



JAPAN RADIO TEST REPORT

Client Information:

Applicant: Shenzhen WISO Technology Co.,Ltd
Applicant add.: Room 815, Building 10, Shenzhen Bay Science and Technology Ecological Park, No. 10, Gaoxin South 9th Road, High-tech Zone Community, Yuehai Street, Nanshan District, Shenzhen

Product Information:

Product Name: PixelDarts
Model No.: DN-PD1
Derivative model No.: DN-PD1A, DN-PD1B, DN-PD1C
Brand Name: Dartsnut
Report No.: CTT2026070601R21T-01

Standards: Item 19 of Article 2 Paragraph 1

Prepared By:

Shenzhen C-link Testing & Technology Co., Ltd.

Add.: No.709, Enhai Building, No.1 Hangkong Road, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Date of Receipt: Jul. 06, 2026

Date of Test: Jul. 06, 2026~ Jul. 31, 2026

Date of Issue: Jul. 31, 2026

Test Result: Pass

This device has been tested and found to comply with the stated standard(s) above, which is (are) applicable only to the tested sample identified in the report.

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Reviewed by:

Mary Ye



Approved by:

Brown Lu



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2 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	±50 PPM or less	PASS
Occupied Bandwidth	Item 19 of Article 2-1	Within 26MHz	PASS
Spread-spectrum Bandwidth	Item 19 of Article 2-1	Only for reported	PASS
Antenna Power	Item 19 of Article 2-1	10mW Error + 20%	PASS
Spurious Emission of Tx	Item 19 of Article 2-1	(1) Below 2387 MHz : 2.5μW/MHz (2) 2387 to 2400 MHz : 25μW/MHz (3) 2483.5 through 2496.5 MHz : 25μW/MHz (4) Over 2496.5 MHz : 2.5μW/MHz	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) 1GHz or higher: 20 nW	PASS
Carrier sense function	Item 19 of Article 2-1	/	N/A, Note2
Carrier sense function	Item 19 of Article 2-1	/	N/A, Note3

Remark:

Note 1: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.

Note 2: Not apply to this device, since EIRP does not require compensation through Antenna Power.

Note 3: Not apply to this device, since The bandwidth is less than 26MHz.

2.1 Measurement Uncertainty

The report uncertainty of measurement $y \pm U$, where expended 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	Frequency Error / 99% & 90% Bandwidth	± 0.85 x 10 ⁻⁷
2	Antenna Power	± 0.70 dB
3	Spurious Emissions	± 0.80 dB



4	DC / AC Power Source	$\pm 1.4\%$
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3 General Information

Manufacturer:	Shenzhen WISO Technology Co.,Ltd
Manufacturer Address:	Room 815, Building 10, Shenzhen Bay Science and Technology Ecological Park, No. 10, Gaoxin South 9th Road, High-tech Zone Community, Yuehai Street, Nanshan District, Shenzhen
Product Name:	PixelDarts
Model No.:	DN-PD1
Brand Name:	Dartsnut
Derivative model No.:	DN-PD1A, DN-PD1B, DN-PD1C
Sample ID:	260706001-01
Sample(s) Quantity:	1
Operating Frequency	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Number of Channels	40 Channels(for other)
Channel Separation:	2 MHz (for other)
Bit Rate of Transmitter	1Mbps/2Mbps
Antenna Type	PCB Antenna
Antenna gain:	1.49dBi
Normal antenna power:	other: F1D: 4mW
Bluetooth version:	Bluetooth 5.0
Power Supply Range:	INPUT: DC12V
Normal Test Voltage:	The same as above
Adapter:	Model: J652-1205000D Input: 100-240V~ 50/60Hz 1.7A Output: 12.0VDC 5.0A
Hard Ware Version:	ET_Dartsnut_POWER_P6_260422-1042
Soft Ware Version:	DN-PD1_2.0.2
Model difference:	All the model are the same circuit and RF module, Only the model name are different.



3.1 Test Location

Shenzhen C-link Testing & Technology Co., Ltd.

No.709, Enhai Building, No.1 Hangkong Road, Sanwei Community, Hangcheng Street, Bao 'an District, Shenzhen, Guangdong, China

3.2 EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	Signal cord
1	N/A	N/A	N/A	N/A	N/A	N/A

3.3 Test Peripheral List

No.	Equipment	Manufacturer	EMC Compliance	Model No.	Serial No.	Power cord	Signal cord
1	Computer	Lenovo	N/A	TP00076A	N/A	N/A	N/A
2	USB Line	UGREEN	N/A	USB3.0	N/A	N/A	N/A

4 Equipment Used during Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date	Cal. Lab
1	SIGNAL Analyzer	Keysight	N9020A	MY53300466	2026.01.16	2027.01.15	Guangdong LiSai
2	RF Automatic Test System	MWRFTest	MV1 00-RFCB	/	2026.01.16	2027.01.15	

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

Note: The testing equipment is calibrated using the C method.

5 Test Results

5.1 Radio Technical Requirements Specification

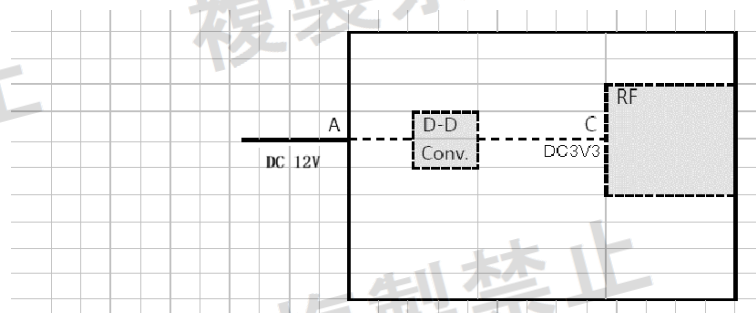
Table 1: Radio Technical Requirements Specification for 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2-1)

Items	Technical standard
Assigned frequency or designated frequency	2,400-2,483.5MHz
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
Tolerance of occupied bandwidth	FH : 83.5MHz or less FH + DS : 83.5MHz or less FH + OFDM : 83.5MHz or less OFDM : 40MHz or less Others : 26MHz or less
Antenna power	Designated value (1) FH, FH+DS , FH+OFDM: 3mW/MHz (used in the range of 2400 – 2483.5 MHz) (2) OFDM , DS other than (1) 10mW/MHz (3) Other than (1) & (2) 10mW (4) OFDM OBW 26 - 38MHz: 5mW/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 2400 – 2483.5 MHz EIRP $\leq$ 16.91 dBm/MHz (2) OFDM or DS other than (1) EIRP $\leq$ 22.14 dBm/MHz (3) Other than (1) and (2): 22.14 dBm or less (4) OFDM OBW 26 - 38MHz: 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	(1) Below 2387 MHz : 2.5 μ W/MHz (2) 2387 to 2400 MHz : 25 μ W/MHz (3) 2483.5 through 2496.5 MHz : 25 μ W/MHz (4) Over 2496.5 MHz : 2.5 μ W/MHz
Spreading bandwidth	Only for reported
Spreading rate of spectrum	For DS system: (Spreading bandwidth) / (Frequency corresponding to transmission rate) ≥ 5
Limit of secondary radiated emissions	(1) Below 1 GHz : 4 nW (2) 1 GHz or higher : 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:

The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$). So, all measurements were conducted at only rated voltage DC 12V.



Test below:

1: The fluctuation of C point is under $\pm 1\%$, when input voltage from A point to the test equipment is fluctuated by $\pm 10\%$.

The measurement result of the voltage fluctuation at RF circuit when DC 12V $\pm 10\%$

DC 12V	DC3V3
12V	3.33V
13.2V	3.33V
10.8V	3.33V

Pre-test the EUT in all voltage mode at the DC 13.2V, DC 12V and DC10.8V and conducted to determine the worst-case mode, only the worst-case results (DC 12V) are recorded in this report.

The EUT has the input voltage to the circuit of RF unit complies with output voltage limitation ($\pm 1\%$) against input voltage fluctuation ($\pm 10\%$). So, all measurements were conducted at only rated voltage DC 12V.

Temperature:

5.0 -35.0 °C

Humidity:

45-85 % RH

Atmospheric Pressure:

1000 -1020 mbar

Test frequencies:

If the EUT can be set to 3 of more different (carrier) frequencies in 1 allocated band, testing shall be performed using the Lowest, Middle and the Highest frequency (L, M and H). If there are 2 or fewer frequencies, testing shall be performed with the available frequencies.

**EUT channels and frequencies list:**

For other:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	14	2430	28	2458
1	2404	15	2432	29	2460
2	2406	16	2434	30	2462
3	2408	17	2436	31	2464
4	2410	18	2438	32	2466
5	2412	19	2440	33	2468
6	2414	20	2442	34	2470
7	2416	21	2444	35	2472
8	2418	22	2446	36	2474
9	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454	/	/
13	2428	27	2456	/	/

Test frequencies are the lowest channel: 0 channel(2402 MHz), middle channel: 19 channel(2440 MHz) and highest channel: 39 channel(2480 MHz)

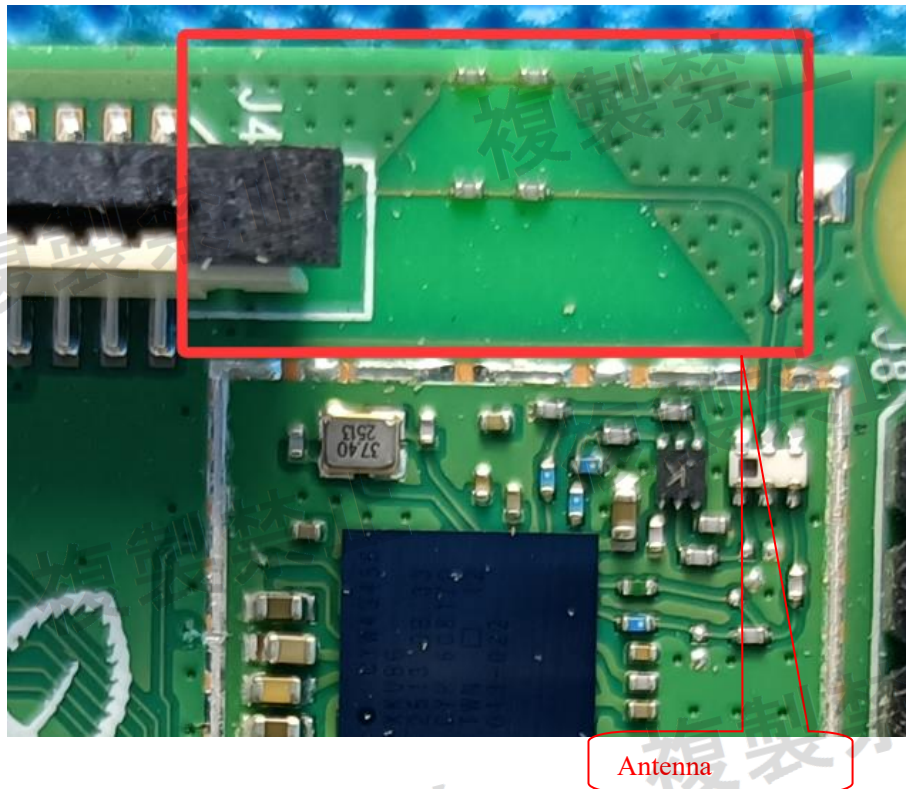
5.3 Antenna Requirement

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.

EUT Antenna

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.49dBi.



Result: All relevant tests will be carried out conducted.

5.4 Interference Prevention Function

LIMIT

Item	Limits
Identification code	≥ 48 bits

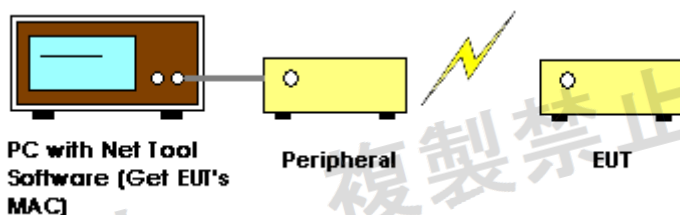
MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

TEST PROCEDURES

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

TEST SETUP LAYOUT



TEST DEVIATION

There is no deviation with the original standard.

EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

EUT:	PixelDarts	Test Date:	2026/07/18
Temperature:	25°C	Tested by:	Renny
Humidity:	55 % RH	Test result:	CONFORM

MAC Address: 42: A5: 00: 3B: 21: C0

5.5 Frequency Error

Test Requirement: Item 19 of Article 2-1

Tolerance of frequency: $\pm 50 \times 10^{-6}$

Temperature: 23.0 °C

Humidity: 55 % RH

Test Status: Test the EUT in transmitting mode without modulation.

Test Configuration:



Test Procedure:

1. Test Conditions:
Frequency Counter or 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 for FHSS; Modulation OFF for other),
VBW 10 kHz (Modulation OFF for FHSS; Modulation OFF for other),
Sweep Time Auto
Detector mode Positive peak
Indication mode Max hold

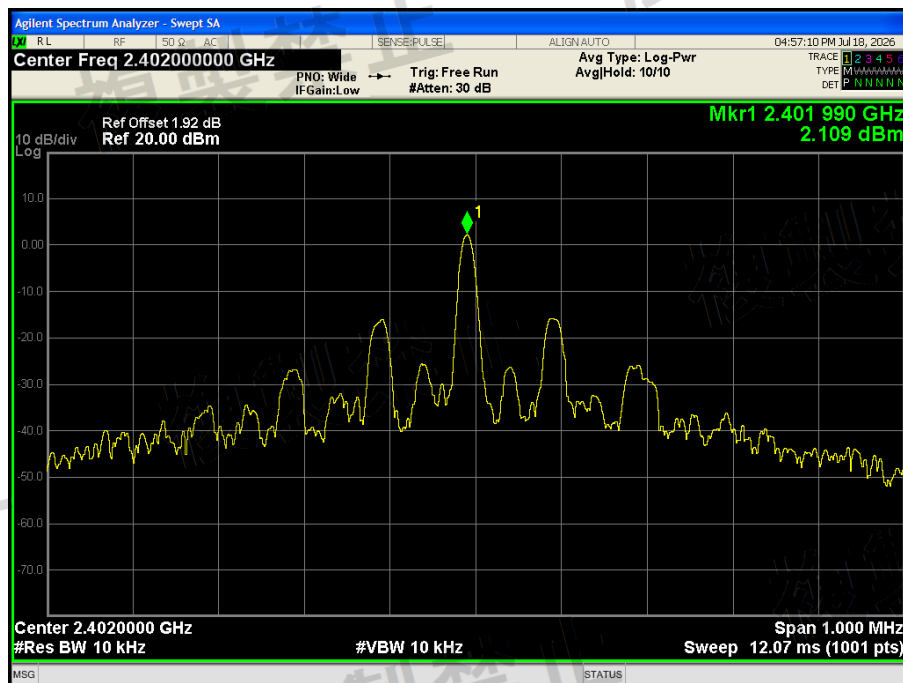
**Test result:****For other:**

Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		12V DC	13.2V DC	10.8V DC		
Lowest	2402.0	2401.990	N/A	N/A	MHz	±50 PPM or less
		-4.16	N/A	N/A	PPM	
Middle	2440.0	2439.990	N/A	N/A	MHz	
		-4.10	N/A	N/A	PPM	
Highest	2480.0	2479.990	N/A	N/A	MHz	
		-4.03	N/A	N/A	PPM	

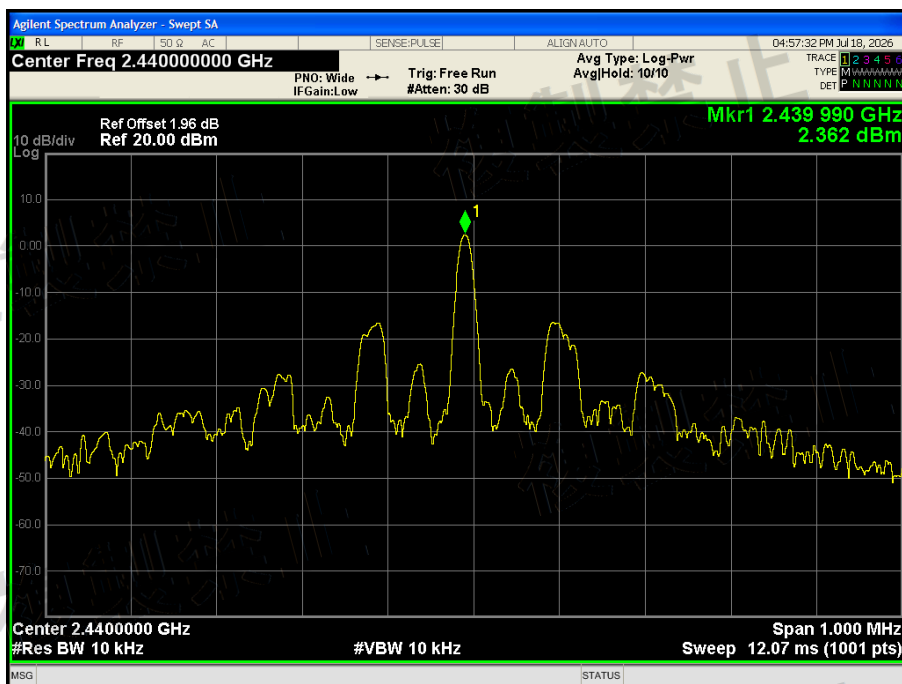
Note: The nominal frequency shall be confirmed by the applicant and test lab.

