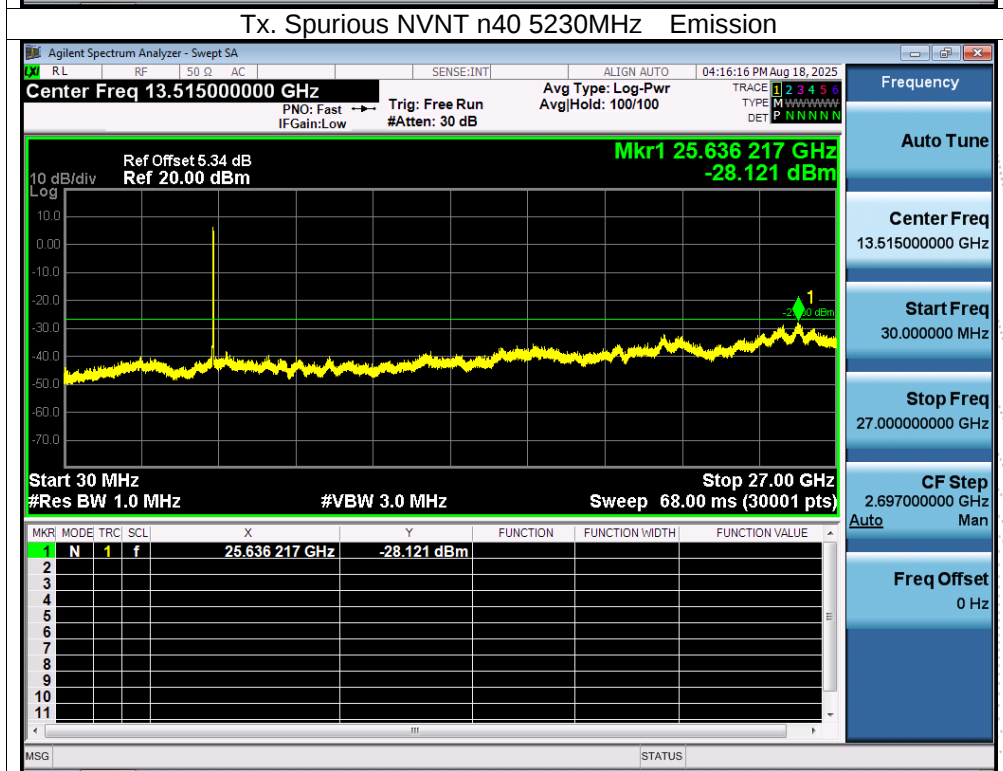
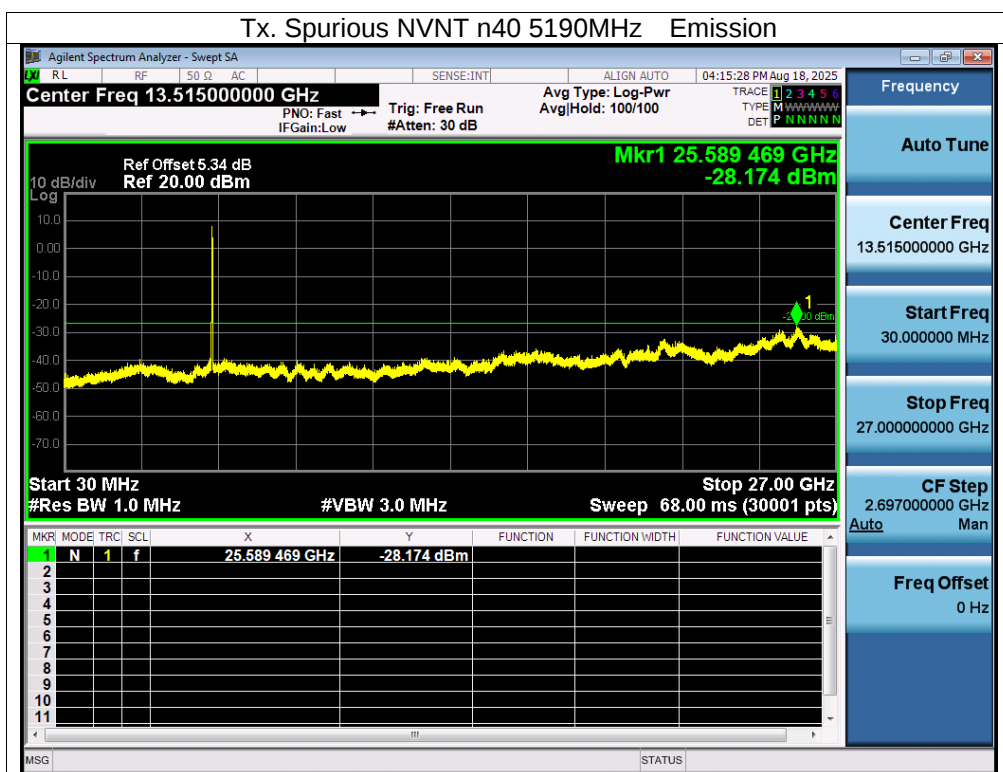
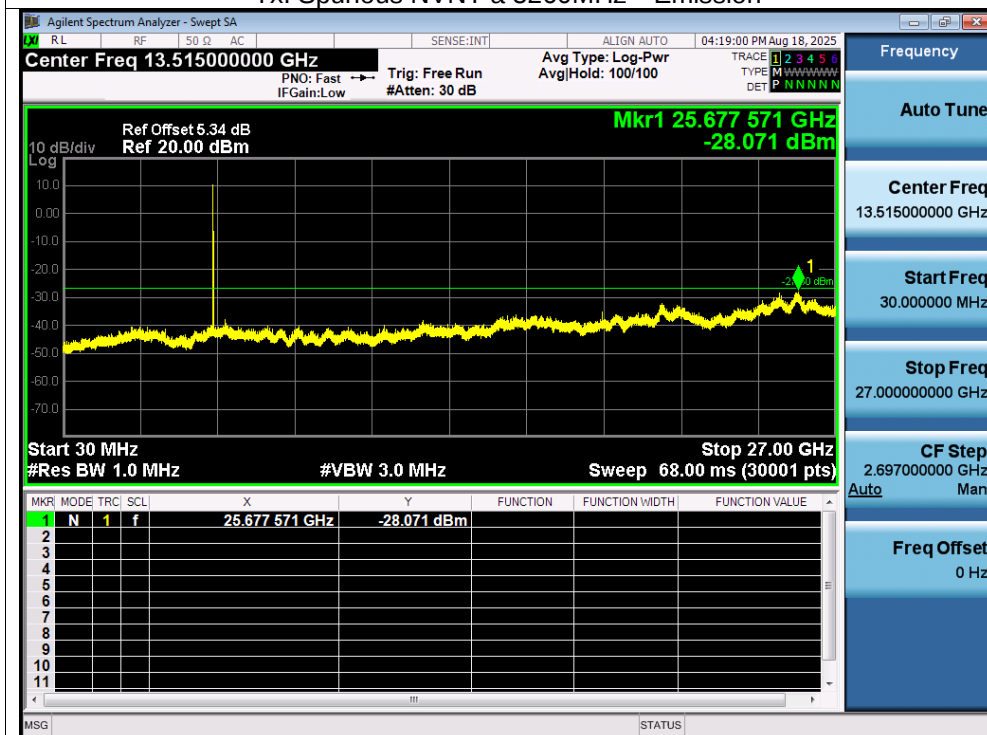


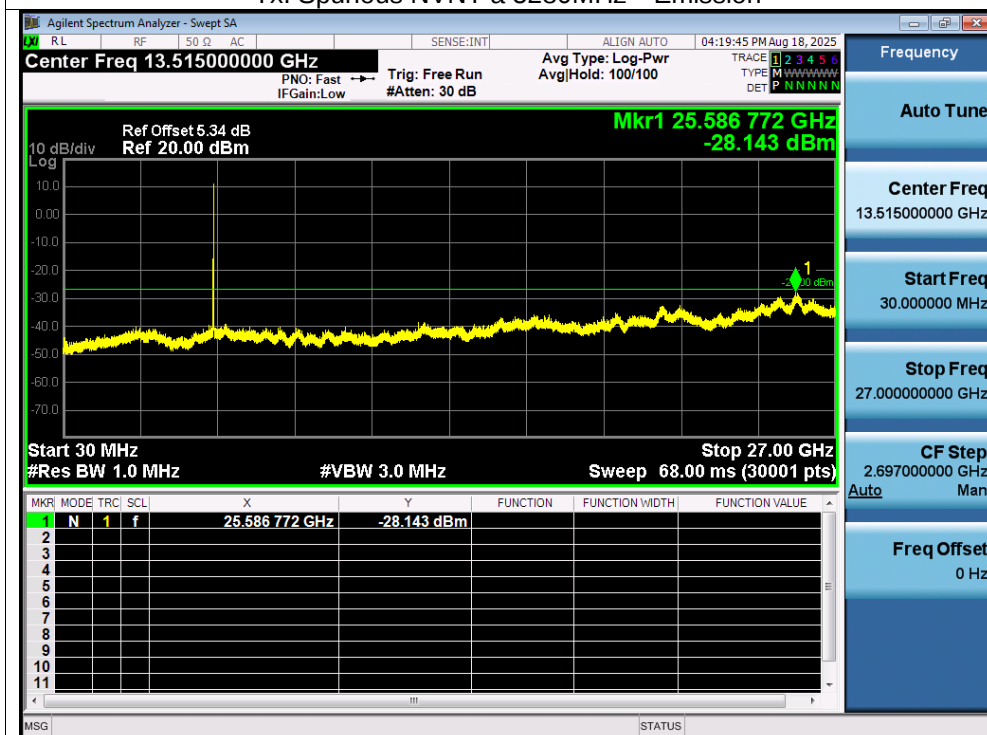


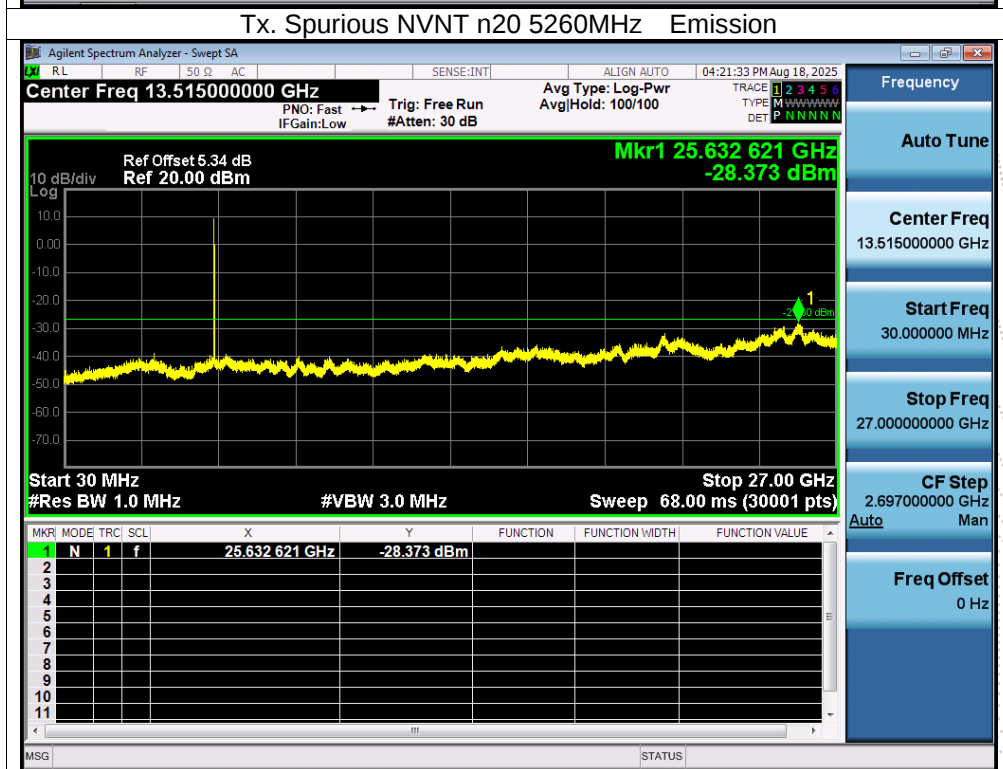
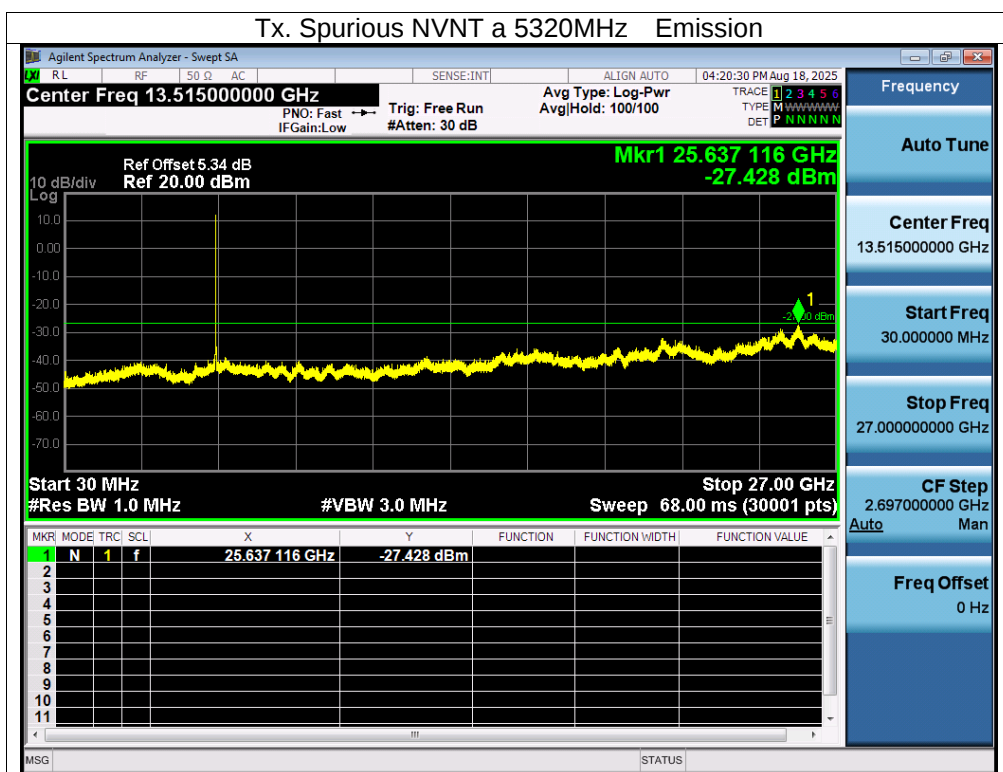
Test Graphs

