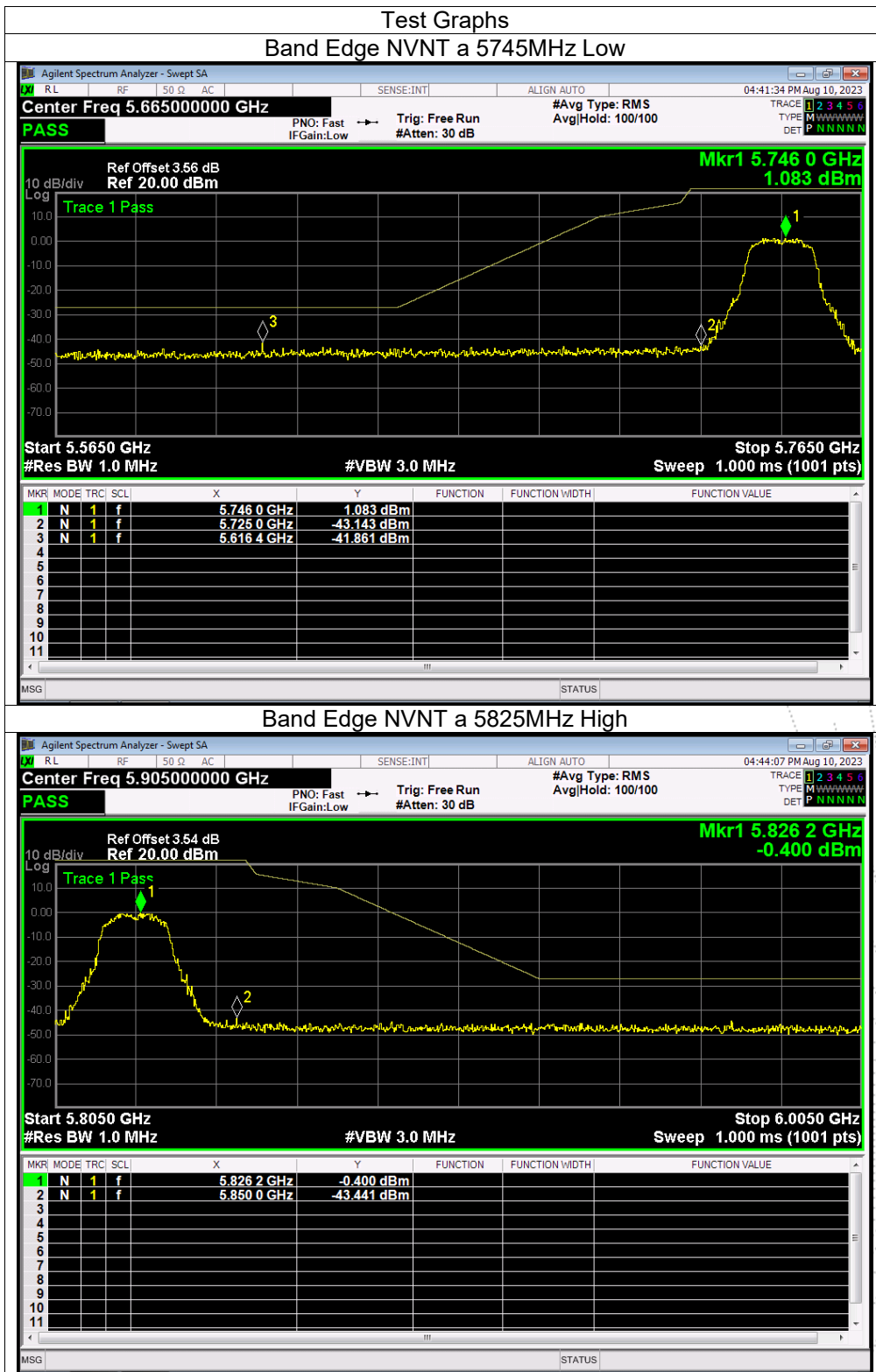
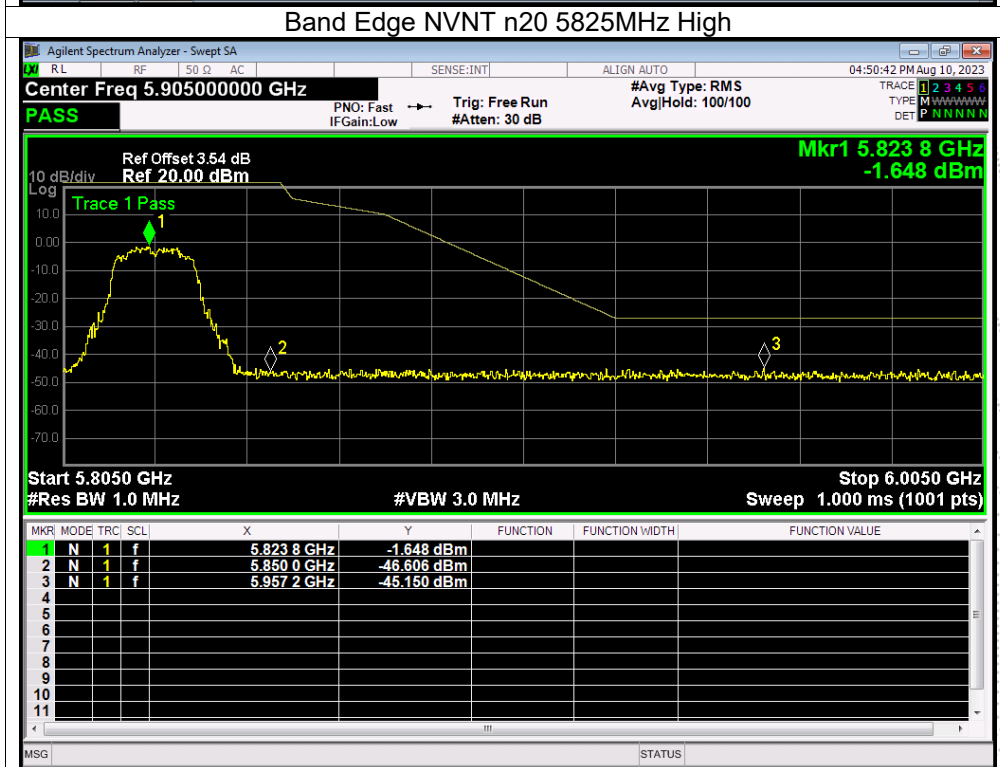
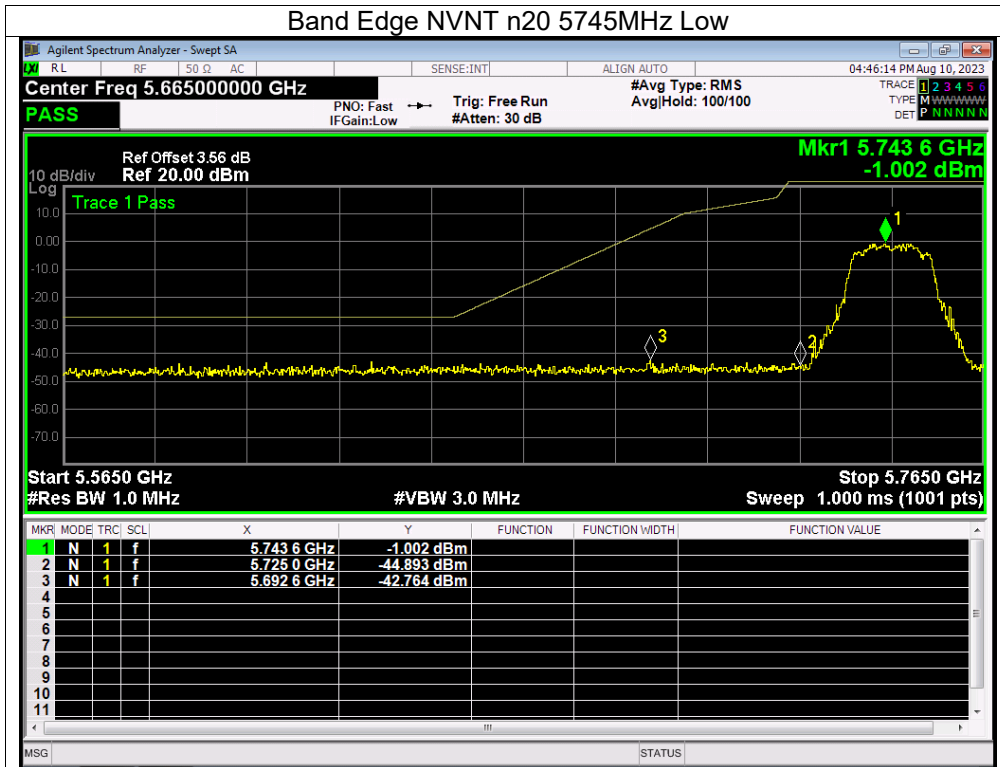
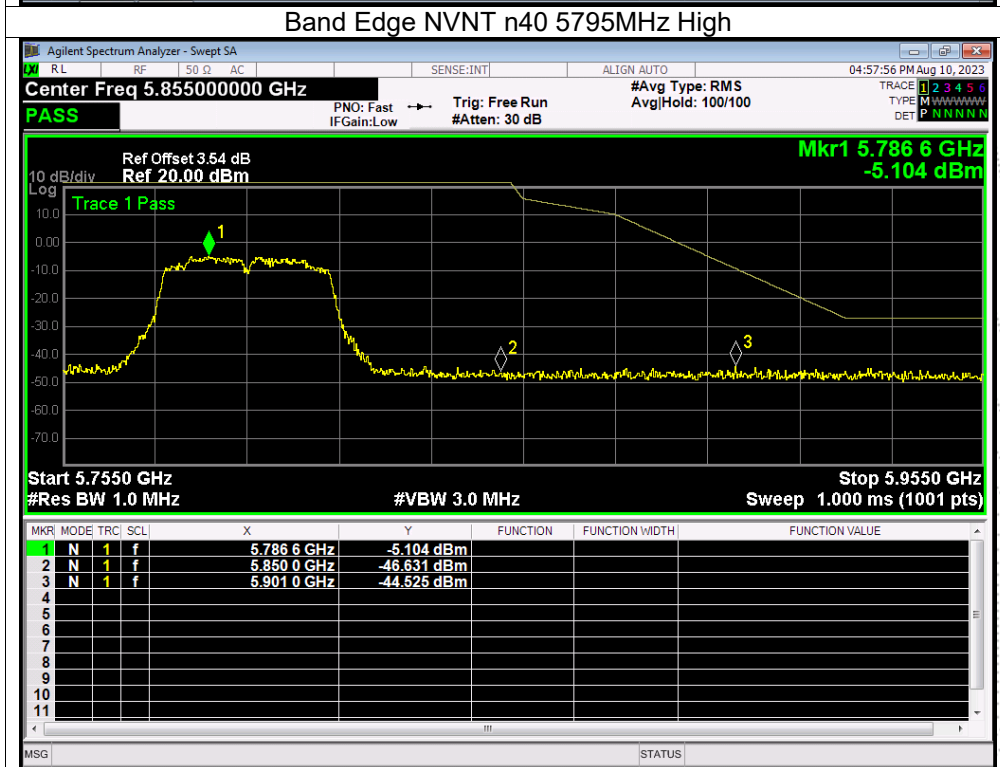
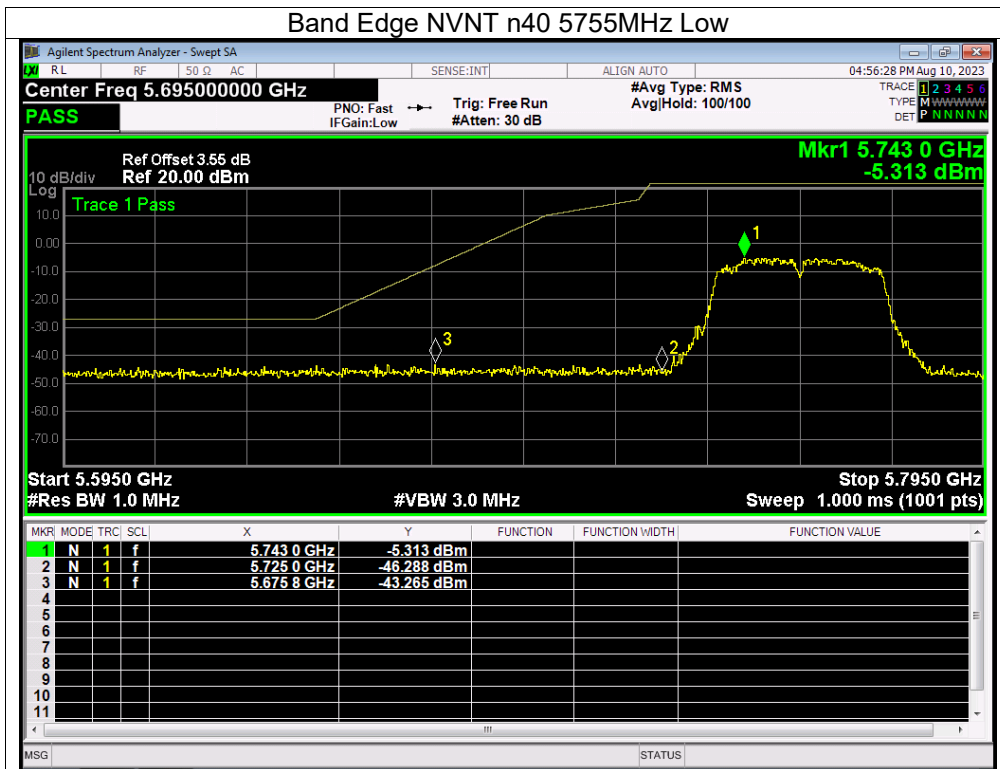
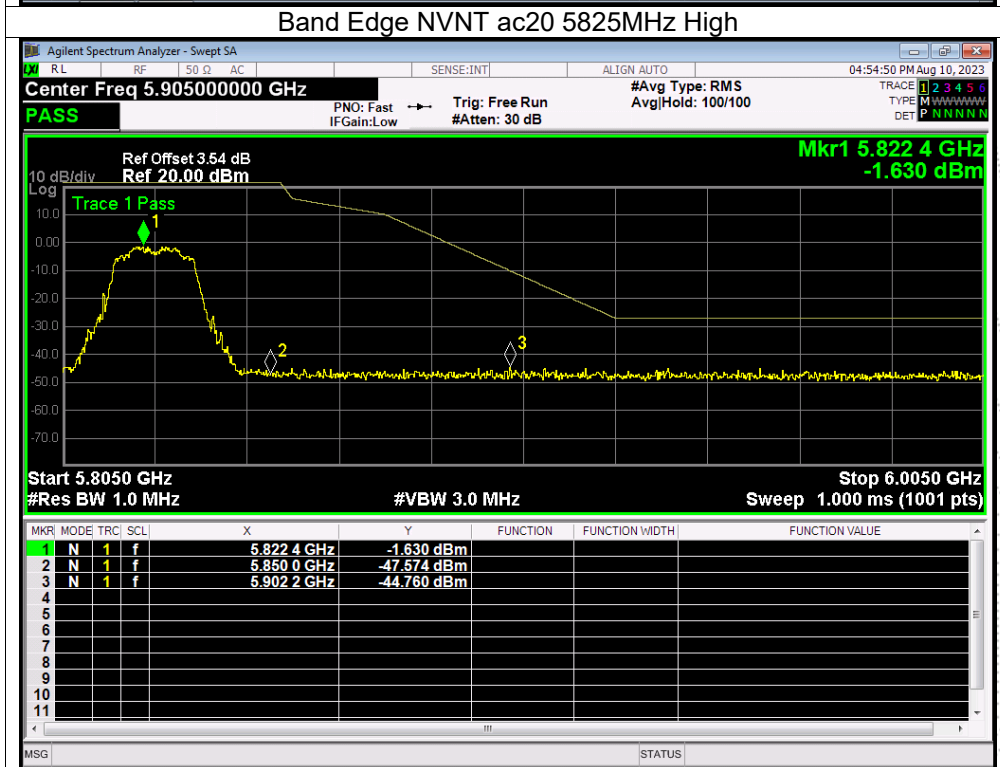
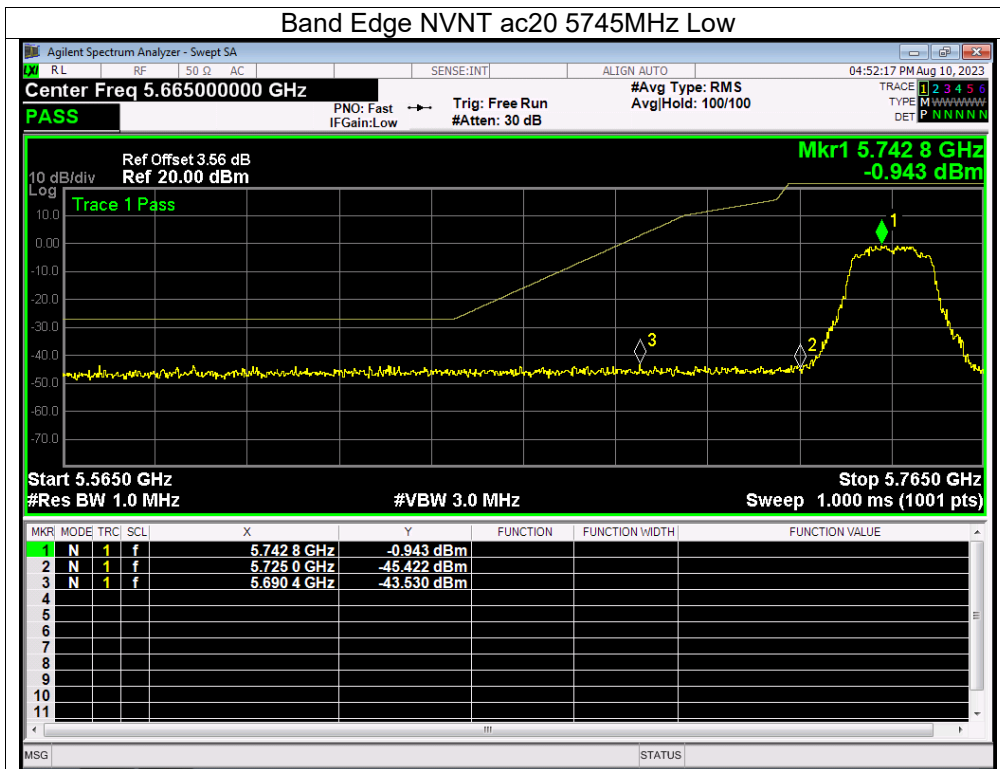


