

TEST REPORT

Application No.: SUCR2604000388AT

Applicant: Anhui Huami Information Technology Co., Ltd.

Address of Applicant: Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone

Manufacturer: Anhui Huami Information Technology Co., Ltd.

Address of Manufacturer: Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone

EUT Description: Smart Watch

Model No.: A2443

Trade Mark: AMAZFIT

Standards: Article 2, paragraph 1, item 19

Test Method: MIC Notice No.88 Appendix No.43

Date of Receipt: 2026-04-21

Date of Test: 2026-04-28 to 2026-04-30

Date of Issue: 2026-04-30

Test Result:**PASS ***

* In the configuration tested, the EUT detailed in this report complied with the standards specified above. Please refer to section 3 of this report for further detail.

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Version

Revision Record			
Version	Description	Date	Remark
00	Original	2026-04-30	/

Authorized for issue by:		
Tested By	<i>Nature Shen</i>	
	Nature Shen/Project Engineer	
Approved By	<i>Cedar cheng</i>	
	Cedar Cheng/Reviewer	

1 Test Summary

Test	Test Requirement	Limit/Severity	Result
Antenna Requirement	Item 19 of Article 2-1	Notice 88 Appendix 43, B-1 (1) & (2)	PASS
Test frequency	Item 19 of Article 2-1	Notice 88 Appendix 43, A-3	PASS
Frequency Error	Item 19 of Article 2-1	$\leq \pm 50$ ppm	PASS
Occupied Bandwidth	Item 19 of Article 2-1	FH, FH+DS, FH+OFDM: ≤ 83.5 MHz	PASS
Antenna Power and Tolerance	Item 19 of Article 2-1	FH, FH+DS, FH+OFDM: a. 2427 ~ 2470.75 MHz ≤ 3 mW/MHz b. Others ≤ 10 mW/MHz Tolerance: +20% ~ -80%	PASS
Spurious Emission of Tx	Item 19 of Article 2-1	< 2387 MHz ≤ 2.5 μ W/MHz 2387 ~ 2400 MHz ≤ 25 μ W/MHz 2483.5 ~ 2496.5 MHz ≤ 25 μ W/MHz > 2496.5 MHz ≤ 2.5 μ W/MHz	PASS
Dwell Time	Item 19 of Article 2-1	less than 0.4 sec	PASS
Interference prevention capability	Item 19 of Article 2-1	Notice 88 Appendix 43	PASS
RF accessibility	Item 19 of Article 2-1	Notice 88 Appendix 43	PASS
Spurious Emission of Rx	Item 19 of Article 2-1	(1) Below 1 GHz: ≤ 4 nW (2) Above 1 GHz: ≤ 20 nW	PASS
Remark: EUT: In this whole report EUT means Equipment Under Test. Tx: In this whole report Tx (or tx) means Transmitter. Rx: In this whole report Rx (or rx) means Receiver. RF: In this whole report RF means Radio Frequency. Item 19 of Article 2 Paragraph 1			

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2 General Information

2.1 Client Information

Applicant:	Anhui Huami Information Technology Co., Ltd.
Address of Applicant:	Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone
Manufacturer:	Anhui Huami Information Technology Co., Ltd.
Address of Manufacturer:	Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Hefei City, China (Anhui) Pilot Free Trade Zone

2.2 Details of E.U.T.

Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, ($\pi/4$) DQPSK, 8DPSK
Number of Channels:	79 Channels
Antenna Type:	IFA Antenna
Antenna Gain*:	☒ Provided by client
	-5.55dBi
RF Cable:	2000MHz ~ 3000MHz (1.1dB)
Note: *	
Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.	
Remark:	
As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.	

2.3 Description of Support Units

The EUT has been tested independently.

2.4 Deviation from Standards

None.

2.5 Abnormalities from Standard Conditions

None.

2.6 Other Information Requested by the Customer

None.

2.7 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Levi Li

2.8 Test Facility

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

- **A2LA (Certificate No. 6336.01)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA).

- **FCC (Designation Number: CN1312)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized as an accredited testing laboratory. Test Firm Registration Number: 717327

- **ISED (CAB Identifier: CN0120)**

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

Remark: Our test report is under the quality assurance system according to ISO17025.

3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 9.84\text{Hz}$
2	Occupied Bandwidth	$\pm 0.2\%$
3	RF conducted power	$\pm 0.42\text{dB}$
4	Conducted Spurious emissions	$\pm 0.42\text{dB}$

Remark:

The U_{lab} (lab Uncertainty) is less than U_{cispr/ETSI} (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

4 Equipment List

Item	Equipment	Manufacturer	Model	Serial No	Inventory No	Cal Date	Cal. Due Date	Cal body	Certifier
1	Signal Analyzer	ROHDE&SCHWARZ	FSW43	101881	SUWI-01-02-04	2026/1/14	2027/1/13	LISAI	(c)
2	Signal Analyzer	KEYSIGHT	N9020A	MY51240034	SUWI-01-02-15	2026/1/14	2027/1/13	LISAI	(c)
3	MXG Vector signal genitor	KEYSIGHT	N5182B	MY58108831	SUWI-01-38-01	2026/1/14	2027/1/13	CETC	(c)
4	Signal Generator	ROHDE&SCHWARZ	SMW200A	110074	SUWI-01-07-08	2026/1/14	2027/1/13	SGS	(c)
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	182393	SUWI-01-08-01	2026/1/14	2027/1/13	SGS	(c)
6	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	171428	SUWI-01-16-13	2025/5/8	2026/5/7	SGS	(c)
7	Wideband Radio Communication Test Station	Anritsu	MT8000A	6272368744	SUWI-01-34-02	2025/11/21	2026/11/20	LISAI	(c)
8	Wideband Radio Communication Tester	Anritsu	MT8821C	62062257918	SUWI-01-26-03	2025/11/21	2026/11/20	SGS	(c)
9	Power meter	Anritsu	ML2495A	2136003	SUWI-01-31-01	2025/11/21	2026/11/20	LISAI	(c)
10	Pulse power sensor	Anritsu	MA2411B	1911376	SUWI-01-32-01	2025/11/21	2026/11/20	LISAI	(c)
11	DC Power Supply	HYELEC	HY3005B	595472	SUWI-01-18-01	2026/1/14	2027/1/13	SGS	(c)
12	Temperature and humidity meter	MingGao	TH101B	4897002120270	SUWI-01-01-07	2026/2/11	2027/2/10	SGS	(c)
13	Temperature Chamber	GIANT FORCE	ICT-017-40-SP-SD	IAF2304-002	SUWI-01-13-02	2025/5/7	2026/5/6	SGS	(c)
14	Measurement Software	TST	TST 272 V2.02	CN1505IF40218	SUWI-03-55-03	NCR	NCR	SGS	(c)
15	RF Control unit	TST	TSCB3023R2	SUZ001	SUWI-02-20-01	NCR	NCR	SGS	(c)
16	RFCables	Tonscend	9k~18G	L72-C1124-800	SUWI-01-03-01	2026/1/15	2027/1/14	SGS	(c)

Remark:

(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

(d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).

From JRL Article 24-2, paragraph 4, Item 2

Notice: Calibration duration for above equipments is 1 year.

5 Test Results

5.1 Radio Technical Requirements Specification

Table 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2-1)

Items	Technical standard
Assigned frequency or designated frequency	2400-2483.5MHz
Communication method	One-way communication, simplex, semi-duplex, or duplex operation of digital signal transmission including spread spectrum
Tolerance of frequency ($\times 10^{-6}$)	± 50 ppm
Tolerance of occupied bandwidth	FH/FH+DS+FH+OFDM: ≤ 83.5 MHz
Antenna power	FH, FH+DS, FH+OFDM: (1) 2427 - 2470.75 MHz: ≤ 3 mW/MHz (2) Others: ≤ 10 mW/MHz Tolerance: $+20\%$
Antenna gain	1) 12.14 dBi or less in principle 2) In case of directional antenna (1) FH, FH+DS or FH+OFDM using 2427-2470.75 MHz EIRP ≤ 16.91 dBm/MHz (2) OFDM or DS other than (1) EIRP ≤ 22.14 dBm/MHz (3) Other than (1) and (2): 22.14 dBm or less (4) OFDM OBW 26 - 40MHz: 19.14dBm/MHz (5) Half-power angle of directional antenna (e) in case of the item 2): $e \leq 360/A$ (The A is 10 in maximum.)
Tolerance of spurious emission intensity	< 2387 MHz: 2.5μ W/MHz 2387 to 2400 MHz: 25μ W/MHz 2483.5 through 2496.5 MHz: 25μ W/MHz > 2496.5 MHz: 2.5μ W/MHz
Spreading bandwidth	Not regulated
Spreading rate of spectrum	Not regulated
Limit of secondary radiated emissions	(1) Below 1 GHz: 4 nW (2) Above 1 GHz: 20 nW
Interference prevention function	Shall have the function of automatic transmission and reception of identification sign.
Structure	Shall be of the structure that the RF and modulator sections excluding antenna cannot easily be opened.
Note	DS: Direct spread FH: Frequency hopping OFDM: Orthogonal frequency division multiplexing

5.2 E.U.T. test conditions

Power Supply:	DC 3.87V			
	The RF unit is supplied DC 3.87V. The fluctuation of input voltage to the circuit of RF unit of test equipment is under $\pm 1\%$, when input voltage from DC 3.87V to the test equipment is fluctuated by $\pm 10\%$, So, all measurement has been conducted by only rated voltage.			
	The measurement result of the voltage fluctuation at RF circuit when DC 1.8V $\pm 1\%$.			
	DC Input		input voltage to the circuit	Deviation
	High Voltage	DC 4.26V	DC 1.80V	0.00%
	Normal Voltage	DC 3.87V	DC 1.80V	0.00%
Test Frequencies:	Low Voltage	DC 3.48V	DC 1.80V	0.00%
	If the EUT can be set to 3 or more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest and the Highest frequency (L and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.			

5.3 EUT channels and frequencies list:

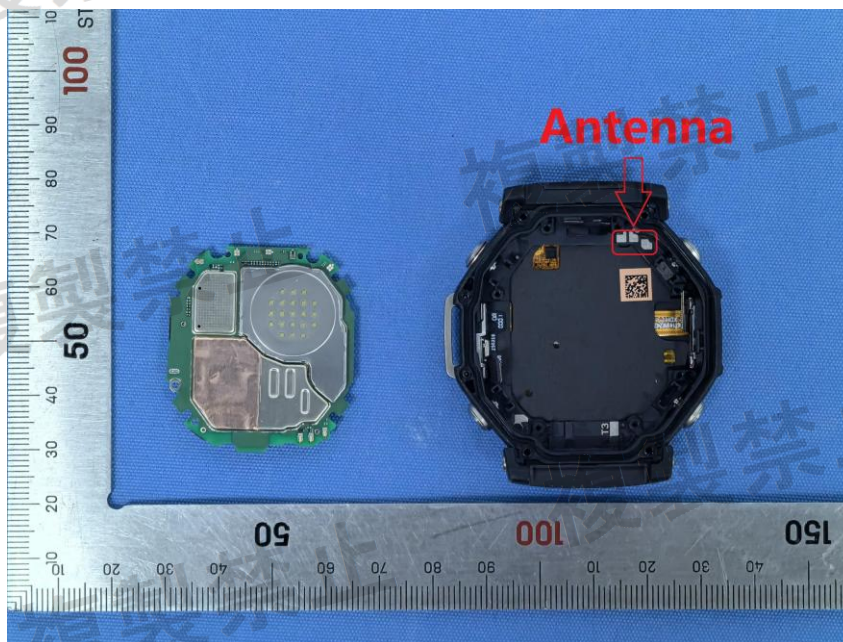
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

Test frequencies are the lowest channel: 0 channel (2402 MHz) and highest channel: 78 channel (2480 MHz).

5.4 Antenna Requirement

Standard requirement

Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.



The antenna is IFA Antenna and no consideration of replacement.

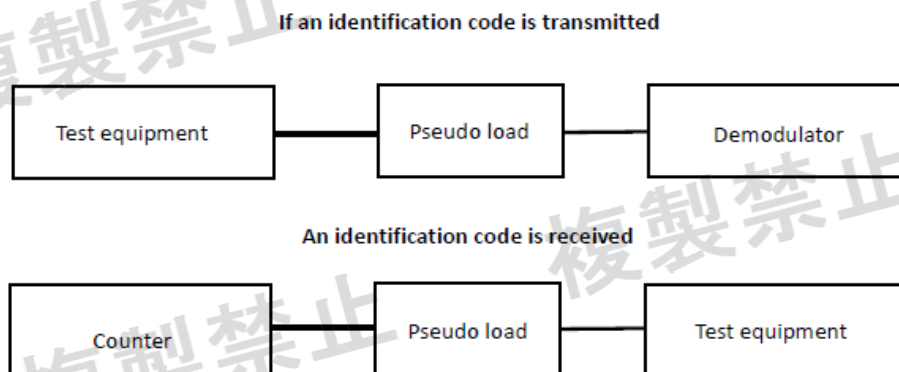
The best case gain of the antenna is -5.55dBi.

Result: An antenna connector is available, all relevant tests will be carried out conducted.

5.5 Interference prevention function

1) Measurement system diagram

(a) When transmitting identification code



2) Condition of measuring instrument

(b) Demodulator must be able to demodulate the transmitting signal emitted by test equipment and to indicate the identification code.

3) Condition of test equipment The mode of normal use.

4) Measuring operation procedure

(a) When test equipment has the function to transmit identification code automatically:

A) Transmit the predetermined identification code from test equipment.

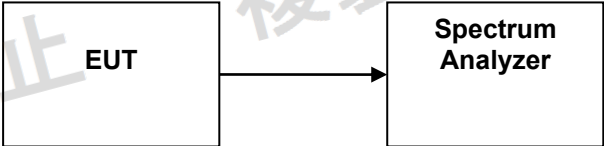
B) Confirm the transmitted identification code by demodulator.

BD Address 0x0X032256772267

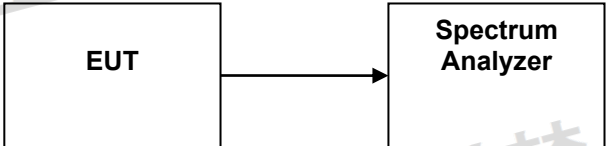
5) Test result: The unit does meet the requirements (Good).

PASS

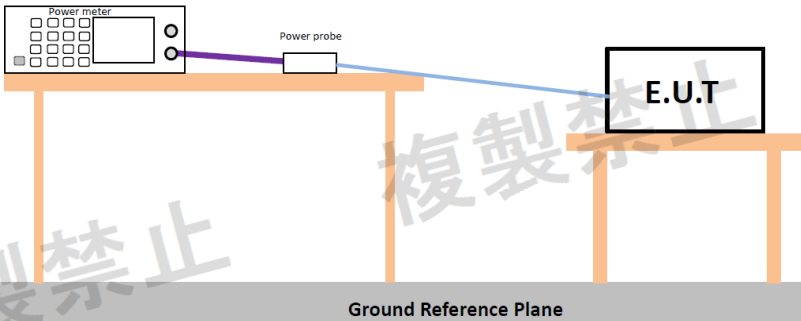
5.6 Frequency Error

Test Requirement:	Item 19 of Article 2-1
Limit:	Tolerance of frequency: $\pm 50 \times 10^{-6}$
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Test the EUT in transmitting mode without modulation.
Temperature:	22~25 °C
Humidity:	50~60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	1. Test Conditions: Spectrum Analyzer is used for measurement. 2. EUT conditions: Modulation/Spread/Hopping OFF, CW Tx 3. Spectrum Analyzer conditions: Frequency: Test Frequency Span 1MHz RBW 10 kHz (Modulation OFF), VBW 10 kHz (Modulation OFF), Sweep Time Auto Detector mode Positive peak Indication mode Max hold Alternative method: Frequency: Test Frequency Span 2 times channel bandwidth RBW 100 kHz (Modulation ON), VBW 100 kHz (Modulation ON), Sweep Time Auto Detector mode Positive peak Indication mode Max hold
The detailed test data see: Appendix	

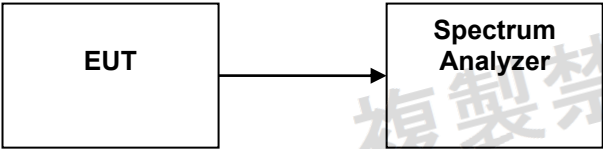
5.7 Occupied Bandwidth (99%)

Test Requirement:	Item 19 of Article 2-1
Limit:	FH: 83.5MHz or less
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	22~25 °C
Humidity:	50~60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 <pre>graph LR; EUT[EUT] --> SA[Spectrum Analyzer]</pre>
Test Procedure:	1. Test Conditions: Spectrum Analyzer is used for measurement. 2. EUT conditions: Modulation/Spread/Hopping ON, Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal. 3. Spectrum Analyzer conditions: Frequency: Test Frequency Span 83.5 MHz (FHSS); 40/60 MHz (OFDM; DSSS); 2-5 times OBW (Others) RBW 1 MHz (FHSS); 300kHz (OFDM; DSSS); 3% OBW (Others) VBW 1 MHz (FHSS); 300kHz (OFDM; DSSS); 3 times RBW (Others) Sweep Time Auto detector mode Positive peak Indication mode Max hold OBW 99%
The detailed test data see: Appendix	

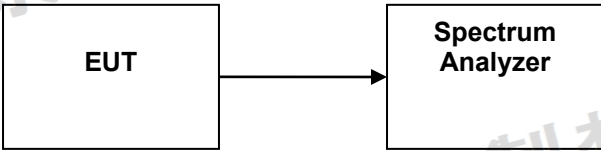
5.8 Antenna Power and Tolerance of Antenna Power

Test Requirement:	Item 19 of Article 2-1
Limit:	2427 ~ 2470.75MHz: 3mW/MHz or less Others: 10mW/MHz or less Tolerance: +20%
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	22~25 °C
Humidity:	50~60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 The diagram illustrates the test setup. A 'Power meter' is connected via a 'Power probe' to the 'E.U.T.' (Equipment Under Test). Both the power meter and the E.U.T. are positioned on a table. Below the table is a 'Ground Reference Plane'.
Test Procedure:	1. Test Conditions: Power meter is used for measurement. 2. EUT conditions: Modulation/Spread/Hopping ON, Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal. The high-frequency power meter is connected to the output of the analog load (attenuator) and measures the total power
The detailed test data see: Appendix	

5.9 Spurious Emissions of Tx

Test Requirement:	Item 19 of Article 2-1
Limit:	< 2387MHz ≤ 2.5μW/MHz 2387 ~ 2400MHz ≤ 25μW/MHz 2483.5 ~ 2496.5MHz ≤ 25μW/MHz >2496.5MHz ≤ 2.5μW/MHz
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	22~25 °C
Humidity:	50~60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>
Test Procedure:	- Test Conditions: Spectrum Analyzer is used for measurement. - EUT conditions: Modulation/Spread/Hopping ON, Modulation Tx For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal. - Spectrum Analyzer conditions: Step 1: All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2: IF the value measured by Step1 is 2 dB or less, measure in average mode. Test setup for Step 1: Frequency: 30MHz~2400MHz, 2483.5MHz~13GHz (for 2412-2472MHz) RBW 1 MHz VBW 1 MHz Sweep Time Auto detector mode Positive peak Indication mode Max hold Test setup for Step 2: Frequency: Spurious Frequency RBW 1 MHz VBW 1 MHz Sweep Time Auto detector mode Sample Indication mode Max hold
The detailed test data see: Appendix	

5.10 Dwell Time

Test Requirement:	Item 19 of Article 2-1
Limit:	less than 0.4sec
Text Method:	MIC Notice No.88 Appendix No.43
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. Modulation/Spread/Hopping ON, Hopping frequency is fixed, Bluetooth equipment is setting DH5 mode
Temperature:	22~25 °C
Humidity:	50~60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>
Test Procedure:	- Test Conditions: Spectrum Analyzer is used for measurement. - EUT conditions: Modulation/Spread/Hopping ON, Hopping frequency is fixed, Bluetooth equipment is setting DH5 mode For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal. - Spectrum Analyzer conditions: Frequency: Test Frequency (fixed hopping frequency) Span 0 Hz RBW 1 MHz VBW 1 MHz Sweep Time EUT condition Trigger Video Trigger Measures the Transmission time of 1 burst (sec) Measures the Burst cycle (sec) Calculation procedure: Dwell time = (0.4(s) x [spreading rate] x [Transmission time of 1 burst(s)]) / ([burst cycle(s)] x [No. of hopping channel]) Note:* Spreading rate = [Spread bandwidth (actual measurement value)] / [Transmission rate]
The detailed test data see: Appendix	

5.11 Pseudorandom Frequency Hopping Sequence

Standard requirement

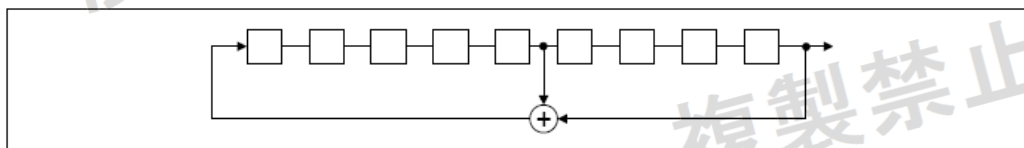
Article 2, Item (19) Notice 88 Appendix 43 requirement:

The EUT shall have the capability to transmit or to receive the MAC identification automatically, so that sender and receiver shall exclude other equipment.

