

TEST REPORT

Report No.: BCTC2603125072E

Applicant: WE ARE REWIND

Product Name: Headphones

Test Model: EQ-002

Tested Date: 2026-03-13 to 2026-05-09

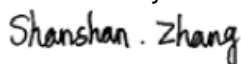
Issued Date: 2026-05-09

Shenzhen BCTC Technology Co., Ltd.



Product Name: Headphones
Trademark: WE ARE REWIND
Model/Type reference: EQ-002
Prepared For: WE ARE REWIND
Address: 26 Rue Montcalm, 75018 PARIS, FRANCE
Manufacturer: Shenzhen Sonun Technology Co., Ltd
Address: Floor 3, No. 37, Langkou Industrial Park, Langkou Community, Dalang Street, Longhua District, Shenzhen, Guangdong
Prepared By: Shenzhen BCTC Technology Co., Ltd.
Address: Room 101M, Unit 1, Building 1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China
Sample Received Date: 2026-03-13
Sample tested Date: 2026-03-13 to 2026-05-09
Issue Date: 2026-05-09
Report No.: BCTC2603125072E
Test Standards: Article 2 paragraph 1 of item 19
MIC Notice No.88 Appendix No.43
Test Results: PASS
Remark: This is JAPAN RADIO test report.

Tested by:



Shanshan. Zhang / Project Handler

Approved by:



Zero Zhou/Reviewer

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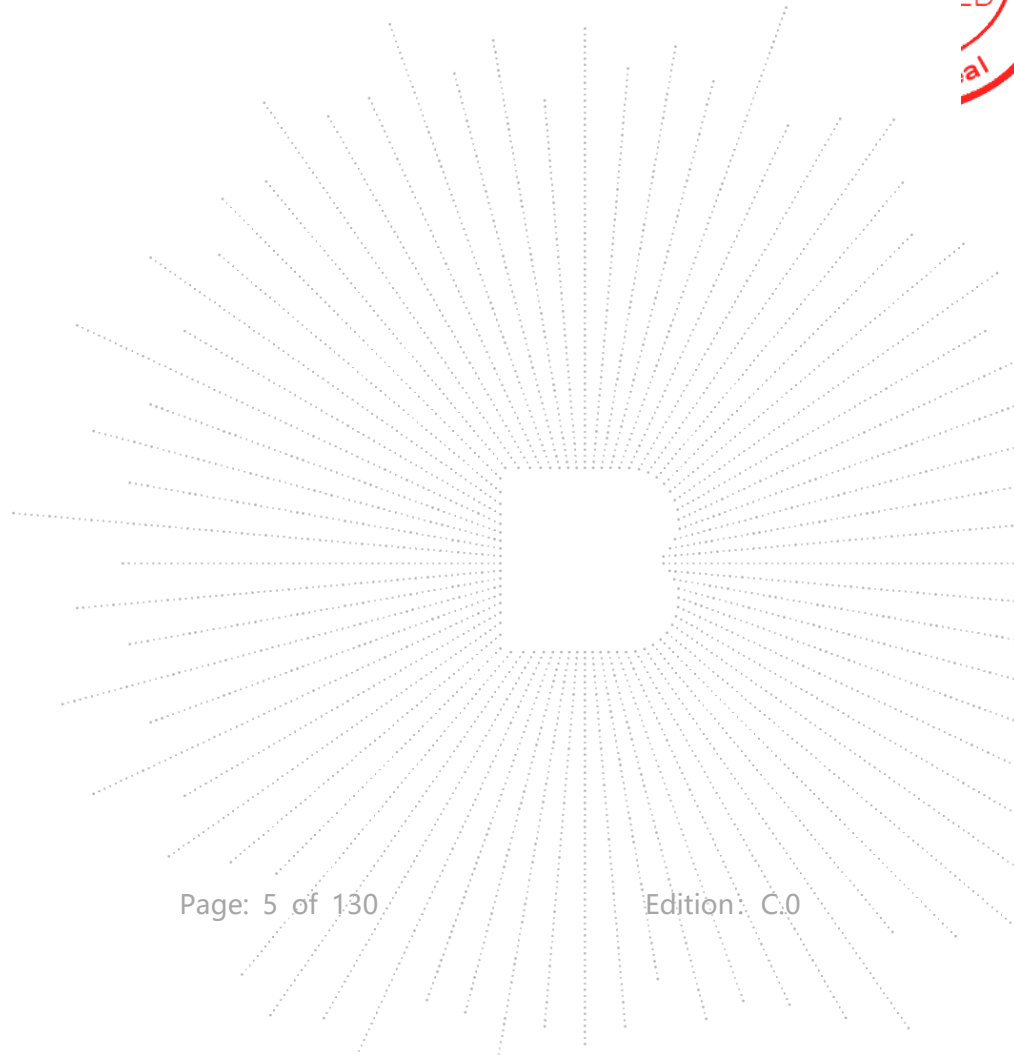
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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2603125072E	2026-05-09	Original	Valid



2. Test Summary

Test procedures according to the technical standards:

Article 2 paragraph 1 of item 19			
Standard Section	Test Item	Judgment	Remark
General provisions			
5	Frequency Error	PASS	
6	Occupied Bandwidth	PASS	
7	Spurious Emissions Intensity	PASS	
8	Radio Interference Prevention Capability Measurement	PASS	
Transmitting equipment			
6	Antenna Power	PASS	
Transmitting antenna			
20	Type, Configuration, etc., of Transmitting Antenna	PASS	
22	Direction Pattern of Transmitting Antenna (Provided at Individual Antenna Report)	PASS	
Receiving antenna			
24	Limitation of Collateral Emission of Receiver	PASS	
26	Refer to All Articles for Transmitting Antenna	PASS	
Operating frequency 2400~2483.5MHz			
49.20(1);a	RF Shielding Method	PASS	
49.20(1);a	Communication Method	PASS	
49.20(1);b	Spread-spectrum Method	PASS	
49.20(1);c	Antenna Power	PASS	
49.20(1);d	Absolute Antenna Gain (Provided at Individual Antenna Report)	PASS	
49.20(1);e	Spread-Spectrum Bandwidth	PASS	
49.20(1);f	Spreading Factor	PASS	
49.20(1);g	Hopping Frequency Dwell Time (FH employed)	PASS	

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report.

3. 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 %.

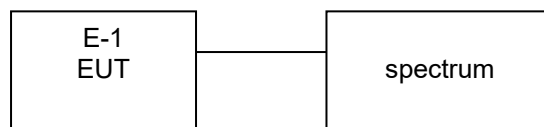
No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 3.2\text{dB}$
2	Radiated Emission Test	$\pm 4.7\text{dB}$
3	RF power,conducted	$\pm 0.16\text{dB}$
4	Spurious emissions,conducted	$\pm 0.21\text{dB}$
5	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
6	All emissions,radiated(>1G)	$\pm 5.0\text{dB}$
7	frequency error ppm	$\pm 0.5\text{ppm}$

4. Product Information And Test Setup

4.1 Product Information

Model/Type Reference: EQ-002
 Model Differences: N/A
 Hardware Version: Main board: EQ002-AC7006F8-V1.4
 secondary board: EQ002-USB-V1.4
 Software Version: V1.2.01
 Operation Frequency: 2402-2480MHz
 Type of Modulation: GFSK, $\pi/4$ -DQPSK
 Number Of Channel: 79 CH
 Antenna installation: FPC antenna
 Antenna Gain: -0.79 dBi
 Remark:
☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.
☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
 Ratings: DC 3.7V

4.2 Block Digram Parameters Of Text Software Setting



4.3 Description Of Support Units (Conducted Mode)

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Headphones	WE ARE REWIND	EQ-002	N/A	EUT

Notes:

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”.

4.4 Channel List

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

4.5 Test Mode

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

For All Mode	Description	Modulation Type
Mode 1	CH 00	GFSK
Mode 2	CH 39	
Mode 3	CH 78	
Mode 4	RX	
Mode 5	CH 00	$\pi/4$ -DQPSK
Mode 6	CH 39	
Mode 7	CH 78	
Mode 8	RX	

4.6 Test Conditions

The EUT 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	3.7V	4.07V	3.33V
Voltage Variation (%)	0%	+10%	-10%

Note:

Voltage Variation (%)= (Output high or Low Voltage - Output Normal Voltage)/ Output Normal Voltage* 100

4.7 Table Of Parameters Of 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 is going to be fixed on the firmware of the final end product power parameters

Test software Version	FCC_assist1.0.4		
Frequency	2402 MHz	2441 MHz	2480 MHz
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Technology Co., Ltd. Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Spectrum Analyzer	Keysight	N9020A	MY51287403	Aug.30, 2025	Aug.29, 2026
Signal Generator	Keysight	N5182A	MY50144088	Aug.30, 2025	Aug.29, 2026
Power sensor	Keysight	U2001	MY51250006	Oct. 28, 2025	Oct. 27, 2026
Radio frequency control box	MWRFTest	MW100-RFCB	\	\	\
Software	Frad	EZ-EMC	FA-03A2 RE	\	\
Software	Keysight	Keysight.ETSL Test system	1.02.05	\	\
D.C. Power Supply	LongWei	D-41747 Viersen	6230316	Aug.30, 2025	Aug.29, 2026
Communication test set	R&S	CMW500	157483	Aug.30, 2025	Aug.29, 2026
Programmable constant temperature and humidity test chamber	Auchno	OJN-9606-408 L	19120183	July.9, 2025	July.8, 2026
hygrothermograph	Thermo	HTC-1	\	Sep.01, 2025	Aug.31, 2026

Calibration laboratory: CCIC(Shenzhen) Co., Ltd

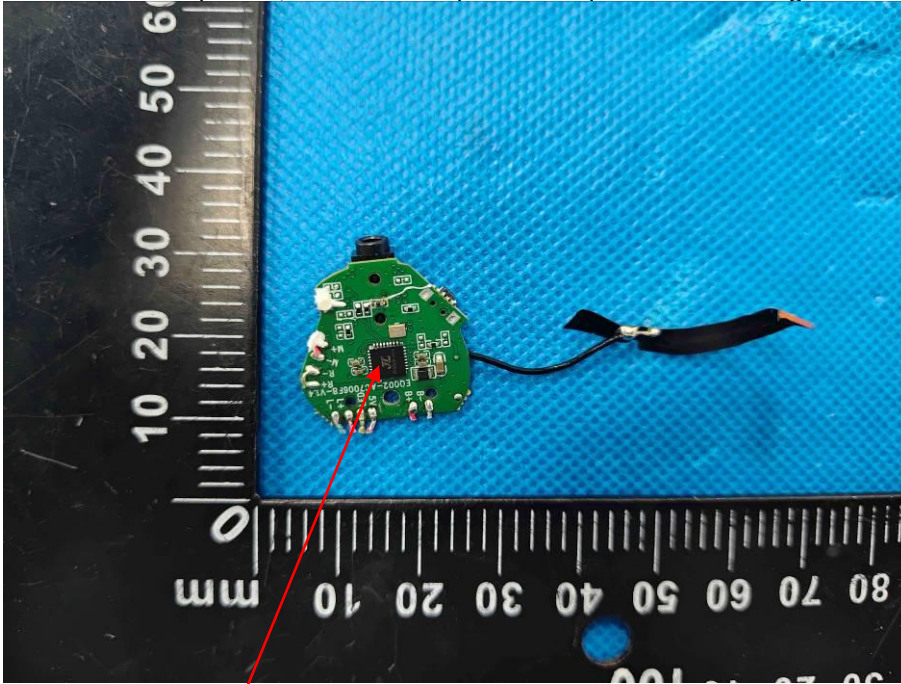
● Calibration Information (Article 24-2, Paragraph 4 of the Radio Act)	
☐	(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act
☐	(b) Calibration conducted based on the regulations of Article 135 or 144 of the Measurement Act
☒	(c) Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act
☐	(d) Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a) through (c) above

6. RF Shielding Method

Chipset:

The product structure is uses SMD patch process.

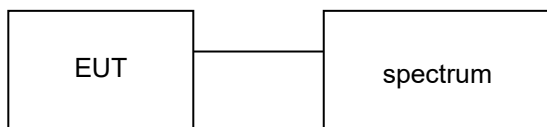
As shown in the picture, If the will be open so the product be damage.



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7. Frequency Error

7.1 Block Diagram Of Test Setup



7.2 Limit

Item	Limits
Frequency Error	±50ppm

7.3 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

7.4 Test Procedure

(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.

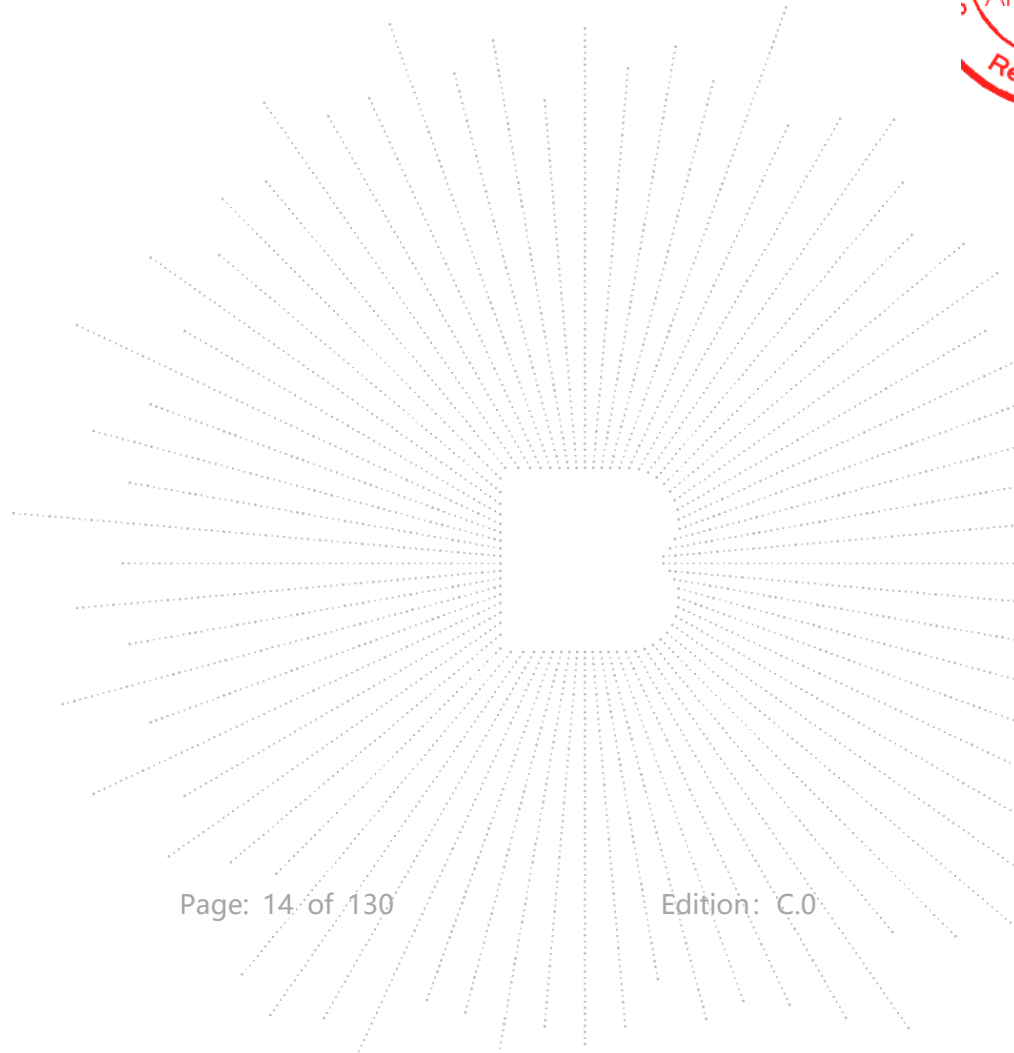
(4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

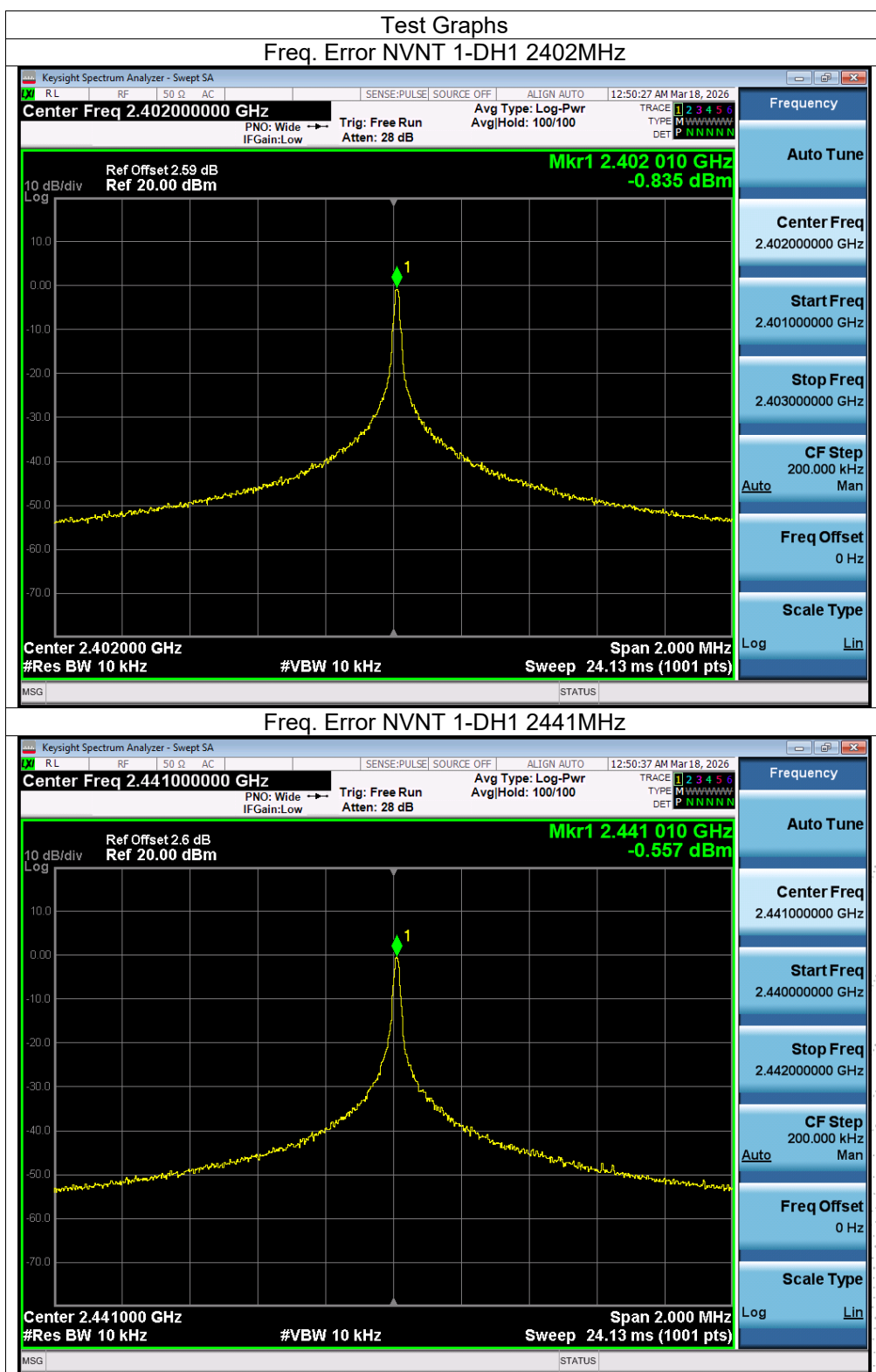
In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the 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.

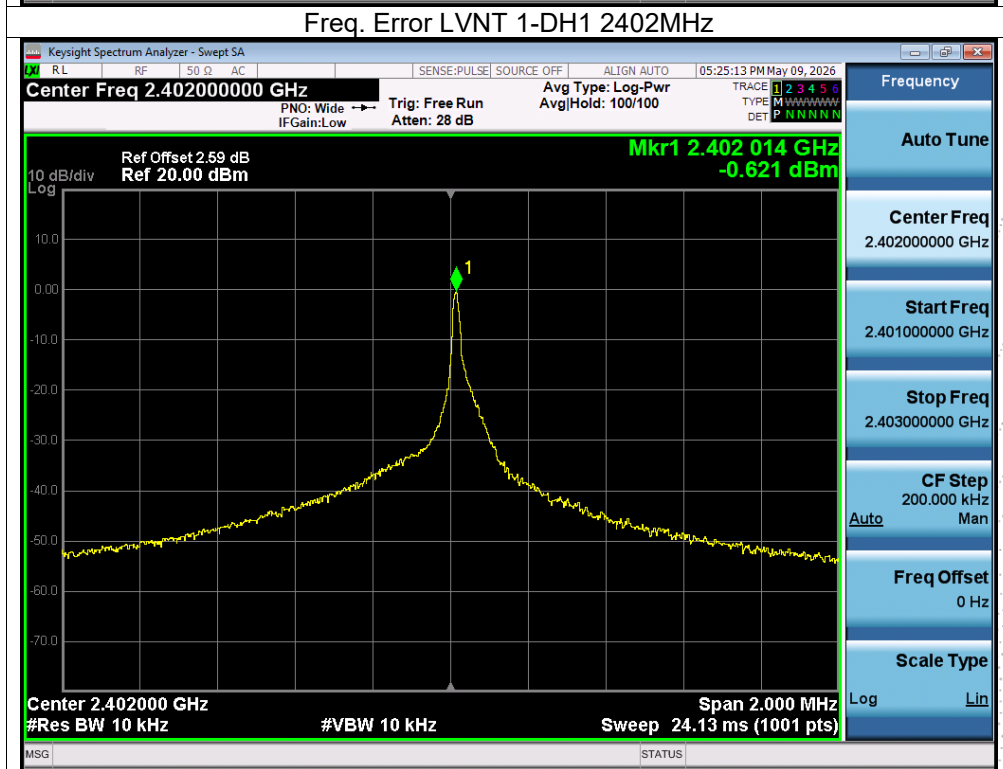
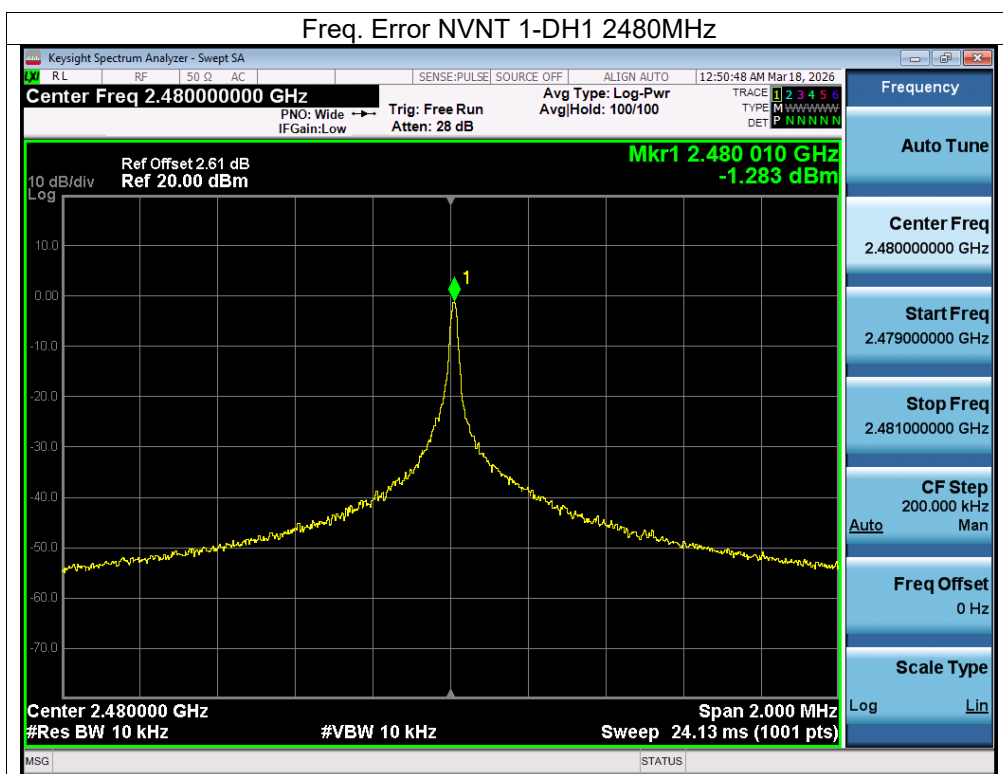
7.5 Test Result

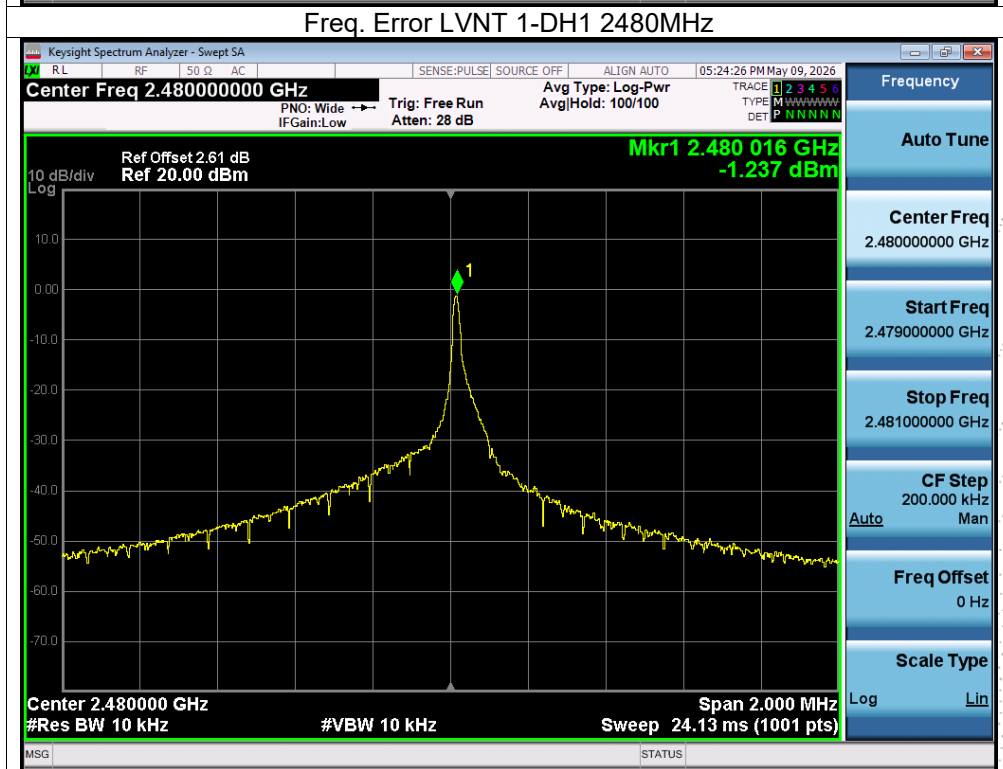
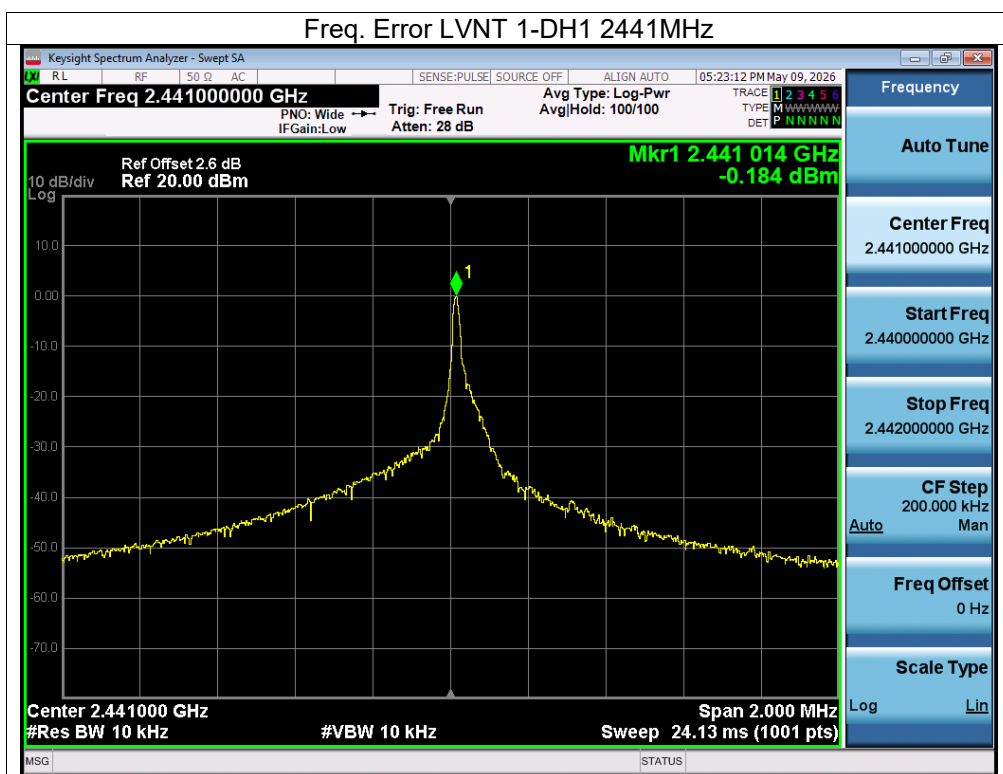
Temperature:	26°C		
Humidity:	54%RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		

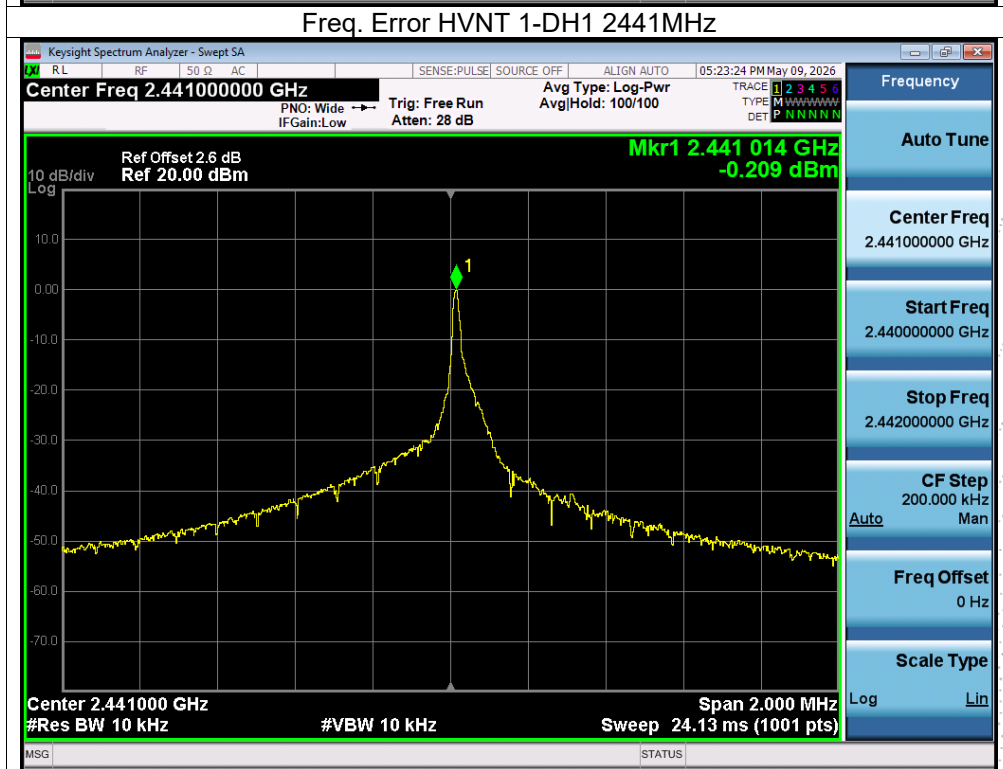
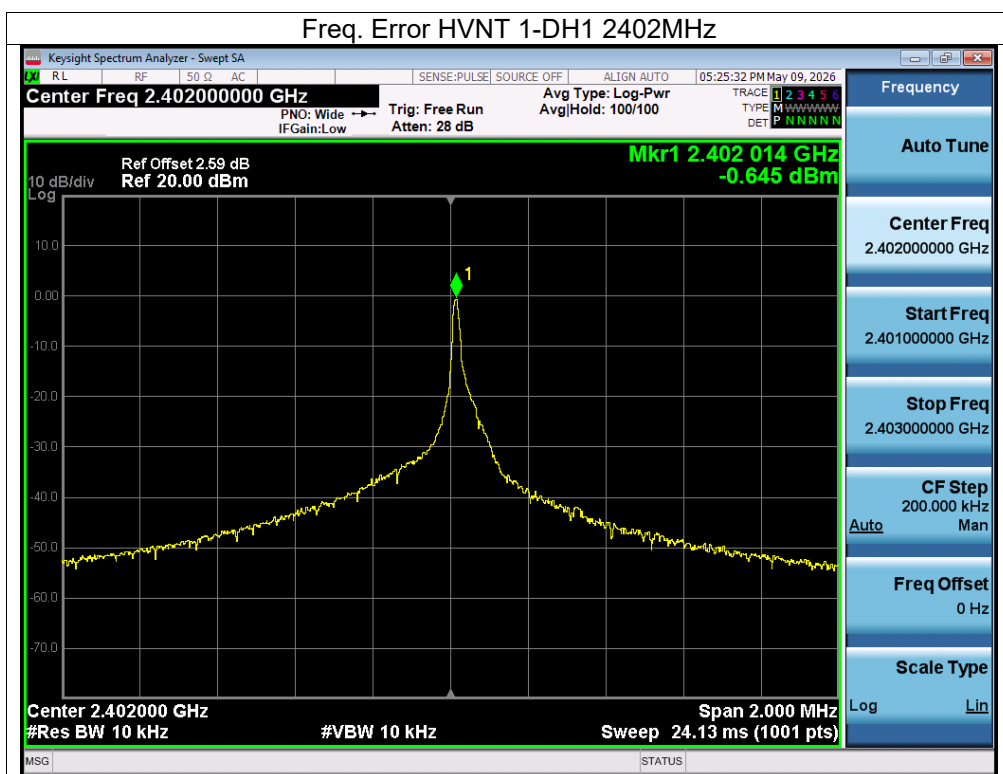
Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	1-DH1	2402	2402.01	4.16	50	Pass
NVNT	1-DH1	2441	2441.01	4.10	50	Pass
NVNT	1-DH1	2480	2480.01	4.03	50	Pass
LVNT	1-DH1	2402	2402.014	5.83	50	Pass
LVNT	1-DH1	2441	2441.014	5.74	50	Pass
LVNT	1-DH1	2480	2480.016	6.45	50	Pass
HVNT	1-DH1	2402	2402.014	5.83	50	Pass
HVNT	1-DH1	2441	2441.014	5.74	50	Pass
HVNT	1-DH1	2480	2480.016	6.45	50	Pass



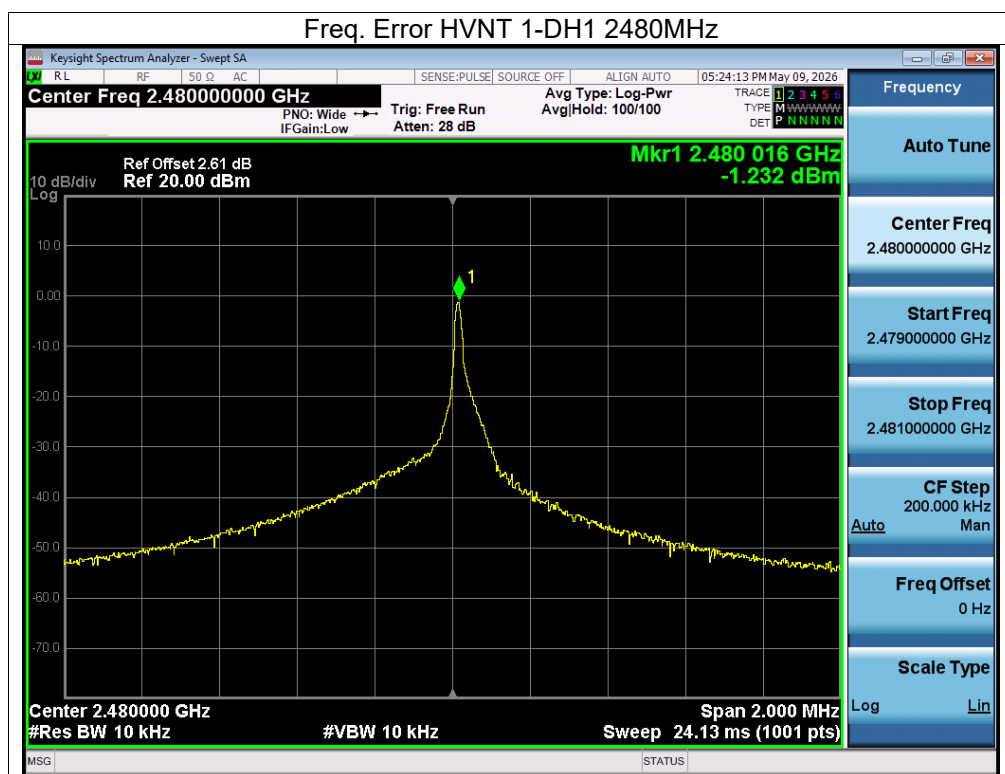






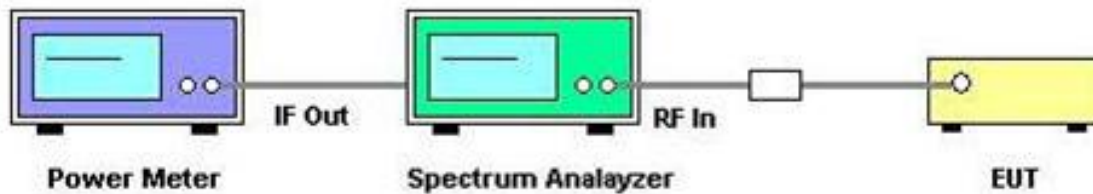


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8. Antenna Power

8.1 Block Diagram Of Test Setup



8.2 Limit

Item	Limits
Antenna Power Density	(1) $\leq 3\text{mW/MHz}$ (FH, FH+DS, FH+OFDM form 2400 - 2483.5 MHz) (2) $\leq 10\text{mW/MHz}$ (OFDM OBW < 26MHz, DS, FH other than (1)) (3) $\leq 5\text{mW/MHz}$ (OFDM OBW 26-38MHz) (4) $\leq 10\text{mW/MHz}$ (Other than (1) & (2)& (3))
Antenna Power Error	+20%, -80% (Base on manufacturer declare antenna power density)

8.3 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 / VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.4 Test Procedure

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. Adjust the spectrum analyzer to have the center frequency the same with the measured carrier. RBW=VBW=1MHz, detector mode is positive peak. Turn off the averaging function and use zero span.
3. The calibrating signal power shall be reduced to 0 dBm and it shall be verified that the power meter reading also reduces by 10 dB.
4. Connect the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operating frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averaging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range. The frequency found shall be recorded.
5. Set the center frequency of the spectrum analyzer to the found frequency and switch to zero span. The power meter indicates the measured power density "E".
6. Calculate antenna power density by the formula below $PD = P / \text{Spread bandwidth}$.
7. Antenna Power Error is definition that actual measure antenna power tolerance between + 20% to - 80% power range that base on manufacturer declare the conducted power density.

8.5 Test Result

Temperature:	26°C		
Humidity:	54%RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		
Test Mode:	1-DH1, 2-DH1		

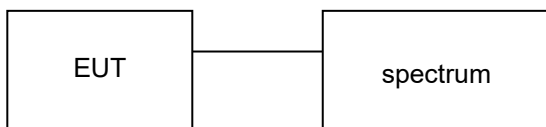
Condition	Mode	Conducted RF output power (dBm)	Conducted RF output power (mW)	90% Hopping Occupied bandwidth (MHz)	Conducted RF output power density (mW/MHz)	Rated power density (mW/MHz)	Limit (mW/MHz)	Antenna Power Error (%)	Verdict
NVNT	1-DH1	1.11	1.29	71.166	0.018	0.020	3	-0.1	Pass
LVNT	1-DH1	1.52	1.42	71.417	0.020	0.020	3	0	Pass
HVNT	1-DH1	1.44	1.39	71.437	0.019	0.020	3	-0.05	Pass
NVNT	2-DH1	1.21	1.32	71.244	0.019	0.020	3	-0.05	Pass
LVNT	2-DH1	1.43	1.39	71.498	0.019	0.020	3	-0.05	Pass
HVNT	2-DH1	1.54	1.43	71.389	0.020	0.020	3	0	Pass

Limit: +20%, -80% (Base on manufacturer declare antenna power density)

Conducted RF output power density=Antenna Power/ 90%Hopping Occupied bandwidth

9. Occupied Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

Item	Limits
Occupied Band Width:	FH 83.5MHz; OFDM,DS $\leq$ 26MHz;Others $\leq$ 26MHz
Spreading Bandwidth:	$\geq$ 500 kHz (FH, DS)
Spreading Factor	$\geq$ 5

9.3 Test Procedure

- Setting of SA is following as: RB: 1MHz / VB:1MHz / SPAN: 120MHz / AT: 20dB Ref: 10dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- 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).
- SA set to 90% of occupied bandwidth to measure Spread Spectrum Bandwidth and must greater than 500kHz.
- Spread Spectrum Factor = Spread Spectrum Bandwidth / modulation rate of EUT.
- Spread Spectrum Factor limit is greater than 5

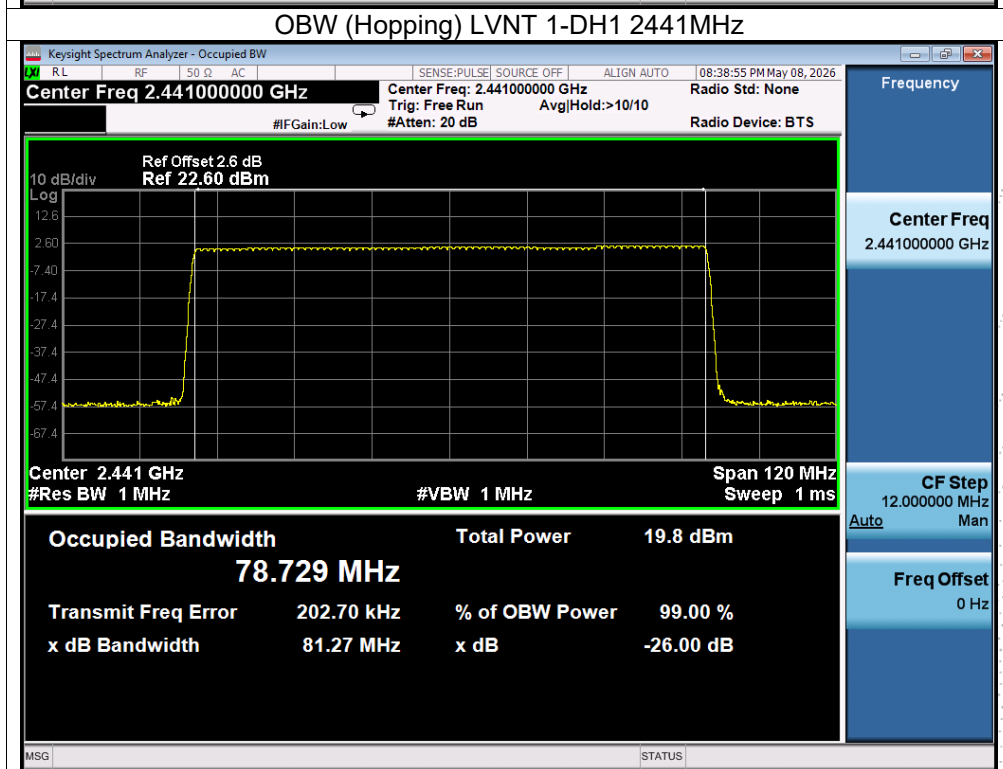
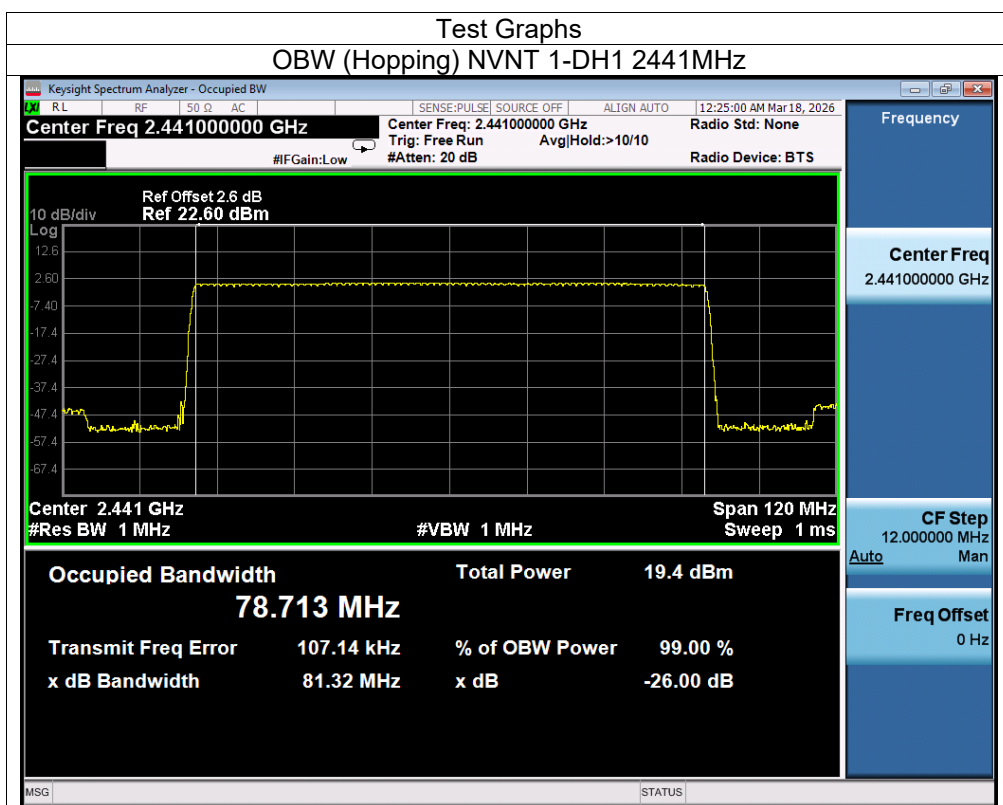
9.4 Test Result

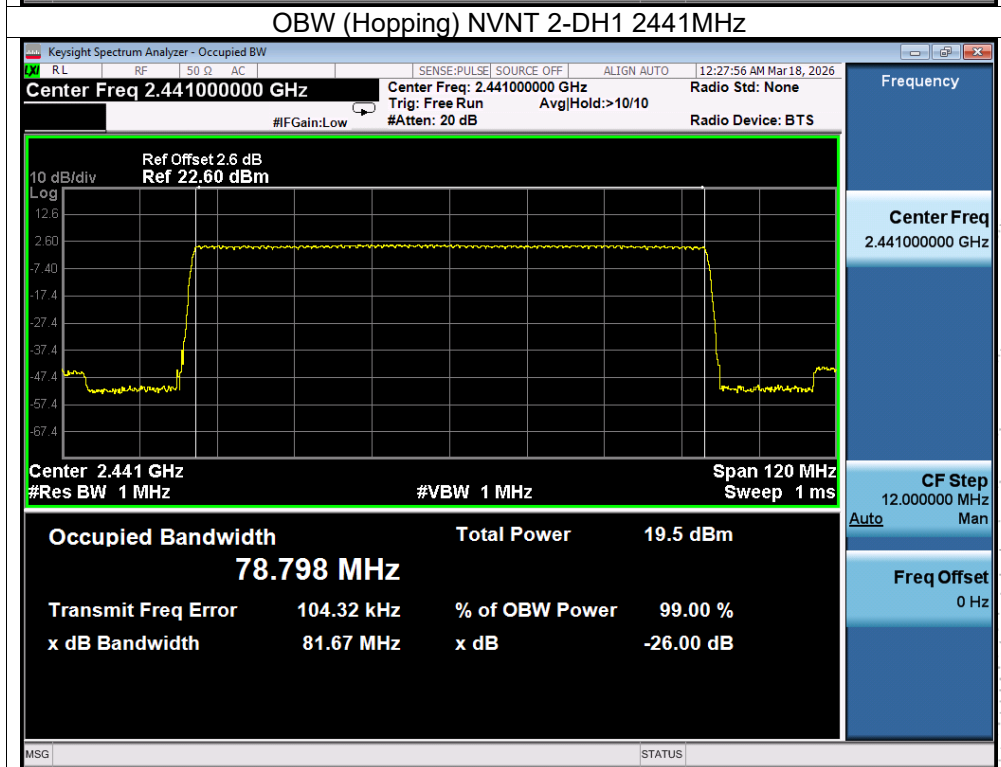
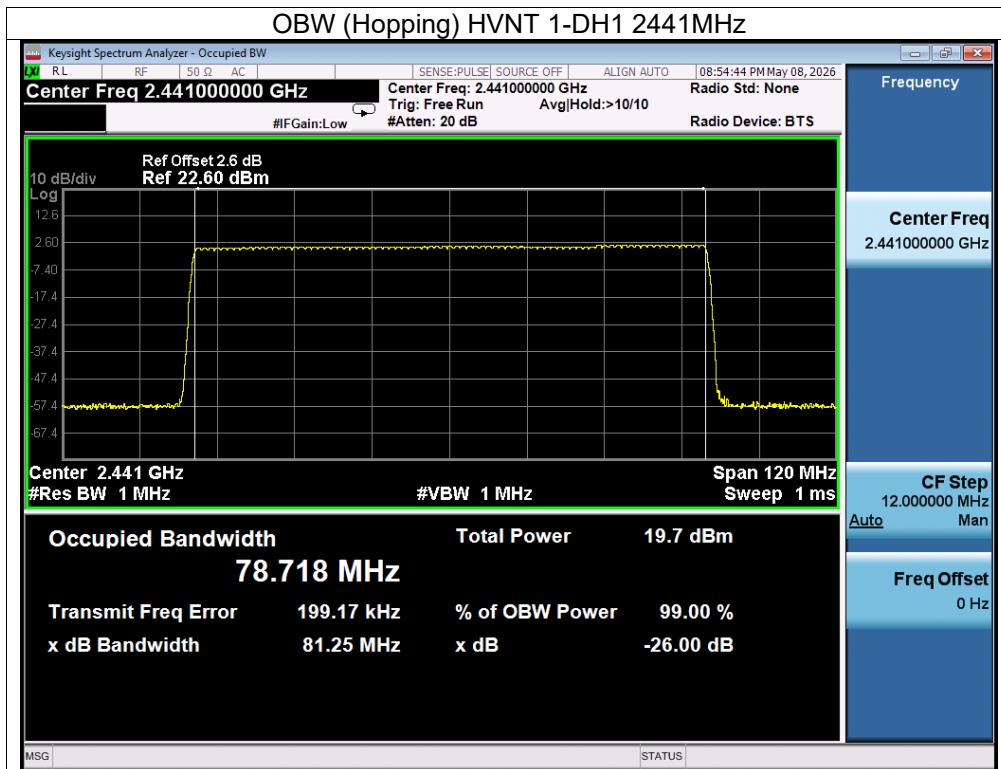
Temperature:	26°C		
Humidity:	54%RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		

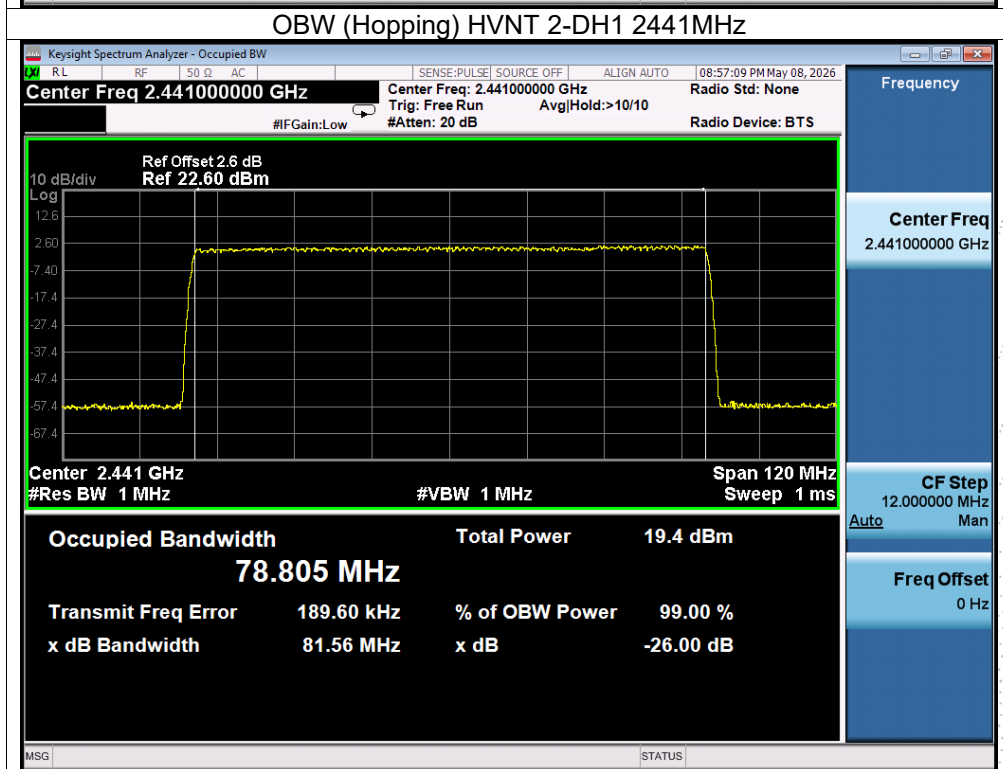
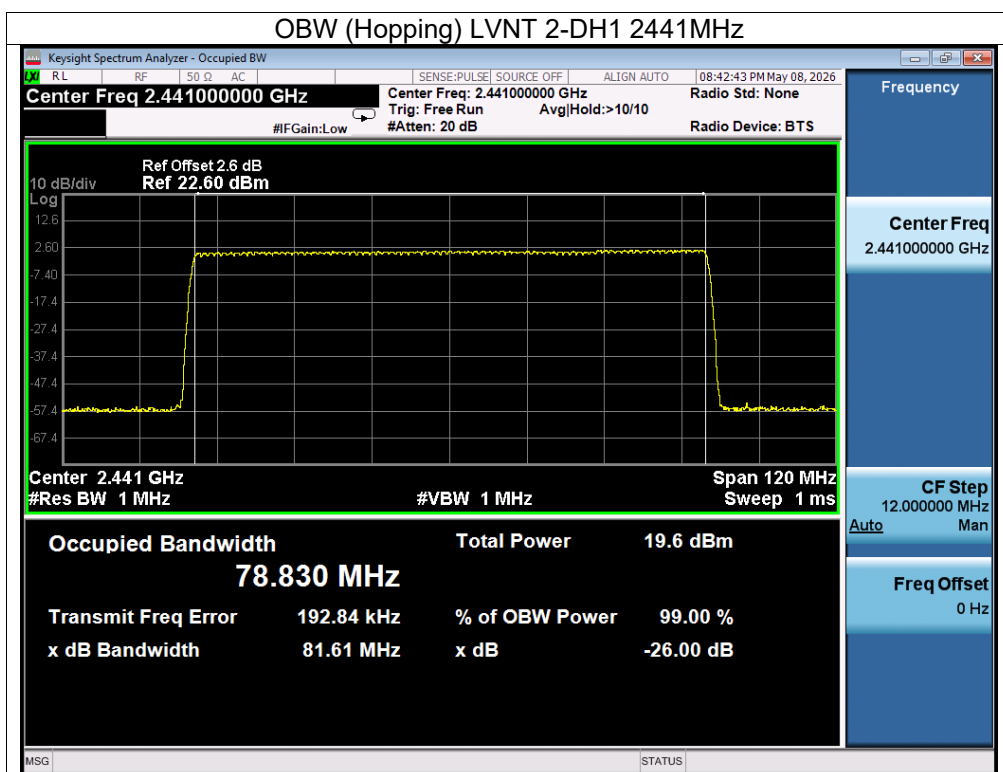
Condition	Mode	99% OBW (MHz)	90% OBW (MHz)	Spreading Factor	Verdict
NVNT	1-DH1	78.713	71.166	71.166	Pass
LVNT	1-DH1	78.729	71.417	71.417	Pass
HVNT	1-DH1	78.718	71.437	71.437	Pass
NVNT	2-DH1	78.798	71.244	35.622	Pass
LVNT	2-DH1	78.83	71.498	35.749	Pass
HVNT	2-DH1	78.805	71.389	35.695	Pass

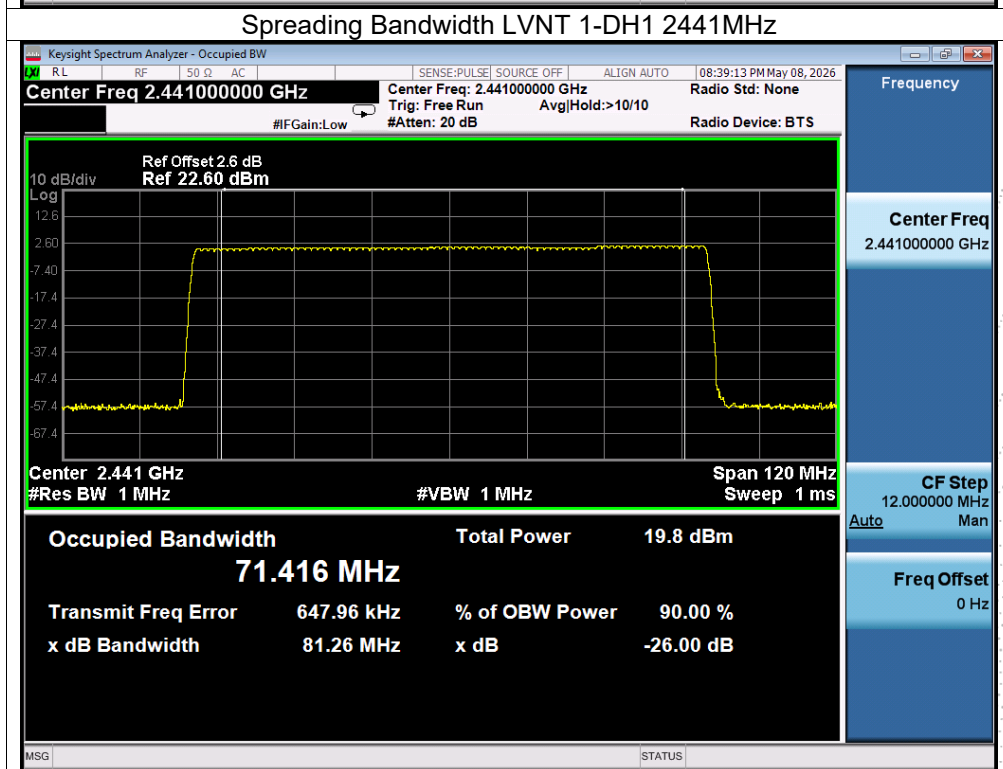
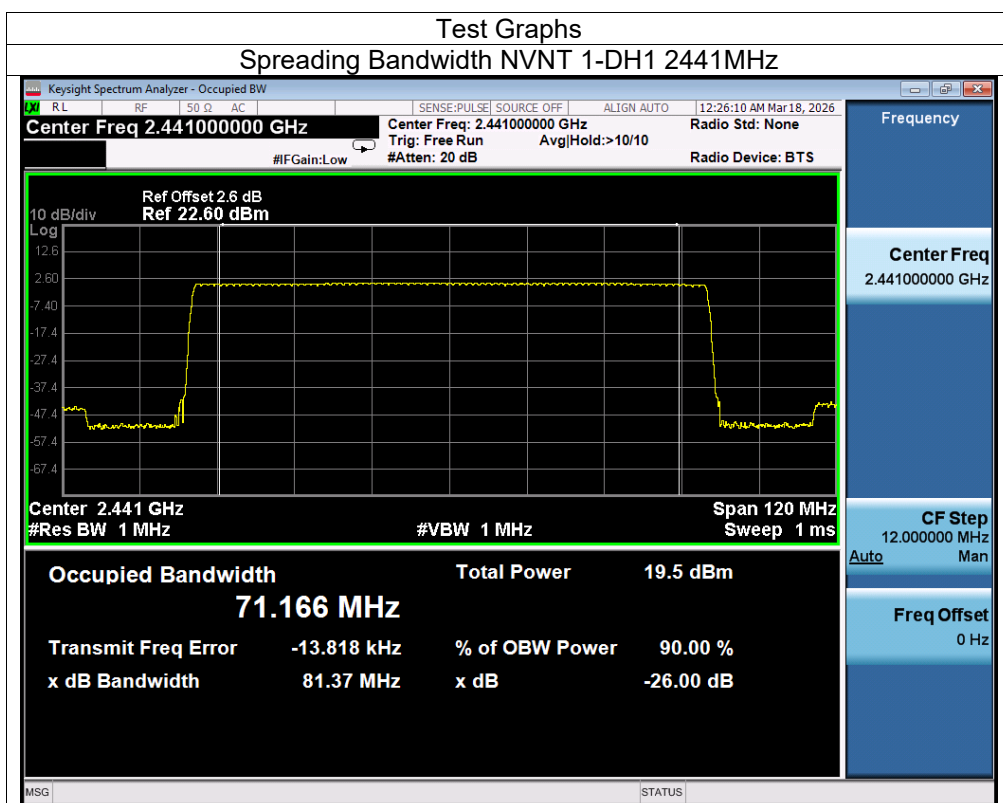
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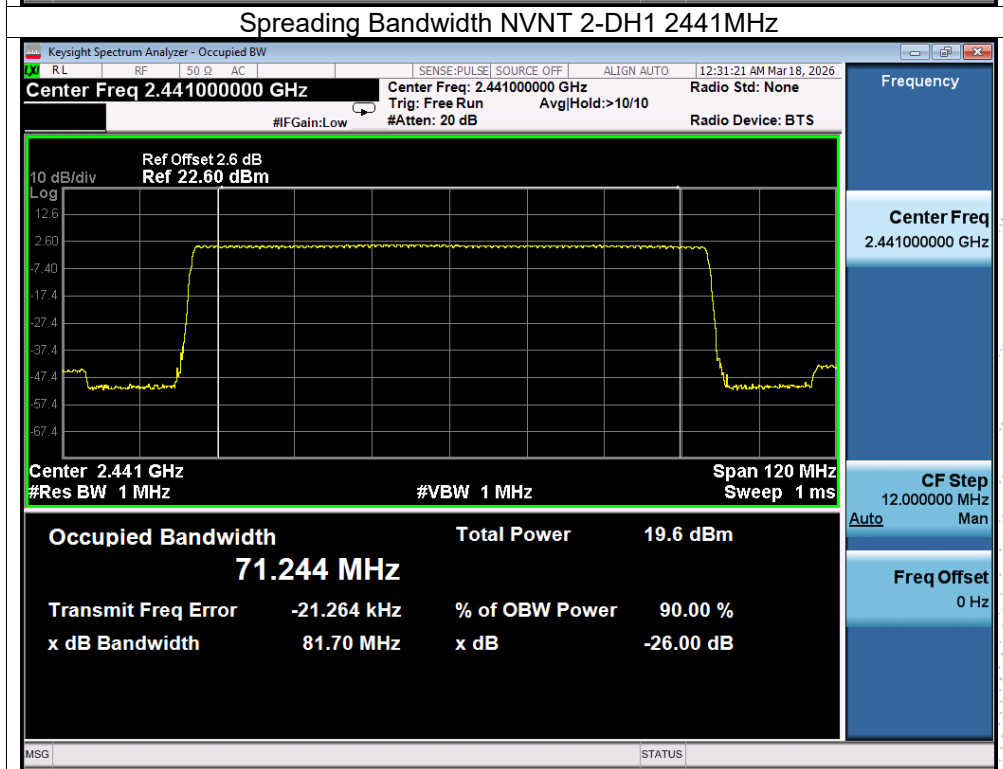
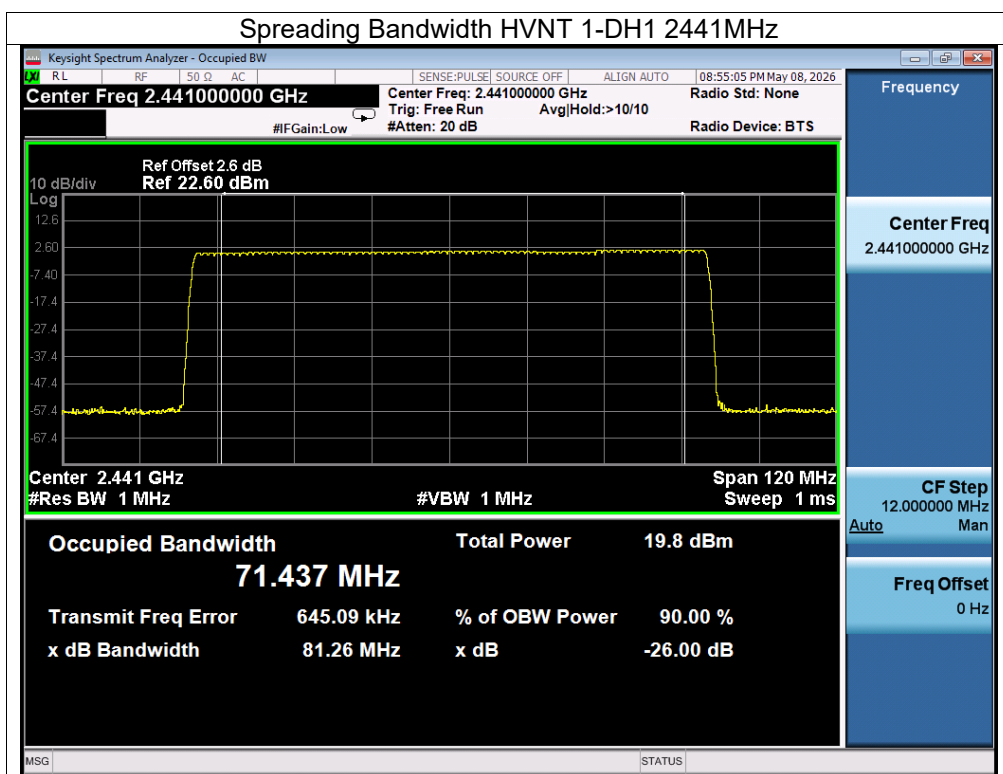
- Spreading Factor = (90%Hopping Mode(Occupied bandwidth)) / (transmission rate);
- Transmission Rate=(1-DH1=1Mbps, 2-DH1=2Mbps, 3-DH1=3Mbps)

