

TEST REPORT

Applicant : Shenzhen Antaihui Electronic Commerce Co., Ltd.
Address : Rm 412, Yinfeng Business Bldg., 570 Fanshen Rd.,
Bao'an Dist., Shenzhen, China
Product Name : SMART WIRELESS PROJECTOR
Brand Name : N/A
Model No : PJ530, HY300Pro+, TP350NTV, HY320, HY320Mini,
TP300NTV, TP100, L018, LY300, H968F10, P4,
T1, T1 Mini, T1 PRO
Standards : Article 2 Paragraph 1 of Item 19,
MIC Notice No.88 Appendix No. 43
Report No. : MTL26062602836S
Date of Receipt sample : June 25, 2026
Date of Test : June 25, 2026 to July 03, 2026
Date of Issue : July 03, 2026
Test Result : PASS

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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1. GENERAL**TEST FACTORY**

Shenzhen MTL Testing Technology Co., Ltd.

Add:305, Building A, Shenghengji Industrial Park, No.137, Fuyuan 1st Road,
Zhancheng Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

FCC test Firm Registration Number:

IC test Firm Registration Number:

A2LA Certificate No.:

MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95%**.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 1.197\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.896\text{dB}$
3	Frequency tolerance	$\pm 0.03\text{ppm}$

3 TEST SUMMARY

No.	Test Item	Test Method	Basic Standard	Result
1	Antenna Power	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
2	Tolerances for Antenna Power	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
3	Frequency Tolerance	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
4	Occupied Frequency Bandwidth	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
5	Number of Carriers	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS(1)
6	Spurious Emissions	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
7	Equivalent Isotropic Radiated Power	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
8	3dB Beam Bandwidth	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	N/A(2)
9	Interference prevention function	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
10	Carrier Sensing function	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS
11	Secondary Radiated Emissions	MIC Notice No.88 Appendix No. 43	Article 2-1, Item 19	PASS

NOTE:

(1) This device has more than 1 sub-carrier in 1MHz.

(2) The EIRP less than 12.14dBm/MHz for 802.11b/g/n20, 9.13dBm/MHz for 802.11n40.

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Manufacturer:	Shenzhen Antaihui Electronic Commerce Co., Ltd.	
Address:	Rm 412, Yinfeng Business Bldg., 570 Fanshen Rd., Bao'an Dist., Shenzhen, China	
Equipment	SMART WIRELESS PROJECTOR	
Brand Name	N/A	
Model Name	PJ530	
Series Model(s)	HY300Pro+, TP350NTV, HY320, HY320Mini, TP300NTV, TP100, L018, LY300, H968F10, P4, T1, T1 Mini, T1 PRO	
Model Difference	There is only a difference in the model name.	
Product Description	The EUT is a SMART WIRELESS PROJECTOR	
	Operation Frequency:	802.11b/g/n 20: 2412~2472 MHz 802.11n(40MHz):2422~2462MHz
	Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): MCS7~MCS0:65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): MCS7~MCS0:135/121.5/108/81/54/40.5/27/13.5Mbps
	Number Of Channel:	802.11b/g/n20: 13CH 802.11n 40: 9CH
	Antenna Designation:	Please refer to the Note 3.
	AntennaGain(dBi):	2.95 dBi
	Antenna Power:	--
	Declare power:	--
	Duty Cycle:	>98%
Based on the application, features, or specification exhibited in User Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User Manual.		
Channel List	Please refer to the Note 2.	
Adapter	100-240V~, 50/60Hz	
Battery	N/A	
Hardware version	GBPT-H713-V6.5	
Software version	13-RS-20251224.1654	
Connecting I/O Port(s)	Please refer to the Note 1.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2. Operation Frequency of channel

802.11b/g/n(20MHz)		Channel List for 802.11n(40MHz)	
Channel	Frequency	Channel	Frequency
01	2412	03	2422
02	2417	04	2427
03	2422	05	2432
04	2427	06	2437
05	2432	07	2442
06	2437	08	2447
07	2442	09	2452
08	2447	10	2457
09	2452	11	2462
10	2457		
11	2462		
12	2467		
13	2472		

Note:

regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Carrier Frequency Channel

2.4GHz Test Frequency:

For 802.11b/g/n (HT20)		For 802.11n (HT40)	
Channel	Freq.(MHz)	Channel	Freq.(MHz)
01	2412	03	2422
07	2442	07	2442
13	2472	11	2462

3.

Note: The antenna information refer the manufacturer provide report, applicable only to the te-sted sample identified in the report.

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH1	1 Mbps
Mode 2	TX IEEE 802.11b CH7	1 Mbps
Mode 3	TX IEEE 802.11 b CH13	1 Mbps
Mode 4	TX IEEE 802.11g CH1	6 Mbps
Mode 5	TX IEEE 802.11g CH7	6 Mbps
Mode 6	TX IEEE 802.11g CH13	6 Mbps
Mode 7	TX IEEE 802.11n HT20 CH1	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH7	MCS 0
Mode 9	TX IEEE 802.11n HT20 CH13	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH3	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH7	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH11	MCS 0

2.3 TABLE FOR PARAMETERS OF THE TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. the RF output power selection is for the setting of RF output power expected by the customer and going to be fixed on the firmware of the final end product.

RF Function	Type	Mode Or Modulation type	Power Class	Software For Testing
2.4G WiFi	802.11b	L/M/H	default	RF test v1.0
	802.11g	L/M/H	default	
	802.11n20	L/M/H	default	
	802.11n40	L/M/H	default	

2.4 TEST CONDITIONS

The WIFI module was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in allModes to determine worst case levels.

Power Supply Voltage Fluctuation Test

POWER SUPPLY VOLTAGE FLUCTUATION TEST

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input To EUT	100V~	110V~	90V~
Output To RF Module	DC 3.3V	DC 3.3V	DC 3.3V
Voltage Variation(%)	--	--	--

Note: 1. Voltage Variation (%)

= (RF chip Input high or Low Voltage - RF chip Input Normal Voltage) / RF chip Input Normal Voltage * 100

2. RF chip Input DC power fluctuation is verified at the power input PIN of the RF chip.

When the input supply voltage to the EUT from the external power source is varied by +/- 10%, the output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%, and the DC power fluctuation at the power input PIN of the RF chip is equal to or less than +/-1%.Exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Mode 1:

E-1
EUT

2.6 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.7 EQUIPMENTS LIST FOR ALL TEST ITEMS

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	EMI test receiver ESCI	R&S	ESPI-7	100754	2025-03-17	2027-03-16
2	Log periodic antenna	SCHWARZBECK	VULB9163	01790	2025-10-24	2026-10-23
3	preamplifier	QUANJUDA	LNA18	2503130032	2025-07-07	2026-07-06
4	spectrum analyzer	Agilent	N9020A	MY51287427	2025-07-07	2026-07-06
5	Terminal tester	R&S	CMW500	129734	2025-07-07	2026-07-06
6	Vector signal generator	Agilent	N5182A	MY50145556	2025-07-07	2026-07-06
7	RF automatic control unit	TST	CBOX-Full	2752539	2025-07-14	2026-07-13
8	High frequency antenna	Schwarzbeck	9120D-1141	03260	2025-10-19	2026-10-18
9	High-frequency horn antenna	Schwarzbeck	HA-018040L	25098408	2025-10-31	2026-10-30
10	preamplifier	HCT	HC180400-50 G25	25098401	2025-09-19	2026-09-18
11	spectrum analyzer	R&S	FSV40	101373	2025-12-24	2026-12-23
12	preamplifier	SCHWARZBECK	8447D	2944A08081	2025-03-17	2027-03-16
13	Oscilloscope	Tektronix	TDS3052C	C011852	2025-08-08	2026-08-07
14	DC regulated power supply	LONGWVEI	PS-305DF	201104661	2025-07-07	2026-07-06
15	RF automatic control unit	TST	CBOX-Full	2752539	2025-07-14	2026-07-13
16	testing software	TST Pass	2.0.2 (2026.04.07_1 5.08.33)	/	2025-07-14	2026-07-13

Note:

Cal. Institution: Guangdong Zhongcheng Metrology Testing Co., Ltd.

Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law".

- ☐ (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.
- ☒ (c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act.
- ☐ (d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above.

3. CONSTRUCTION PROTECTION CONFIRMATION

Test Requirement:	The EUT shall be constructed in such a way that sensitive RF parts, (like modulation and oscillator parts) cannot be reached easily by the user. These parts shall be covered by soldered metal caps or glue or by other mechanical covers. If the covers are fixed with screws, these shall be not the common type(s) like a Phillips, but special versions like Torx, so that the user cannot open the device with common tools.
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Tamper proof declaration:

- ☐ Sealed with special screws.
- ☐ Plastic chassis is being welded using ultrasonic waves.
- ☐ Chassis is glued using a special adhesive
- ☐ Metal covers are spot-fused.
- ☐ Cover is specially interlocked.
- ☐ RF and modulation components are covered with shielding case and this shielding case is soldered.
- ☐ Shiled case is welded at RF and modulation parts, and ID-ROM is welded using the BGA method.
- ☐ Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
- ☐ Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
- ☒ RF and Modulation parts are mounted on PCB with surface mount technology, and there is no any adjustable parts on PCB or adjustable parts are not exposed.

4. FREQUENCY ERROR

4.1 LIMIT

Item	Limits
Frequency Error	±50ppm

4.2 TEST PROCEDURES

Test Limit:	±50ppm or less.		
Test Method:	MIC Notice No.88 Appendix No. 43		
Procedure:	Center frequency:	Test frequency	
	Span:	2 times channel bandwidth	
	RBW:	100 kHz (Modulation ON)	
	VBW:	100 kHz (Modulation ON)	
	Sweep data points:	1001 or greater	
	Sweep time:	Auto	
	Detector mode:	Positive peak	
	Indication mode:	Max hold	
	<p>If the EUT cannot transmit in un-modulated mode then modulated mode measurements can be made, as follows:</p> <p>If the spectrum observed using the spectrum analyzer has a characteristic dip at the center, then the center frequency of the dip shall be regarded as the center frequency of the carrier.</p>		

4.3 TEST SETUP



4.4 EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

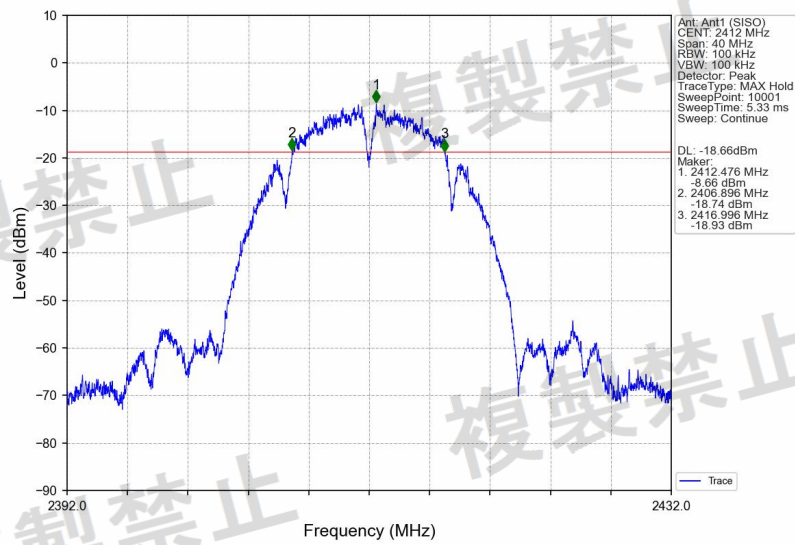
4.5 EUT Operation

Operating Environment:					
Temperature:	23.2 °C	Humidity:	51 %	Atmospheric Pressure:	101.1 kPa

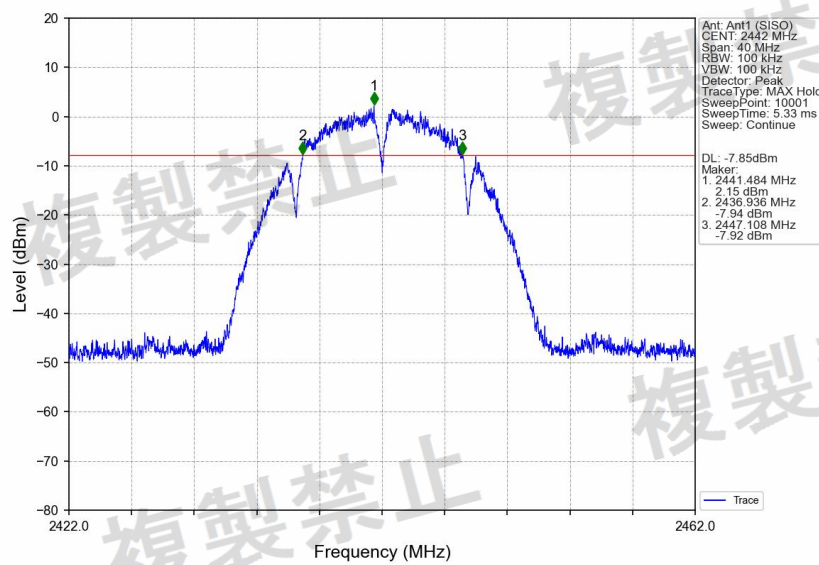
4.6 TEST RESULT

Ant1							
ENV	Mode	TX Type	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
					Result	Limit	
NTNV	802.11b	SISO	2412	2411.946	-22.39	-50 to 50	Pass
			2442	2442.022	9.01	-50 to 50	Pass
			2472	2471.974	-10.52	-50 to 50	Pass
	802.11g	SISO	2412	2412.000	0.00	-50 to 50	Pass
			2442	2442.002	0.82	-50 to 50	Pass
			2472	2471.988	-4.85	-50 to 50	Pass
	802.11n (HT20)	SISO	2412	2411.982	-7.46	-50 to 50	Pass
			2442	2442.004	1.64	-50 to 50	Pass
			2472	2471.966	-13.75	-50 to 50	Pass
	802.11n (HT40)	SISO	2422	2421.972	-11.56	-50 to 50	Pass
			2442	2441.980	-8.19	-50 to 50	Pass
			2462	2461.964	-14.62	-50 to 50	Pass

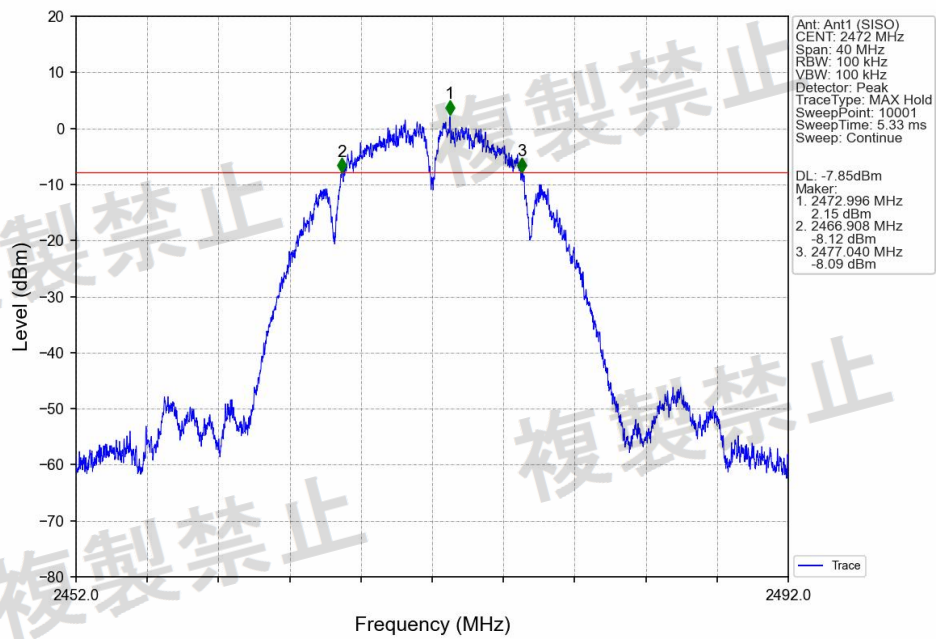
802.11b_2412MHz_Ant1 (SISO)_NTNV



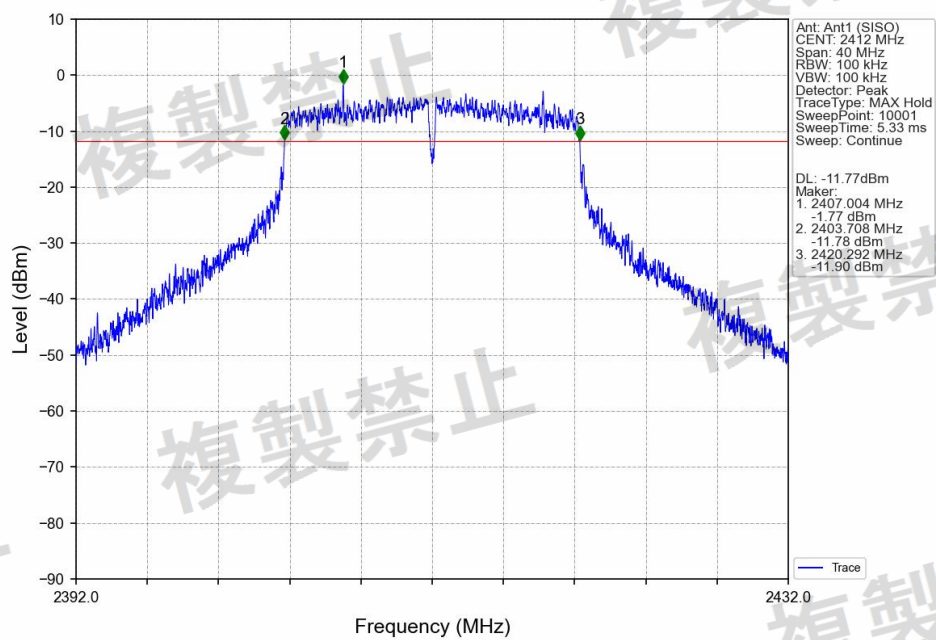
802.11b_2442MHz_Ant1 (SISO)_NTNV



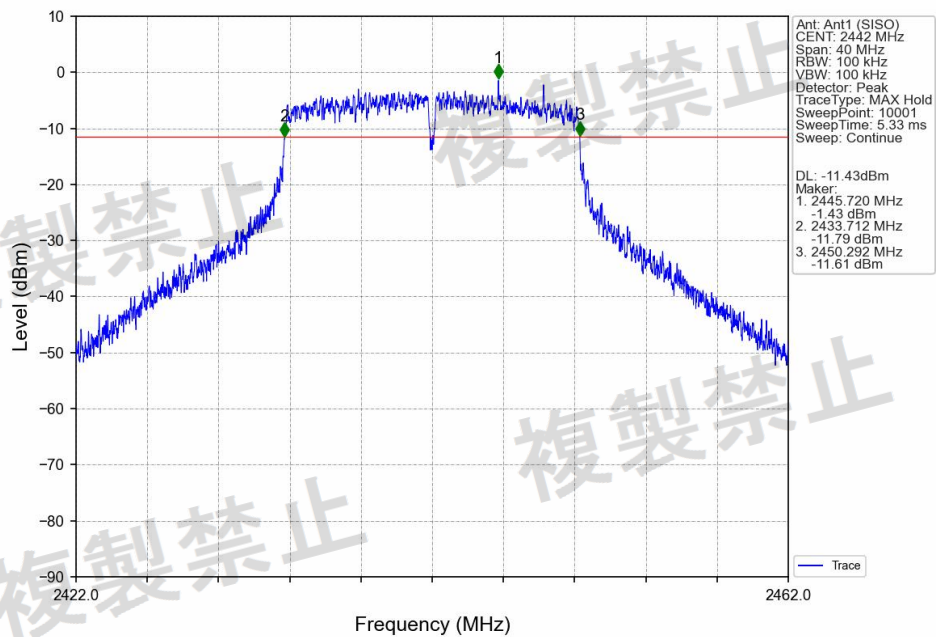
802.11b_2472MHz_Ant1 (SISO)_NTNV



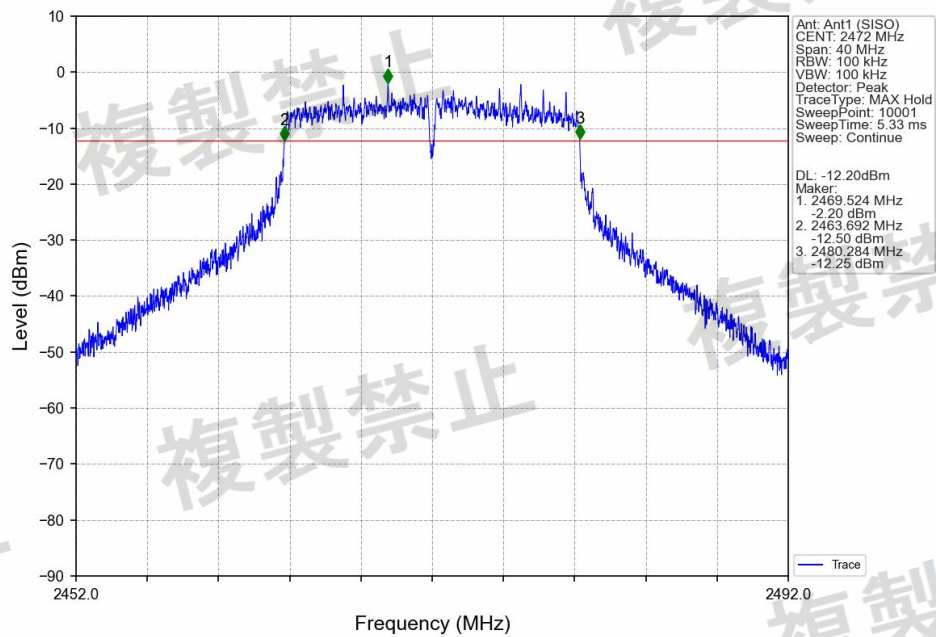
802.11g_2412MHz_Ant1 (SISO)_NTNV



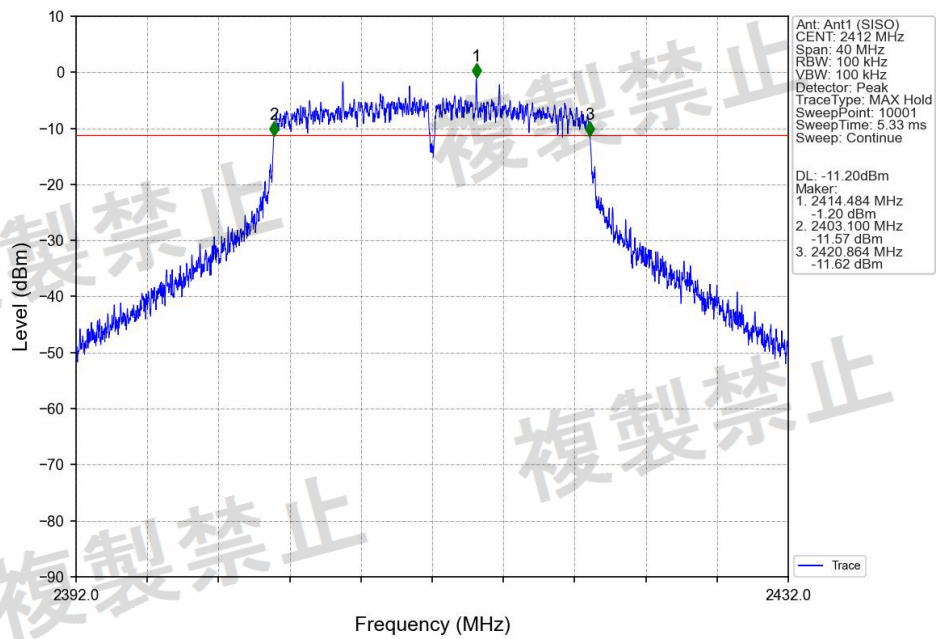
802.11g_2442MHz_Ant1 (SISO)_NTNV



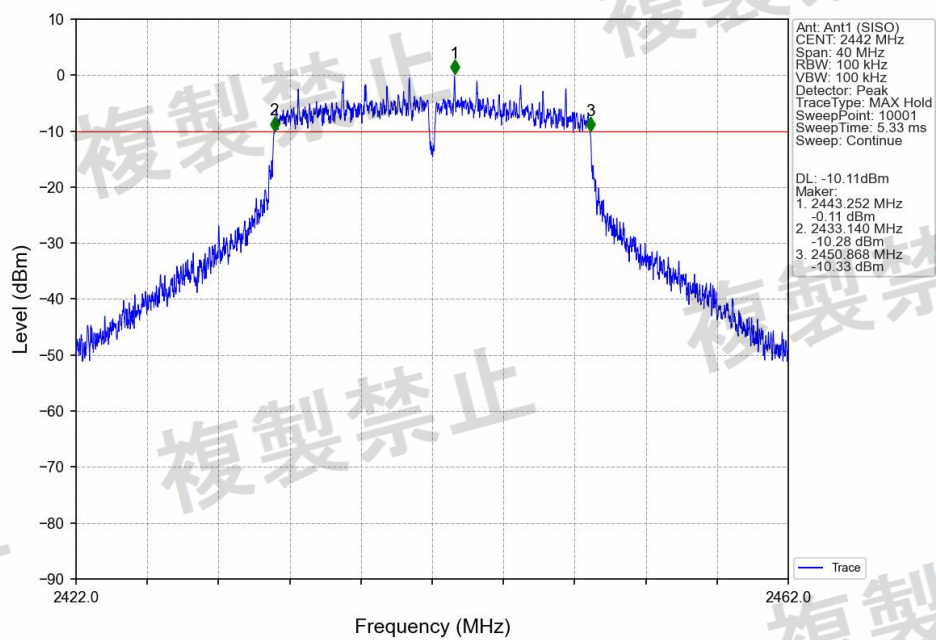
802.11g_2472MHz_Ant1 (SISO)_NTNV



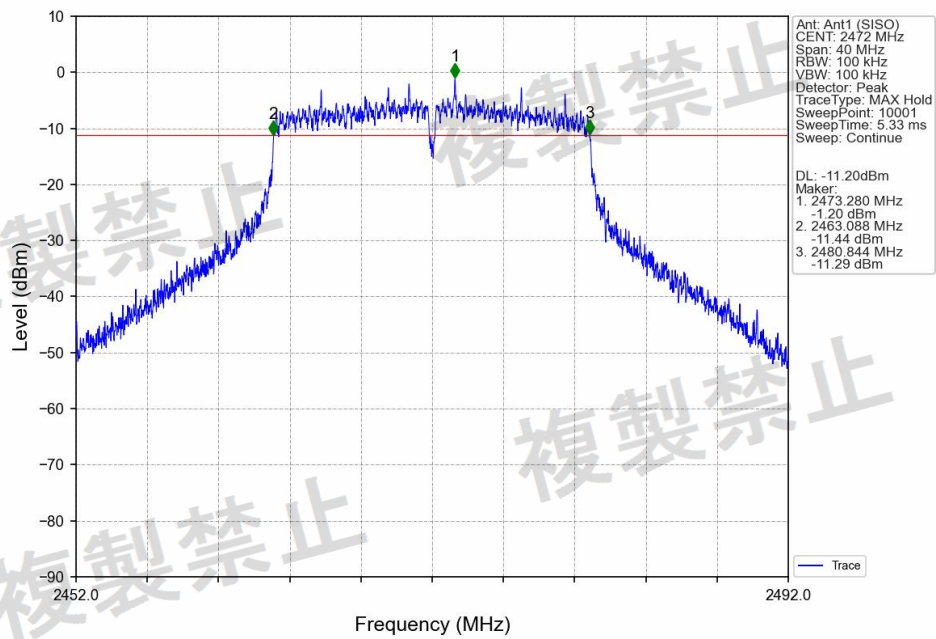
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



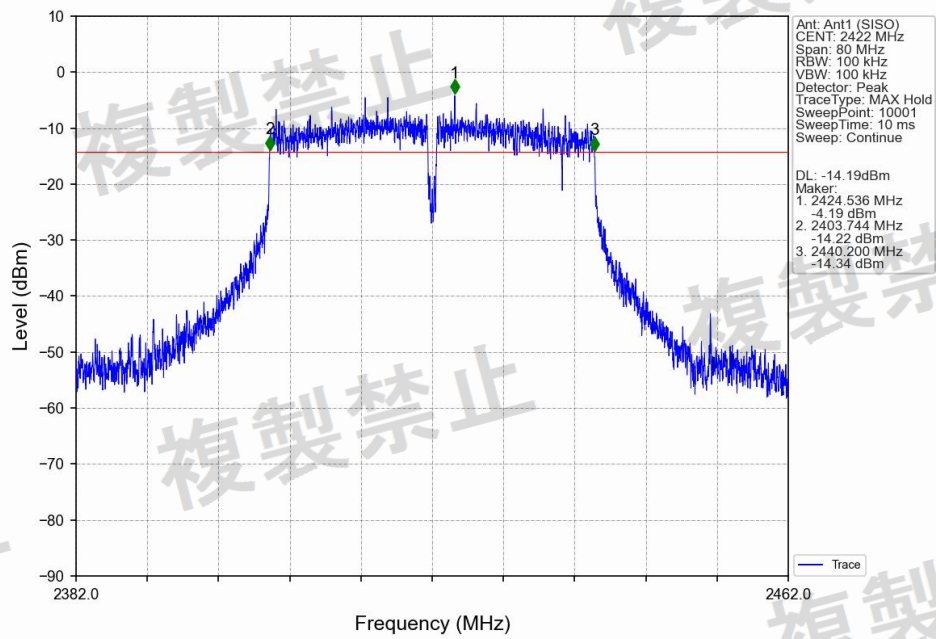
802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV



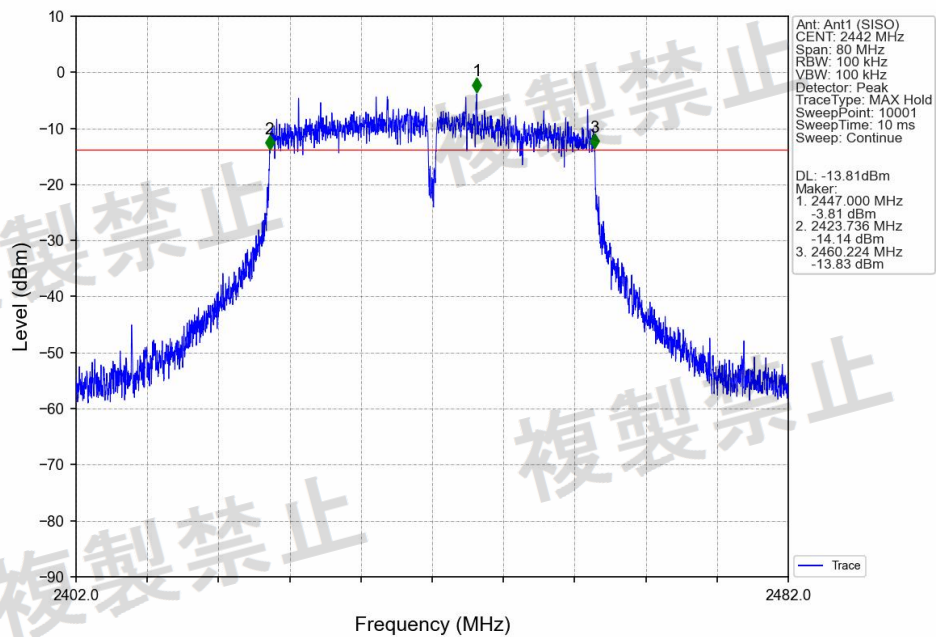
802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV



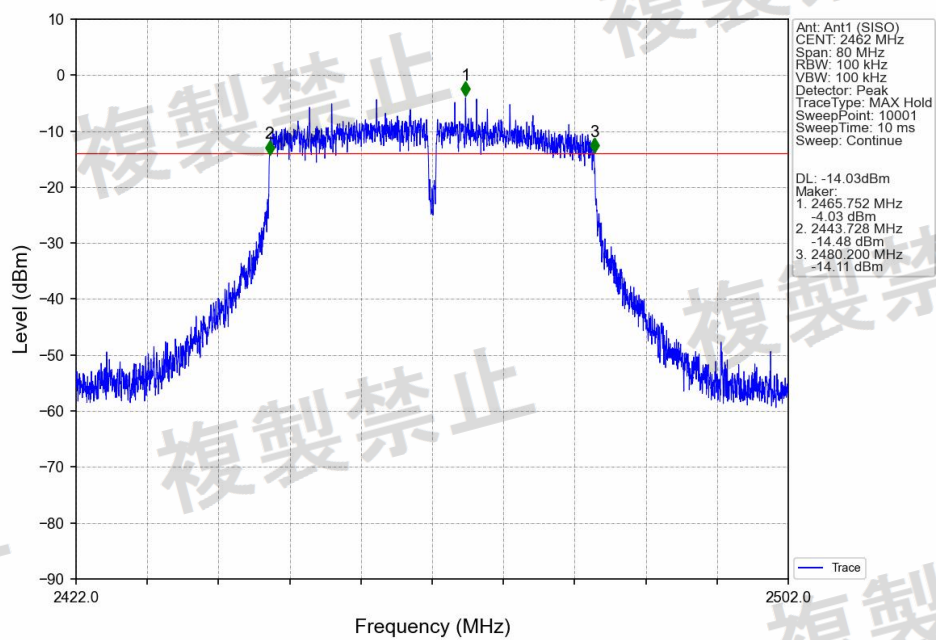
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40) 2442MHz Ant1 (SISO) NTVN



802.11n(HT40) 2462MHz Ant1 (SISO) NTVN



5. ANTENNA POWER

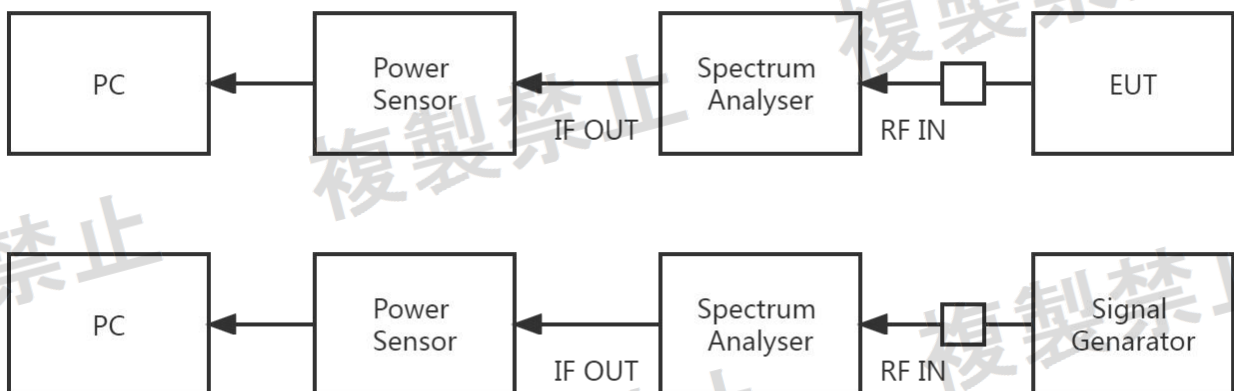
5.1 LIMIT

Item	Limits
Antenna PowerDensity	$\leq 3\text{mW/MHz}$ (FH from 2400 – 2483.5 MHz) $\leq 10\text{mW/MHz}$ (OFDM,DS from2400~2483.5MHz,802.11b/g/n HT20) $\leq 5\text{mW/MHz}$ (OFDM,DS from2400~2483.5MHz,802.11n HT40) $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)
Power Error	+20%(Base on manufacturer declare power)

5.2 TEST PROCEDURE

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. EUT turn to test frequency channel and keep continuous transmitting.
3. Connected the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averGaing: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
4. Reading the output power from the Power sensor as P_{EUT} .
5. Turn the Signal generator to frequency channel the same as the EUT.
6. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; avergaing: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
7. Turn the level of Signal generator, scan with the power meter until the power equal to P_{EUT} , the level of Signal generator recorded as "P".
8. The antenna power of EUT is "P".
9. EIRP power="P"+antenna gain.