For other:

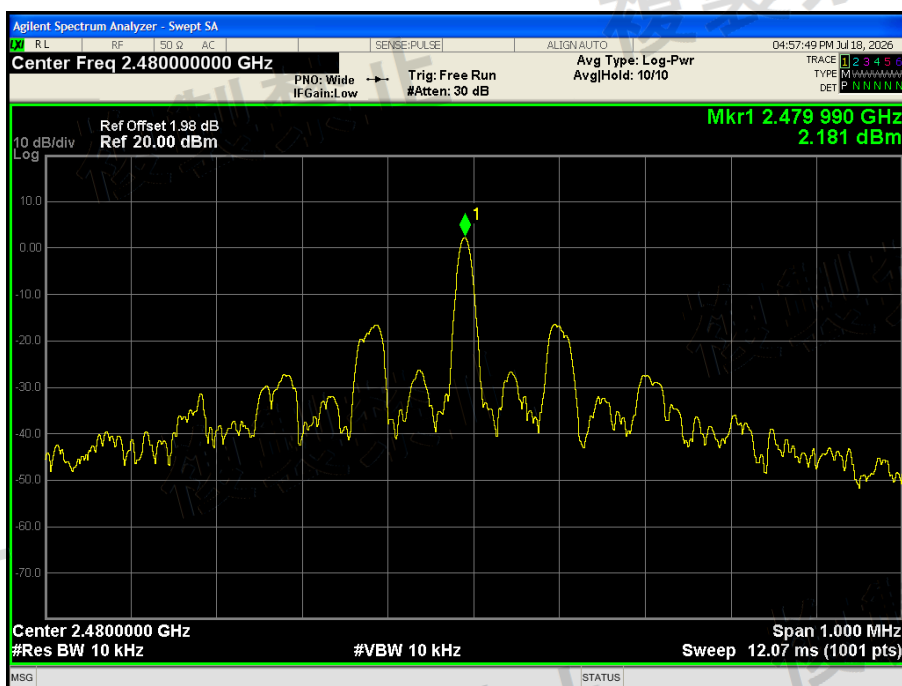
Channel 0: 2.402 GHz:



Channel 19: 2.44 GHz:



Channel 39: 2.480 GHz



Test result: The unit does meet the requirements.

5.6 Occupied Bandwidth (99%)

Test Requirement:	Item 19 of Article 2-1 83.5MHz or less(FHSS) Within 26MHz (other)
Temperature:	23.0 °C
Humidity:	55 % RH
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.

Test Configuration:



Test Procedure:

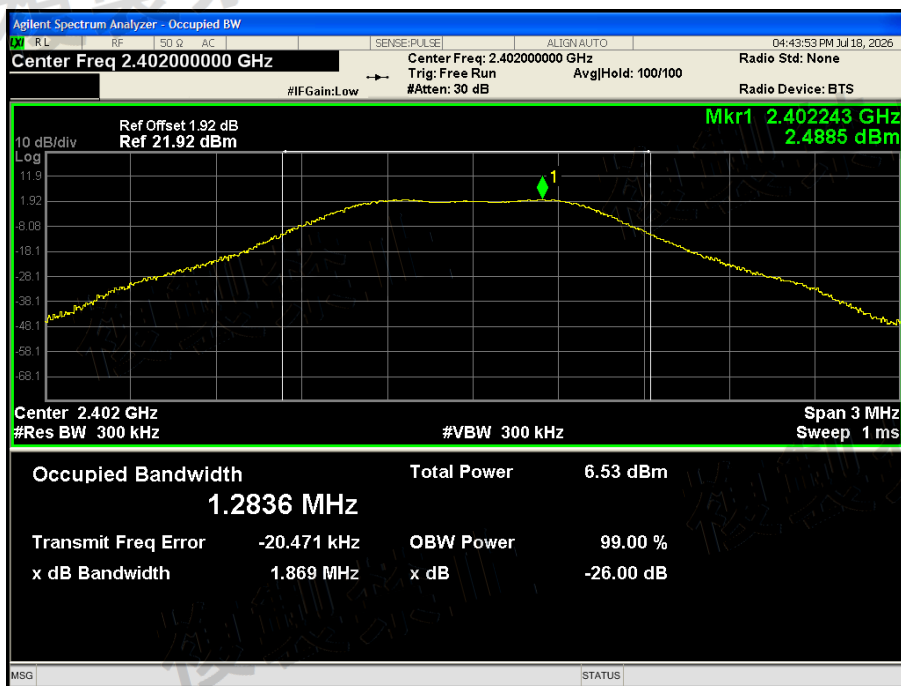
1. Test Conditions:
Spectrum Analyzer is used for measurement.
2. EUT conditions:
Modulation/Spread/Hopping ON, PC Modulation Tx
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:
Frequency: Test Frequency
Span: 5MHz
RBW: 300 kHz
VBW: 300 kHz
Sweep Time Auto
detector mode Positive peak
Indication mode Max hold
OBW 99%

**Test result:****For 1M:**

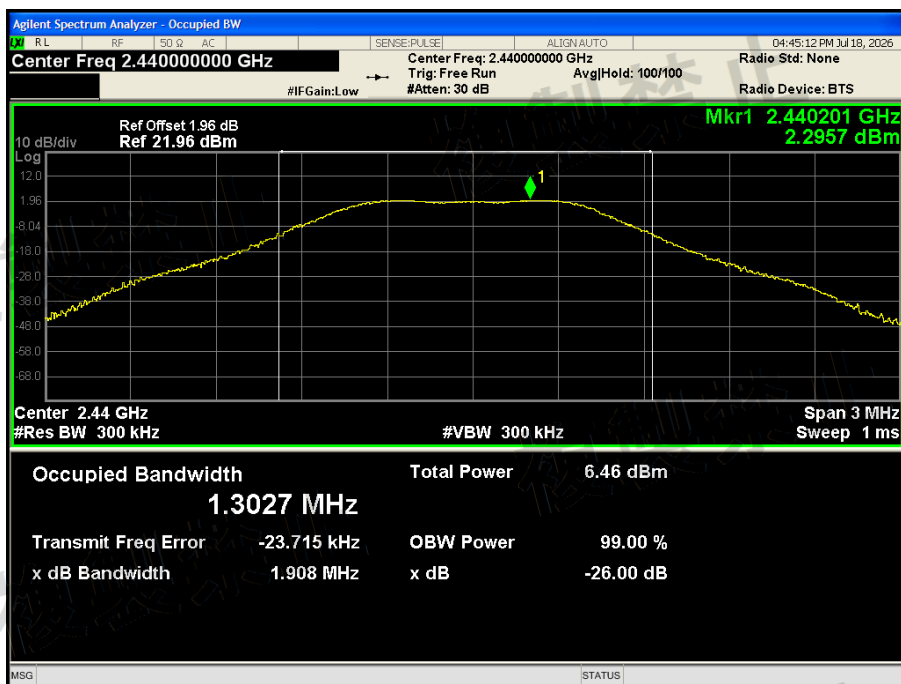
Test ch	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		12V DC	N/A	N/A		
Lowest	2402.0	1.2836	N/A	N/A	MHz	Wthin 26MHz
Middle	2440.0	1.3027	N/A	N/A	MHz	
Highest	2480.0	1.3169	N/A	N/A	MHz	

For 1M:

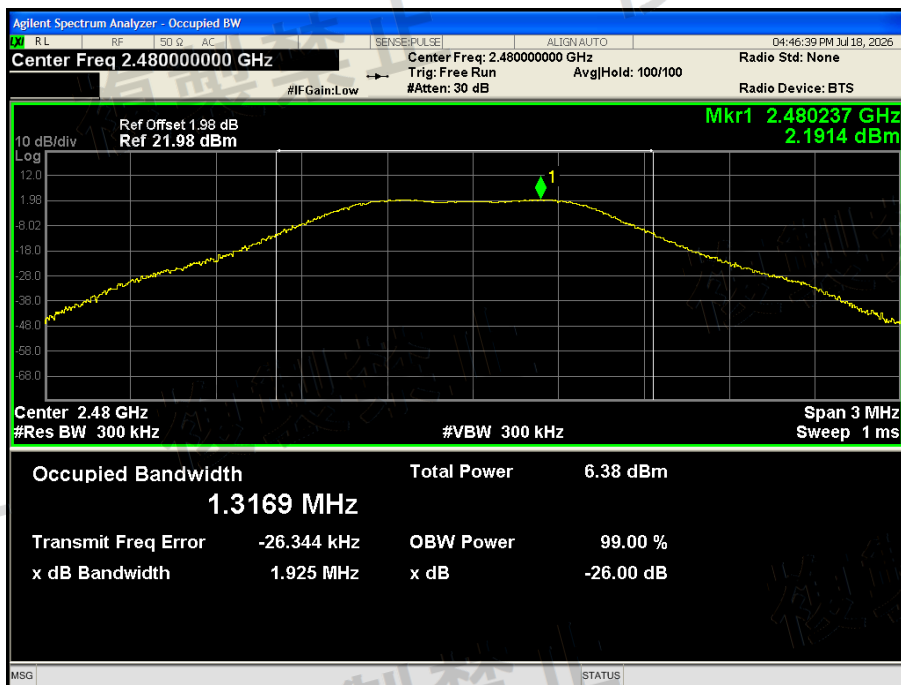
Channel 0: 2.402 GHz:



Channel 19: 2.44 GHz:



Channel 39: 2.480GHz:

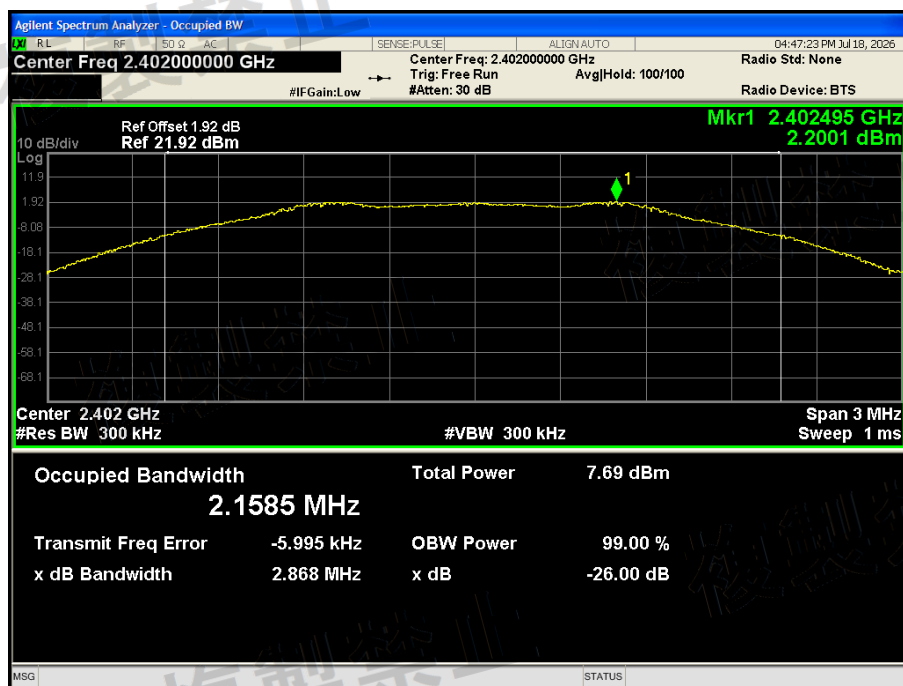


For 2M:

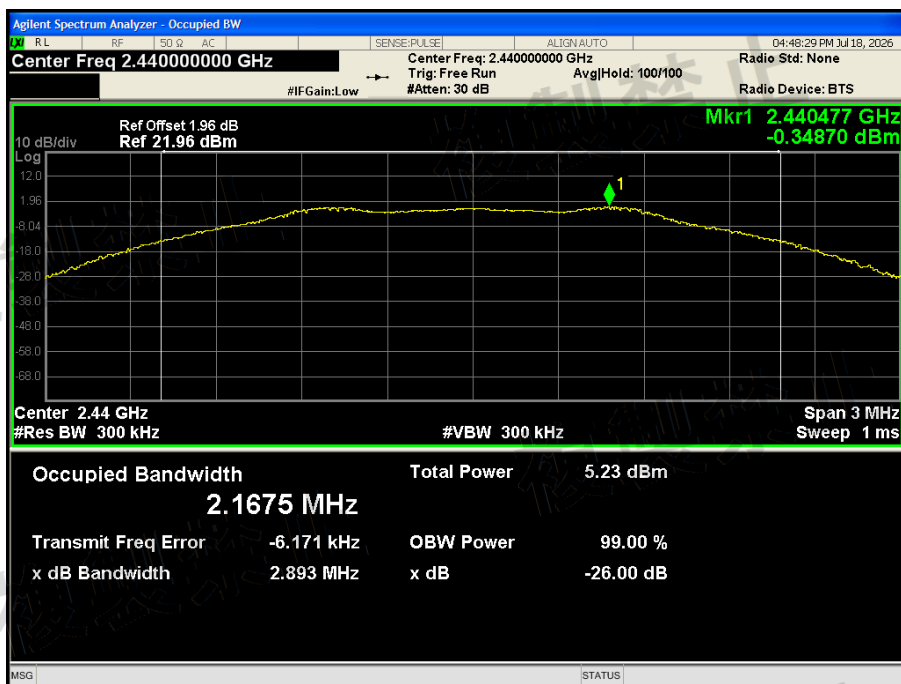
Test ch	Test Frequency (MHz)	Test Result			Unit	Limit
		Normal Voltage	High Voltage	Low Voltage		
		12V DC	N/A	N/A		
Lowest	2402.0	2.1585	N/A	N/A	MHz	Within 26MHz
Middle	2440.0	2.1675	N/A	N/A	MHz	
Highest	2480.0	2.1789	N/A	N/A	MHz	

For 2M:

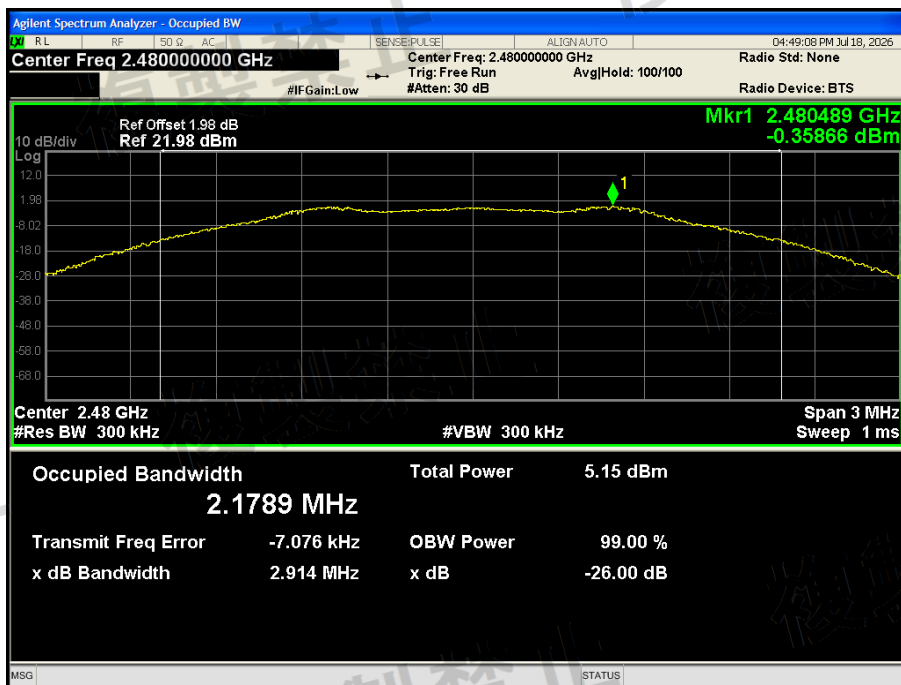
Channel 0: 2.402 GHz:



Channel 19: 2.44 GHz:



Channel 39: 2.480GHz:

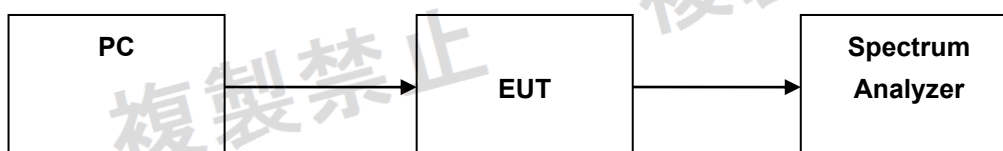


Test result: The unit does meet the requirements.

5.7 Spread Spectrum Bandwidth (90%)

Test Requirement:	Item 19 of Article 2-1
Temperature:	23.0 °C
Humidity:	55 % RH
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.