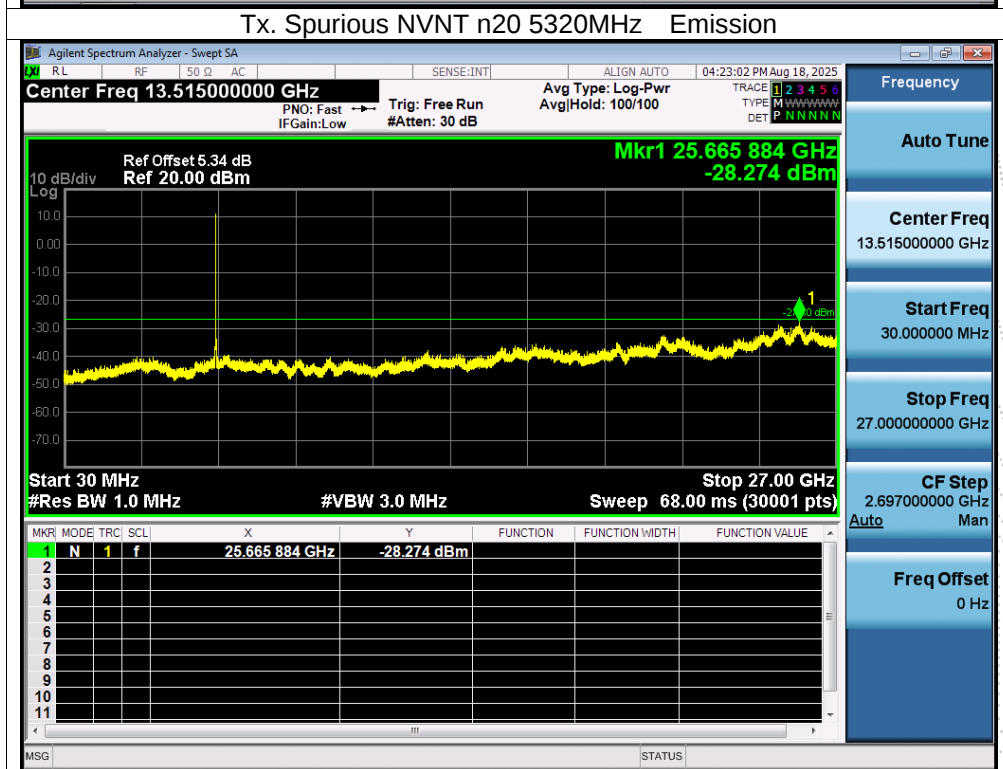
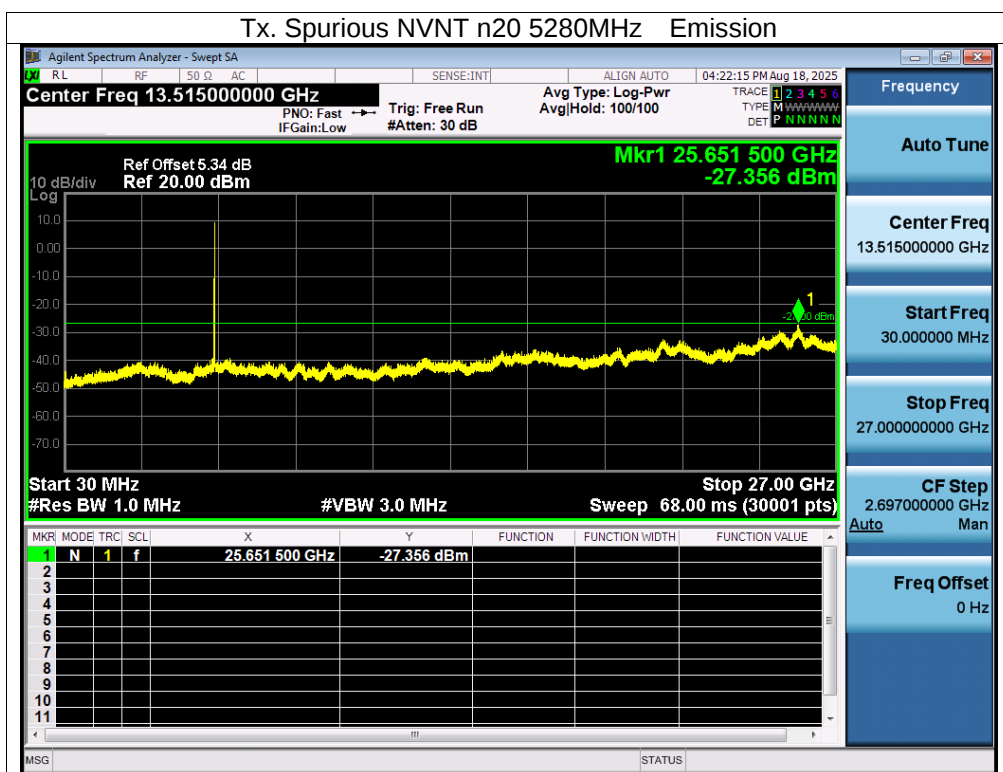
Tx. Spurious NVNT a 5260MHz Emission

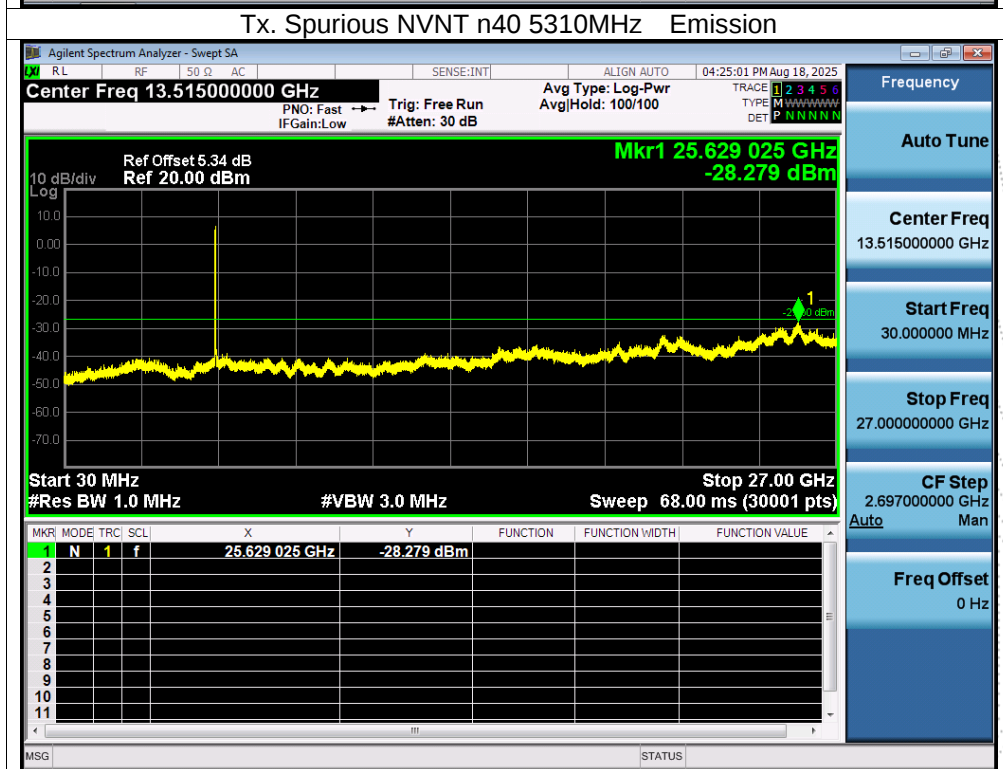
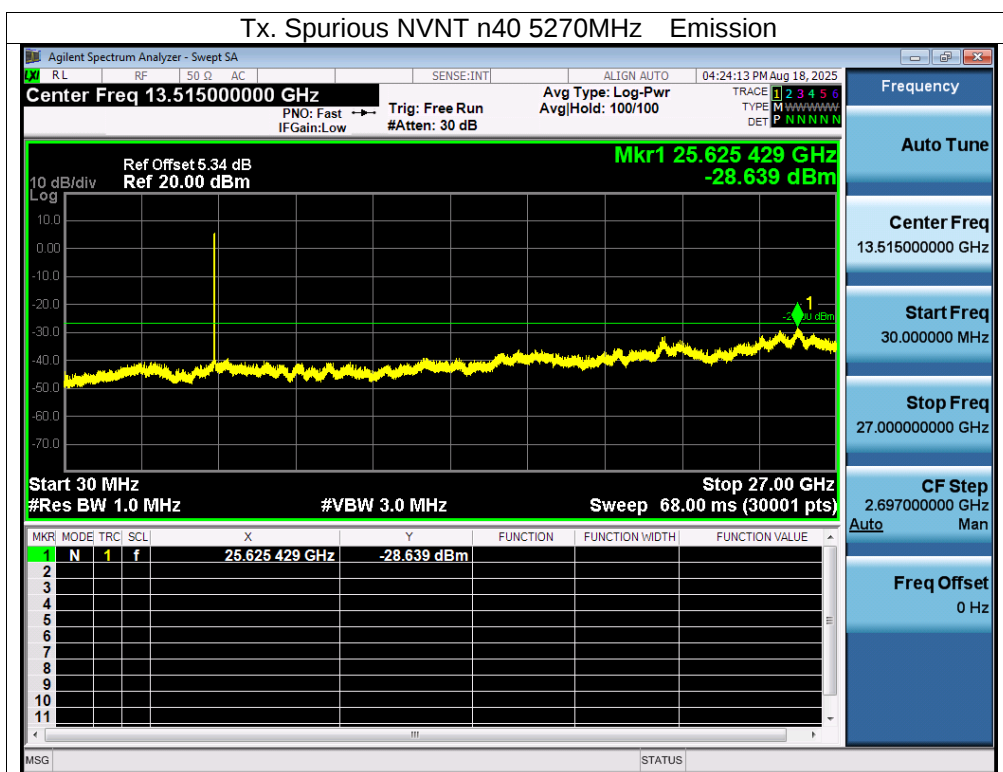


