



TEST REPORT

Report Reference No.: EP2510002M22

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Approved by (name + signature): Eric Liu



Date of Receipt of EUT: 2025-11-26

Date of Test: 2025-11-27 to 2025-12-06

Date of issue: 2026-01-12

Testing Laboratory: Dongguan Pubiao Testing Technology Co., Ltd.

Address: Room 101, Building 1, No.30, Minghua Road, Shijie, Shijie Town,
Dongguan, Guangdong, China.

Applicant's name: Zhuhai Xprinter Electronics Technology Co., Ltd.

Address: 5/F, 1st Workshop, No.613 Huawei Road, Qianshan Industrial
Zone, Xiangzhou District, Zhuhai City, Guangdong Province,
P.R.China

Manufacturer's name: Zhuhai Xprinter Electronics Technology Co., Ltd.

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TEST RESULT

Applicant : Zhuhai Xprinter Electronics Technology Co., Ltd.
Address : 5/F, 1st Workshop, No.613 Huawei Road, Qianshan Industrial Zone,
Xiangzhou District, Zhuhai City, Guangdong Province, P.R.China

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Xiangzhou District, Zhuhai City, Guangdong Province, P.R.China

Test specification:

Standard: Article 2 Paragraph 1 of Item 19

Product Description:

Product Name : Portable Thermal Printer

Brand : /

Model Number : P83

Series Model (s) : /

Test result	Pass
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This device described above has been tested by Dongguan Pubiao Testing Technology Co., Ltd, the test results show that the equipment under

test (EUT) is in compliance with Article 2 Paragraph 1 of Item 19 requirements.

And it is applicable only to the tested sample identified in the report.

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1 SUMMARY

SUMMARY OF TEST RESULTS

Test Standard	Description of Test	Judgment
MIC Notice No.88 Appendix No.43 Article 2 Paragraph 1 Item 19	Frequency Error	PASS
	Antenna power	PASS
	Power error	PASS
	Occupied Bandwidth (99%)	PASS
	Spread-spectrum Bandwidth (90%)	PASS
	Unwanted Emission Intensity	PASS
	Limitation of Collateral Emission of Receiver	PASS
	Transmitting Antenna Absolute Gain	PASS
	Half Power Beam Angle (Radiation angle of antenna)	N/A
	Radio Interference Prevention Capability	PASS
	Spreading Factor	N/A
	Carrier Sense Capability	N/A
	Construction Protection Confirmation	PASS

NOTE:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) "Application to transmitting devices which E.I.R.P. is less than [2.14dBi+antenna power limit] and the shortage of E.I.R.P. is compensated by the antenna power.
- (3) "Application to transmitting devices with OFDM modulation and the occupied bandwidth greater than 26MHz.
- (4) "It is unnecessary to testing, when a E.I.R.P. is less than 12.14dBm.
- (5) Only for reported.

1.1 TEST FACTORY

Address of the test laboratory

Dongguan Pubiao Testing Technology Co., Ltd

Room 101, Building 1, No.30, Minghua Road, Shijie, Shijie Town,

Dongguan, Guangdong, China.

1.2 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	$\pm 0.03\text{ppm}$
4	Occupied Channel Bandwidth	$\pm 3.5\%$

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Equipment	Portable Thermal Printer	
Brand	/	
Model Number	P83	
Series Model(s)	/	
Model Difference	/	
Product Description	Operation Frequency:	2402-2480 MHz
	Modulation Type:	GFSK(1M, 2M)
	Number Of Channel:	40CH
	Antenna Designation:	Please refer to the Note 3.
	Antenna Gain(Peak):	2.46 dBi
	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.	
Power Rating	Input: 5V $\pm$ 2A Battery: 7.4VDC 2600mAh	
Hardware version	MBA4P-P83-UB0	
Software version	V82.1116	
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.

Channel List for BLE							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	10	2422	20	2442	30	2462
01	2404	11	2424	21	2444	31	2464
02	2406	12	2426	22	2446	32	2466
03	2408	13	2428	23	2448	33	2468
04	2410	14	2430	24	2450	34	2470
05	2412	15	2432	25	2452	35	2472
06	2414	16	2434	26	2454	36	2474
07	2416	17	2436	27	2456	37	2476
08	2418	18	2438	28	2458	38	2478
09	2420	19	2440	21	2460	39	2480

3. Table for Filed Antenna

Ant.	Antenna Brand	Antenna Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	PCB Antenna	N/A	2.46	BLE ANT

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

2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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
Mode 1	TX Mode (CH00)
Mode 2	TX Mode (CH19)
Mode 3	TX Mode (CH39)

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	ANT Gain(dBi)	Power Class	Software For Testin
BLE	BLE	GFSK	2.46 dBi	default	FCC_assist

2.4 TEST CONDITIONS

The 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 all Modes to determine worst case levels.

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input DC Power(V)	7.4	8.14	6.66
RF Chip Input DC Power(V)	3.300	3.310	3.290
Voltage Variation (%)	/	+0.3	-0.3

Note: 1. Voltage Variation (%)

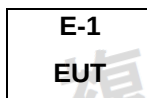
= (RF chip Input high or Low Voltage - RF chip Input Normal Voltage) / RF chip Input Normal Voltage * 100.

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:



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.

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
1	Fixed-frequency auxiliary board	/	FT232	/	/
2	Notebook	HUAWEI	NbDE-WDH9	WCTPM22406001541	/

2.7 TEST TEMPERATURE, HUMIDITY AND ATMOSPHERIC PRESSURE

Temperature: 22.0 °C
Humidity: 48.0 % RH
Atmospheric Pressure: 101.1 mbar

2.8 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

RF Connected Test equipment				
Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
Vector Signal Generator	Agilen	N5182A	MY50142585	2026-05-26
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	132488-Sz	2026-05-26
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50531325	2026-05-26
DC Power Supper	KEYSIGHT	E3642A	MY41002348	2026-05-26
power meter	MWRFTtest	MW100-PSB	MW210914PB-22	2026-05-26

Test Equipment Calibration

All of the test equipment is effective use and calibration certification institution, GRGT, the address is Room 101, Building 1, No.30, Minghua Road, Shijie, Shijie Town, Dongguan, Guangdong, China..

Note: The calibration of the above-mentioned instruments shall be carried out in accordance with Clause C below.

Remark:

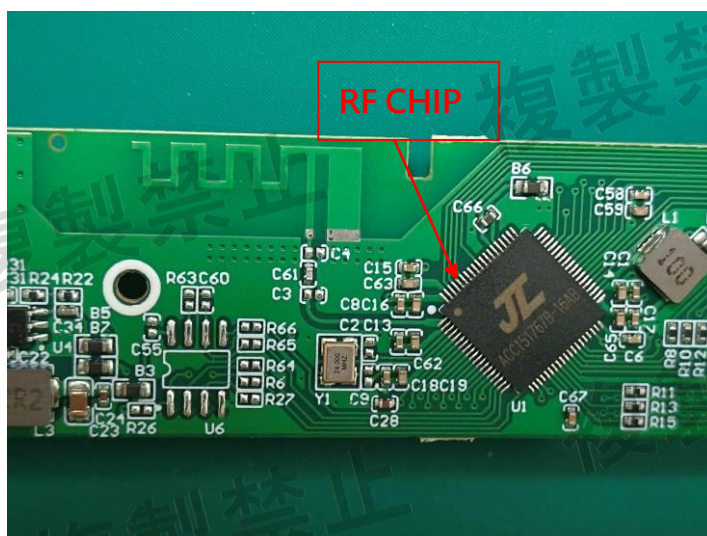
- (a) Calibration conducted by the National institute of information and Communications Technology (NiCT) in Japan (hereinafter referred to as "NiCT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or 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.

3 CONSTRUCTION PROTECTION CONFIRMATION

Our Products Apply For Japanese Radio Frequency (N) Certification. We Use The Following Methods To Prevent Unauthorized Access And Modification Of RF And Modulation Parts. The High-Frequency Section And Modulation Section Use SMT Technology, Not Easy To Change. For More Information, See The Following Photo.

The interval of terminals: 0.4mm
Number of the terminals: 76



4 FREQUENCY ERROR

4.1 LIMIT

Item	Limits
Frequency Error	±50ppm

4.2 TEST PROCEDURES

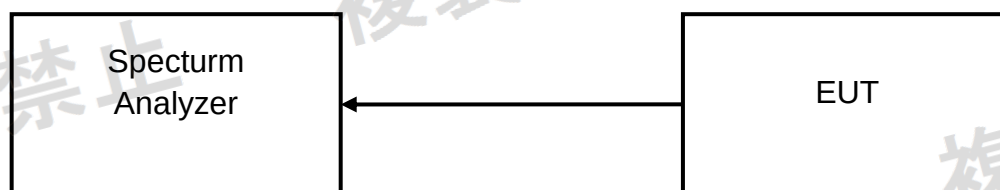
The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- 1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a frequency meter.
- 2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.
- 3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.
- 4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

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 TEST RESULT

Note: For the test data, please refer to Section 13.1 of Appendix 1.

5 ANTENNA POWER

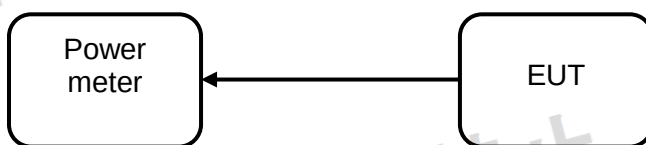
5.1 LIMIT

Item	Limits
Antenna Power Density	$\leq 3\text{mW/MHz}$ (FH from 2400-2483.5MHz)
	$\leq 10\text{mW/MHz}$ (OFDM, DS from 2400~2483.5MHz, 802.11b/g/n HT20)
	$\leq 5\text{mW/MHz}$ (OFDM, DS from 2400~2483.5MHz, 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. EUT turn to test frequency channel and keep continuous transmitting.
2. Reading the output power from the Power sensor as P_{EUT} .
3. The antenna power of EUT is "P".
4. EIRP power="P"+antenna gain.

5.3 TEST SETUP



5.4 TEST DEVIATION

There is no deviation with the original standard.

5.5 TEST RESULT

Note: For the test data, please refer to Section 13.2 of Appendix 1.

6 POWER ERROR

6.1 LIMIT

Item	Limits
Radiation power EIRP	FH from 2400-2483.5 MHz ,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

6.2 TEST RESULT

Note: For the test data, please refer to Section 13.3 of Appendix 1.

7 OCCUPIED BANDWITH AND SPREAD BANDWIDTH

7.1 LIMIT

Item	Limits
Occupied Band Width:	$\leq 83.5\text{MHz}$ (FH;FH+DS;FH+OFDM) $\leq 26\text{MHz}$ (Others)

7.2 TEST PROCEDURES

1. Setting of SA is following as: RB: 300KHz/ VB: 300KHz/ SPAN: 3MHz/ AT: auto/ Ref: auto/ Sweep time: Auto/ Sweep Mode: Continuous sweep/ Detect mode: Positive peak/ Trace mode: Max hold
2. 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) or 83,5MHz(For FHSS Device).

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 TEST RESULT

Note: For the test data, please refer to 13.4 and 13.5 in Appendix 1.

8 UNWANTED EMISSION INTENSITY

8.1 LIMIT

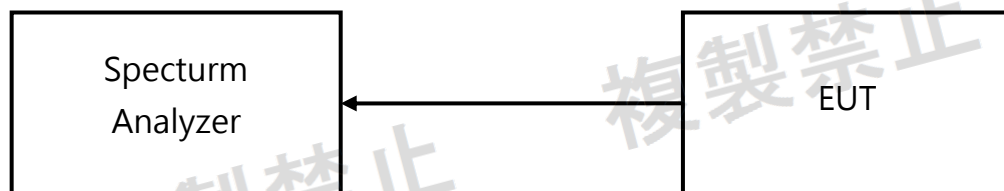
Item	Limits (μ W/MHz)	dBm/MHz
TX Spurious Emission	$\leq 2.5\mu\text{W/MHz}$ ($30\text{MHz} \leq f \leq 1000\text{MHz}$)	-26dBm/MHz
	$\leq 2.5\mu\text{W/MHz}$ ($1000\text{MHz} \leq f \leq 2387\text{MHz}$)	-26dBm/MHz
	$\leq 25\mu\text{W/MHz}$ ($2387\text{MHz} \leq f \leq 2400\text{MHz}$)	-16dBm/MHz
	$\leq 25\mu\text{W/MHz}$ ($2483.5\text{MHz} \leq f \leq 2496.5\text{MHz}$)	-16dBm/MHz
	$\leq 2.5\mu\text{W/MHz}$ ($2496.5\text{MHz} \leq f \leq 12500\text{MHz}$)	-26dBm/MHz

8.2 TEST PROCEDURES

Spectrum arameter	Setting
Attenuation	Auto
RB	1MHz
VB	1MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: RB:1MHz/ VB:1MHz / AT: 10dB / Sweep time: Auto/ Sweep Mode: Continuous sweep/ Detect mode: Positive peak / Trace mode: Max hold.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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 TEST RESULT

Note: For the test data, please refer to Section 13.6 of Appendix 1.

9 LIMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

9.1 LIMIT

Item	Limits (nW/MHz)	dBm/MHz
RX Spurious Emission:	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)	-54
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)	-47

9.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum arameter	Setting
Attenuation	Auto
RB	1 MHz
VB	1 MHz
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: 1 MHz / AT: 10dB / Sweep time: Auto / Sweep time: Auto/
Sweep Mode: Continuous sweep/ Detect mode: Positive peak / Trace mode: Max hold.
- SA set RB/ VB: 1 MHz / AT: 10dB. 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 12750MHz. 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 ($.0.4\text{nW}$ 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 TEST RESULT

Note: For the test data, please refer to Section 13.7 of Appendix 1.

