TEST REPORT

Applicant Name.....	: Artec Co., Ltd.
Address.....	: 3-2-21 KITAKAMEI-CHO,YAO-SHI, OSAKA, 581-0066, JAPAN
Manufacturer Name.....	: Artec Co., Ltd.
Address.....	: 3-2-21 KITAKAMEI-CHO,YAO-SHI, OSAKA, 581-0066, JAPAN
Product.....	: AT smart tag key ring-style
Model(s).....	: 91455
Additional Model(s).....	: 91496
Trademark.....	: /
Model Difference.....	: 91455 is tested model, other models are derivative models .The models are identical in circuit, only different on the model names. So the test data of 91455 can represent the remaining models.
Prepared by.....	: Guangdong Zhonghan Testing Technology Co., Ltd.
Address.....	: Room 104/201, Building 1, Yibaolai Industrial Park, Qiaotou, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Date of Receipt.....	: July 2, 2026
Date of Test(s).....	: July 2, 2026 to July 13, 2026
Date of Issue.....	: July 14, 2026
Test Requested.....	: Select test(s) as requested by the client.
Test Standard(s).....	: Article 2 paragraph 1 of item 19 MIC Notice No.88 Annex 1 MIC Notice No.88 Annex 43
Test procedure.....	/

In the configuration tested, the EUT complied with the standards specified above.

Prepared by	Reviewed by:	Approved by:
Kimi Lu/ Engineer	Baret Wu/ Director	Levi Lee/ Manager

Note: The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report shall not be reproduced except in full, without prior written approval of ZHT. This document may be altered or revised by ZHT, personnel only, and shall be noted in the revision of the document.

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
Test method which is equal to Appendix No.43 of MIC Notification No 88.

MIC Notice No.88 Appendix No.43			
Rule	**NO.**	**Test Item**	**Result**
Article 2 paragraph 1 of item 19	1	RF shielding method	Pass
	2	Frequency Error	Pass
	3	Antenna Power	Pass
	4	99% Occupied bandwidth	Pass
	5	Spread spectrum bandwidth	Just for report
	6	Spurious Emissions Intensity	Pass
	7	Limit of secondary radiated emissions	Pass
	8	Interference suppression	Pass
	9	Transmission Antenna Gain	N/A[3]
	10	Transmission Radiation Angle Width(3dB Beam width)	N/A[1]
	11	CARRIER SENSE CAPABILITY	N/A[2], N/A[3]

NOTE:

(1)" N/A[1]" EIRP does not exceed 12.14dBm

(2)" N/A[2]" Only need to test the OFDM system with a bandwidth greater than 26MHz

(3)" N/A3"EIRP is less than (2.14dBi +antenna power limit), the shortage can be compensated for by the antenna power.

2. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	AT smart tag key ring-style
Test Model No.:	91455
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2402MHz~2480MHz
Channel numbers:	40
Channel separation:	2MHz
Modulation technology:	GFSK
Rated power:	1mW
Antenna Specification:	Chip Antenna
Antenna Gain:	2.8dBi
Power supply:	DC 3 V powered by CR12032 battery
Sample Number:	260702140YP001
Remark:The antenna gain is provided by the customer, if the data provided by the customer is not accurate, Guangdong Zhonghan Testing Technology Co., Ltd. does not assume any responsibility.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2.

Channel List							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402 MHz	11	2422 MHz	21	2442 MHz	31	2462 MHz
2	2404 MHz	12	2424 MHz	22	2444 MHz	32	2464 MHz
3	2406 MHz	13	2426 MHz	23	2446 MHz	33	2466 MHz
4	2408 MHz	14	2428 MHz	24	2448 MHz	34	2468 MHz
5	2410 MHz	15	2430 MHz	25	2450 MHz	35	2470 MHz
6	2412 MHz	16	2432 MHz	26	2452 MHz	36	2472 MHz
7	2414 MHz	17	2434 MHz	27	2454 MHz	37	2474 MHz
8	2416 MHz	18	2436 MHz	28	2456 MHz	38	2476 MHz
9	2418 MHz	19	2438 MHz	29	2458 MHz	39	2478 MHz
10	2420 MHz	20	2440 MHz	30	2460 MHz	40	2480 MHz

3.

Final test channel as follow:					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402	20	2440	40	2480

3.2 DESCRIPTION OF TEST MODES

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
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. test software *BT test tool* used for controlling the EUT. 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 is going to be fixed on the firmware of the final end product power parameters of DTS

Test Software: Direct Test Mode v2.5.3	
Test Mode	Power Level
GFSK	Default

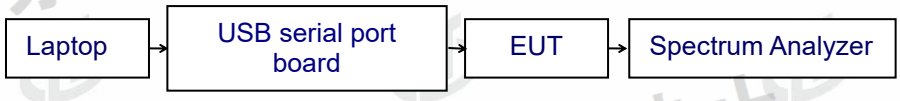
3.3 TEST CONDITIONS

Supply Voltage			
	Input Voltage (Vdc)	Voltage at the input of the RF Circuit (Vdc)	Tolerance (%)
Normal	3	3.3	
+10%	3.3	3.3	0
-10%	2.7	3.3	0

Others	
Temperature (°C)	23.6
Relative humidity	54.2 %
ATM Pressure:	1014 mbar

Note 1: When the input voltage is reduced or increased by 10%, the regulator voltage changes of less than 1%.So the following test items are conducted in the normal voltage.

3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Laptop	Lenovo (Beijing) Co., Ltd	ThinkPad E480	/	AE
E-2	USB serial port board	/	/	/	AE
E-3	DC Power	/	LW-3010KDS	/	AE

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.
(3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".
(4) The test software is the Direct Test Mode v2.5.3 which can set the EUT into the individual test modes.

3. TEST FACILITY AND TEST INSTRUMENT USED

3.1 TEST FACILITY

Guangdong Zhonghan Testing Technology Co., Ltd.
Add. : Room 104/201, Building 1, Yibaolai Industrial Park, Qiaotou, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

China Registered No.: L15216

3.2 EQUIPMENTS LIST FOR ALL TEST ITEMS

Item	Equipment	Manufacturer	Model	Serial No.	Last Cal.	Next Cal.
1	Spectrum Analyzer	KEYSIGHT	N9020A	MY53420208	Apr. 24, 2026	Apr. 23, 2027
2	WIDBAND RADIO COMMUNICATI ON TESTER	R&S	CMW500	109863	Apr. 24, 2026	Apr. 23, 2027
3	Single Generator	Agilent	N5182A	MY48180575	Apr. 24, 2026	Apr. 23, 2027
4	Power Sensor	MWRFtest	MW100-RFCB	/	Apr. 24, 2026	Apr. 23, 2027
5	Single Generator	R&S	SMB100A	259098	Apr. 15, 2026	Apr. 14, 2027
6	Aattenuator	HTEC	-10dB	/	Apr. 24, 2026	Apr. 23, 2027

Measuring Equipment CalibrationInformatione		
Used	Calibration Company Abbreviatione	Full Name of-calibration company
☒	/	GUANGZHOU LISAI METROLOGY & TEST CO.,LTD.
☒	/	/
Calibration Information (Article 24-2,Paragraph 4 ofthe Radio Act)		
☐	a)Calibration Conducted by the National Institute of Information and Connicqions Tesignay (NICT) or a designatde calibration agency under Article 102-18-1 of the Radio Act.	
☐	b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act.	
☒	(c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a desiqnated calibration agency under Article 102-18-1 of the Radio Act.	
☐	(d)Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 ofthe Radio Act, which is to have been calibrated as described in (a) through (c) above.	

3.3 Testing software

Project	Software name	Edition
RF Conducted	MTS 8310	2.0.0.0

3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± 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	Conducted Emission Test	0.92dB
2	RF power conducted	0.16dB
3	Spurious emissions conducted	0.21dB
4	All radiated emissions (9k-30MHz)	4.68dB
5	All radiated emissions (30-1GHz)	5.1dB
6	All radiated emissions (1-6GHz)	3.9dB
7	All radiated emissions (6GHz-18GHz)	4.3dB
8	All radiated emissions (18-40GHz)	4.65dB
9	Temperature	0.5°C
10	Humidity	2%
11	frequency error ppm	0.5ppm
12	Occupied Bandwidth	4.96dB

Decision Rule

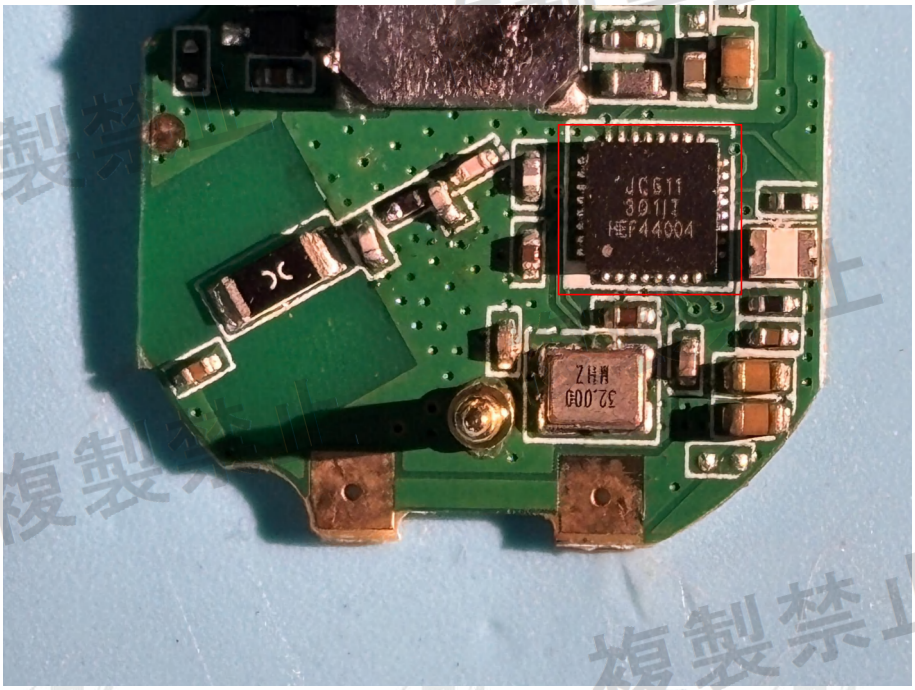
☒ Uncertainty is not included

☐ Uncertainty is included

4. RF PROTECTION MEASURES

All RF control circuits are integrated in the IC, which is a QFN package. The spacing between pins is less than 1mm.

Note:-Number of pins:32>10
-Spacing between pins:0.2mm<1mm



5. TEST RESULT FOR BLUETOOTH

5.1 FREQUENCY ERROR

5.1.1 LIMIT

Item	Limits
Frequency Error	±50ppm

5.1.2 MEASURING INSTRUMENTS AND SETTING

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

5.1.3 TEST PROCEDURES

(1)In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a spectrum analyzer.
(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.

5.1.4 TEST SETUP LAYOUT

5.1.5 EUT OPERATION DURING TEST

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

5.1.6 TEST RESULT

Please refer to APPENDIX A

5.2 ANTENNA POWER

5.2.1 LIMIT

Item	Limits
Antenna Power Density	≦10mW (Other from 2400~2483.5MHz)
Antenna Power Error	+20% (Base on manufacturer declare antenna power density)

5.2.2 TEST SETUP LAYOUT

5.2.3 TEST DEVIATION

There is no deviation with the original standard.

5.2.4 TEST PROCEDURE

The EUT was directly connected to the Power meter.
Antenna Power (dBm/MHz):It is measured directly by power meter, calculated and read out by software.

5.2.5 TEST RESULT

Please refer to APPENDIX A

5.3 OCCUPIED BANDWITH

5.3.1 LIMIT

Item	Limits
Occupied Band Width:	≦26MHz
Spreading Bandwidth:	/

5.3.2 TEST PROCEDURES

1. Setting of SA is following as: RB: 300kHz / VB:300kHz / SPAN: 3MHz / AT: 30dB Ref: 21.41dBm / 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).
3. Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.
4. Spread Spectrum Factor limit is greater than 5

5.3.3 TEST SETUP LAYOUT

5.3.4 TEST DEVIATION

There is no deviation with the original standard.

5.3.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

5.3.6 TEST RESULT

Please refer to APPENDIX A

5.4 UNWANTED EMISSION INTENSITY MEASUREMENT

5.4.1 LIMIT

Item	Limits	
TX Spurious Emission	Below 1000 MHz: 2.5μW/MHz or less 1000 to 2387 MHz:: 2.5μW/MHz or less 2387 to 2400 MHz: 25μW/MHz or less 2483.5 to 2496.5 MHz: 25μW/MHz or less Over 2496.5 MHz: 2.5μW/MHz or less	Below 1000 MHz: -26dBm/MHz or less 1000 to 2387 MHz: -26dBm/MHz or less 2387 to 2400 MHz: -16dBm/MHz or less 2483.5 to 2496.5 MHz: -16dBm/MHz or less Over 2496.5 MHz: -26dBm/MHz or less

5.4.2 MEASURING INSTRUMENTS AND SETTING

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

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

5.4.3 TEST PROCEDURES

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: Below 1GHz RB:100KHz / VB:100KHz
Above 1GHz RB:1MHz / VB:1MHz / AT: 20dB Ref: 11.41dBm / 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 0.25μW/MHz.
4. Setting of SA is following as 1000MHz and stop frequency 2387MHz Then to mark peak reading value + cable loss shall be less than 2.5μW/MHz.
5. SA adjusted to start frequency 2387MHz and stop frequency 2400MHz. Then to mark peak reading value + cable loss shall be less than 25μW/MHz.
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 25μW/MHz
7. SA adjusted to start frequency 2496.5MHz and stop frequency 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5μW/MHz
8. Measure side band spurious as follows: For 2.4GHz band: 2374MHz~2400MHz and 2483.5MHz~2509.5MHz RBW = VBW = 1MHz, Result_Value = Meaured_ Value
9. 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.

5.4.4 TEST SETUP LAYOUT

5.4.5 TEST DEVIATION

There is no deviation with the original standard.

5.4.6 TEST RESULT

Please refer to APPENDIX A

5.5 IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

5.5.1 LIMIT

Item	Limits	
RX Spurious Emission:	≦4nW (f<1GHz)	≦-54 dBm
	≦20nW (1GHz≦f)	≦-47 dBm

5.5.2 MEASURING INSTRUMENTS AND SETTING

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

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

5.5.3 TEST PROCEDURES

1. EUT have the continuous reception mode and fixed only one channelize.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) /
AT: 0dB / Ref: -18.59dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for f < 1GHz, 2nW for f >= 1GHz), 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.

5.5.4 TEST RESULT

Please refer to APPENDIX A

5.6 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

5.6.1 LIMIT

Item	Limits
Identification code	≧48 bits

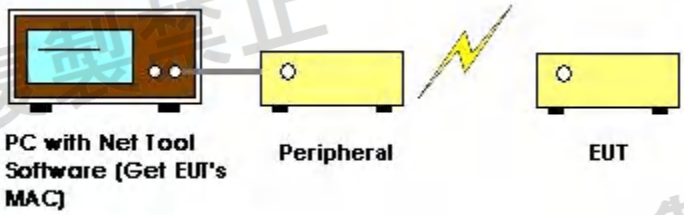
5.6.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

5.6.3 TEST PROCEDURES

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

5.6.4 TEST SETUP LAYOUT



5.6.5 TEST DEVIATION

There is no deviation with the original standard.

5.6.6 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.

5.6.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

Bluetooth Device Address:A0:78:2D:1A:A2:84

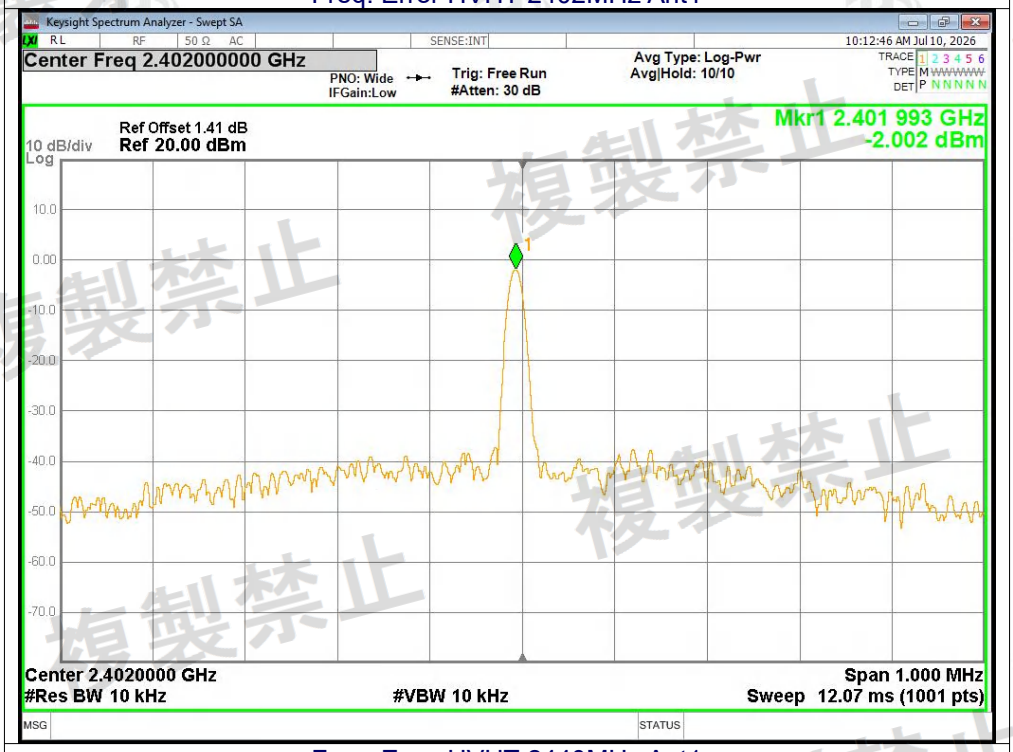
6. APPENDIX A

Frequency Error

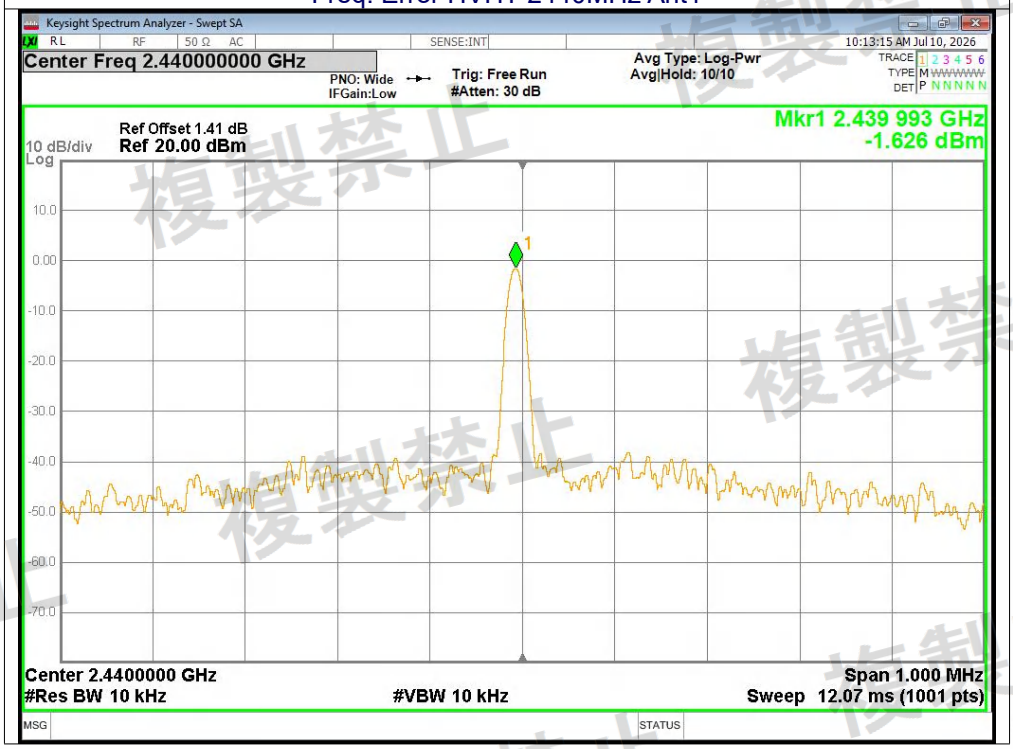
Condition	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	2402	Ant1	2401.993	-7000	-2.91	50	Pass
NVNT	2440	Ant1	2439.993	-7000	-2.87	50	Pass
NVNT	2480	Ant1	2479.993	-7000	-2.82	50	Pass