Tx. Spurious NVNT a 5280MHz Emission



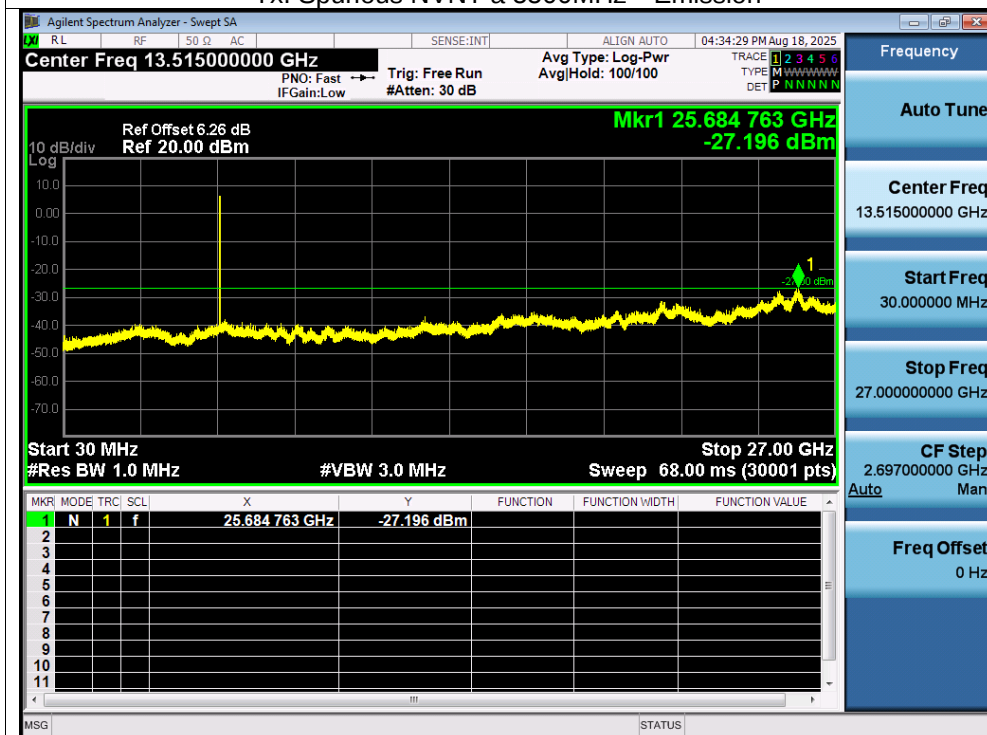




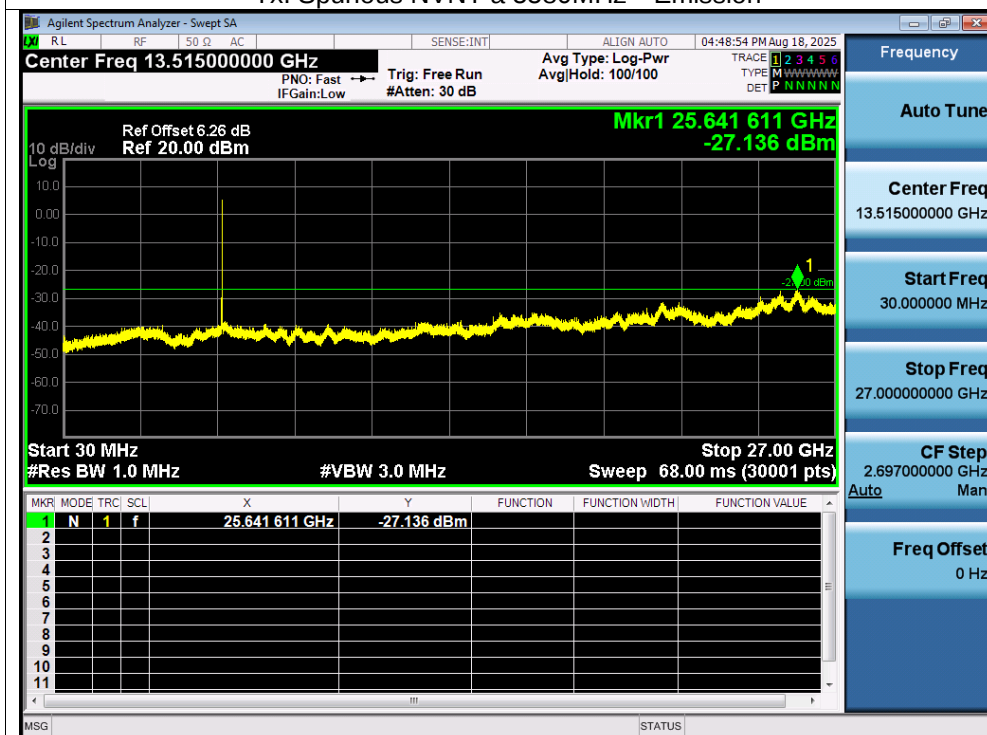


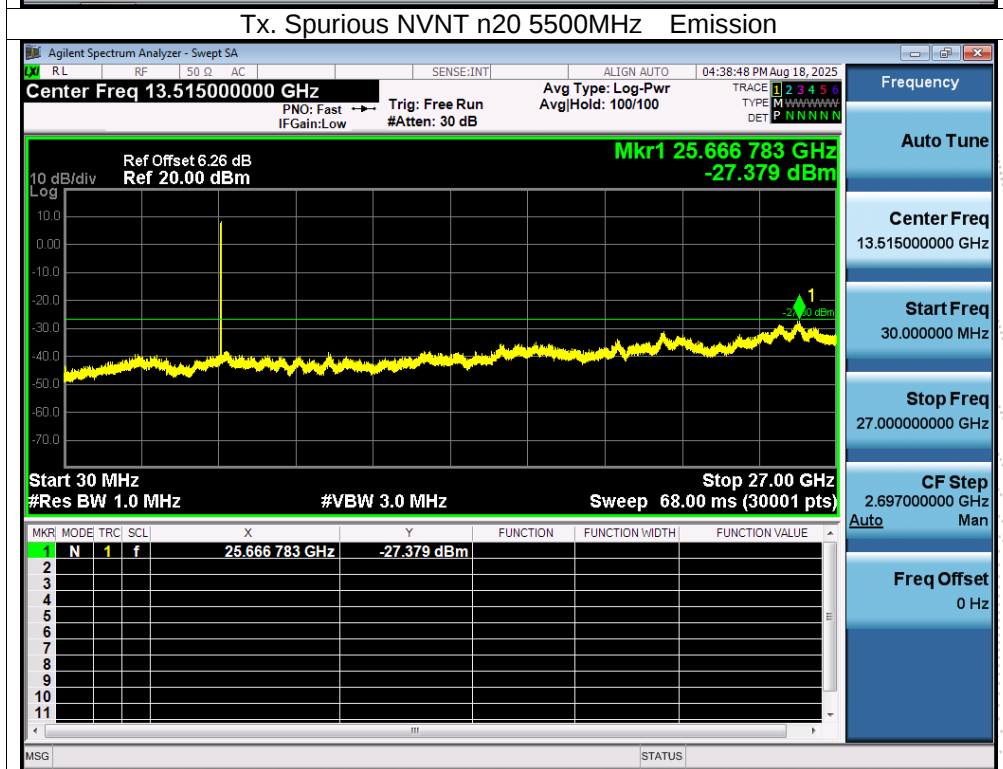
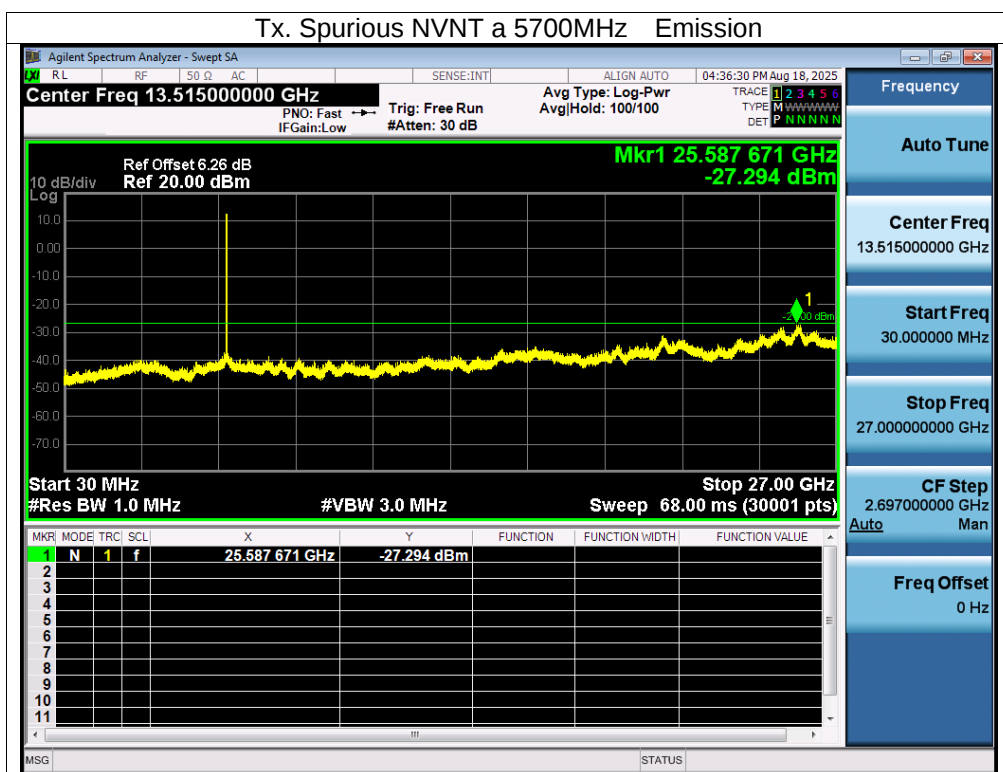
Test Graphs

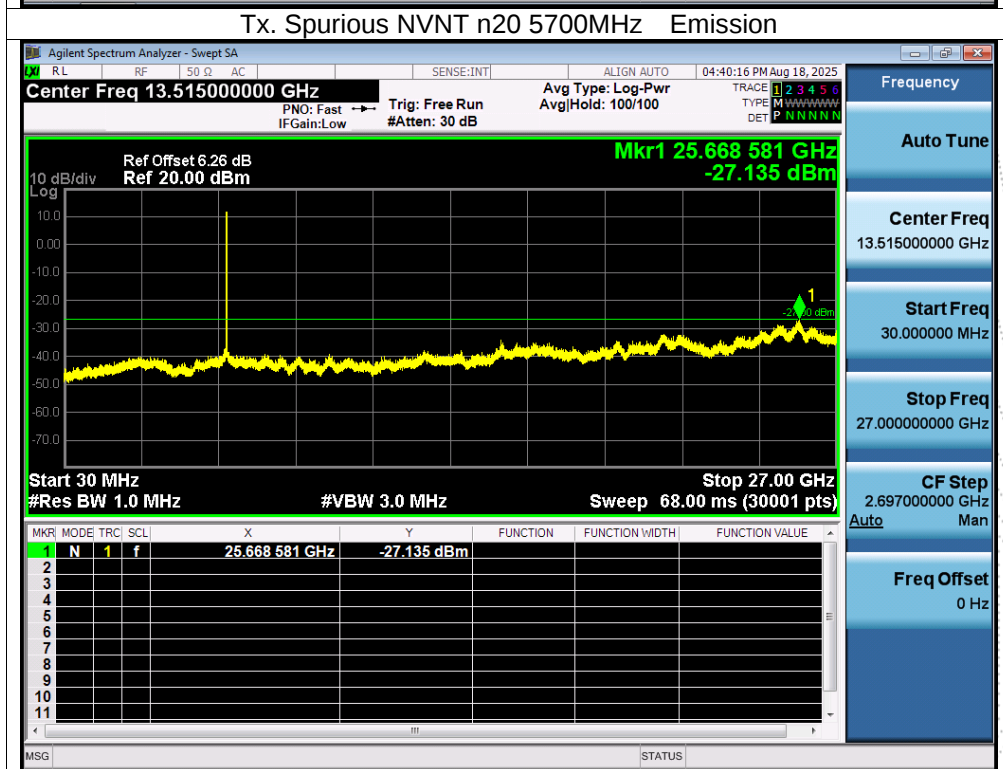
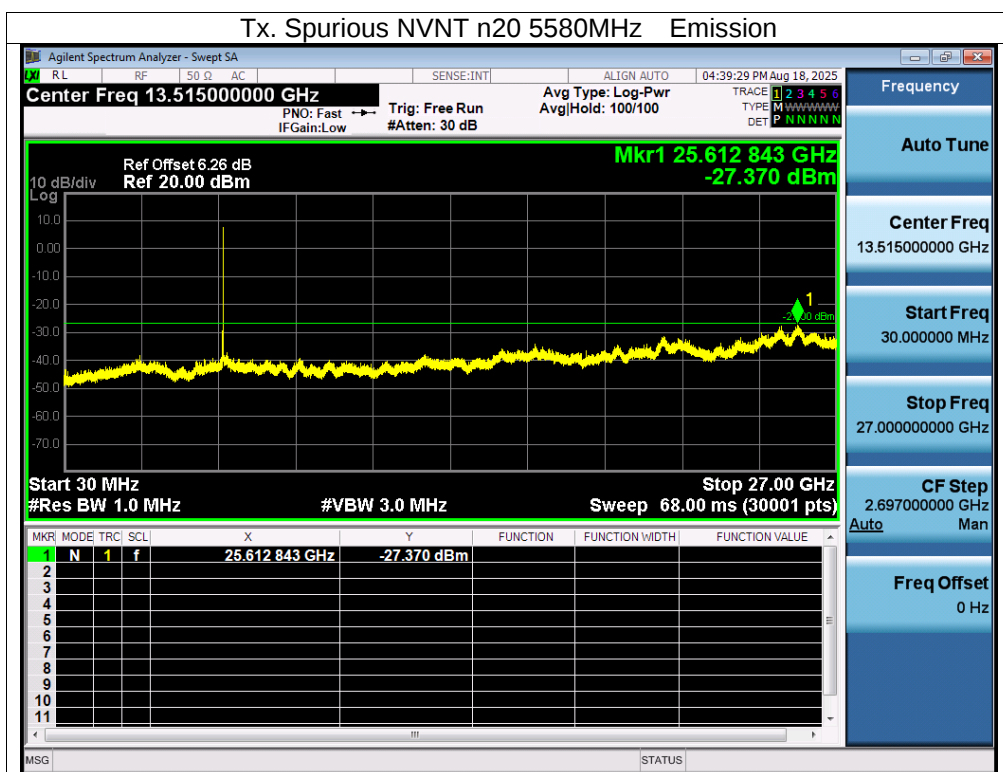
Tx. Spurious NVNT a 5500MHz Emission