5.3 TEST SETUP



5.4 TEST DEVIATION

There is no deviation with the original standard.

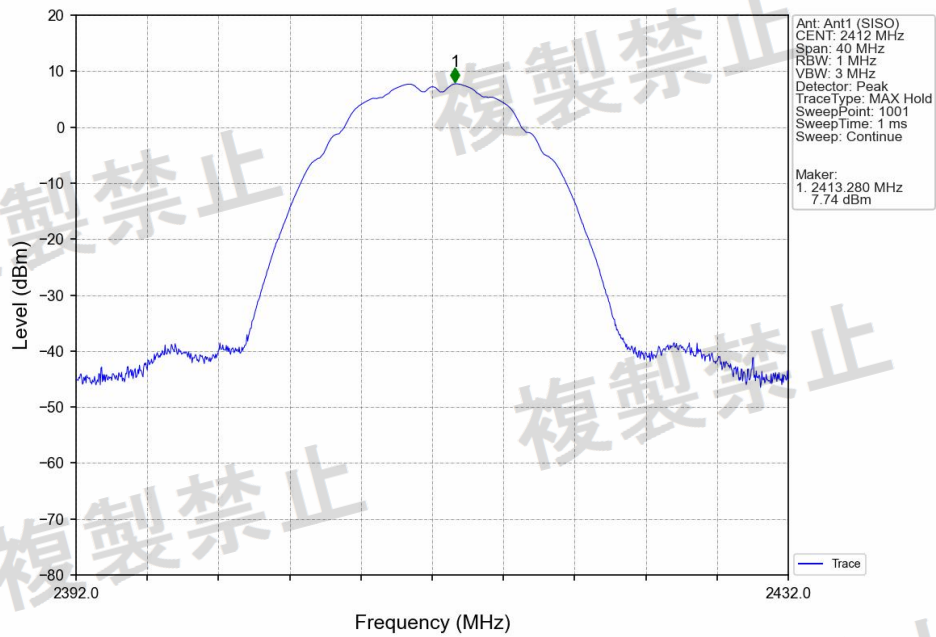
5.5 EUT OPERATION

Operating Environment:					
Temperature:	23.2 °C	Humidity:	51 %	Atmospheric Pressure:	101.1 kPa

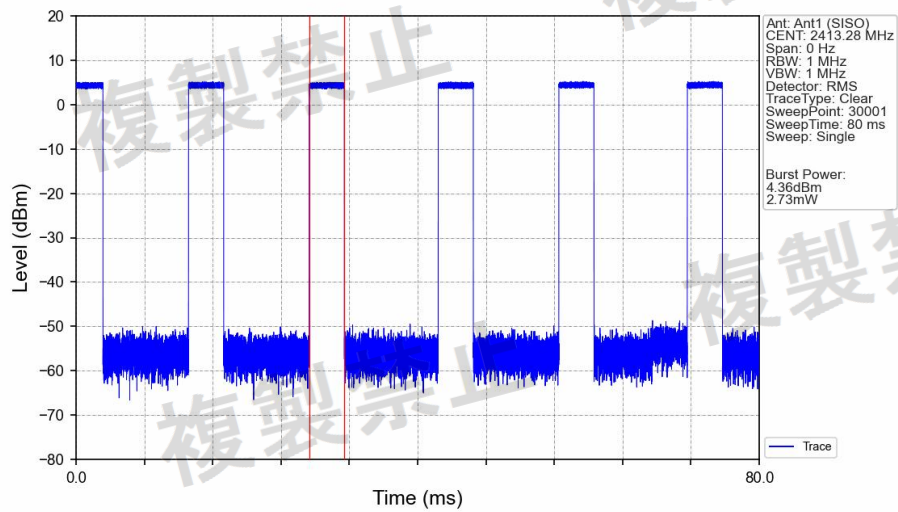
5.6 TEST RESULT

ENV	Mode	TX Type	Frequency (MHz)	ANT	Antenna Power (mW/MHz)		Nominal Power (mW/MHz)	Tolerance (%)		Verdict
					Measured	Limit		Measured	Limit	
NTNV	802.11b	SISO	2412	1	2.732	<=10.00	2.700	1.19	20	Pass
			2442	1	2.132	<=10.00	2.700	-21.04	20	Pass
			2472	1	1.796	<=10.00	2.700	-33.48	20	Pass
	802.11g	SISO	2412	1	0.932	<=10.00	0.930	0.22	20	Pass
			2442	1	0.921	<=10.00	0.930	-0.97	20	Pass
			2472	1	0.858	<=10.00	0.930	-7.74	20	Pass
	802.11n (HT20)	SISO	2412	1	0.834	<=10.00	0.830	0.48	20	Pass
			2442	1	0.965	<=10.00	0.830	16.27	20	Pass
			2472	1	0.779	<=10.00	0.830	-6.14	20	Pass
	802.11n (HT40)	SISO	2422	1	0.423	<=5.00	0.420	0.71	20	Pass
			2442	1	0.478	<=5.00	0.420	13.81	20	Pass
			2462	1	0.403	<=5.00	0.420	-4.05	20	Pass

802.11b_2412MHz_Ant1 (SISO)_NTNV

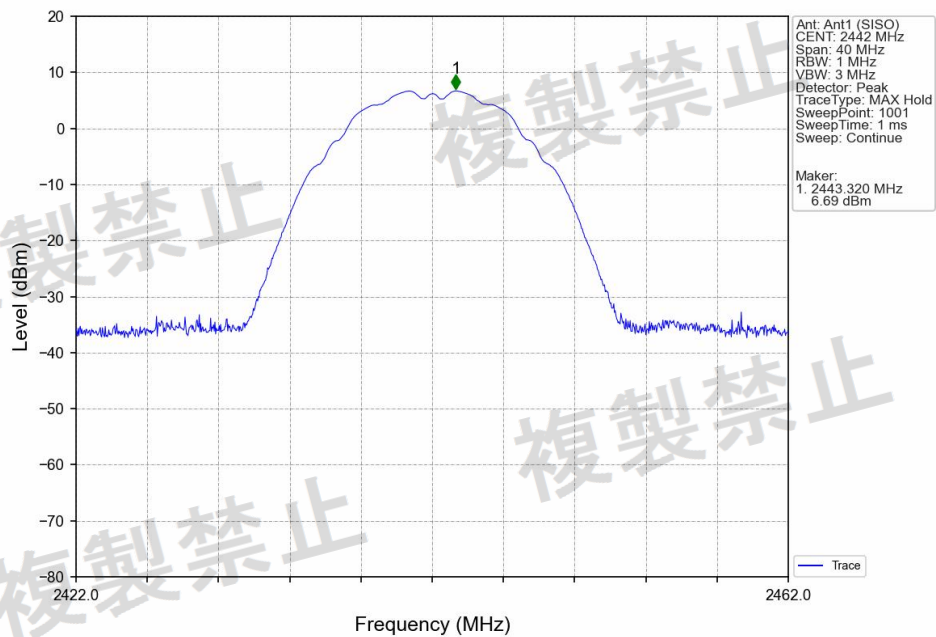


802.11b_2412MHz_Ant1 (SISO)_NTNV

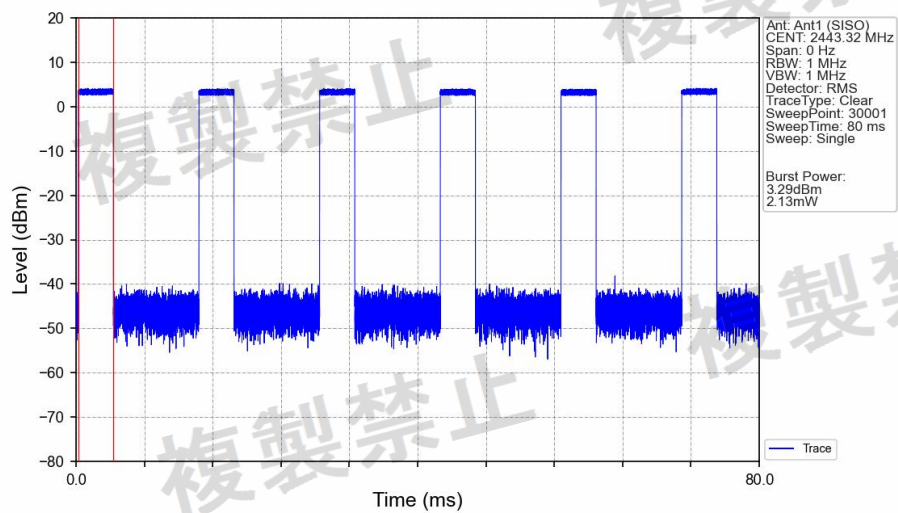


Burst No.	1	2	3	4	5
Length (ms)	4.112	4.115	4.115	4.115	4.112
Power(dBm)	4.36	4.36	4.36	4.35	4.35
Power(mW)	2.726	2.732	2.727	2.724	2.723
Remark	/	Max	/	/	/

802.11b_2442MHz_Ant1 (SISO)_NTNV

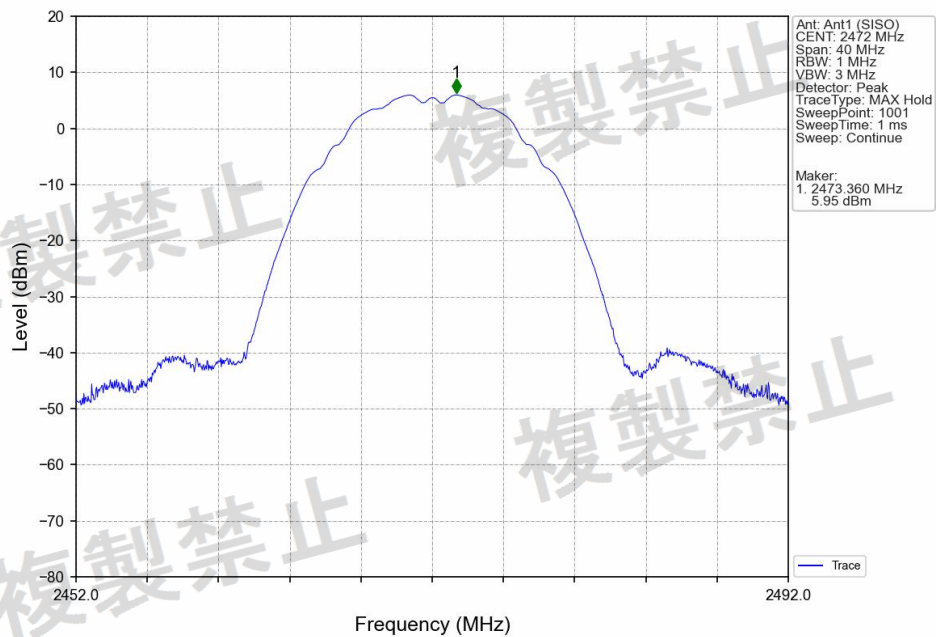


802.11b_2442MHz_Ant1 (SISO)_NTNV

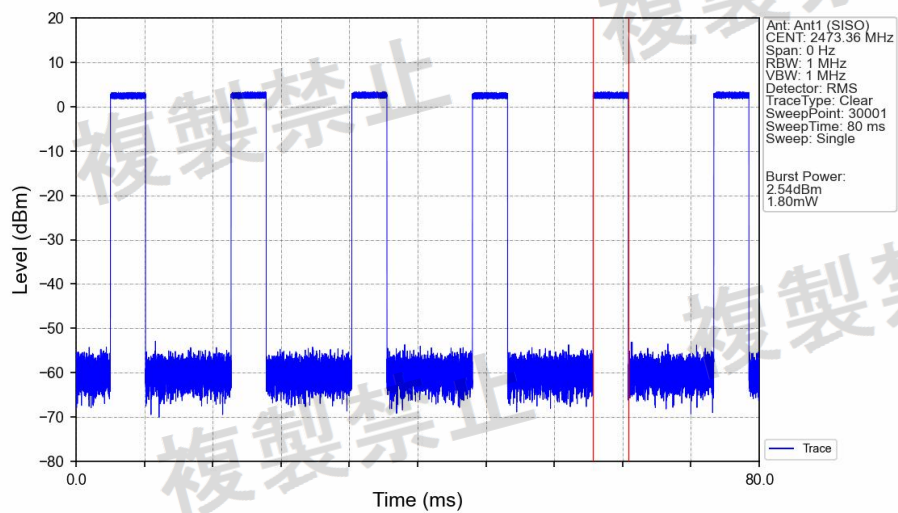


Burst No.	1	2	3	4	5	6
Length (ms)	4.112	4.112	4.112	4.112	4.115	4.115
Power(dBm)	3.29	3.28	3.28	3.28	3.28	3.28
Power(mW)	2.132	2.130	2.128	2.130	2.130	2.129
Remark	Max	/	/	/	/	/

802.11b_2472MHz_Ant1 (SISO)_NTNV

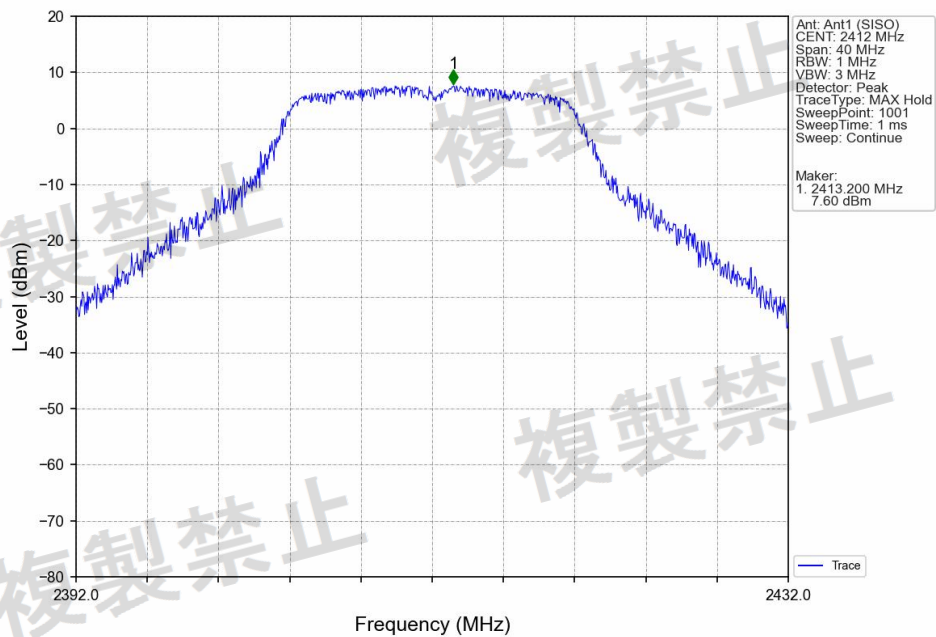


802.11b_2472MHz_Ant1 (SISO)_NTNV

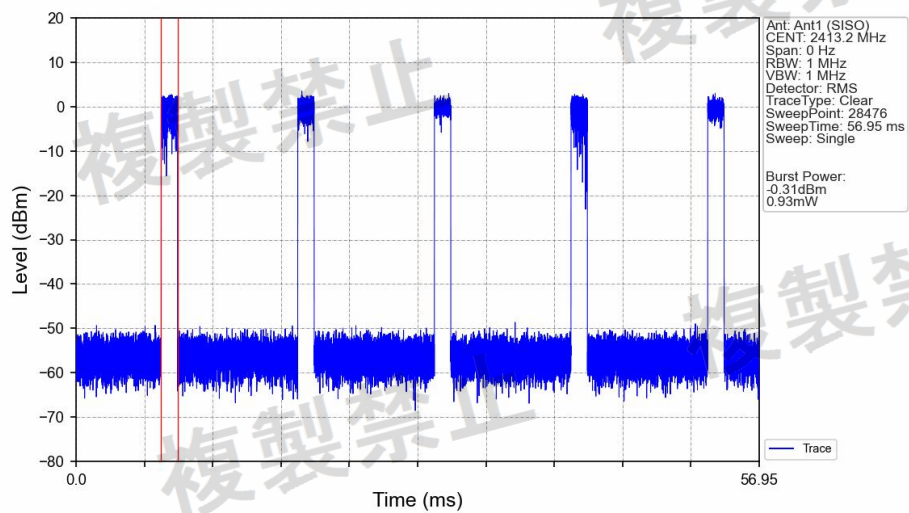


Burst No.	1	2	3	4	5	6
Length (ms)	4.115	4.112	4.115	4.112	4.115	4.115
Power(dBm)	2.53	2.54	2.54	2.54	2.54	2.53
Power(mW)	1.790	1.793	1.794	1.794	1.796	1.790
Remark	/	/	/	/	Max	/

802.11g_2412MHz_Ant1 (SISO)_NTNV

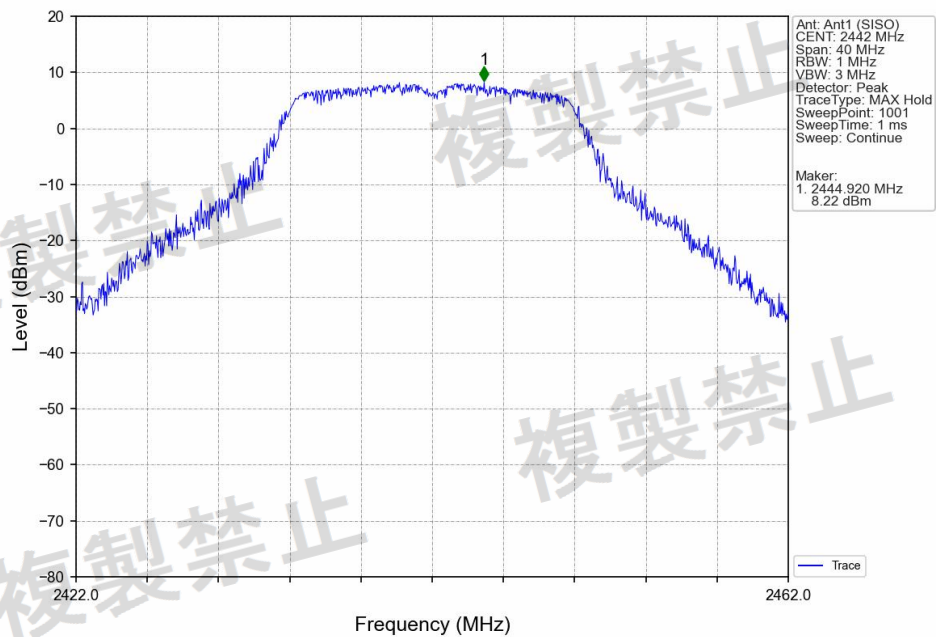


802.11g_2412MHz_Ant1 (SISO)_NTNV

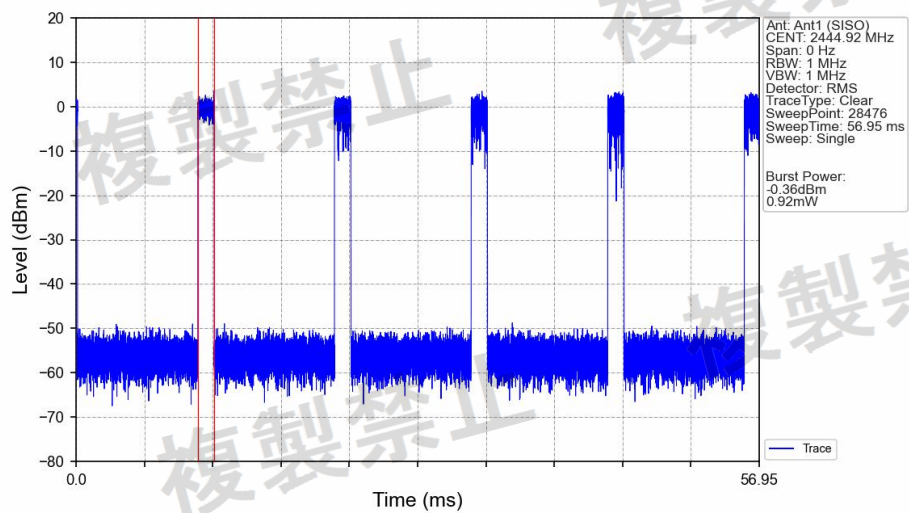


Burst No.	1	2	3	4	5
Length (ms)	1.366	1.364	1.366	1.366	1.364
Power(dBm)	-0.31	-0.33	-0.36	-0.35	-0.31
Power(mW)	0.932	0.927	0.920	0.922	0.930
Remark	Max	/	/	/	/

802.11g_2442MHz_Ant1 (SISO)_NTNV

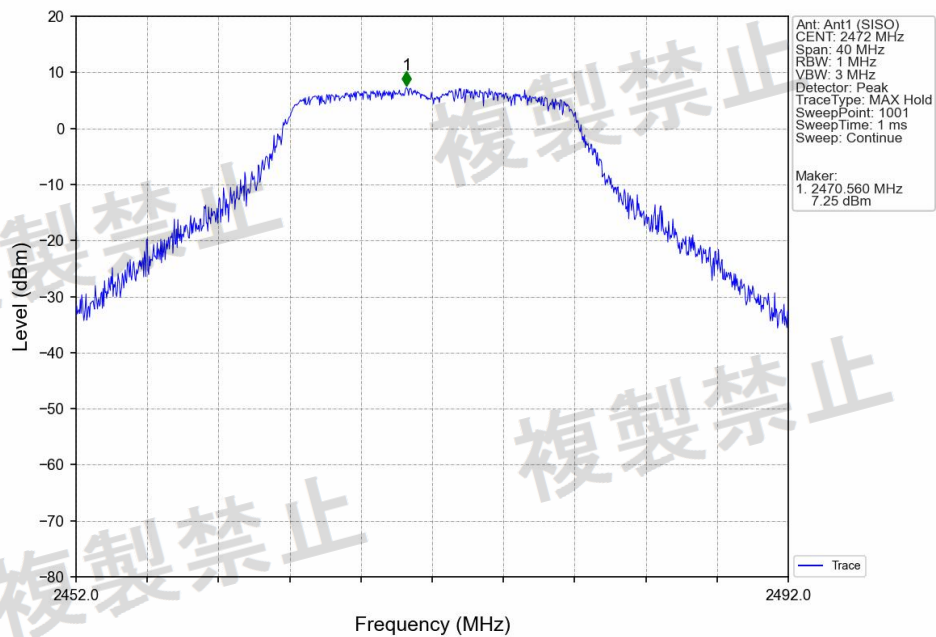


802.11g_2442MHz_Ant1 (SISO)_NTNV

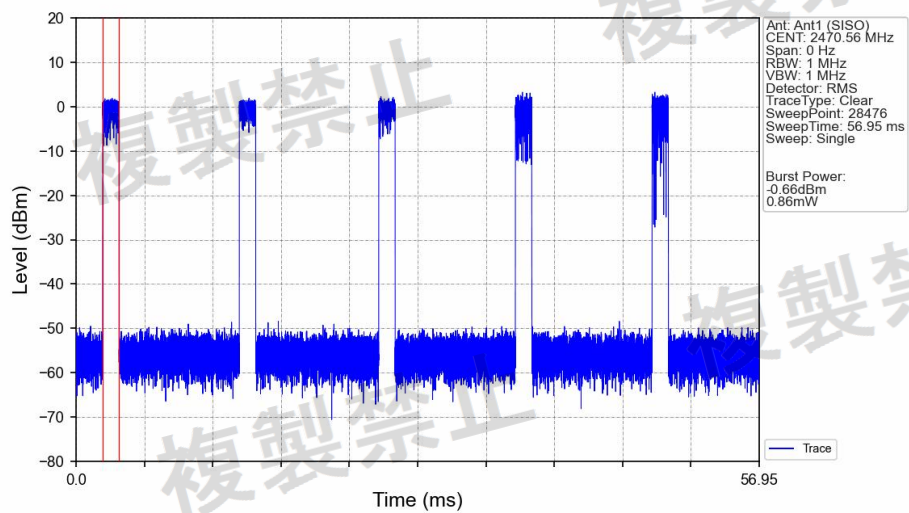


Burst No.	1	2	3	4
Length (ms)	1.366	1.366	1.368	1.366
Power(dBm)	-0.36	-0.44	-0.49	-0.43
Power(mW)	0.921	0.903	0.893	0.905
Remark	Max	/	/	/

802.11g_2472MHz_Ant1 (SISO)_NTNV

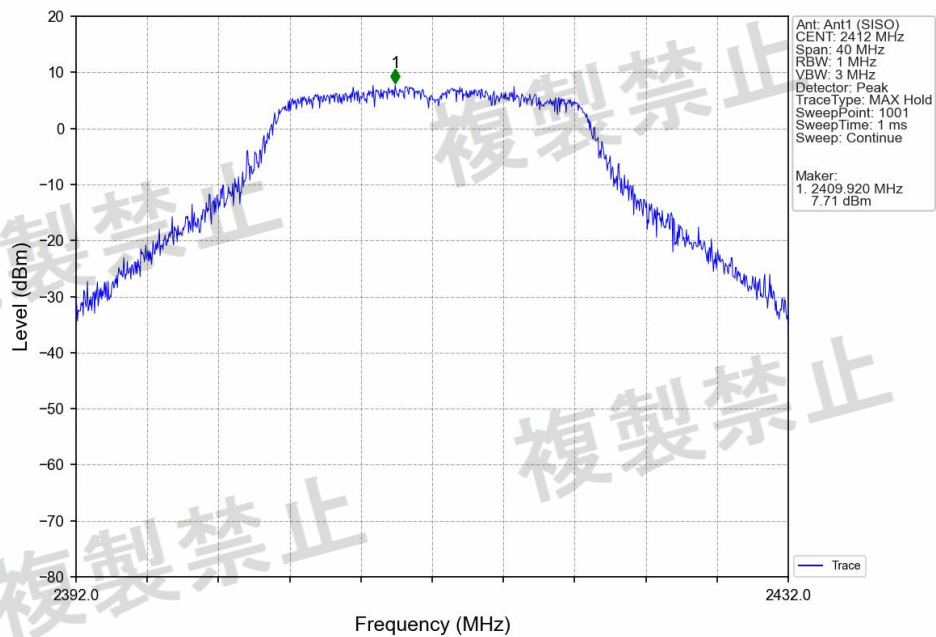


802.11g_2472MHz_Ant1 (SISO)_NTNV

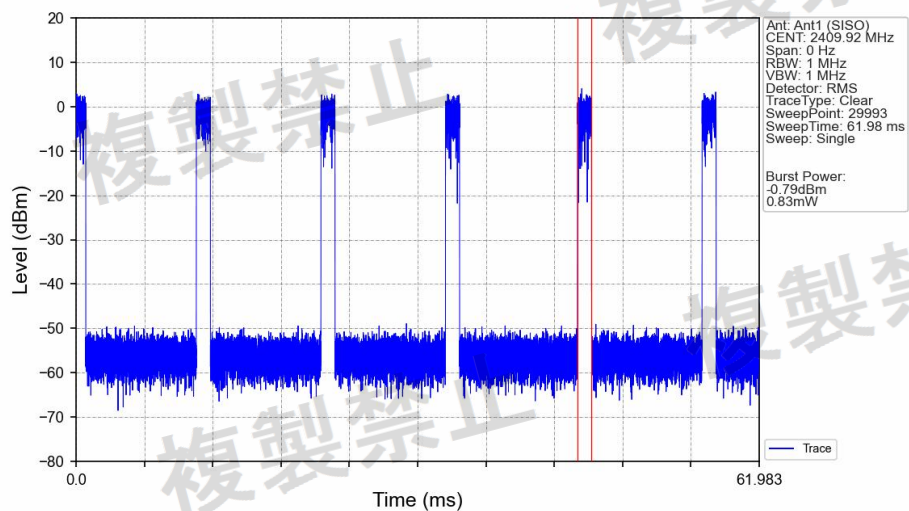


Burst No.	1	2	3	4	5
Length (ms)	1.366	1.366	1.366	1.366	1.364
Power(dBm)	-0.66	-0.70	-0.73	-0.77	-0.72
Power(mW)	0.858	0.851	0.845	0.837	0.848
Remark	Max	/	/	/	/

802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

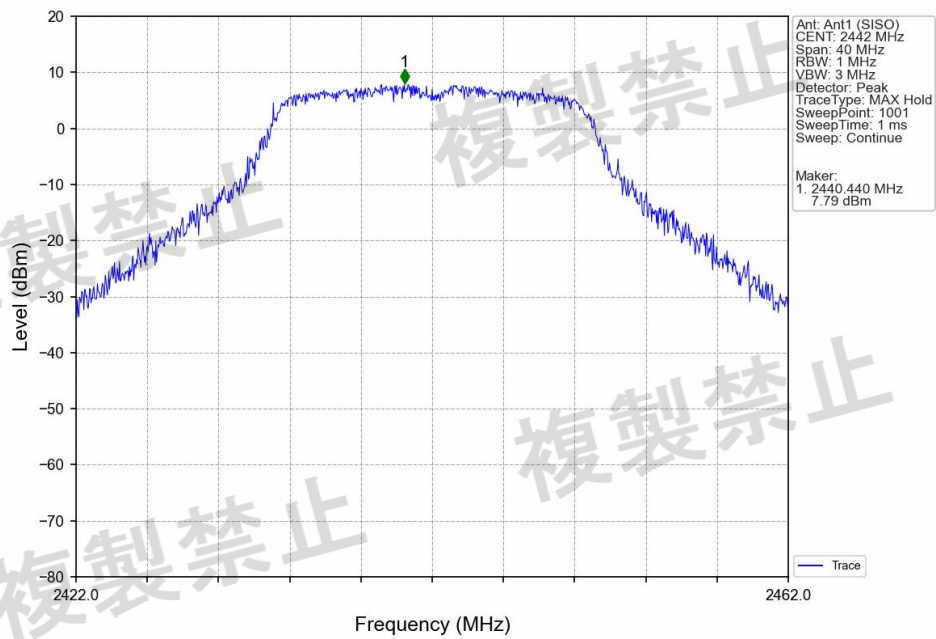


802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

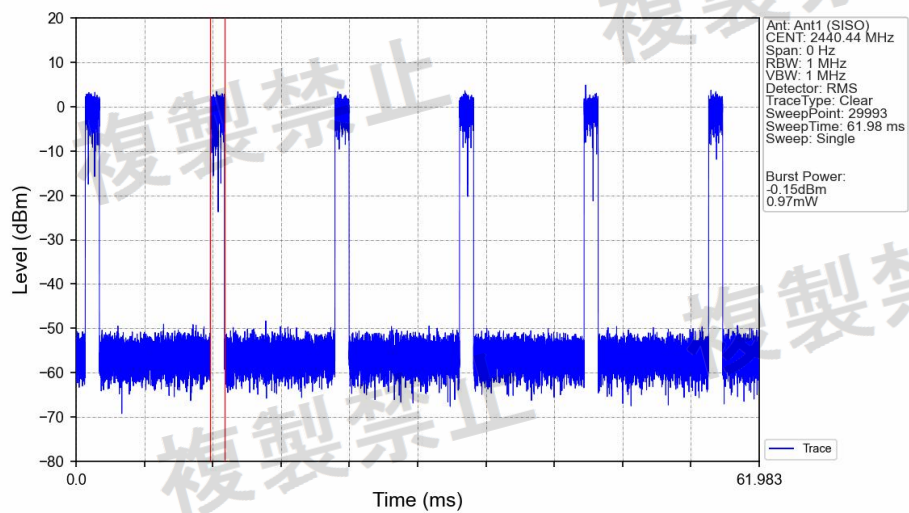


Burst No.	1	2	3	4	5
Length (ms)	1.277	1.277	1.277	1.277	1.277
Power(dBm)	-0.82	-0.79	-0.85	-0.79	-0.82
Power(mW)	0.829	0.833	0.823	0.834	0.828
Remark	/	/	/	Max	/

802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

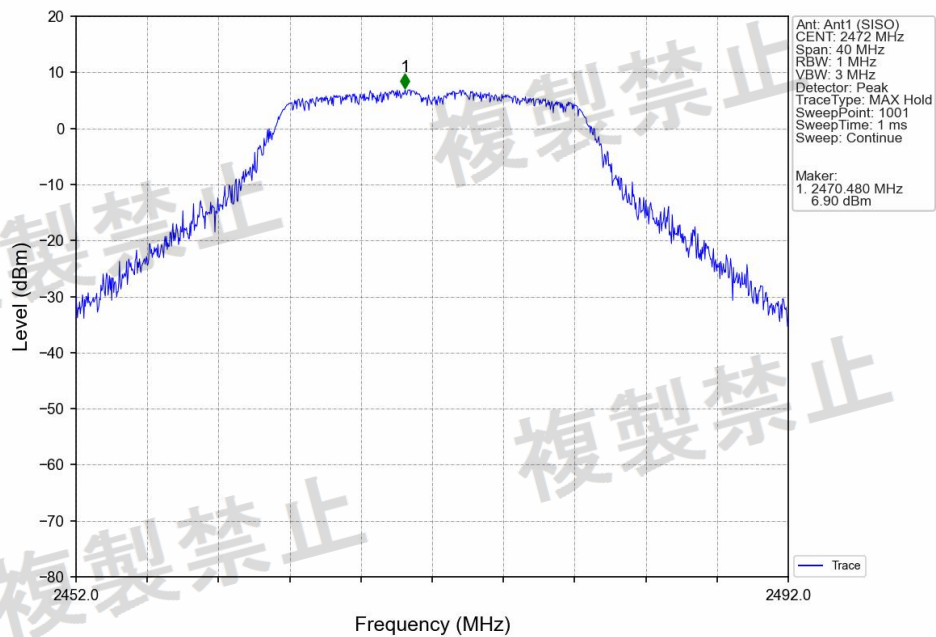


802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

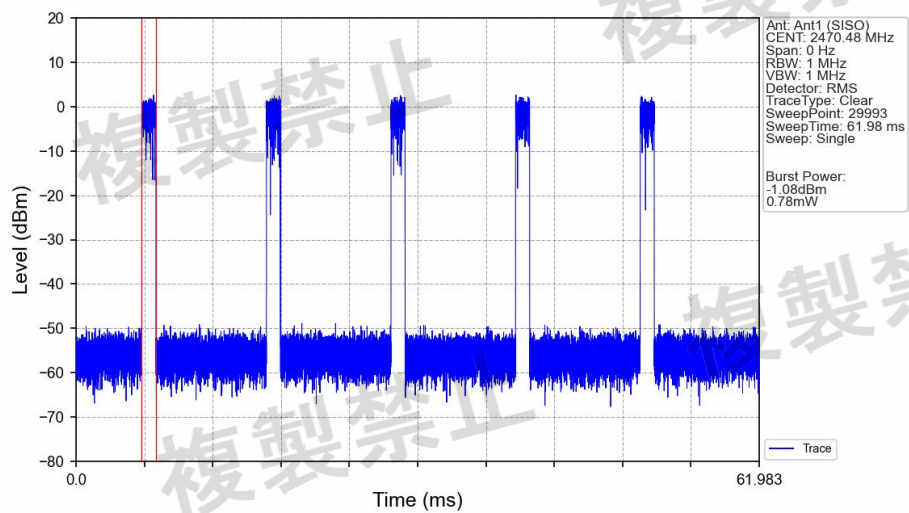


Burst No.	1	2	3	4	5	6
Length (ms)	1.277	1.277	1.277	1.277	1.277	1.277
Power(dBm)	-0.21	-0.15	-0.22	-0.22	-0.22	-0.21
Power(mW)	0.953	0.965	0.950	0.950	0.950	0.954
Remark	/	Max	/	/	/	/