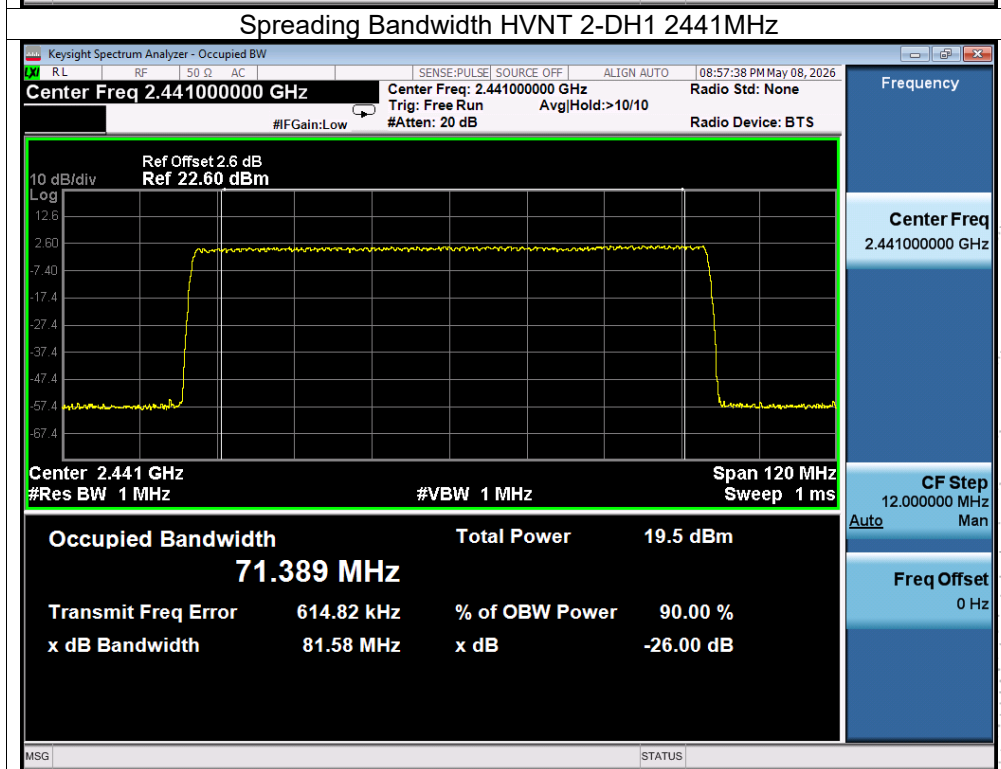
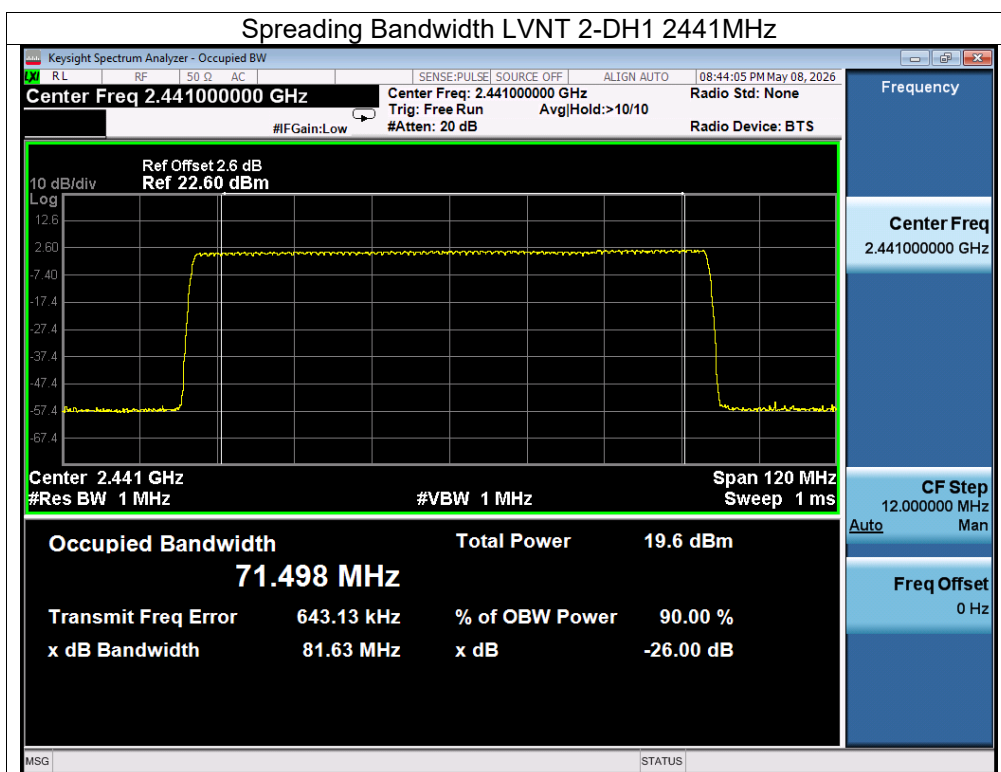






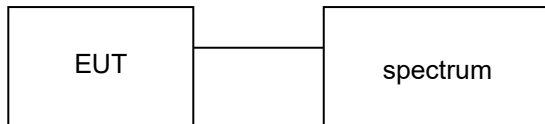






10. Unwanted Emission Intensity Measurement

10.1 Block Diagram Of Test Setup



10.2 Limit

Item	RB / VB	Limits
TX Spurious Emission	100KHz	$\leq 0.25 \mu\text{W}$ (-36dBm) (30MHz $\leq f \leq$ 1000MHz)
	1 MHz	$\leq 2.5 \mu\text{W}$ (-26dBm (1000MHz $< f \leq$ 2387MHz)
	1 MHz	$\leq 25 \mu\text{W}$ (-16dBm (2387MHz $< f \leq$ 2400MHz)
	1 MHz	$\leq 25 \mu\text{W}$ (-16dBm (2483.5MHz $\leq f <$ 2496.5MHz)
	1 MHz	$\leq 2.5 \mu\text{W}$ (-26dBm (2496.5MHz $\leq f <$ 12500MHz)

10.3 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 / VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

10.4 Test Procedure

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: 10dBm / 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 0.25 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 12500MHz Then to mark peak reading value + cable loss shall be less than 2.5 μ W

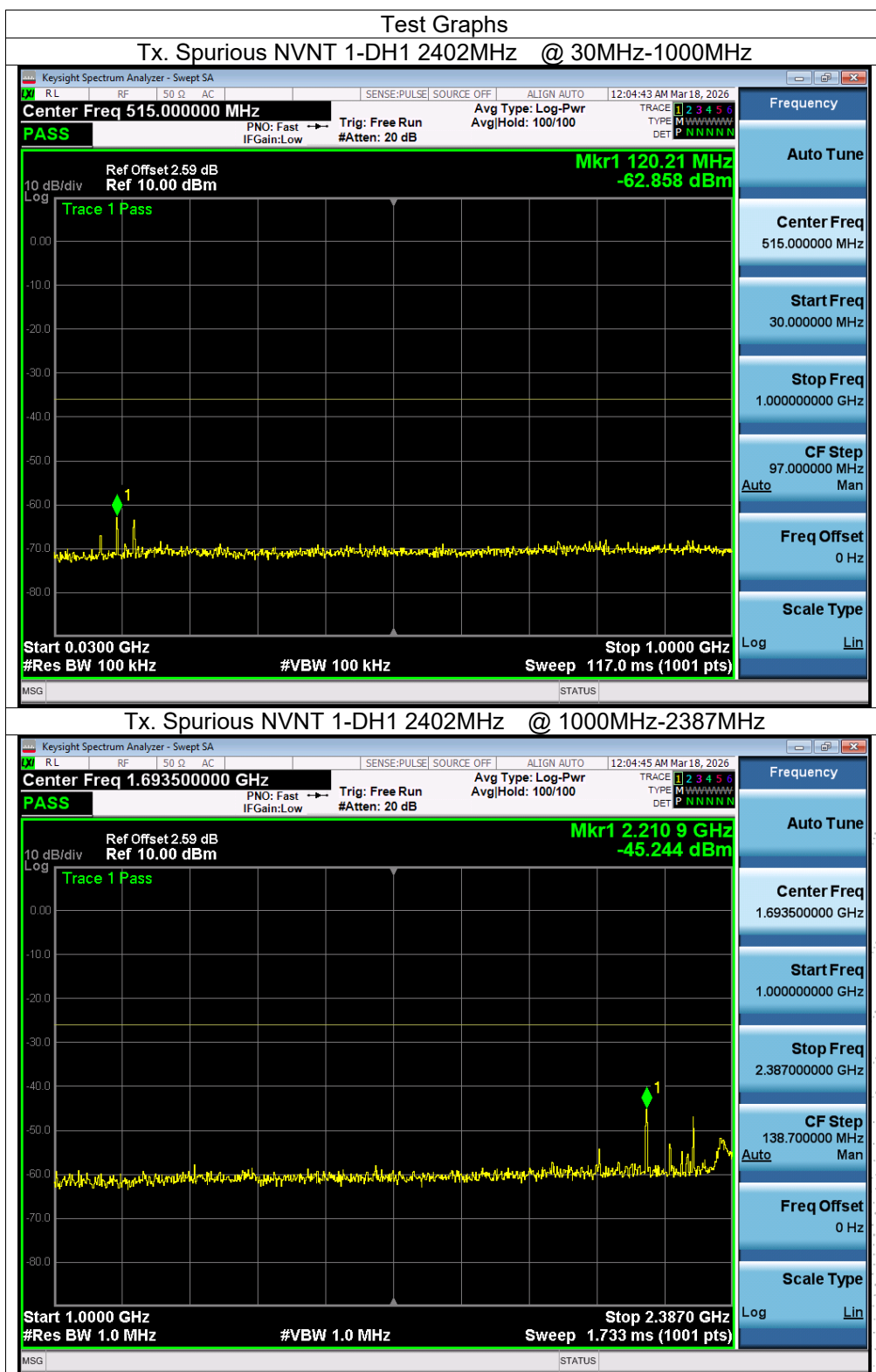
10.5 Test Result

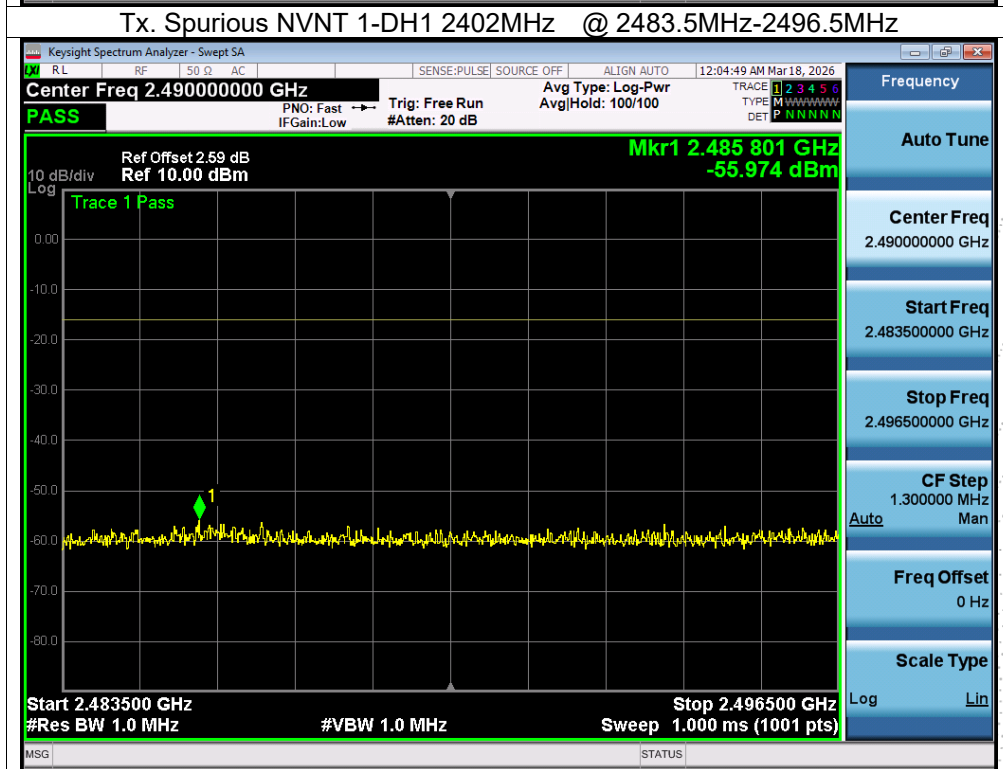
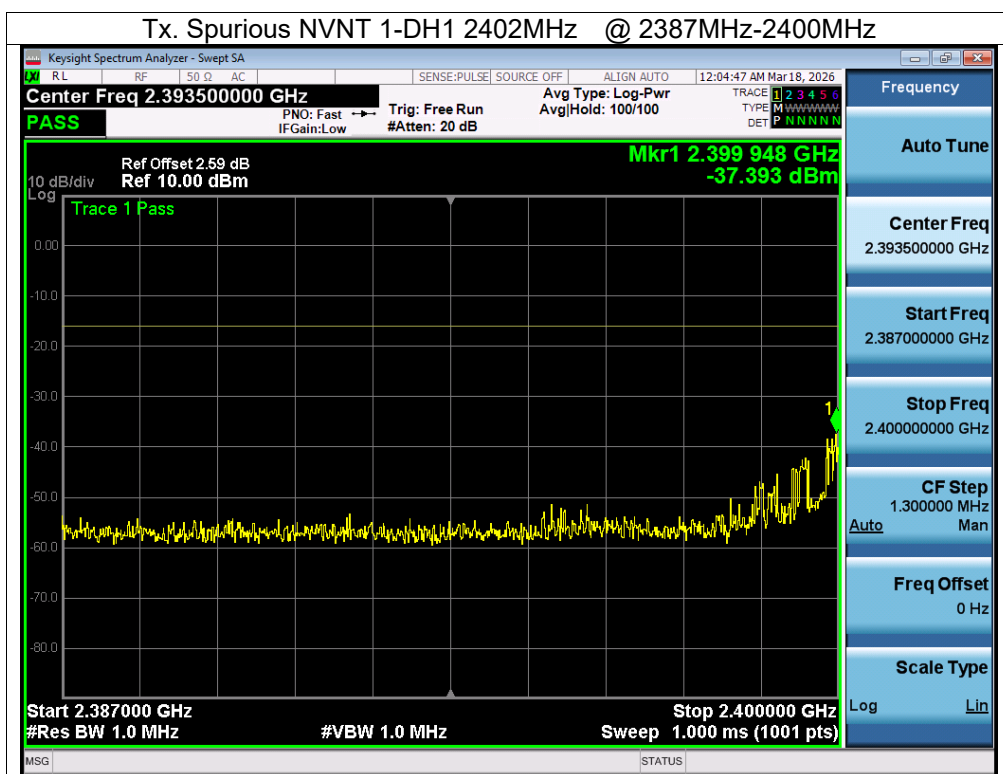
Temperature:	26°C		
Humidity:	54%RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		
Test Mode:	No-hopping		

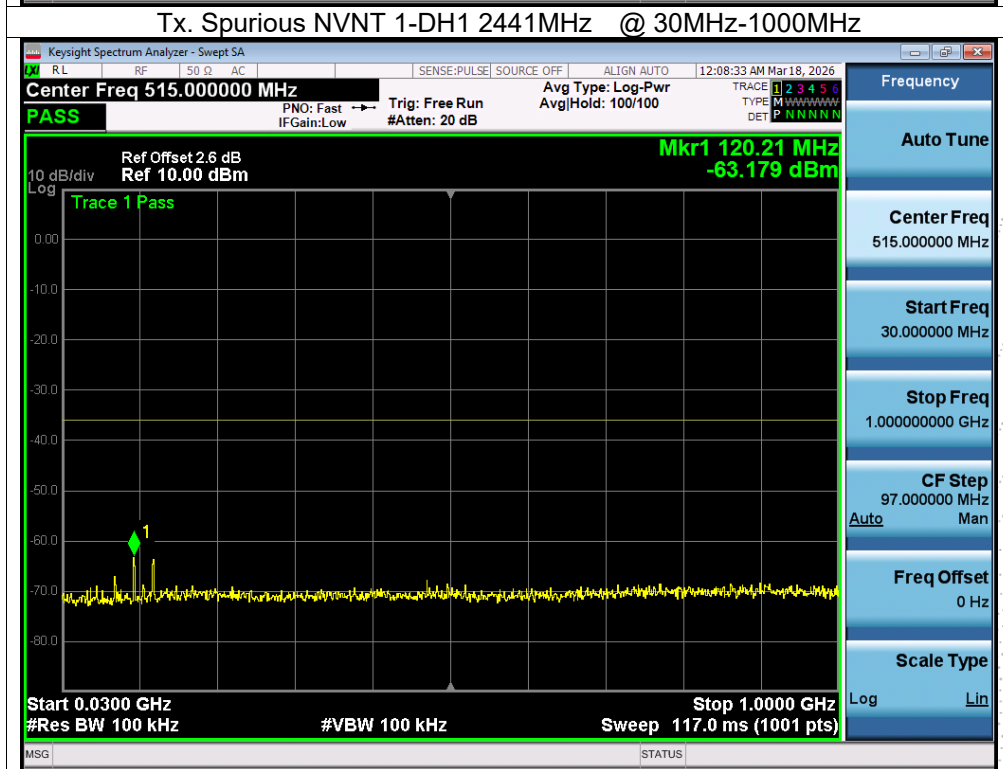
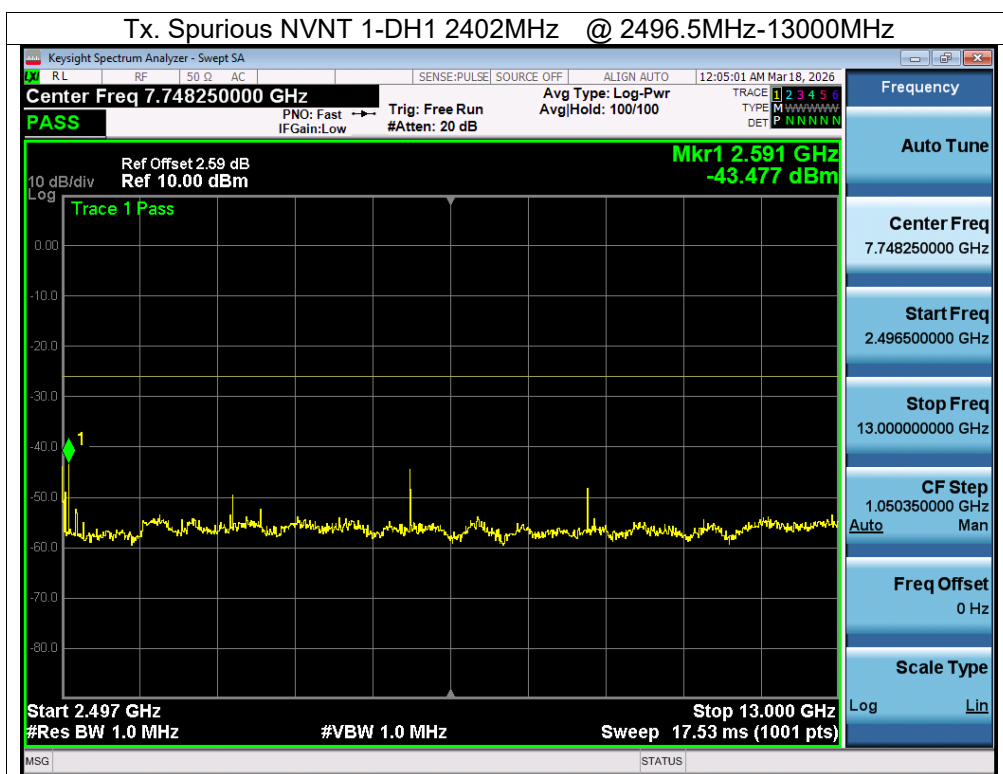
Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	30-1000	120.21	-62.86	-36	Pass
NVNT	1-DH1	2402	1000-2387	2210.85	-45.24	-26	Pass
NVNT	1-DH1	2402	2387-2400	2399.95	-37.39	-16	Pass
NVNT	1-DH1	2402	2483.5-2496.5	2485.8	-55.97	-16	Pass
NVNT	1-DH1	2402	2496.5-13000	2591.03	-43.48	-26	Pass
NVNT	1-DH1	2441	30-1000	120.21	-63.18	-36	Pass
NVNT	1-DH1	2441	1000-2387	2249.69	-44.28	-26	Pass
NVNT	1-DH1	2441	2387-2400	2392.72	-51.36	-16	Pass
NVNT	1-DH1	2441	2483.5-2496.5	2488.9	-50.13	-16	Pass
NVNT	1-DH1	2441	2496.5-13000	2633.05	-44.08	-26	Pass
NVNT	1-DH1	2480	30-1000	120.21	-62.38	-36	Pass
NVNT	1-DH1	2480	1000-2387	2288.52	-43.53	-26	Pass
NVNT	1-DH1	2480	2387-2400	2395.74	-55.56	-16	Pass
NVNT	1-DH1	2480	2483.5-2496.5	2483.75	-50.99	-16	Pass
NVNT	1-DH1	2480	2496.5-13000	2580.53	-44.65	-26	Pass
LVNT	1-DH1	2402	30-1000	913.67	-67.84	-36	Pass
LVNT	1-DH1	2402	1000-2387	2203.92	-56.56	-26	Pass
LVNT	1-DH1	2402	2387-2400	2400	-43.27	-16	Pass
LVNT	1-DH1	2402	2483.5-2496.5	2489.3	-56.4	-16	Pass
LVNT	1-DH1	2402	2496.5-13000	6351.28	-52.4	-26	Pass
LVNT	1-DH1	2441	30-1000	945.68	-68.16	-36	Pass
LVNT	1-DH1	2441	1000-2387	2368.97	-57.06	-26	Pass
LVNT	1-DH1	2441	2387-2400	2388.79	-56.35	-16	Pass
LVNT	1-DH1	2441	2483.5-2496.5	2484.49	-56.28	-16	Pass
LVNT	1-DH1	2441	2496.5-13000	3494.33	-52.92	-26	Pass
LVNT	1-DH1	2480	30-1000	910.76	-68.09	-36	Pass
LVNT	1-DH1	2480	1000-2387	2276.04	-56.8	-26	Pass
LVNT	1-DH1	2480	2387-2400	2398.97	-56.84	-16	Pass
LVNT	1-DH1	2480	2483.5-2496.5	2483.51	-54.1	-16	Pass
LVNT	1-DH1	2480	2496.5-13000	5237.91	-48.24	-26	Pass
HVNT	1-DH1	2402	30-1000	819.58	-68.04	-36	Pass
HVNT	1-DH1	2402	1000-2387	1767.01	-56.5	-26	Pass
HVNT	1-DH1	2402	2387-2400	2400	-43.08	-16	Pass
HVNT	1-DH1	2402	2483.5-2496.5	2485	-56.1	-16	Pass
HVNT	1-DH1	2402	2496.5-13000	5773.59	-53.33	-26	Pass
HVNT	1-DH1	2441	30-1000	702.21	-67.68	-36	Pass
HVNT	1-DH1	2441	1000-2387	1775.33	-44.66	-26	Pass
HVNT	1-DH1	2441	2387-2400	2395.13	-56.94	-16	Pass
HVNT	1-DH1	2441	2483.5-2496.5	2487.35	-55.99	-16	Pass
HVNT	1-DH1	2441	2496.5-13000	5237.91	-52.52	-26	Pass
HVNT	1-DH1	2480	30-1000	911.73	-67.75	-36	Pass
HVNT	1-DH1	2480	1000-2387	1779.49	-43.97	-26	Pass
HVNT	1-DH1	2480	2387-2400	2392.15	-56.78	-16	Pass
HVNT	1-DH1	2480	2483.5-2496.5	2483.8	-54.18	-16	Pass
HVNT	1-DH1	2480	2496.5-13000	5237.91	-49.74	-26	Pass
NVNT	2-DH1	2402	30-1000	144.46	-62.42	-36	Pass
NVNT	2-DH1	2402	1000-2387	2210.85	-45.07	-26	Pass

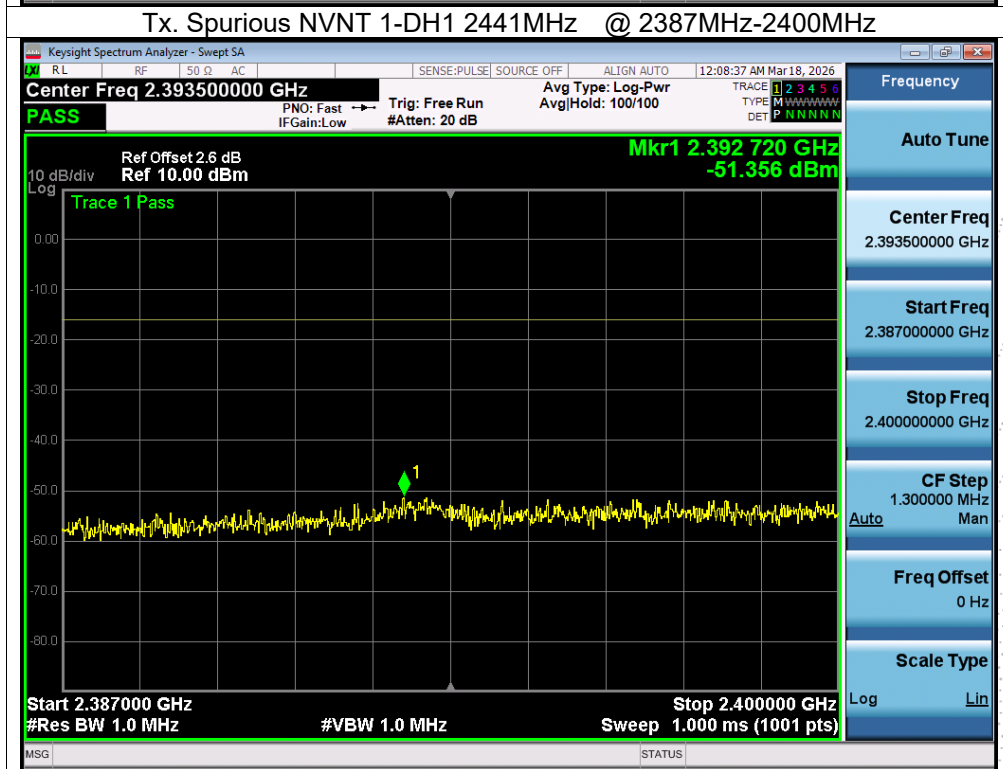
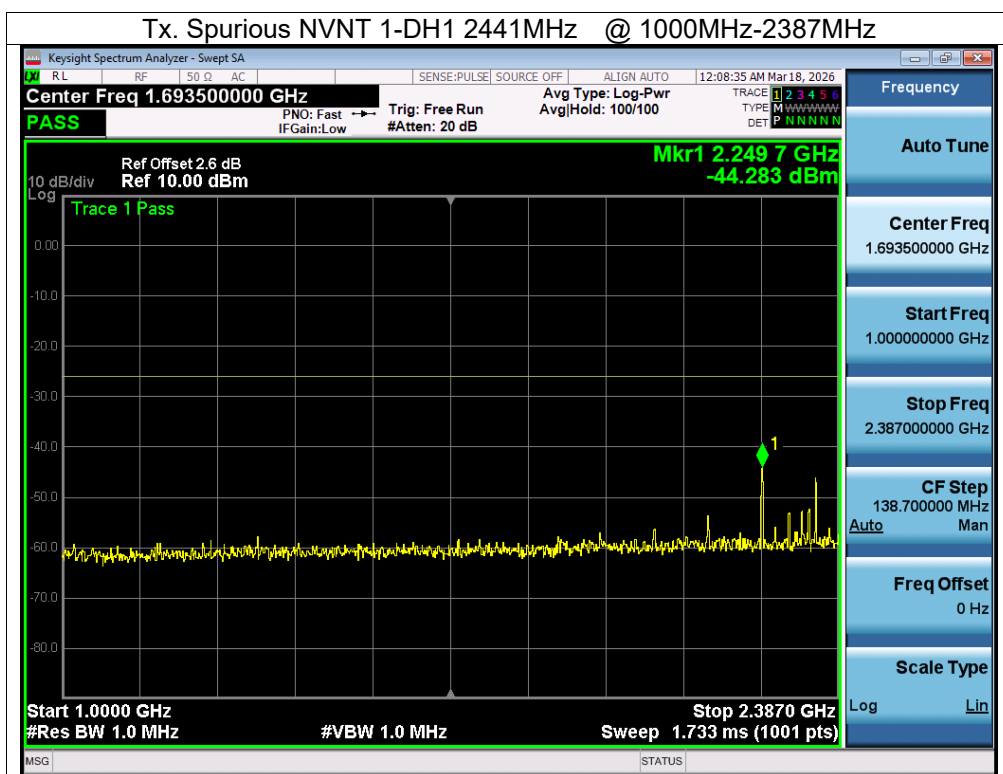
NVNT	2-DH1	2402	2387-2400	2399.99	-34.8	-16	Pass
NVNT	2-DH1	2402	2483.5-2496.5	2485.81	-54.91	-16	Pass
NVNT	2-DH1	2402	2496.5-13000	7202.07	-42.85	-26	Pass
NVNT	2-DH1	2441	30-1000	120.21	-62.76	-36	Pass
NVNT	2-DH1	2441	1000-2387	2249.69	-44.29	-26	Pass
NVNT	2-DH1	2441	2387-2400	2399	-50.92	-16	Pass
NVNT	2-DH1	2441	2483.5-2496.5	2488.51	-50.14	-16	Pass
NVNT	2-DH1	2441	2496.5-13000	2538.51	-44.94	-26	Pass
NVNT	2-DH1	2480	30-1000	120.21	-63.04	-36	Pass
NVNT	2-DH1	2480	1000-2387	2288.52	-43.9	-26	Pass
NVNT	2-DH1	2480	2387-2400	2389.51	-57.19	-16	Pass
NVNT	2-DH1	2480	2483.5-2496.5	2483.71	-52.06	-16	Pass
NVNT	2-DH1	2480	2496.5-13000	2675.06	-45.17	-26	Pass
LVNT	2-DH1	2402	30-1000	835.1	-68.05	-36	Pass
LVNT	2-DH1	2402	1000-2387	2033.31	-57.26	-26	Pass
LVNT	2-DH1	2402	2387-2400	2400	-35.79	-16	Pass
LVNT	2-DH1	2402	2483.5-2496.5	2493.71	-56.42	-16	Pass
LVNT	2-DH1	2402	2496.5-13000	12642.88	-53.19	-26	Pass
LVNT	2-DH1	2441	30-1000	399.57	-67.98	-36	Pass
LVNT	2-DH1	2441	1000-2387	2356.49	-56.75	-26	Pass
LVNT	2-DH1	2441	2387-2400	2392.38	-56.42	-16	Pass
LVNT	2-DH1	2441	2483.5-2496.5	2496.23	-56.39	-16	Pass
LVNT	2-DH1	2441	2496.5-13000	3420.81	-51.68	-26	Pass
LVNT	2-DH1	2480	30-1000	869.05	-67.72	-36	Pass
LVNT	2-DH1	2480	1000-2387	2285.75	-57.05	-26	Pass
LVNT	2-DH1	2480	2387-2400	2390.69	-57.02	-16	Pass
LVNT	2-DH1	2480	2483.5-2496.5	2483.6	-55.1	-16	Pass
LVNT	2-DH1	2480	2496.5-13000	3672.89	-53.26	-26	Pass
HVNT	2-DH1	2402	30-1000	970.9	-68.03	-36	Pass
HVNT	2-DH1	2402	1000-2387	1773.95	-47.76	-26	Pass
HVNT	2-DH1	2402	2387-2400	2400	-34.3	-16	Pass
HVNT	2-DH1	2402	2483.5-2496.5	2493.15	-56.6	-16	Pass
HVNT	2-DH1	2402	2496.5-13000	5700.07	-52.8	-26	Pass
HVNT	2-DH1	2441	30-1000	991.27	-67.82	-36	Pass
HVNT	2-DH1	2441	1000-2387	1783.66	-44.3	-26	Pass
HVNT	2-DH1	2441	2387-2400	2394.71	-56.13	-16	Pass
HVNT	2-DH1	2441	2483.5-2496.5	2491.21	-56.57	-16	Pass
HVNT	2-DH1	2441	2496.5-13000	3714.91	-53.19	-26	Pass
HVNT	2-DH1	2480	30-1000	882.63	-67.69	-36	Pass
HVNT	2-DH1	2480	1000-2387	2312.1	-57.07	-26	Pass
HVNT	2-DH1	2480	2387-2400	2389.82	-55.72	-16	Pass
HVNT	2-DH1	2480	2483.5-2496.5	2486.26	-55.69	-16	Pass
HVNT	2-DH1	2480	2496.5-13000	3725.41	-52.71	-26	Pass

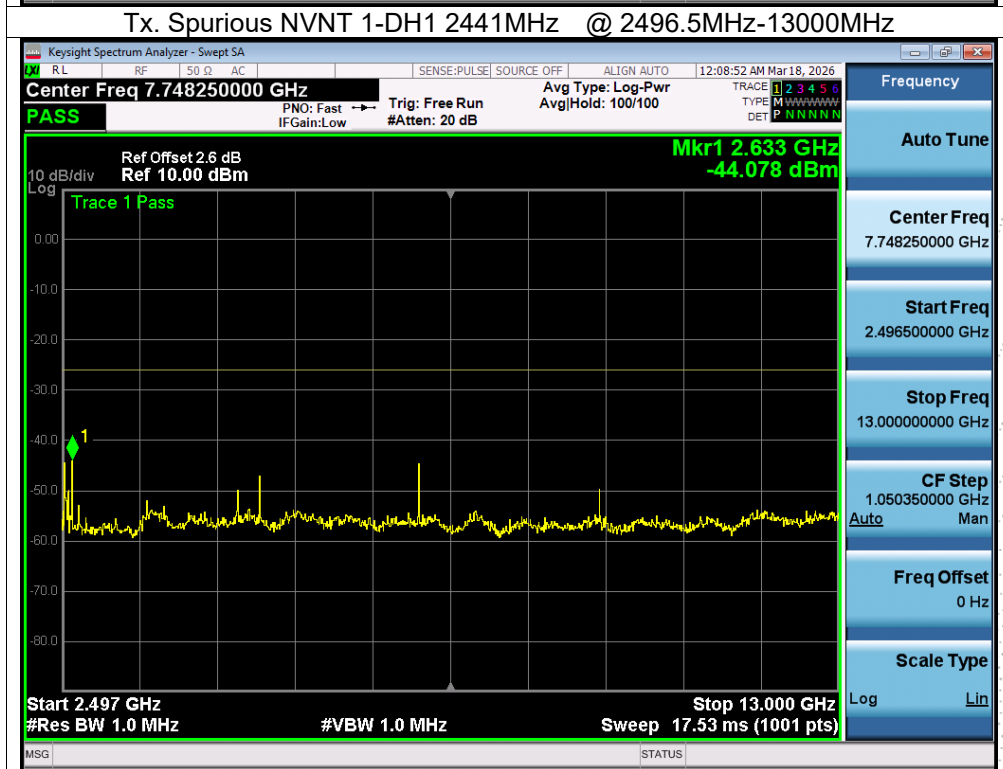
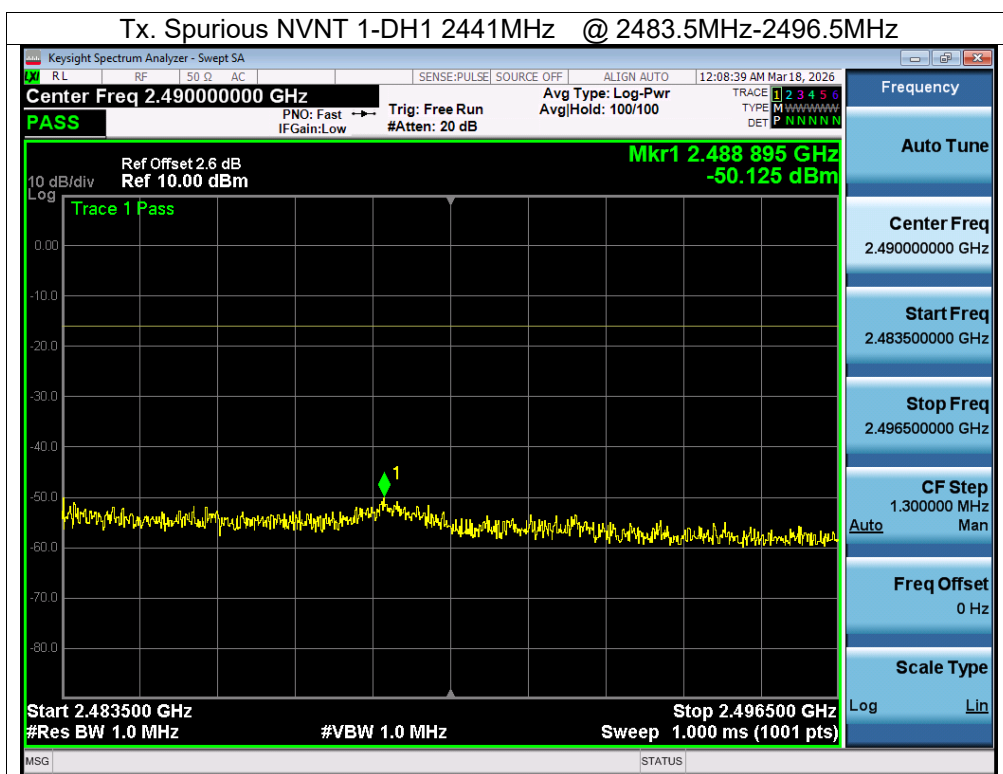
When the RB=100kHz, RB factor = $10\log(RB0/RB1) = 10\log(1M/100K) = 10dB$



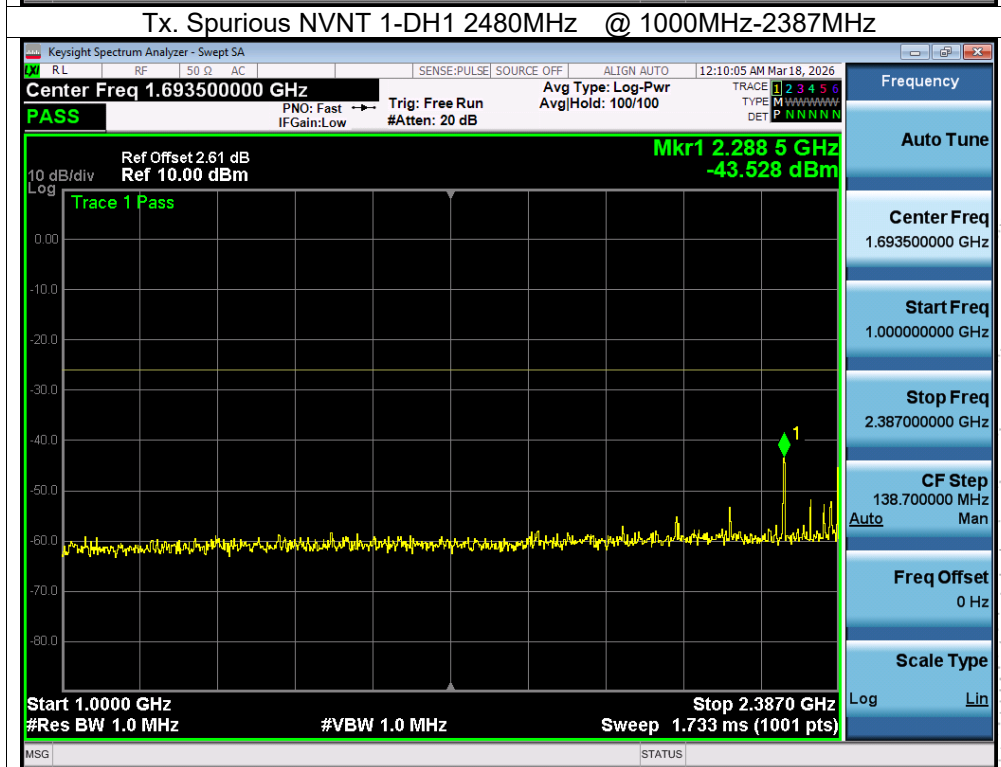
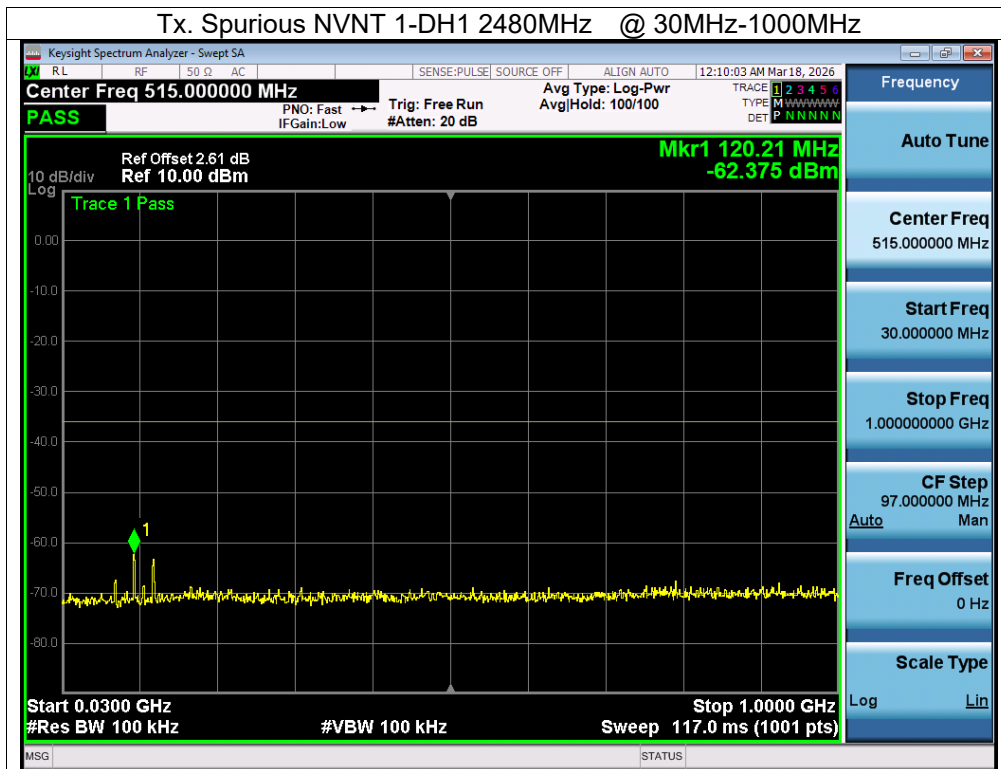


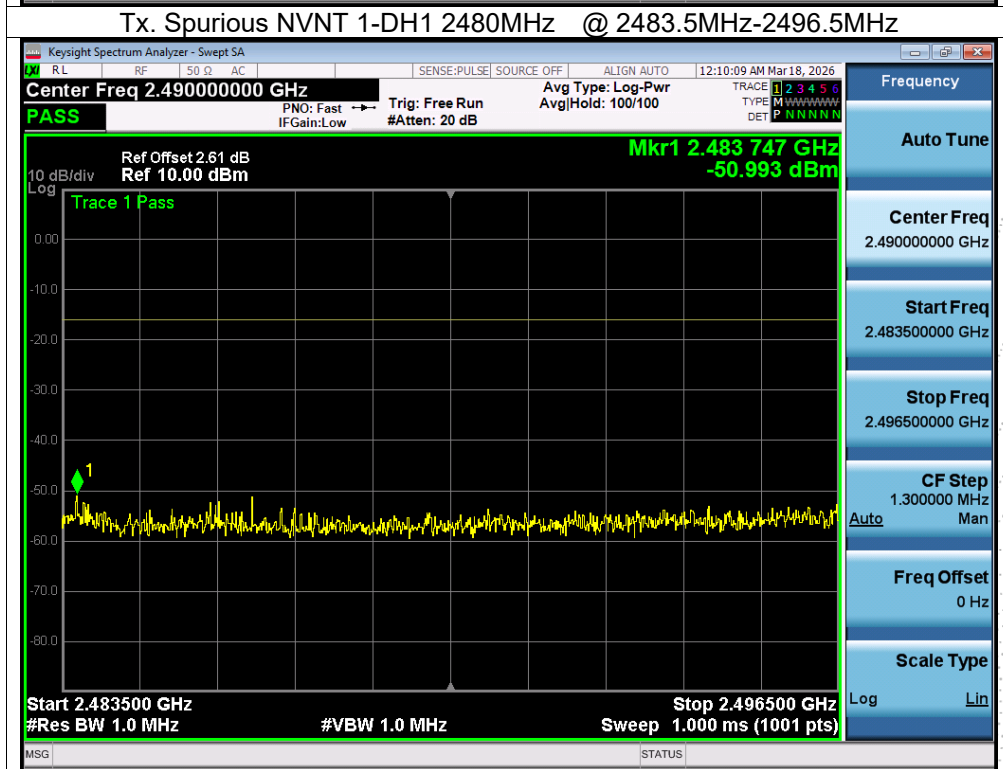
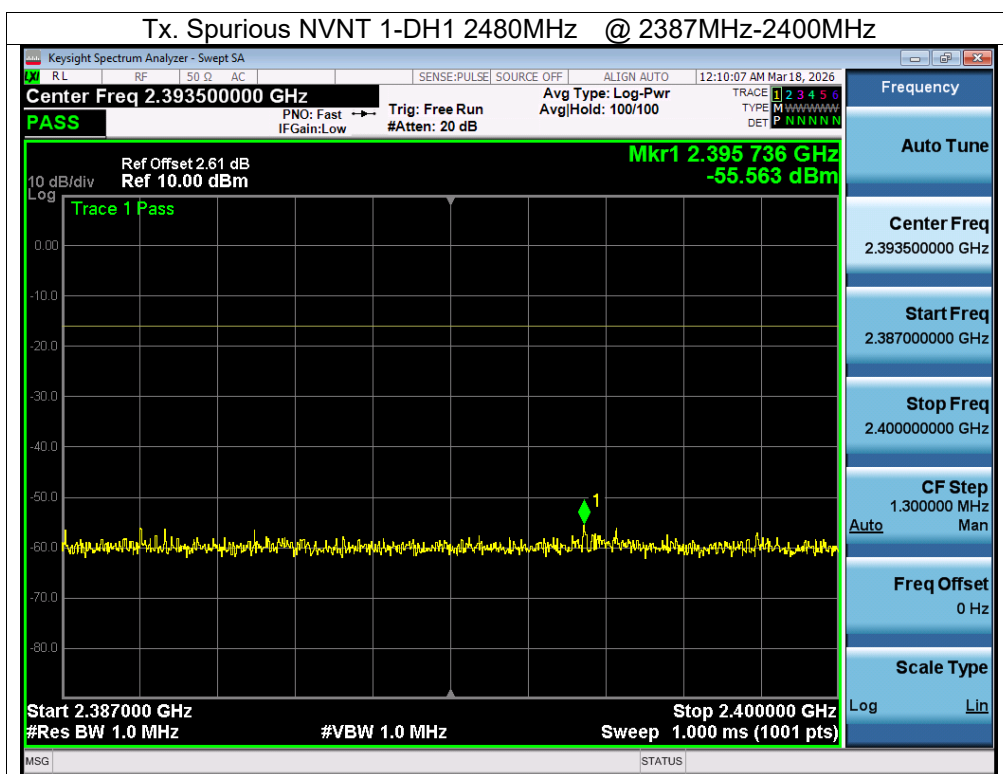


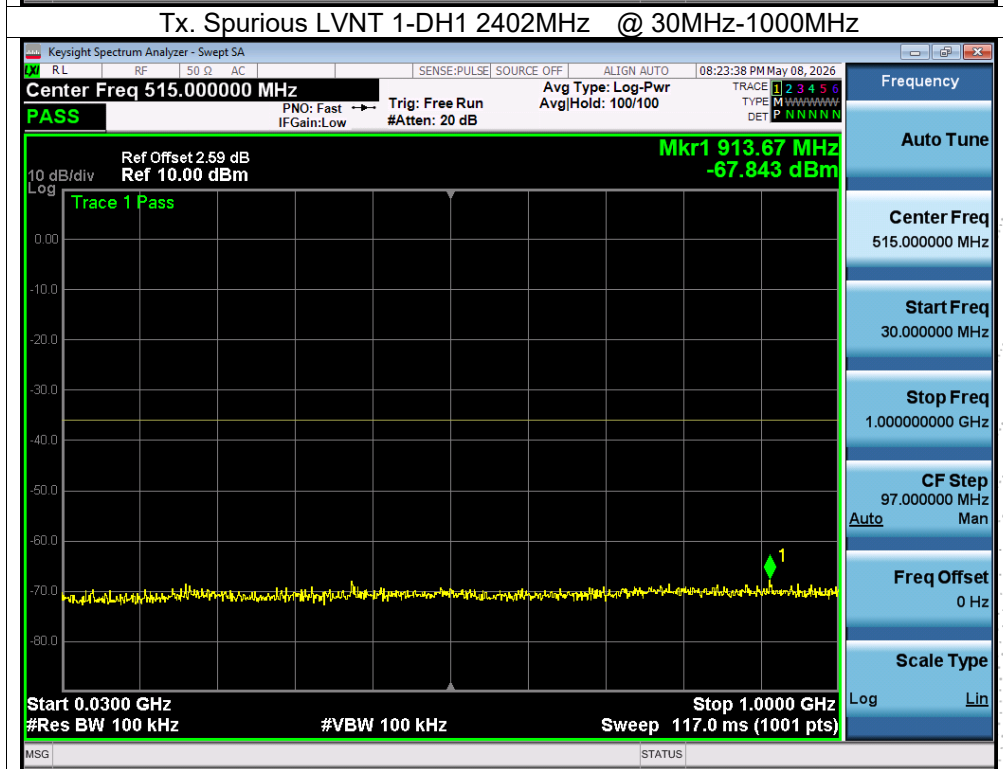
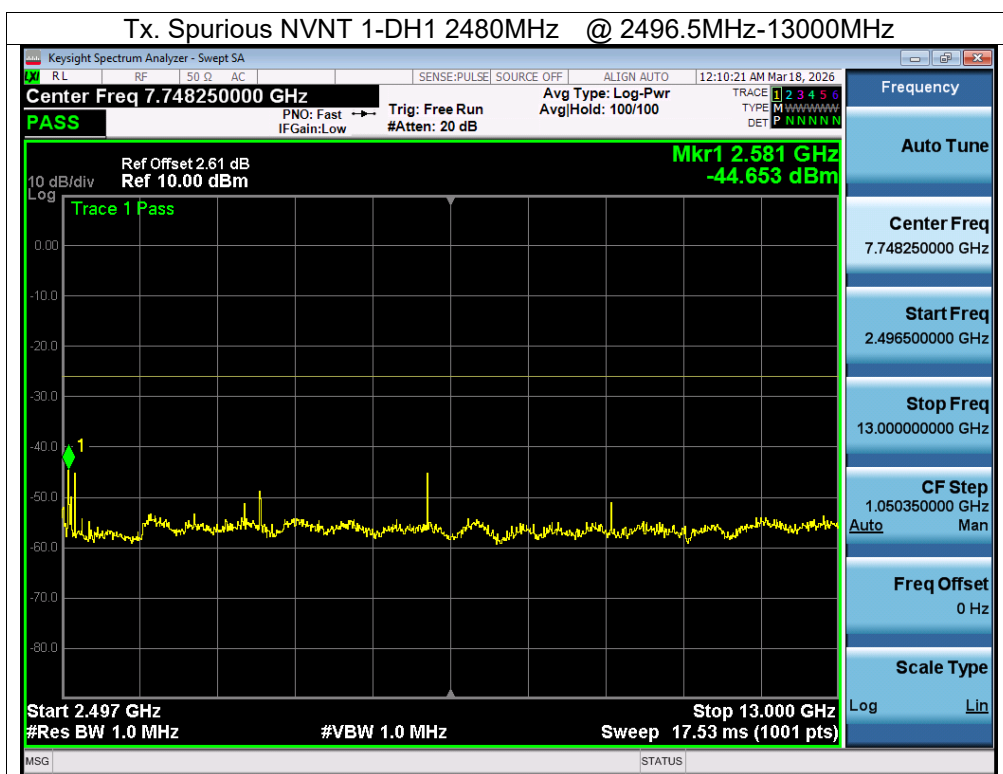


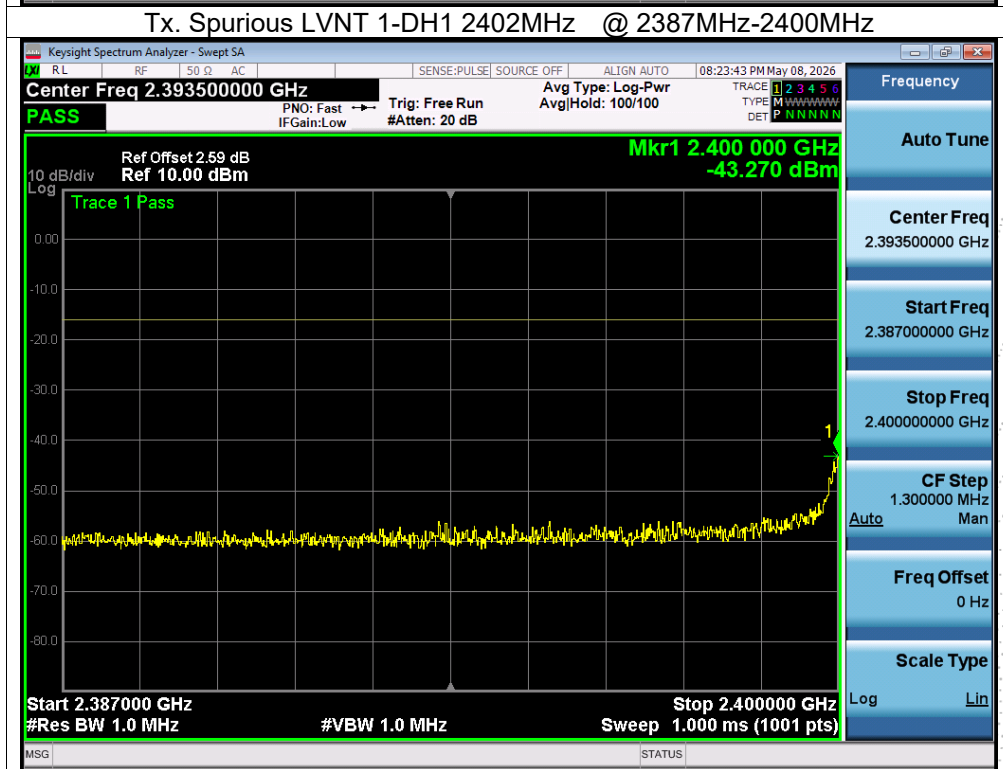
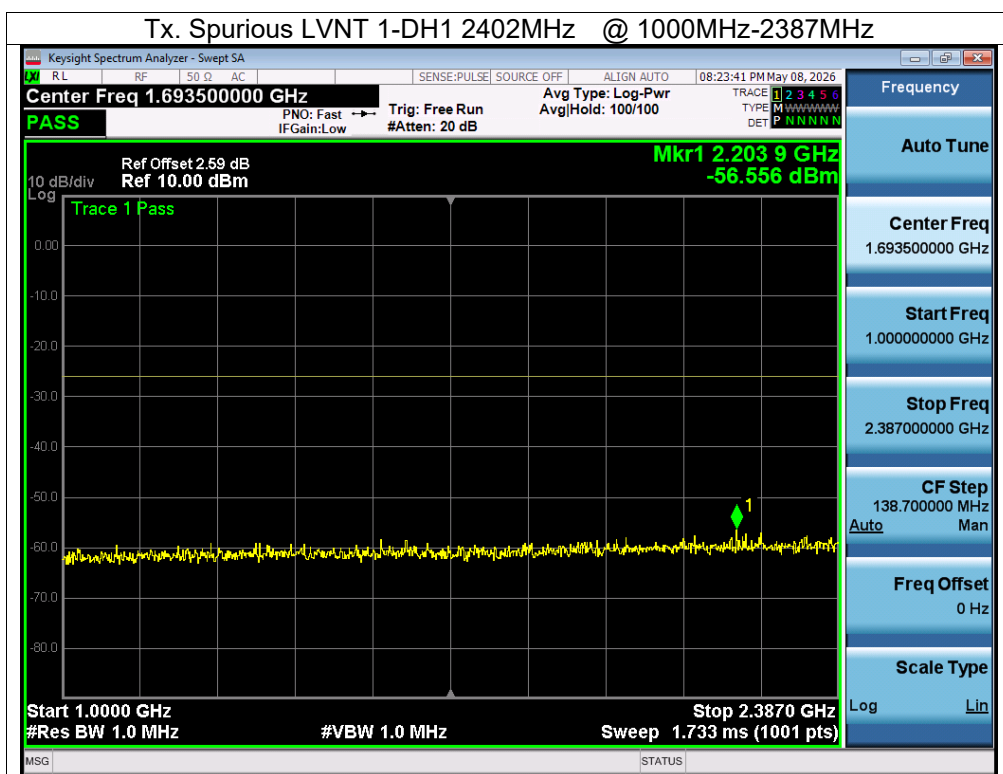