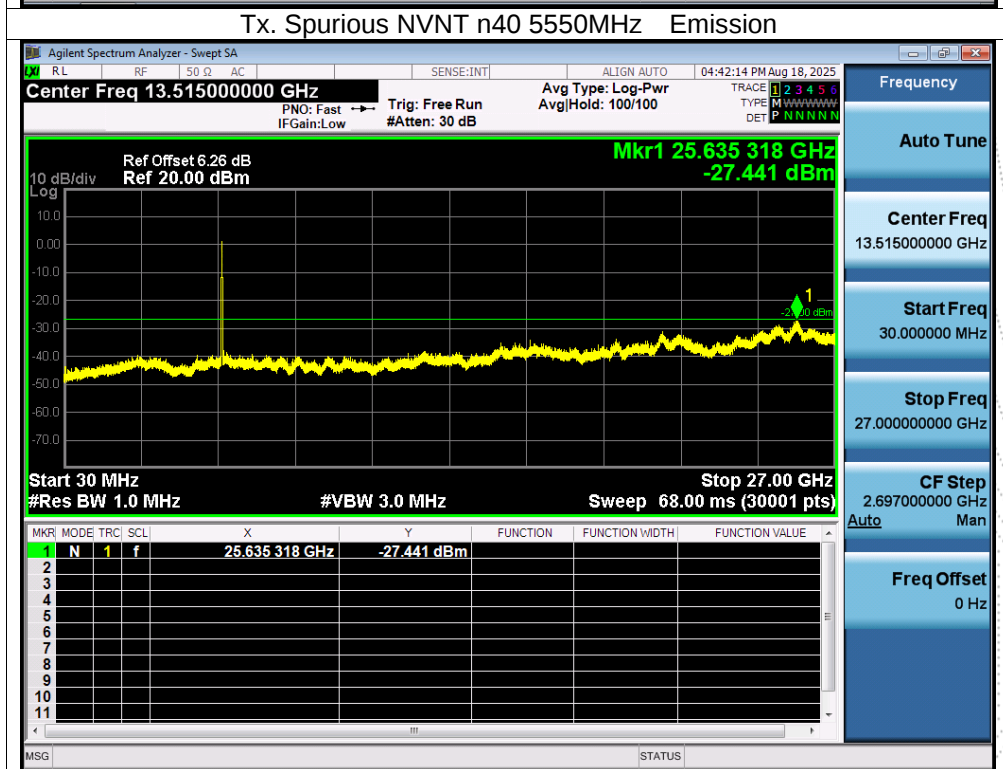
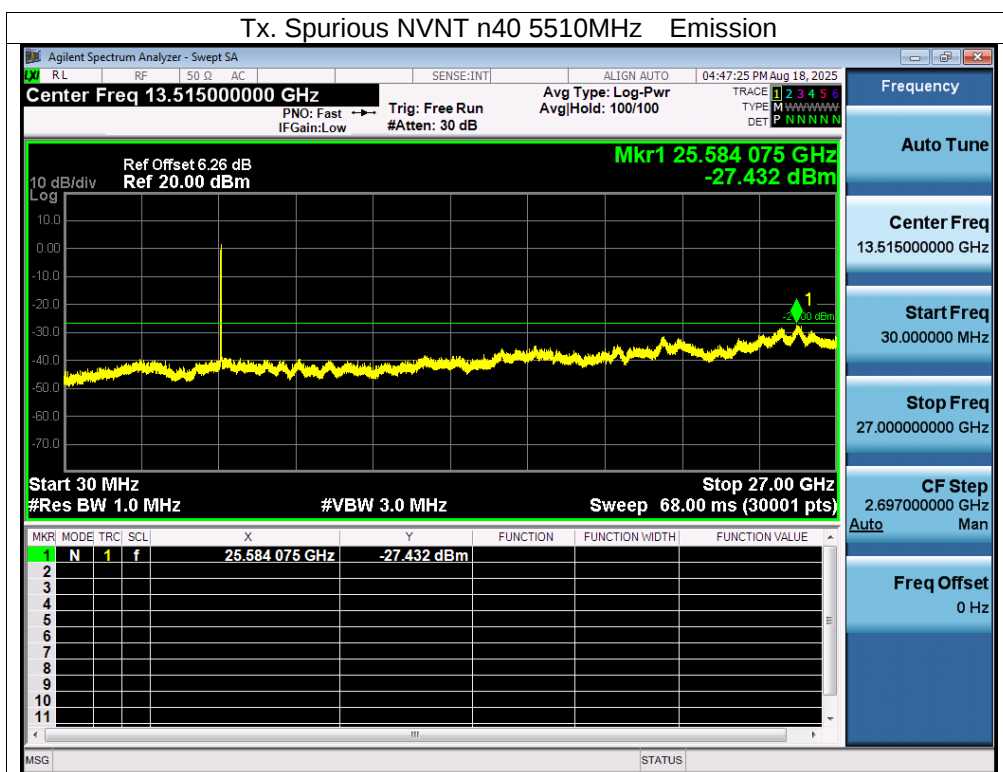


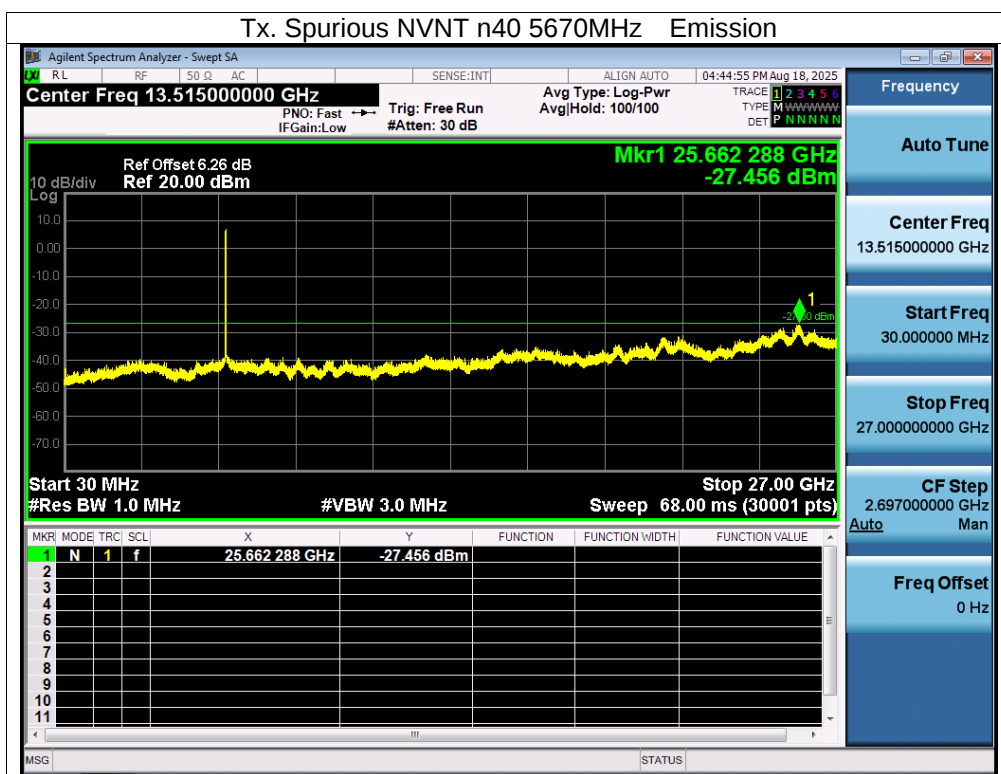
Tx. Spurious NVNT a 5580MHz Emission

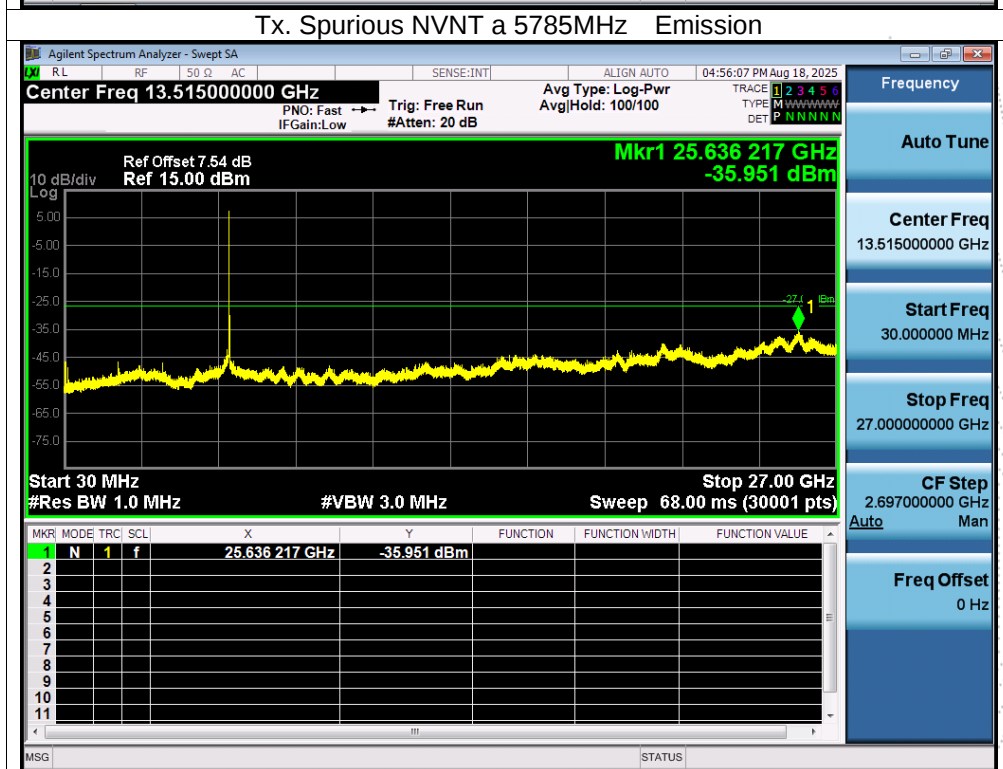
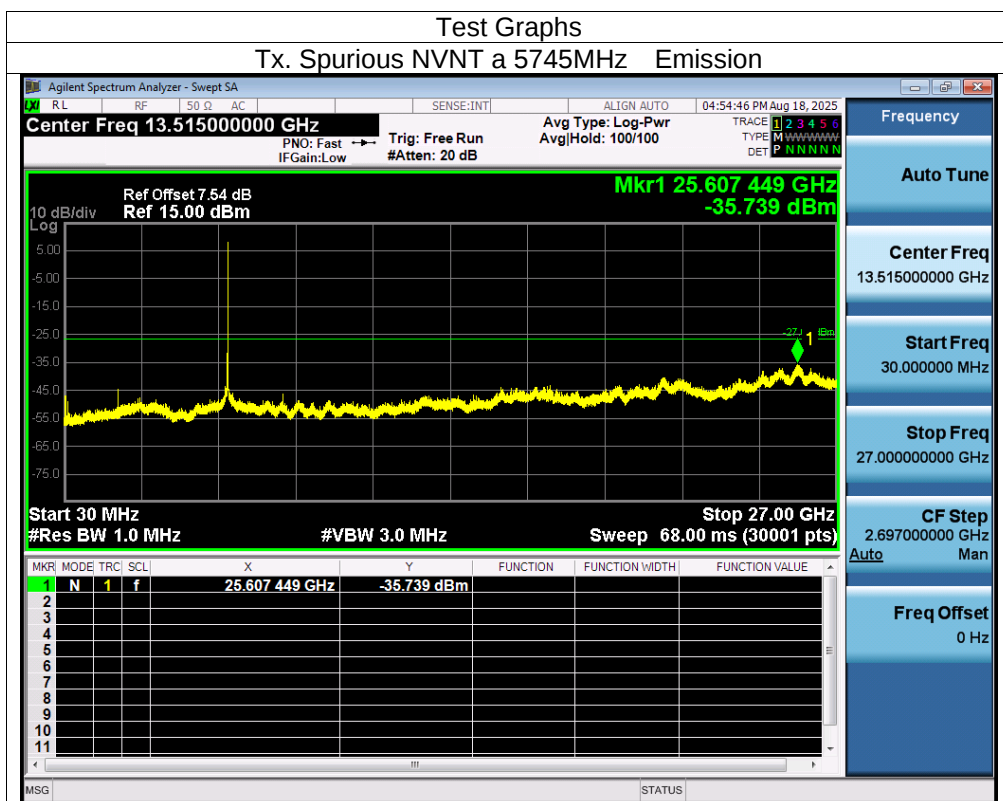


