

11. Peak Output Power Test

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

11.3 Test Procedure

- The EUT was directly connected to the Power meter

11.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Note: Power Spectral Density(dBm)=Reading+Cable Loss

11.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz

Test Mode	Frequency(MHz)	Maximum Conducted Output Power(PK) (dBm)	Limit (dBm)
802.11b	2412	12.25	30
	2437	11.56	30
	2462	13.28	30
802.11g	2412	10.26	30
	2437	10.32	30
	2462	11.68	30
802.11n20	2412	8.60	30
	2437	8.49	30
	2462	9.91	30
802.11n40	2422	8.11	30
	2437	7.93	30
	2452	8.32	30
802.11ax20	2412	8.45	30
	2437	8.44	30
	2462	9.77	30
802.11ax40	2422	7.54	30
	2437	7.95	30
	2452	8.05	30

12. 100 kHz Bandwidth Of Frequency Band Edge

12.1 Block Diagram Of Test Setup



12.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

12.3 Test Procedure

Using the following spectrum analyzer setting:

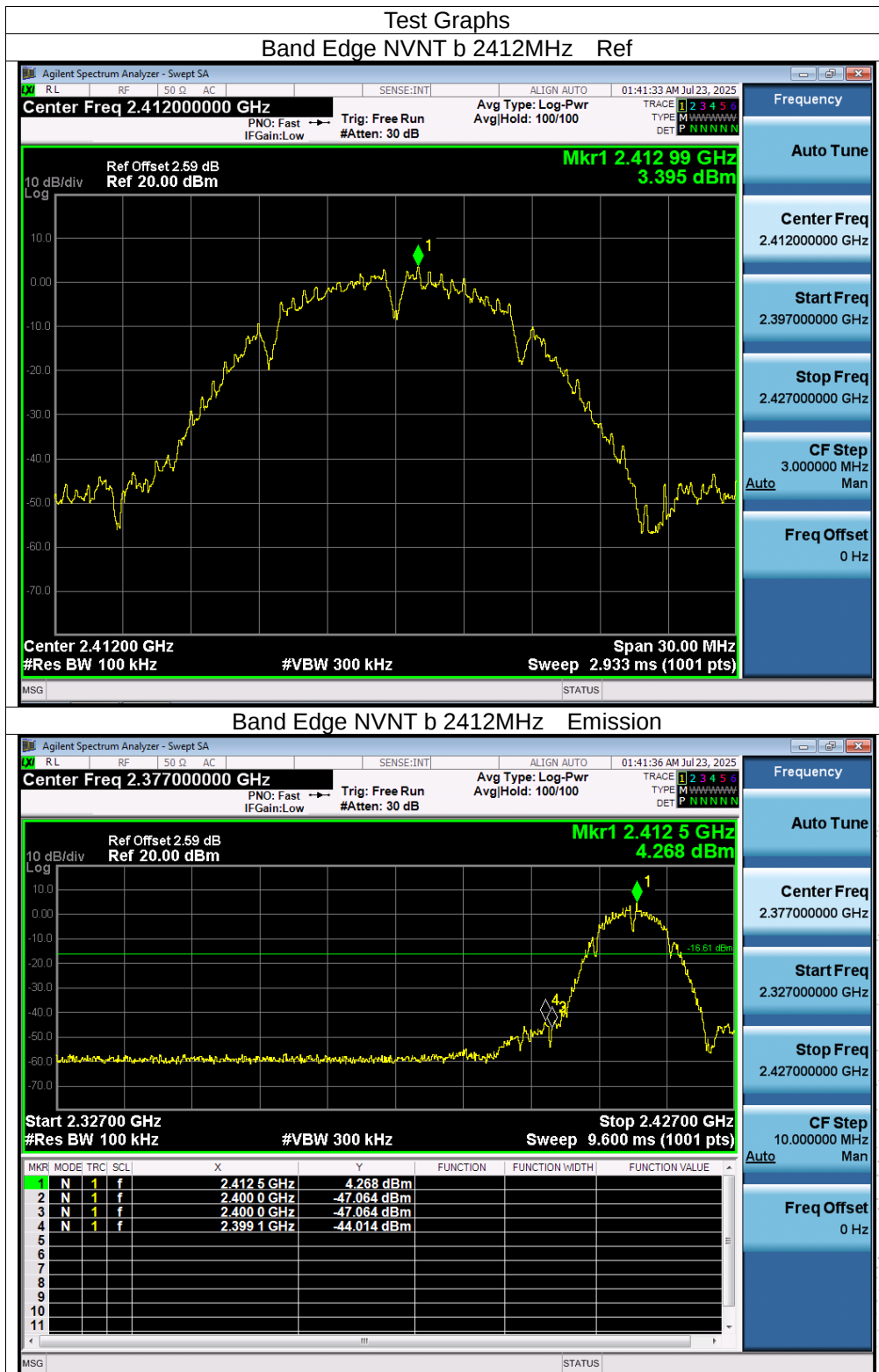
- Set the RBW = 100KHz.
- Set the VBW = 300KHz.
- Sweep time = auto couple.
- Detector function = peak.
- Trace mode = max hold.
- Allow trace to fully stabilize..

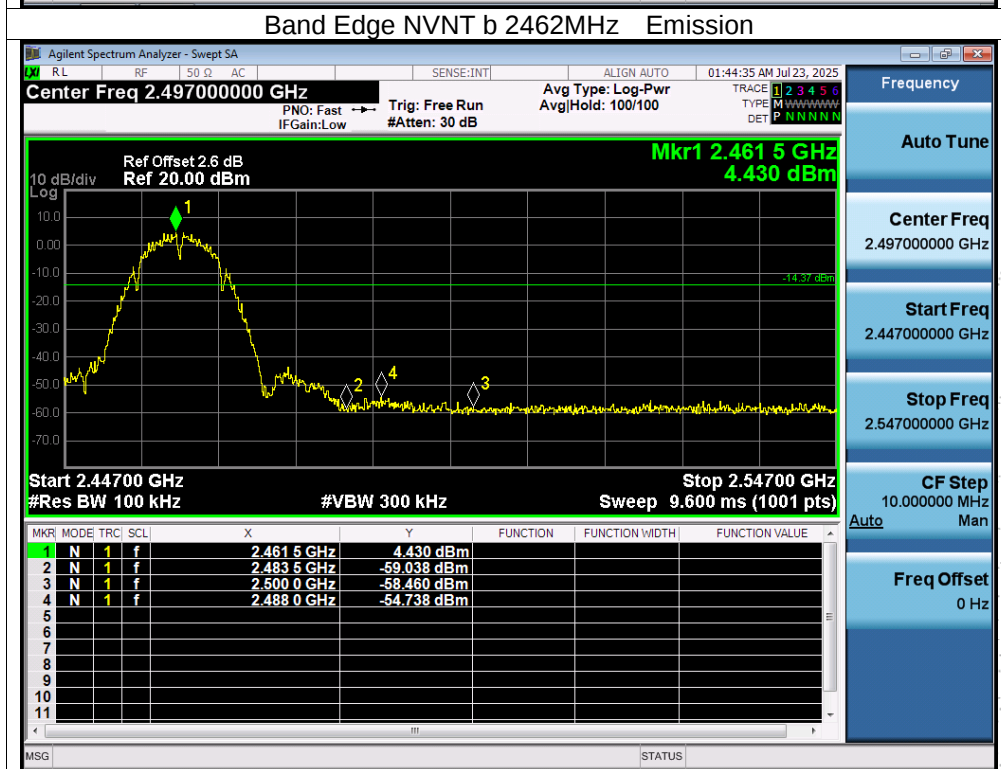
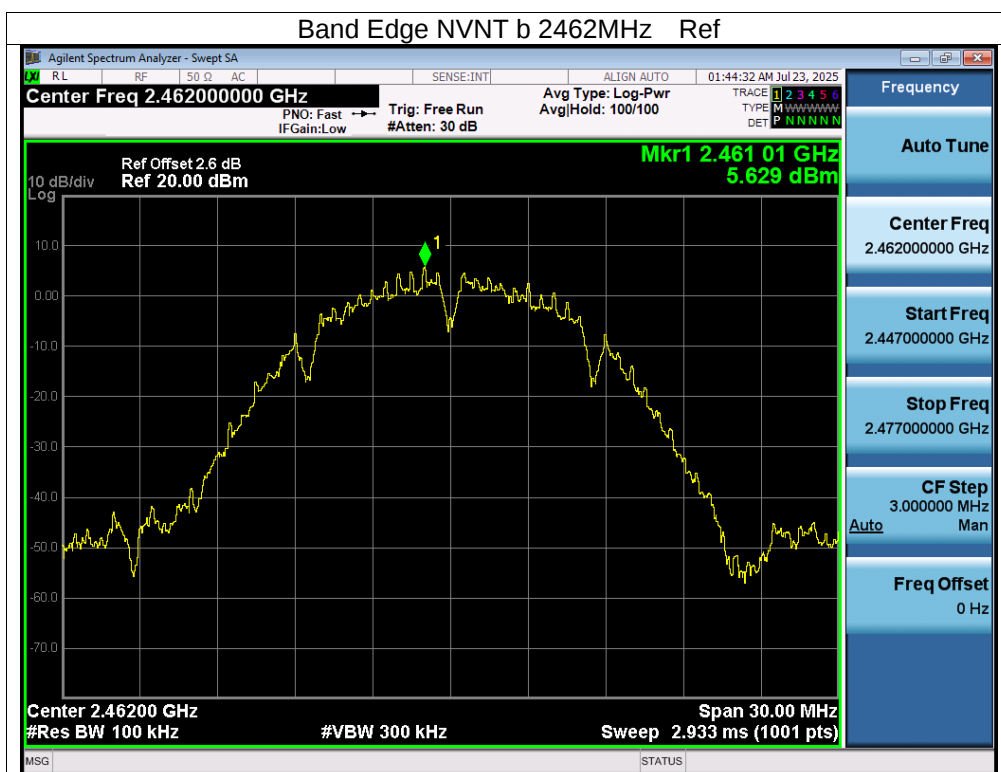
12.4 EUT Operating Conditions

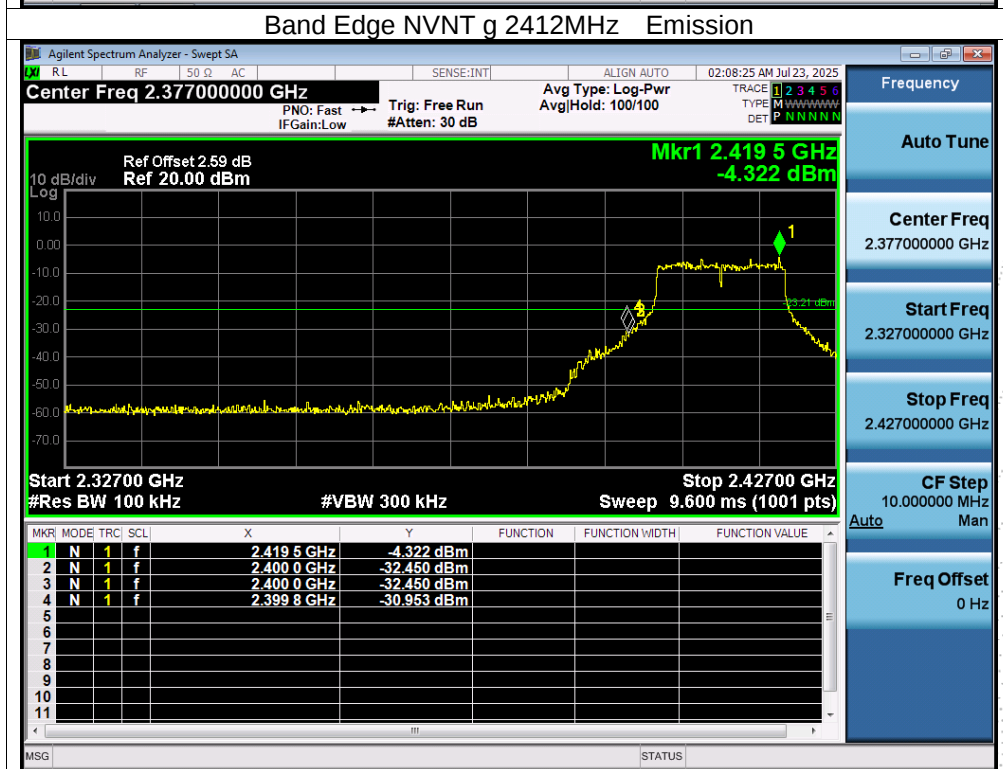
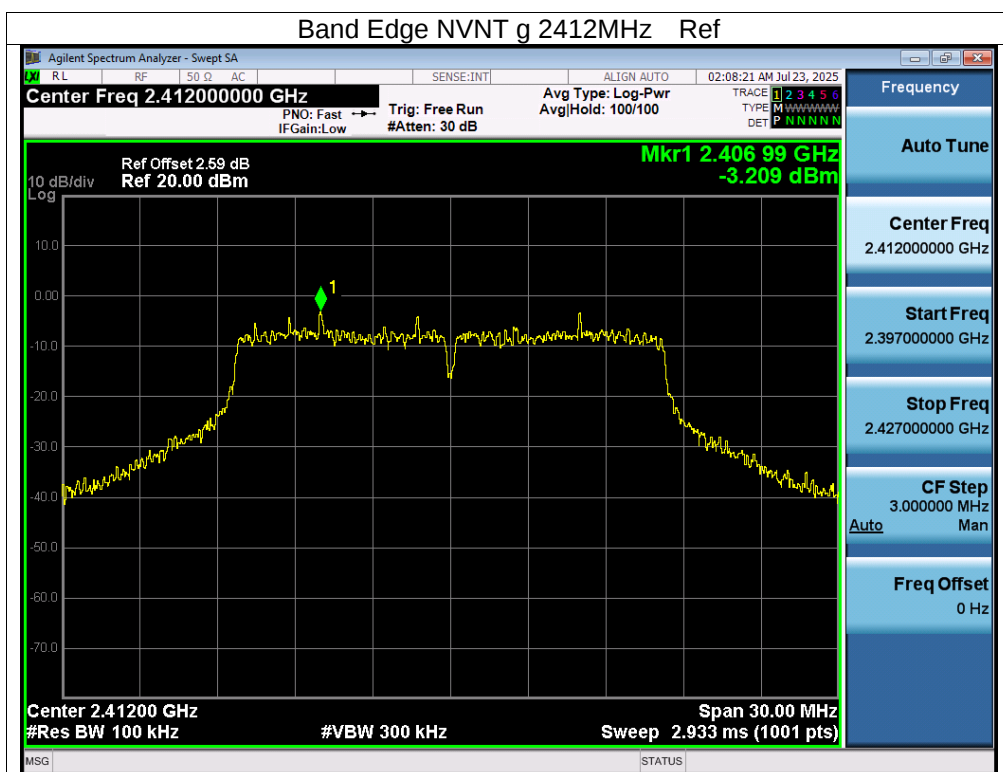
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Note: Power Spectral Density(dBm)=Reading+Cable Loss

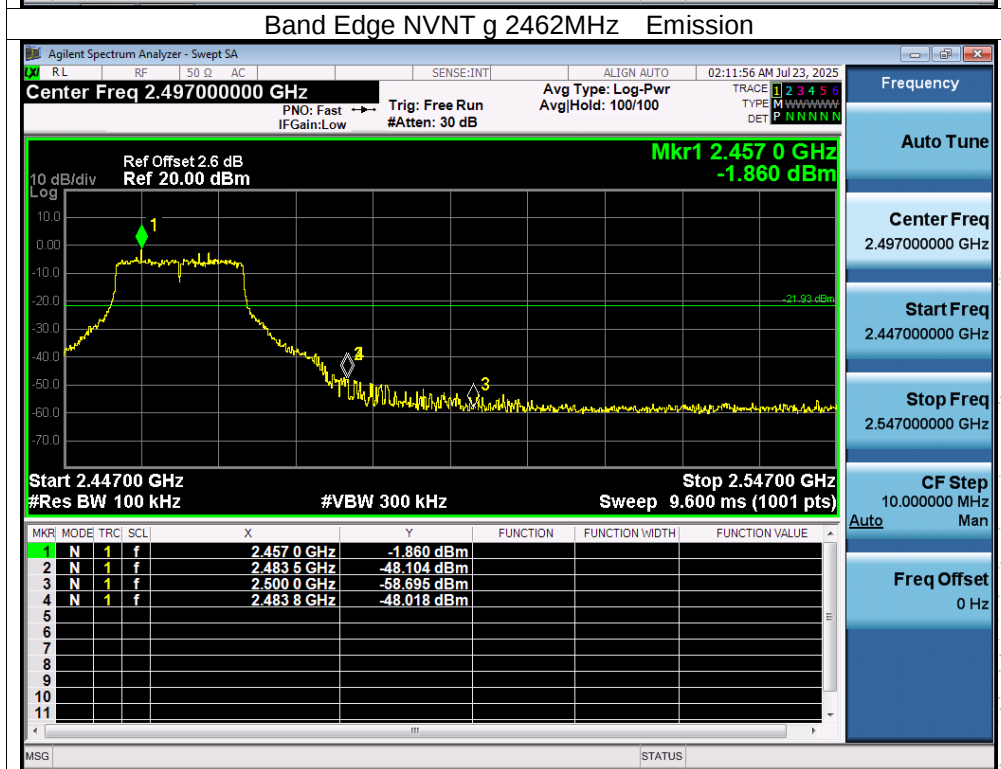
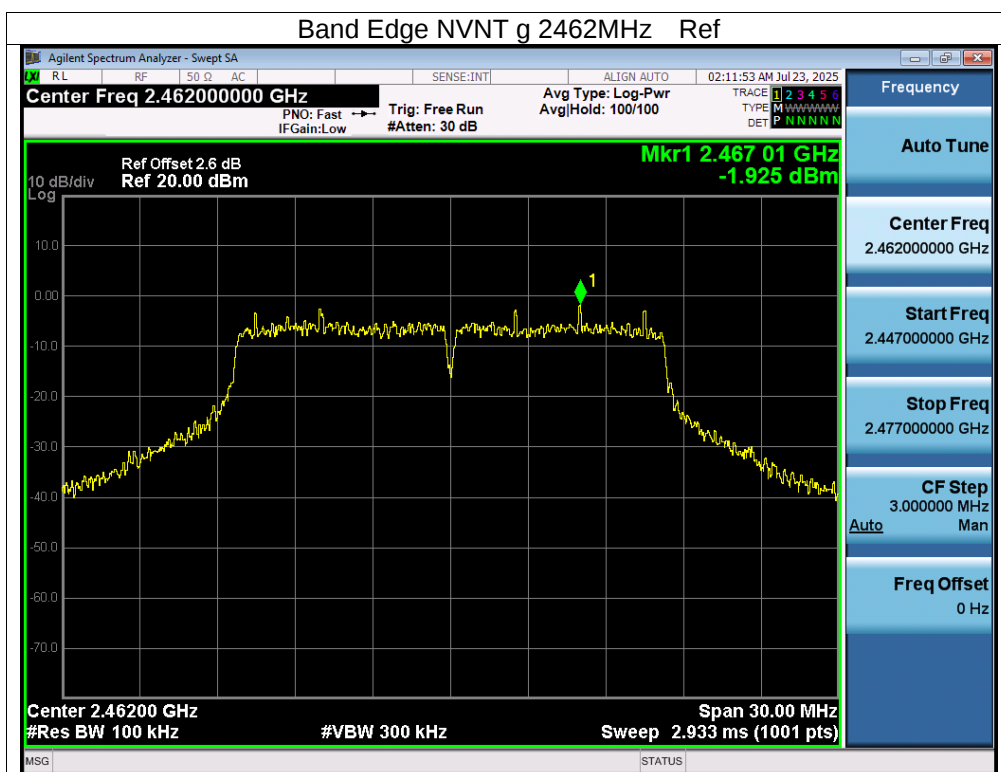
12.5 Test Result