Test Graphs

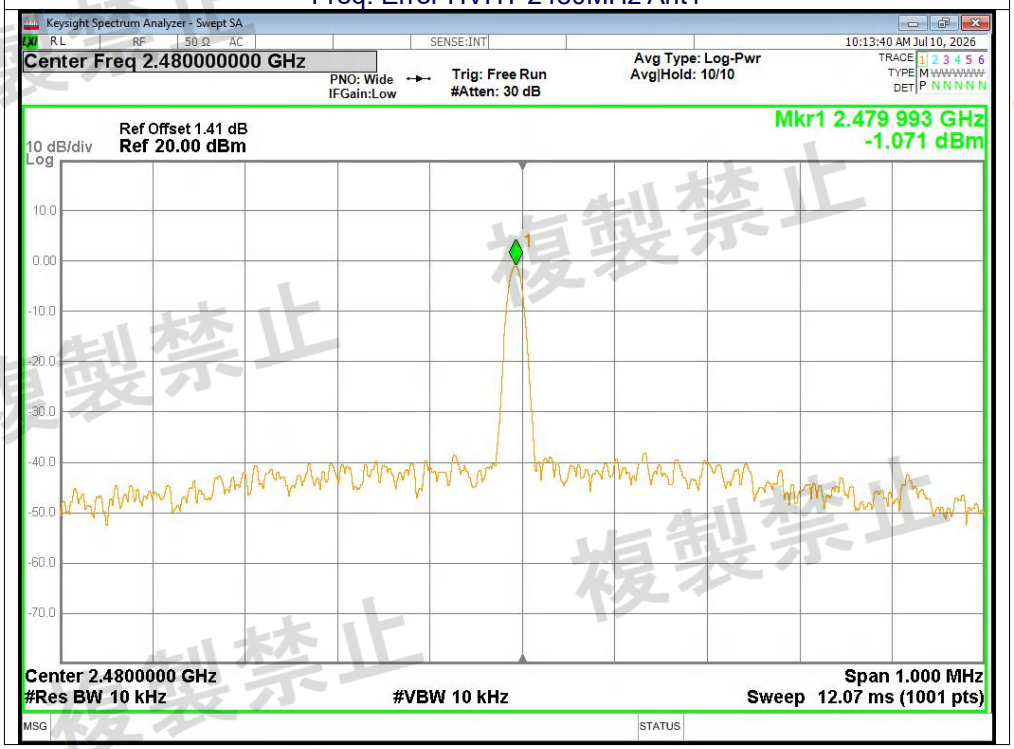
Freq. Error HVHT 2402MHz Ant1



Freq. Error HVHT 2440MHz Ant1



Freq. Error HVHT 2480MHz Ant1



Antenna and EIRP Power

Mode	Antenna Power (dBm)	Antenna Power (mW)	Limit (mW)	Declared Power (mW)	Tolerance (%)	Upper Limit (%)	Verdict
BLE 1M	-2.01	0.63	10	1	-37	20	Pass
BLE 1M	-1.61	0.69	10	1	-31	20	Pass
BLE 1M	-1.02	0.79	10	1	-21	20	Pass
BLE 2M	-1.94	0.64	10	1	-36	20	Pass
BLE 2M	-1.61	0.69	10	1	-31	20	Pass
BLE 2M	-1.02	0.79	10	1	-21	20	Pass

Tolerance (%)=（Antenna Power-Rated output power）/Rated output power *100%

EIRP Power

Mode	Antenna Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Verdict
BLE 1M	-2.01	2.8	0.79	12.14	Pass
BLE 1M	-1.61	2.8	1.19	12.14	Pass
BLE 1M	-1.02	2.8	1.78	12.14	Pass
BLE 2M	-1.94	2.8	0.86	12.14	Pass
BLE 2M	-1.61	2.8	1.19	12.14	Pass
BLE 2M	-1.02	2.8	1.78	12.14	Pass

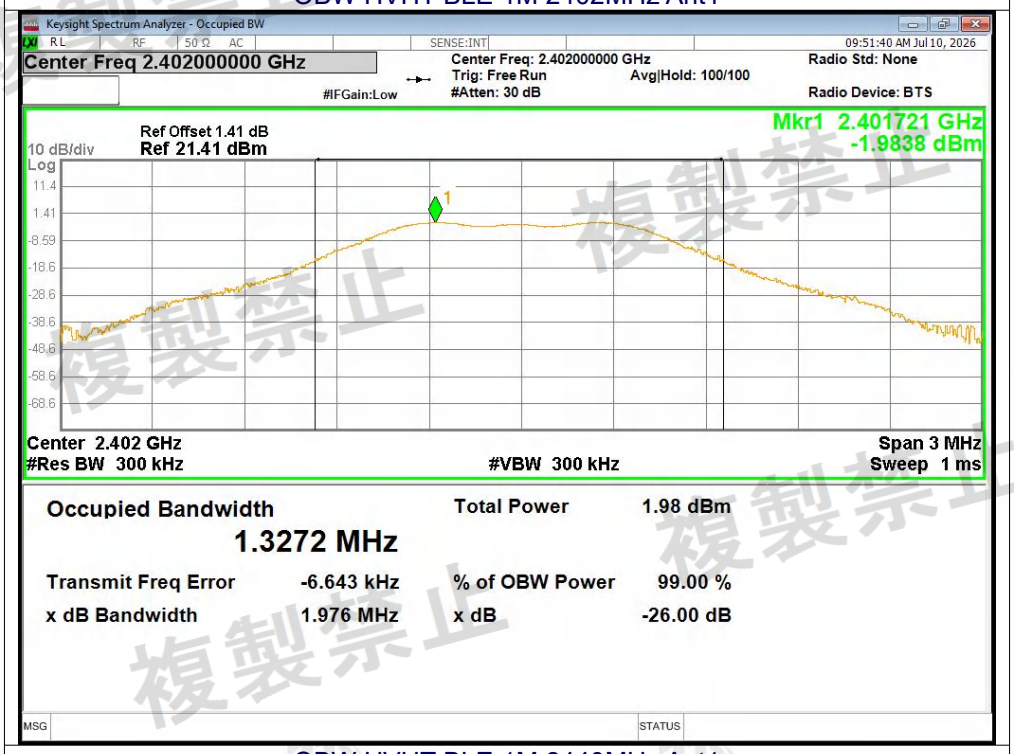
Note: Measured EIRP=Antenna power + Antenna Gina

Occupied Channel Bandwidth

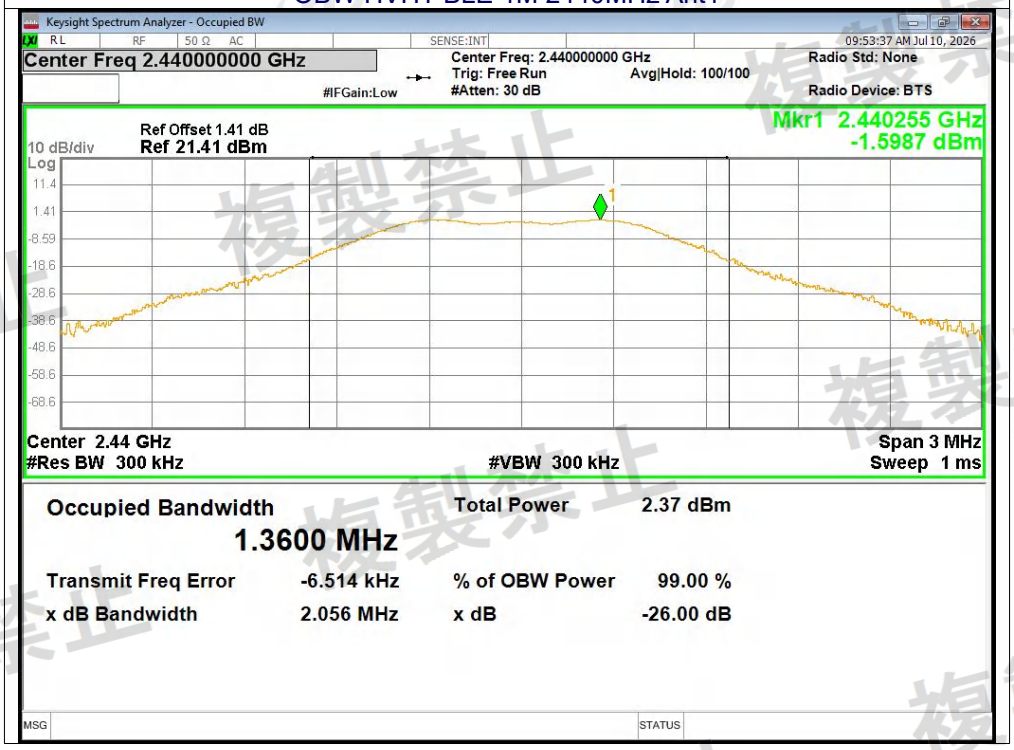
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
BLE 1M	2402	Ant1	1.327
BLE 1M	2440	Ant1	1.36
BLE 1M	2480	Ant1	1.372
BLE 2M	2402	Ant1	2.373
BLE 2M	2440	Ant1	2.423
BLE 2M	2480	Ant1	2.469