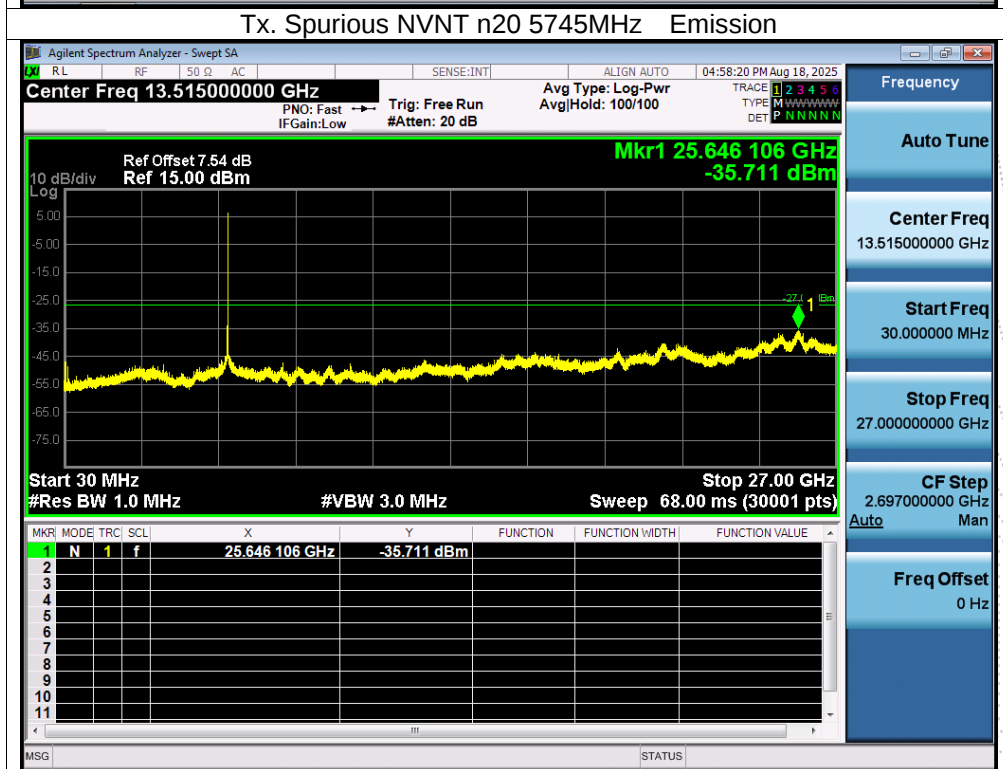
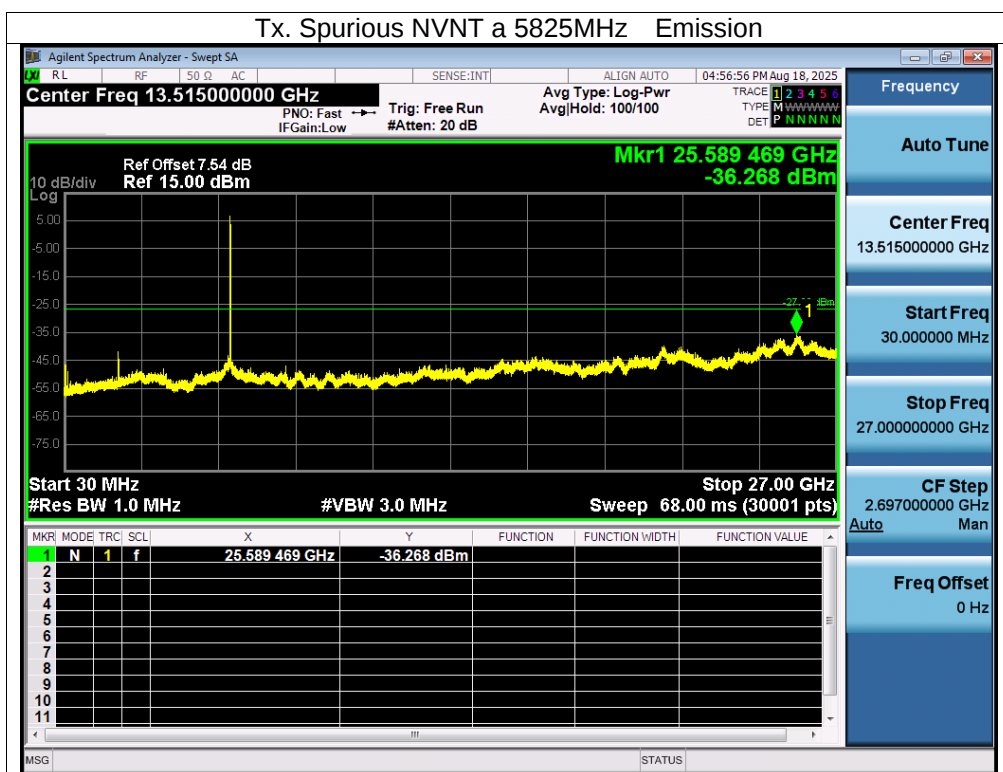


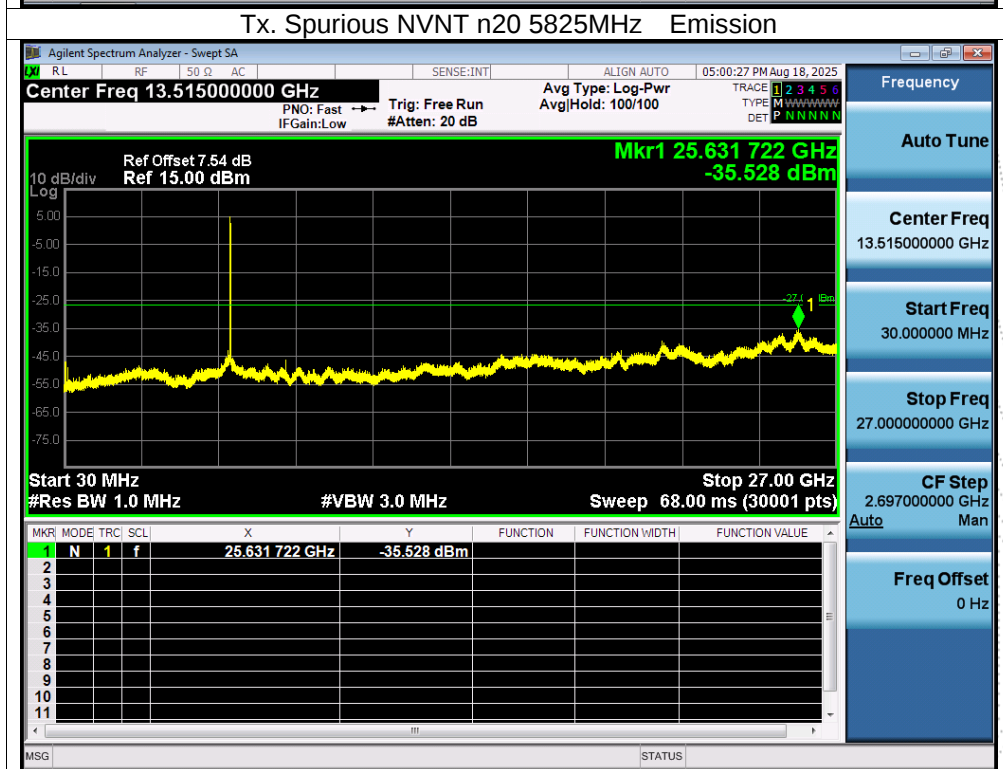
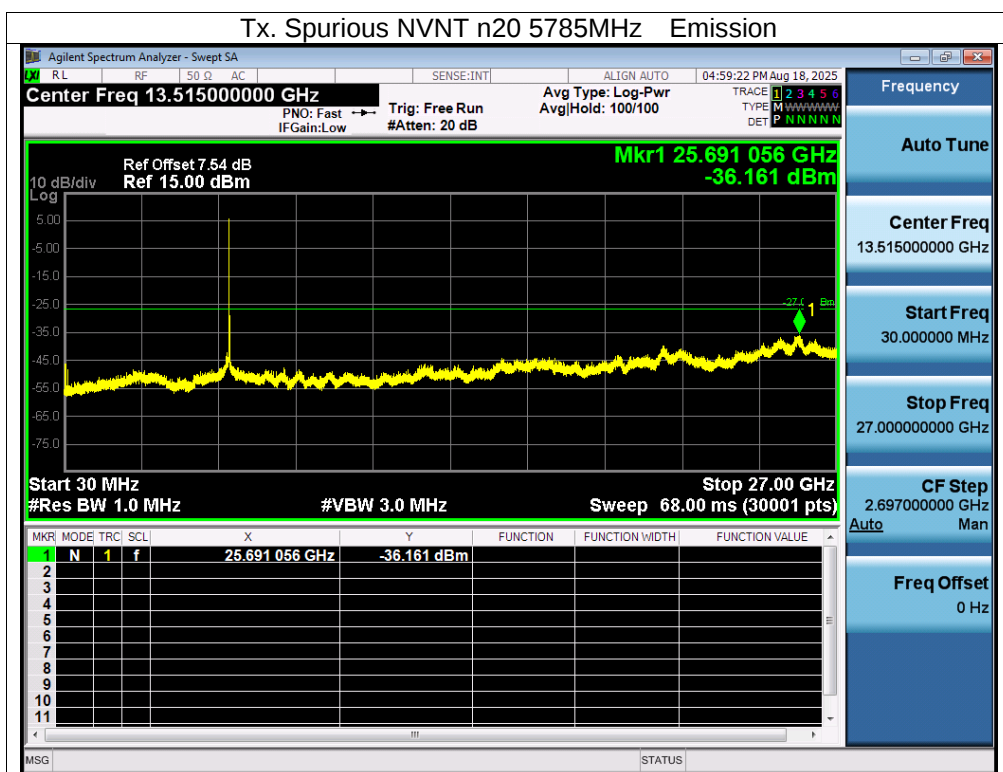