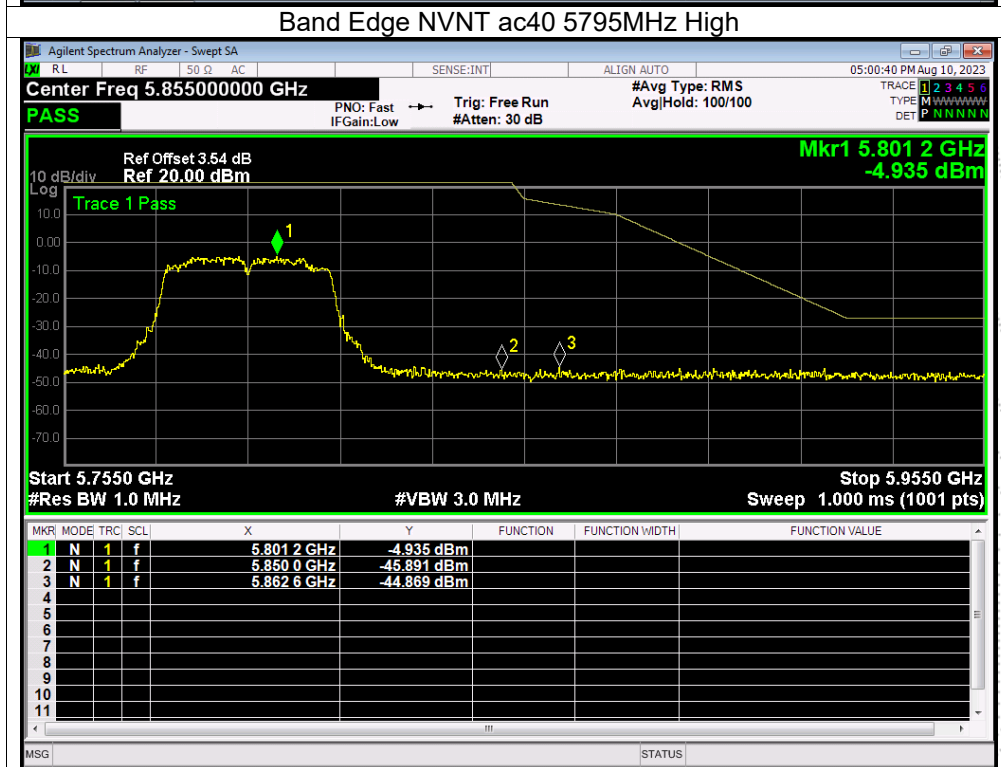
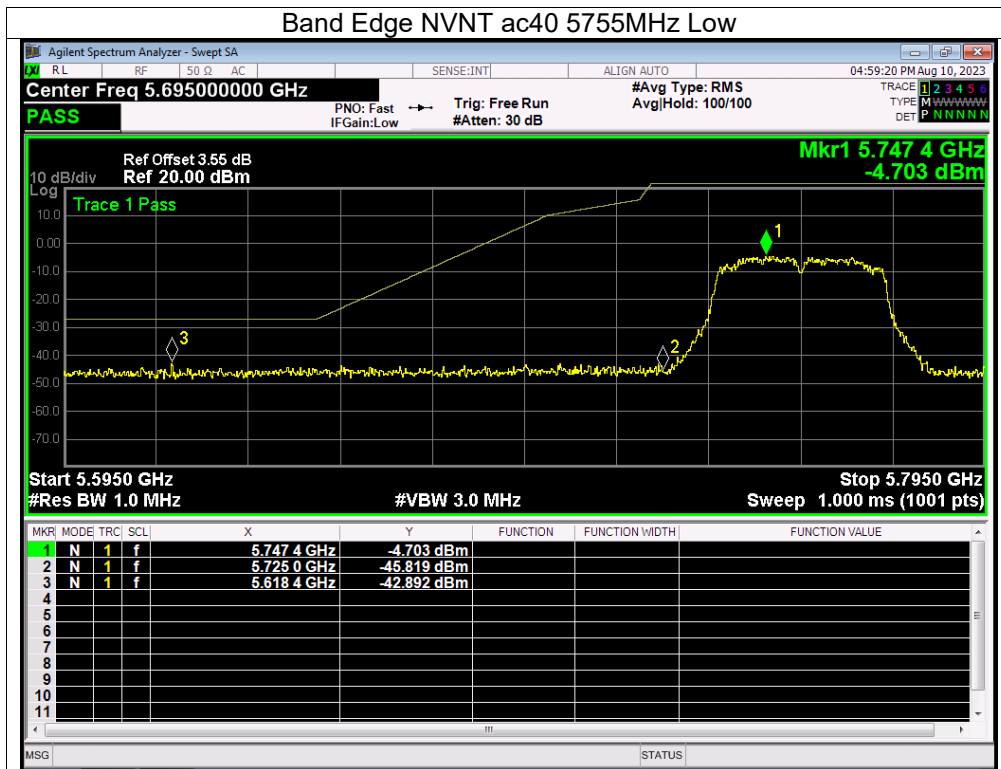
Note: A(B) Represent the value of antenna A and B. The worst data is Antenna B, only shown Antenna B.
 Antenna B: 5745-58250MHz

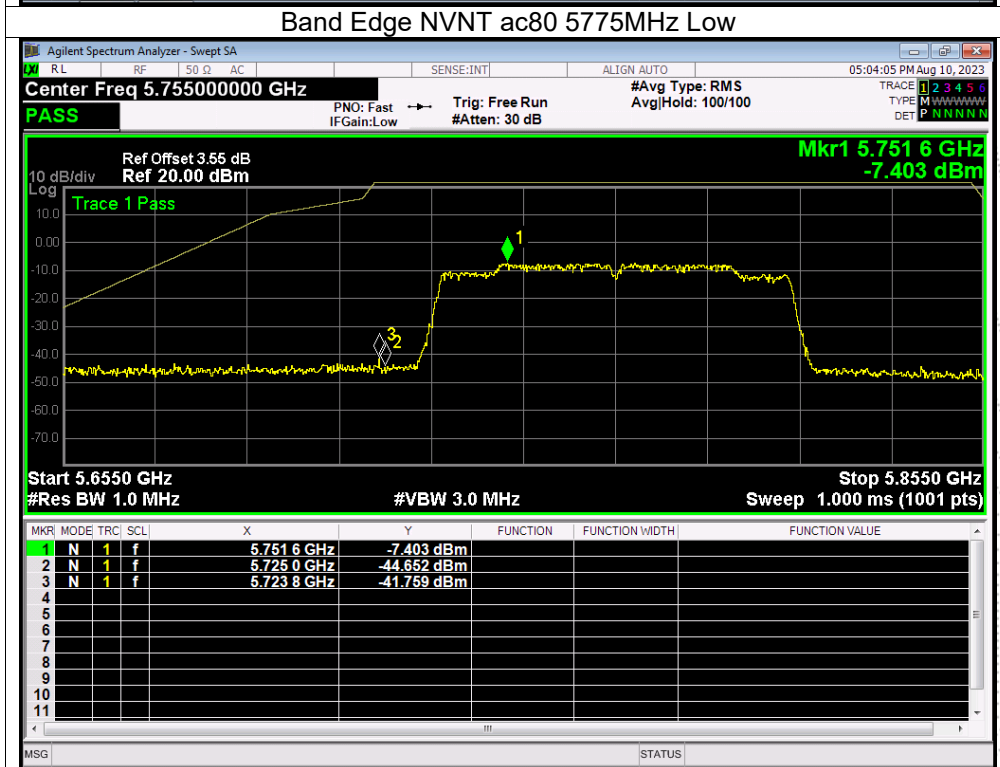
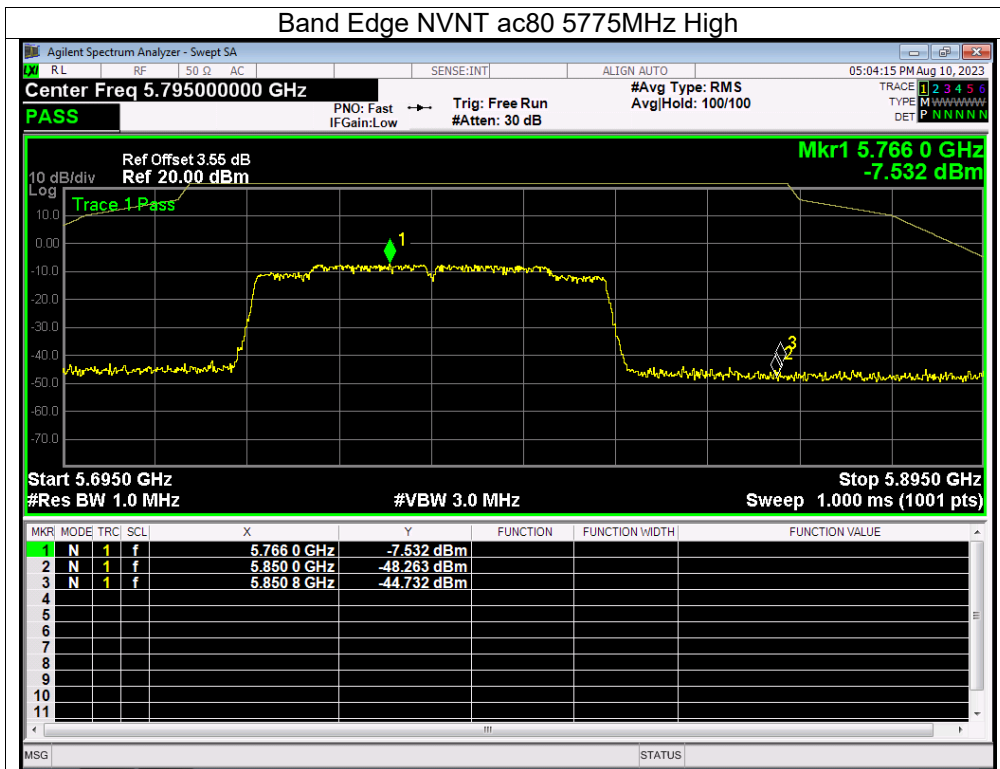












12. Spurious RF Conducted Emissions

12.1 Block Diagram Of Test Setup



12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.725-5.85 GHz band (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge..