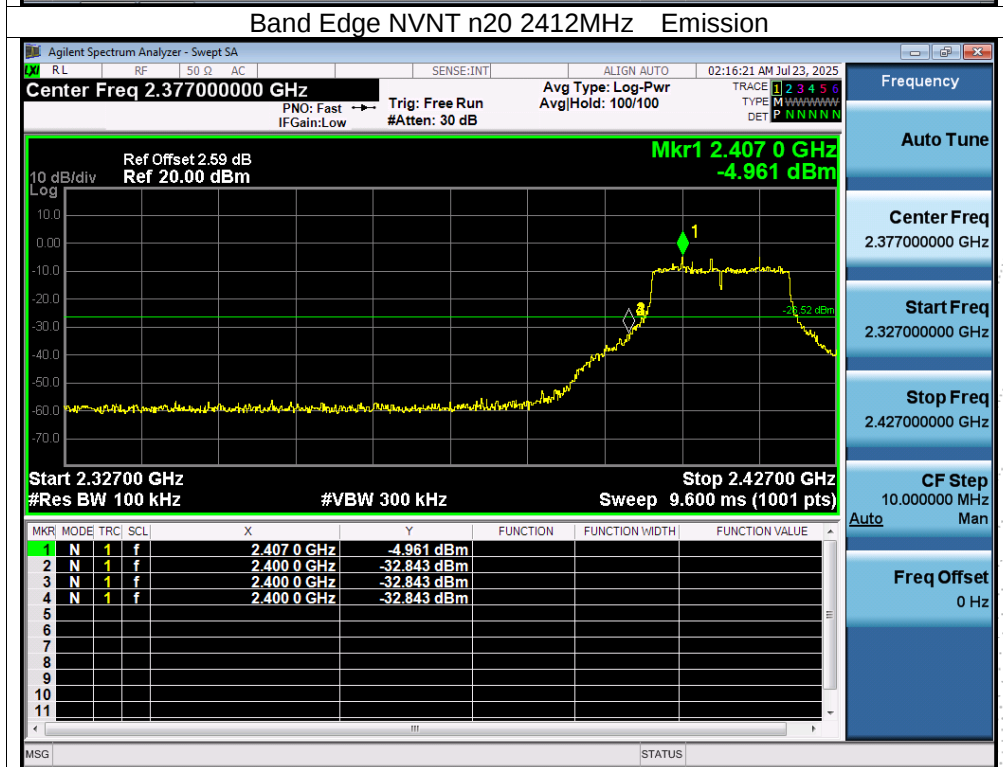
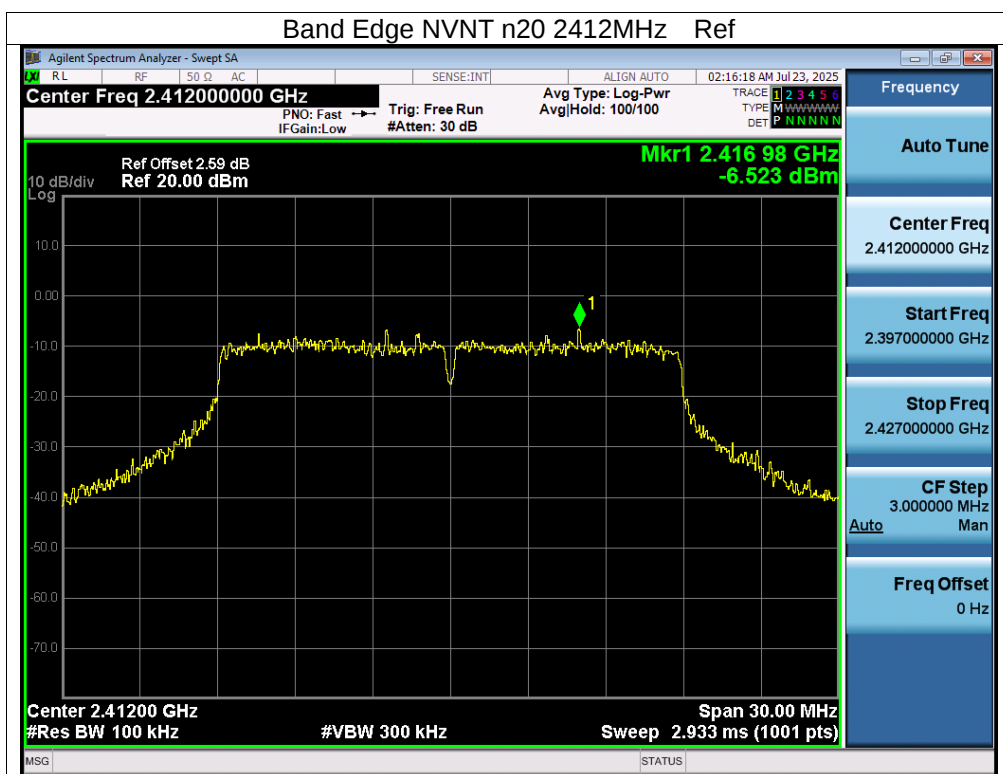


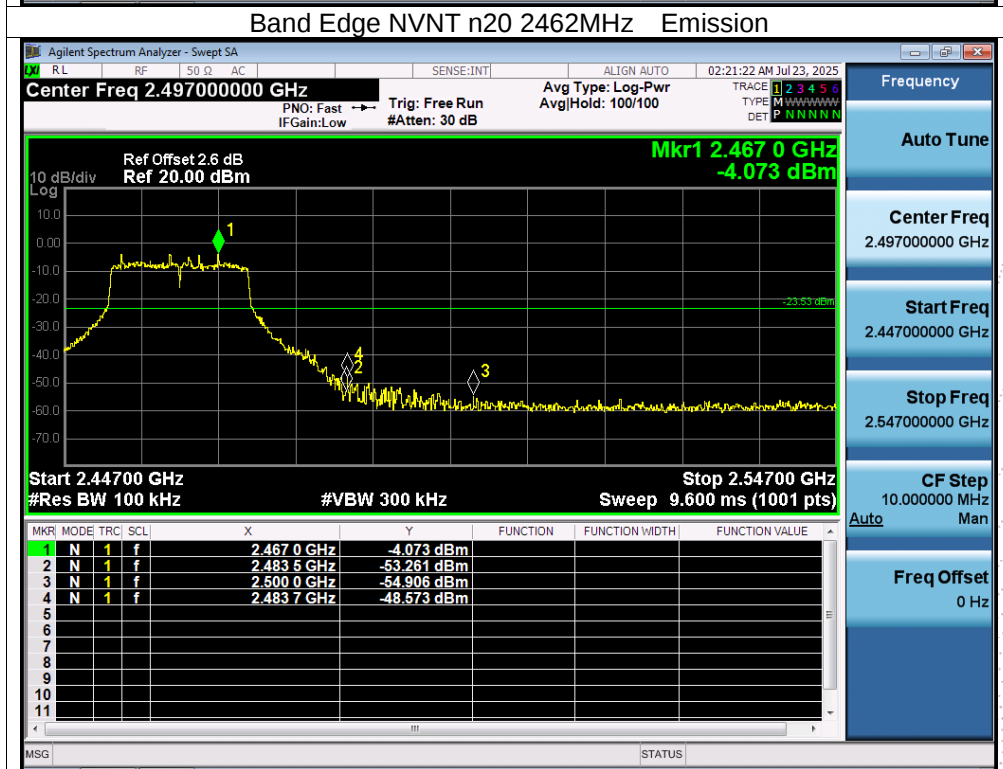
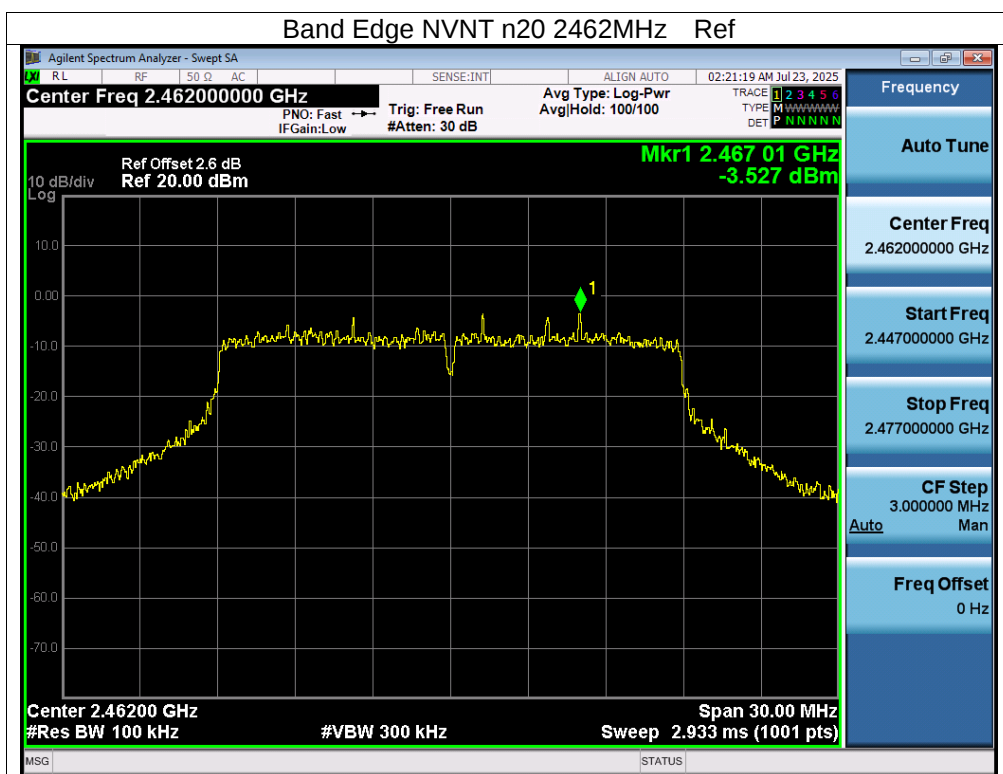


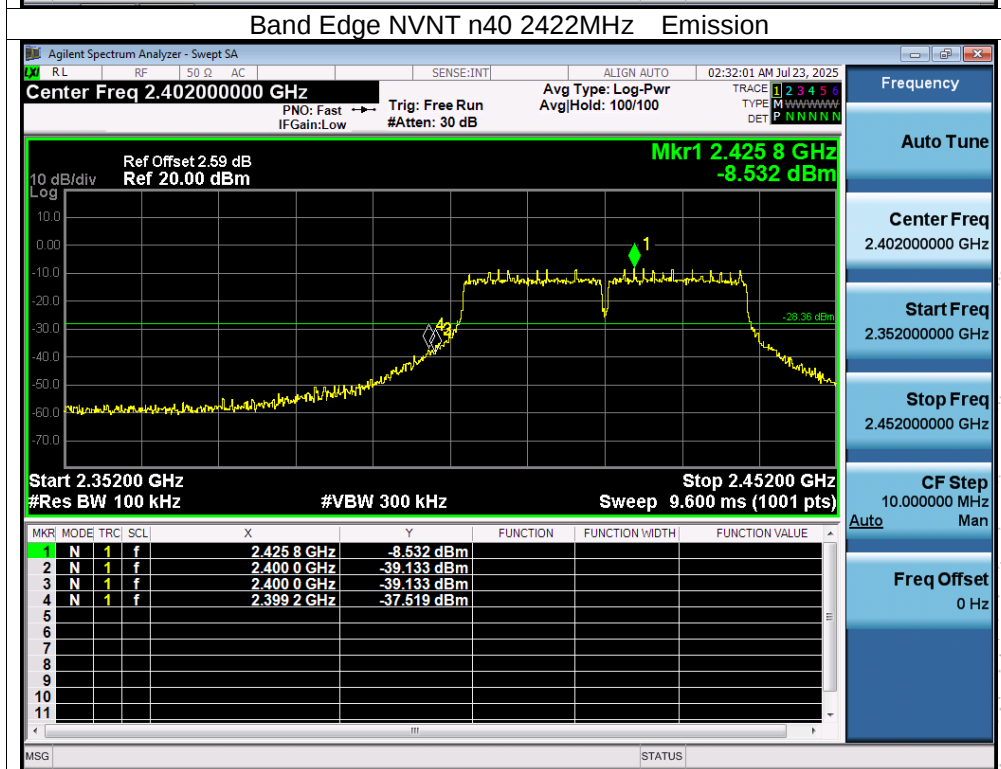
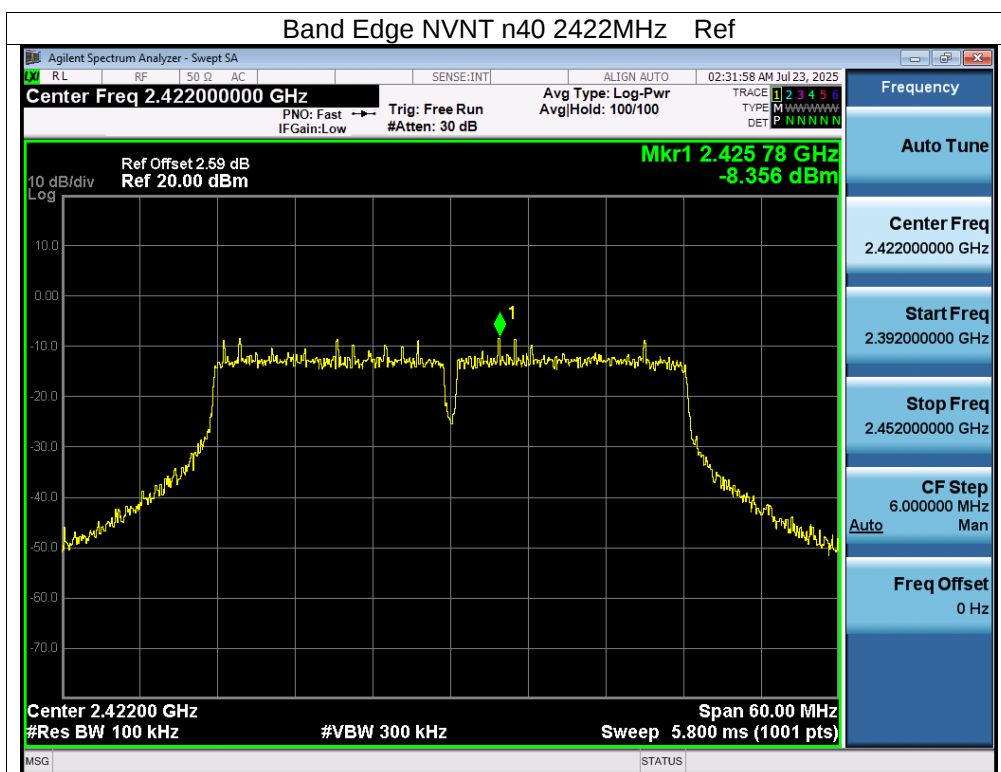


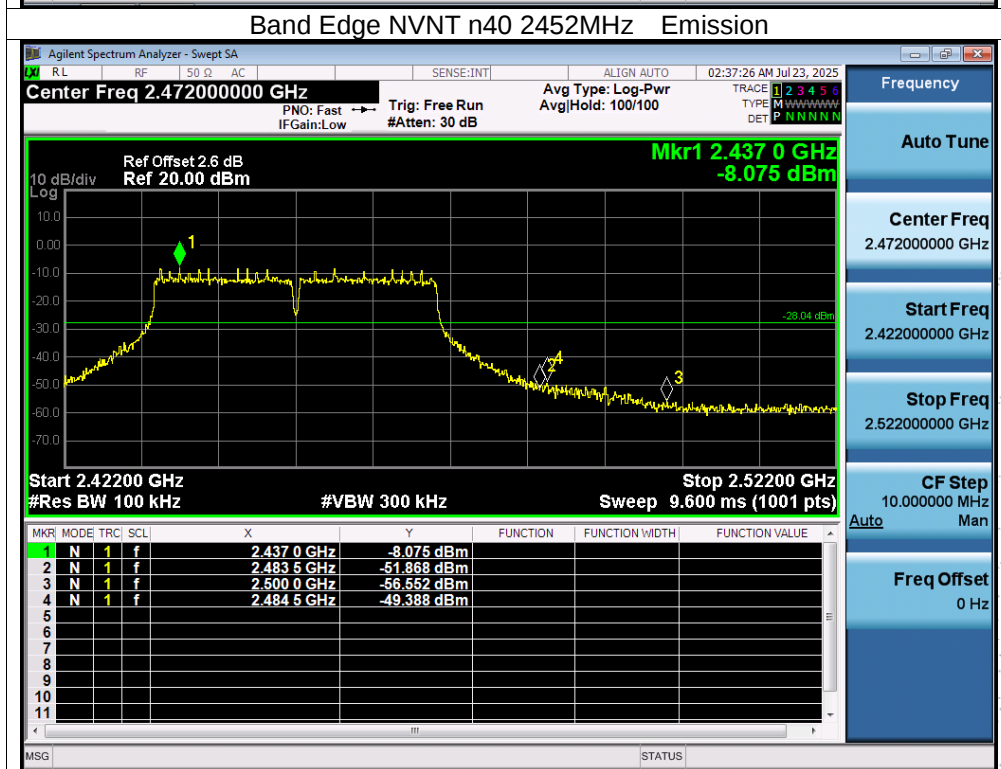
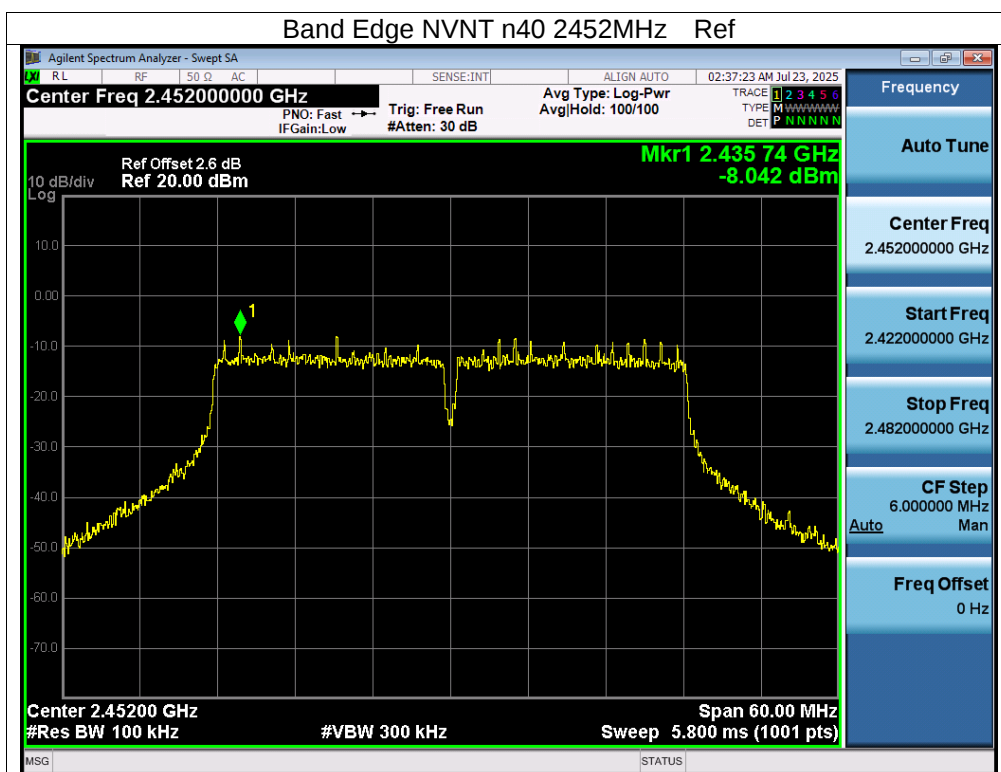
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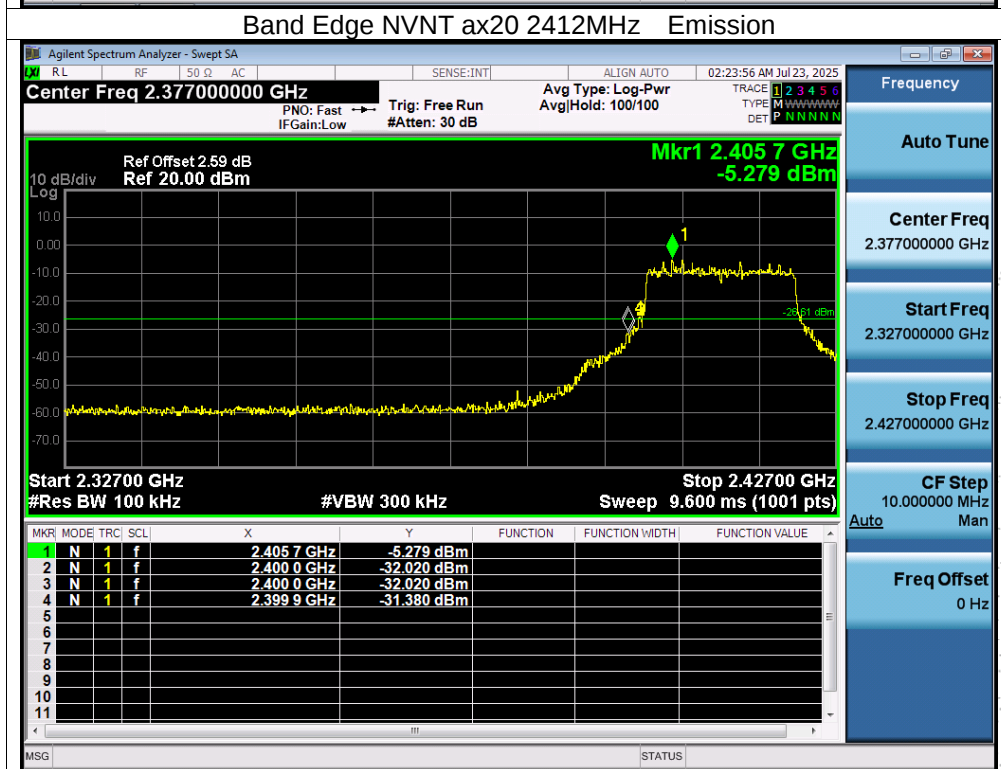
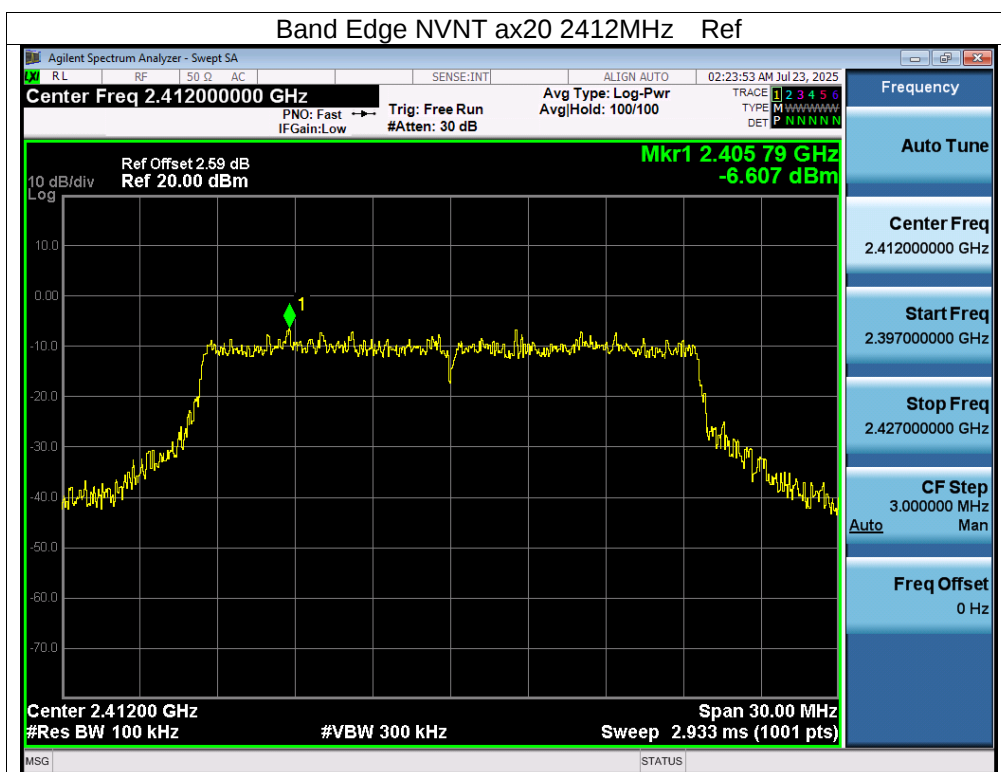