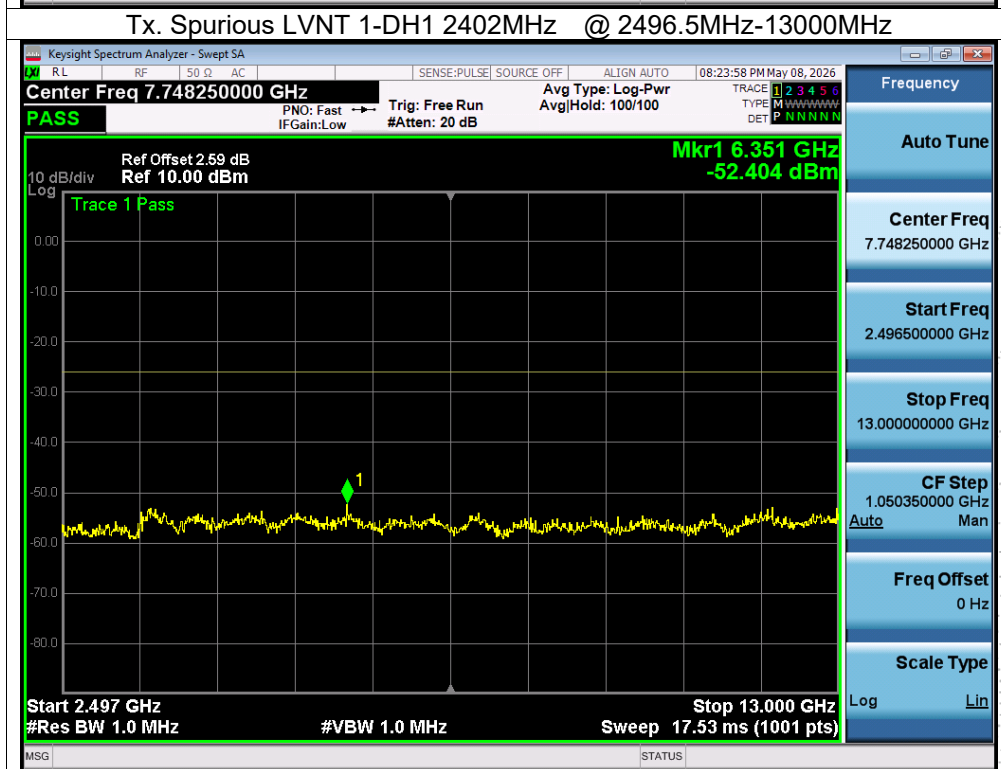
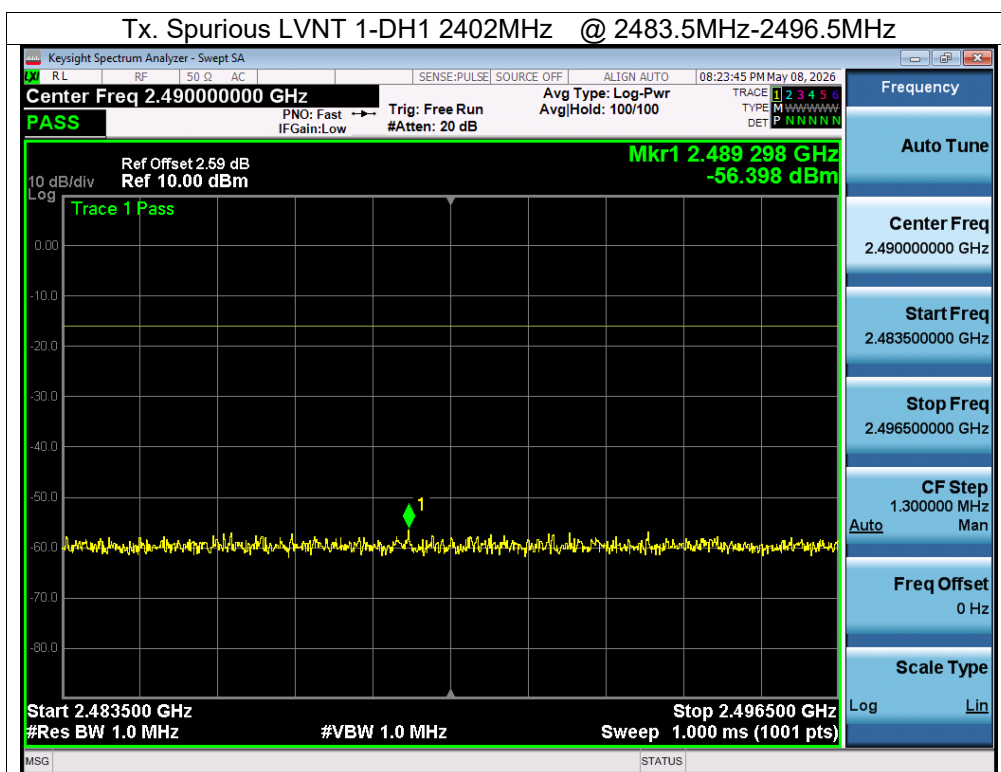
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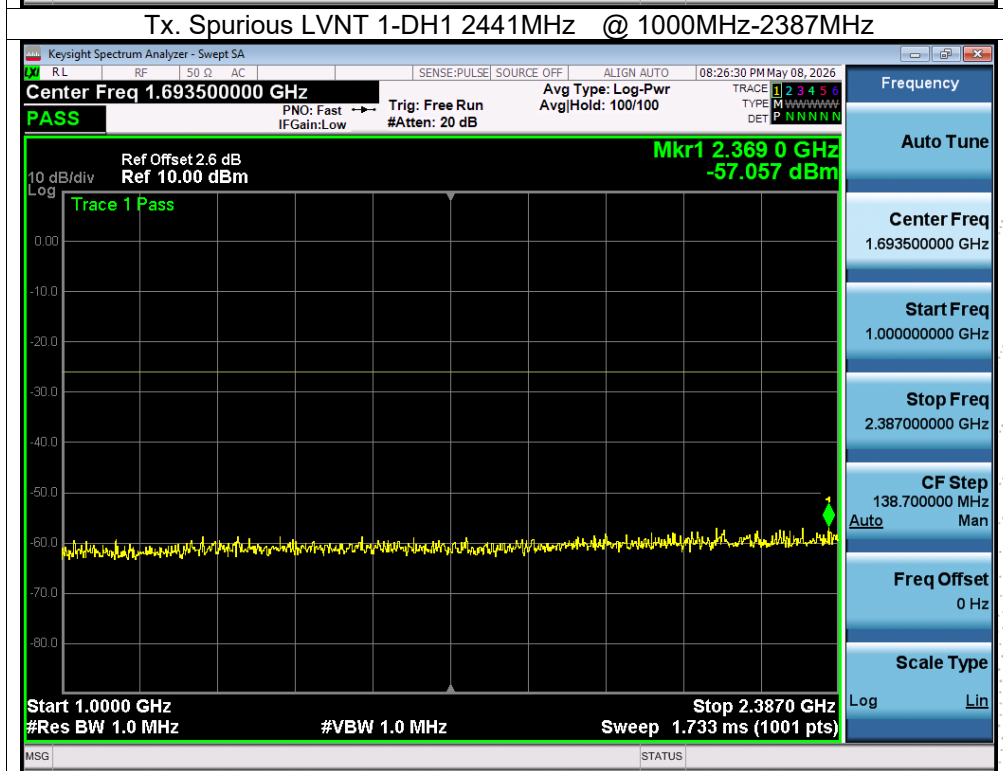
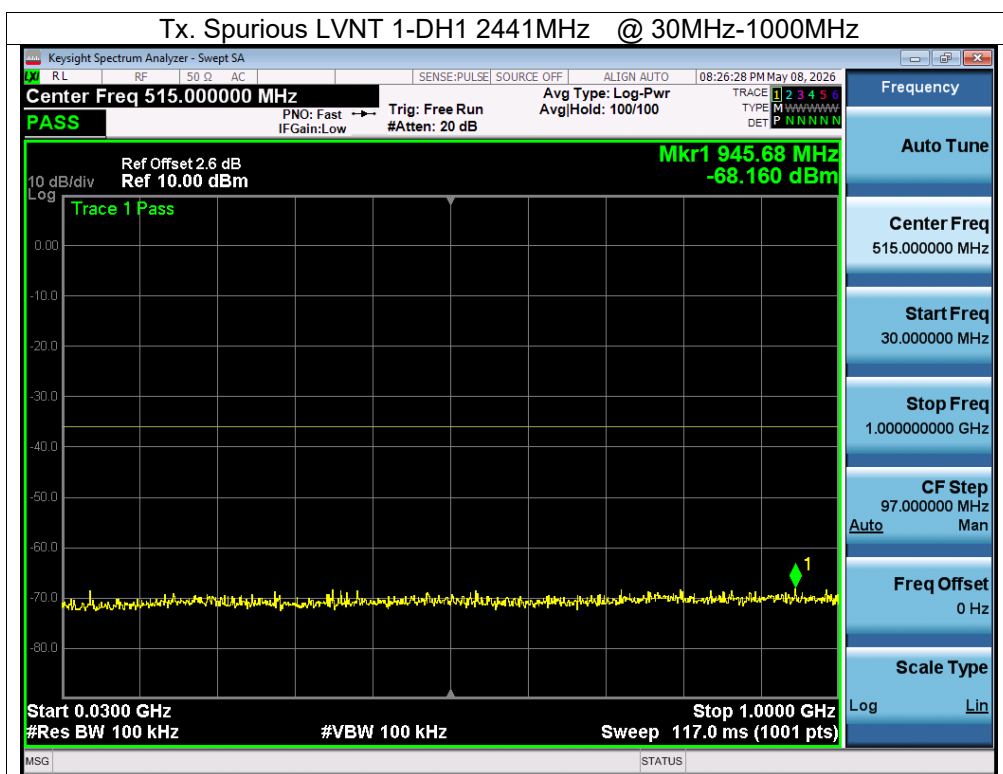




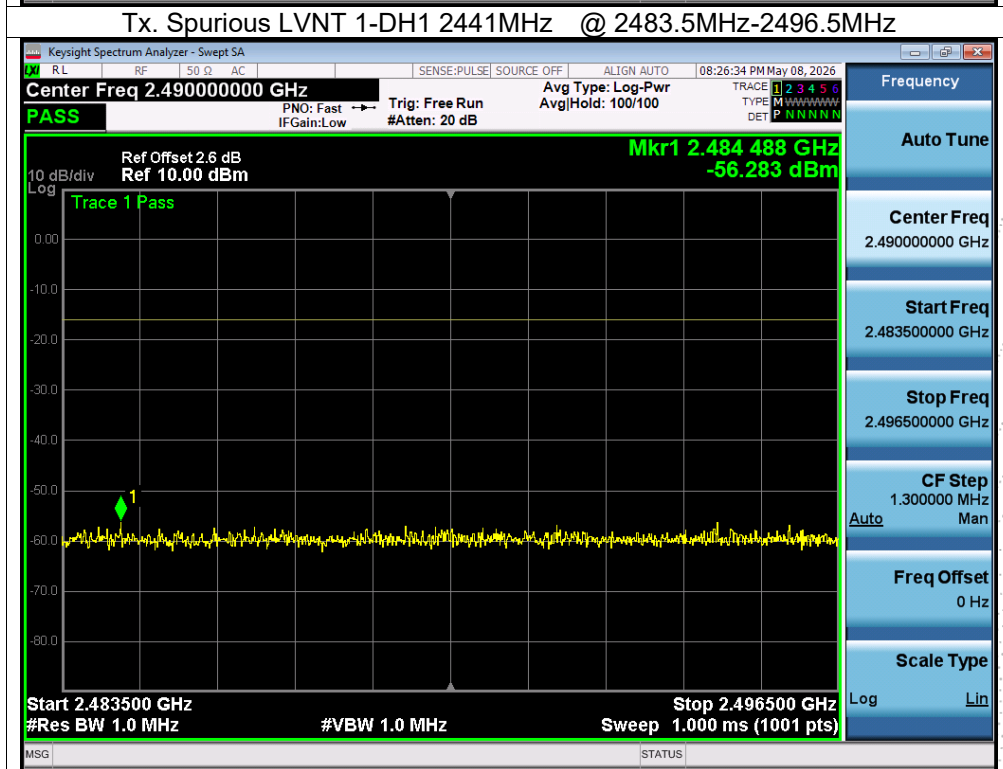
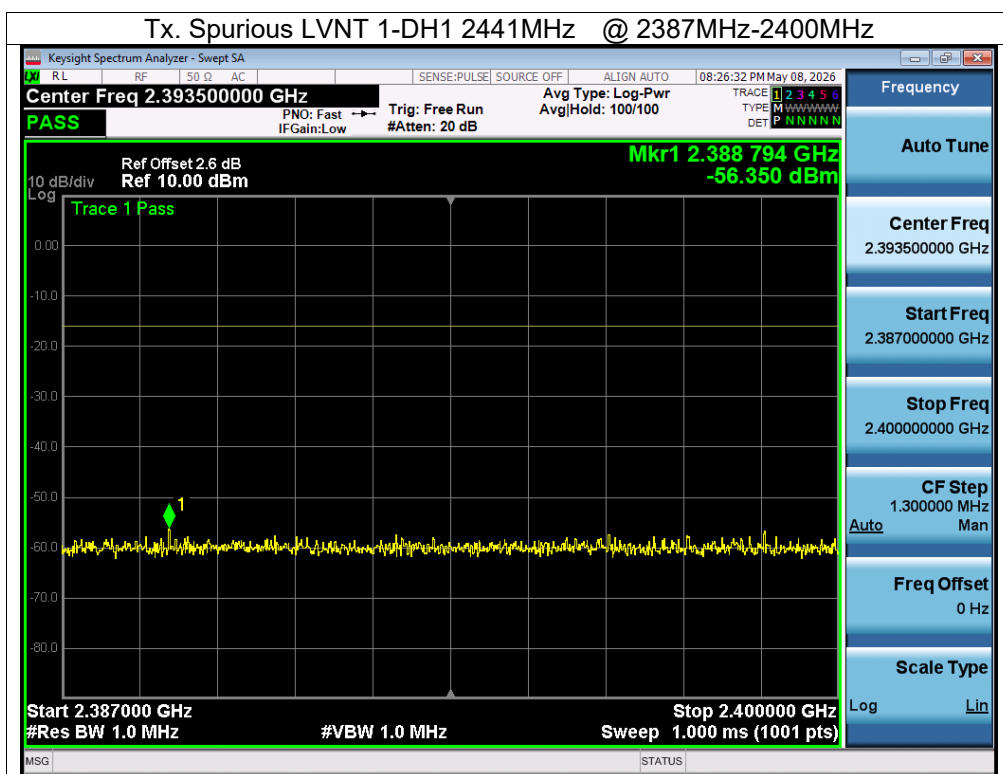


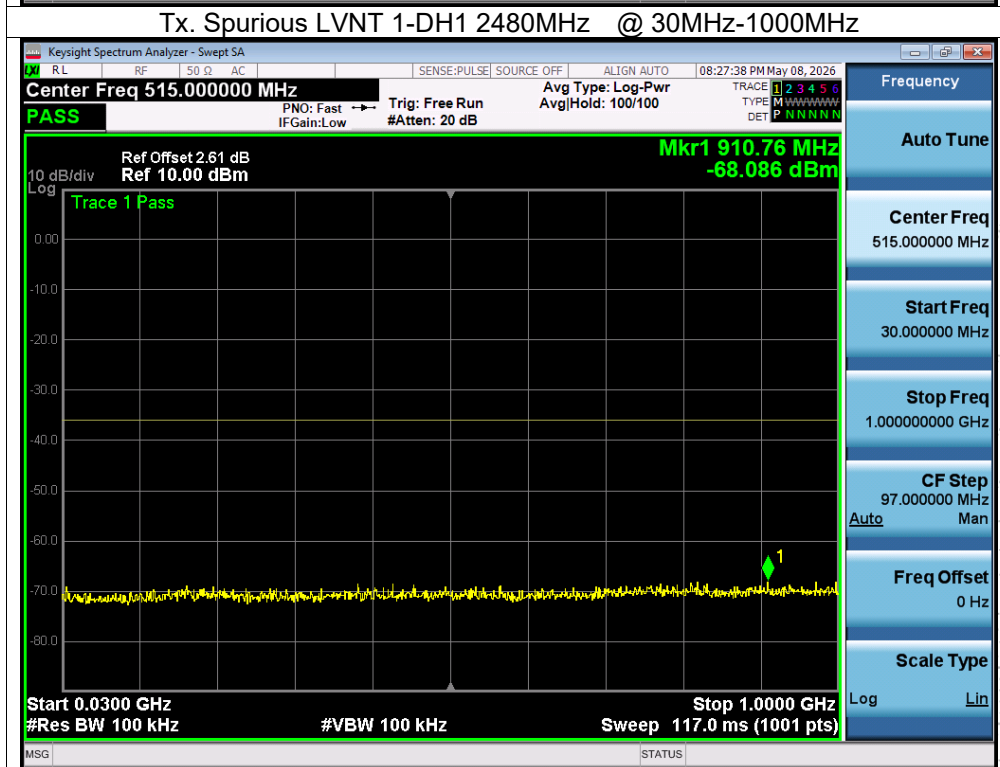
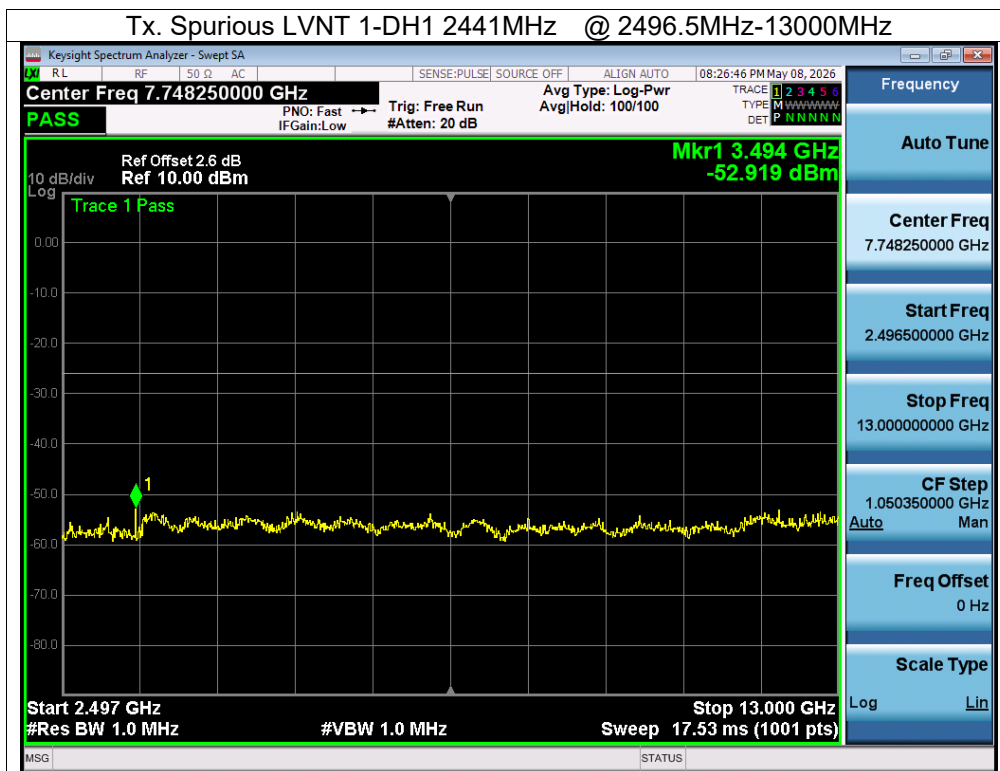


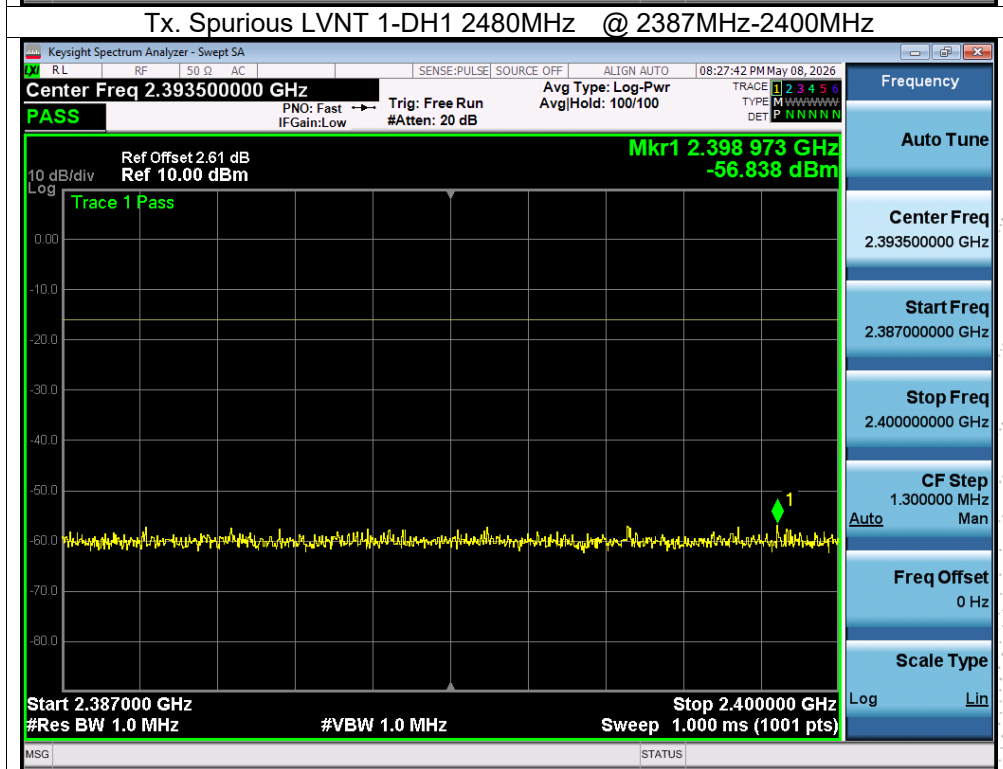
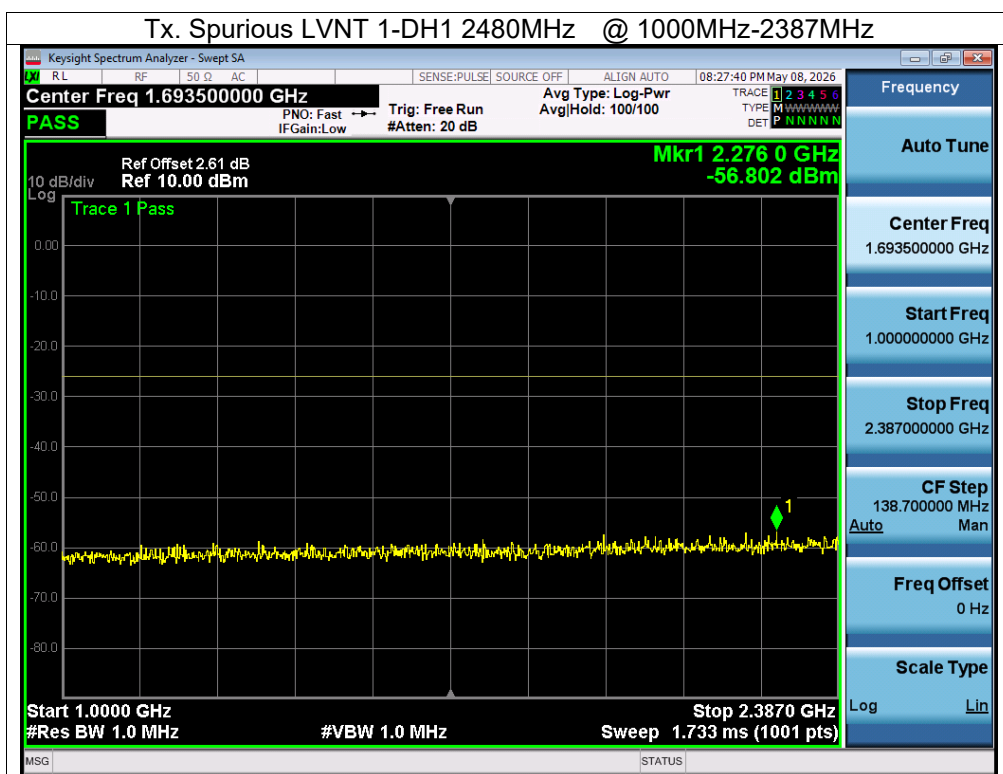


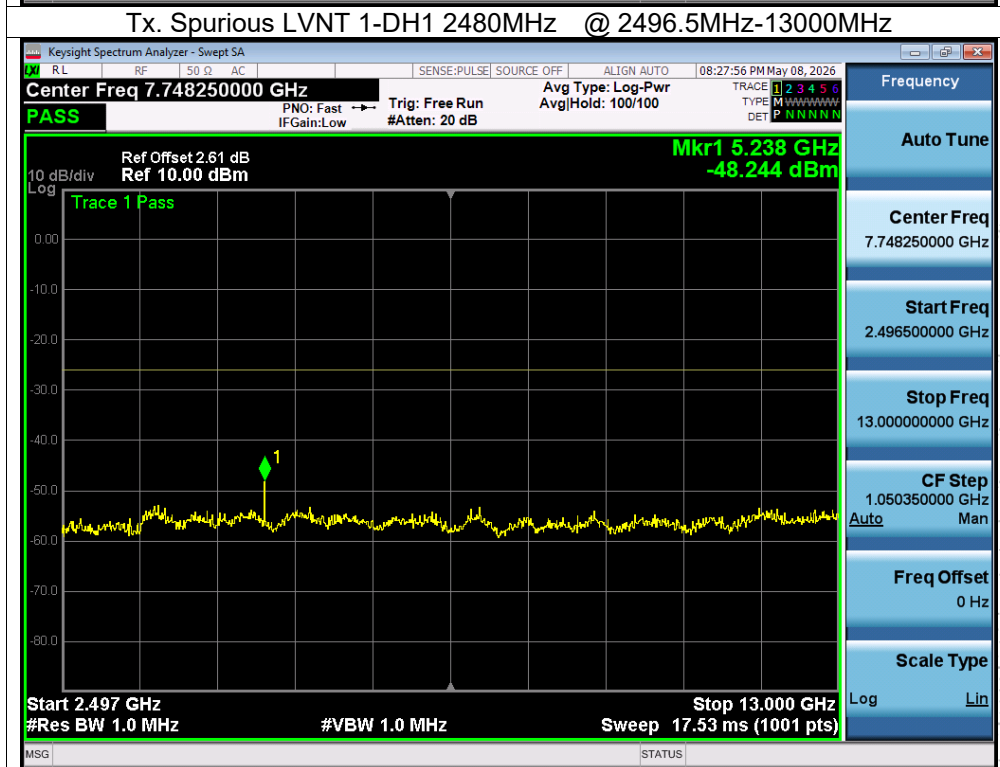
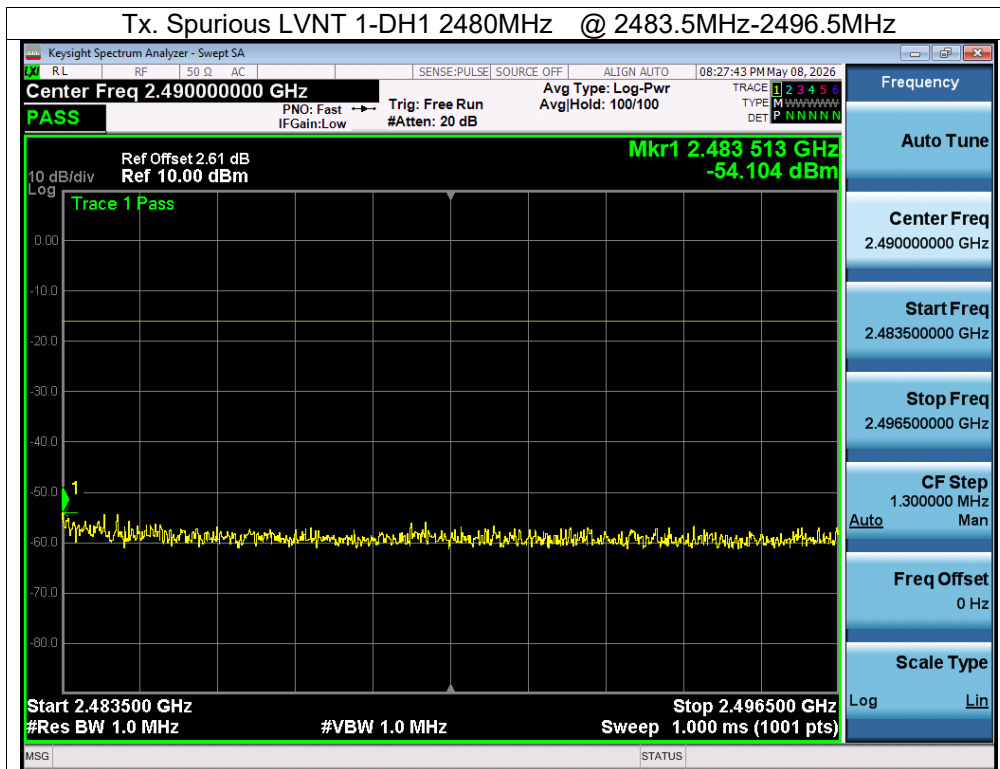


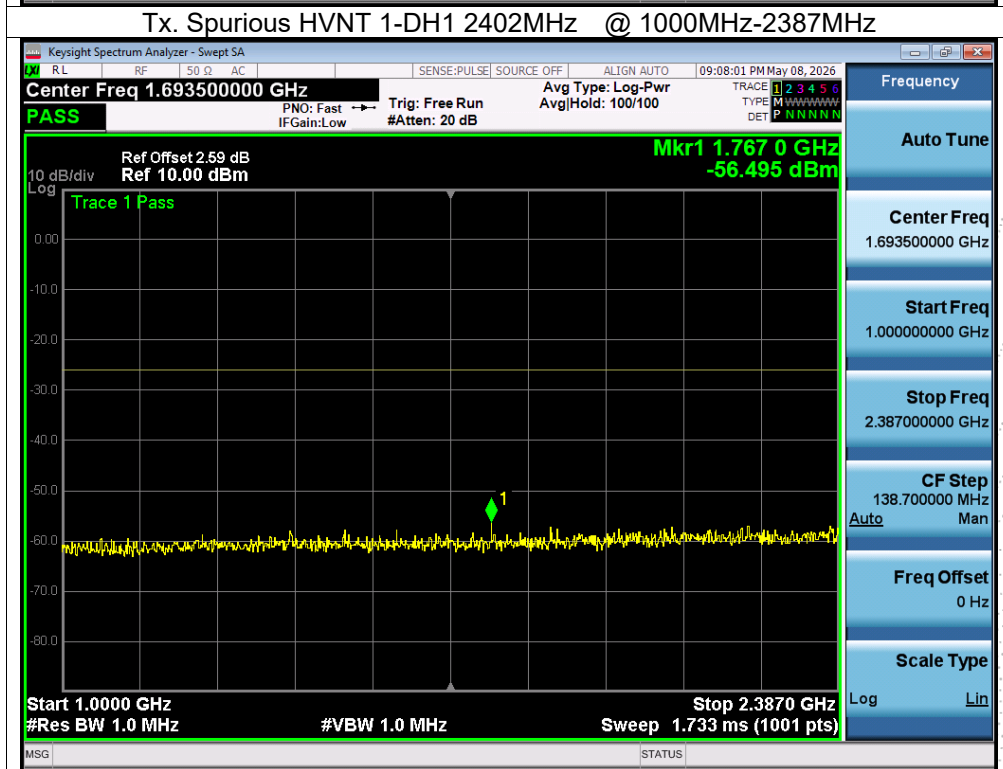
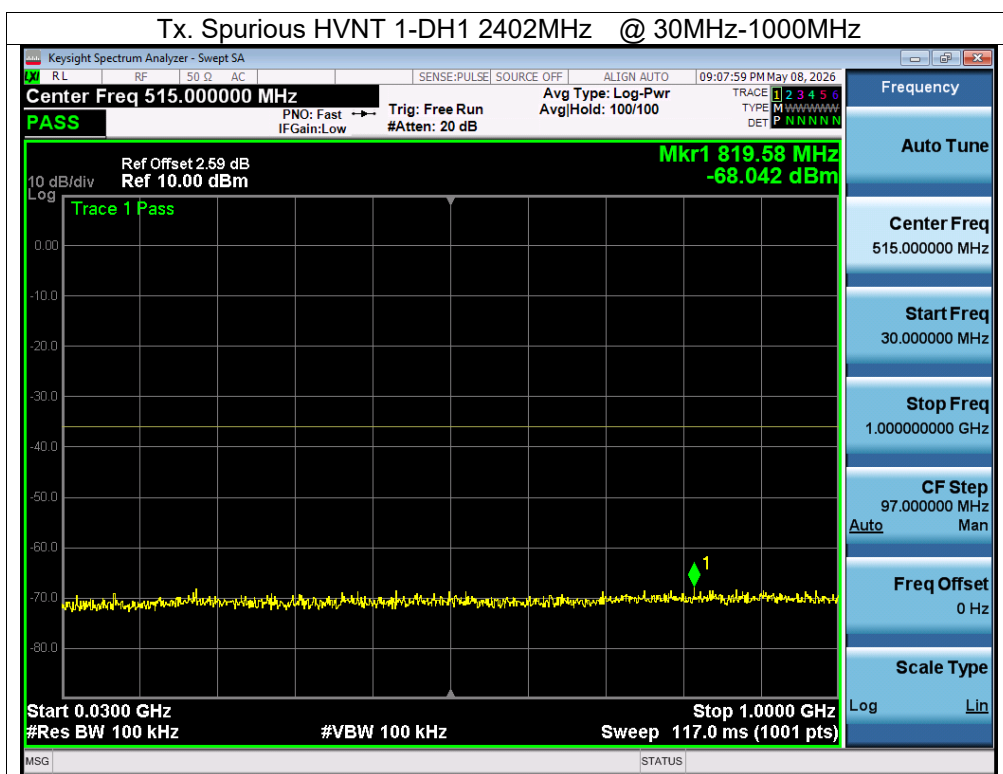
BCTC CO., LTD

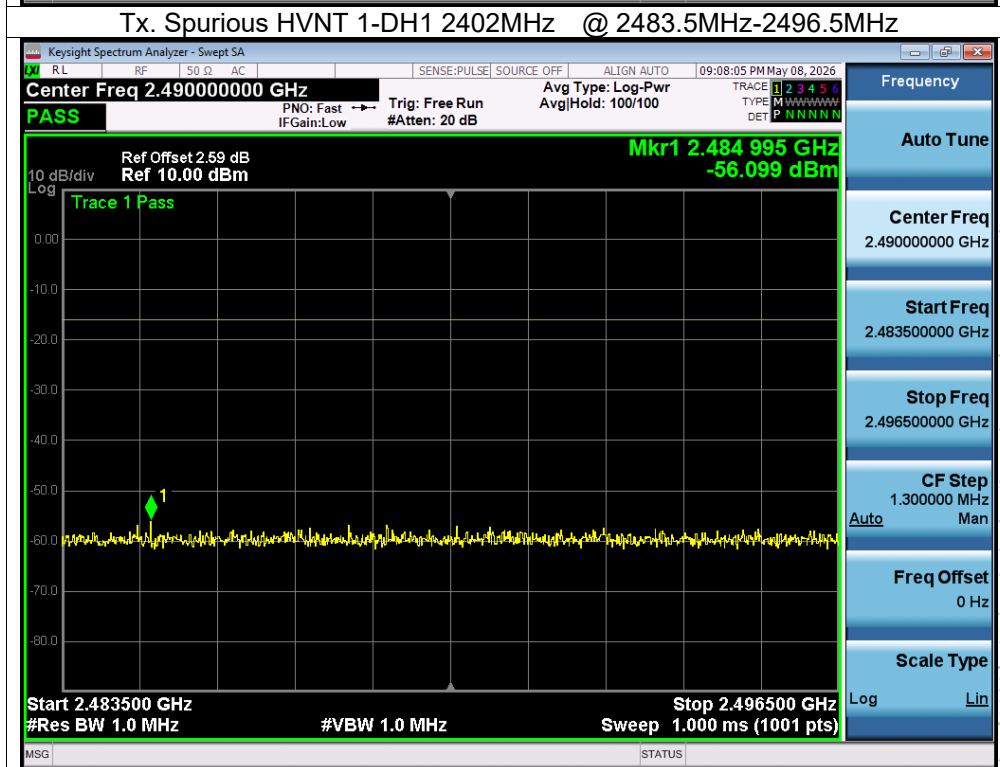
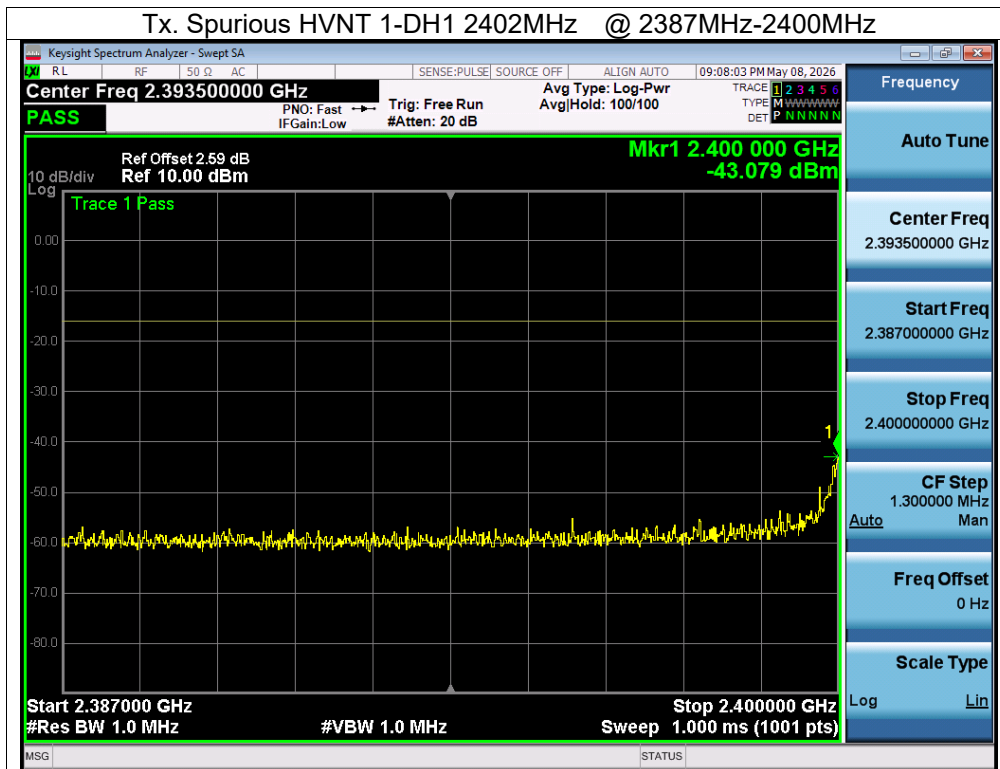


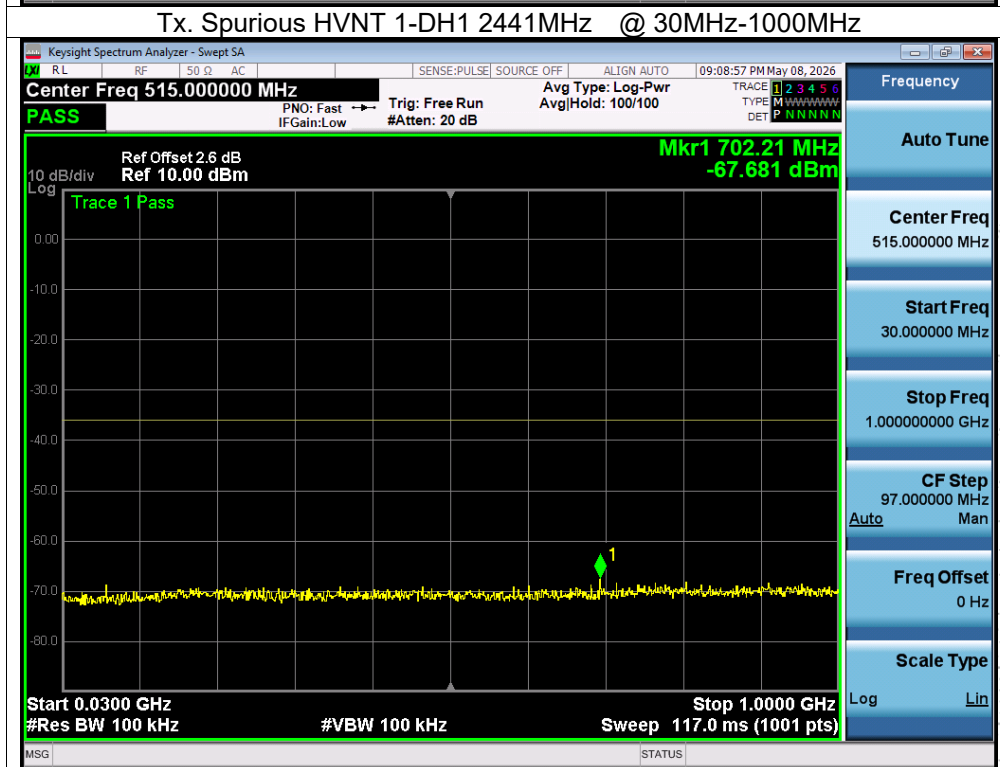
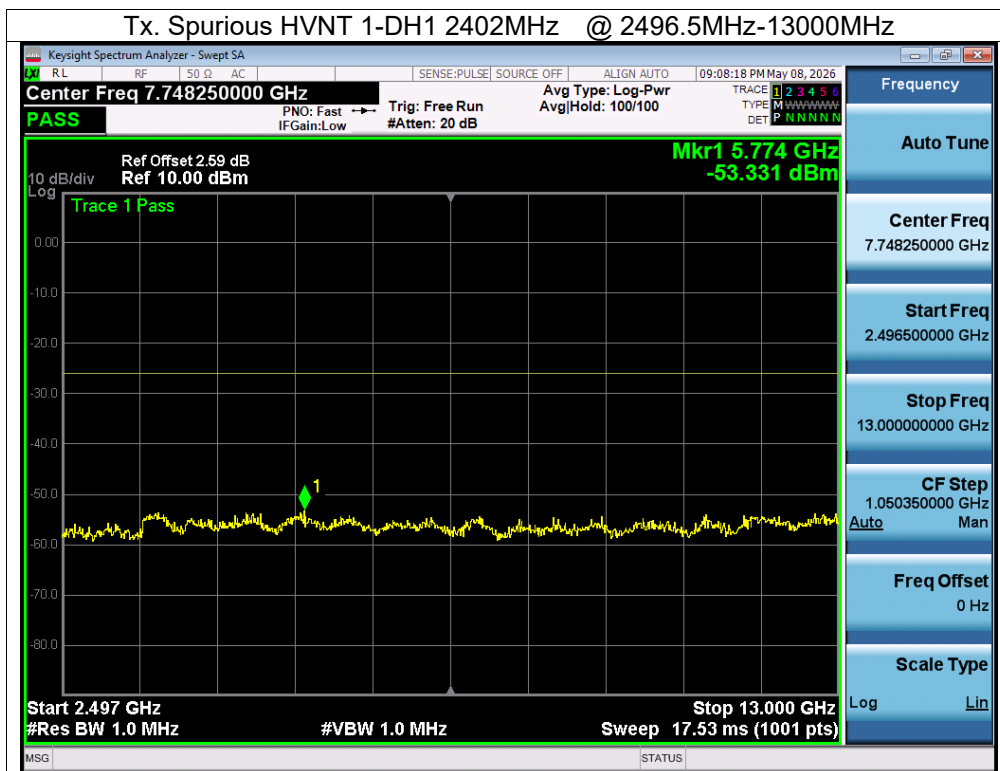


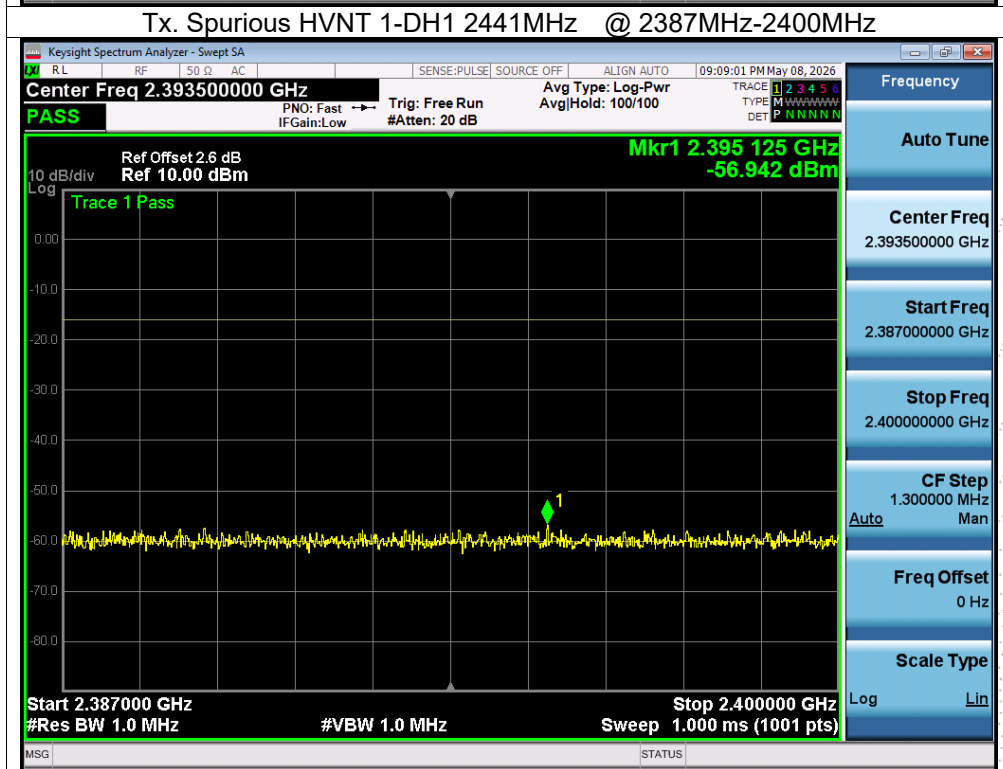
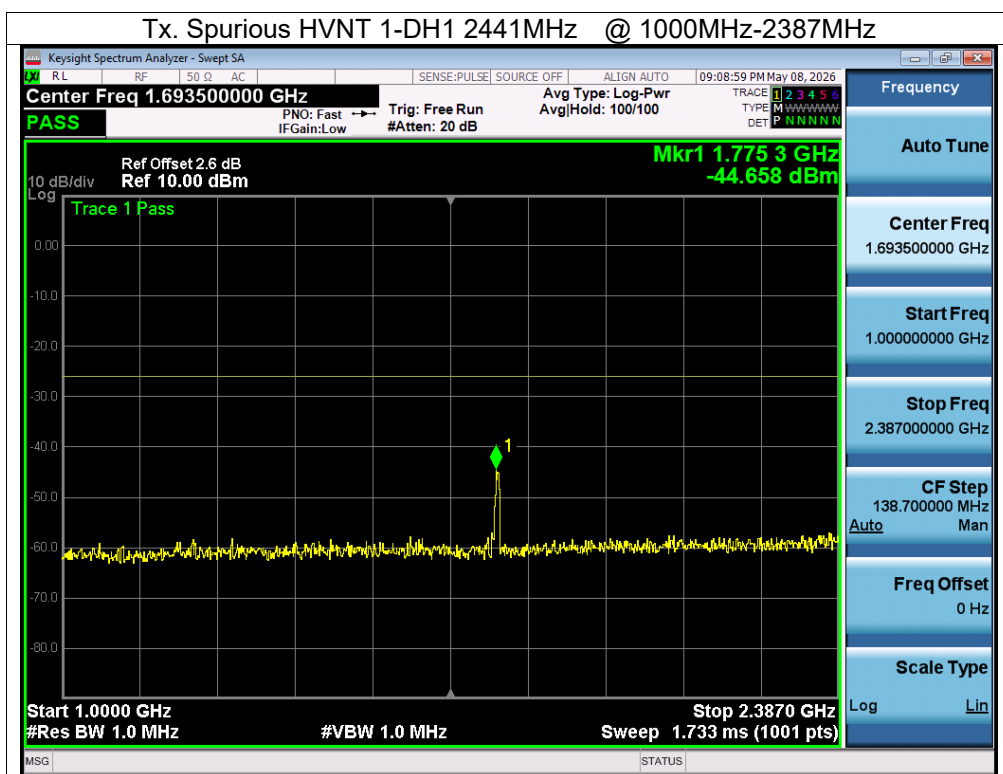


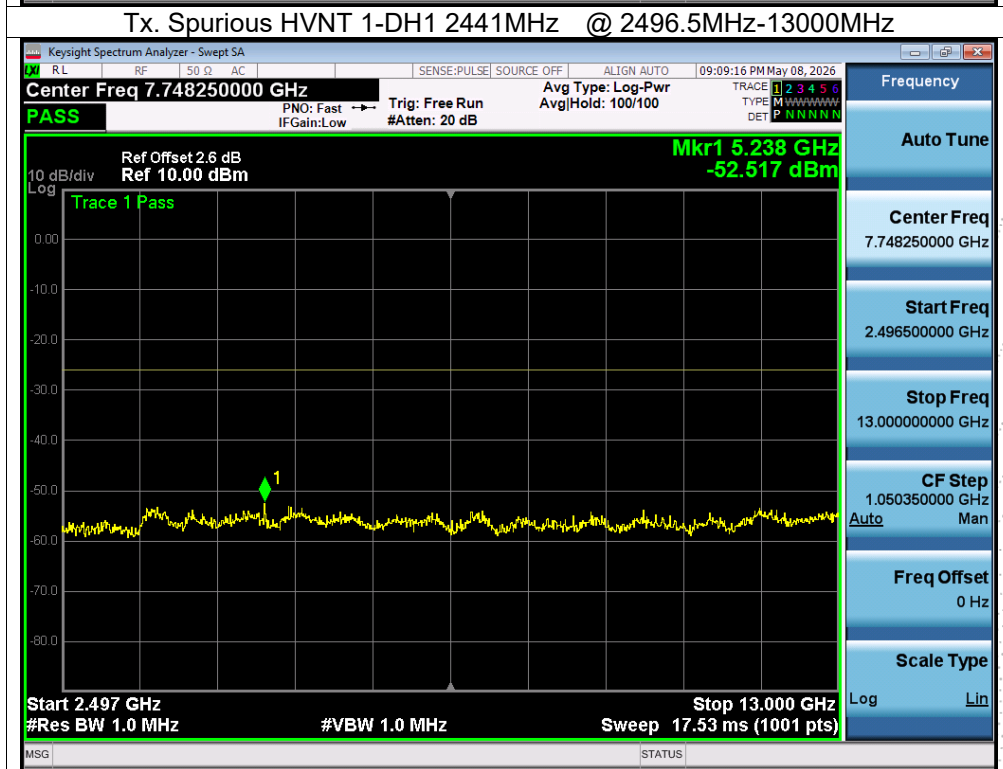
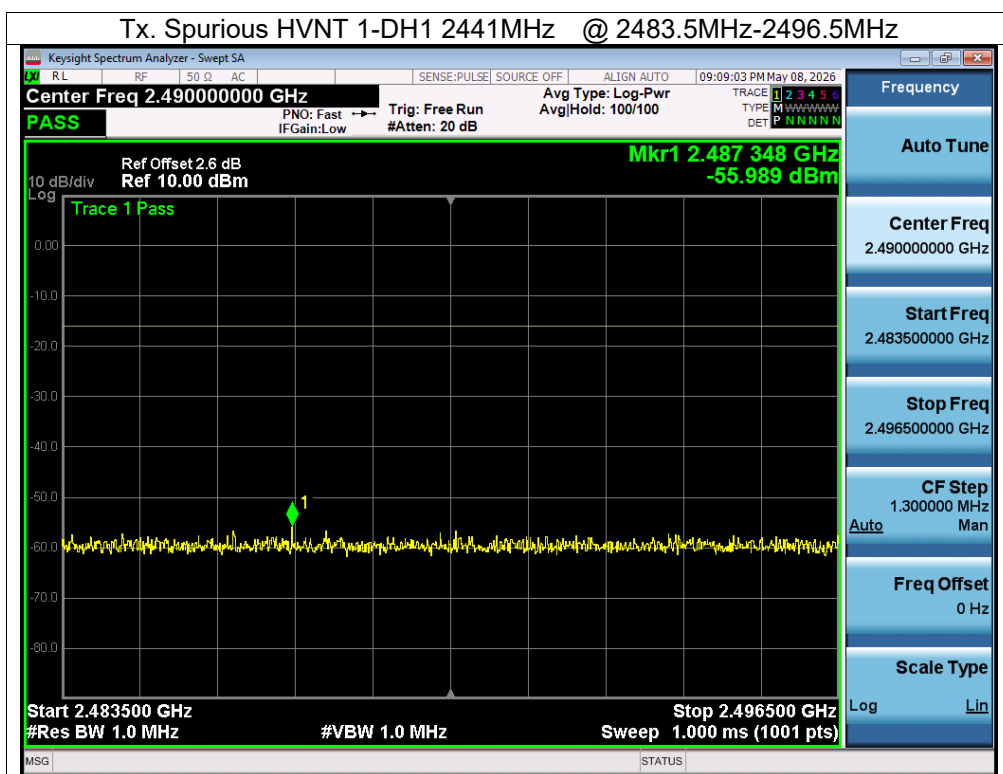


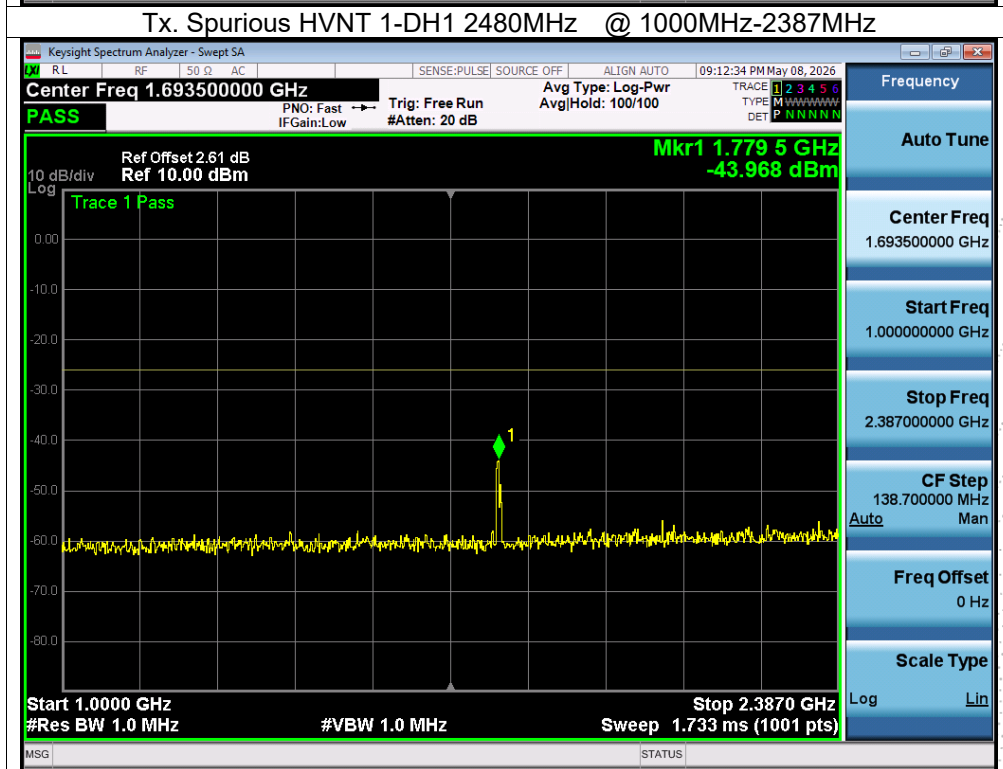
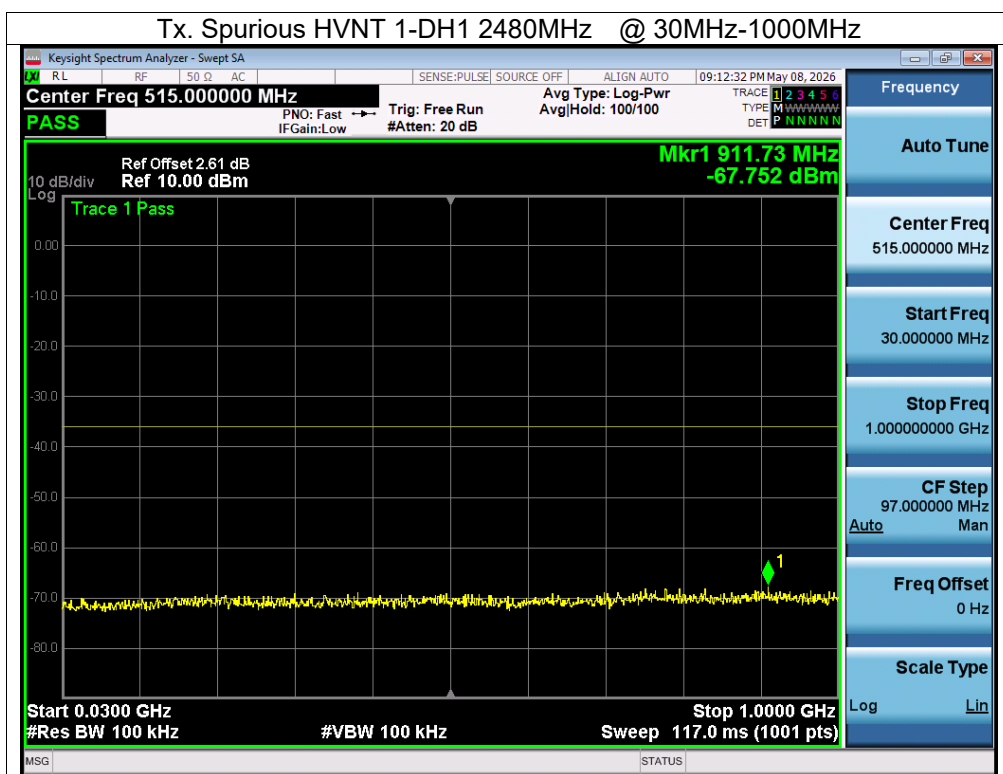


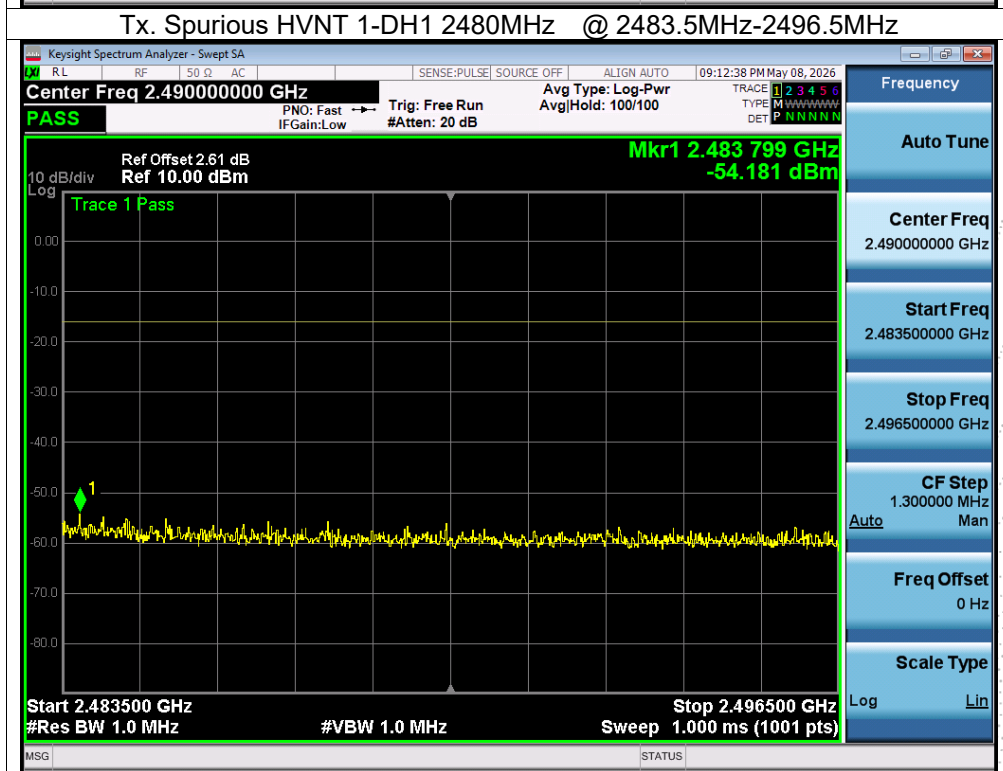
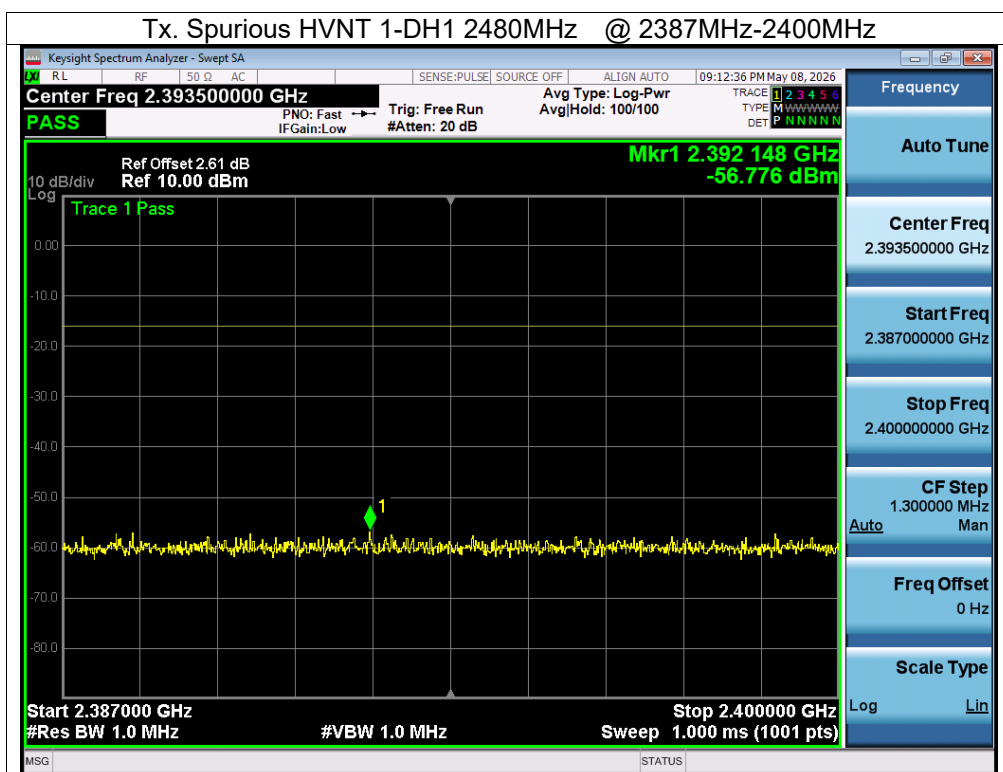


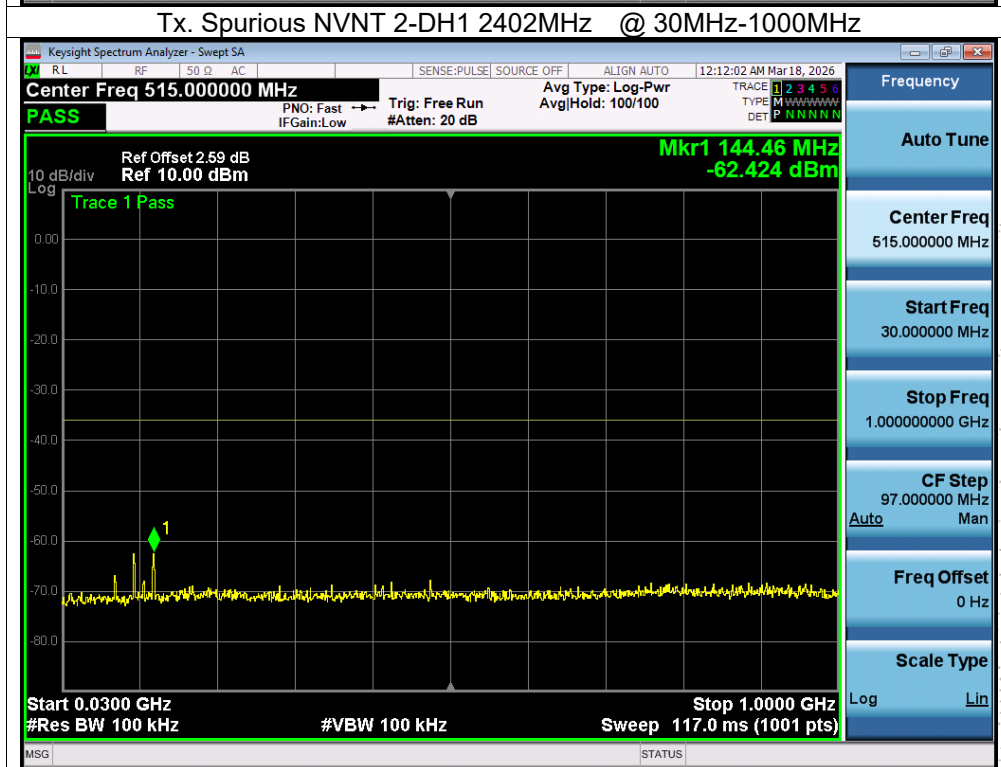
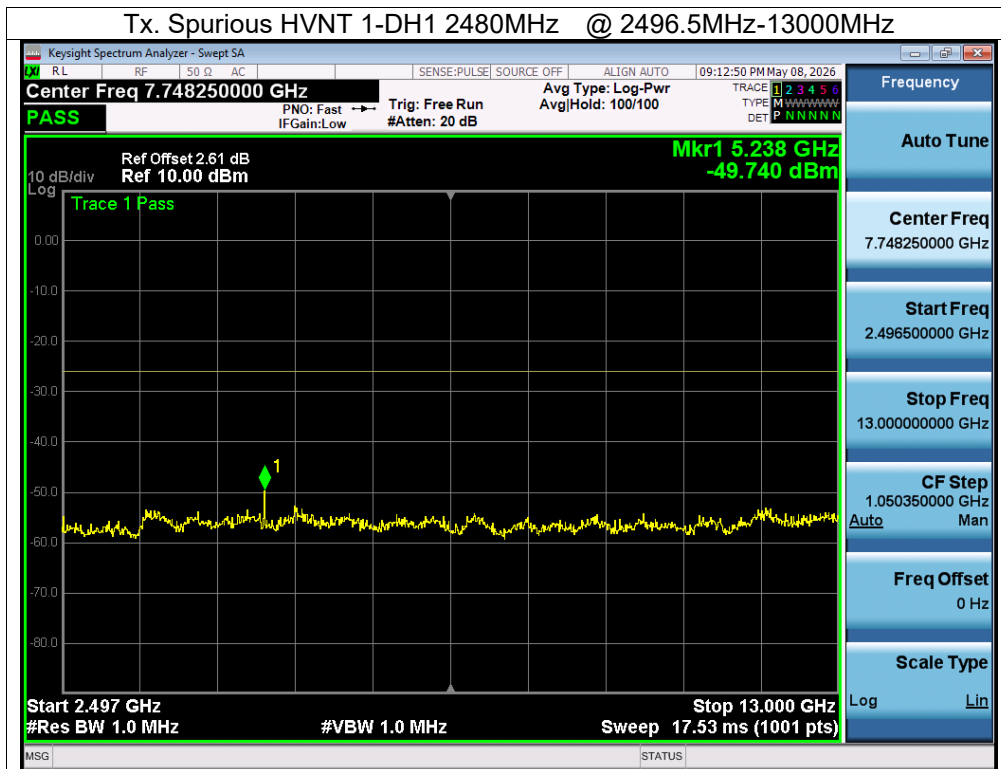