10 HALF POWER BEAM ANGLE (RADIATION ANGLE OF ANTENNA)

10.1 LIMIT

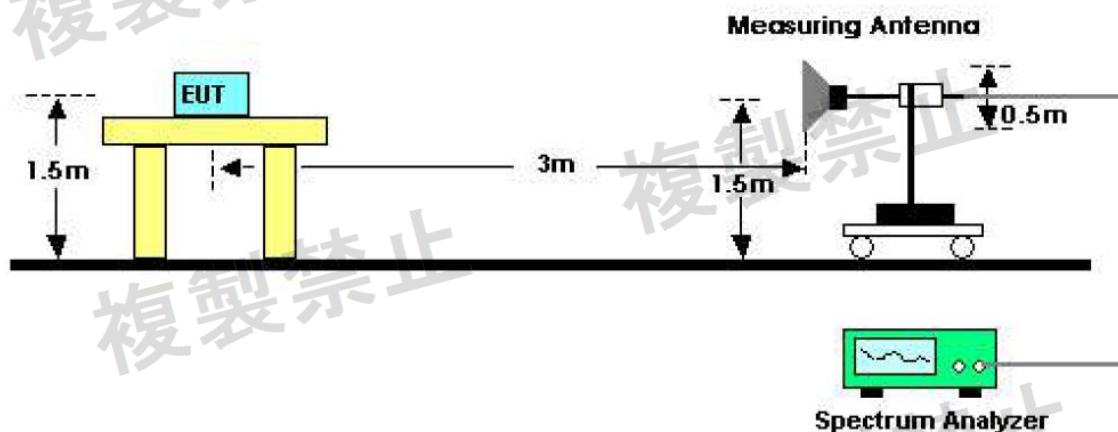
Item	Limits
Radiation angle of antenna	$e \leq 360/A$ (The A is 10 in maximum) $A = \{ \text{EIRP Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW /MHz}, 3\text{mW/MHz})\} \}$ Shall be 1 when A is lower than 1
Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm/MHz, but Antenna Power(Conducted) limit is 10 mW/MHz(10 dBm/MHz), So the test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less	

10.2 TEST PROCEDURES

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RB	1 MHz
VB	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 $360/A$ (If $A < 1$; then $A = 1$).
 $A = \{ \text{EIRP Power [mW/MHz]} / \{2.14\text{dBi} + \text{output power}(10\text{mW/MHz}, 3\text{mW/MHz})\} \}$
 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

Note: The max EIRP less than 12.14dBm, not applicable.

11 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

11.1 LIMIT

Item	Limits
Identification code	≥48 bits

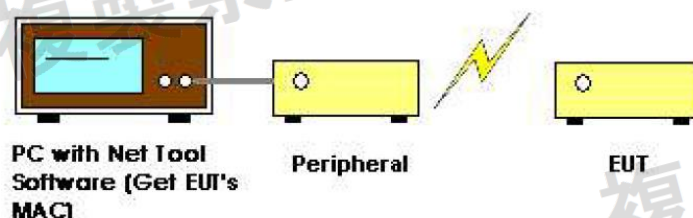
11.2 MEASURING ID CODE SOFTWARE

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 from EUT.
 - b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification code:
 - a. Transmit the predetermined identification codes from the counterpart.
 - b. Check if communication is normal.
 - c. Transmit the signals other than predetermined ID codes from the counterpart.
 - d. check if the EUT stops the transmission, or if it displays that identification 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 CAPABILITY

Note: The MAC Address is 7F:94:66:5B:C3:ED.

12 CARRIER SENSE CAPABILITY

12.1 INTERFERENCE PREVENTION FUNCTION

12.2 TEST REQUIREMENT

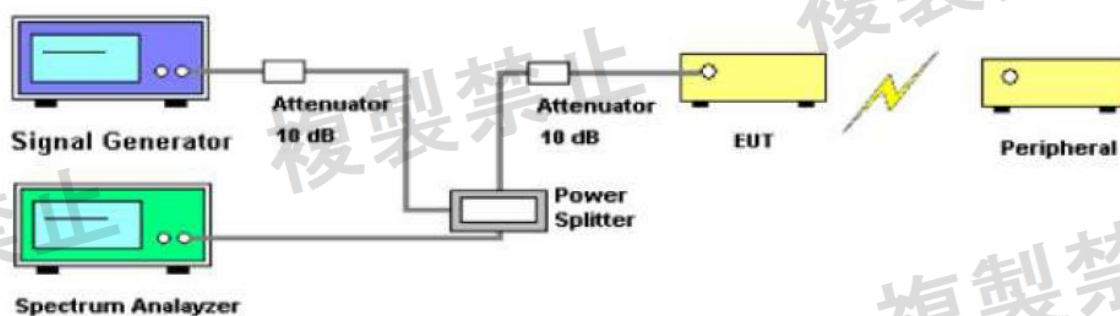
MIC Notice No.88 Appendix No.43

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 (on $22.79 + G - 20 \cdot \log(f)$ 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=50MHz, Sweep time=auto, Sweep mode=continuous, Detect mode=positive peak
5. SG RF signal on.
6. EUT shall be stop the 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

Note: no requirement.

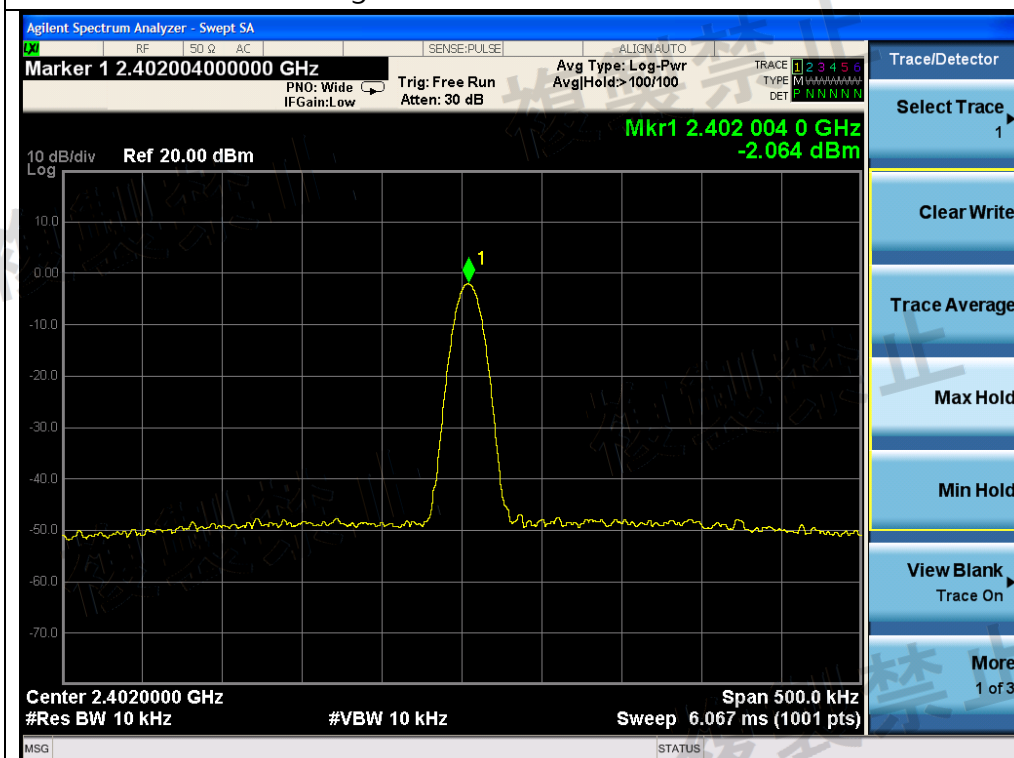
13 APPENDIX 1-TEST DATA

13.1 FREQUENCY ERROR

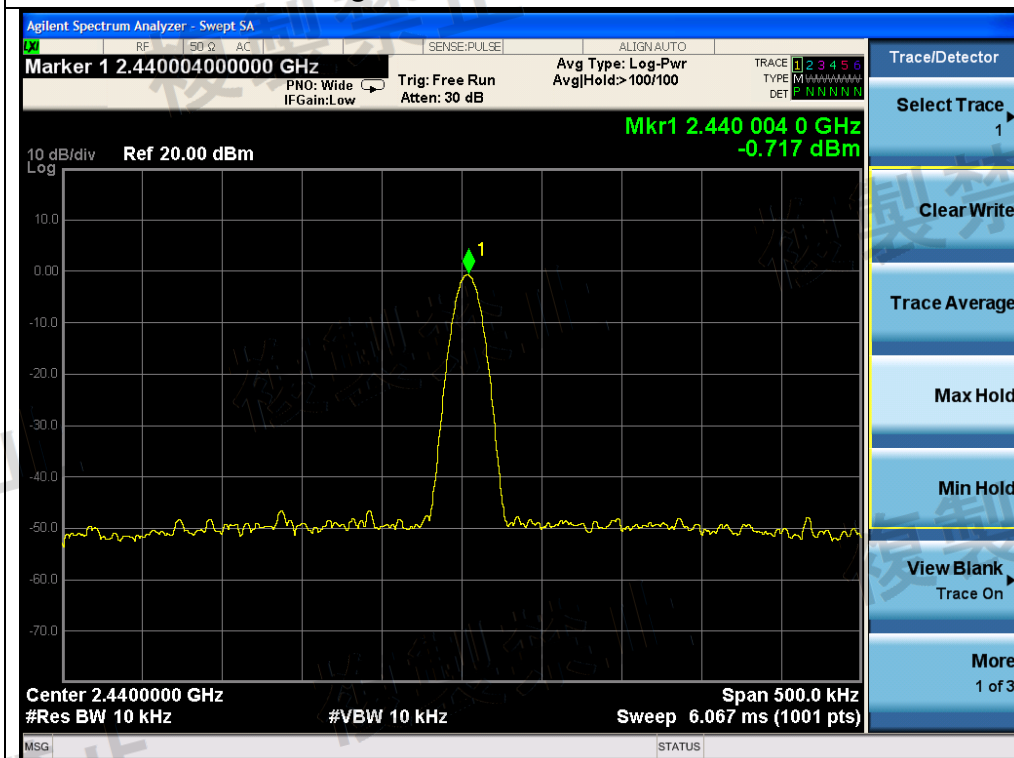
Condition	Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	2402	2402.004	0.004	1.67	±50	Pass
NVNT	2440	2440.004	0.004	1.64	±50	Pass
NVNT	2480	2480.0035	0.0035	1.41	±50	Pass

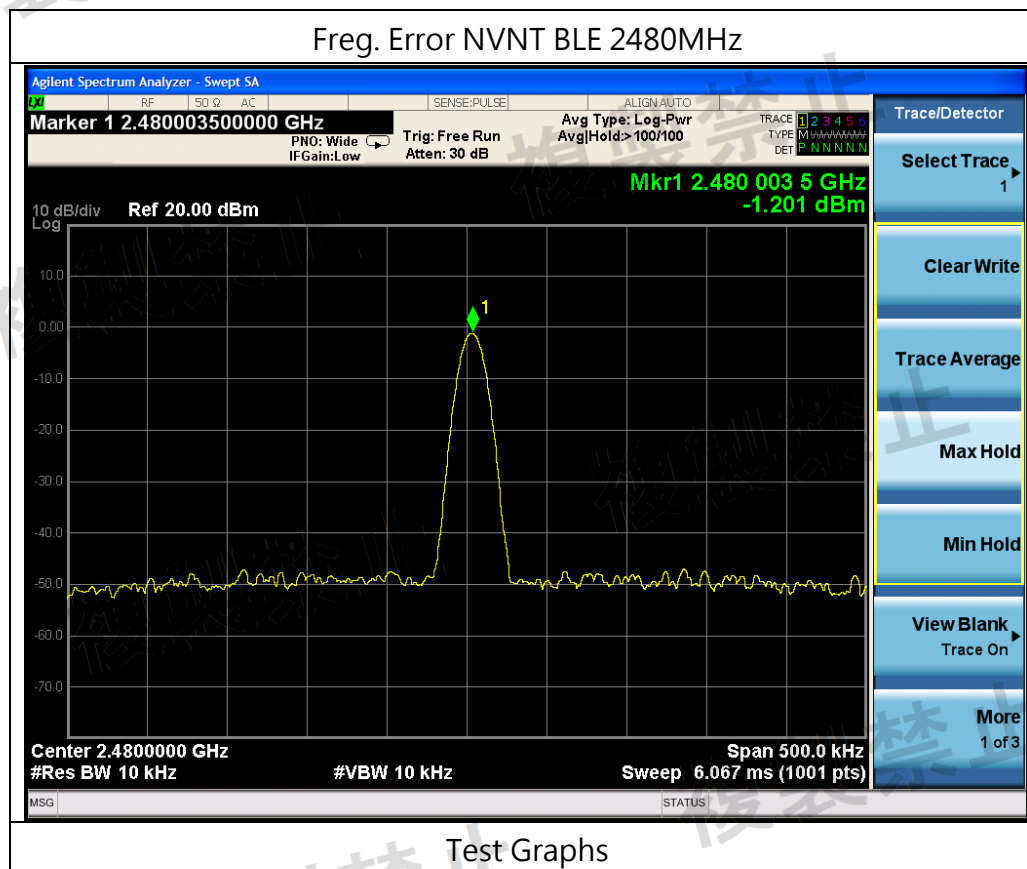
Test Graphs

Freq. Error NVNT BLE 2402MHz



Freq. Error NVNT BLE 2440MHz





13.2 ANTENNA POWER AND POWER ERROR

Condition	Mode	Frequency (MHz)	Power (dBm)	Antenna Power (mW)	Limit (mW)	Declared Power (mW)	Tolerance (%)	Upper Limit (%)	Verdict
NVNT	BLE 1M	2402	5.97	3.954	10	6	-34.11	20	Pass
NVNT	BLE 1M	2440	7.4	5.495	10	6	-8.41	20	Pass
NVNT	BLE 1M	2480	6.93	4.932	10	6	-17.80	20	Pass
NVNT	BLE 1M	2402	4.32	2.704	10	6	-54.93	20	Pass
NVNT	BLE 1M	2440	6.03	4.009	10	6	-33.19	20	Pass
NVNT	BLE 1M	2480	5.54	3.581	10	6	-40.32	20	Pass

13.3 EIRP POWER

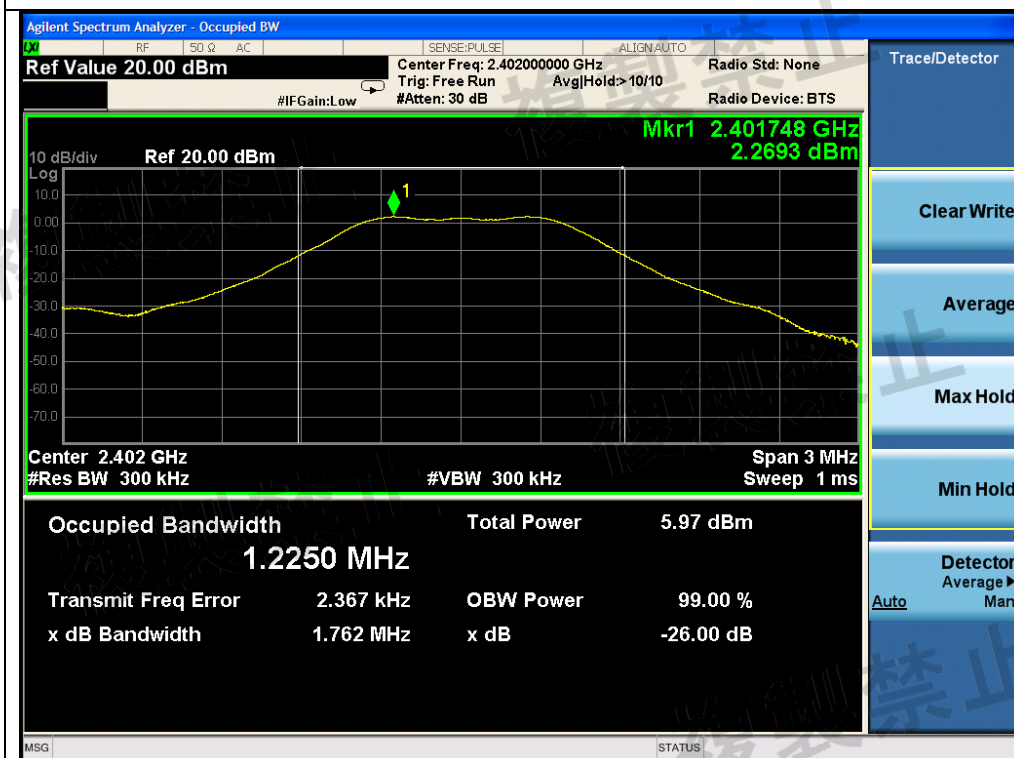
Condition	Mode	Frequency (MHz)	Antenna Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	5.97	2.46	8.43	12.14	Pass
NVNT	BLE 1M	2440	7.4	2.46	9.86	12.14	Pass
NVNT	BLE 1M	2480	6.93	2.46	9.39	12.14	Pass
NVNT	BLE 2M	2402	4.32	2.46	6.78	12.14	Pass
NVNT	BLE 2M	2440	6.03	2.46	8.49	12.14	Pass
NVNT	BLE 2M	2480	5.54	2.46	8.00	12.14	Pass