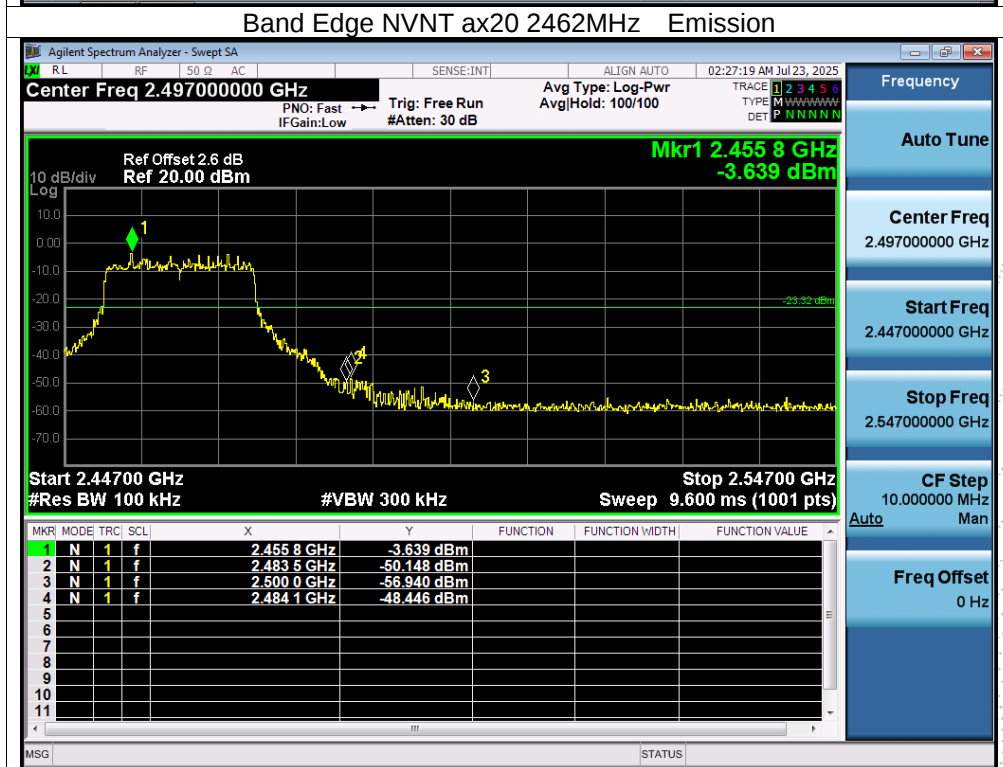
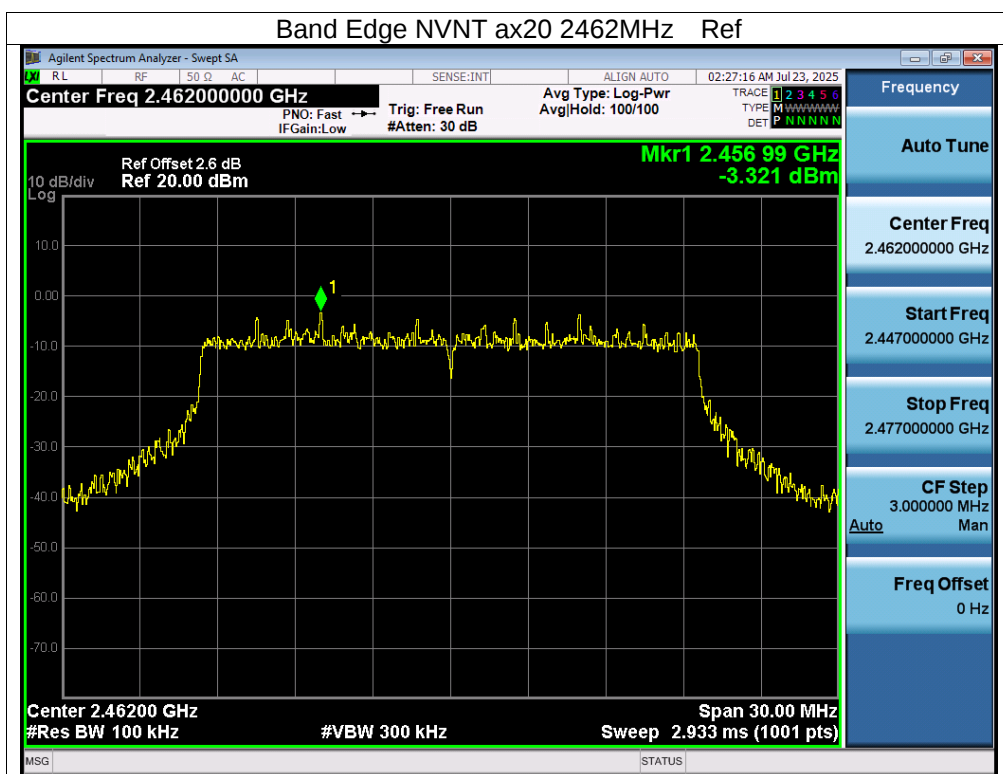


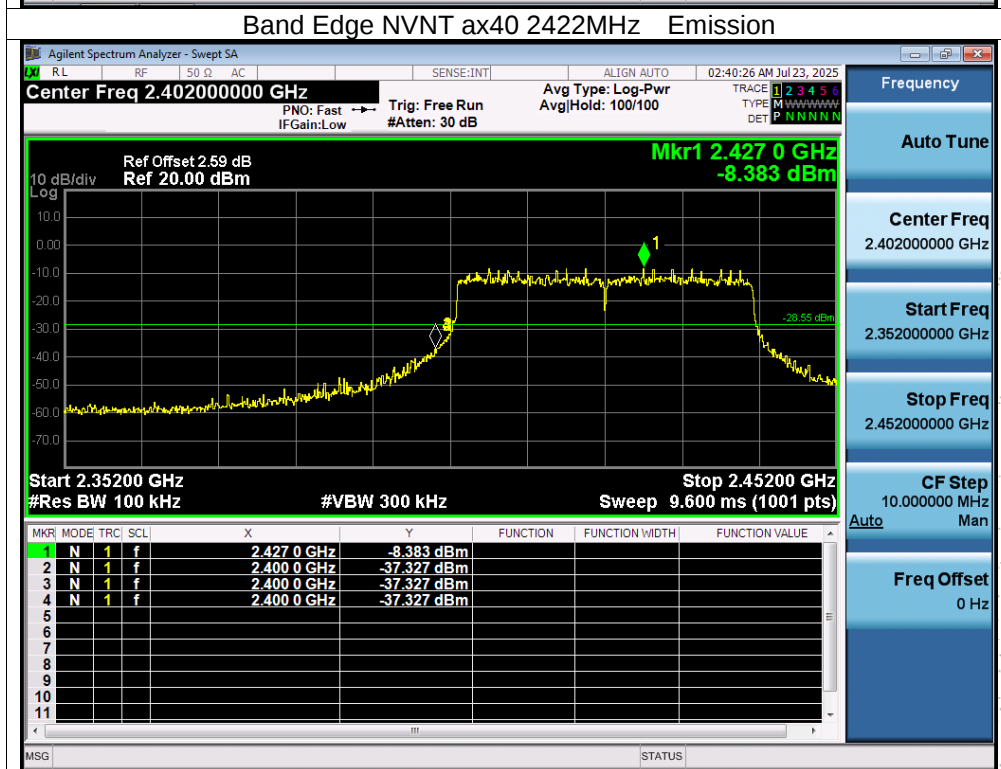
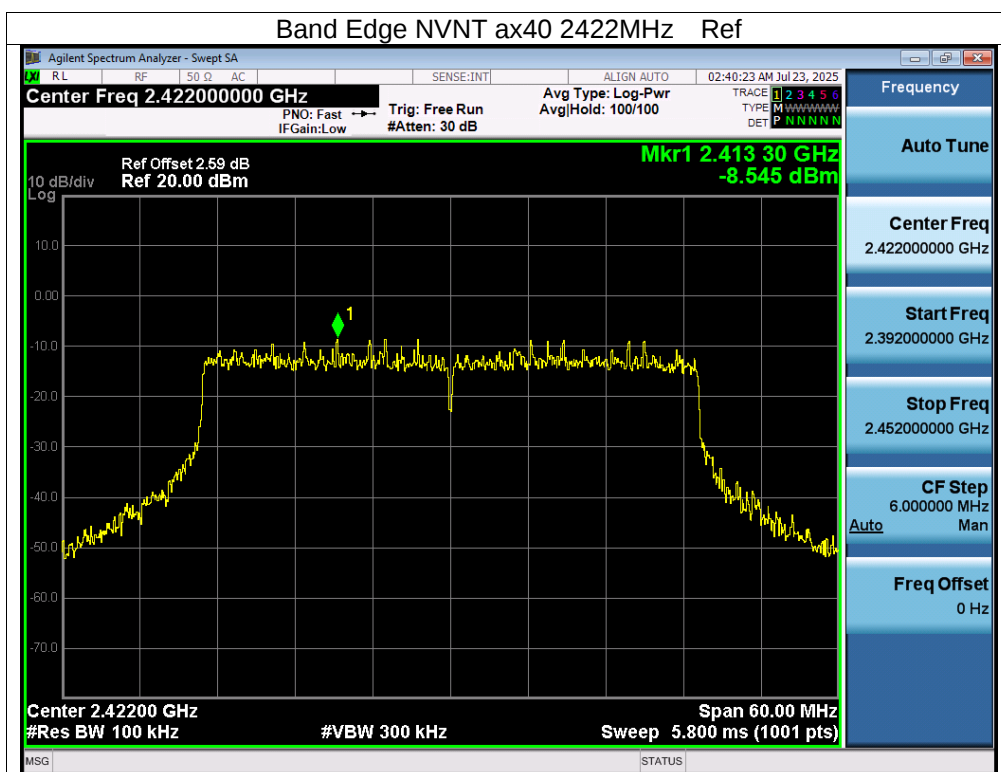


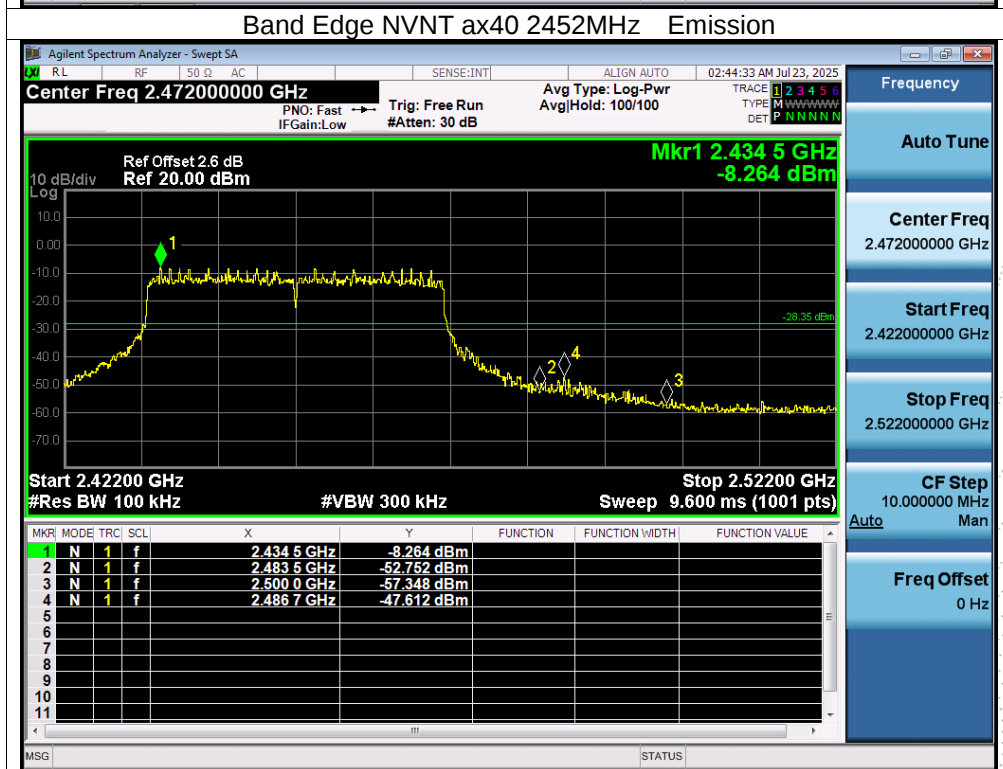
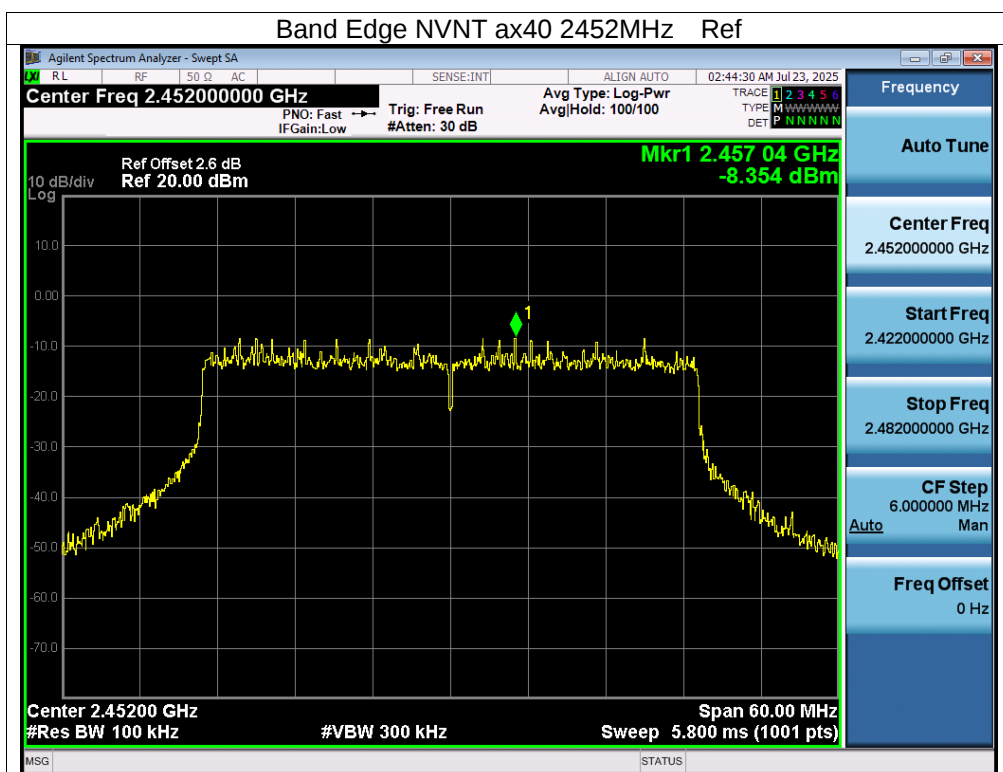