Test Graphs

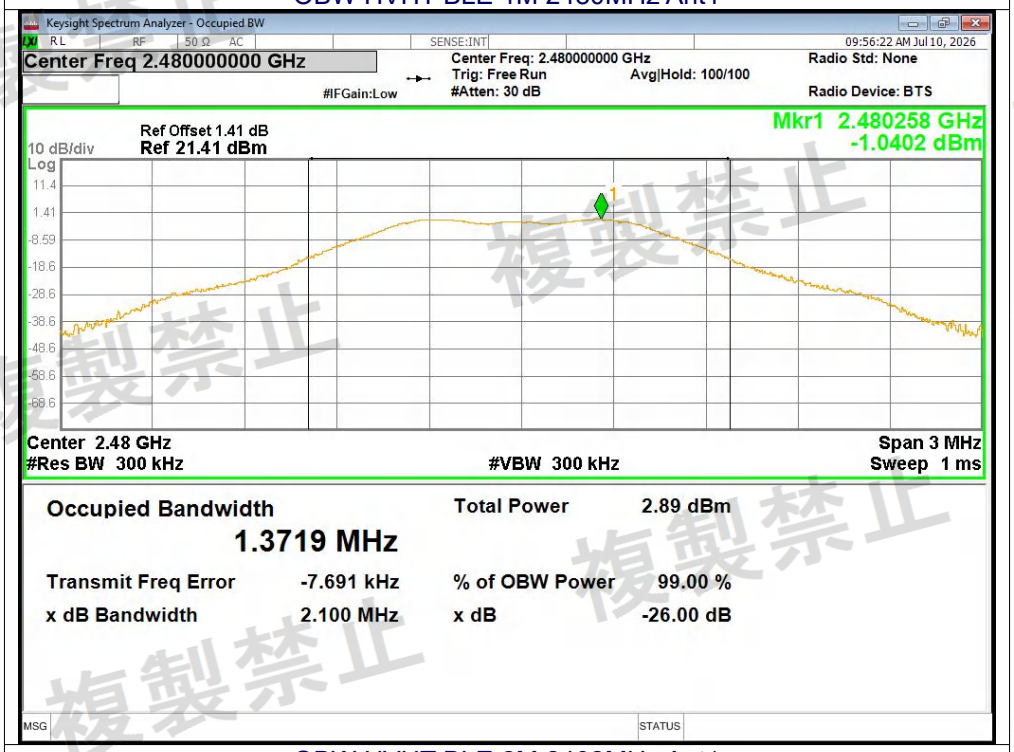
OBW HVHT BLE 1M 2402MHz Ant1



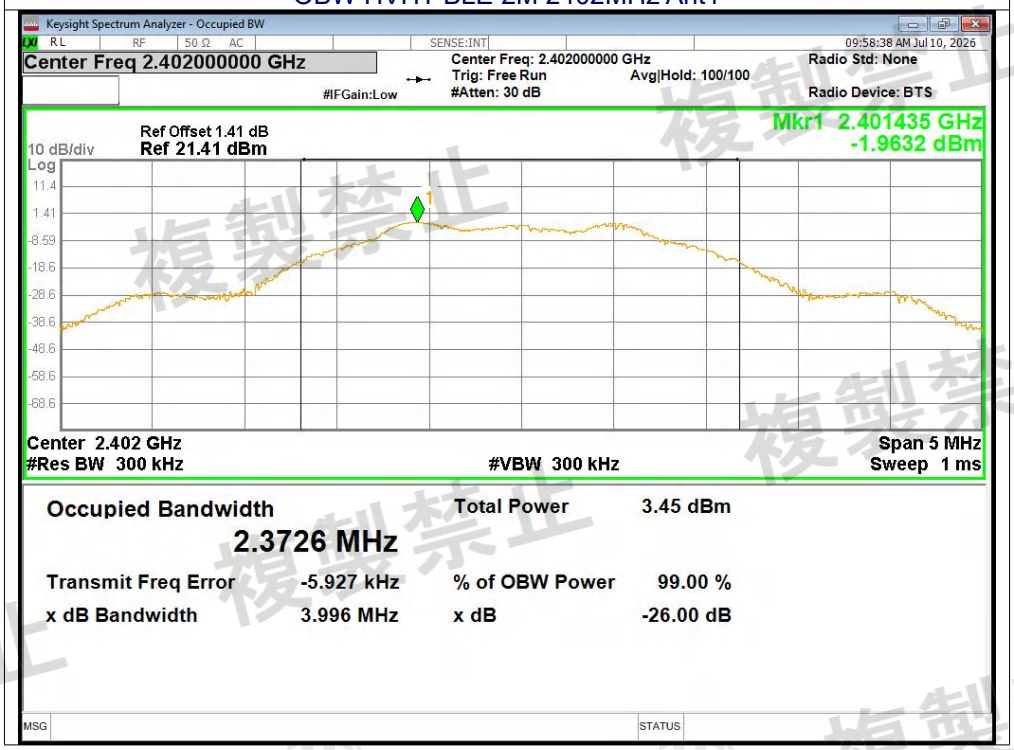
OBW HVHT BLE 1M 2440MHz Ant1



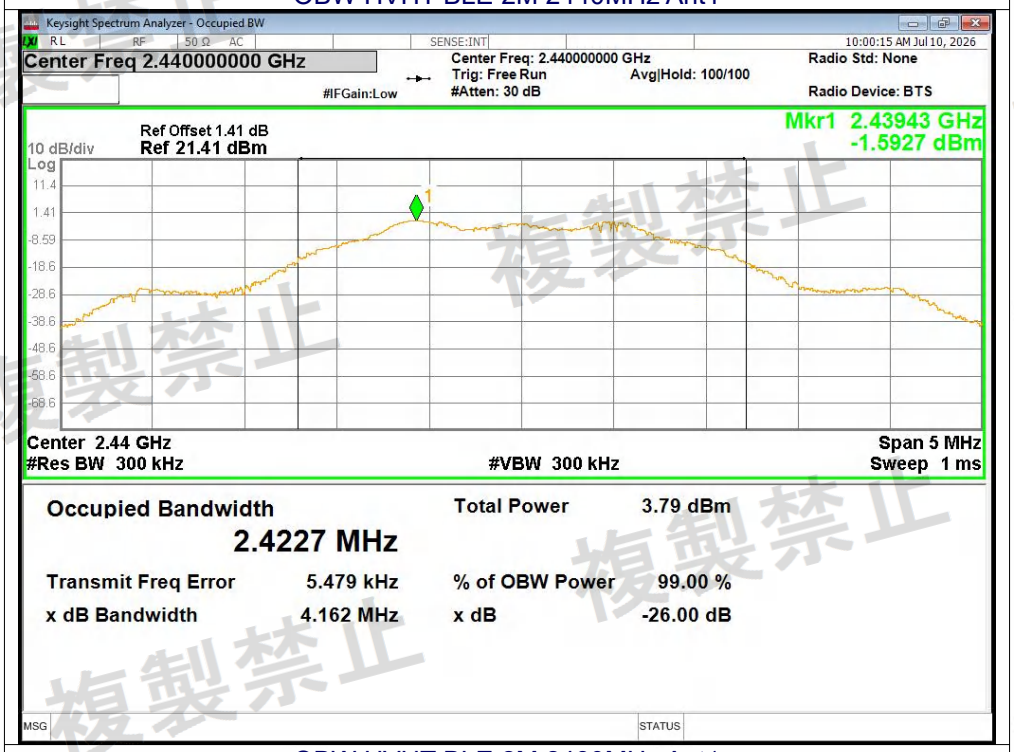
OBW HVHT BLE 1M 2480MHz Ant1



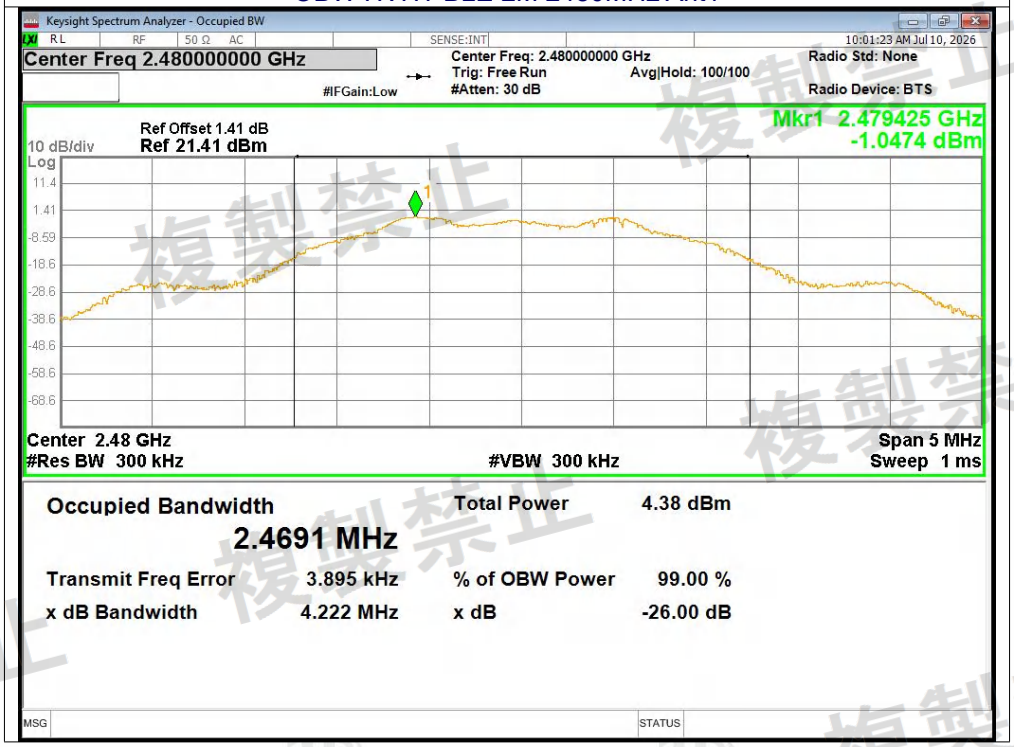
OBW HVHT BLE 2M 2402MHz Ant1



OBW HVHT BLE 2M 2440MHz Ant1



OBW HVHT BLE 2M 2480MHz Ant1

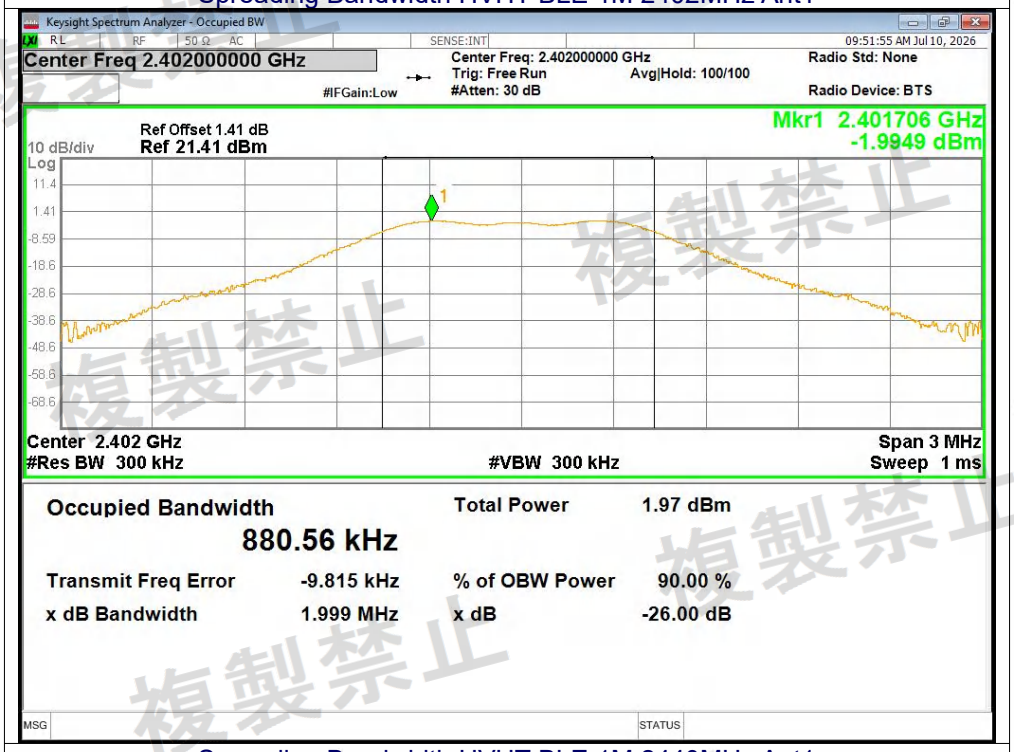


Spreading Bandwidth

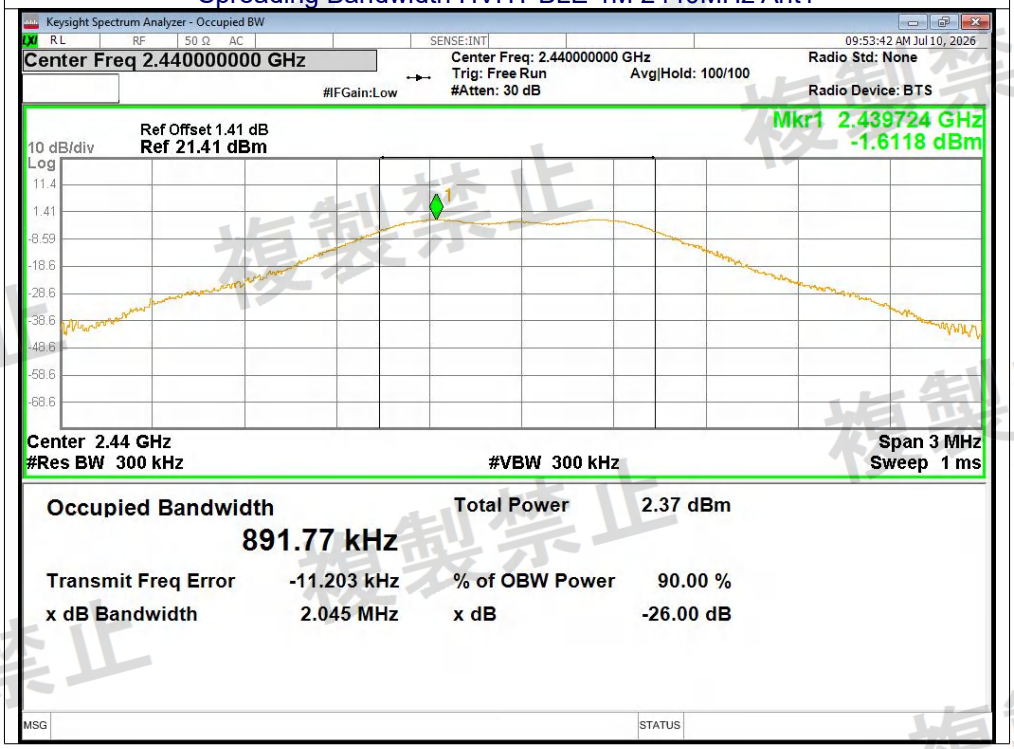
Mode	Frequency (MHz)	Antenna	90% OBW (MHz)	Verdict
BLE 1M	2402	Ant1	0.881	Pass
BLE 1M	2440	Ant1	0.892	Pass
BLE 1M	2480	Ant1	0.895	Pass
BLE 2M	2402	Ant1	1.539	Pass
BLE 2M	2440	Ant1	1.594	Pass
BLE 2M	2480	Ant1	1.63	Pass

Test Graphs

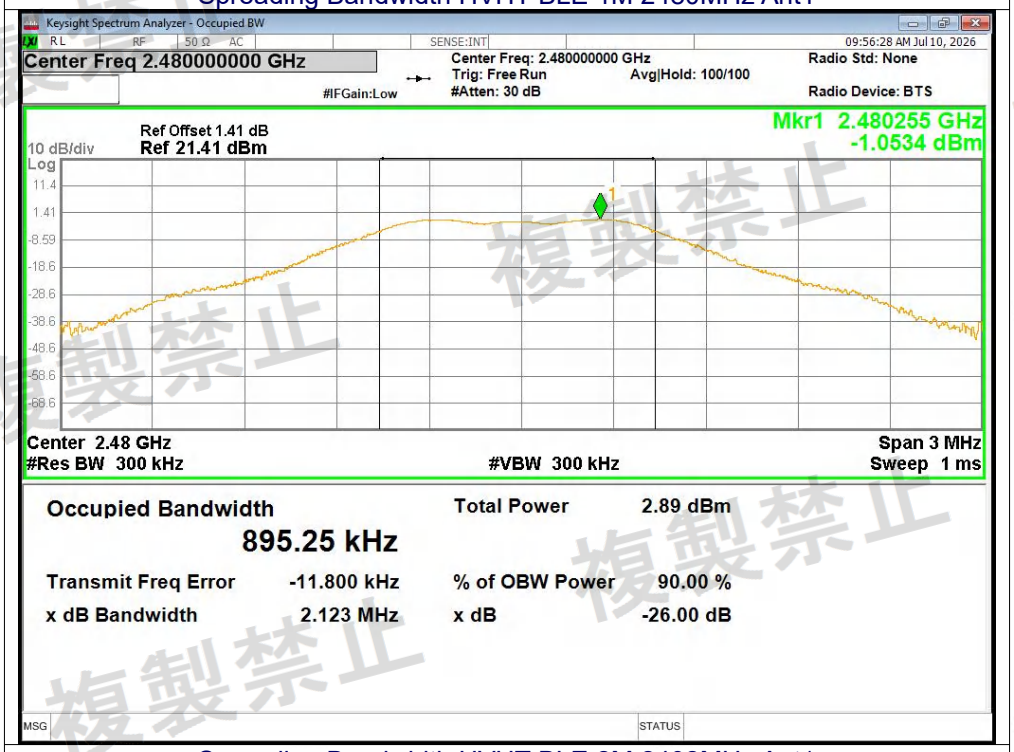
Spreading Bandwidth HVHT BLE 1M 2402MHz Ant1



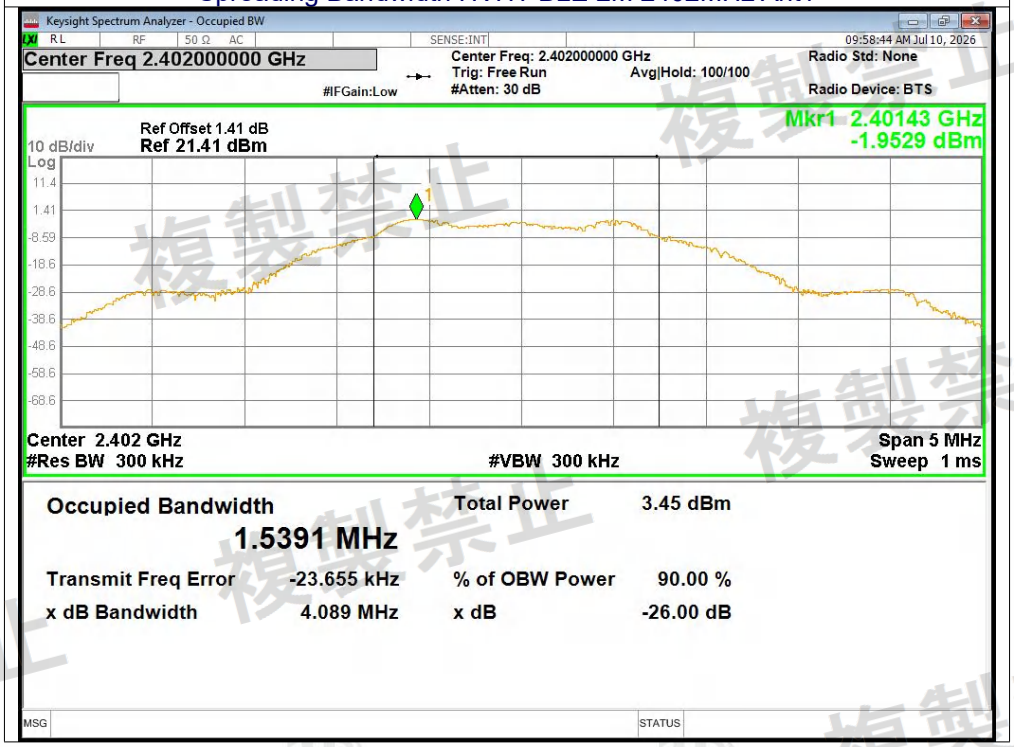
Spreading Bandwidth HVHT BLE 1M 2440MHz Ant1



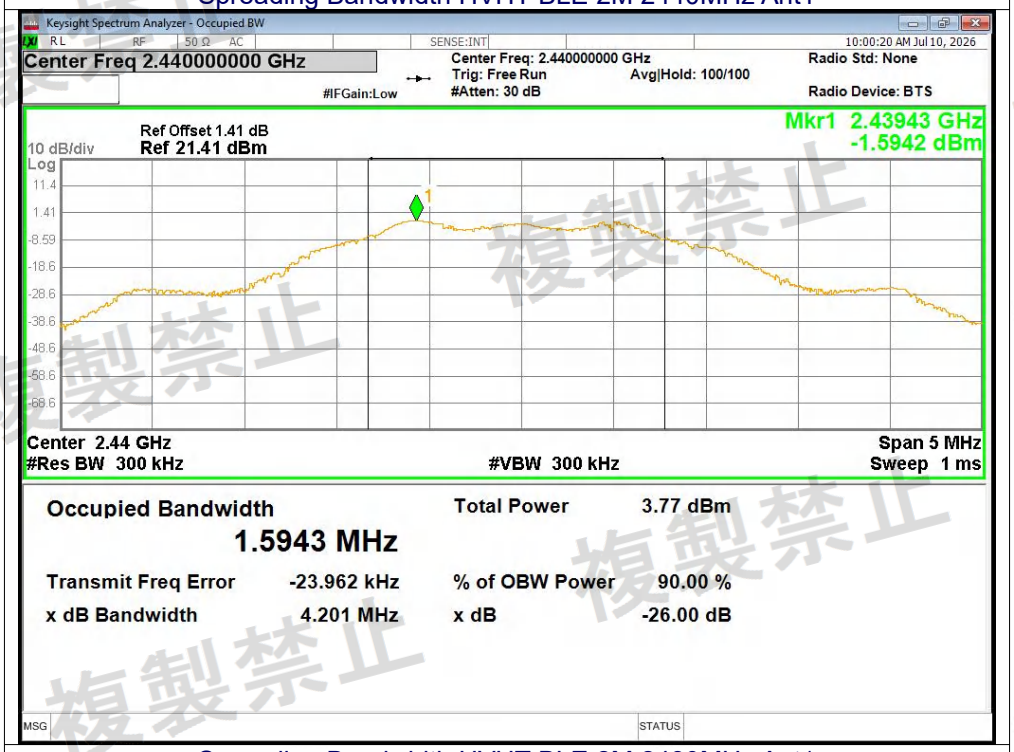
Spreading Bandwidth HVHT BLE 1M 2480MHz Ant1



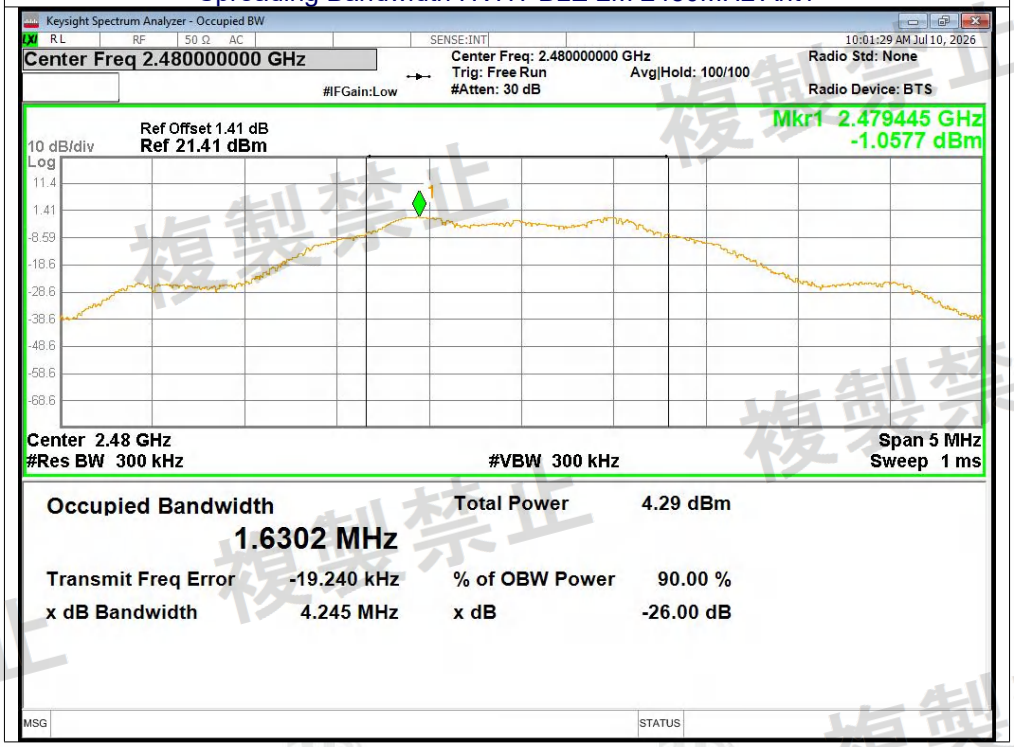
Spreading Bandwidth HVHT BLE 2M 2402MHz Ant1



Spreading Bandwidth HVHT BLE 2M 2440MHz Ant1



Spreading Bandwidth HVHT BLE 2M 2480MHz Ant1



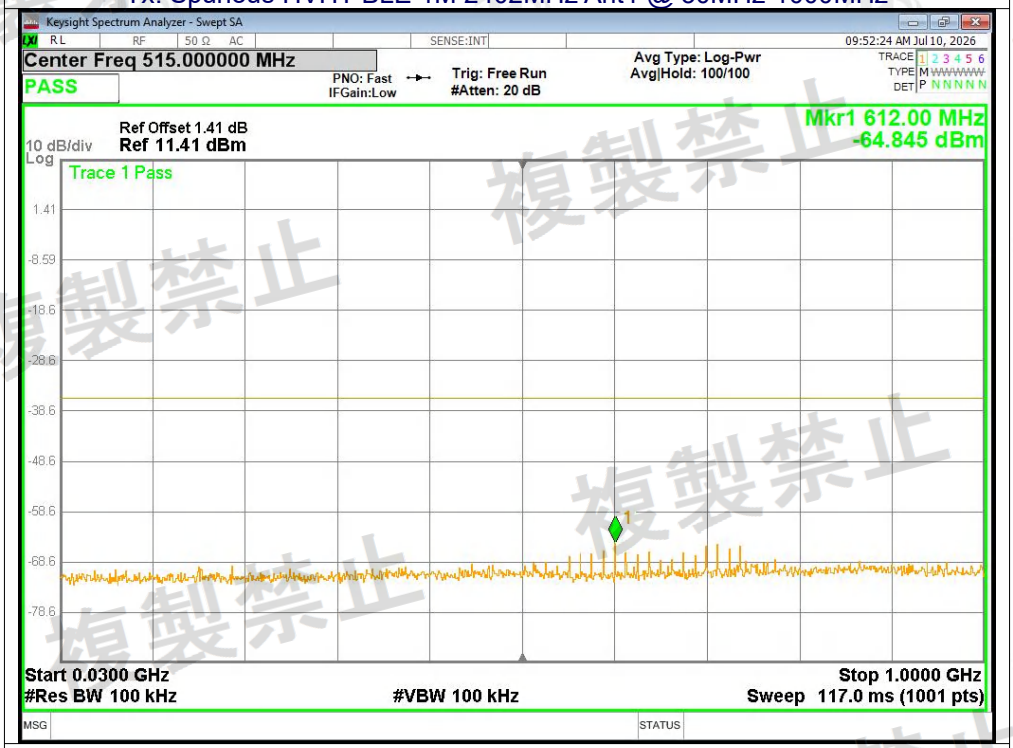
Tx Spurious Emission

Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm/MHz)	Max Value (uW/MHz)	Limit Stop (dBm/MHz)	Limit Stop (uW/MHz)	Verdict
BLE 1M	2402	Ant1	30-1000	612	-54.85	0.003	-26	2.5	Pass
BLE 1M	2402	Ant1	1000-2387	2385.61	-51.27	0.007	-26	2.5	Pass
BLE 1M	2402	Ant1	2387-2400	2400	-33.98	0.400	-16	25	Pass
BLE 1M	2402	Ant1	2483.5-2496.5	2493.63	-57.65	0.002	-16	25	Pass
BLE 1M	2402	Ant1	2496.5-13000	4807.27	-42.25	0.060	-26	2.5	Pass
BLE 1M	2440	Ant1	30-1000	732.28	-54.04	0.004	-26	2.5	Pass
BLE 1M	2440	Ant1	1000-2387	1567.28	-57.19	0.002	-26	2.5	Pass
BLE 1M	2440	Ant1	2387-2400	2392.98	-56.3	0.002	-16	25	Pass
BLE 1M	2440	Ant1	2483.5-2496.5	2485.42	-55.97	0.003	-16	25	Pass
BLE 1M	2440	Ant1	2496.5-13000	4880.79	-43.2	0.048	-26	2.5	Pass
BLE 1M	2480	Ant1	30-1000	719.67	-54.06	0.004	-26	2.5	Pass
BLE 1M	2480	Ant1	1000-2387	2385.61	-57.98	0.002	-26	2.5	Pass
BLE 1M	2480	Ant1	2387-2400	2387.49	-58.96	0.001	-16	25	Pass
BLE 1M	2480	Ant1	2483.5-2496.5	2483.51	-37.3	0.186	-16	25	Pass
BLE 1M	2480	Ant1	2496.5-13000	12401.3	-41.89	0.065	-26	2.5	Pass
BLE 2M	2402	Ant1	30-1000	708.03	-54.09	0.004	-26	2.5	Pass
BLE 2M	2402	Ant1	1000-2387	2384.23	-49.64	0.011	-26	2.5	Pass
BLE 2M	2402	Ant1	2387-2400	2400	-20.18	9.594	-16	25	Pass
BLE 2M	2402	Ant1	2483.5-2496.5	2493.12	-57.66	0.002	-16	25	Pass
BLE 2M	2402	Ant1	2496.5-13000	4807.27	-42.43	0.057	-26	2.5	Pass
BLE 2M	2440	Ant1	30-1000	719.67	-54.07	0.004	-26	2.5	Pass
BLE 2M	2440	Ant1	1000-2387	1416.1	-57.47	0.002	-26	2.5	Pass
BLE 2M	2440	Ant1	2387-2400	2397.74	-56.08	0.002	-16	25	Pass
BLE 2M	2440	Ant1	2483.5-2496.5	2485.05	-57.51	0.002	-16	25	Pass
BLE 2M	2440	Ant1	2496.5-13000	4880.79	-44.26	0.037	-26	2.5	Pass
BLE 2M	2480	Ant1	30-1000	732.28	-54.63	0.003	-26	2.5	Pass
BLE 2M	2480	Ant1	1000-2387	2238.59	-57.79	0.002	-26	2.5	Pass
BLE 2M	2480	Ant1	2387-2400	2388.14	-58.11	0.002	-16	25	Pass
BLE 2M	2480	Ant1	2483.5-2496.5	2483.51	-37.68	0.171	-16	25	Pass
BLE 2M	2480	Ant1	2496.5-13000	12401.3	-41.45	0.072	-26	2.5	Pass