802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

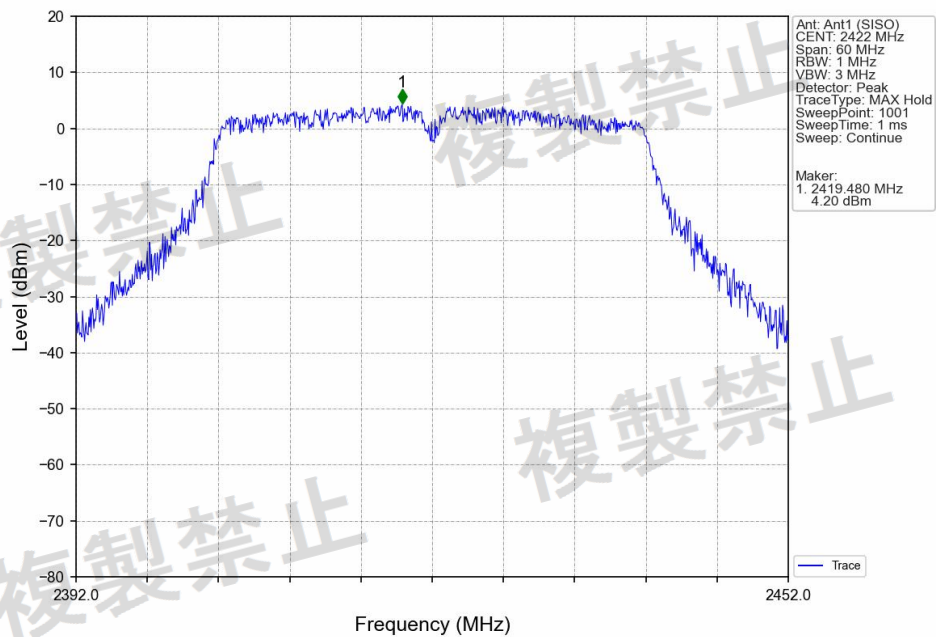


802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

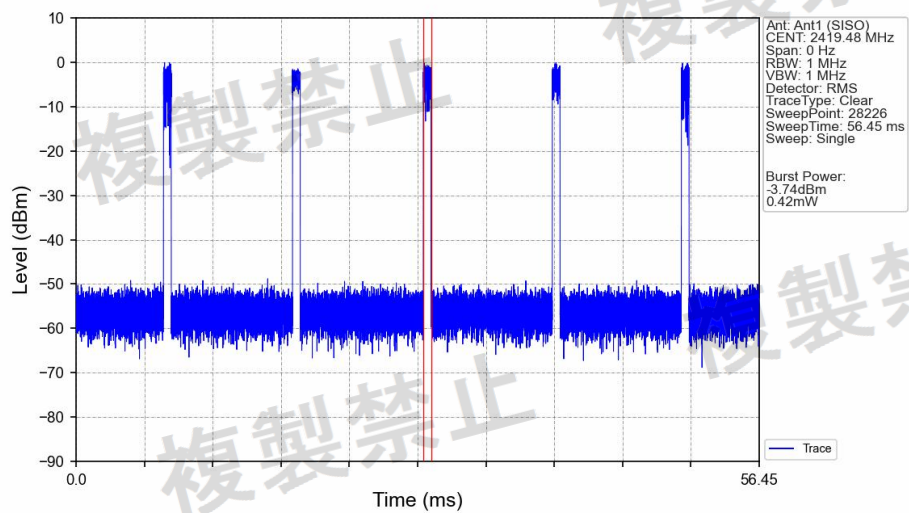


Burst No.	1	2	3	4	5
Length (ms)	1.275	1.277	1.277	1.279	1.275
Power(dBm)	-1.08	-1.13	-1.10	-1.09	-1.11
Power(mW)	0.779	0.771	0.776	0.778	0.775
Remark	Max	/	/	/	/

802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

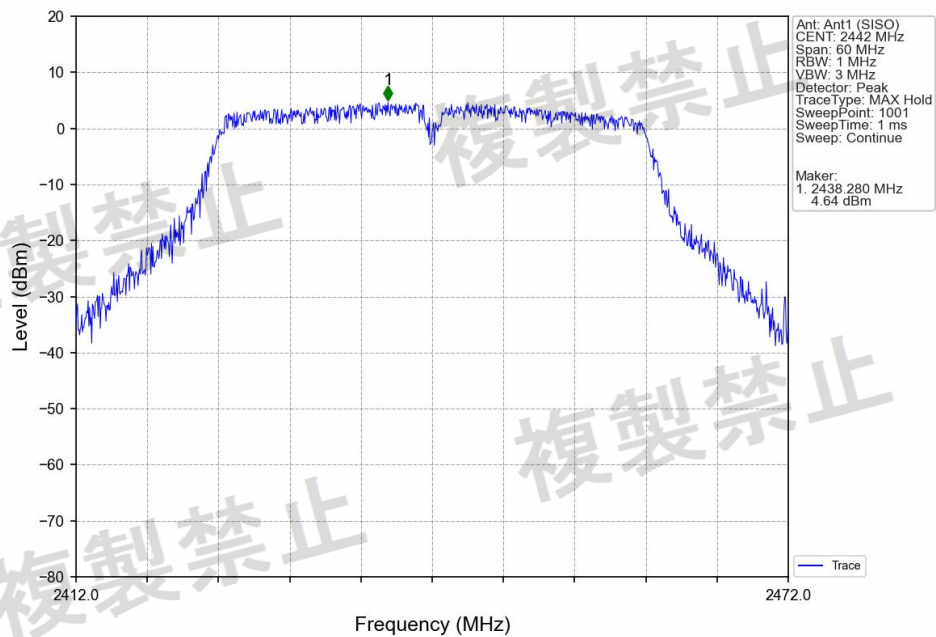


802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

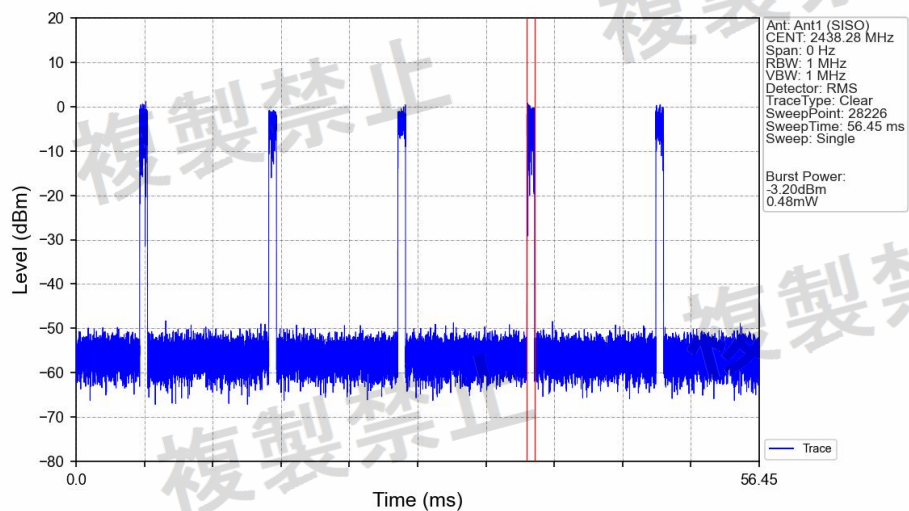


Burst No.	1	2	3	4	5
Length (ms)	0.636	0.638	0.636	0.636	0.638
Power(dBm)	-3.83	-3.79	-3.74	-3.78	-3.85
Power(mW)	0.414	0.418	0.423	0.419	0.412
Remark	/	/	Max	/	/

802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

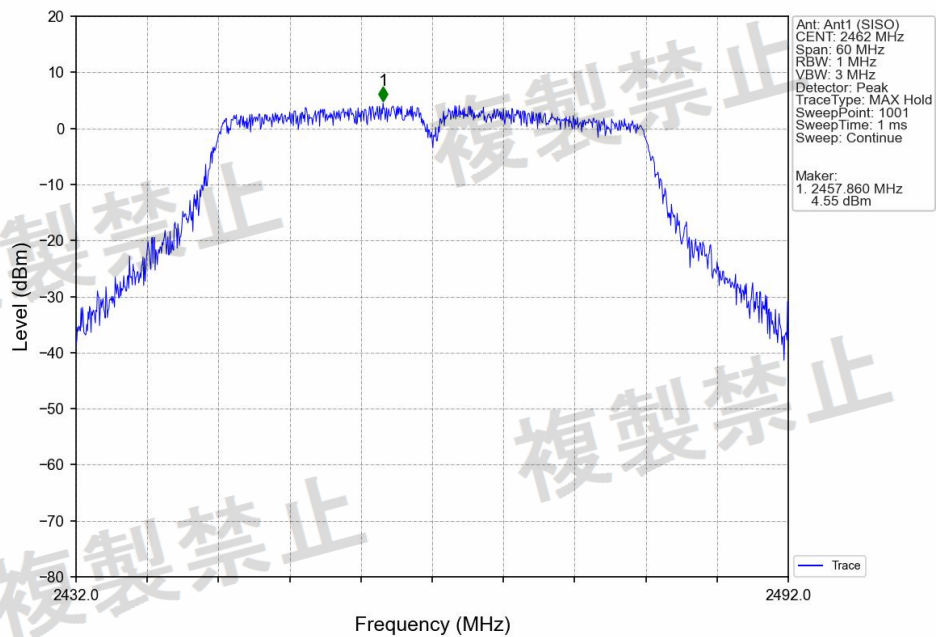


802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

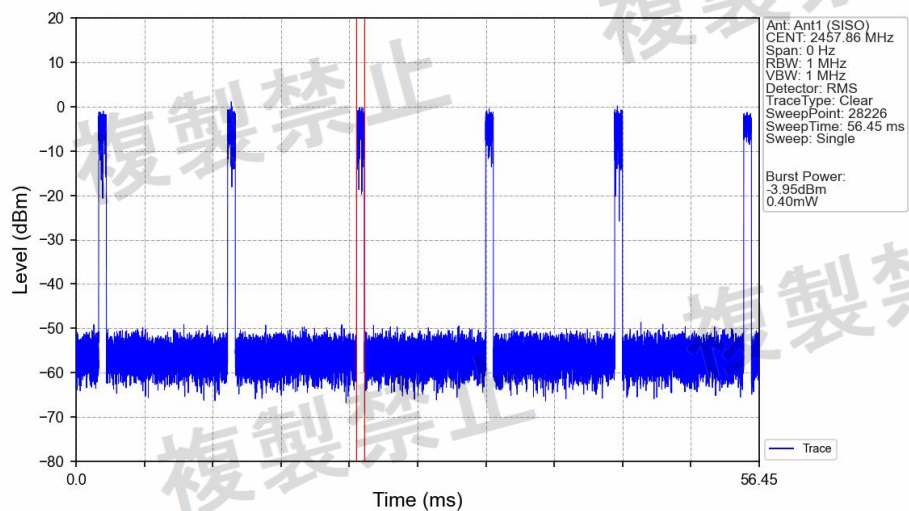


Burst No.	1	2	3	4	5
Length (ms)	0.636	0.638	0.638	0.636	0.638
Power(dBm)	-3.25	-3.30	-3.27	-3.20	-3.29
Power(mW)	0.473	0.468	0.470	0.478	0.469
Remark	/	/	/	Max	/

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Burst No.	1	2	3	4	5	6
Length (ms)	0.638	0.638	0.636	0.638	0.638	0.638
Power(dBm)	-4.08	-3.97	-3.95	-3.96	-3.98	-3.96
Power(mW)	0.391	0.400	0.403	0.401	0.400	0.402
Remark	/	/	Max	/	/	/

6. EIRP POWER**6.1 LIMIT**

Item	Limits
Radiation power EIRP	FH form 2400 – 2483.5MHz, EIRP $\leq$ 6.91dBm/MHz CCK/OFDM/DBPSK (2400~2483.5MHz) OFDM or DS other than (802.11b/g/n HT20) EIRP $\leq$ 12.14 dBm/MHz OFDM or DS other than (802.11n HT40) EIRP $\leq$ 9.13dBm/MHz Other from 2400~2483.5MHz: 12.14 dBm or less

Operating Environment:

Temperature:	23.2 °C	Humidity:	51 %	Atmospheric Pressure:	101.1 kPa
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6.2 TEST RESULT

Mode	Frequency (MHz)	Antenna power	Gain (dBi)	EIRP (dBm/MHz)		Verdict
		(dBm/MHz)		Result	Limit	
802.11b	2412	4.36	2.95	7.31	$\leq$ 12.14	Pass
	2442	3.29	2.95	6.24	$\leq$ 12.14	Pass
	2472	2.54	2.95	5.49	$\leq$ 12.14	Pass
802.11g	2412	-0.31	2.95	2.64	$\leq$ 12.14	Pass
	2442	-0.36	2.95	2.59	$\leq$ 12.14	Pass
	2472	-0.66	2.95	2.29	$\leq$ 12.14	Pass
802.11n (HT20)	2412	-0.79	2.95	2.16	$\leq$ 12.14	Pass
	2442	-0.15	2.95	2.80	$\leq$ 12.14	Pass
	2472	-1.08	2.95	1.87	$\leq$ 12.14	Pass
802.11n (HT40)	2422	-3.74	2.95	-0.79	$\leq$ 9.13	Pass
	2442	-3.2	2.95	-0.25	$\leq$ 9.13	Pass
	2462	-3.95	2.95	-1.00	$\leq$ 9.13	Pass

7. OCCUPIED BANDWITH AND SPREADING BANDWIDTH

7.1 LIMIT

Item	Limits
Occupied Band Width:	83.5MHz for FHSS; 26MHz for DSSS and OFDM; 26 ~ 40MHz for OFDM(HT40)
Spreading Bandwidth:	≥ 500 kHz (FH, DS)

7.2 TEST PROCEDURES

1. EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode (For FHSS Device).
SA set to 99% of occupied bandwidth to measure occupied bandwidth. The limit is less than 26MHz (For DSSS or OFDM Device), 83.5MHz (For FHSS Device) or 40MHz (For OFDM (HT 40)).
2. SA set to 90% of occupied bandwidth to measure Spread Spectrum Bandwidth and must greater than 500kHz.

7.3 TEST SETUP



7.4 TEST DEVIATION

There is no deviation with the original standard.

7.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

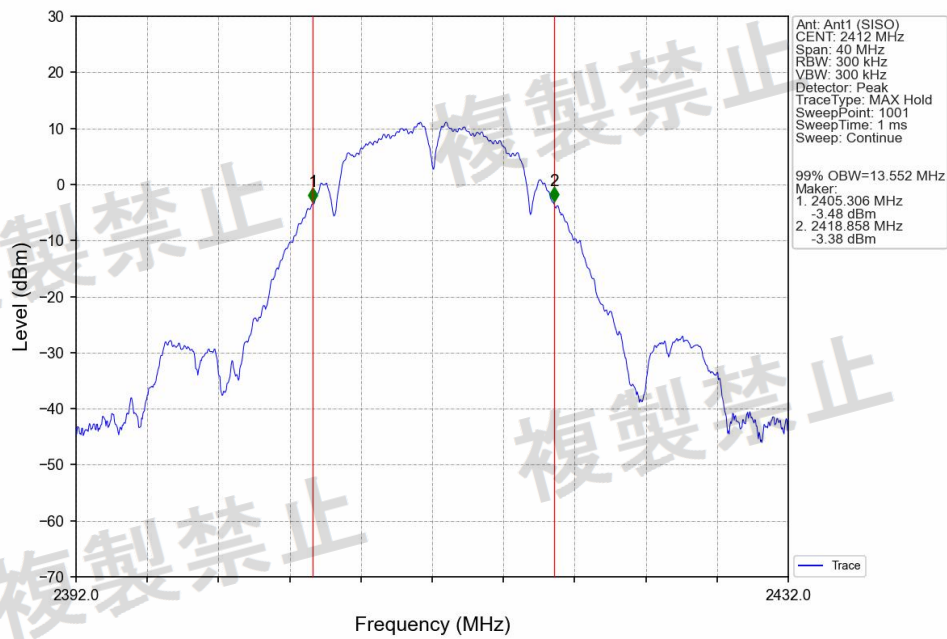
7.6 EUT OPERATION

Operating Environment:					
Temperature:	22.3 °C	Humidity:	54 %	Atmospheric Pressure:	101.1 kPa

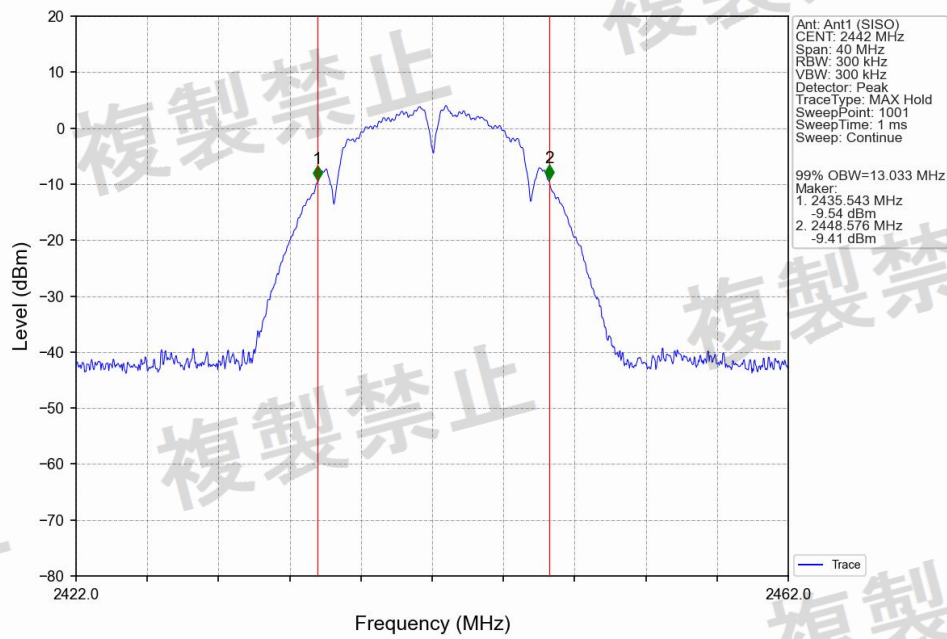
7.7 TEST RESULT

ENV	Mode	TX Type	Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
				ANT1	Limit	
NTNV	802.11b	SISO	2412	13.552	<=26	Pass
			2442	13.033	<=26	Pass
			2472	12.989	<=26	Pass
	802.11g	SISO	2412	16.901	<=40	Pass
			2442	16.893	<=40	Pass
			2472	16.855	<=40	Pass
	802.11n (HT20)	SISO	2412	18.061	<=40	Pass
			2442	18.055	<=40	Pass
			2472	17.991	<=40	Pass
	802.11n (HT40)	SISO	2422	36.196	<=40	Pass
			2442	36.148	<=40	Pass
			2462	36.151	<=40	Pass

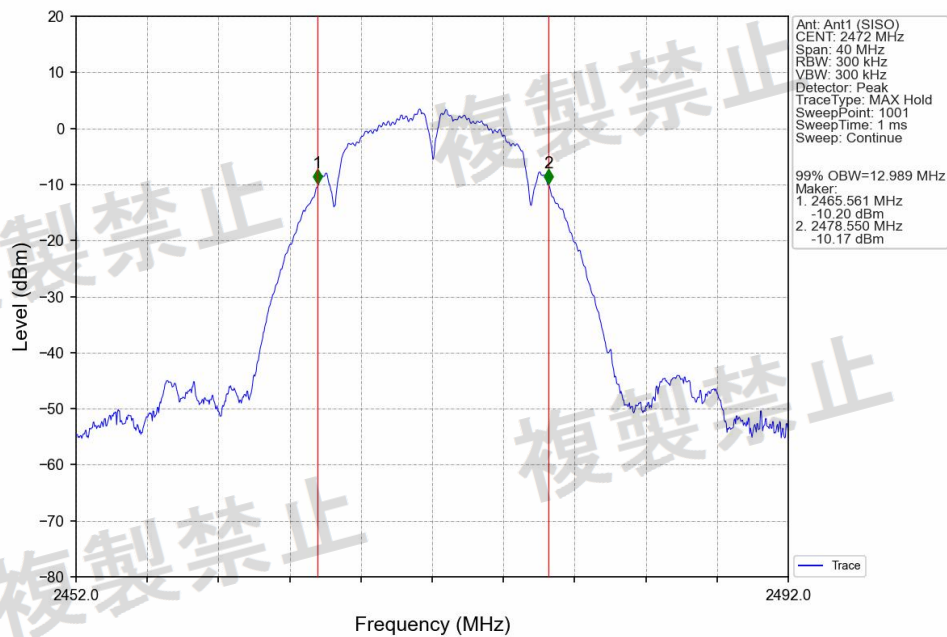
802.11b_2412MHz_Ant1 (SISO)_NTNV



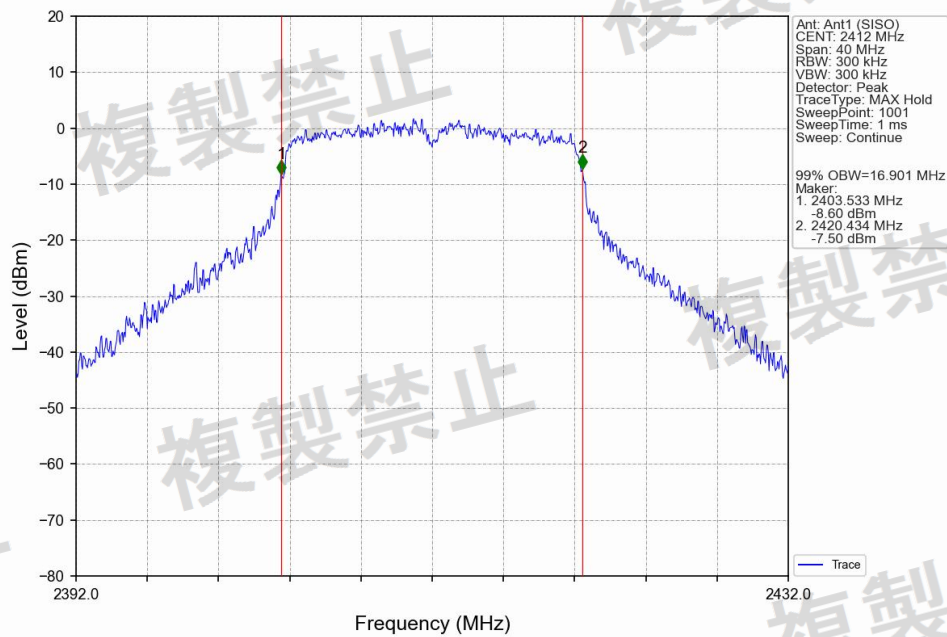
802.11b_2442MHz_Ant1 (SISO)_NTNV



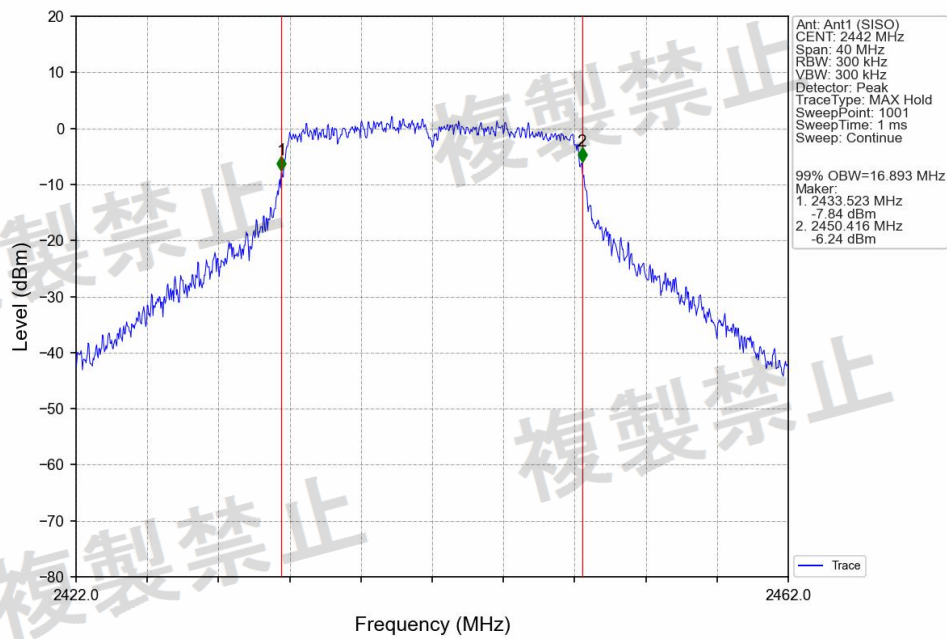
802.11b_2472MHz_Ant1 (SISO)_NTNV



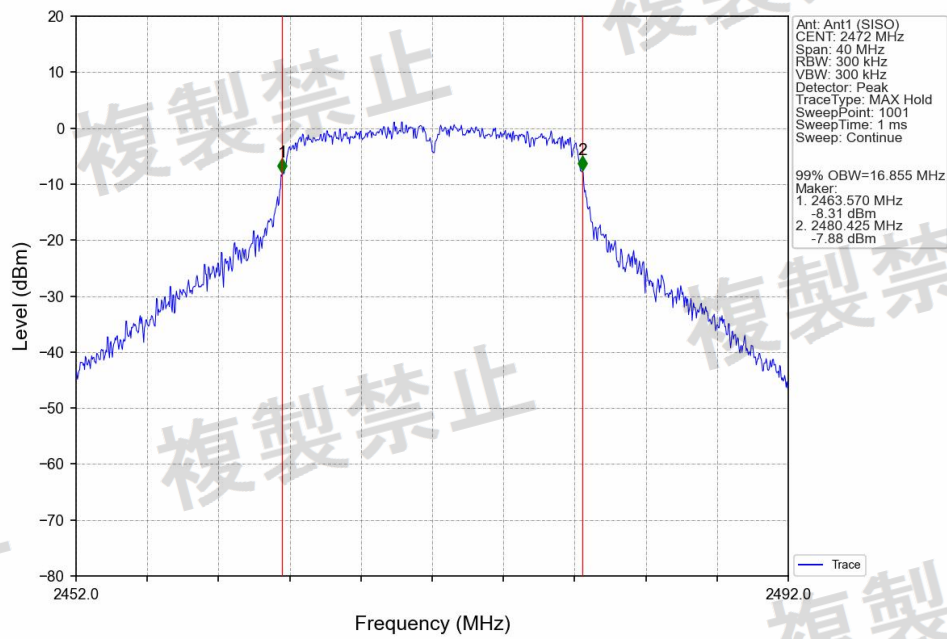
802.11g_2412MHz_Ant1 (SISO)_NTNV



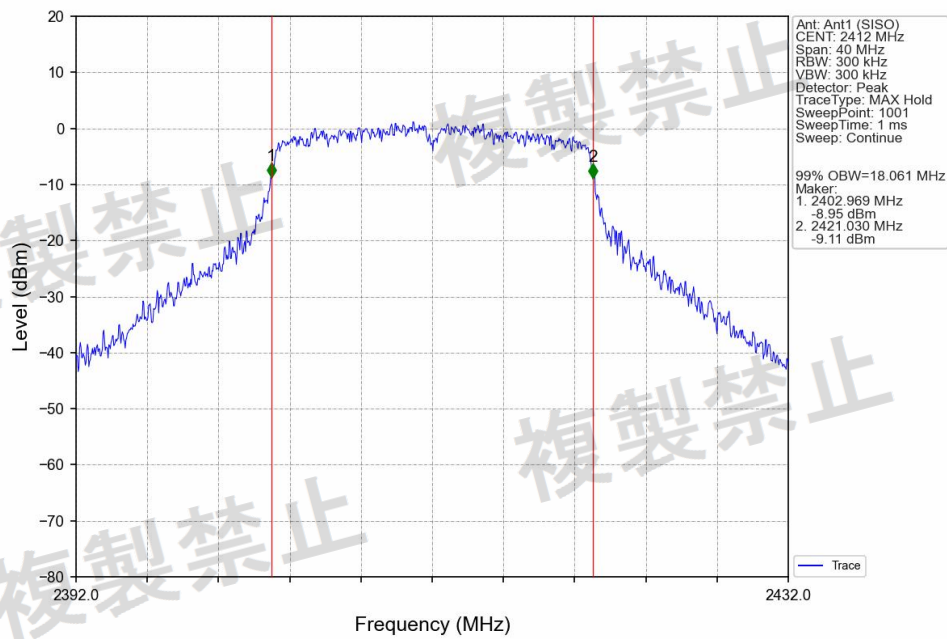
802.11g_2442MHz_Ant1 (SISO)_NTNV



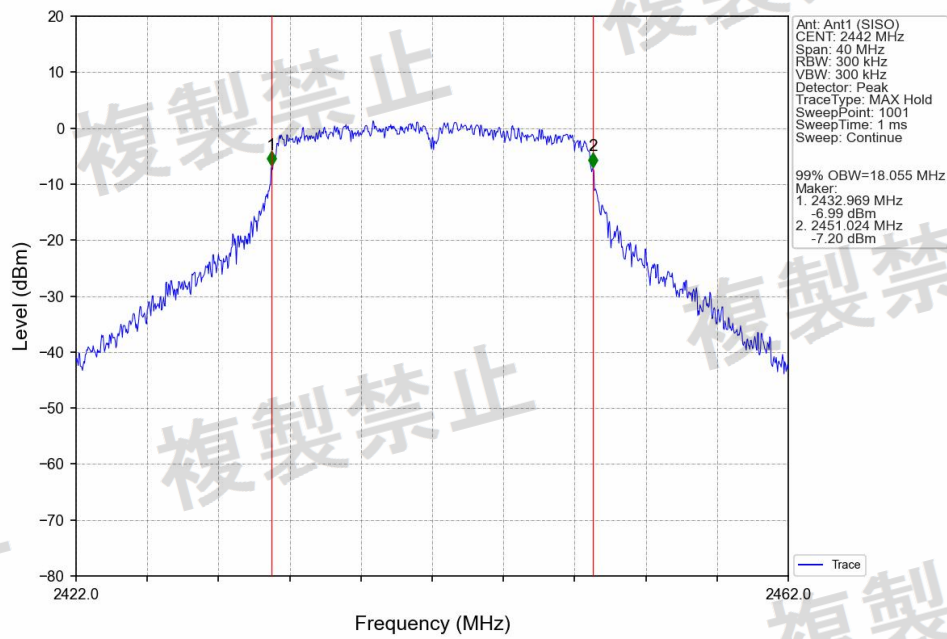
802.11g_2472MHz_Ant1 (SISO)_NTNV



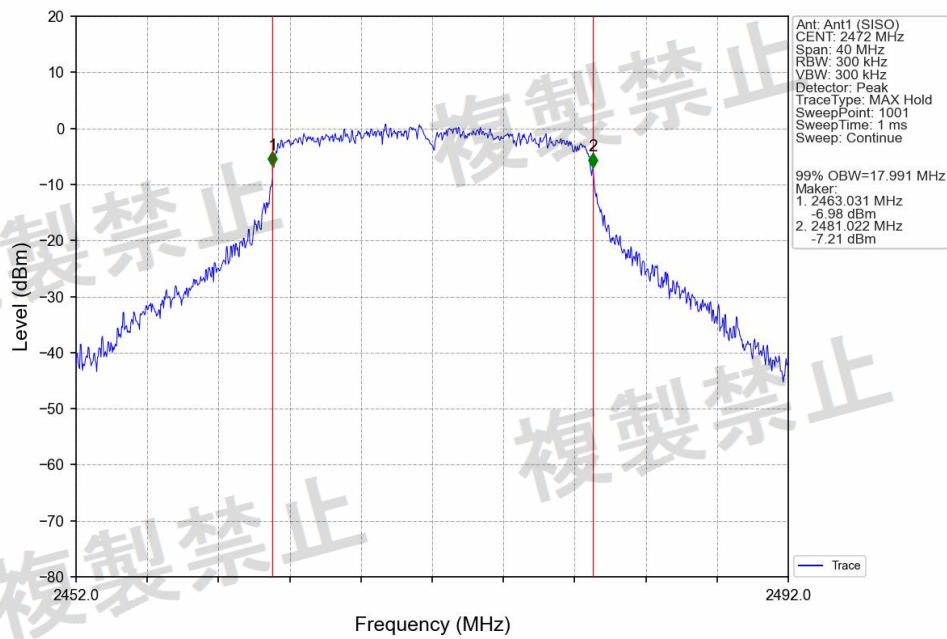
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



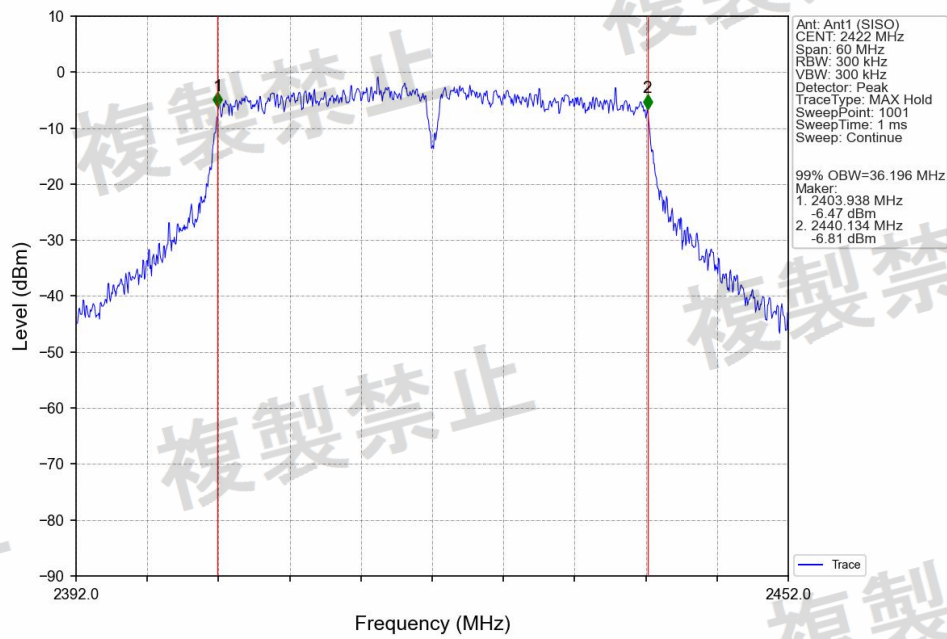
802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV



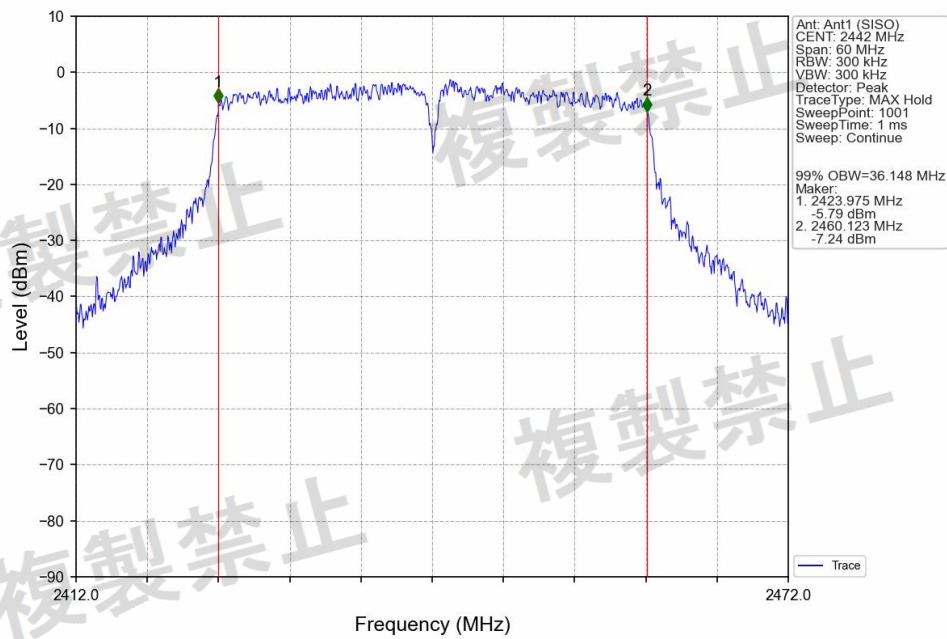
802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV



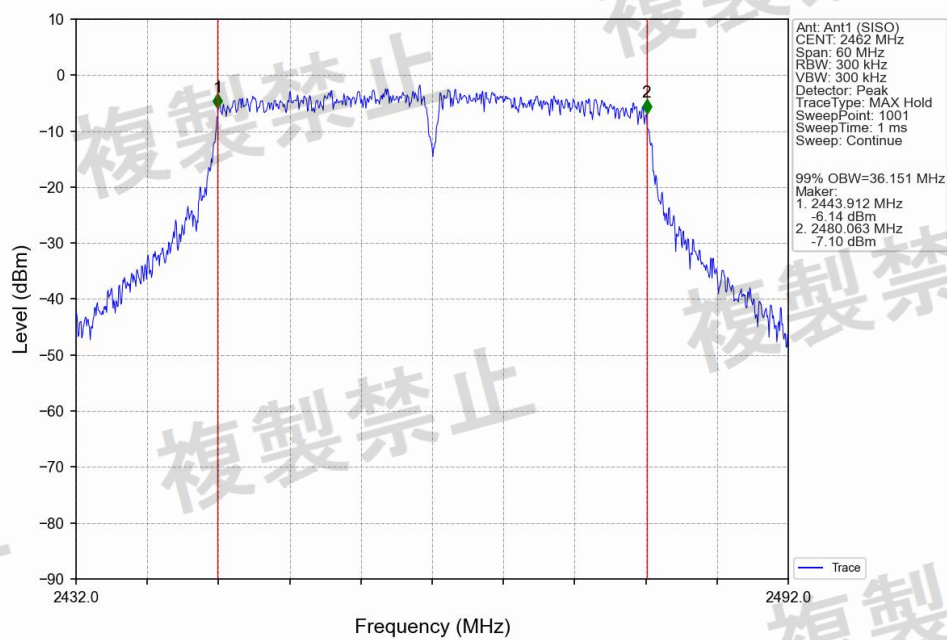
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40) 2442MHz Ant1 (SISO) NTVN



802.11n(HT40) 2462MHz Ant1 (SISO) NTVN



8. UNWANTED EMISSION INTENSITY MEASUREMENT

8.1 LIMIT

Item	Limits
TX Spurious Emission	$\leq 2.5 \text{ Mw/MHz}$ ($30\text{MHz} \leq f \leq 1000\text{MHz}$)
	$\leq 2.5 \text{ }\mu\text{W/MHz}$ ($1000\text{MHz} < f \leq 2387\text{MHz}$)
	$\leq 25 \text{ }\mu\text{W/MHz}$ ($2387\text{MHz} < f \leq 2400\text{MHz}$)
	$\leq 25 \text{ }\mu\text{W/MHz}$ ($2483.5\text{MHz} \leq f < 2496.5\text{MHz}$)
	$\leq 2.5 \text{ }\mu\text{W/MHz}$ ($2496.5\text{MHz} \leq f < 12500\text{MHz}$)

8.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RBW / VBW	1MHz / 1MHz (Below 1GHz)
RBW / VBW	1MHz / 1MHz (Above 1GHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- EUT have transmitted the maximum modulation signal and fixed channelize.
- Setting of SA is following as: Below 1GHz RB: 1MHz / VB: 1MHz, Above 1GHz RB: 1MHz / VB: 1MHz / AT: 10dB Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- Setting of SA is following as 30MHz and stop frequency 1000MHz, then to mark peak reading value + cable loss shall be less than 2.5 μ W.
- Setting of SA is following as 1000MHz and stop frequency 2387MHz, then to mark peak reading value + cable loss shall be less than 2.5 μ W.
- SA adjusted to start frequency 2387MHz and stop frequency 2400MHz, then to mark peak reading value + cable loss shall be less than 25 μ W.
- SA adjusted to start frequency 2483.5MHz and stop frequency 2496.5MHz, then to mark peak reading value + cable loss shall be less than 25 μ W.
- SA adjusted to start frequency 2496.5MHz and stop frequency 12750MHz, then to mark peak reading value + cable loss shall be less than 2.5 μ W.
- When we tested 30MHz-1GHz, we used the RB 100KHz setting for the test. The limit on the test chart was converted. The conversion formula: $-26\text{dBm} + 10 \cdot \log(100\text{K}/1\text{M}) = -36\text{dBm}$.
- If the Result_Value is over the requirement, take total sum of 1MHz band centered at the spur frequency like ACLP measurement as Result_Value.