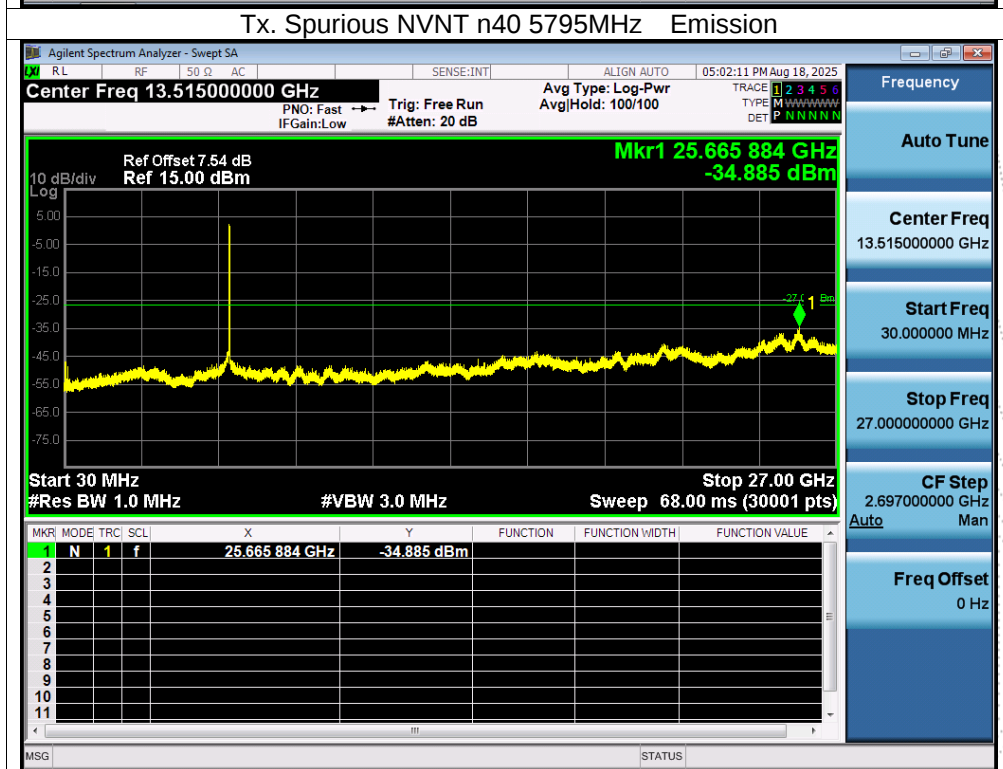
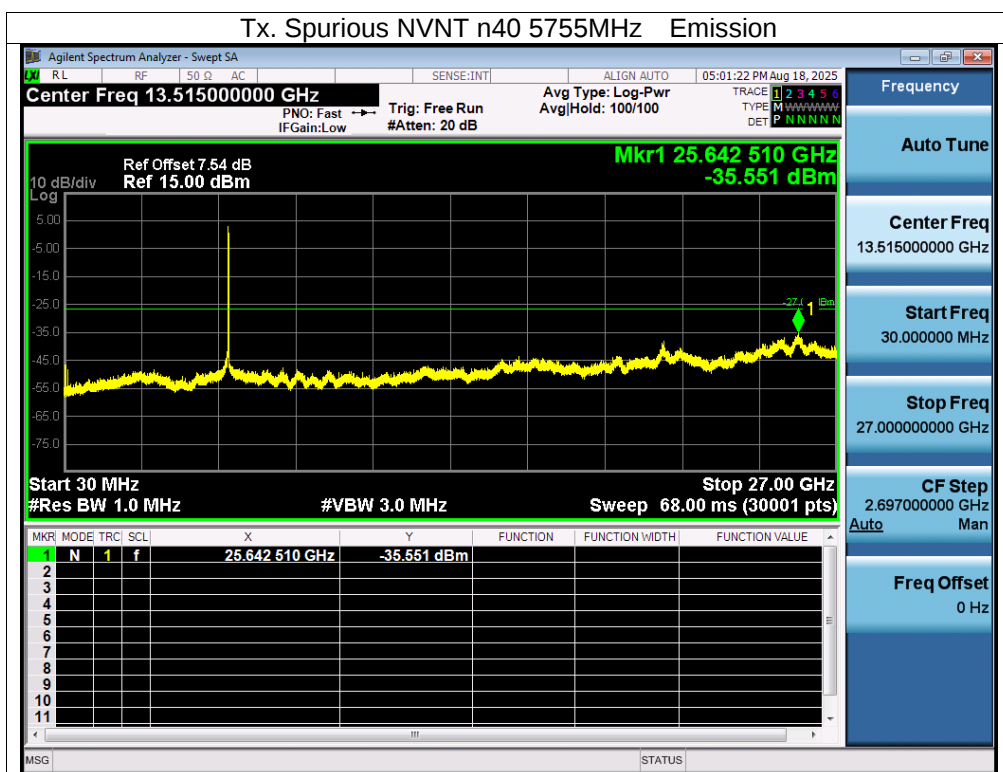












13. Frequency Stability Measurement

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°C ~ 70°C .

13.4 Test Result

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX (5.1G) Mode 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)	AC 120	5180.0029	5180	0.0029	0.5598
		V max (V)	AC 138	5180.0117	5180	0.0117	2.2587
		V min (V)	AC 102	5180.0109	5180	0.0109	2.1042
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)	AC 120	T (°C)	-20	5180.0010	5180	0.0010	0.1931
		T (°C)	-10	5180.0099	5180	0.0099	1.9112
		T (°C)	0	5180.0034	5180	0.0034	0.6564
		T (°C)	10	5180.0122	5180	0.0122	2.3552
		T (°C)	20	5180.0017	5180	0.0017	0.3282
		T (°C)	30	5180.0057	5180	0.0057	1.1004
		T (°C)	40	5180.0079	5180	0.0079	1.5251
		T (°C)	50	5180.0051	5180	0.0051	0.9846
		T (°C)	60	5180.0001	5180	0.0001	0.0193
		T (°C)	70	5180.0006	5180	0.0006	0.1158
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)	AC 120	5200.0076	5200	0.0076	1.4615
		V max (V)	AC 138	5200.0024	5200	0.0024	0.4615
		V min (V)	AC 102	5200.0134	5200	0.0134	2.5769
Limits				5150-5250 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5200.00730	5200	0.00730	1.4038
		T (°C)	-10	5200.01130	5200	0.01130	2.1731
		T (°C)	0	5200.01170	5200	0.01170	2.2500
		T (°C)	10	5200.00420	5200	0.00420	0.8077
		T (°C)	20	5200.00920	5200	0.00920	1.7692
		T (°C)	30	5200.00170	5200	0.00170	0.3269
		T (°C)	40	5200.00050	5200	0.00050	0.0962
		T (°C)	50	5200.00060	5200	0.00060	0.1154
		T (°C)	60	5200.00900	5200	0.00900	1.7308
		T (°C)	70	5200.00840	5200	0.00840	1.6154
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)	AC 120	5240.0042	5240	0.0042	0.8015
		V max (V)	AC 138	5240.0092	5240	0.0092	1.7557
		V min (V)	AC 102	5240.0106	5240	0.0106	2.0229
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)	AC 120	T (°C)	-20	5240.0064	5240	0.0064	1.2214
		T (°C)	-10	5240.0028	5240	0.0028	0.5344
		T (°C)	0	5240.0097	5240	0.0097	1.8511
		T (°C)	10	5240.0052	5240	0.0052	0.9924
		T (°C)	20	5240.0030	5240	0.0030	0.5725
		T (°C)	30	5240.0086	5240	0.0086	1.6412
		T (°C)	40	5240.0095	5240	0.0095	1.8130
		T (°C)	50	5240.0133	5240	0.0133	2.5382
		T (°C)	60	5240.0029	5240	0.0029	0.5534
		T (°C)	70	5240.0048	5240	0.0048	0.9160
Limits				5150-5250 MHz			
Result				Complies			

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX (5.3G) Mode Frequency U-NII-2A (5260-5320MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5260.0125	5260	0.0125	2.3764
		V max (V)	AC 138	5260.0100	5260	0.0100	1.9011
		V min (V)	AC 102	5260.0117	5260	0.0117	2.2243
Limits				5250-5350 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5260.0115	5260	0.0115	2.1863
		T (°C)	-10	5260.0052	5260	0.0052	0.9886
		T (°C)	0	5260.0003	5260	0.0003	0.0570
		T (°C)	10	5260.0079	5260	0.0079	1.5019
		T (°C)	20	5260.0085	5260	0.0085	1.6160
		T (°C)	30	5260.0025	5260	0.0025	0.4753
		T (°C)	40	5260.0127	5260	0.0127	2.4144
		T (°C)	50	5260.0038	5260	0.0038	0.7224
		T (°C)	60	5260.0091	5260	0.0091	1.7300
		T (°C)	70	5260.0053	5260	0.0053	1.0076
Limits				5250-5350 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5280.0057	5280	0.0057	1.0795
		V max (V)	AC 138	5280.0019	5280	0.0019	0.3598
		V min (V)	AC 102	5280.0087	5280	0.0087	1.6477
Limits				5250-5350 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5280.00490	5280	0.00490	0.9280
		T (°C)	-10	5280.00690	5280	0.00690	1.3068
		T (°C)	0	5280.01220	5280	0.01220	2.3106
		T (°C)	10	5280.00350	5280	0.00350	0.6629
		T (°C)	20	5280.00650	5280	0.00650	1.2311
		T (°C)	30	5280.00320	5280	0.00320	0.6061
		T (°C)	40	5280.00060	5280	0.00060	0.1136
		T (°C)	50	5280.00030	5280	0.00030	0.0568
		T (°C)	60	5280.00960	5280	0.00960	1.8182
		T (°C)	70	5280.00110	5280	0.00110	0.2083
Limits				5250-5350 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5320.0041	5320	0.0041	0.7707
		V max (V)	AC 138	5320.0091	5320	0.0091	1.7105
		V min (V)	AC 102	5320.0043	5320	0.0043	0.8083
Limits				5250-5350 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5320.0057	5320	0.0057	1.0714
		T (°C)	-10	5320.0133	5320	0.0133	2.5000
		T (°C)	0	5320.0005	5320	0.0005	0.0940
		T (°C)	10	5320.0015	5320	0.0015	0.2820
		T (°C)	20	5320.0030	5320	0.0030	0.5639
		T (°C)	30	5320.0072	5320	0.0072	1.3534
		T (°C)	40	5320.0080	5320	0.0080	1.5038
		T (°C)	50	5320.0095	5320	0.0095	1.7857
		T (°C)	60	5320.0029	5320	0.0029	0.5451
		T (°C)	70	5320.0015	5320	0.0015	0.2820
Limits				5250-5350 MHz			
Result				Complies			

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX (5.6G) Mode Frequency U-NII-2C (5500-5700MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency : 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5500.0013	5500	0.0013	0.2364
		V max (V)	AC 138	5500.0117	5500	0.0117	2.1273
		V min (V)	AC 102	5500.0103	5500	0.0103	1.8727
Limits				5470-5725 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5500.0012	5500	0.0012	0.2182
		T (°C)	-10	5500.0080	5500	0.0080	1.4545
		T (°C)	0	5500.0064	5500	0.0064	1.1636
		T (°C)	10	5500.0075	5500	0.0075	1.3636
		T (°C)	20	5500.0005	5500	0.0005	0.0909
		T (°C)	30	5500.0035	5500	0.0035	0.6364
		T (°C)	40	5500.0012	5500	0.0012	0.2182
		T (°C)	50	5500.0068	5500	0.0068	1.2364
		T (°C)	60	5500.0061	5500	0.0061	1.1091
		T (°C)	70	5500.0006	5500	0.0006	0.1091
Limits				5470-5725 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency : 5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5580.0004	5580	0.0004	0.0717
		V max (V)	AC 138	5580.0051	5580	0.0051	0.9140
		V min (V)	AC 102	5580.0068	5580	0.0068	1.2186
Limits				5470-5725 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency : 5580MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5580.00560	5580	0.00560	1.0036
		T (°C)	-10	5580.00220	5580	0.00220	0.3943
		T (°C)	0	5580.00360	5580	0.00360	0.6452
		T (°C)	10	5580.00540	5580	0.00540	0.9677
		T (°C)	20	5580.00830	5580	0.00830	1.4875
		T (°C)	30	5580.00190	5580	0.00190	0.3405
		T (°C)	40	5580.00330	5580	0.00330	0.5914
		T (°C)	50	5580.01230	5580	0.01230	2.2043
		T (°C)	60	5580.00610	5580	0.00610	1.0932
		T (°C)	70	5580.00940	5580	0.00940	1.6846
Limits				5470-5725 MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency :5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	AC 120	5700.0112	5700	0.0112	1.9649
		V max (V)	AC 138	5700.0123	5700	0.0123	2.1579
		V min (V)	AC 102	5700.0018	5700	0.0018	0.3158
Limits				5470-5725 MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency : 5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	AC 120	T (°C)	-20	5700.0120	5700	0.0120	2.1053
		T (°C)	-10	5700.0009	5700	0.0009	0.1579
		T (°C)	0	5700.0124	5700	0.0124	2.1754
		T (°C)	10	5700.0118	5700	0.0118	2.0702
		T (°C)	20	5700.0134	5700	0.0134	2.3509
		T (°C)	30	5700.0034	5700	0.0034	0.5965
		T (°C)	40	5700.0036	5700	0.0036	0.6316
		T (°C)	50	5700.0045	5700	0.0045	0.7895
		T (°C)	60	5700.0110	5700	0.0110	1.9298
		T (°C)	70	5700.0111	5700	0.0111	1.9474
Limits				5470-5725 MHz			
Result				Complies			