Test Configuration:



Test Procedure:

1. Test Conditions:
Spectrum Analyzer is used for measurement.
2. EUT conditions:
Modulation/Spread/Hopping ON, PC 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: 5MHz
RBW: 300 kHz
VBW: 300 kHz
Sweep Time Auto
detector mode Positive peak
Indication mode Max hold
OBW 99%

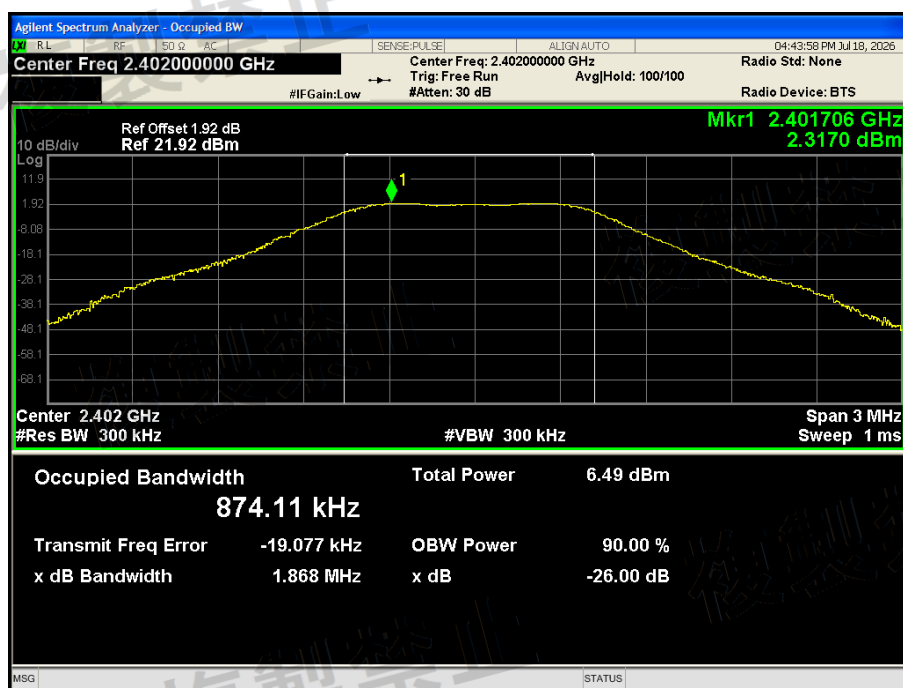
Test result:

For 1M:

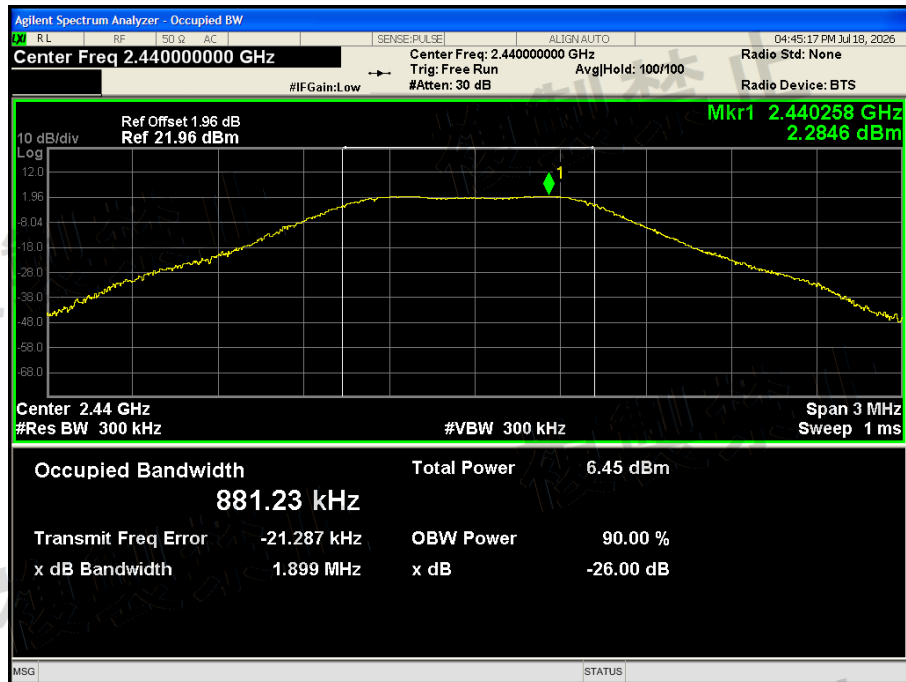
Test channels	Test Result (kHz)
	Normal Voltage
	12V DC
2402.0	874.11
2440.0	881.23
2480.0	880.07

For 1M:

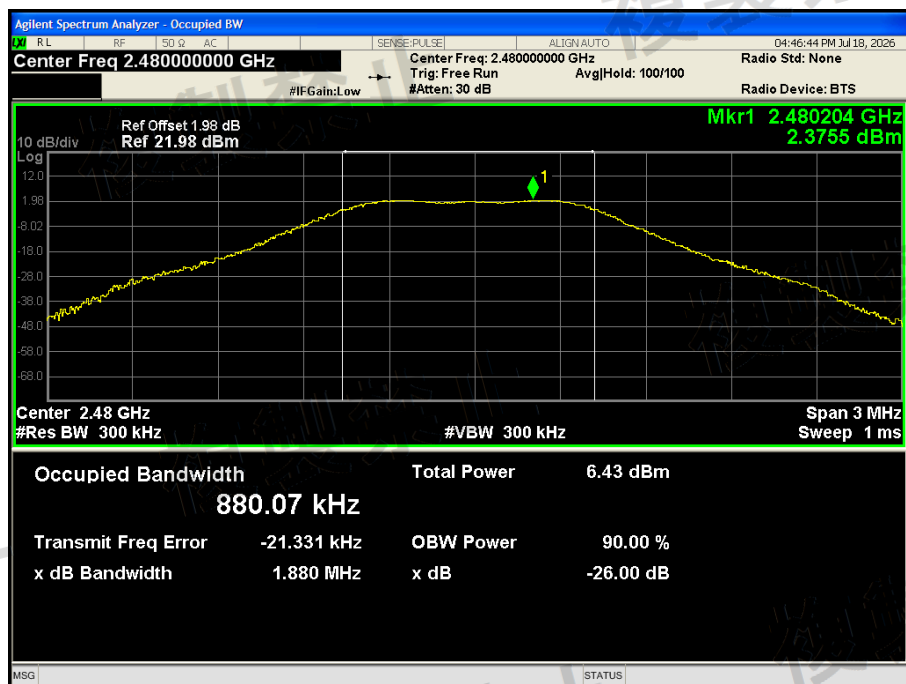
Channel 0: 2.402 GHz:



Channel 19: 2.44 GHz:



Channel 39: 2.480 GHz:



Test result: The unit does meet the requirements.

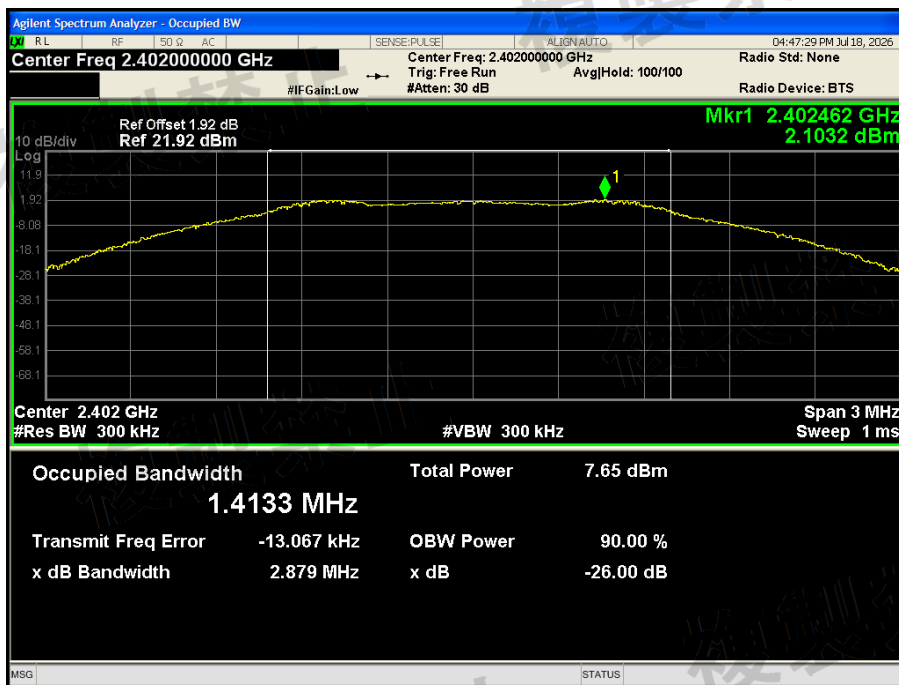


For 2M:

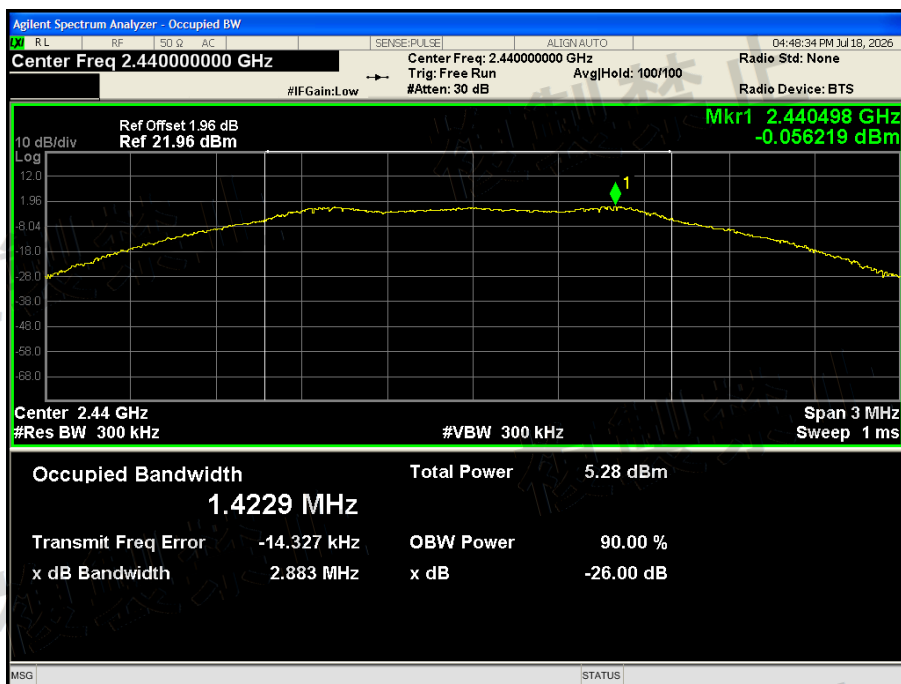
Test channels	Test Result (MHz)
	Normal Voltage
	12V DC
2402.0	1.4133
2440.0	1.4229
2480.0	1.4367

For 2M:

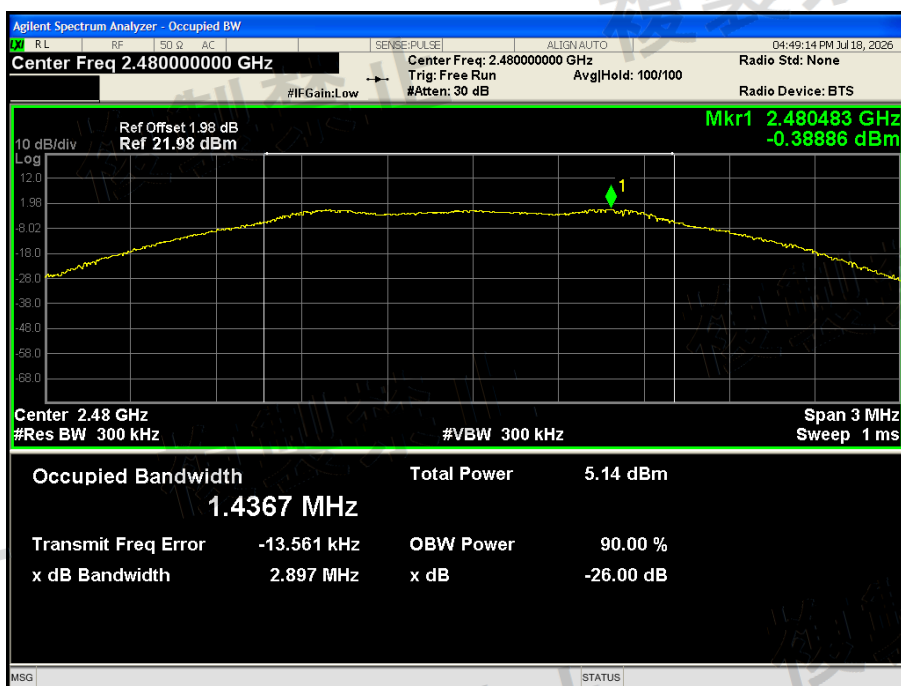
Channel 0: 2.402 GHz:



Channel 19: 2.44 GHz:



Channel 39: 2.480 GHz:



Test result: The unit does meet the requirements.

5.8 Antenna Power

Test Requirement:	Item 19 of Article 2-1
Antenna Power:	3 mW/MHz or less(FHSS) 10mW and less(other)
EIRP:	12.14dBm or less
Temperature:	23.0 °C
Humidity:	55 % RH
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.

Test Configuration:



Test Procedure:

1. The EUT was directly connected to the RF Automatic Test System and antenna output port as show in the block diagram above.

**Test result:**

	Test channel	Test Frequency (MHz)	Test Result			Unit	Limit
			Normal Voltage	High Voltage	Low Voltage		
			12V DC	13.2V DC	10.8V DC		
1M	Lowest	2402.0	1.60	N/A	N/A	mW	10mW and less Error+20%
			-60.00	N/A	N/A	%	
	Middle	2440.0	1.58	N/A	N/A	mW	
			-60.50	N/A	N/A	%	
	Highest	2480.0	1.51	N/A	N/A	mW	
			-62.25	N/A	N/A	%	
2M	Lowest	2402.0	1.76	N/A	N/A	mW	10mW and less Error+20%
			-56.00	N/A	N/A	%	
	Middle	2440.0	1.63	N/A	N/A	mW	
			-59.25	N/A	N/A	%	
	Highest	2480.0	1.62	N/A	N/A	mW	
			-59.50	N/A	N/A	%	

Remark:

Normal antenna power: BLE: F1D:4mW

5.9 Spurious Emissions of Tx

Test Requirement:	Item 19 of Article 2-1 (1) 30 to 1000 MHz : 2.5 μ W/MHz(-36dBm/100kHz) (2) 1000 to 2387 MHz : 2.5 μ W/MHz(-26dBm/MHz) (3) 2387 to 2400 MHz : 25 μ W/MHz(-16dBm/MHz) (4) 2483.5 through 2496.5 MHz : 25 μ W/MHz(-16dBm/MHz) (5) Over 2496.5 MHz : 2.5 μ W/MHz(-26dBm/MHz)
Temperature:	23.0 °C
Humidity:	55 % RH
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.

Test Configuration:



Test Procedure:

1. Test Conditions:
Spectrum Analyzer is used for measurement.
2. EUT conditions:
Modulation/Spread/Hopping ON, , PC Modulation Tx
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. 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 – 1000 MHz,
RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz)
1000 MHz – 2400 MHz, 2483.5 MHz –13 GHz
RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz)
Sweep Time Auto
detector mode Positive peak, Indication mode Max hold
Test setup for Step 2:
Frequency: Spurious Frequency
RBW 100 kHz (Below 1000 MHz), VBW 100 kHz (Below 1000 MHz)
RBW 1 MHz (above 1000 MHz), VBW 1 MHz (above 1000 MHz)
Sweep Time Auto,
Detector mode Sample, Indication mode Max hold

**Test result:**

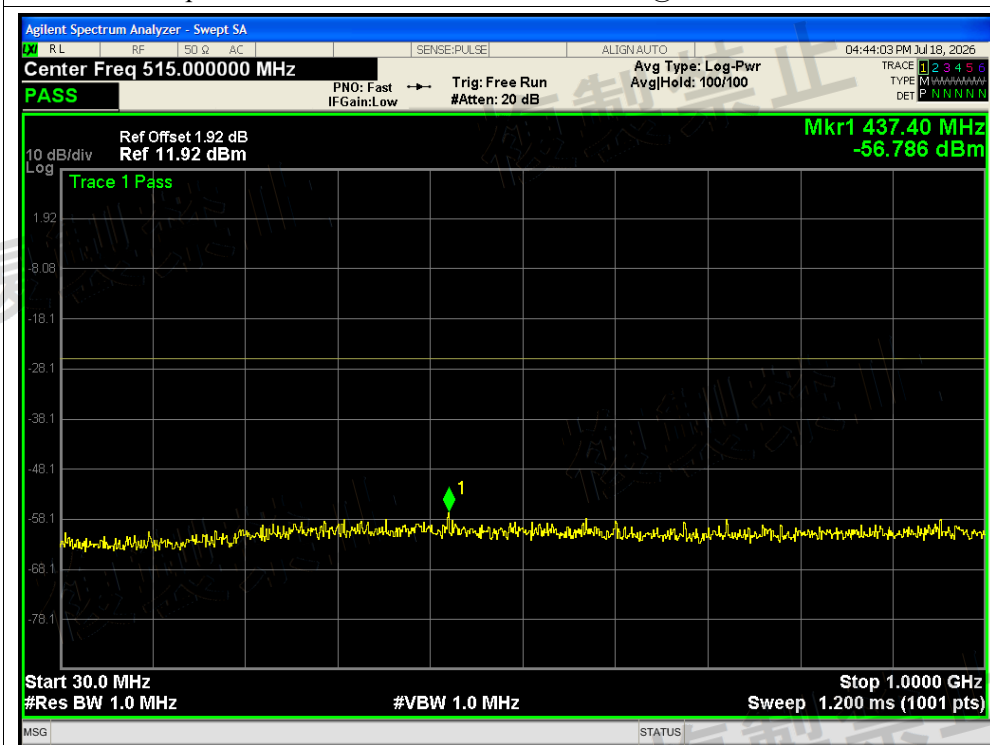
Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (uW/MHz)	Limit Start(uW/MHz)	Limit Stop (uW/MHz)	Verdict
NVNT	BLE 1M	2402	30-1000	437.4	-56.79	0.0021	2.5	2.5	Pass
NVNT	BLE 1M	2402	1000-2387	2370.36	-54.46	0.0036	2.5	2.5	Pass
NVNT	BLE 1M	2402	2387-2400	2399.97	-32.59	0.5508	25	25	Pass
NVNT	BLE 1M	2402	2483.5-2496.5	2492.92	-56.19	0.0024	25	25	Pass
NVNT	BLE 1M	2402	2496.5-13000	5195.9	-52.15	0.0061	2.5	2.5	Pass
NVNT	BLE 1M	2440	30-1000	404.42	-56.74	0.0021	2.5	2.5	Pass
NVNT	BLE 1M	2440	1000-2387	2242.75	-54.59	0.0035	2.5	2.5	Pass
NVNT	BLE 1M	2440	2387-2400	2399.7	-55.41	0.0029	25	25	Pass
NVNT	BLE 1M	2440	2483.5-2496.5	2492.64	-55.16	0.003	25	25	Pass
NVNT	BLE 1M	2440	2496.5-13000	7317.61	-49.16	0.0121	2.5	2.5	Pass
NVNT	BLE 1M	2480	30-1000	329.73	-57.51	0.0018	2.5	2.5	Pass
NVNT	BLE 1M	2480	1000-2387	2385.61	-55.06	0.0031	2.5	2.5	Pass
NVNT	BLE 1M	2480	2387-2400	2389.65	-54.87	0.0033	25	25	Pass
NVNT	BLE 1M	2480	2483.5-2496.5	2487.65	-50.43	0.0091	25	25	Pass
NVNT	BLE 1M	2480	2496.5-13000	7443.65	-48.71	0.0135	2.5	2.5	Pass
NVNT	BLE 2M	2402	30-1000	368.53	-59.74	0.0011	2.5	2.5	Pass
NVNT	BLE 2M	2402	1000-2387	2387	-56.23	0.0024	2.5	2.5	Pass
NVNT	BLE 2M	2402	2387-2400	2400	-27.06	1.9679	25	25	Pass
NVNT	BLE 2M	2402	2483.5-2496.5	2488.3	-57.37	0.0018	25	25	Pass
NVNT	BLE 2M	2402	2496.5-13000	12789.93	-53.56	0.0044	2.5	2.5	Pass