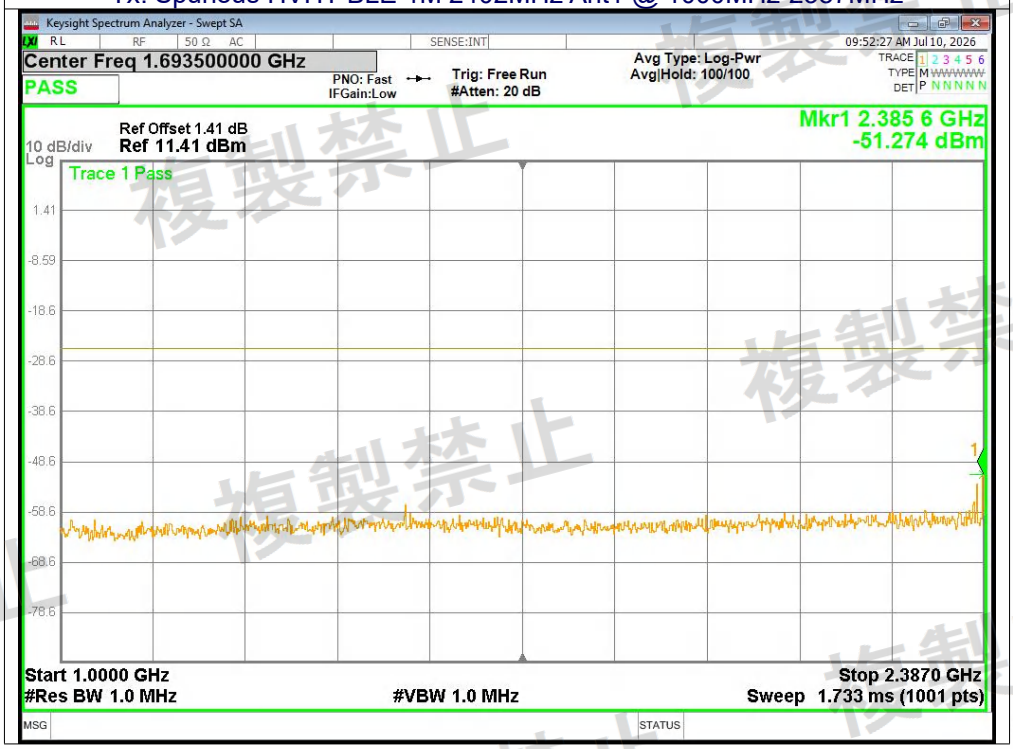
Note: For 30-1000MHz, the final values (dBm/MHz)= test value (dBm/100kHz)+10*log(1000kHz/100kHz)

Test Graphs

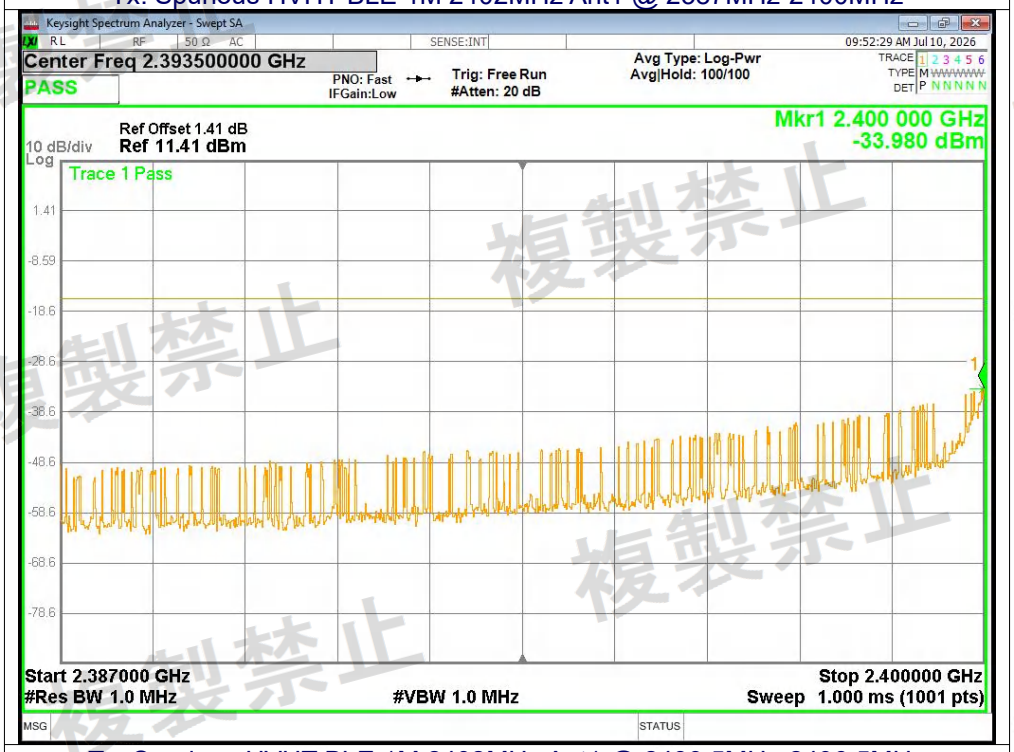
Tx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



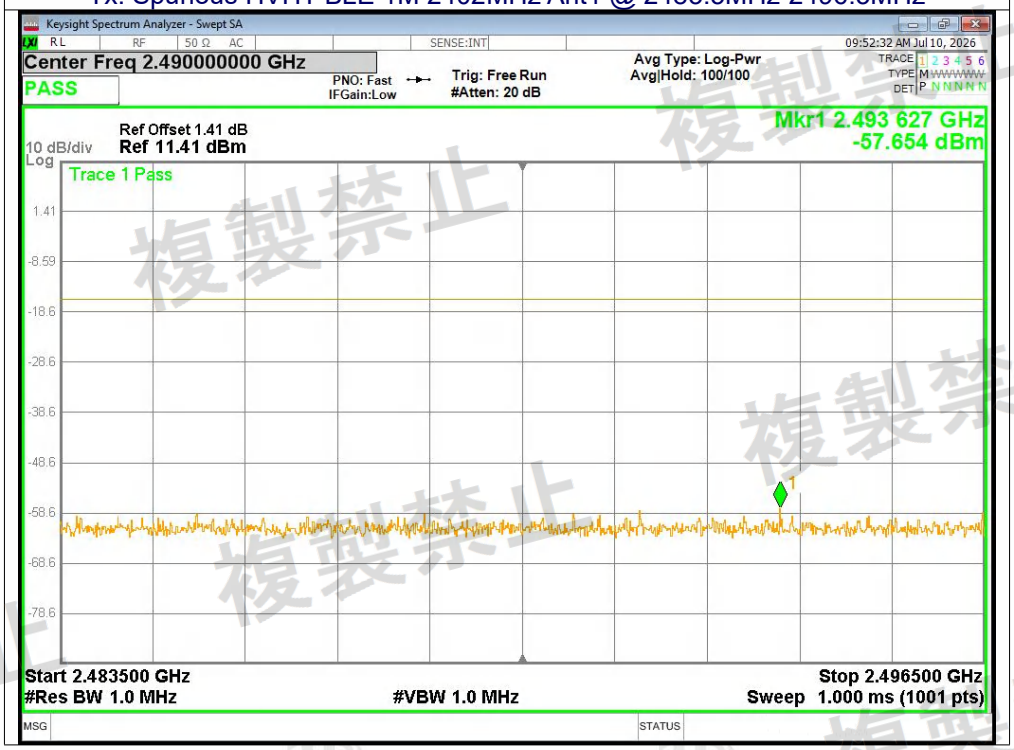
Tx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 1000MHz-2387MHz



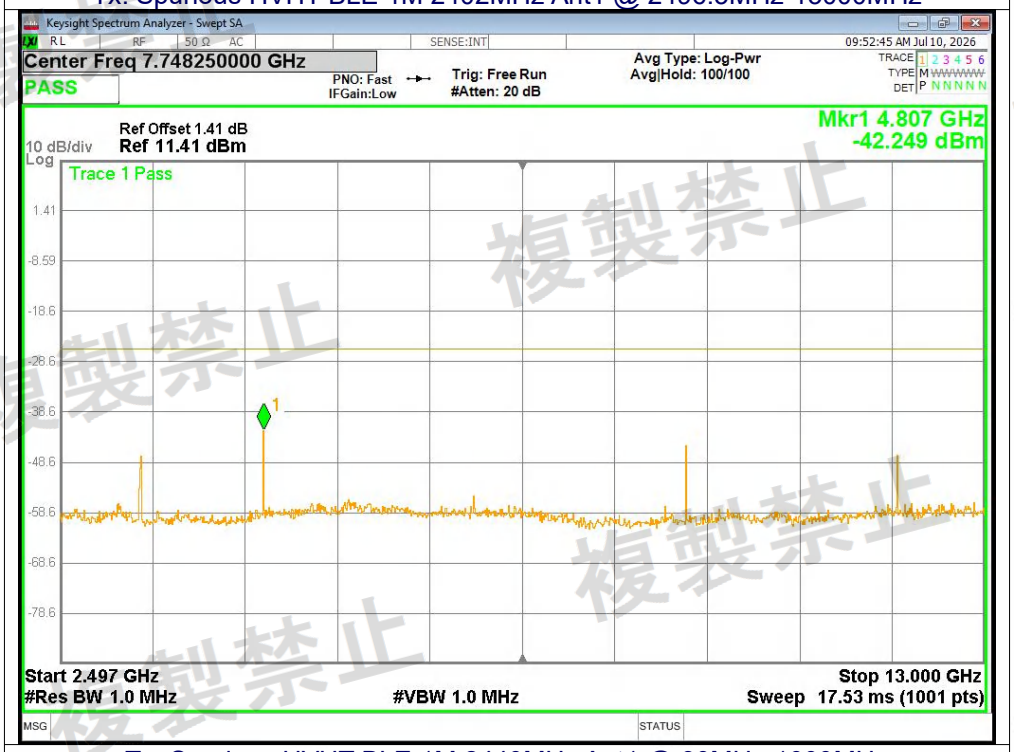
Tx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 2387MHz-2400MHz



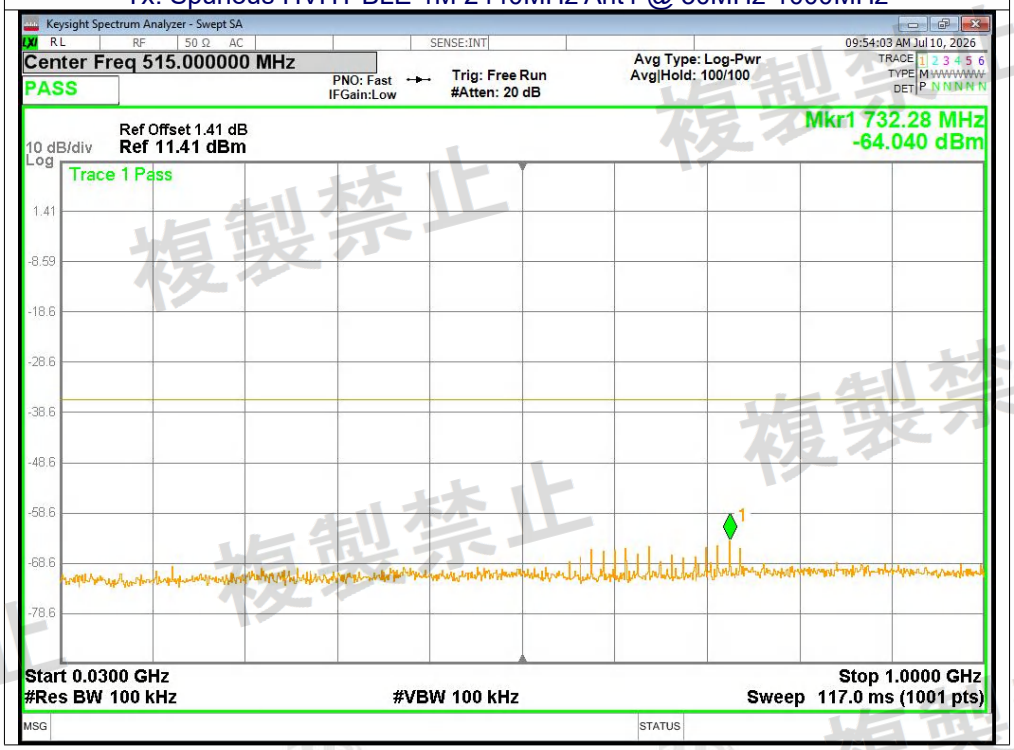
Tx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



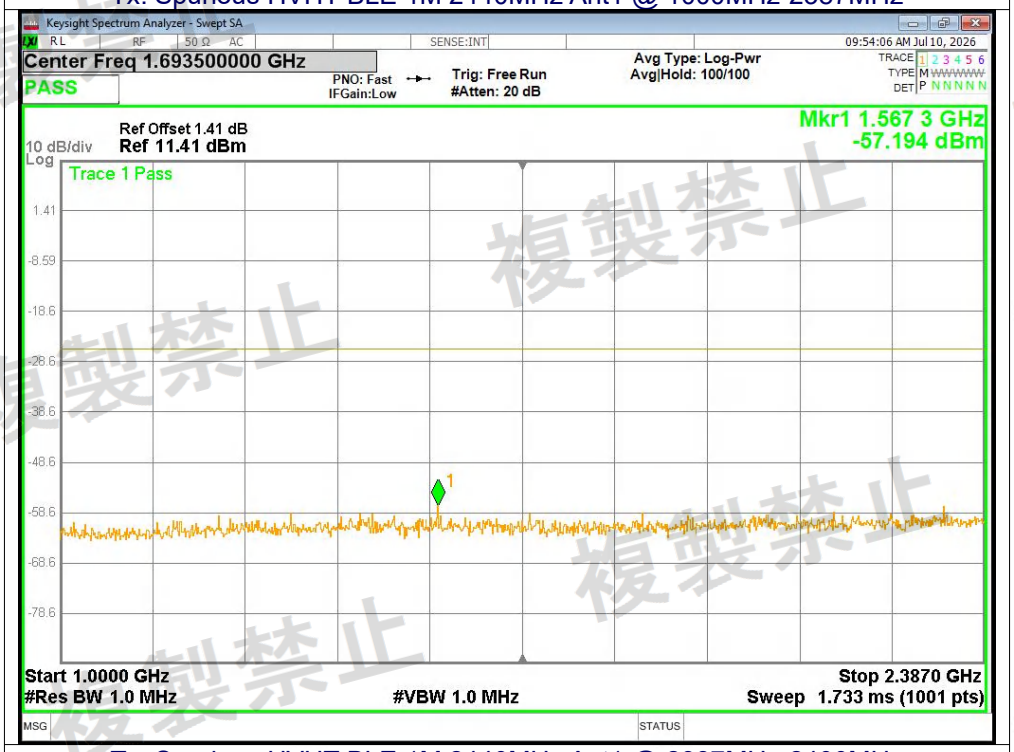
Tx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 2496.5MHz-13000MHz



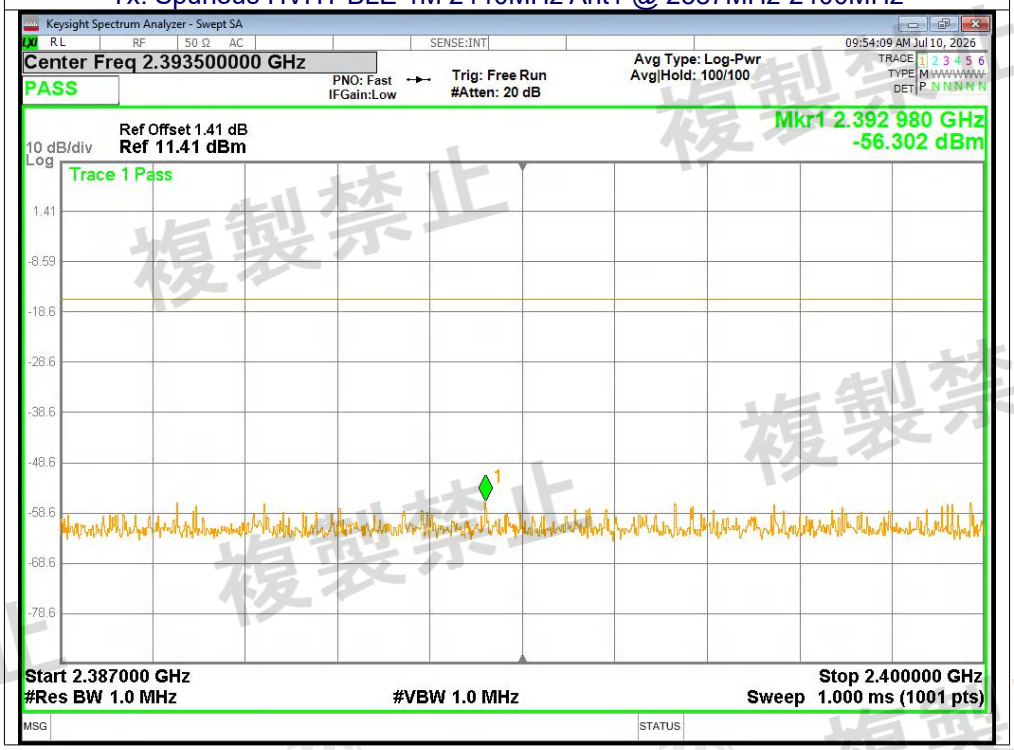
Tx. Spurious HVHT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



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



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



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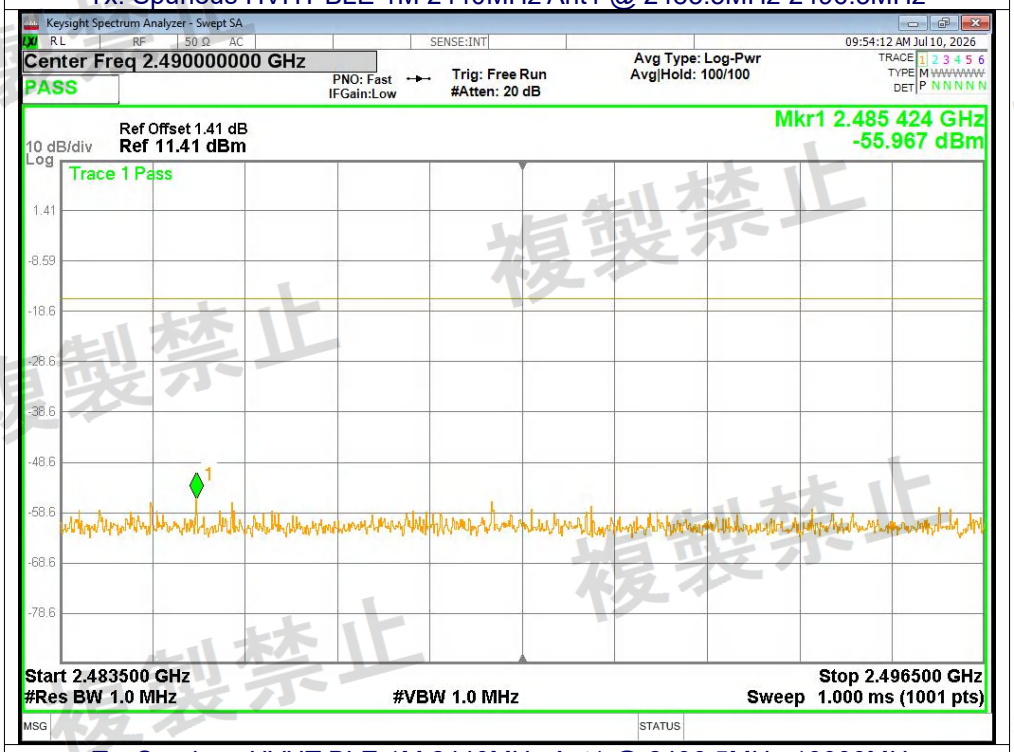
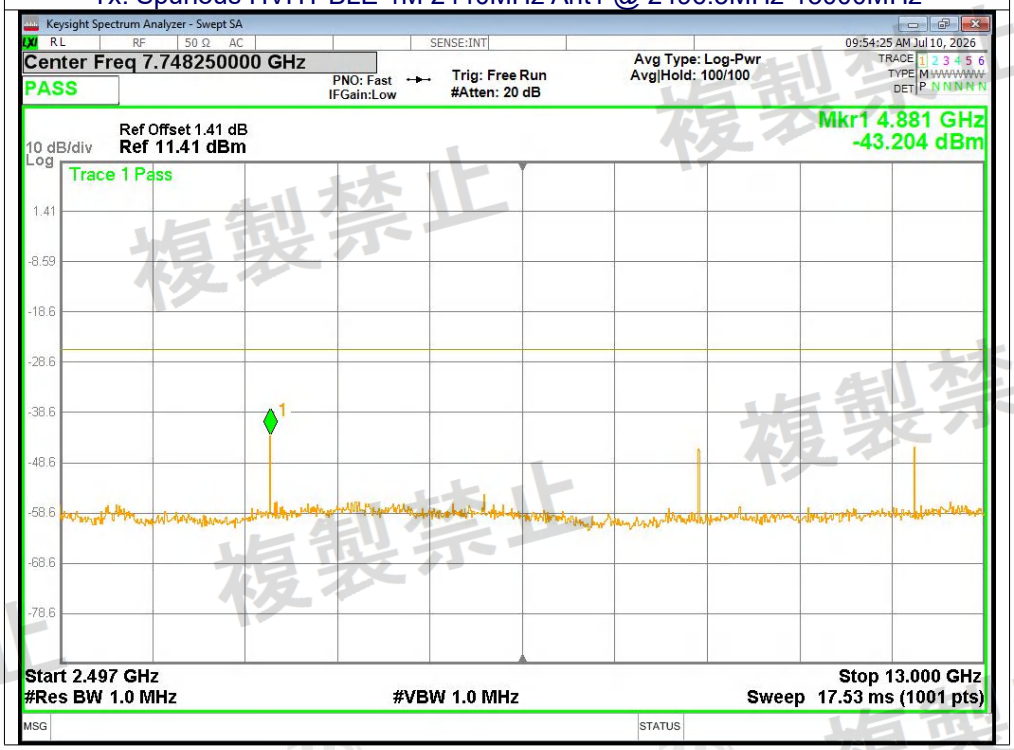
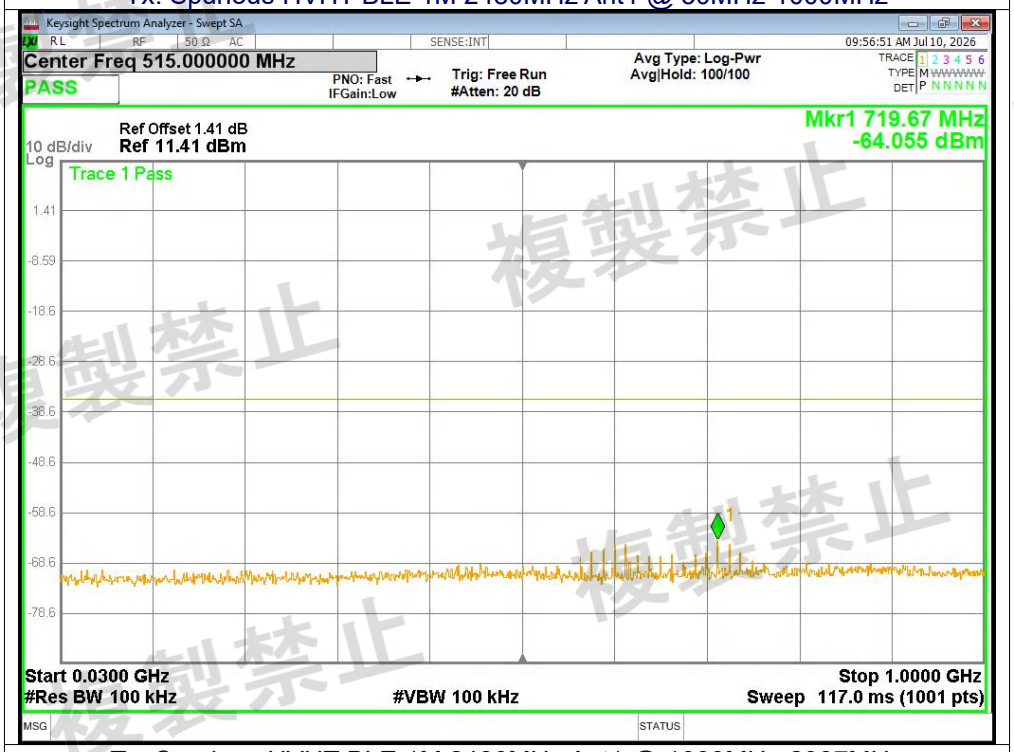