12.3 Test Procedure

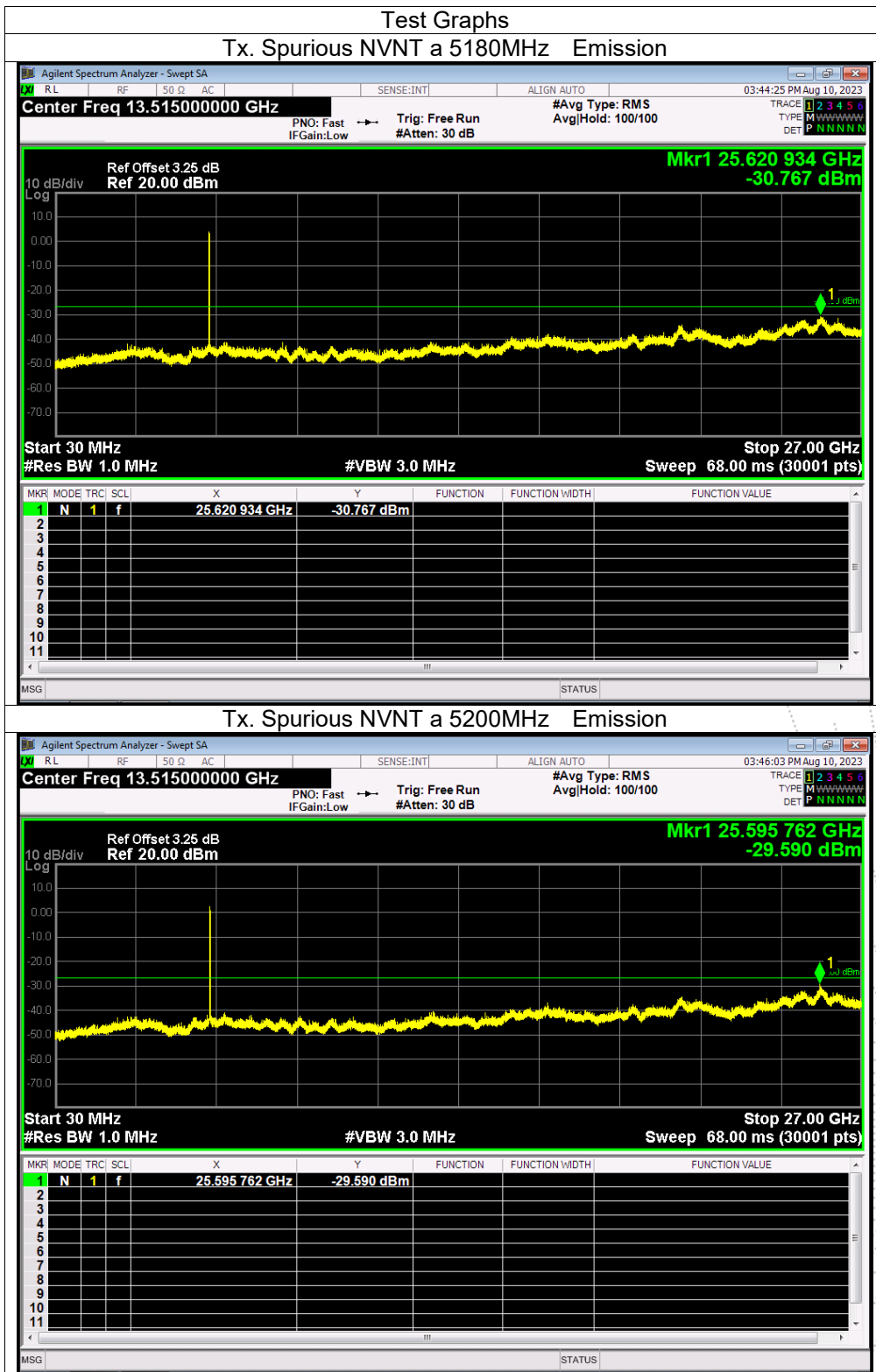
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

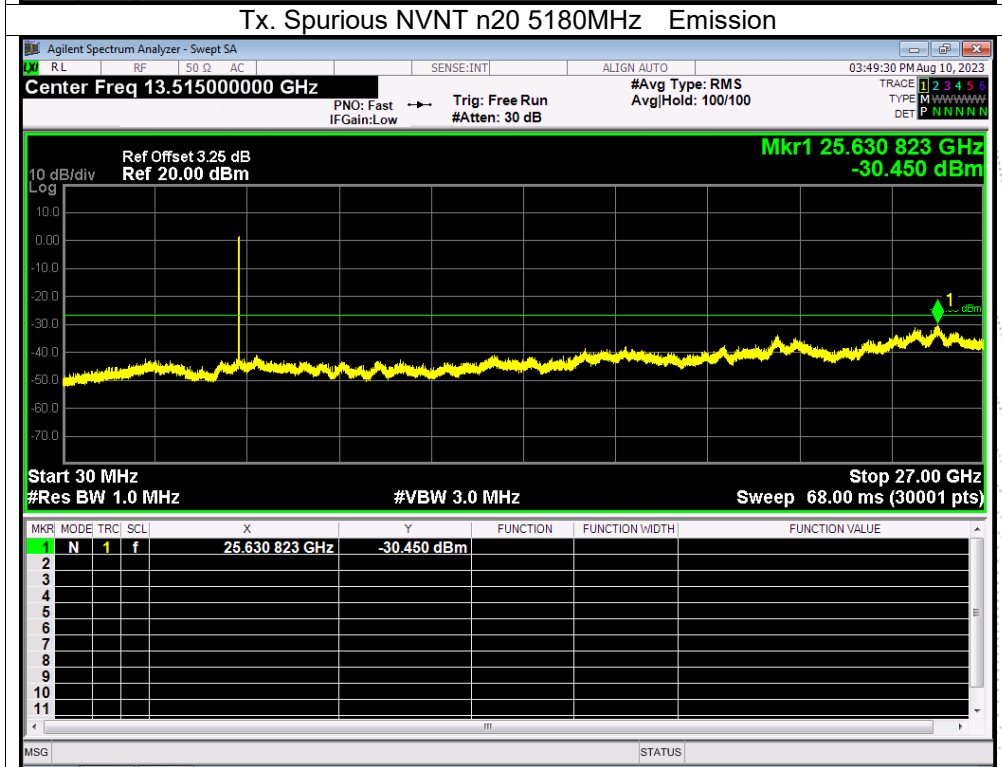
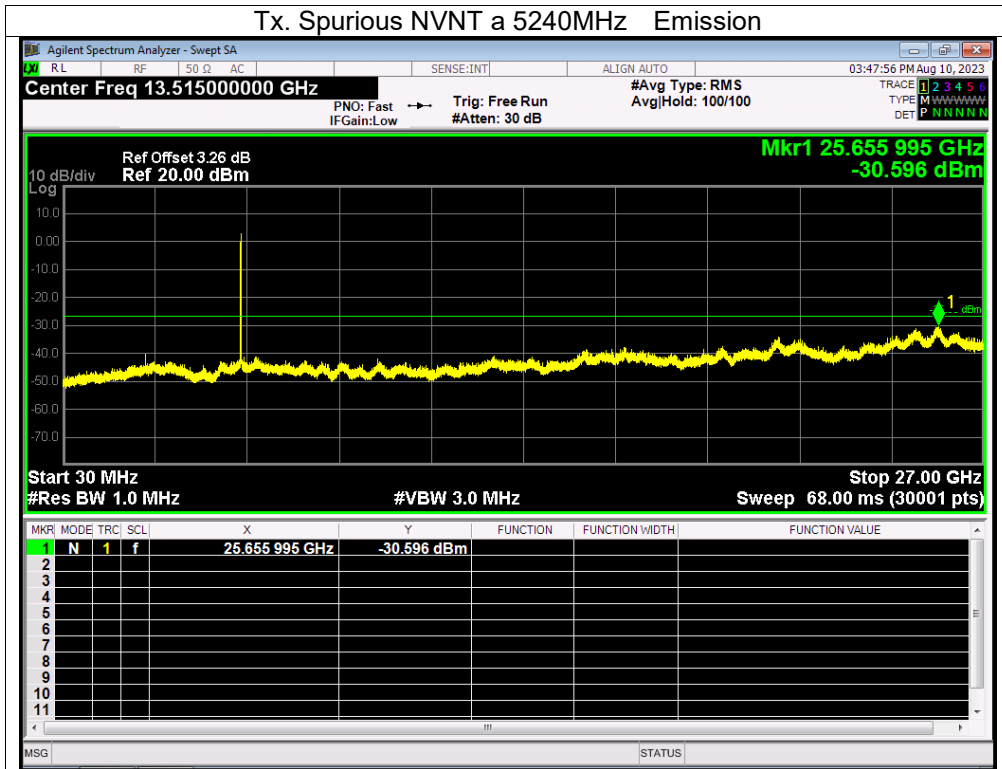
12.4 Test Result

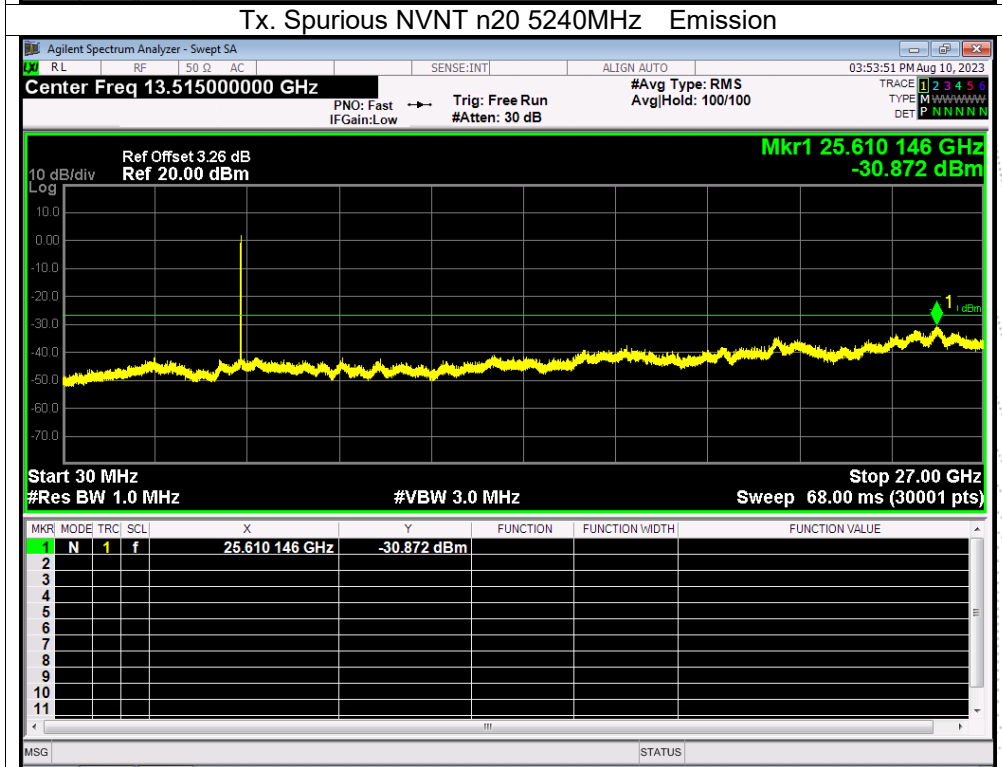
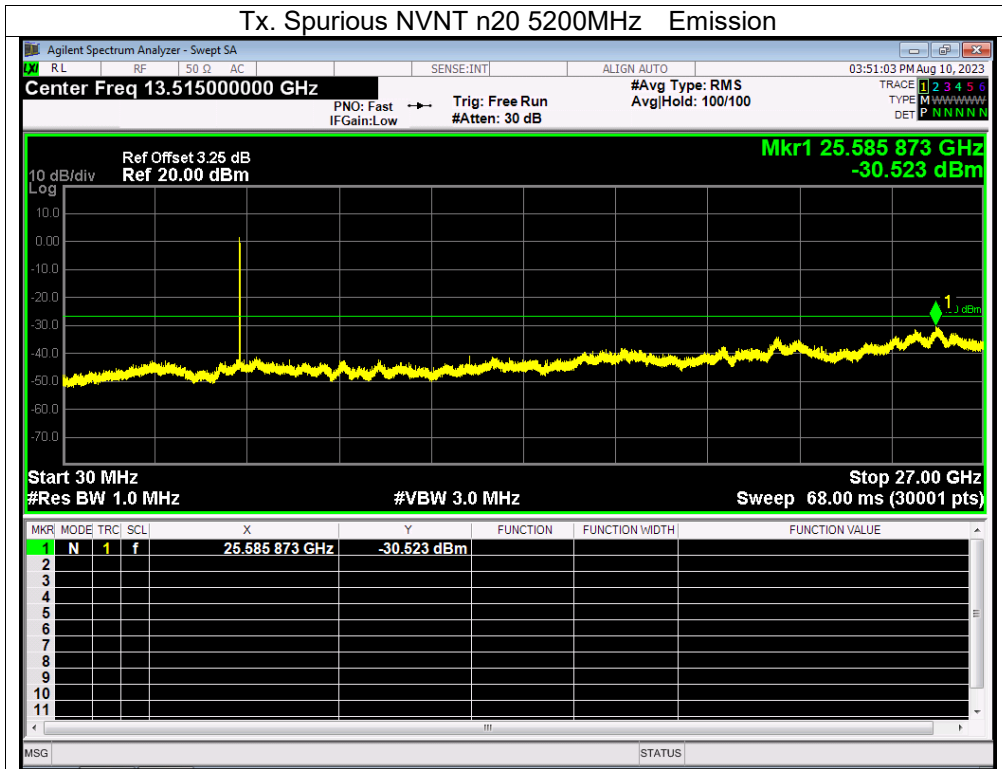
Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and band edge measurement data.