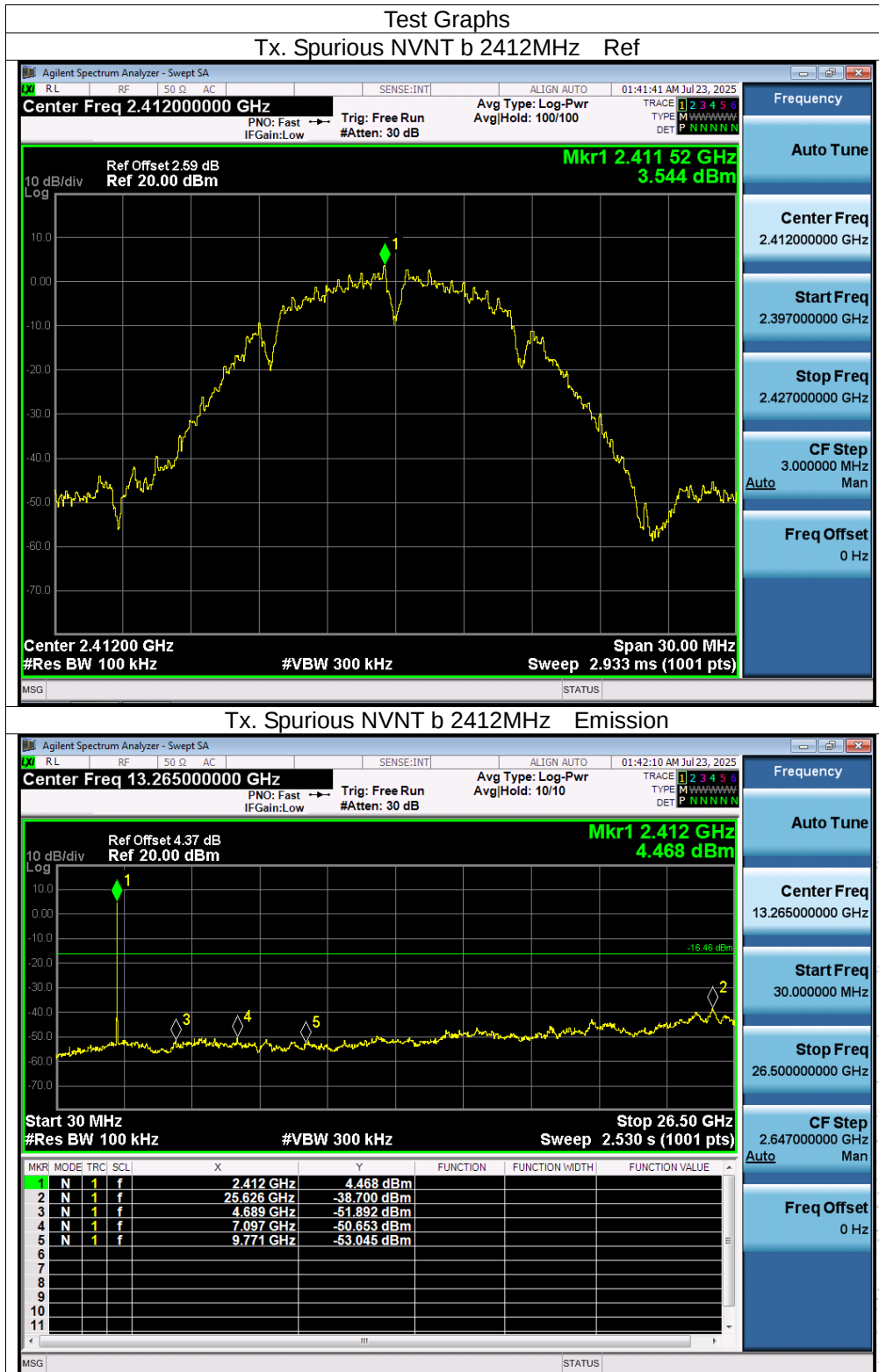
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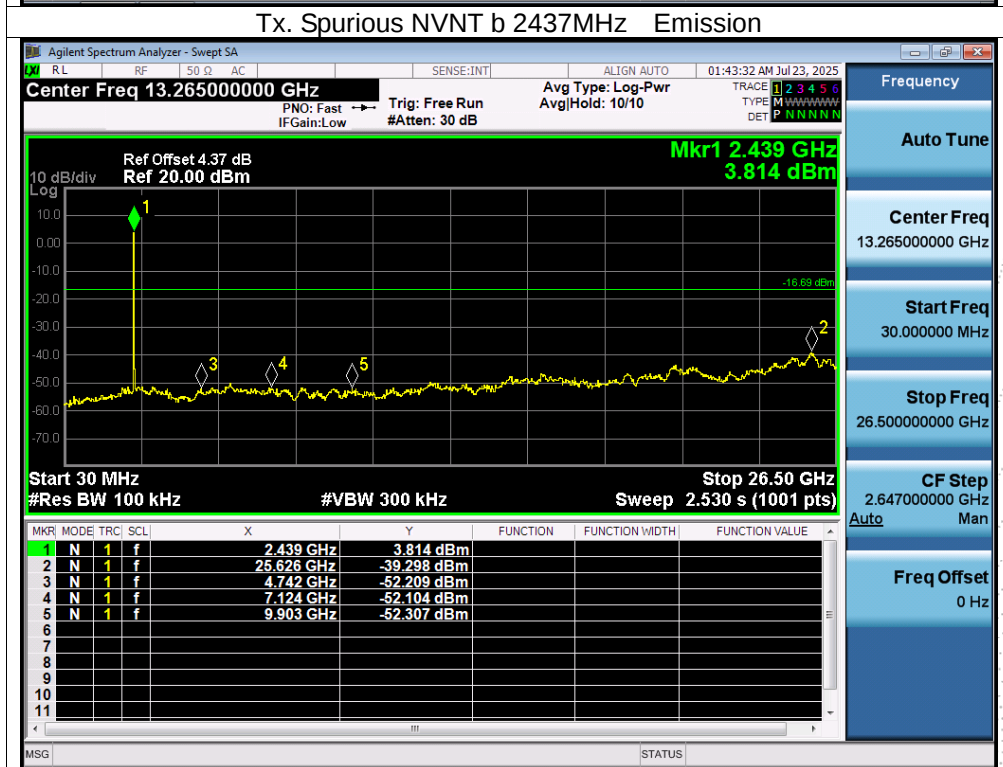
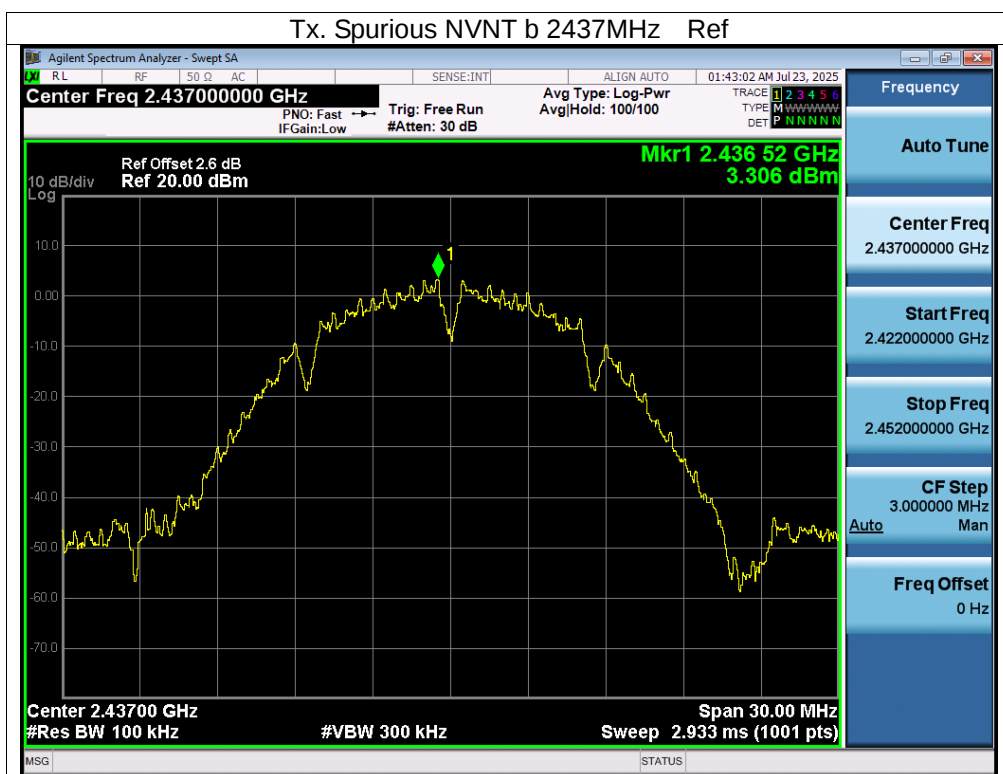


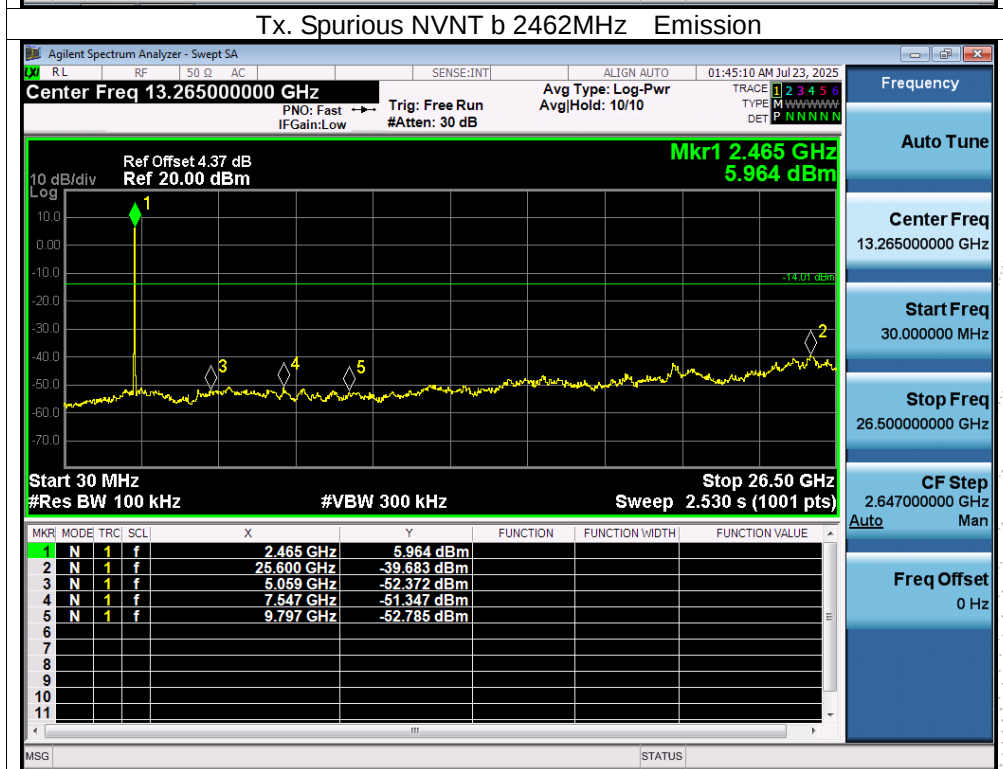
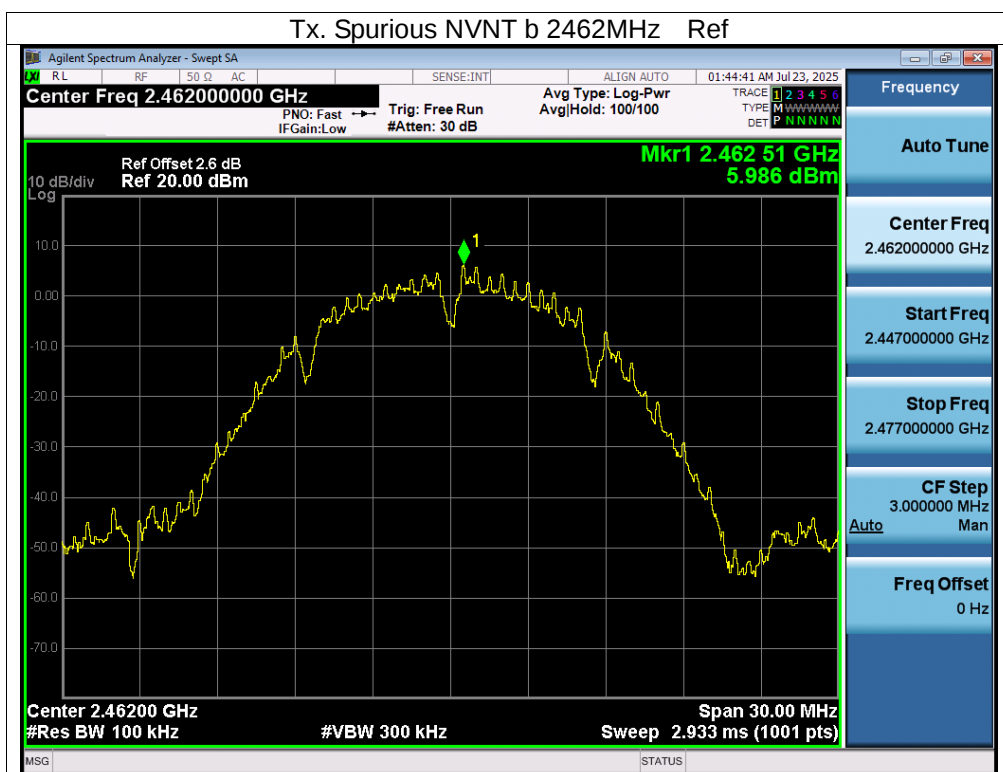




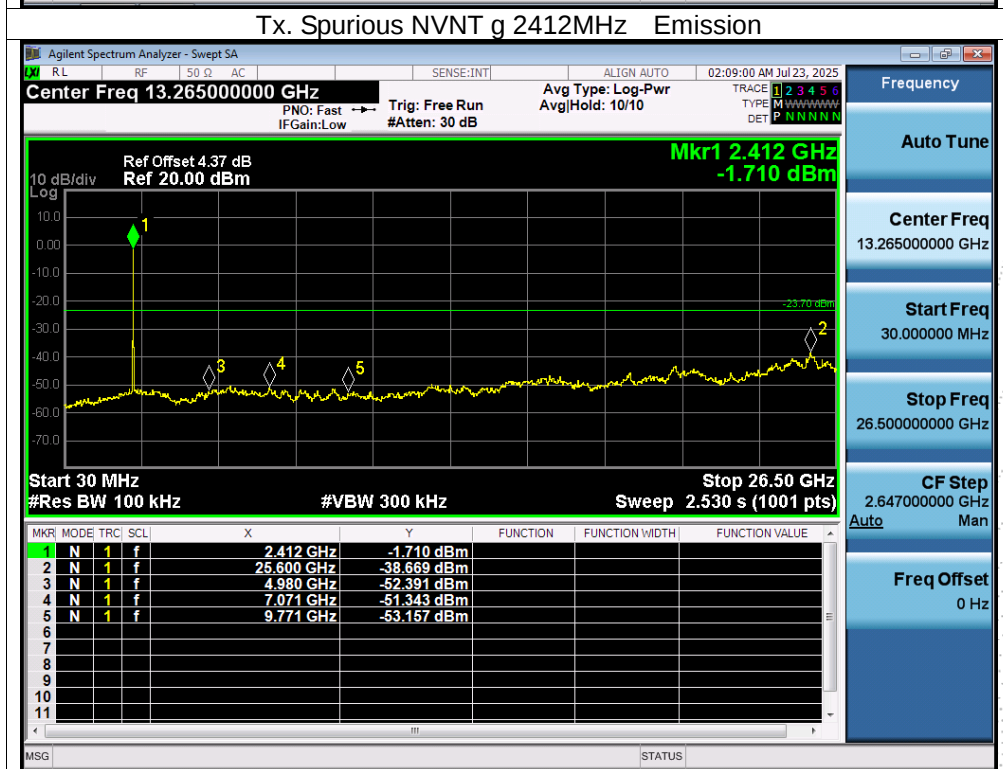
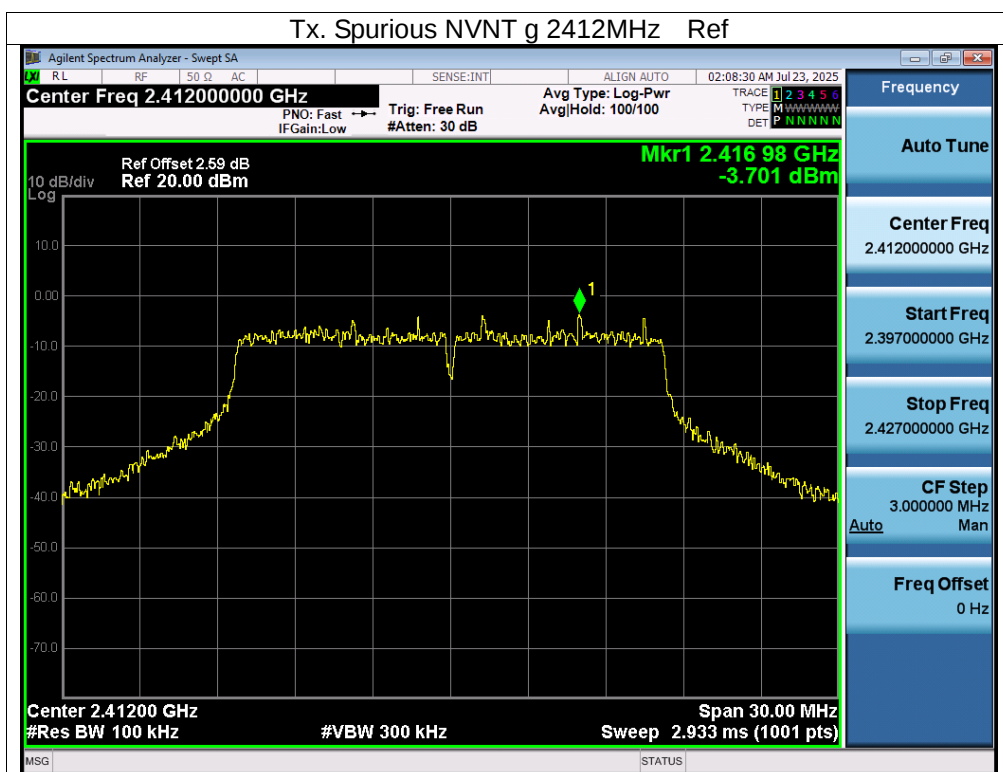
Conducted Emission Measurement

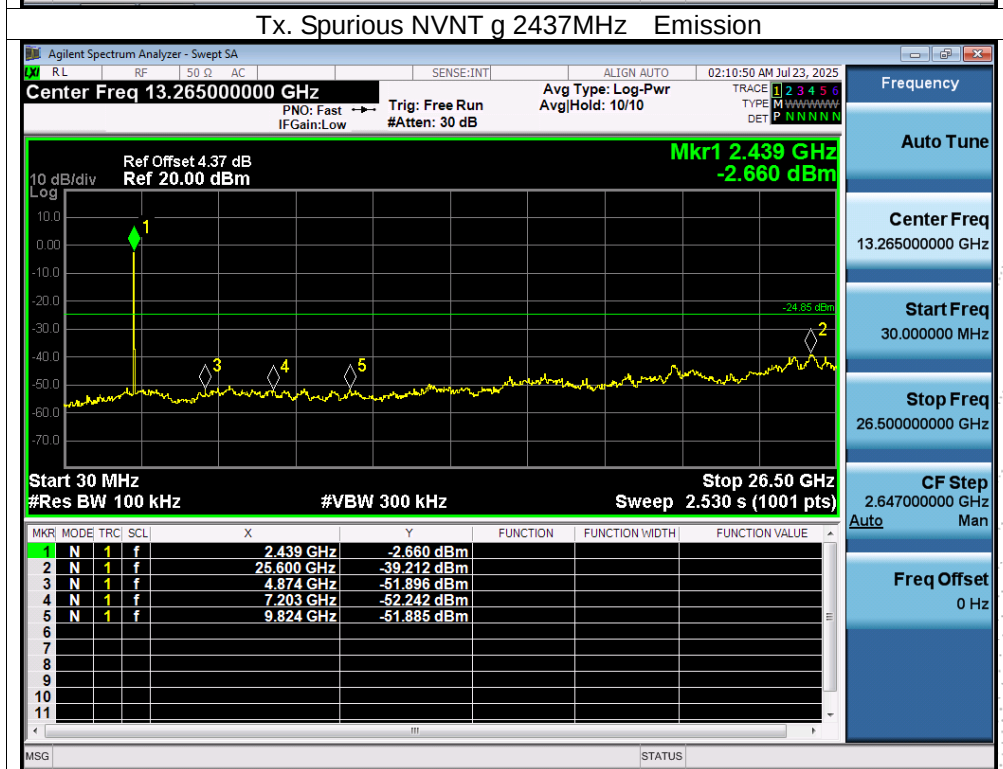
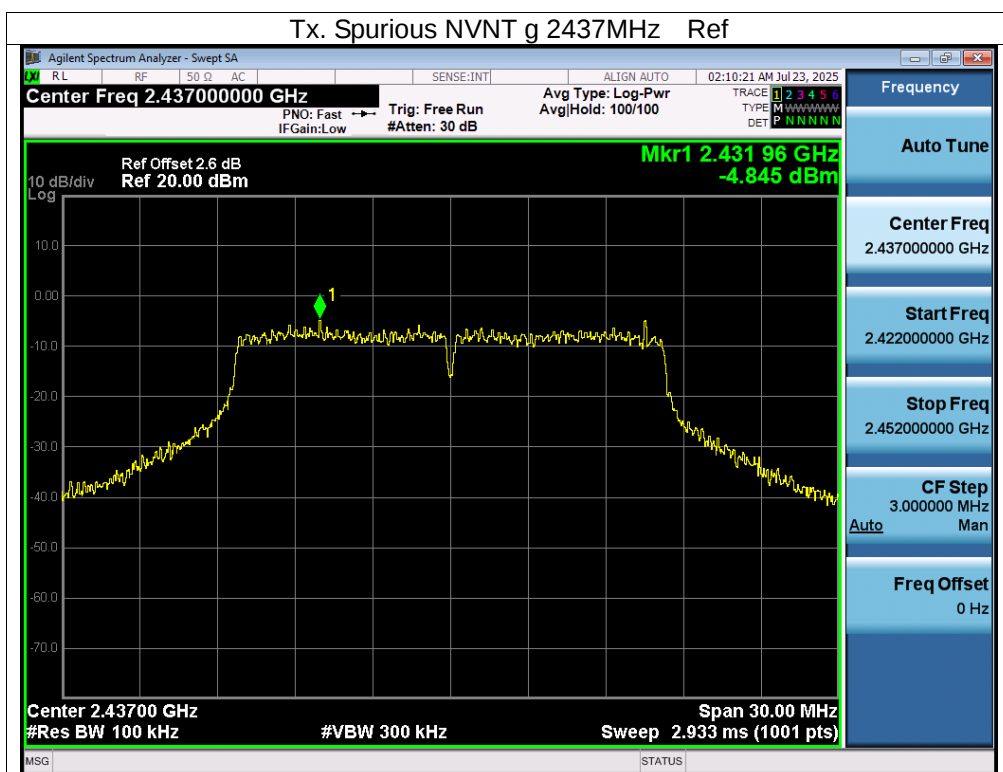