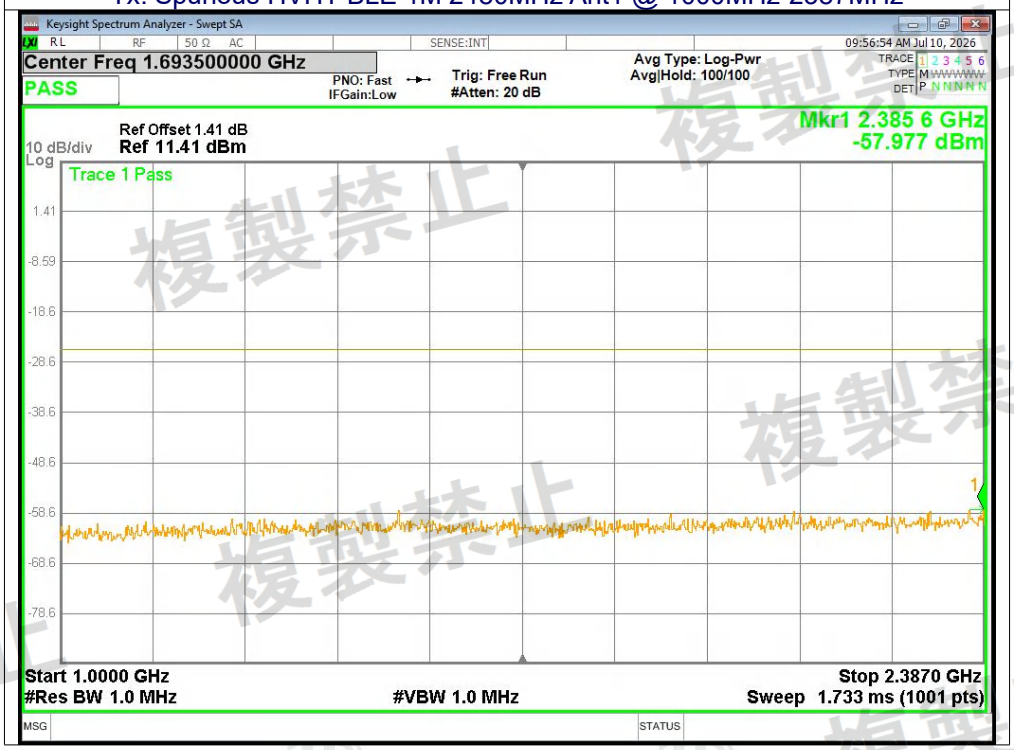
Tx. Spurious HVHT BLE 1M 2440MHz Ant1 @ 2496.5MHz-13000MHz



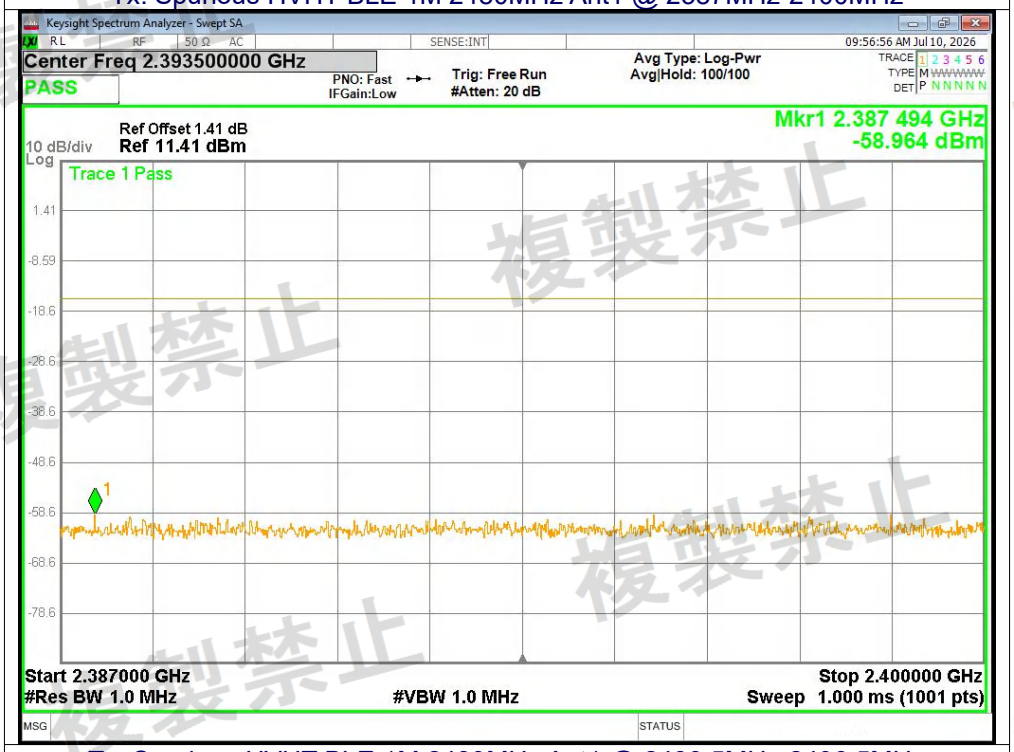
Tx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



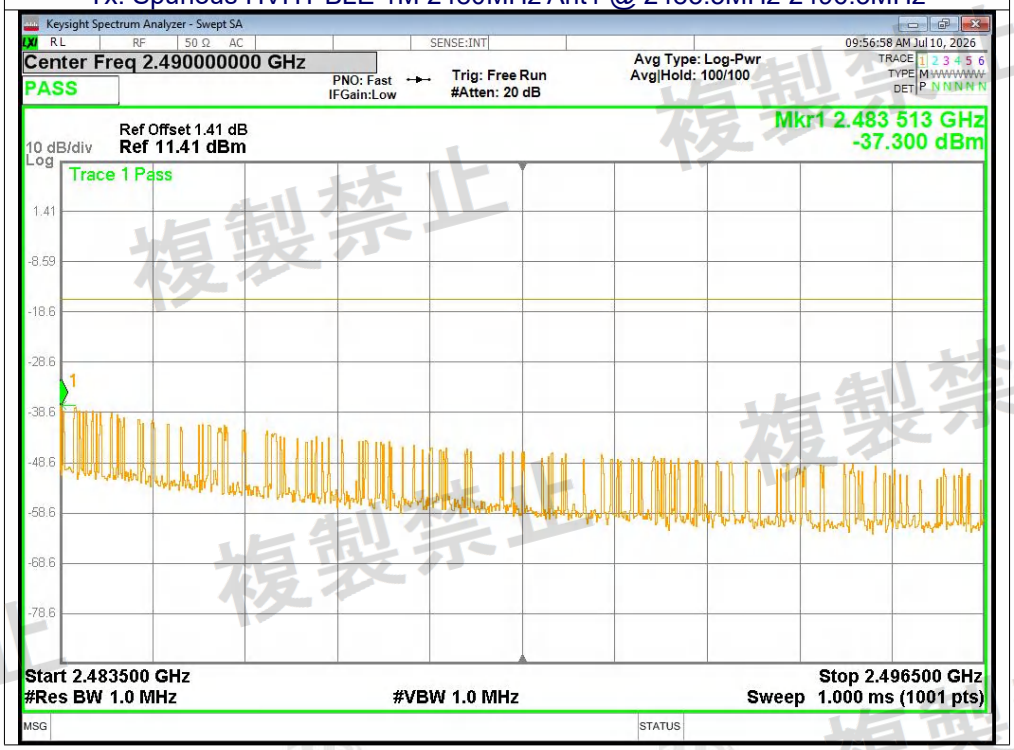
Tx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 1000MHz-2387MHz



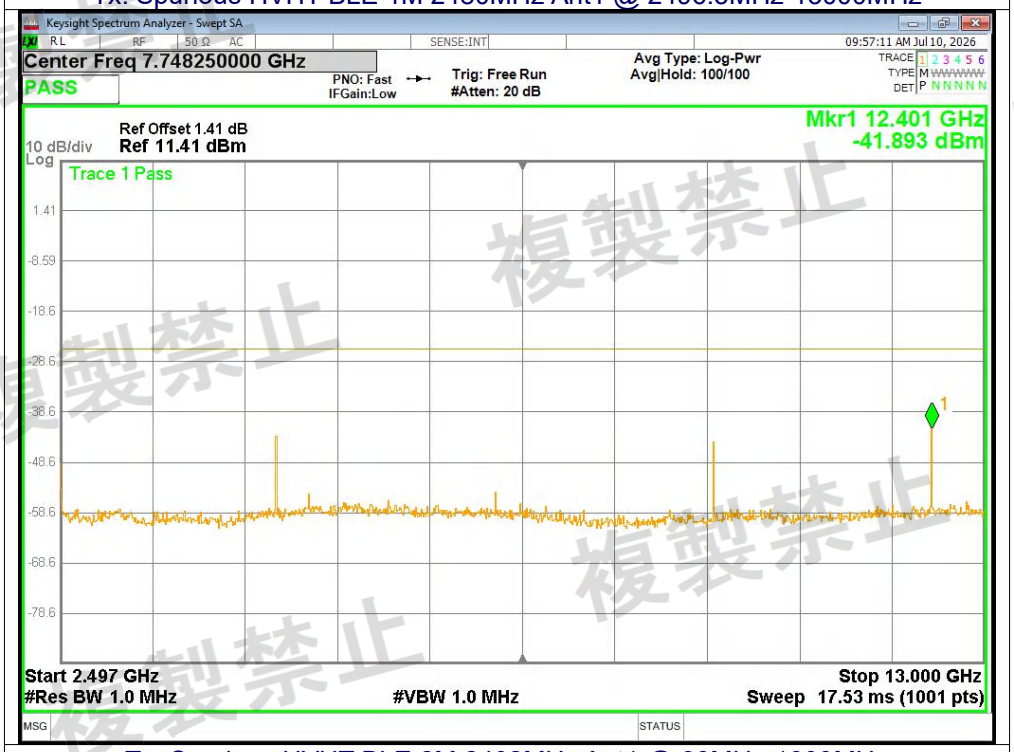
Tx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 2387MHz-2400MHz



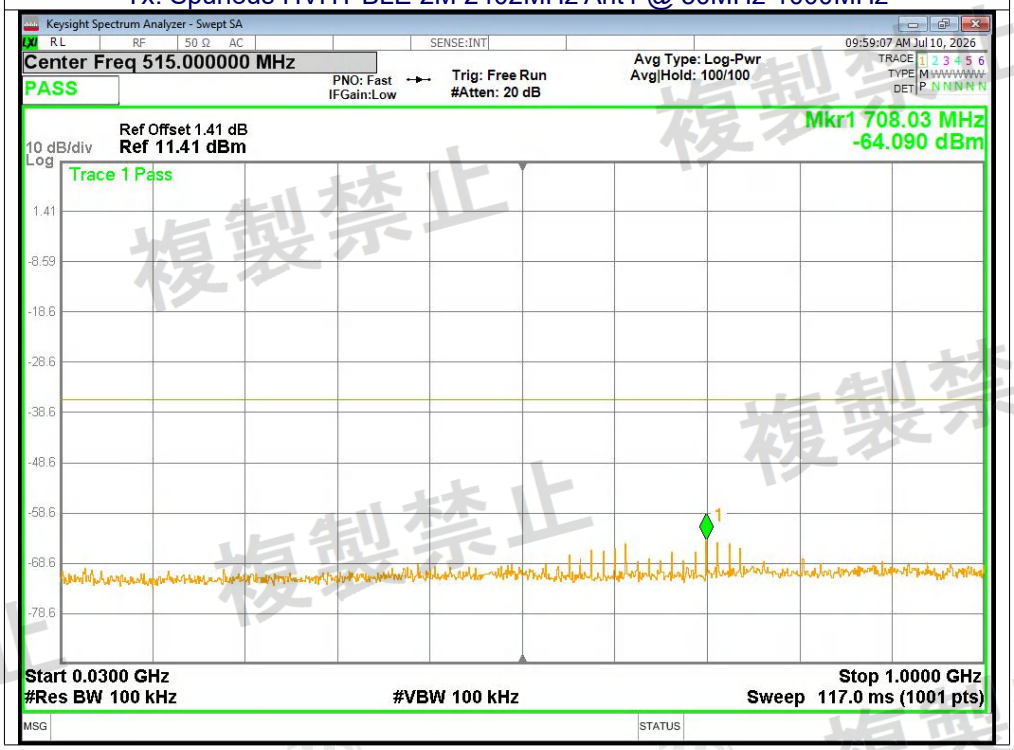
Tx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 2483.5MHz-2496.5MHz



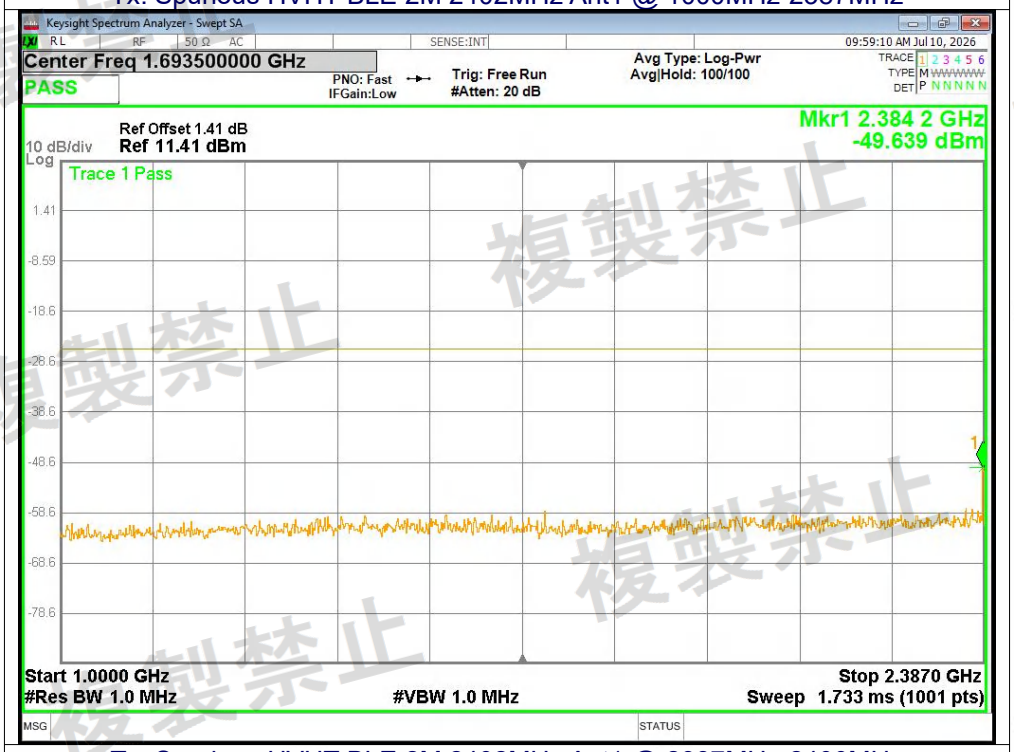
Tx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 2496.5MHz-13000MHz



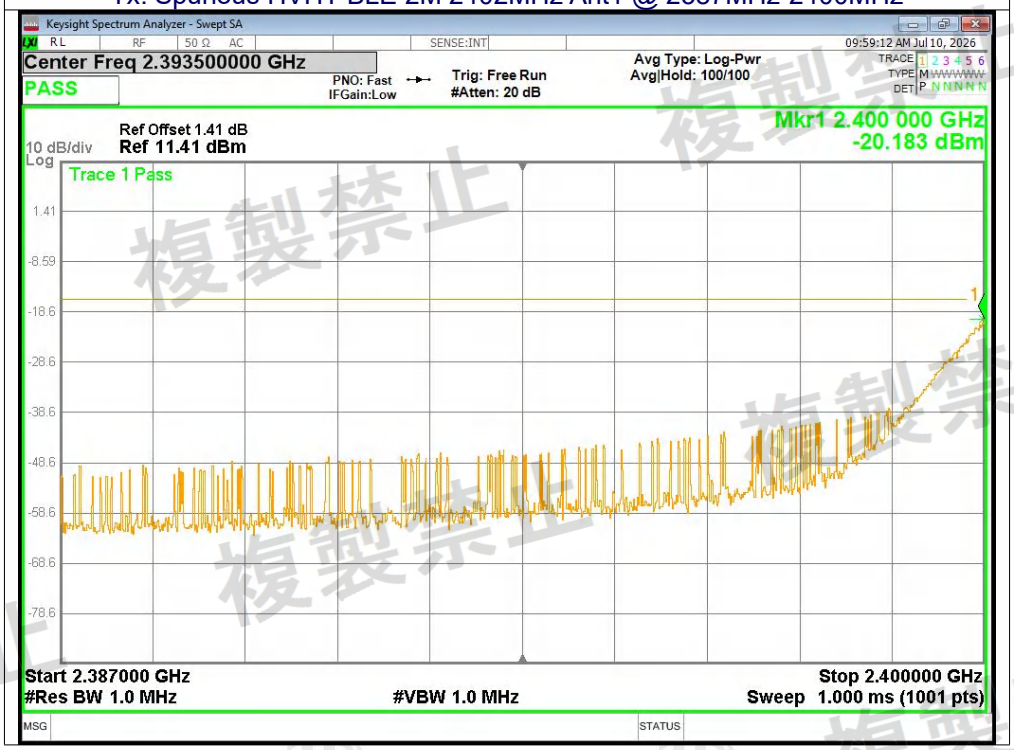
Tx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