8.3 TEST SETUP



8.4 TEST DEVIATION

There is no deviation with the original standard.

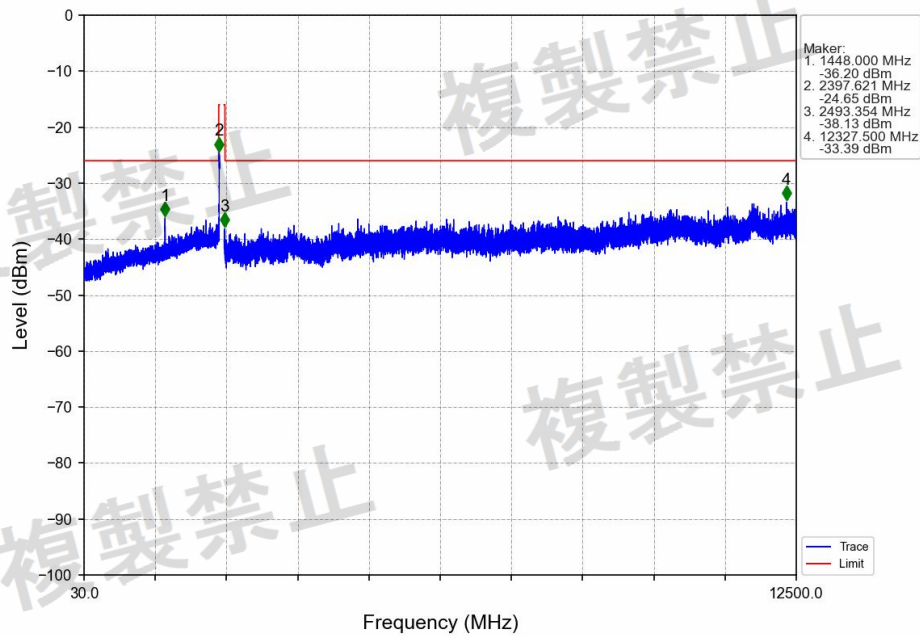
8.5 EUT OPERATION

Operating Environment:					
Temperature:	23 °C	Humidity:	55.4 %	Atmospheric Pressure:	101.1 kPa

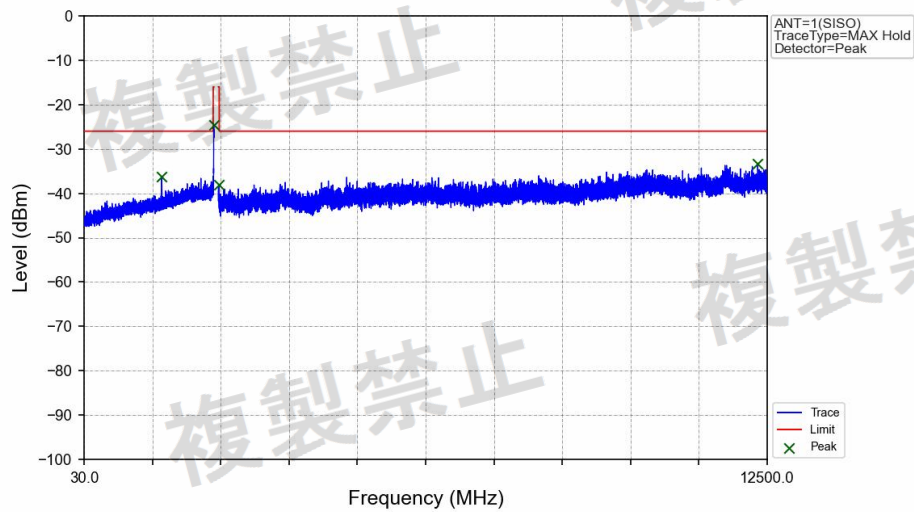
8.6 TEST RESULT

NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
802.11b	SISO	2412	1	30	2387	1448	-36.20	0.240	/	/	2.5	Pass
				2387	2400	2397.621	-24.65	3.428	/	/	25	Pass
				2483.5	2496.5	2493.354	-38.13	0.154	/	/	25	Pass
				2496.5	12500	12327.5	-33.39	0.458	/	/	2.5	Pass
		2442	1	30	2387	2089	-33.13	0.486	/	/	2.5	Pass
				2387	2400	2393.318	-34.38	0.365	/	/	25	Pass
				2483.5	2496.5	2487.439	-34.23	0.378	/	/	25	Pass
				2496.5	12500	10491	-29.79	1.050	/	/	2.5	Pass
		2472	1	30	2387	1485	-44.77	0.033	/	/	2.5	Pass
				2387	2400	2390.016	-48.02	0.016	/	/	25	Pass
				2483.5	2496.5	2485.554	-39.63	0.109	/	/	25	Pass
				2496.5	12500	4944.5	-42.90	0.051	/	/	2.5	Pass
802.11g	SISO	2412	1	30	2387	2201	-42.68	0.054	/	/	2.5	Pass
				2387	2400	2399.584	-11.60	69.183	-31.89	0.647	25	Pass
				2483.5	2496.5	2487.491	-44.02	0.040	/	/	25	Pass
				2496.5	12500	10314.5	-39.12	0.122	/	/	2.5	Pass
		2442	1	30	2387	2113.5	-42.33	0.058	/	/	2.5	Pass
				2387	2400	2389.925	-38.38	0.145	/	/	25	Pass
				2483.5	2496.5	2493.991	-39.44	0.114	/	/	25	Pass
				2496.5	12500	11796.5	-39.60	0.110	/	/	2.5	Pass
		2472	1	30	2387	2010.5	-40.56	0.088	/	/	2.5	Pass
				2387	2400	2391.537	-31.84	0.655	/	/	25	Pass
				2483.5	2496.5	2483.513	-13.43	45.394	-31.47	0.713	25	Pass
				2496.5	12500	11440	-39.78	0.105	/	/	2.5	Pass
802.11n (HT20)	SISO	2412	1	30	2387	2133.5	-42.94	0.051	/	/	2.5	Pass
				2387	2400	2399.519	-11.80	66.069	-31.22	0.755	25	Pass
				2483.5	2496.5	2485.255	-39.67	0.108	/	/	25	Pass
				2496.5	12500	11873	-38.92	0.128	/	/	2.5	Pass
		2442	1	30	2387	2041	-40.28	0.094	/	/	2.5	Pass
				2387	2400	2399.831	-33.43	0.454	/	/	25	Pass
				2483.5	2496.5	2488.219	-44.10	0.039	/	/	25	Pass
				2496.5	12500	12223	-39.61	0.109	/	/	2.5	Pass
		2472	1	30	2387	1904.5	-43.22	0.048	/	/	2.5	Pass
				2387	2400	2396.243	-34.57	0.349	/	/	25	Pass
				2483.5	2496.5	2483.63	-11.42	72.111	-30.42	0.908	25	Pass
				2496.5	12500	12255	-39.26	0.119	/	/	2.5	Pass
802.11n (HT40)	SISO	2422	1	30	2387	2381.5	-40.41	0.091	/	/	2.5	Pass
				2387	2400	2399.922	-17.04	19.770	-35.66	0.272	25	Pass
				2483.5	2496.5	2488.908	-37.40	0.182	/	/	25	Pass
				2496.5	12500	11808.5	-39.94	0.101	/	/	2.5	Pass
		2442	1	30	2387	2334.5	-38.33	0.147	/	/	2.5	Pass
				2387	2400	2397.179	-35.27	0.297	/	/	25	Pass
				2483.5	2496.5	2484.722	-37.62	0.173	/	/	25	Pass
				2496.5	12500	10312.5	-39.97	0.101	/	/	2.5	Pass
		2462	1	30	2387	2174.5	-39.17	0.121	/	/	2.5	Pass
				2387	2400	2391.745	-31.43	0.719	/	/	25	Pass
				2483.5	2496.5	2483.656	-18.24	14.997	-36.31	0.234	25	Pass
				2496.5	12500	12294.5	-40.13	0.097	/	/	2.5	Pass

802.11b_2412MHz_Ant1 (SISO)_NTNV

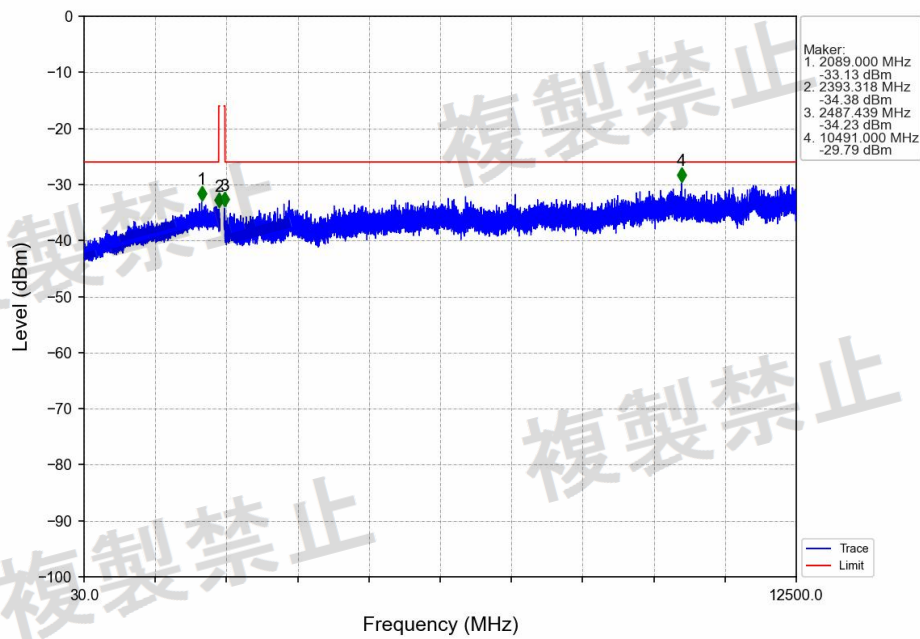


802.11b_2412MHz_Ant1 (SISO)_NTNV

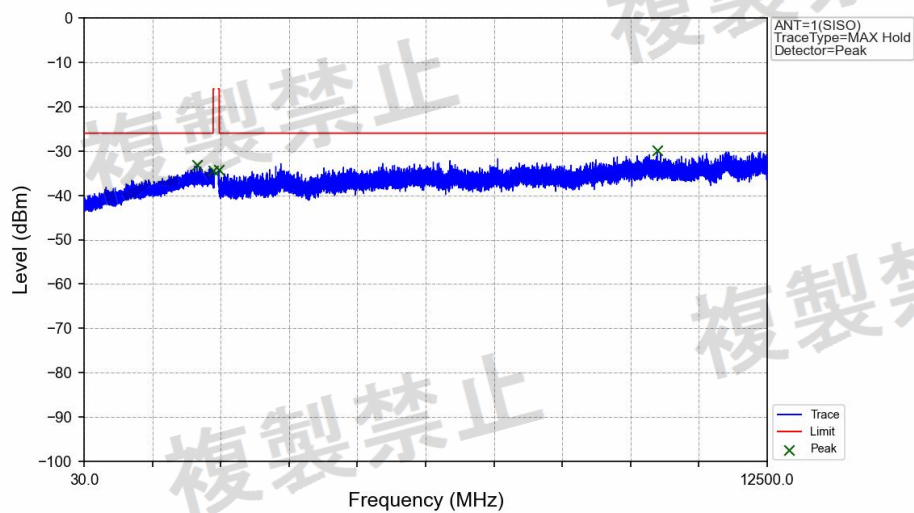


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	1448.000	-36.20	/	-26	Pass
2387	2400	1	1	2397.621	-24.65	/	-16	Pass
2483.5	2496.5	1	1	2493.354	-38.13	/	-16	Pass
2496.5	12500	1	1	12327.500	-33.39	/	-26	Pass

802.11b_2442MHz_Ant1 (SISO)_NTNV

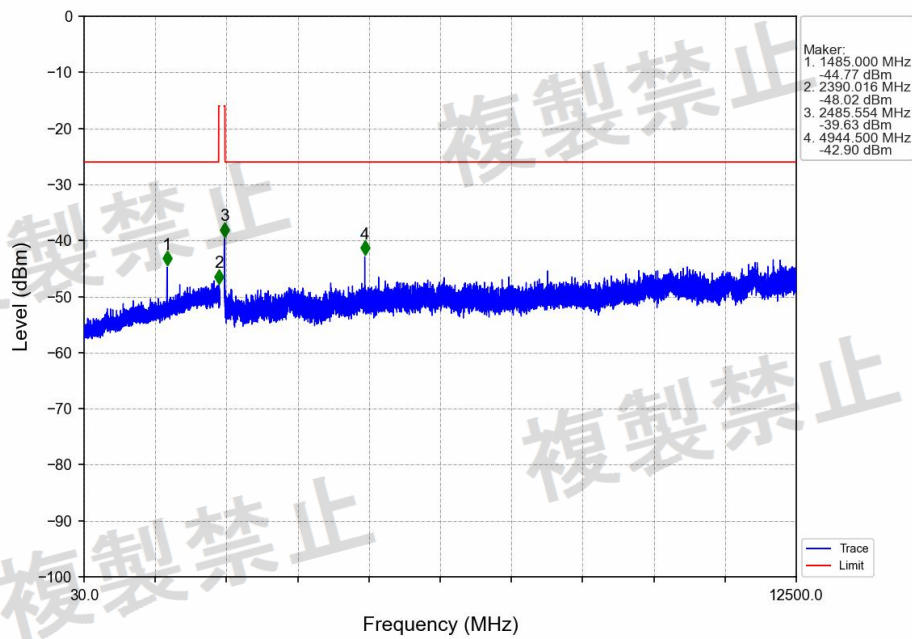


802.11b_2442MHz_Ant1 (SISO)_NTNV

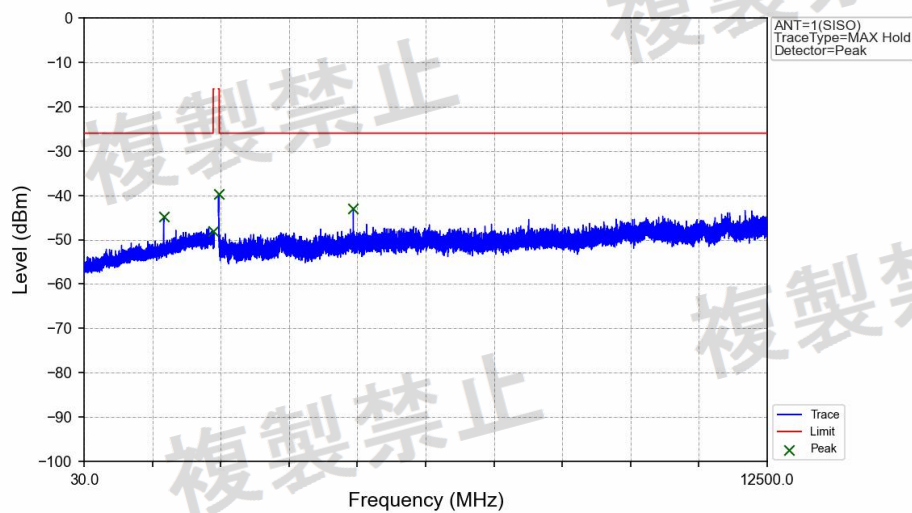


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2089.000	-33.13	/	-26	Pass
2387	2400	1	1	2393.318	-34.38	/	-16	Pass
2483.5	2496.5	1	1	2487.439	-34.23	/	-16	Pass
2496.5	12500	1	1	10491.000	-29.79	/	-26	Pass

802.11b_2472MHz_Ant1 (SISO)_NTNV

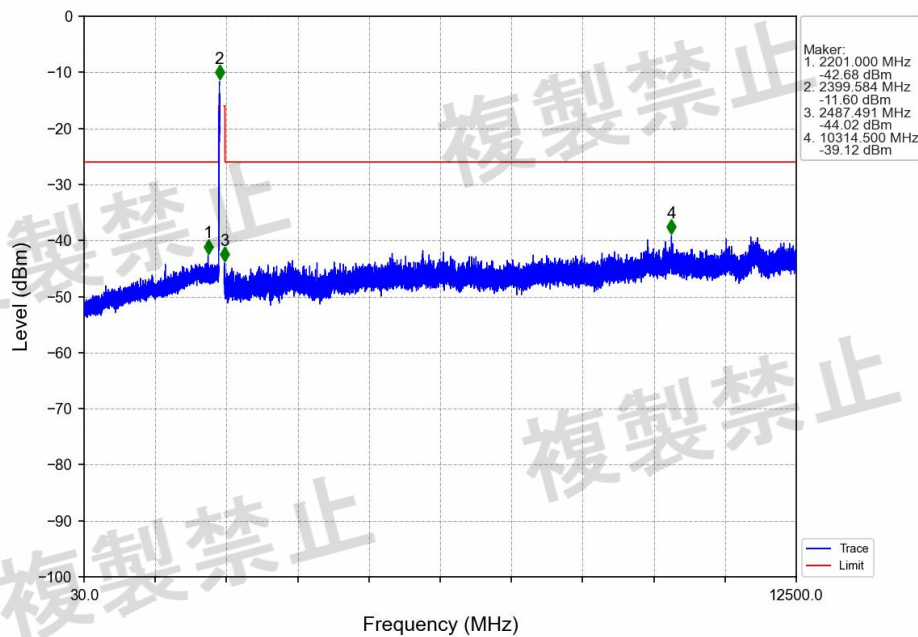


802.11b_2472MHz_Ant1 (SISO)_NTNV

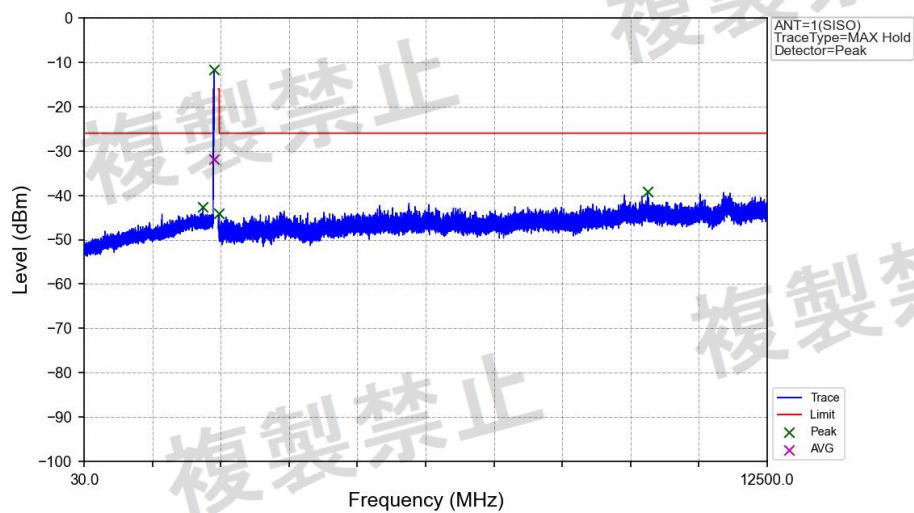


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	1485.000	-44.77	/	-26	Pass
2387	2400	1	1	2390.016	-48.02	/	-16	Pass
2483.5	2496.5	1	1	2485.554	-39.63	/	-16	Pass
2496.5	12500	1	1	4944.500	-42.90	/	-26	Pass

802.11g_2412MHz_Ant1 (SISO)_NTNV

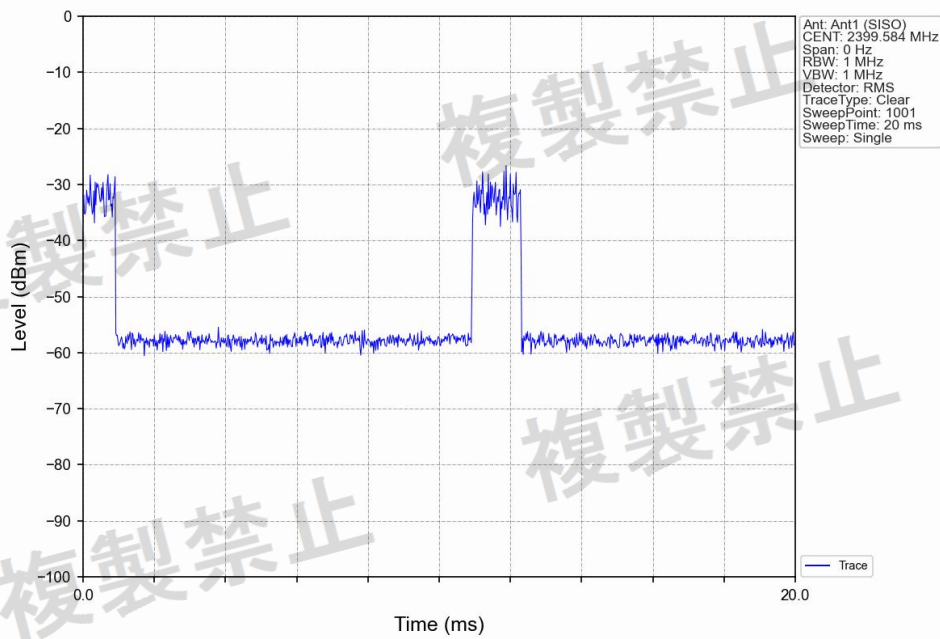


802.11g_2412MHz_Ant1 (SISO)_NTNV

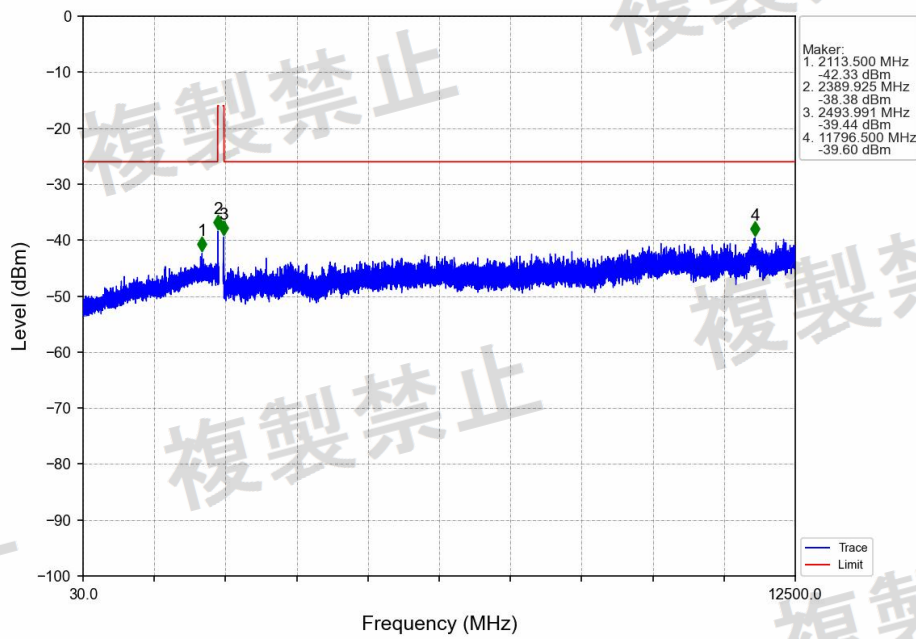


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2201.000	-42.68	/	-26	Pass
2387	2400	1	1	2399.584	-11.60	-31.89	-16	Pass
2483.5	2496.5	1	1	2487.491	-44.02	/	-16	Pass
2496.5	12500	1	1	10314.500	-39.12	/	-26	Pass

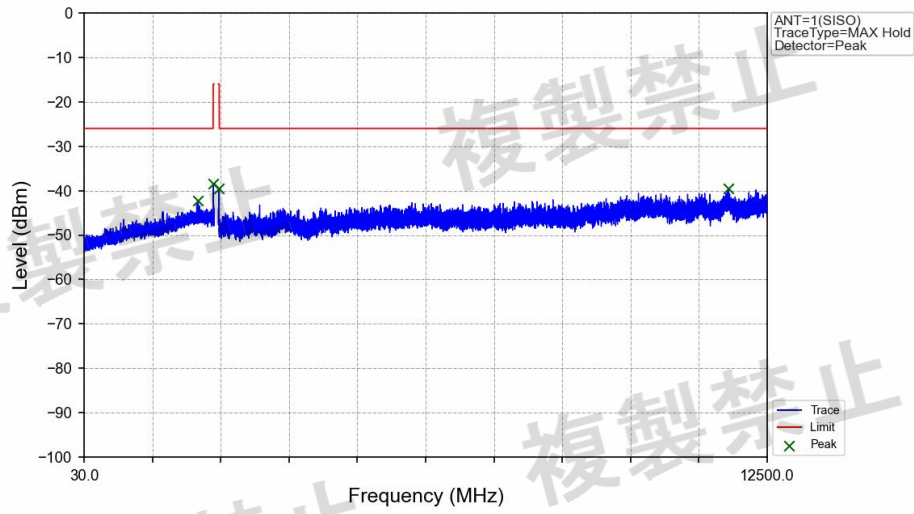
802.11g_2412MHz_Ant1 (SISO)_NTNV



802.11g_2442MHz_Ant1 (SISO)_NTNV

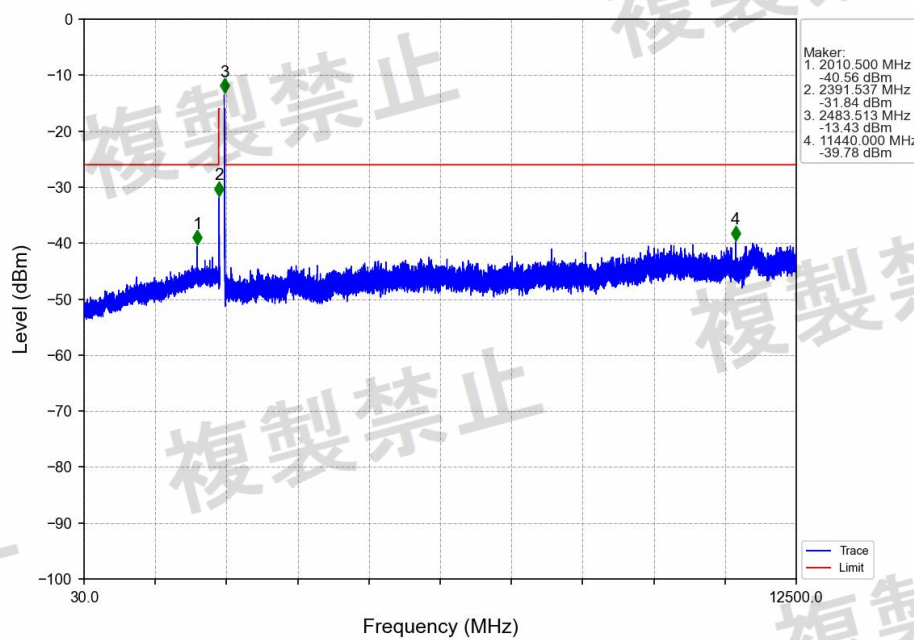


802.11g_2442MHz_Ant1 (SISO)_NTNV

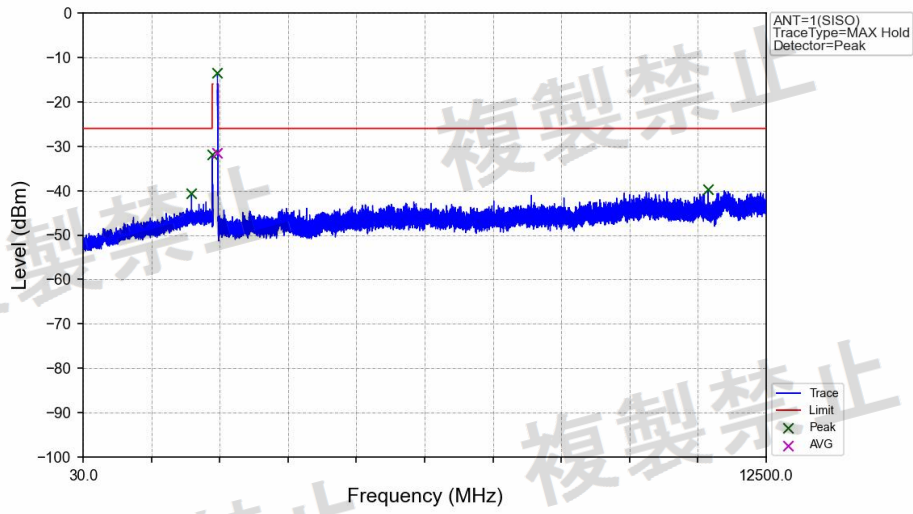


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2113.500	-42.33	/	-26	Pass
2387	2400	1	1	2389.925	-38.38	/	-16	Pass
2483.5	2496.5	1	1	2493.991	-39.44	/	-16	Pass
2496.5	12500	1	1	11796.500	-39.60	/	-26	Pass

802.11g_2472MHz_Ant1 (SISO)_NTNV

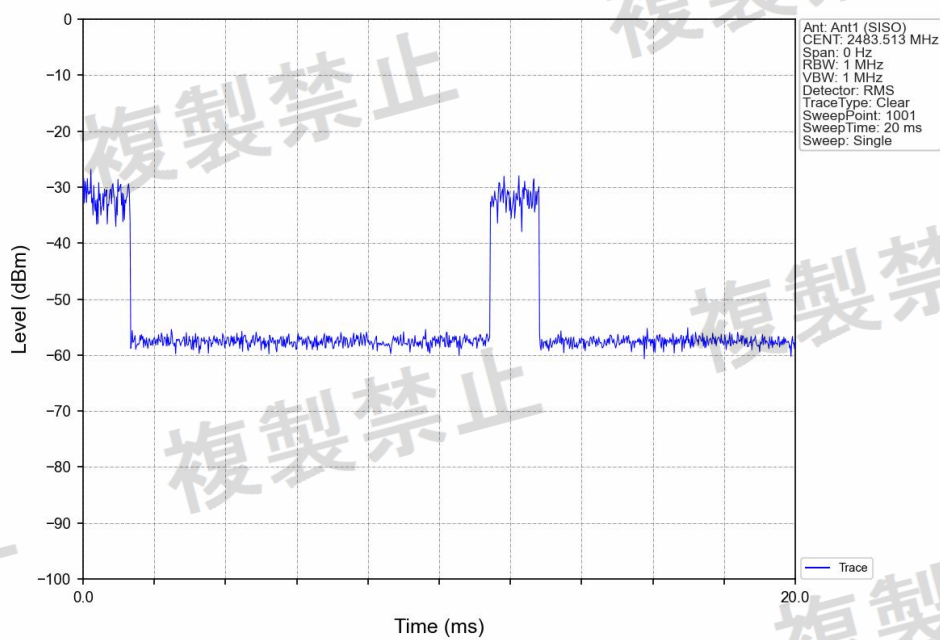


802.11g_2472MHz_Ant1 (SISO)_NTNV

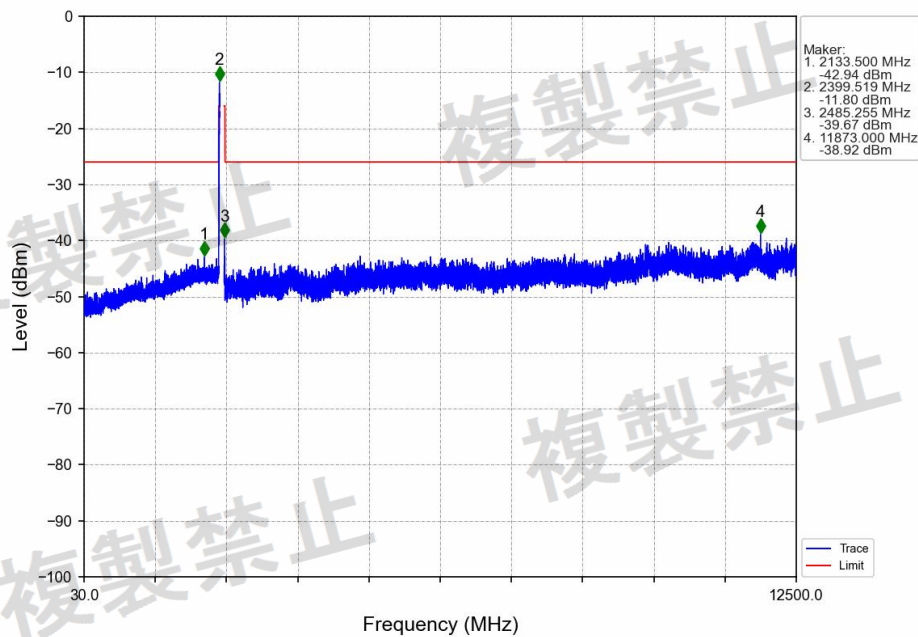


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2010.500	-40.56	/	-26	Pass
2387	2400	1	1	2391.537	-31.84	/	-16	Pass
2483.5	2496.5	1	1	2483.513	-13.43	-31.47	-16	Pass
2496.5	12500	1	1	11440.000	-39.78	/	-26	Pass