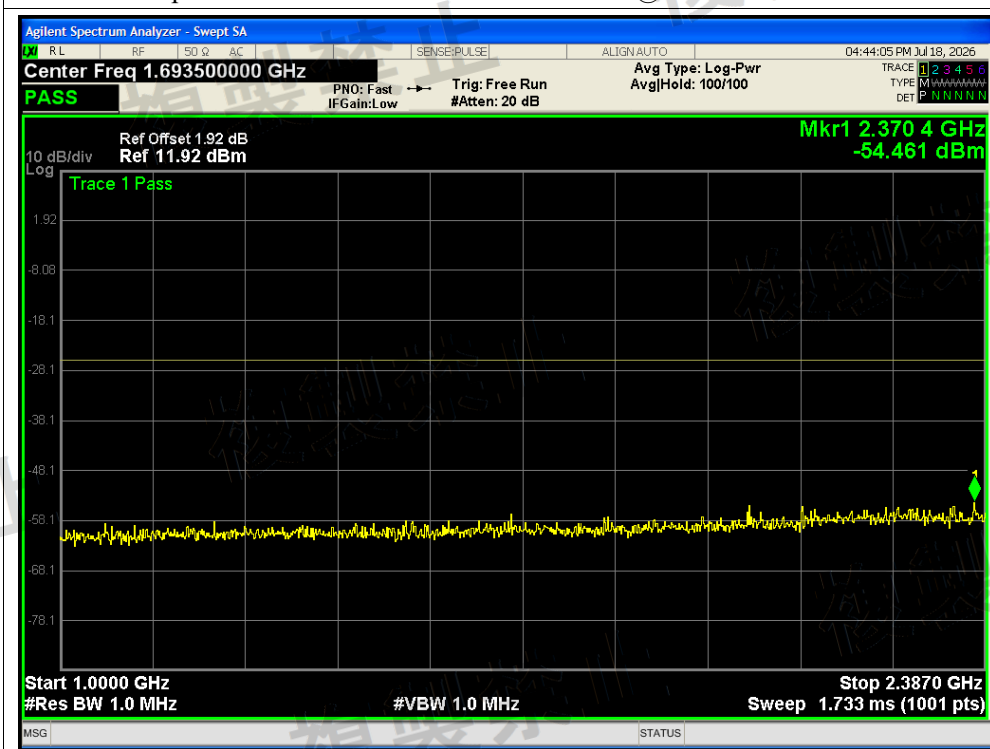
NVNT	BLE 2M	2440	30-1000	905.91	-57.31	0.0019	2.5	2.5	Pass
NVNT	BLE 2M	2440	1000-2387	2269.11	-55.28	0.003	2.5	2.5	Pass
NVNT	BLE 2M	2440	2387-2400	2391.06	-55.52	0.0028	25	25	Pass
NVNT	BLE 2M	2440	2483.5-2496.5	2490.21	-54.96	0.0032	25	25	Pass
NVNT	BLE 2M	2440	2496.5-13000	7317.61	-52.67	0.0054	2.5	2.5	Pass
NVNT	BLE 2M	2480	30-1000	557.68	-58.66	0.0014	2.5	2.5	Pass
NVNT	BLE 2M	2480	1000-2387	2149.82	-55.18	0.003	2.5	2.5	Pass
NVNT	BLE 2M	2480	2387-2400	2389.52	-55.81	0.0026	25	25	Pass
NVNT	BLE 2M	2480	2483.5-2496.5	2483.75	-45.58	0.0277	25	25	Pass
NVNT	BLE 2M	2480	2496.5-13000	7443.65	-51.54	0.007	2.5	2.5	Pass

Test Graphs

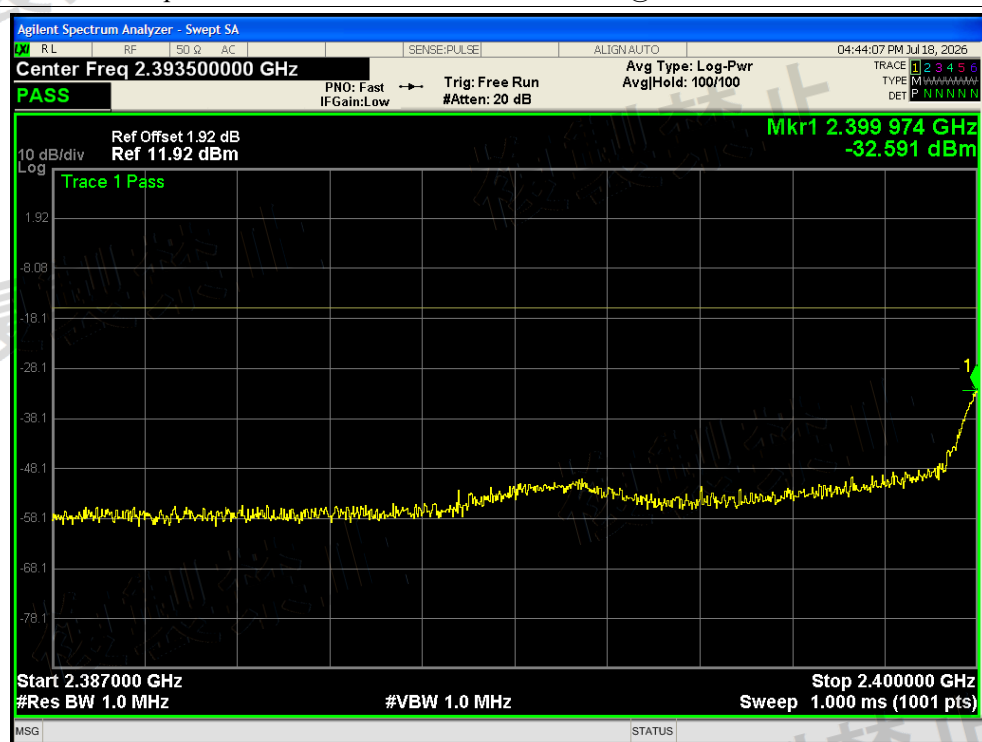
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



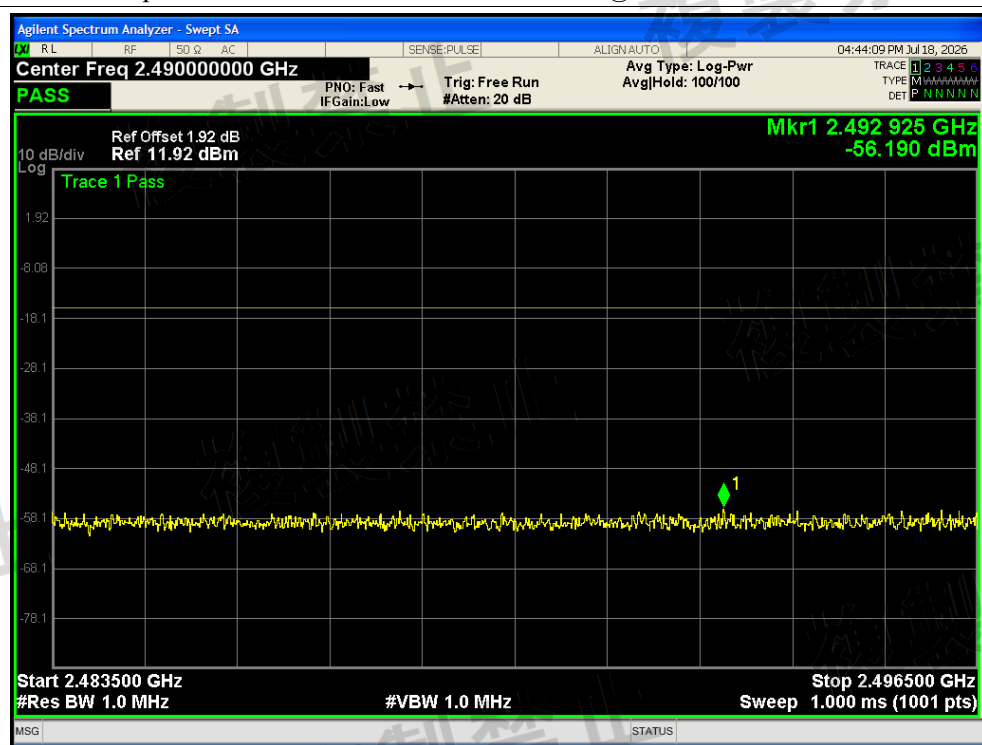
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-2387MHz



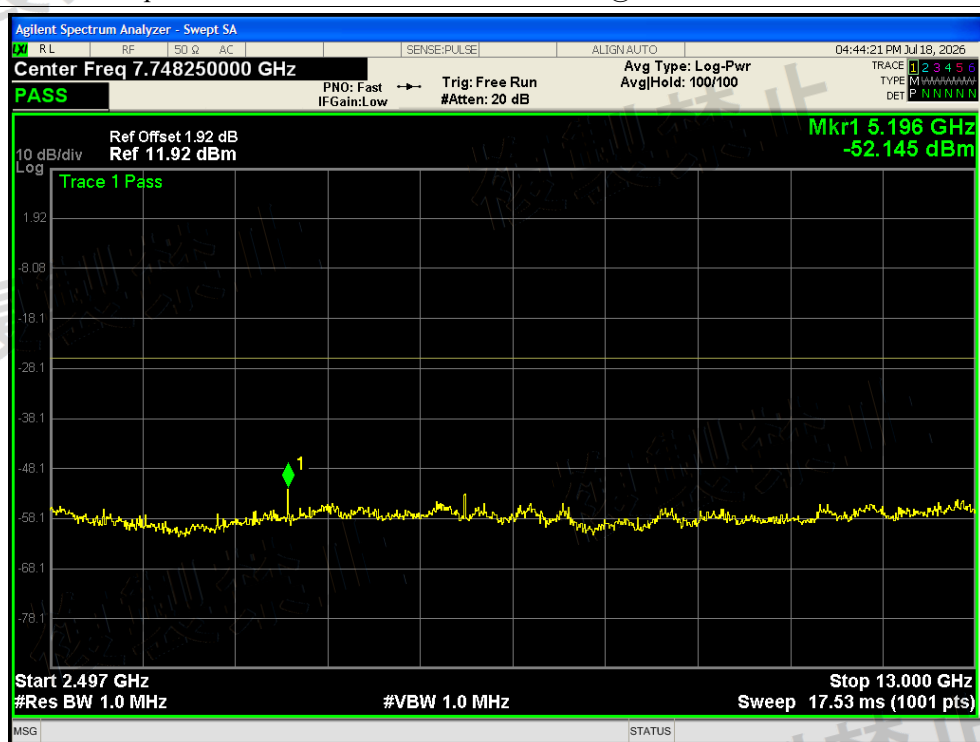
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2387MHz-2400MHz



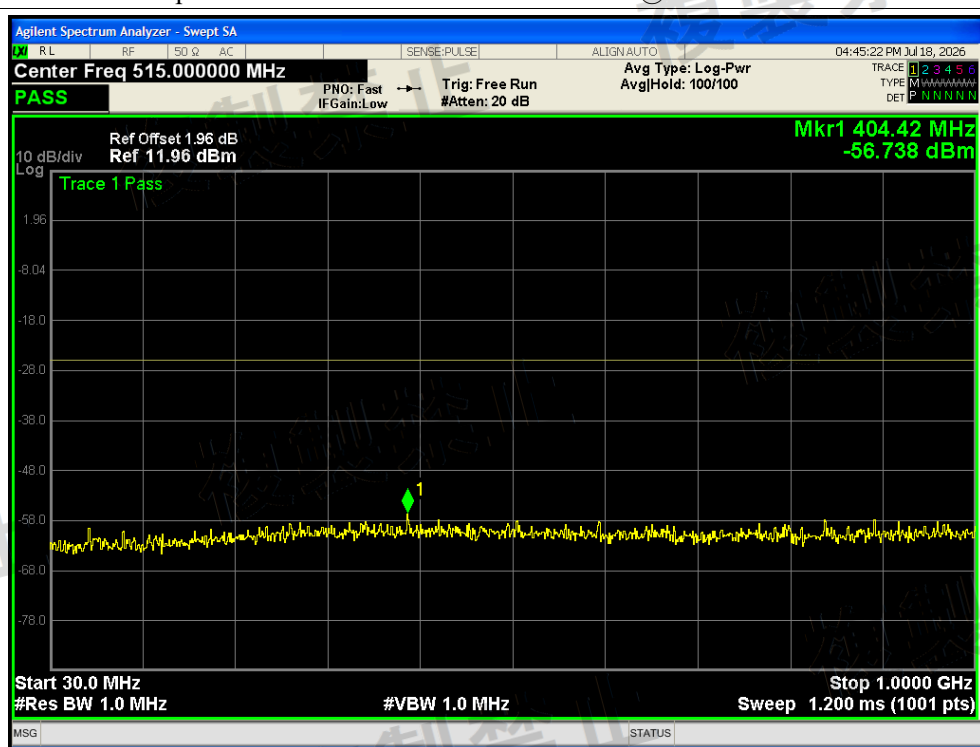
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



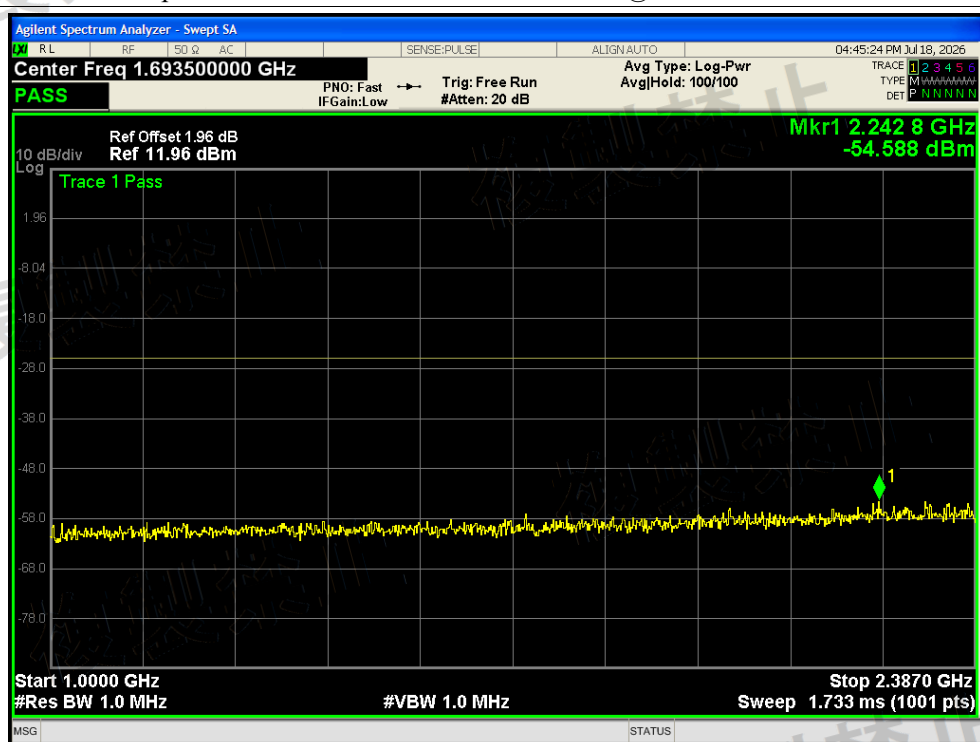
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 2496.5MHz-13000MHz