EUT Pseudorandom Frequency Hopping Sequence

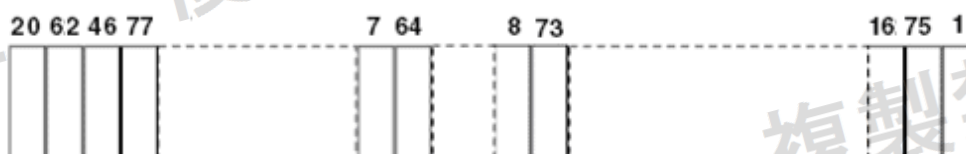
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. and the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONES; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: $2^9 - 1 = 511$ bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

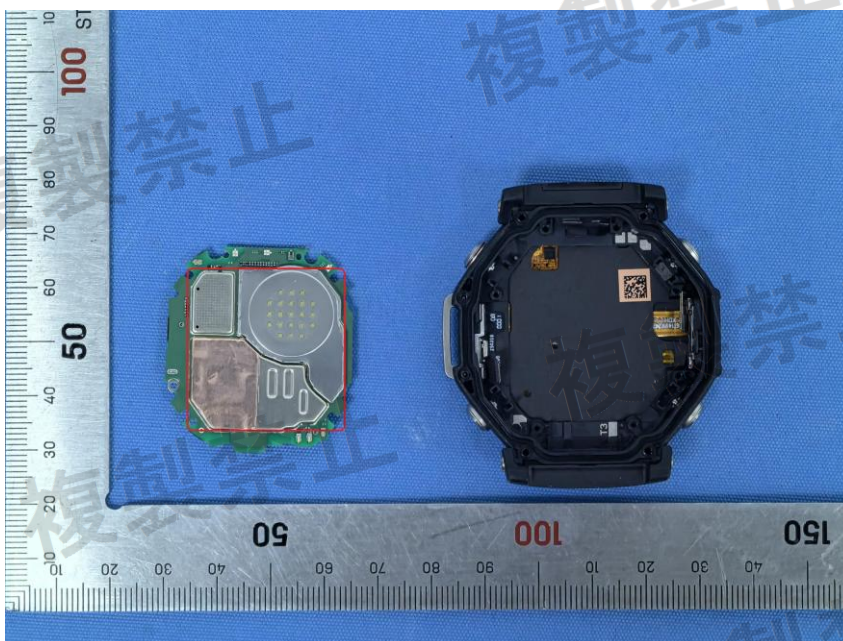
The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

5.12 RF accessibility

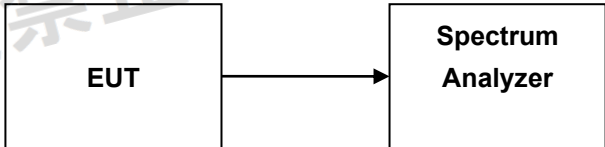
Standard requirement

Article 49-20, paragraph 1 (a)

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.

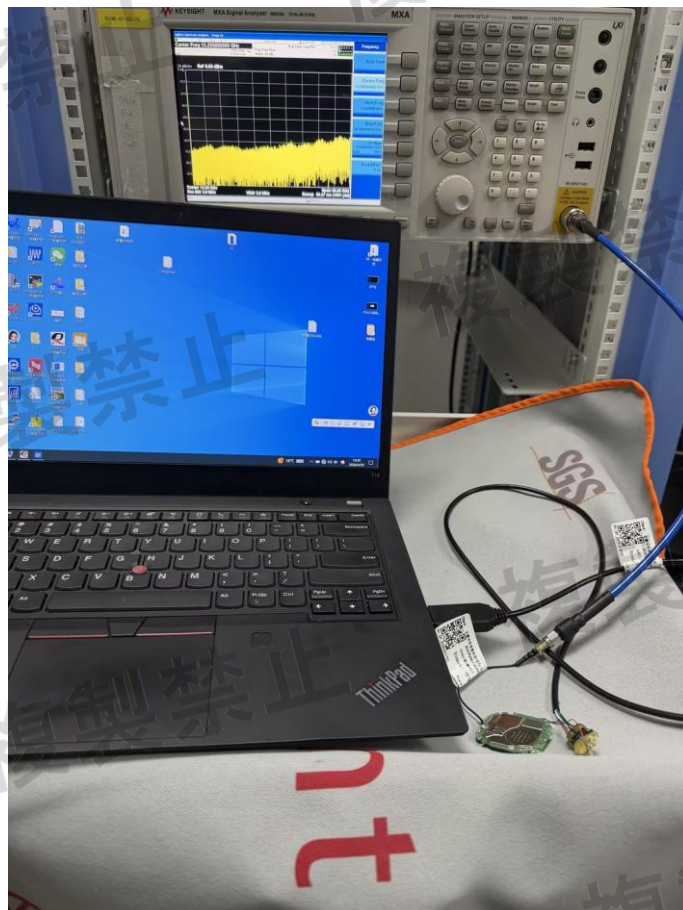


5.13 Spurious Emissions of Rx

Test Requirement:	Item 19 of Article 2-1
Text Method:	MIC Notice No.88 Appendix No.43
Limit:	(1) Below 1 GHz: ≤ 4 nW (2) Above 1 GHz: ≤ 20 nW
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Temperature:	22~25 °C
Humidity:	50-60 % RH
Atmospheric Pressure:	101.0kPa
Test Configuration:	 <pre> graph LR EUT[EUT] --> SA[Spectrum Analyzer] </pre>
Test Procedure:	- Test Conditions: Spectrum Analyzer is used for measurement. - EUT conditions: Modulation/Spread/Hopping ON For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal - Spectrum Analyzer conditions: Step 1: All spurious are measured from 30 MHz to 13 GHz by peak mode. Step 2: IF the value measured by Step1 is 2 dB or less, measure in average mode. Test setup for Step 1: Frequency: 30 MHz – 2400 MHz , 2483.5 MHz –13 GHz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Positive peak Indication mode Max hold Test setup for Step 2: Frequency: Spurious Frequency Span 0 Hz RBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) VBW 100 kHz (30 – 1GHz) , 1 MHz (over 1GHz) Sweep Time Auto detector mode Sample Indication mode Max hold
The detailed test data see: Appendix	

6 Photographs

6.1 EUT Test Setup



7 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for SUCR2604000388AT

8 Appendix

1. Frequency Error

1.1 Test Result

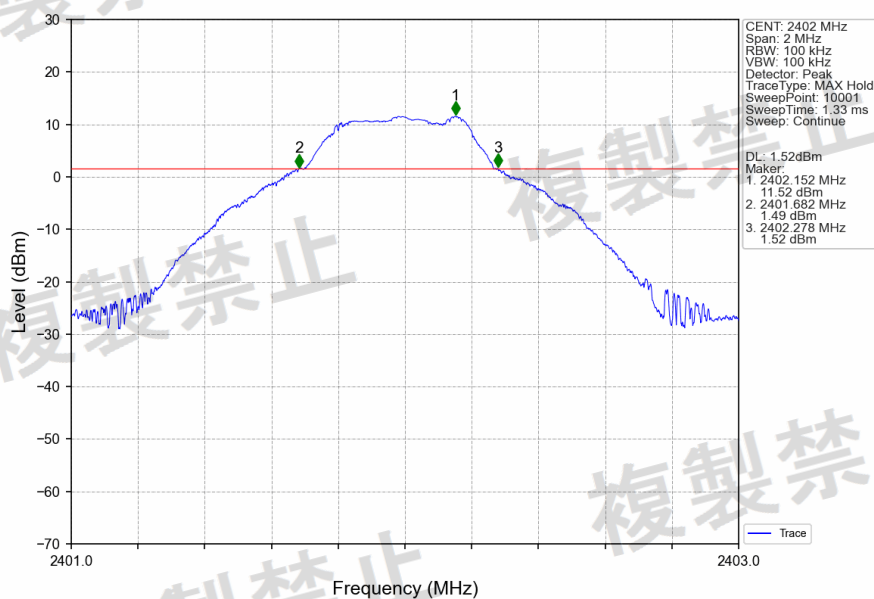
1.1.1 Ant1

Ant1								
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
						Result	Limit	
NTNV	GFSK	SISO	2402	DH5	2401.980	-8.20	-50 to 50	Pass
			2480	DH5	2479.977	-9.48	-50 to 50	Pass
	Pi/4DQPSK	SISO	2402	2DH5	2401.989	-4.50	-50 to 50	Pass
			2480	2DH5	2479.985	-5.85	-50 to 50	Pass
	8DPSK	SISO	2402	3DH5	2401.976	-9.79	-50 to 50	Pass
			2480	3DH5	2479.980	-7.94	-50 to 50	Pass

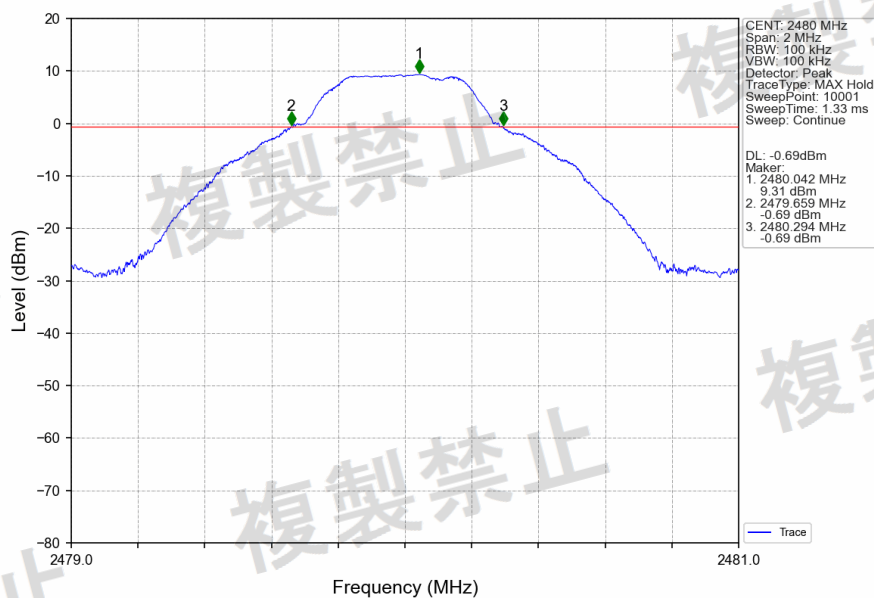
1.2 Test Graph

1.2.1 Ant1

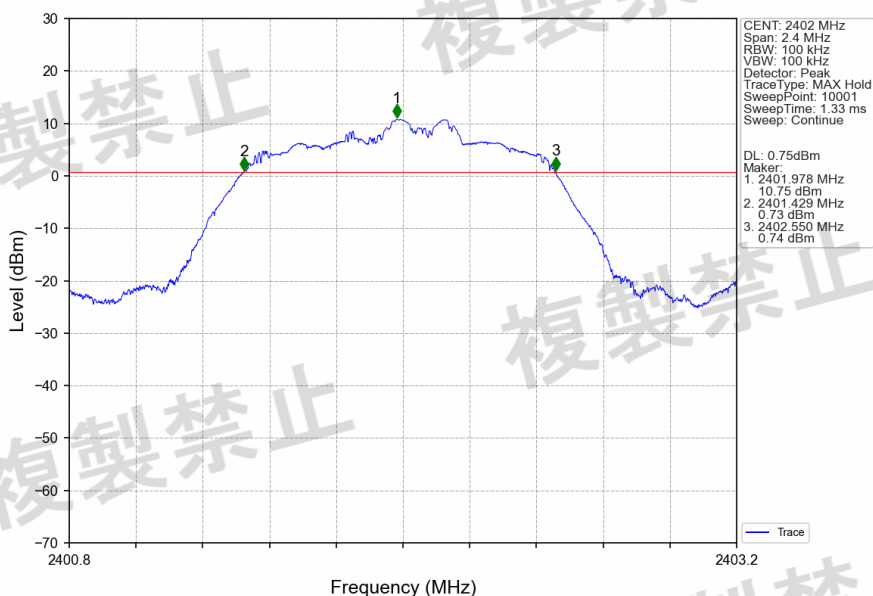
GFSK_DH5_2402MHz_Ant1_NTNV



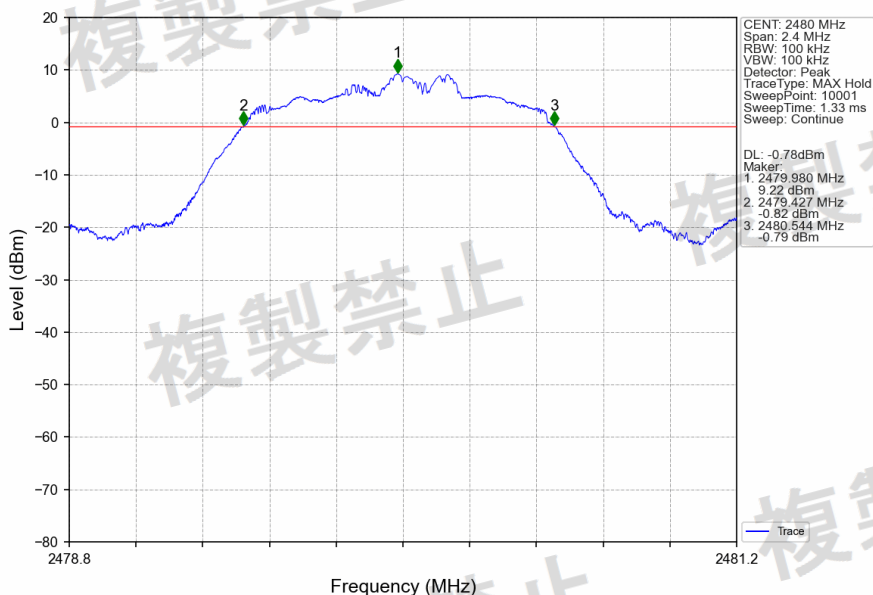
GFSK_DH5_2480MHz_Ant1_NTNV



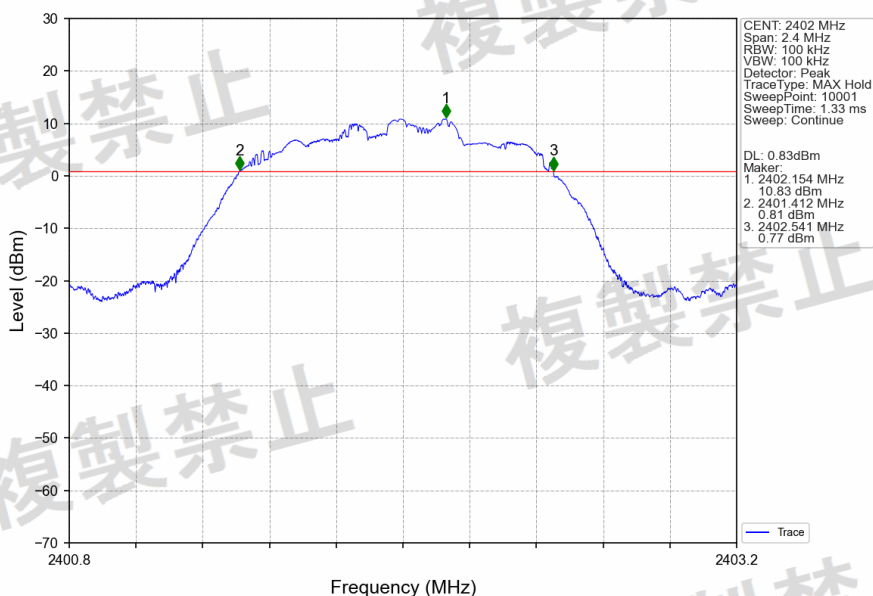
Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV



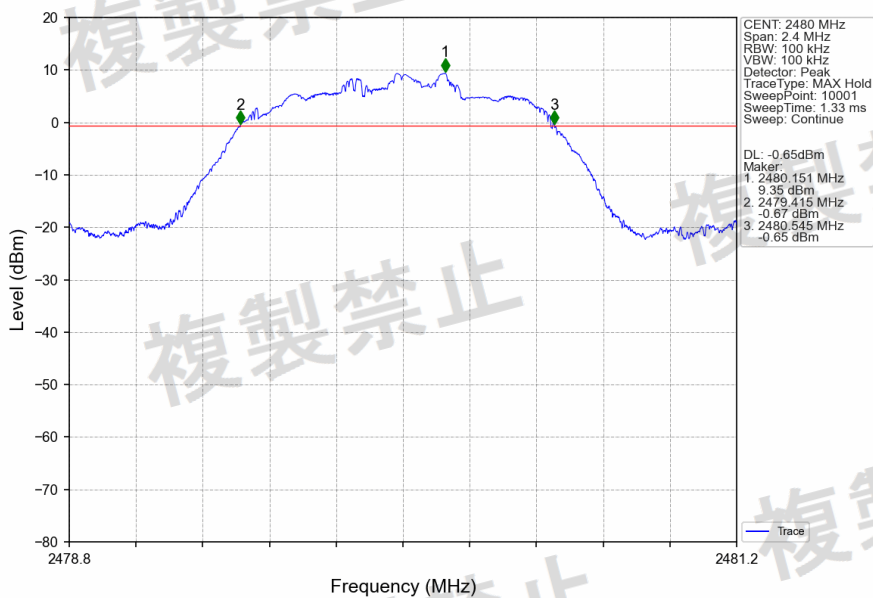
Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2402MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



2. Occupied Bandwidth

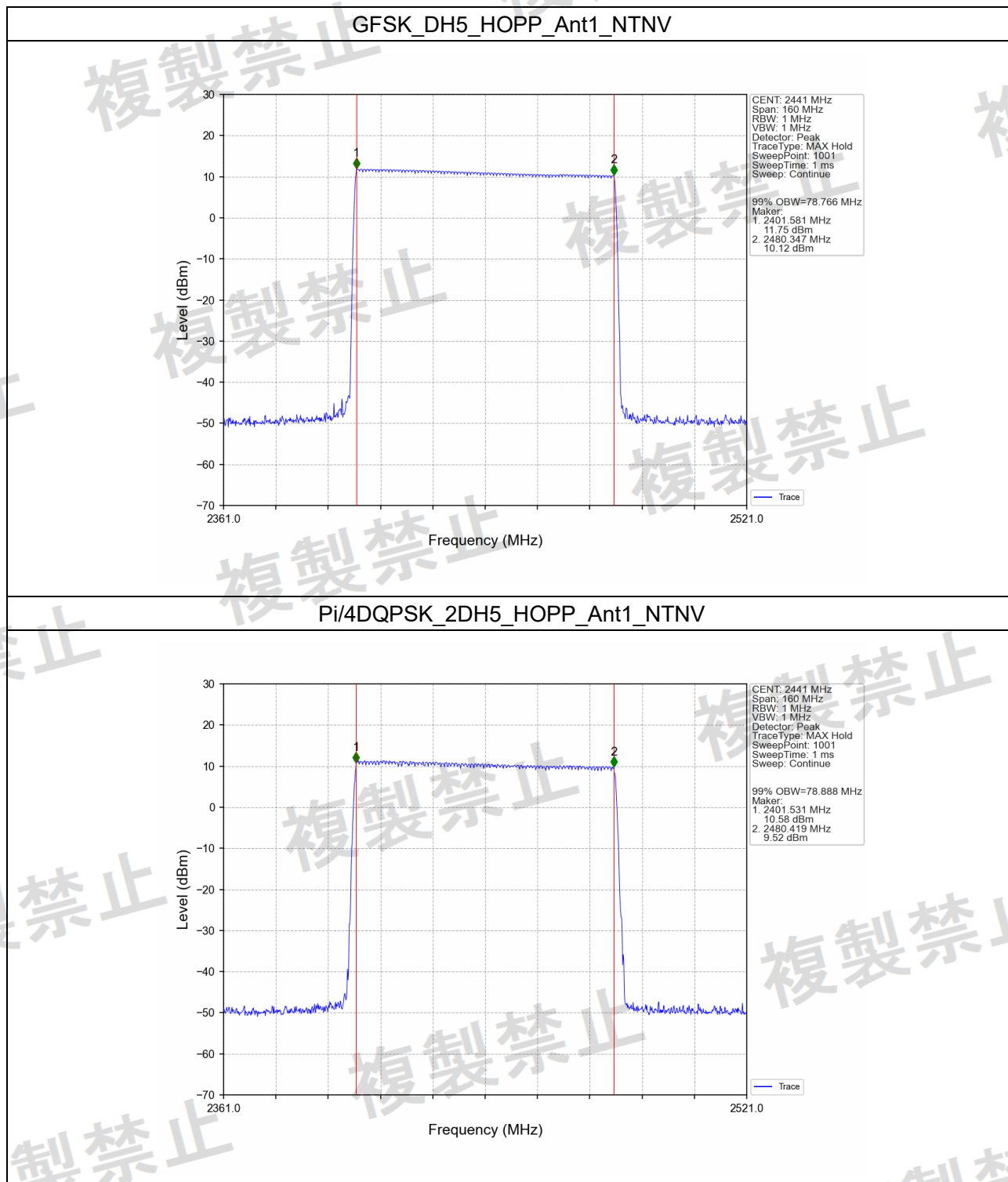
2.1 Test Result

2.1.1 OBW

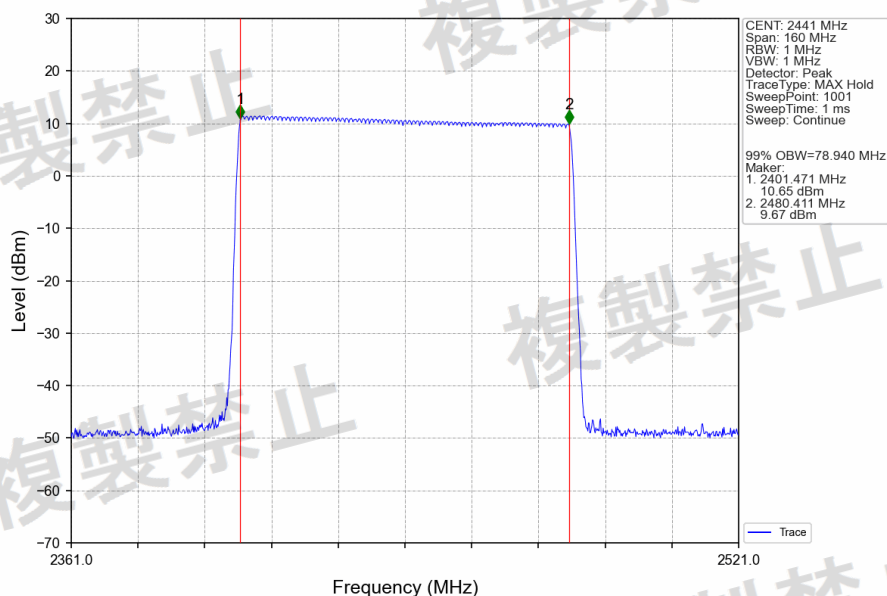
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	99% Occupied Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	78.766	≤ 83.5	Pass
	Pi/4DQPSK	SISO	HOPP	2DH5	78.888	≤ 83.5	Pass
	8DPSK	SISO	HOPP	3DH5	78.940	≤ 83.5	Pass

2.2 Test Graph

2.2.1 OBW



8DPSK_3DH5_HOPP_Ant1_NTNV



3. Spread Bandwidth

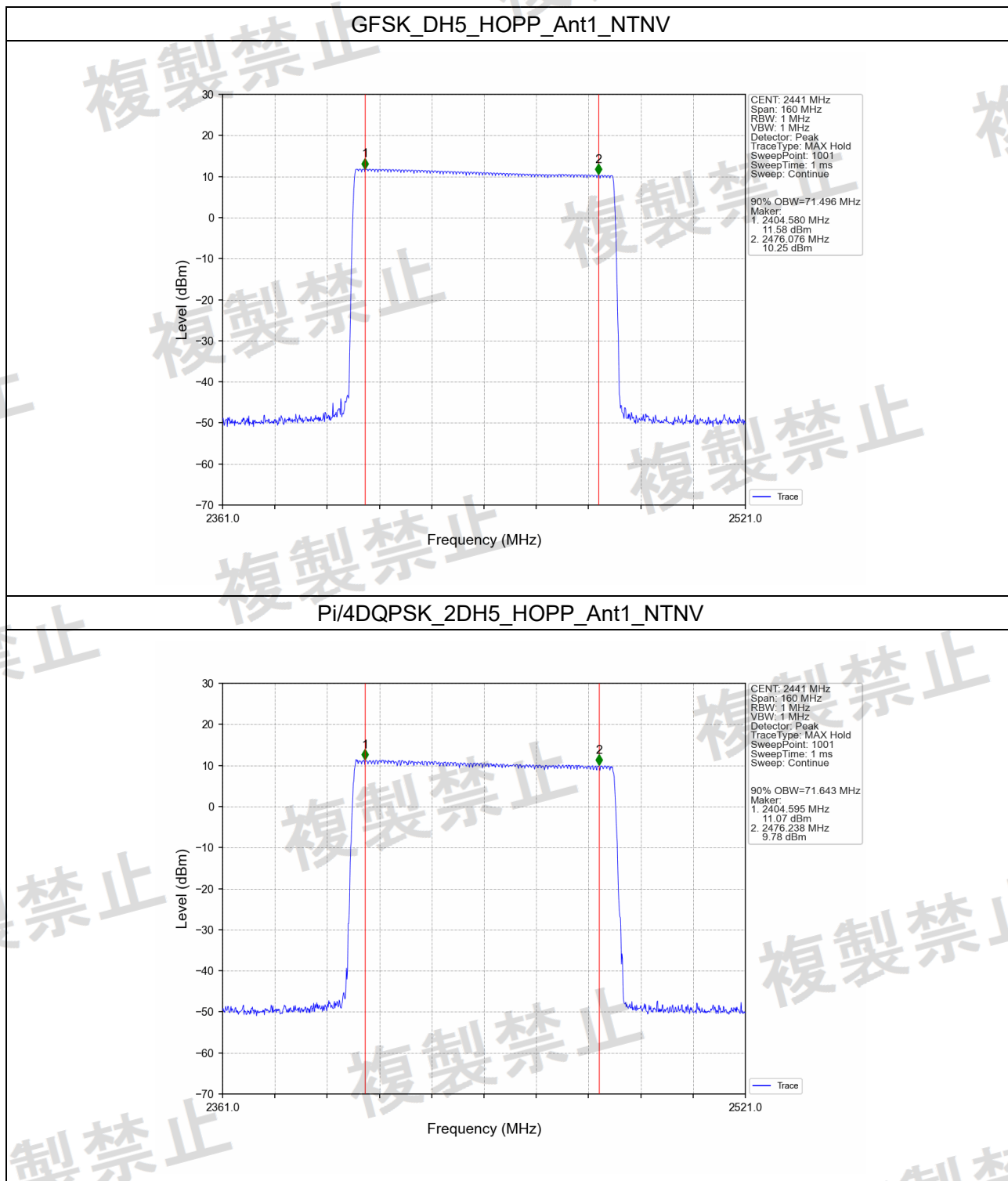
3.1 Test Result

3.1.1 SPBW

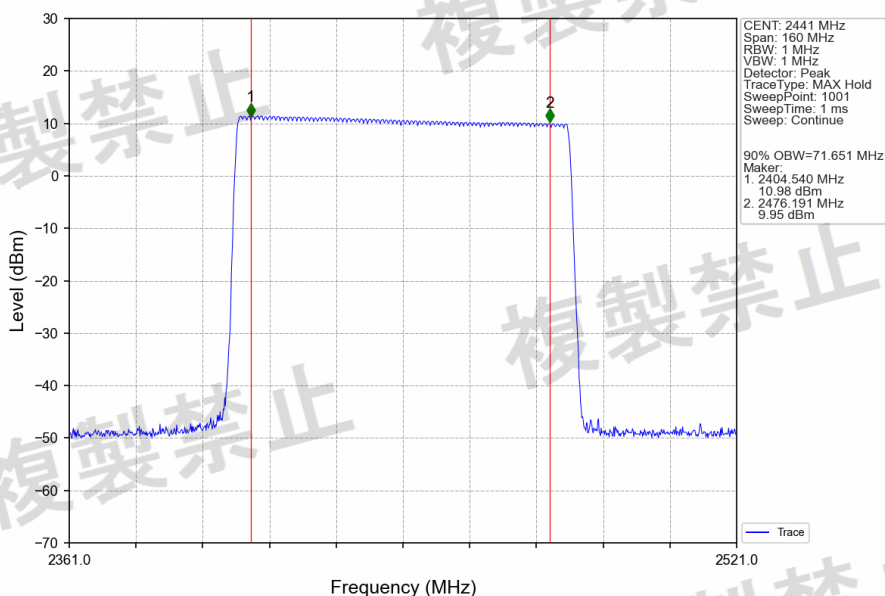
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spread Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	71.496	/	Only For Report
	Pi/4DQPSK	SISO	HOPP	2DH5	71.643	/	Only For Report
	8DPSK	SISO	HOPP	3DH5	71.651	/	Only For Report

3.2 Test Graph

3.2.1 SPBW



8DPSK_3DH5_HOPP_Ant1_NTNV



4. Antenna Power

4.1 Test Result

4.1.1 Power

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Antenna Power (mW/MHz)		Nominal Power (mW/MHz)	Tolerance (%)		Verdict
						Measured	Limit		Measured	Limit	
NTNV	GFSK	SISO	HOPP	DH5	1	0.207	<=3.00	0.210	-1.43	<=20	Pass
	Pi/4DQPSK	SISO	HOPP	2DH5	1	0.119	<=3.00	0.120	-0.83	<=20	Pass
	8DPSK	SISO	HOPP	3DH5	1	0.100	<=3.00	0.100	0.00	<=20	Pass

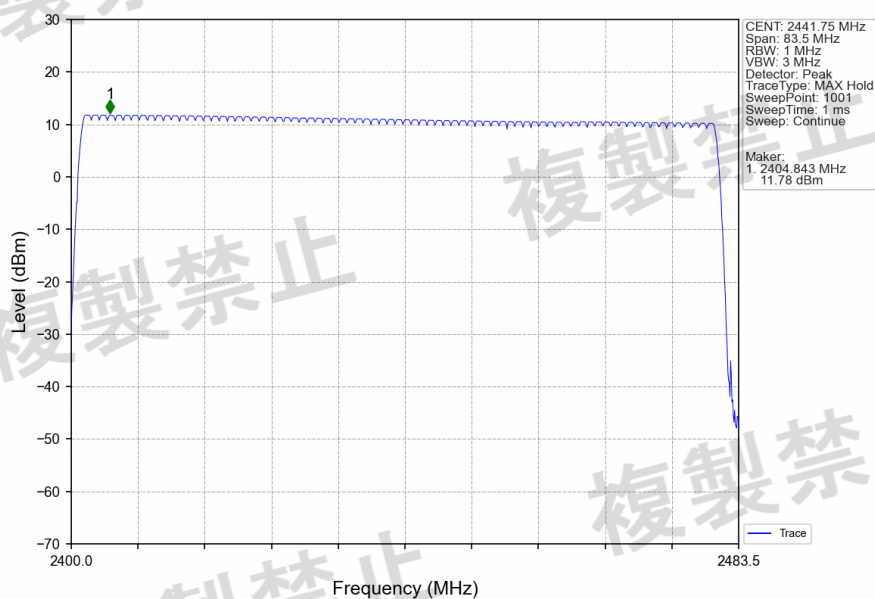
4.1.2 EIRP

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Gain (dBi)	EIRP (dBm/MHz)		Verdict
							Result	Limit	
NTNV	GFSK	SISO	HOPP	DH5	1	-5.55	-12.39	<=6.91	Pass
	Pi/4DQPSK	SISO	HOPP	2DH5	1	-5.55	-14.80	<=6.91	Pass
	8DPSK	SISO	HOPP	3DH5	1	-5.55	-15.56	<=6.91	Pass