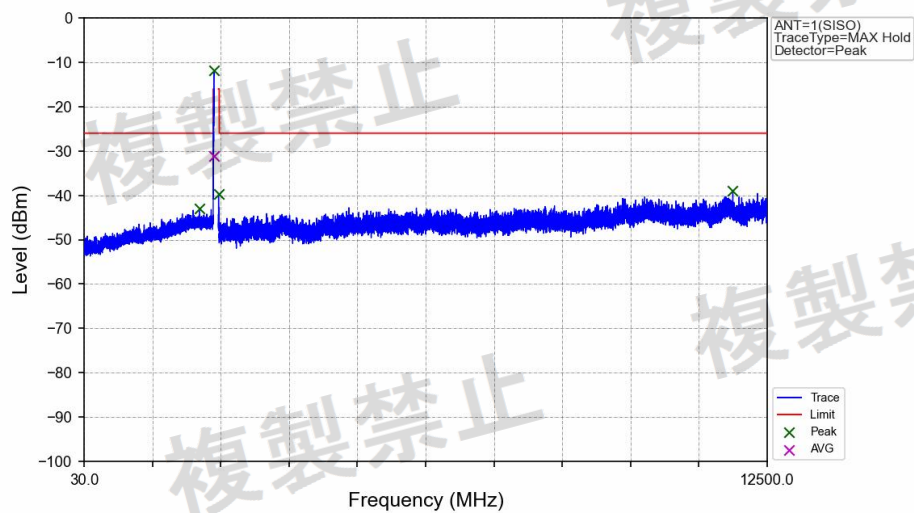
802.11g_2472MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

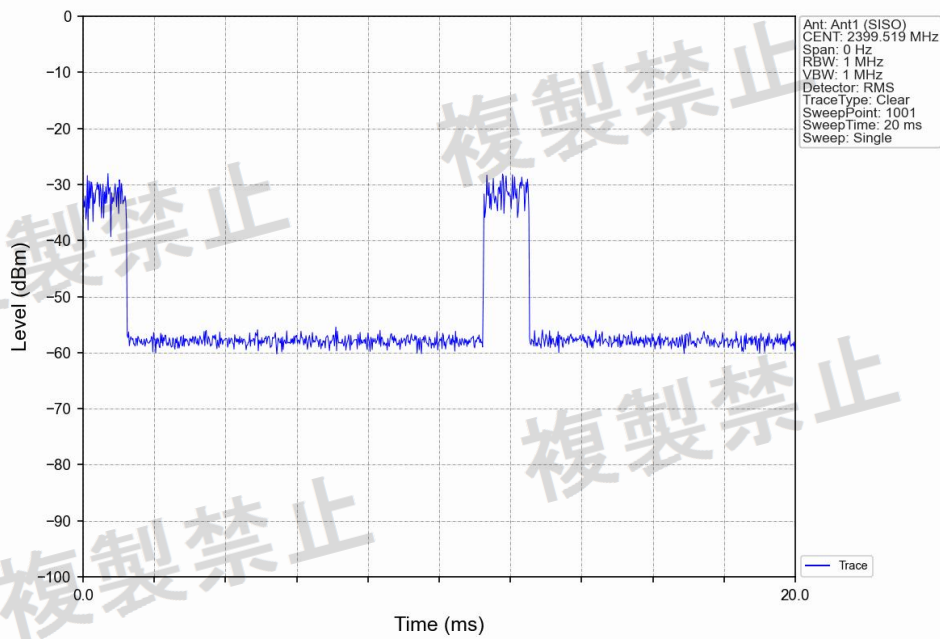


802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

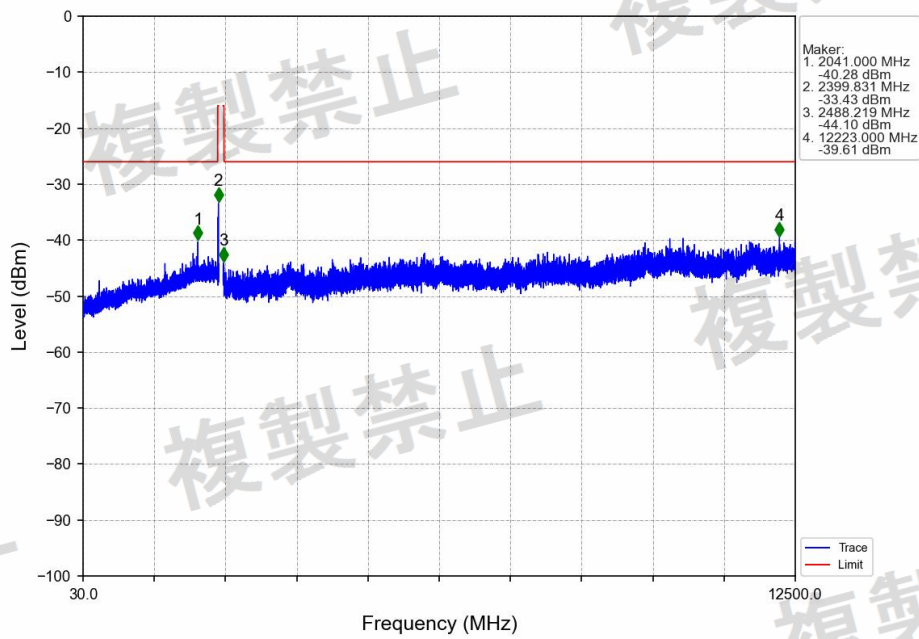


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2133.500	-42.94	/	-26	Pass
2387	2400	1	1	2399.519	-11.80	-31.22	-16	Pass
2483.5	2496.5	1	1	2485.255	-39.67	/	-16	Pass
2496.5	12500	1	1	11873.000	-38.92	/	-26	Pass

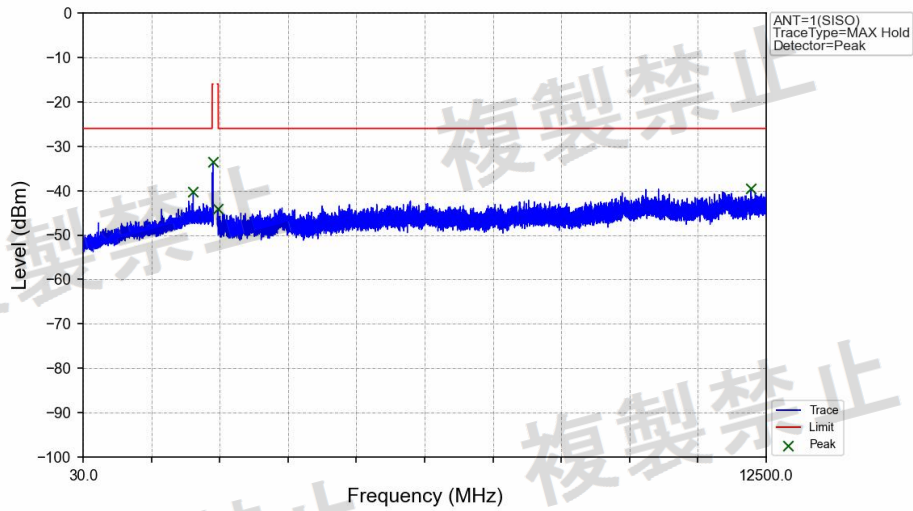
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

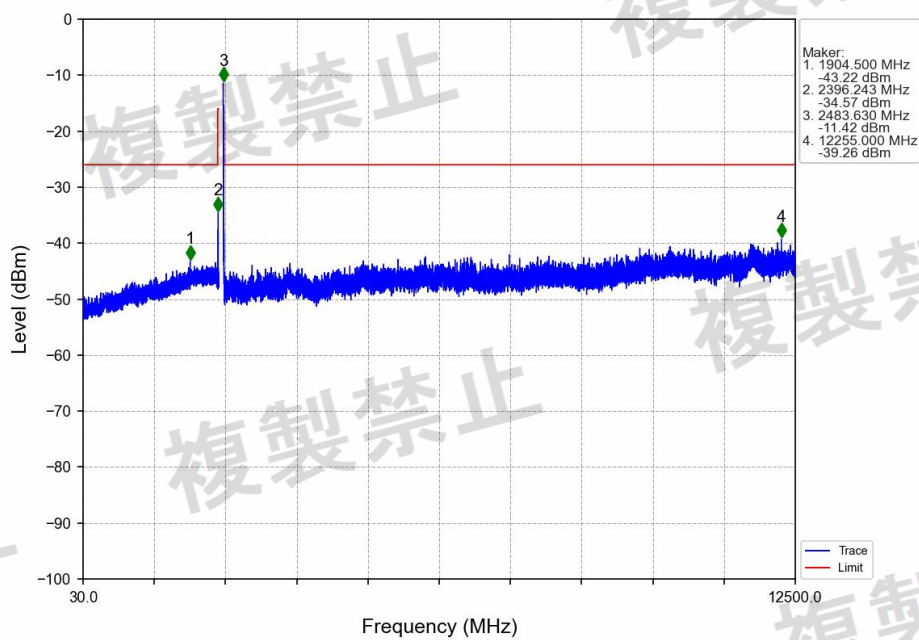


802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

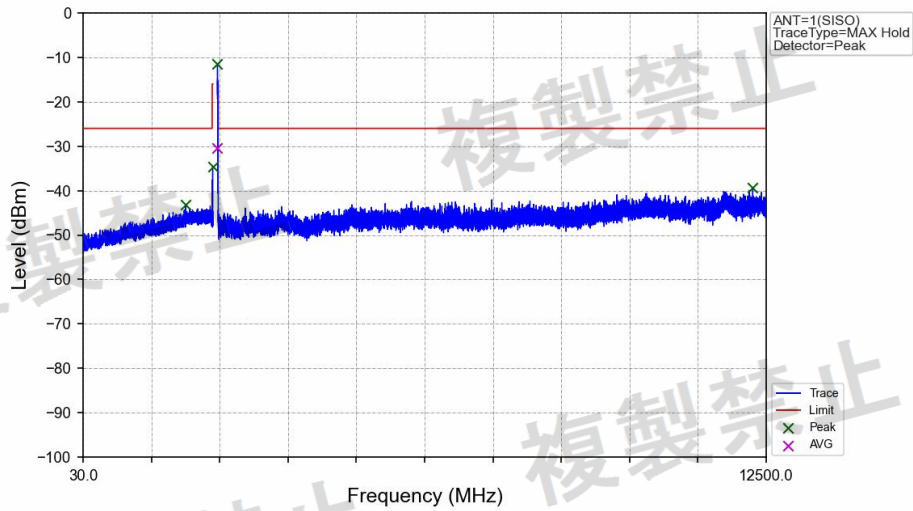


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2041.000	-40.28	/	-26	Pass
2387	2400	1	1	2399.831	-33.43	/	-16	Pass
2483.5	2496.5	1	1	2488.219	-44.10	/	-16	Pass
2496.5	12500	1	1	12223.000	-39.61	/	-26	Pass

802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

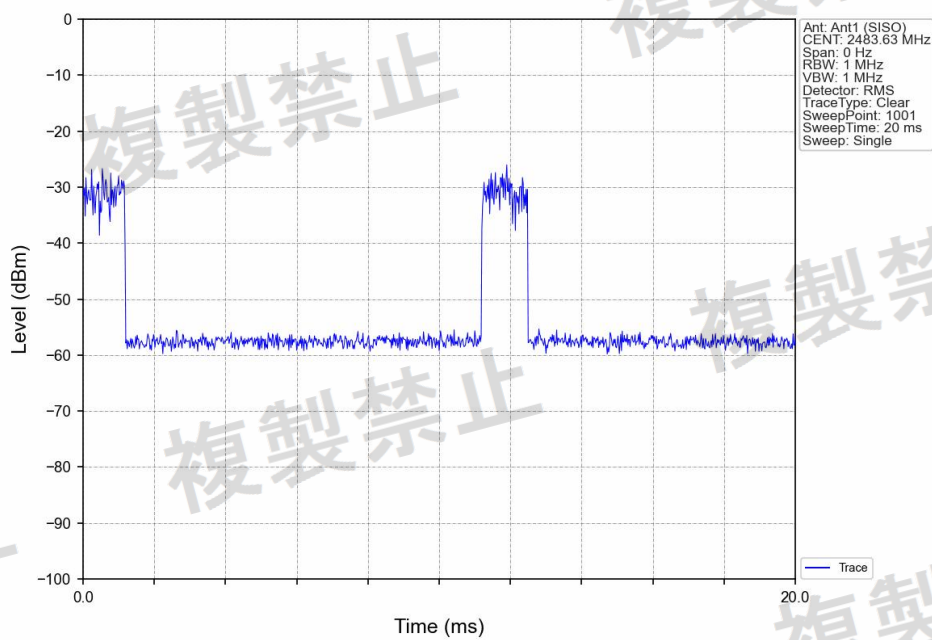


802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

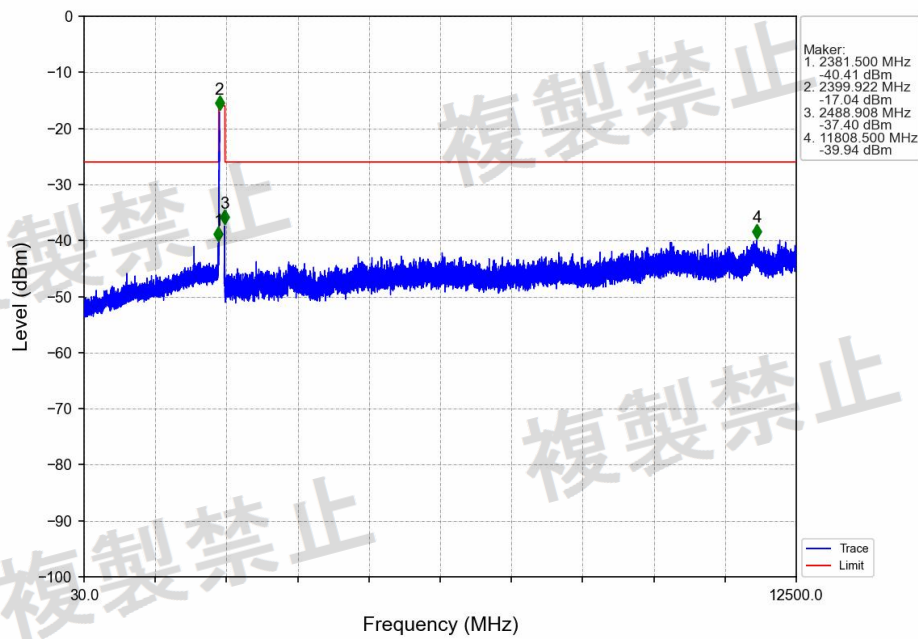


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	1904.500	-43.22	/	-26	Pass
2387	2400	1	1	2396.243	-34.57	/	-16	Pass
2483.5	2496.5	1	1	2483.630	-11.42	-30.42	-16	Pass
2496.5	12500	1	1	12255.000	-39.26	/	-26	Pass

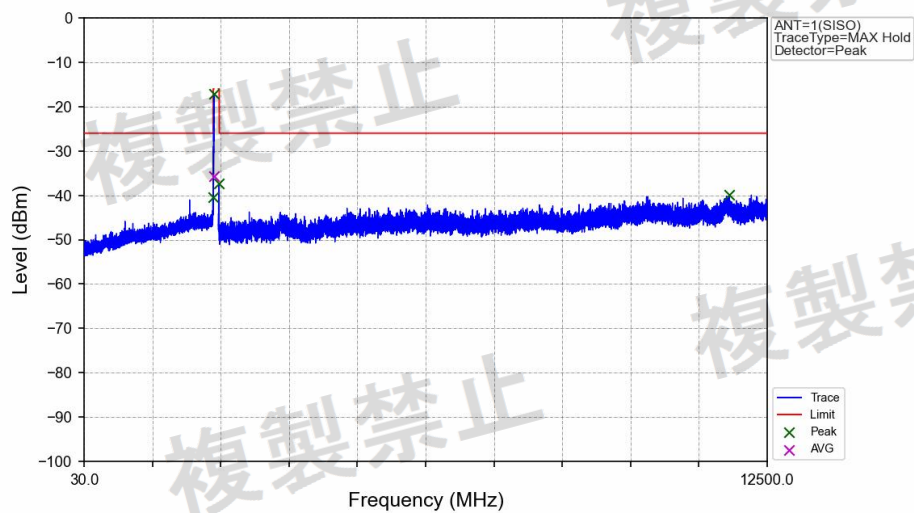
802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

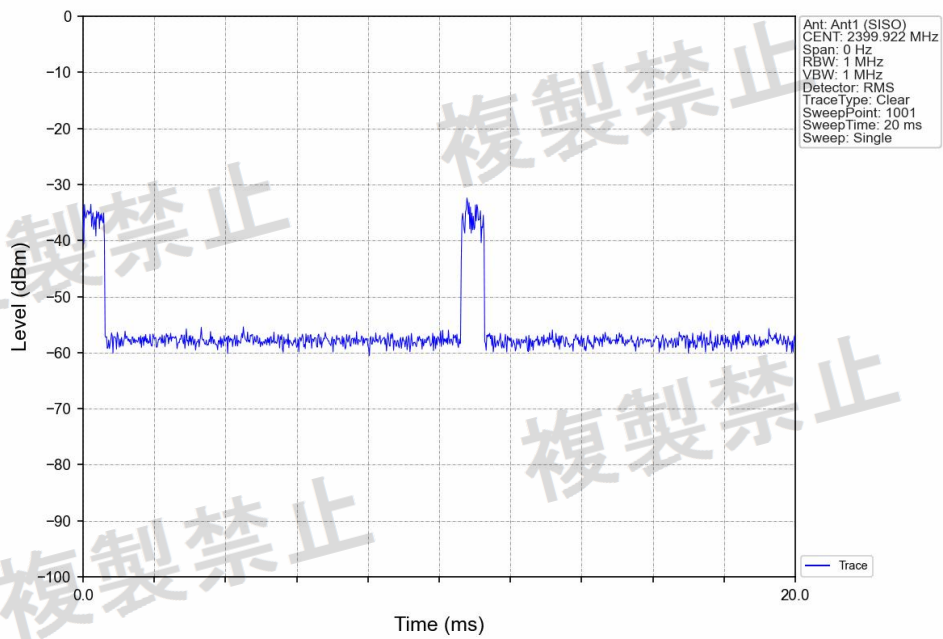


802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

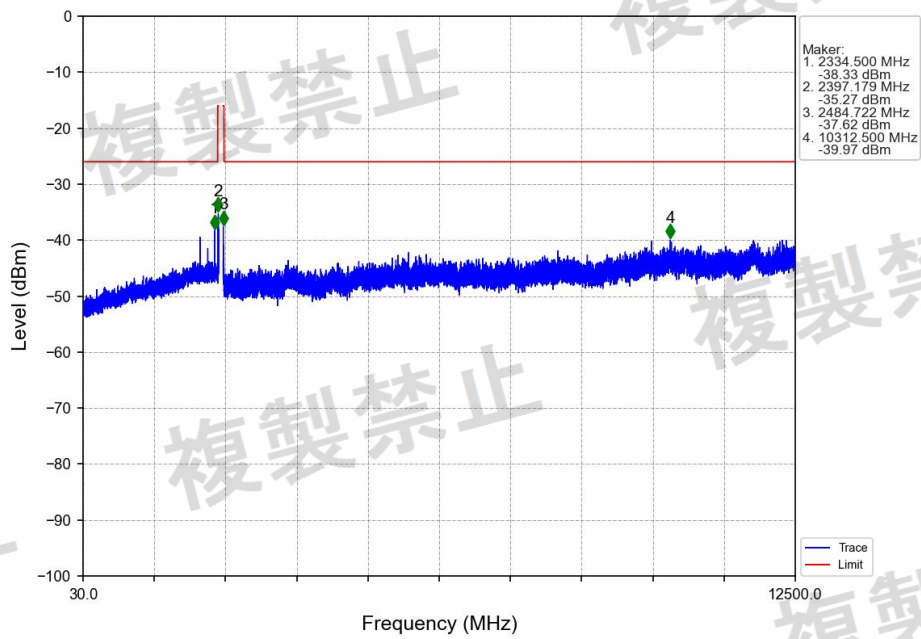


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2381.500	-40.41	/	-26	Pass
2387	2400	1	1	2399.922	-17.04	-35.66	-16	Pass
2483.5	2496.5	1	1	2488.908	-37.40	/	-16	Pass
2496.5	12500	1	1	11808.500	-39.94	/	-26	Pass

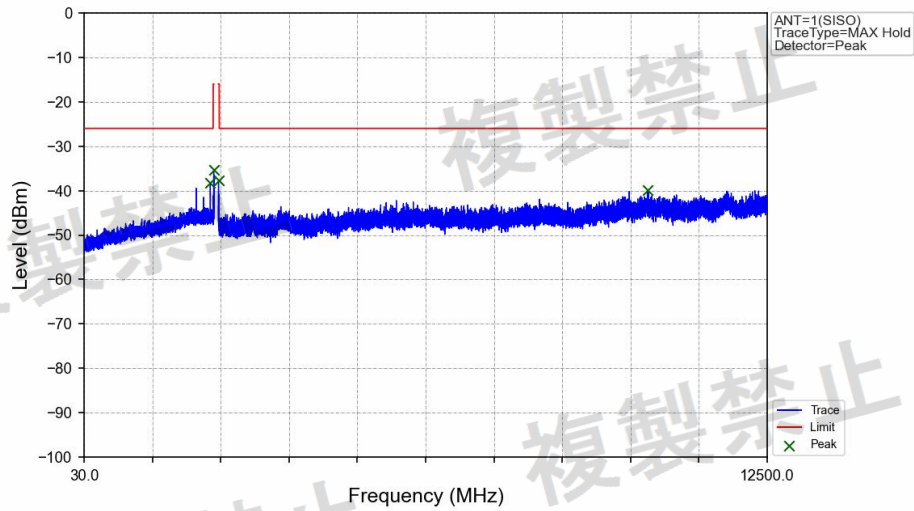
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

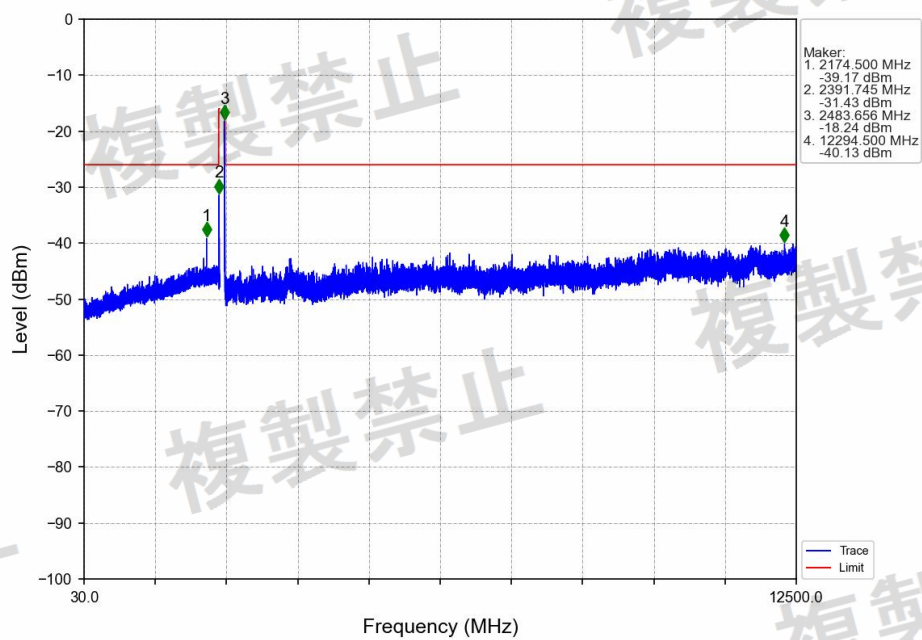


802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

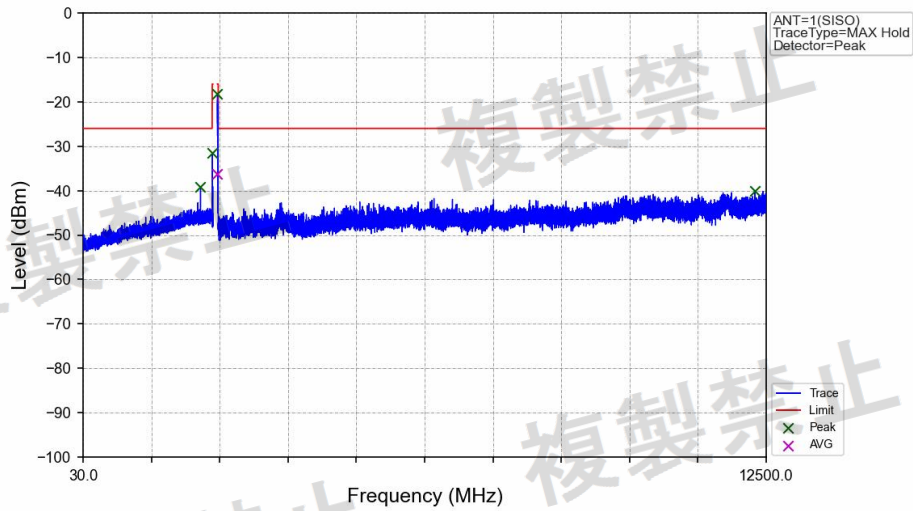


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2334.500	-38.33	/	-26	Pass
2387	2400	1	1	2397.179	-35.27	/	-16	Pass
2483.5	2496.5	1	1	2484.722	-37.62	/	-16	Pass
2496.5	12500	1	1	10312.500	-39.97	/	-26	Pass

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV

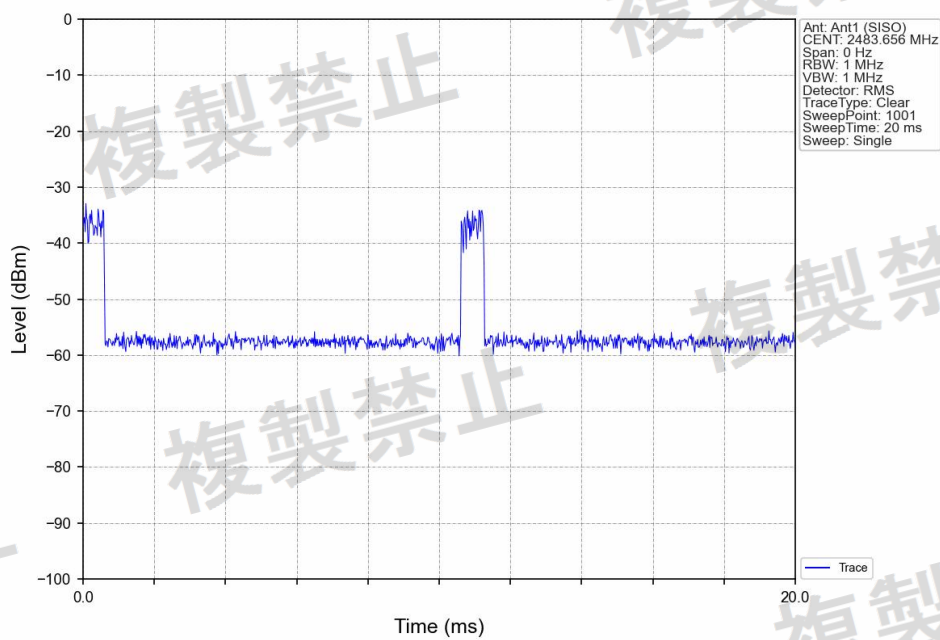


802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2174.500	-39.17	/	-26	Pass
2387	2400	1	1	2391.745	-31.43	/	-16	Pass
2483.5	2496.5	1	1	2483.656	-18.24	-36.31	-16	Pass
2496.5	12500	1	1	12294.500	-40.13	/	-26	Pass

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



9. IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

9.1 LIMIT

Item	Limits
RX Spurious Emission:	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)

9.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RBW	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
VBW	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW.
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW.
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

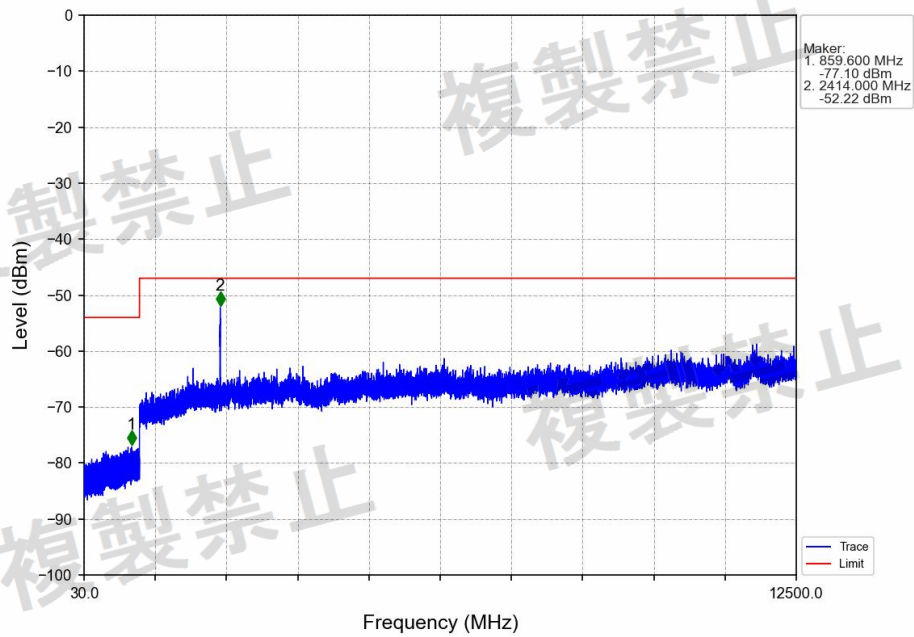
9.3 EUT OPERATION

Operating Environment:					
Temperature:	23.2 °C	Humidity:	55.1 %	Atmospheric Pressure:	101.1 kPa

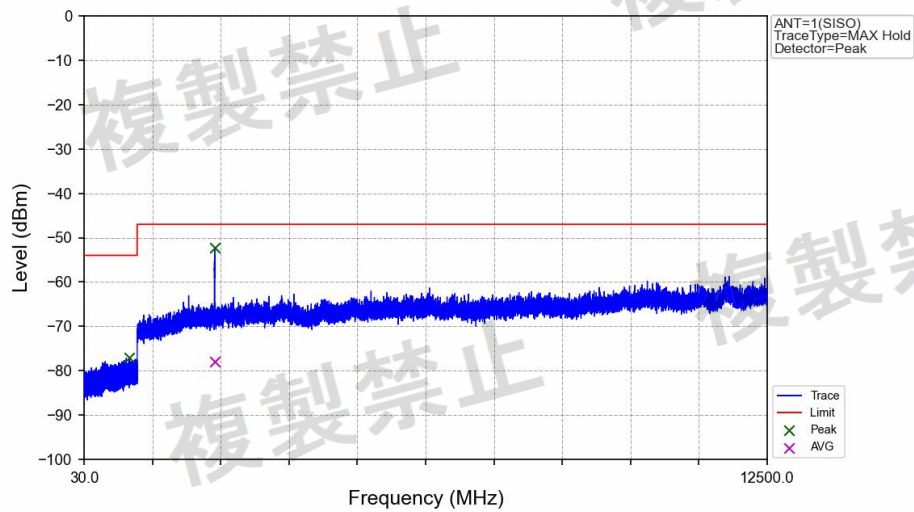
9.4 TEST RESULT

NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
802.11b	SISO	2412	1	30	1000	859.6	-77.10	0.019	/	/	4	Pass
				1000	12500	2414	-52.22	5.998	-77.92	0.016	20	Pass
		2442	1	30	1000	920	-76.29	0.023	/	/	4	Pass
				1000	12500	2414.5	-49.88	10.280	-77.97	0.016	20	Pass
		2472	1	30	1000	5187.5	-55.54	2.793	-70.19	0.096	20	Pass
				1000	12500	2415	-52.60	5.495	-77.99	0.016	20	Pass
802.11g	SISO	2412	1	30	1000	968.15	-76.06	0.025	/	/	4	Pass
				1000	12500	715.15	-76.81	0.021	/	/	4	Pass
		2442	1	30	1000	2412.5	-51.18	7.621	-77.96	0.016	20	Pass
				1000	12500	5187.5	-49.76	10.568	-77.63	0.017	20	Pass
		2472	1	30	1000	846.15	-76.28	0.024	/	/	4	Pass
				1000	12500	2412	-44.61	34.594	-78.00	0.016	20	Pass
802.11n (HT20)	SISO	2412	1	30	1000	5173.5	-51.22	7.551	-77.65	0.017	20	Pass
				1000	12500	939.95	-76.36	0.023	/	/	4	Pass
		2442	1	30	1000	2411	-49.55	11.092	-77.95	0.016	20	Pass
				1000	12500	999.25	-76.47	0.023	/	/	4	Pass
		2472	1	30	1000	2414	-49.69	10.740	-77.96	0.016	20	Pass
				1000	12500	5178.5	-49.70	10.715	-77.65	0.017	20	Pass
802.11n (HT40)	SISO	2422	1	30	1000	930.3	-76.22	0.024	/	/	4	Pass
				1000	12500	2414	-47.90	16.218	-77.94	0.016	20	Pass
		2442	1	30	1000	5188	-49.43	11.402	-77.61	0.017	20	Pass
				1000	12500	832.7	-77.03	0.020	/	/	4	Pass
		2462	1	30	1000	2411	-52.05	6.237	-60.88	0.817	20	Pass
				1000	12500	872.8	-76.72	0.021	/	/	4	Pass
802.11n (HT40)	SISO	2422	1	30	1000	2414	-51.78	6.637	-77.92	0.016	20	Pass
				1000	12500	884.75	-75.26	0.030	/	/	4	Pass
		2442	1	30	1000	2411	-50.46	8.995	-59.51	1.119	20	Pass
				1000	12500	5176	-47.48	17.865	-77.67	0.017	20	Pass
		2462	1	30	1000	792.75	-77.10	0.019	/	/	4	Pass
				1000	12500	2411	-50.87	8.185	-78.00	0.016	20	Pass