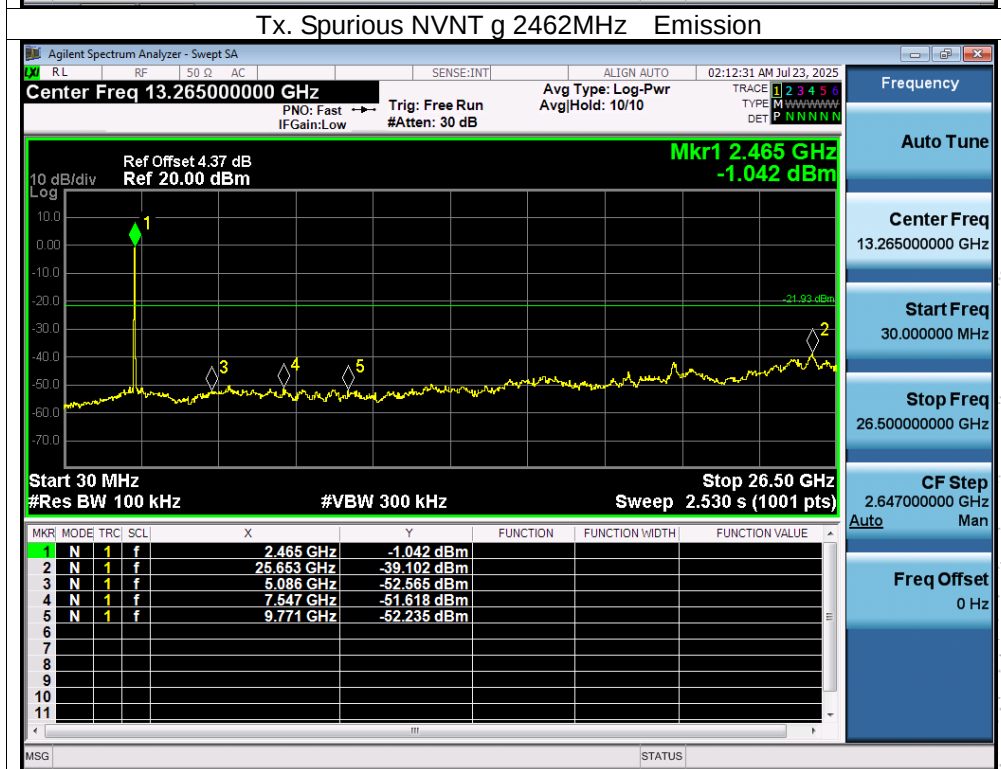
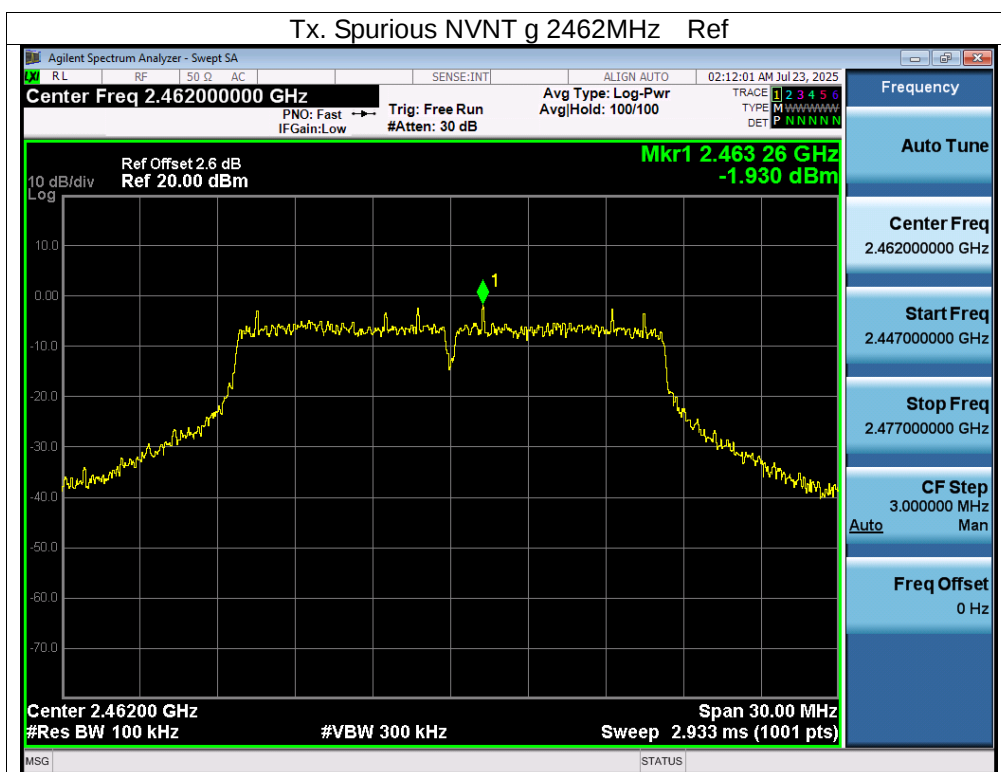


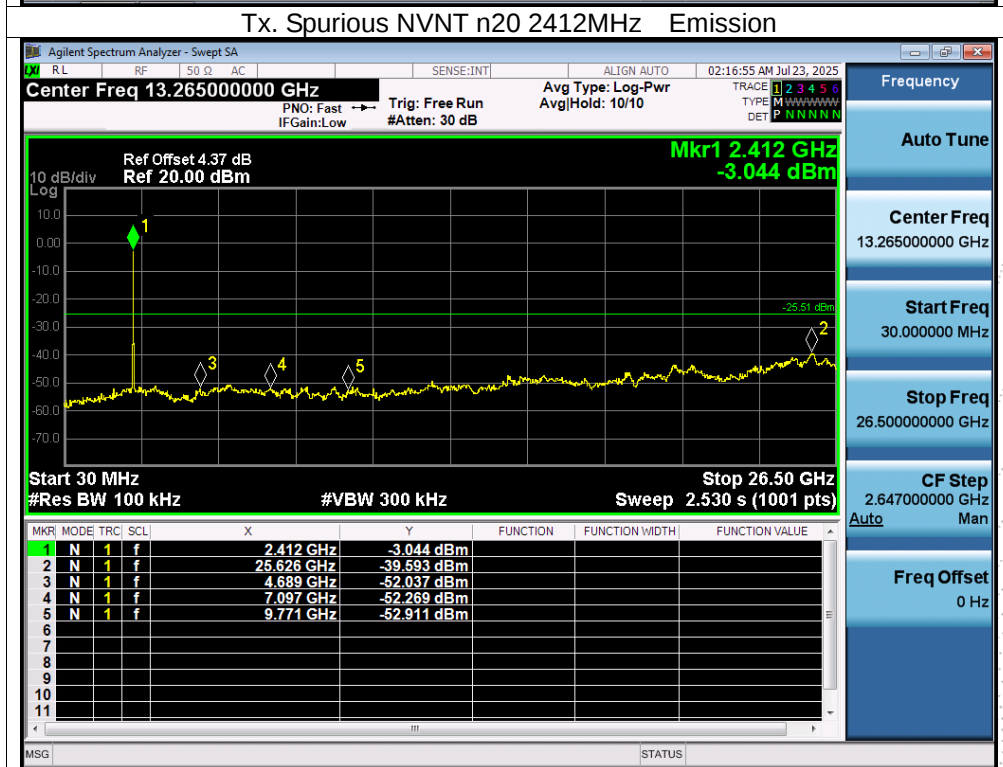
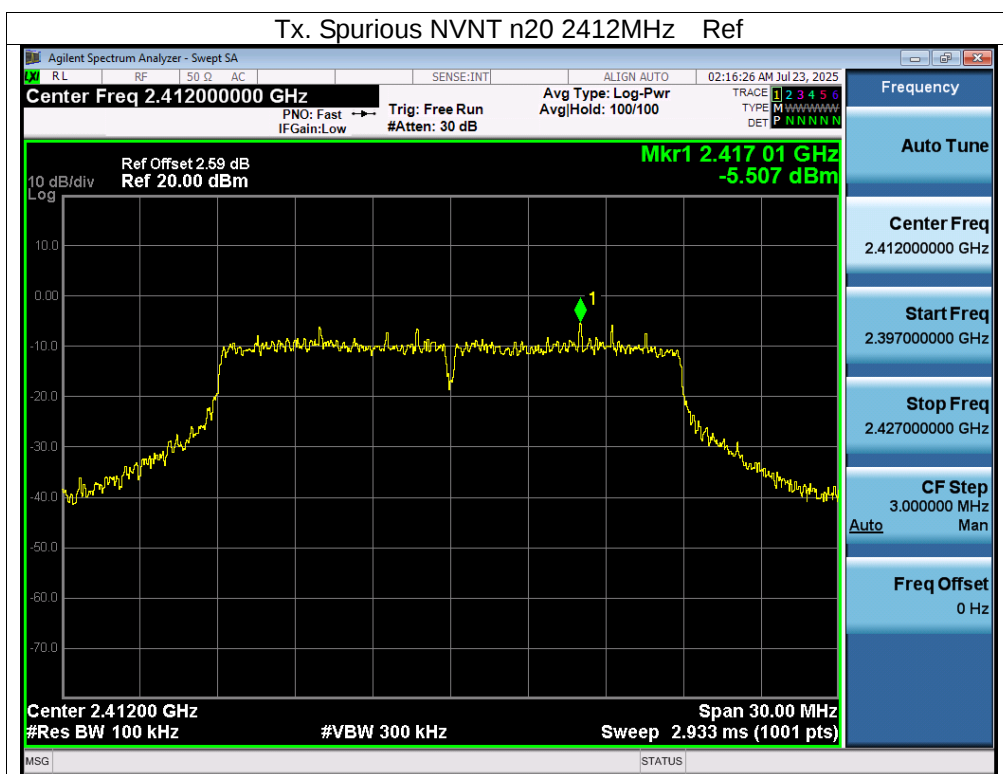


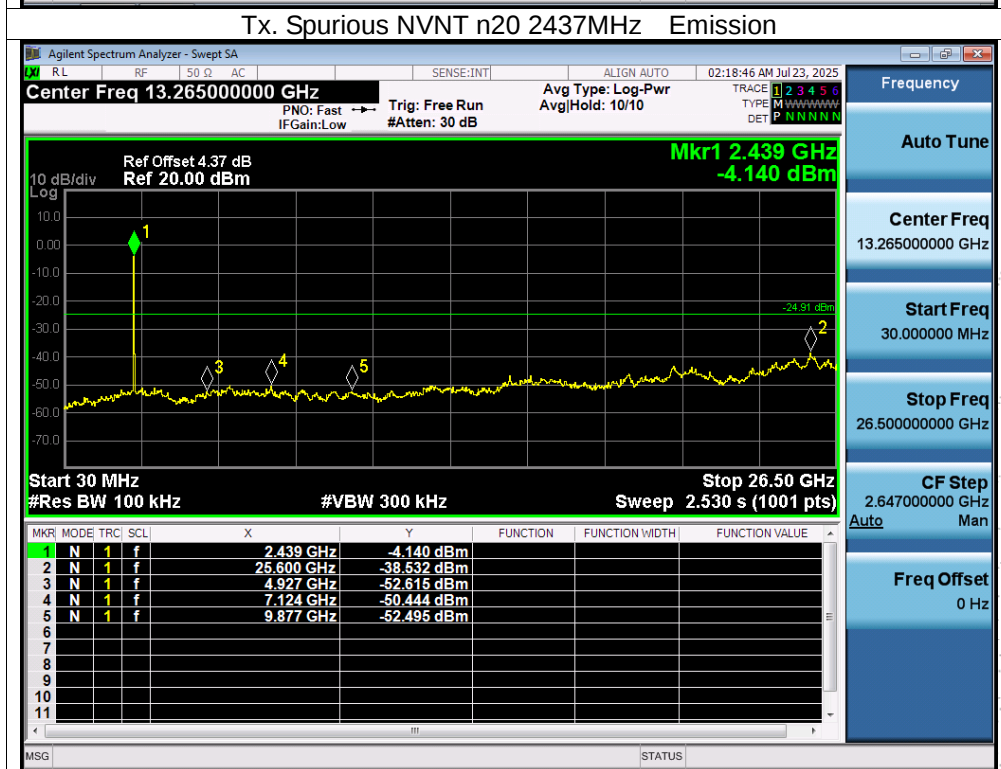
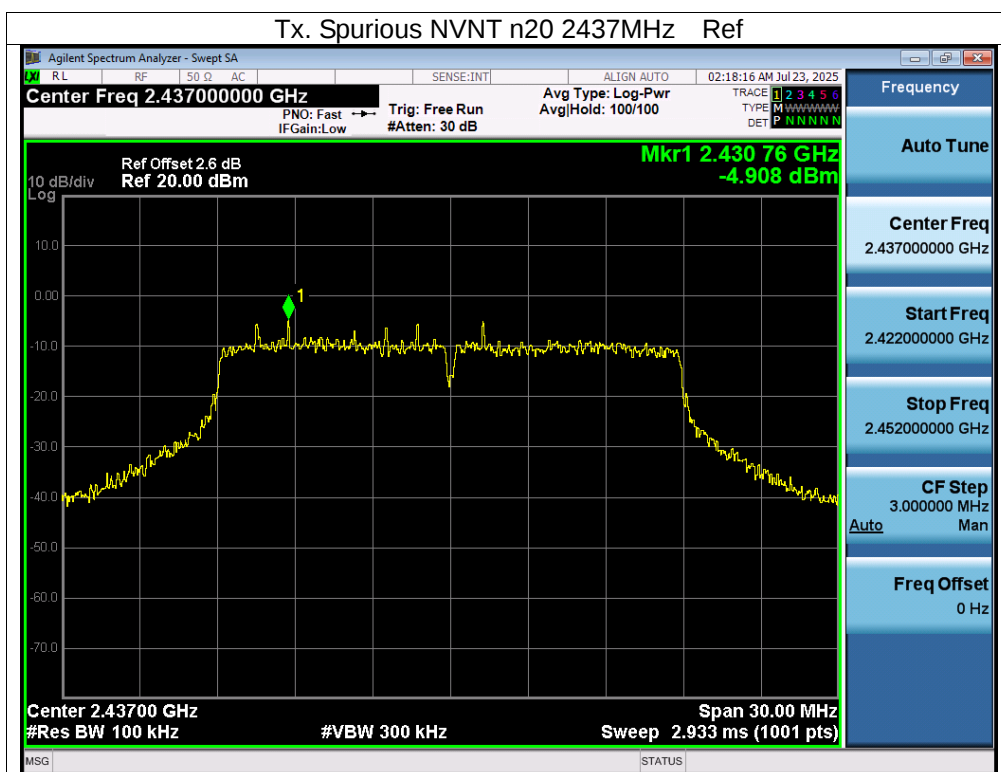
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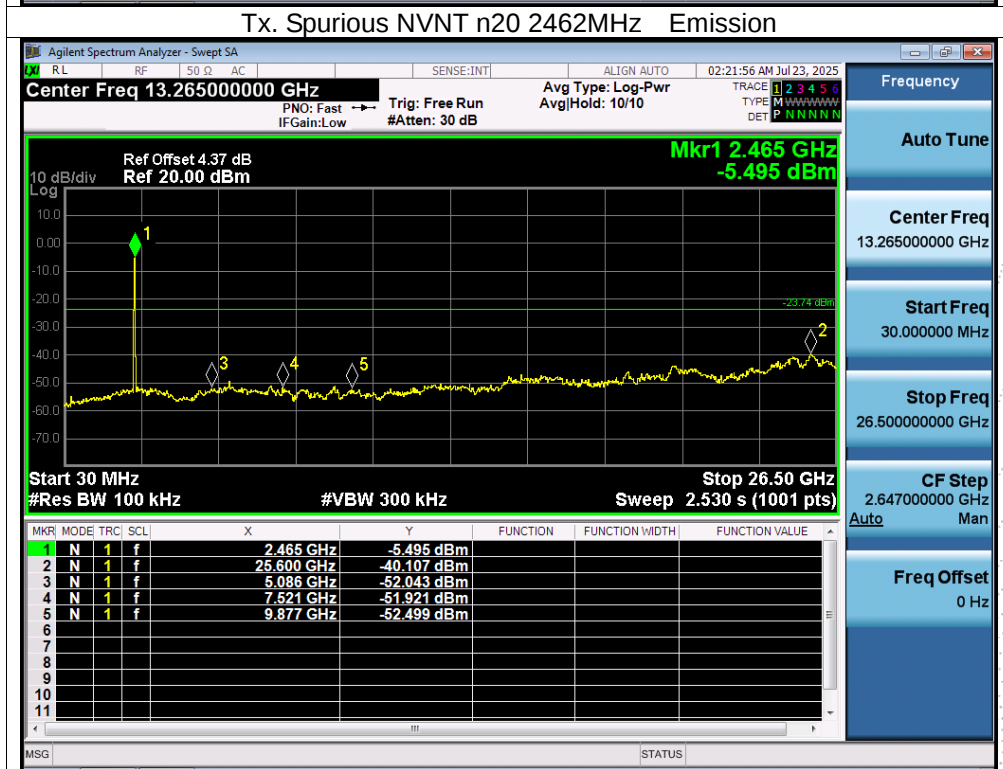
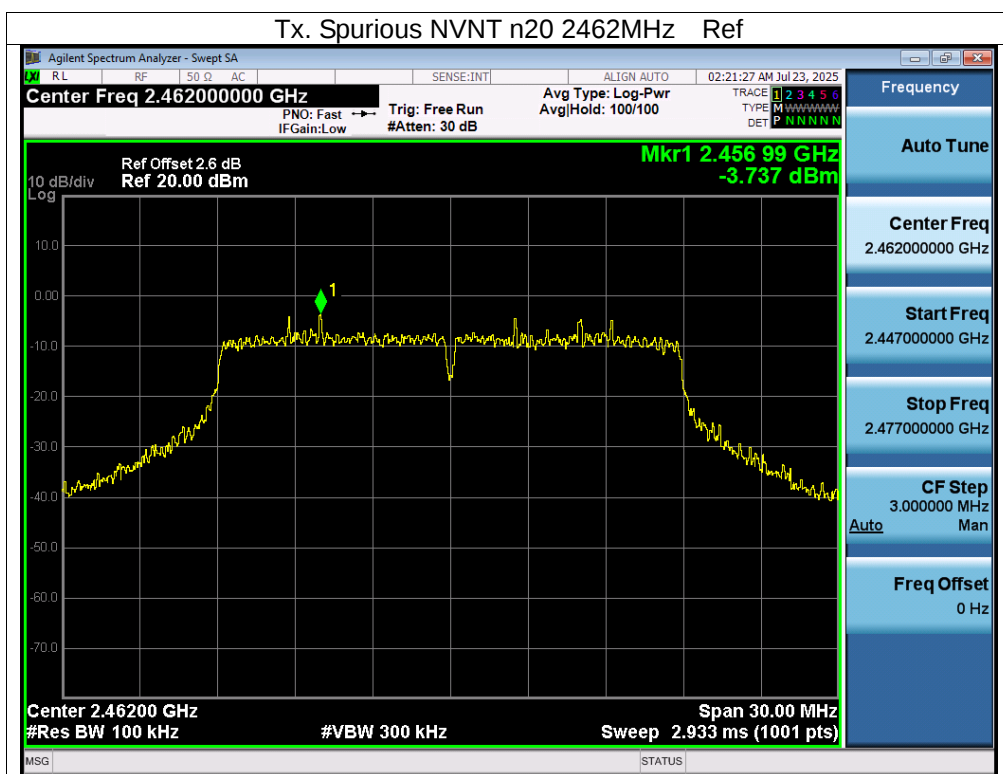