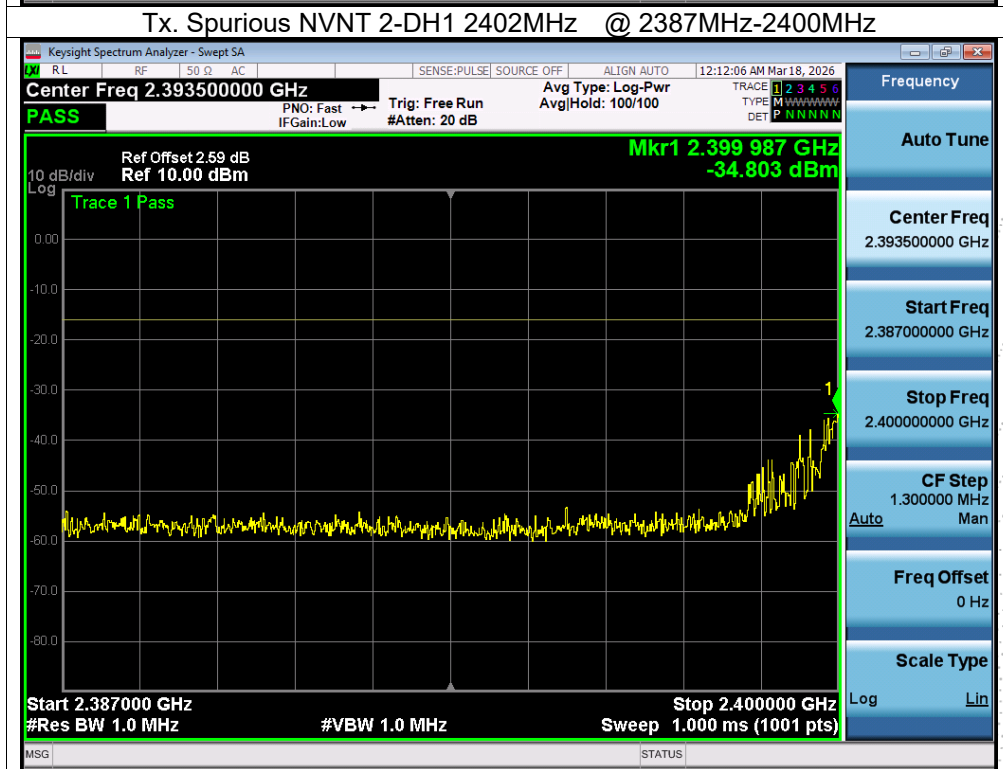
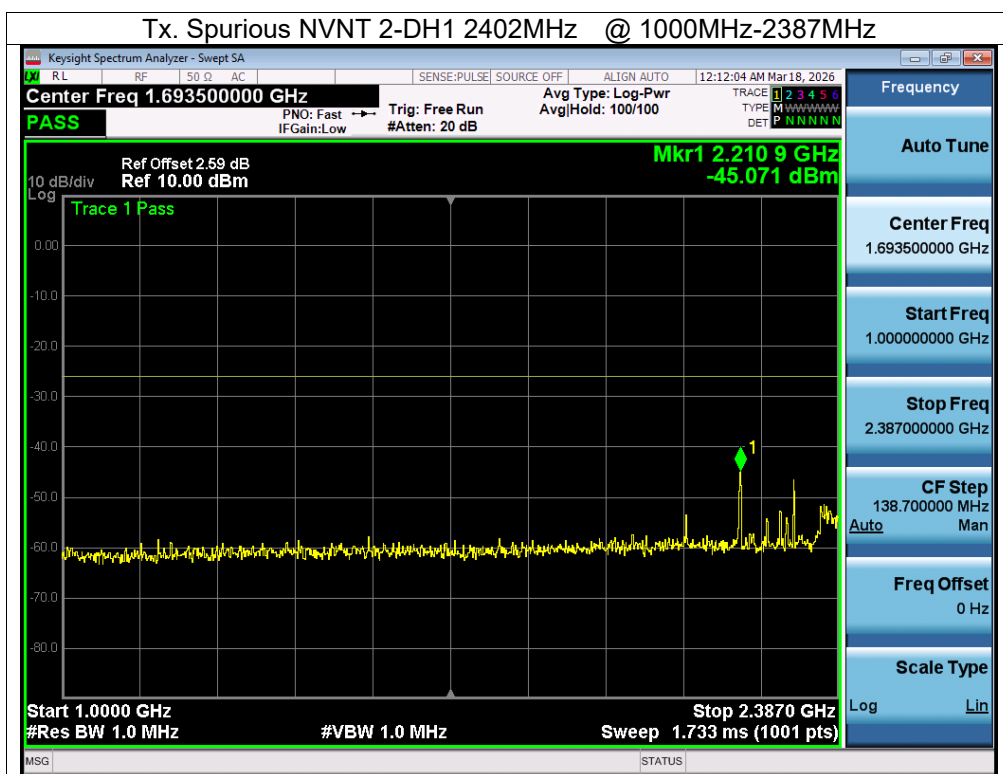


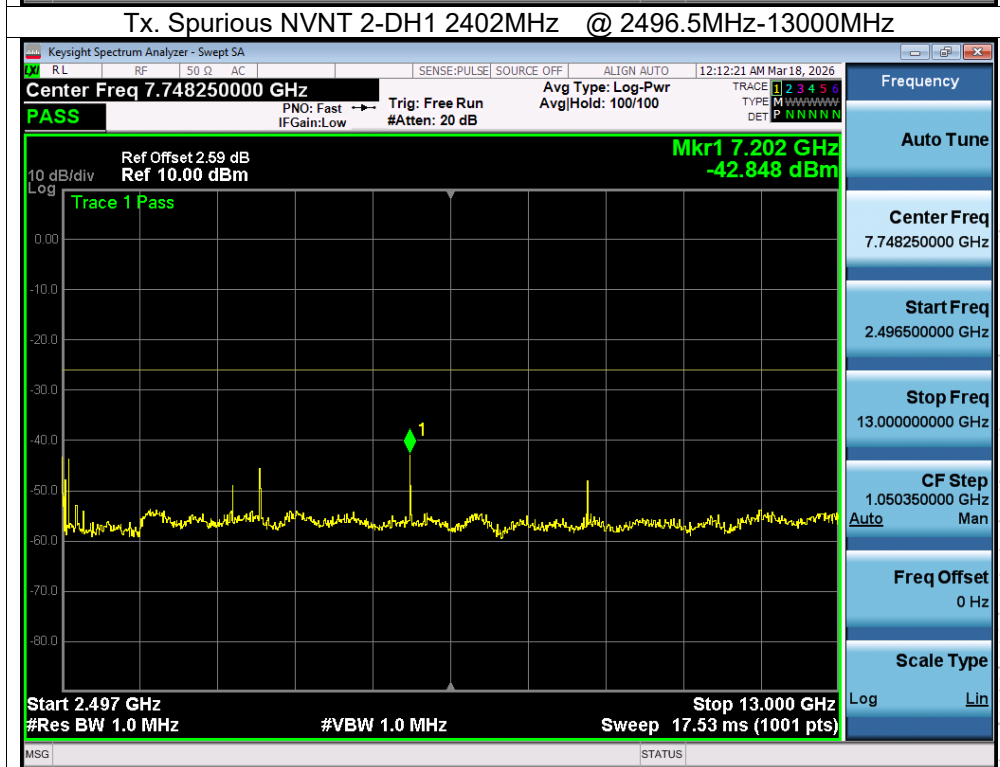
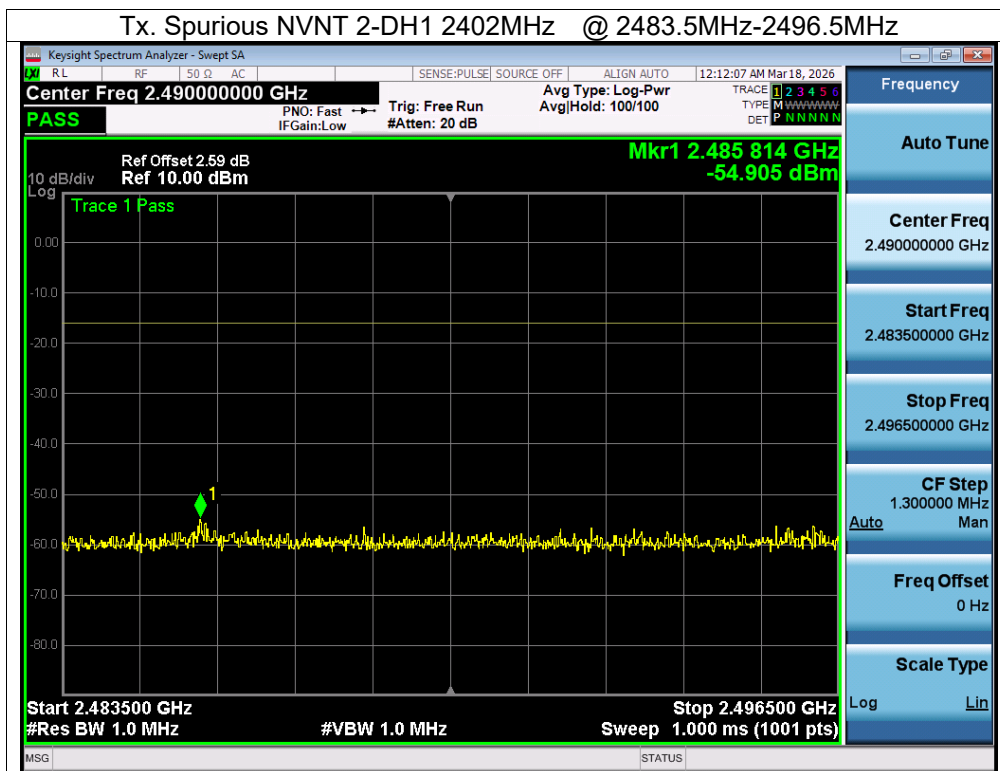


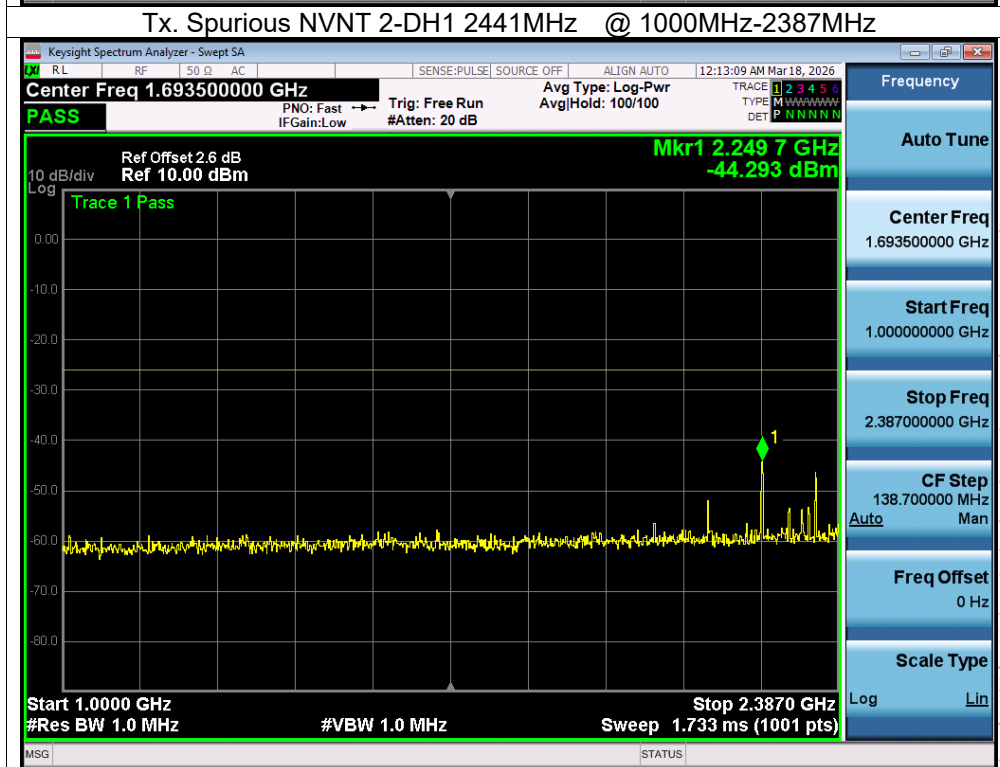
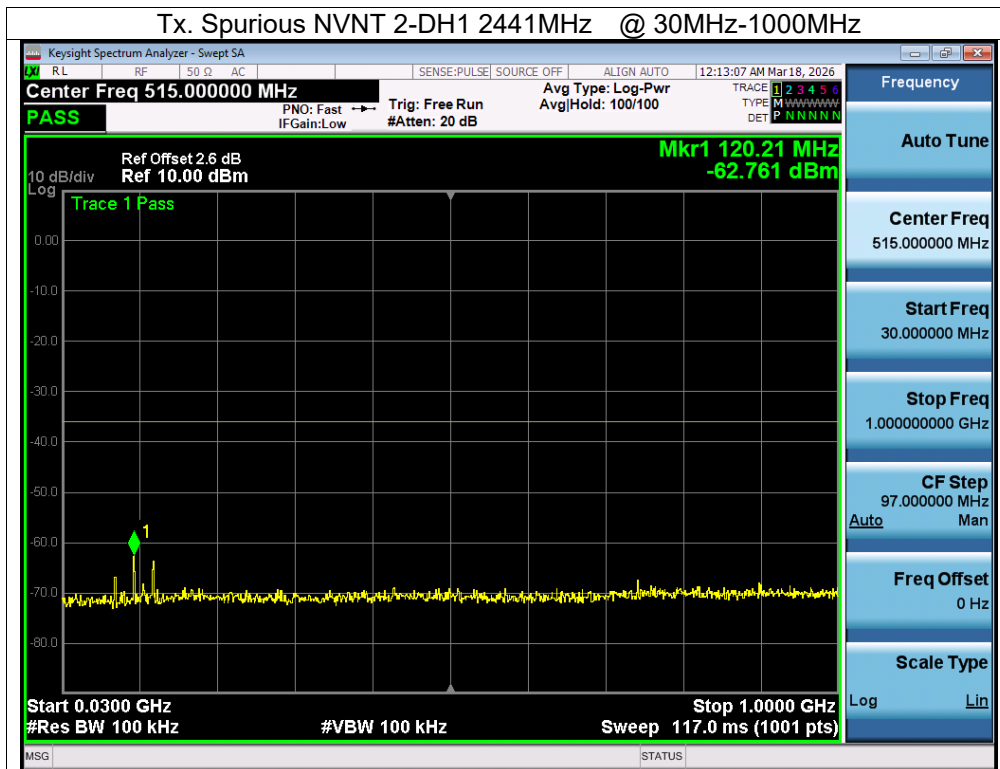


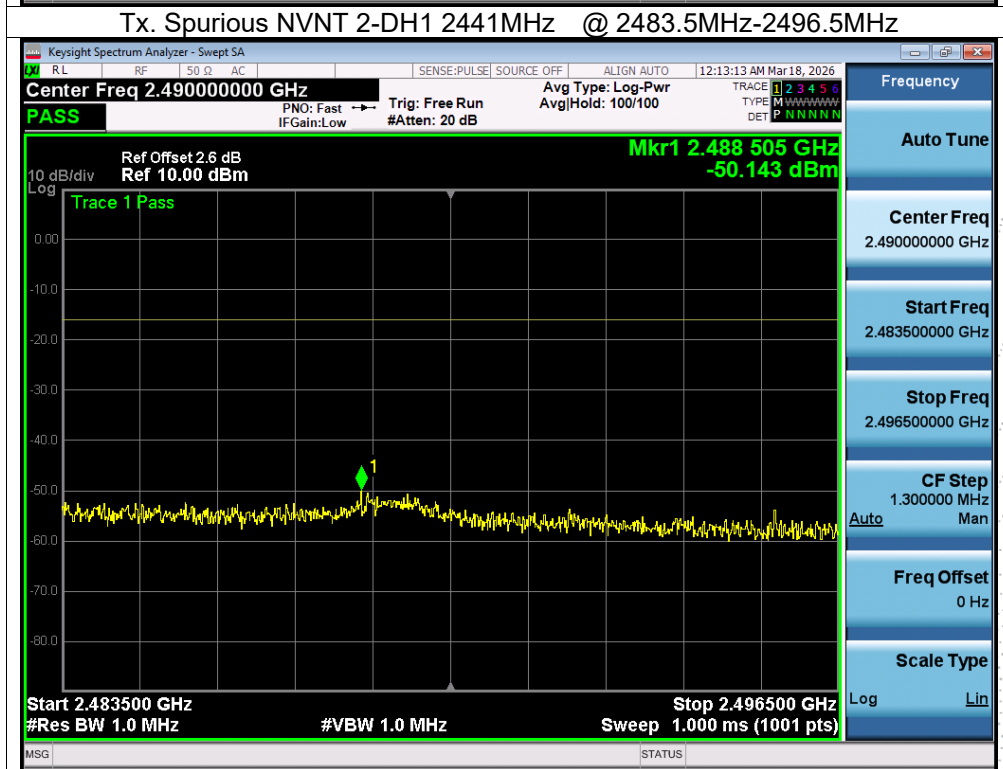
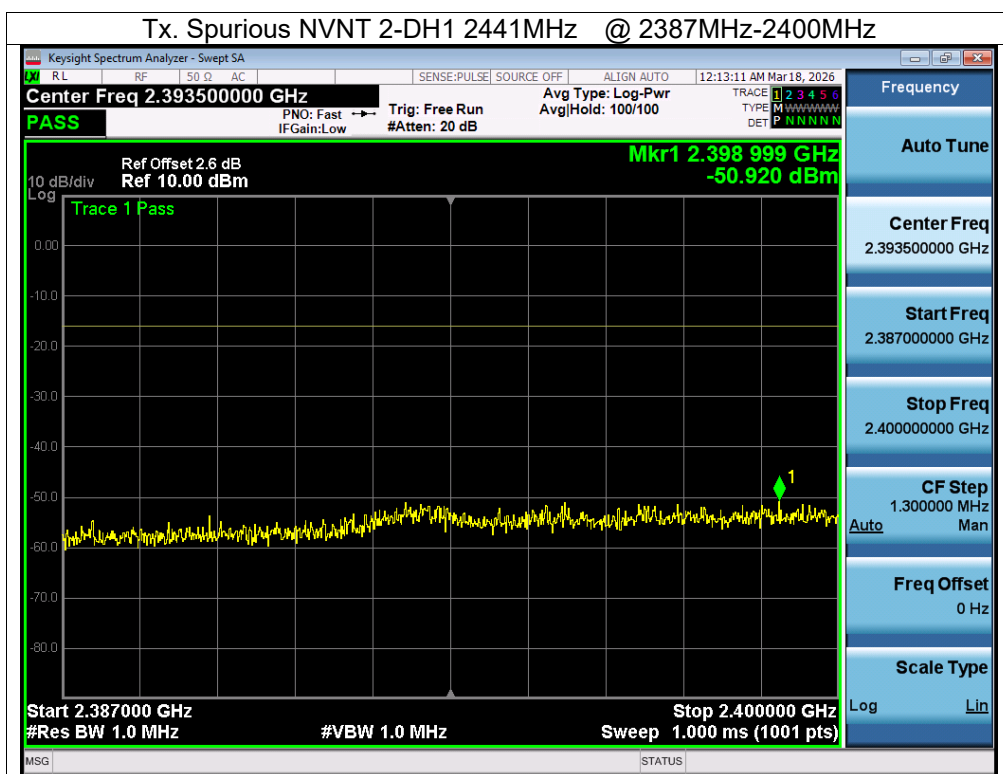


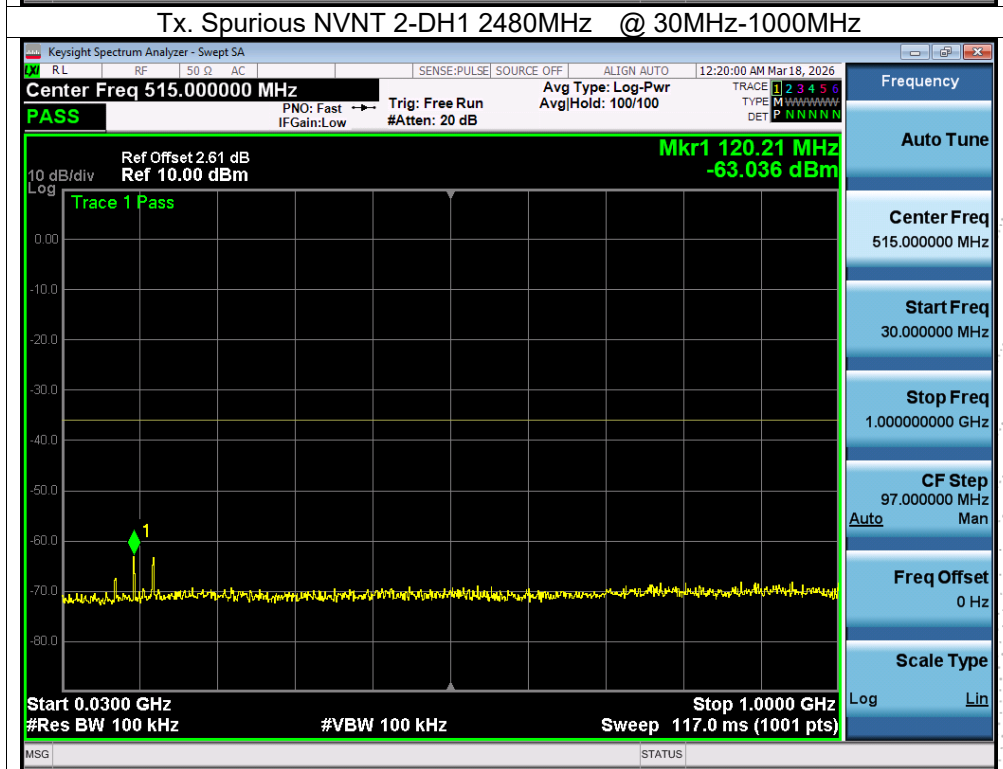
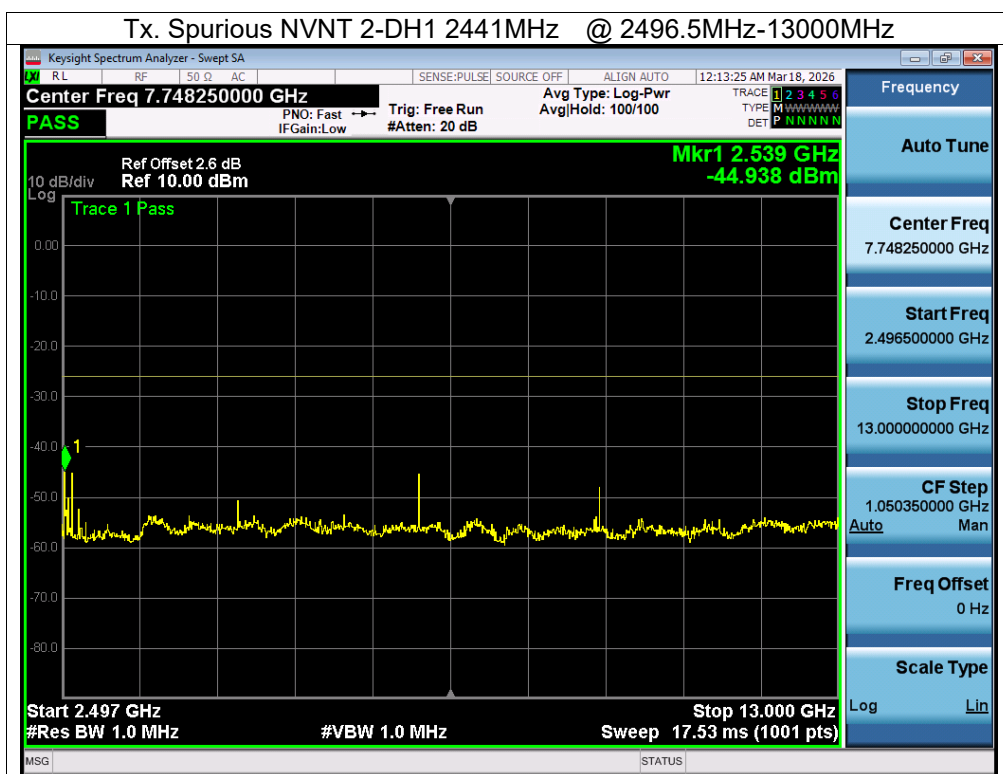


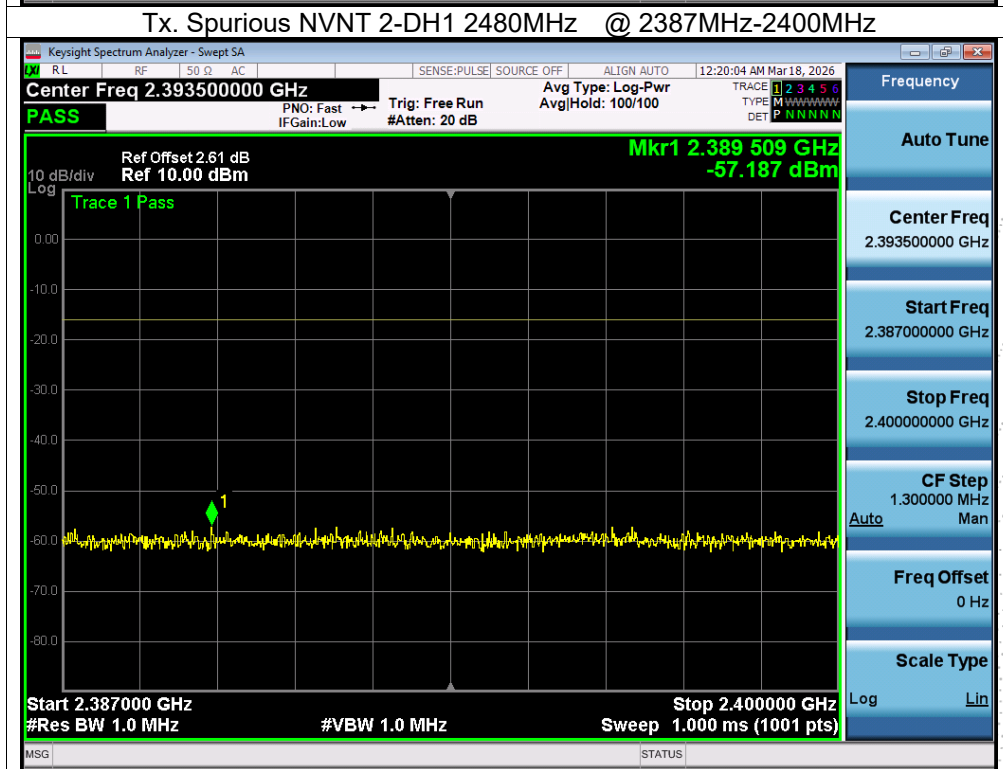
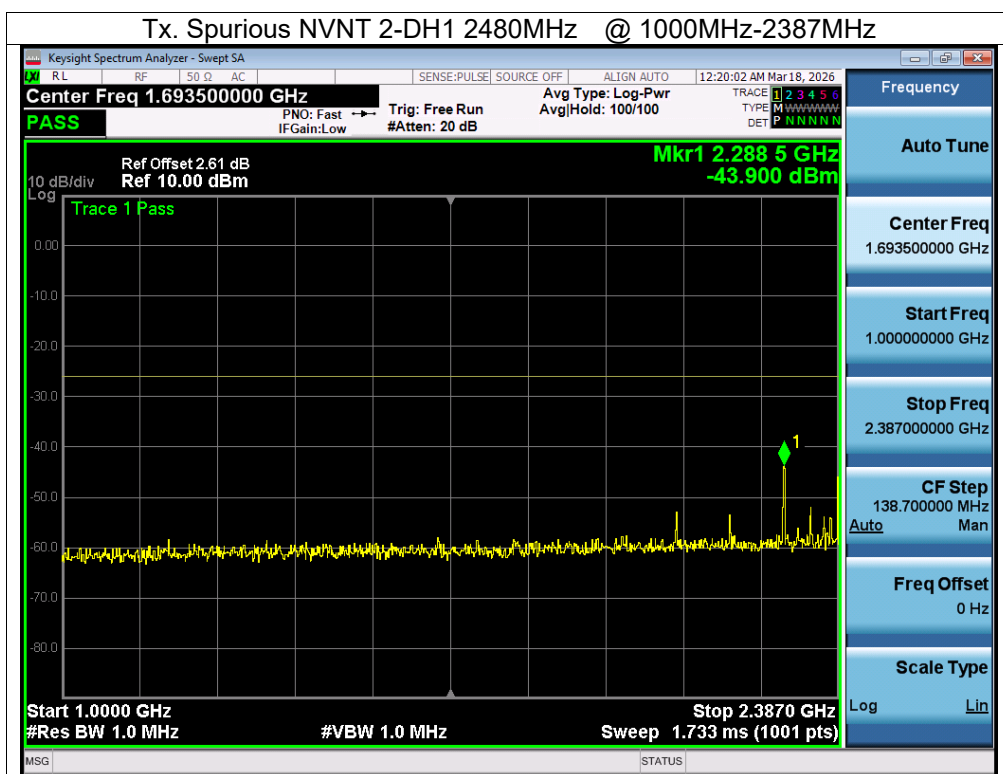




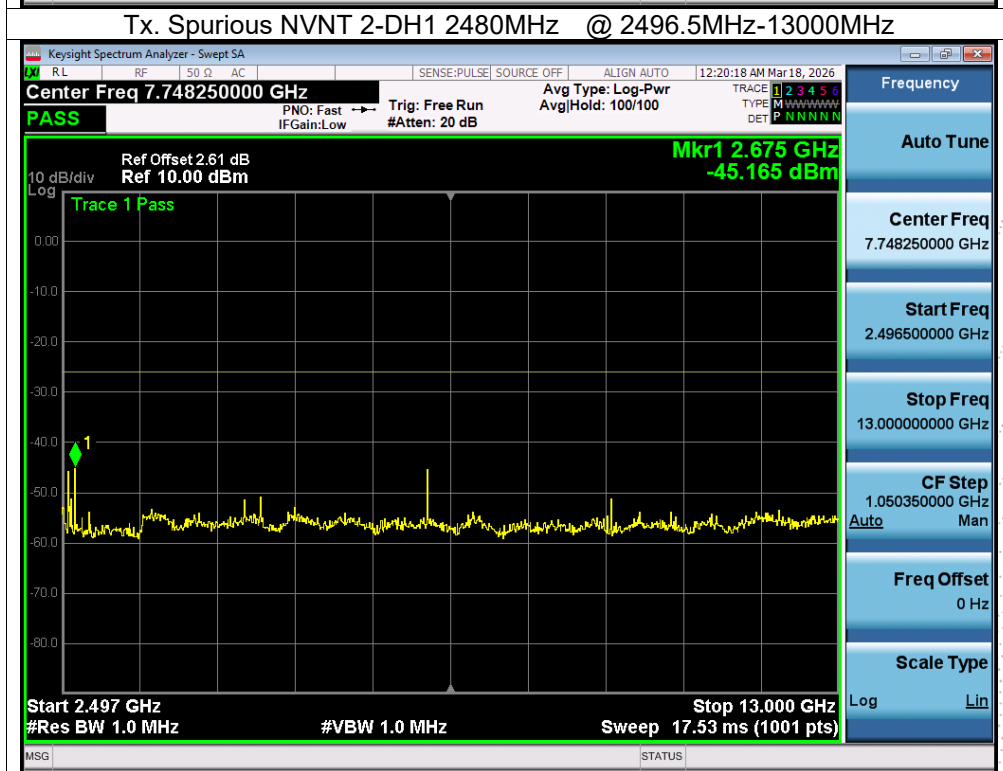
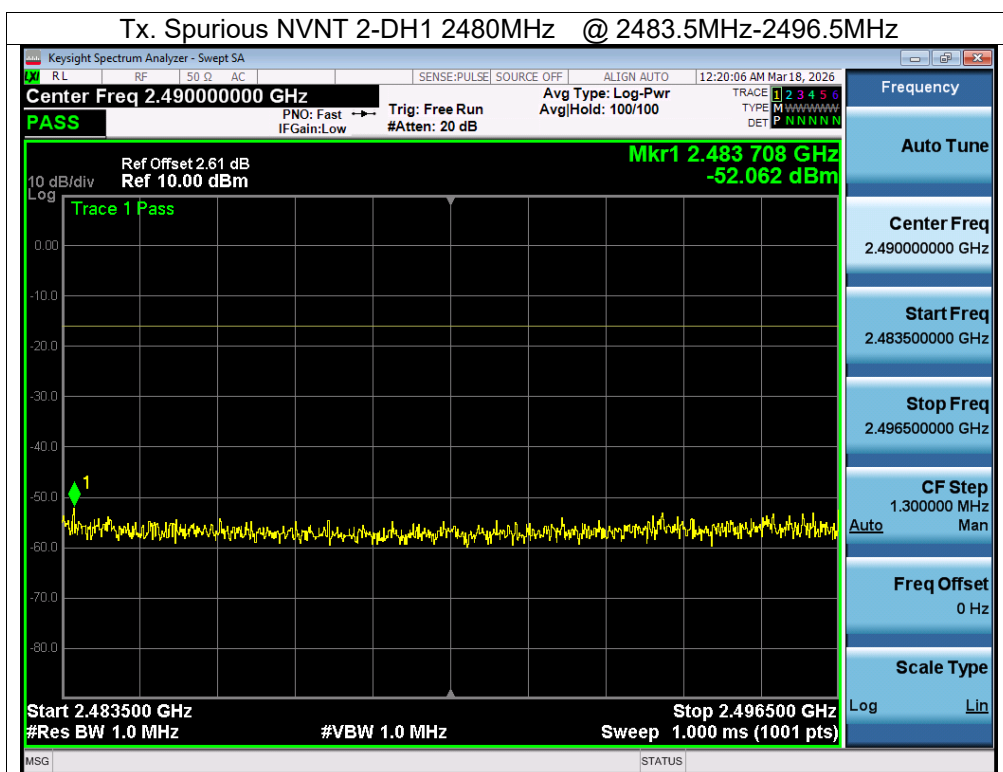


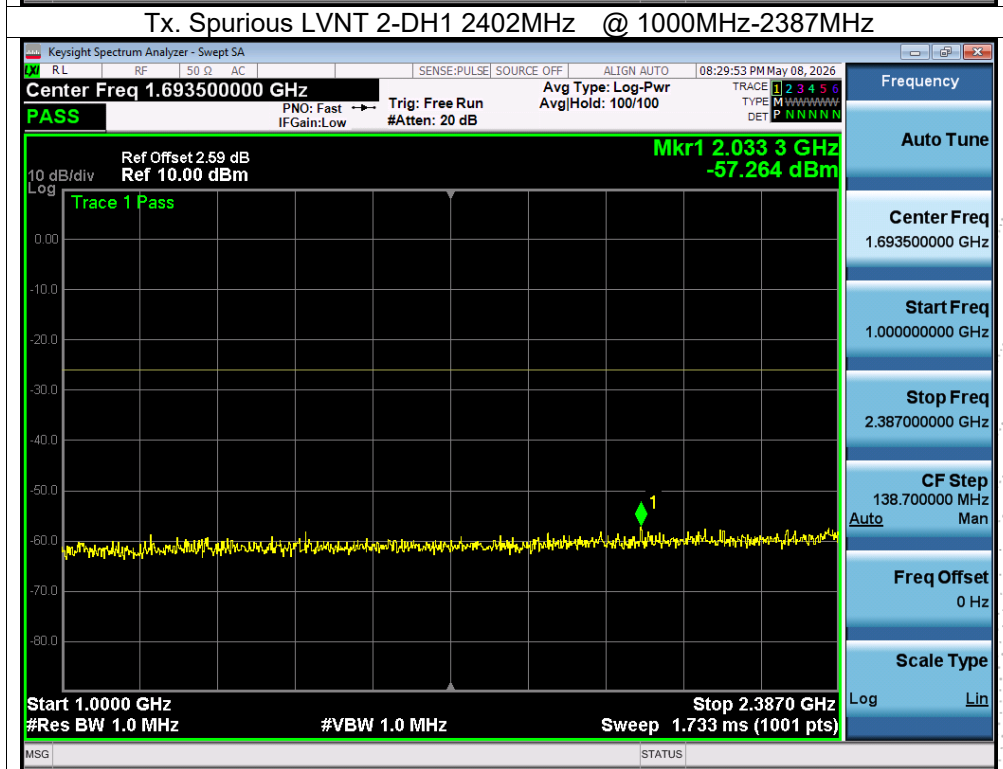
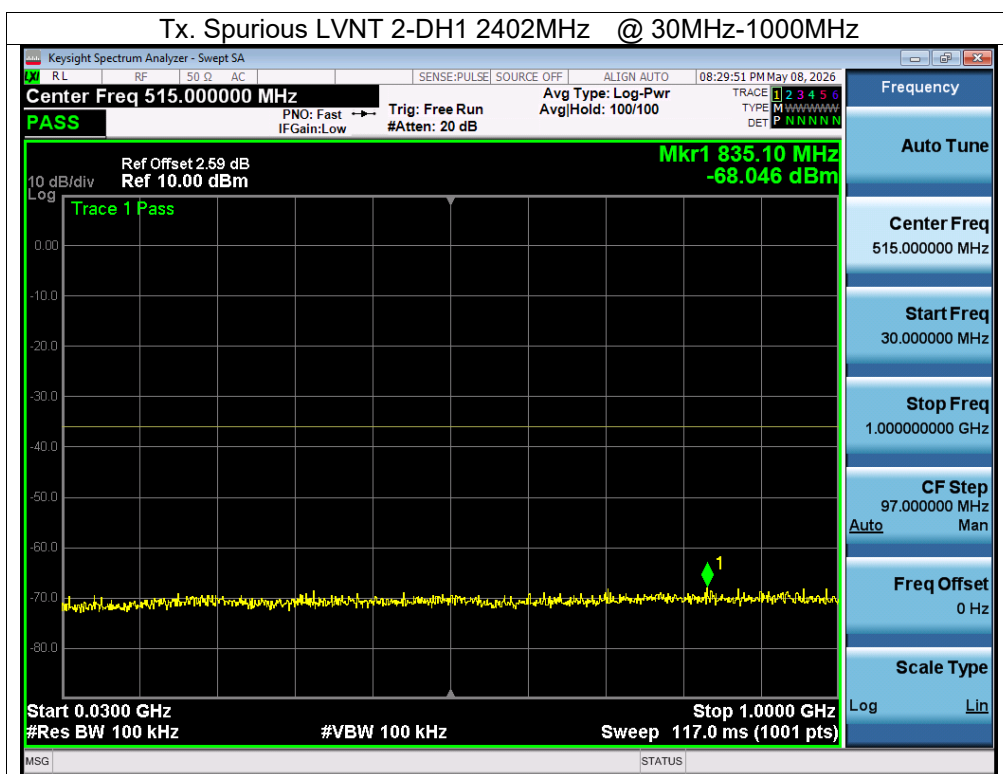


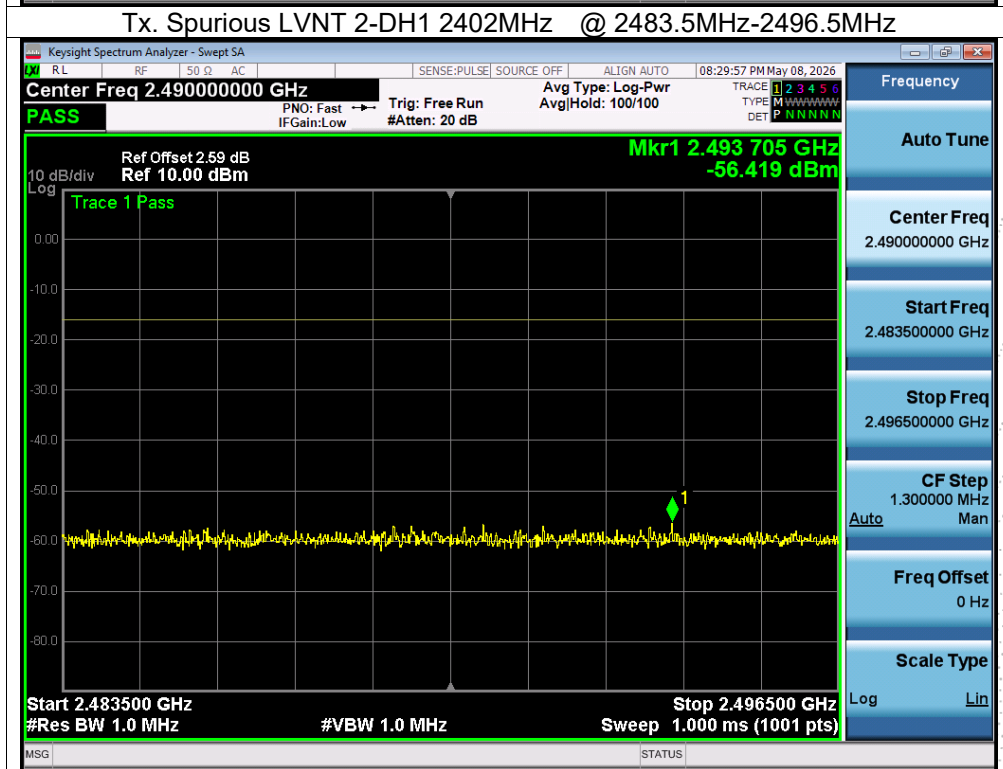
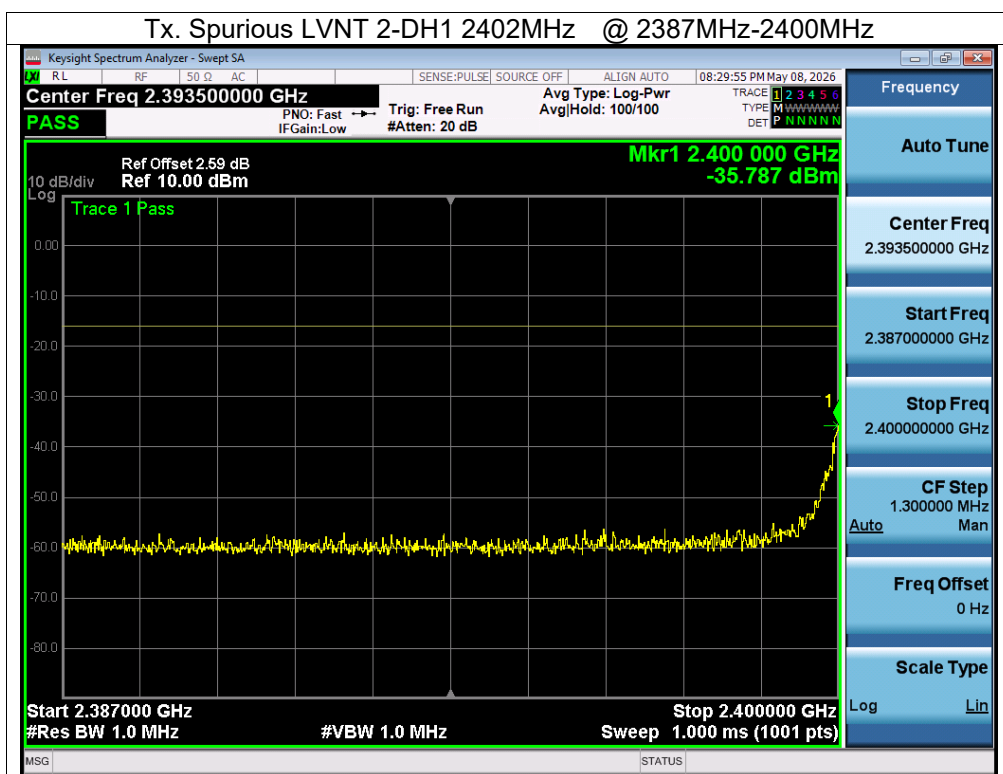


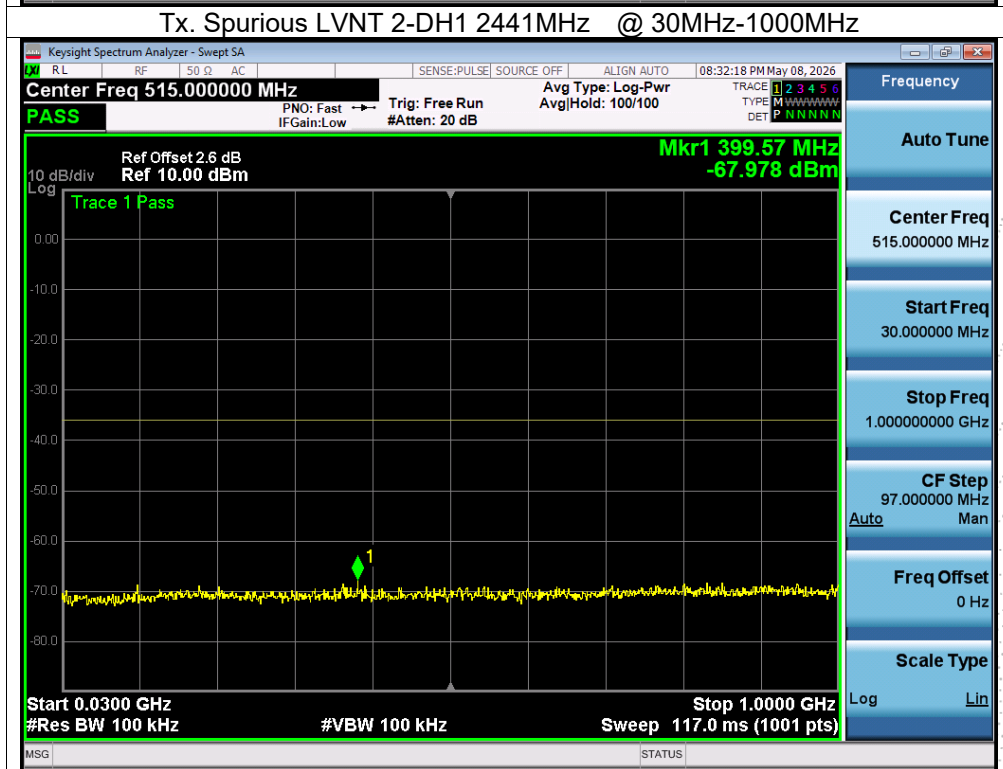
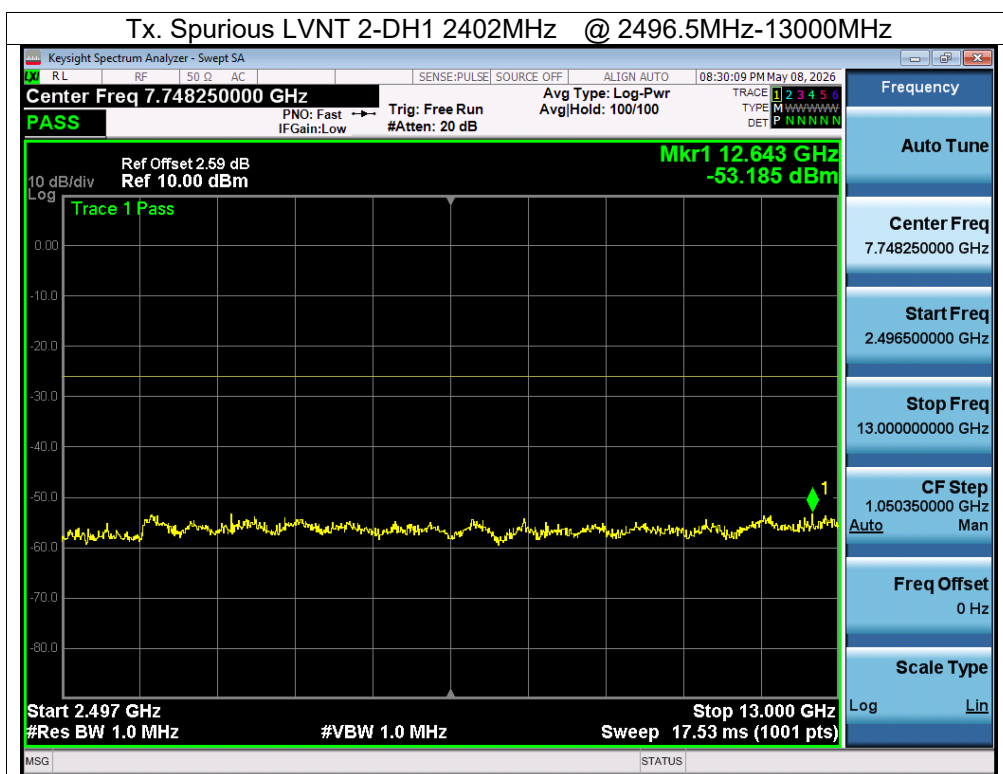


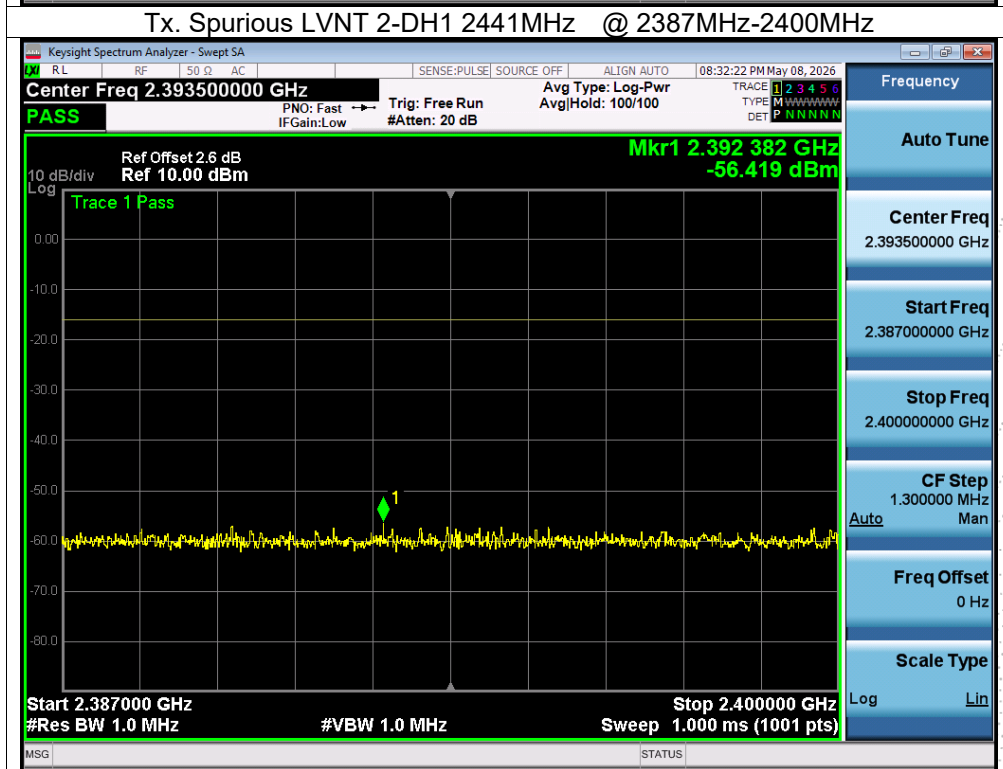
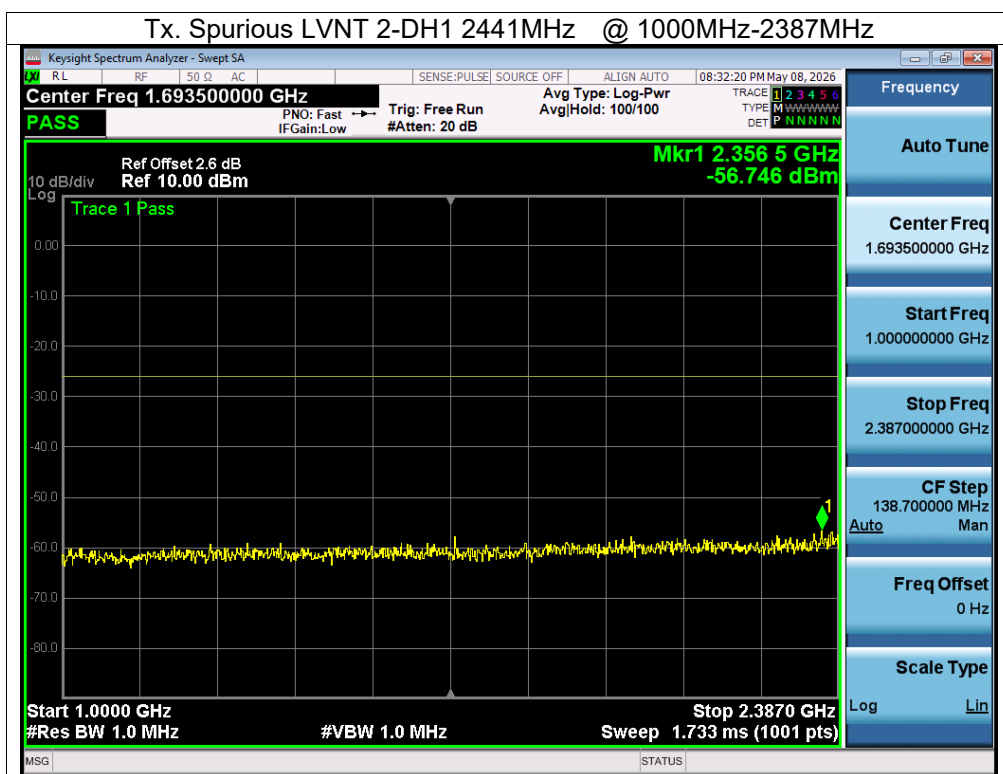
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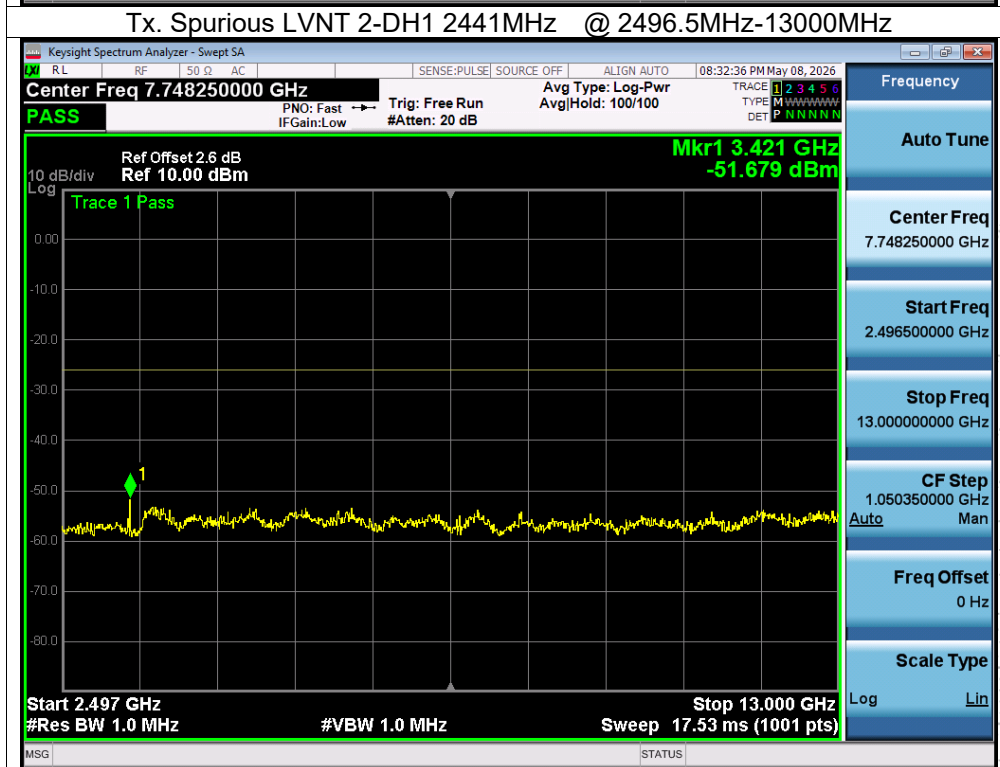
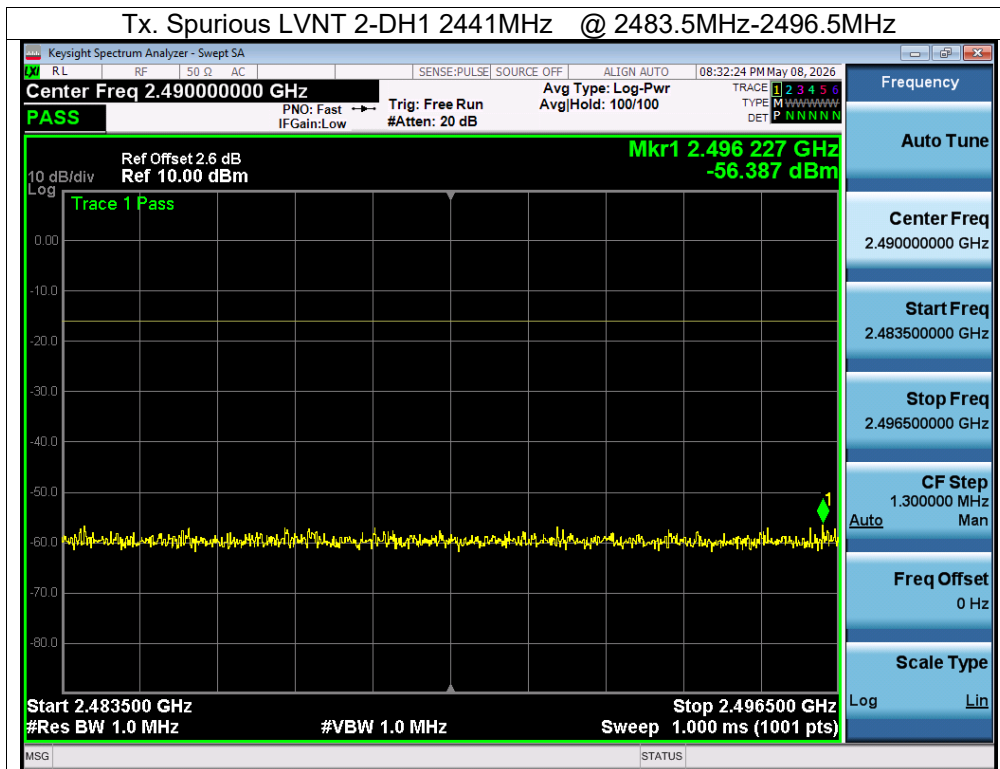


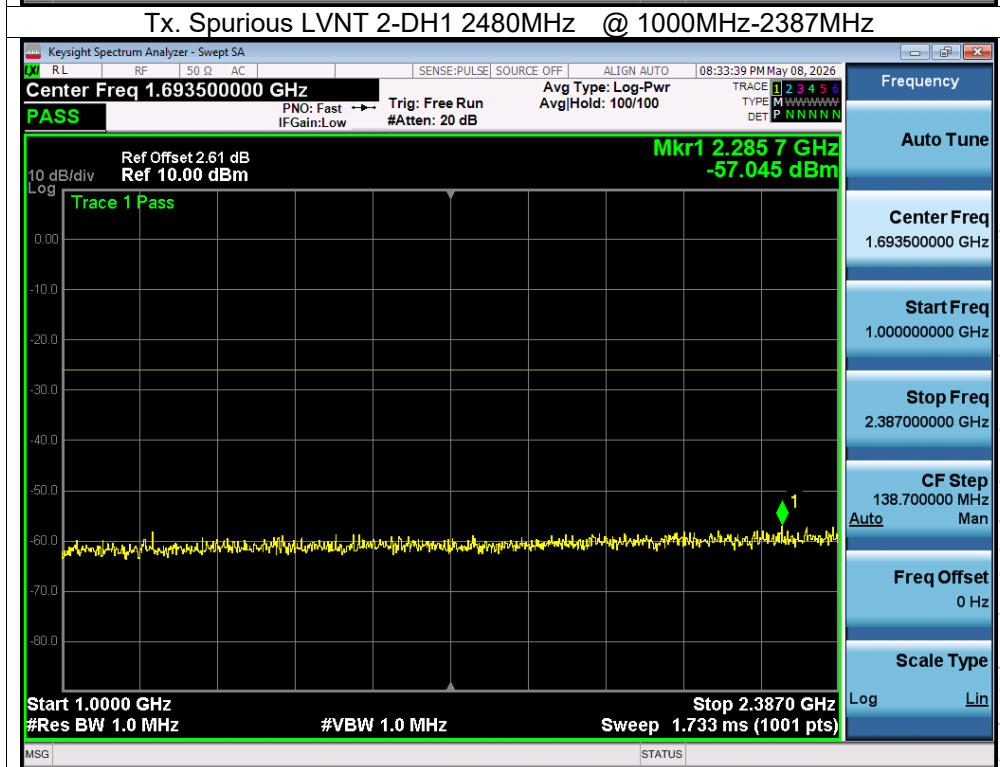
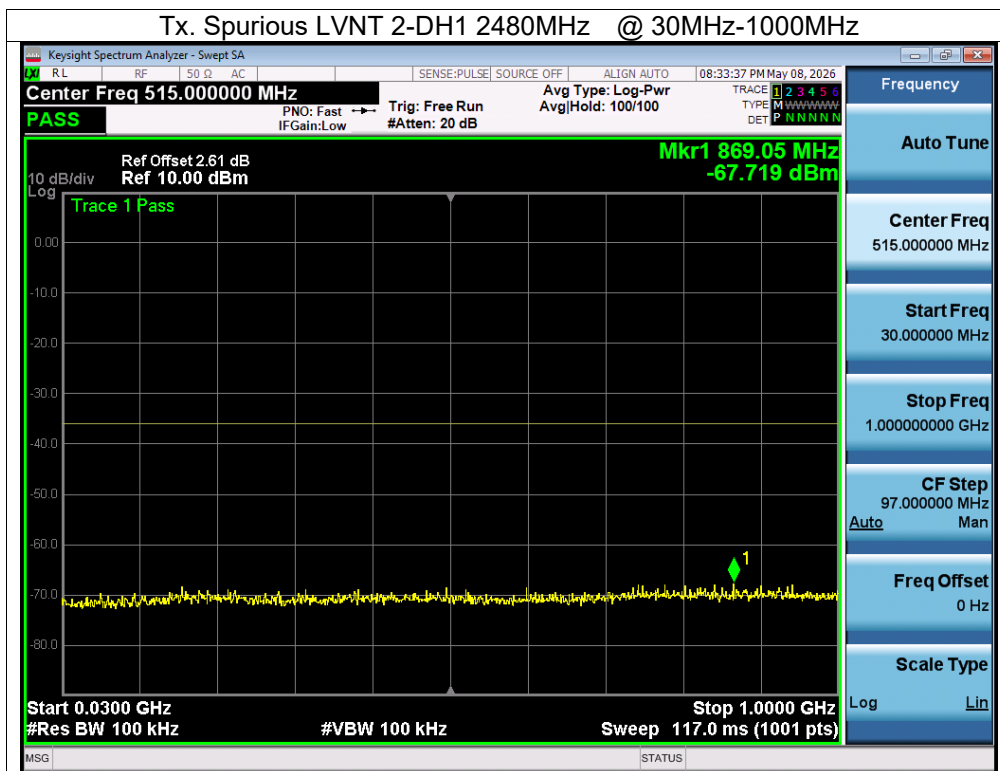