802.11b_2412MHz_Ant1 (SISO) NTN

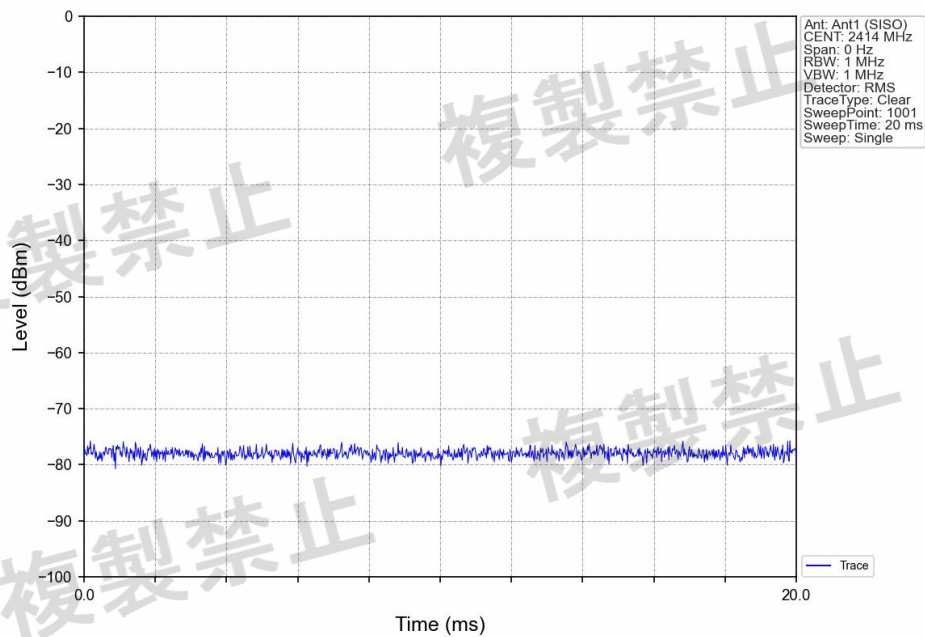


802.11b_2412MHz_Ant1 (SISO) NTN

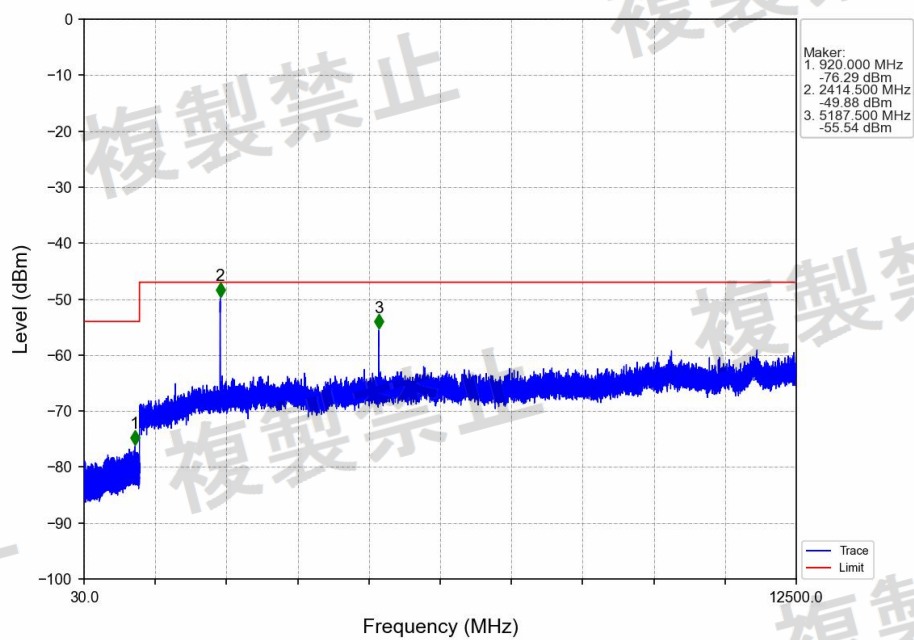


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	859.600	-77.10	/	-54	Pass
1000	12500	1	1	2414.000	-52.22	-77.92	-47	Pass

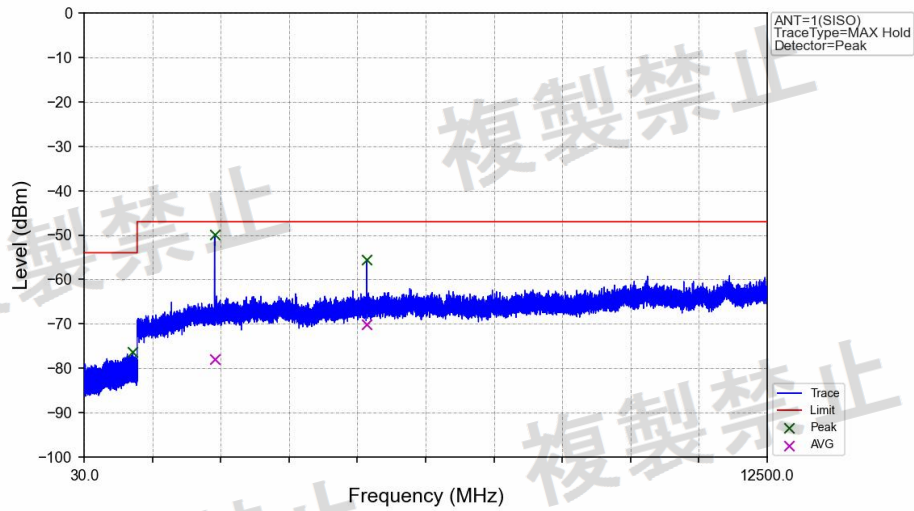
802.11b_2412MHz_Ant1 (SISO)_NTNV



802.11b_2442MHz_Ant1 (SISO)_NTNV

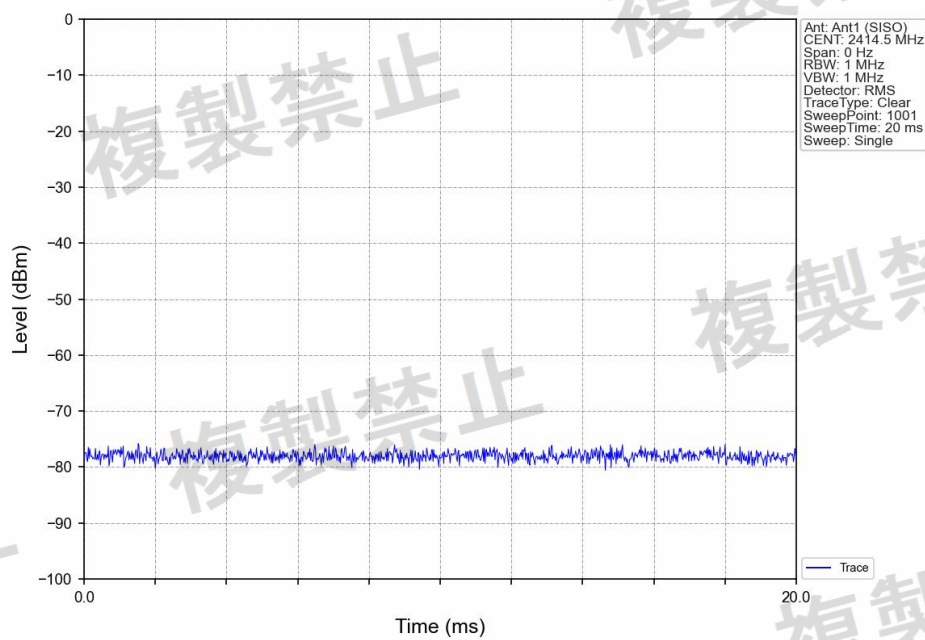


802.11b_2442MHz_Ant1 (SISO)_NTNV

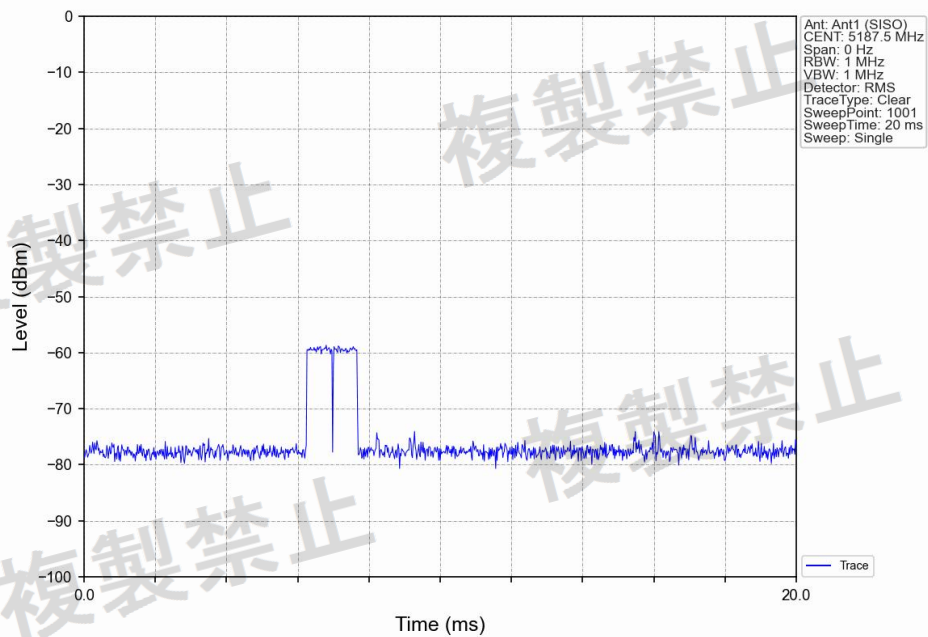


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	920.000	-76.29	/	-54	Pass
1000	12500	1	1	2414.500	-49.88	-77.97	-47	Pass
1000	12500	1	1	5187.500	-55.54	-70.19	-47	Pass

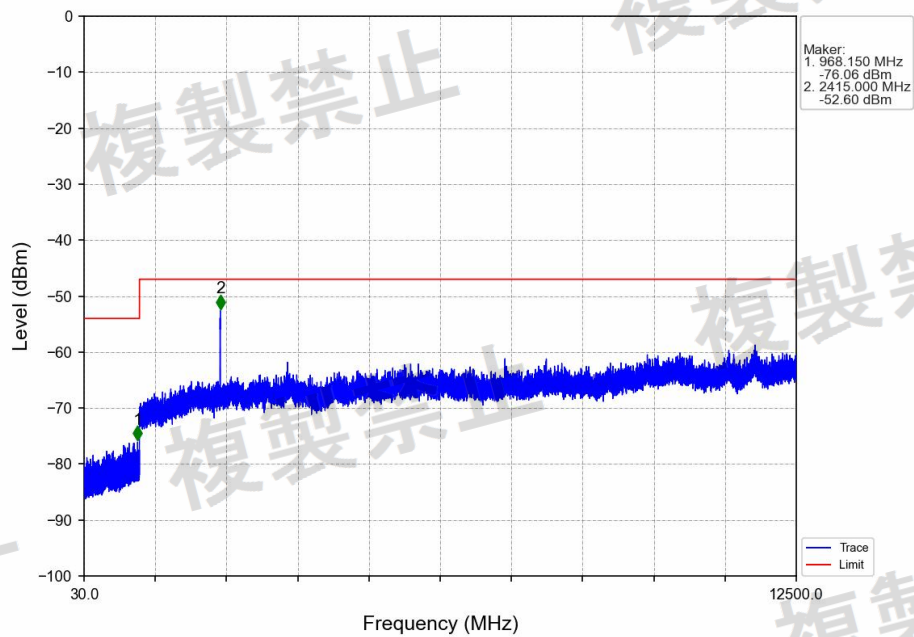
802.11b_2442MHz_Ant1 (SISO)_NTNV



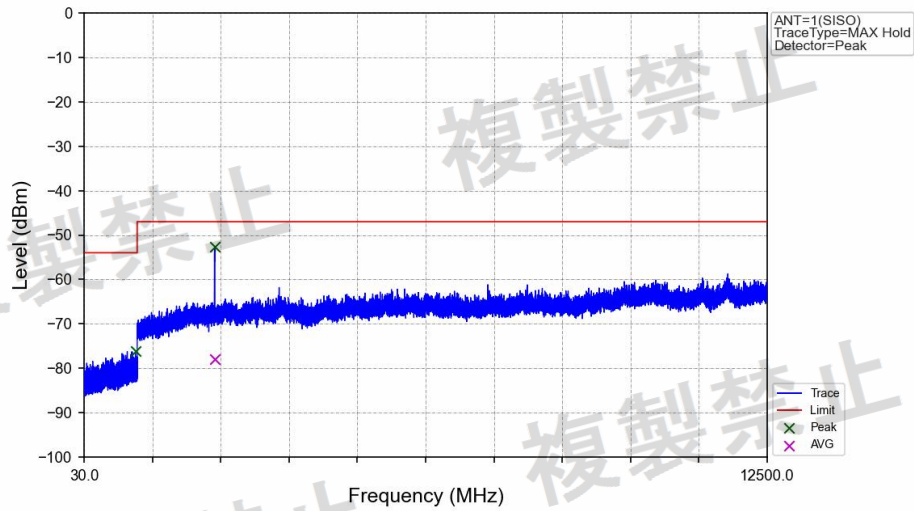
802.11b_2442MHz_Ant1 (SISO)_NTNV



802.11b_2472MHz_Ant1 (SISO)_NTNV

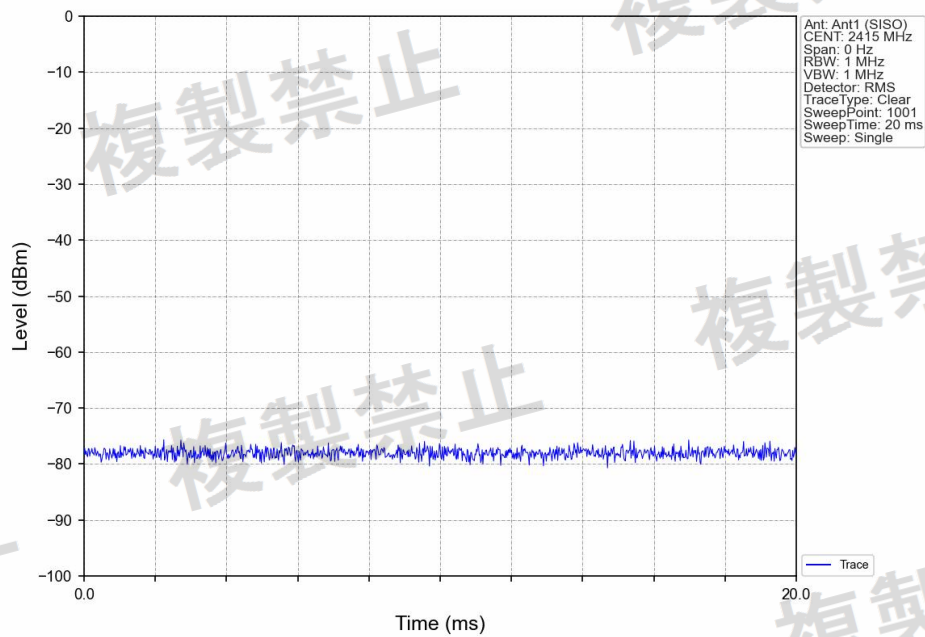


802.11b_2472MHz_Ant1 (SISO)_NTNV

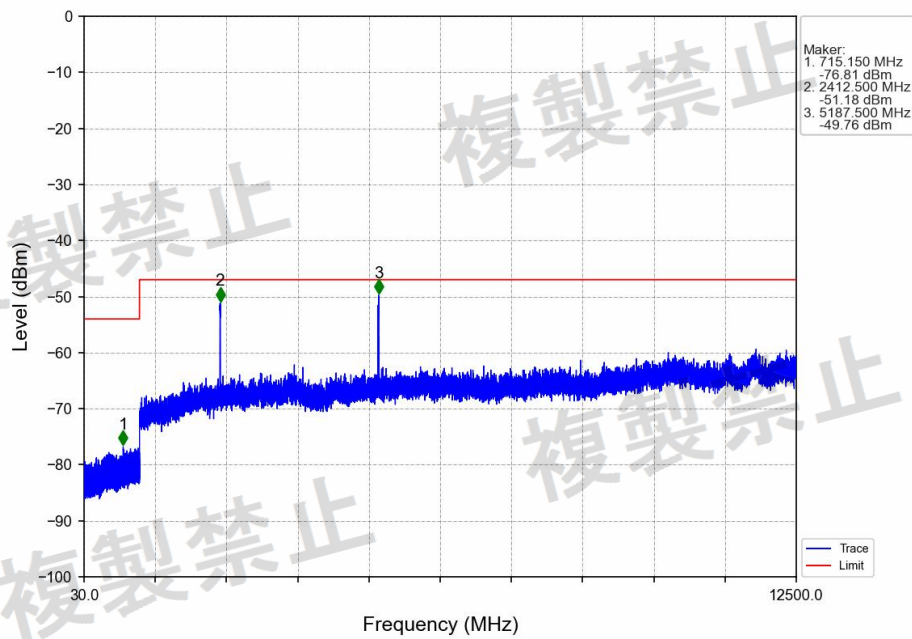


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	968.150	-76.06	/	-54	Pass
1000	12500	1	1	2415.000	-52.60	-77.99	-47	Pass

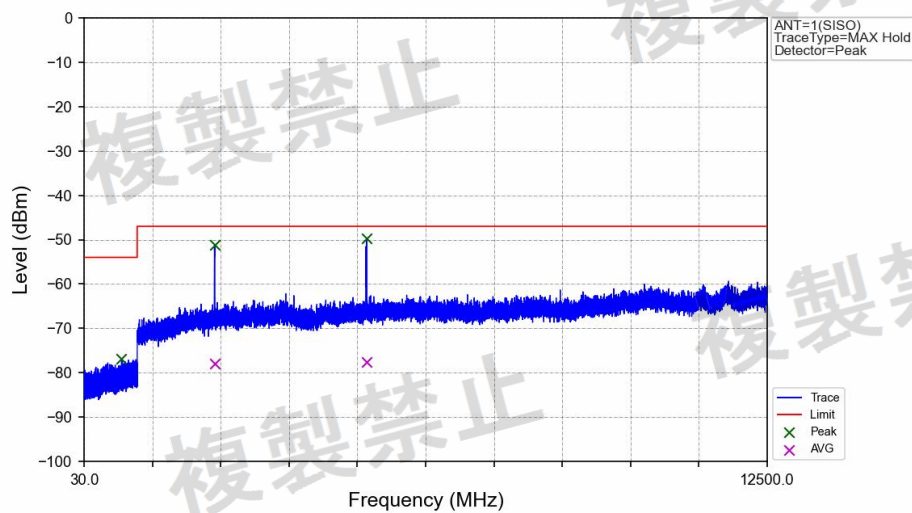
802.11b_2472MHz_Ant1 (SISO)_NTNV



802.11g_2412MHz_Ant1 (SISO)_NTNV

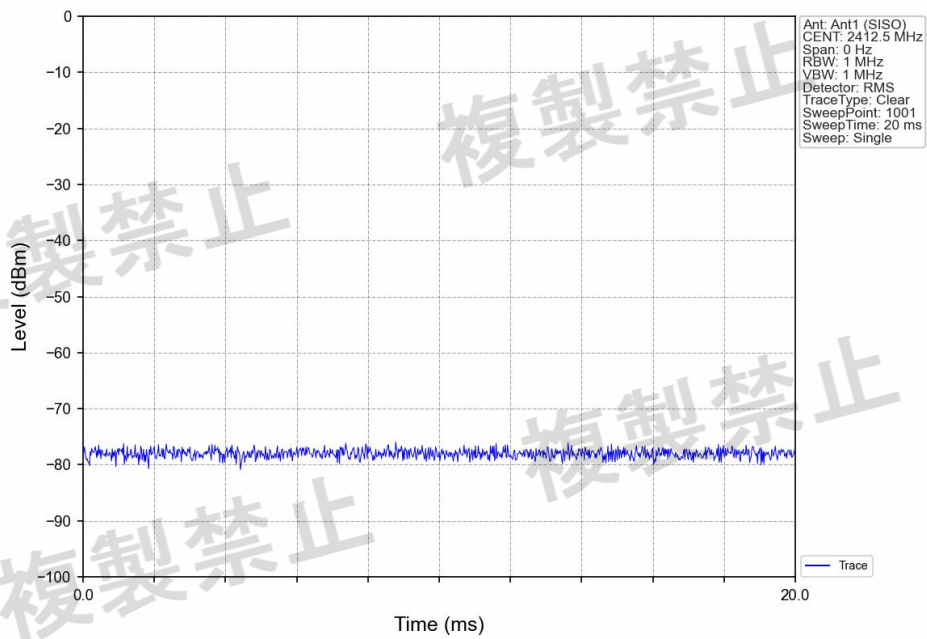


802.11g_2412MHz_Ant1 (SISO)_NTNV

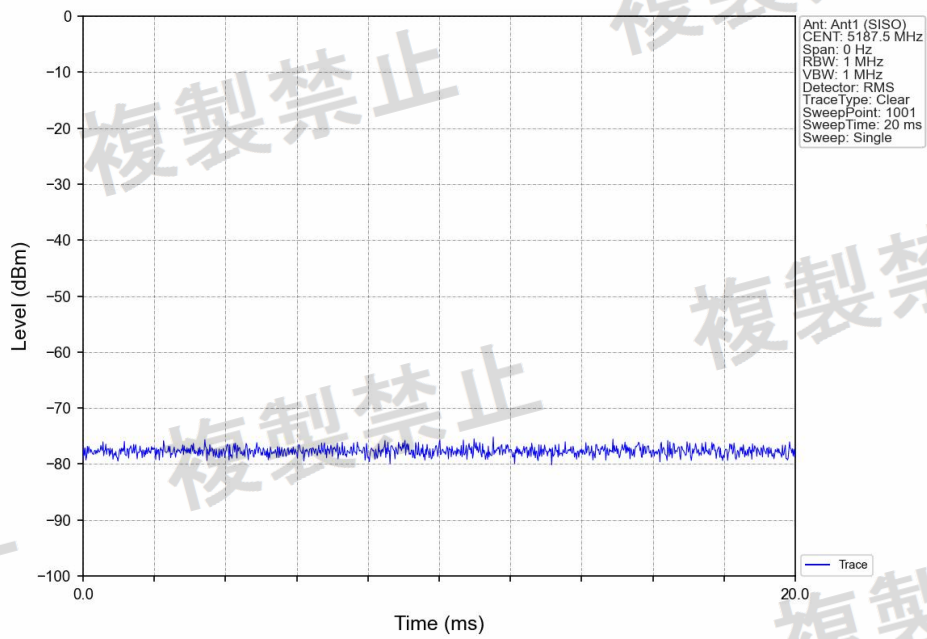


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	715.150	-76.81	/	-54	Pass
1000	12500	1	1	2412.500	-51.18	-77.96	-47	Pass
1000	12500	1	1	5187.500	-49.76	-77.63	-47	Pass

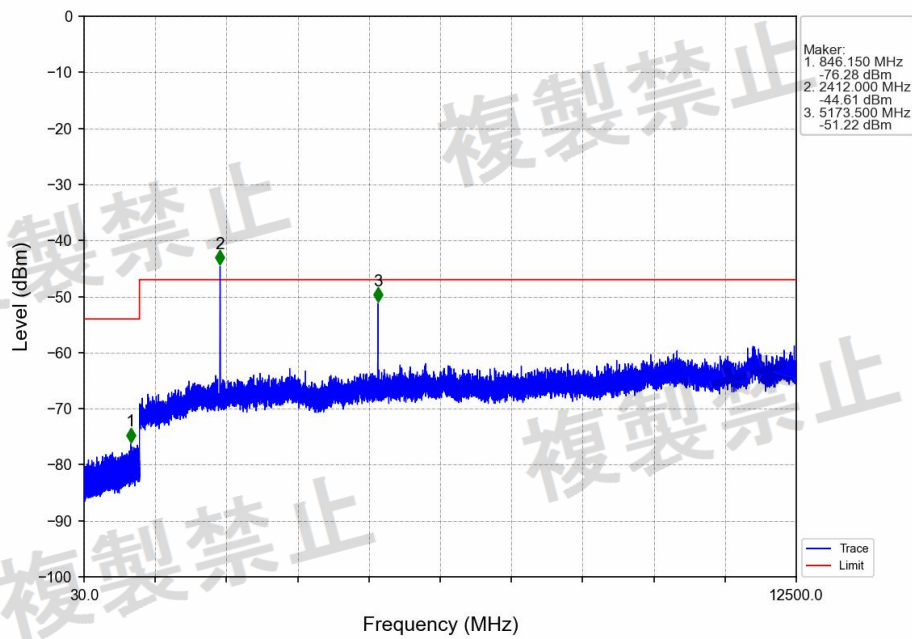
802.11g_2412MHz_Ant1 (SISO)_NTNV



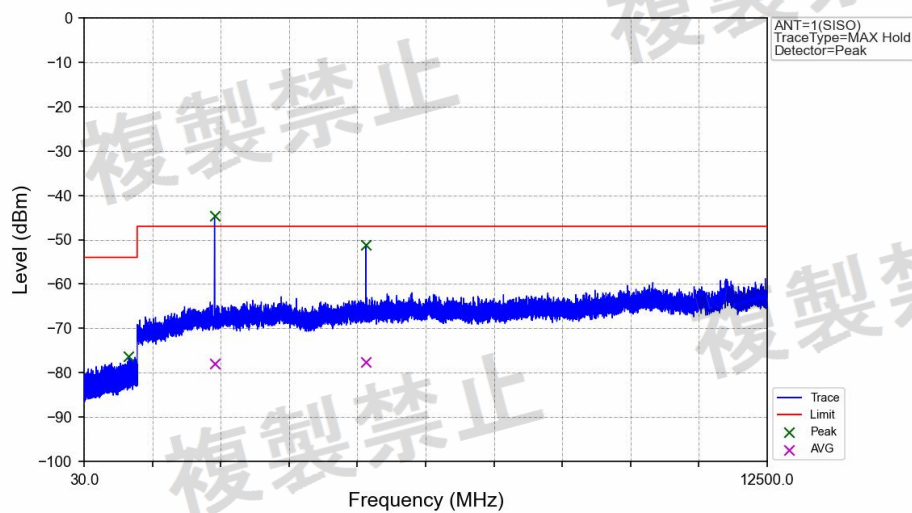
802.11g_2412MHz_Ant1 (SISO)_NTNV



802.11g_2442MHz_Ant1 (SISO)_NTNV

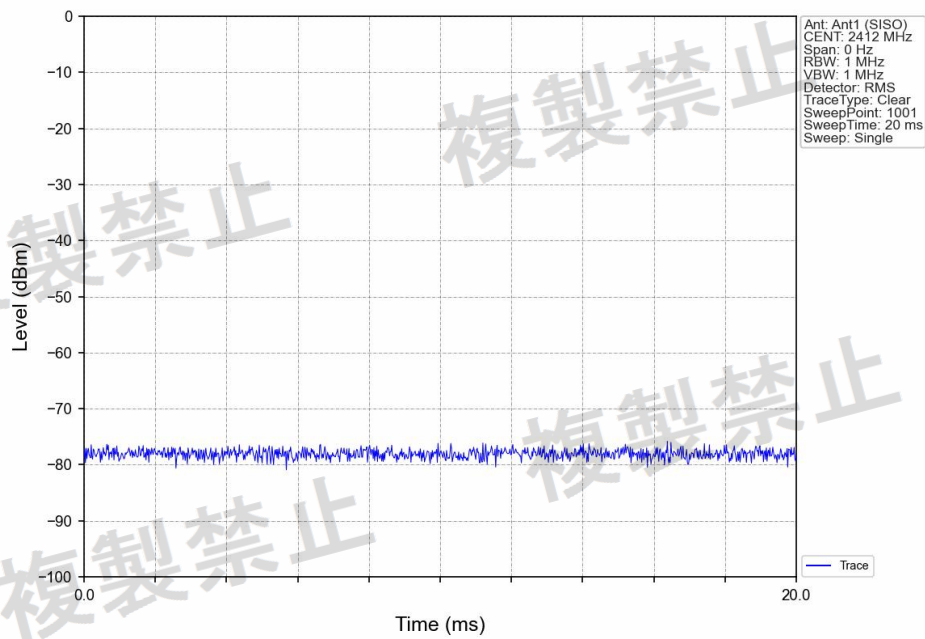


802.11g_2442MHz_Ant1 (SISO)_NTNV

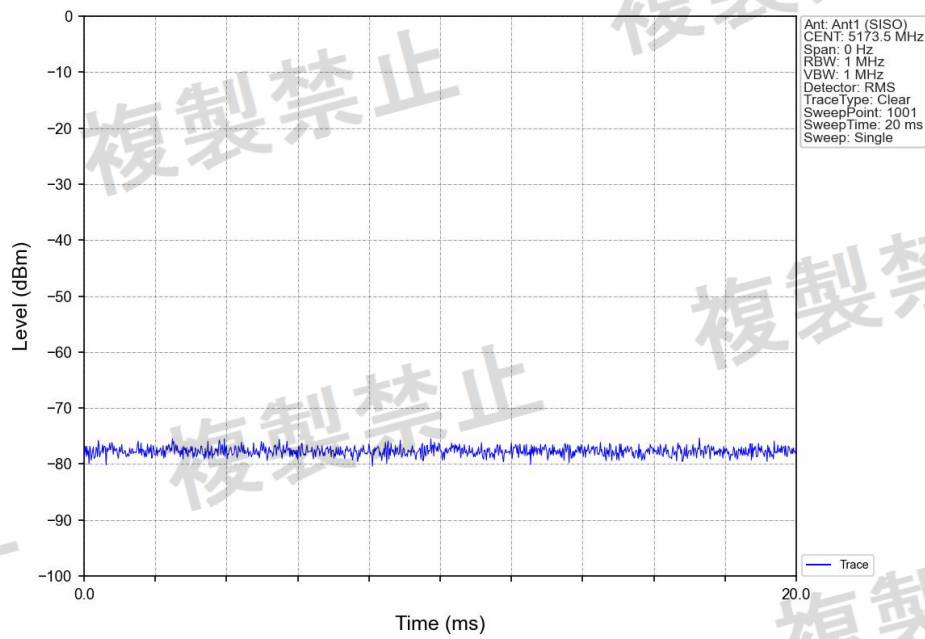


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	846.150	-76.28	/	-54	Pass
1000	12500	1	1	2412.000	-44.61	-78.00	-47	Pass
1000	12500	1	1	5173.500	-51.22	-77.65	-47	Pass

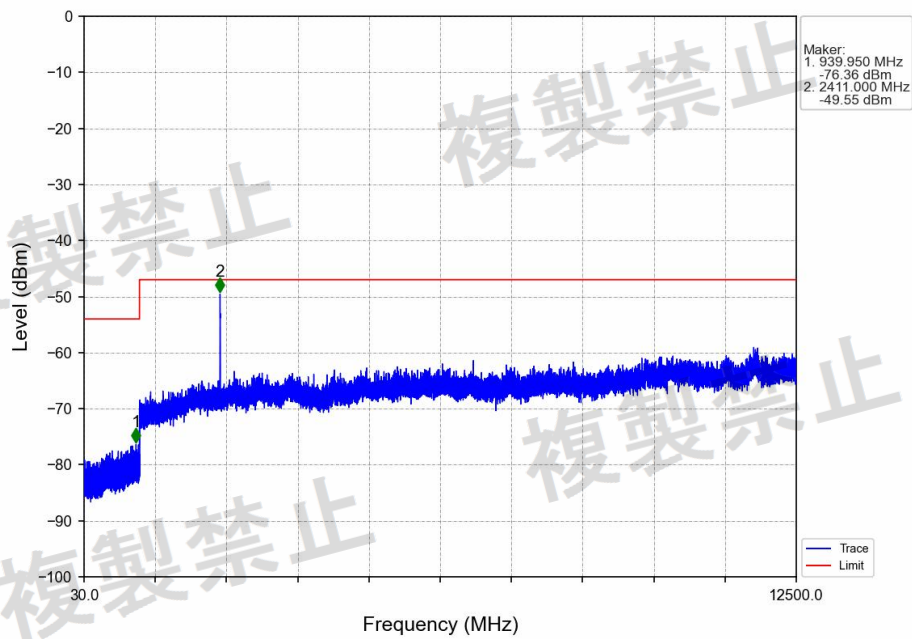
802.11g_2442MHz_Ant1 (SISO)_NTNV



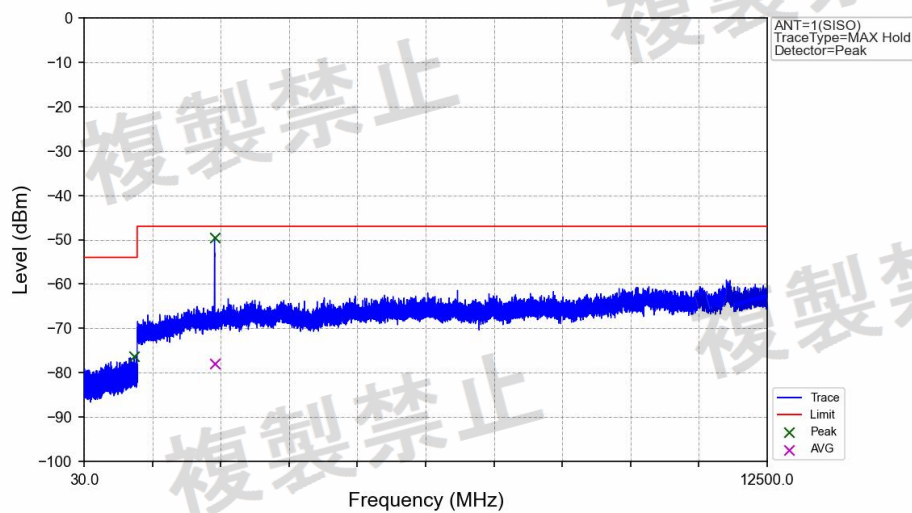
802.11g_2442MHz_Ant1 (SISO)_NTNV



802.11g_2472MHz_Ant1 (SISO)_NTNV

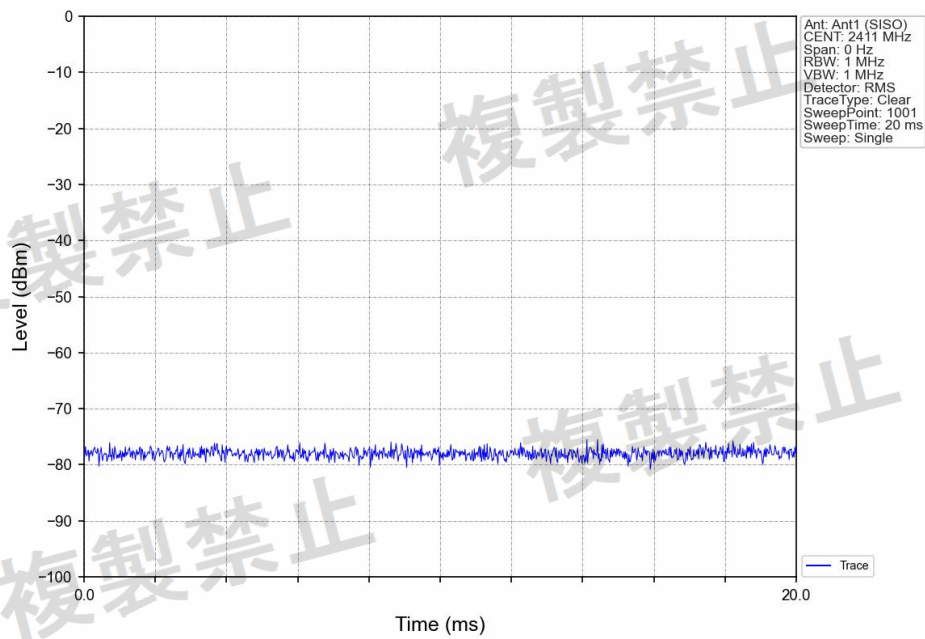


802.11g_2472MHz_Ant1 (SISO)_NTNV

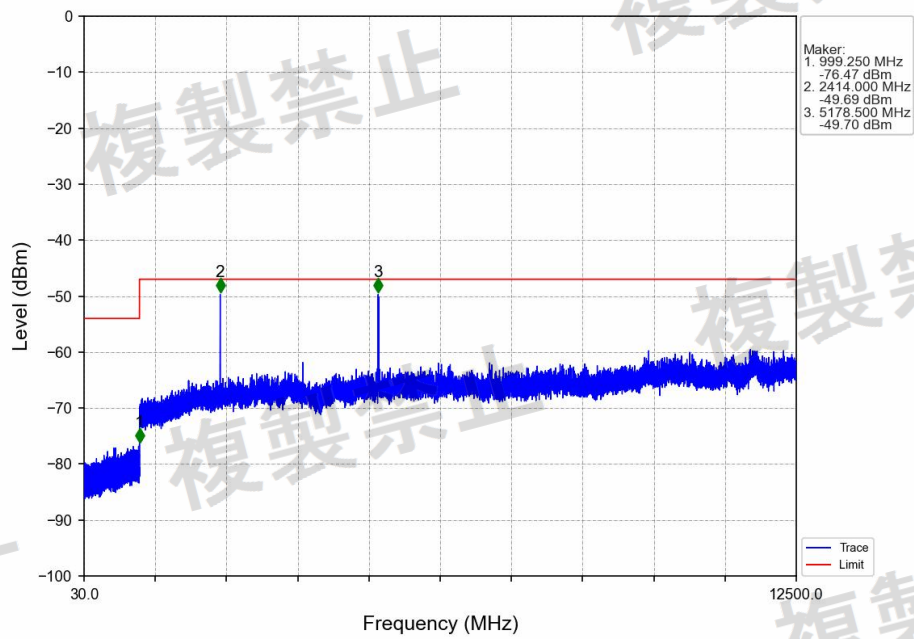


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	939.950	-76.36	/	-54	Pass
1000	12500	1	1	2411.000	-49.55	-77.95	-47	Pass