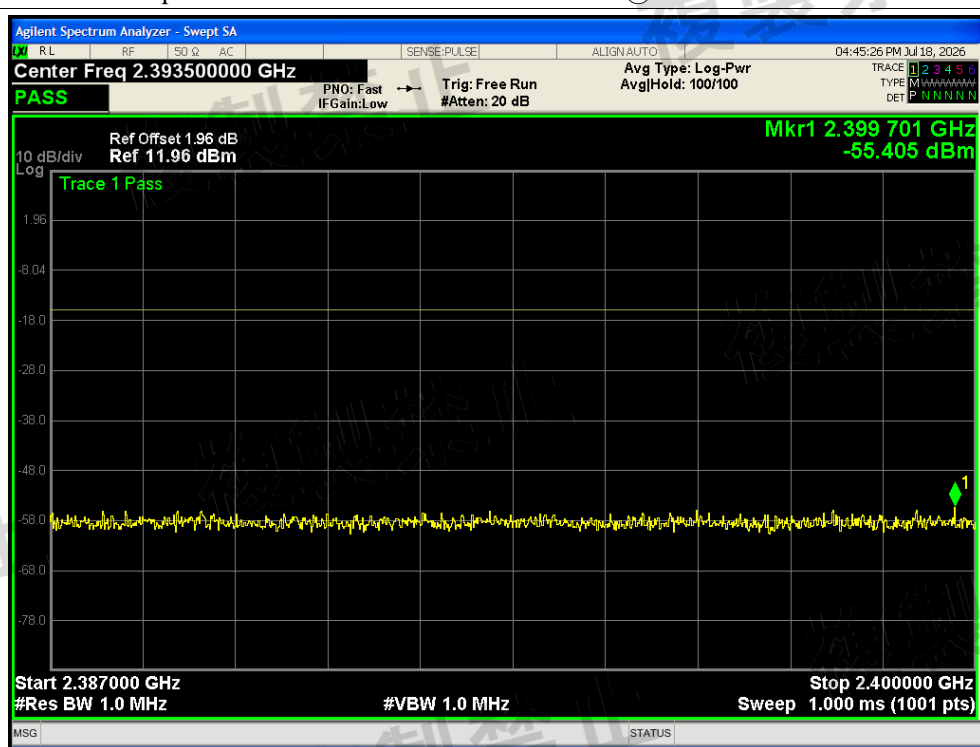
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



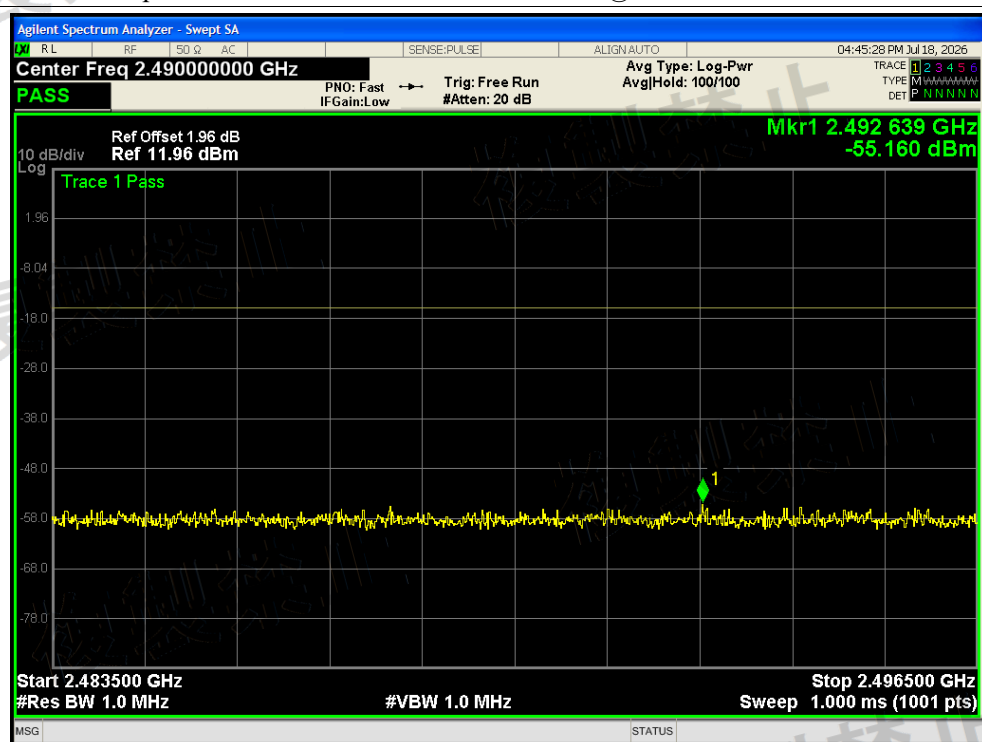
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-2387MHz



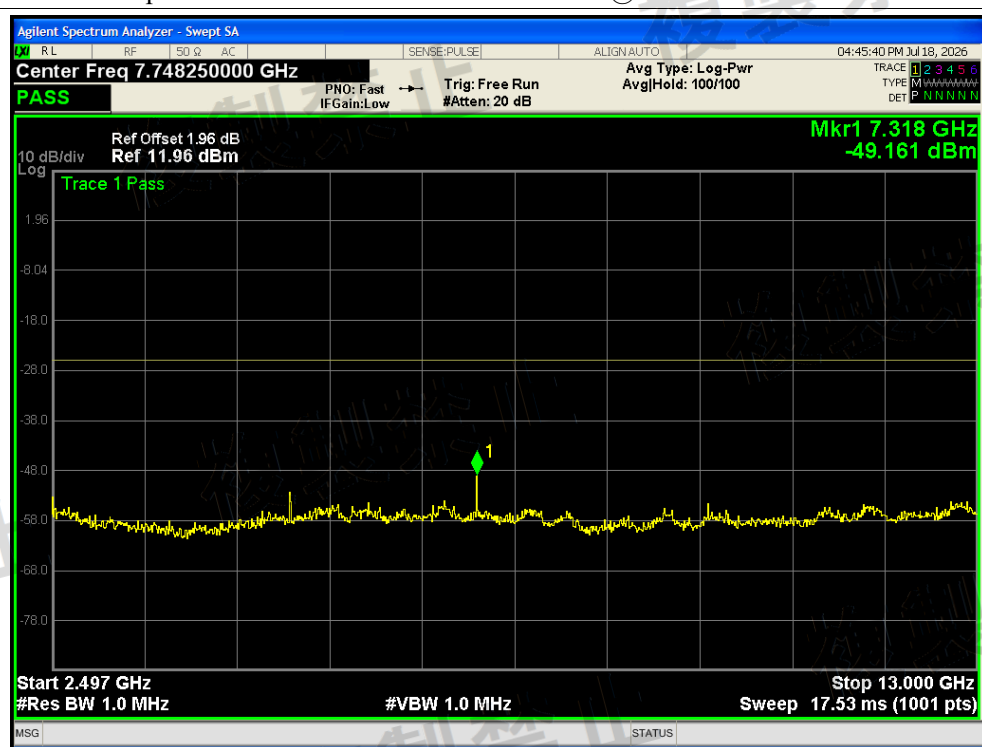
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2387MHz-2400MHz



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz

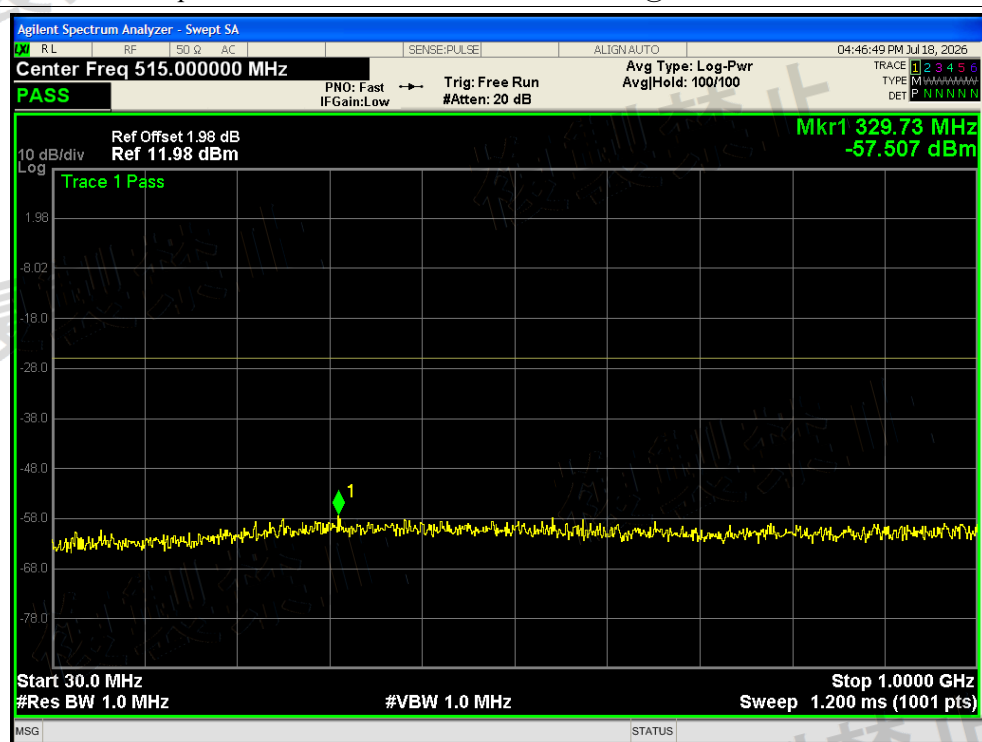


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 2496.5MHz-13000MHz

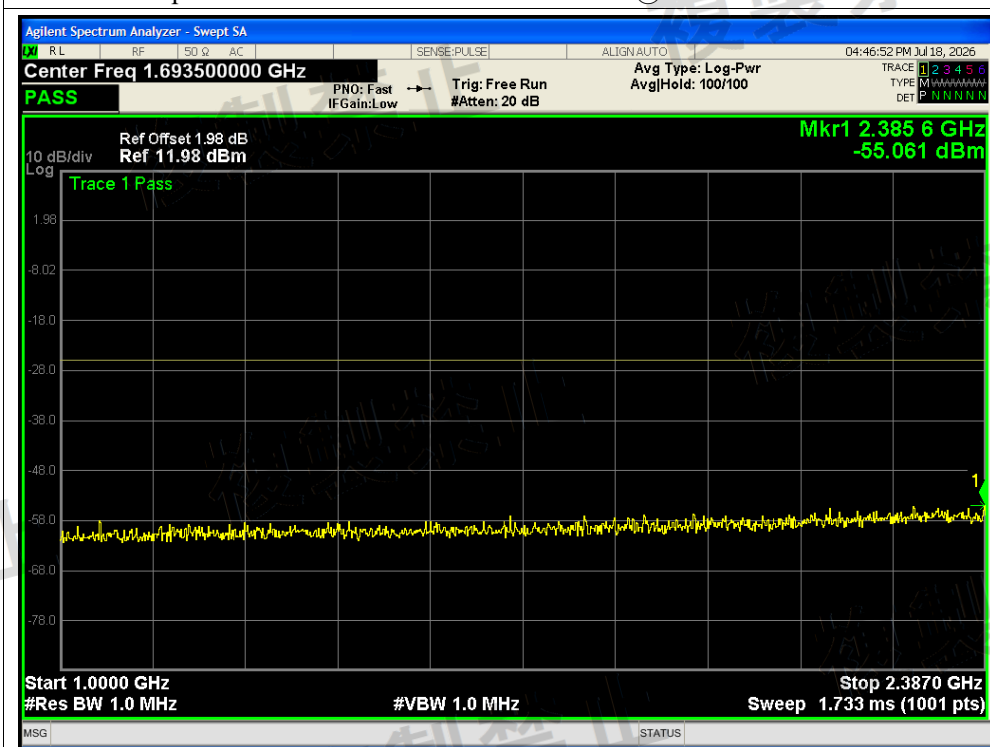




Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz

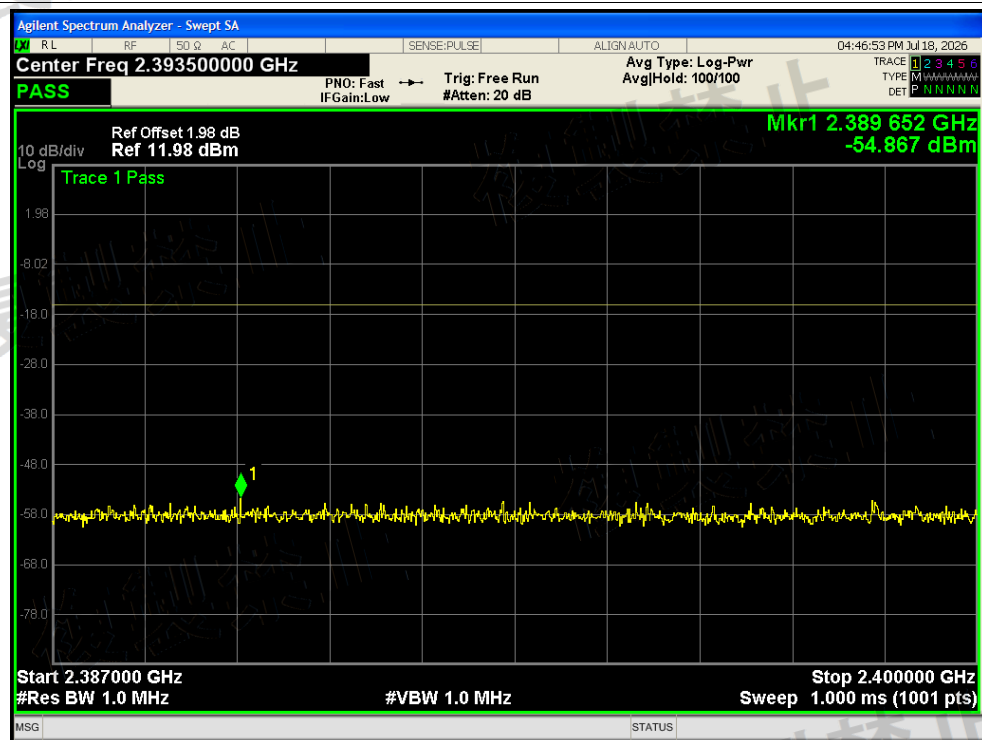


Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-2387MHz

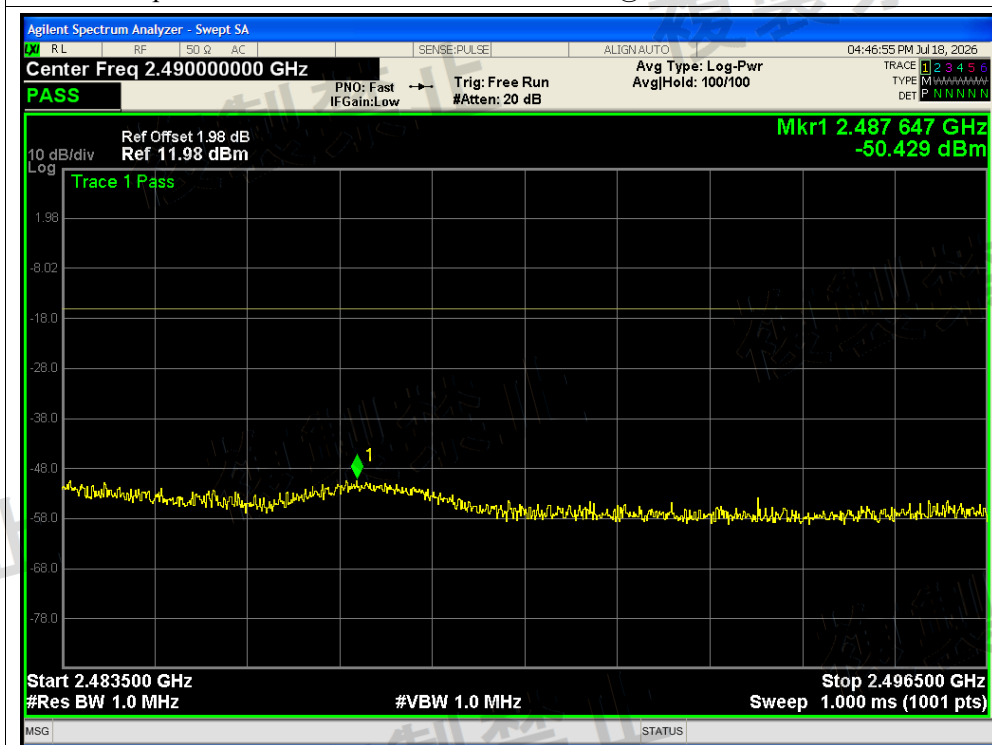




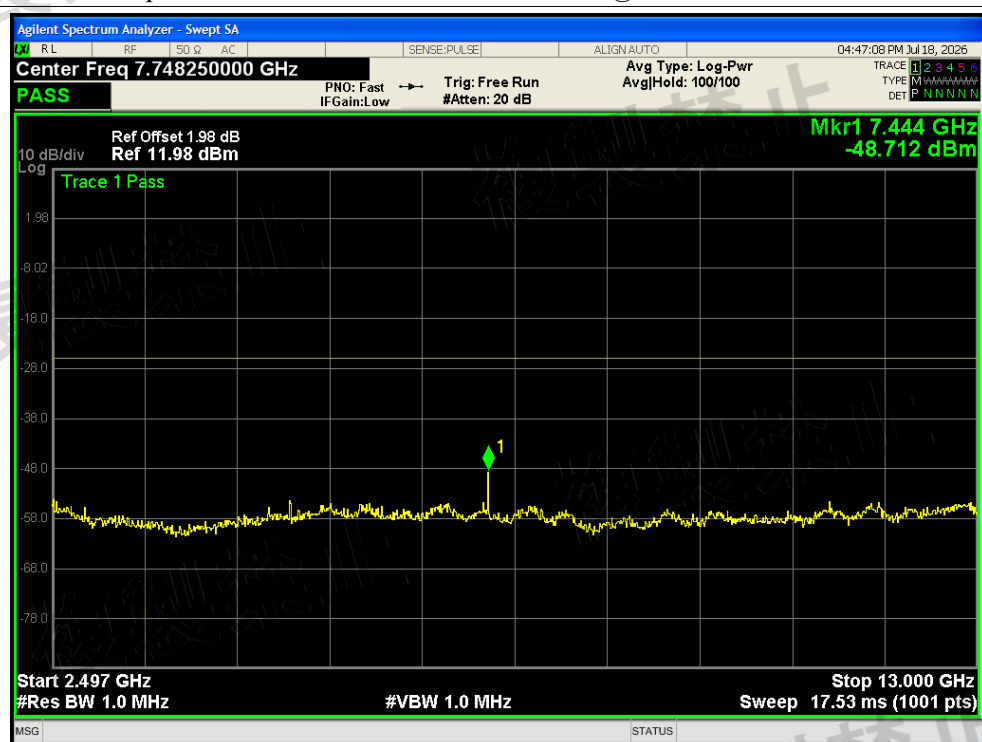
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2387MHz-2400MHz