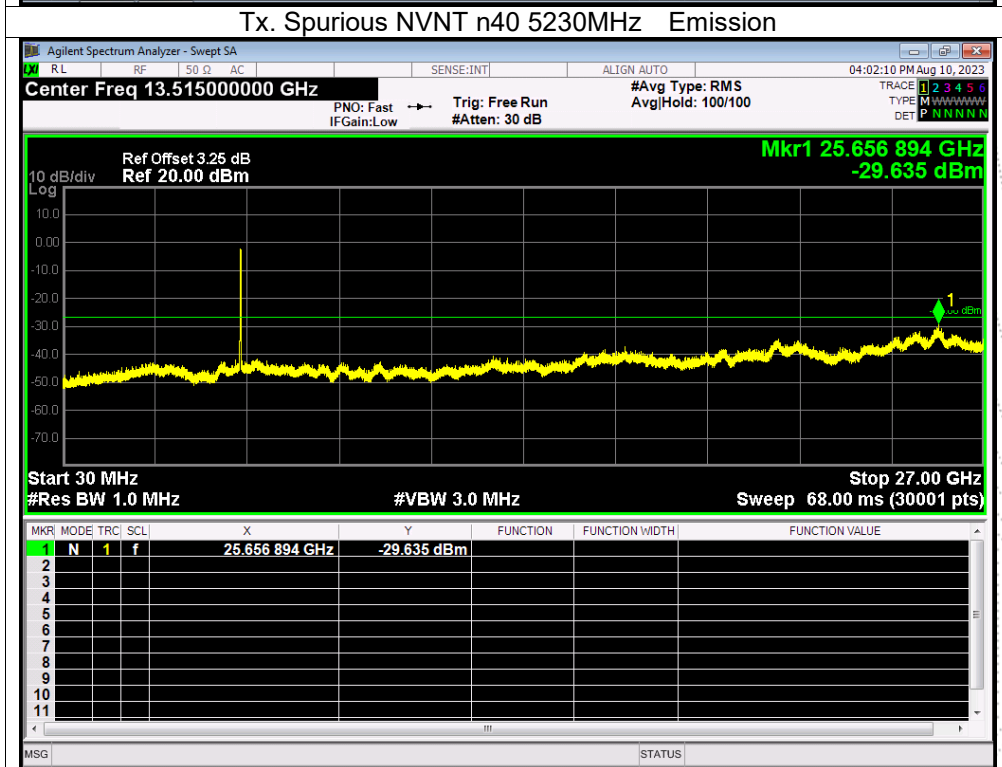
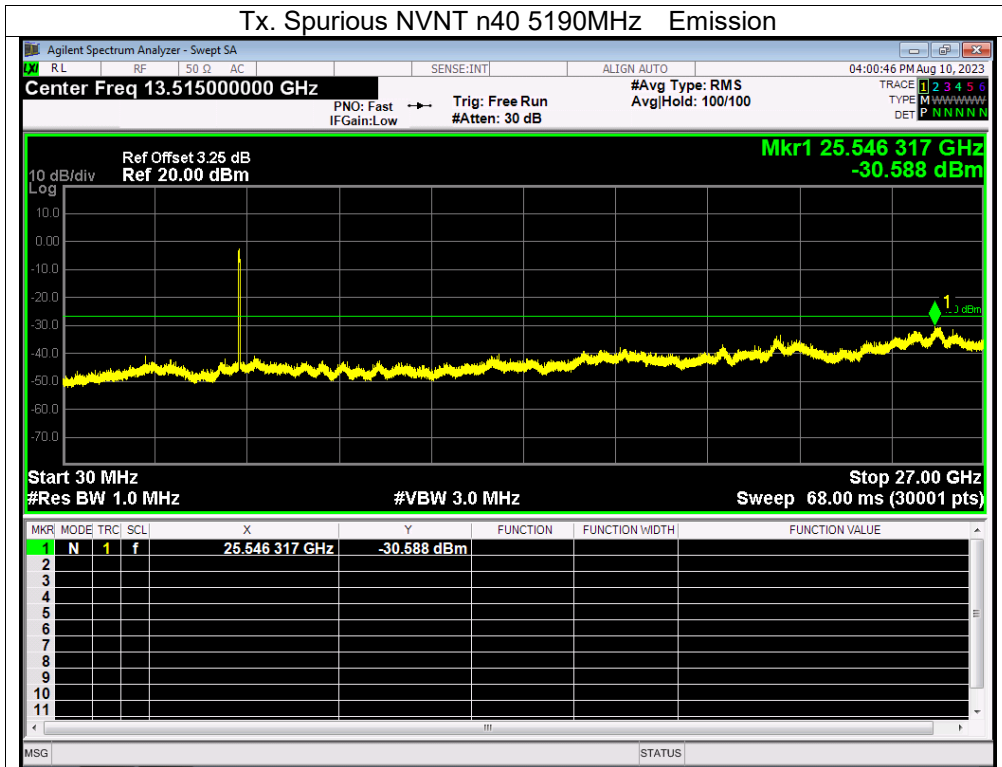
About: 26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

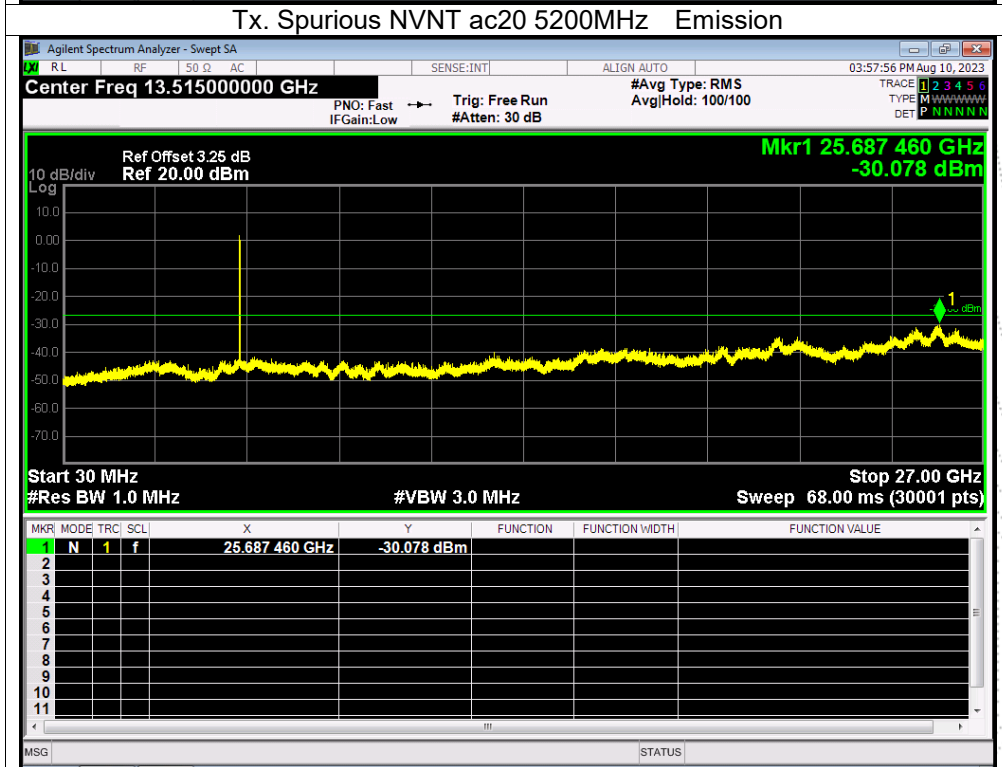
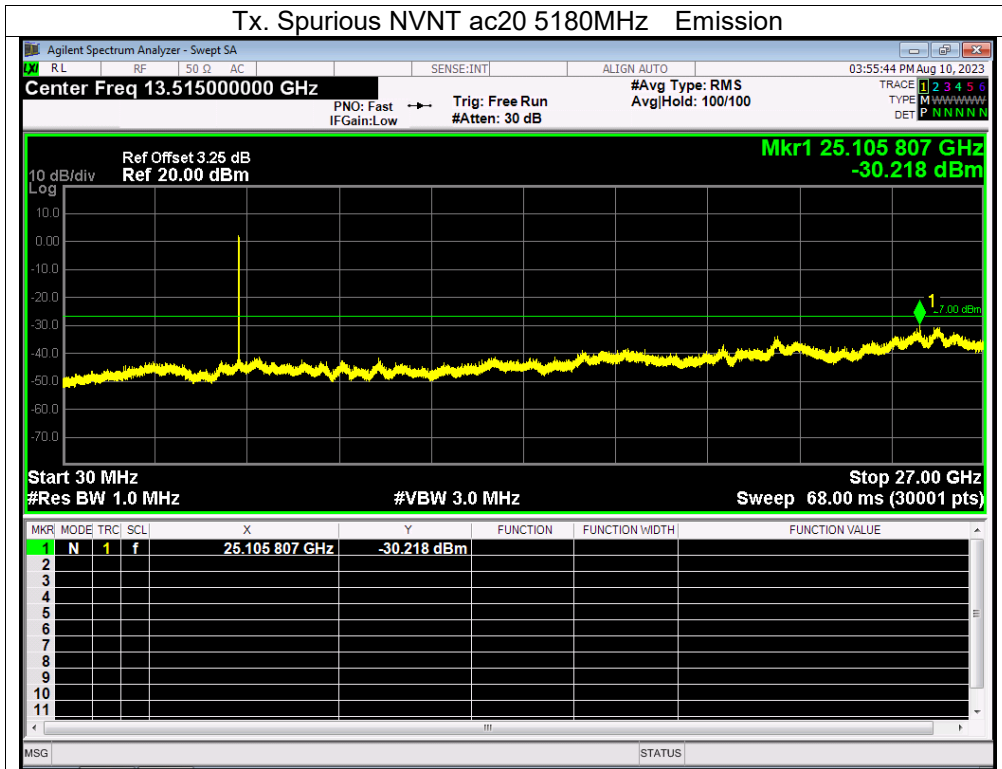
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A.
 Plot. Antenna B: 5180-5240MHz

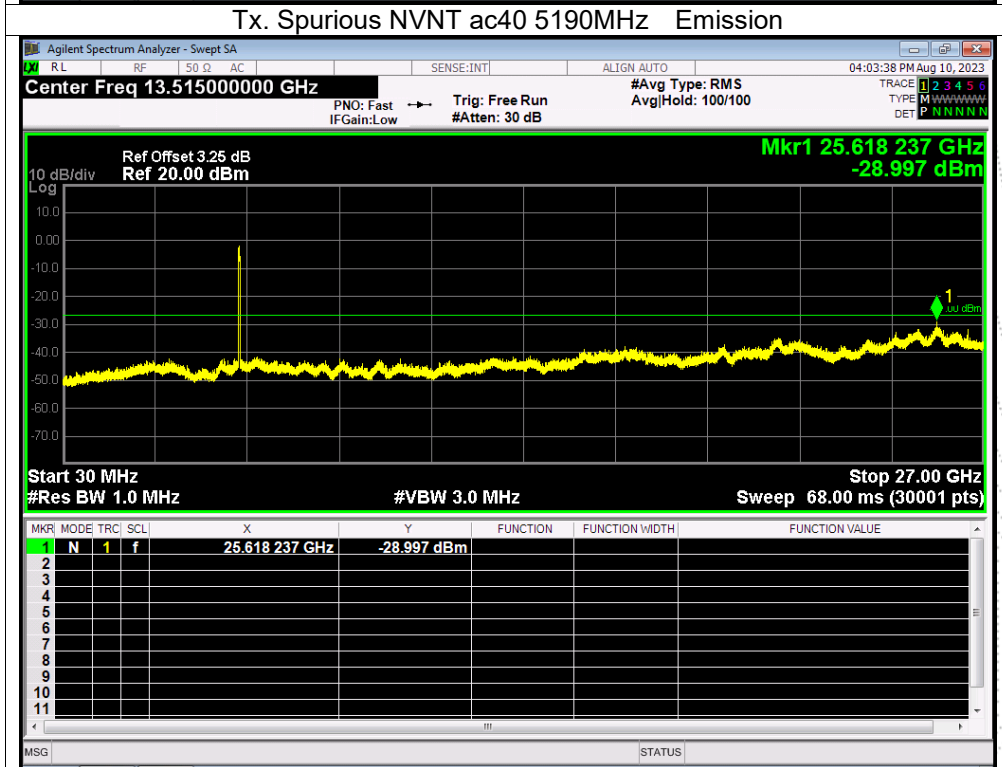
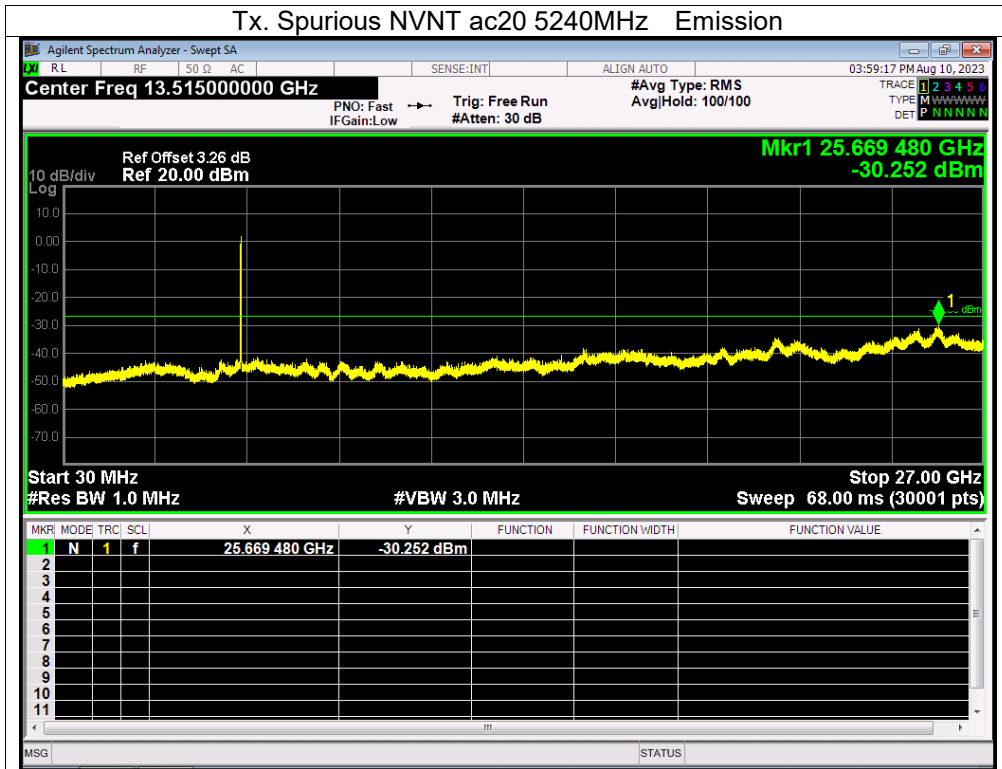