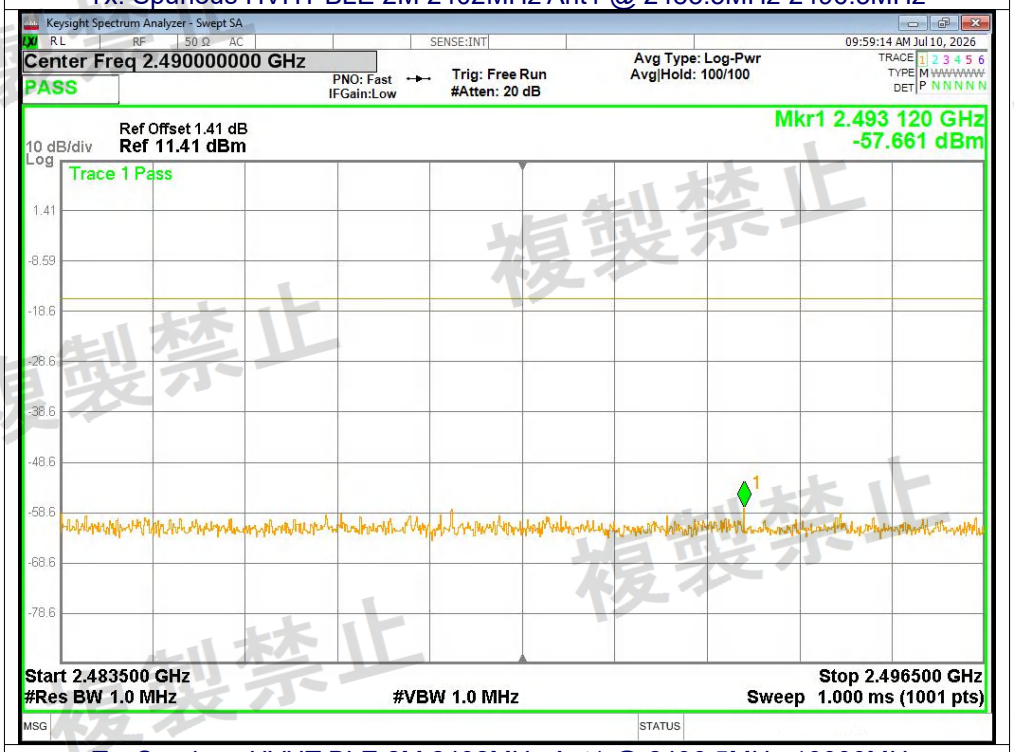
Tx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 1000MHz-2387MHz



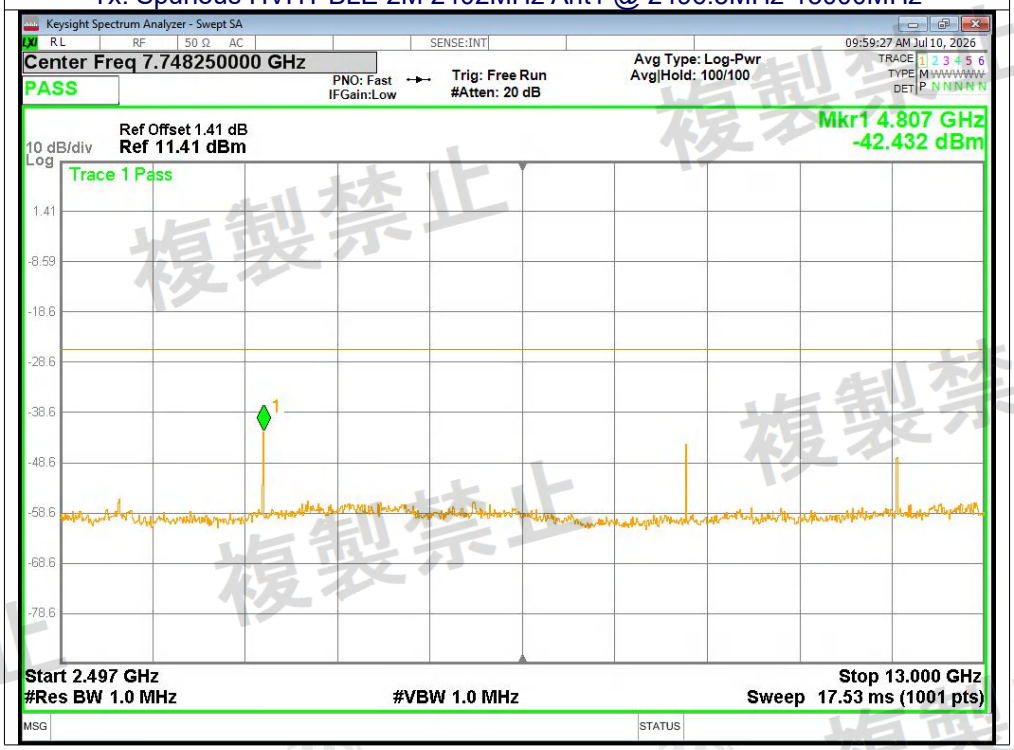
Tx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 2387MHz-2400MHz



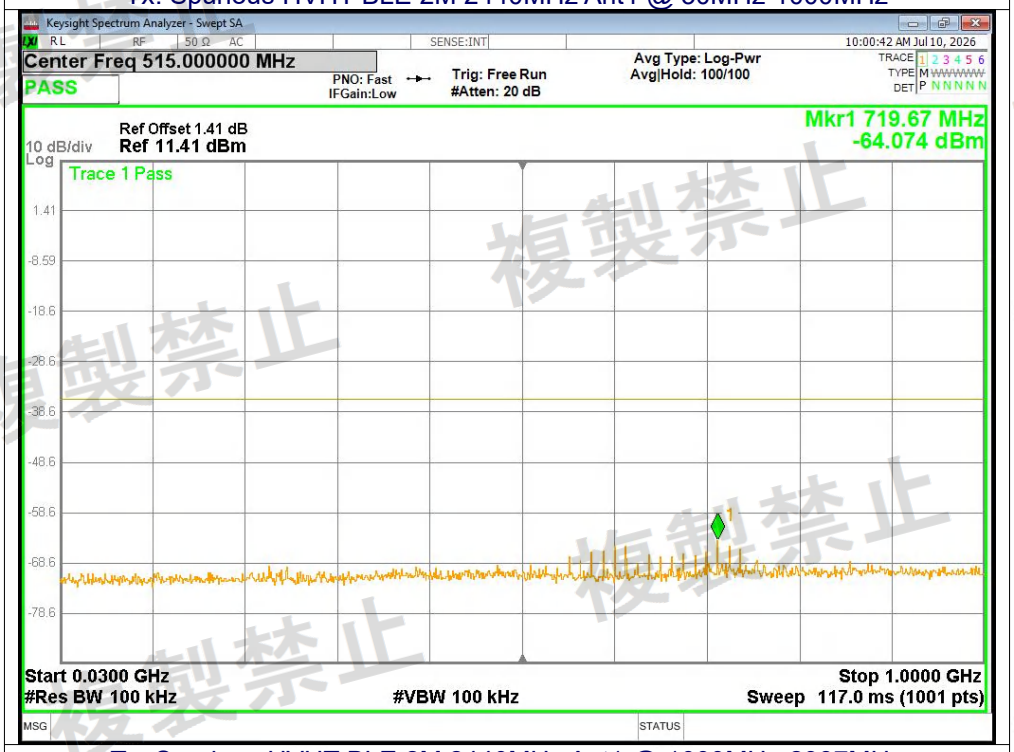
Tx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 2483.5MHz-2496.5MHz



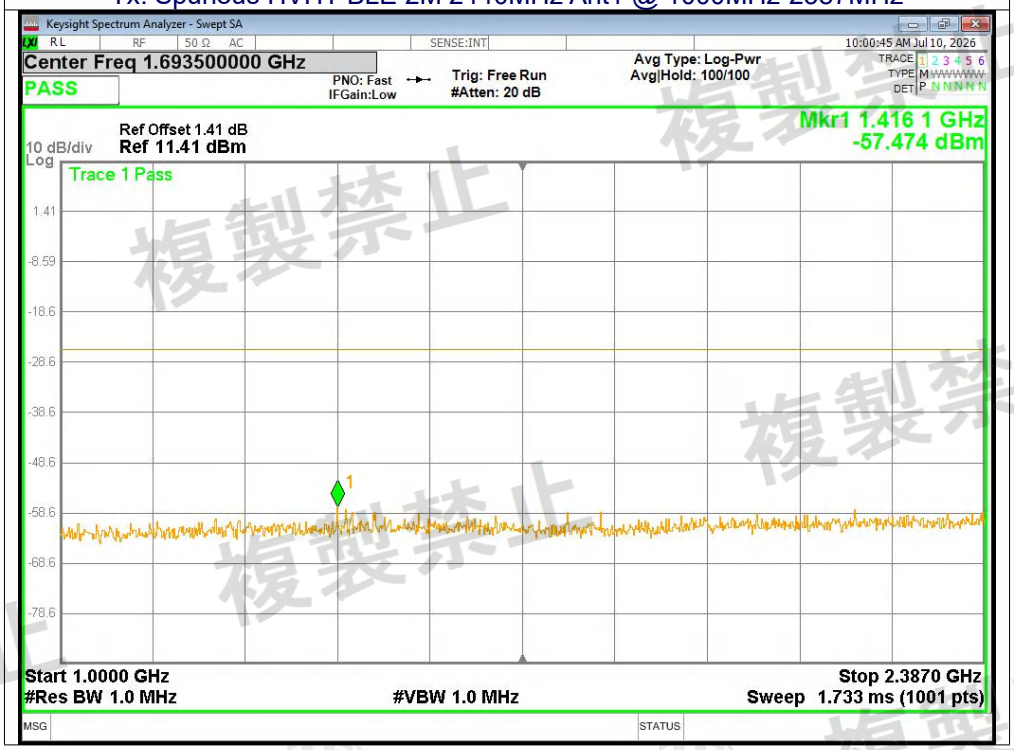
Tx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 2496.5MHz-13000MHz



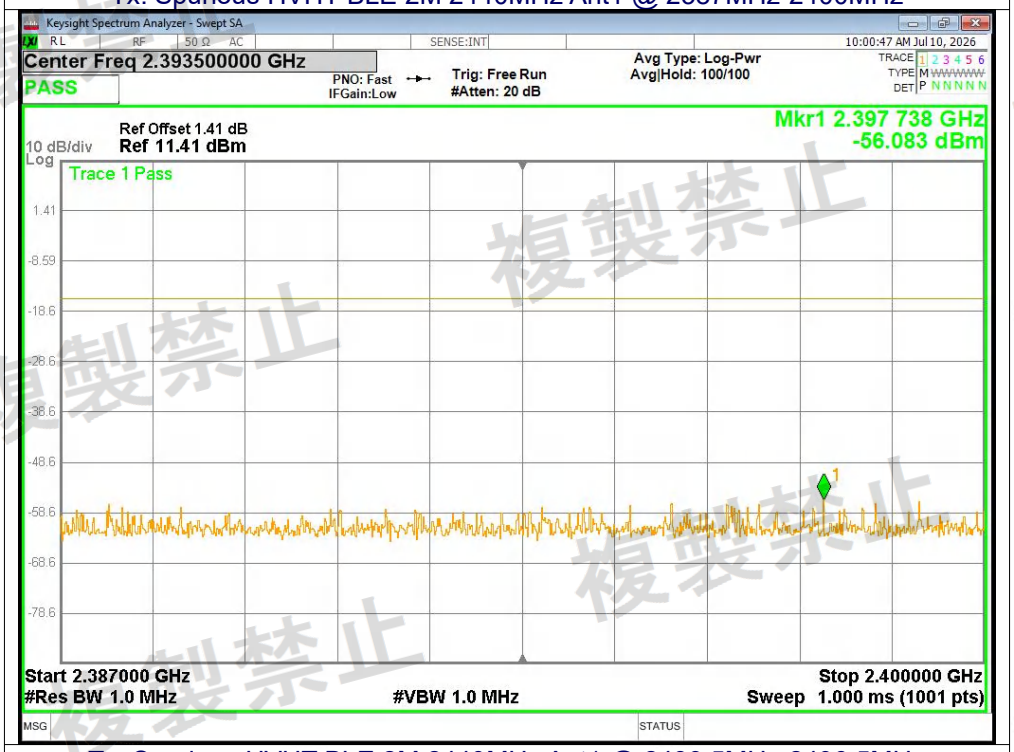
Tx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



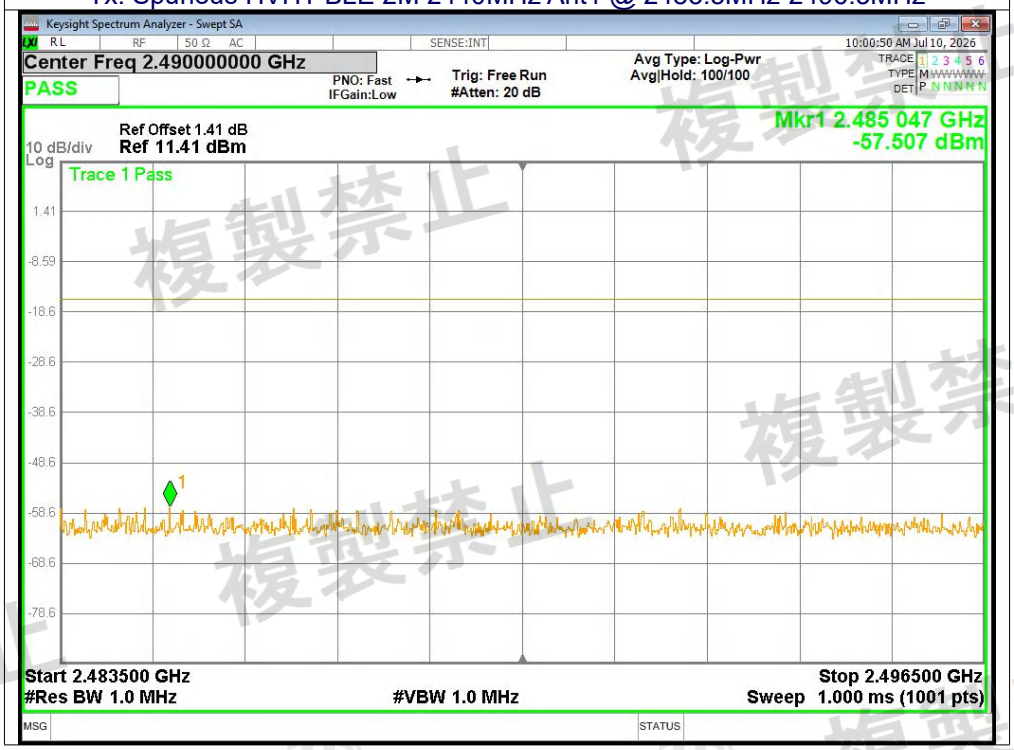
Tx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 1000MHz-2387MHz



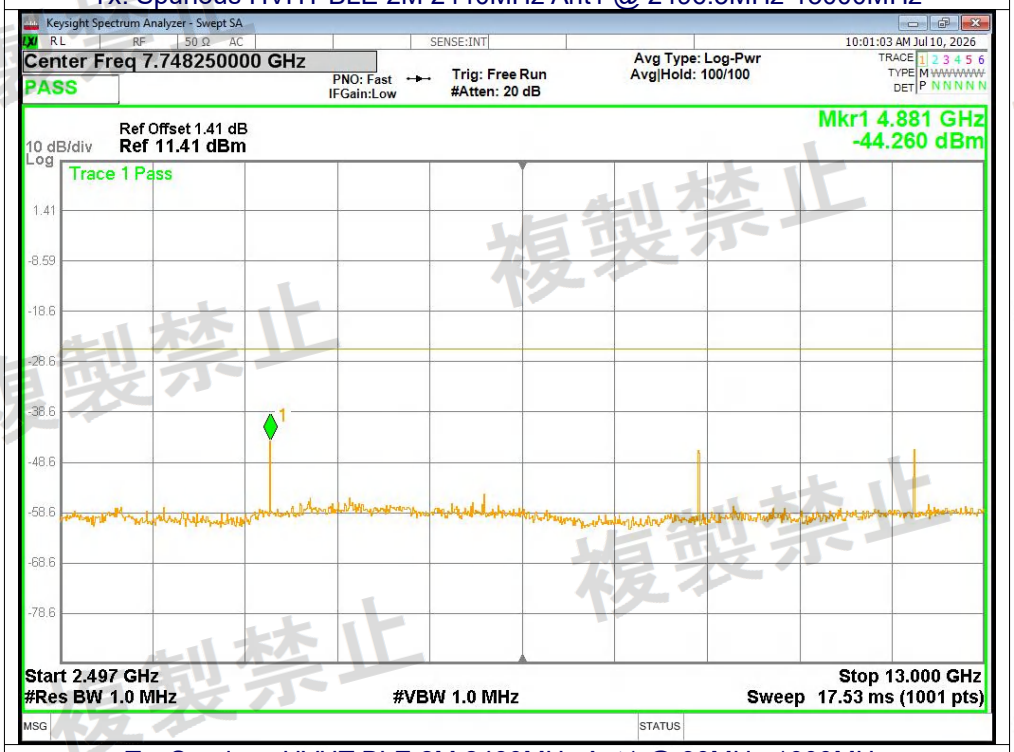
Tx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 2387MHz-2400MHz



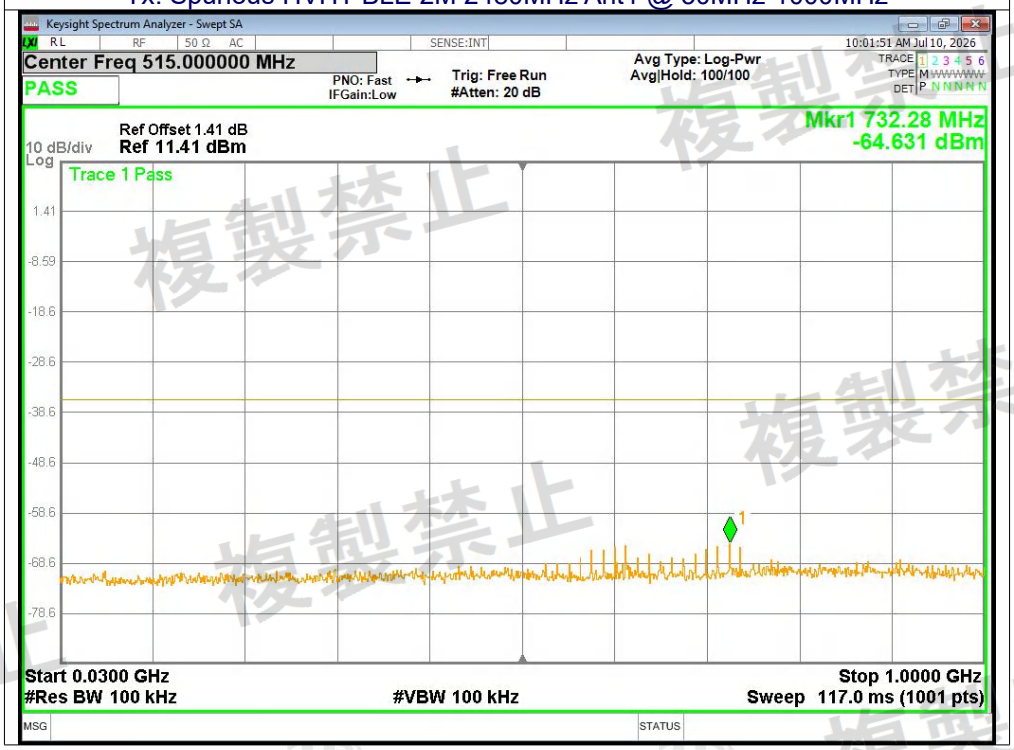
Tx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 2483.5MHz-2496.5MHz