13.4 OCCUPIED CHANNEL BANDWIDTH

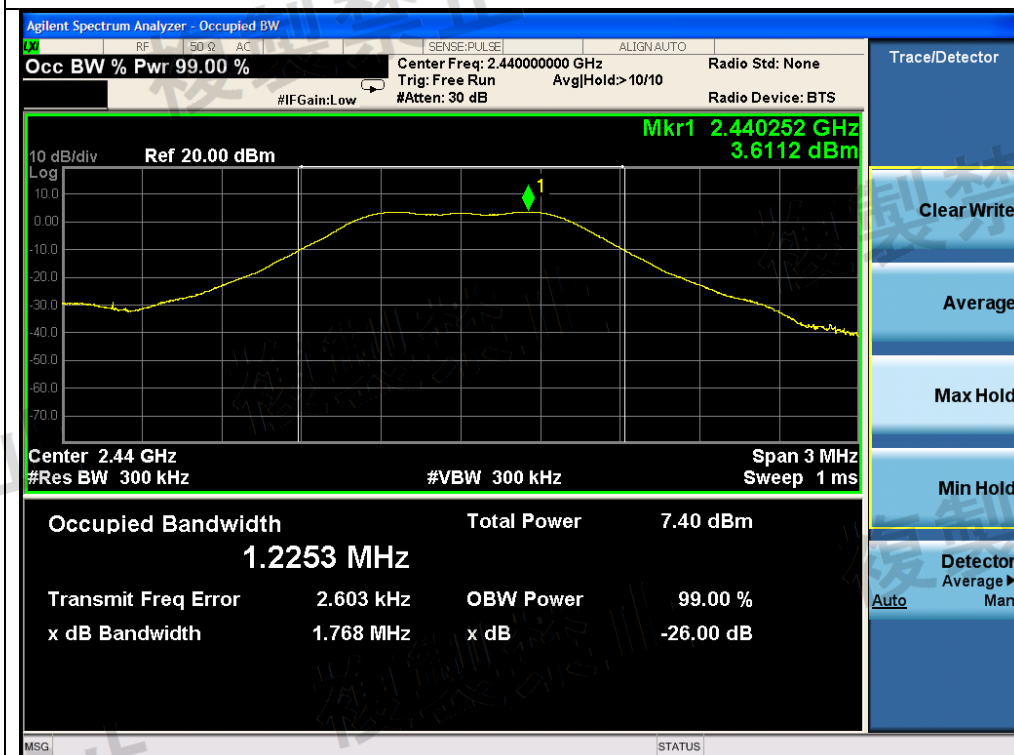
Condition	Mode	Frequency (MHz)	99% OBW (MHz)	Limit (MHz)	Verdict
NVNT	BLE 1M	2402	1.2250	<26	Pass
NVNT	BLE 1M	2440	1.2253	<26	Pass
NVNT	BLE 1M	2480	1.2251	<26	Pass
NVNT	BLE 2M	2402	2.1306	<26	Pass
NVNT	BLE 2M	2440	2.1287	<26	Pass
NVNT	BLE 2M	2480	2.1294	<26	Pass

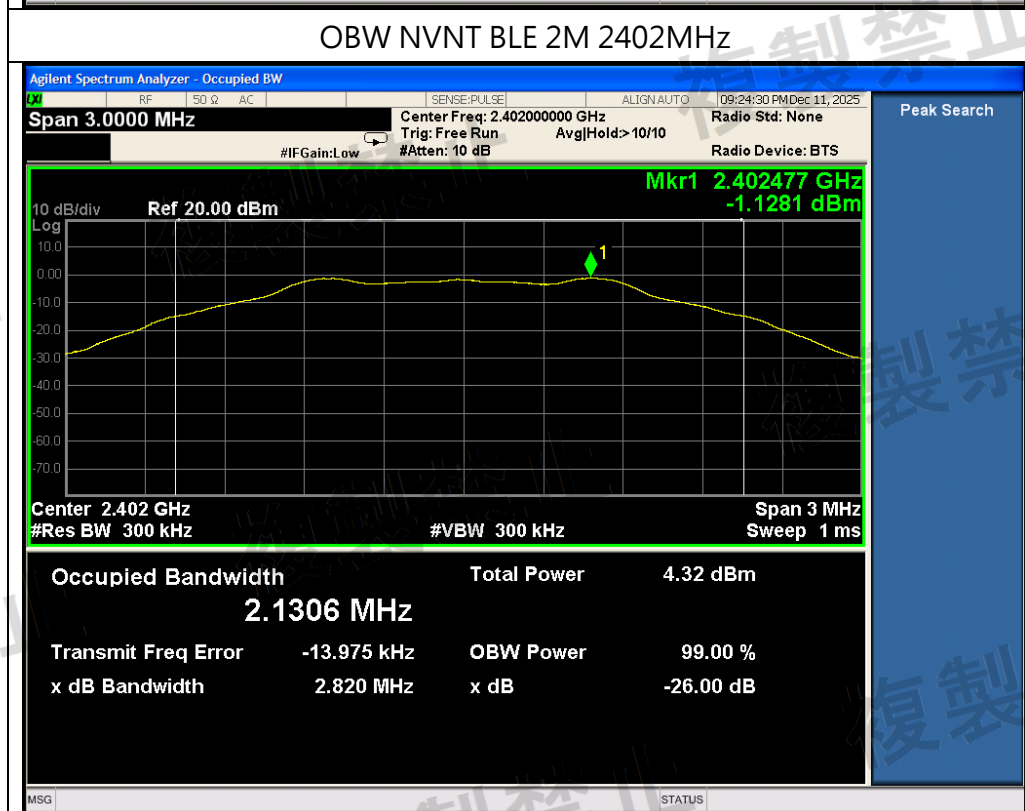
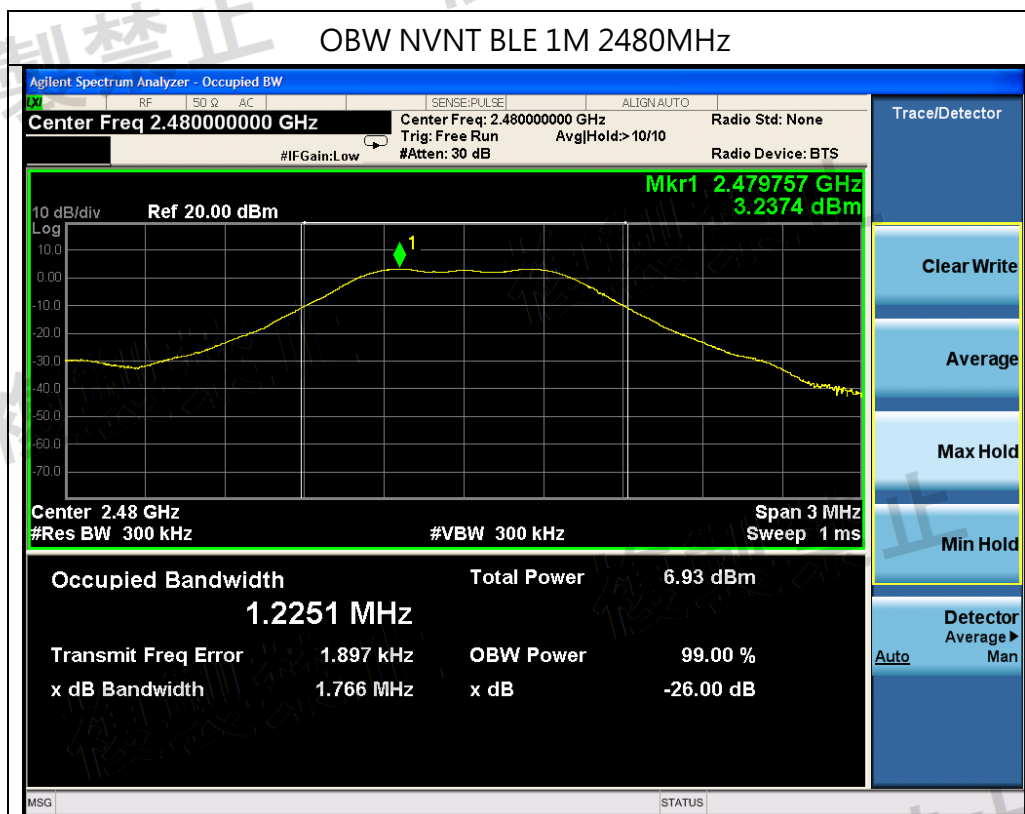
Test Graphs