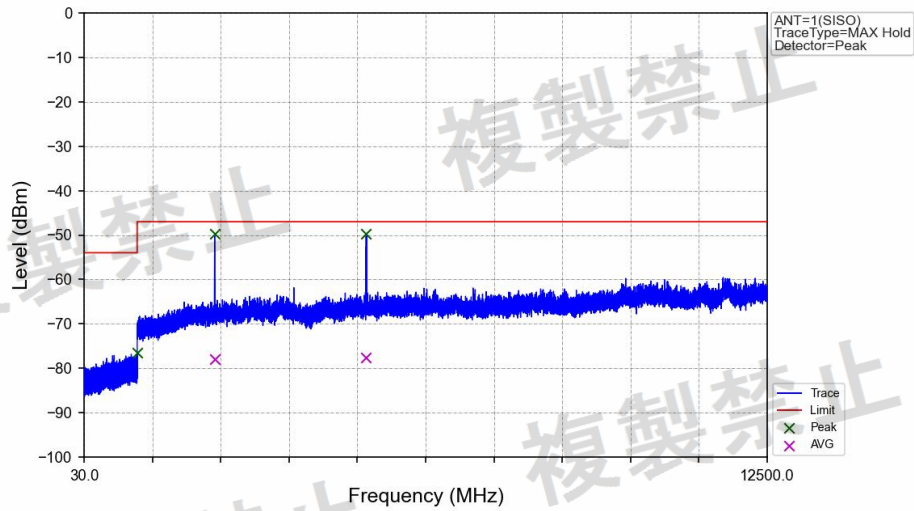
802.11g_2472MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

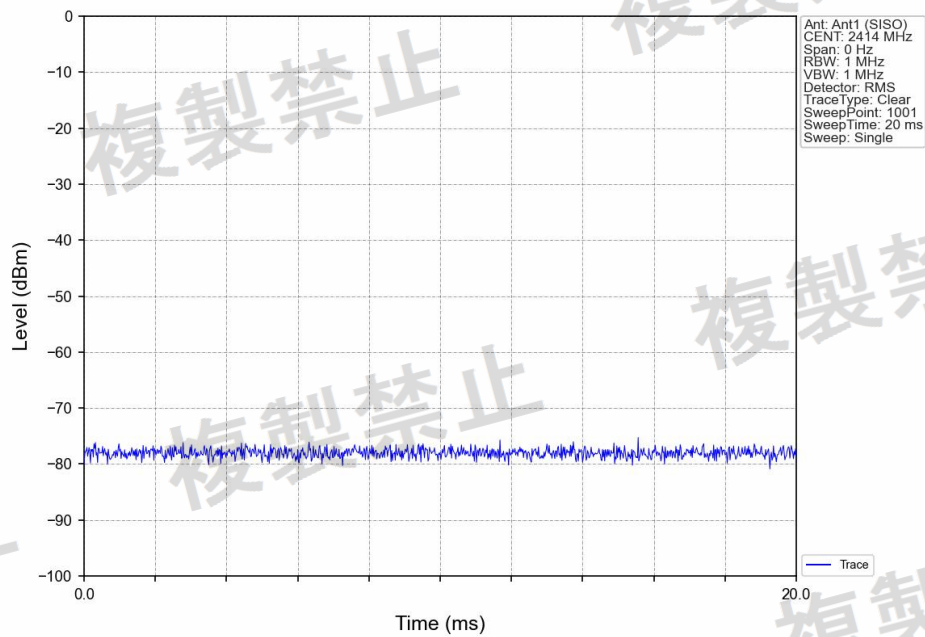


802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV

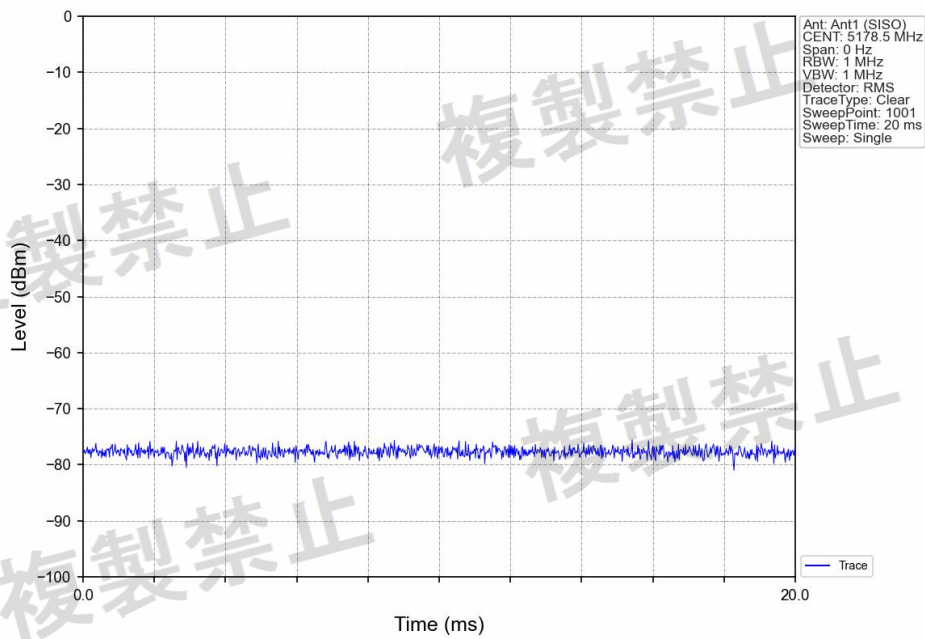


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	999.250	-76.47	/	-54	Pass
1000	12500	1	1	2414.000	-49.69	-77.96	-47	Pass
1000	12500	1	1	5178.500	-49.70	-77.65	-47	Pass

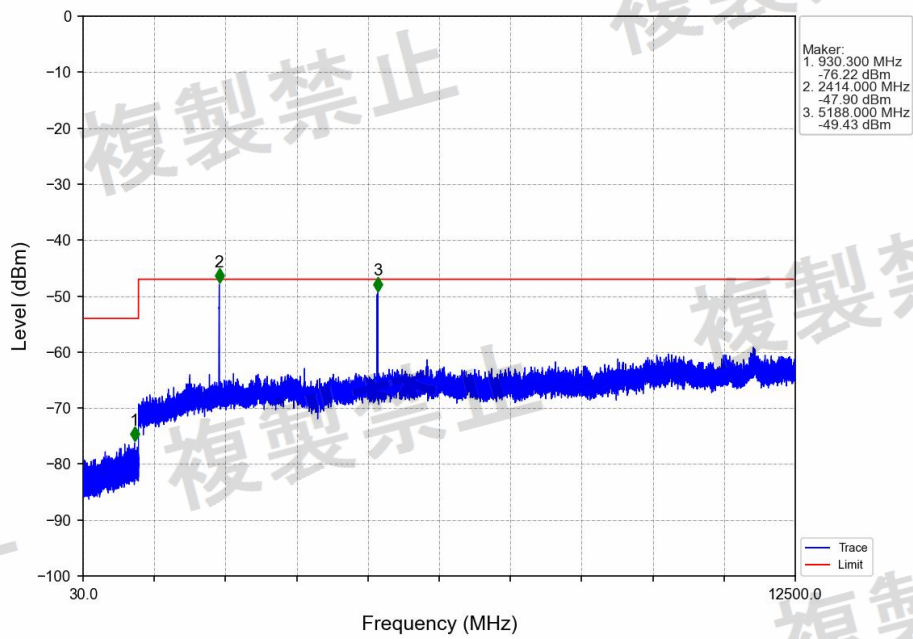
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



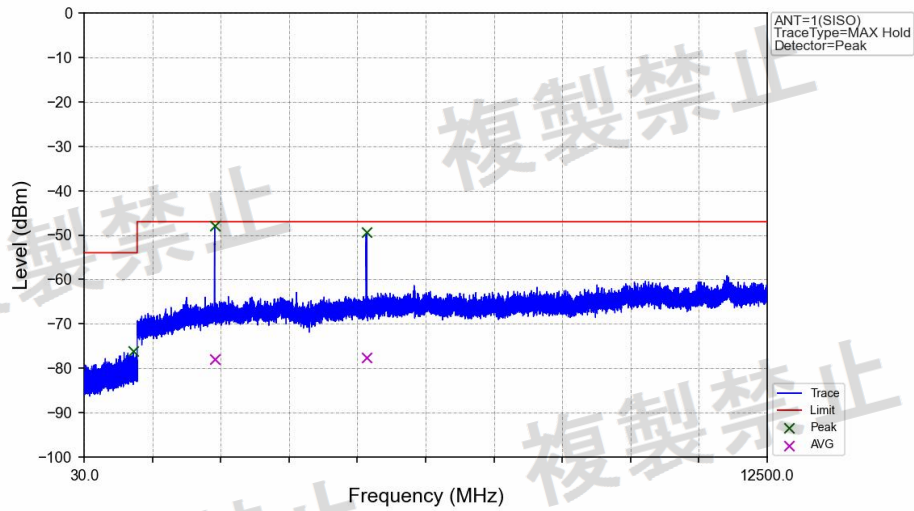
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

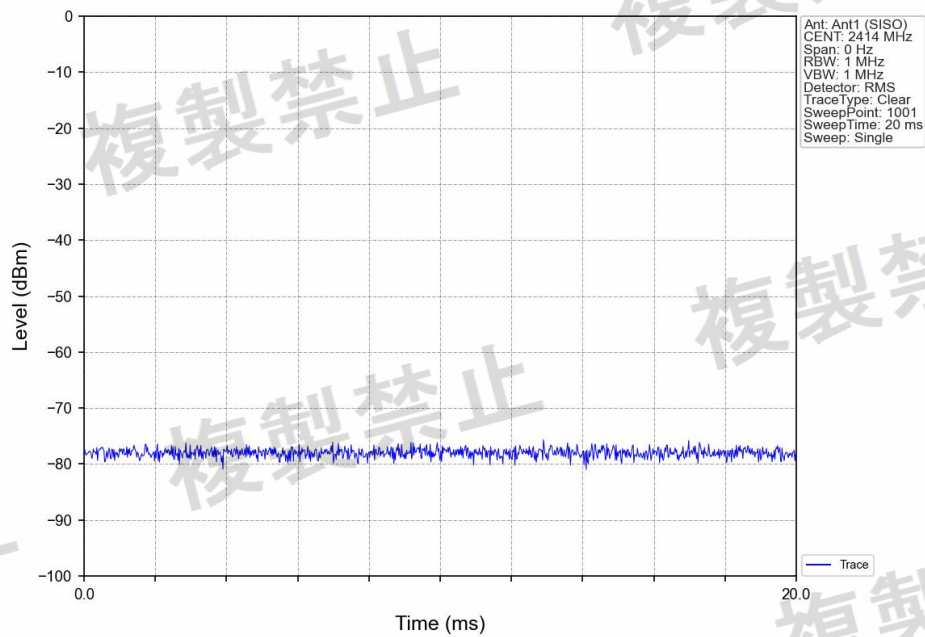


802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV

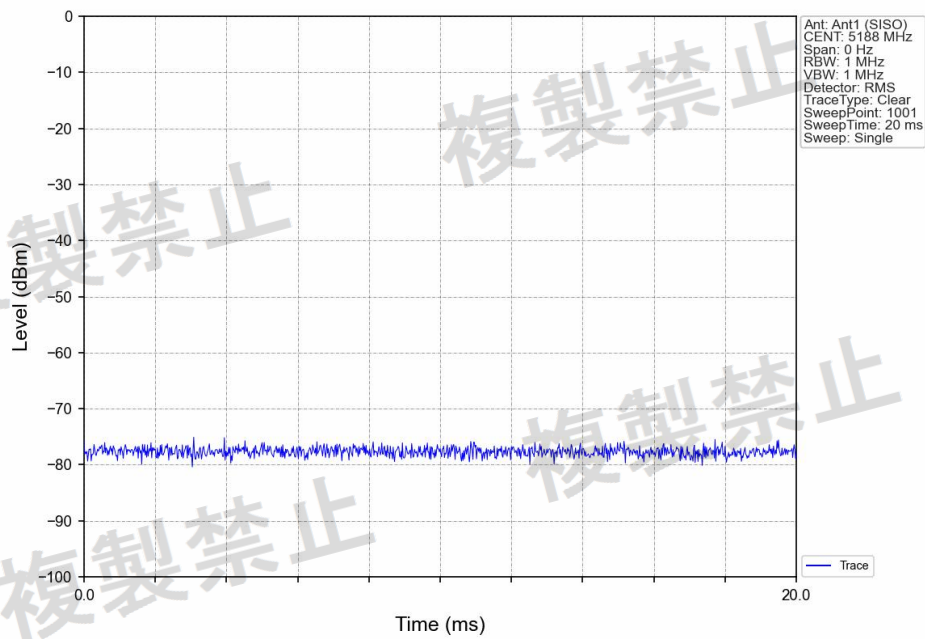


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	930.300	-76.22	/	-54	Pass
1000	12500	1	1	2414.000	-47.90	-77.94	-47	Pass
1000	12500	1	1	5188.000	-49.43	-77.61	-47	Pass

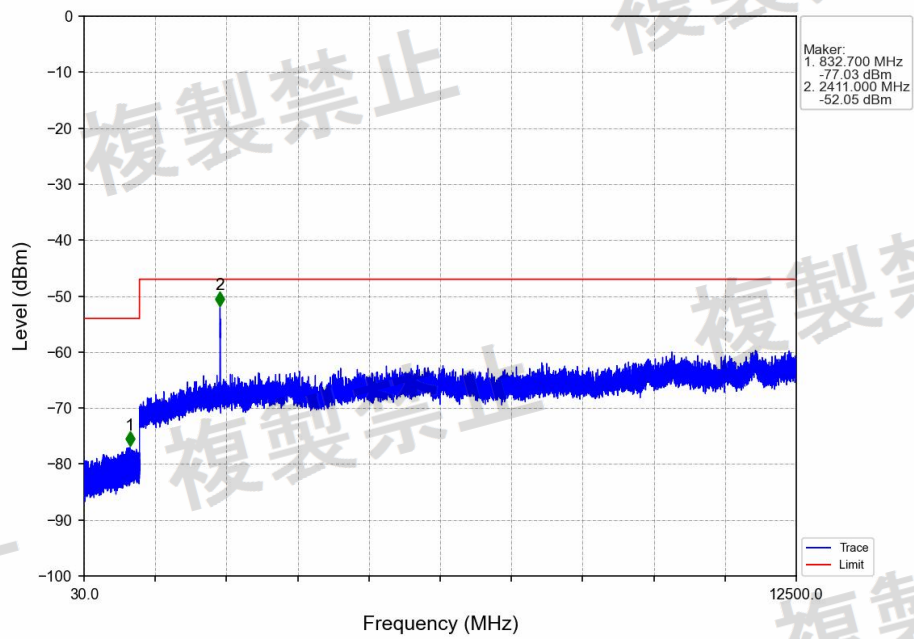
802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV



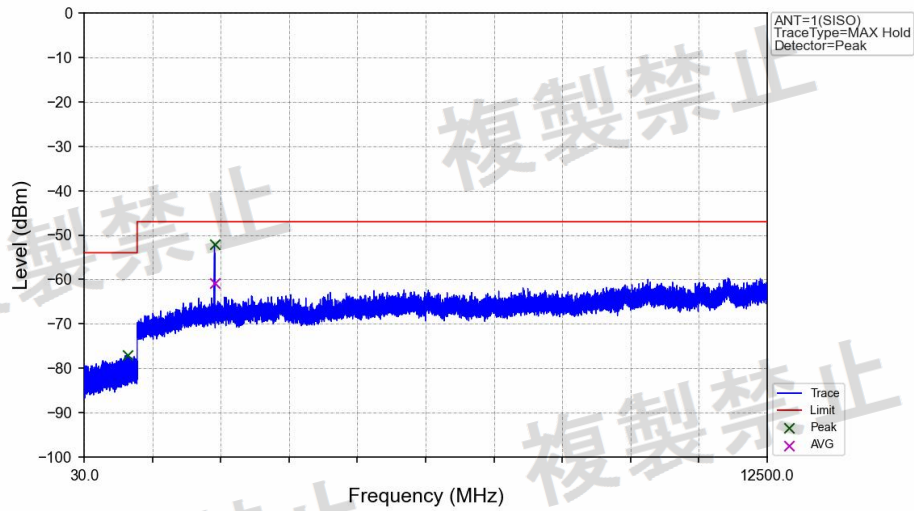
802.11n(HT20)_2442MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

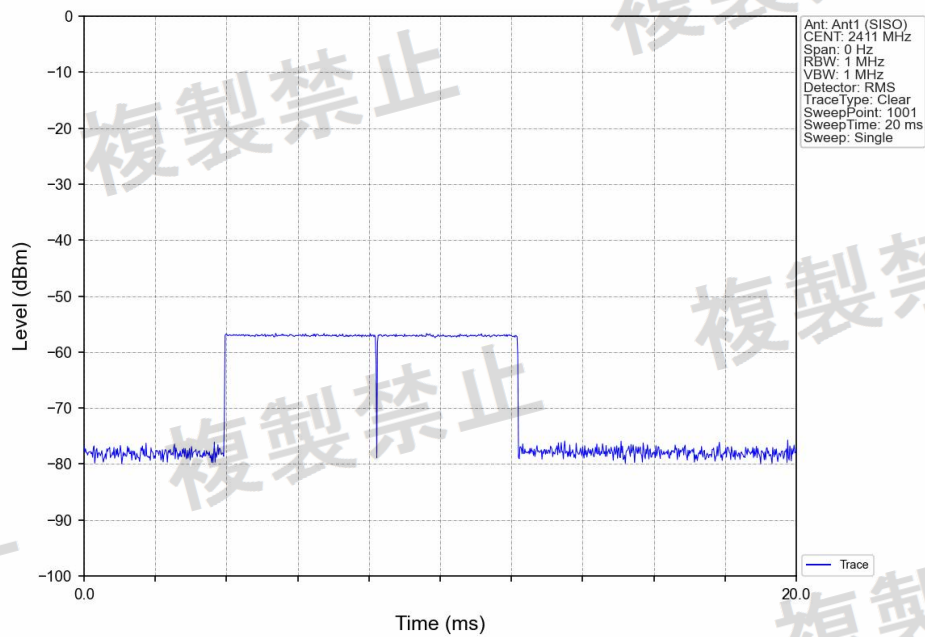


802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV

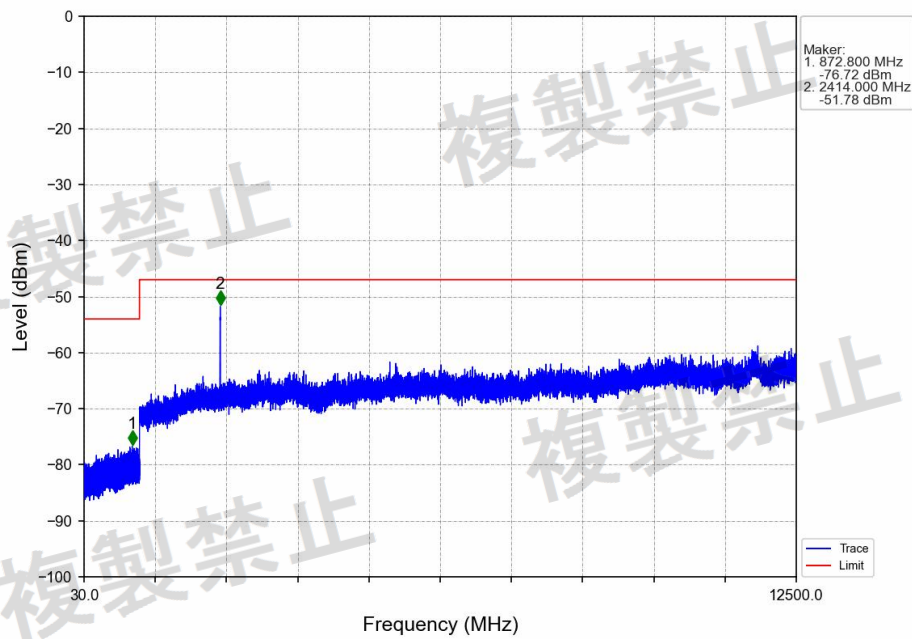


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	832.700	-77.03	/	-54	Pass
1000	12500	1	1	2411.000	-52.05	-60.88	-47	Pass

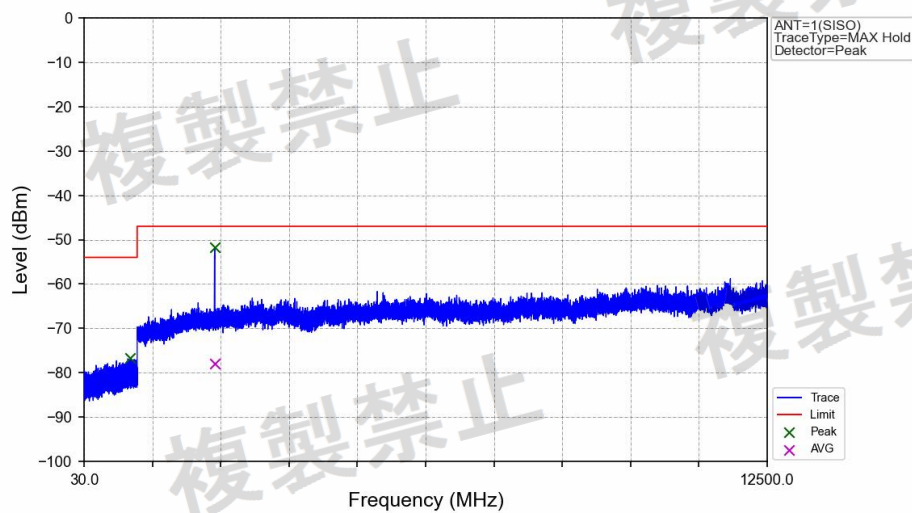
802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

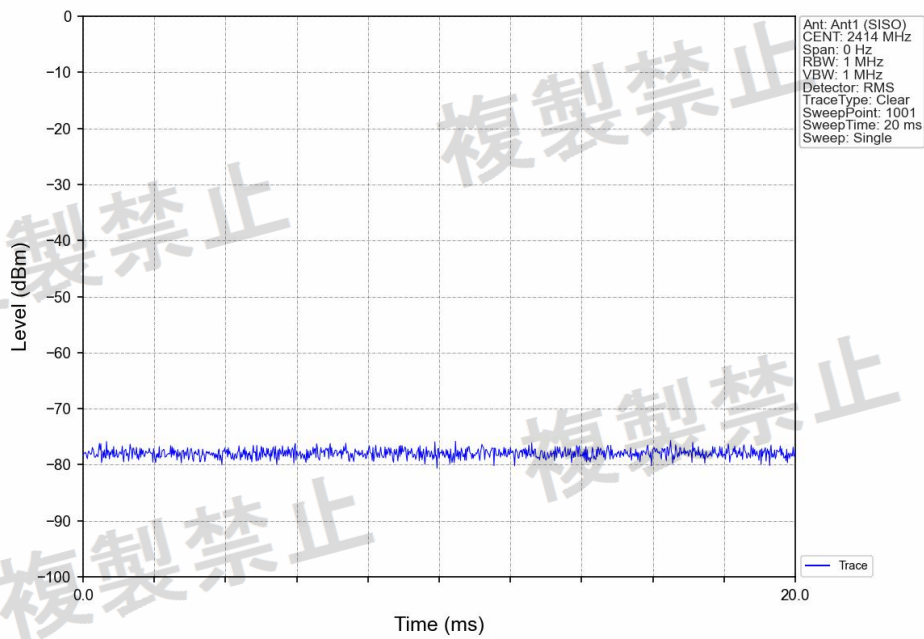


802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV

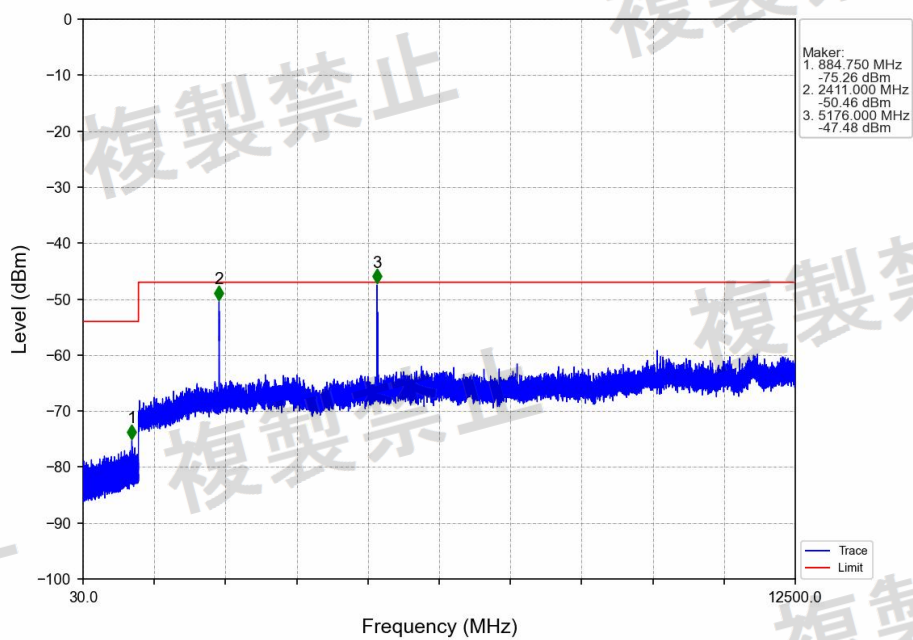


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	872.800	-76.72	/	-54	Pass
1000	12500	1	1	2414.000	-51.78	-77.92	-47	Pass

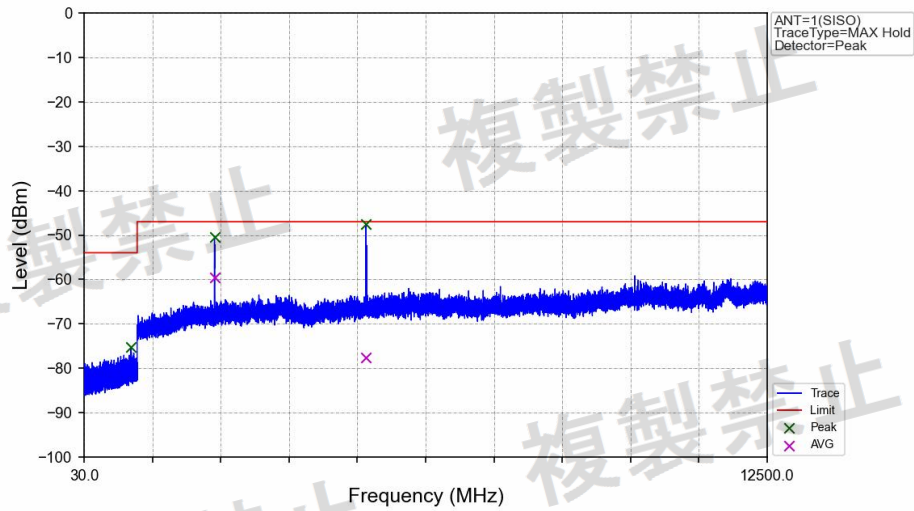
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

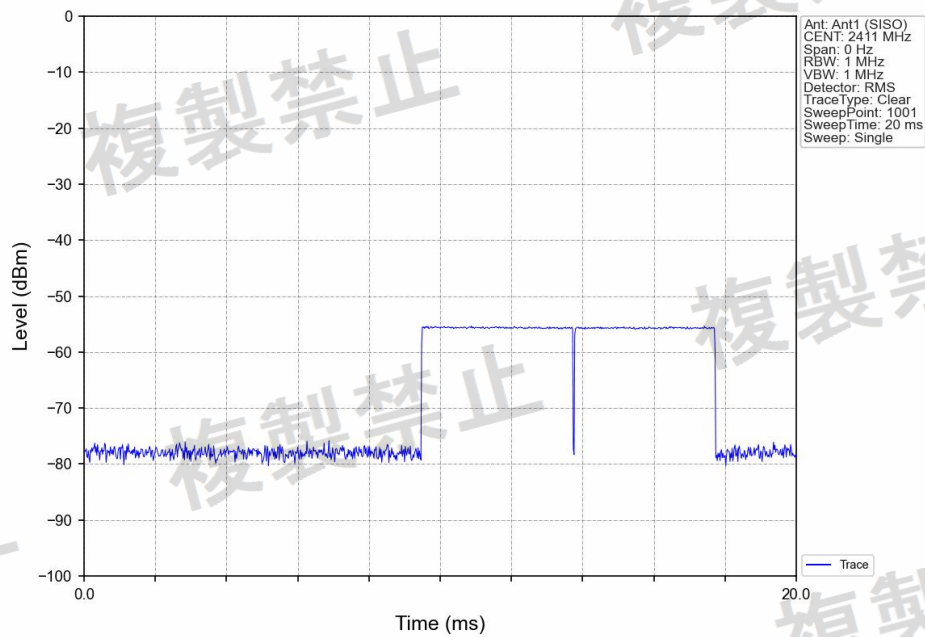


802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV

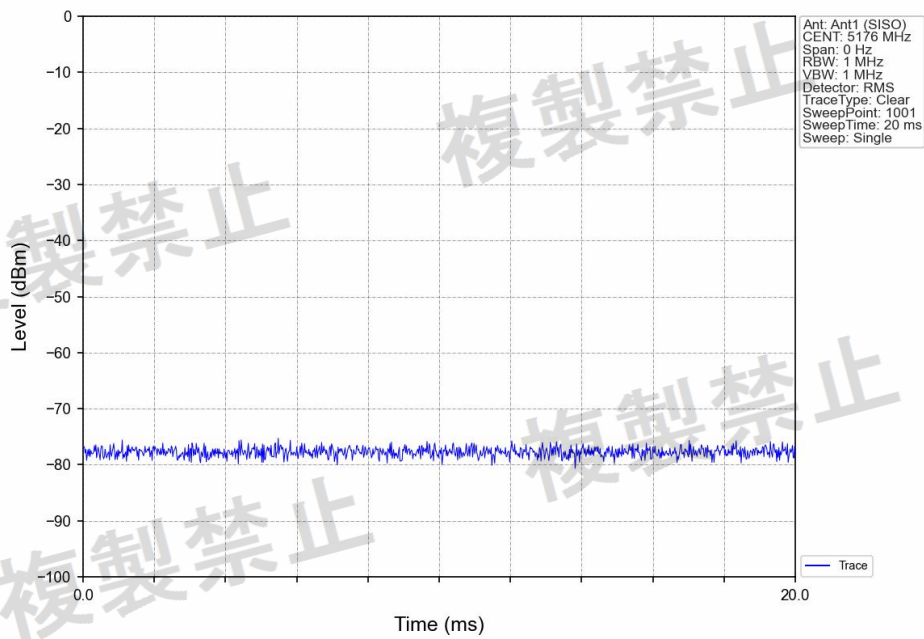


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	884.750	-75.26	/	-54	Pass
1000	12500	1	1	2411.000	-50.46	-59.51	-47	Pass
1000	12500	1	1	5176.000	-47.48	-77.67	-47	Pass

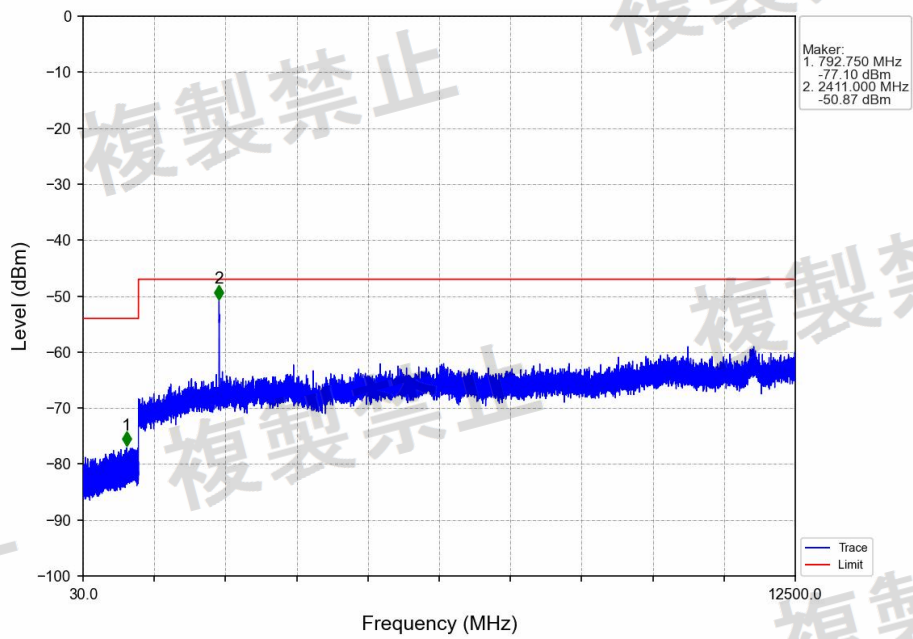
802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV



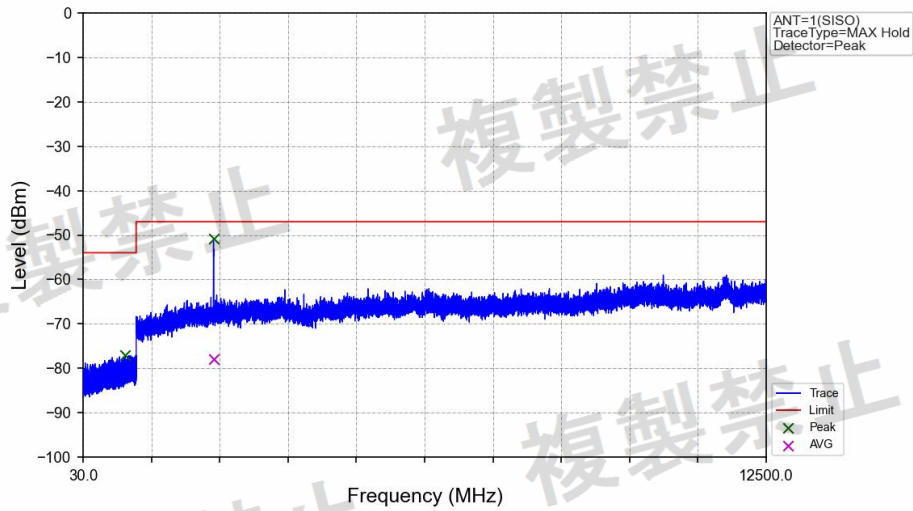
802.11n(HT40)_2442MHz_Ant1 (SISO)_NTNV



802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV

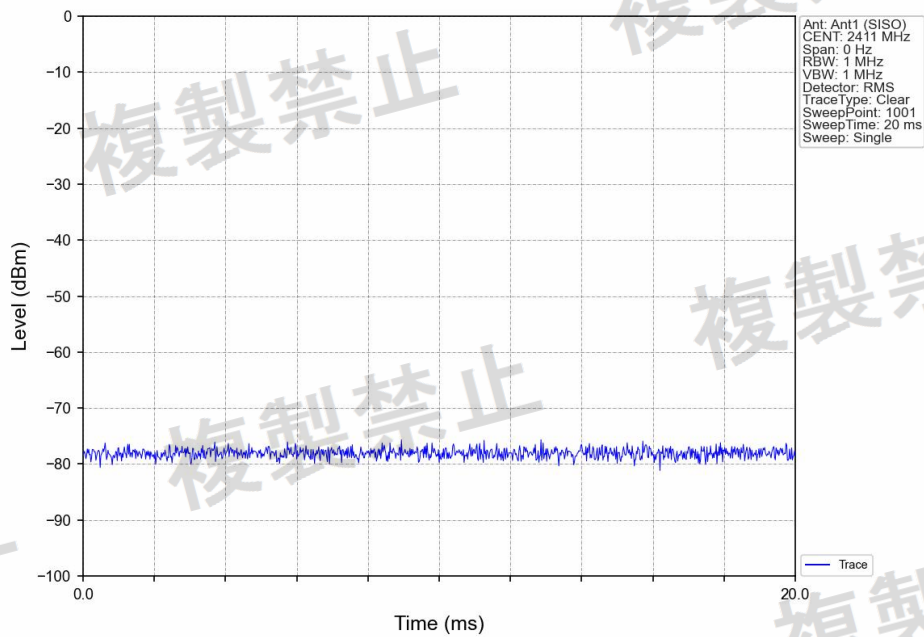


802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	792.750	-77.10	/	-54	Pass
1000	12500	1	1	2411.000	-50.87	-78.00	-47	Pass

802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



10. TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH) MEASUREMENT

10.1 LIMIT

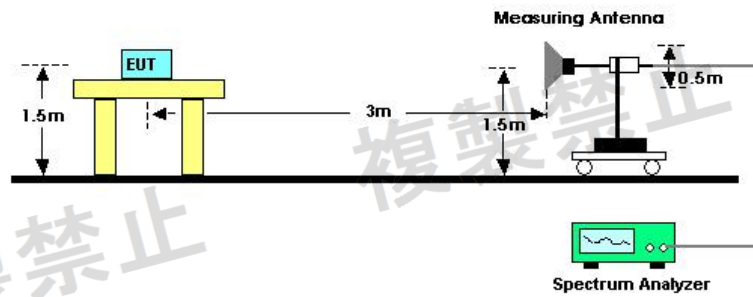
Item	Limits
3dB antenna beam width	$e \leq 360/A$ (The A is 10 in maximum) $A = \{EIRP \text{ Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW/MHz}, 3\text{mW/MHz})\}\}$ Shall be 1 when A is lower than 1

10.2 TEST PROCEDURES

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RBW	1 MHz
VBW	1 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition in section 4.7.2 and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within $\pm 50\text{cm}$ of EUT height and swing it to find the maximum output of measuring antenna. "E" is the half-power beam width (angle between two points at which radiated power becomes 1/2).
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below $360/A$ (The A is 10 in maximum).
 $e \leq 360/A$ (The A is 10 in maximum)
 $A = \{EIRP \text{ Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW/MHz}, 3\text{mW/MHz})\}\}$
 Shall be 1 when A is lower than 1

10.3 TEST SETUP



10.4 TEST DEVIATION

There is no deviation with the original standard.