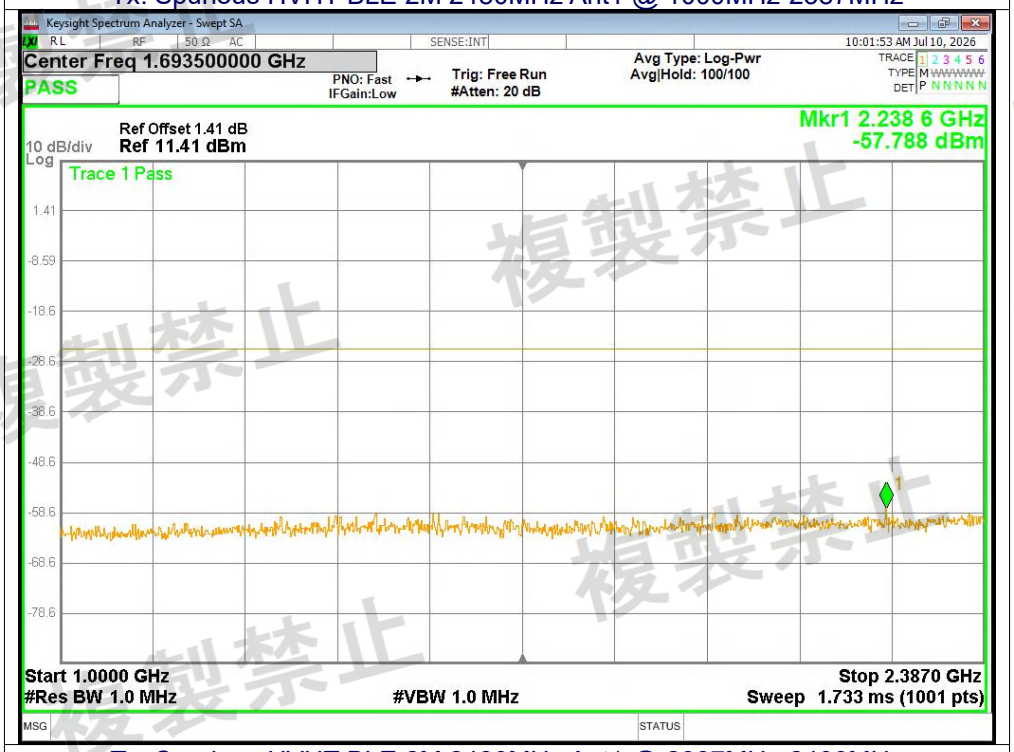
Tx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 2496.5MHz-13000MHz



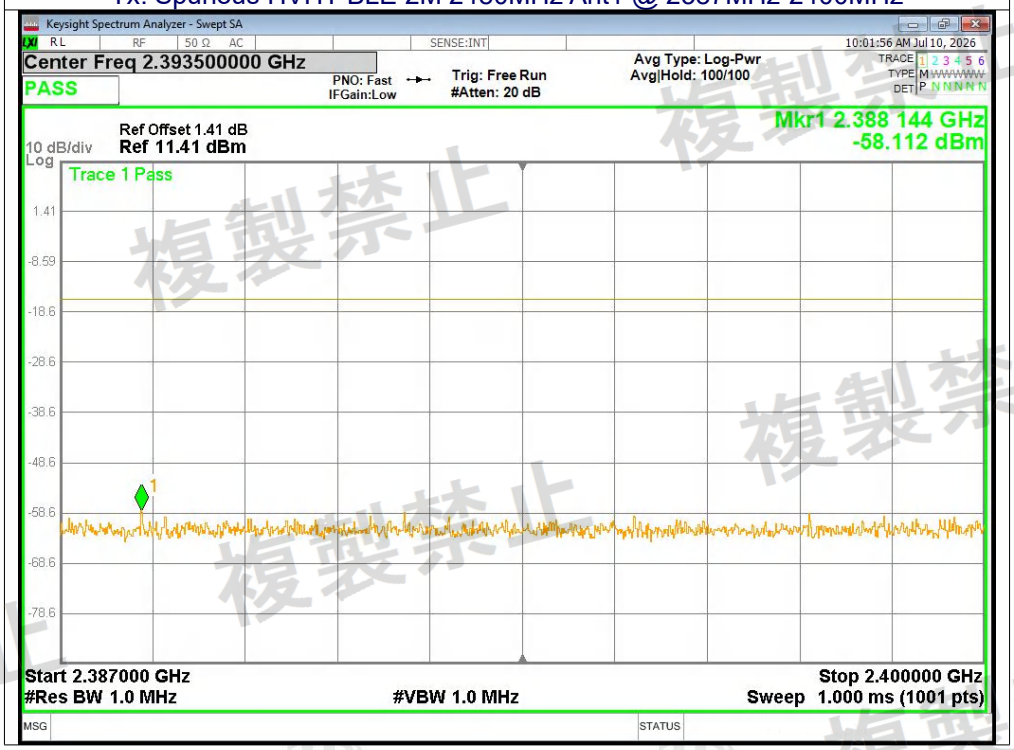
Tx. Spurious HVHT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



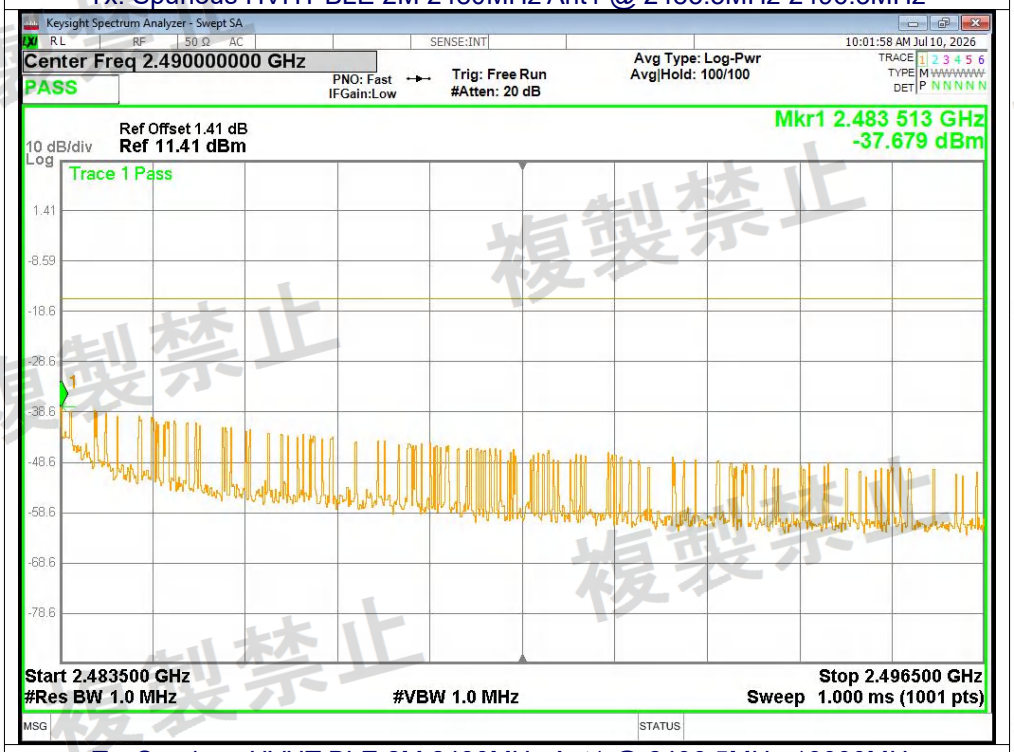
Tx. Spurious HVHT BLE 2M 2480MHz Ant1 @ 1000MHz-2387MHz



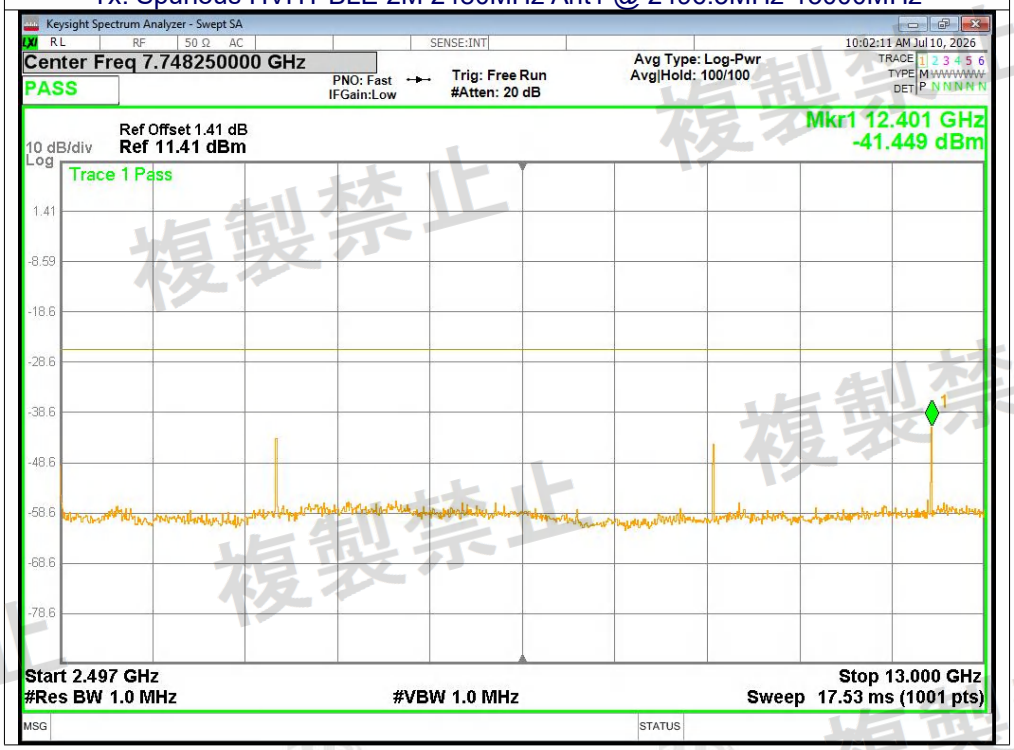
Tx. Spurious HVHT BLE 2M 2480MHz Ant1 @ 2387MHz-2400MHz



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



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

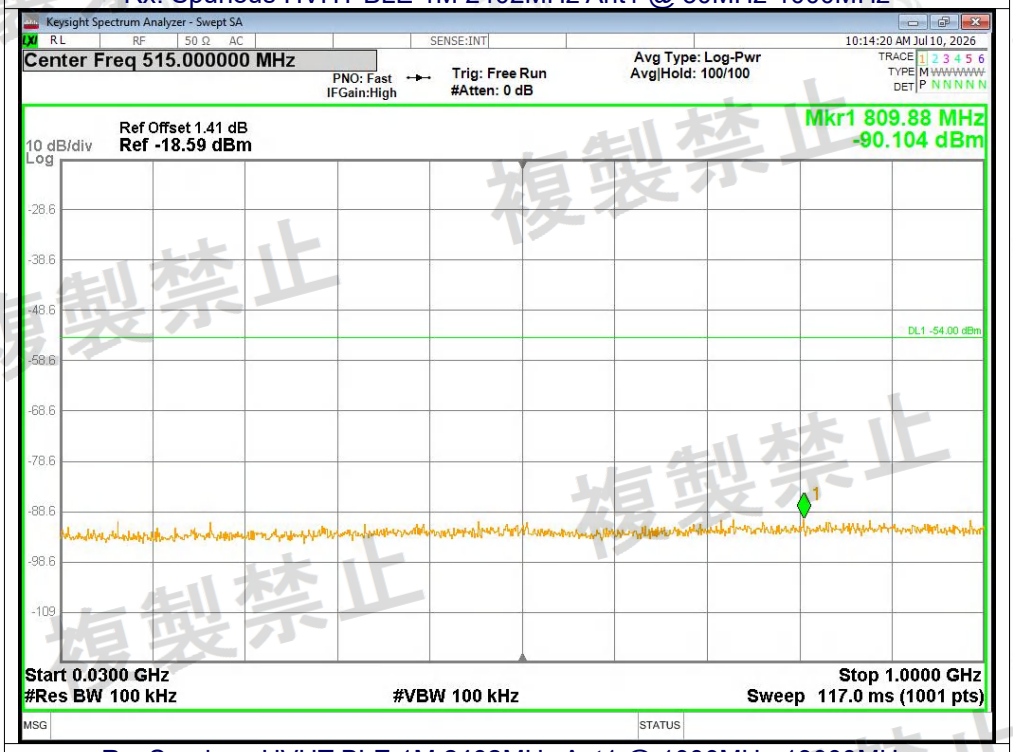


Rx Spurious Emission

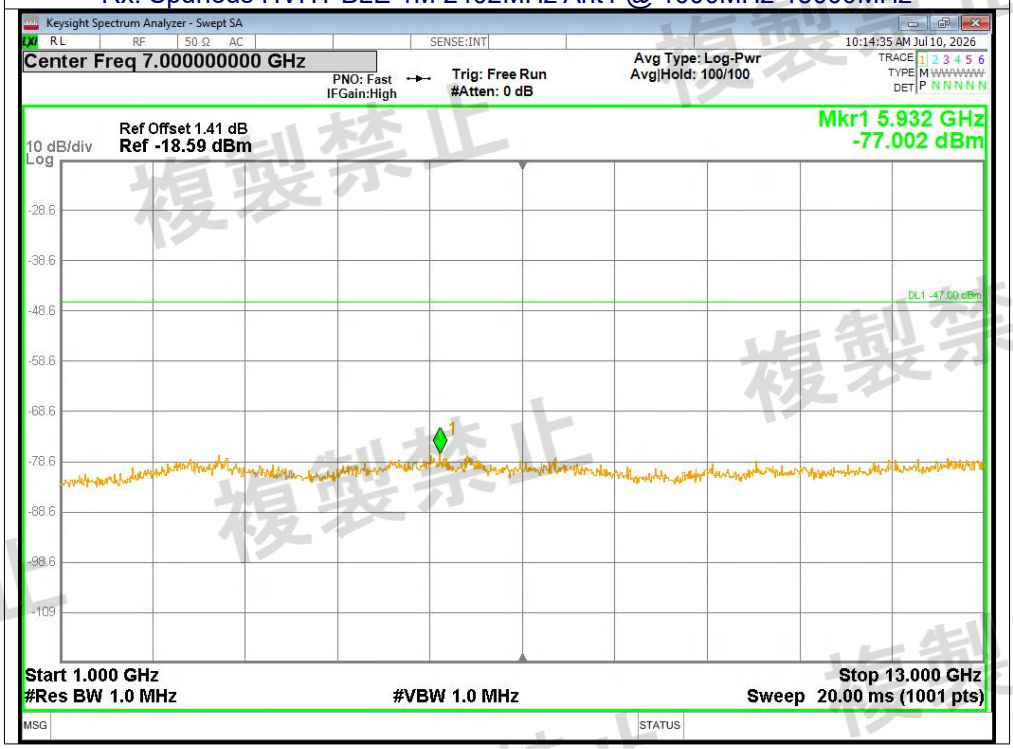
Mode	Frequency (MHz)	Antenna	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (nW)	Limit (dBm)	Limit (nW)	Verdict
BLE 1M	2402	Ant1	30-1000	809.88	-90.10	0.001	-54	4	Pass
BLE 1M	2402	Ant1	1000-13000	5932	-77.00	0.020	-47	20	Pass
BLE 1M	2440	Ant1	30-1000	878.75	-90.03	0.001	-54	4	Pass
BLE 1M	2440	Ant1	1000-13000	5644	-77.75	0.017	-47	20	Pass
BLE 1M	2480	Ant1	30-1000	863.23	-90.00	0.001	-54	4	Pass
BLE 1M	2480	Ant1	1000-13000	5752	-75.79	0.026	-47	20	Pass
BLE 2M	2402	Ant1	30-1000	422.85	-89.28	0.001	-54	4	Pass
BLE 2M	2402	Ant1	1000-13000	5920	-77.54	0.018	-47	20	Pass
BLE 2M	2440	Ant1	30-1000	907.85	-89.47	0.001	-54	4	Pass
BLE 2M	2440	Ant1	1000-13000	12700	-77.63	0.017	-47	20	Pass
BLE 2M	2480	Ant1	30-1000	892.33	-89.42	0.001	-54	4	Pass
BLE 2M	2480	Ant1	1000-13000	12436	-77.59	0.017	-47	20	Pass

Test Graphs

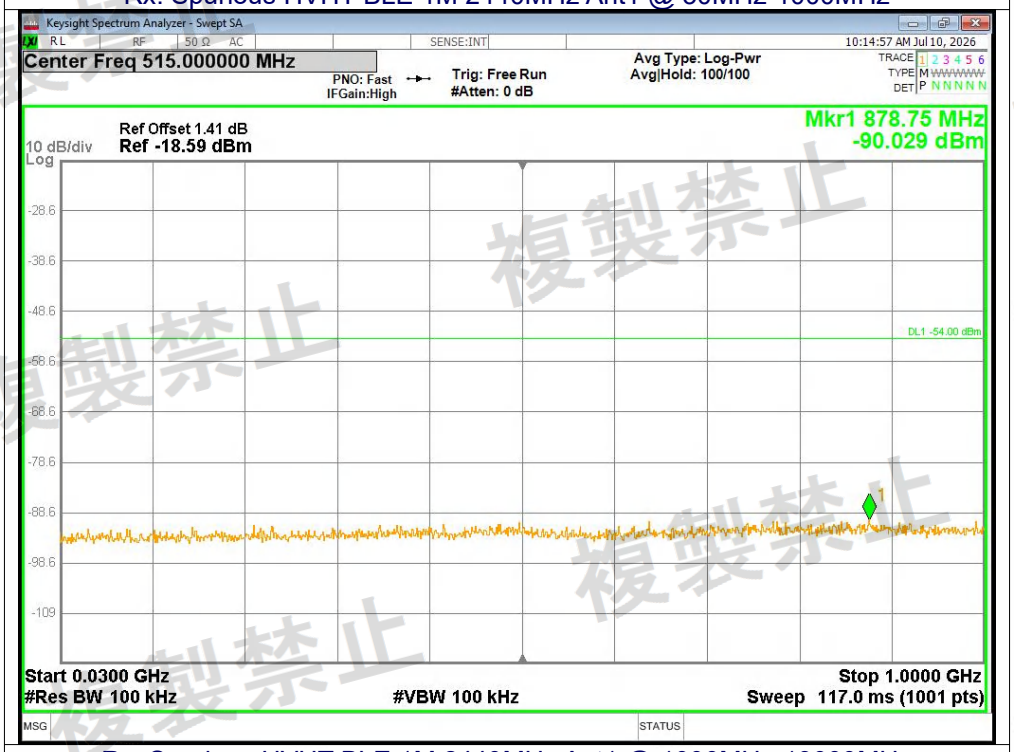
Rx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 30MHz-1000MHz



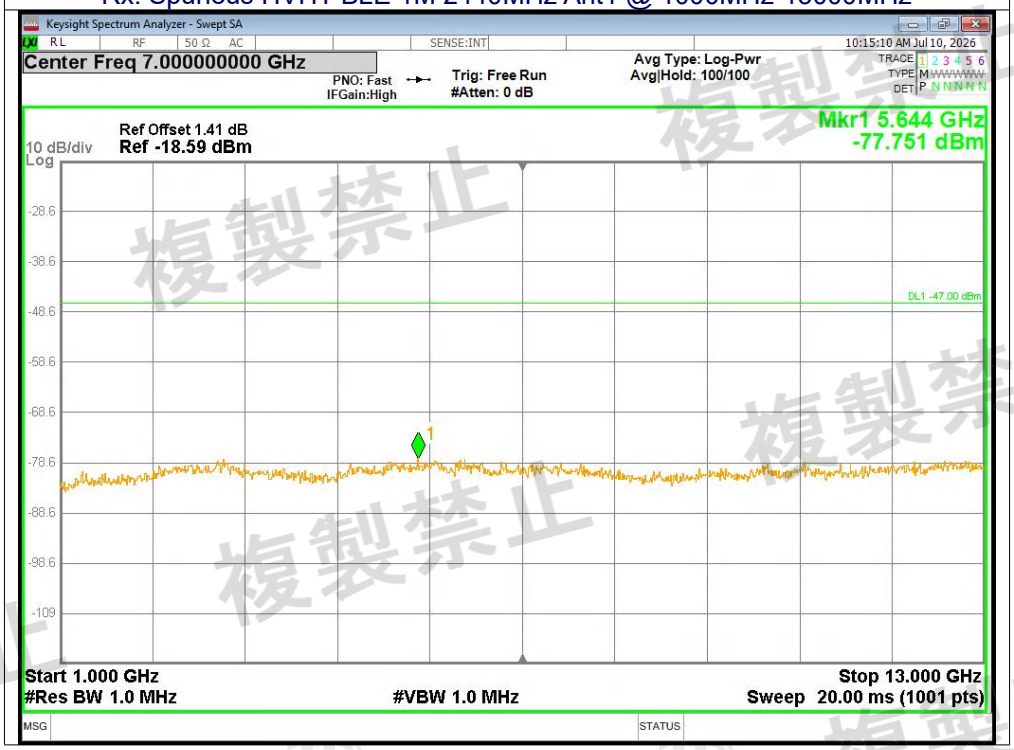
Rx. Spurious HVHT BLE 1M 2402MHz Ant1 @ 1000MHz-13000MHz