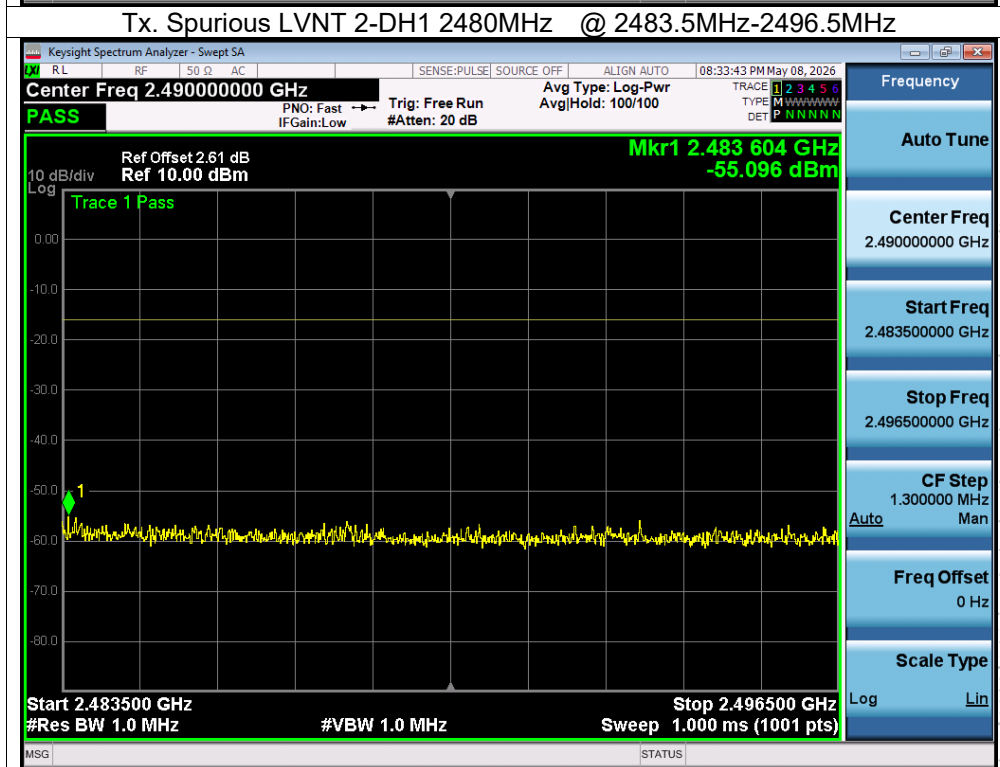
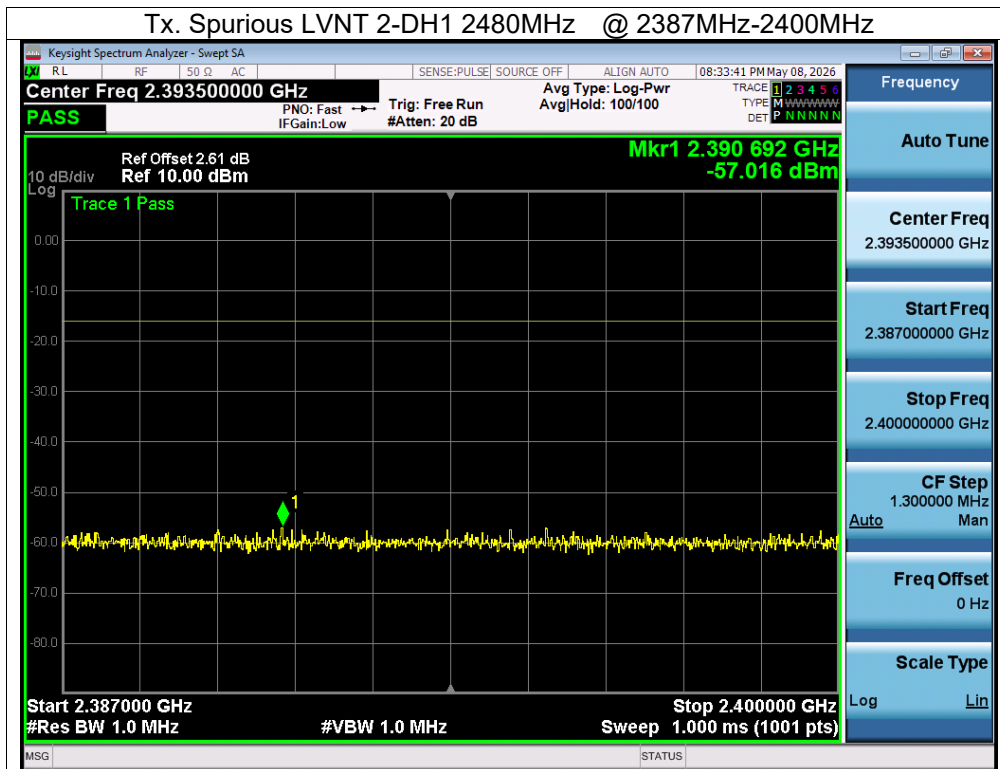


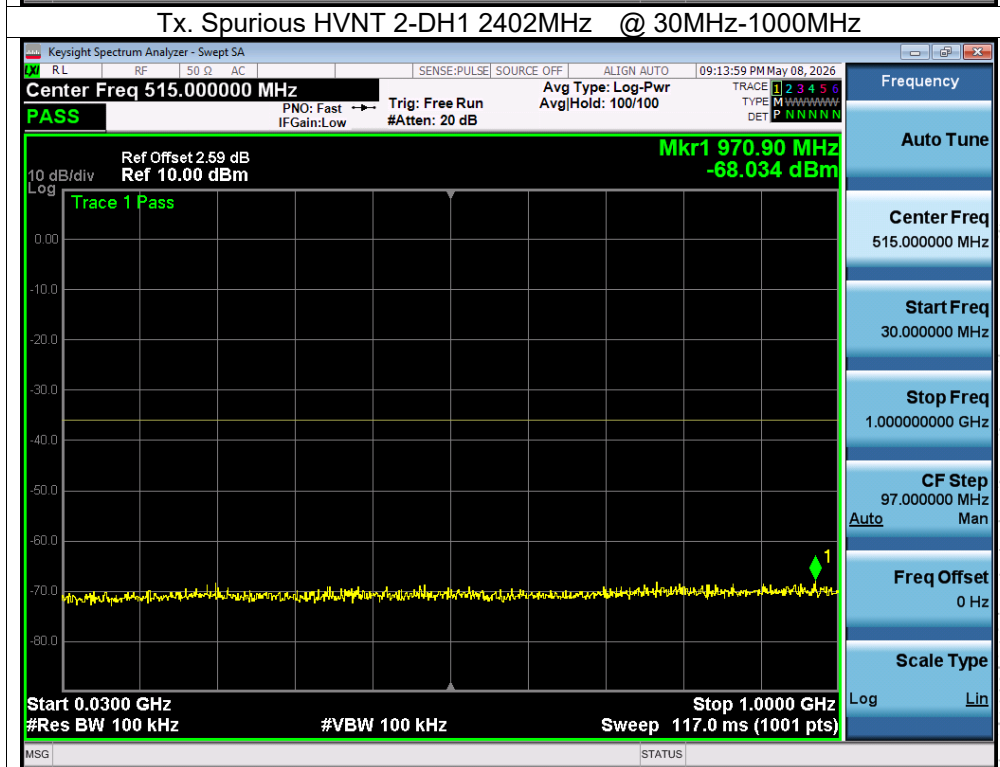
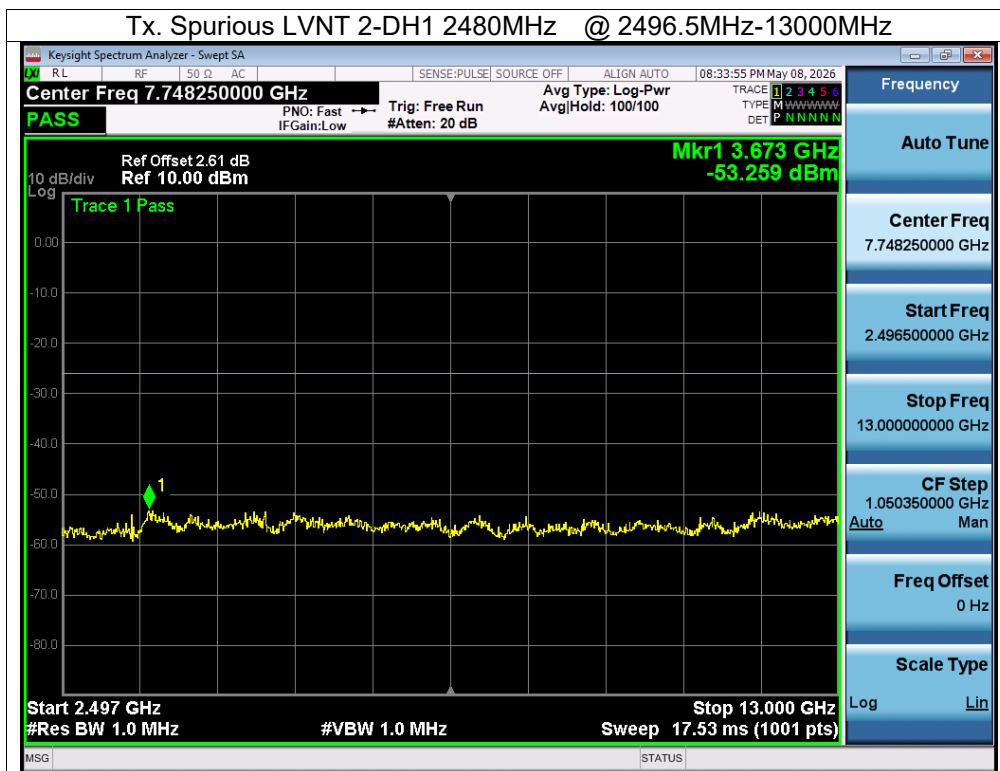


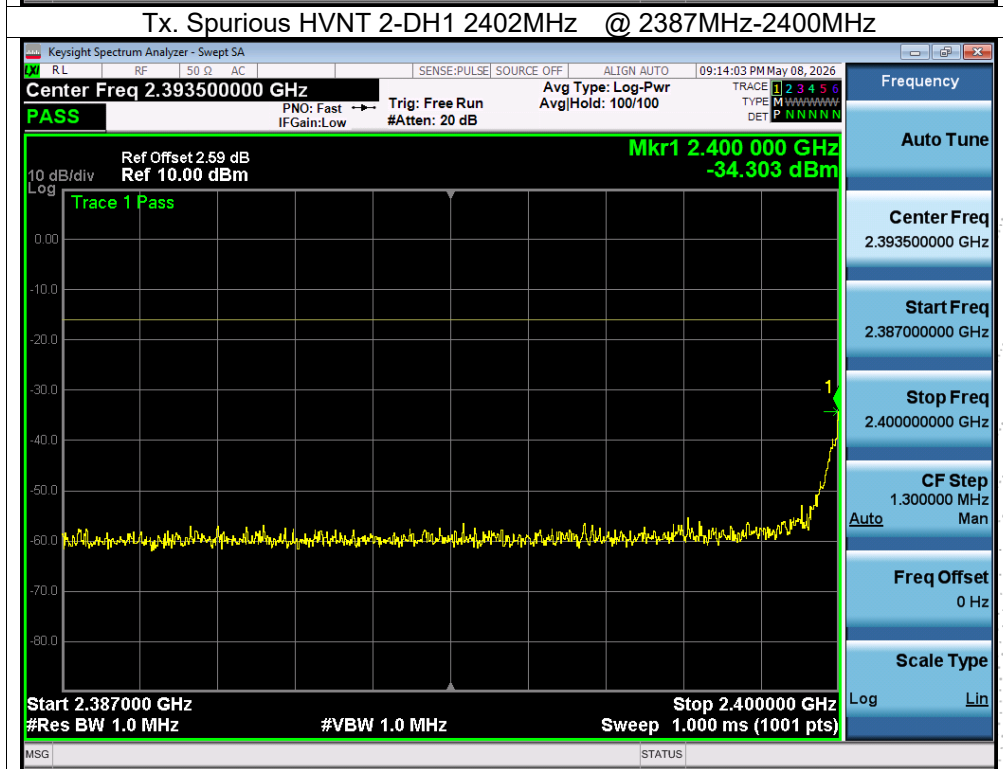
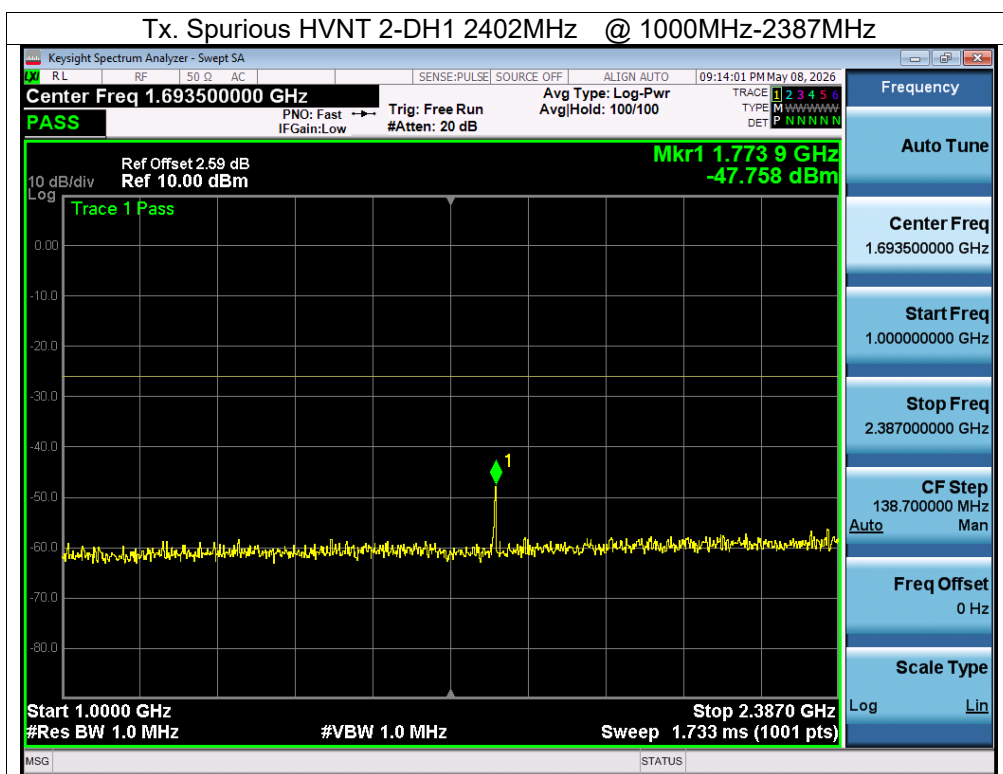


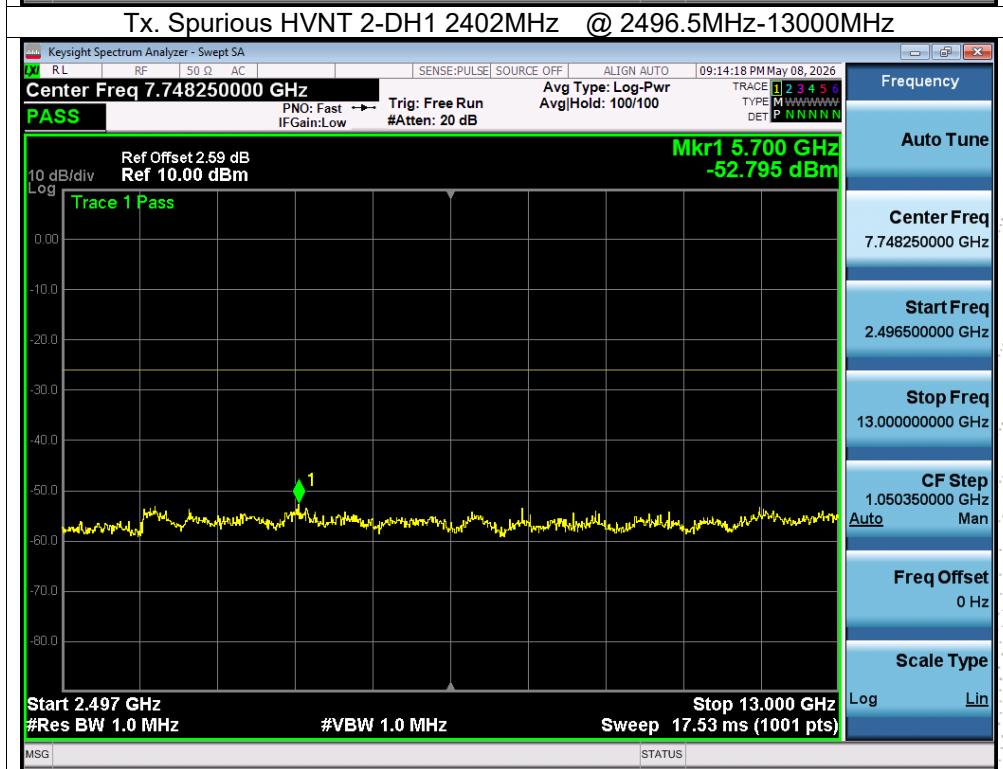
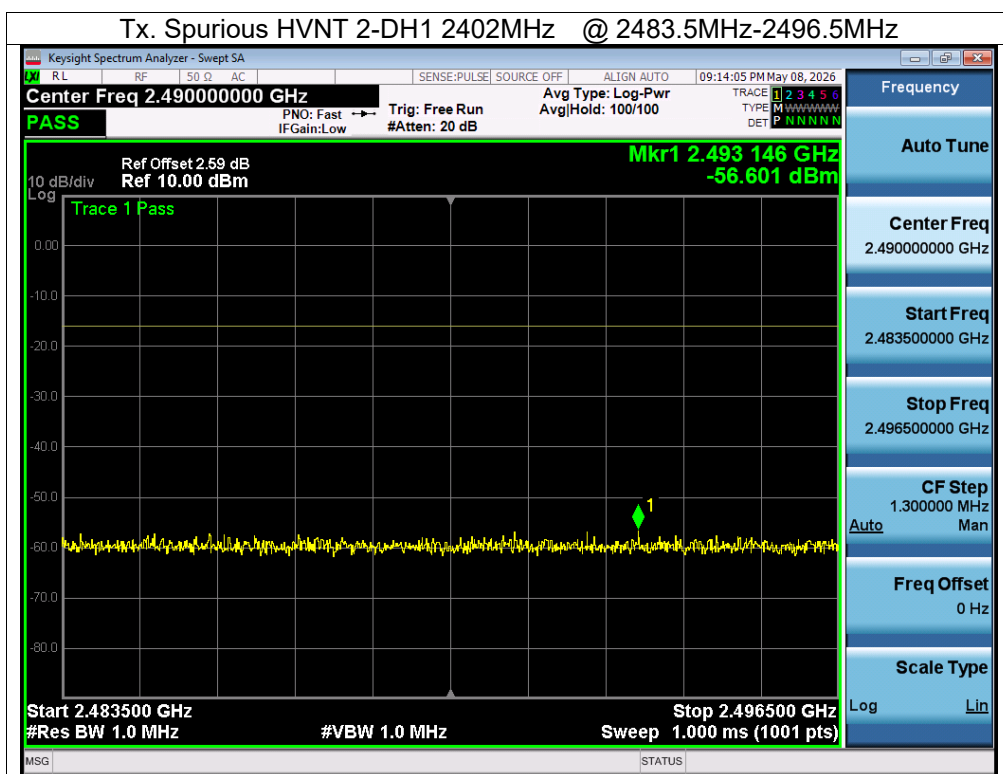


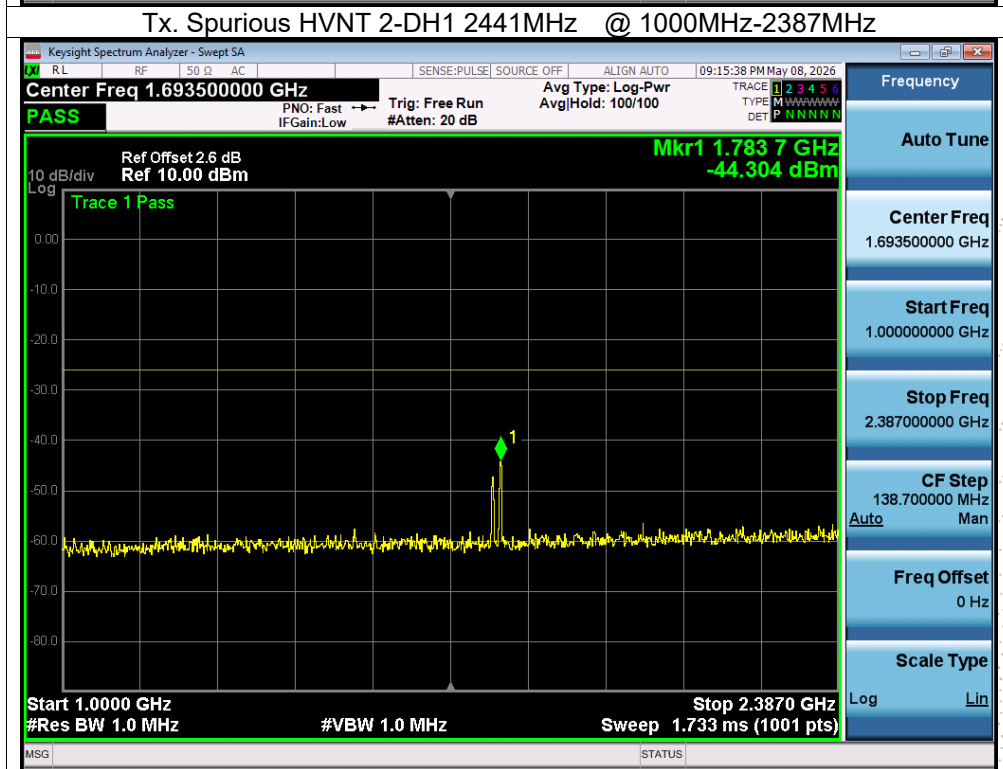
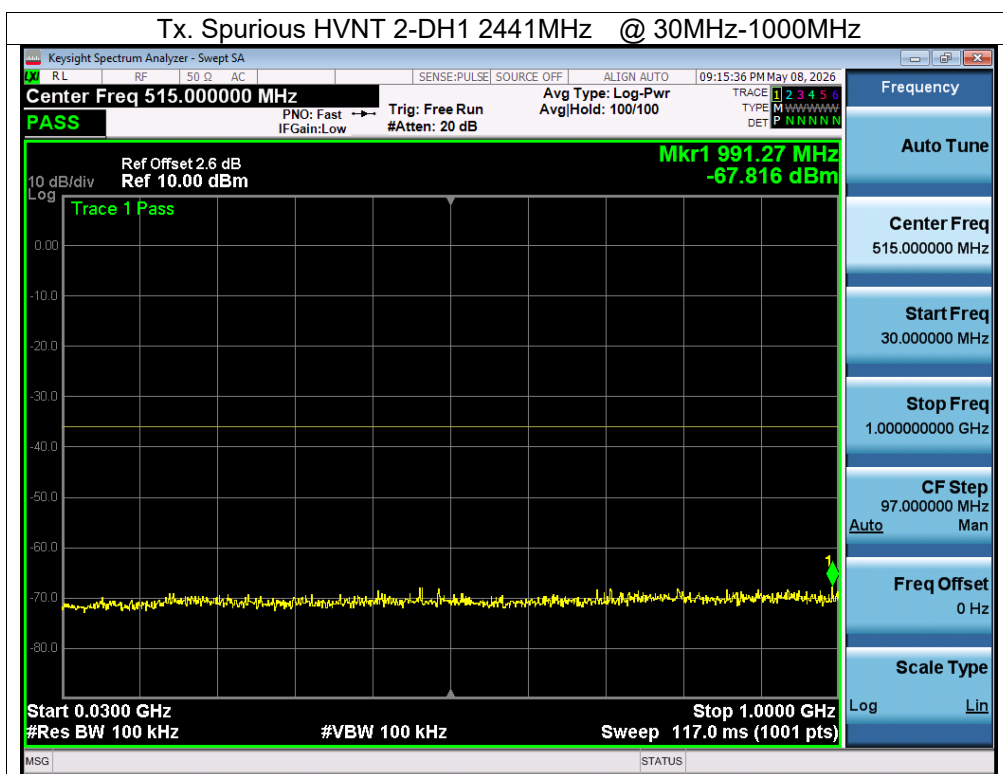




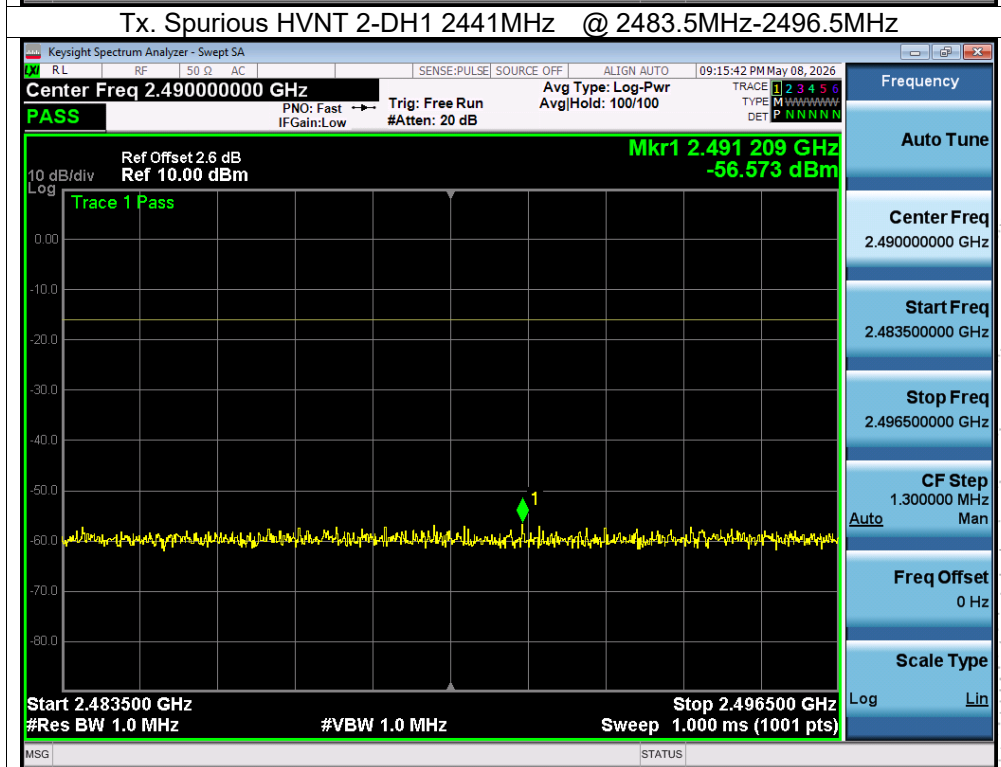
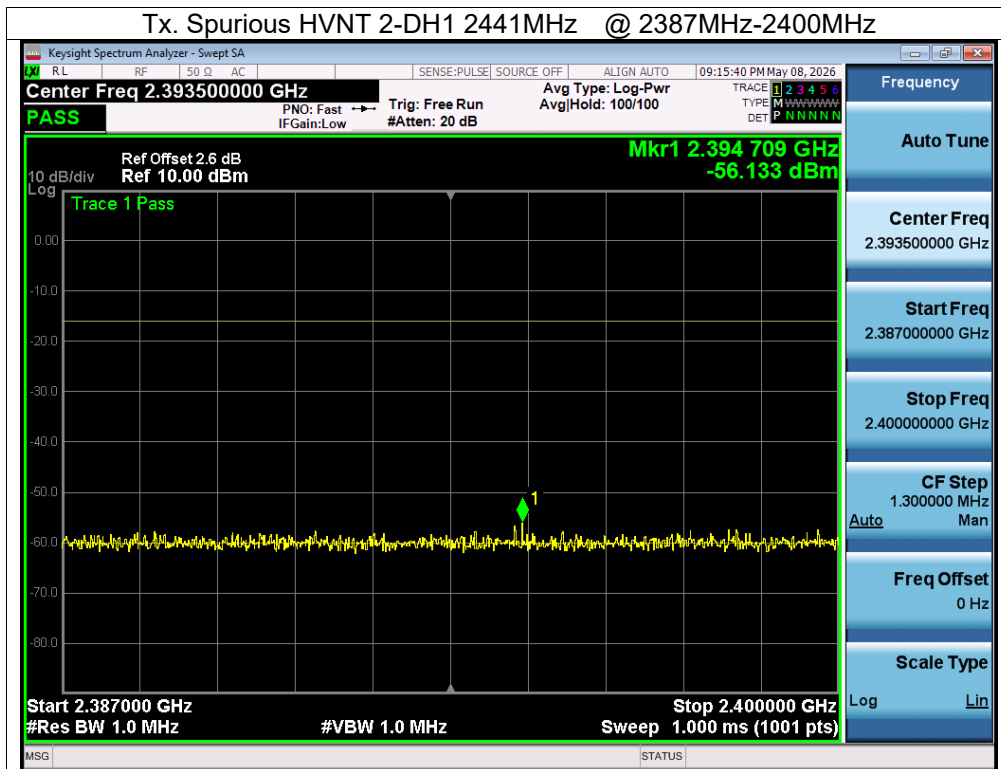


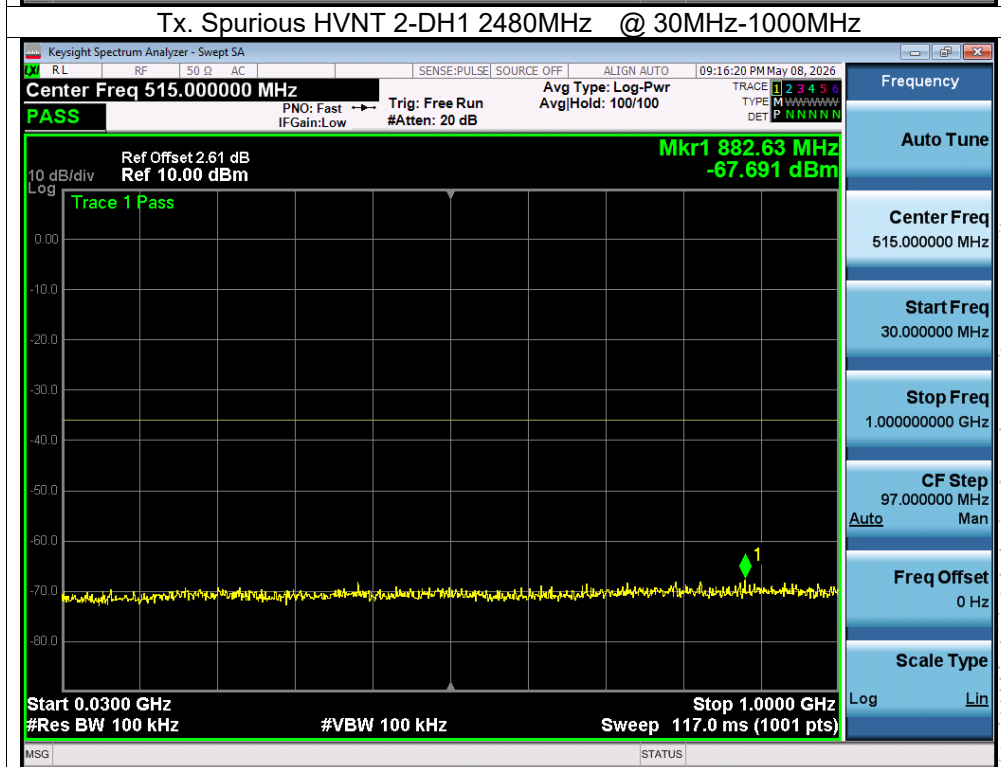
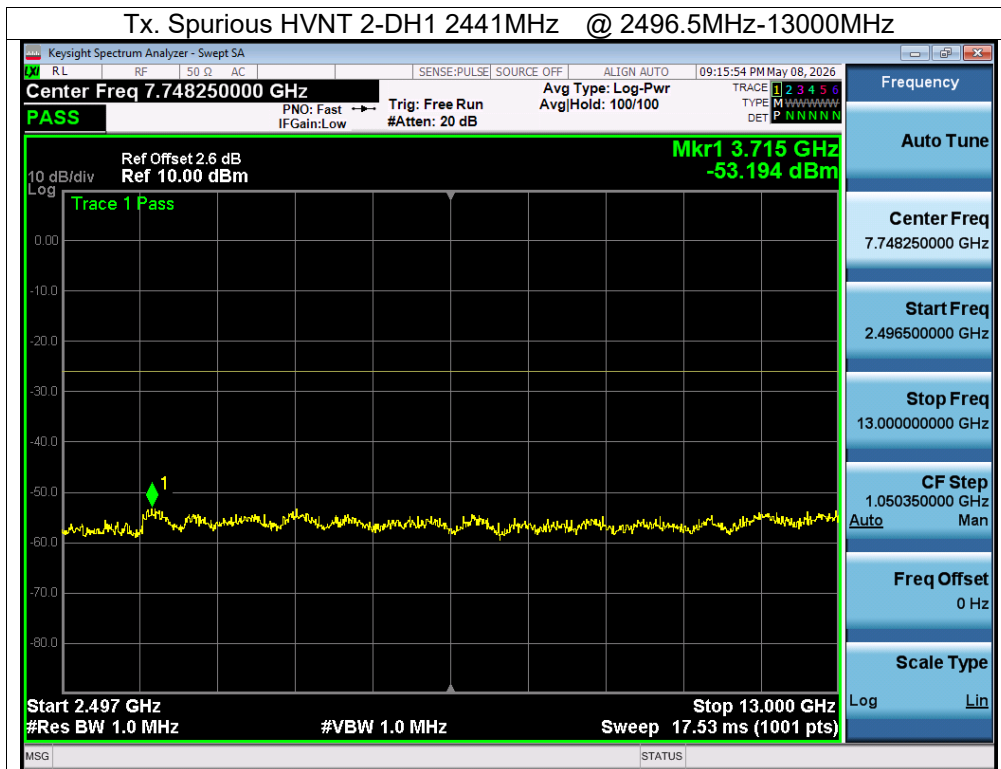


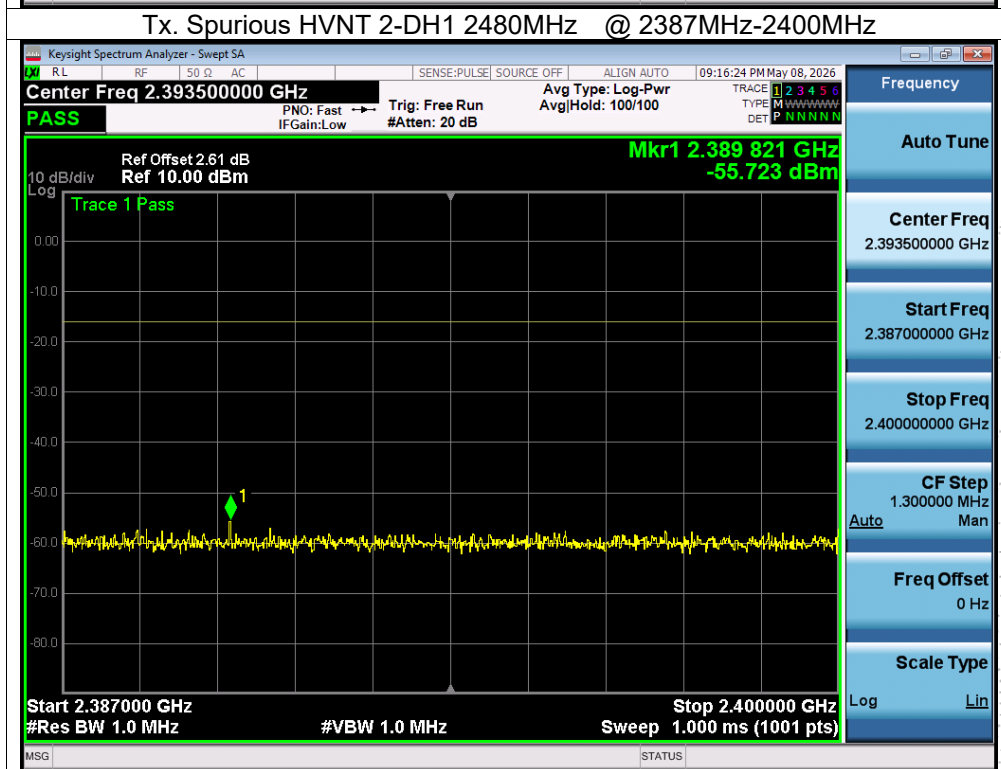
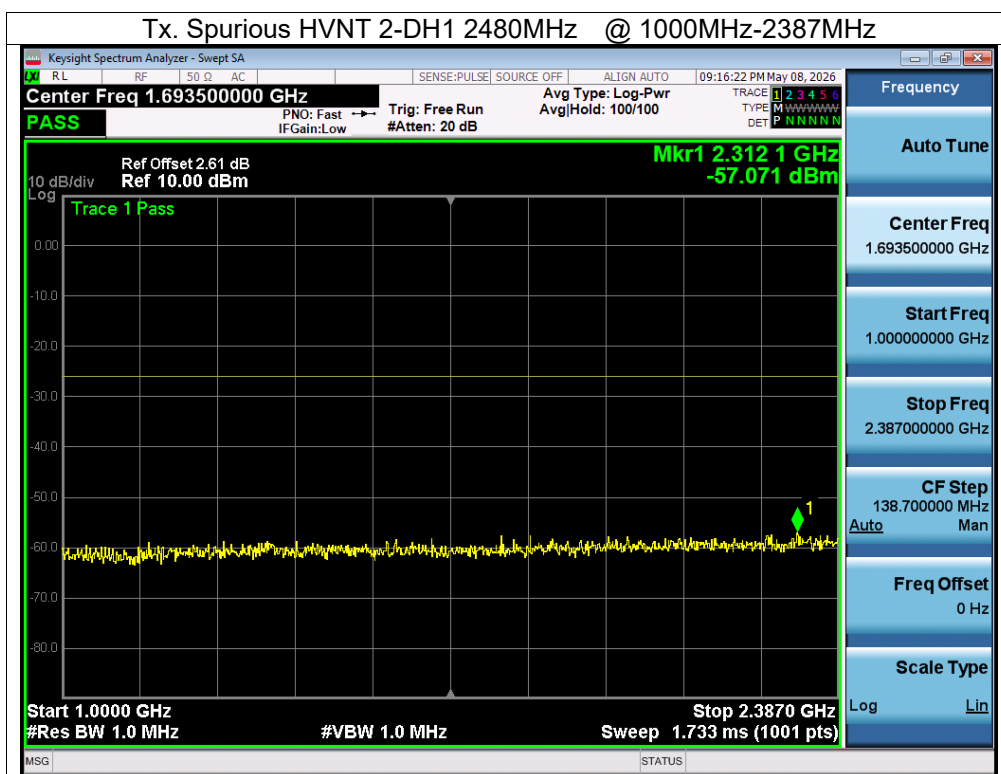


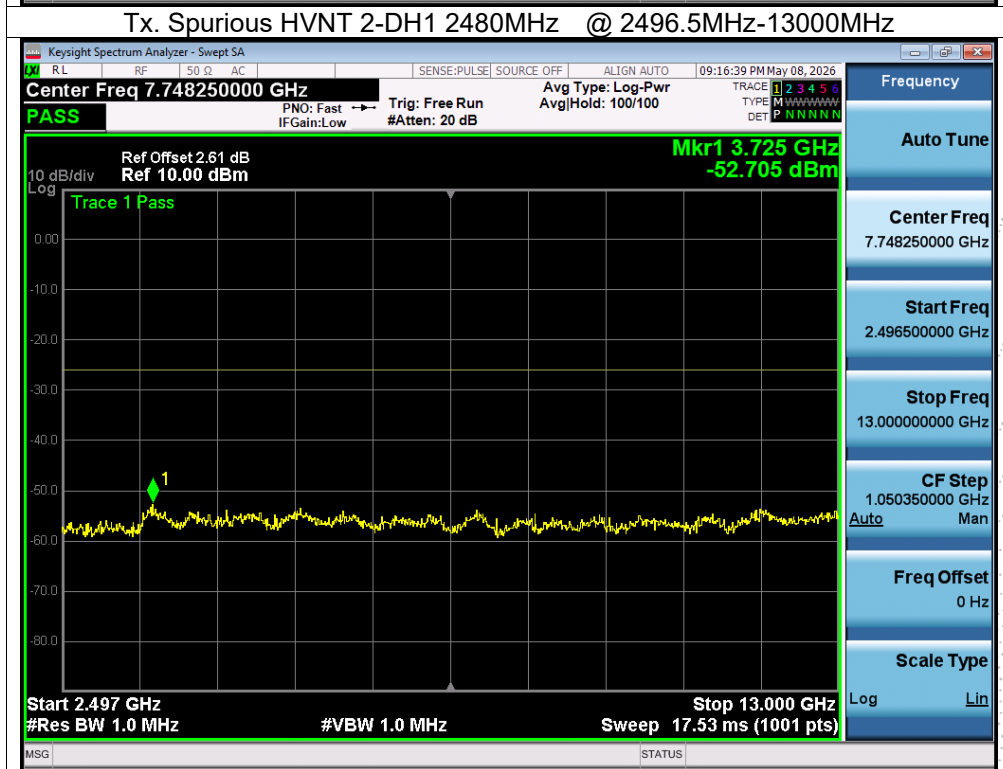
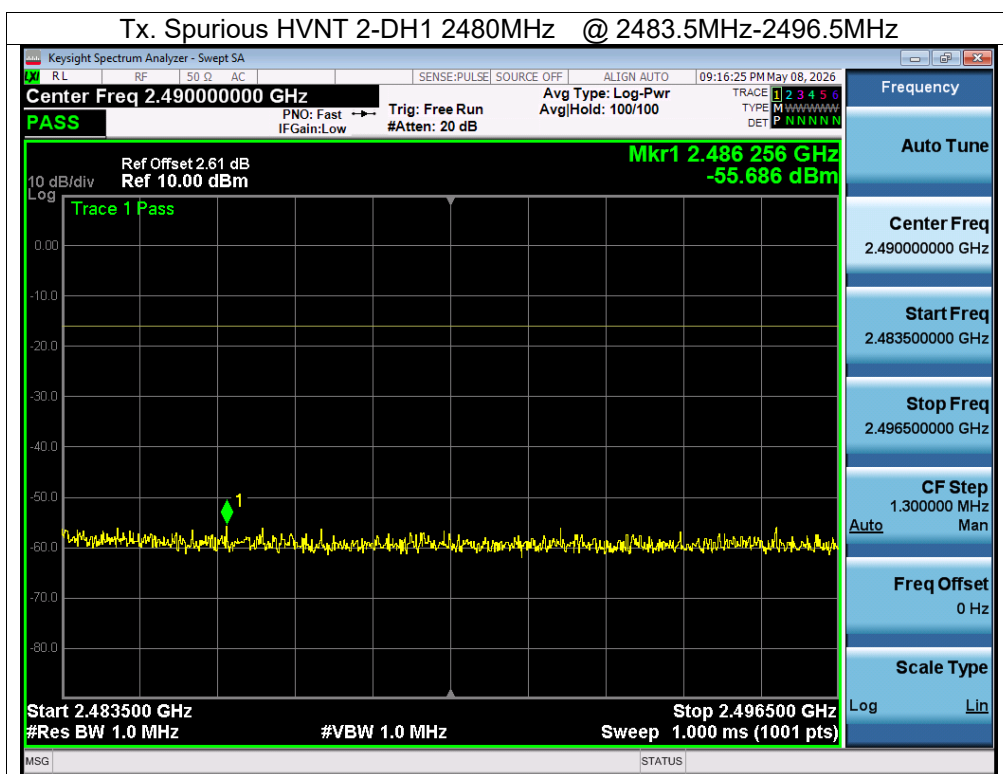


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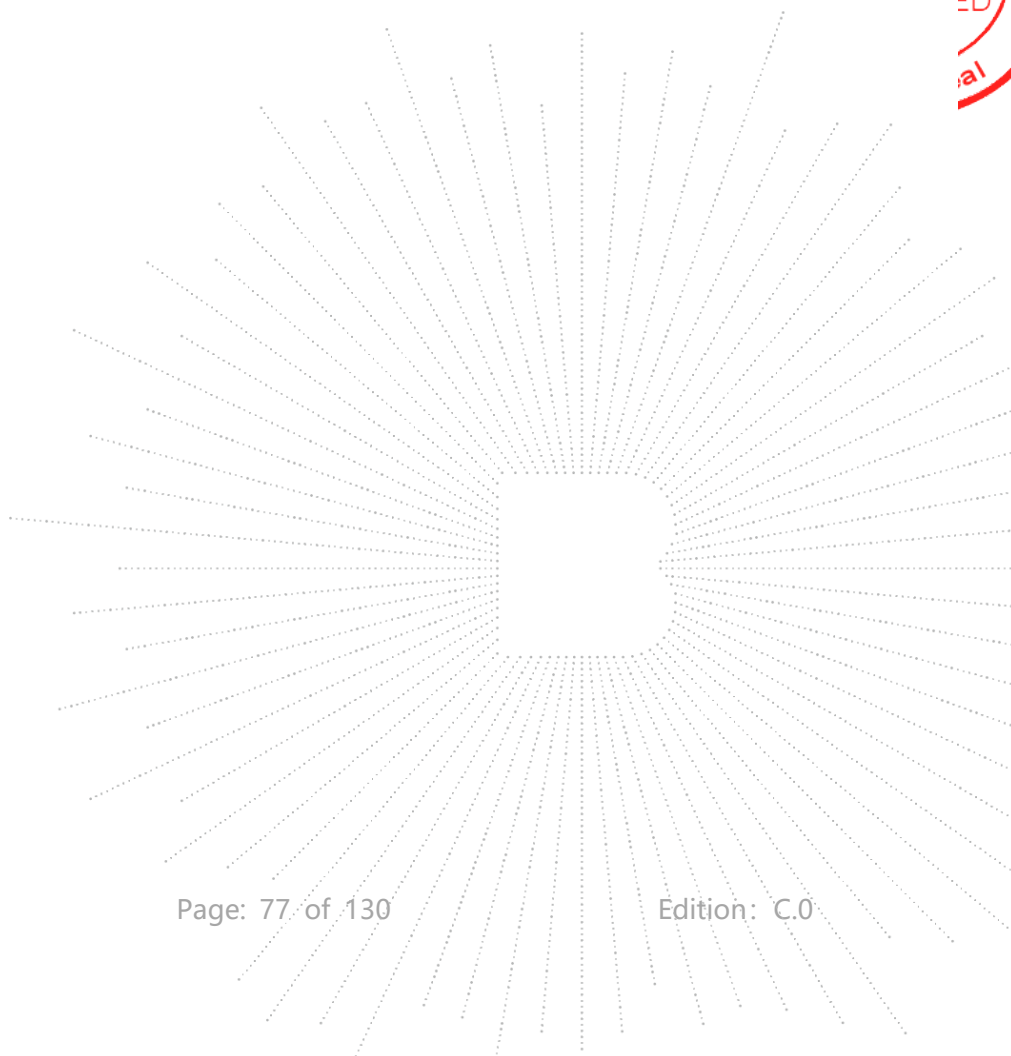


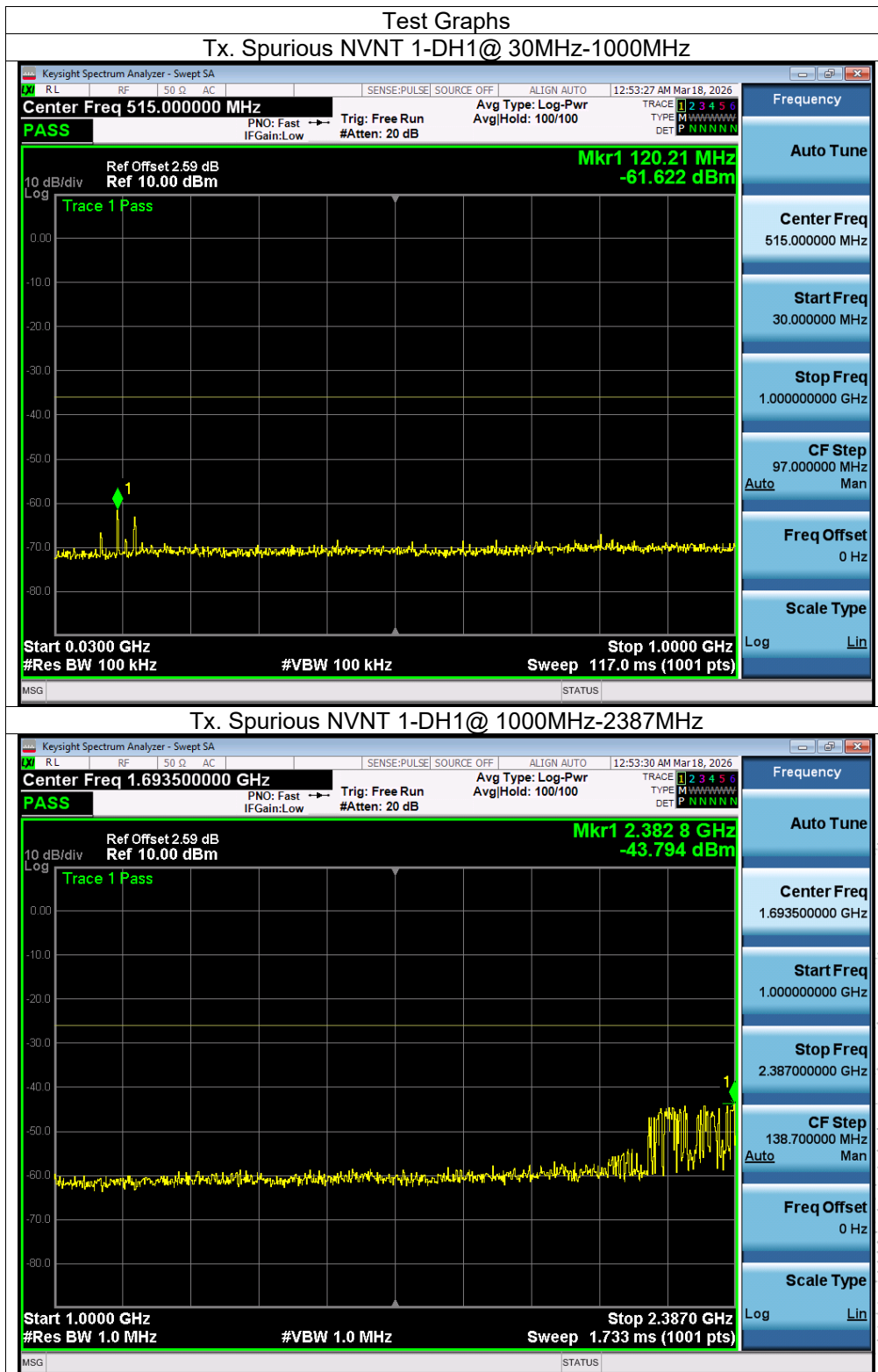


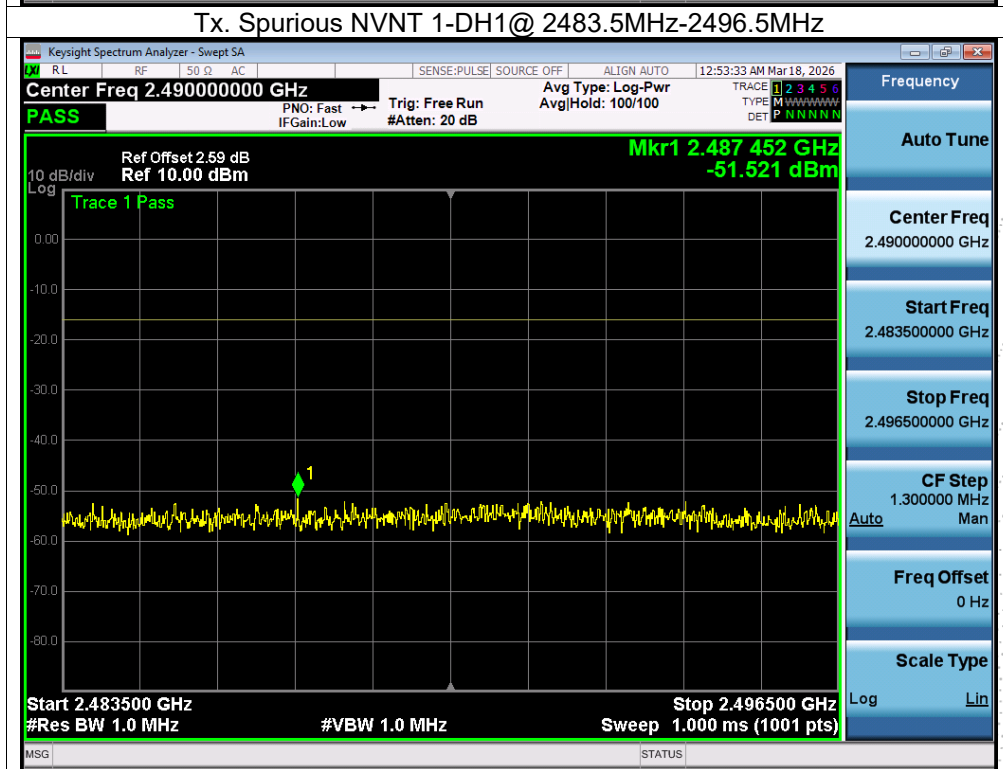
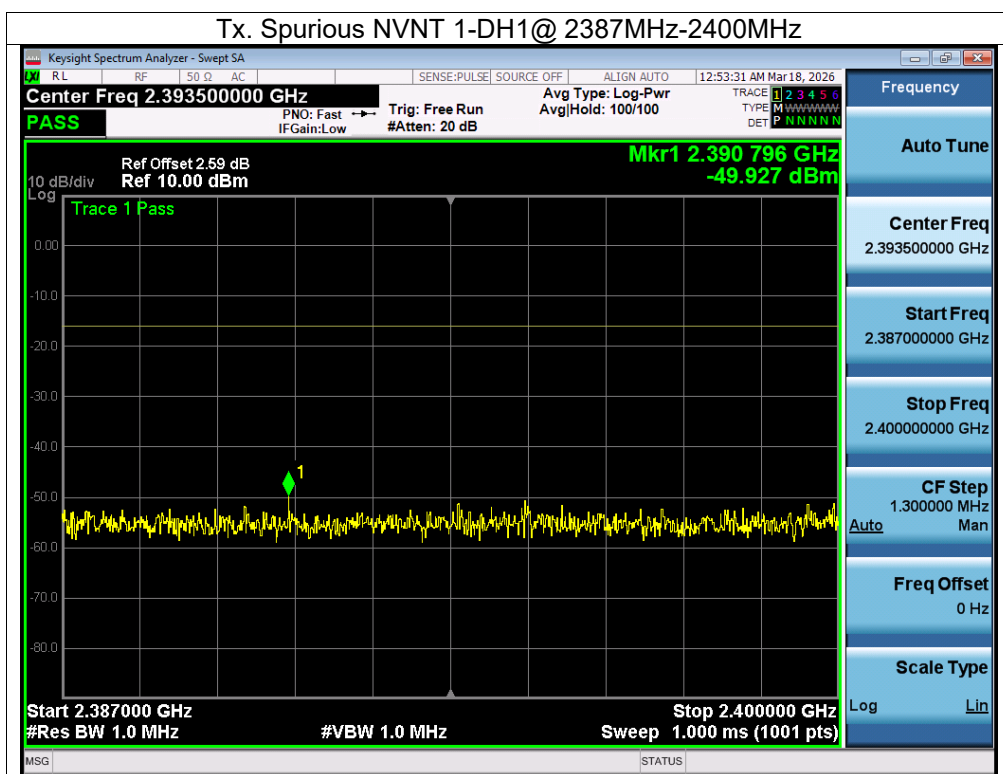


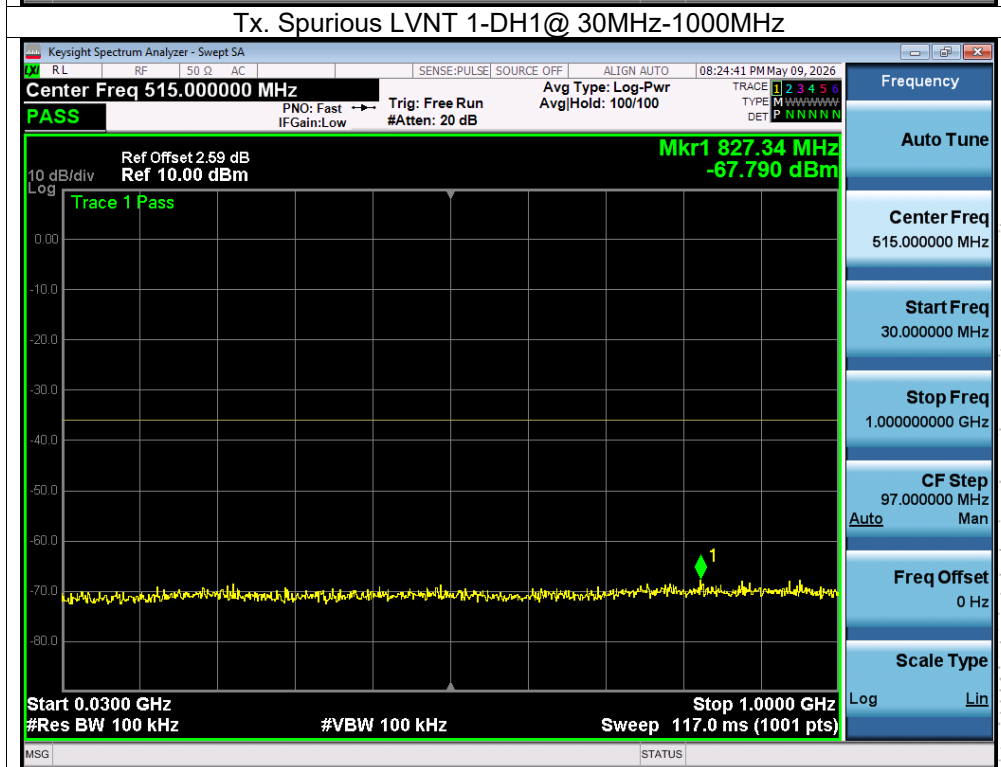
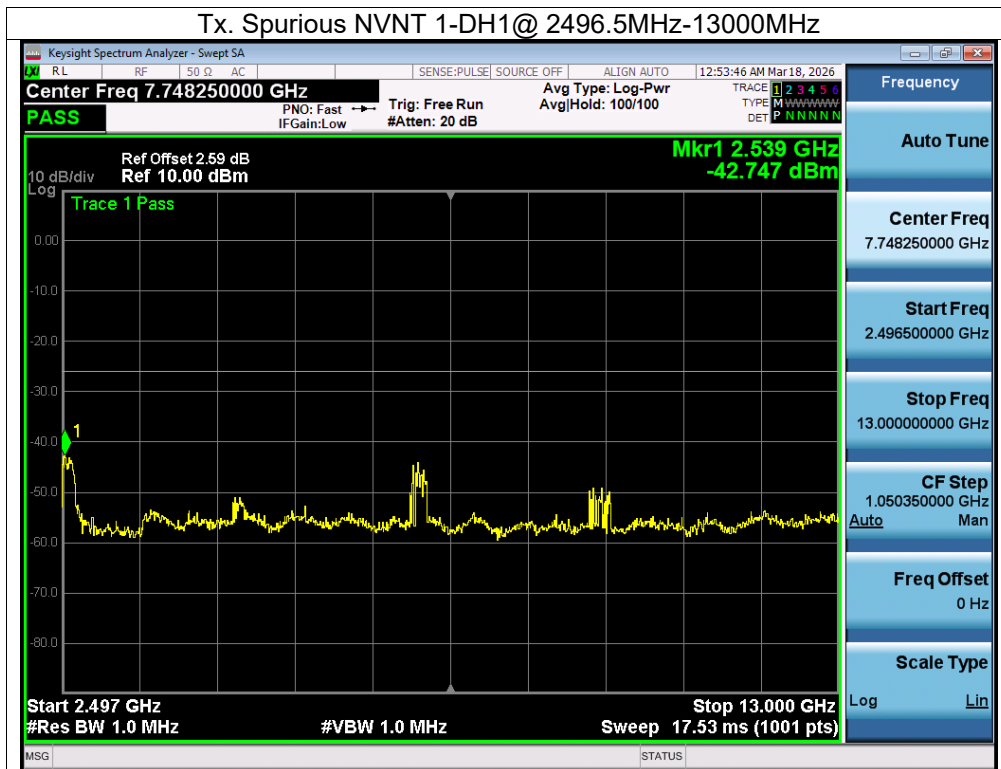
Temperature:	26°C		
Humidity:	54 % RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		
Test Mode:	Hopping		

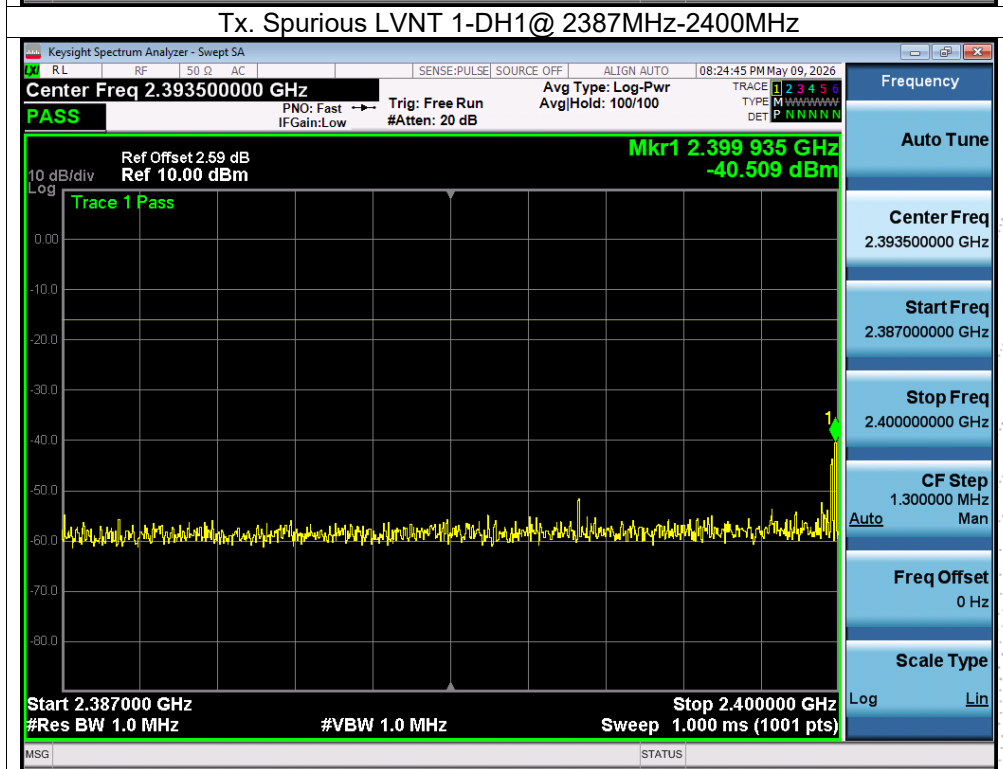
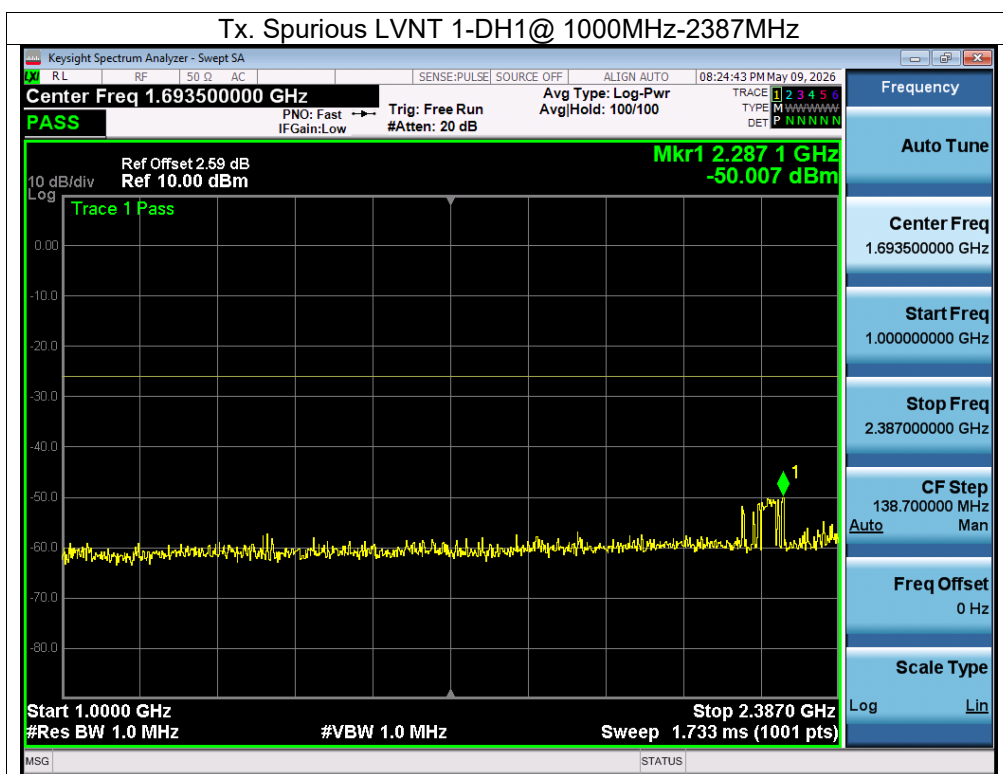
Condition	Mode	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	30-1000	120.21	-61.62	-36	Pass
NVNT	1-DH1	1000-2387	2382.84	-43.79	-26	Pass
NVNT	1-DH1	2387-2400	2390.8	-49.93	-16	Pass
NVNT	1-DH1	2483.5-2496.5	2487.45	-51.52	-16	Pass
NVNT	1-DH1	2496.5-13000	2538.51	-42.75	-26	Pass
LVNT	1-DH1	30-1000	827.34	-67.79	-36	Pass
LVNT	1-DH1	1000-2387	2287.14	-50.01	-26	Pass
LVNT	1-DH1	2387-2400	2399.94	-40.51	-16	Pass
LVNT	1-DH1	2483.5-2496.5	2487.83	-52.37	-16	Pass
LVNT	1-DH1	2496.5-13000	9922.47	-45.24	-26	Pass
HVNT	1-DH1	30-1000	814.73	-67.63	-36	Pass
HVNT	1-DH1	1000-2387	2288.52	-49.72	-26	Pass
HVNT	1-DH1	2387-2400	2395.19	-53.71	-16	Pass
HVNT	1-DH1	2483.5-2496.5	2486.17	-51.7	-16	Pass
HVNT	1-DH1	2496.5-13000	2601.54	-45.27	-26	Pass