10.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

10.6 TEST RESULT

N/A

11. RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

11.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

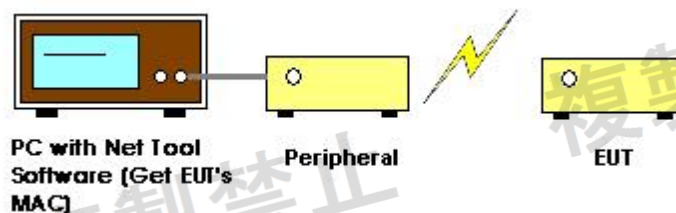
11.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

11.3 TEST PROCEDURES

1. In the case that the EUT has the function of automatically transmitting the identification code:
 - a. Transmit the predetermined identification codes form EUT.
 - b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification ocde:
 - a. Transmit the predetermined identification codes form the counterpart.
 - b. Check if communication is normal.
 - c. Transmit the signals other than predetermined ID codes form the counterpart.
 - d. check if the EUT stops the transmission, or if it displays that idnetification codes are different from the predetermined ones.

11.4 TEST SETUP



11.5 TEST DEVIATION

There is no deviation with the original standard.

11.6 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

11.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

Mac address: 56:42:46:45:5A:C4

12. CARRIER SENSE CAPABILITY

12.1 INTERFERENCE PREVENTION FUNCTION

12.2 TEST REQUIREMENT

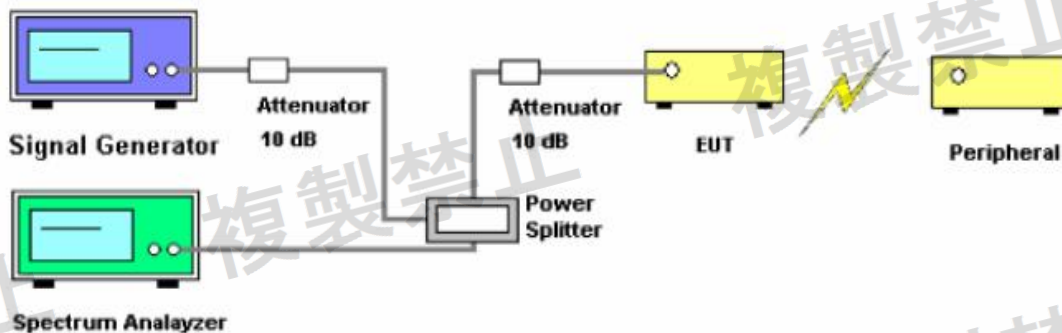
MIC Notice No.88 Appendix No.43

Article 2, Paragraph 1, Item 19 Rules Section 10

12.3 TEST PROCEDURE

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is $(22.79 + G - 20 \cdot \log(f) \text{ dBm})$ (G is the antenna gain, f is the test frequency).
2. Turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA :RBW/VBW=1MHz/1MHz, Span=0MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak
5. SG RF signal on.
6. EUT shall be stop transmitted any signal and SG RF signal off, the EUT will be continuous

❖ Measurement System Diagram



❖ Conditions of Application Equipment (EUT)

- The EUT state shall be "normal mode link with wireless router".

12.4 TEST RESULT

Frequency(MHz)	PCS(dBm)	Reault
2422	-39.70	pass
2442	-39.85	pass
2462	-39.88	pass

Note:

1. This test item only applies to those modes with bandwidth greater than 20MHz; $PCS = 22.79 + G - 20 \cdot \log(F)$
 G=antenna gain
 F=transmission frequency
2. After a carrier signal $22.79 + G - 20 \cdot \log(f) \text{ [dBm]}$ was injected into EUT, it stopped transmission.

Appendix I Product photo



FIGURE 1



FIGURE 2

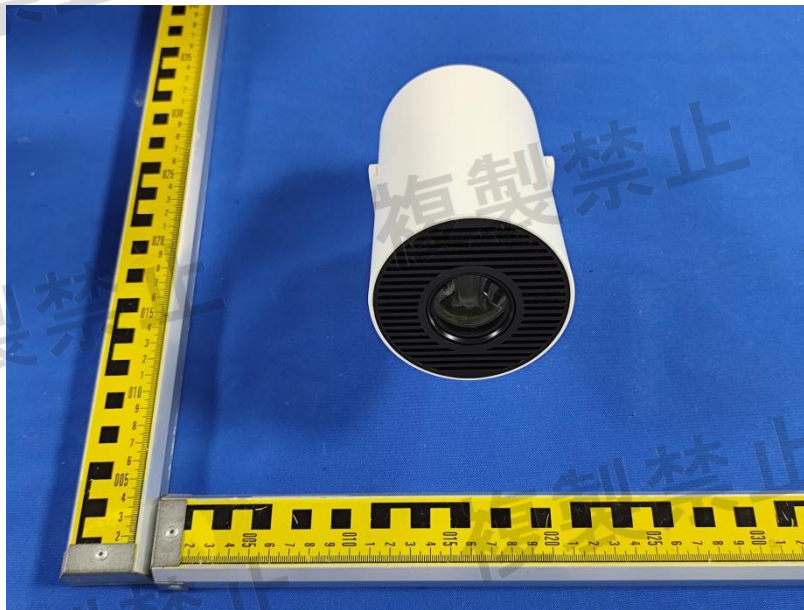


FIGURE 3

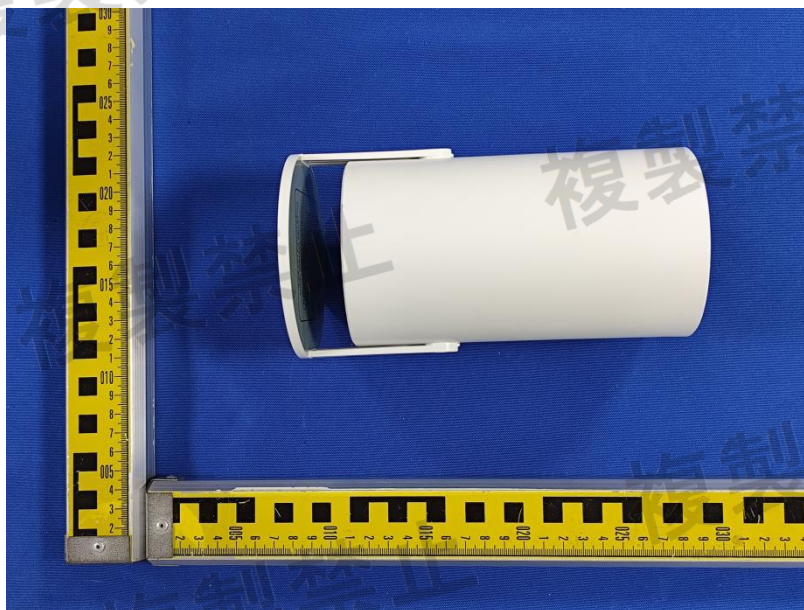


FIGURE 4

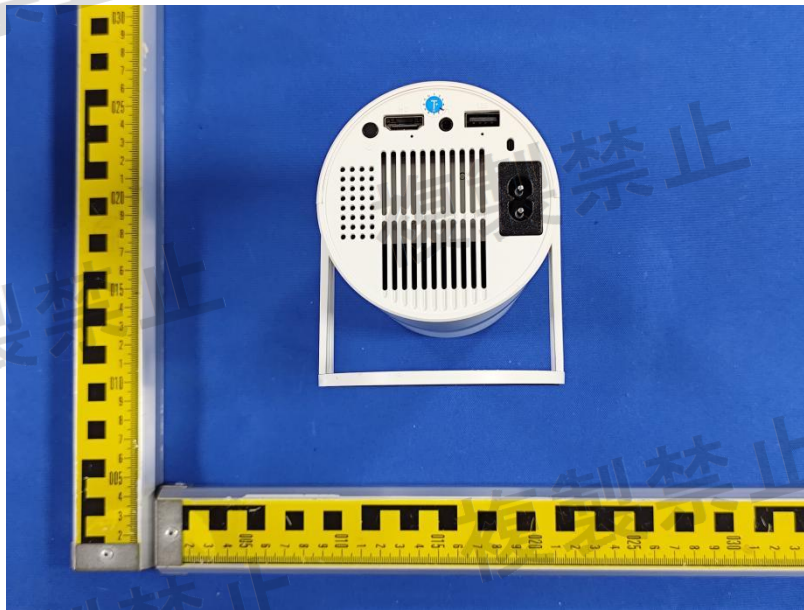


FIGURE 5

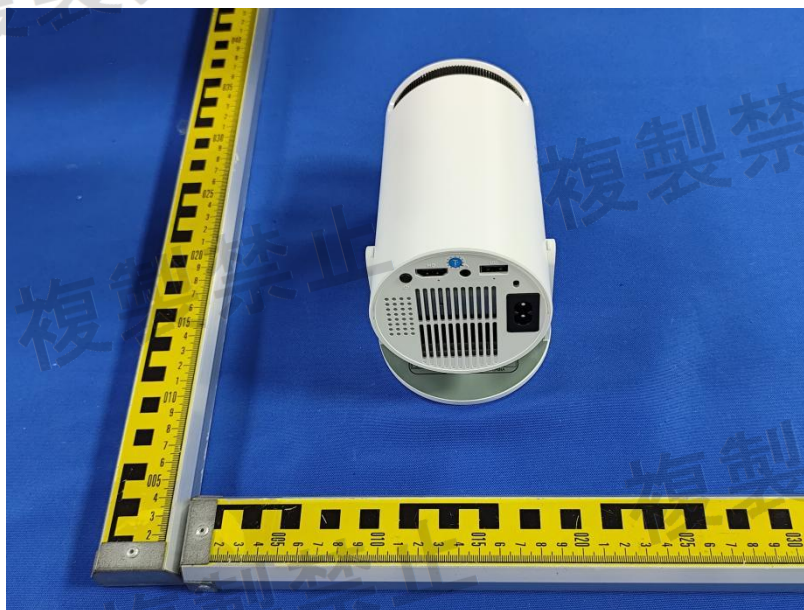


FIGURE 6

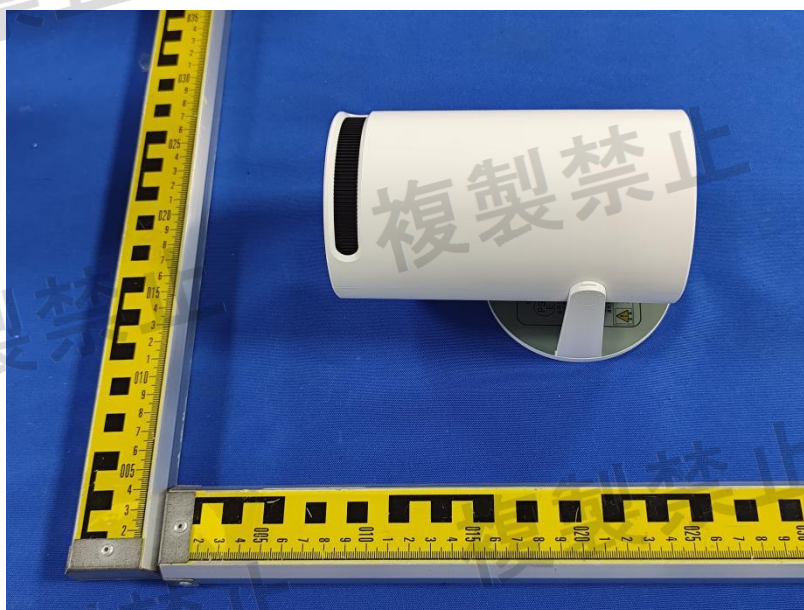


FIGURE 7

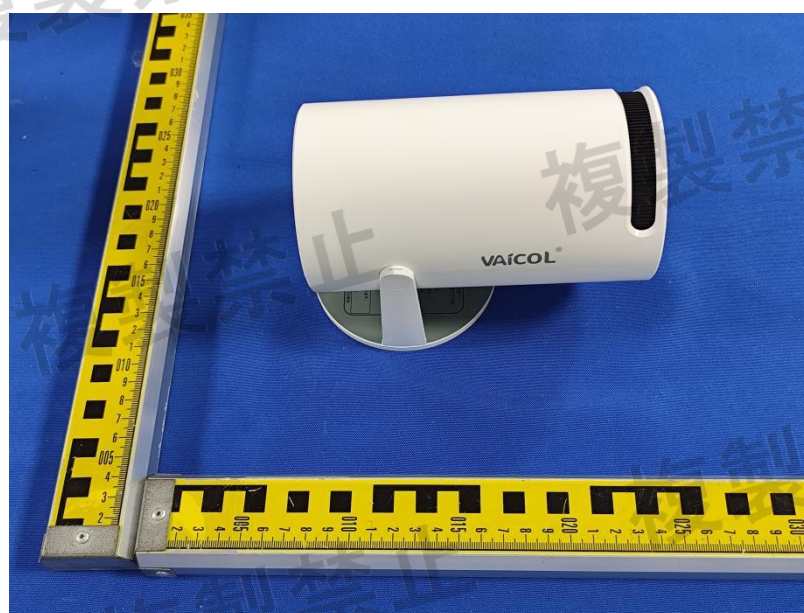


FIGURE 8

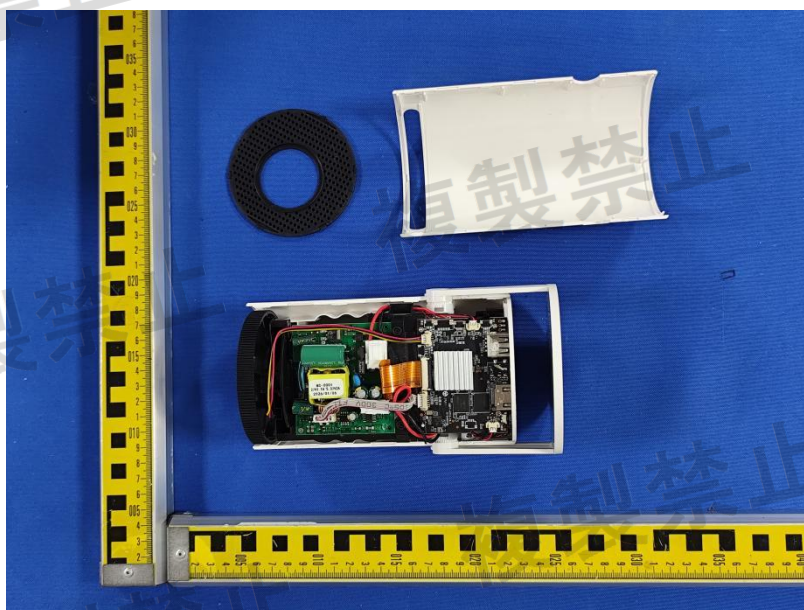


FIGURE 9

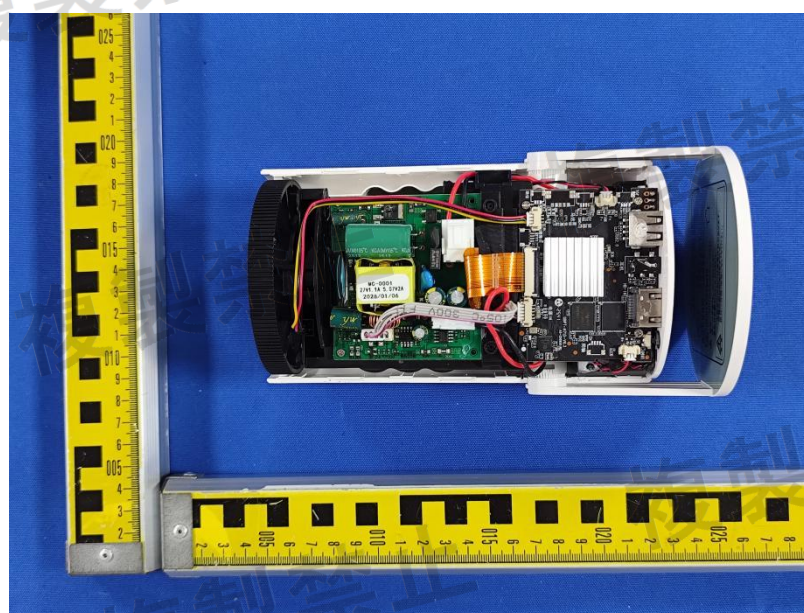


FIGURE 10

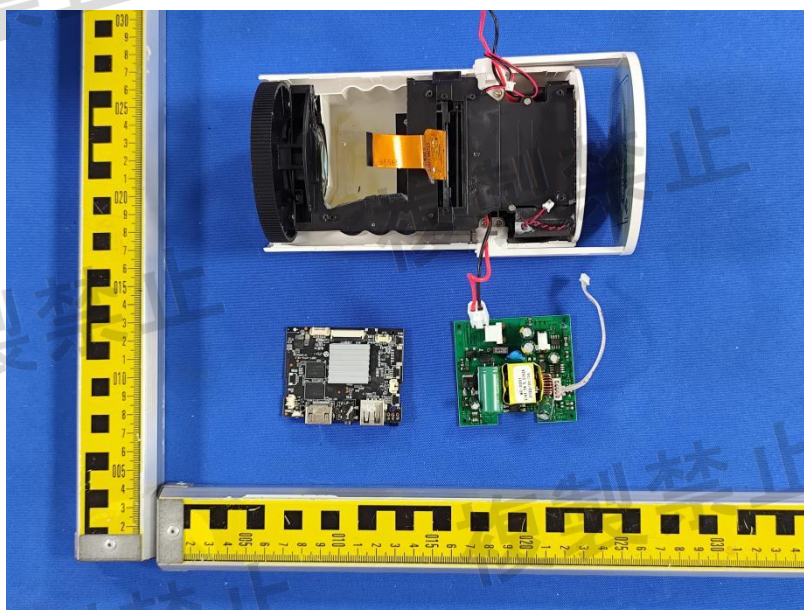


FIGURE 11

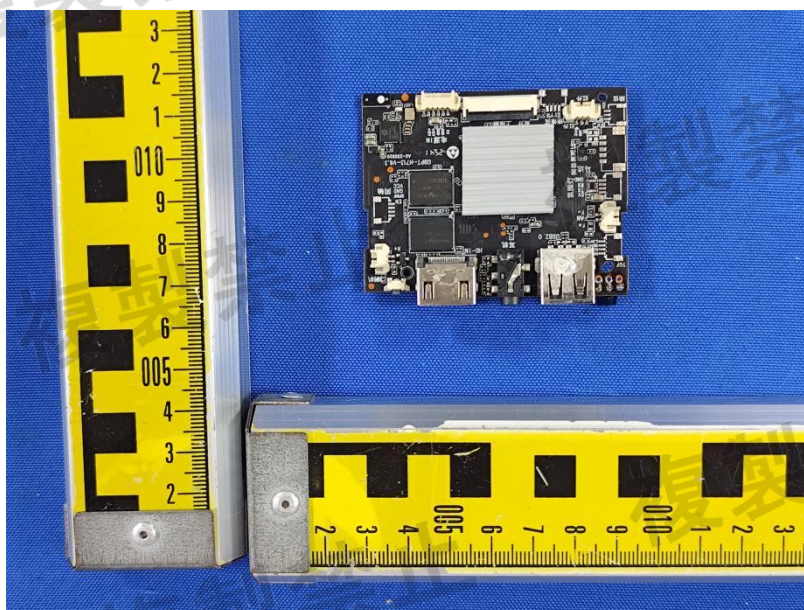


FIGURE 12

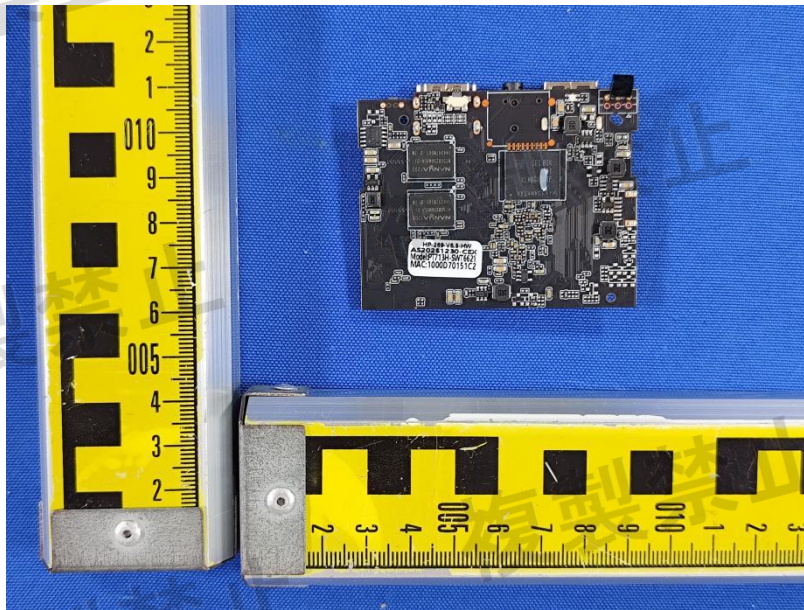


FIGURE 13

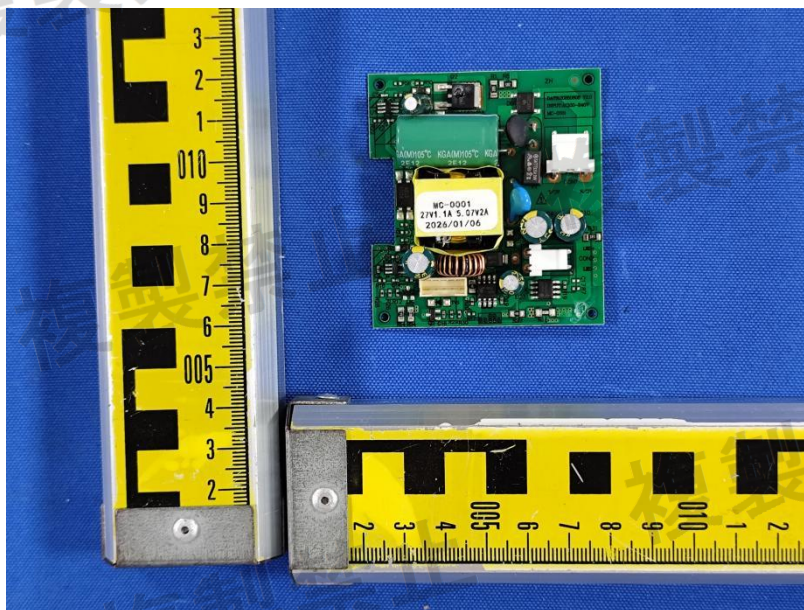


FIGURE 14

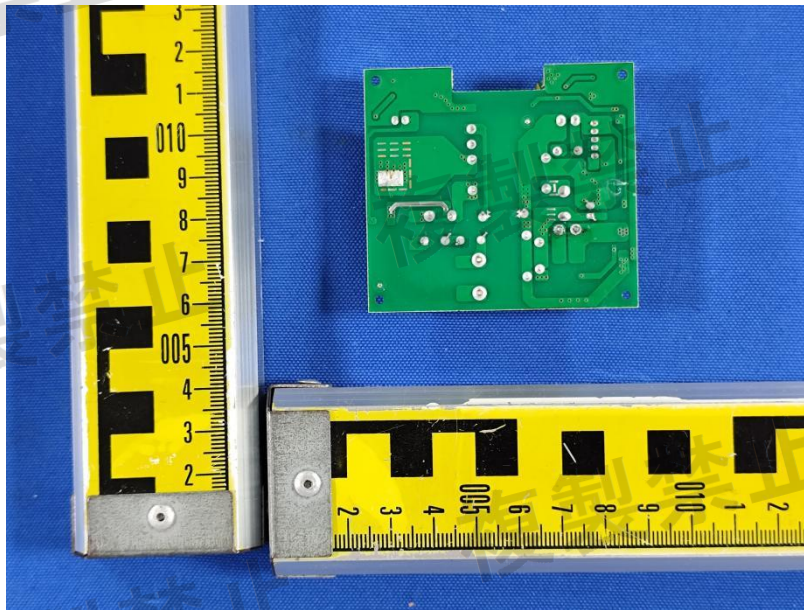


FIGURE 15

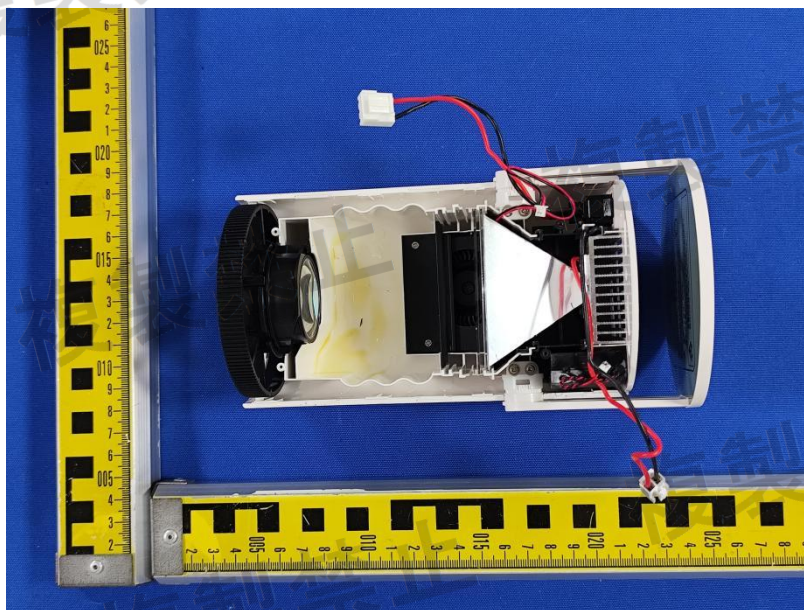


FIGURE 16

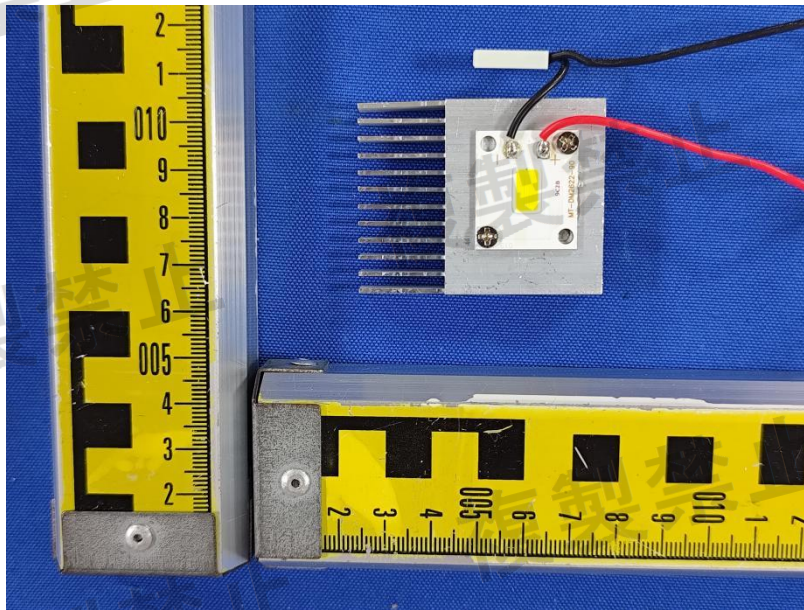


FIGURE 17

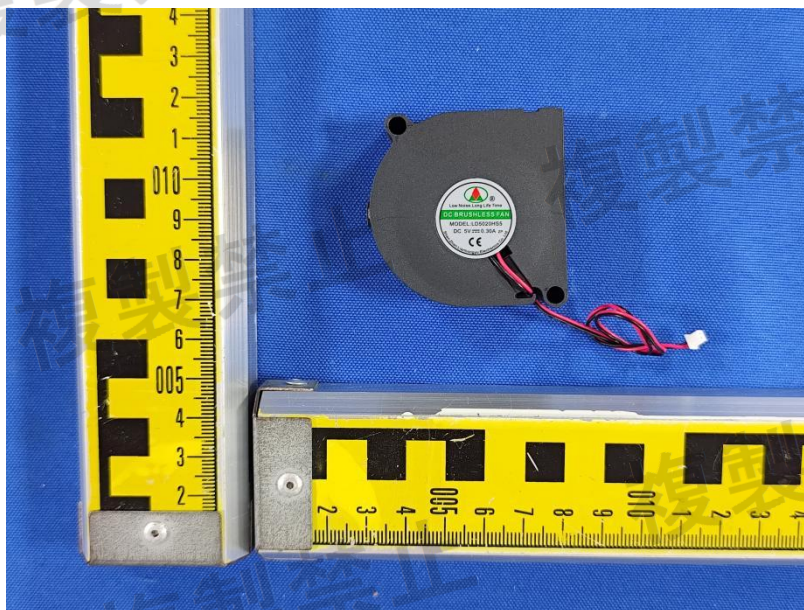


FIGURE 18

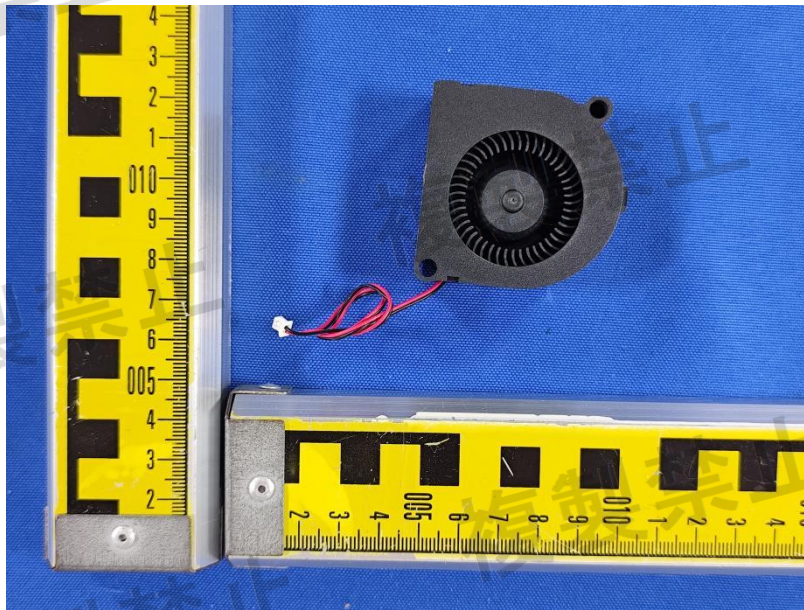


FIGURE 19

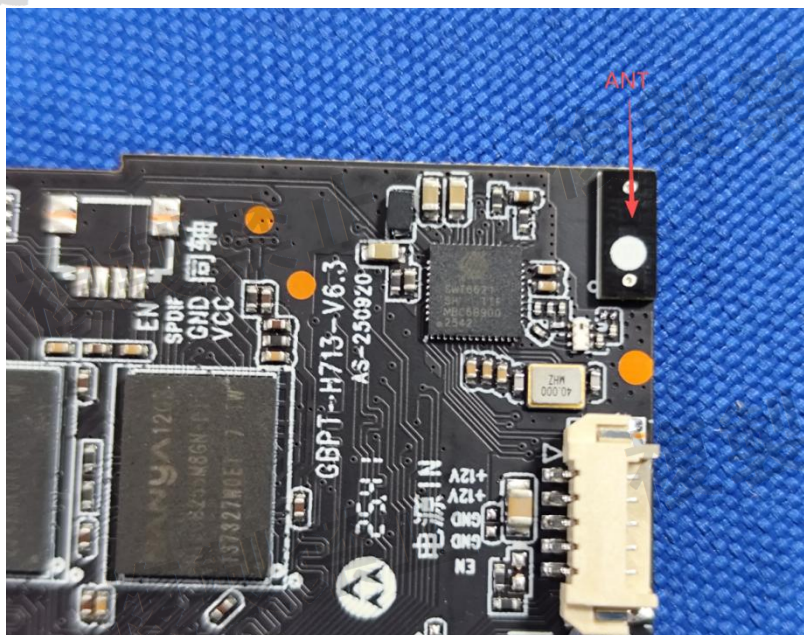


FIGURE 20

End of the report