OBW NVNT BLE 1M 2402MHz

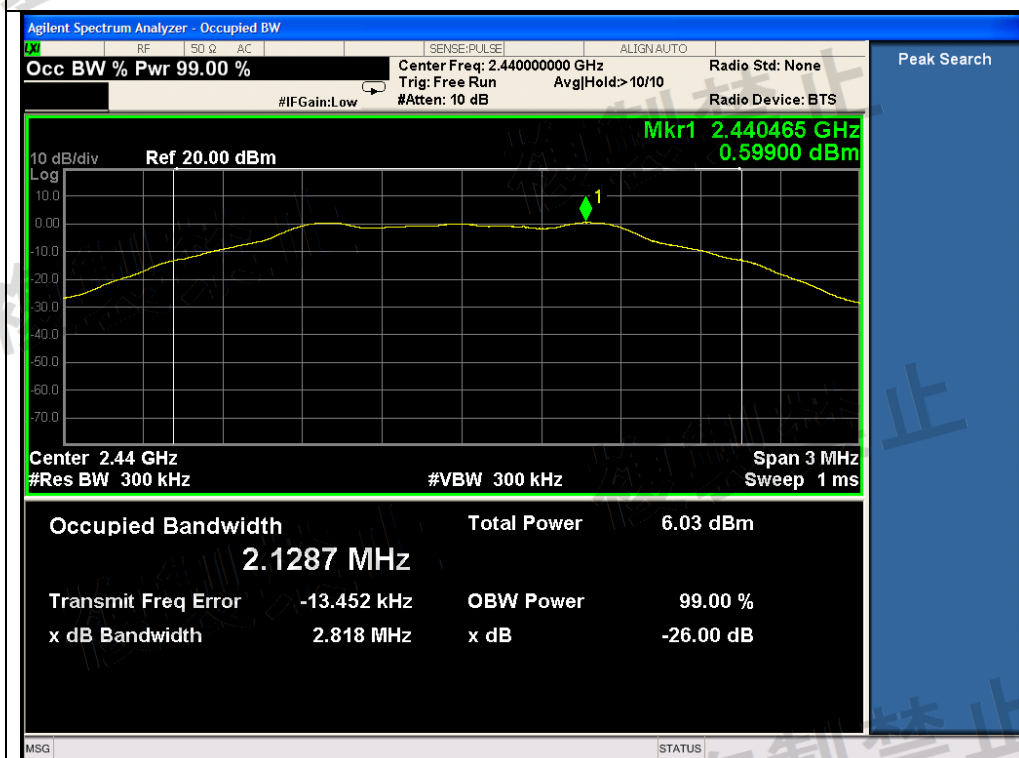


OBW NVNT BLE 1M 2440MHz

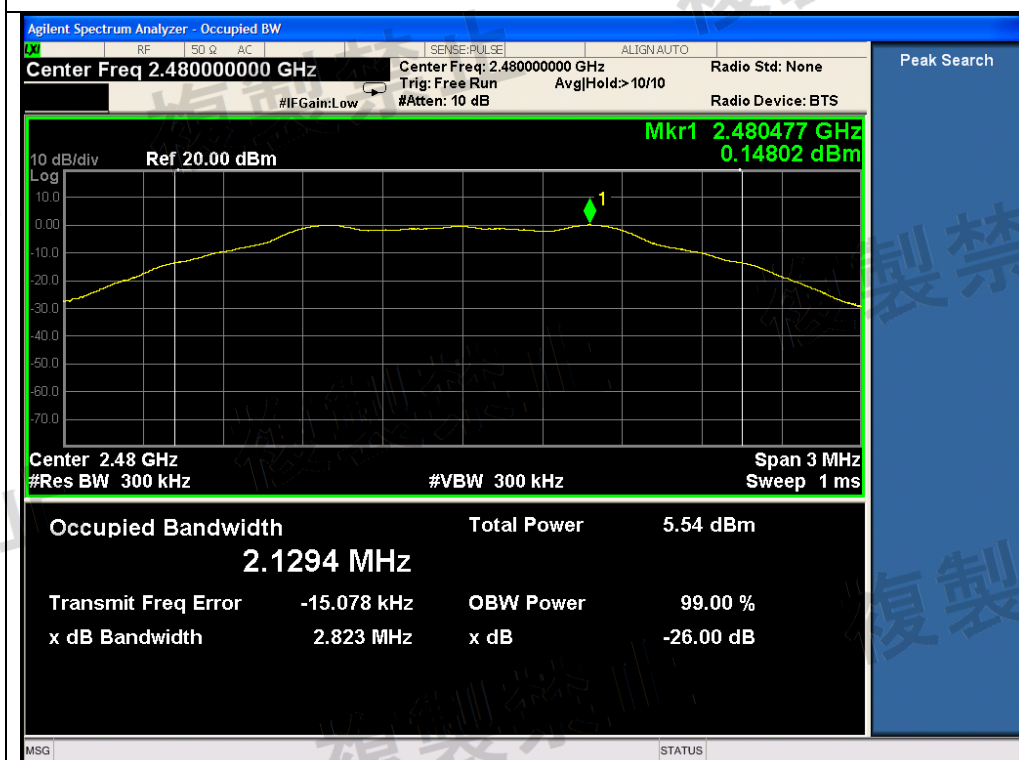




OBW NVNT BLE 2M 2440MHz



OBW NVNT BLE 2M 2480MHz

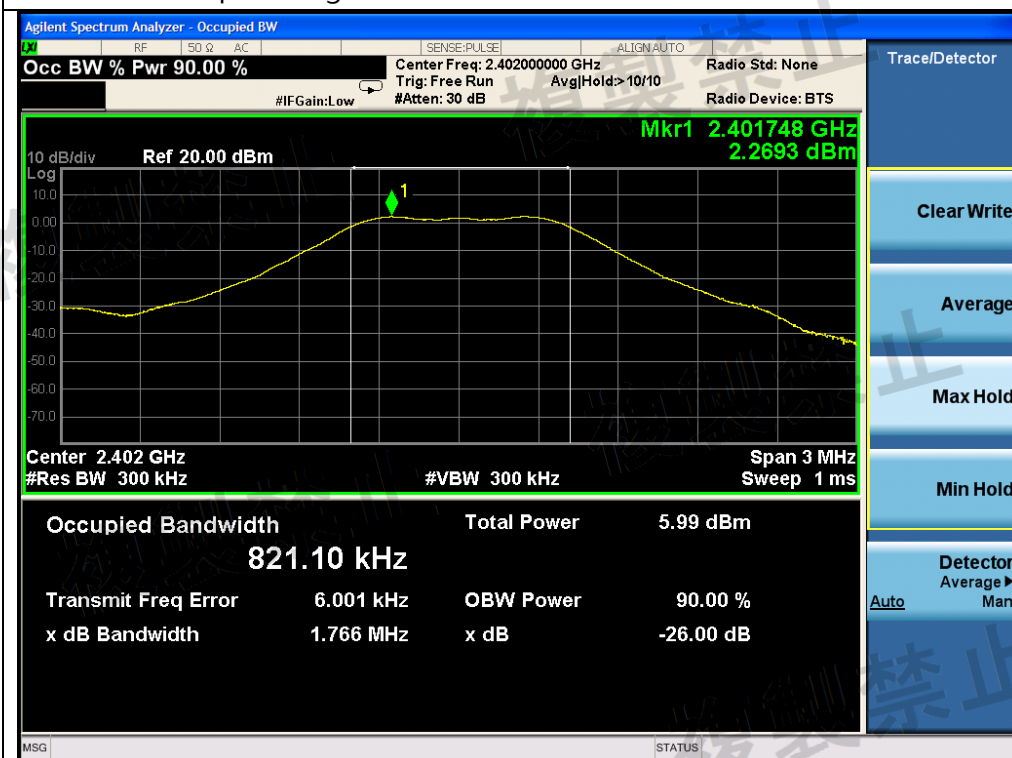


13.5 SPREADING BANDWIDTH

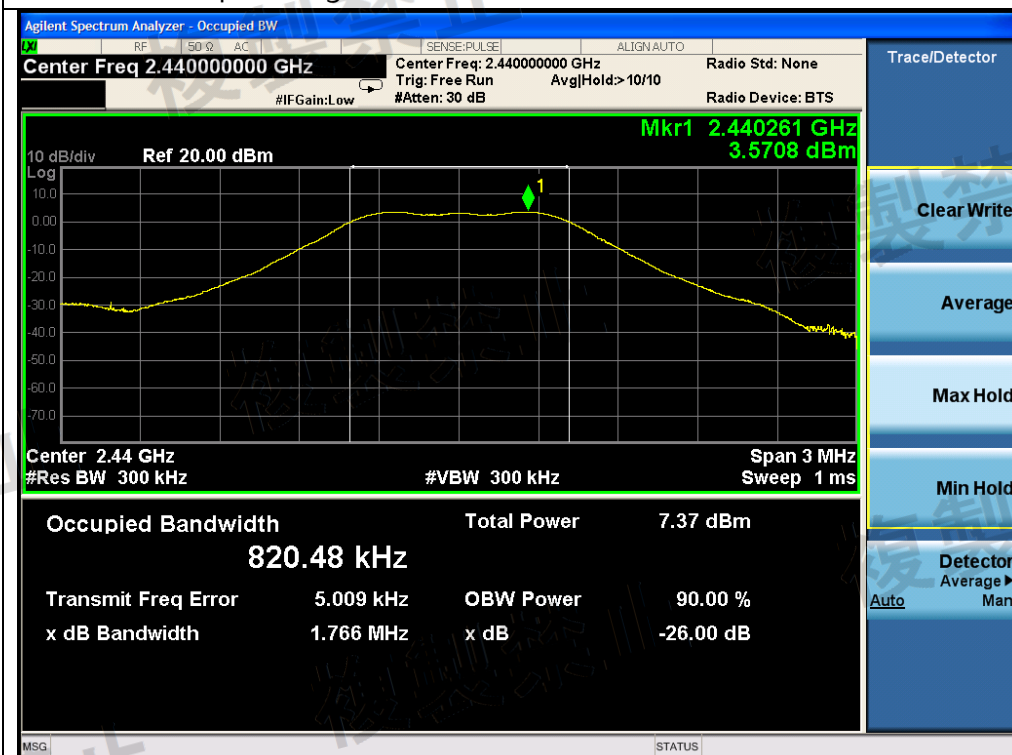
Condition	Mode	Frequency (MHz)	90% OBW (kHz)
NVNT	BLE 1M	2402	821.10
NVNT	BLE 1M	2440	820.48
NVNT	BLE 1M	2480	821.73
NVNT	BLE 2M	2402	1357.9
NVNT	BLE 2M	2440	1358.2
NVNT	BLE 2M	2480	1359.0