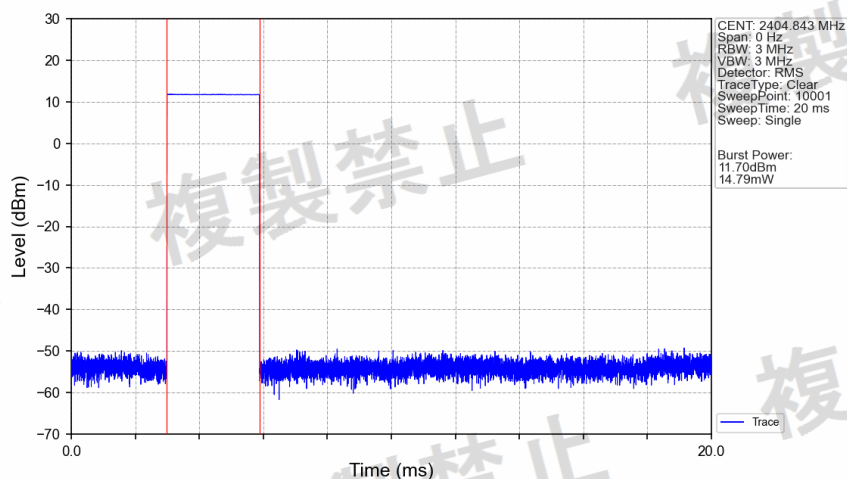
4.2 Test Graph

4.2.1 Power

GFSK_DH5_HOPP_Ant1_NTNV

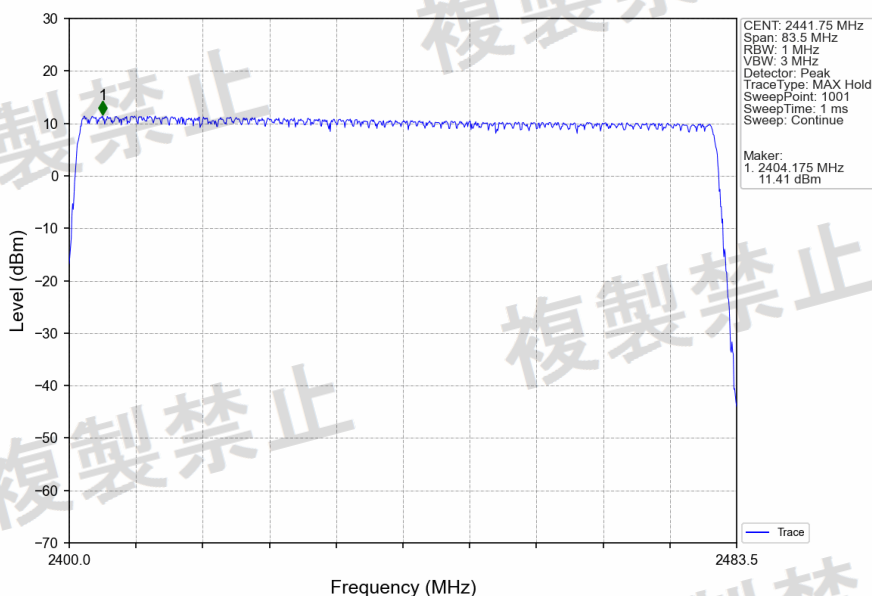


GFSK_DH5_HOPP_Ant1_NTNV

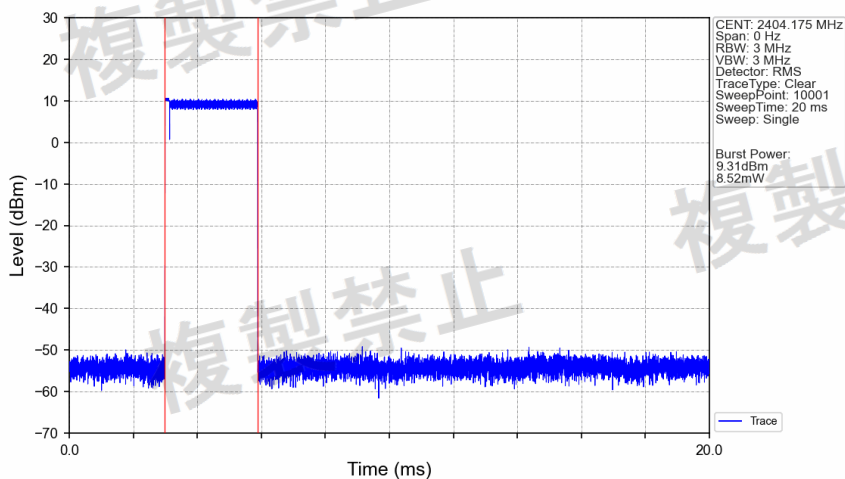


Burst No.	1
Length (ms)	2.896
Power(dBm)	11.70
Power(mW)	14.787
Remark	Max

Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV

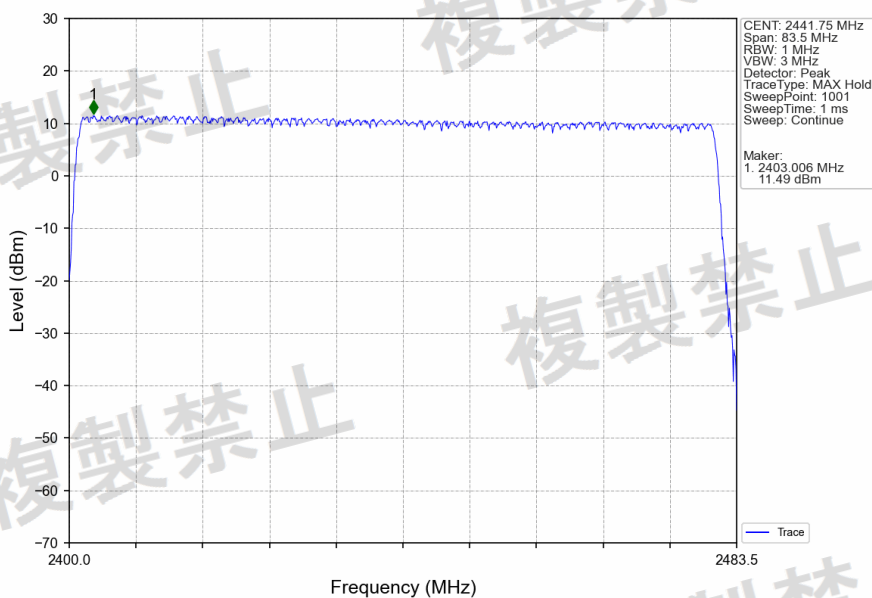


Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV

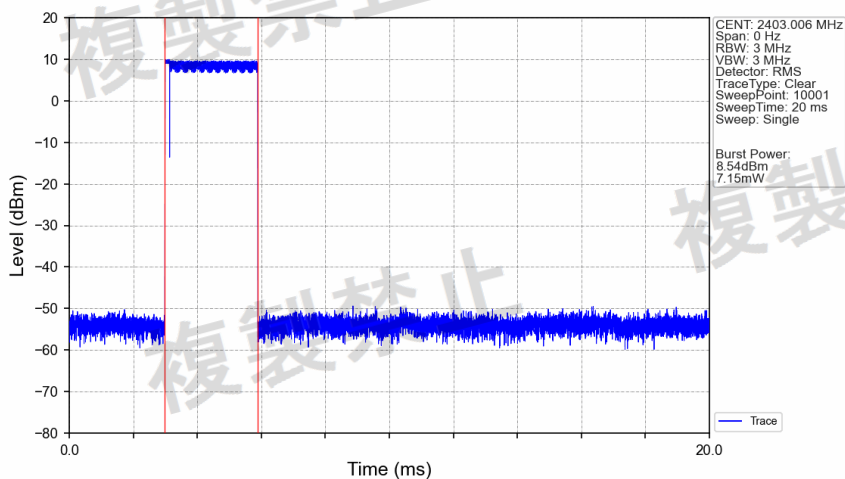


Burst No.	1
Length (ms)	2.902
Power(dBm)	9.31
Power(mW)	8.521
Remark	Max

8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



Burst No.	1
Length (ms)	2.904
Power(dBm)	8.54
Power(mW)	7.146
Remark	Max

5. Dwell Time

5.1 Test Result

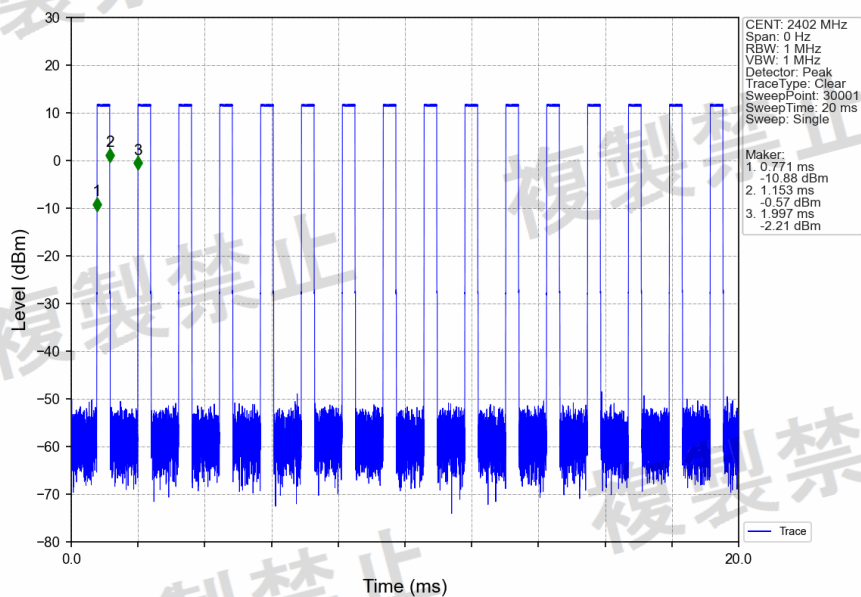
5.1.1 Ant1

Ant1											
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spreading Rate	T_on (ms)	Period (ms)	Hopp Number	Dwell Time (ms)		Verdict
									Result	Limit	
NTNV	GFSK	SISO	2402	DH1	71.496	0.382	1.226	79	112.794	<=400	Pass
				DH3	71.496	1.637	2.481	79	238.856	<=400	Pass
				DH5	71.496	2.886	3.730	79	280.093	<=400	Pass
			2480	DH1	71.496	0.381	1.225	79	112.591	<=400	Pass
				DH3	71.496	1.638	2.482	79	238.906	<=400	Pass
				DH5	71.496	2.885	3.729	79	280.071	<=400	Pass
	Pi/4DQPSK	SISO	2402	2DH1	71.643	0.389	1.234	79	114.351	<=400	Pass
				2DH3	71.643	1.633	2.486	79	238.282	<=400	Pass
				2DH5	71.643	2.888	3.734	79	280.562	<=400	Pass
			2480	2DH1	71.643	0.388	1.234	79	114.057	<=400	Pass
				2DH3	71.643	1.641	2.486	79	239.450	<=400	Pass
				2DH5	71.643	2.889	3.734	79	280.660	<=400	Pass
	8DPSK	SISO	2402	3DH1	71.651	0.388	1.234	79	114.070	<=400	Pass
				3DH3	71.651	1.640	2.485	79	239.427	<=400	Pass
				3DH5	71.651	2.890	3.736	79	280.638	<=400	Pass
			2480	3DH1	71.651	0.389	1.234	79	114.364	<=400	Pass
				3DH3	71.651	1.640	2.485	79	239.427	<=400	Pass
				3DH5	71.651	2.890	3.736	79	280.638	<=400	Pass