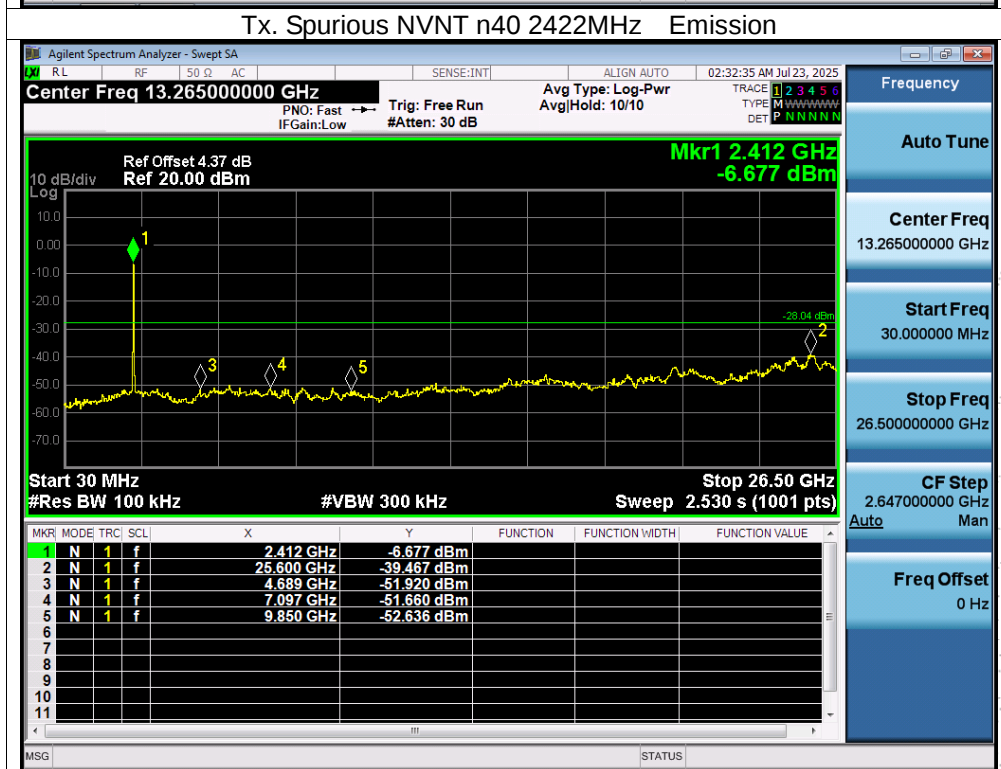
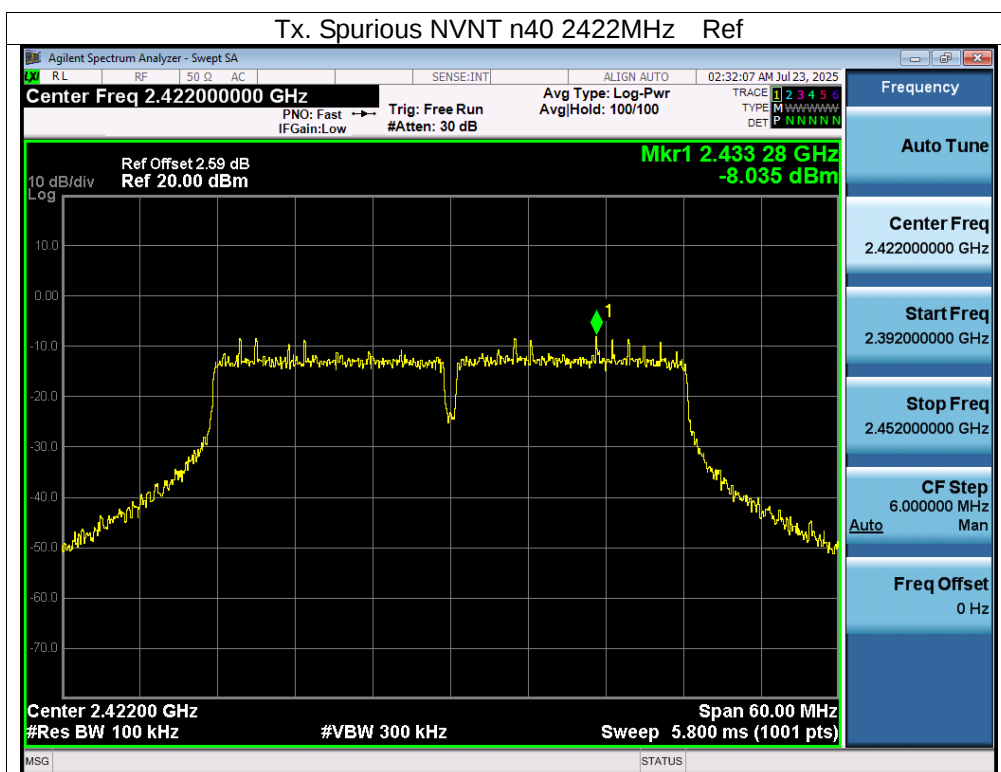


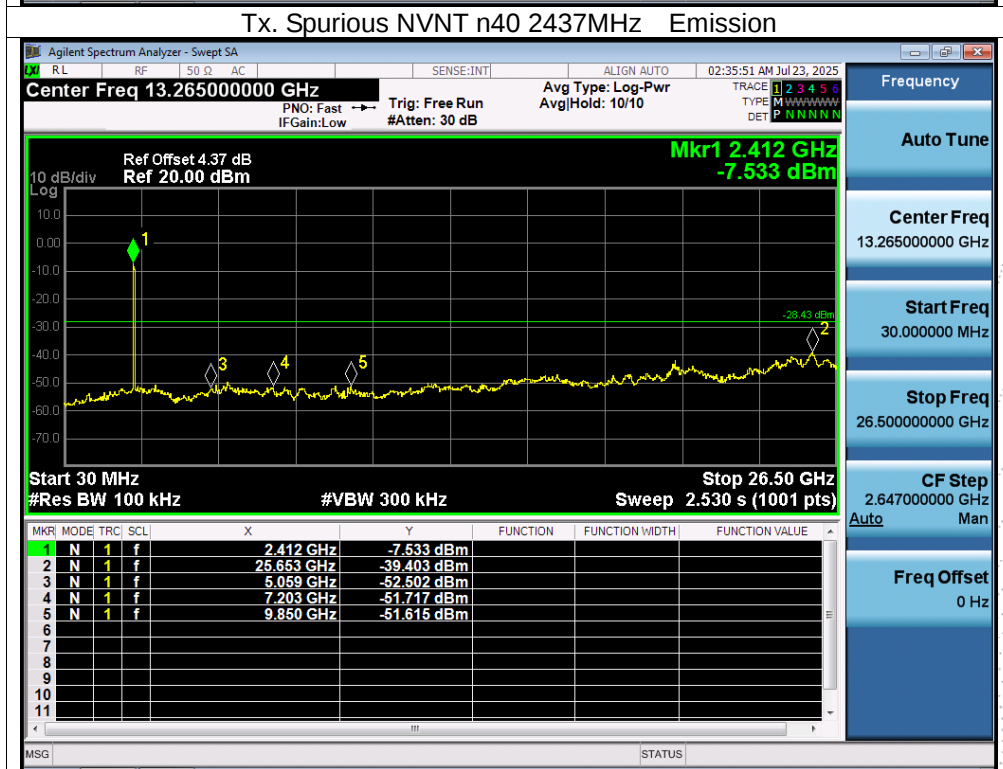
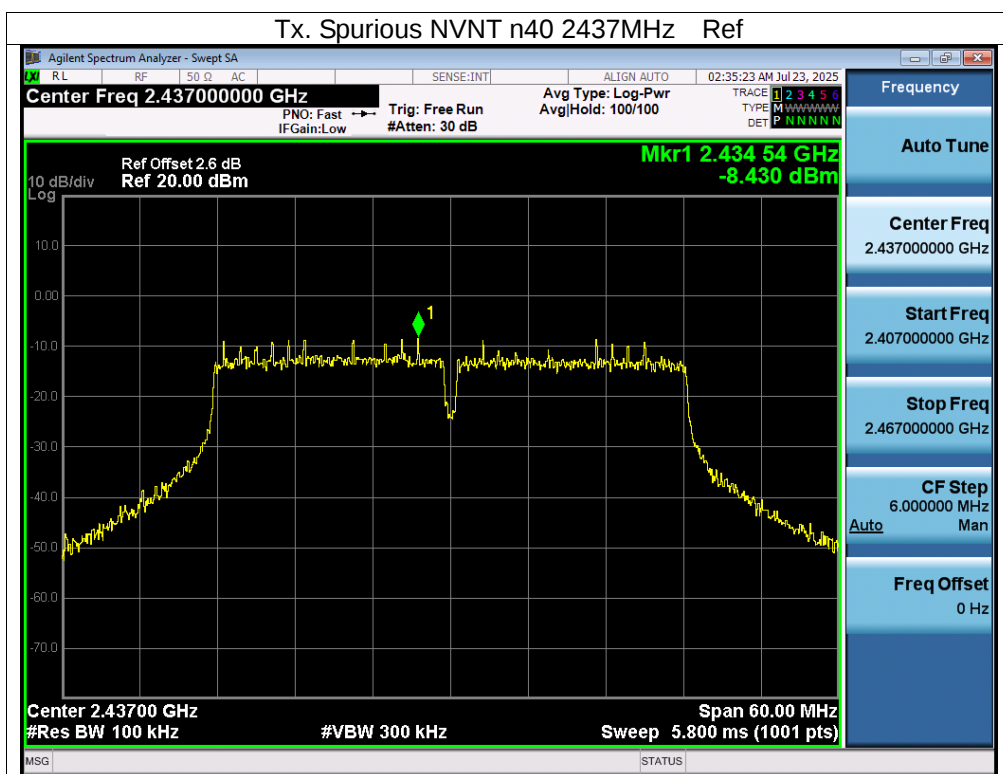


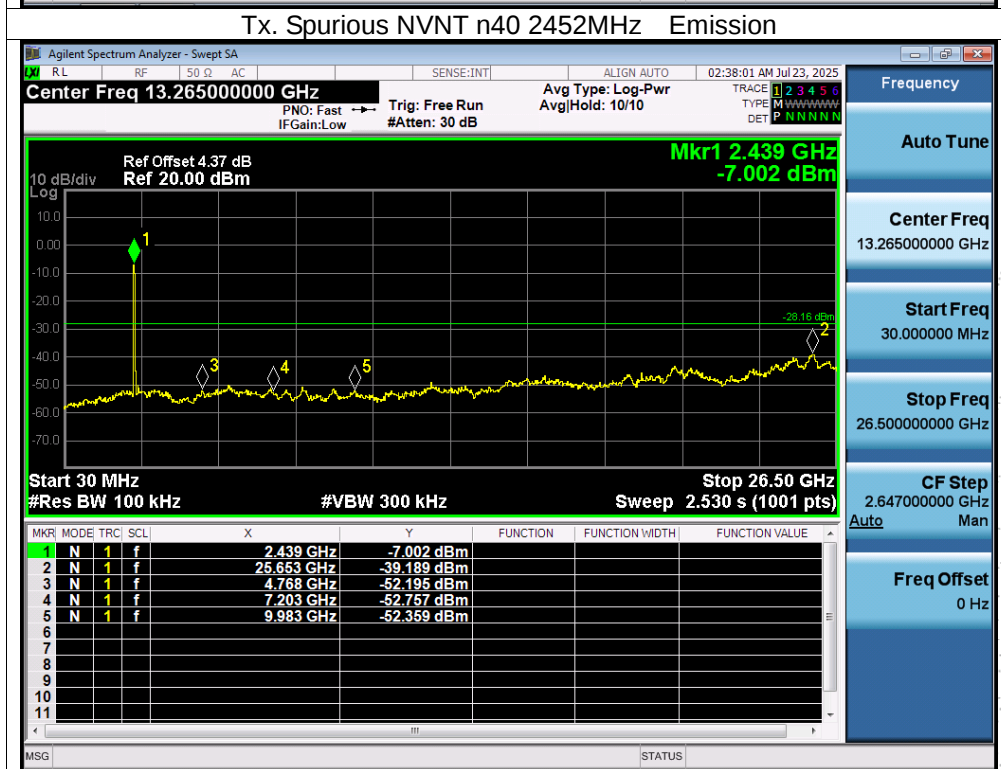
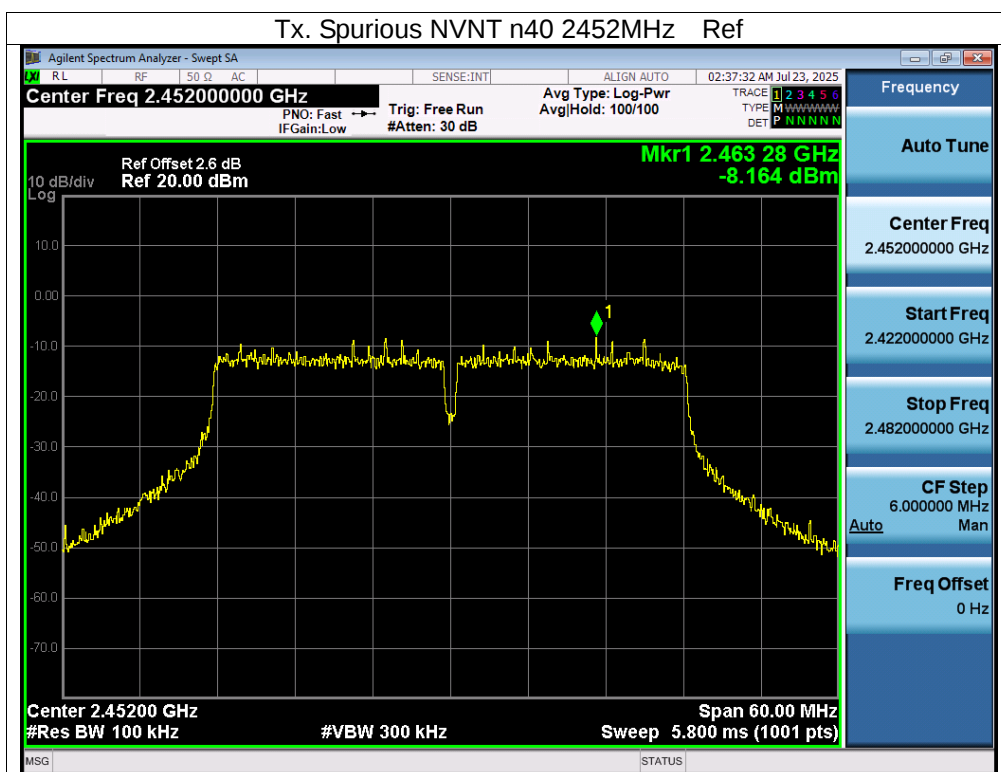


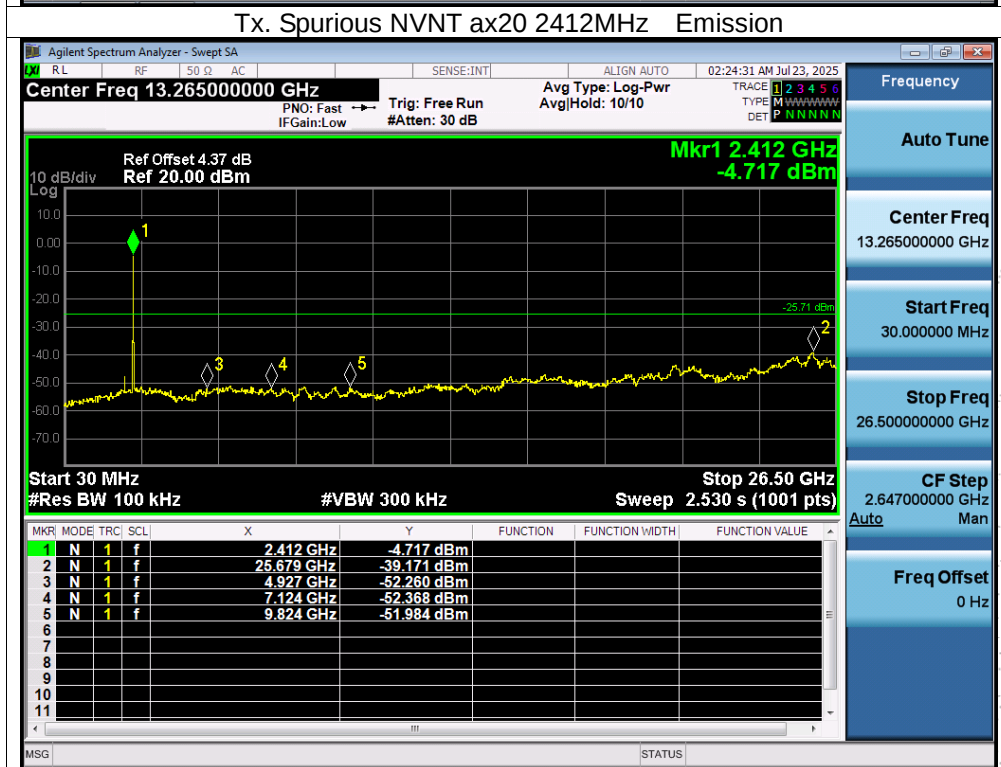
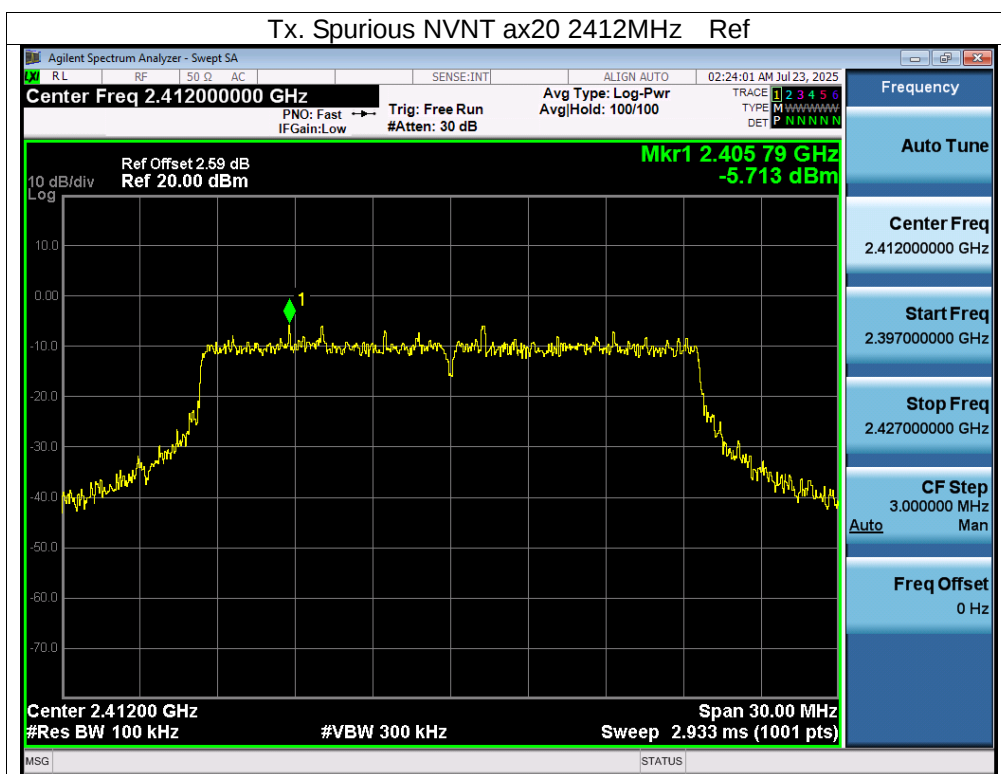