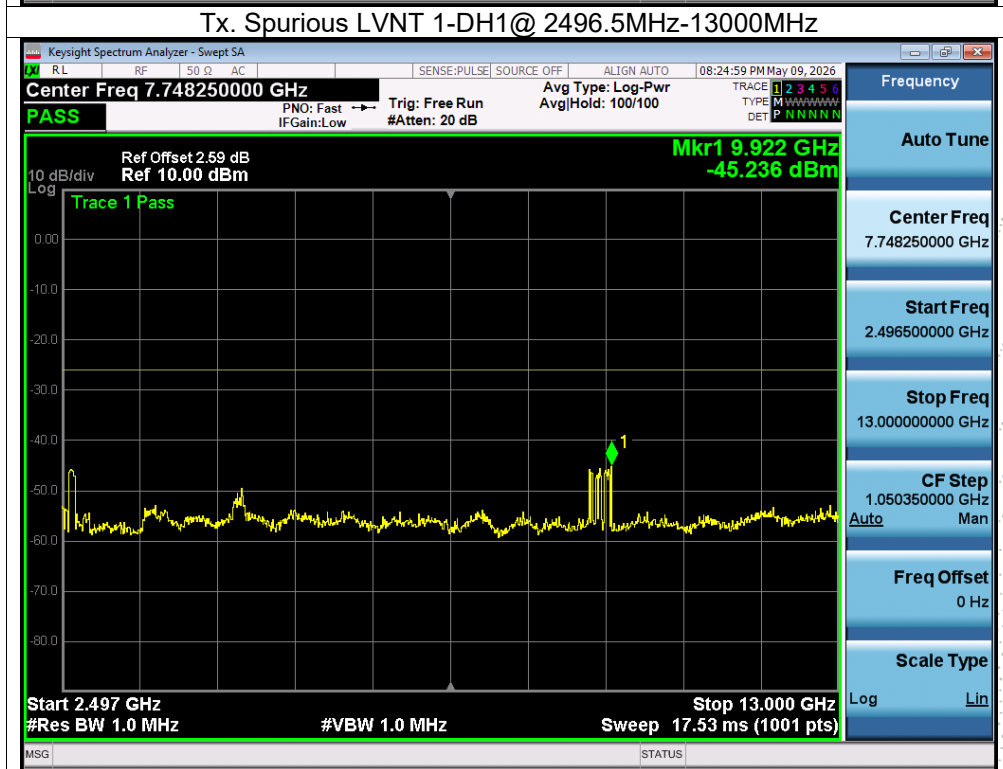
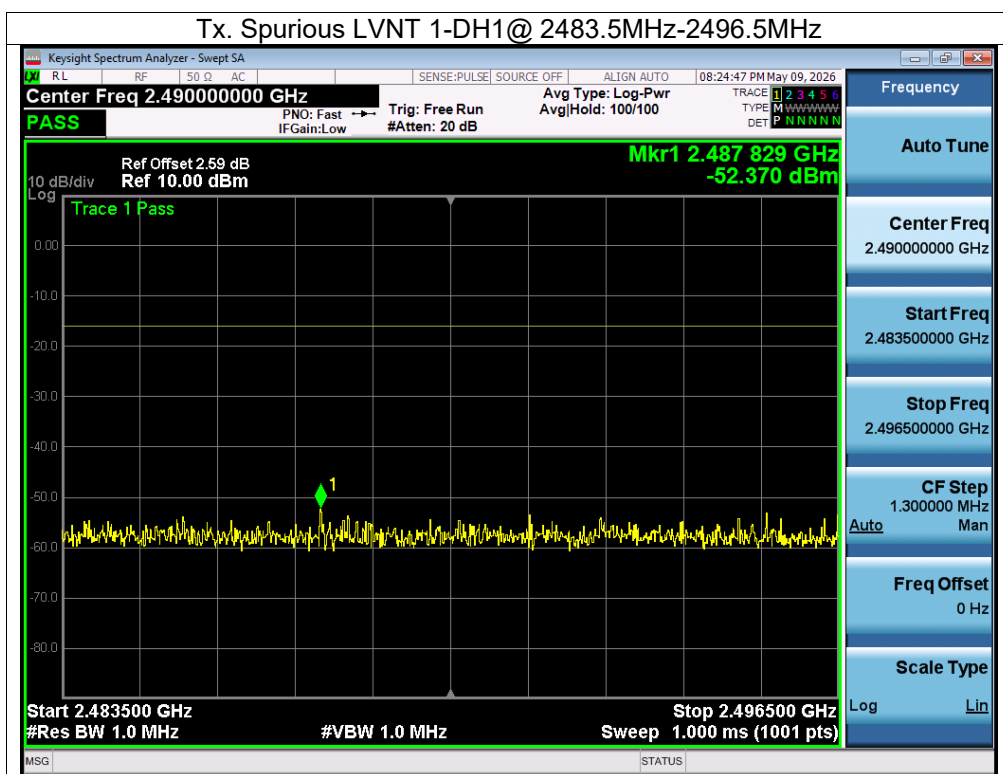


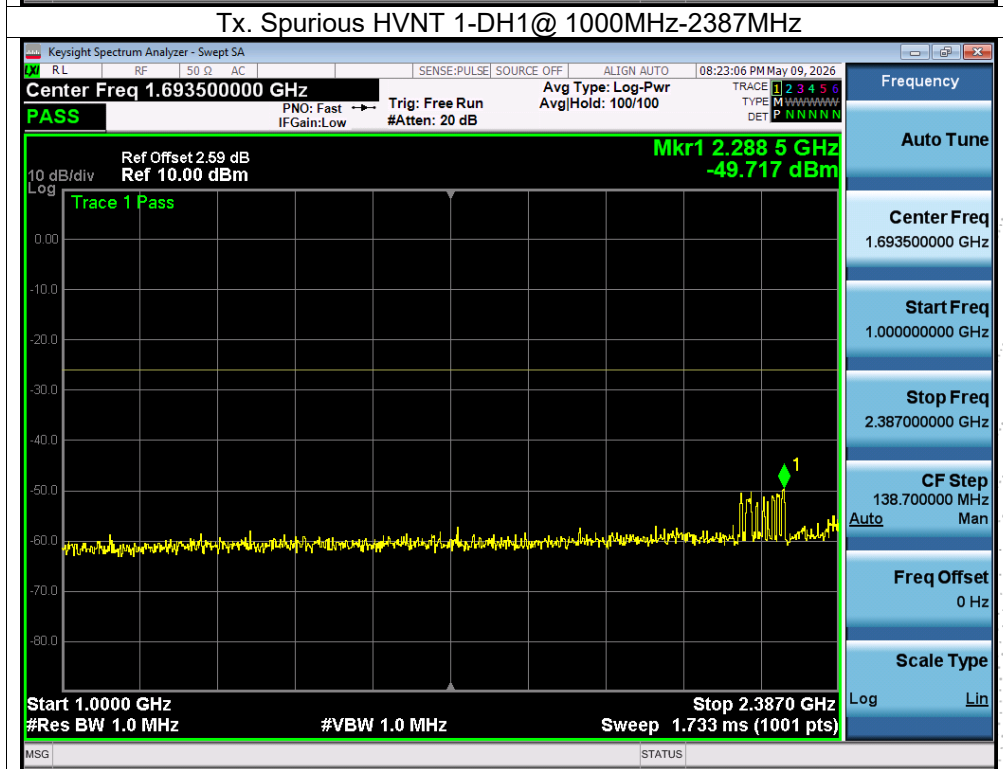
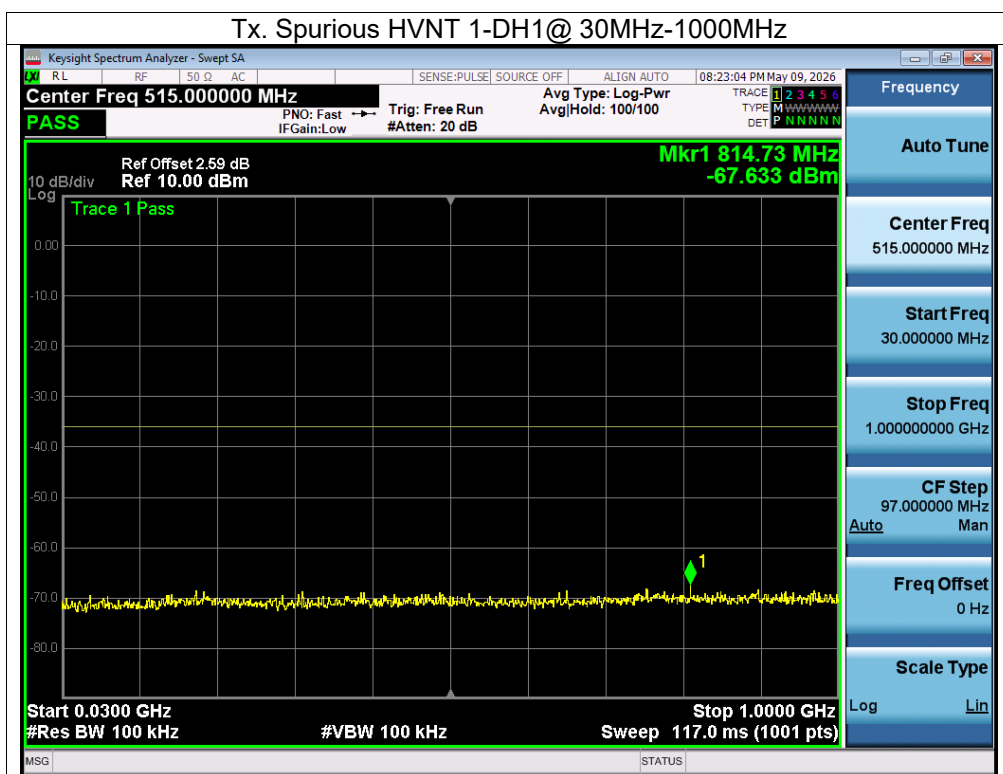


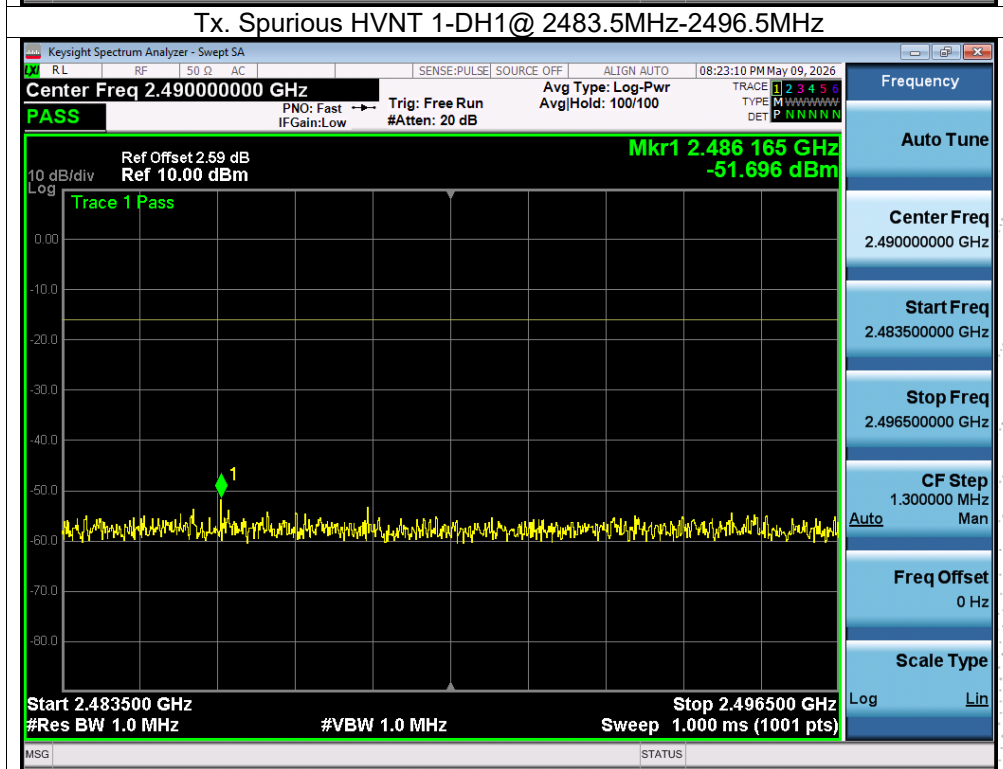
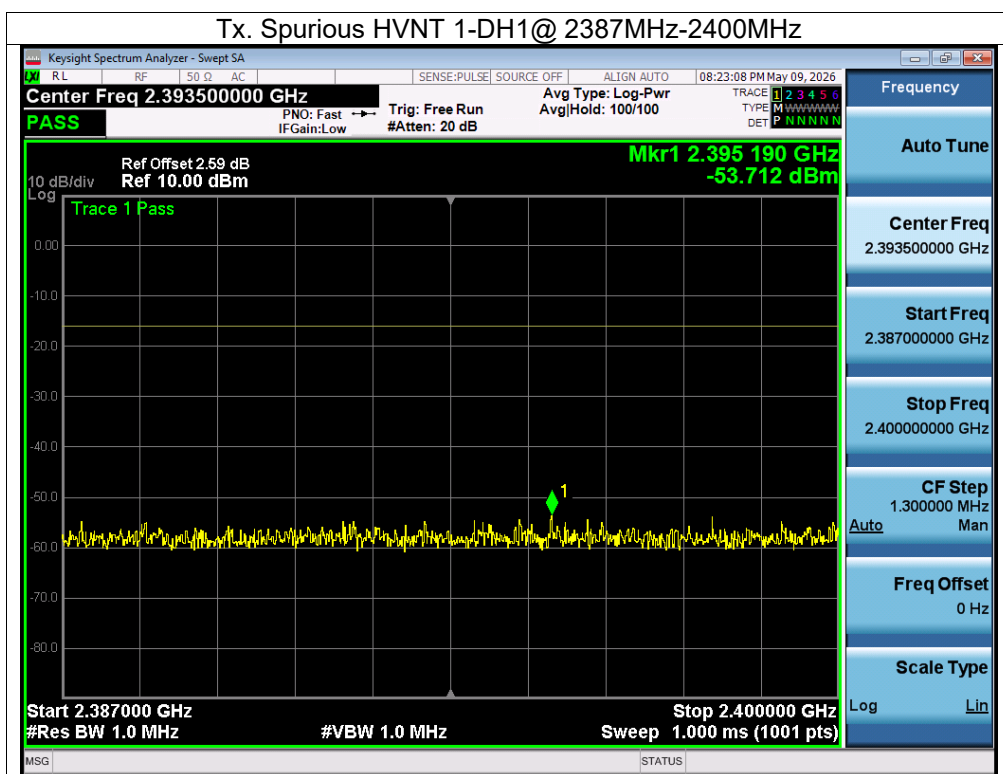




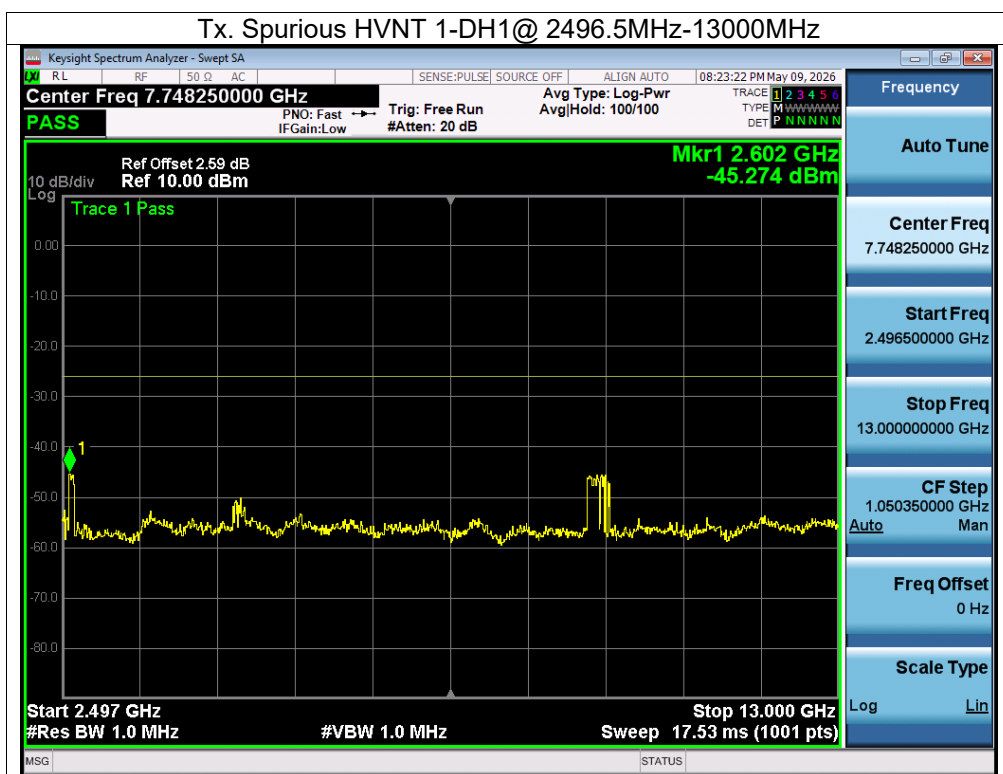






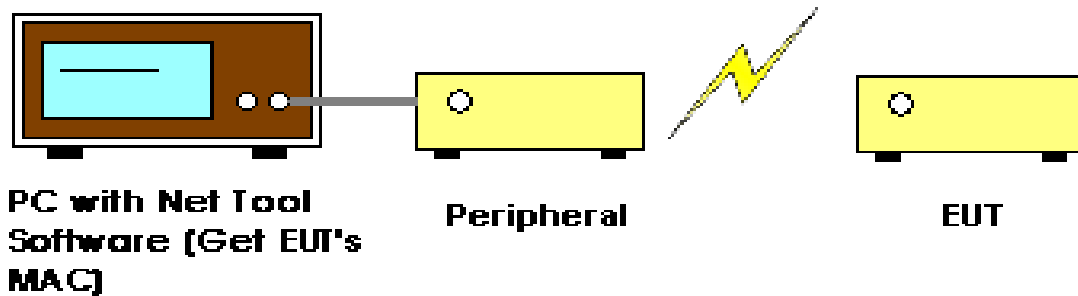


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11. Radio Interference Prevention Capability Measurement

11.1 Block Diagram Of Test Setup



11.2 Limit

Item	Limits
Identification code	≥ 48 bits

11.3 Measuring Instruments And Setting

Item	Limits
MAC IP List	MAC Scan

11.4 Test Procedure

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

11.5 Test Result

Temperature:	26°C		
Humidity:	54 % RH	Test Voltage	DC 3.7V

1. Bluetooth Device Address: 57-2d-b1-b8-e8-da
2. Test result: PASS

12. Dwell Time

12.1 Block Diagram Of Test Setup



12.2 Limit

Item	Limits
Hopping Freq. Dwell Time	$\leq 0.4 \text{ sec (In } 0.4 \text{ sec} \times \text{ spreading rate)}$

12.3 Measuring Instruments And Setting

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

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 Hz
RB	1 MHz
VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep	Continuous

12.4 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer
2. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
3. Use a video trigger with the trigger level set to enable triggering only on full pulses.
4. Sweep Time is more than once pulse time.
5. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
6. Measure the maximum time duration of one single pulse.
7. Set the EUT for DH5, DH3 and DH1 packet transmitting.
8. Measure the maximum time duration of one single pulse.

12.5 Test Result

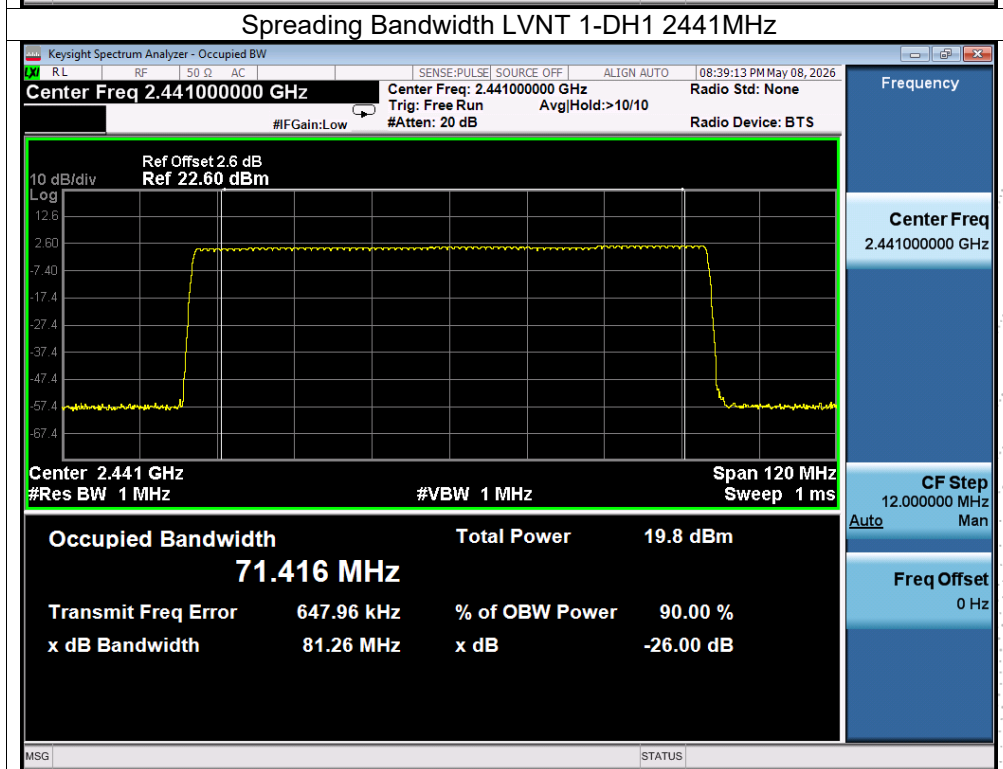
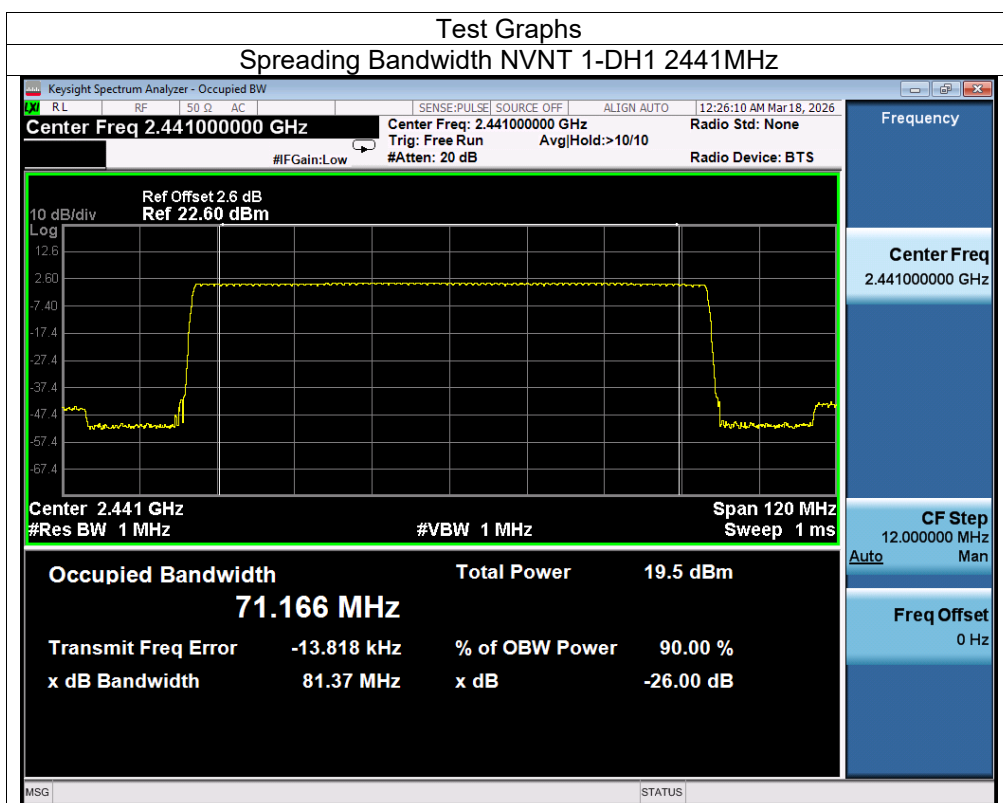
Temperature:	26°C		
Humidity:	54 % RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		

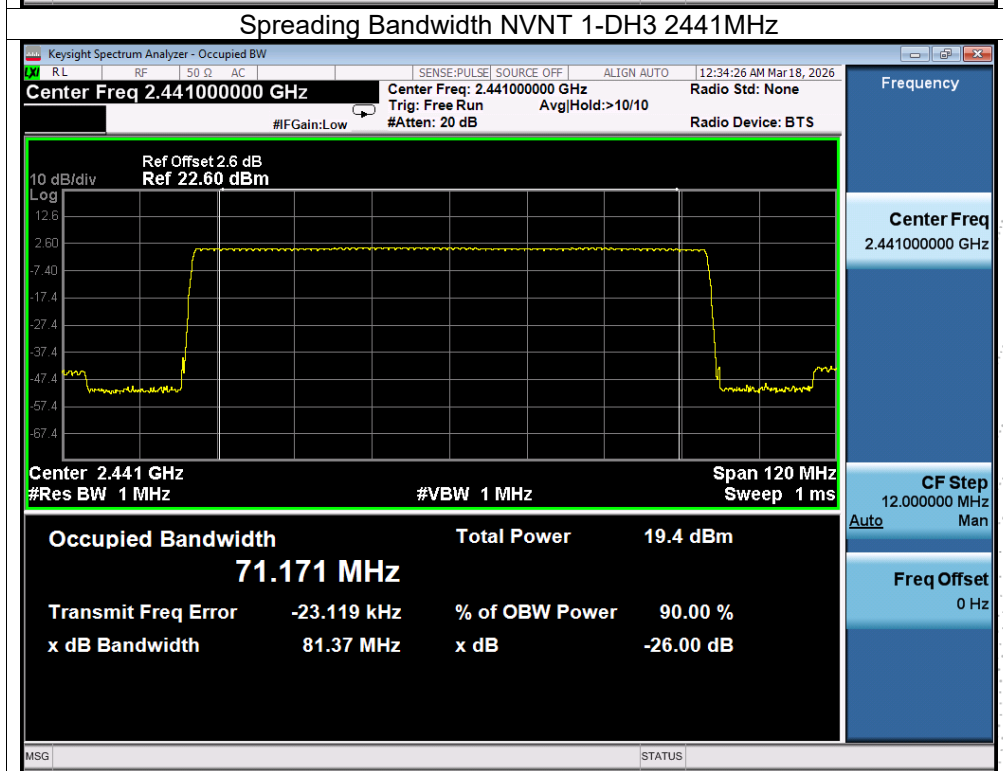
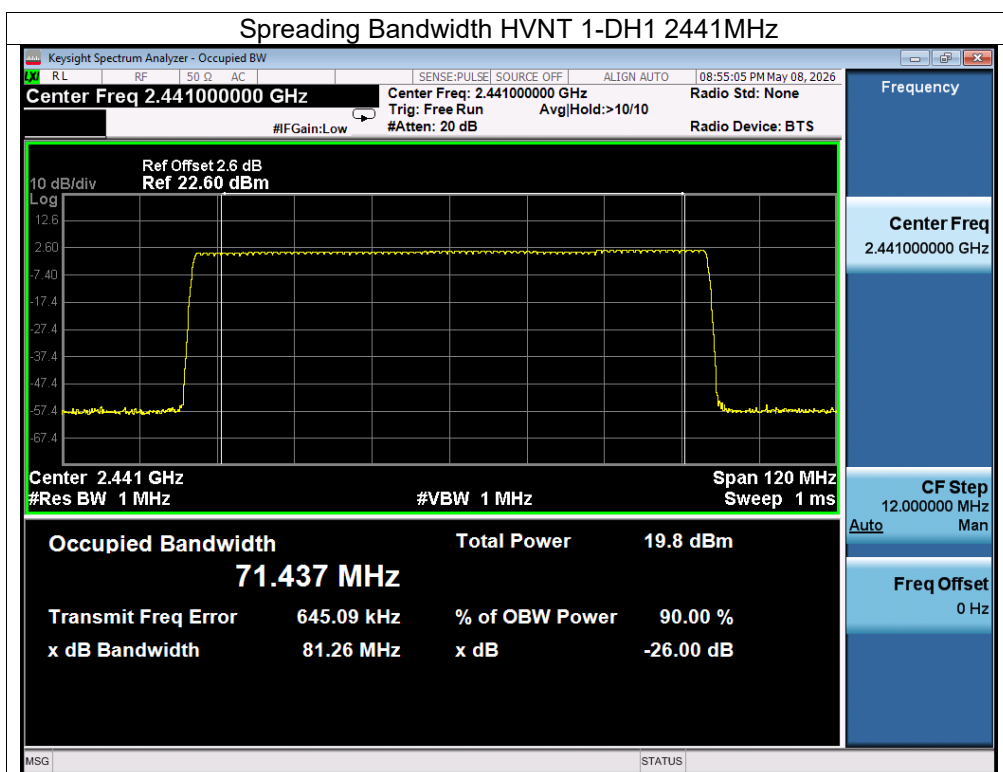
Condition	Mode	Frequency (MHz)	Spreading Bandwidth (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	71.166	0.383	109.538	286	28466.4	400	Pass
LVNT	1-DH1	2441	71.417	0.383	109.538	286	28566.8	400	Pass
HVNT	1-DH1	2441	71.437	0.383	110.304	288	28574.8	400	Pass
NVNT	1-DH3	2441	71.171	1.639	239.294	146	28468.4	400	Pass
LVNT	1-DH3	2441	71.429	1.639	221.265	135	28571.6	400	Pass
HVNT	1-DH3	2441	71.429	1.638	219.492	134	28571.6	400	Pass
NVNT	1-DH5	2441	71.19	2.888	297.464	103	28476	400	Pass
LVNT	1-DH5	2441	71.431	2.887	271.378	94	28572.4	400	Pass
HVNT	1-DH5	2441	71.433	2.887	277.152	96	28573.2	400	Pass
NVNT	2-DH1	2441	71.244	0.391	111.826	286	28497.6	400	Pass
LVNT	2-DH1	2441	71.498	0.392	112.896	288	28599.2	400	Pass
HVNT	2-DH1	2441	71.389	0.391	112.217	287	28555.6	400	Pass
NVNT	2-DH3	2441	71.17	1.638	234.234	143	28468	400	Pass
LVNT	2-DH3	2441	71.47	1.643	228.377	139	28588	400	Pass
HVNT	2-DH3	2441	71.515	1.644	236.736	144	28606	400	Pass
NVNT	2-DH5	2441	71.286	2.892	266.064	92	28514.4	400	Pass
LVNT	2-DH5	2441	71.522	2.891	251.517	87	28608.8	400	Pass
HVNT	2-DH5	2441	71.497	2.891	297.773	103	28598.8	400	Pass

Note:

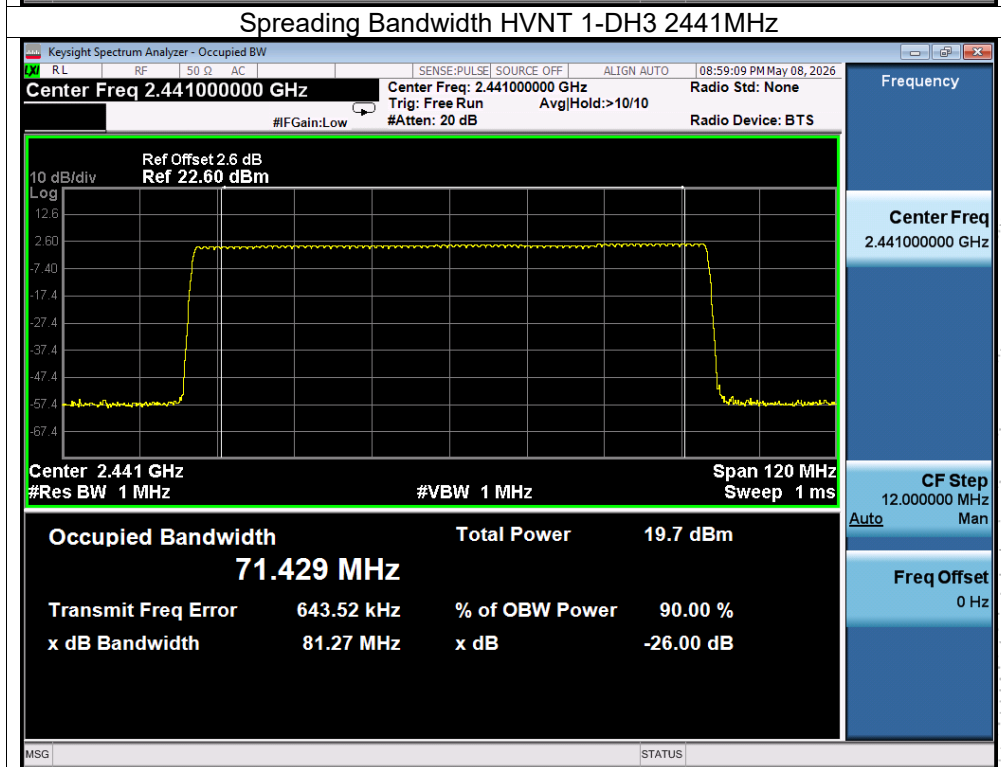
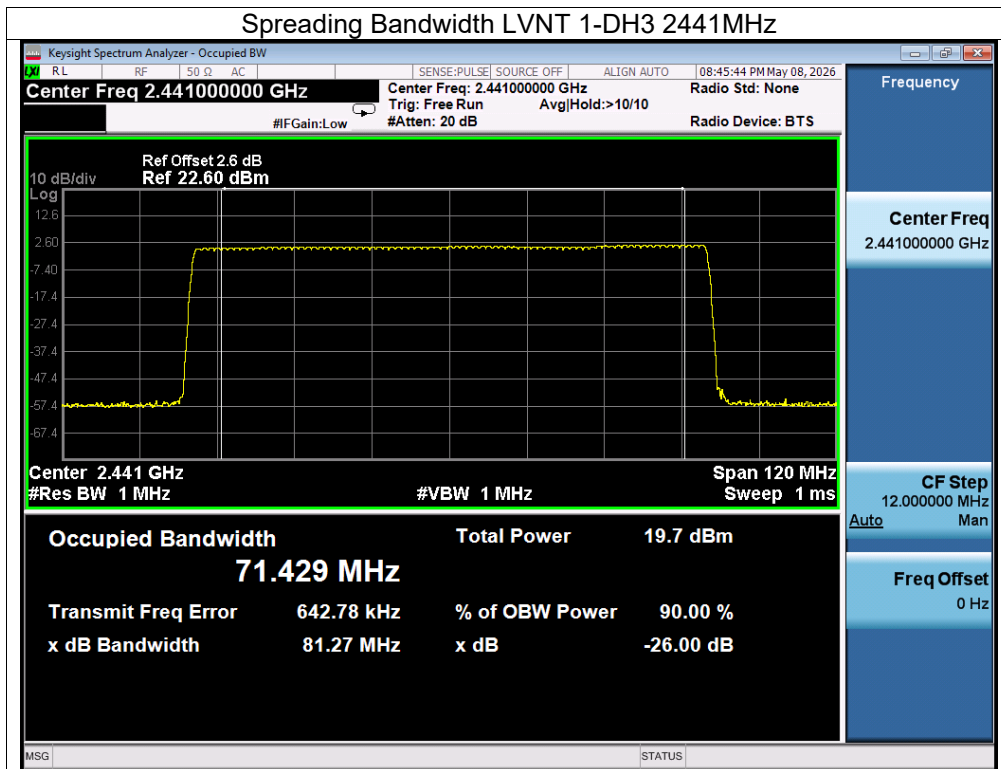
Period Time= Spreading Bandwidth *0.4

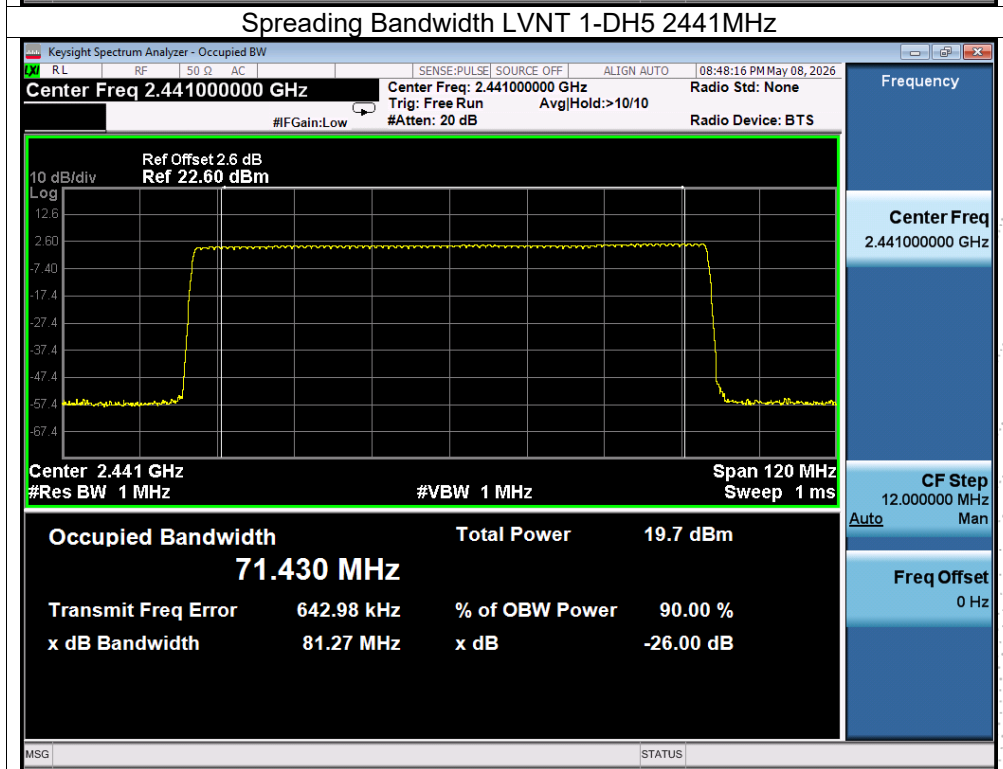
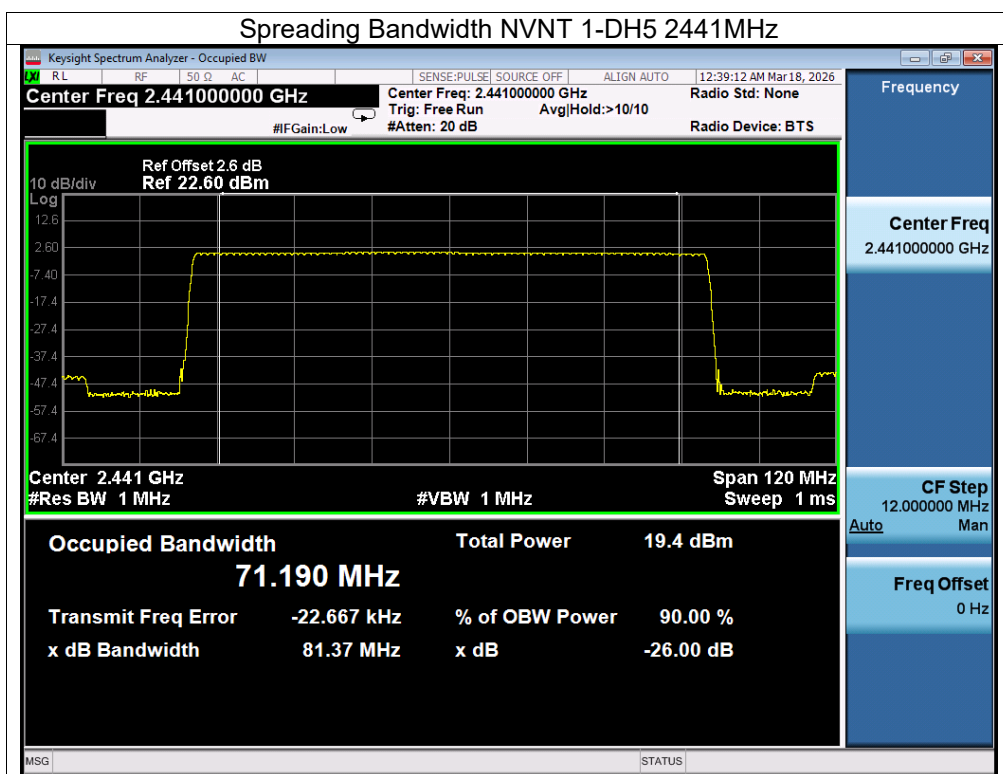
Dwell Time= Pulse Time* Burst Count

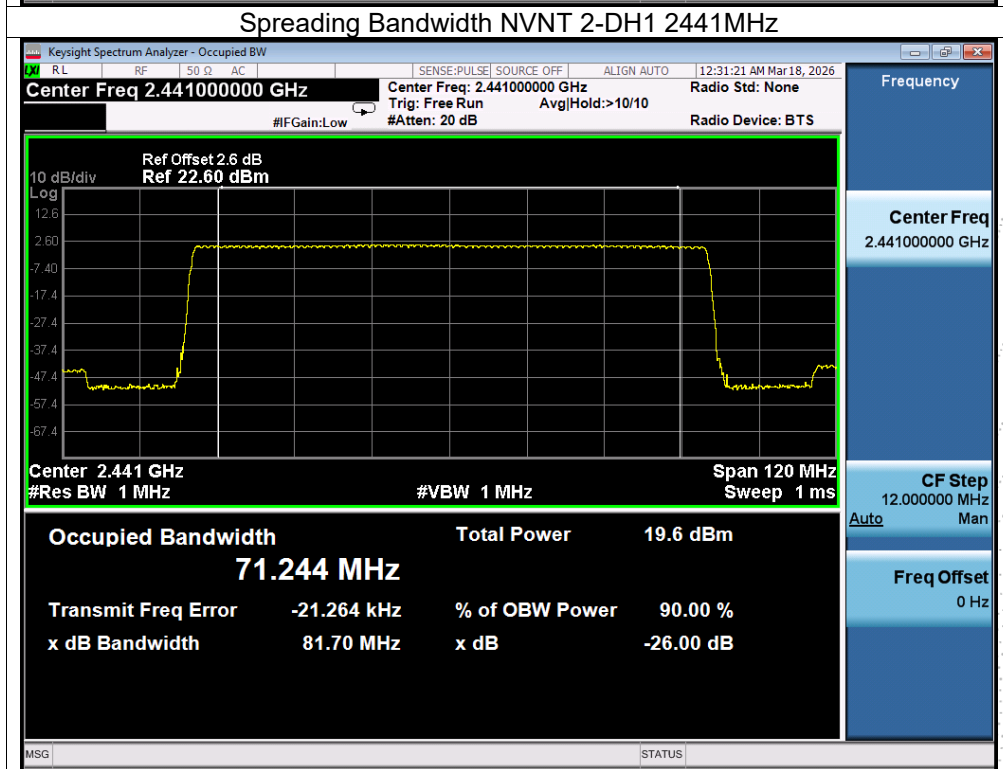
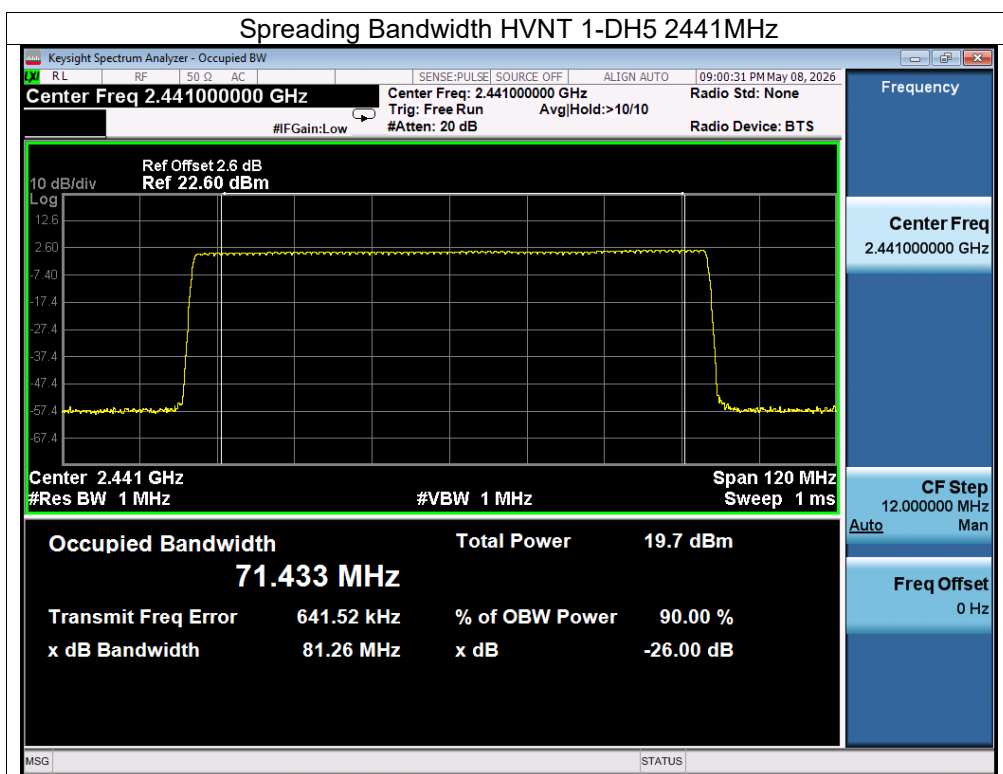


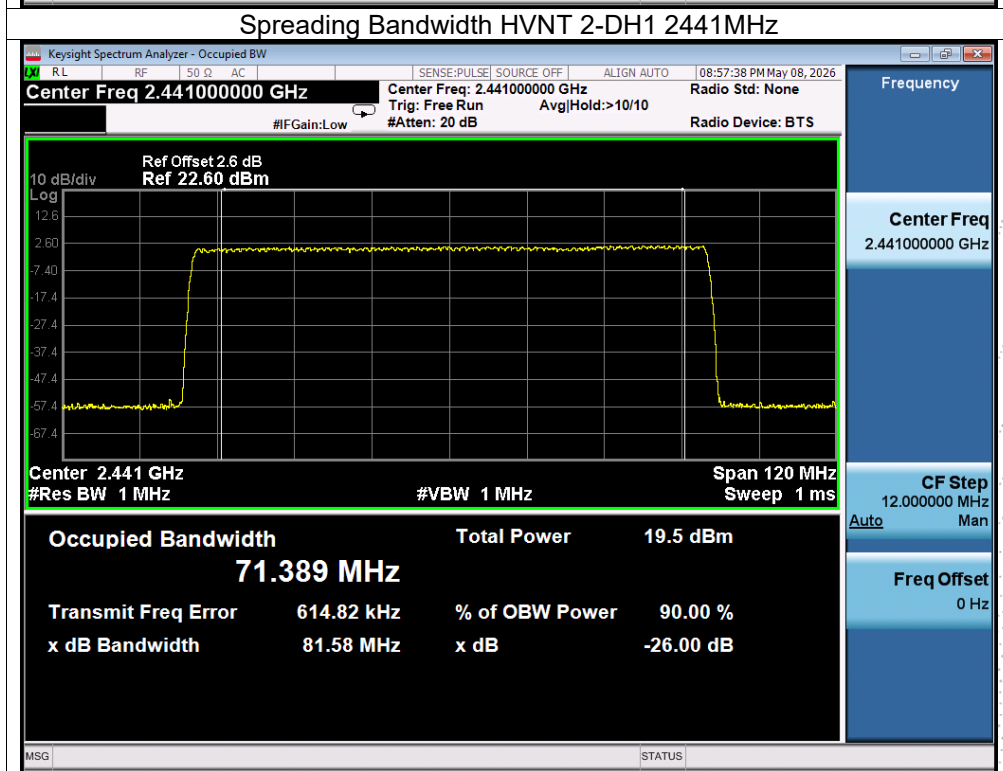
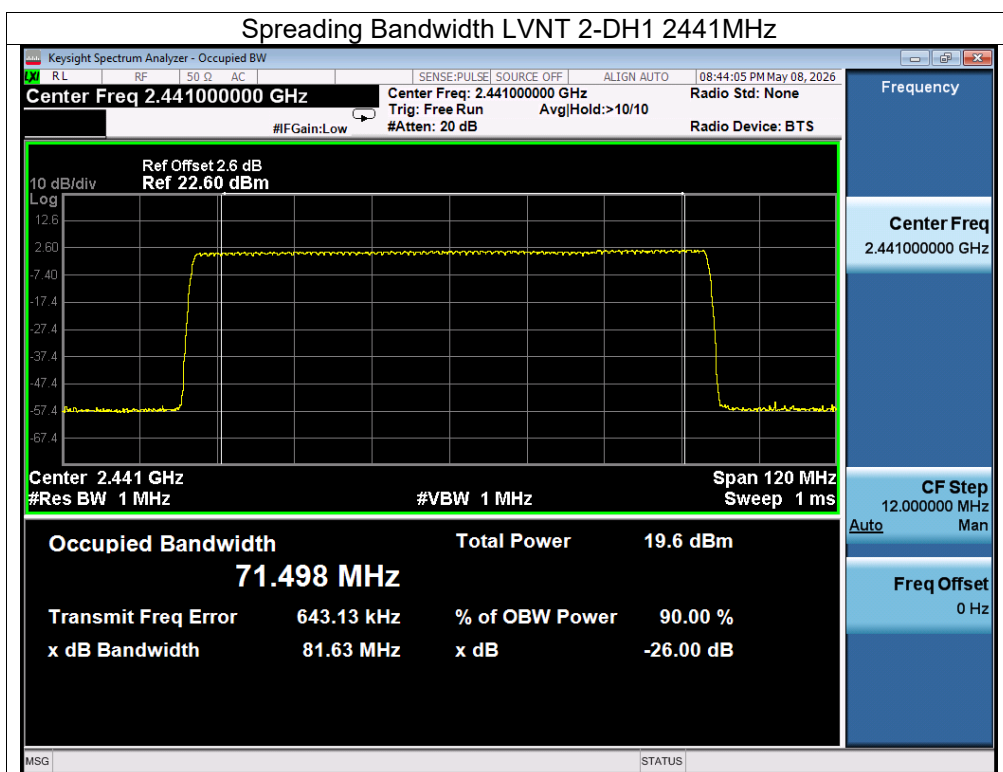


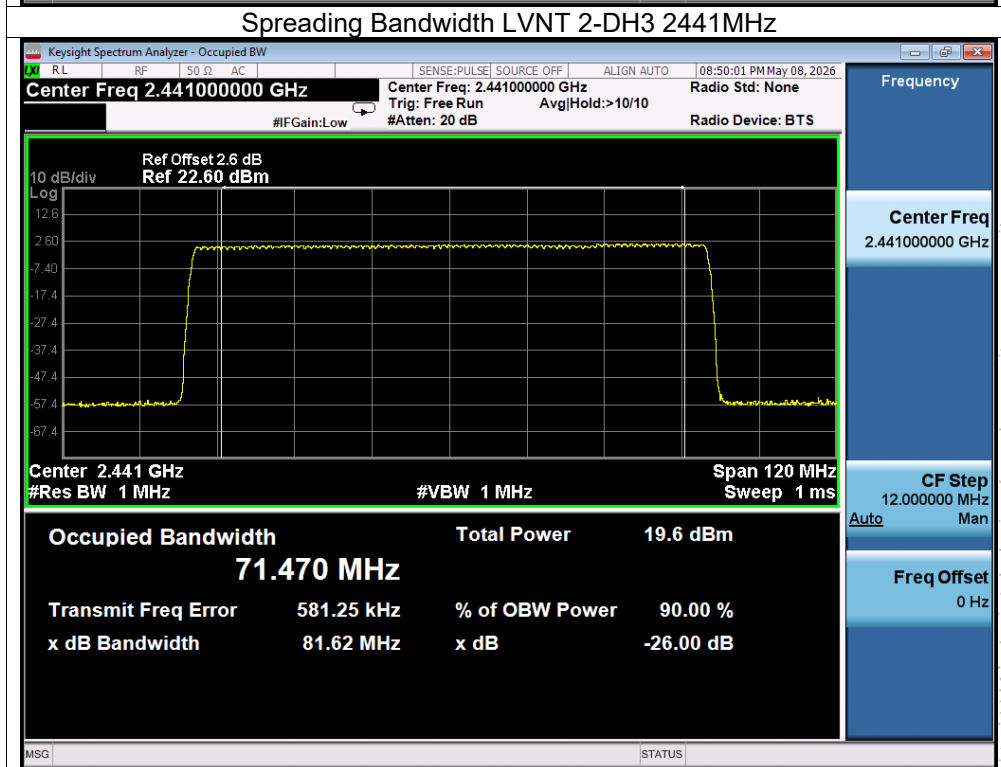
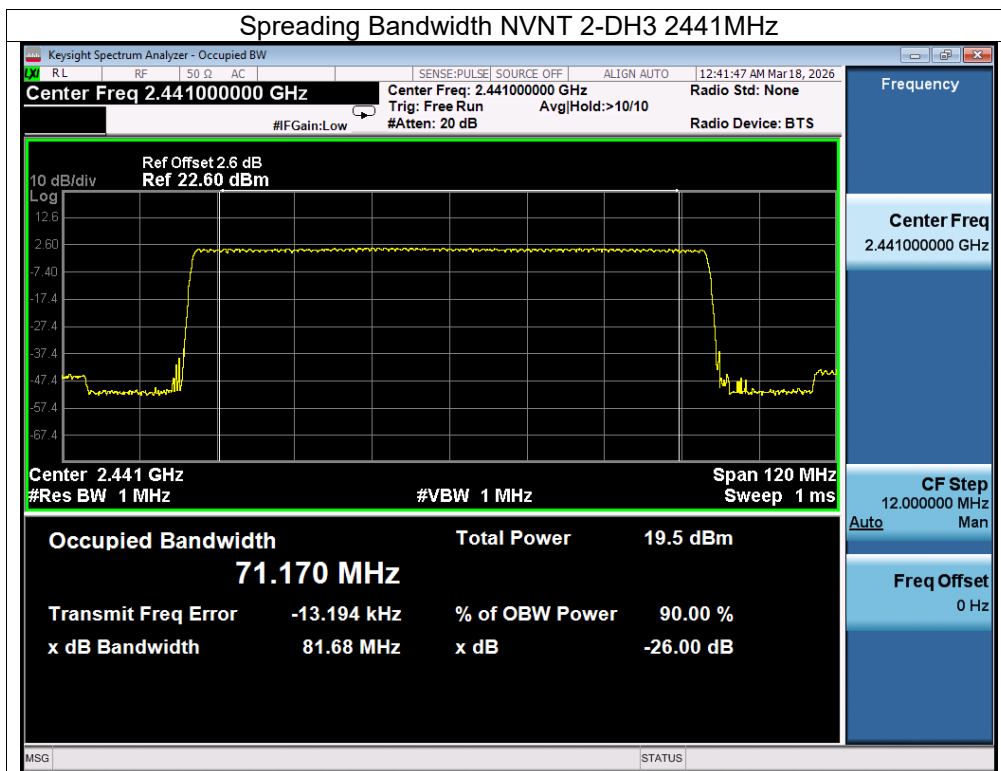
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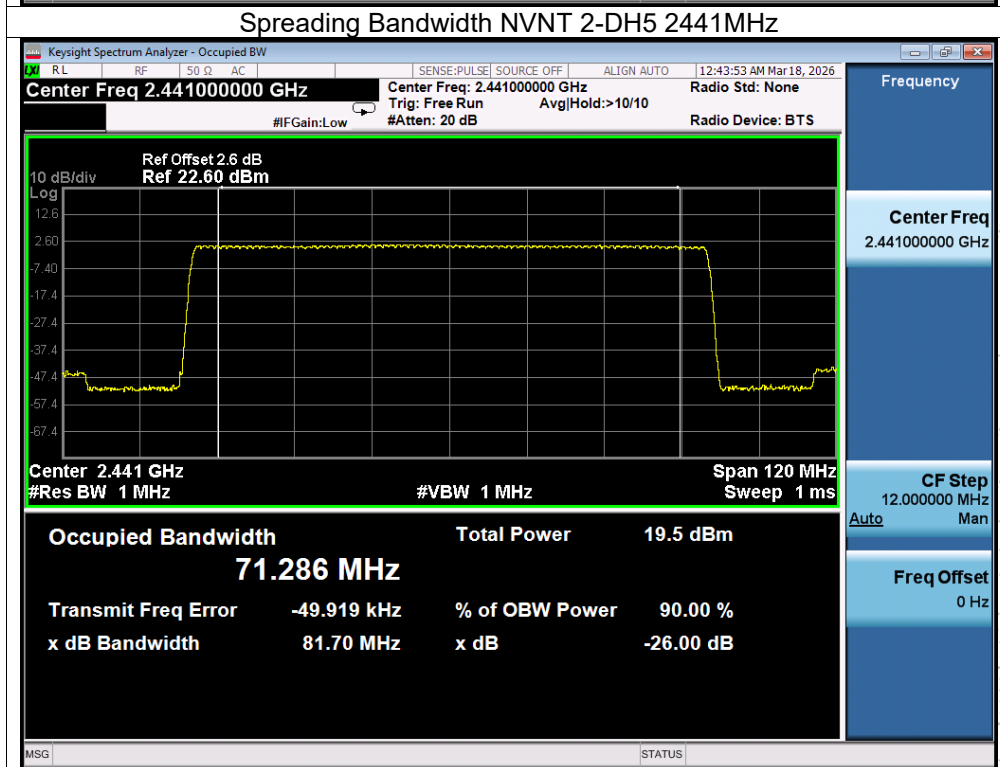
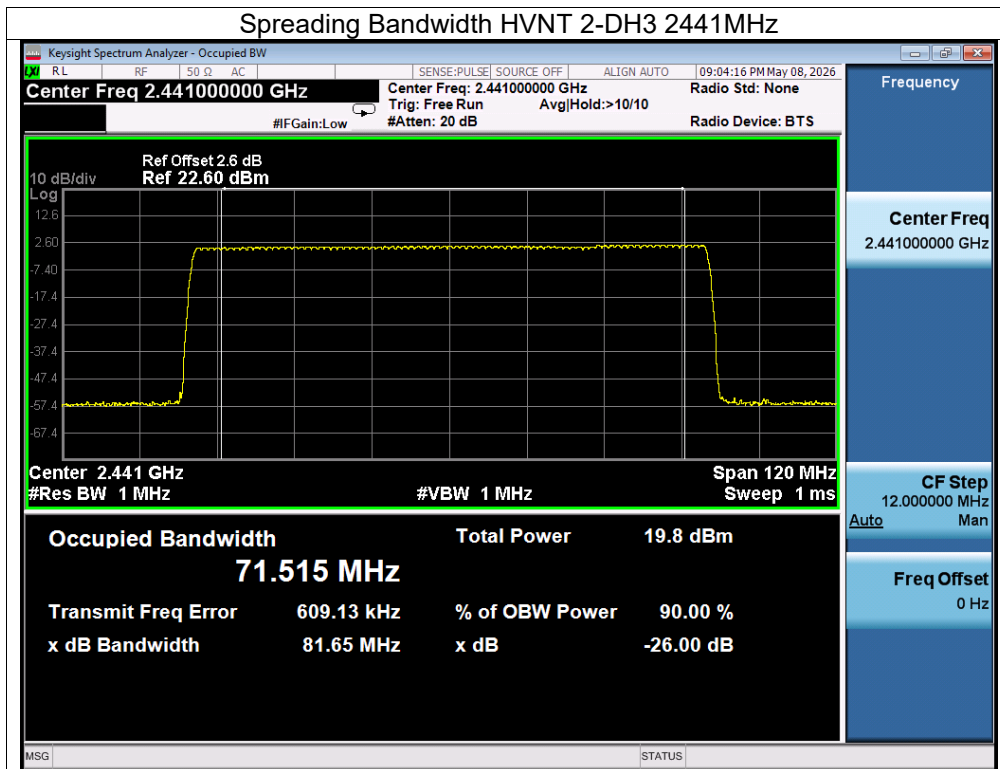