Test Graphs

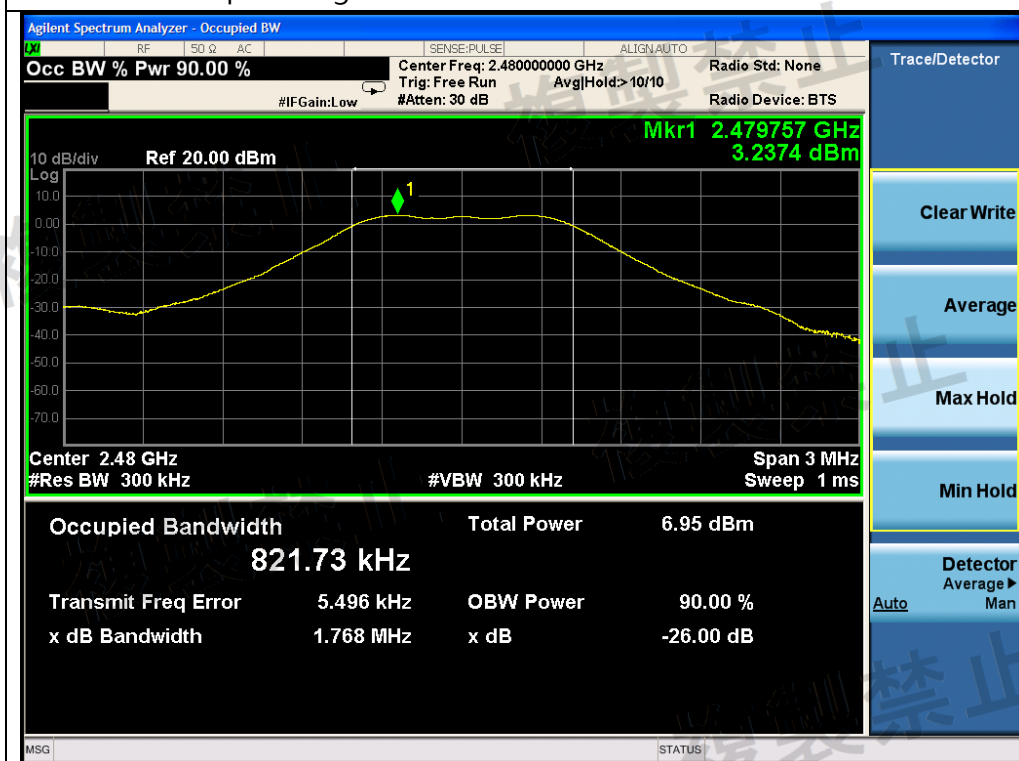
Spreading Bandwidth NVNT BLE 1M 2402MHz



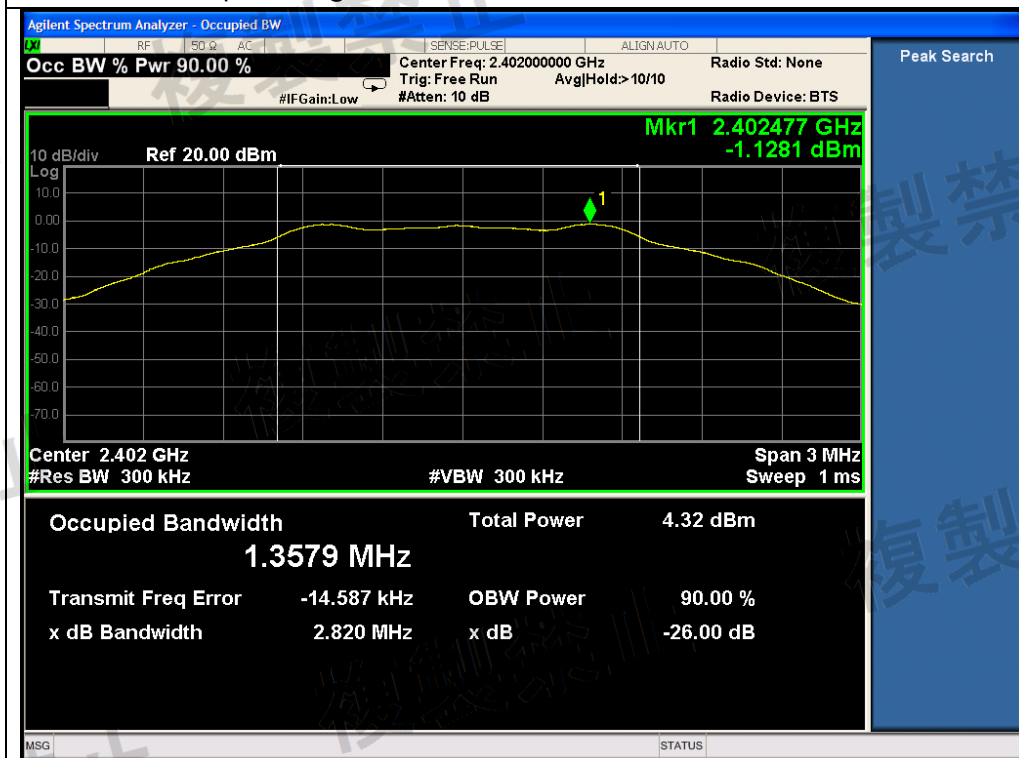
Spreading Bandwidth NVNT BLE 1M 2440MHz



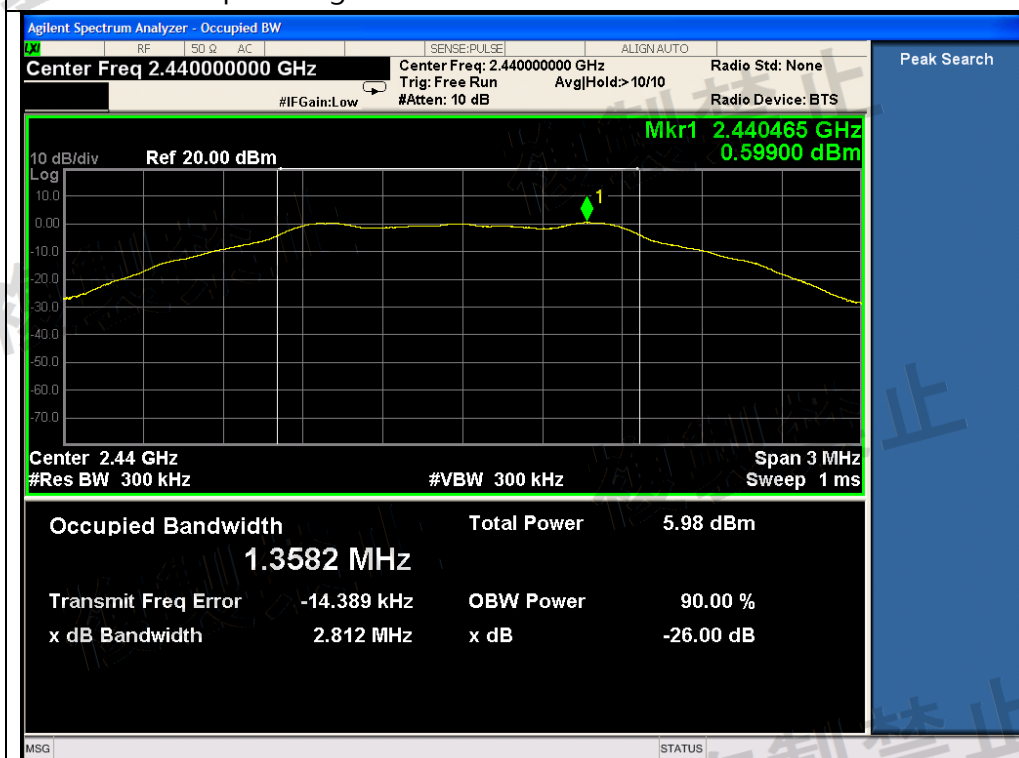
Spreading Bandwidth NVNT BLE 1M 2480MHz



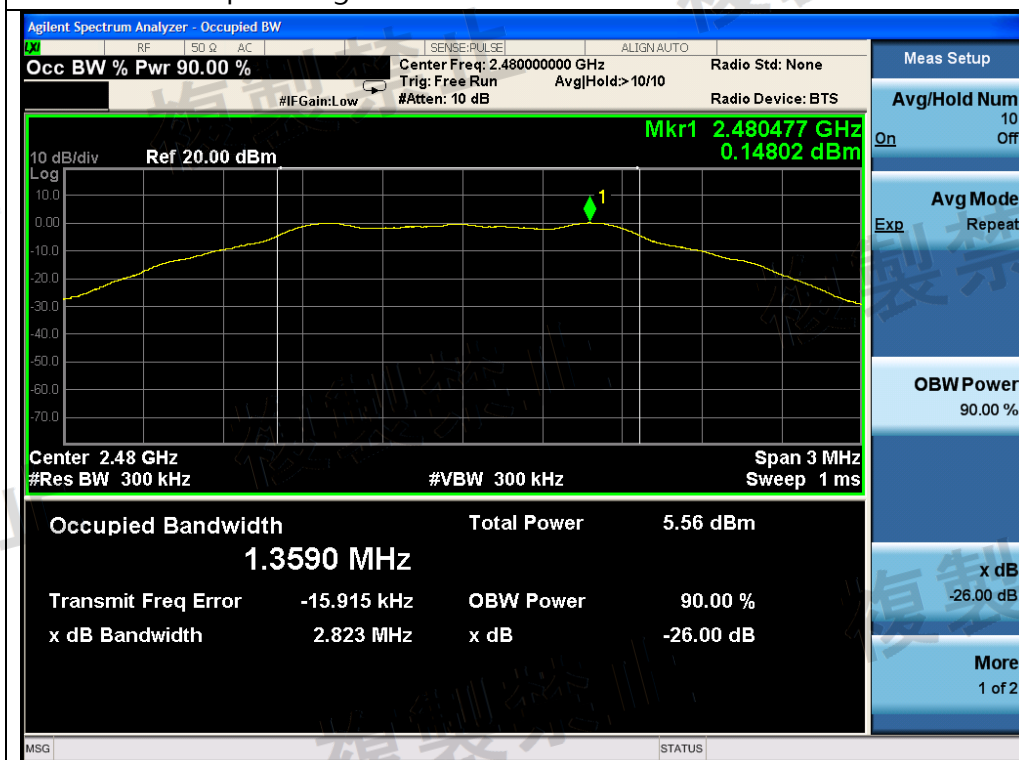
Spreading Bandwidth NVNT BLE 2M 2402MHz



Spreading Bandwidth NVNT BLE 2M 2440MHz



Spreading Bandwidth NVNT BLE 2M 2480MHz



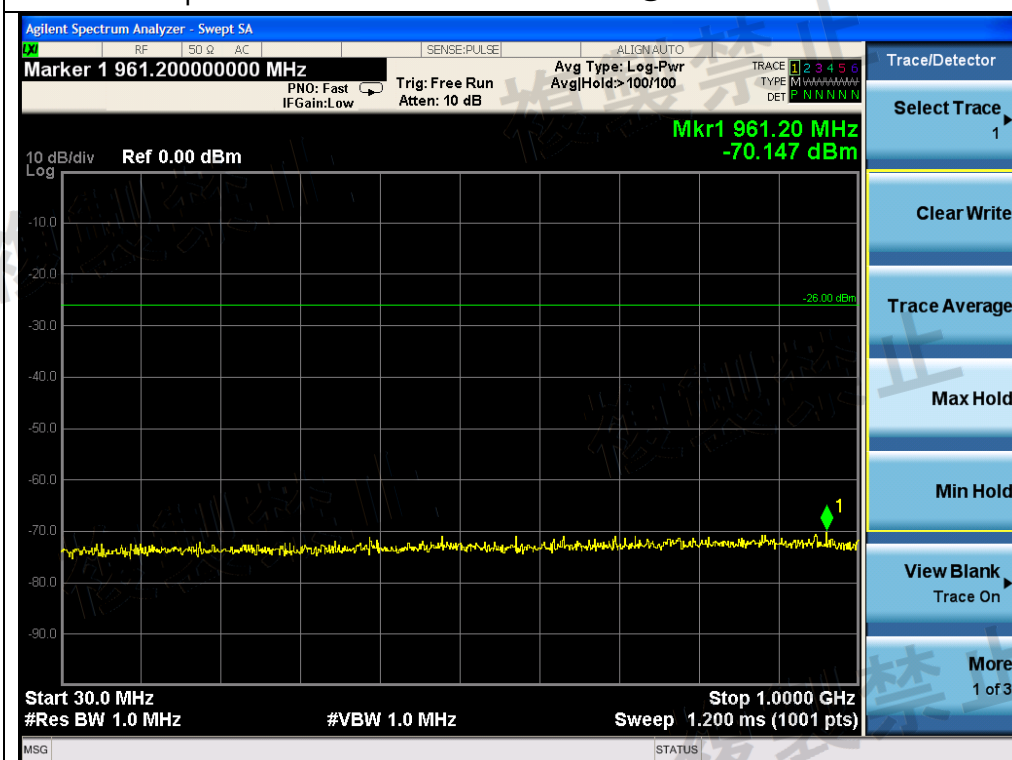
13.6 TX SPURIOUS EMISSION

Bluetooth (GFSK(1M, 2M)) mode have been tested, and the worst result (GFSK(1M)) was report as below:

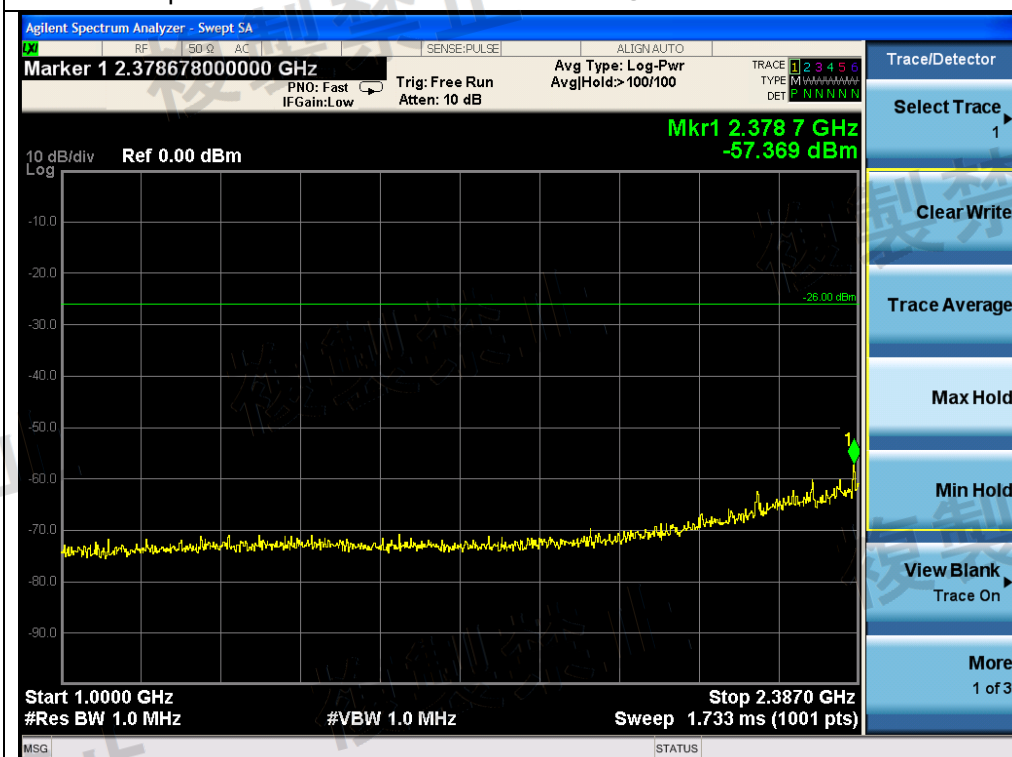
Condition	Mode	Frequ ency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm) /MHz	Limit (dBm) /MHz	Verdict
NVNT	BLE 1M	2402	30-1000	961.20	-70.147	-26	Pass
NVNT	BLE 1M	2402	1000-2387	2378.7	-57.369	-26	Pass
NVNT	BLE 1M	2402	2387-2400	2400	-29.368	-16	Pass
NVNT	BLE 1M	2402	2483.5-2496.5	2495.720	-58.510	-16	Pass
NVNT	BLE 1M	2402	2496.5-13000	2597.7	-49.158	-26	Pass
NVNT	BLE 1M	2440	30-1000	825.40	-62.413	-26	Pass
NVNT	BLE 1M	2440	1000-2387	2345.4	-58.645	-26	Pass
NVNT	BLE 1M	2440	2387-2400	2400	-47.388	-16	Pass
NVNT	BLE 1M	2440	2483.5-2496.5	2488.479	-58.388	-16	Pass
NVNT	BLE 1M	2440	2496.5-13000	4877	-48.366	-26	Pass
NVNT	BLE 1M	2480	30-1000	829.28	-56.057	-26	Pass
NVNT	BLE 1M	2480	1000-2387	2385.6	-57.549	-26	Pass
NVNT	BLE 1M	2480	2387-2400	2399.893	-46.039	-16	Pass
NVNT	BLE 1M	2480	2483.5-2496.5	2483.539	-46.870	-16	Pass
NVNT	BLE 1M	2480	2496.5-13000	4957	-44.907	-26	Pass

Test Graphs

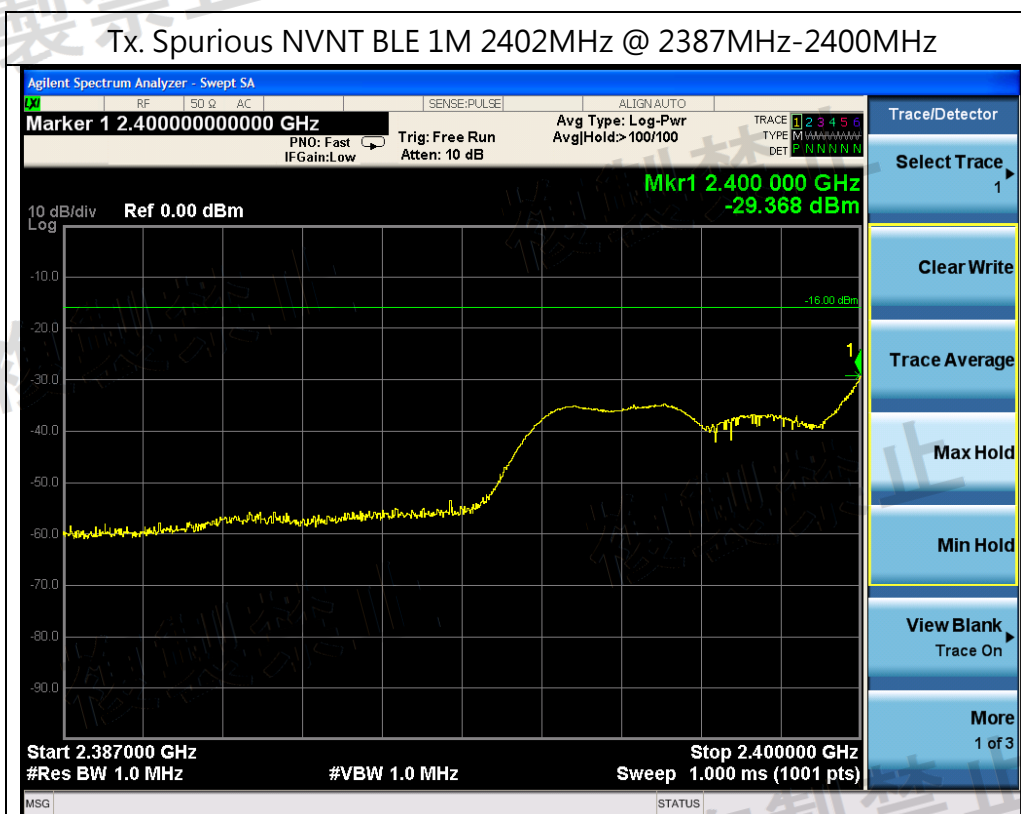
Tx. Spurious NVNT BLE 1M 2402MHz @ 30MHz-1000MHz



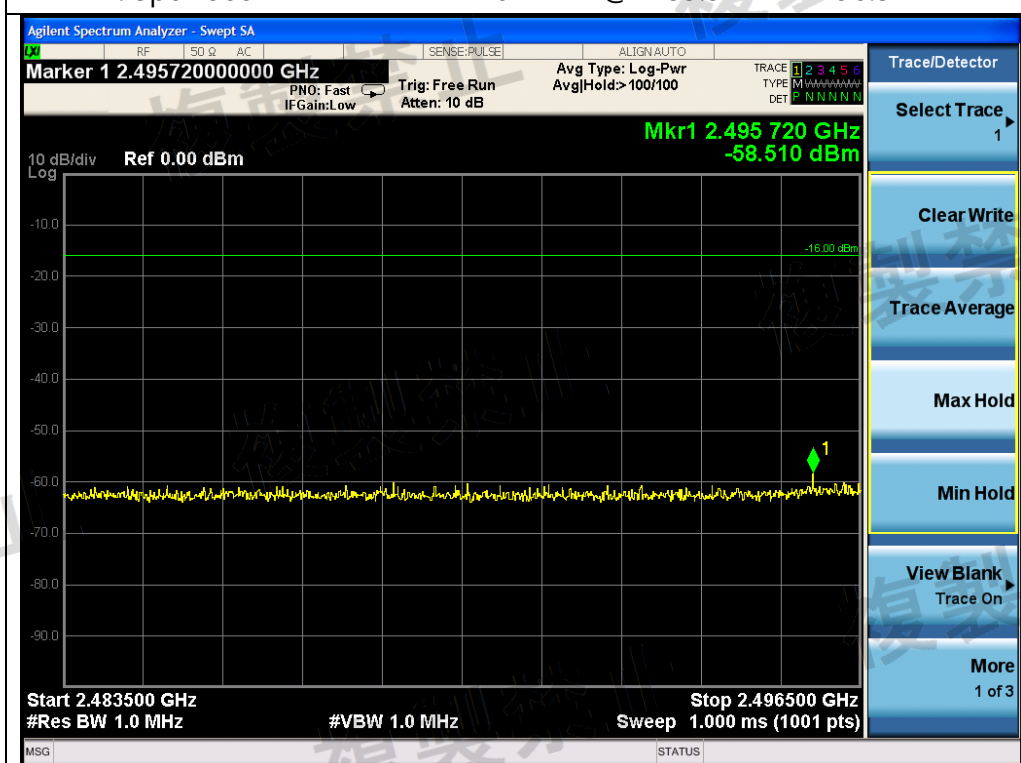
Tx. Spurious NVNT BLE 1M 2402MHz @ 1000MHz-2387MHz



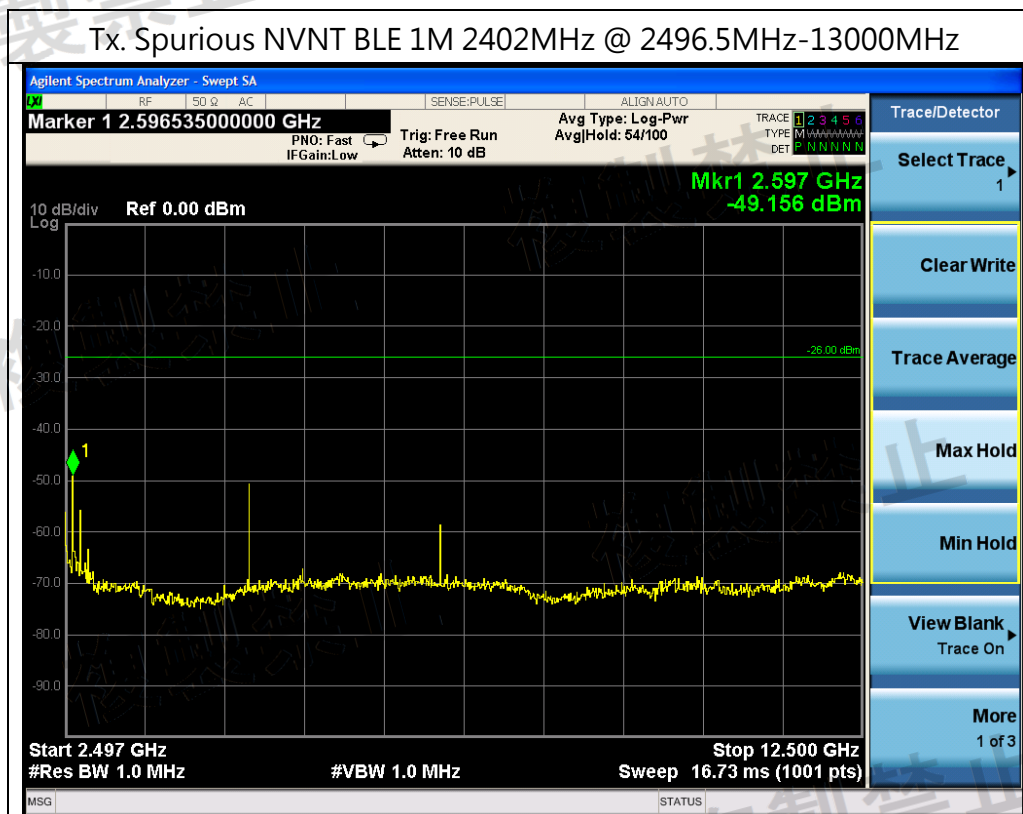
Tx. Spurious NVNT BLE 1M 2402MHz @ 2387MHz-2400MHz