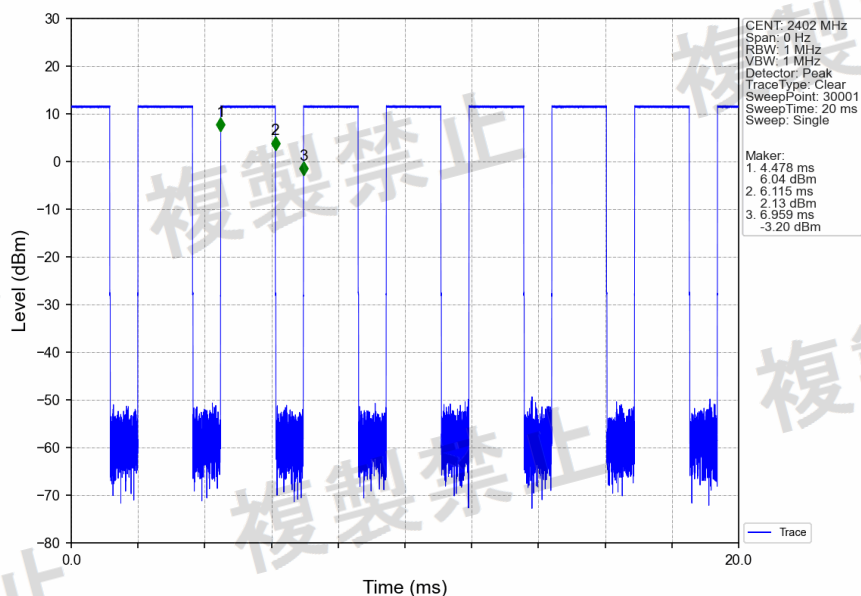
5.2 Test Graph

5.2.1 Ant1

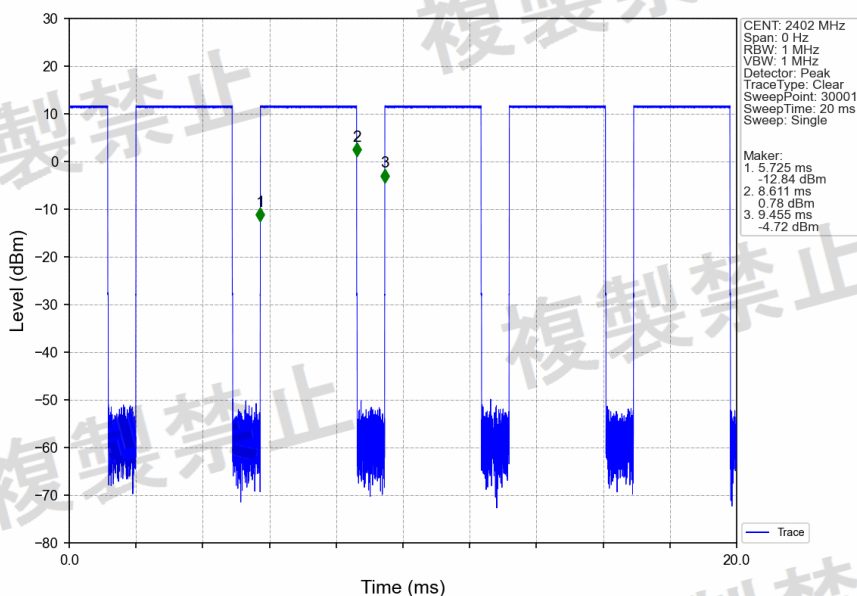
GFSK_DH1_2402MHz_Ant1_NTNV



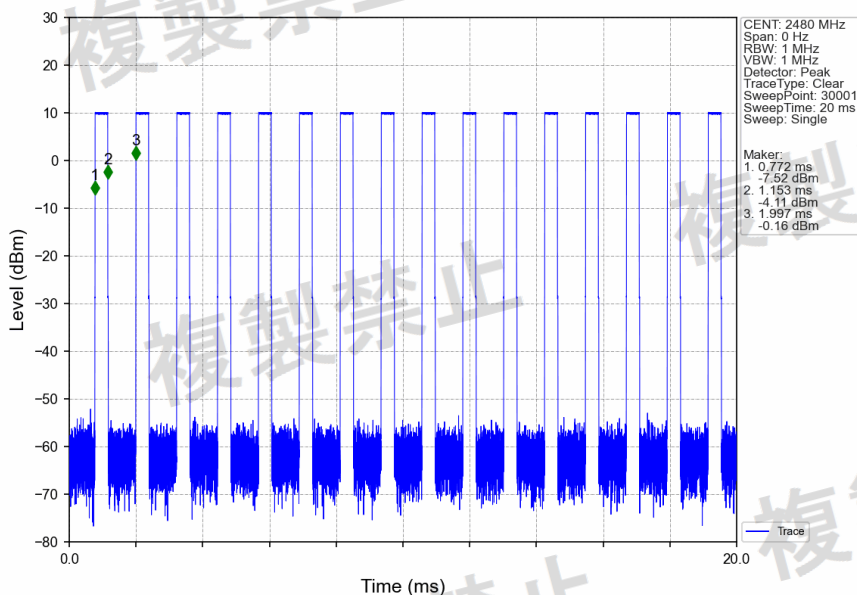
GFSK_DH3_2402MHz_Ant1_NTNV



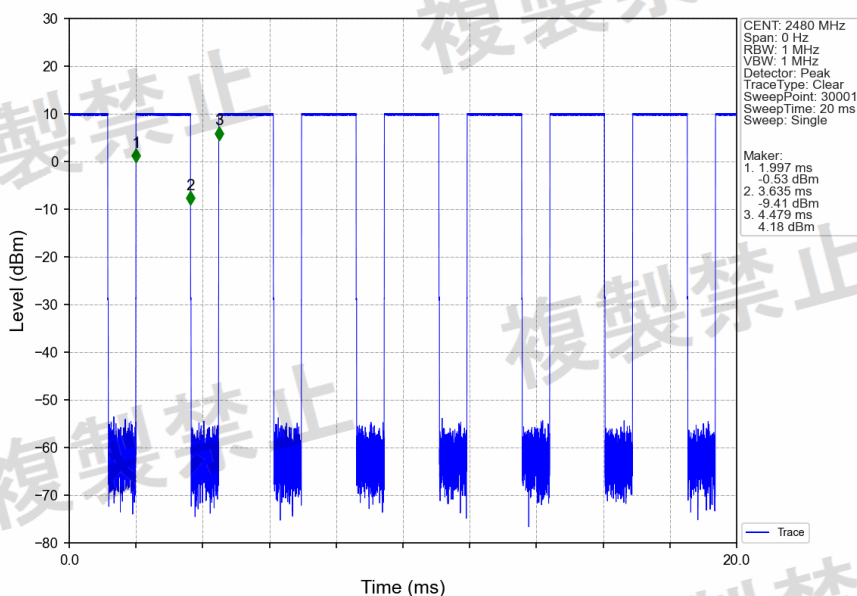
GFSK_DH5_2402MHz_Ant1_NTNV



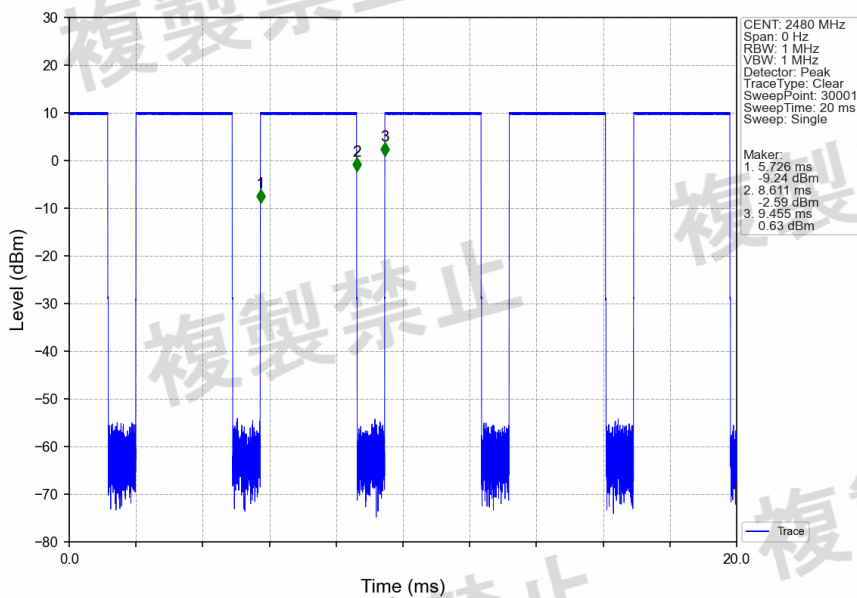
GFSK_DH1_2480MHz_Ant1_NTNV



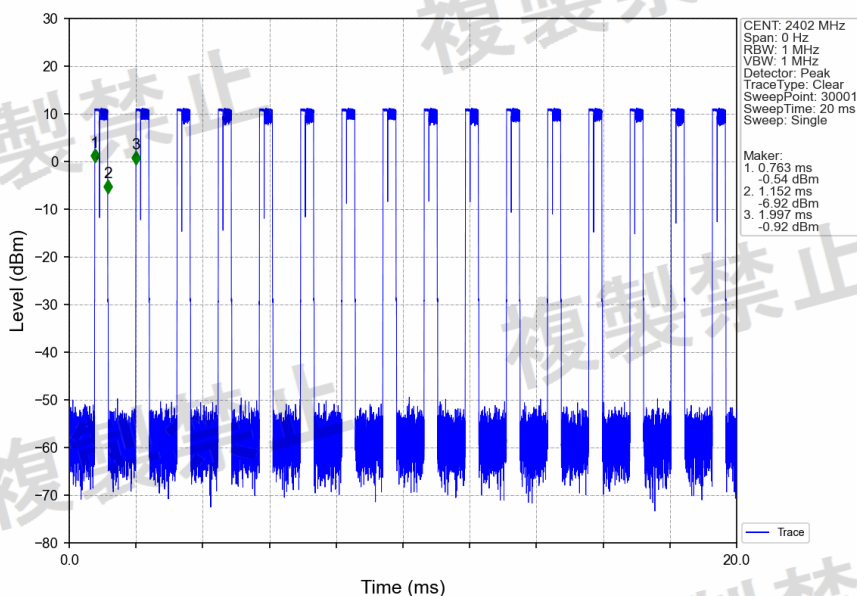
GFSK_DH3_2480MHz_Ant1_NTNV



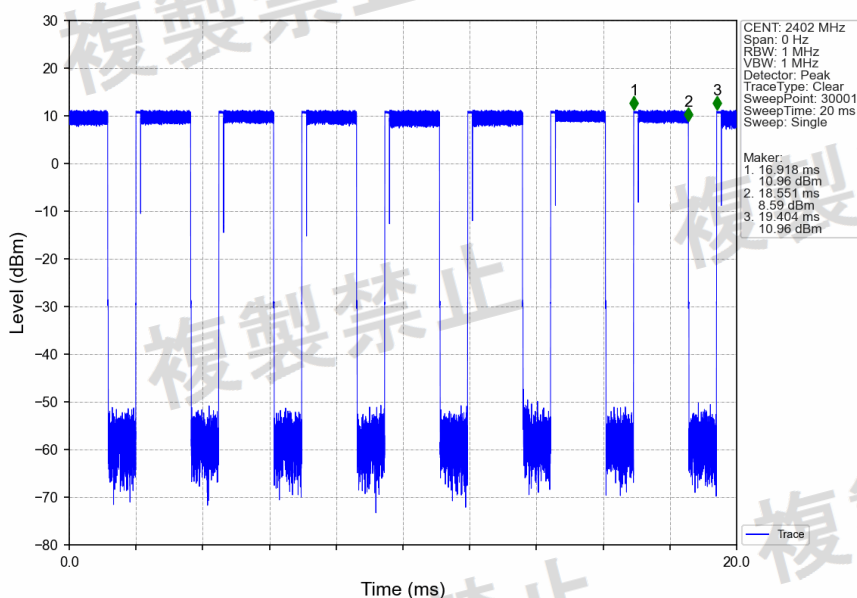
GFSK_DH5_2480MHz_Ant1_NTNV



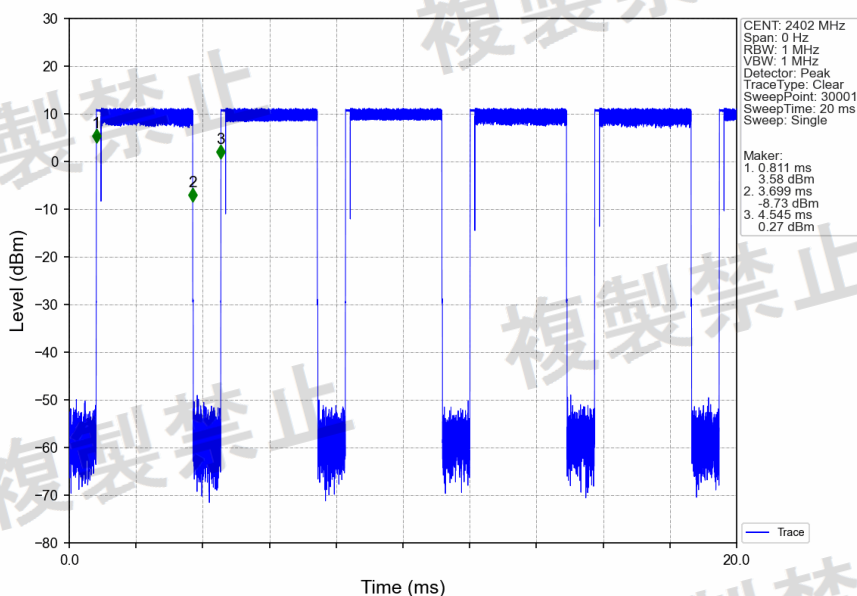
Pi/4DQPSK_2DH1_2402MHz_Ant1_NTNV



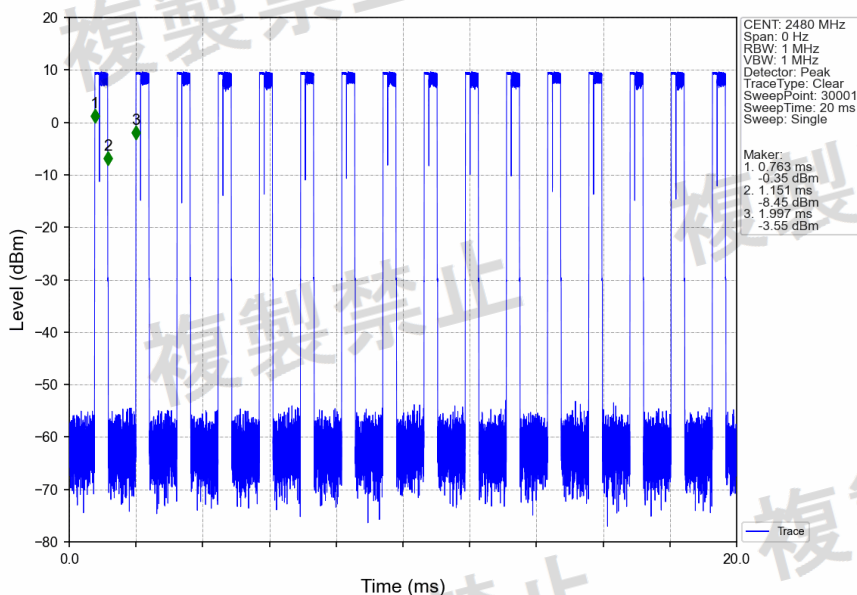
Pi/4DQPSK_2DH3_2402MHz_Ant1_NTNV



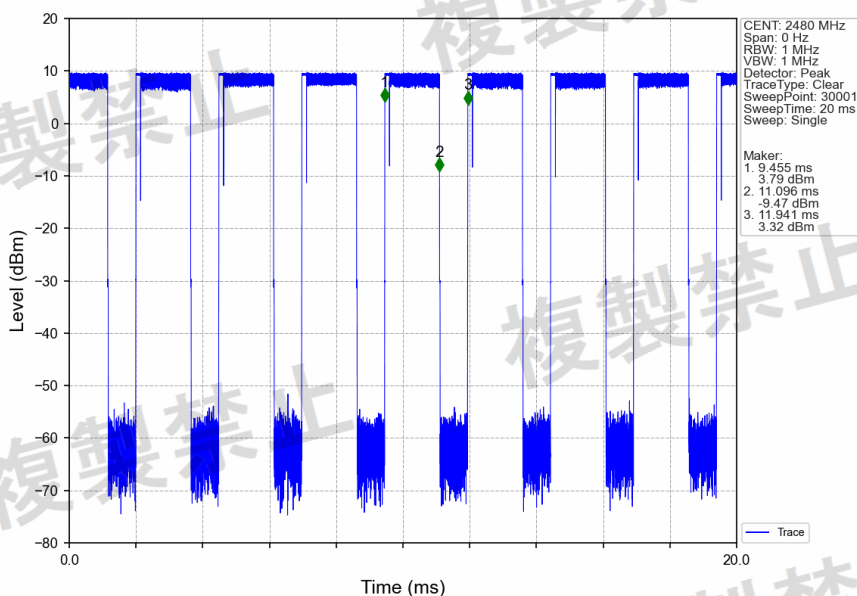
Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV



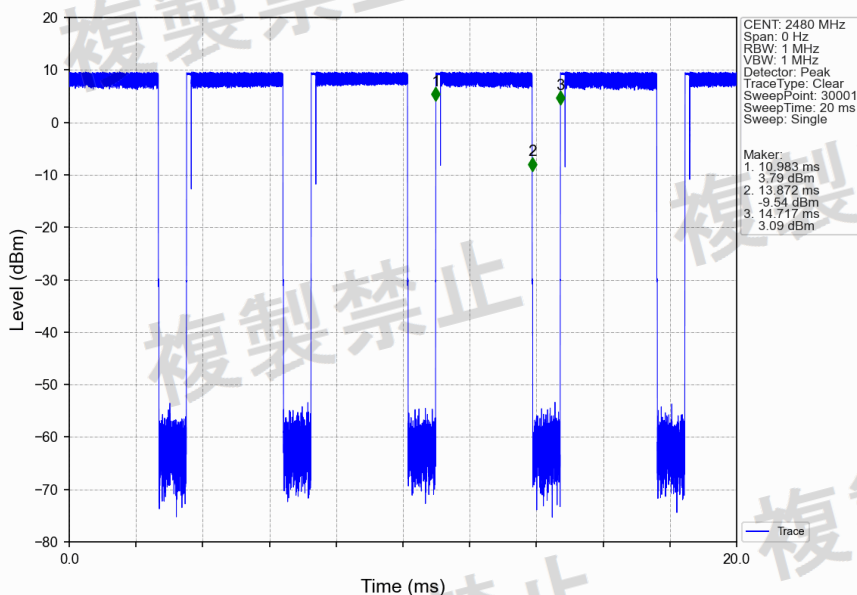
Pi/4DQPSK_2DH1_2480MHz_Ant1_NTNV



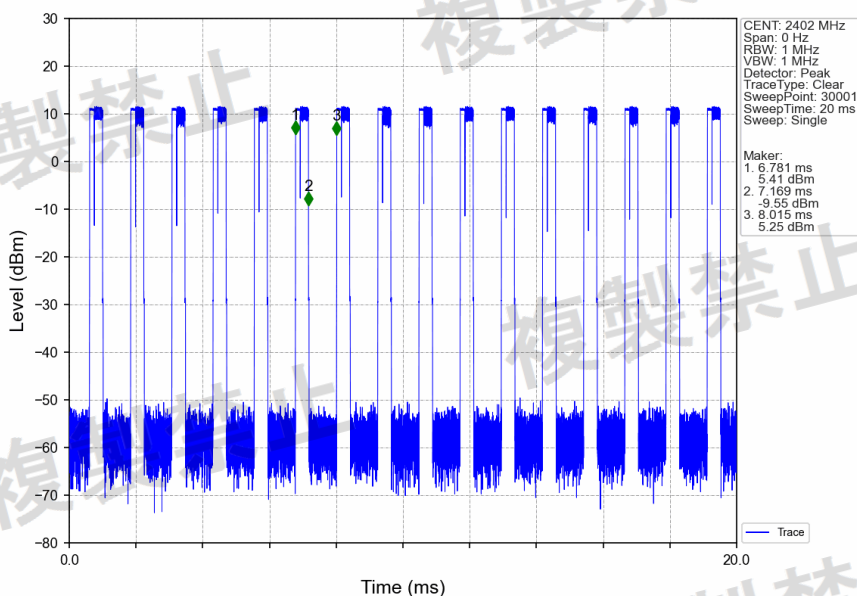
Pi/4DQPSK_2DH3_2480MHz_Ant1_NTNV



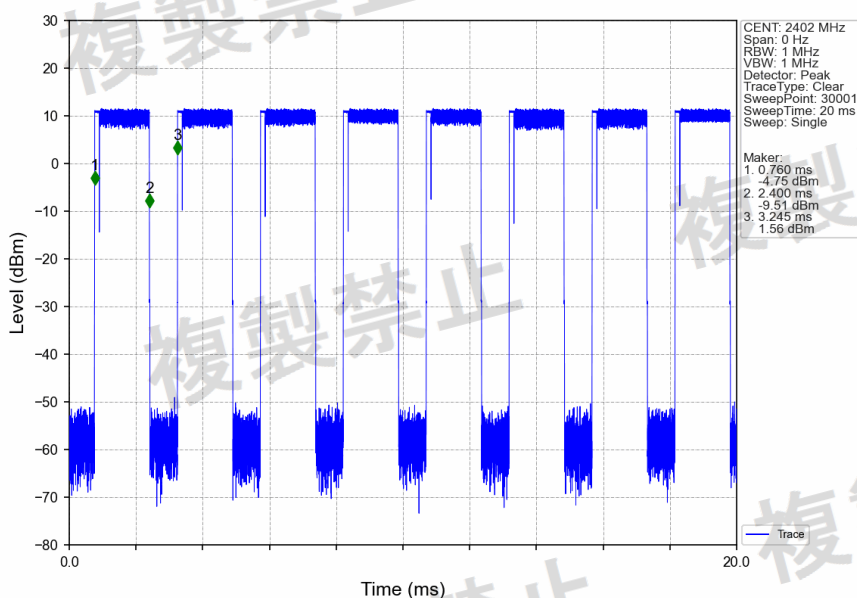
Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV