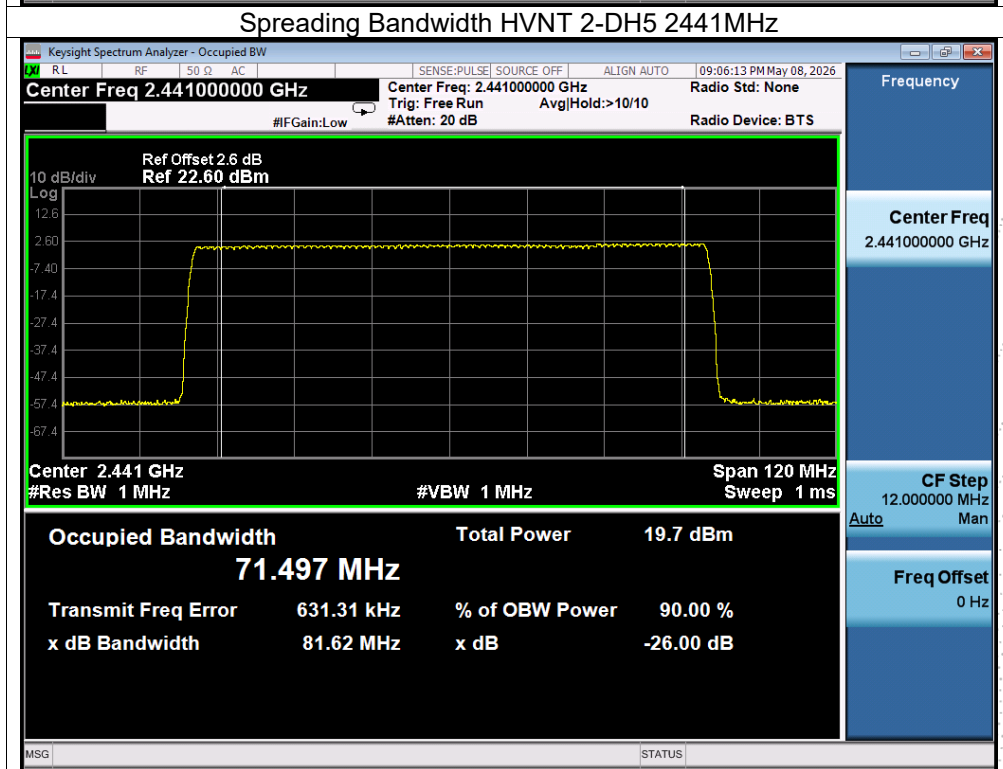
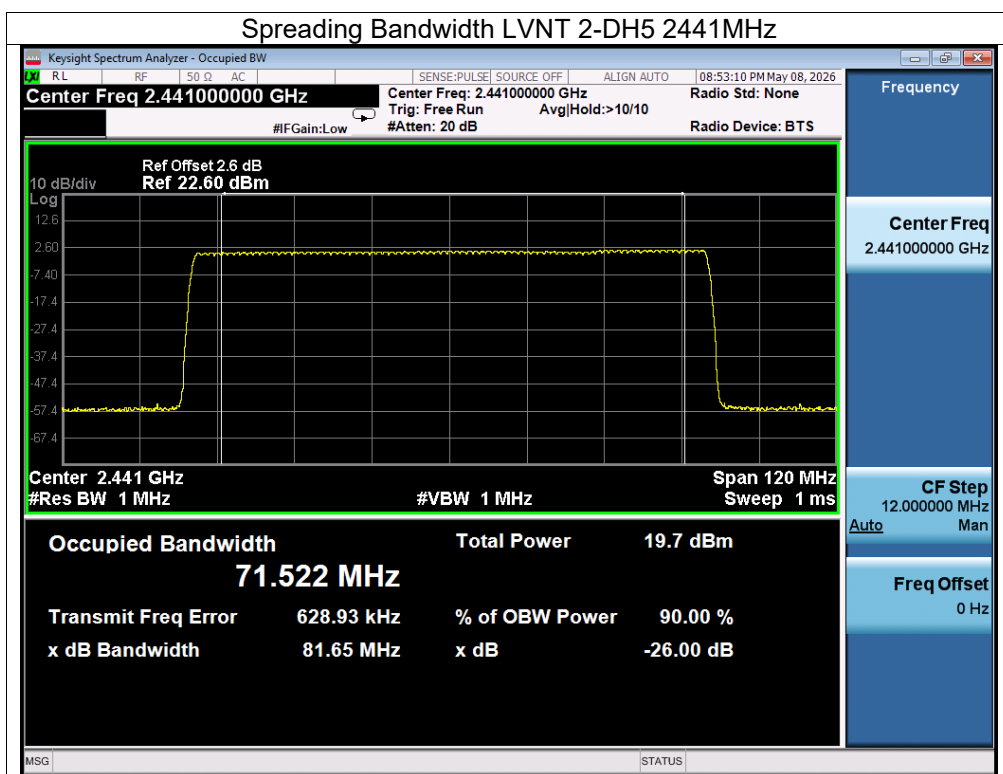


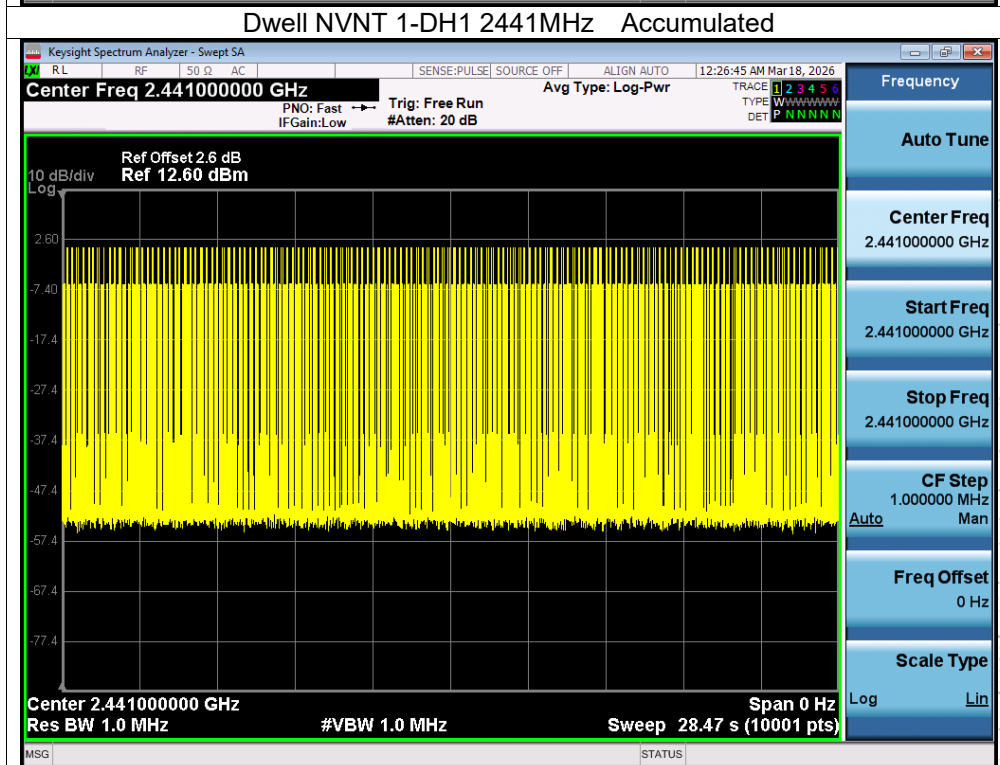
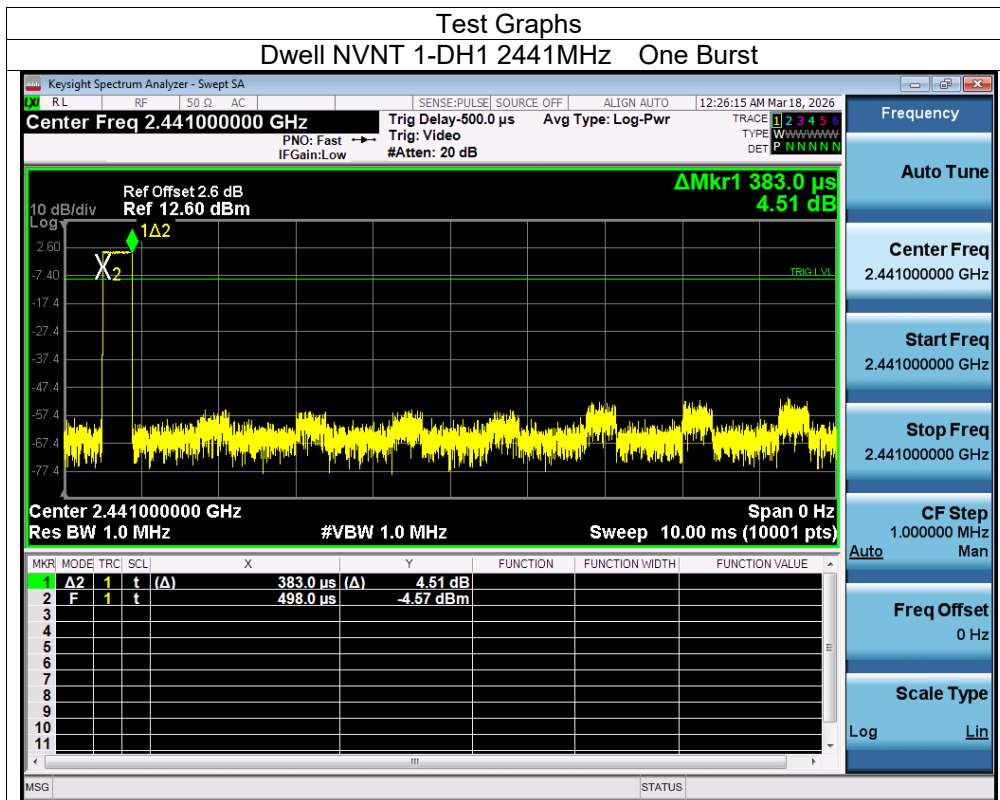


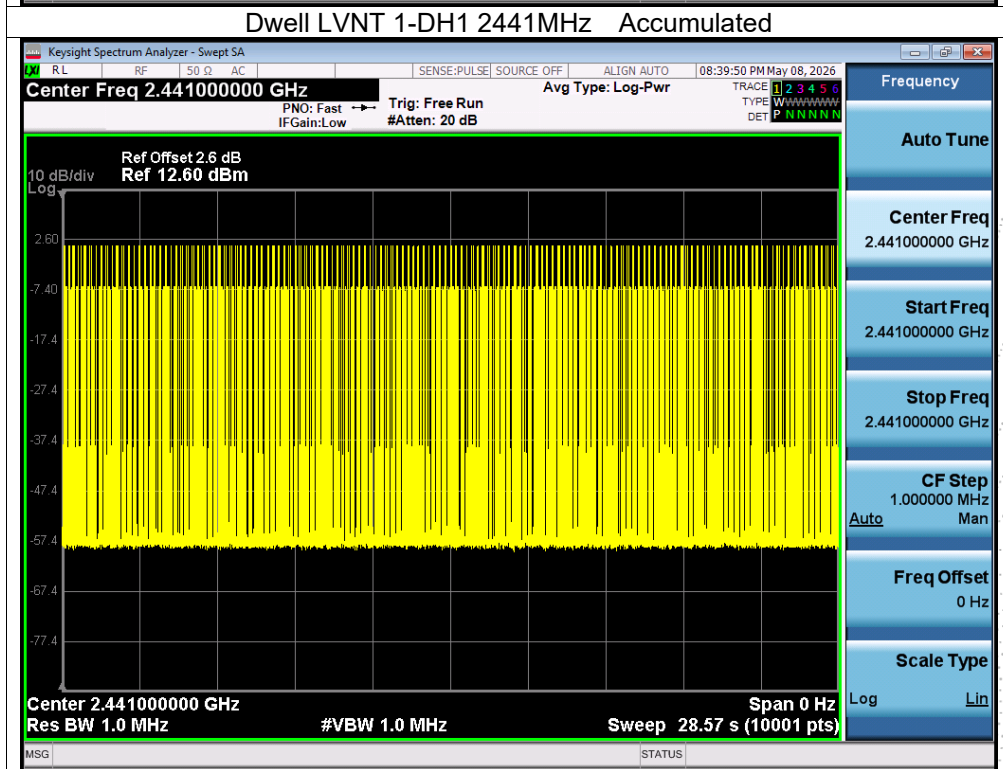
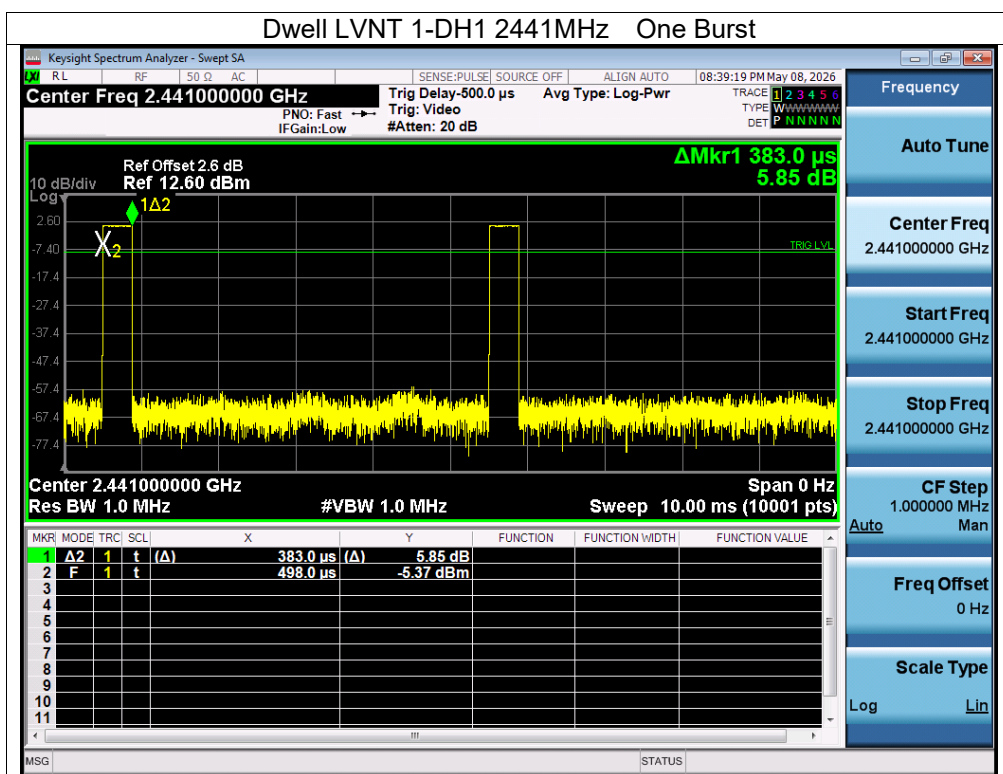


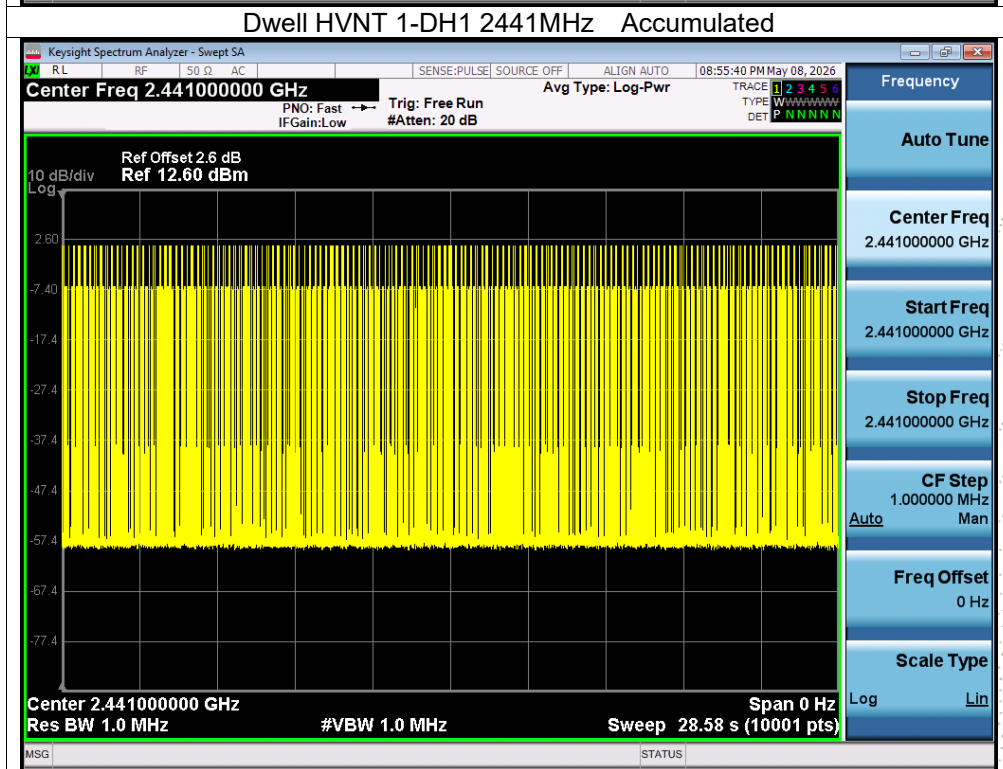
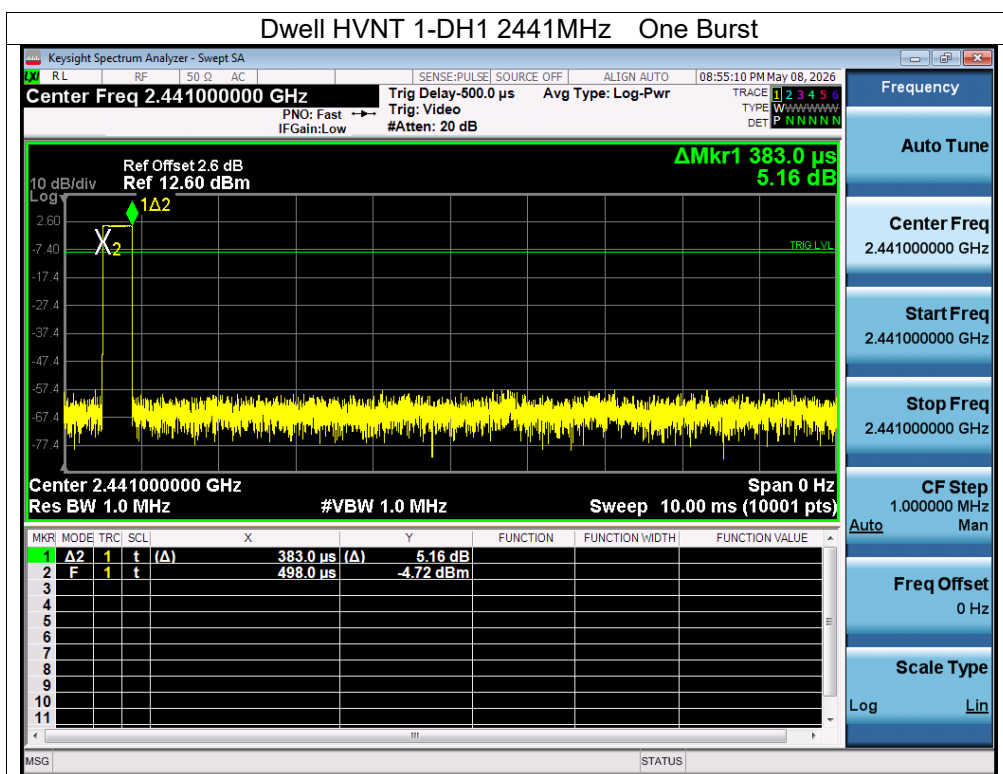


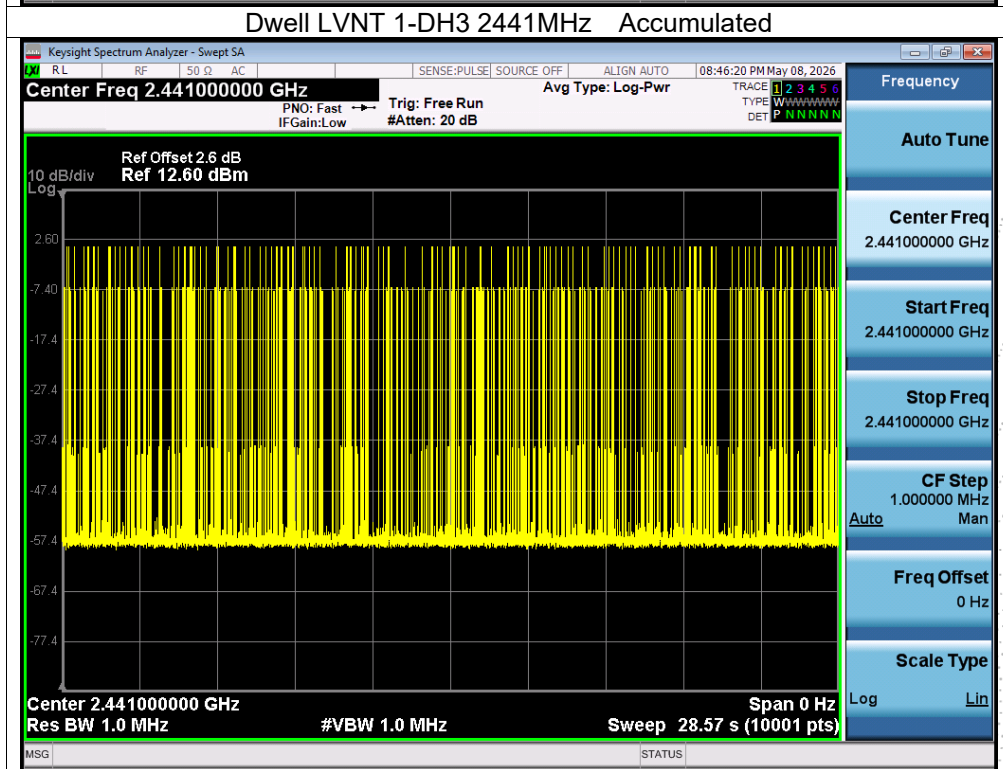
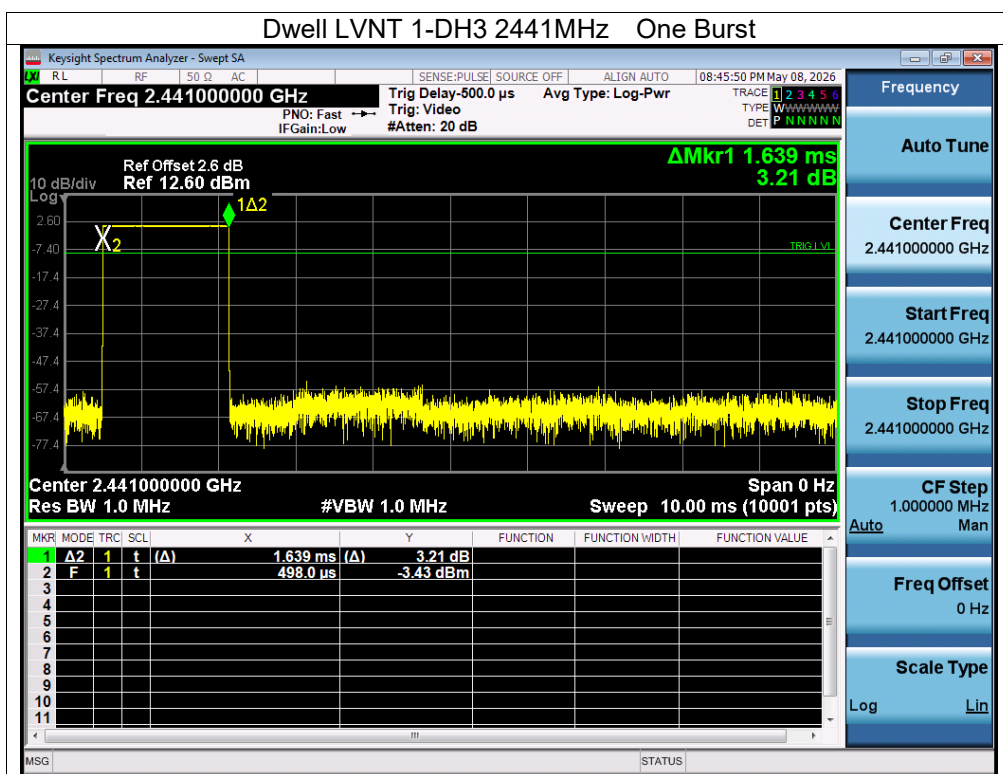




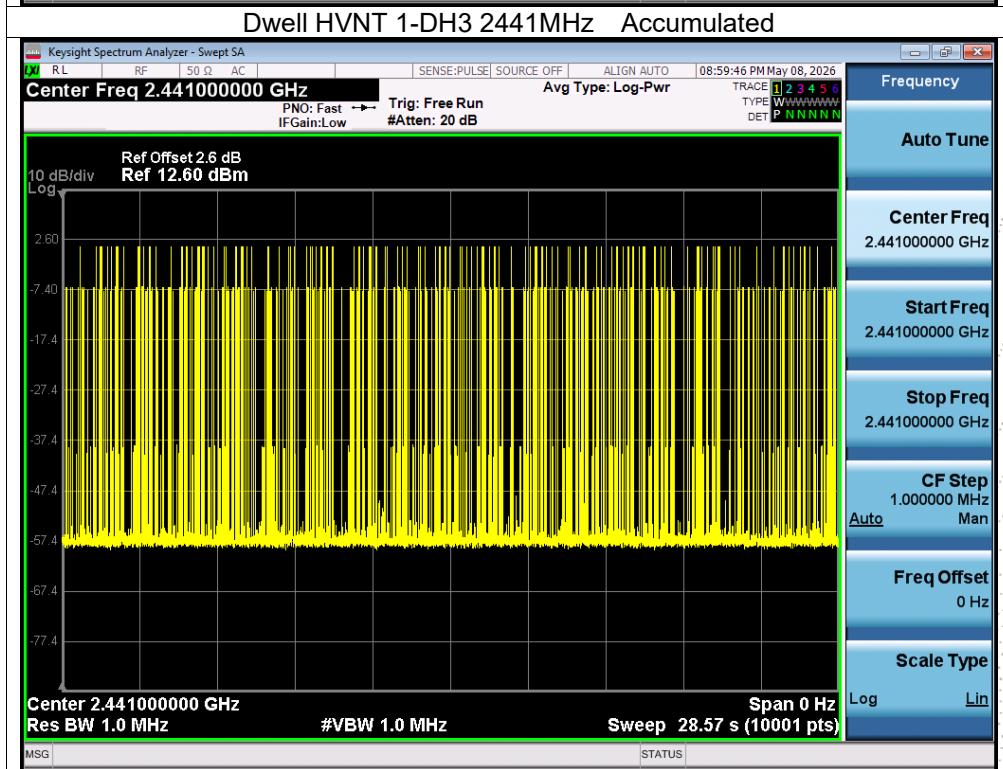
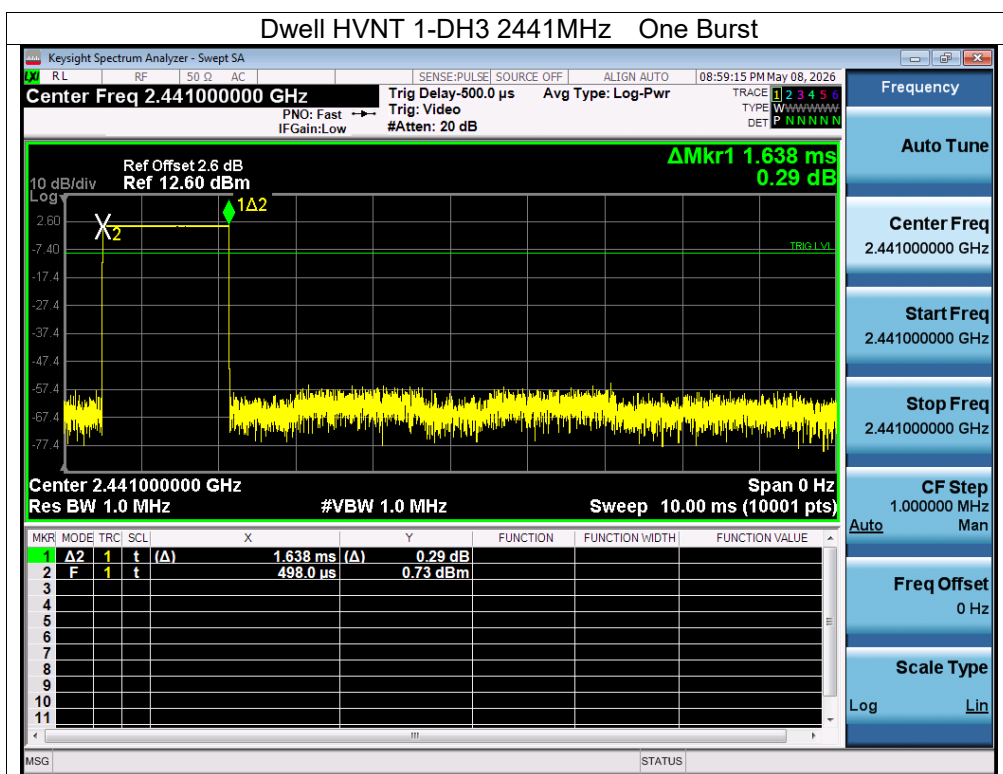


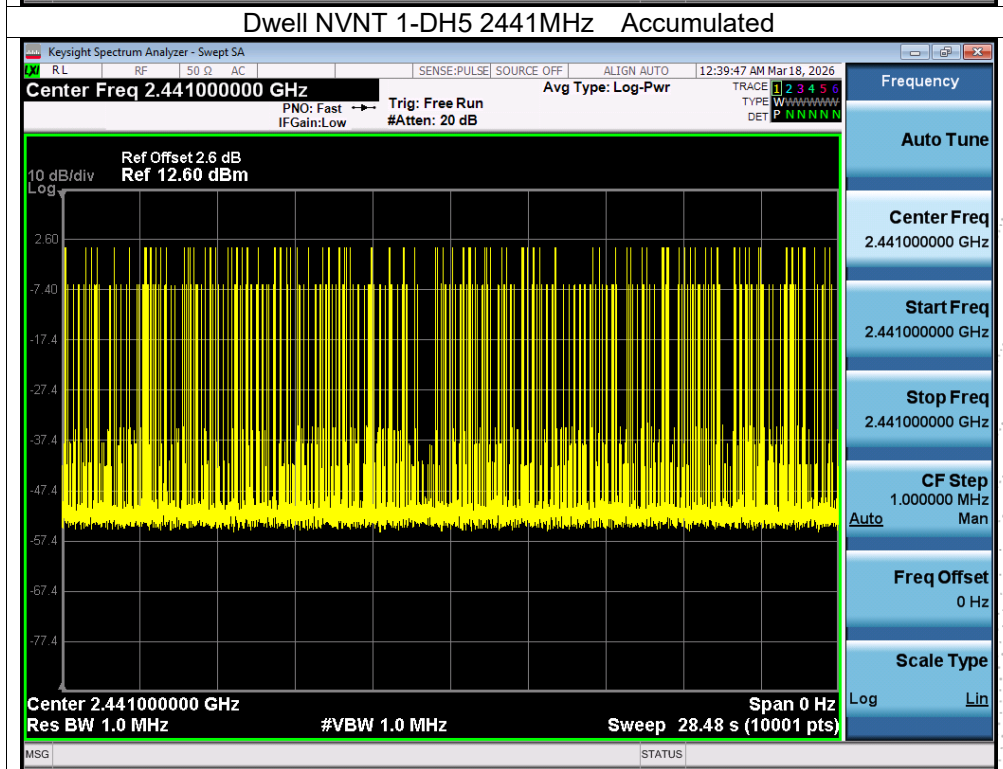
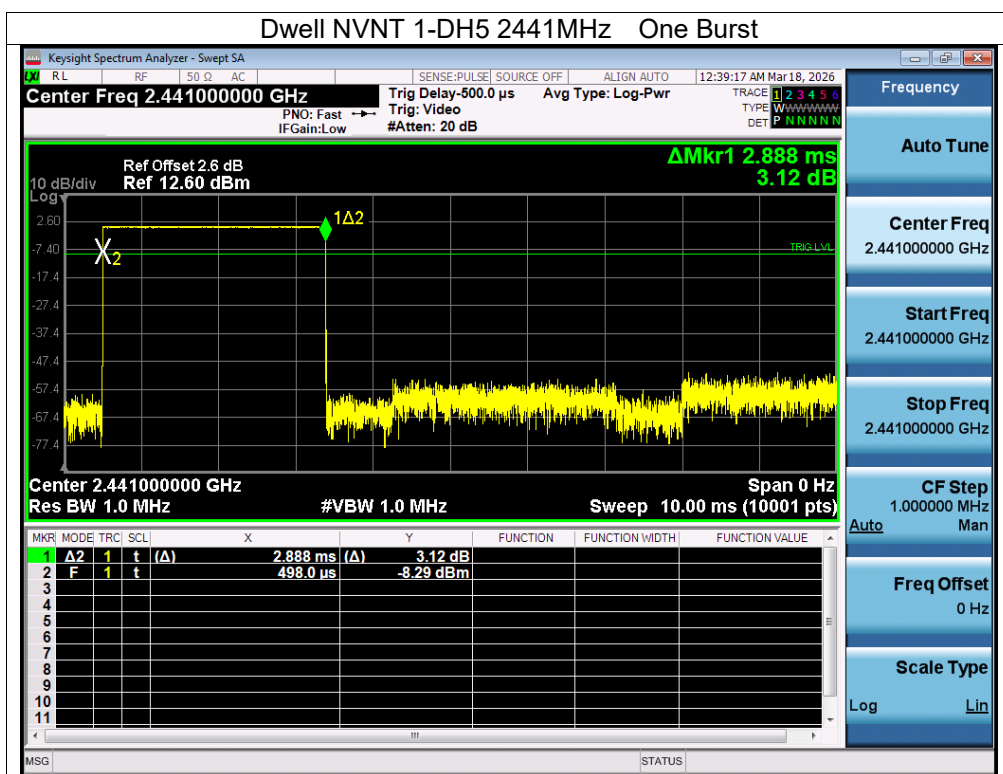


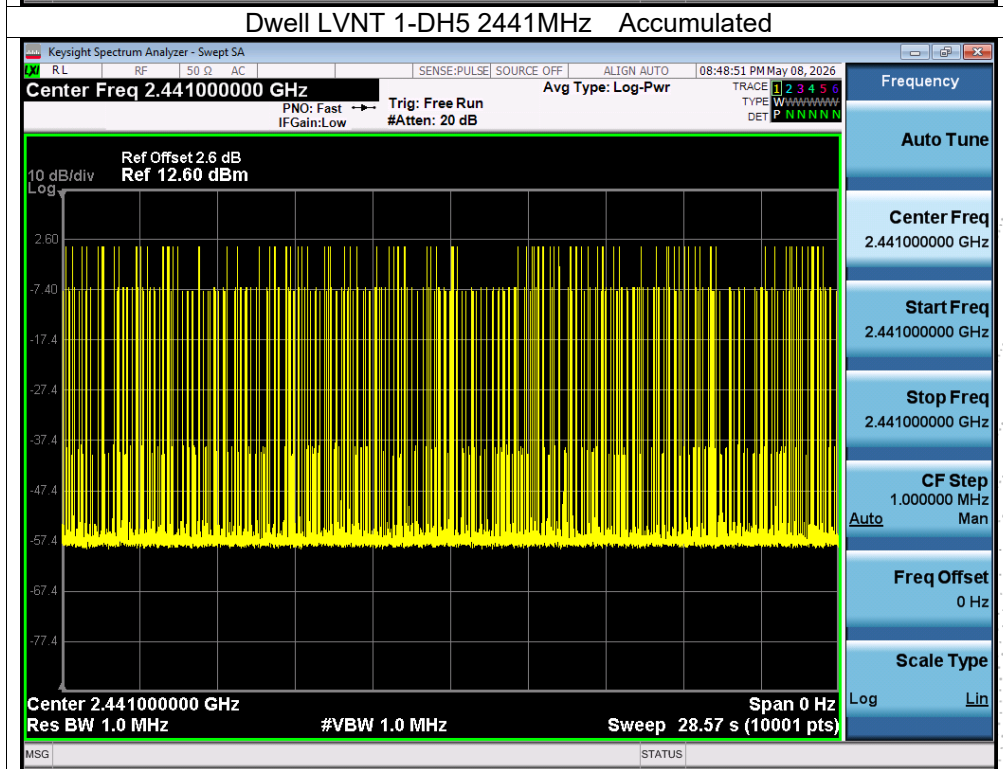
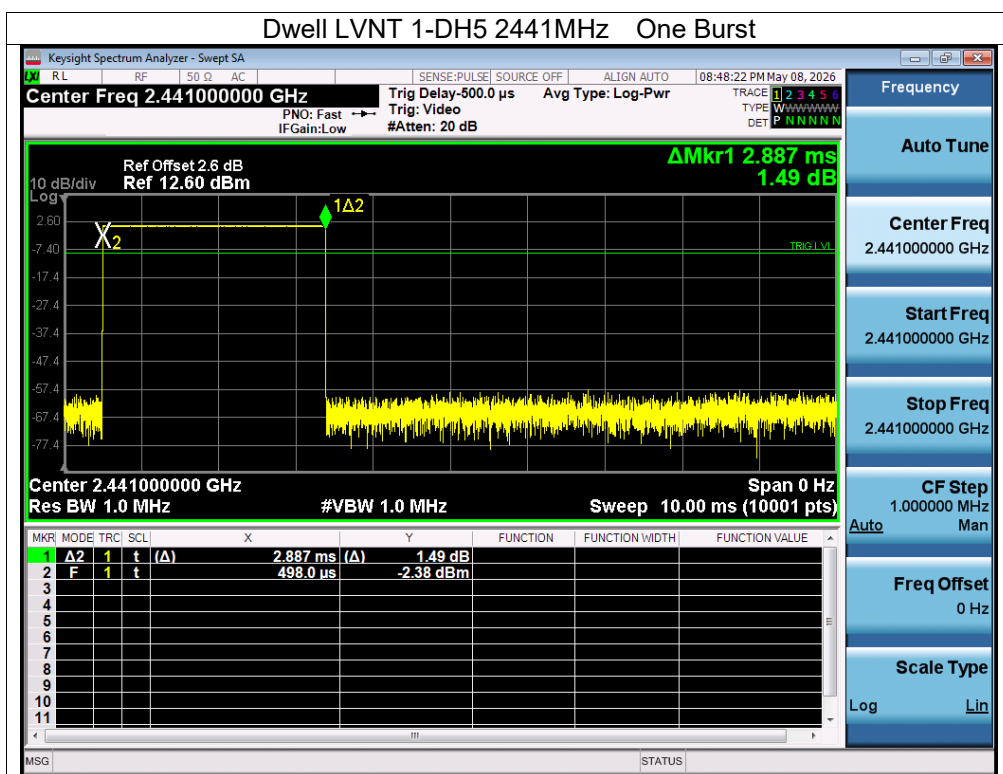


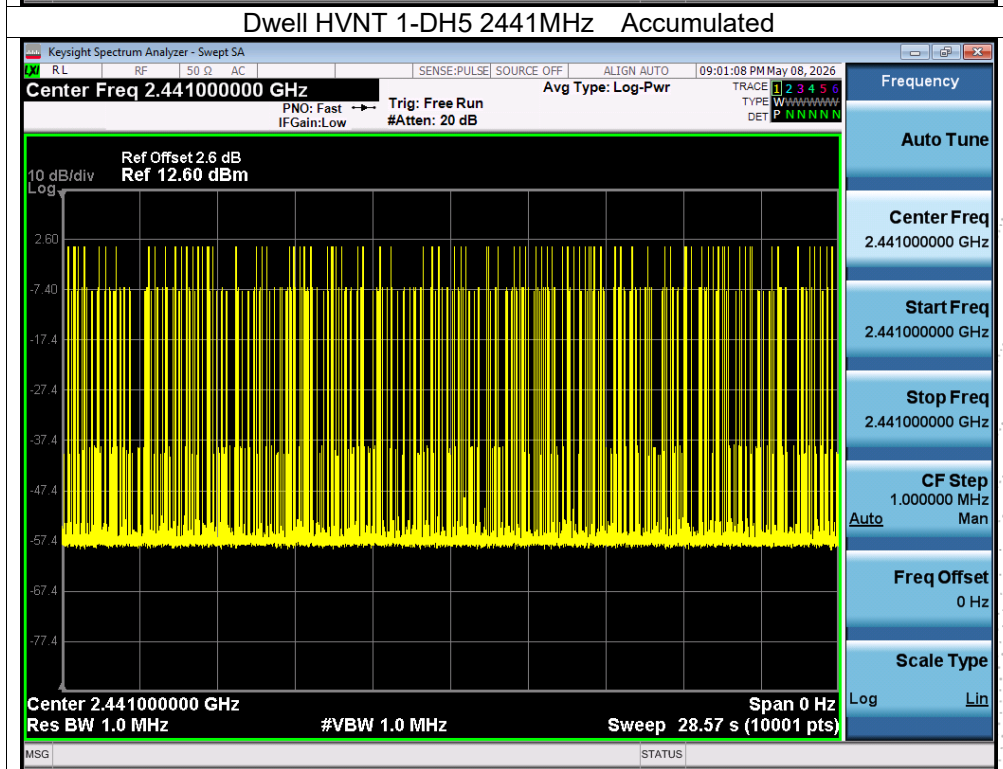
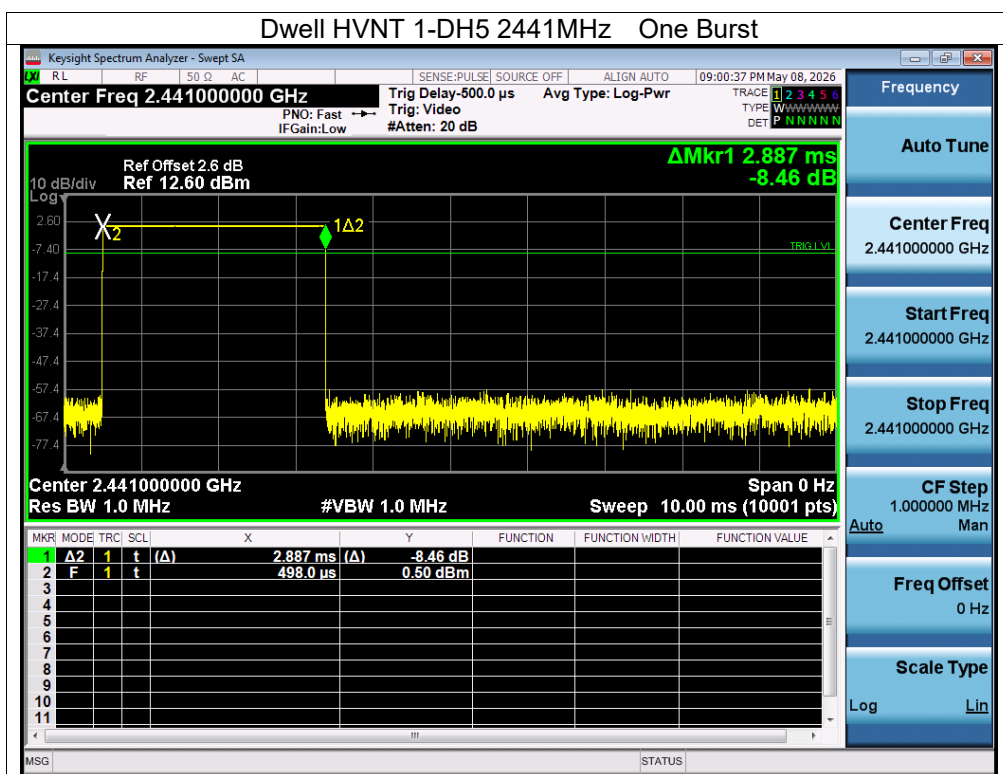


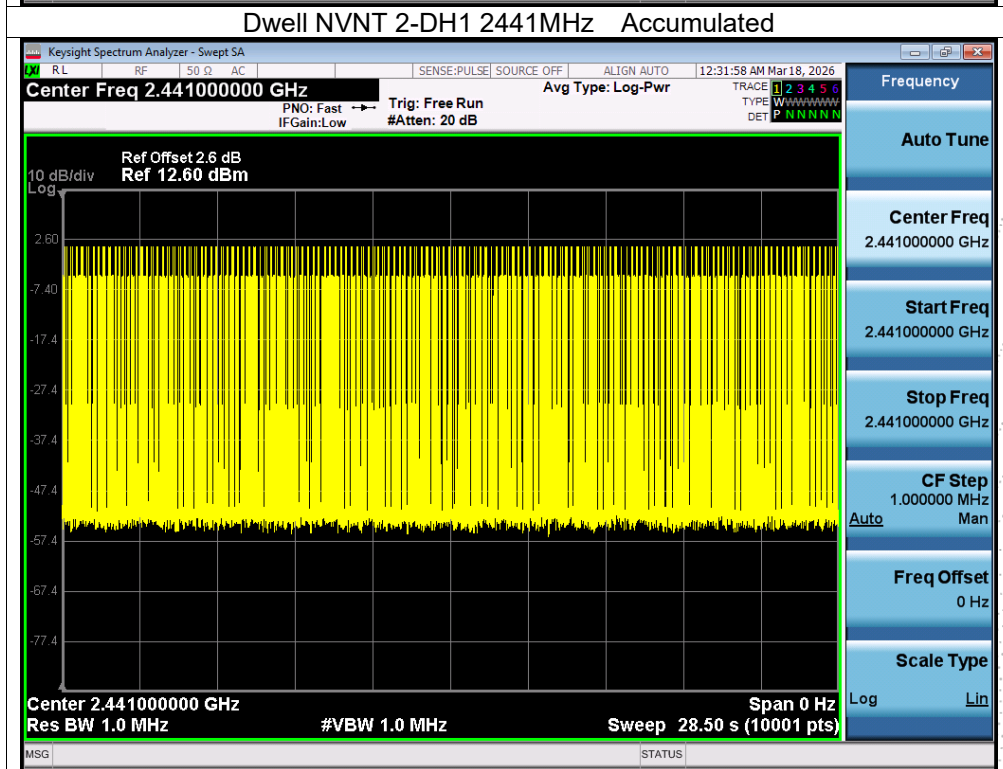
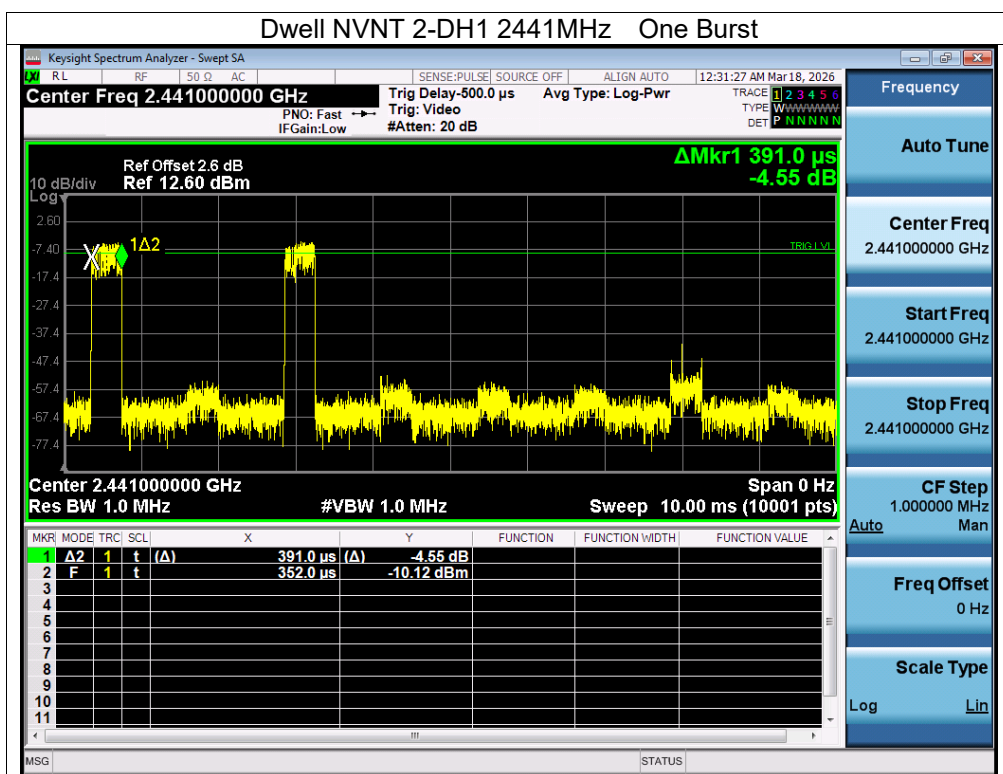
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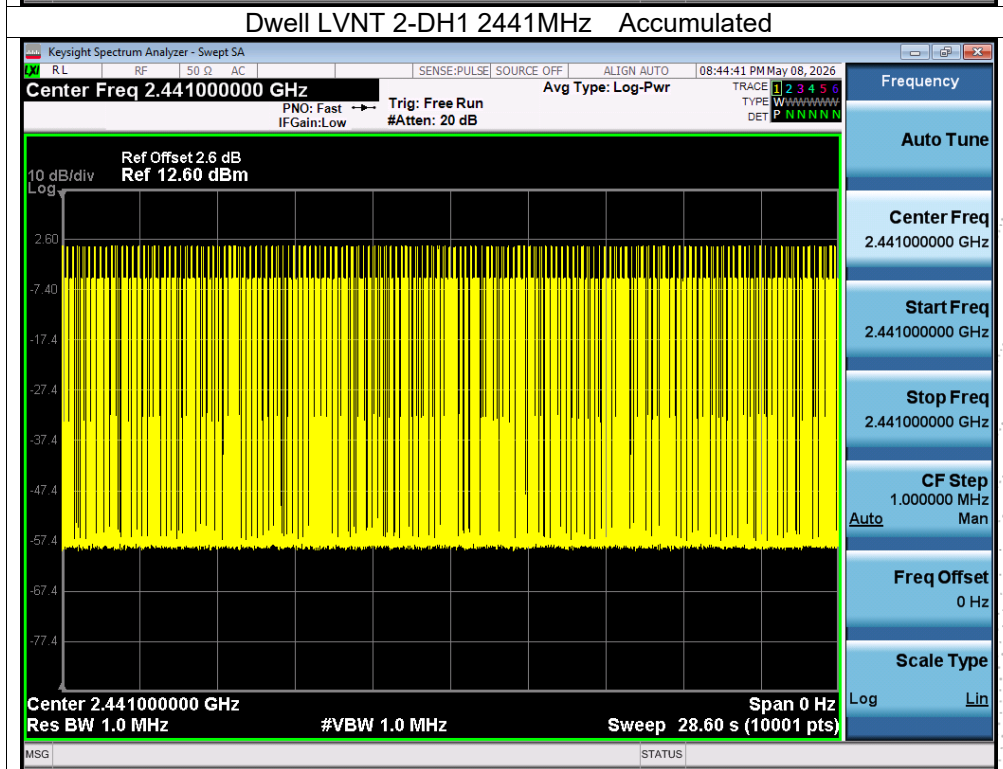
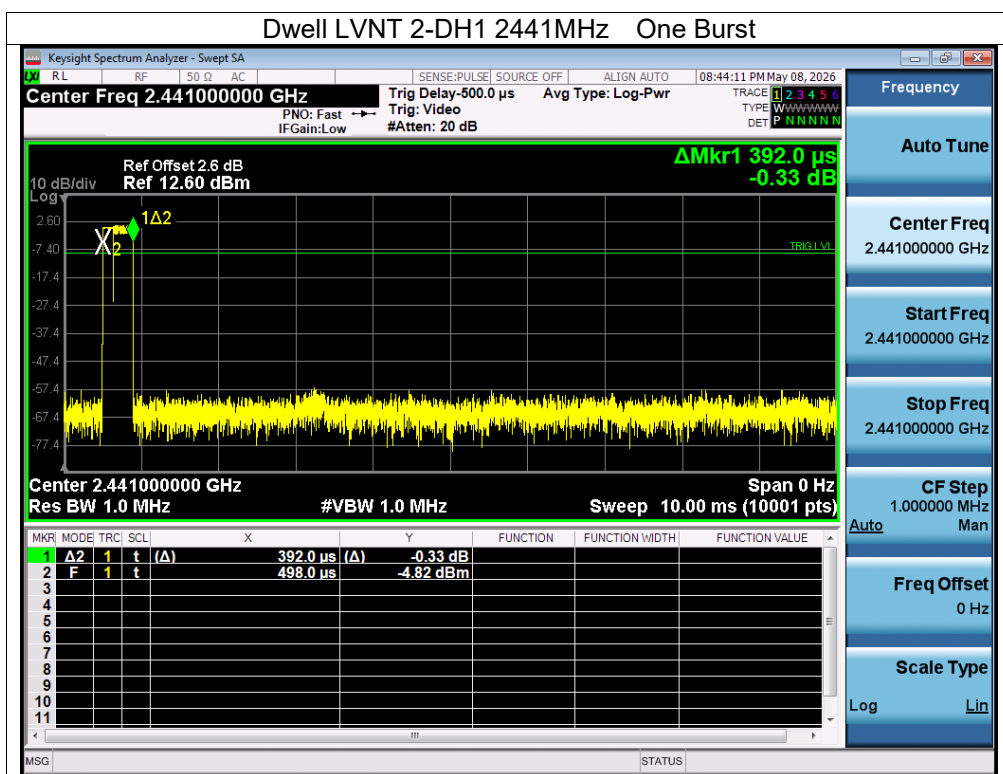




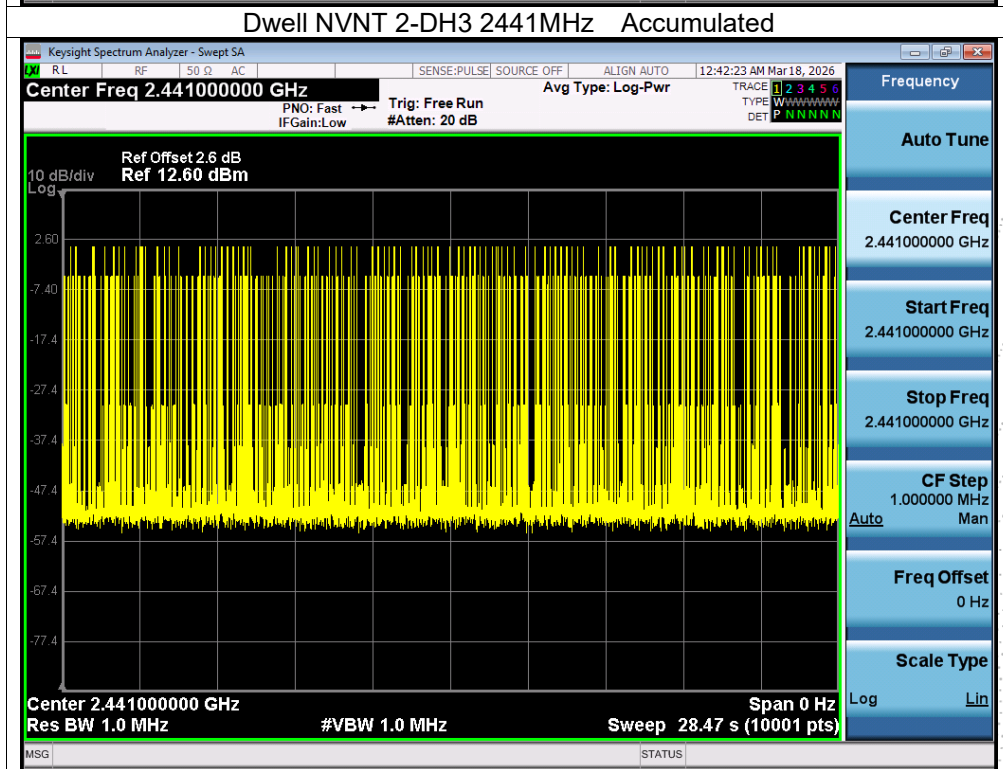
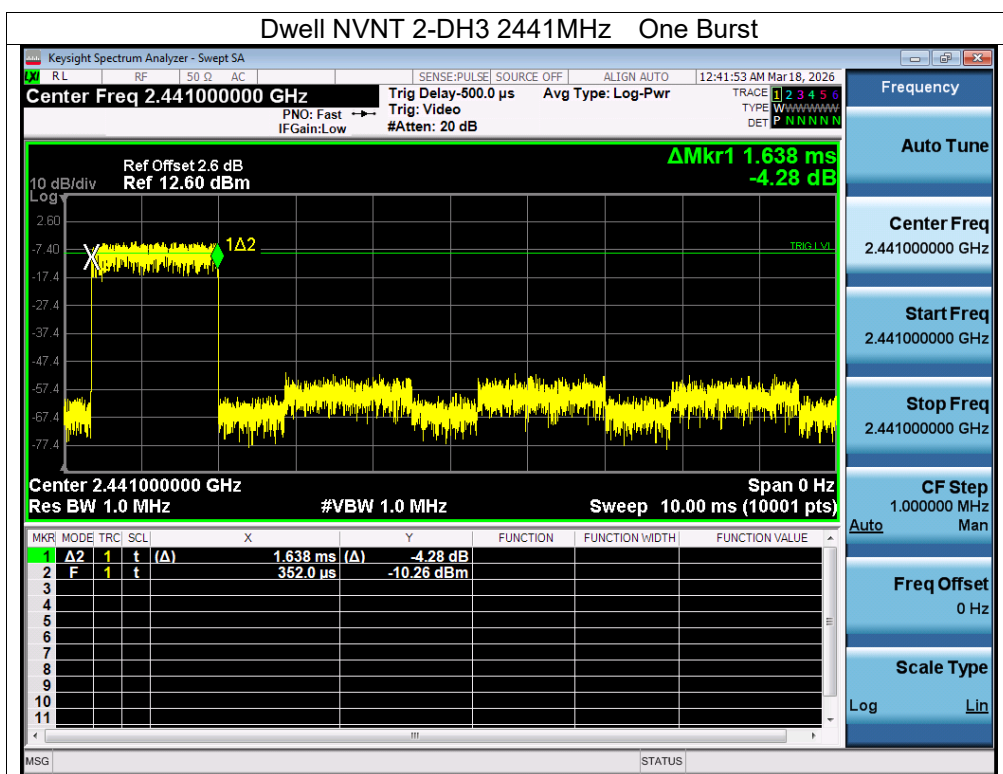


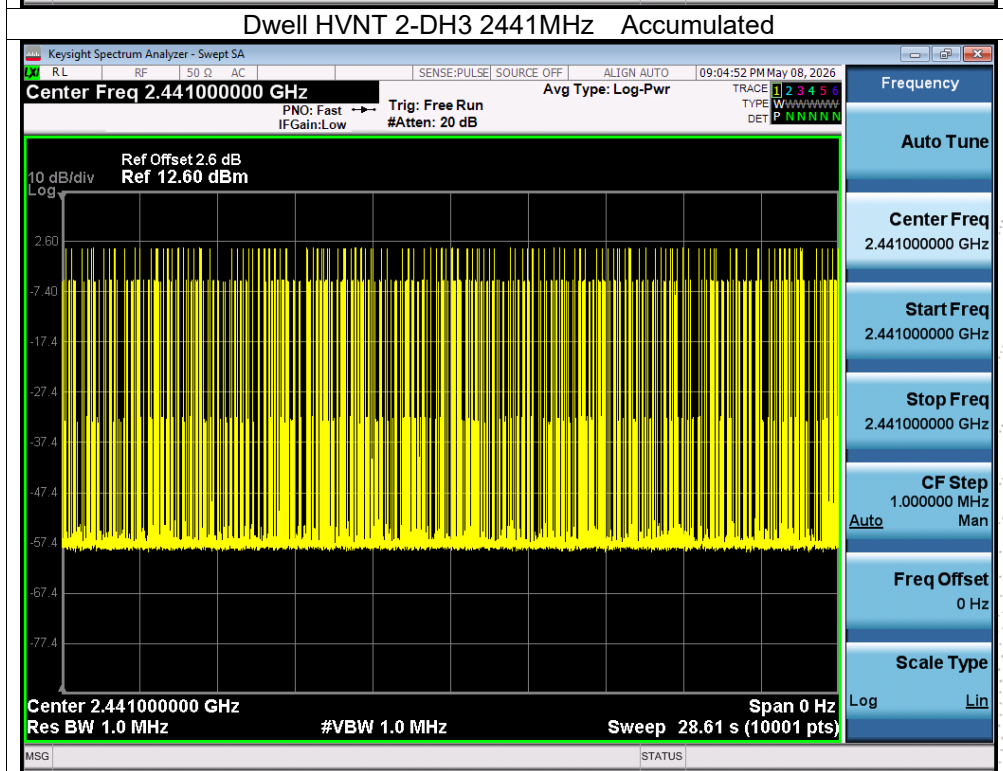
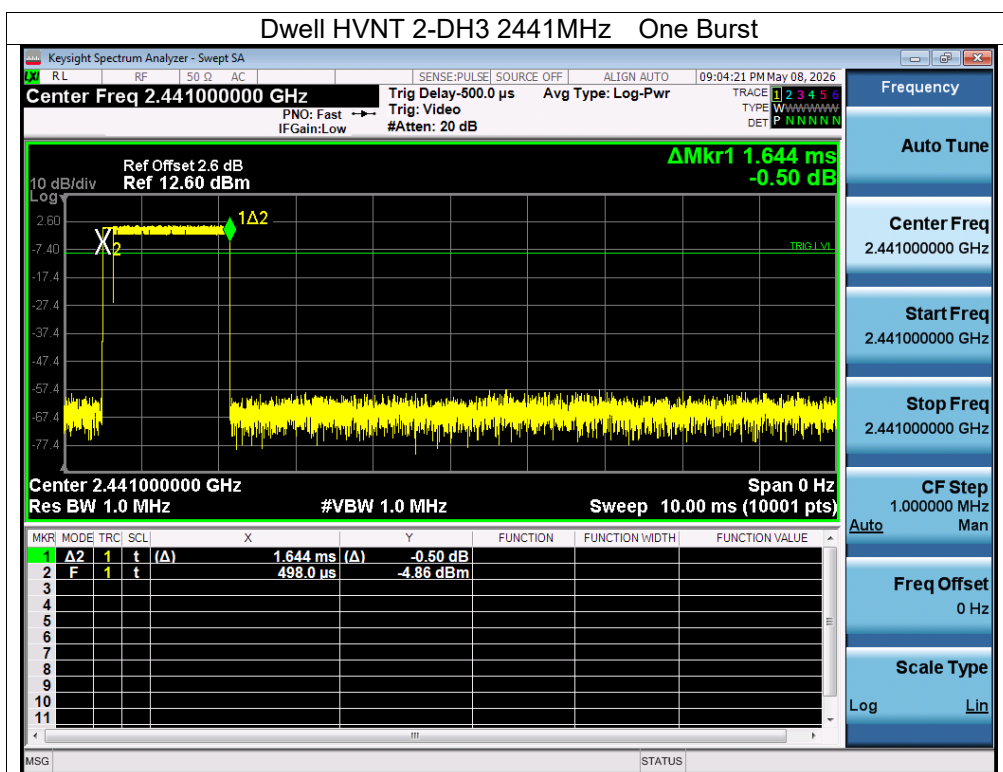