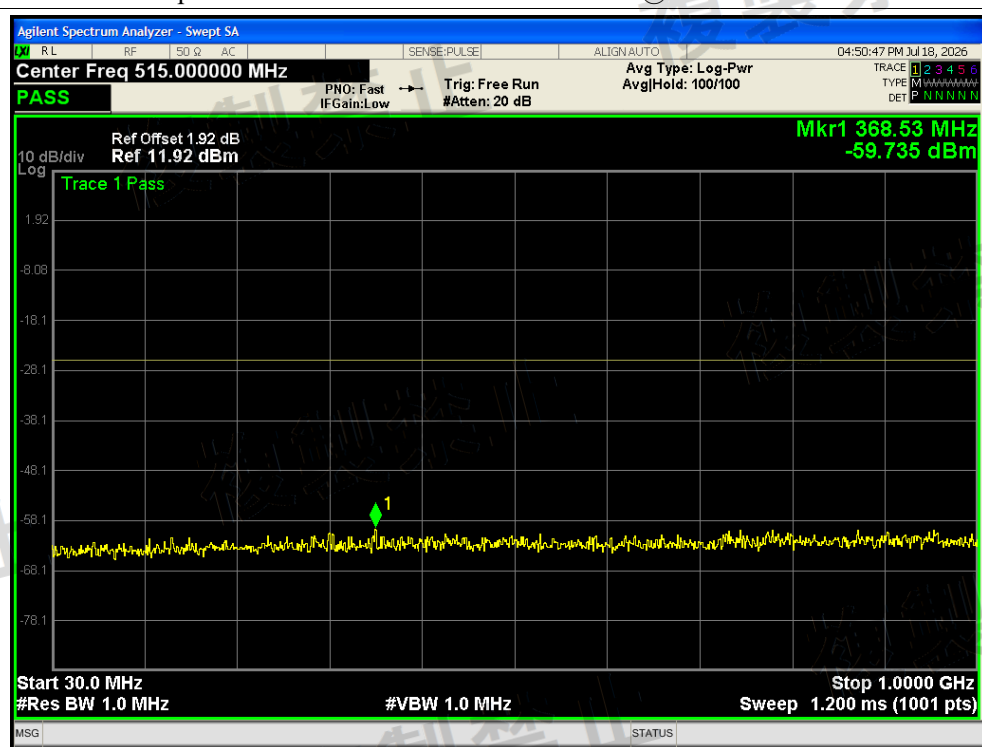
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz



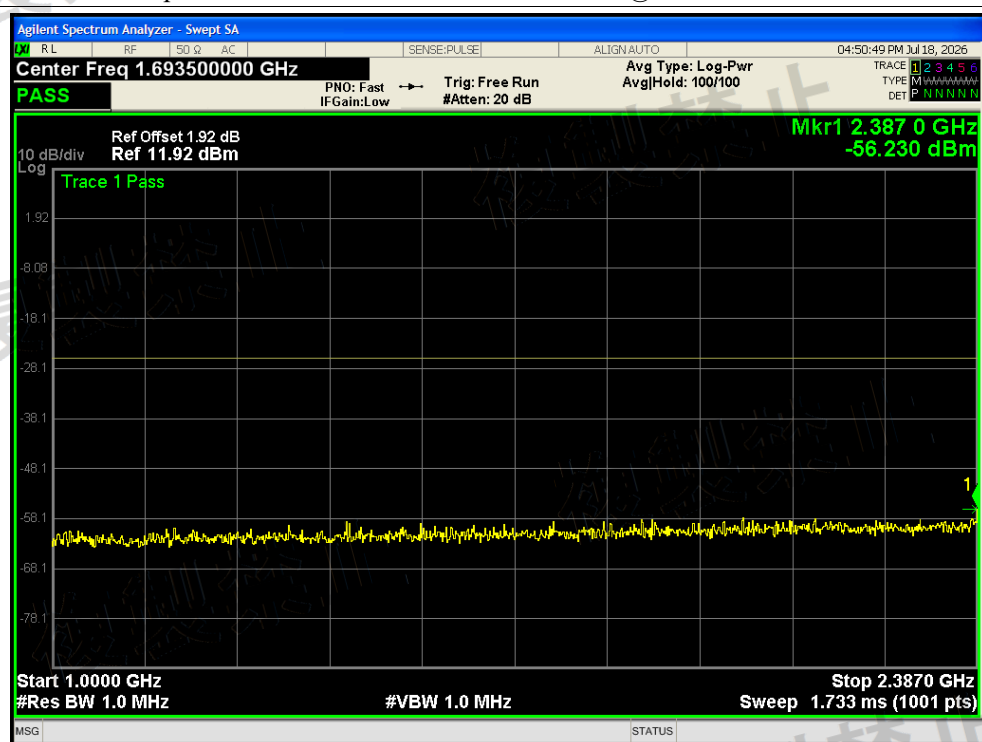
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 2496.5MHz-13000MHz



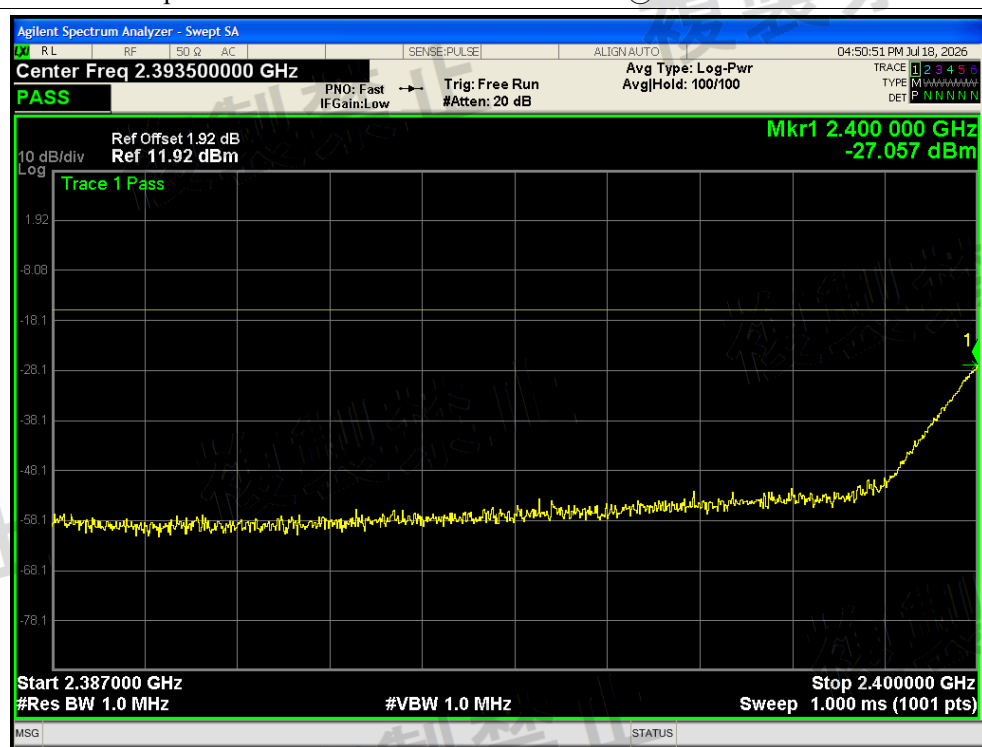
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



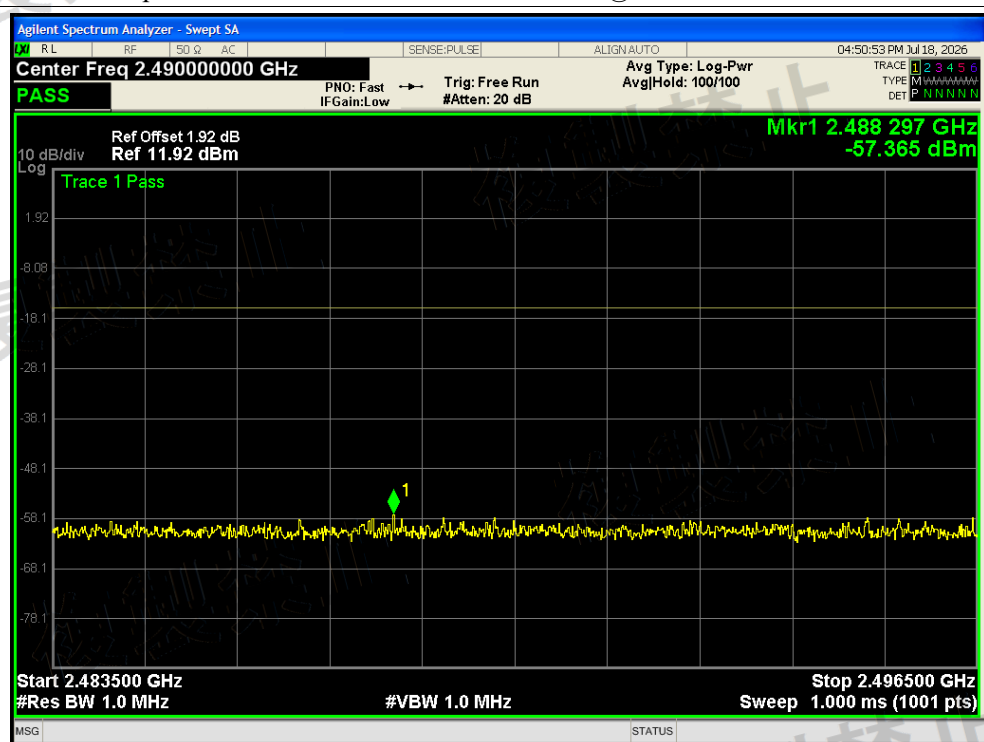
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 1000MHz-2387MHz



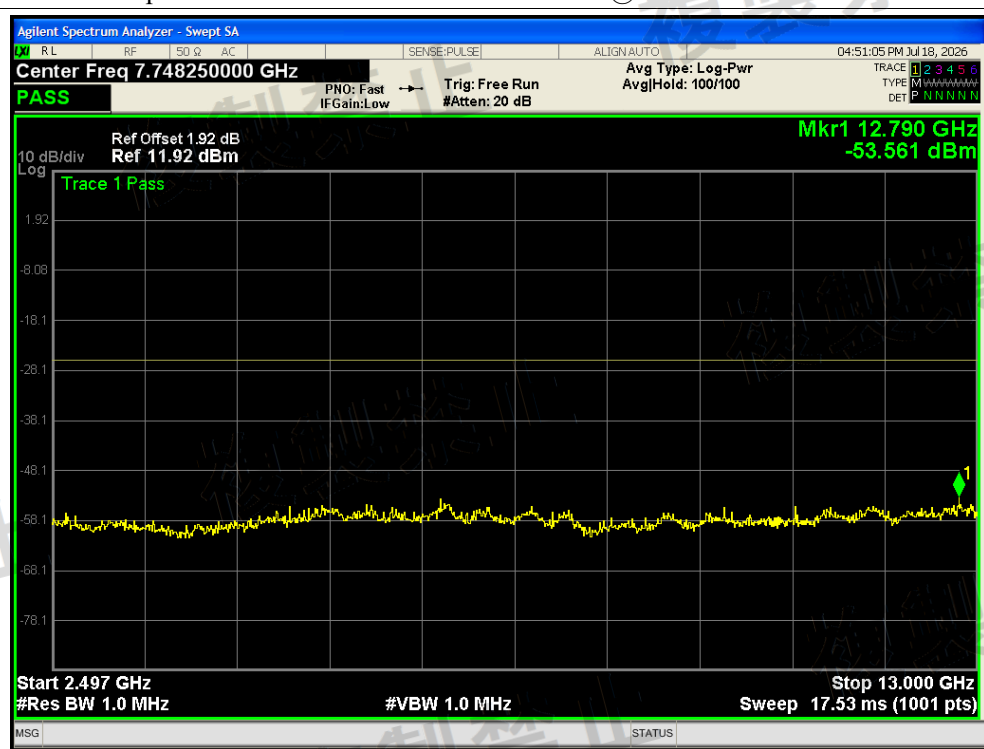
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz



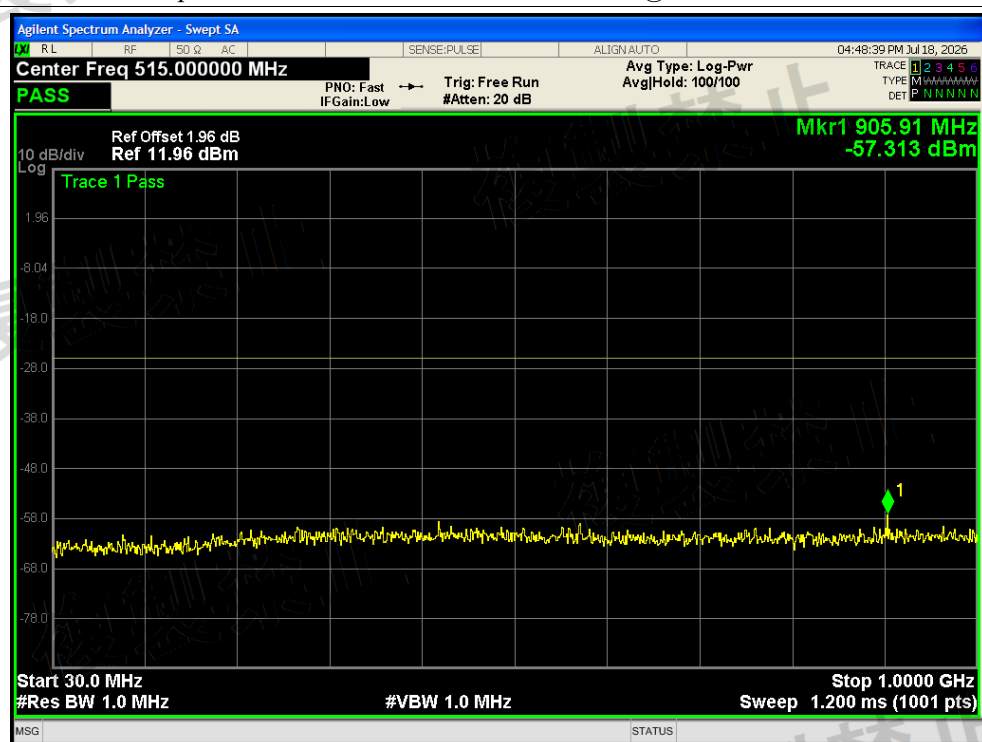
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



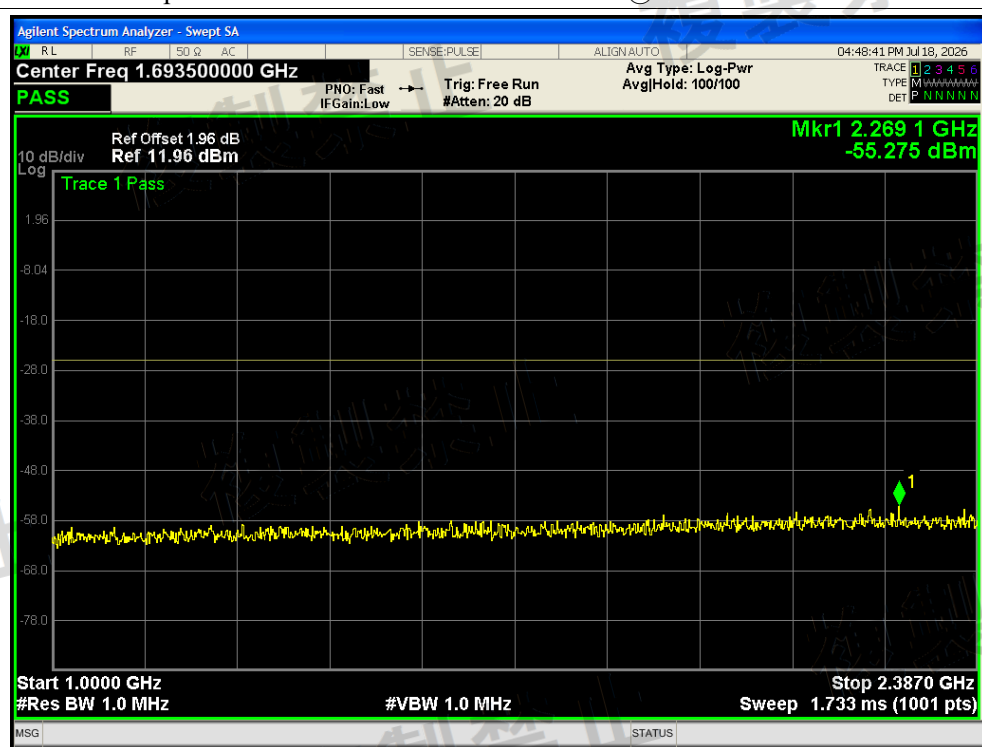
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 @ 2496.5MHz-13000MHz