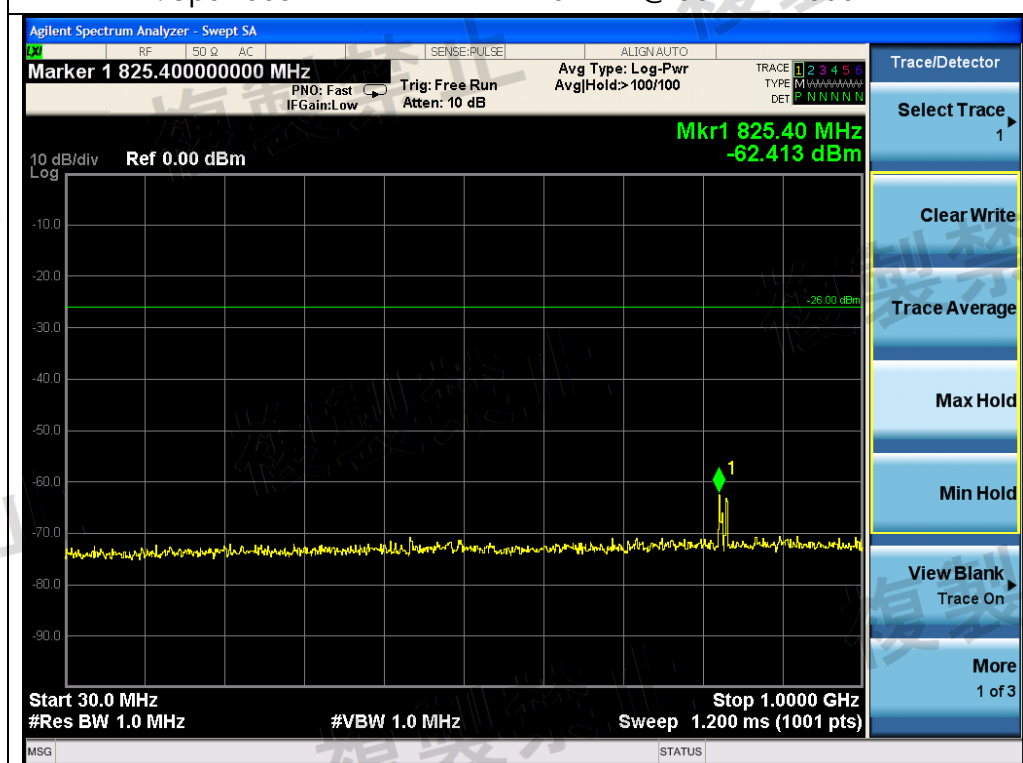
Tx. Spurious NVNT BLE 1M 2402MHz @ 2483.5MHz-2496.5MHz



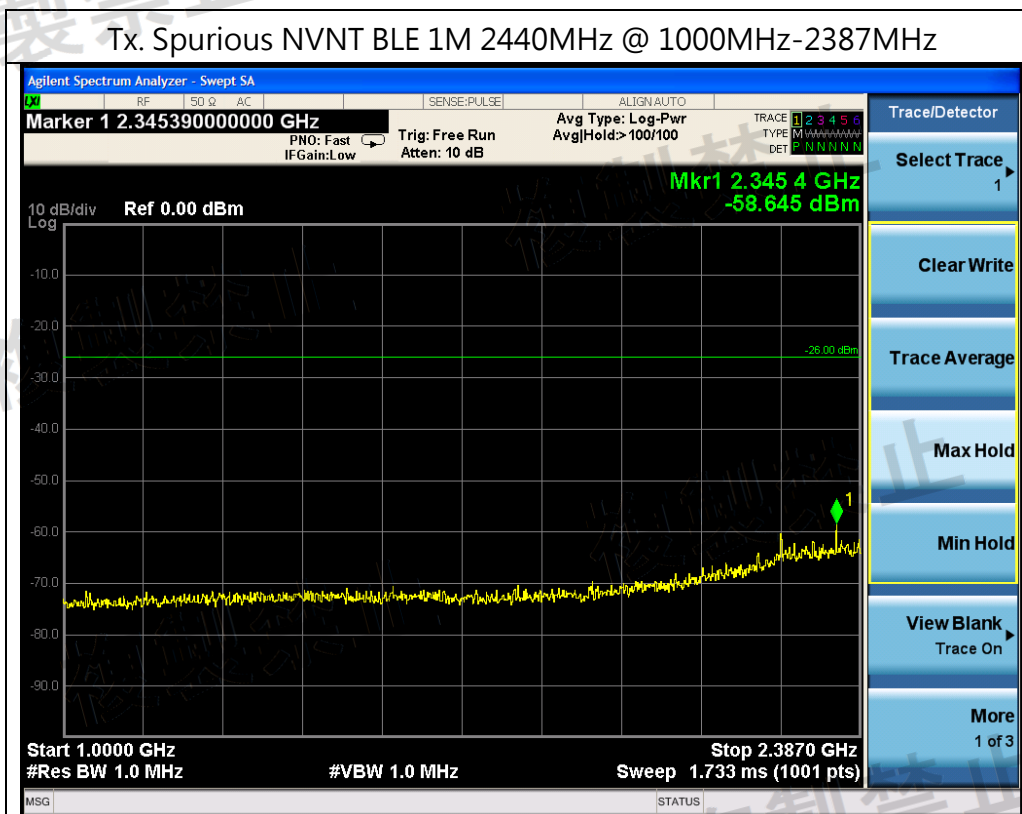
Tx. Spurious NVNT BLE 1M 2402MHz @ 2496.5MHz-13000MHz



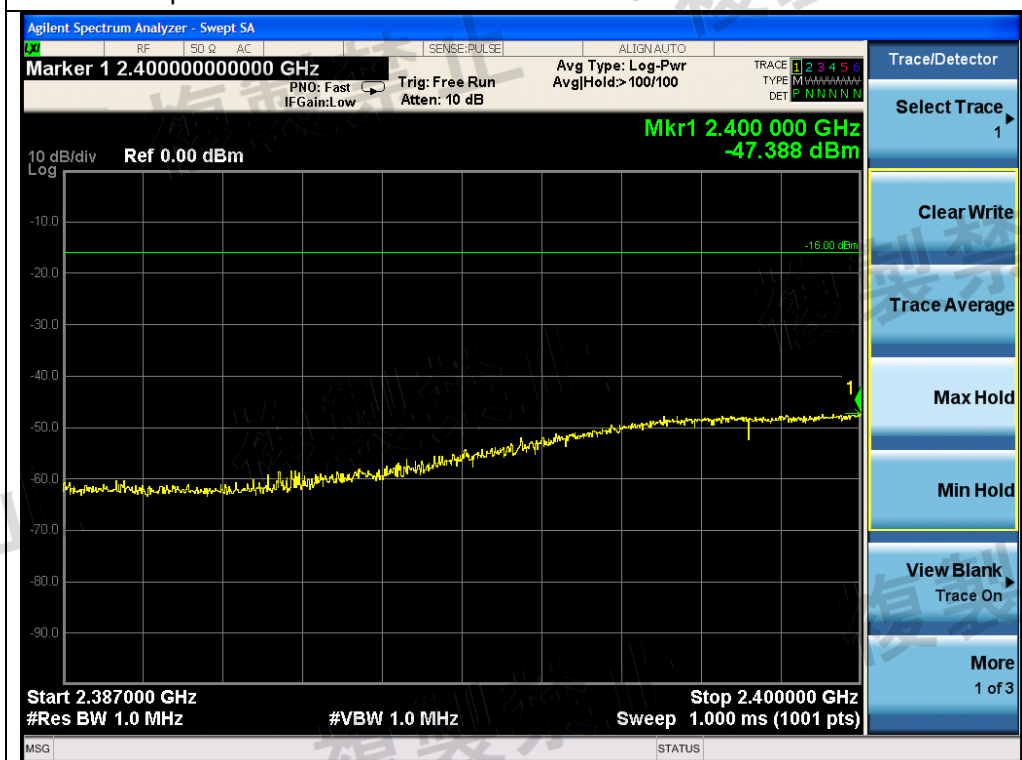
Tx. Spurious NVNT BLE 1M 2440MHz @ 30MHz-1000MHz



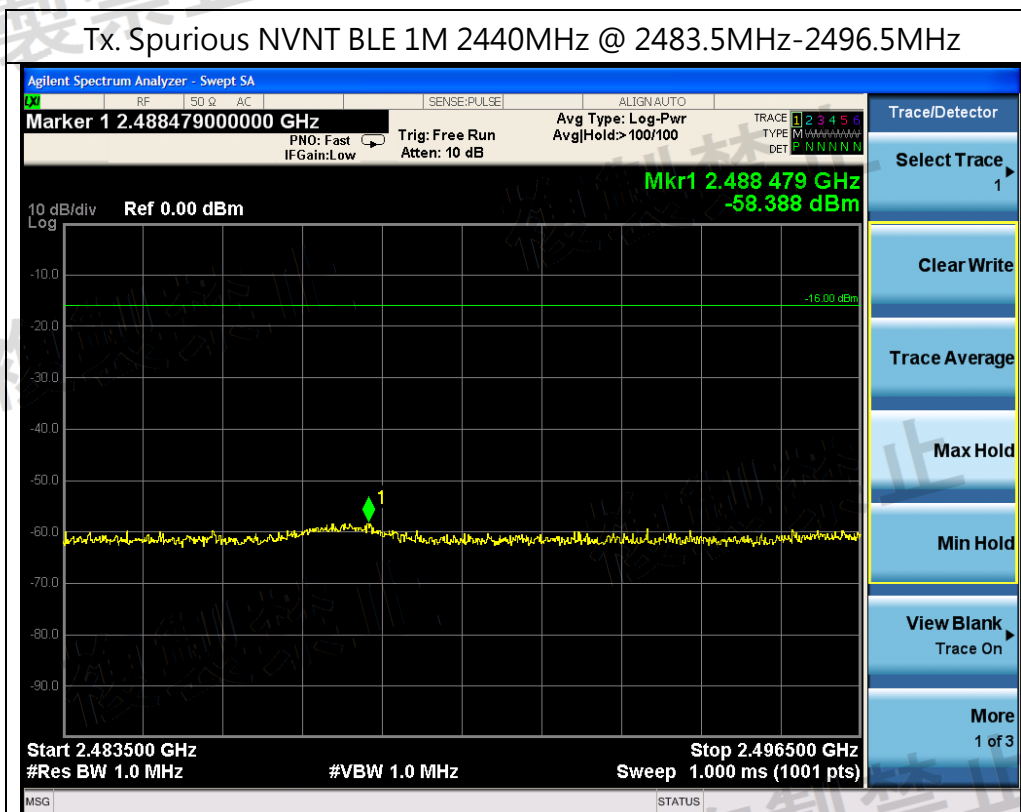
Tx. Spurious NVNT BLE 1M 2440MHz @ 1000MHz-2387MHz



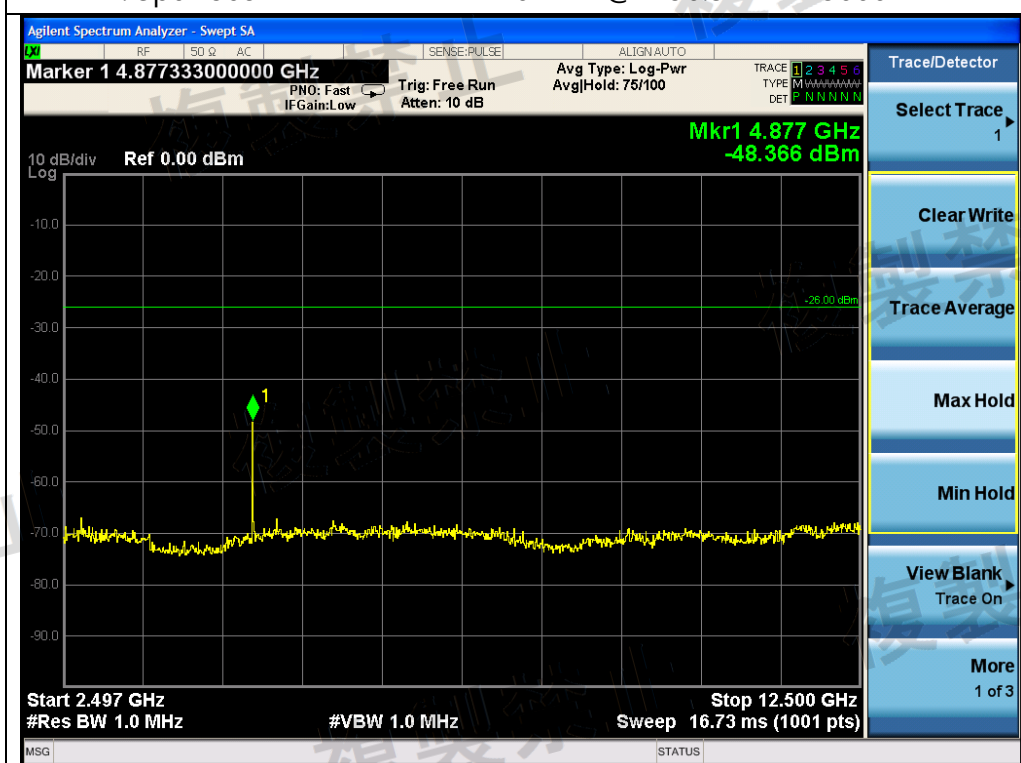
Tx. Spurious NVNT BLE 1M 2440MHz @ 2387MHz-2400MHz