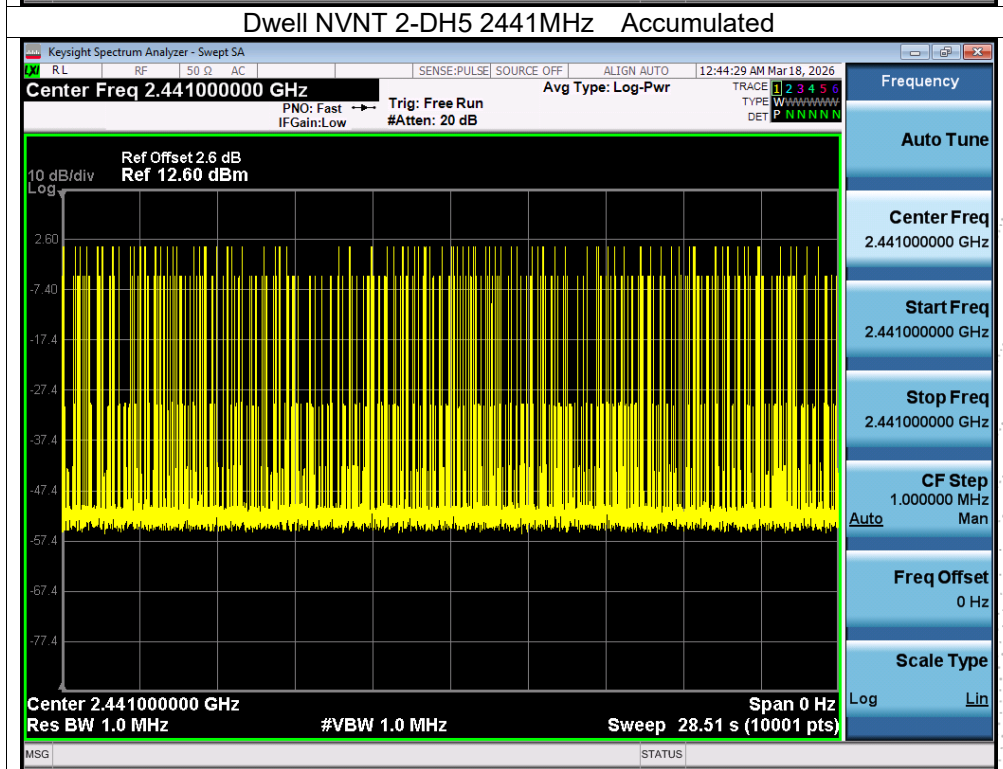
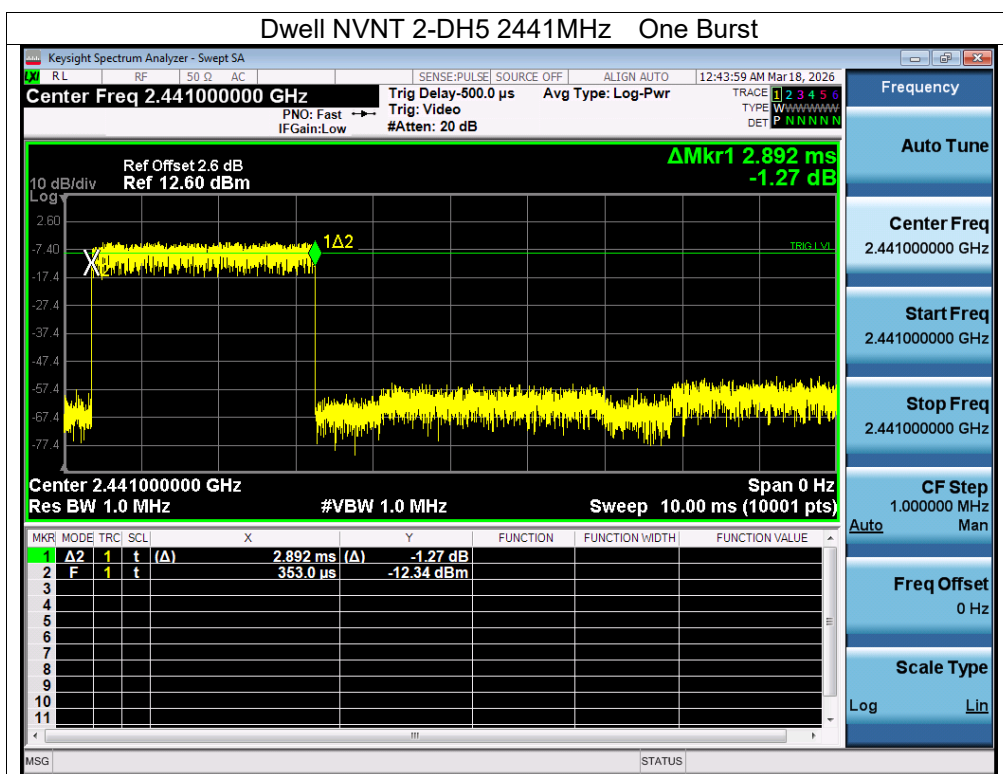


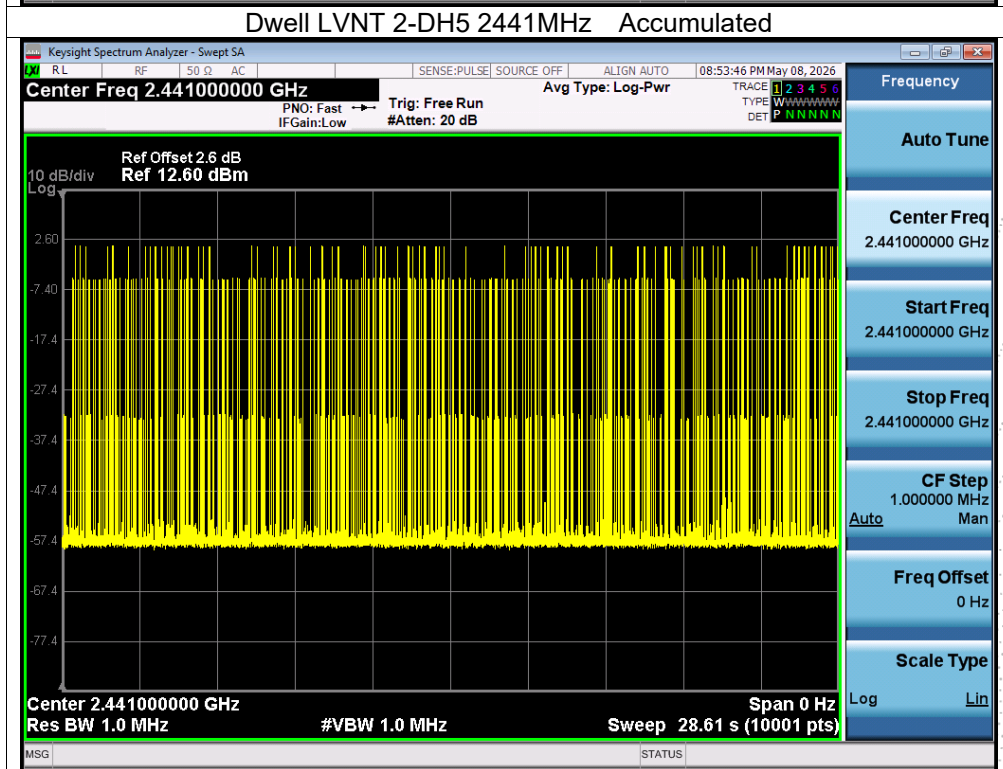
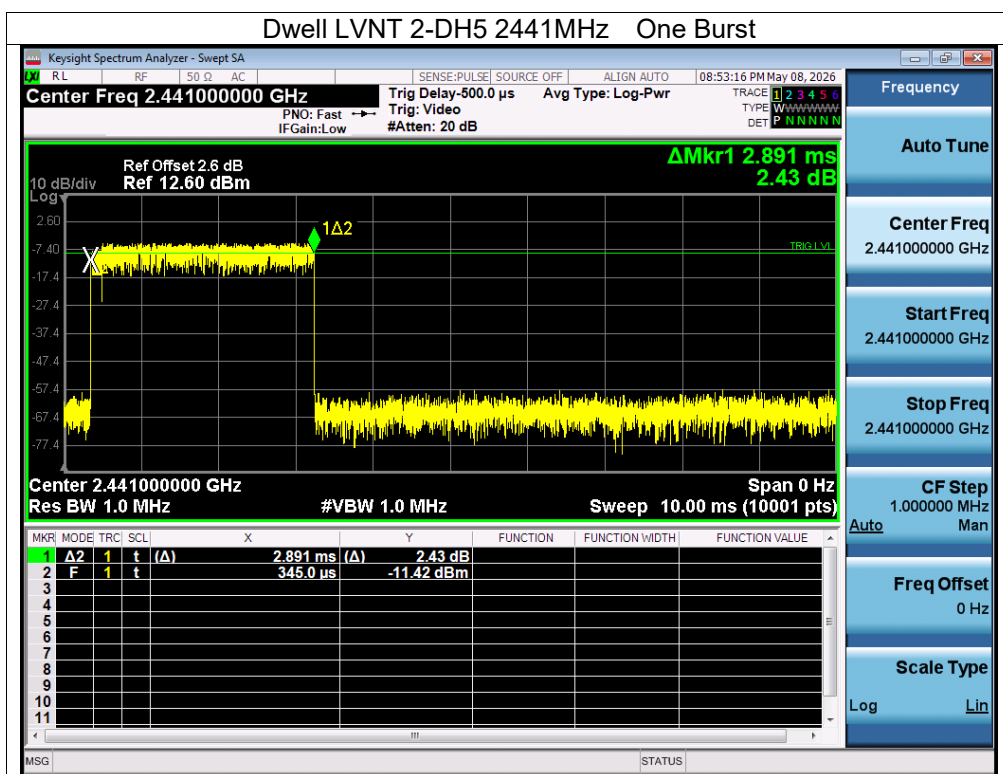


CO., LTD





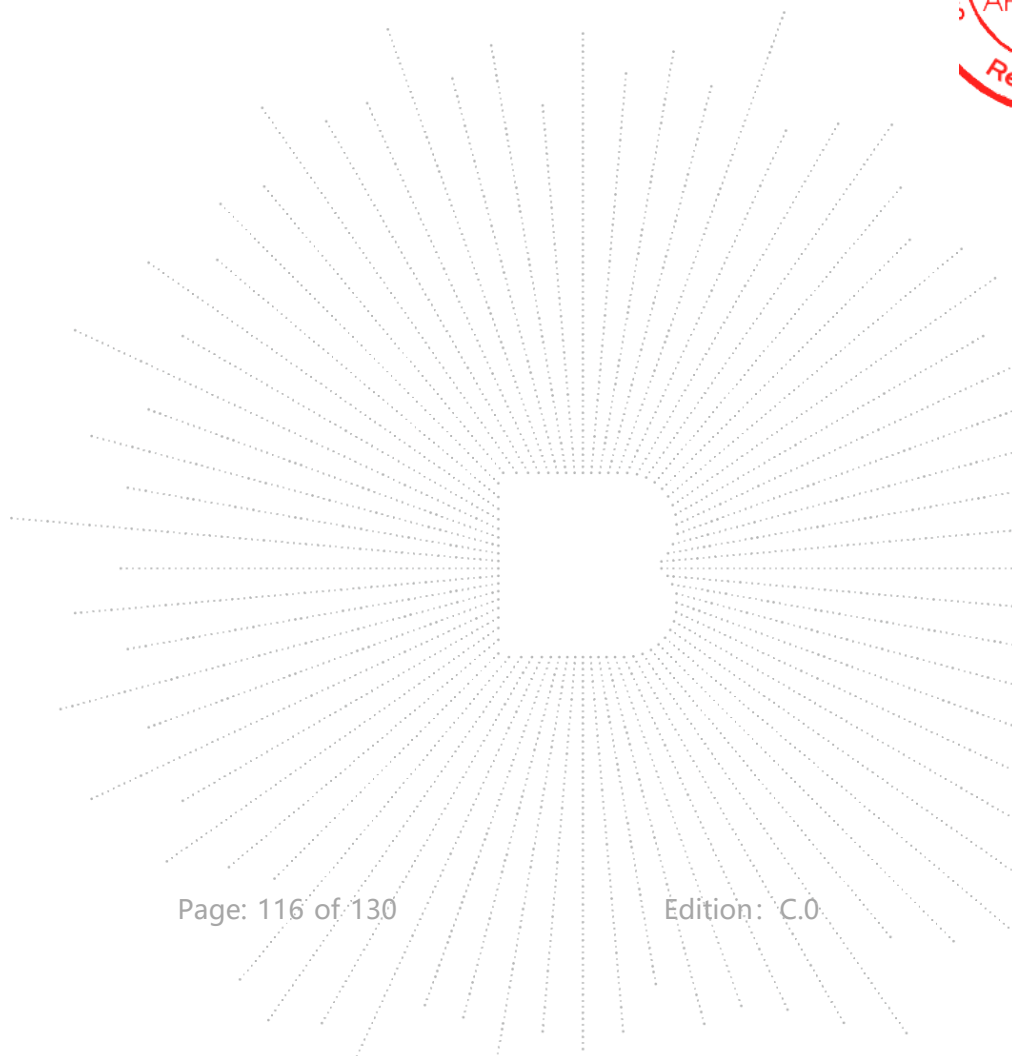




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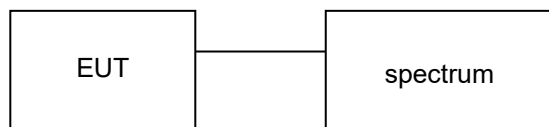
13. Carrier Sense

Not applicable, Since the EUT belong to Bluetooth



14. Imitation Of Collateral Emission Of Receiver Measurement

14.1 Block Diagram Of Test Setup



14.2 Limit

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

14.3 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

14.4 Test Procedure

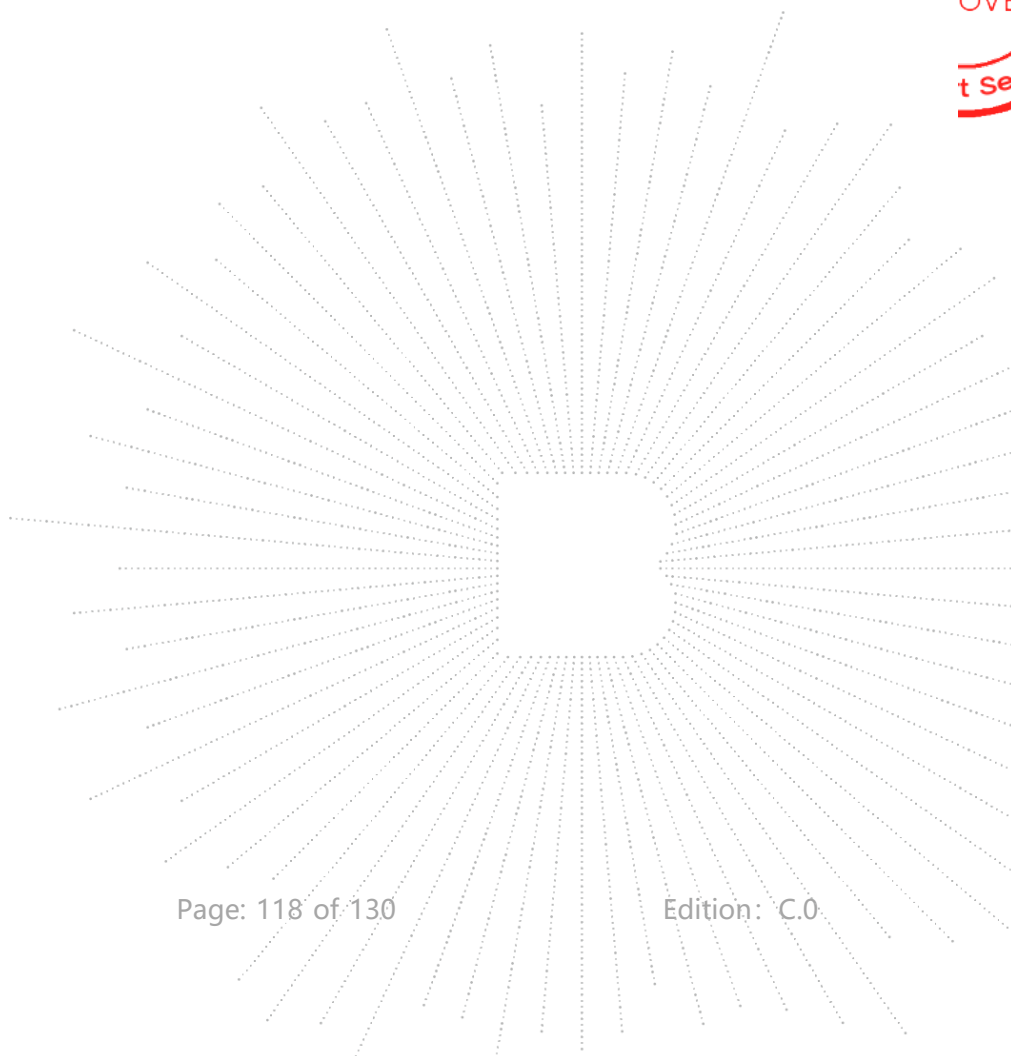
- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz(above 1GHz emissions)/ AT: 6dB / Ref: -20dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak/ Trace mode: Max hold
- SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

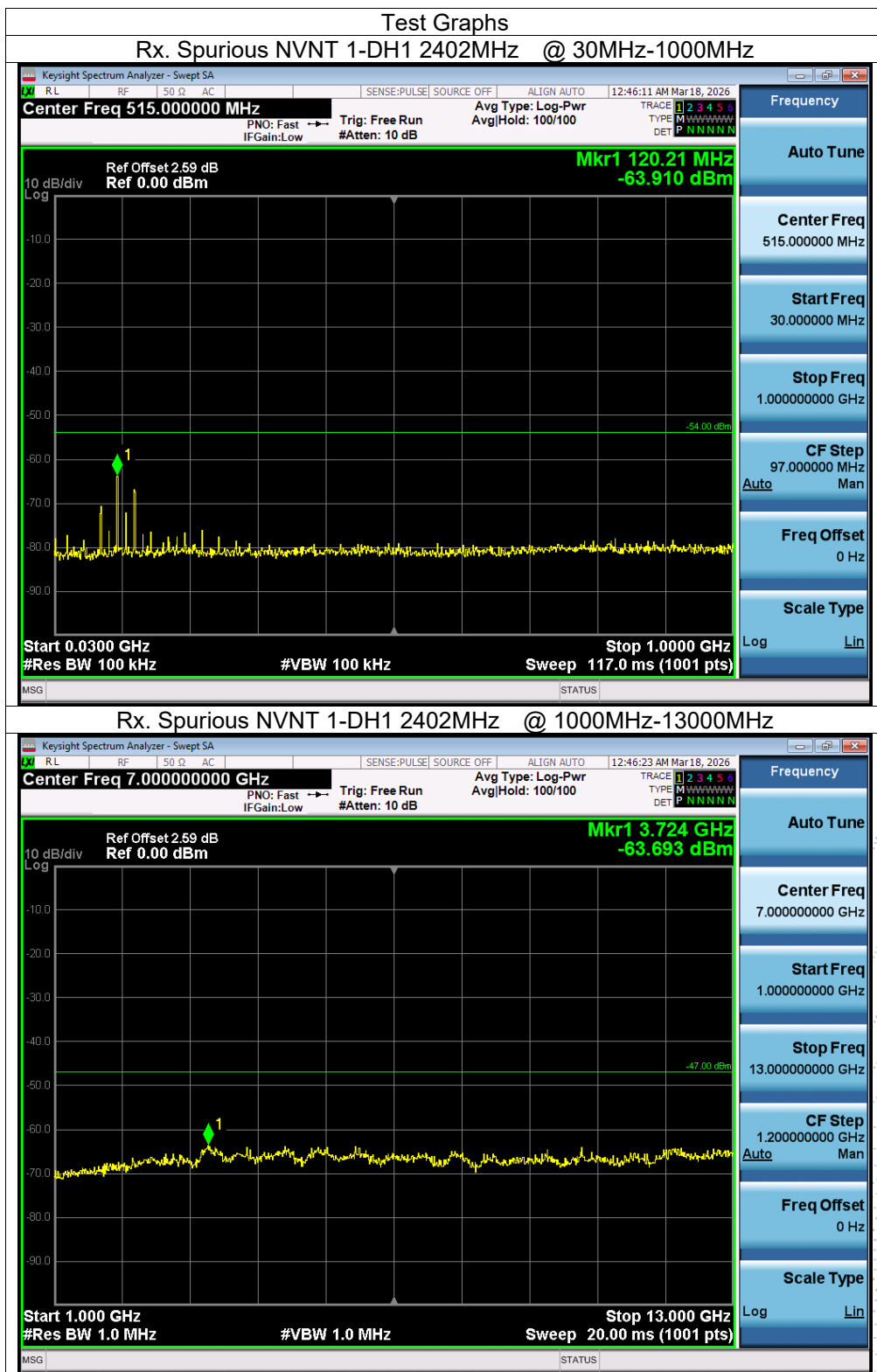
14.5 Test Result

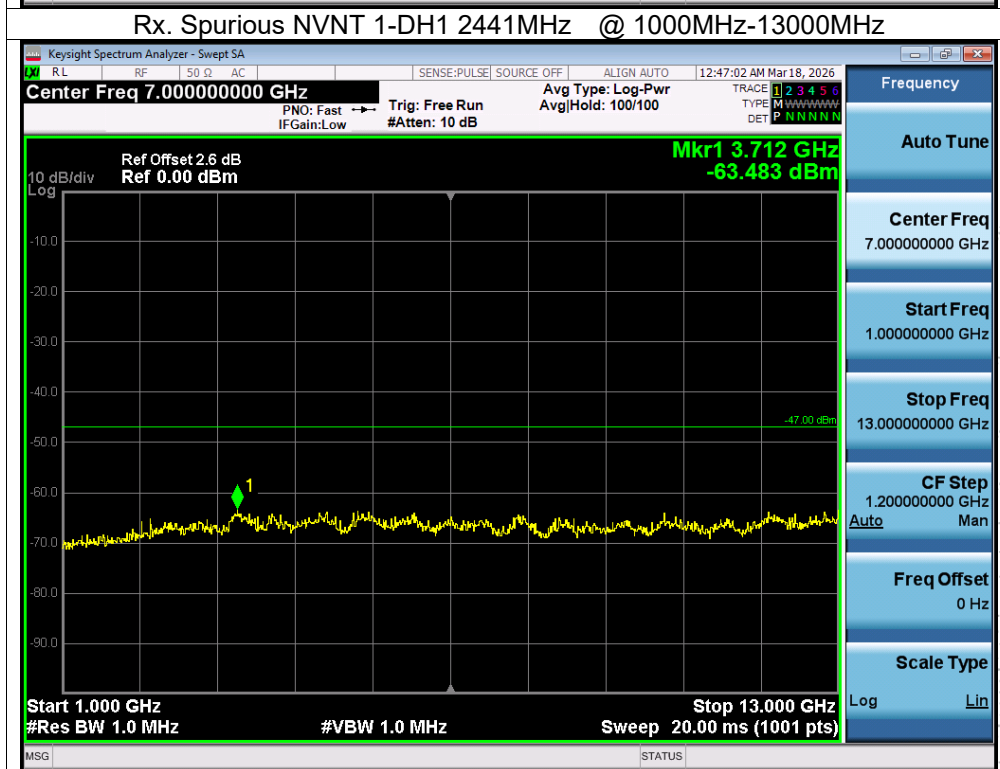
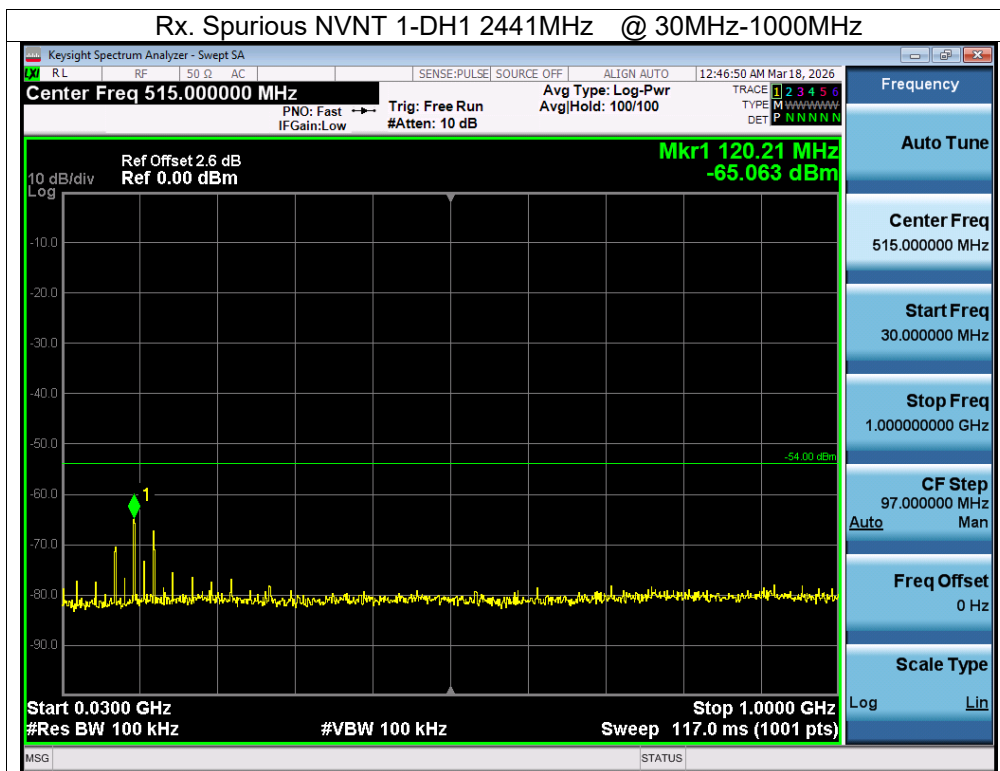
Temperature:	26°C		
Humidity:	54 % RH	Test Voltage	DC 3.7V/3.33V/4.07V
Condition:	NVNT/ LVNT/ HVNT		

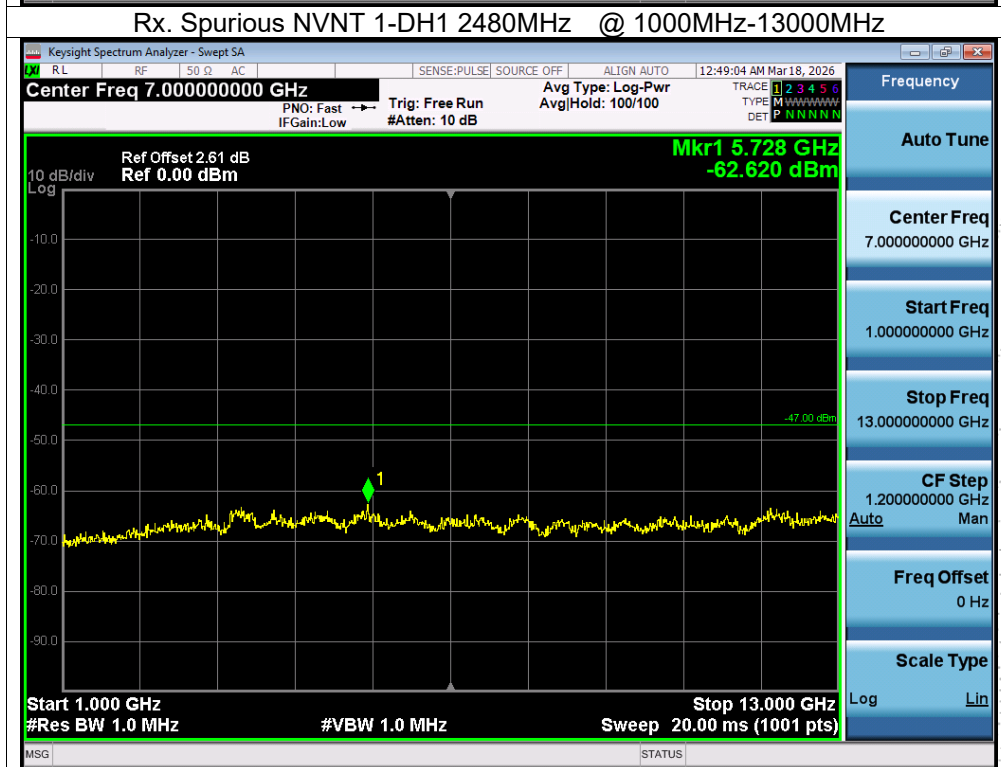
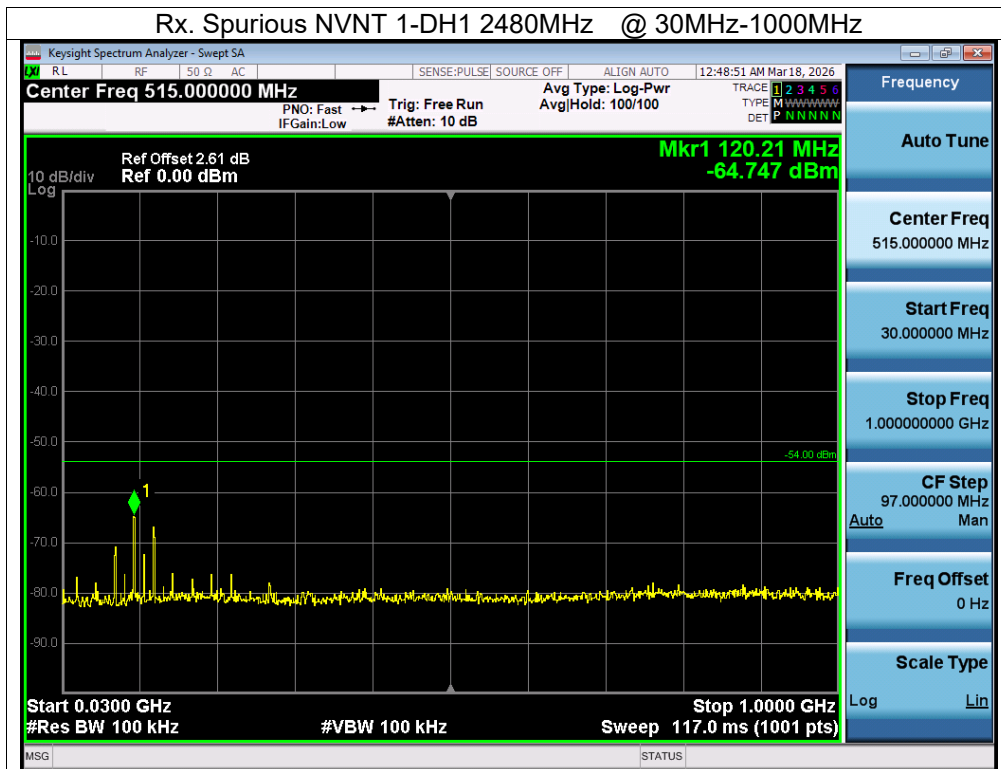
Condition	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	30-1000	120.21	-63.91	-54	Pass
NVNT	1-DH1	2402	1000-13000	3724	-63.69	-47	Pass
NVNT	1-DH1	2441	30-1000	120.21	-65.06	-54	Pass
NVNT	1-DH1	2441	1000-13000	3712	-63.48	-47	Pass
NVNT	1-DH1	2480	30-1000	120.21	-64.75	-54	Pass
NVNT	1-DH1	2480	1000-13000	5728	-62.62	-47	Pass
LVNT	1-DH1	2402	30-1000	535.37	-78.24	-54	Pass
LVNT	1-DH1	2402	1000-13000	12148	-63.19	-47	Pass
LVNT	1-DH1	2441	30-1000	804.06	-78.33	-54	Pass
LVNT	1-DH1	2441	1000-13000	5248	-61.81	-47	Pass
LVNT	1-DH1	2480	30-1000	858.38	-77.95	-54	Pass
LVNT	1-DH1	2480	1000-13000	11944	-63.3	-47	Pass
HVNT	1-DH1	2402	30-1000	978.66	-78.52	-54	Pass
HVNT	1-DH1	2402	1000-13000	12376	-63.16	-47	Pass
HVNT	1-DH1	2441	30-1000	835.1	-78.22	-54	Pass
HVNT	1-DH1	2441	1000-13000	5104	-62.97	-47	Pass
HVNT	1-DH1	2480	30-1000	894.27	-76.53	-54	Pass
HVNT	1-DH1	2480	1000-13000	3736	-63.52	-47	Pass

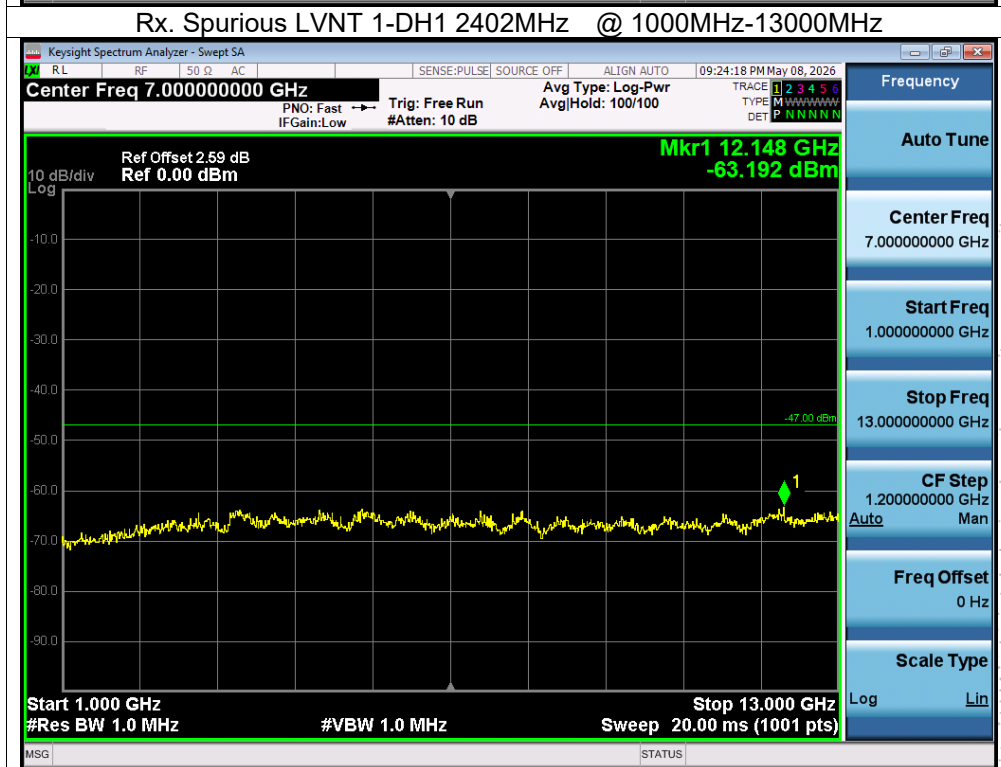
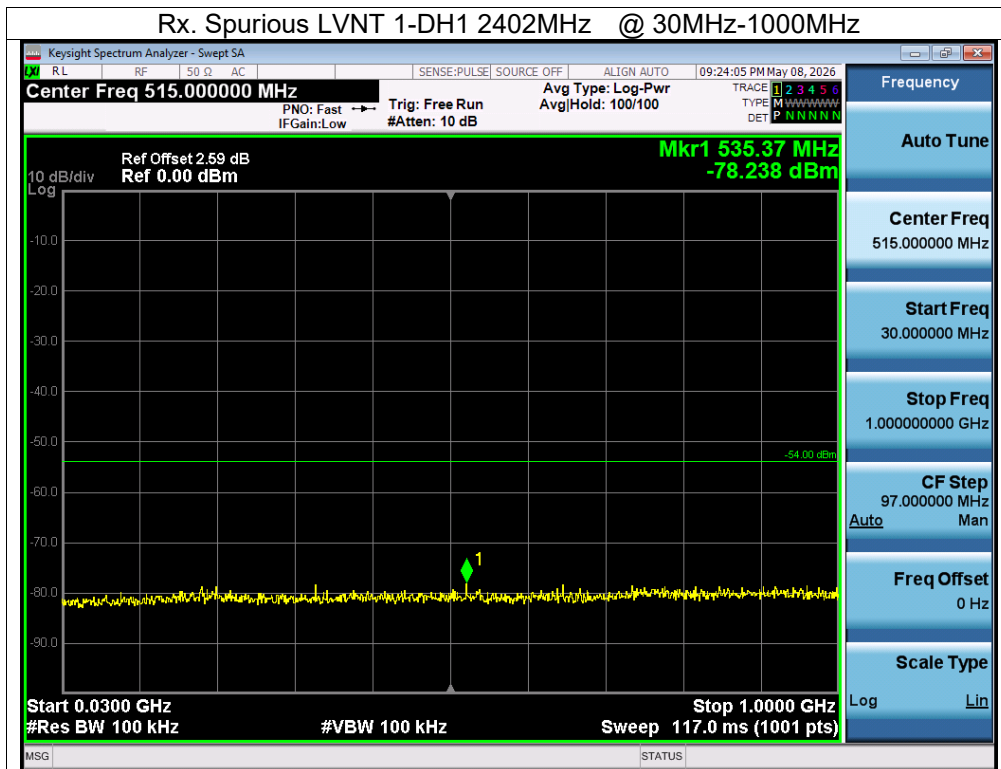
ECH
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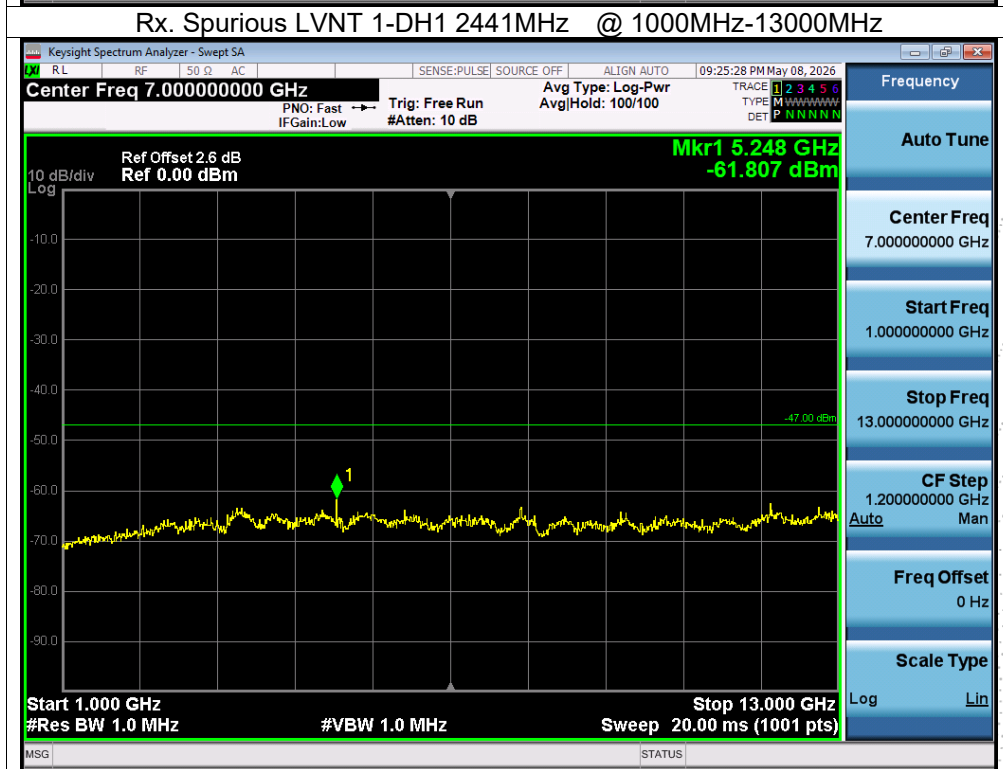
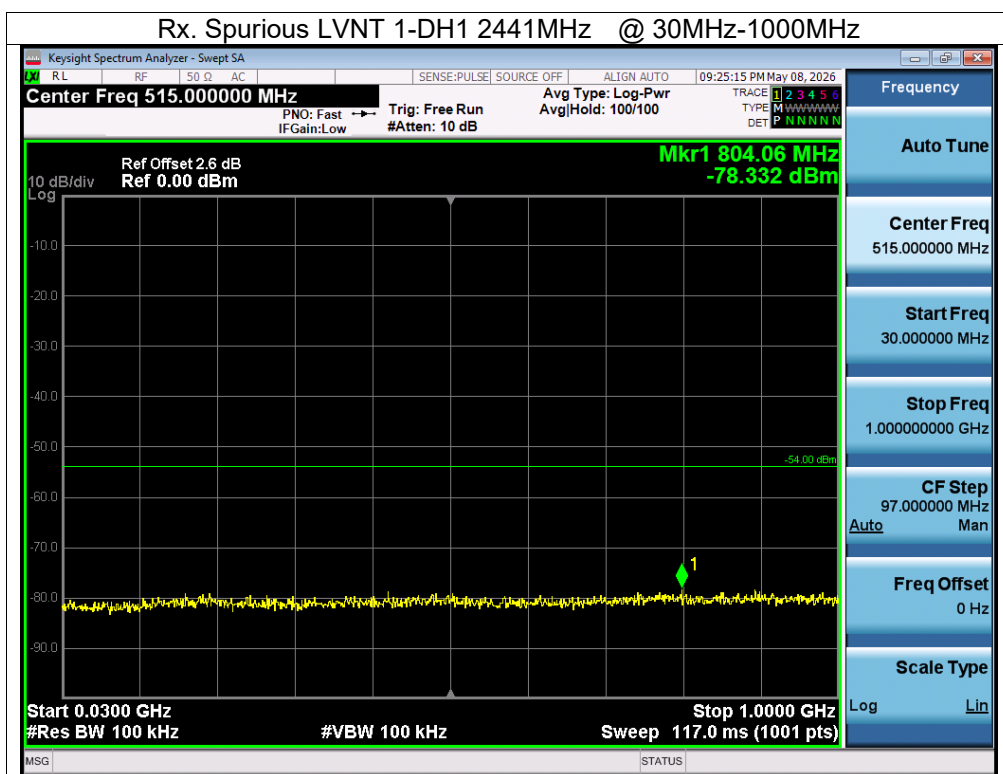


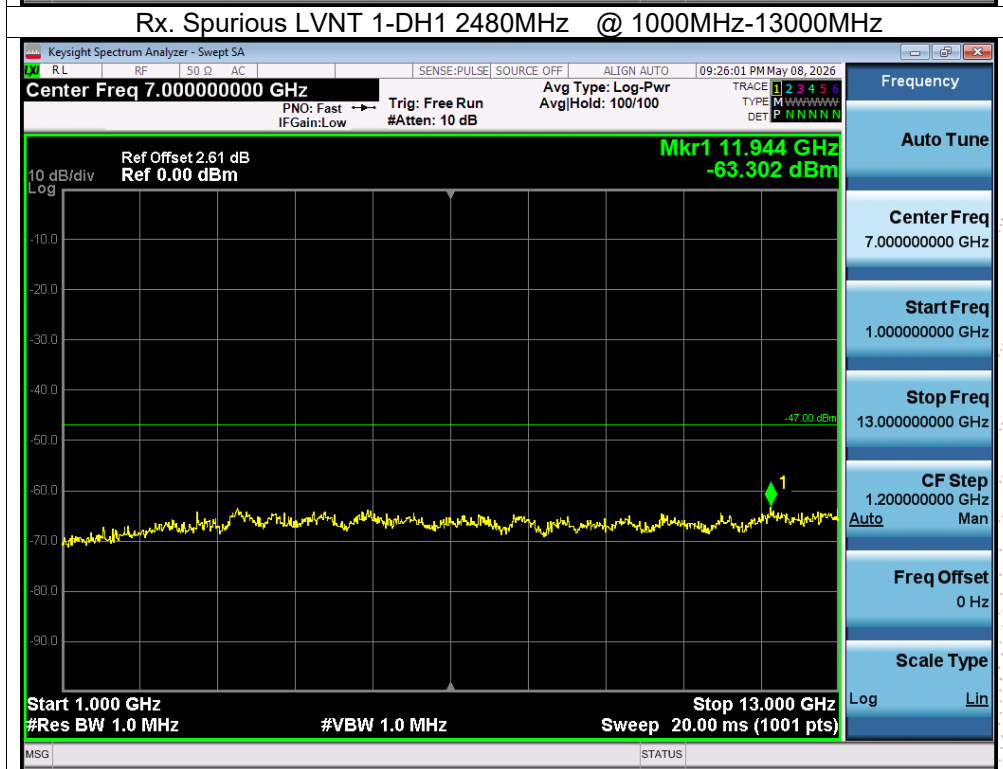
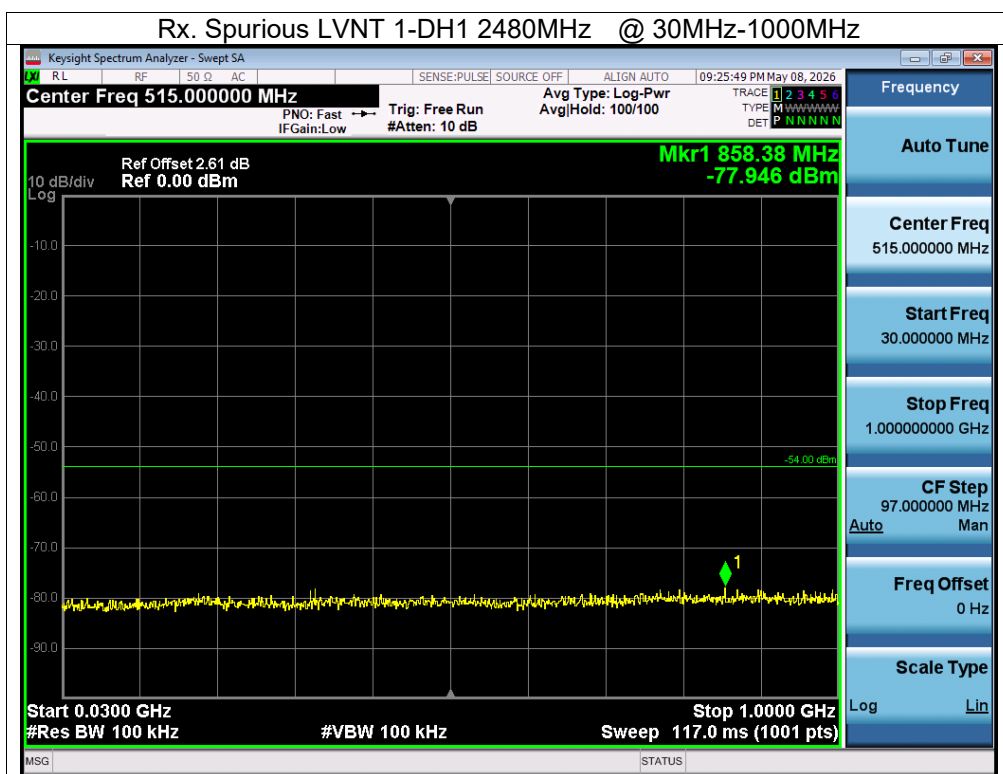


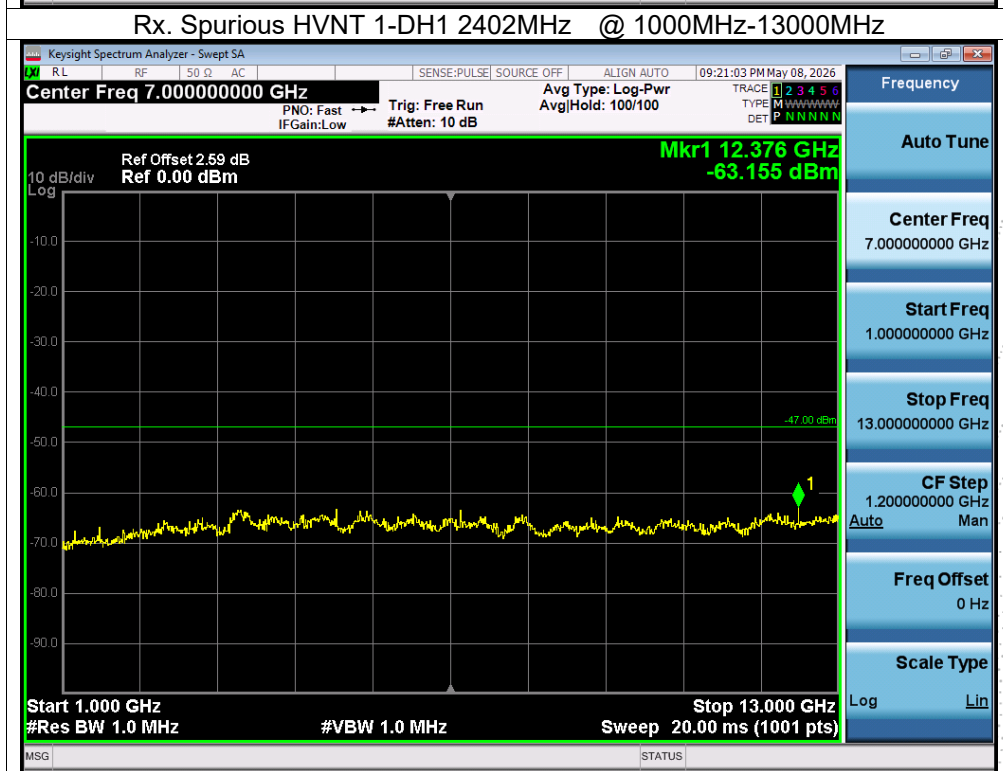
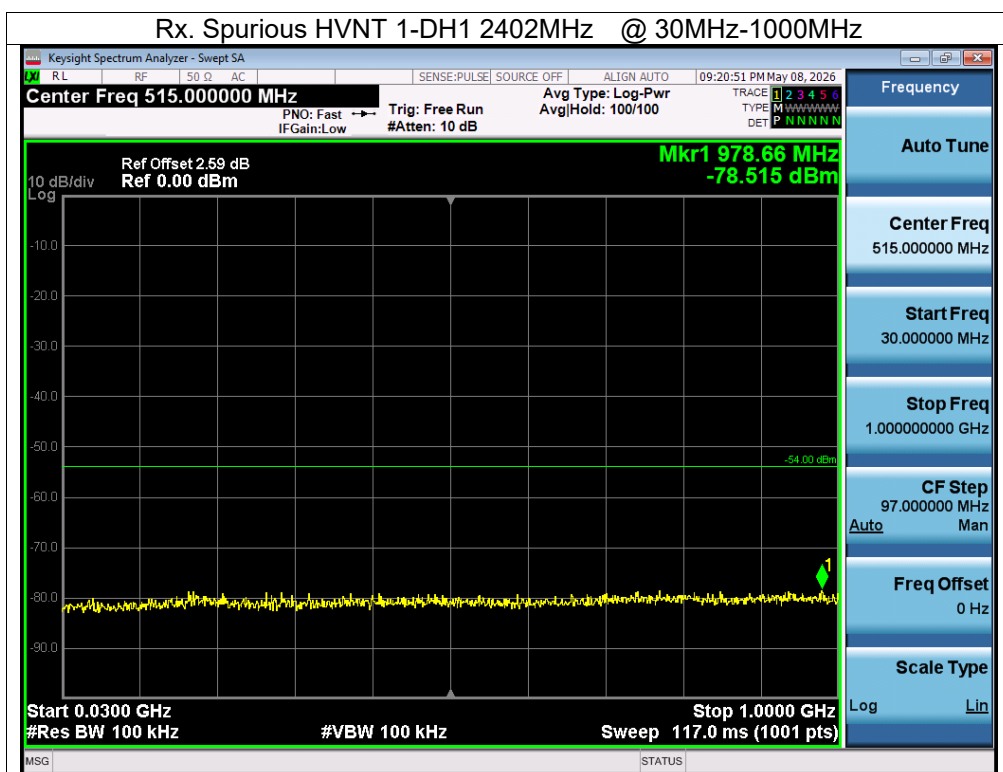


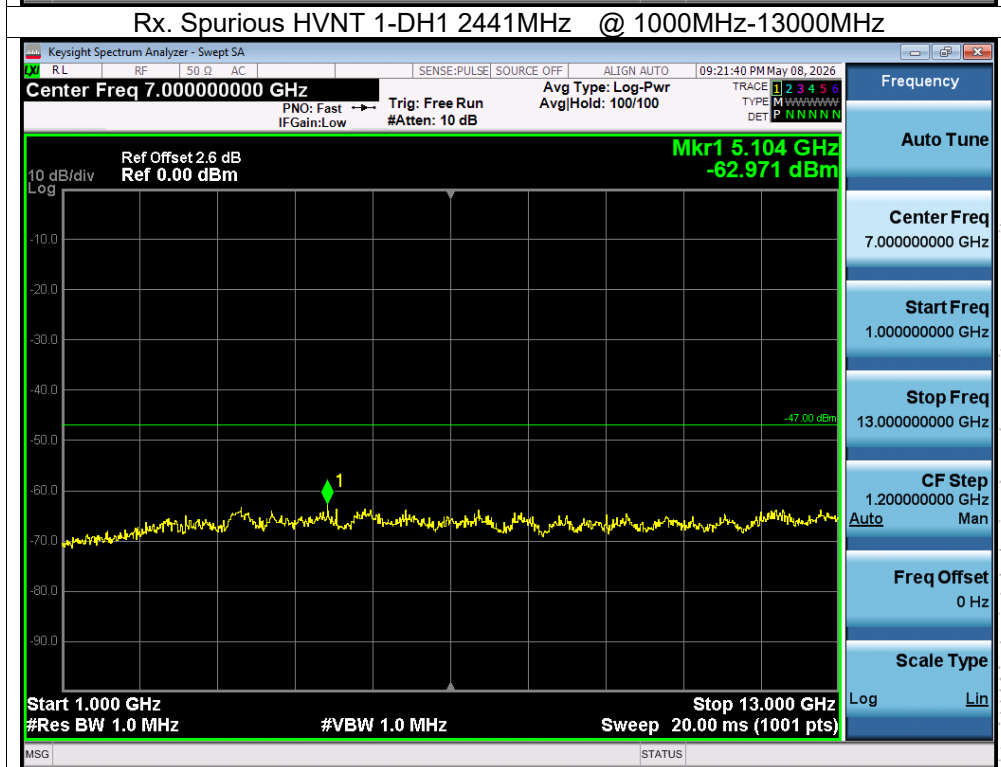
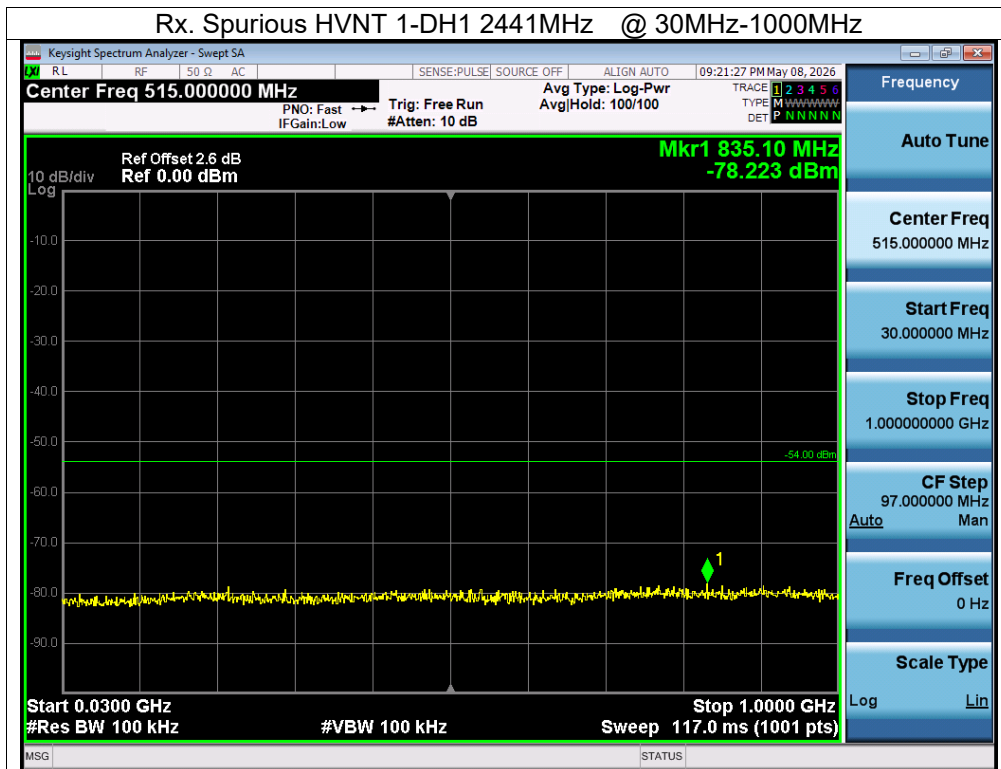


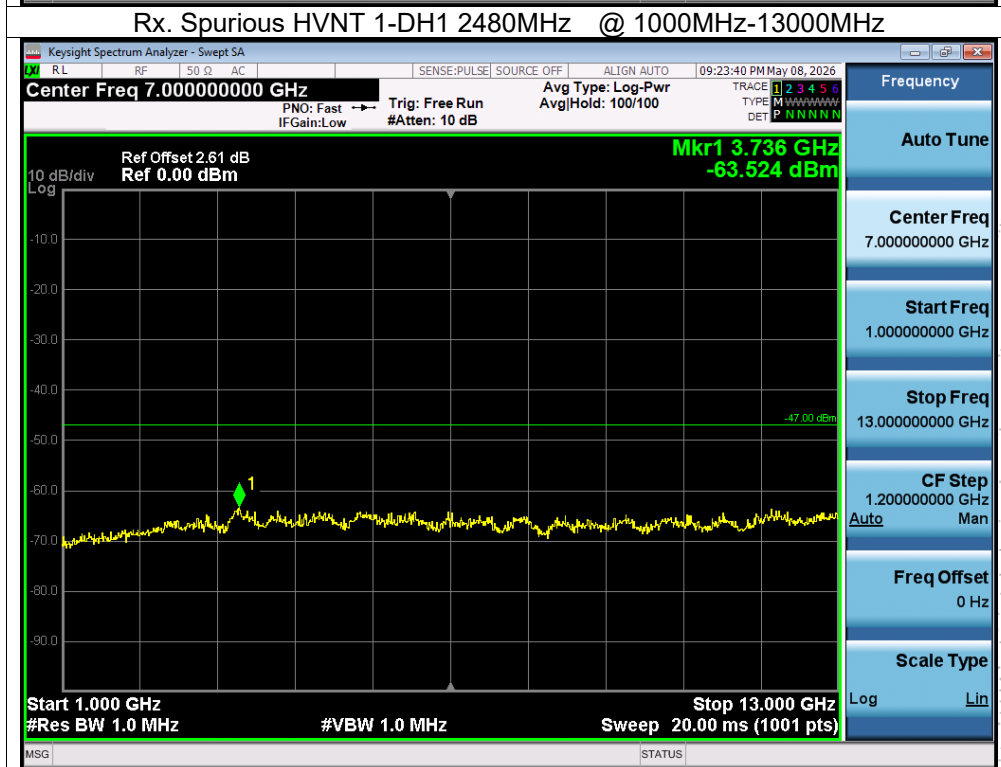
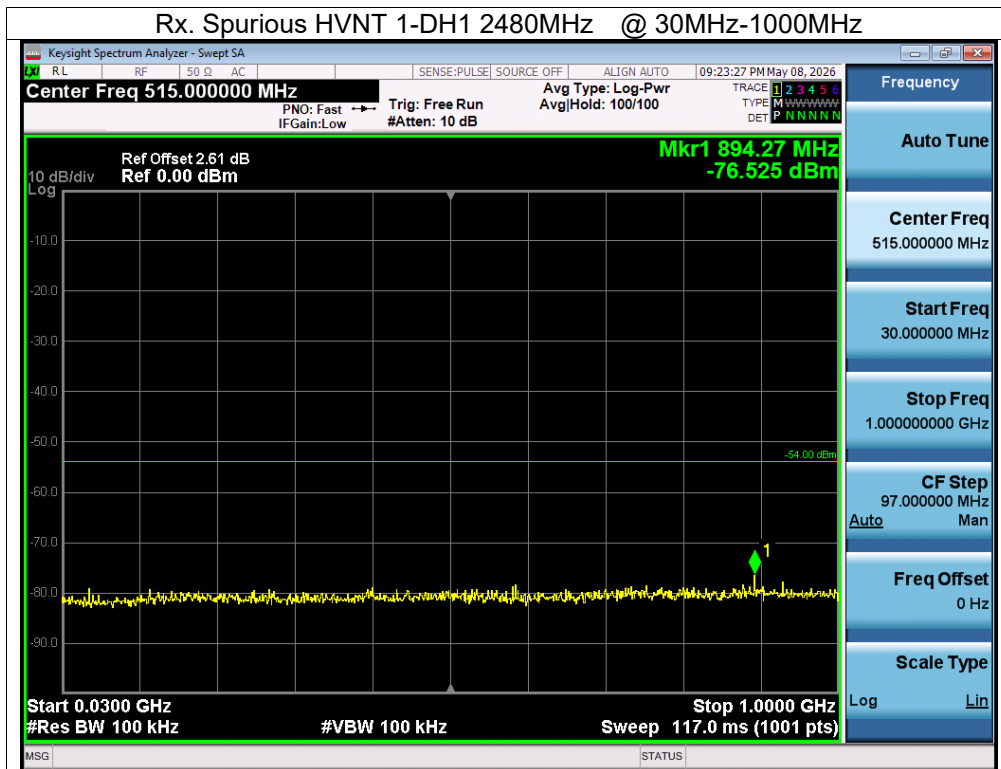












15. EUT Photographs

EUT Photo

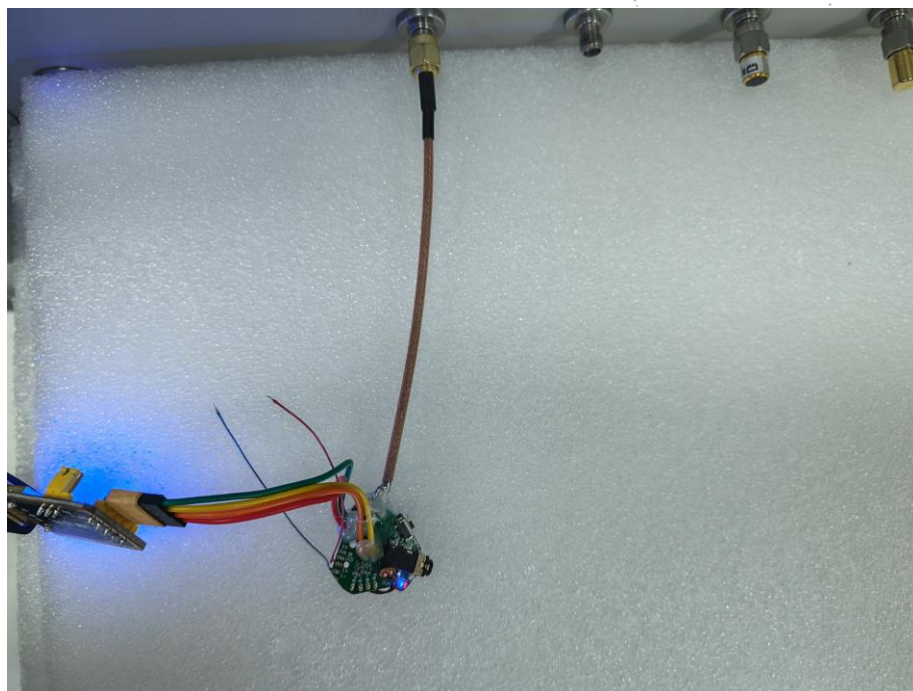
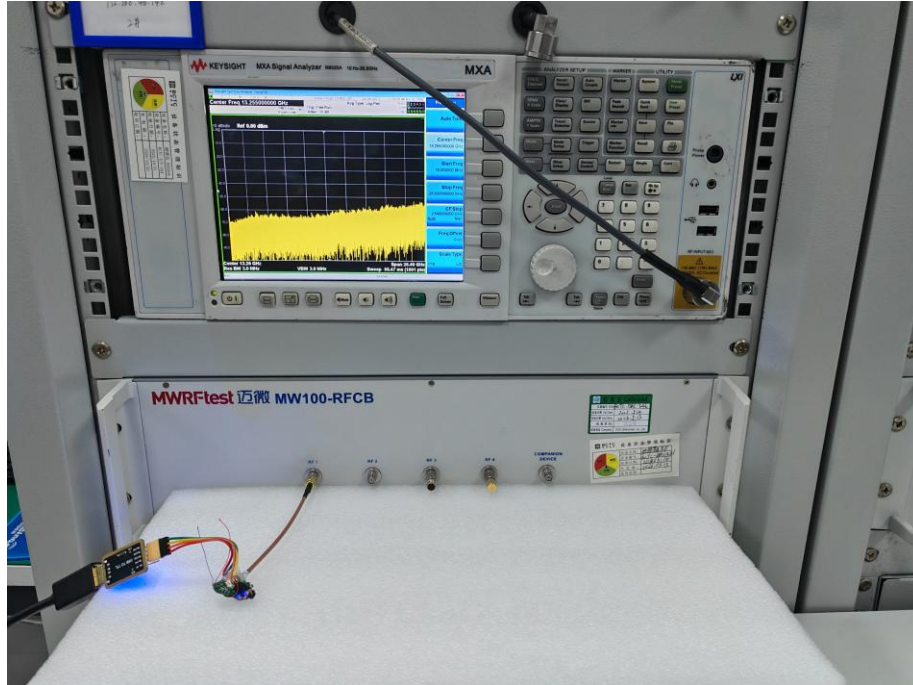


Appendix-Photographs Of EUT Constructional Details
(EQ-002_External & Internal Photos)

BCTC T
BC
APPR
Report

16. EUT Test Setup Photographs

Measurement Photos



STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: <http://www.chnbctc.com>

Consultation E-mail: bctc@bctc-lab.com.cn

Complaint/Advice E-mail: advice@bctc-lab.com.cn

***** END *****