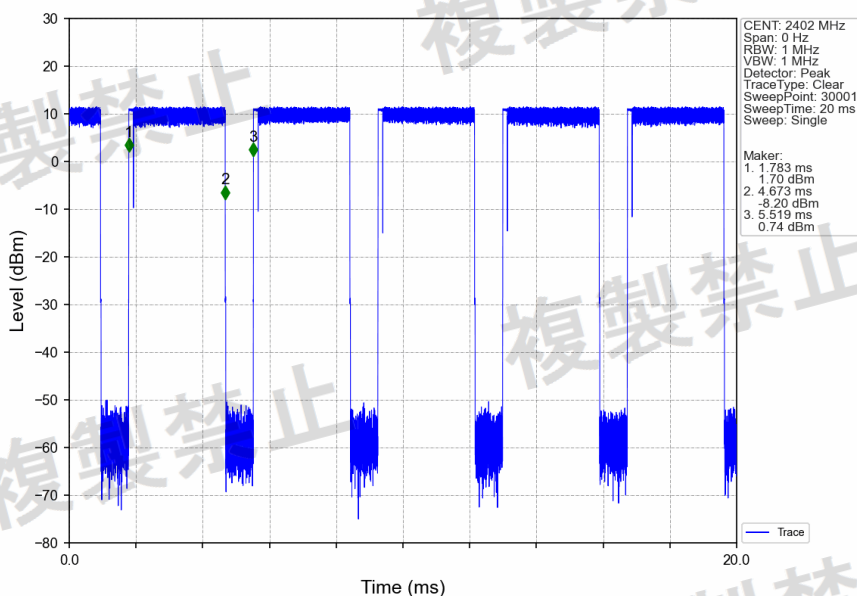
8DPSK_3DH1_2402MHz_Ant1_NTNV



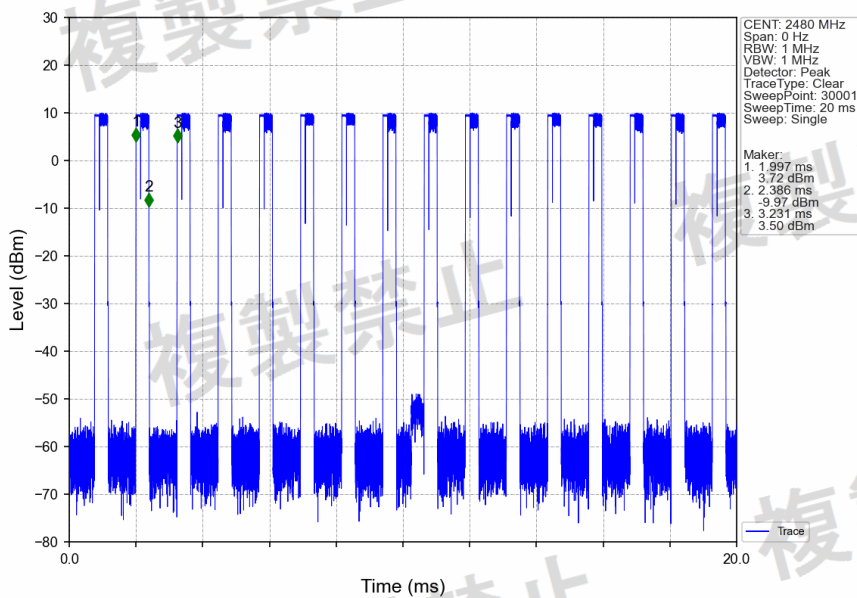
8DPSK_3DH3_2402MHz_Ant1_NTNV



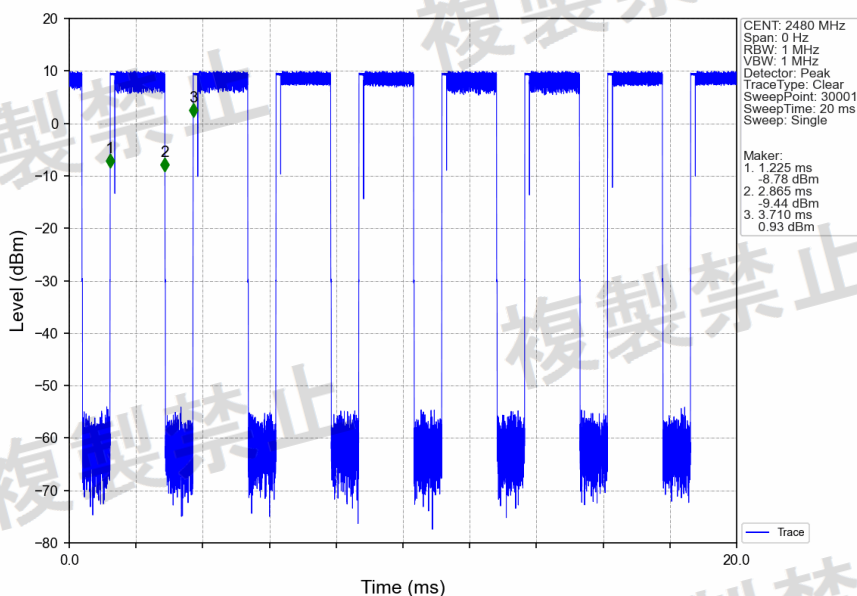
8DPSK_3DH5_2402MHz_Ant1_NTNV



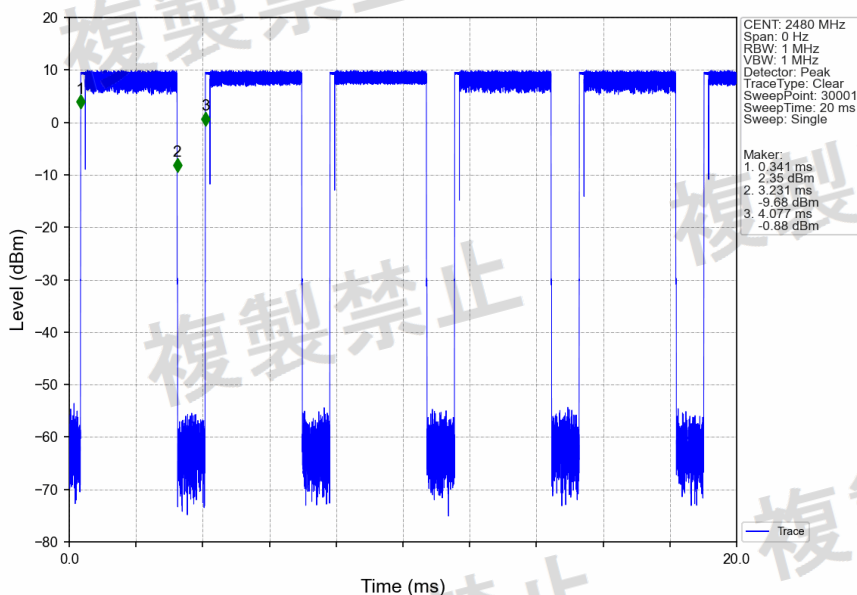
8DPSK_3DH1_2480MHz_Ant1_NTNV



8DPSK_3DH3_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



6. Spurious Emission Intensity

6.1 Test Result

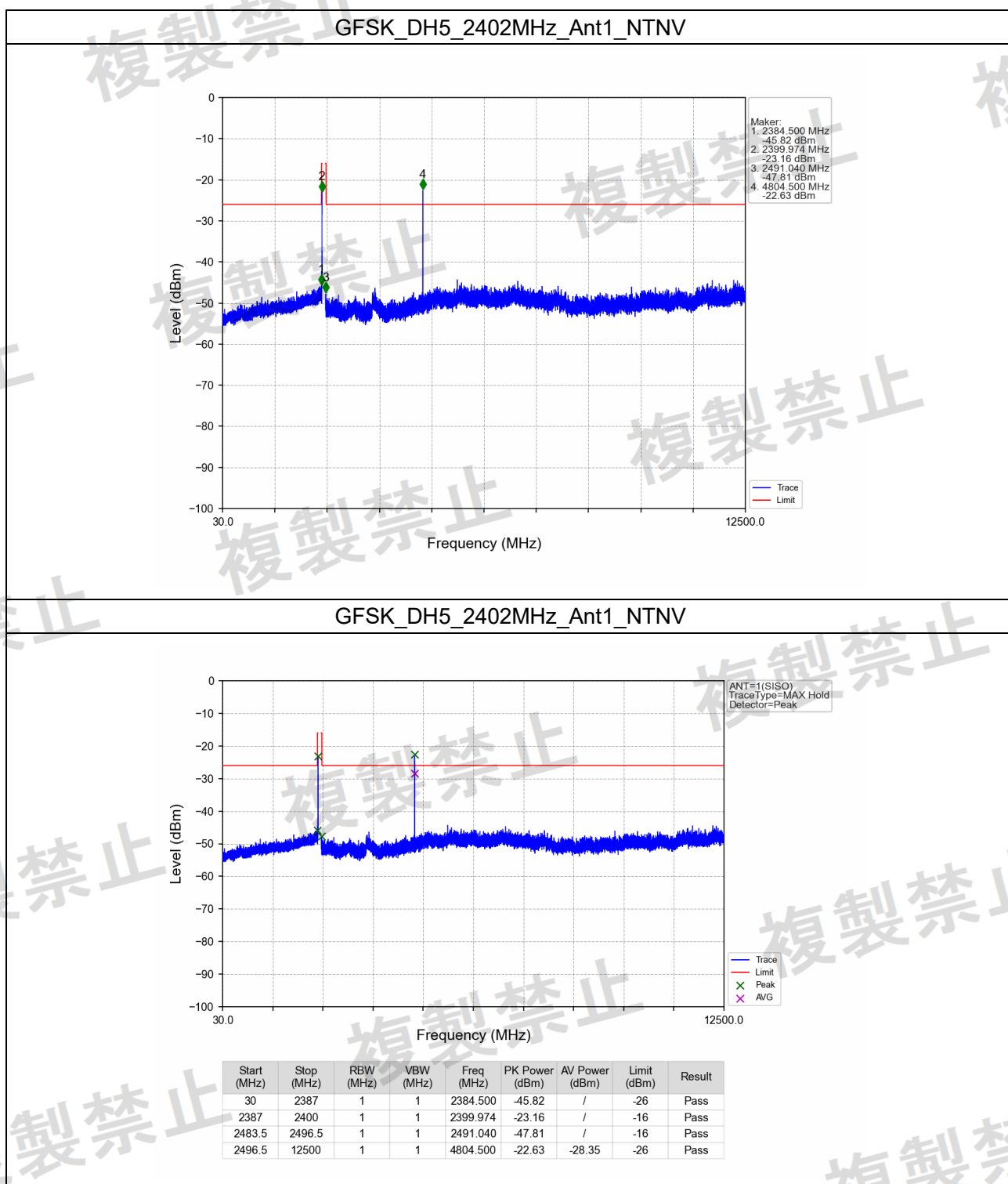
6.1.1 TxSe_NTNV

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)		
GFSK	SISO	2402	1	30	2387	2384.5	-45.82	0.026	/	/	2.5	Pass
				2387	2400	2399.974	-23.16	4.831	/	/	25	Pass
				2483.5	2496.5	2491.04	-47.81	0.017	/	/	25	Pass
				2496.5	12500	4804.5	-22.63	5.458	-28.35	1.462	2.5	Pass
		2480	1	30	2387	1780	-41.14	0.077	/	/	2.5	Pass
				2387	2400	2393.786	-50.99	0.008	/	/	25	Pass
				2483.5	2496.5	2483.851	-44.37	0.037	/	/	25	Pass
				2496.5	12500	4960.5	-25.39	2.891	-30.69	0.853	2.5	Pass
Pi/4DQPSK	SISO	2402	1	30	2387	2363.5	-46.29	0.023	/	/	2.5	Pass
				2387	2400	2399.987	-16.04	24.889	-26.53	2.223	25	Pass
				2483.5	2496.5	2489.779	-47.72	0.017	/	/	25	Pass
				2496.5	12500	4804.5	-22.65	5.433	-29.21	1.199	2.5	Pass
		2480	1	30	2387	2374.5	-50.44	0.009	/	/	2.5	Pass
				2387	2400	2398.518	-51.20	0.008	/	/	25	Pass
				2483.5	2496.5	2483.539	-37.88	0.163	/	/	25	Pass
				2496.5	12500	4960.5	-24.93	3.214	-31.12	0.773	2.5	Pass
8DPSK	SISO	2402	1	30	2387	2102	-46.23	0.024	/	/	2.5	Pass
				2387	2400	2399.987	-14.97	31.842	-26.29	2.350	25	Pass
				2483.5	2496.5	2486.49	-47.51	0.018	/	/	25	Pass
				2496.5	12500	4804	-22.76	5.297	-27.67	1.710	2.5	Pass
		2480	1	30	2387	2383	-50.19	0.010	/	/	2.5	Pass
				2387	2400	2398.739	-51.30	0.007	/	/	25	Pass
				2483.5	2496.5	2483.565	-37.17	0.192	/	/	25	Pass
				2496.5	12500	4959.5	-25.13	3.069	-30.74	0.843	2.5	Pass

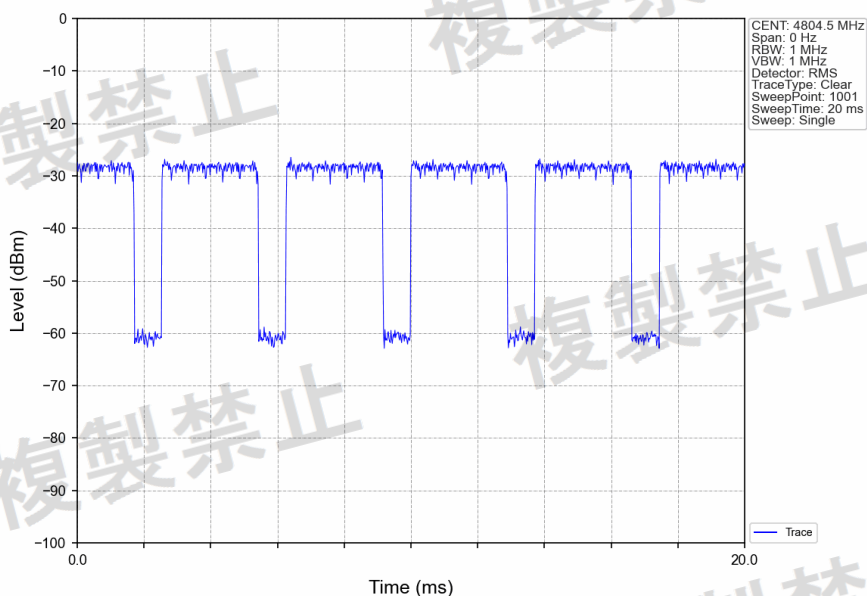
Note: The measurement just shows the test results, expressed in dBm units, which has the same meaning as uW/MHz.

6.2 Test Graph

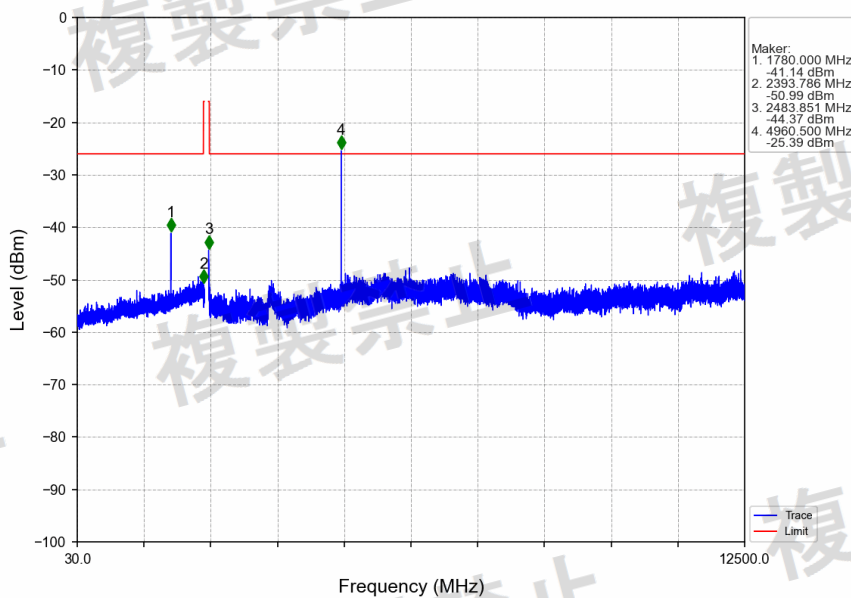
6.2.1 TxSe_NTNV



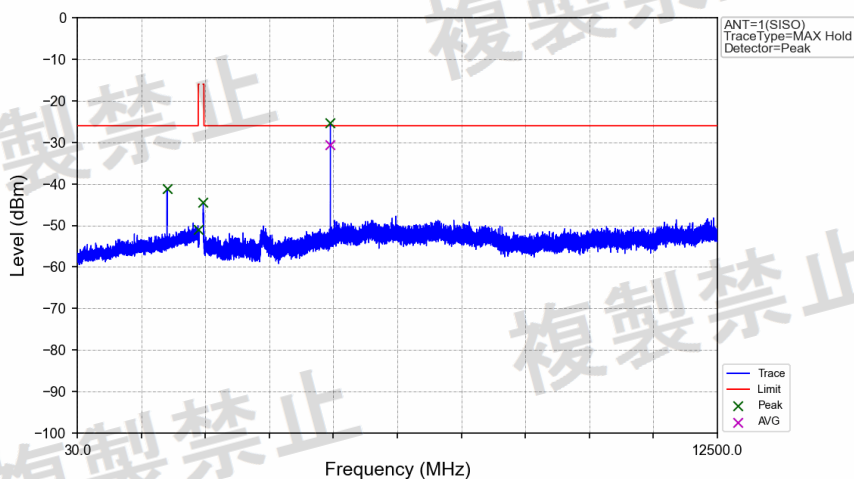
GFSK_DH5_2402MHz_Ant1_NTNV



GFSK_DH5_2480MHz_Ant1_NTNV

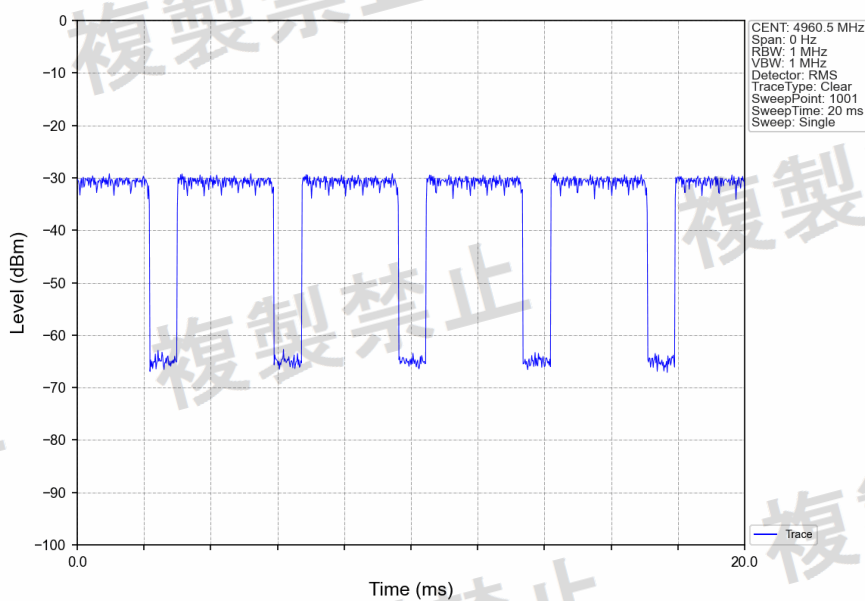


GFSK_DH5_2480MHz_Ant1_NTNV

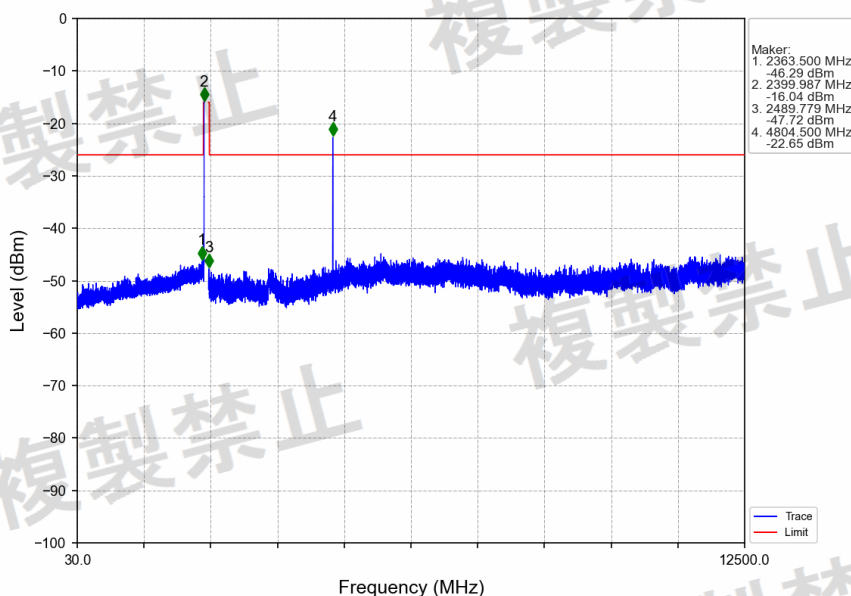


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	1780.000	-41.14	/	-26	Pass
2387	2400	1	1	2393.786	-50.99	/	-16	Pass
2483.5	2496.5	1	1	2483.851	-44.37	/	-16	Pass
2496.5	12500	1	1	4960.500	-25.39	-30.69	-26	Pass

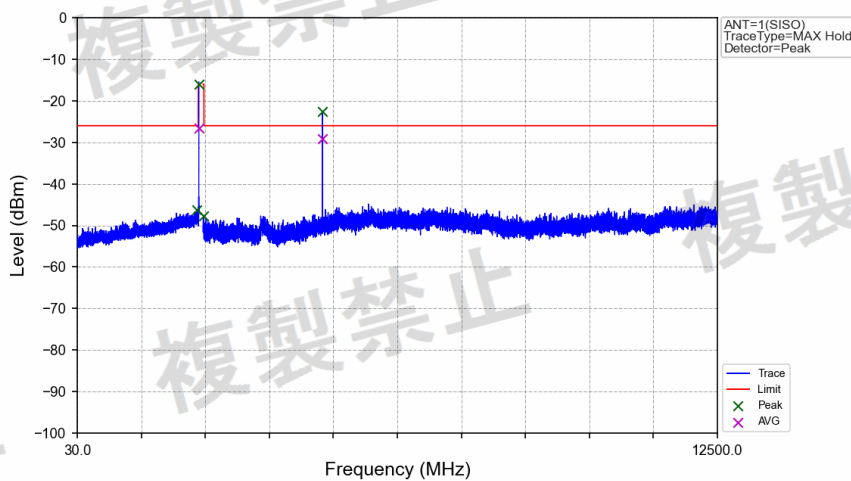
GFSK_DH5_2480MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV

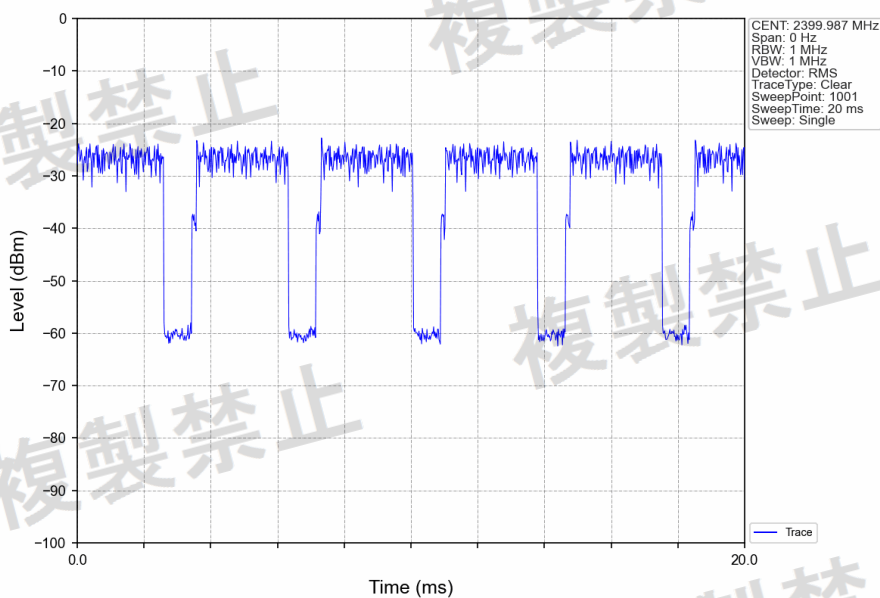


Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV

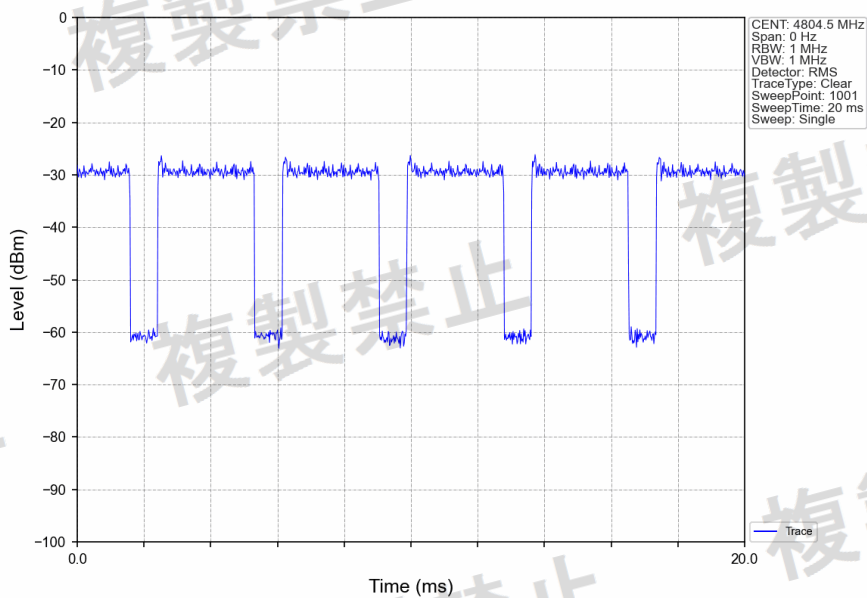


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2363.500	-46.29	/	-26	Pass
2387	2400	1	1	2399.987	-16.04	-26.53	-16	Pass
2483.5	2496.5	1	1	2489.779	-47.72	/	-16	Pass
2496.5	12500	1	1	4804.500	-22.65	-29.21	-26	Pass