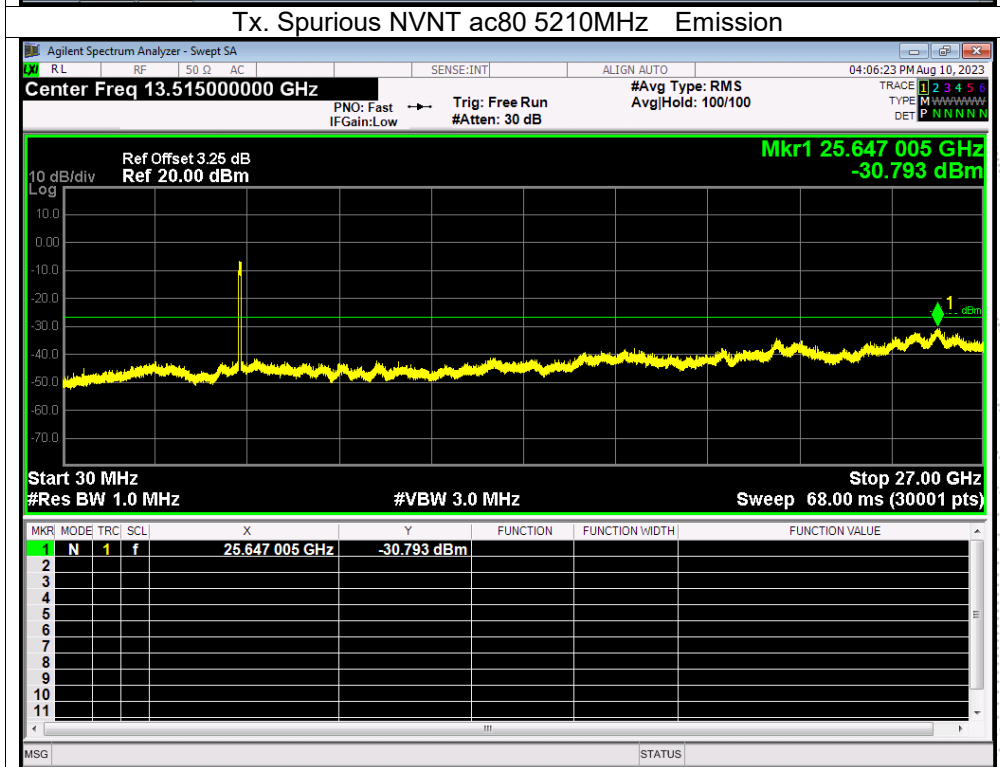
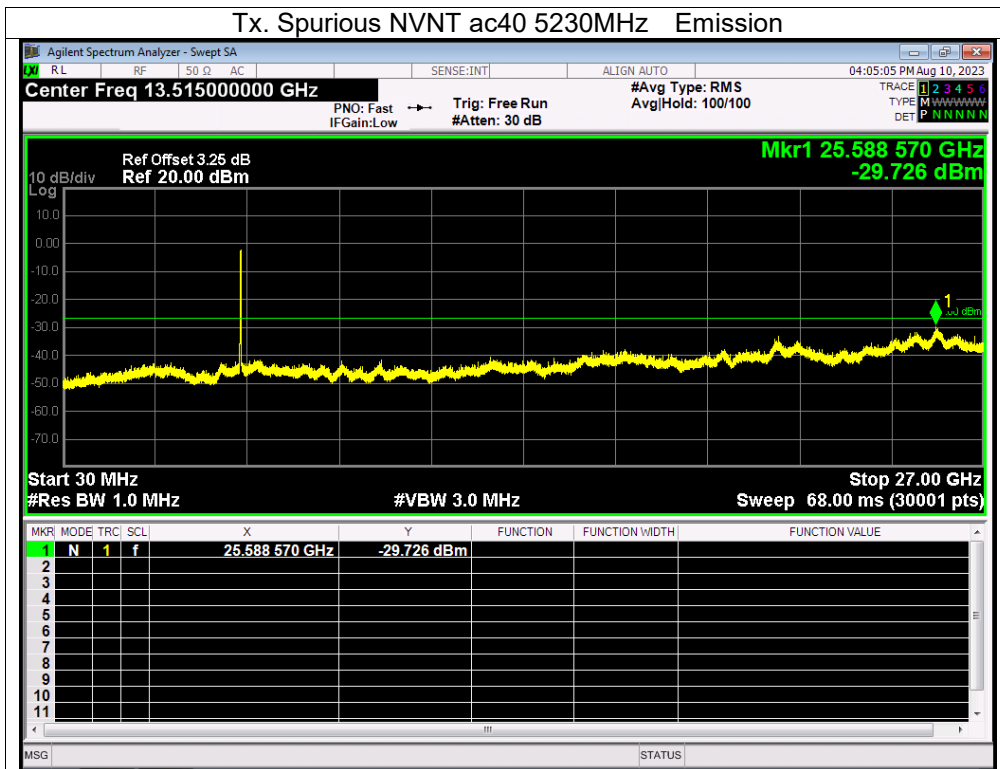




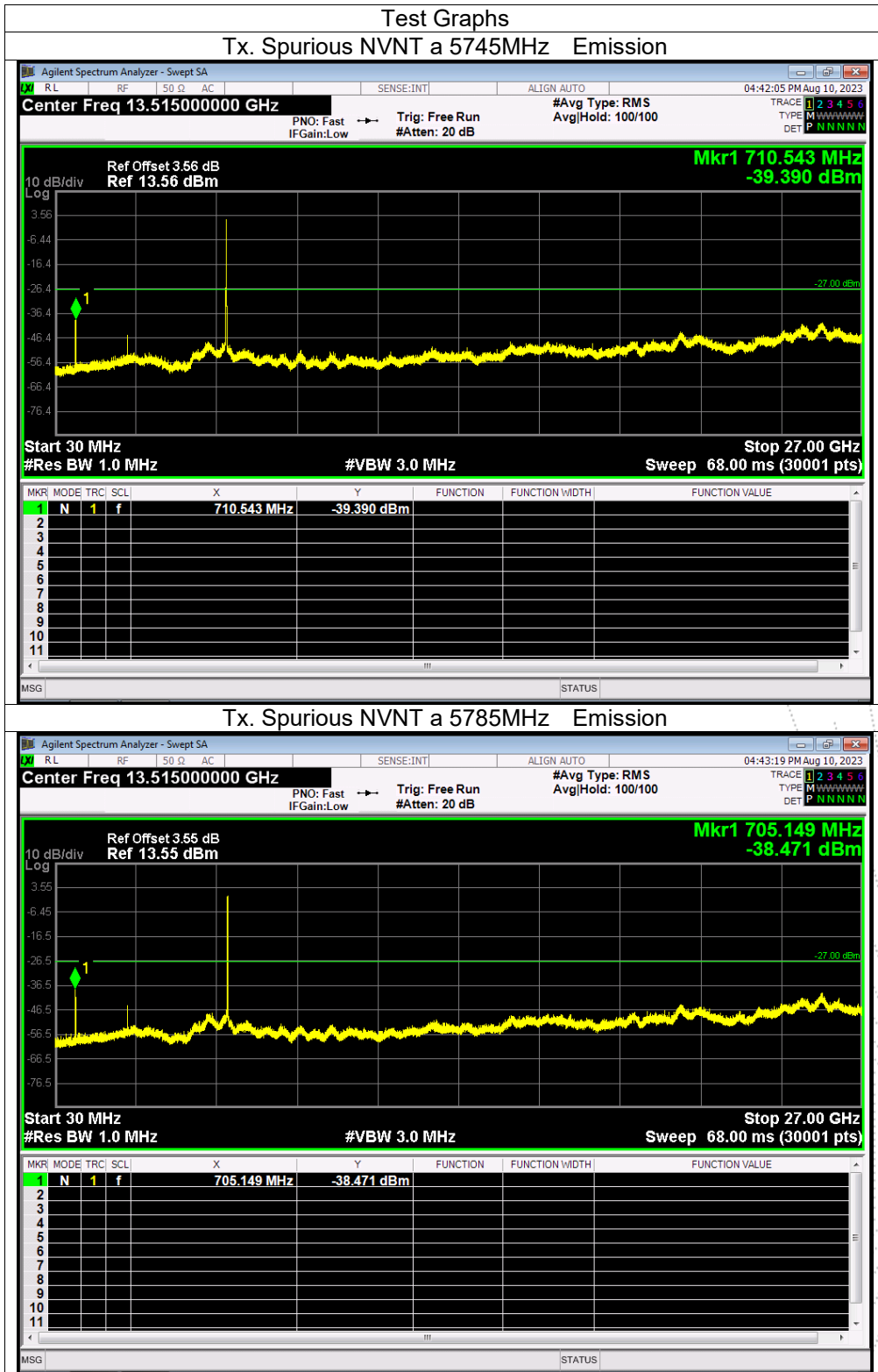


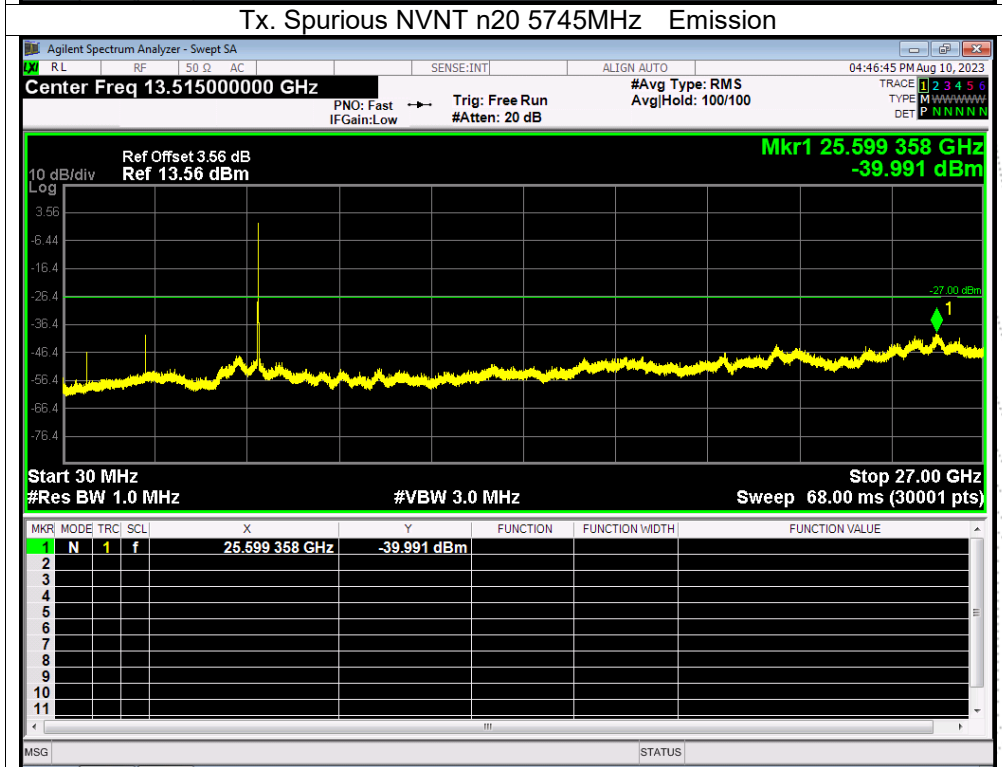
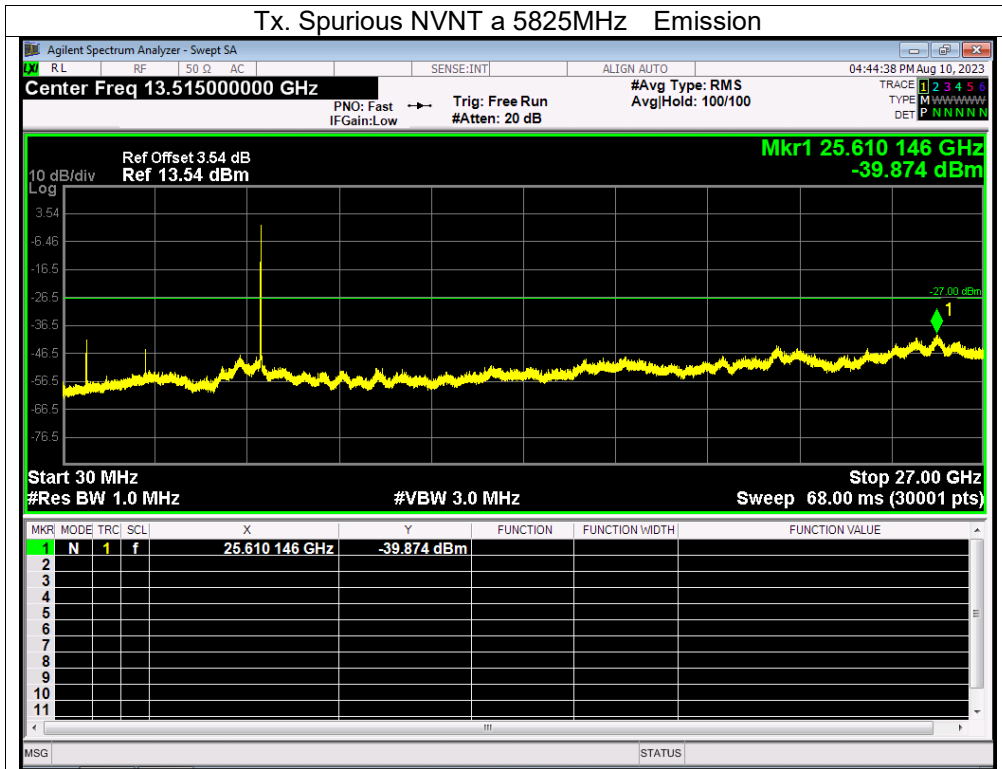


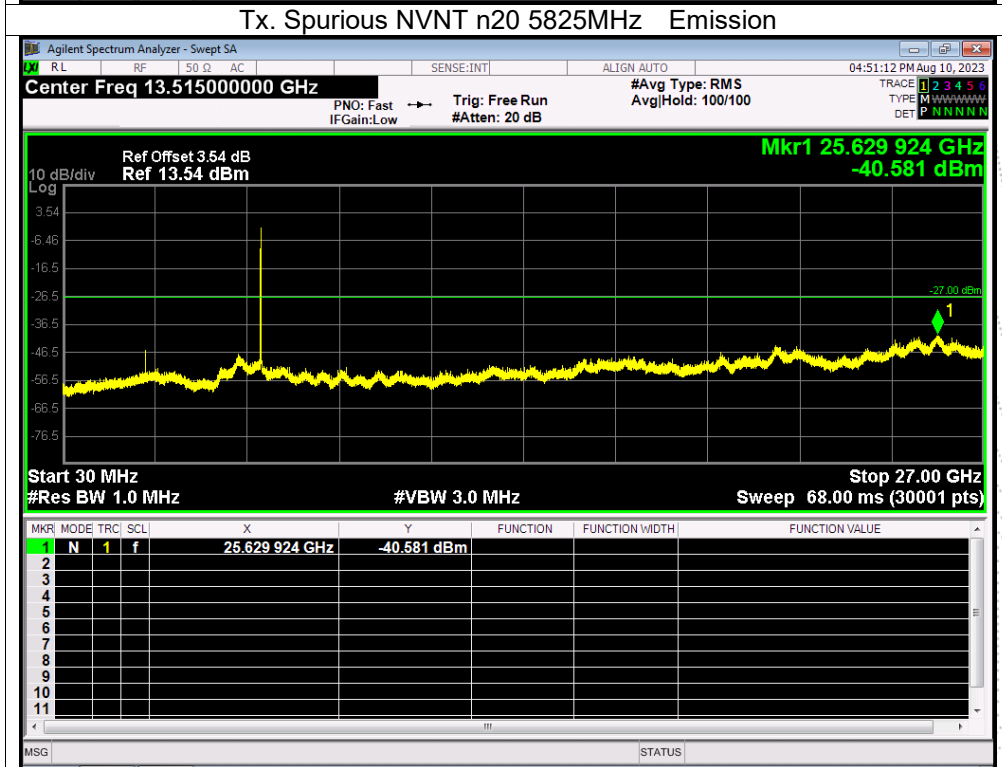
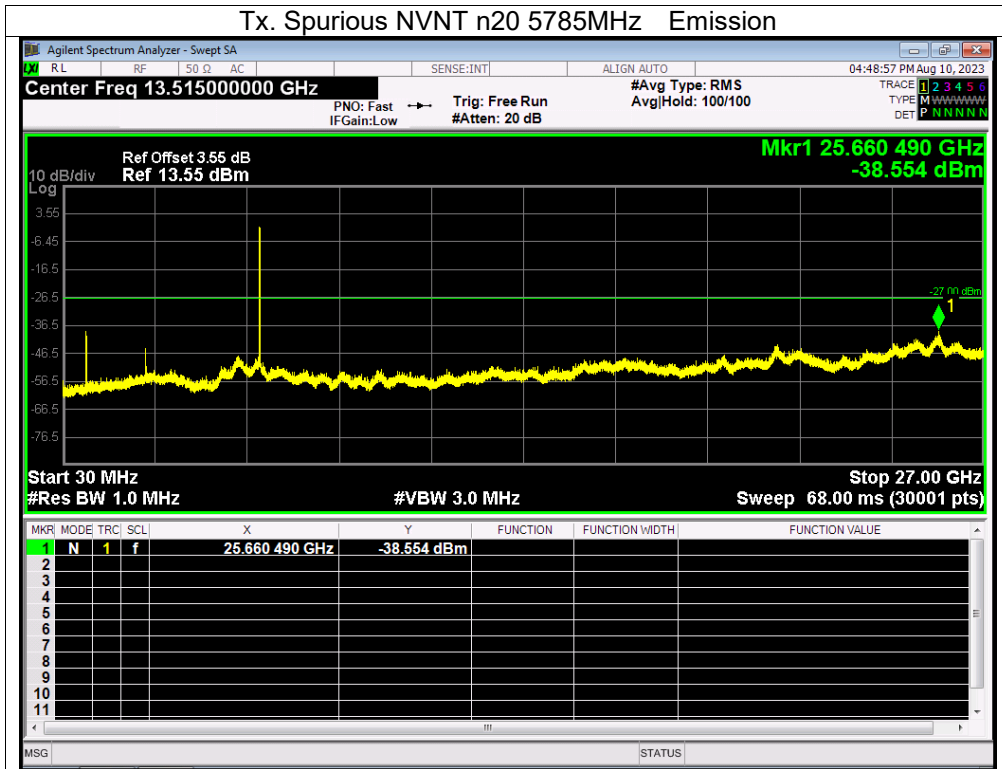