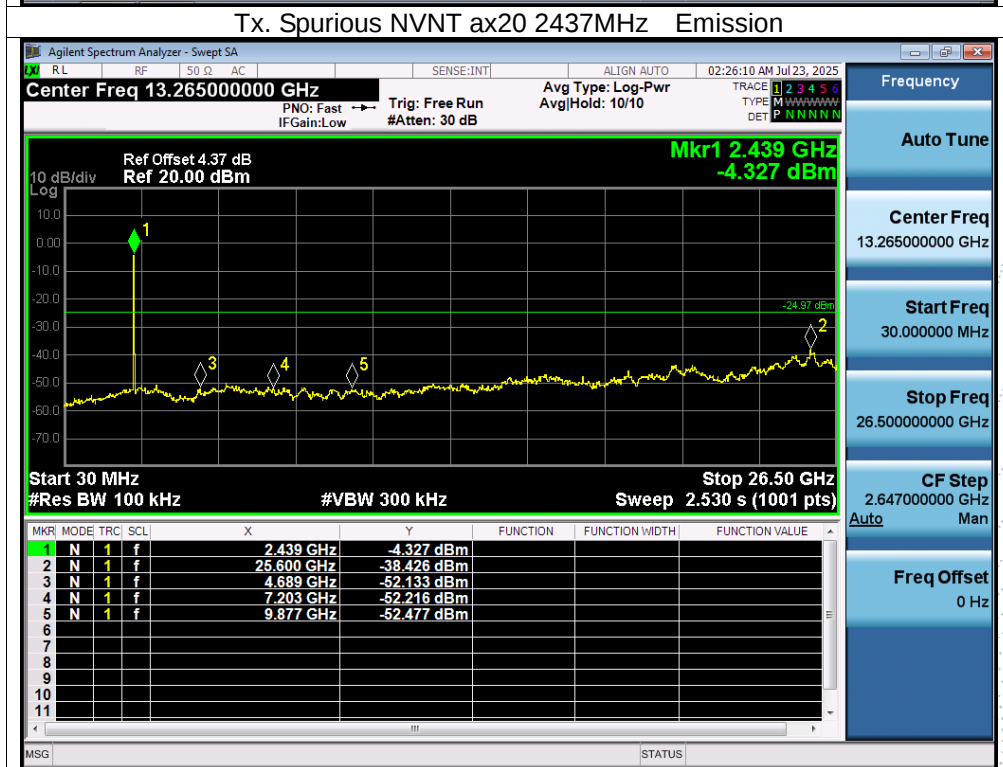
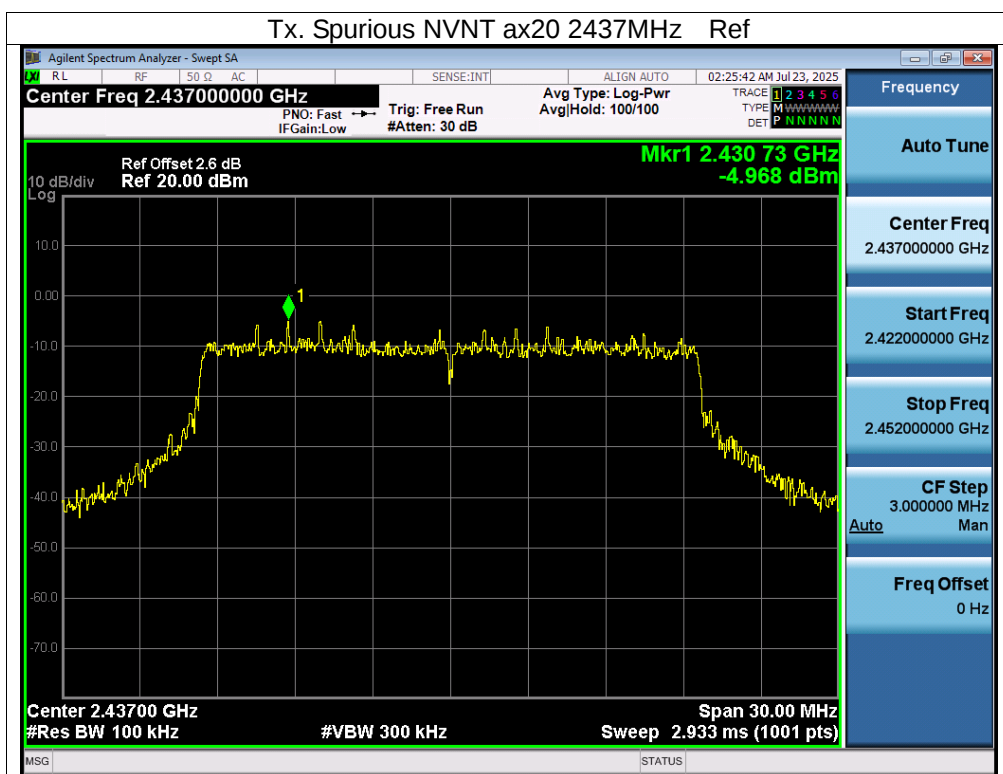
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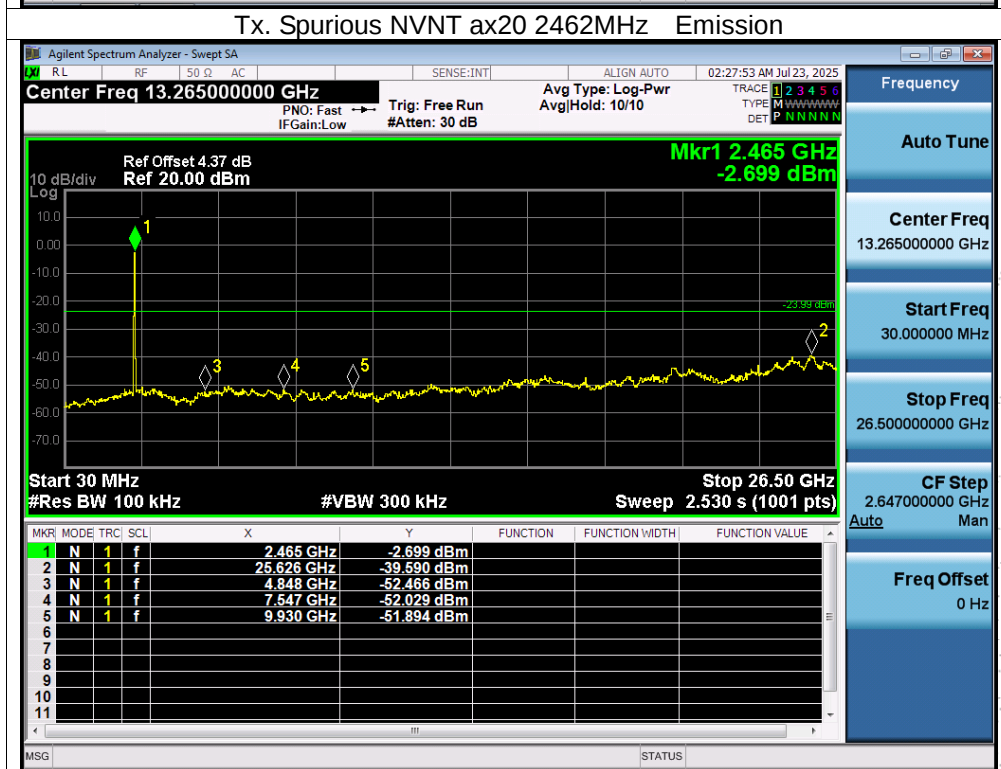
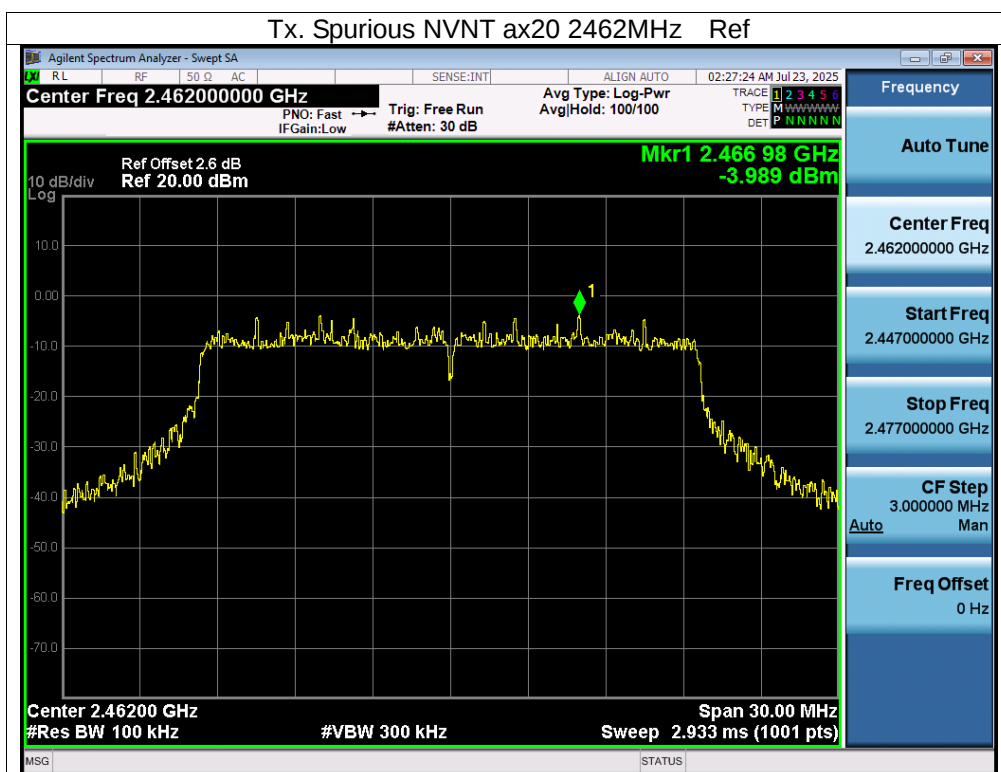




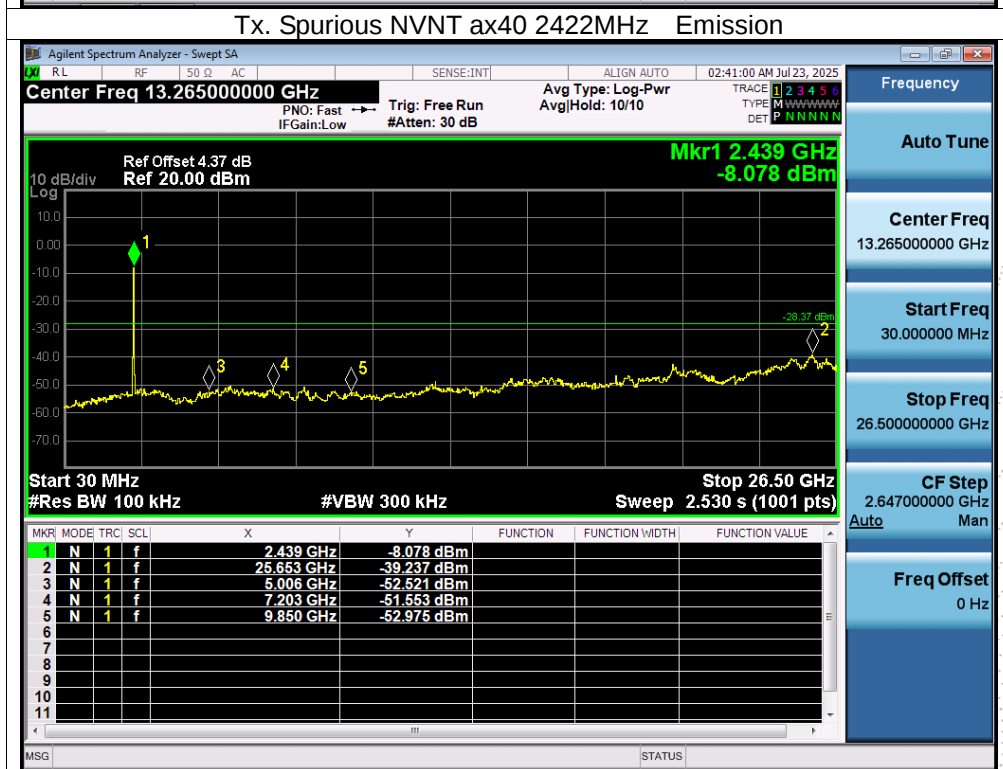
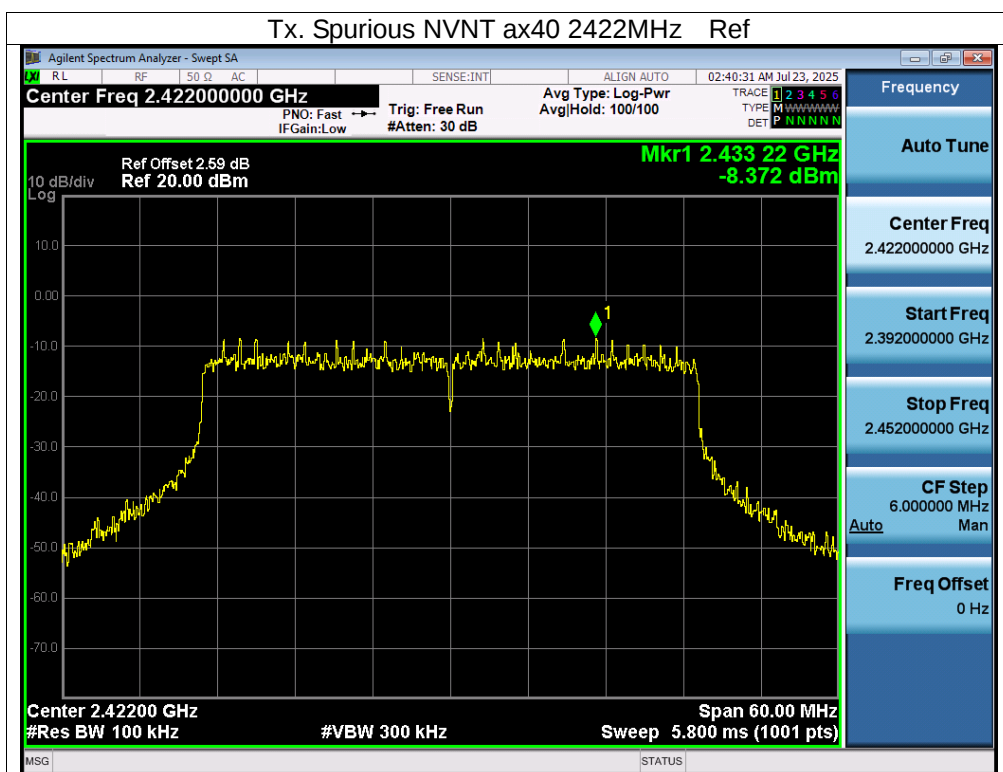


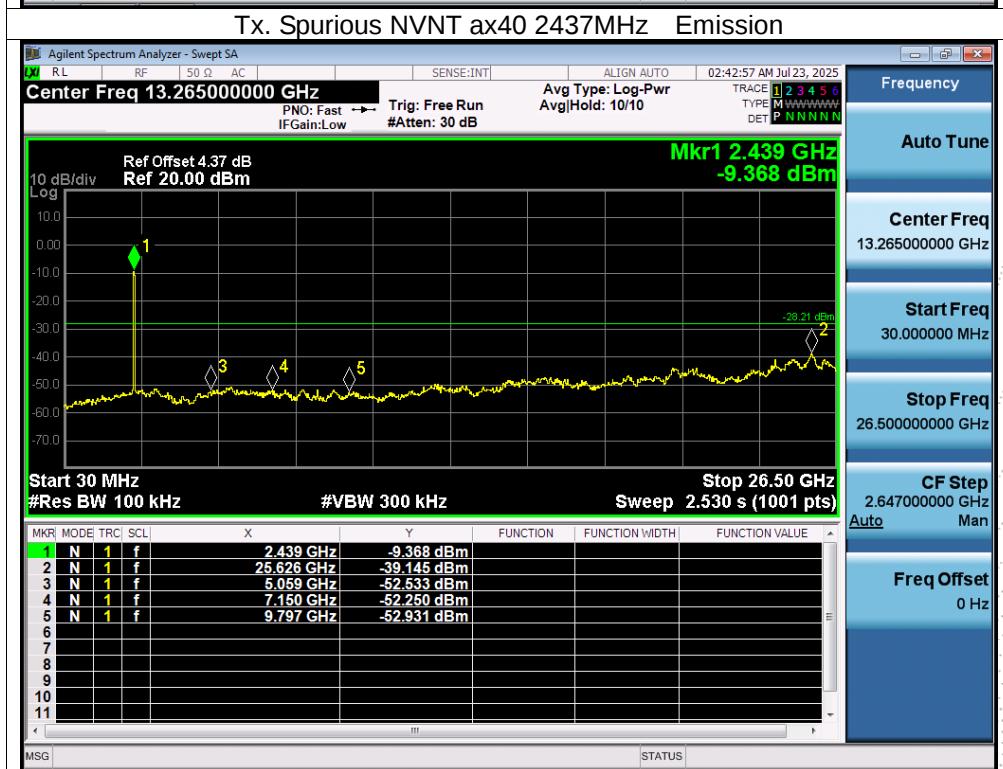
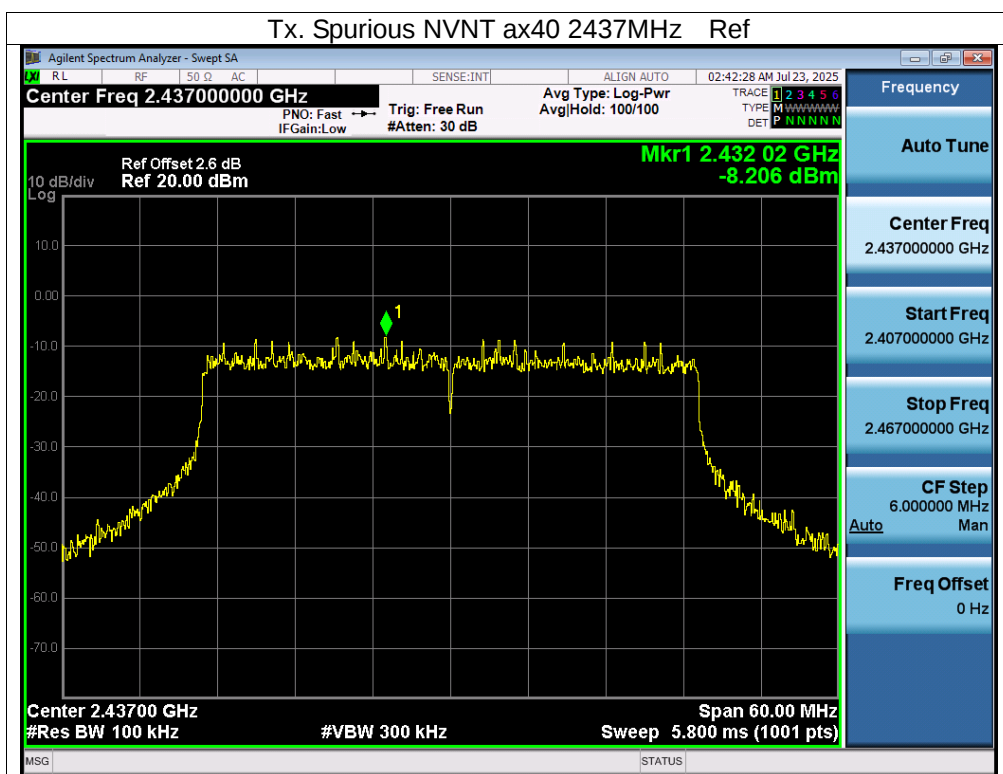


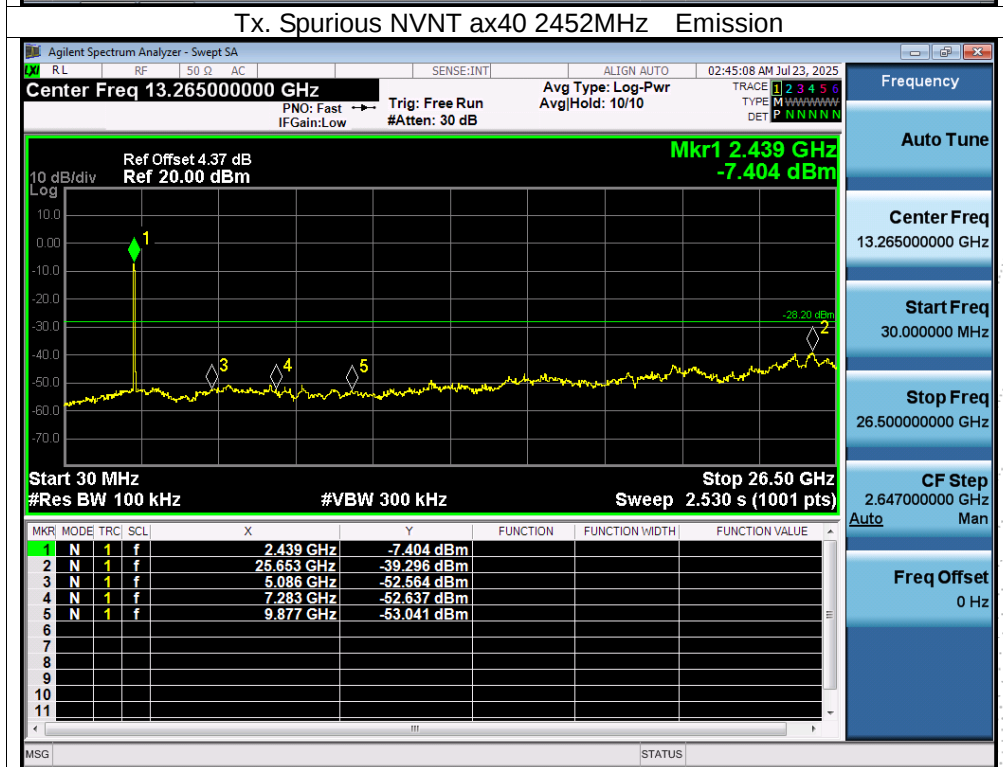
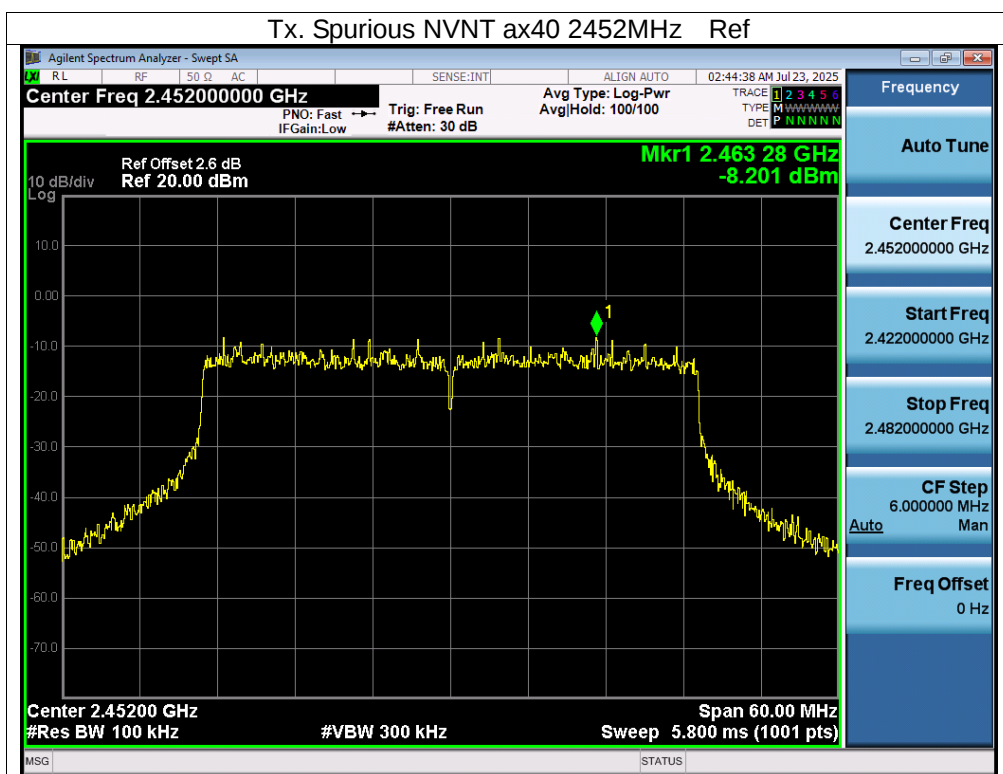