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX (5.8G) Mode Frequency U-NII-3 (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)	AC 120	5745.00280	5745	0.00280	0.4874
		V max (V)	AC 138	5745.00340	5745	0.00340	0.5918
		V min (V)	AC 102	5745.01050	5745	0.01050	1.8277
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)	AC 120	T (°C)	-20	5745.00930	5745	0.00930	1.6188
		T (°C)	-10	5745.00510	5745	0.00510	0.8877
		T (°C)	0	5745.00920	5745	0.00920	1.6014
		T (°C)	10	5745.01190	5745	0.01190	2.0714
		T (°C)	20	5745.00470	5745	0.00470	0.8181
		T (°C)	30	5745.01110	5745	0.01110	1.9321
		T (°C)	40	5745.00320	5745	0.00320	0.5570
		T (°C)	50	5745.00070	5745	0.00070	0.1218
		T (°C)	60	5745.00930	5745	0.00930	1.6188
		T (°C)	70	5745.00090	5745	0.00090	0.1567
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)	AC 120	5785.01210	5785	0.01210	2.0916
		V max (V)	AC 138	5785.01010	5785	0.01010	1.7459
		V min (V)	AC 102	5785.00410	5785	0.00410	0.7087
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)	AC 120	T (°C)	-20	5785.00010	5785	0.00010	0.0173
		T (°C)	-10	5785.01080	5785	0.01080	1.8669
		T (°C)	0	5785.01030	5785	0.01030	1.7805
		T (°C)	10	5785.01200	5785	0.01200	2.0743
		T (°C)	20	5785.01110	5785	0.01110	1.9188
		T (°C)	30	5785.00400	5785	0.00400	0.6914
		T (°C)	40	5785.00820	5785	0.00820	1.4175
		T (°C)	50	5785.00030	5785	0.00030	0.0519
		T (°C)	60	5785.01340	5785	0.01340	2.3163
		T (°C)	70	5785.00920	5785	0.00920	1.5903
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)	AC 120	5825.01100	5825	0.01100	1.8884
		V max (V)	AC 138	5825.00210	5825	0.00210	0.3605
		V min (V)	AC 102	5825.00830	5825	0.00830	1.4249
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)	AC 120	T (°C)	-20	5825.01050	5825	0.01050	1.8026
		T (°C)	-10	5825.00590	5825	0.00590	1.0129
		T (°C)	0	5825.00110	5825	0.00110	0.1888
		T (°C)	10	5825.00350	5825	0.00350	0.6009
		T (°C)	20	5825.00800	5825	0.00800	1.3734
		T (°C)	30	5825.00300	5825	0.00300	0.5150
		T (°C)	40	5825.01320	5825	0.01320	2.2661
		T (°C)	50	5825.01040	5825	0.01040	1.7854
		T (°C)	60	5825.00180	5825	0.00180	0.3090
		T (°C)	70	5825.01060	5825	0.01060	1.8197
Limits				5725-5850 MHz			
Result				Complies			

14. Duty Cycle Of Test Signal

14.1 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.

14.2 Formula

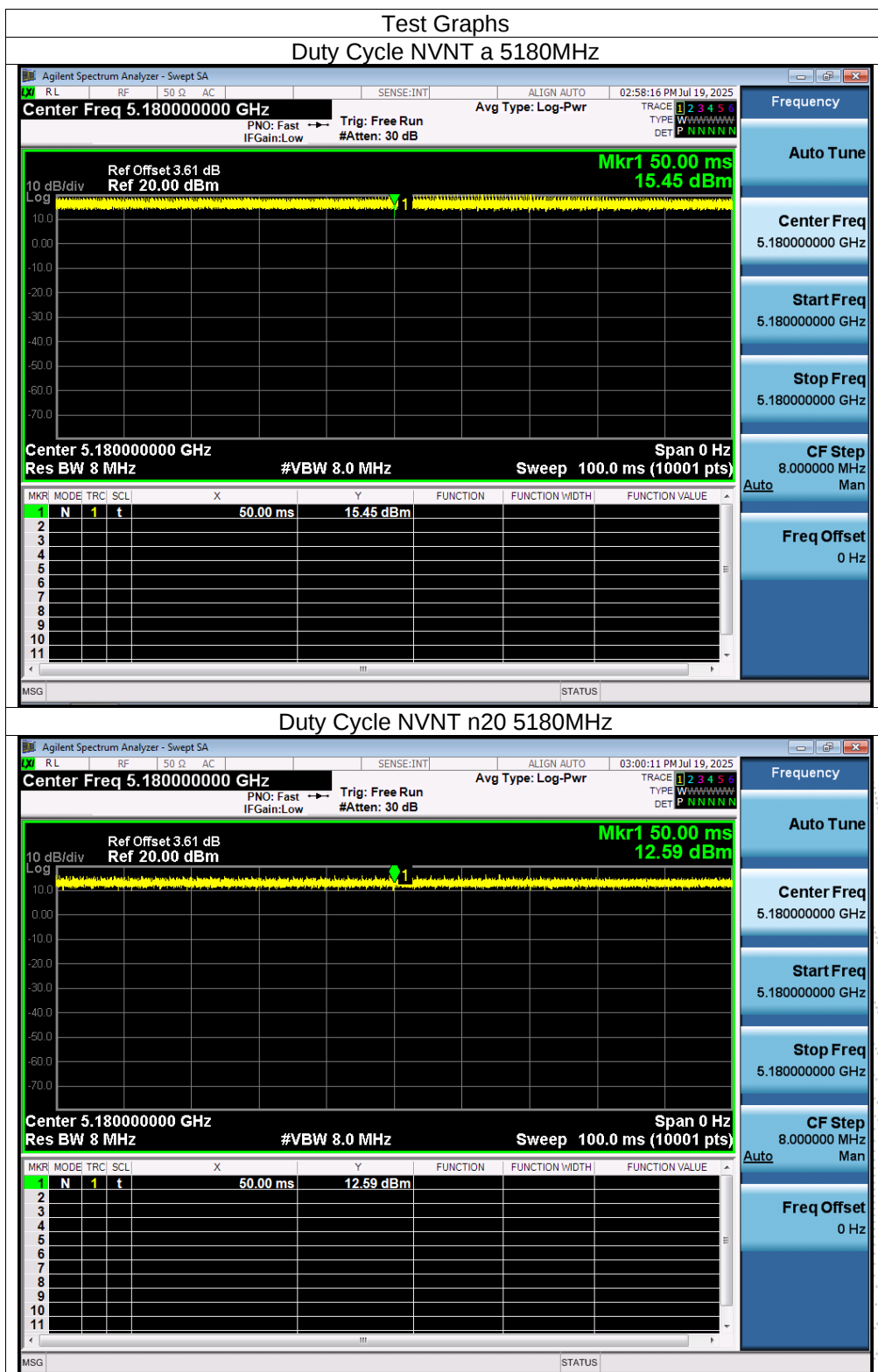
Duty Cycle = $T_{on} / (T_{on} + T_{off})$