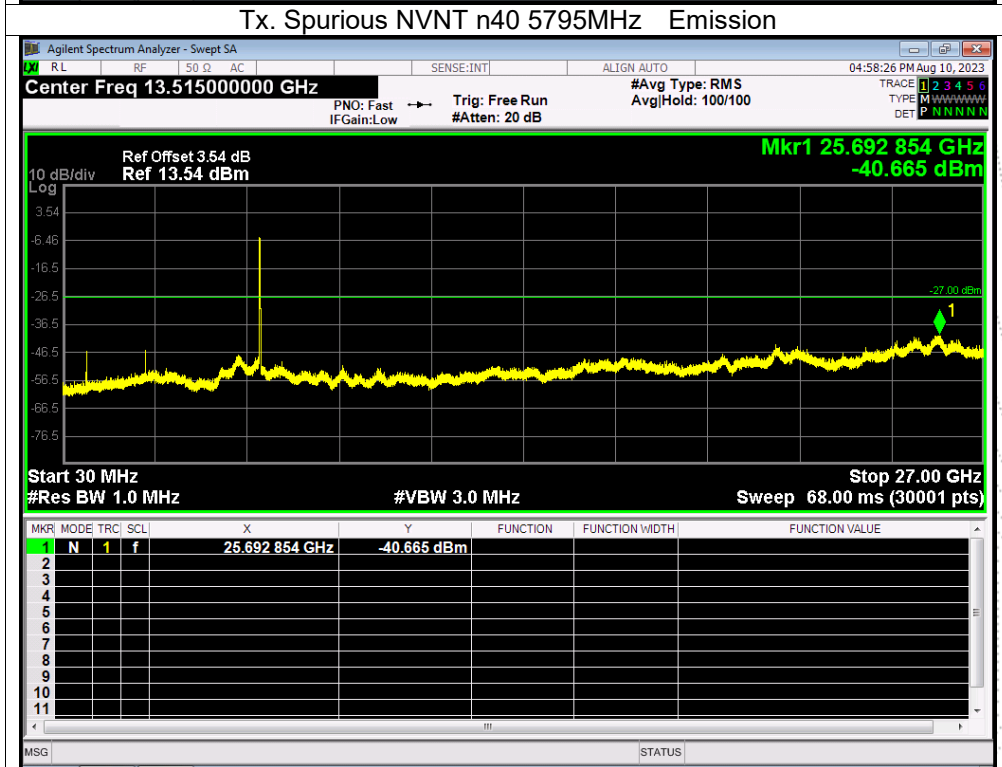
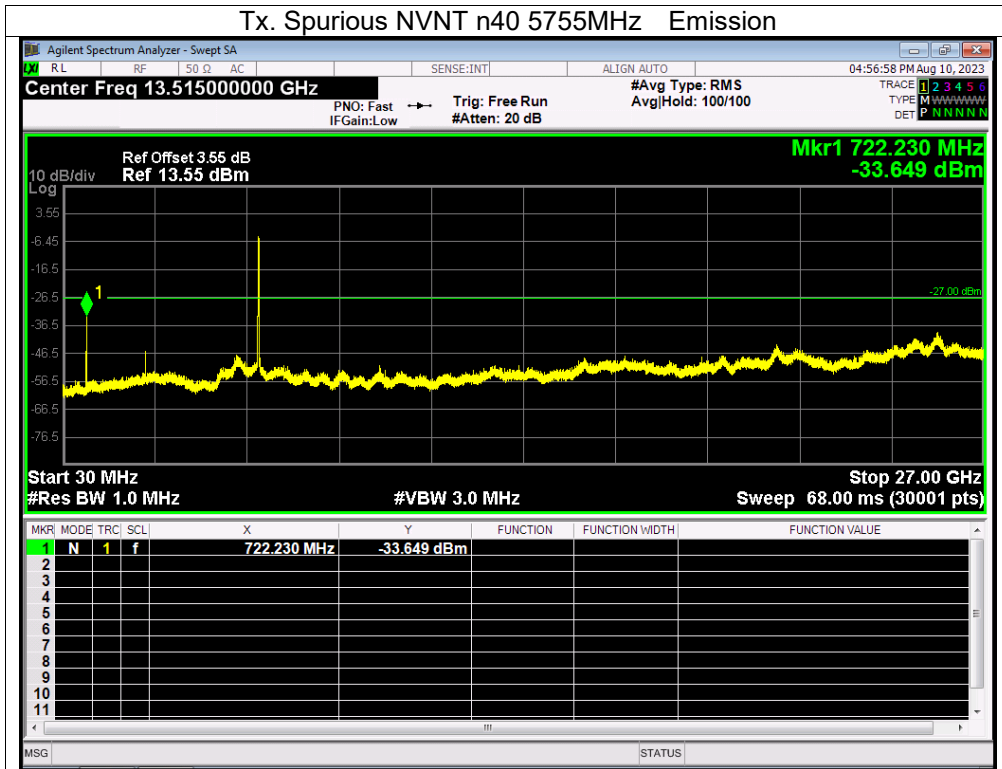


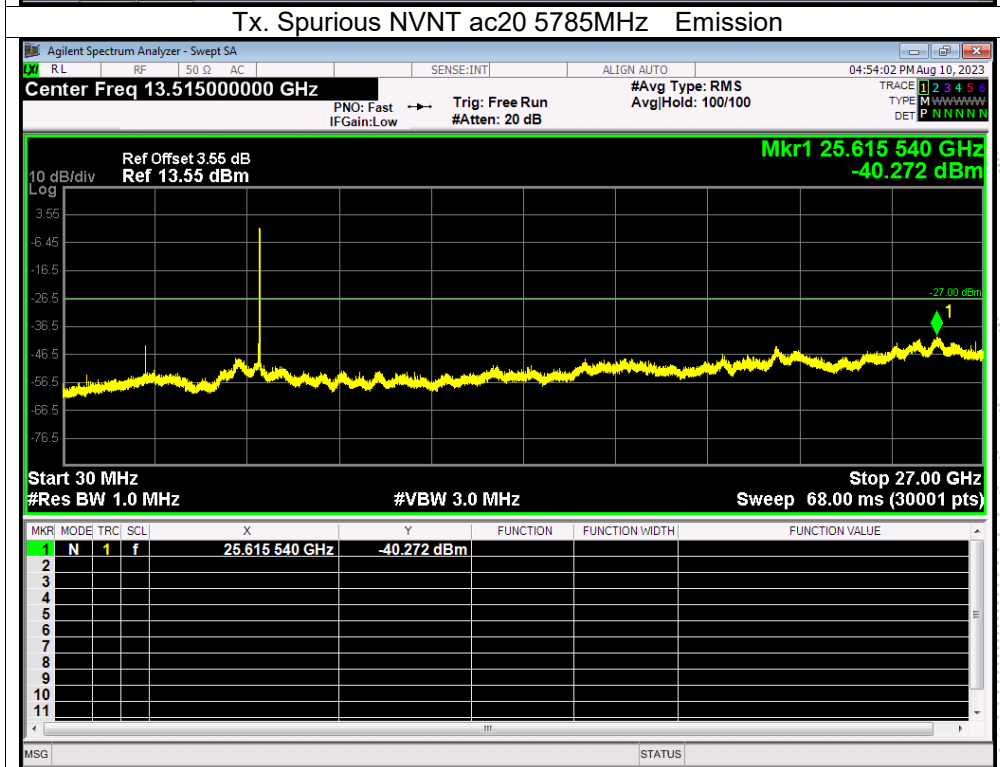
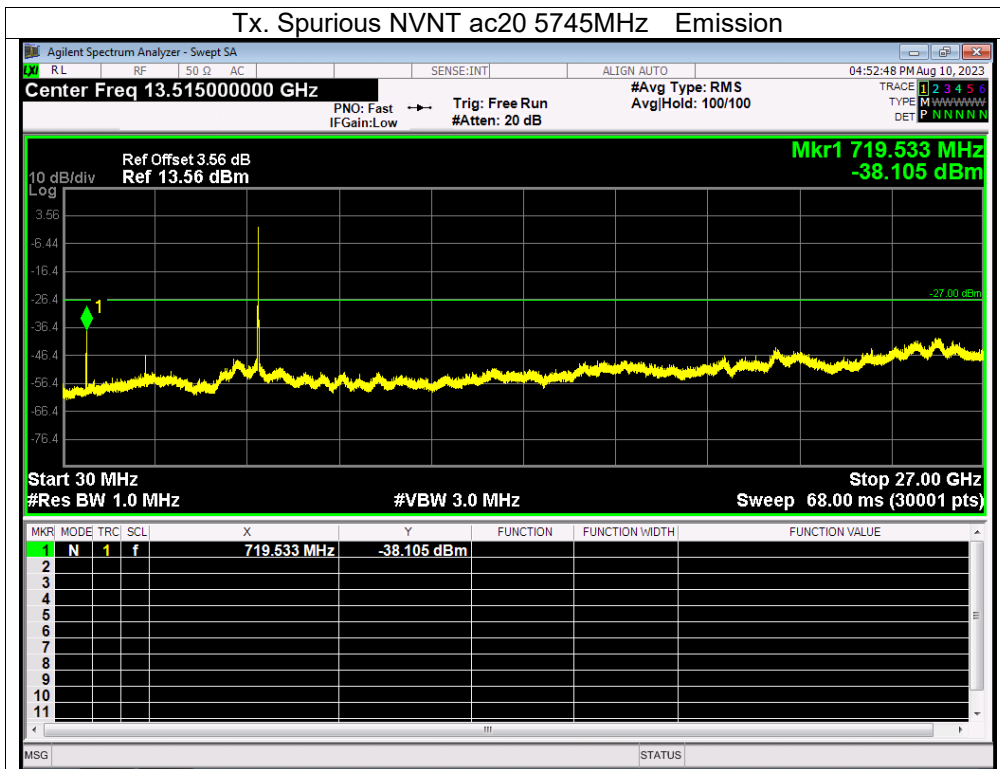
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B.
 Antenna B: 5745-58250MHz