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13. Duty Cycle Of Test Signal

13.1 Standard Requirement

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

13.2 Formula

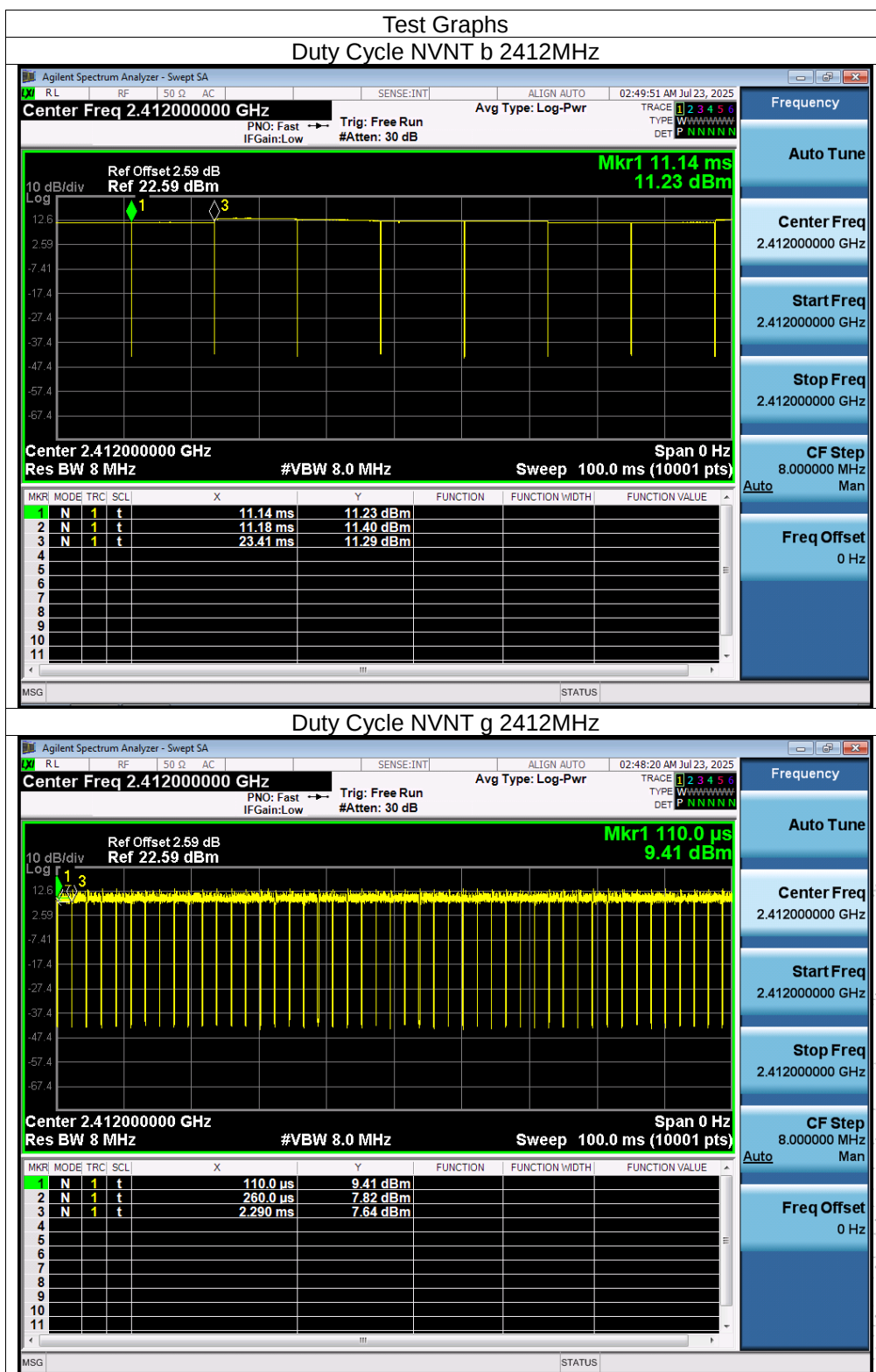
Duty Cycle = $T_{on} / (T_{on} + T_{off})$

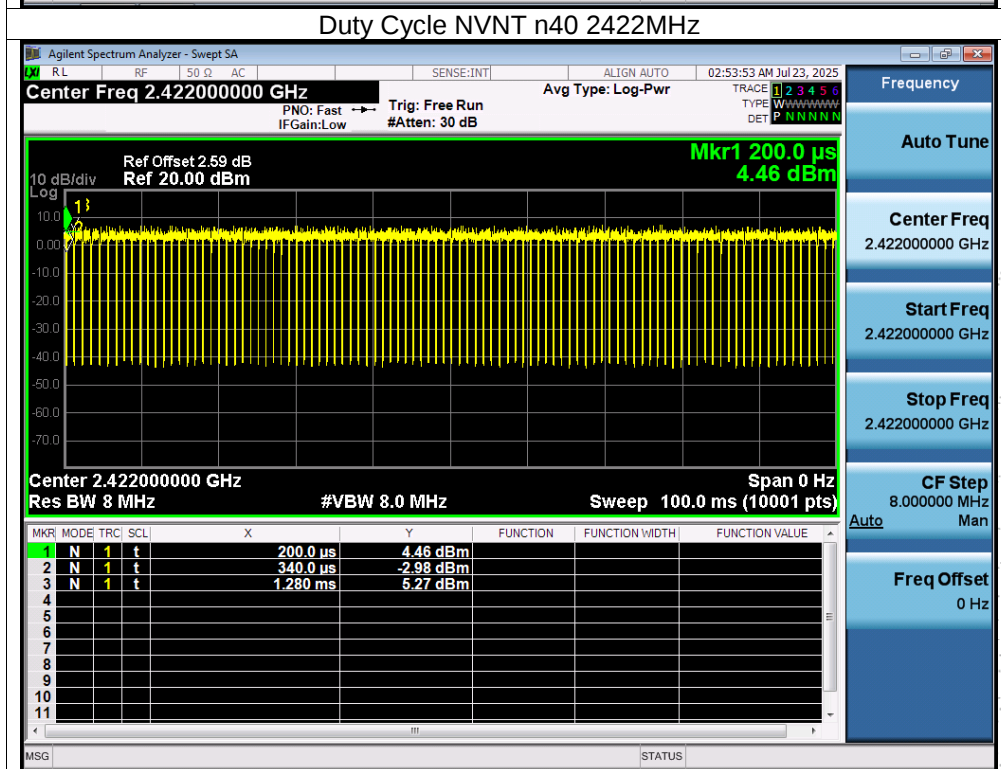
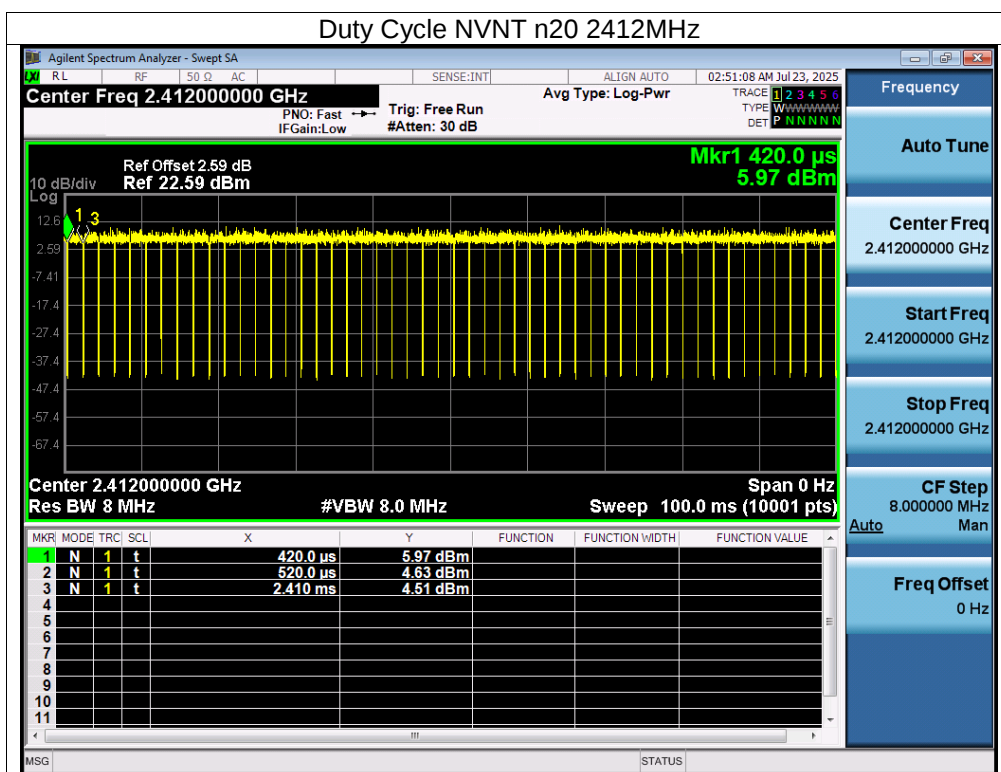
13.3 Test Procedure

1. Set span = Zero
2. RBW = 10MHz
3. VBW = 10MHz,
4. Detector = Peak

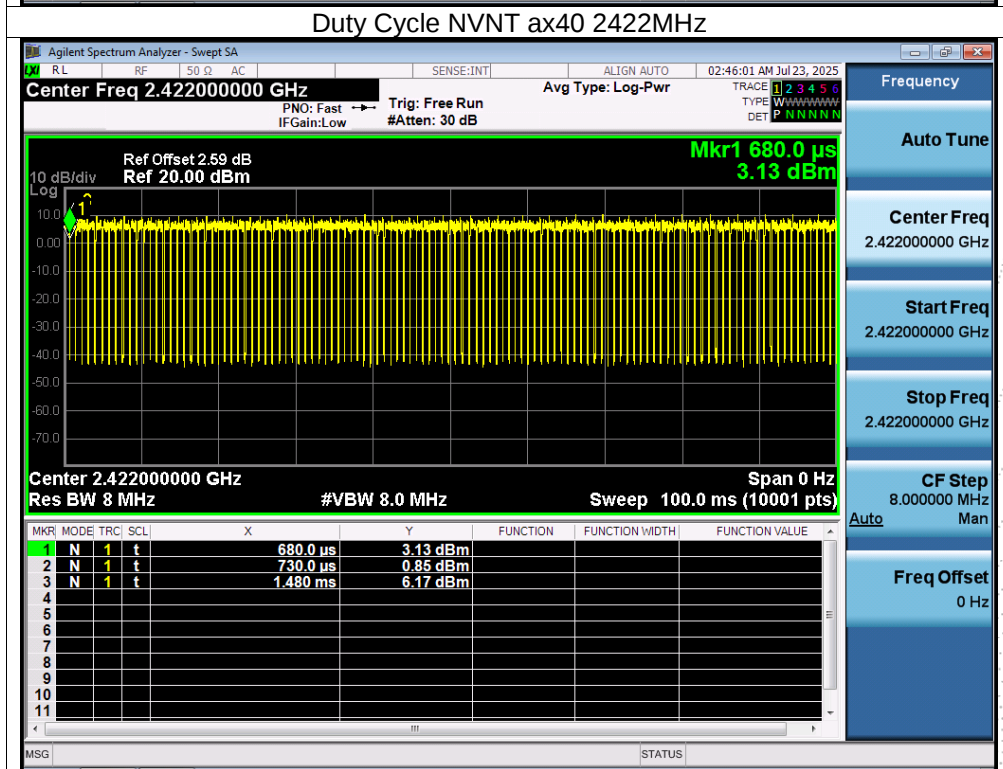
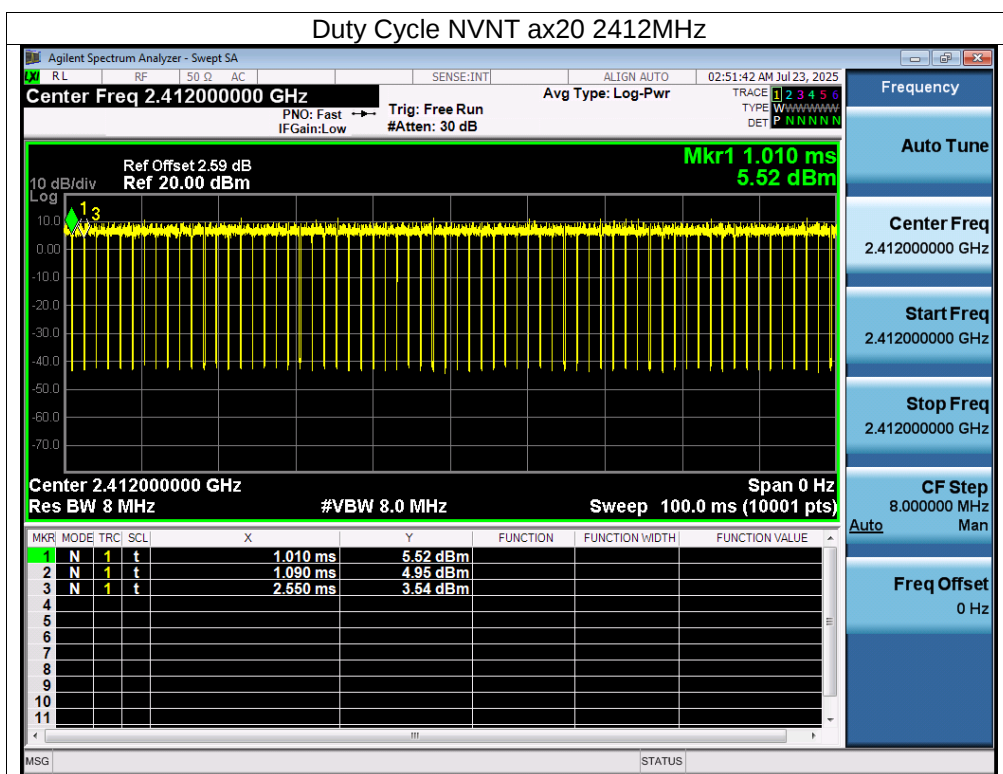
13.4 Test Result

Test mode	Frequency (MHz)	Duty Cycle(%)	Duty Fator(dB)
802.11b	2412	99.67	0
802.11g	2412	93.12	0.31
802.11n(HT20)	2412	94.97	0.22
802.11n(HT40)	2422	87.04	0.6
802.11ax(HT20)	2412	94.81	0.23
802.11ax(HT40)	2422	93.75	0.28





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14. Antenna Requirement

14.1 Limit

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

14.1 Test Result

The EUT antenna is External antenna, antenna connector type is RP-SMA, and it is inside the EUT, fulfill the requirement of this section.



15. EUT Photographs

EUT Photo

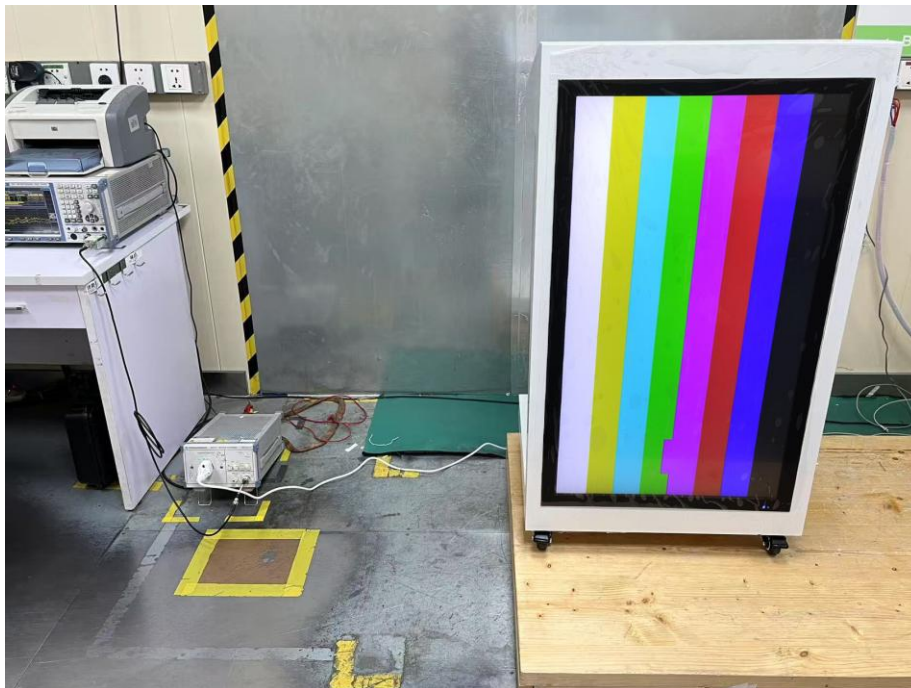


NOTE: Appendix-Photographs Of EUT Constructional Details
(DE043NLW_External & Internal Photos)

TC
BC
PPR
Report

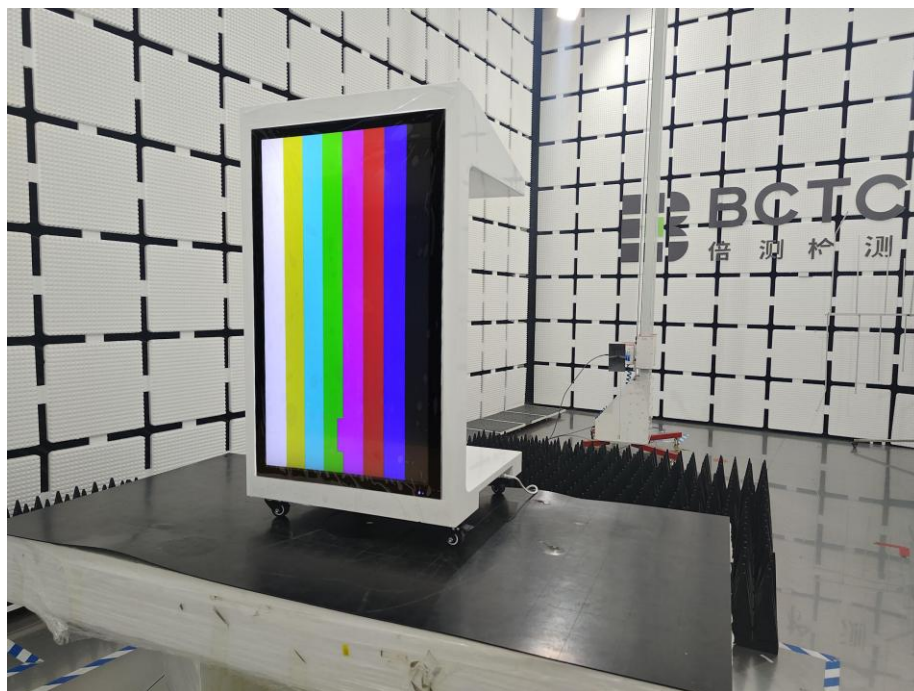
16. EUT Test Setup Photographs

Conducted emissions



Radiated 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 *****