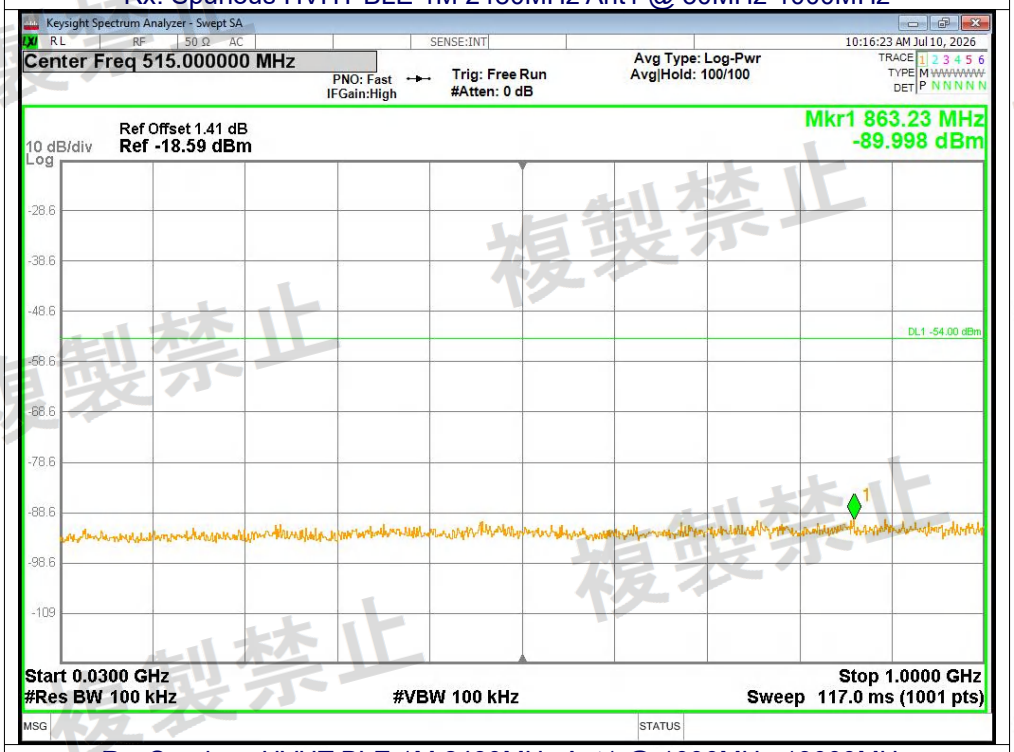
Rx. Spurious HVHT BLE 1M 2440MHz Ant1 @ 30MHz-1000MHz



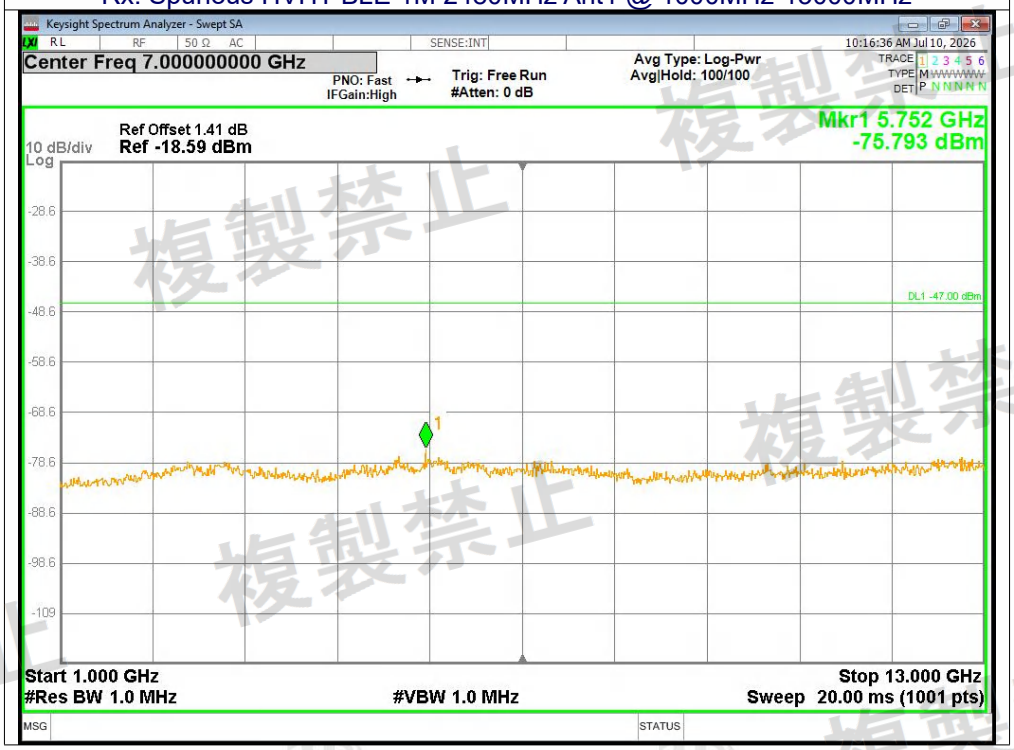
Rx. Spurious HVHT BLE 1M 2440MHz Ant1 @ 1000MHz-13000MHz



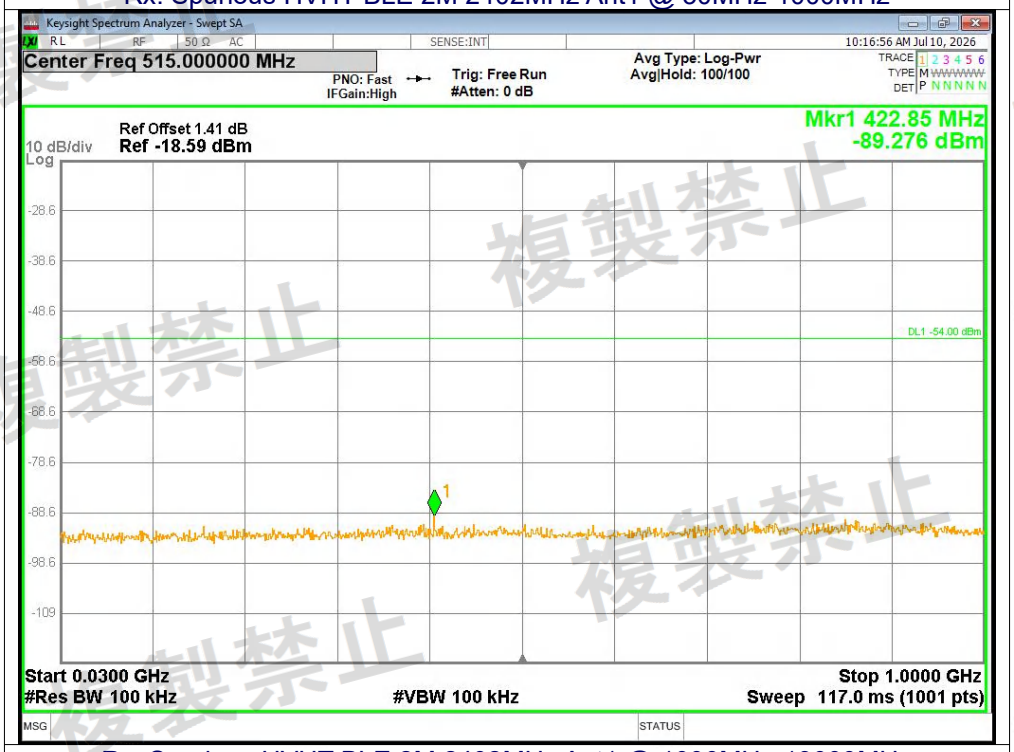
Rx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 30MHz-1000MHz



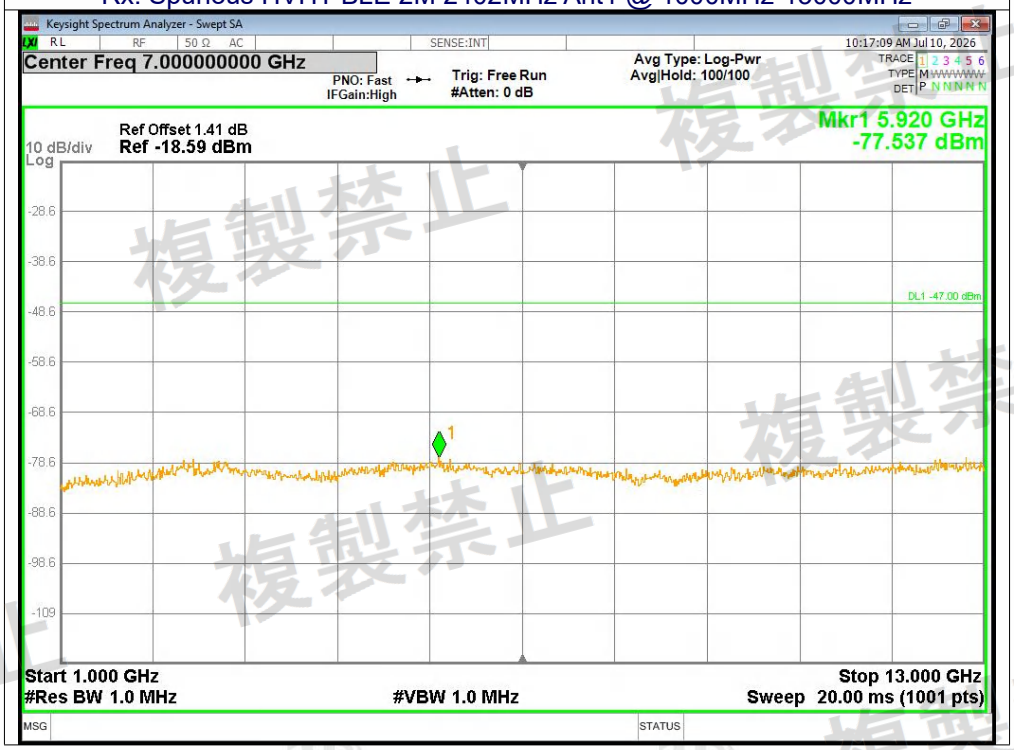
Rx. Spurious HVHT BLE 1M 2480MHz Ant1 @ 1000MHz-13000MHz



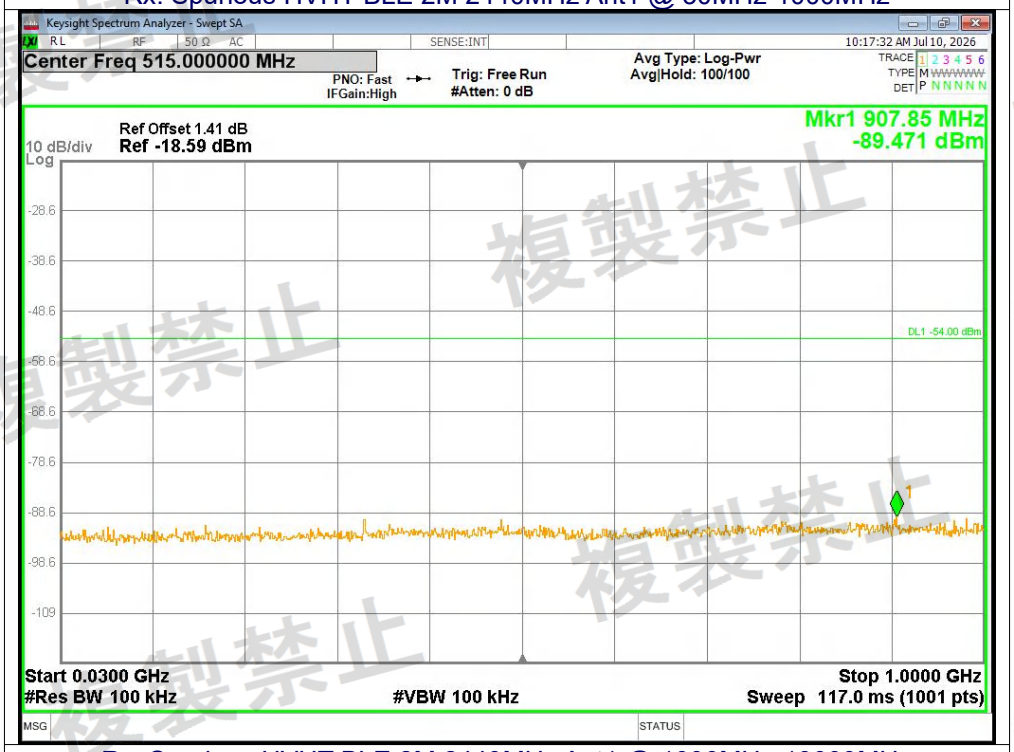
Rx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 30MHz-1000MHz



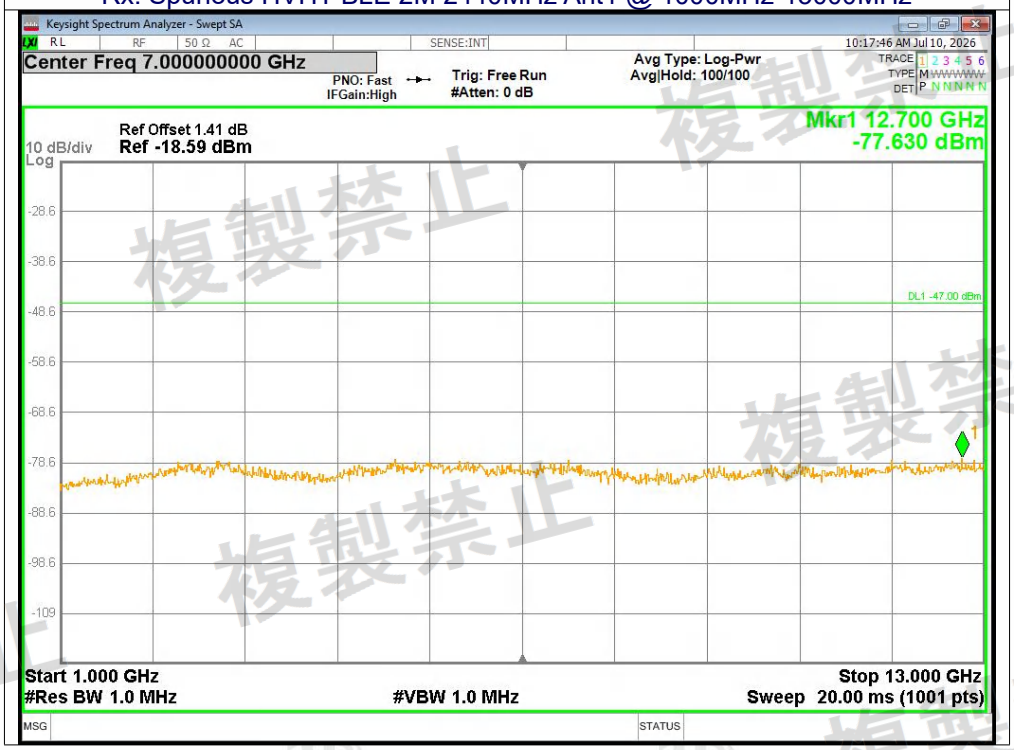
Rx. Spurious HVHT BLE 2M 2402MHz Ant1 @ 1000MHz-13000MHz



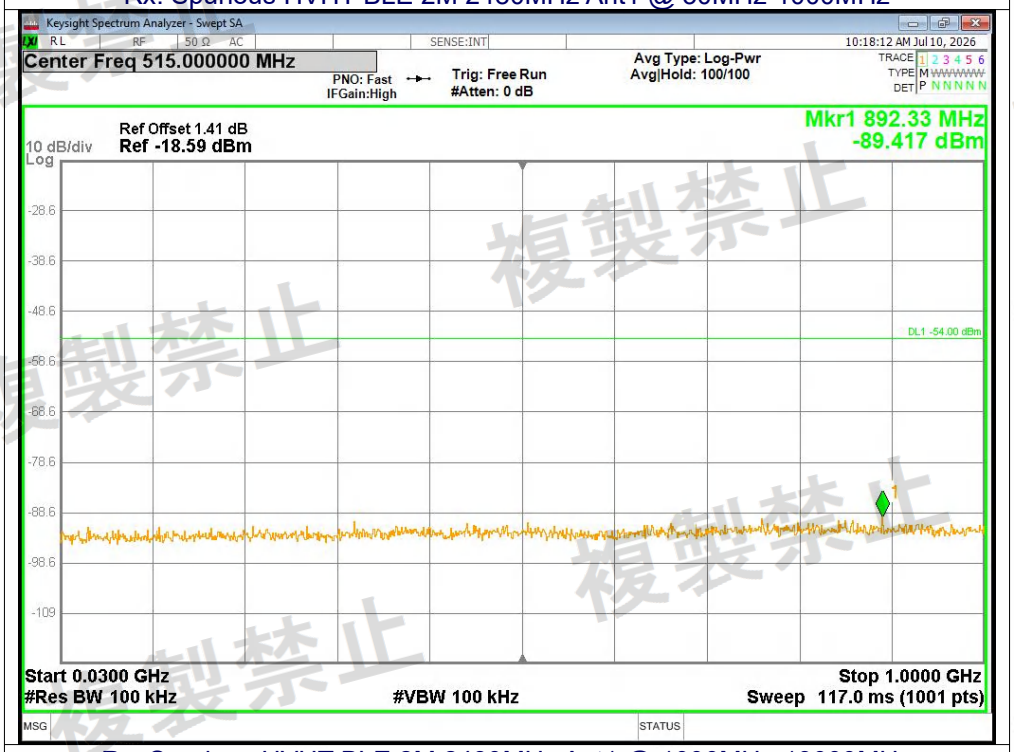
Rx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 30MHz-1000MHz



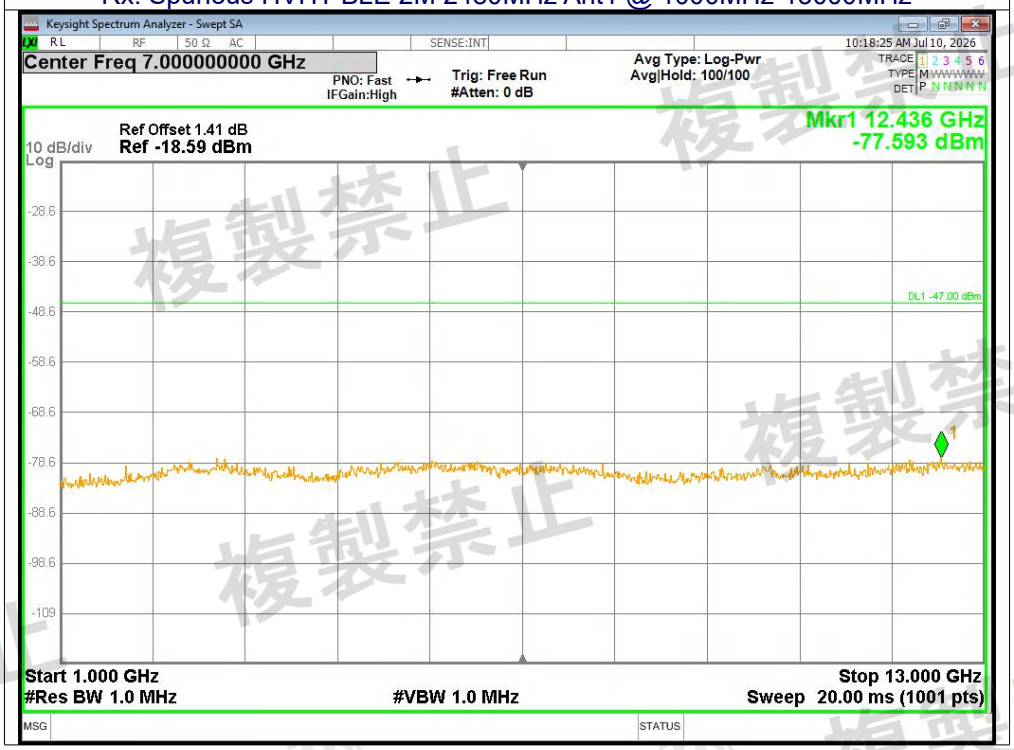
Rx. Spurious HVHT BLE 2M 2440MHz Ant1 @ 1000MHz-13000MHz



Rx. Spurious HVHT BLE 2M 2480MHz Ant1 @ 30MHz-1000MHz



Rx. Spurious HVHT BLE 2M 2480MHz Ant1 @ 1000MHz-13000MHz



7. EUT TEST PHOTO

Reference to the appendix I for details.

8. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※