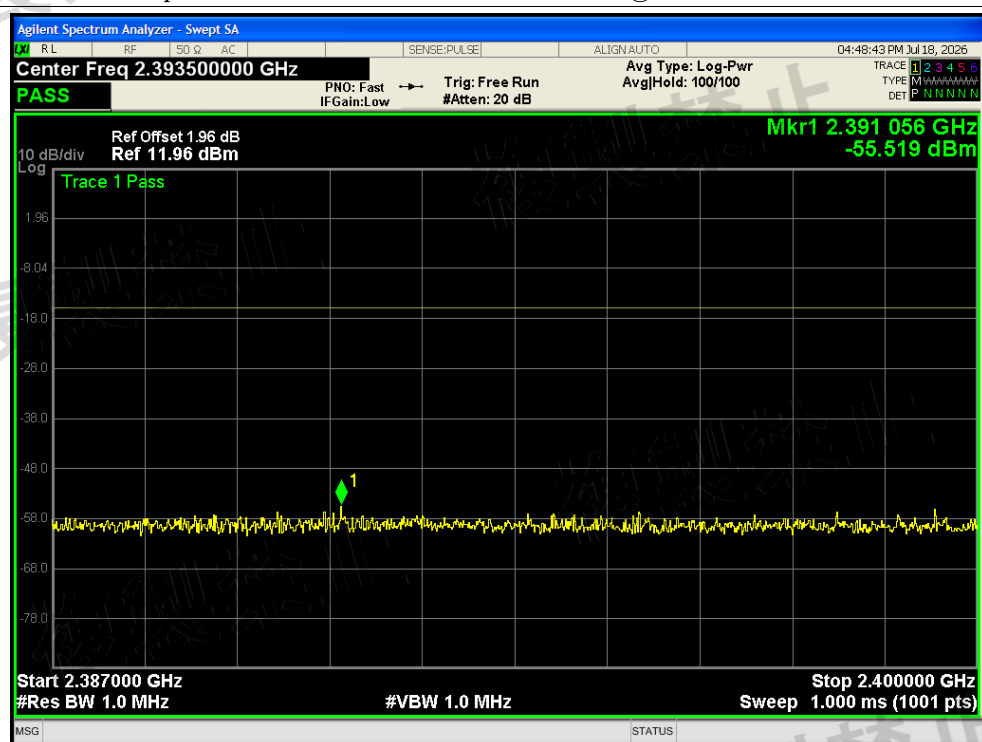
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



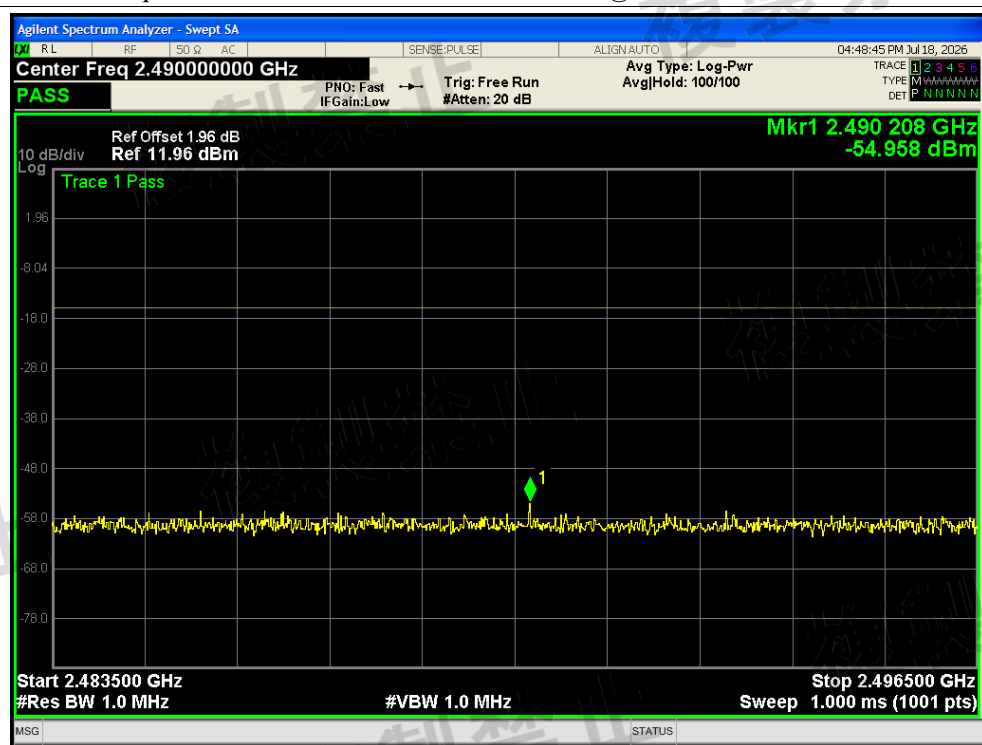
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 1000MHz-2387MHz



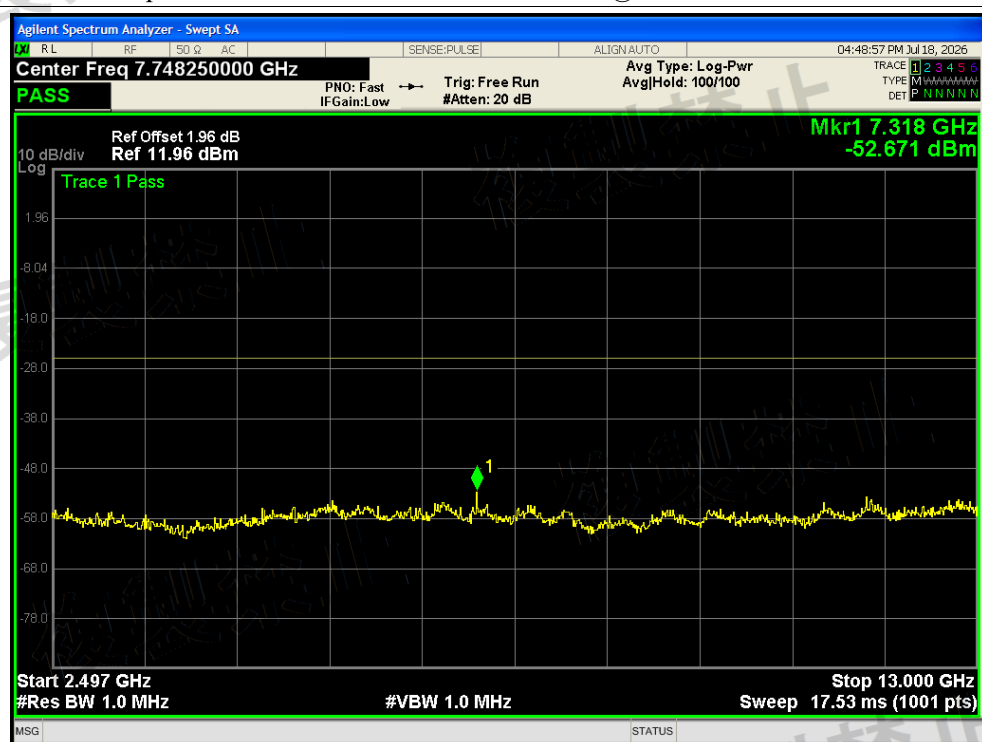
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2387MHz-2400MHz



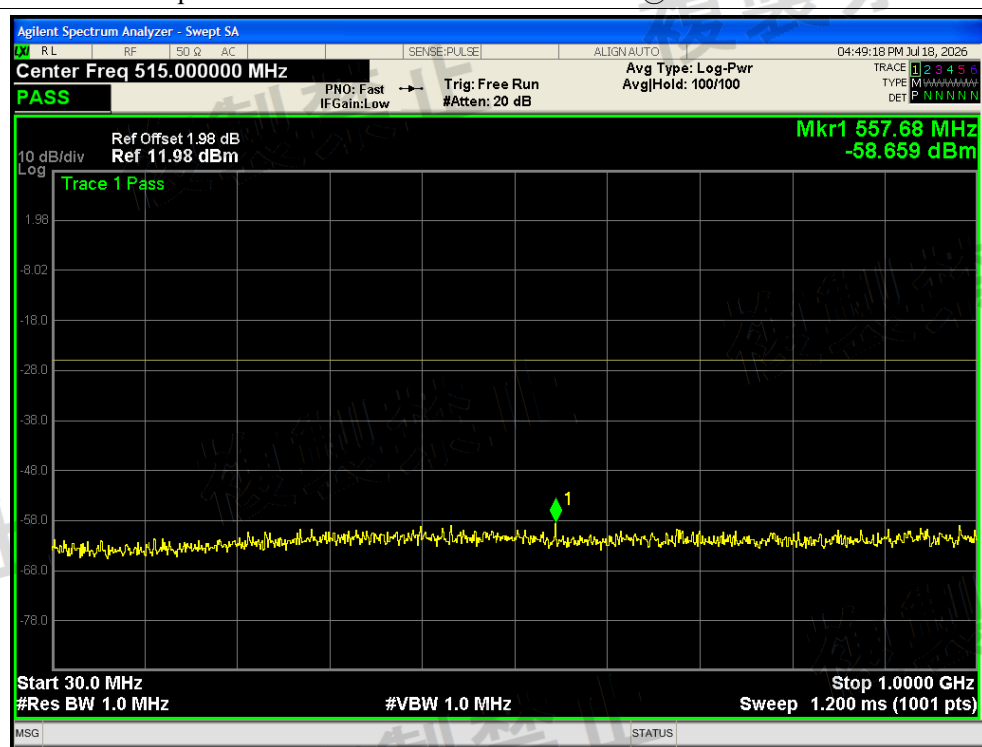
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



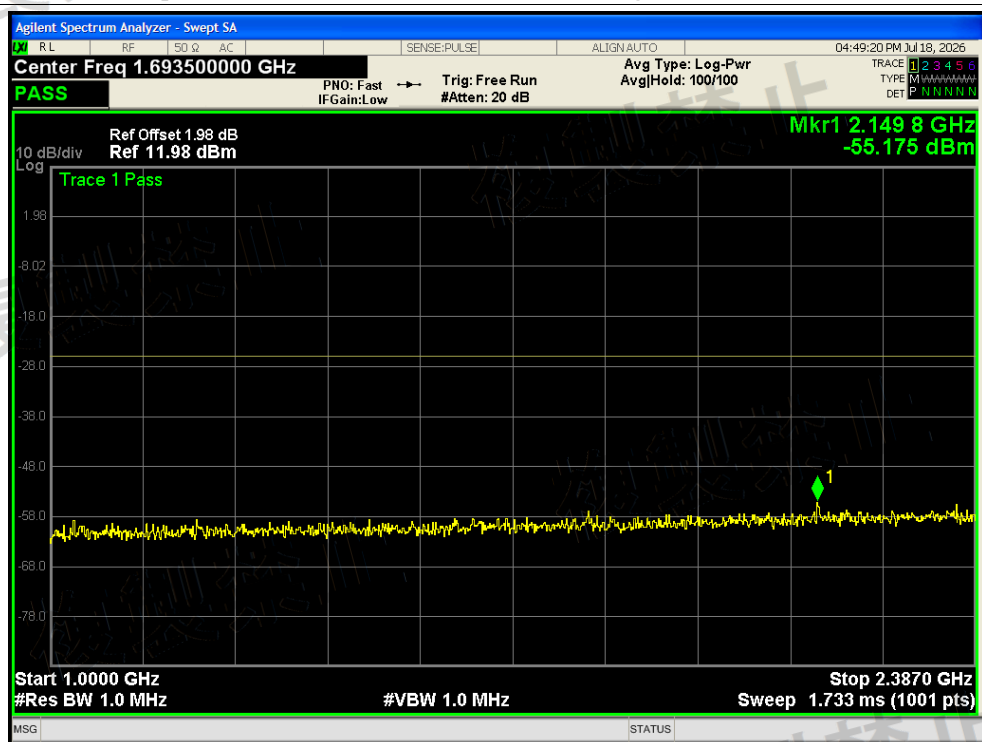
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 @ 2496.5MHz-13000MHz



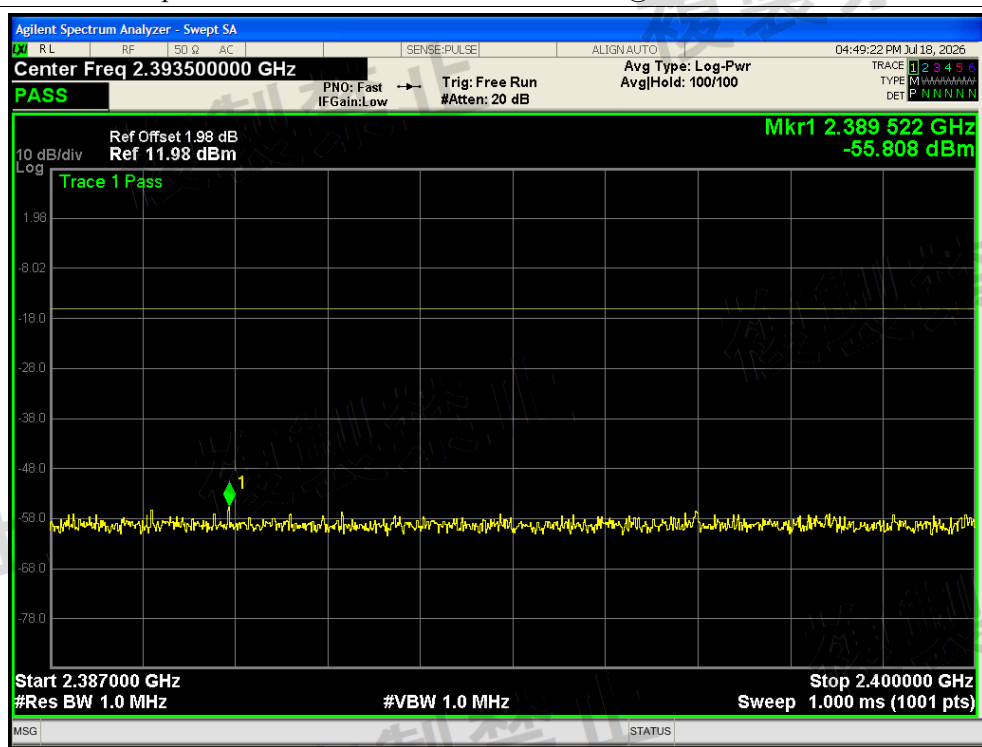
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



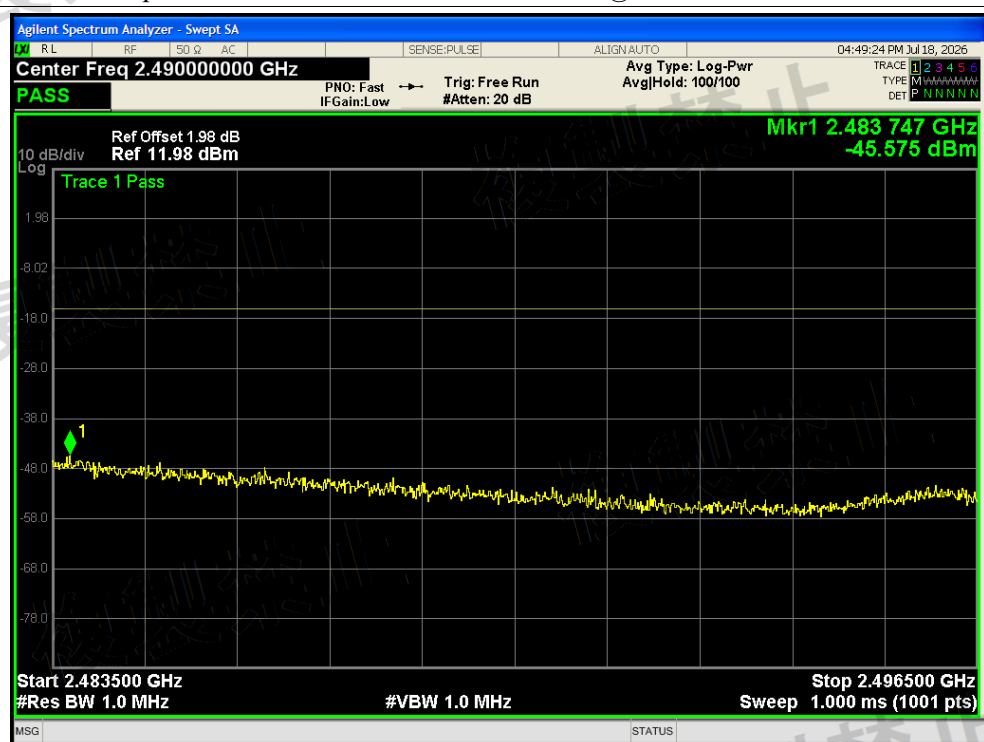
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 1000MHz-2387MHz



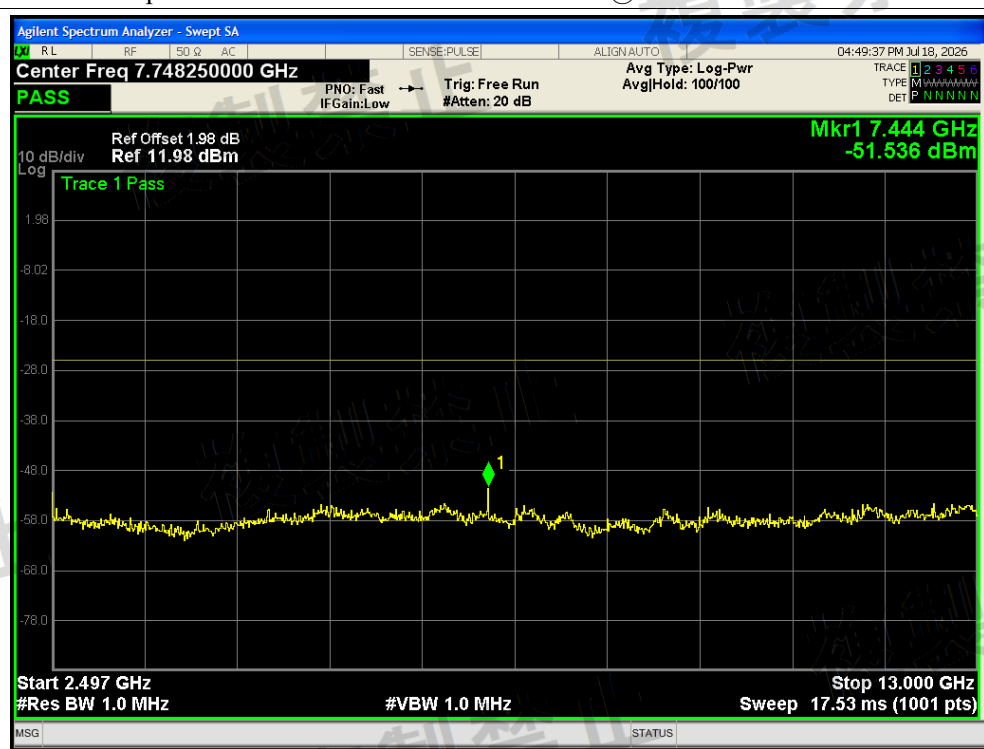
Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2387MHz-2400MHz



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 @ 2496.5MHz-13000MHz



5.10 RF Accessibility

Standard requirement

Article 2, Item (19) Notice 88 Appendix 43, 44, 45

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.