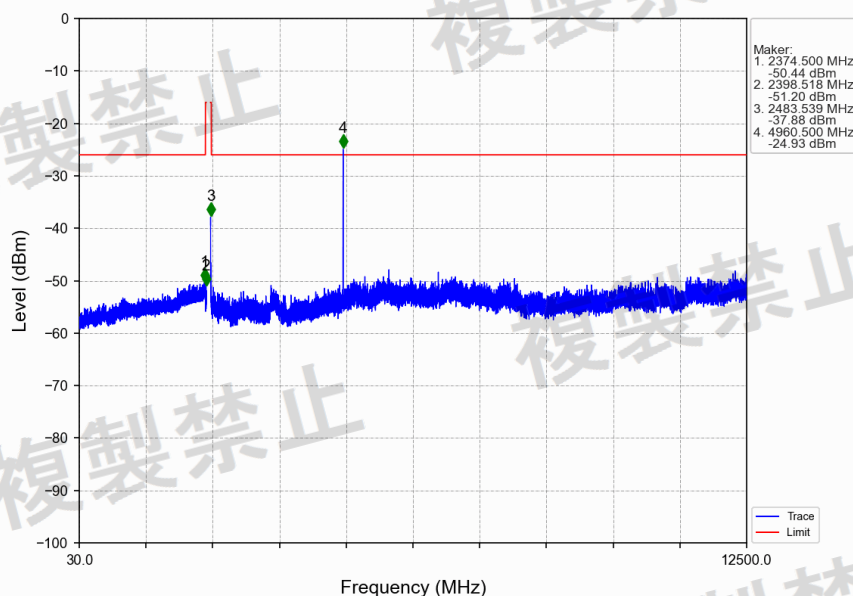
Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV



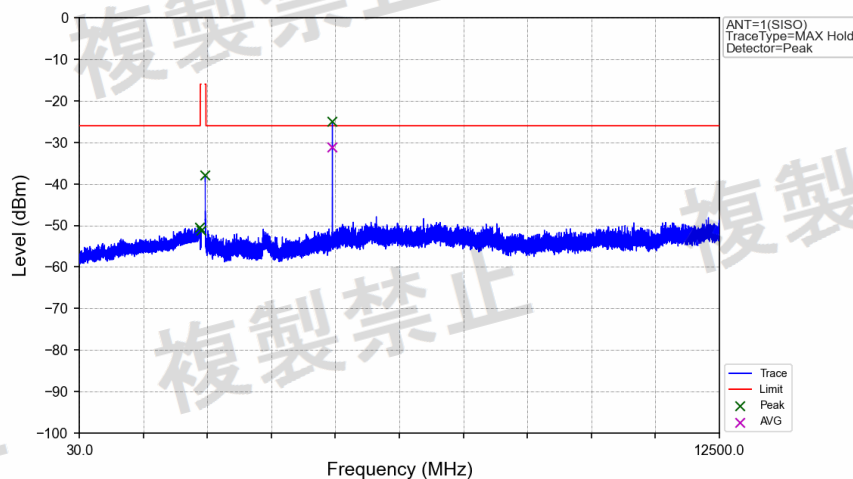
Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV

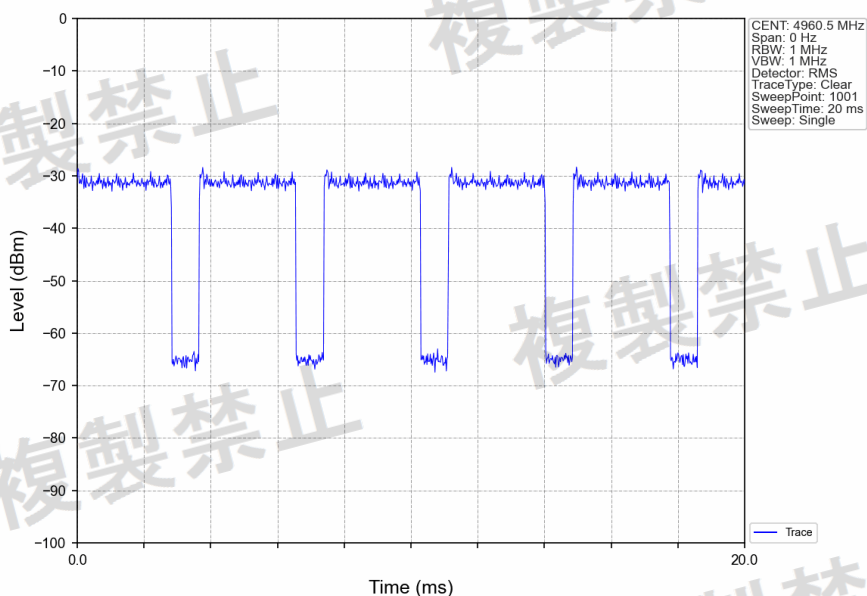


Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV

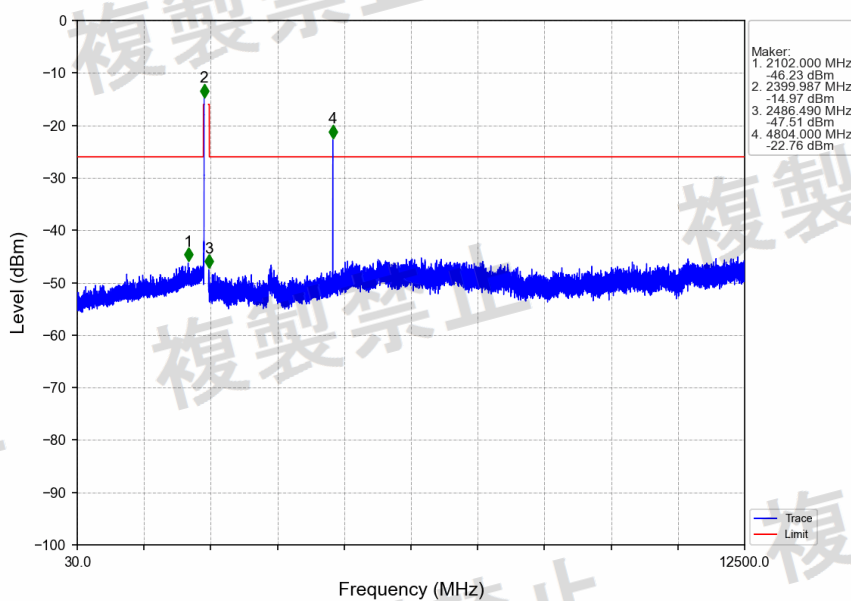


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2374.500	-50.44	/	-26	Pass
2387	2400	1	1	2398.518	-51.20	/	-16	Pass
2483.5	2496.5	1	1	2483.539	-37.88	/	-16	Pass
2496.5	12500	1	1	4960.500	-24.93	-31.12	-26	Pass

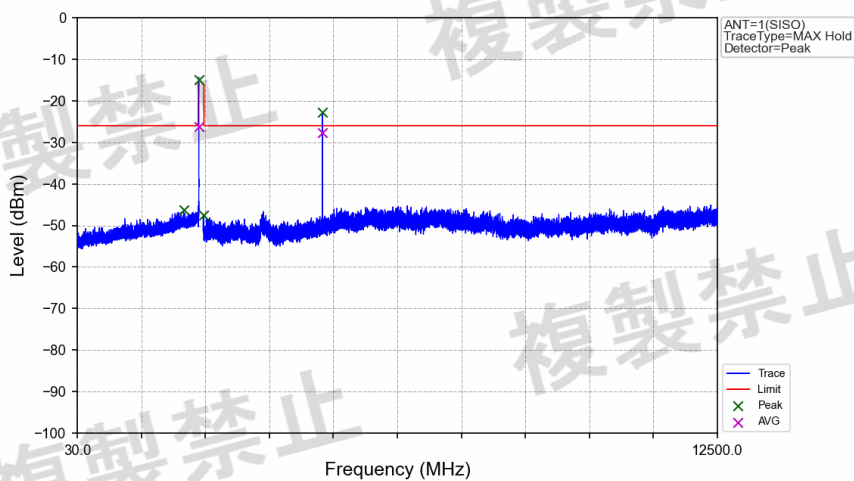
Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2402MHz_Ant1_NTNV

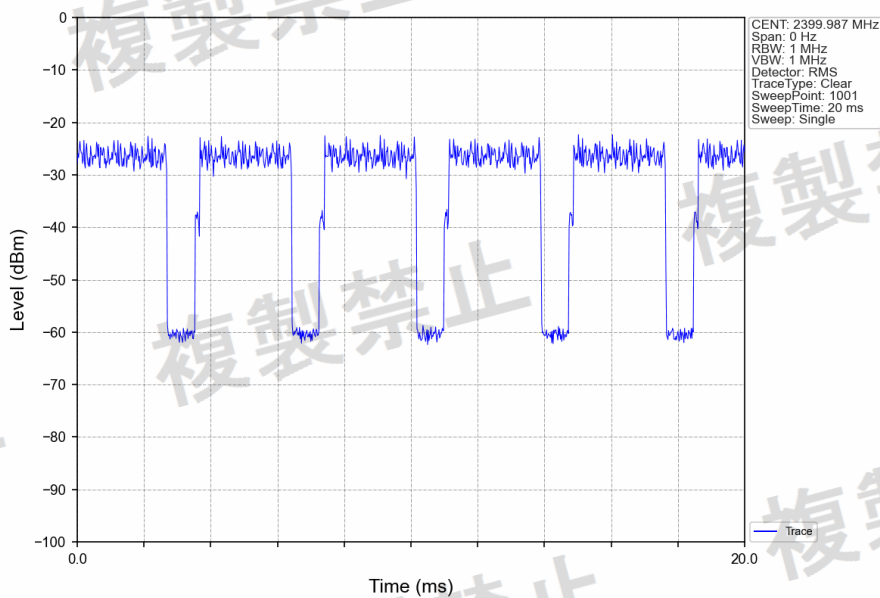


8DPSK_3DH5_2402MHz_Ant1_NTNV

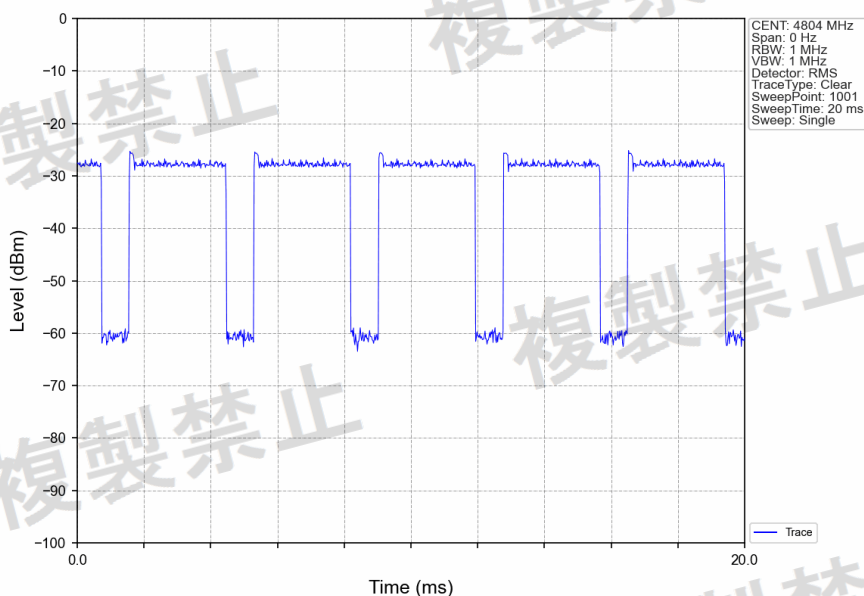


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2102.000	-46.23	/	-26	Pass
2387	2400	1	1	2399.987	-14.97	-26.29	-16	Pass
2483.5	2496.5	1	1	2486.490	-47.51	/	-16	Pass
2496.5	12500	1	1	4804.000	-22.76	-27.67	-26	Pass

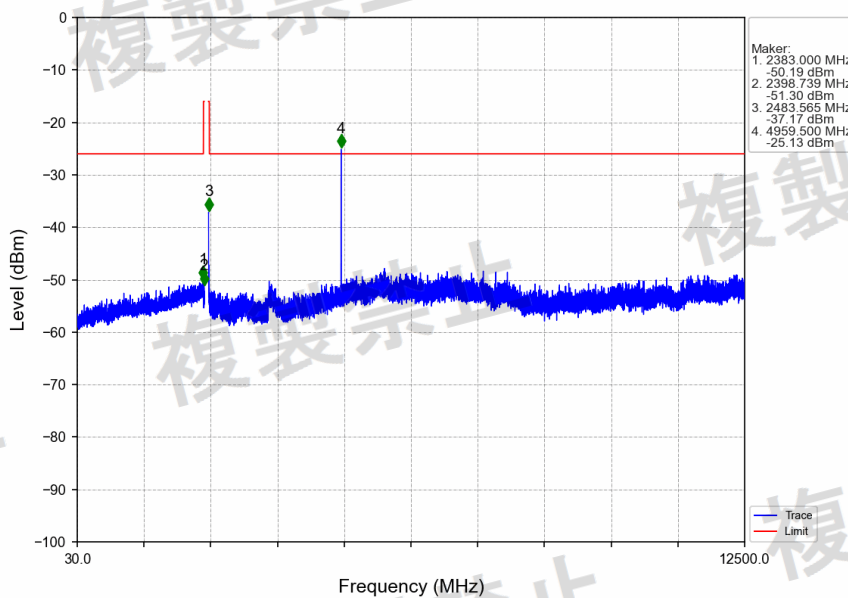
8DPSK_3DH5_2402MHz_Ant1_NTNV



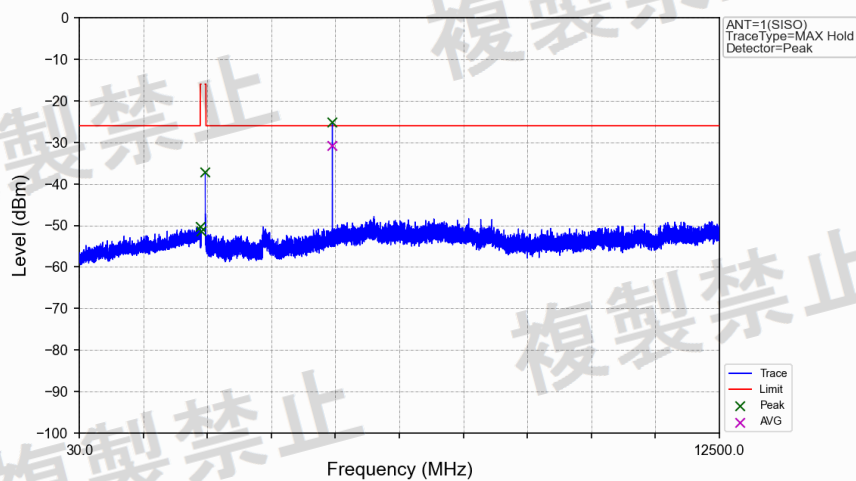
8DPSK_3DH5_2402MHz_Ant1_NTNV



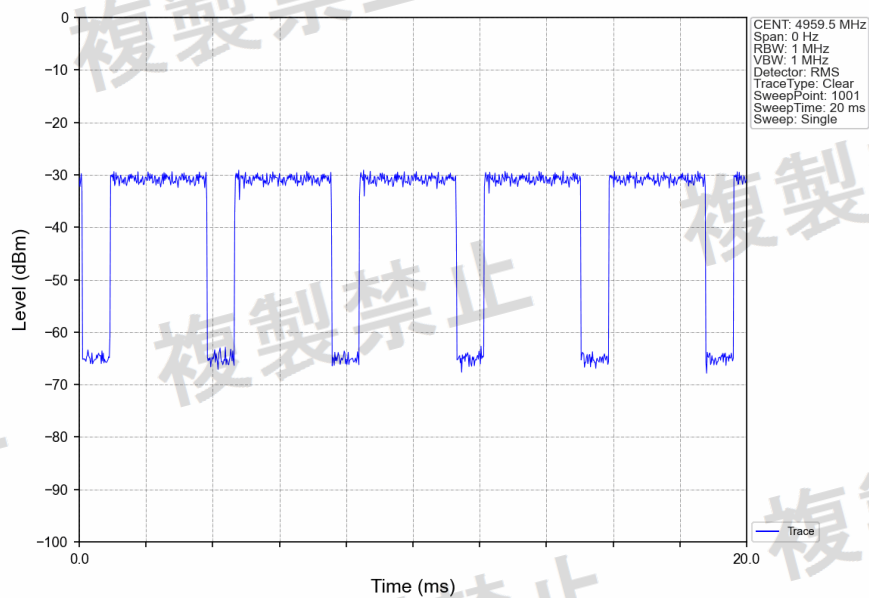
8DPSK_3DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



7. Secondary Radiated Emission

7.1 Test Result

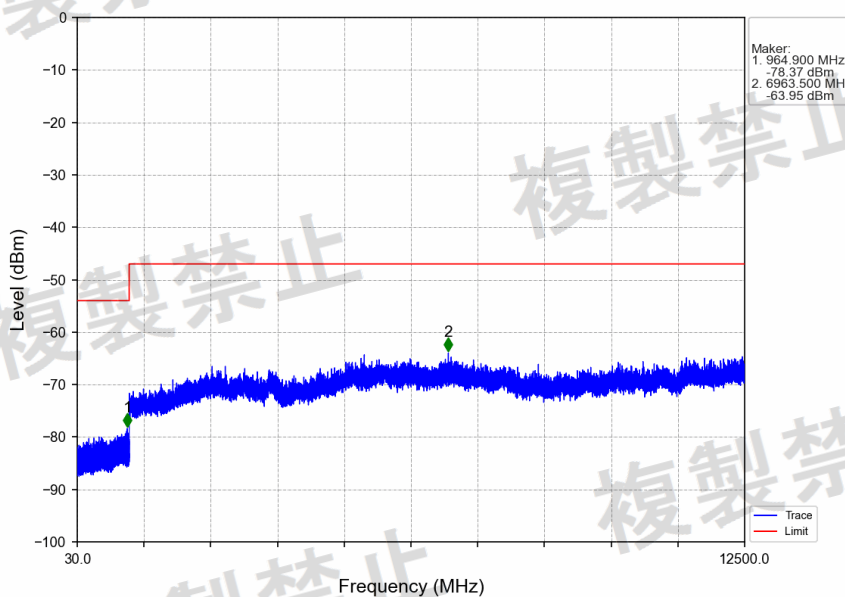
7.1.1 RxSe_NTNV

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)		
GFSK	SISO	2402	1	30	1000	964.9	-78.37	0.015	/	/	4	Pass
				1000	12500	6963.5	-63.95	0.403	/	/	20	Pass
		2480	1	30	1000	830.75	-78.60	0.014	/	/	4	Pass
				1000	12500	12188.5	-64.37	0.366	/	/	20	Pass
Pi/4DQPSK	SISO	2402	1	30	1000	964.35	-79.47	0.011	/	/	4	Pass
				1000	12500	5708.5	-64.28	0.373	/	/	20	Pass
		2480	1	30	1000	910.25	-78.19	0.015	/	/	4	Pass
				1000	12500	5768	-64.31	0.371	/	/	20	Pass
8DPSK	SISO	2402	1	30	1000	890.25	-73.95	0.040	/	/	4	Pass
				1000	12500	11770	-63.94	0.404	/	/	20	Pass
		2480	1	30	1000	925.35	-79.14	0.012	/	/	4	Pass
				1000	12500	6006	-64.42	0.361	/	/	20	Pass