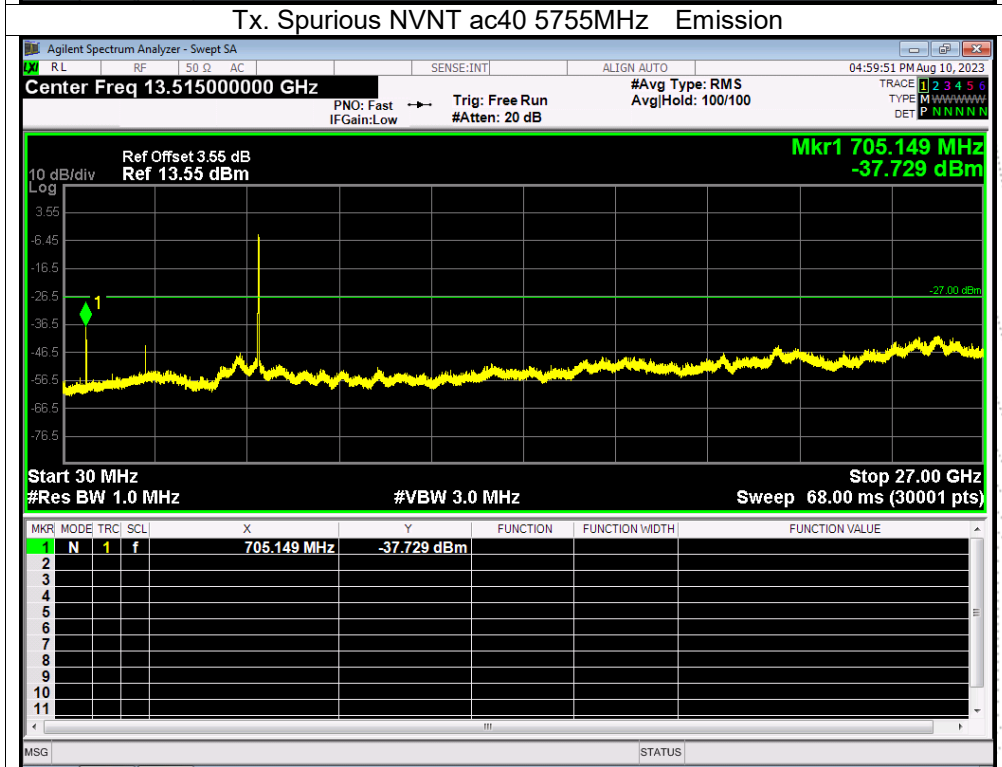
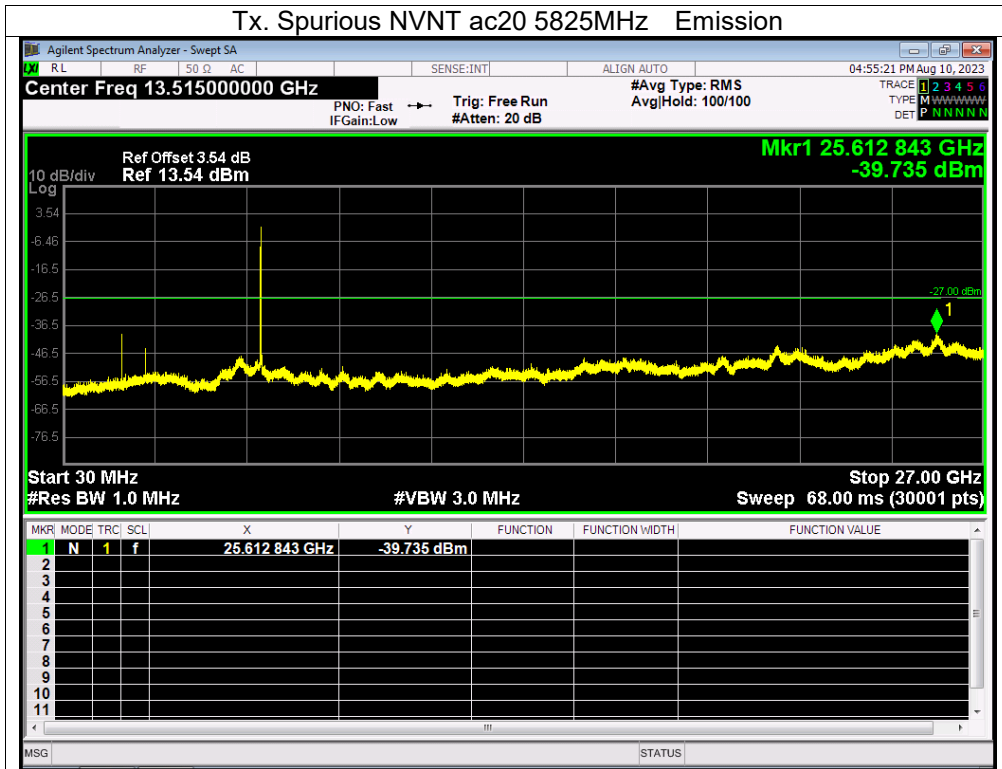


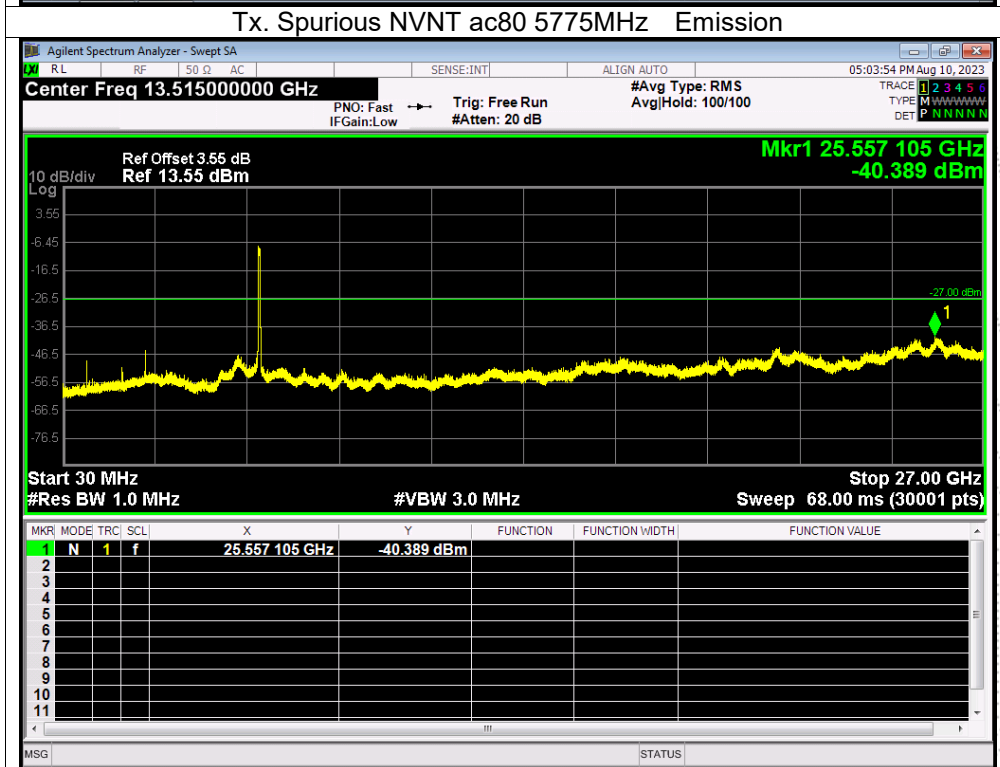
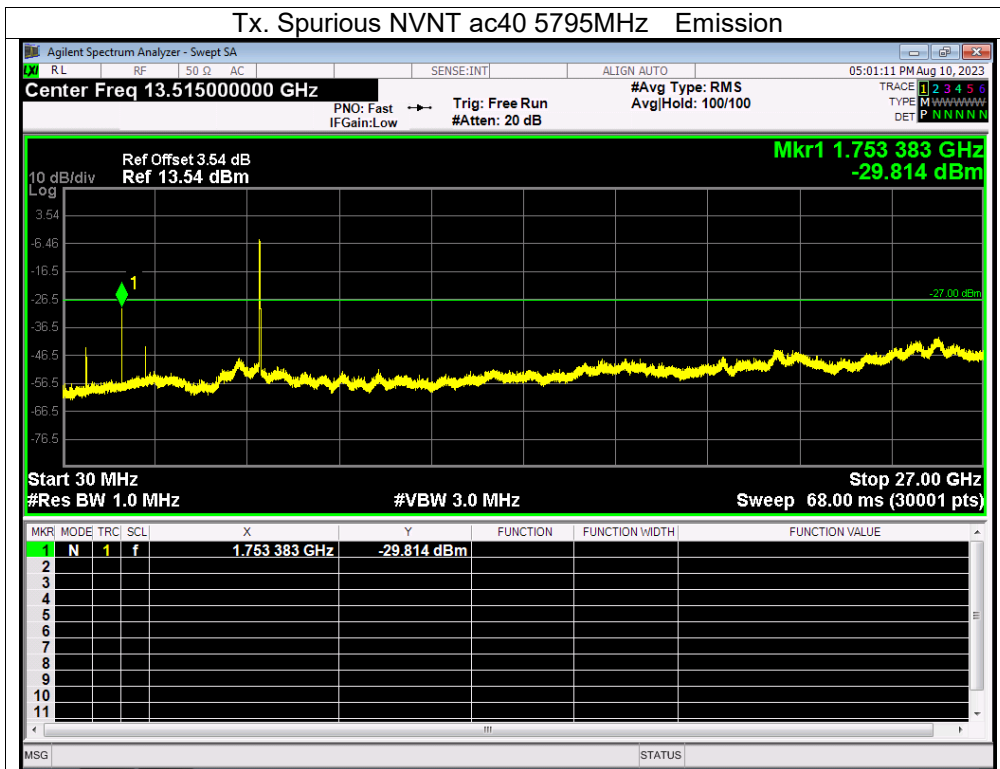






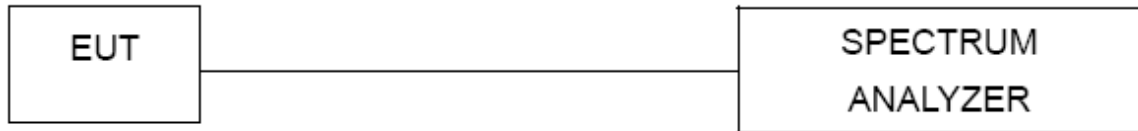






13. Frequency Stability Measurement

13.1 Block Diagram Of Test Setup



13.2 Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)..

13.3 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f) / f_c \times 10^6$ ppm and he limit is less than ± 20 ppm (IEEE 802.11n specification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is $-20^\circ\text{C} \sim 70^\circ\text{C}$.

13.4 Test Result

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency U-NII-1 (5180-5240MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency : 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0155	5180	0.0155	2.9938
		V max (V)	13.80	5180.0011	5180	0.0011	0.2182
		V min (V)	10.20	5180.0092	5180	0.0092	1.7723
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

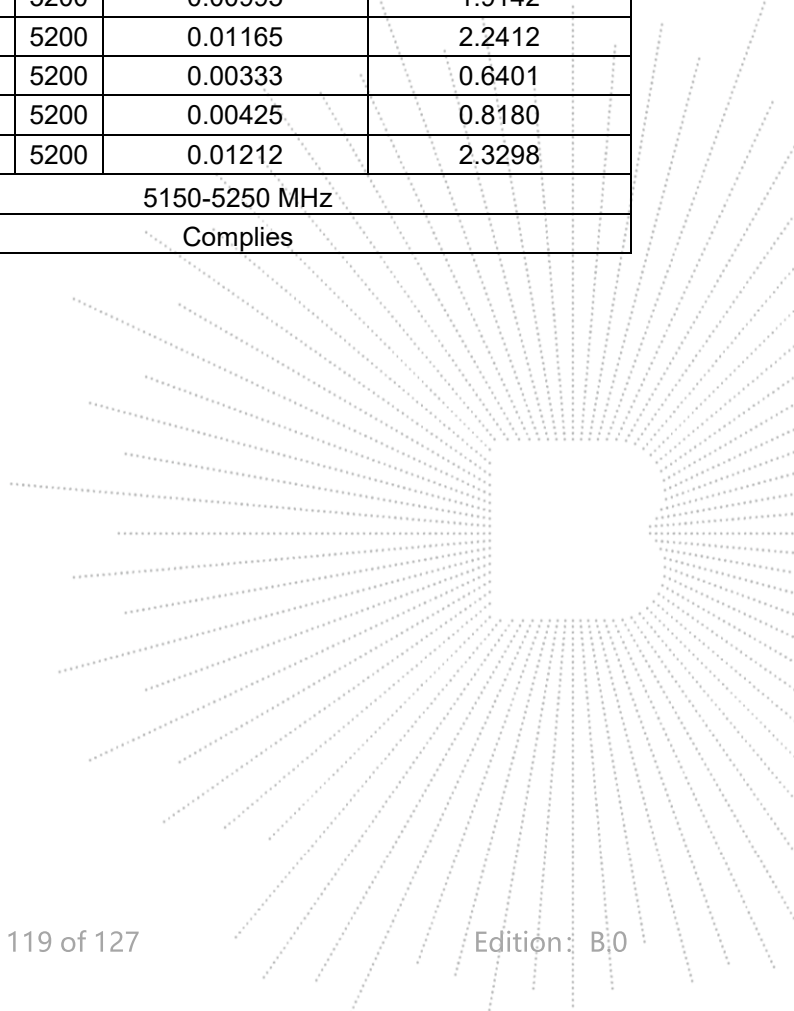
TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5180.0045	5180	0.0045	0.8658
		T (°C)	-10	5180.0018	5180	0.0018	0.3462
		T (°C)	0	5180.0041	5180	0.0041	0.7863
		T (°C)	10	5180.0068	5180	0.0068	1.3033
		T (°C)	20	5180.0135	5180	0.0135	2.6103
		T (°C)	30	5180.0006	5180	0.0006	0.1196
		T (°C)	40	5180.0058	5180	0.0058	1.1152
		T (°C)	50	5180.0084	5180	0.0084	1.6262
		T (°C)	60	5180.0057	5180	0.0057	1.0934
		T (°C)	70	5180.0109	5180	0.0109	2.1088
Limits				5150-5250 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5200.0043	5200	0.0043	0.8211
		V max (V)	13.80	5200.0032	5200	0.0032	0.6127
		V min (V)	10.20	5200.0099	5200	0.0099	1.9035
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5200.01235	5200	0.01235	2.3753
		T (°C)	-10	5200.00364	5200	0.00364	0.7007
		T (°C)	0	5200.00086	5200	0.00086	0.1657
		T (°C)	10	5200.01040	5200	0.01040	2.0000
		T (°C)	20	5200.00181	5200	0.00181	0.3477
		T (°C)	30	5200.00995	5200	0.00995	1.9142
		T (°C)	40	5200.01165	5200	0.01165	2.2412
		T (°C)	50	5200.00333	5200	0.00333	0.6401
		T (°C)	60	5200.00425	5200	0.00425	0.8180
		T (°C)	70	5200.01212	5200	0.01212	2.3298
Limits				5150-5250 MHz			
Result				Complies			

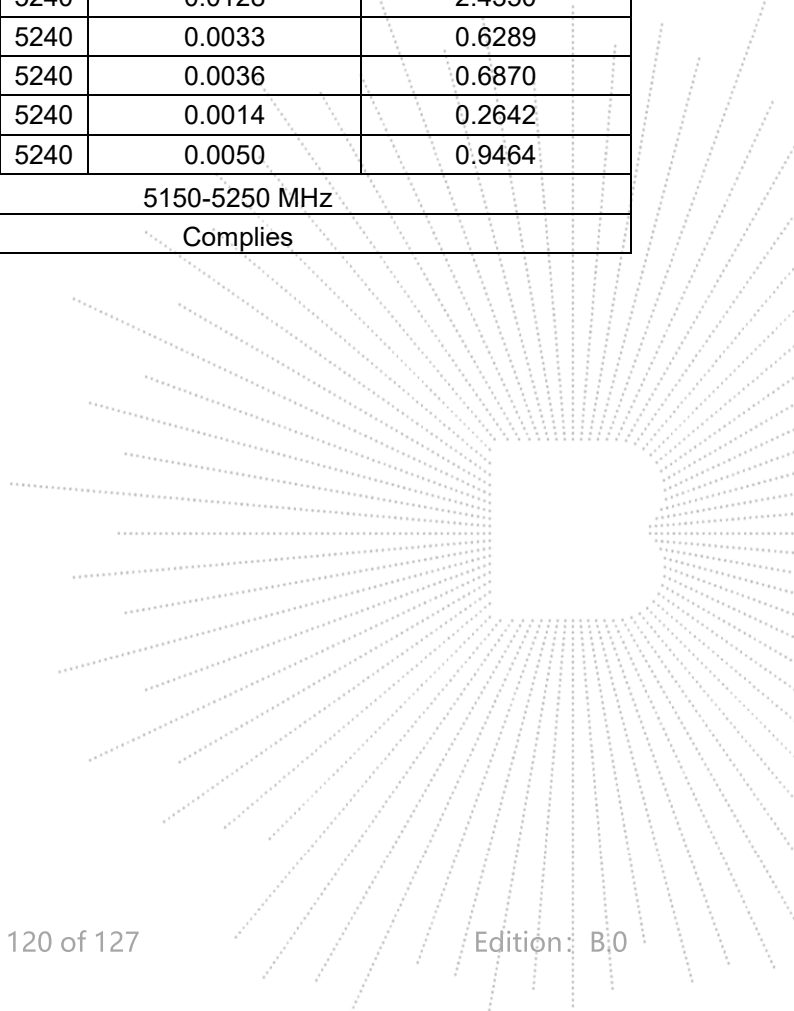


Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5240.0005	5240	0.0005	0.0979
		V max (V)	13.80	5240.0134	5240	0.0134	2.5653
		V min (V)	10.20	5240.0014	5240	0.0014	0.2746
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5240.0101	5240	0.0101	1.9355
		T (°C)	-10	5240.0049	5240	0.0049	0.9400
		T (°C)	0	5240.0056	5240	0.0056	1.0778
		T (°C)	10	5240.0007	5240	0.0007	0.1250
		T (°C)	20	5240.0135	5240	0.0135	2.5755
		T (°C)	30	5240.0128	5240	0.0128	2.4350
		T (°C)	40	5240.0033	5240	0.0033	0.6289
		T (°C)	50	5240.0036	5240	0.0036	0.6870
		T (°C)	60	5240.0014	5240	0.0014	0.2642
		T (°C)	70	5240.0050	5240	0.0050	0.9464
Limits				5150-5250 MHz			
Result				Complies			



Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 12V
Test Mode :	TX Frequency(5745-5825MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.00051	5745	0.00051	0.0883
		V max (V)	13.80	5745.00922	5745	0.00922	1.6045
		V min (V)	10.20	5745.01090	5745	0.01090	1.8971
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5745.01067	5745	0.01067	1.8572
		T (°C)	-10	5745.01301	5745	0.01301	2.2648
		T (°C)	0	5745.01232	5745	0.01232	2.1447
		T (°C)	10	5745.00570	5745	0.00570	0.9919
		T (°C)	20	5745.00103	5745	0.00103	0.1801
		T (°C)	30	5745.00688	5745	0.00688	1.1977
		T (°C)	40	5745.00679	5745	0.00679	1.1815
		T (°C)	50	5745.00812	5745	0.00812	1.4130
		T (°C)	60	5745.00416	5745	0.00416	0.7245
		T (°C)	70	5745.01350	5745	0.01350	2.3499
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5785.00567	5785	0.00567	0.9799
		V max (V)	13.80	5785.01093	5785	0.01093	1.8901
		V min (V)	10.20	5785.01283	5785	0.01283	2.2172
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

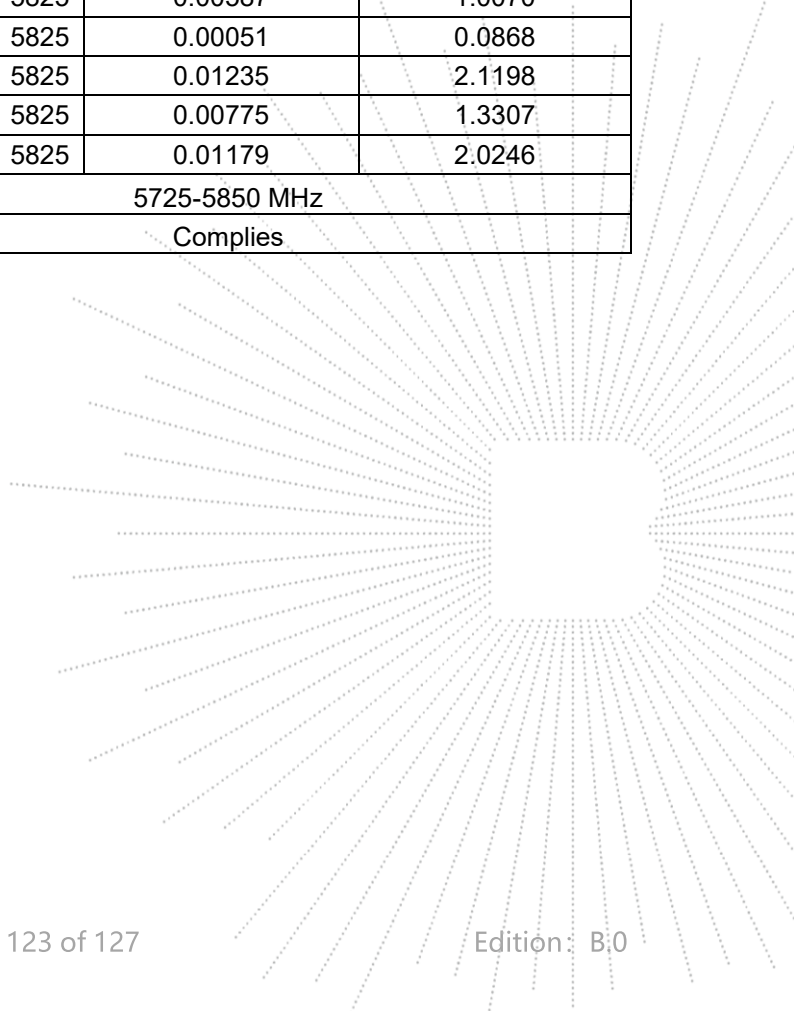
TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5785.00710	5785	0.00710	1.2276
		T (°C)	-10	5785.00867	5785	0.00867	1.4993
		T (°C)	0	5785.00309	5785	0.00309	0.5347
		T (°C)	10	5785.00181	5785	0.00181	0.3137
		T (°C)	20	5785.00083	5785	0.00083	0.1435
		T (°C)	30	5785.01182	5785	0.01182	2.0431
		T (°C)	40	5785.00897	5785	0.00897	1.5501
		T (°C)	50	5785.00444	5785	0.00444	0.7674
		T (°C)	60	5785.00180	5785	0.00180	0.3117
		T (°C)	70	5785.00145	5785	0.00145	0.2506
Limits				5725-5850 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5825.00546	5825	0.00546	0.9371
		V max (V)	13.80	5825.00990	5825	0.00990	1.7002
		V min (V)	10.20	5825.01289	5825	0.01289	2.2129
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5825.00447	5825	0.00447	0.7667
		T (°C)	-10	5825.01073	5825	0.01073	1.8425
		T (°C)	0	5825.01024	5825	0.01024	1.7585
		T (°C)	10	5825.01340	5825	0.01340	2.3012
		T (°C)	20	5825.00064	5825	0.00064	0.1098
		T (°C)	30	5825.00587	5825	0.00587	1.0070
		T (°C)	40	5825.00051	5825	0.00051	0.0868
		T (°C)	50	5825.01235	5825	0.01235	2.1198
		T (°C)	60	5825.00775	5825	0.00775	1.3307
		T (°C)	70	5825.01179	5825	0.01179	2.0246
Limits				5725-5850 MHz			
Result				Complies			



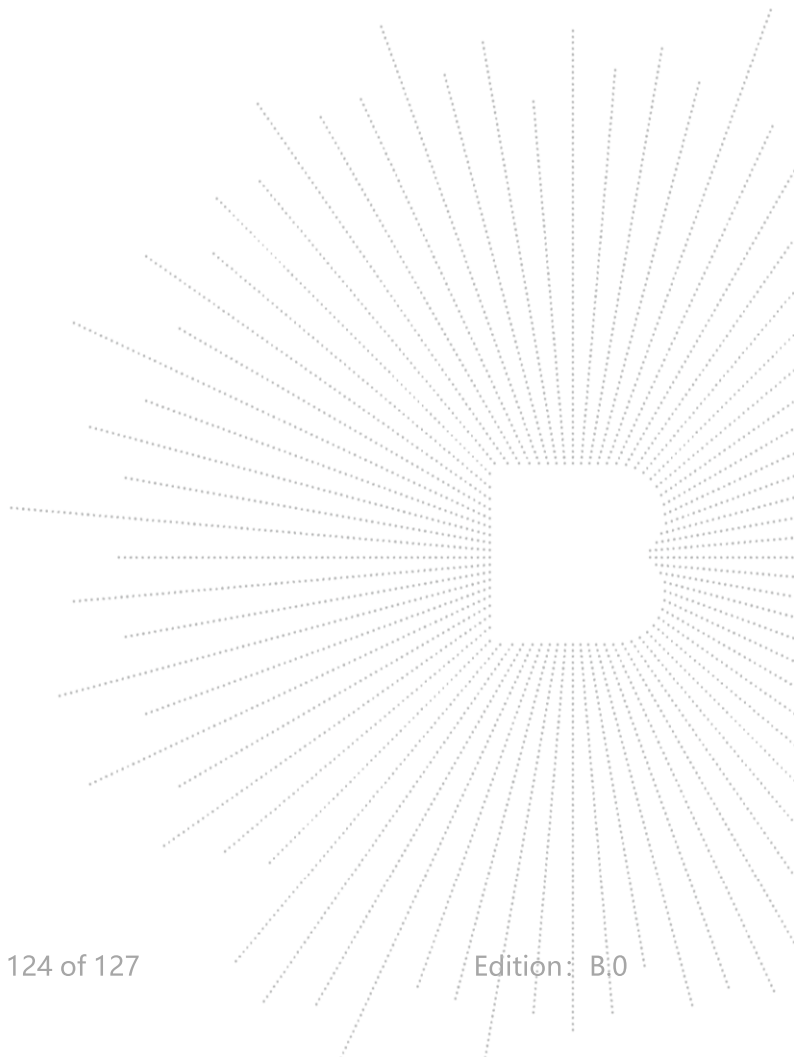
14. Antenna Requirement

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.

14.2 Test Result

The EUT antenna is Internal antenna (antenna gain (A): 2.50 dBi; antenna gain (B) : 2.50 dBi). It comply with the standard requirement.

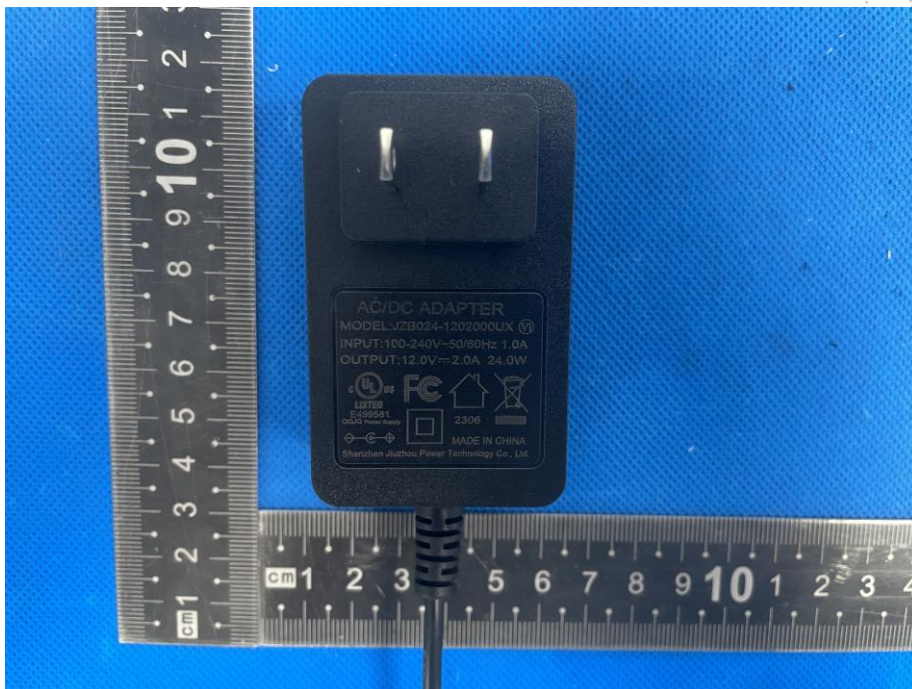


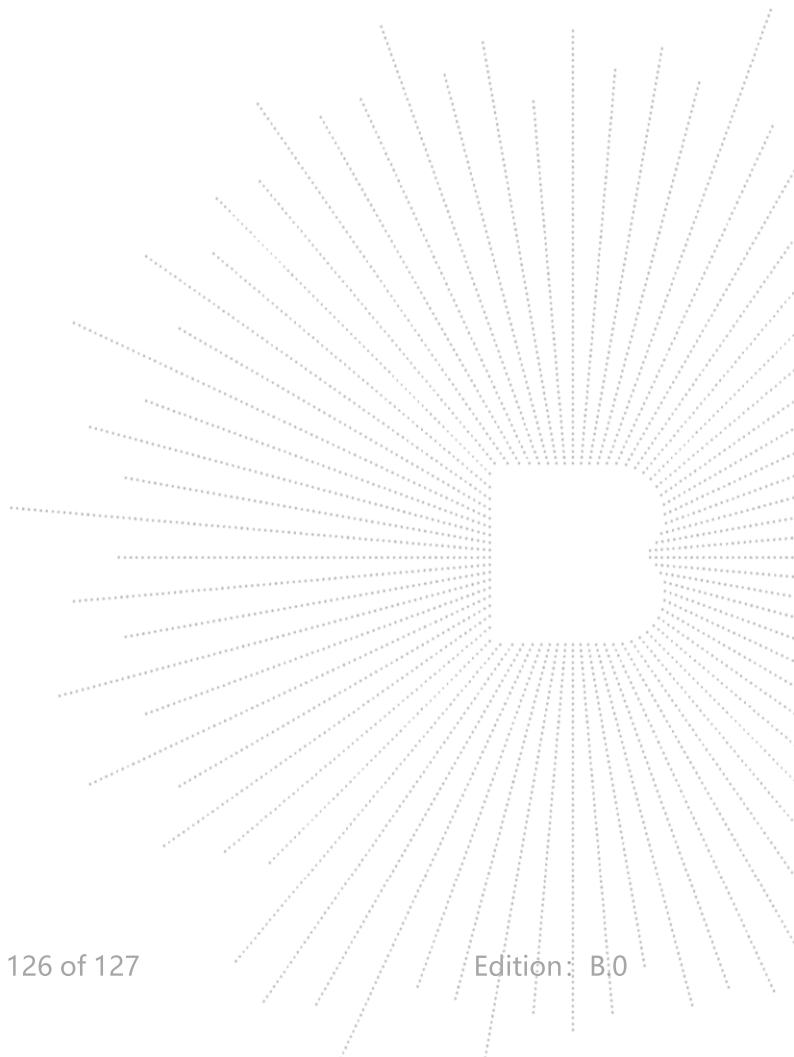
15. EUT Photographs

EUT Photo 1



EUT Photo 2



16. EUT Test Setup Photographs**NOTE: Appendix -Test Setup Photographs**

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.

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