We apply the product for Japan RF certification. We use covered by soldered metal caps for preventing end- user to access RF parts easily. The shield can only be opened by forced, which will result in damaging the case. Please refer to following for photo for details.

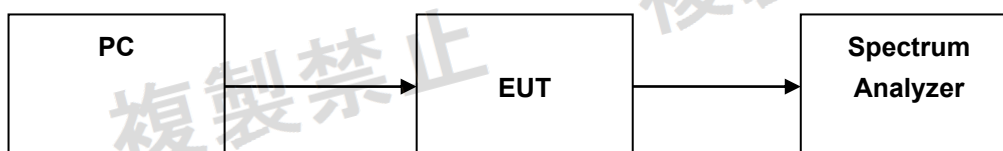


Covered by
soldered
metal caps

5.11 Spurious Emissions of Rx

Test Requirement:	Item 19 of Article 2-1 (1) Below 1 GHz : 4 nW or less(-54dBm) (2) 1 GHz and over : 20 nW or less(-47dBm)
Temperature:	23.0 °C
Humidity:	55 % RH
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.

Test Configuration:



Test Procedure:

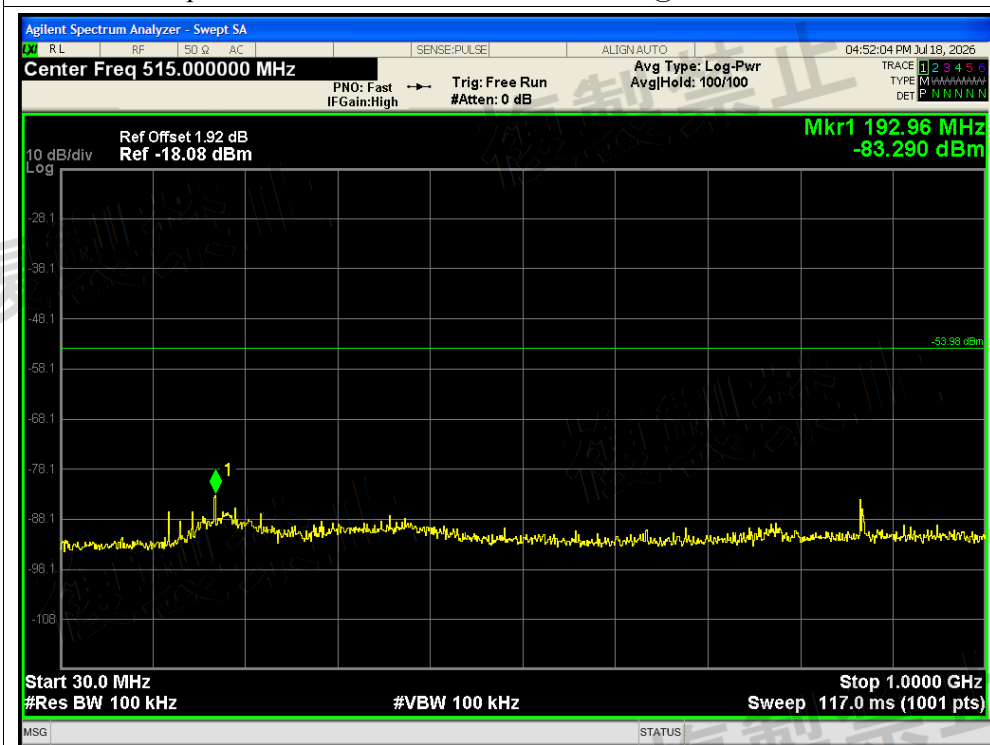
1. Test Conditions: Spectrum Analyzer is used for measurement.
2. EUT conditions:
Modulation/Spread/Hopping ON
For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.
3. Spectrum Analyzer conditions:
Step 1
All spurious are measured from 30 MHz 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

**Test result:**

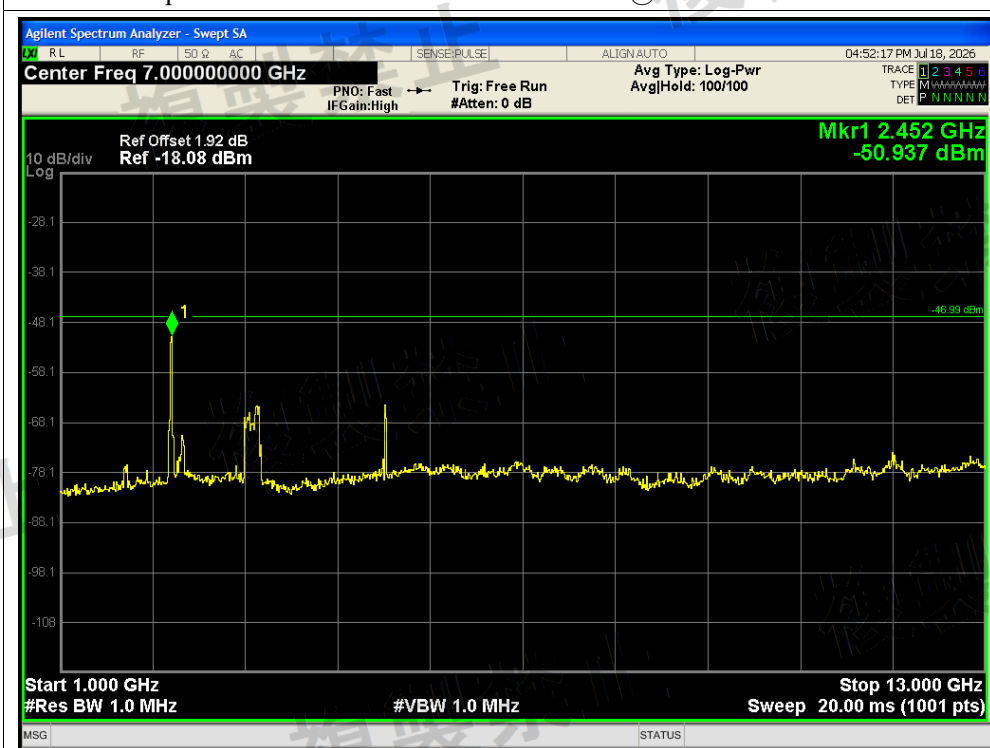
Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (nW/MHz)	Limit (nW/MHz)	Verdict
NVNT	BLE 1M	2402	30-1000	192.96	-83.29	0.0047	4	Pass
NVNT	BLE 1M	2402	1000-13000	2452	-50.94	8.0538	20	Pass
NVNT	BLE 1M	2440	30-1000	754.59	-89.31	0.0012	4	Pass
NVNT	BLE 1M	2440	1000-13000	2452	-64.07	0.3917	20	Pass
NVNT	BLE 1M	2480	30-1000	961.2	-89.74	0.0011	4	Pass
NVNT	BLE 1M	2480	1000-13000	2452	-65.96	0.2535	20	Pass

Test Graphs

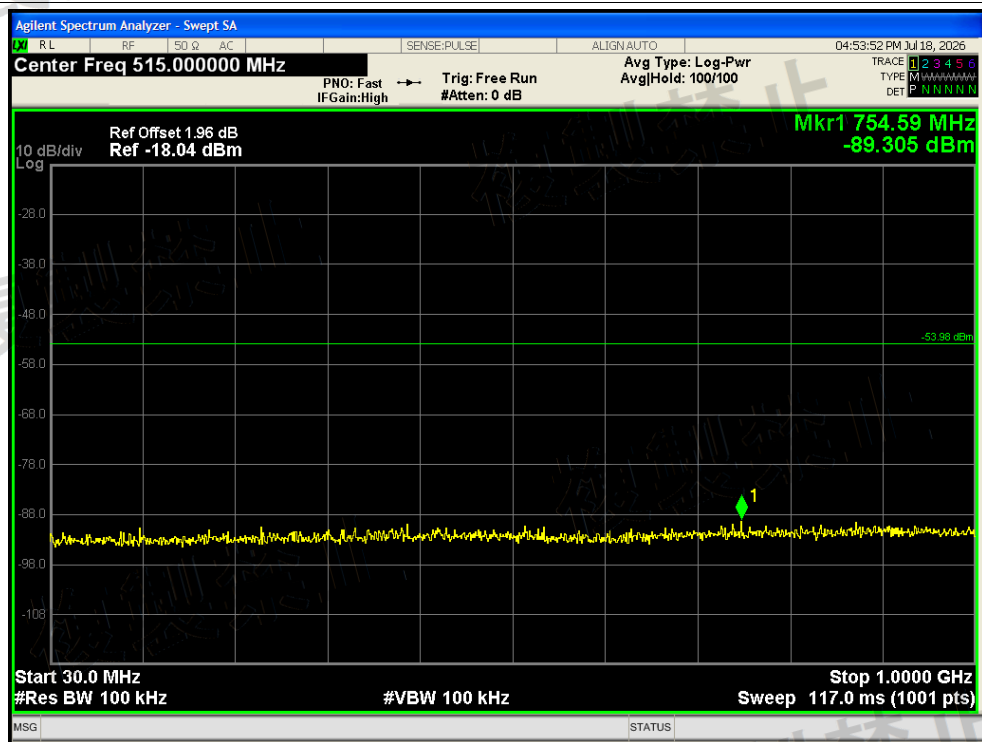
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



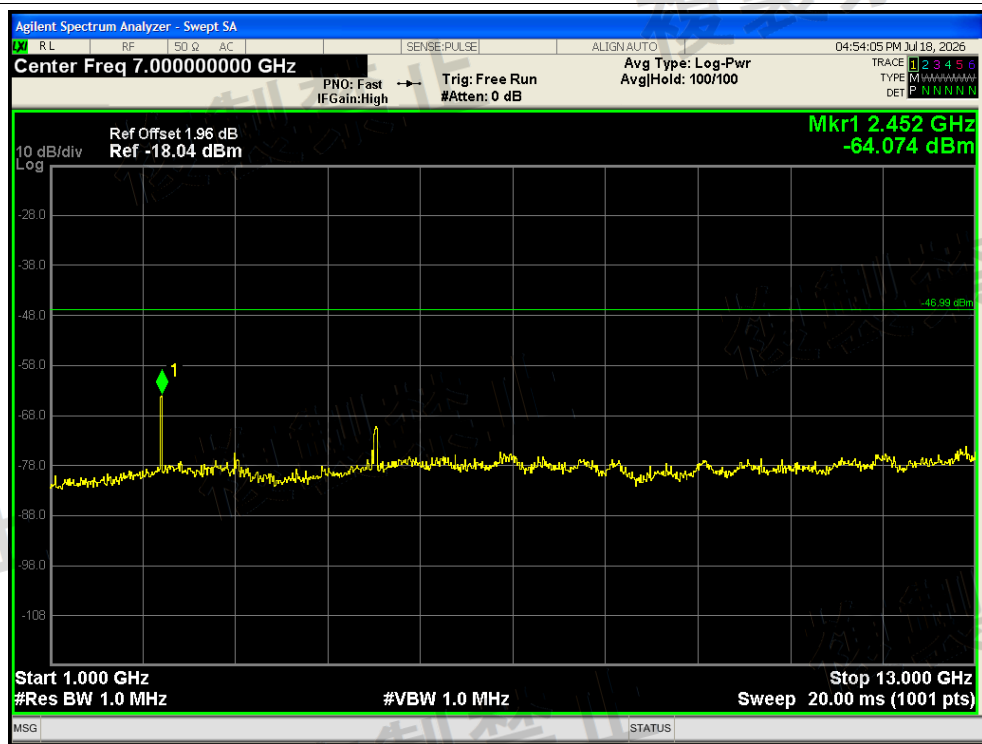
Rx. Spurious NVNT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz



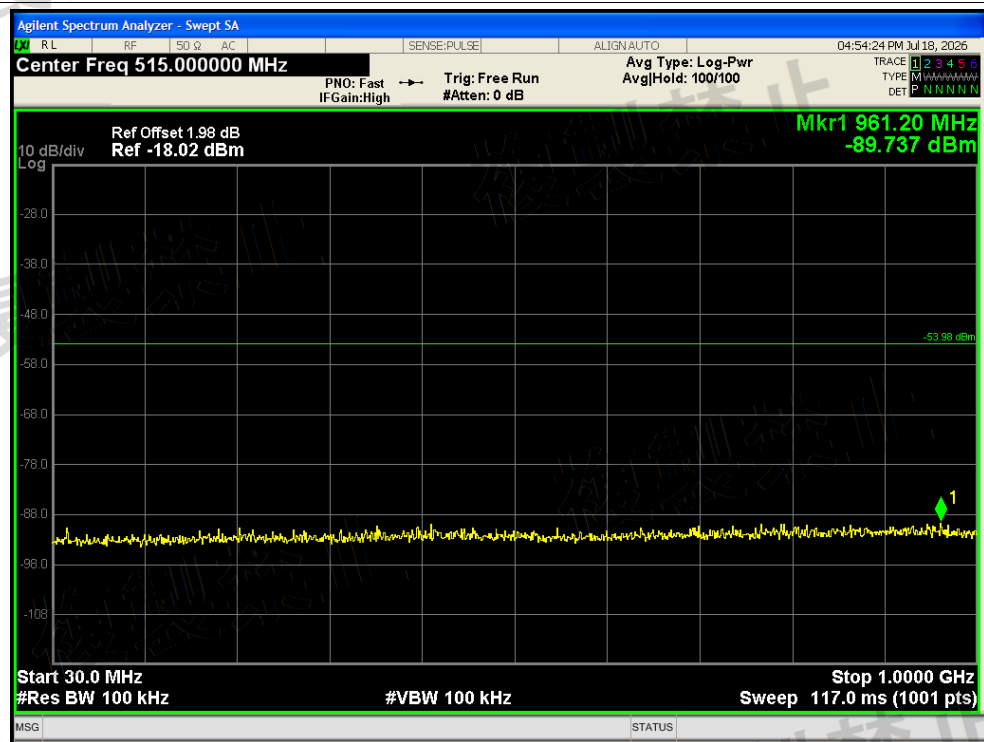
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



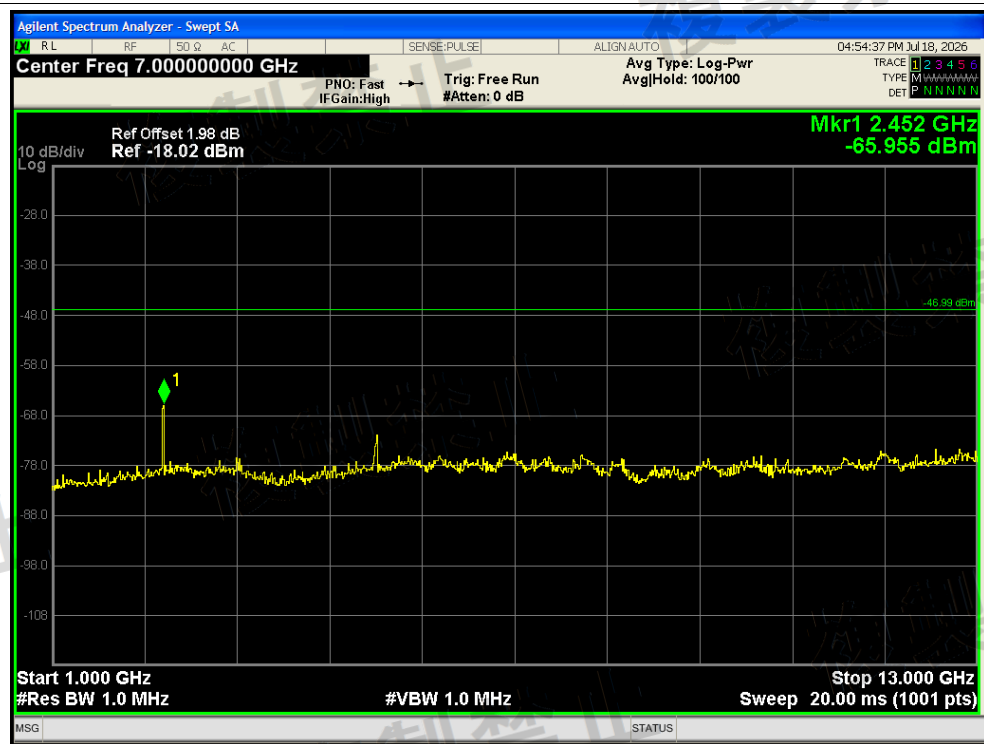
Rx. Spurious NVNT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz



Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious NVNT BLE 1M 2480MHz Ant1 @ 1000MHz-13000MHz



Test result: The unit does meet the requirements.

6 Photographs

6.1 EUT TEST PHOTO



****End of report****