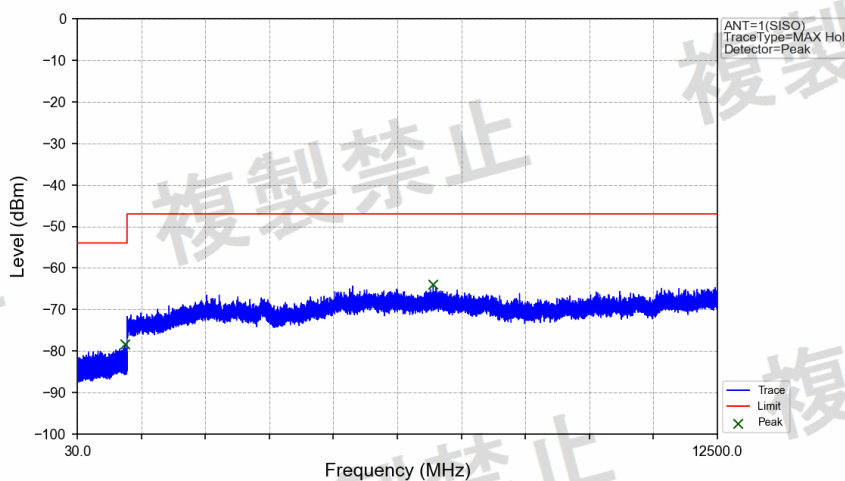
7.2 Test Graph

7.2.1 RxSe_NTNV

GFSK_DH5_2402MHz_Ant1_NTNV

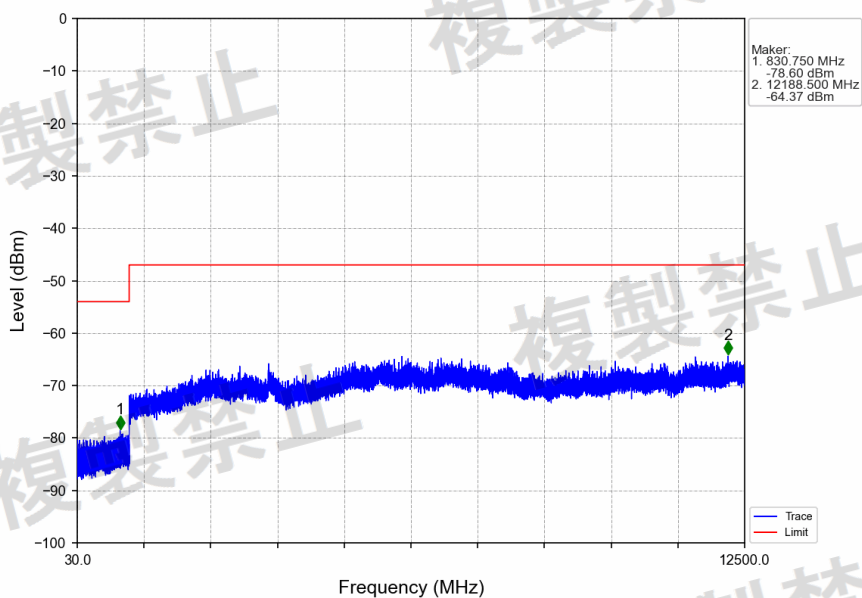


GFSK_DH5_2402MHz_Ant1_NTNV

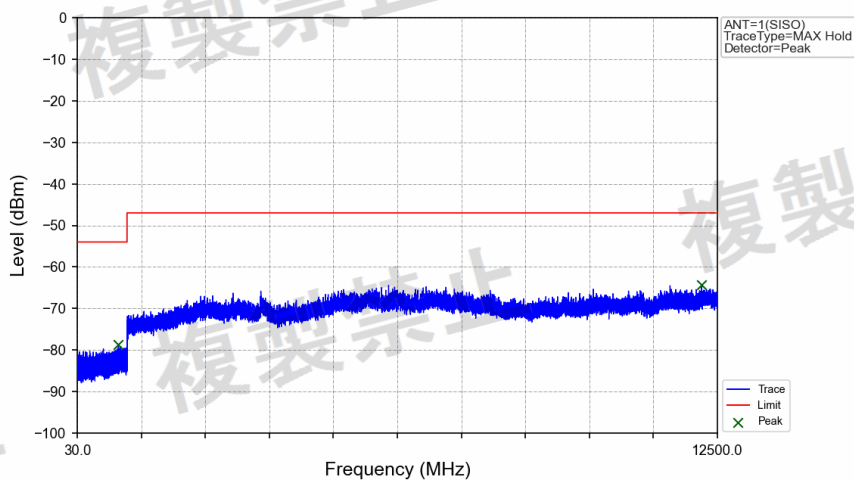


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	964.900	-78.37	/	-54	Pass
1000	12500	1	1	6963.500	-63.95	/	-47	Pass

GFSK_DH5_2480MHz_Ant1_NTNV

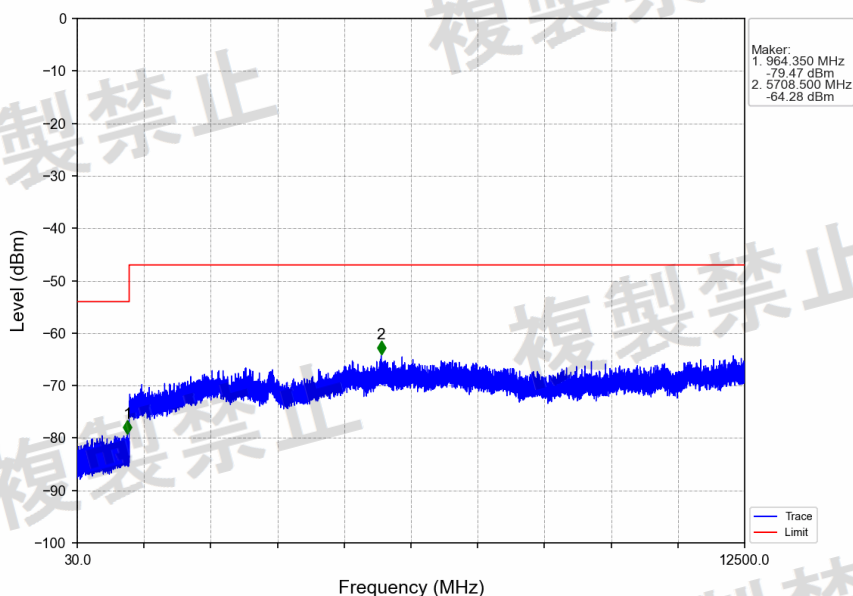


GFSK_DH5_2480MHz_Ant1_NTNV

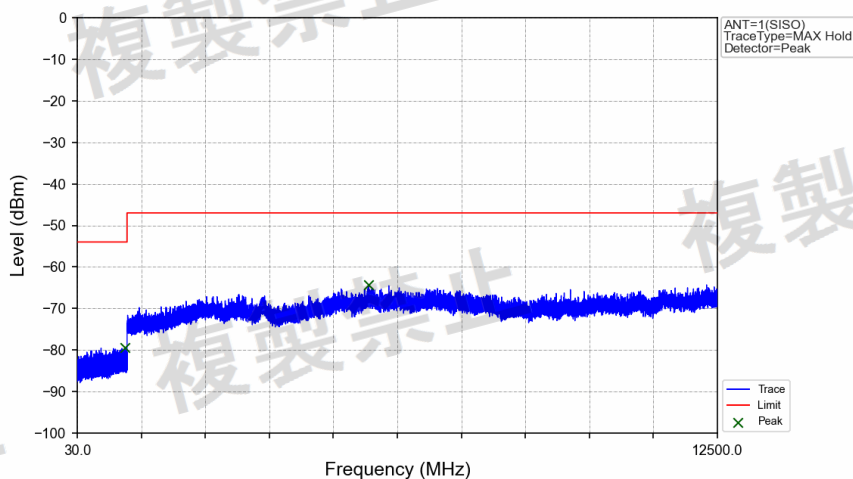


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	830.750	-78.60	/	-54	Pass
1000	12500	1	1	12188.500	-64.37	/	-47	Pass

Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV

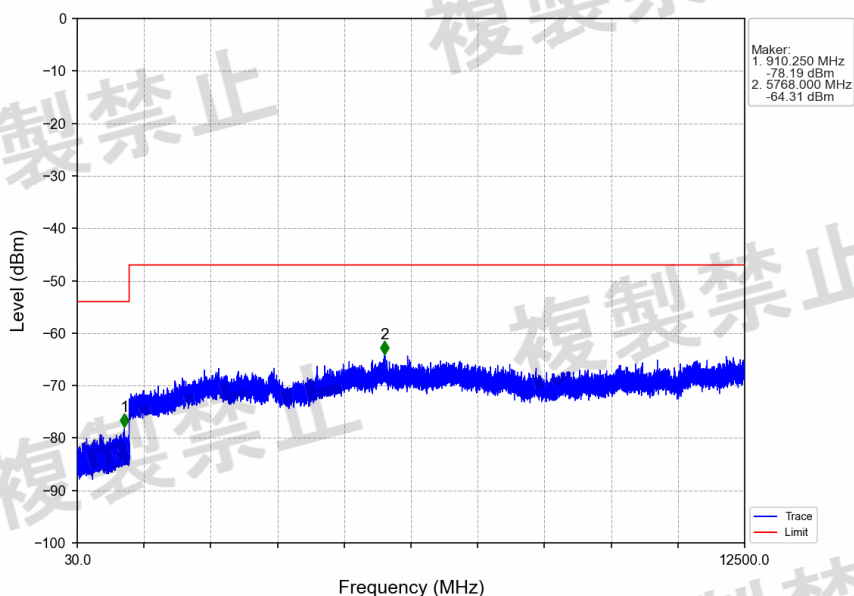


Pi/4DQPSK_2DH5_2402MHz_Ant1_NTNV

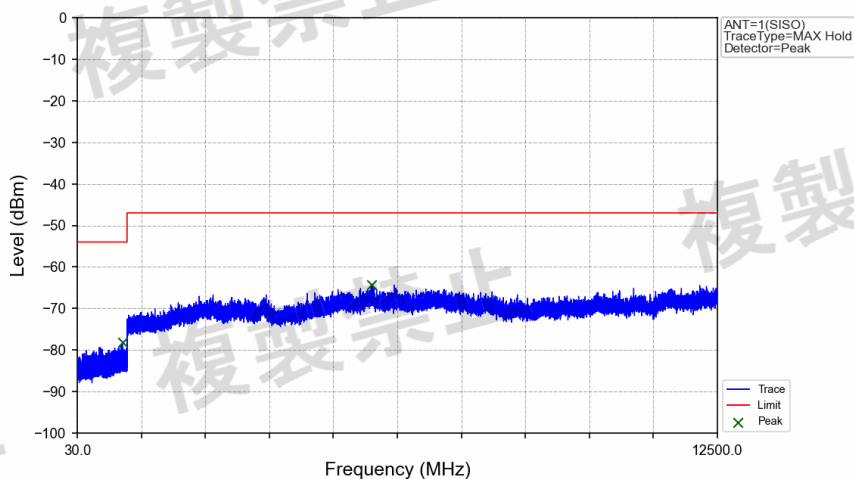


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	964.350	-79.47	/	-54	Pass
1000	12500	1	1	5708.500	-64.28	/	-47	Pass

Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV

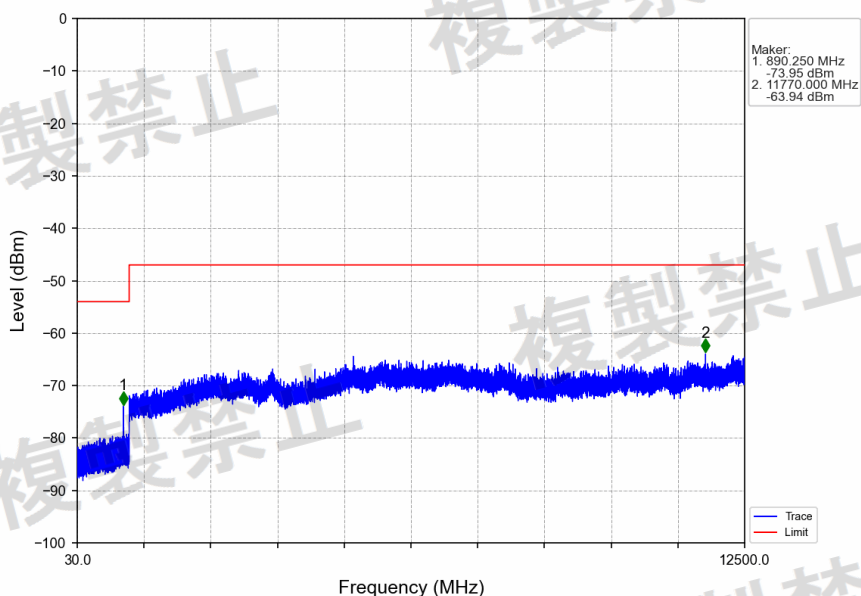


Pi/4DQPSK_2DH5_2480MHz_Ant1_NTNV

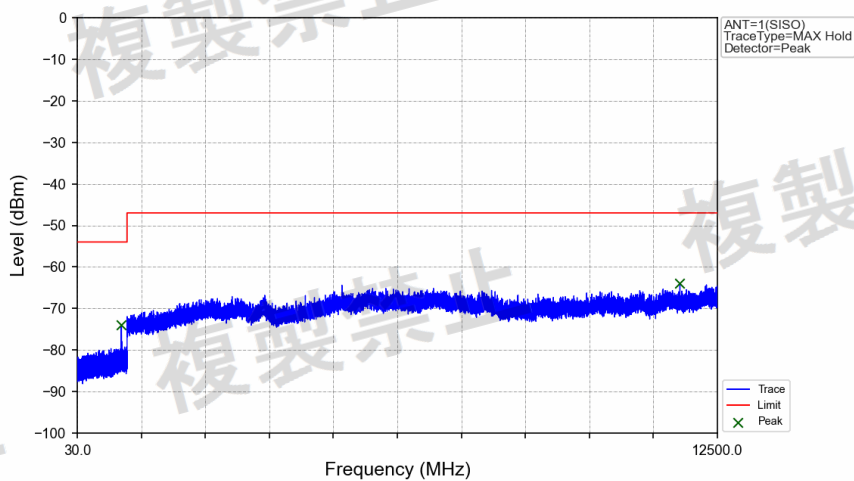


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	910.250	-78.19	/	-54	Pass
1000	12500	1	1	5768.000	-64.31	/	-47	Pass

8DPSK_3DH5_2402MHz_Ant1_NTNV

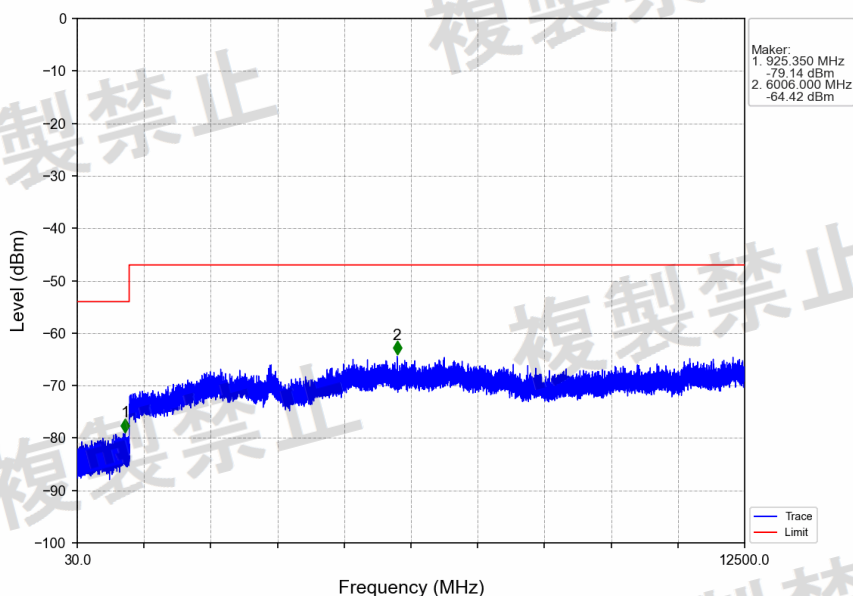


8DPSK_3DH5_2402MHz_Ant1_NTNV

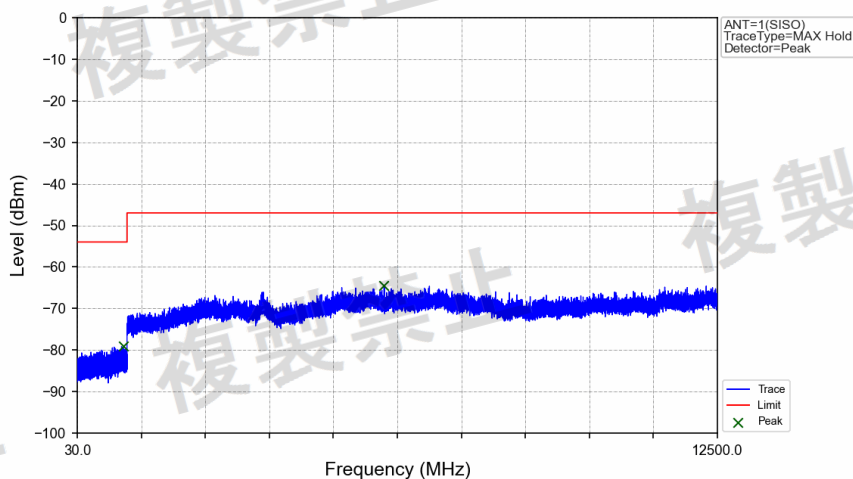


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	890.250	-73.95	/	-54	Pass
1000	12500	1	1	11770.000	-63.94	/	-47	Pass

8DPSK_3DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_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	925.350	-79.14	/	-54	Pass
1000	12500	1	1	6006.000	-64.42	/	-47	Pass

---End of Report---