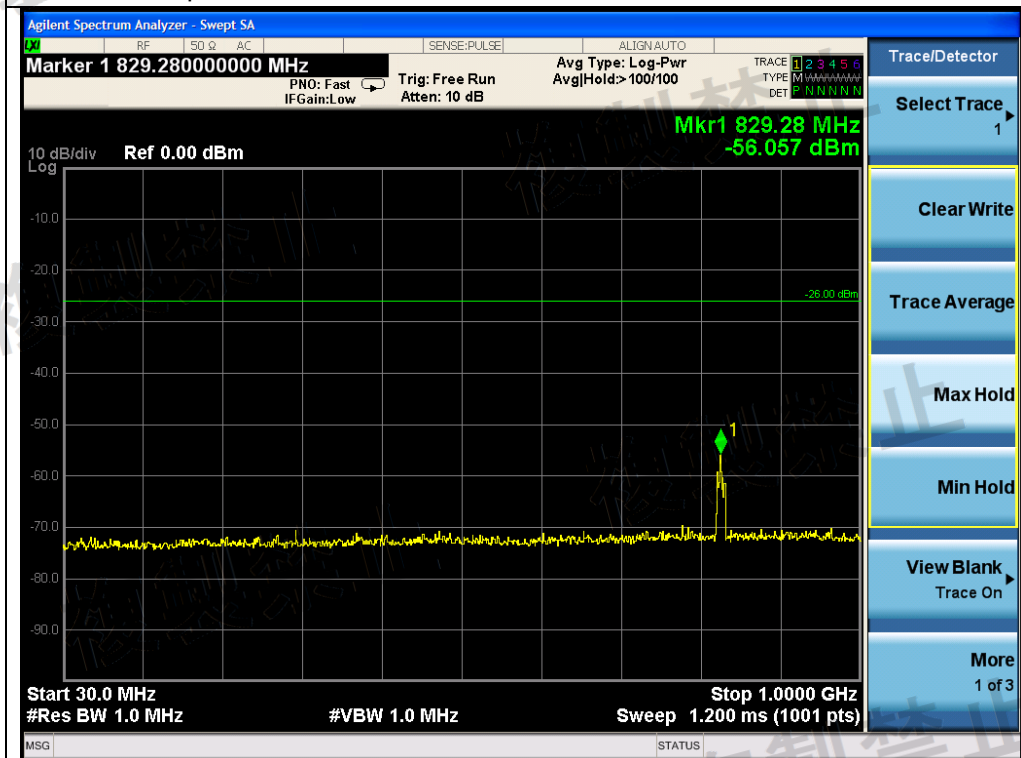
Tx. Spurious NVNT BLE 1M 2440MHz @ 2483.5MHz-2496.5MHz



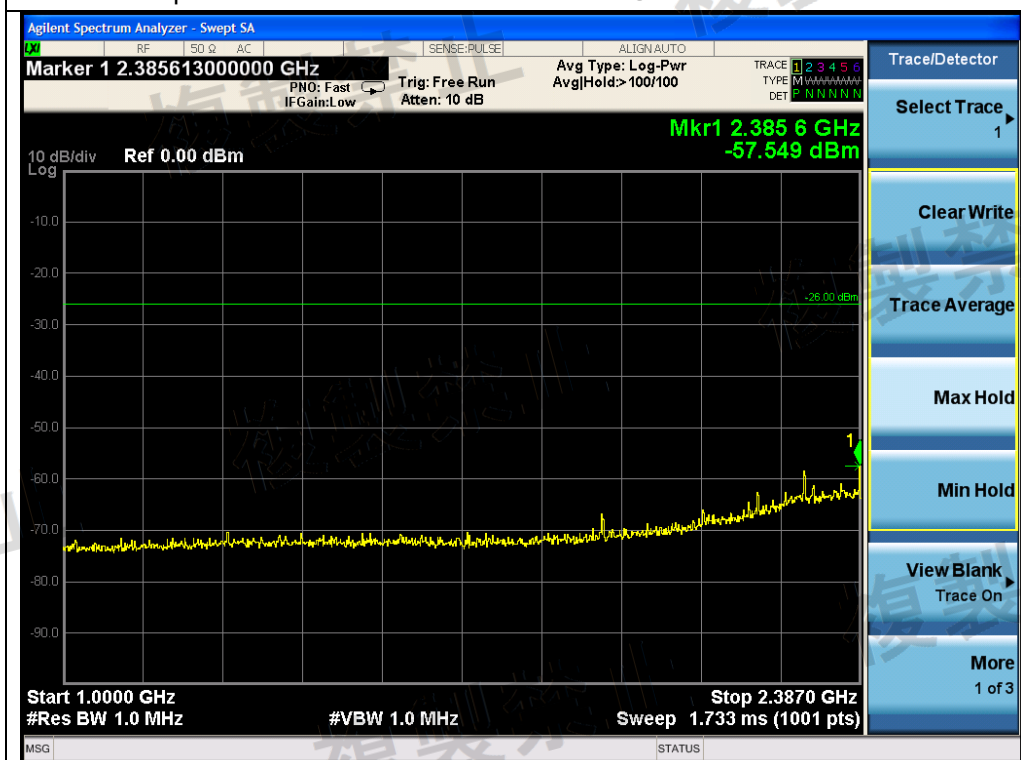
Tx. Spurious NVNT BLE 1M 2440MHz @2496.5MHz-13000MHz



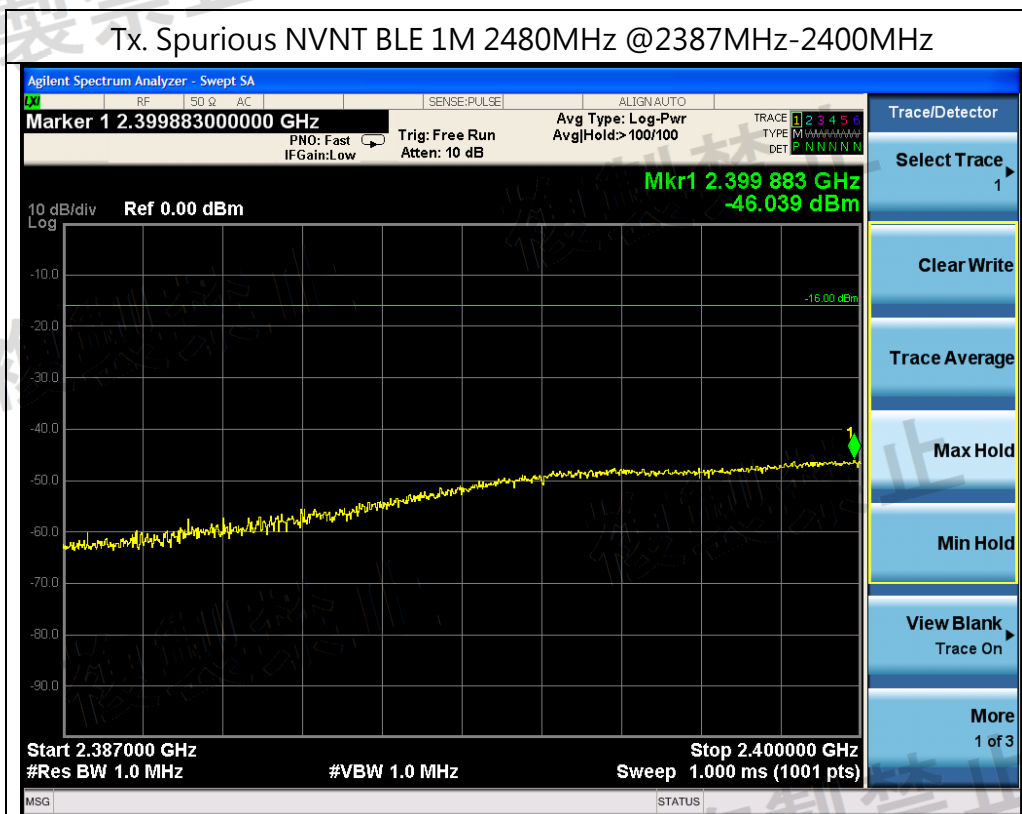
Tx. Spurious NVNT BLE 1M 2480MHz @ 30MHz-1000MHz



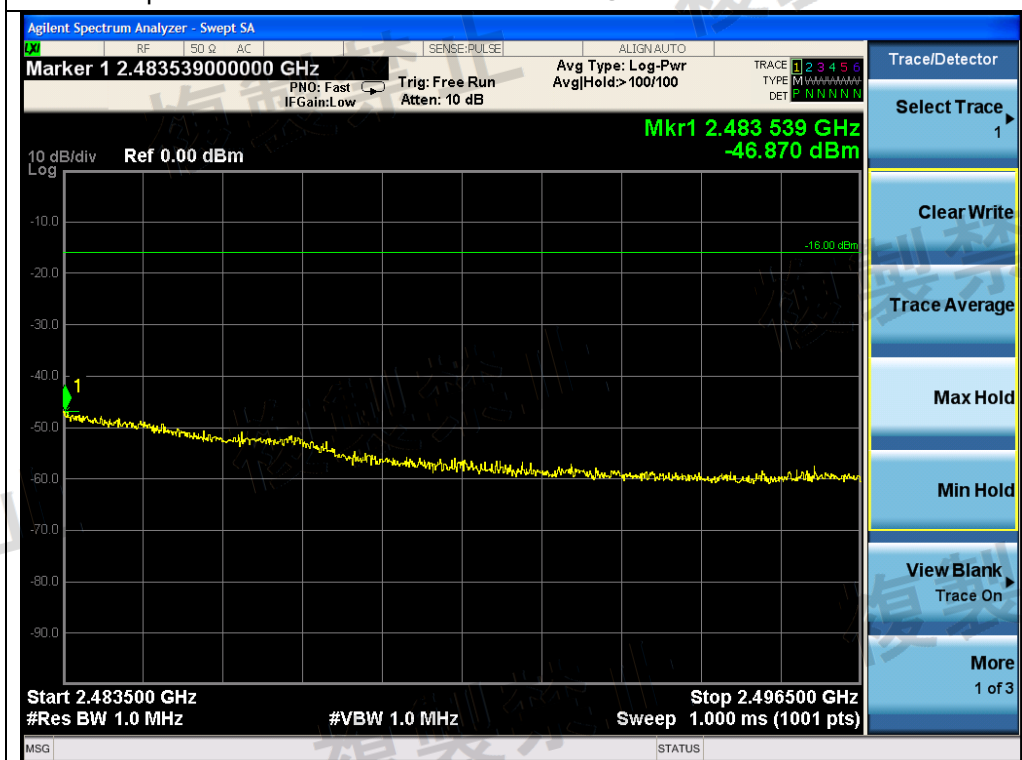
Tx. Spurious NVNT BLE 1M 2480MHz @ 1000MHz-2387MHz

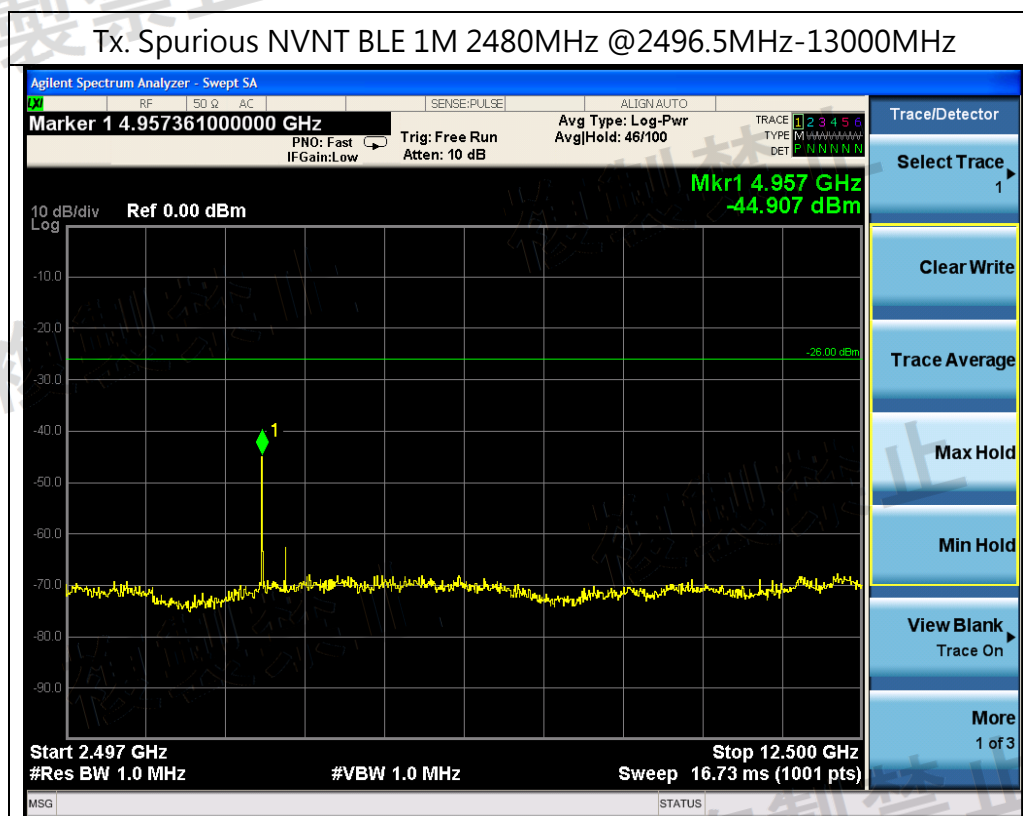


Tx. Spurious NVNT BLE 1M 2480MHz @2387MHz-2400MHz



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





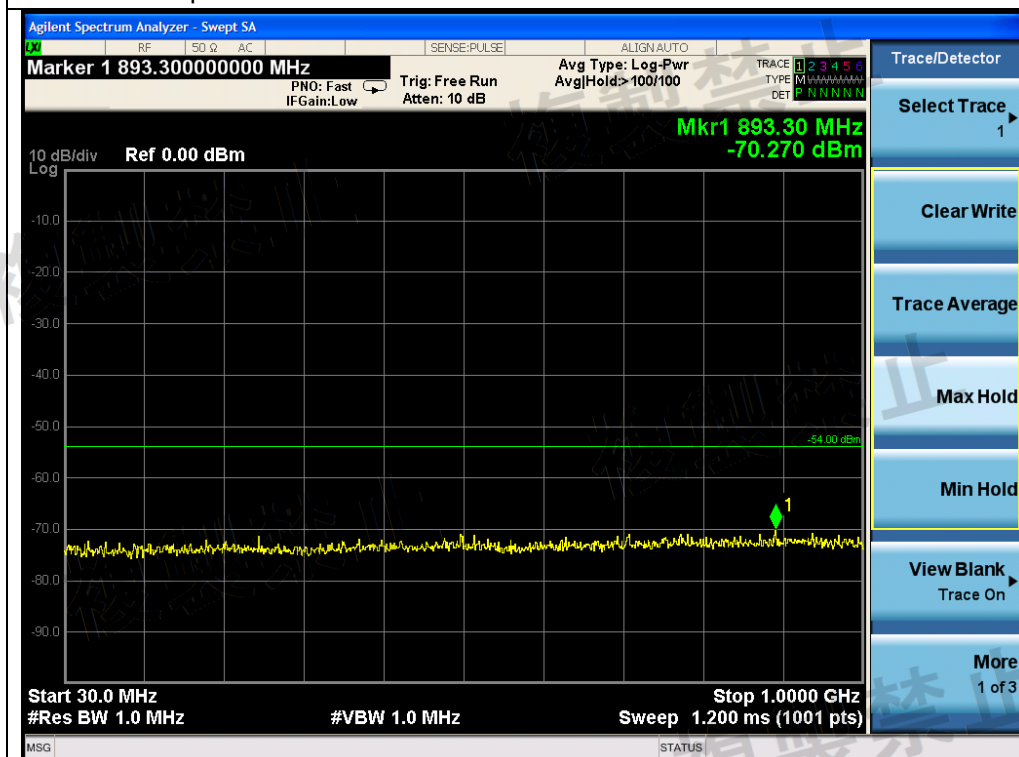
13.7 RX SPURIOUS EMISSION

Bluetooth (GFSK(1M, 2M)) mode have been tested, and the worst result (GFSK(1M)) was report as below:

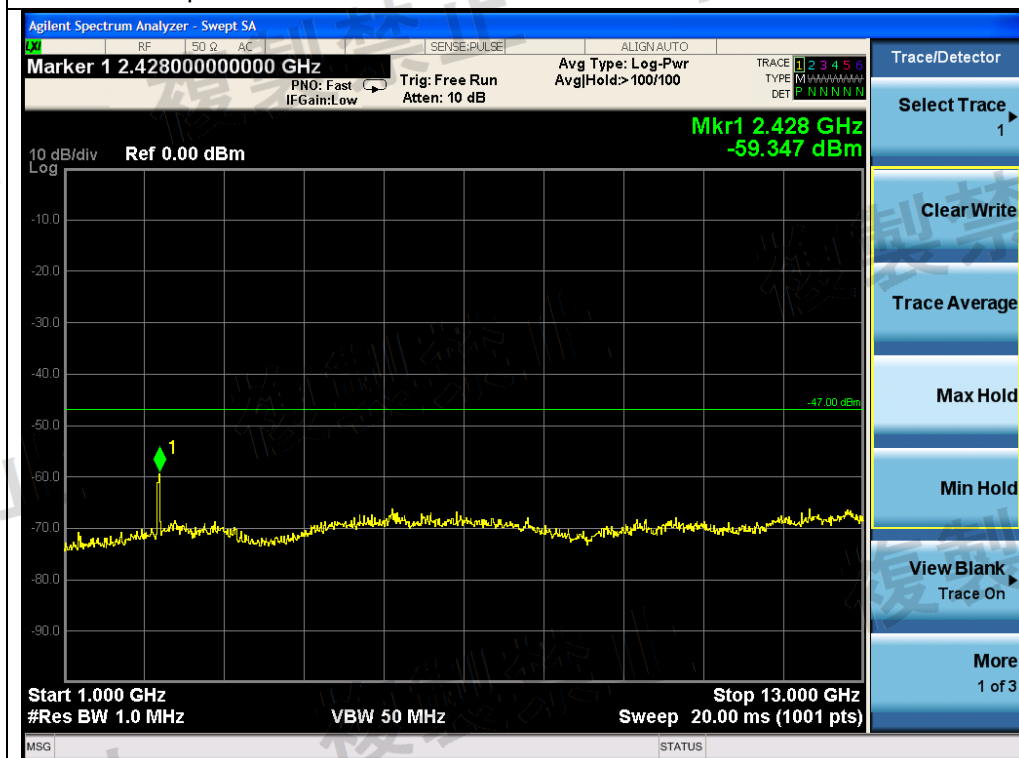
Condition	Mode	Frequency (MHz)	Range (MHz}	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	30-1000	893.30	-70.270	<=-54	Pass
NVNT	BLE 1M	2402	1000-13000	2428	-59.347	<=-47	Pass
NVNT	BLE 1M	2440	30-1000	870.99	-70.708	<=-54	Pass
NVNT	BLE 1M	2440	1000-13000	2404	-61.064	<=-47	Pass
NVNT	BLE 1M	2480	30-1000	948.59	-70.726	<=-54	Pass
NVNT	BLE 1M	2480	1000-13000	2440	-58.663	<=-47	Pass

Test Graphs

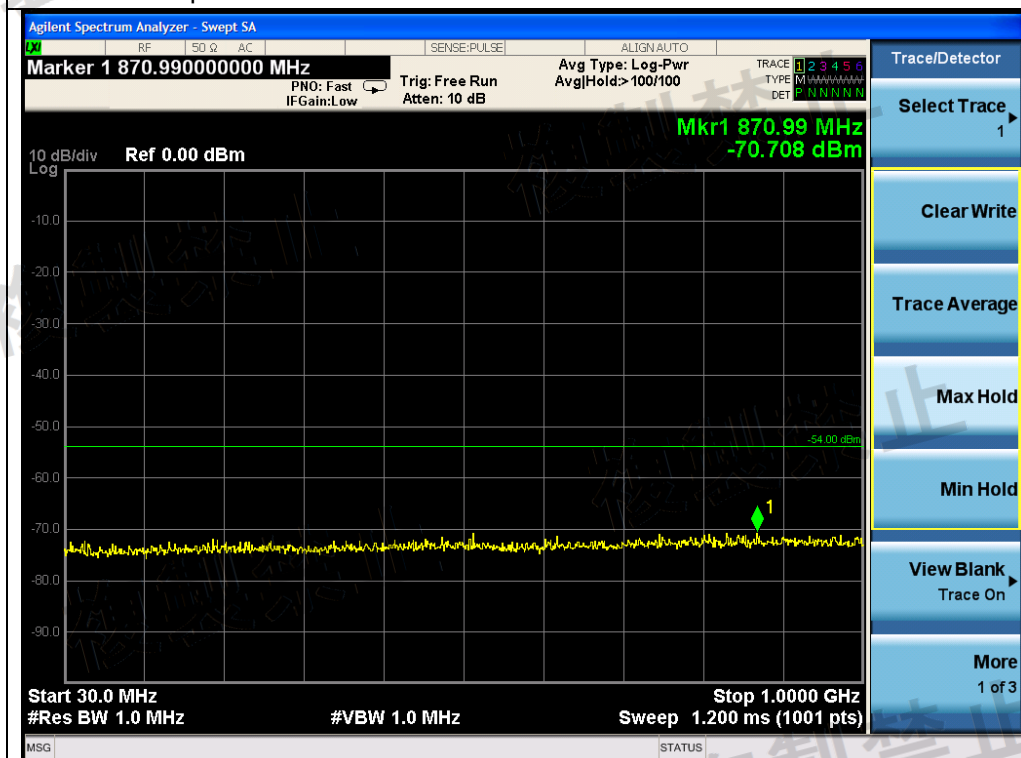
Rx. Spurious NVNT BLE 1M 2402MHz @ 30MHz-1000MHz



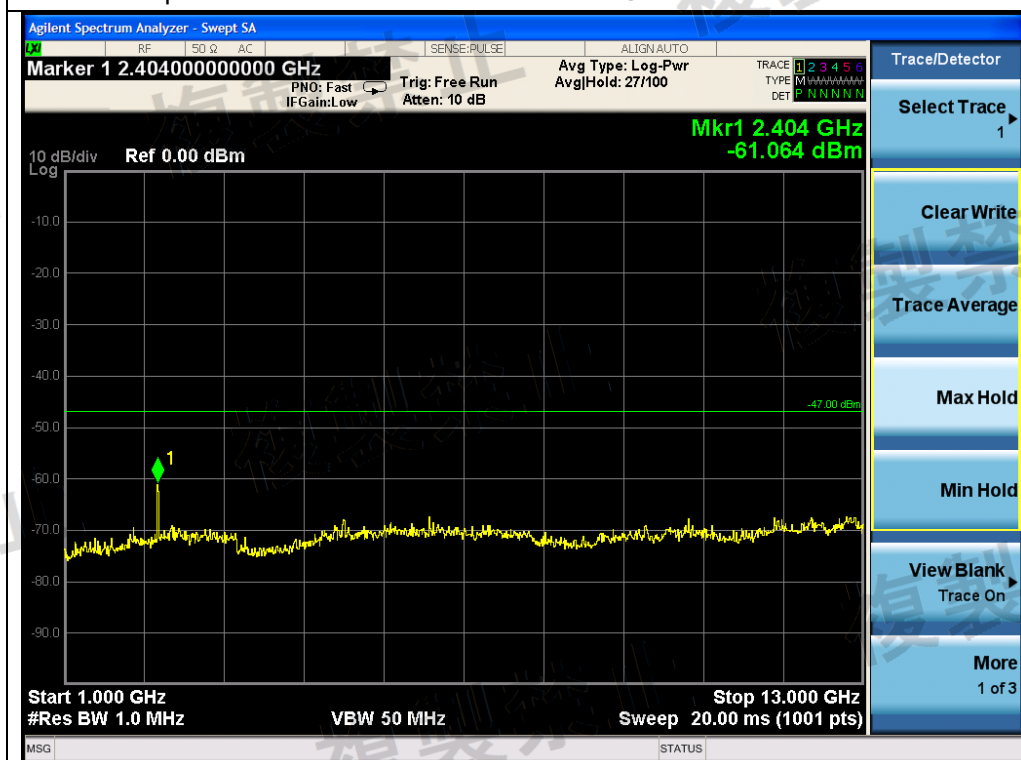
Rx. Spurious NVNT BLE 1M 2402MHz1000MHz-13000MHz



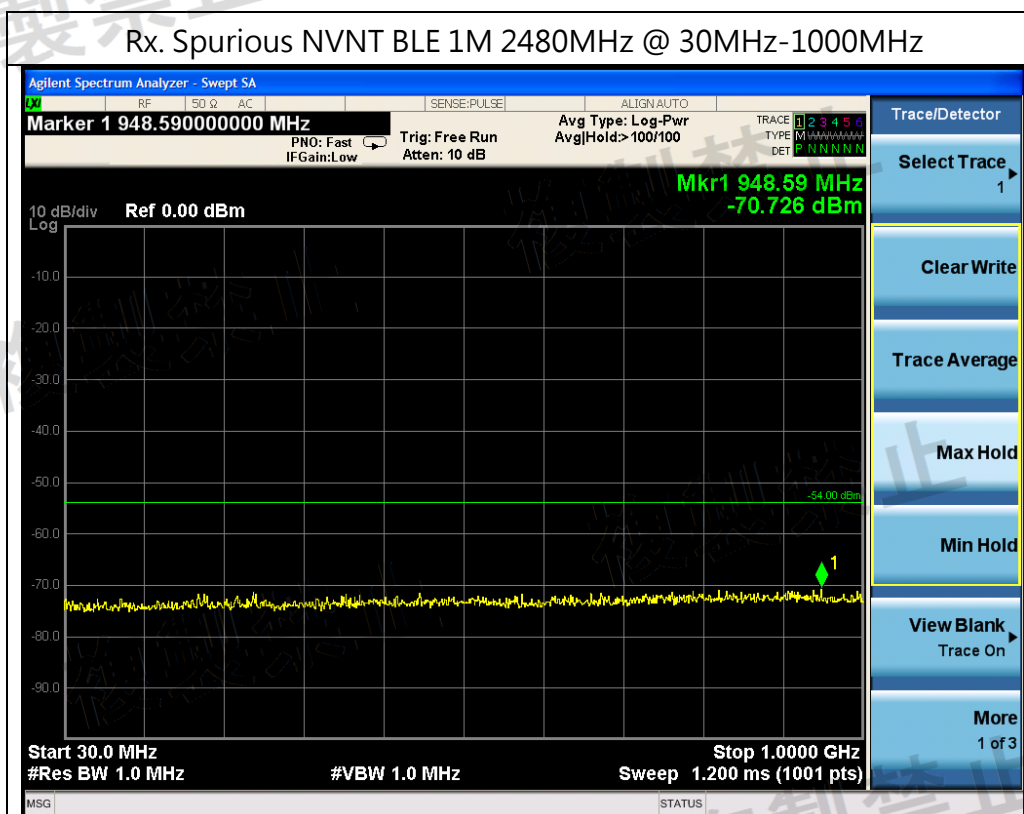
Rx. Spurious NVNT BLE 1M 2440MHz @ 30MHz-1000MHz



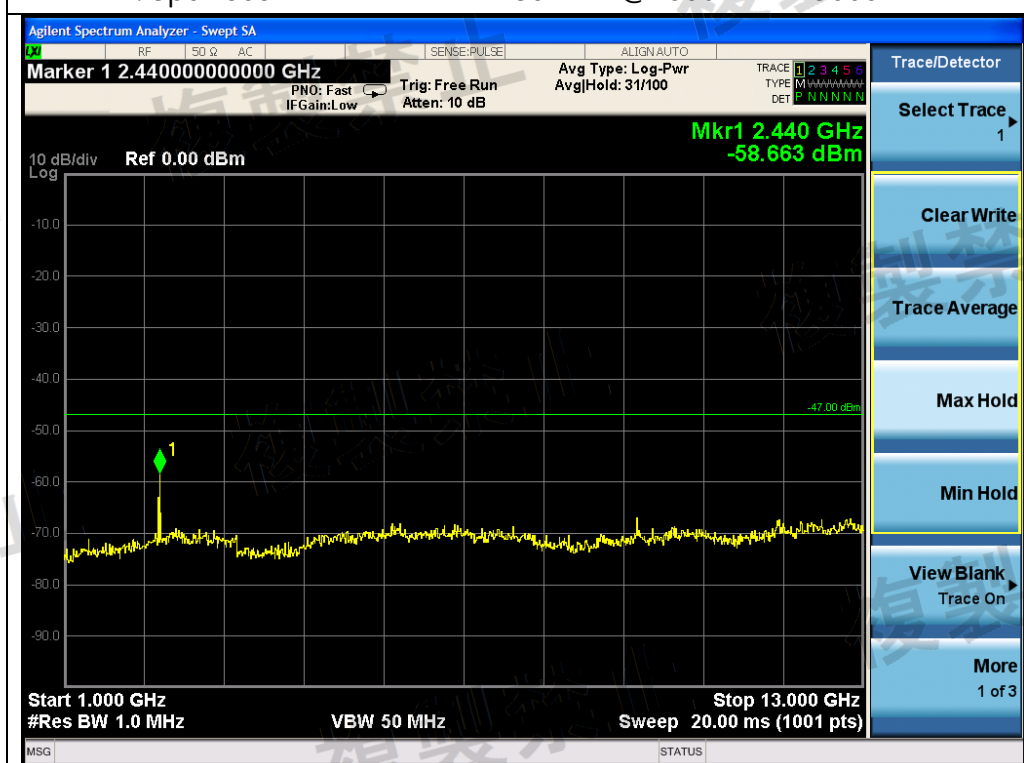
Rx. Spurious NVNT BLE 1M 2440MHz @ 1000MHz-13000MHz



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



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



***** End of Report*****