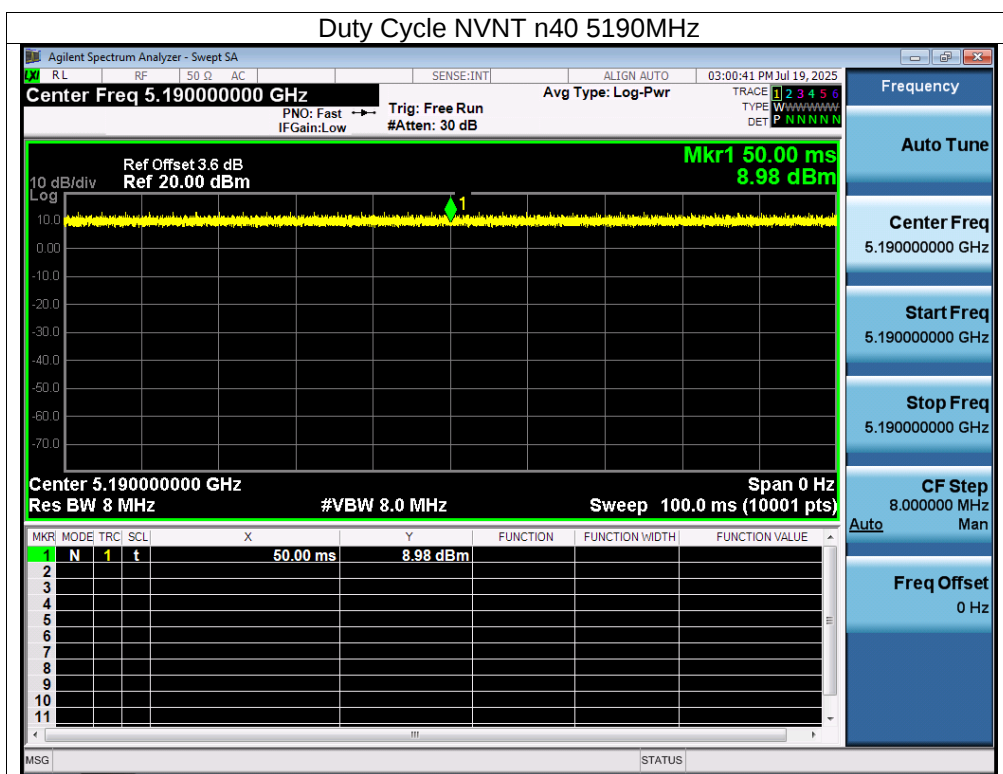
14.3 Test Procedure

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

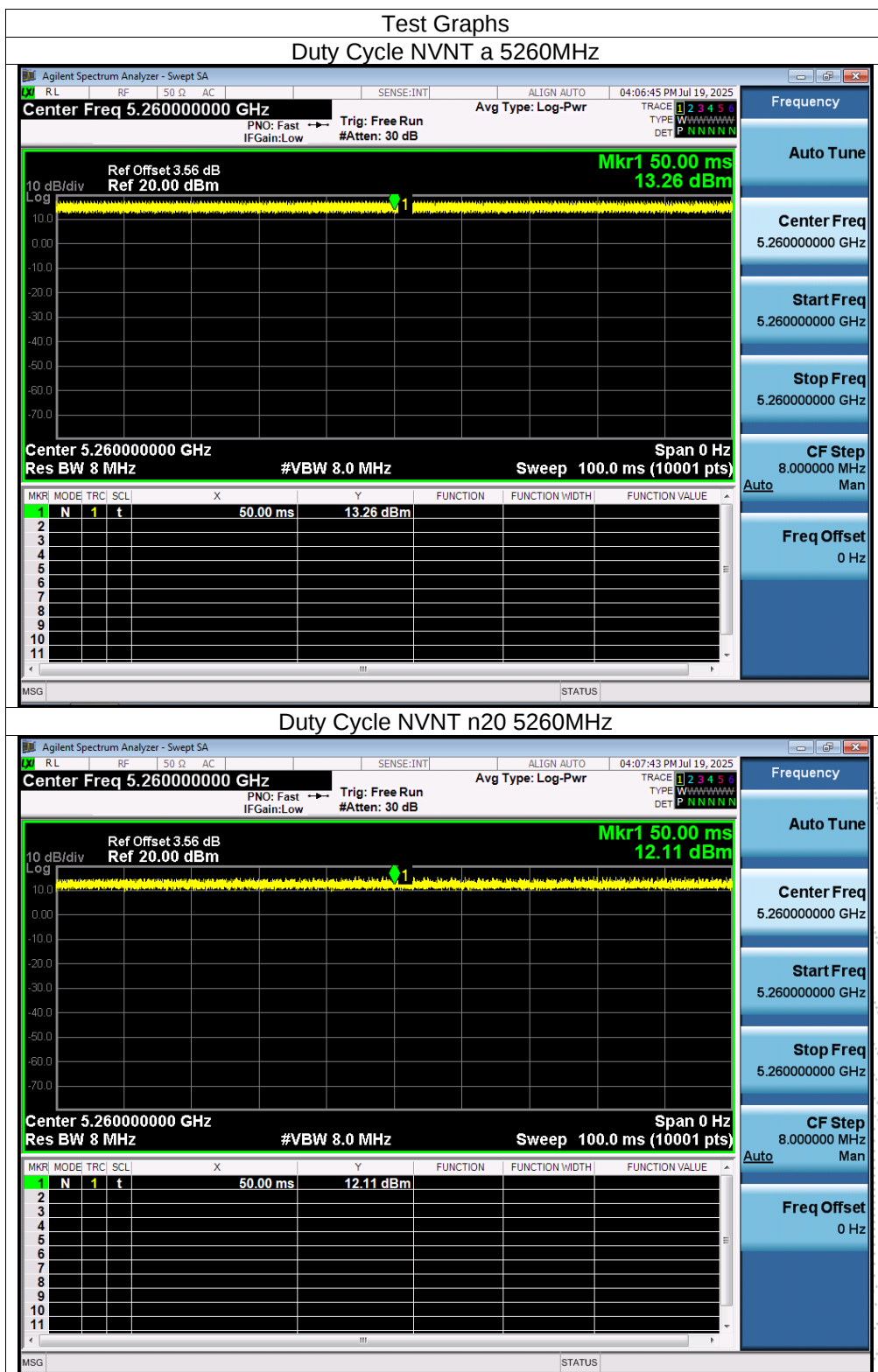
14.4 Test Result

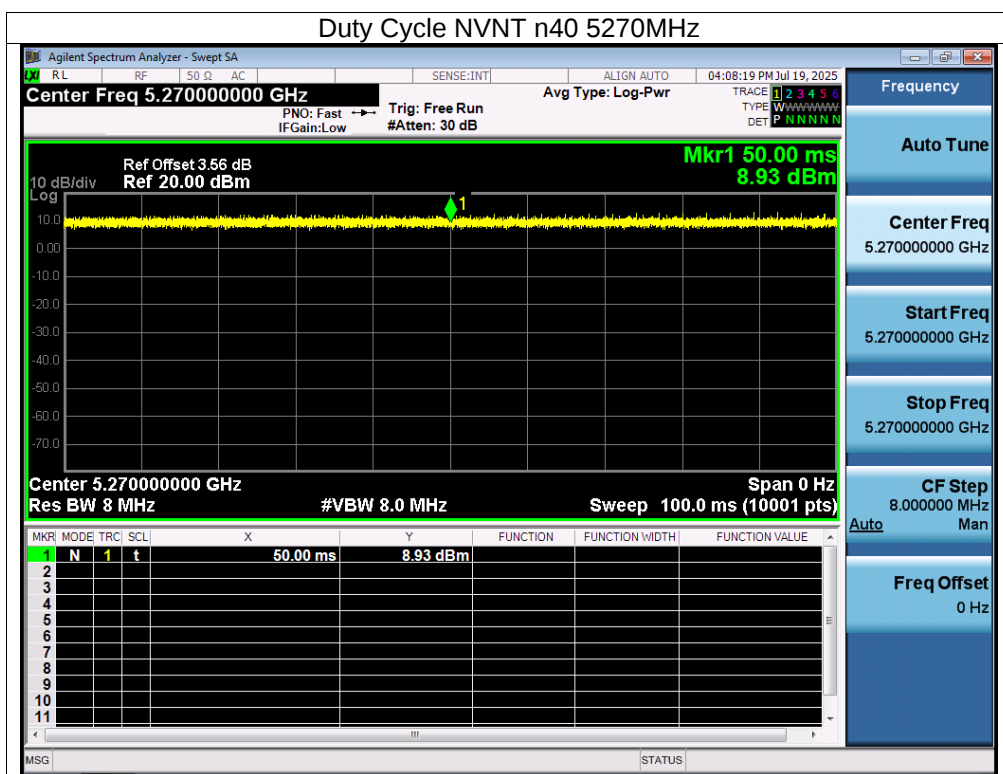
Condition	Mode	Frequency (MHz)	Duty Cycle (%)
NVNT	a	5180	100
NVNT	n20	5180	100
NVNT	n40	5190	100



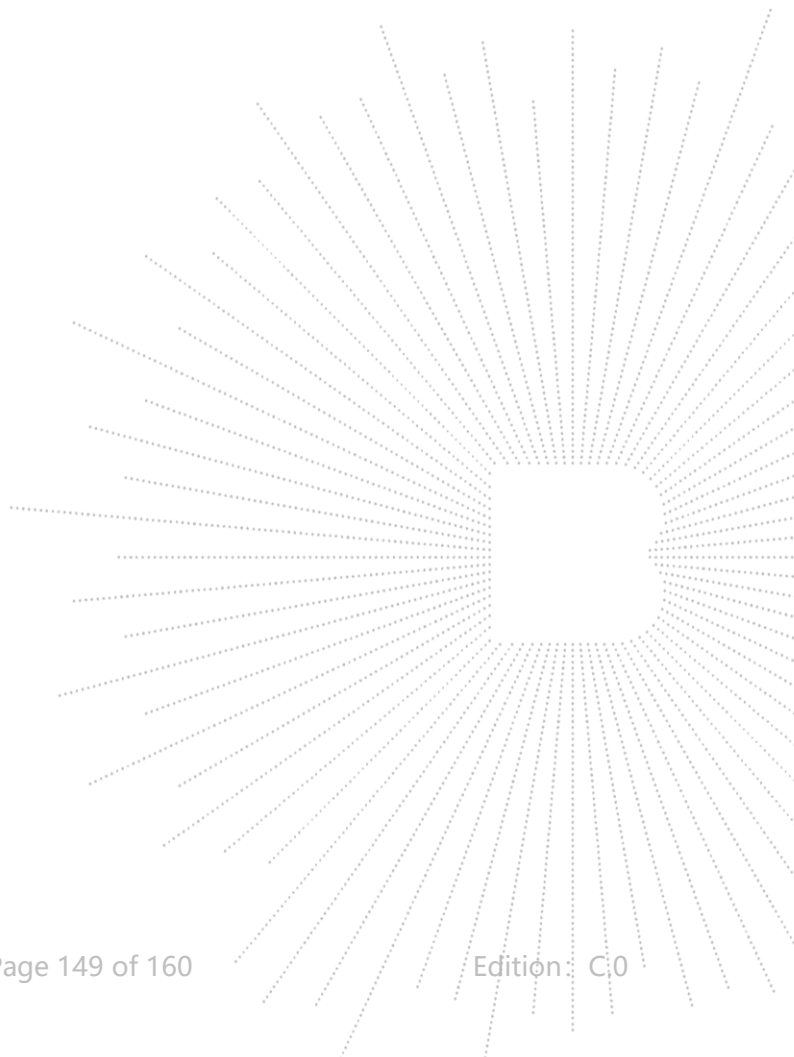


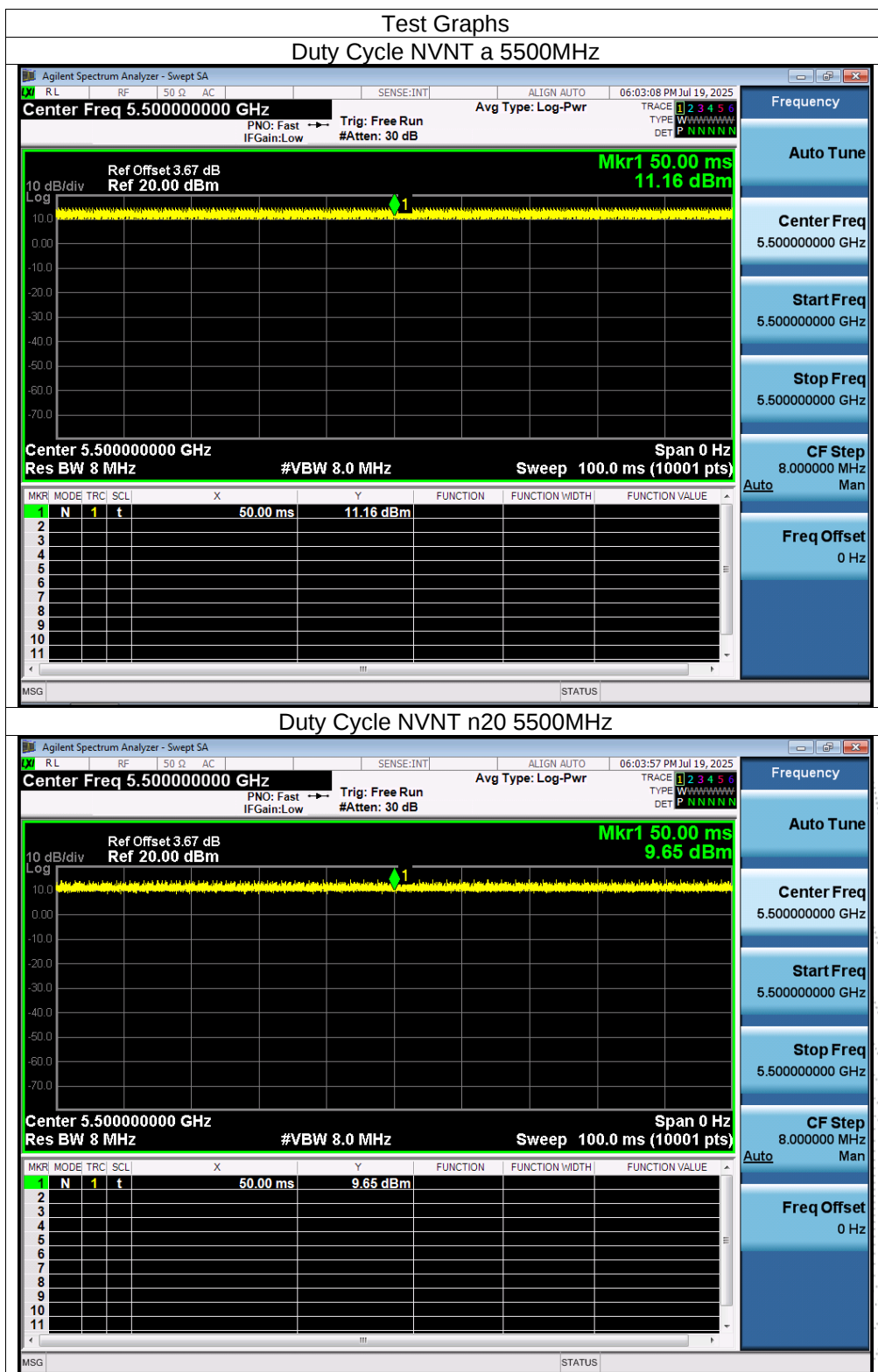
Condition	Mode	Frequency (MHz)	Duty Cycle (%)
NVNT	a	5260	100
NVNT	n20	5260	100
NVNT	n40	5270	100

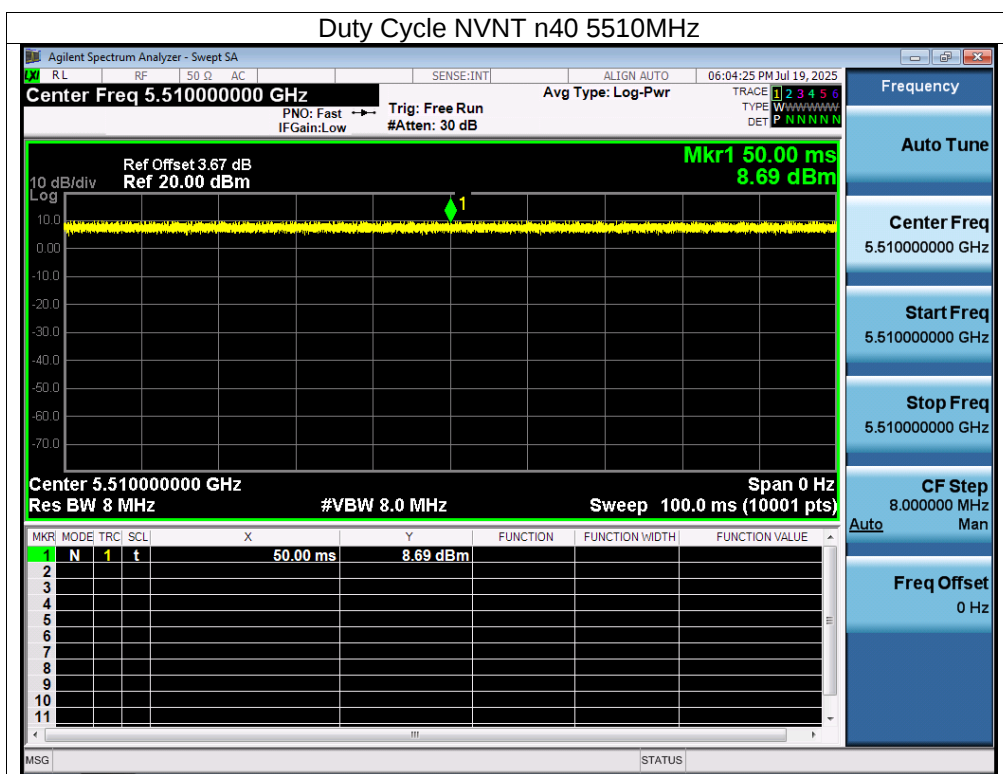




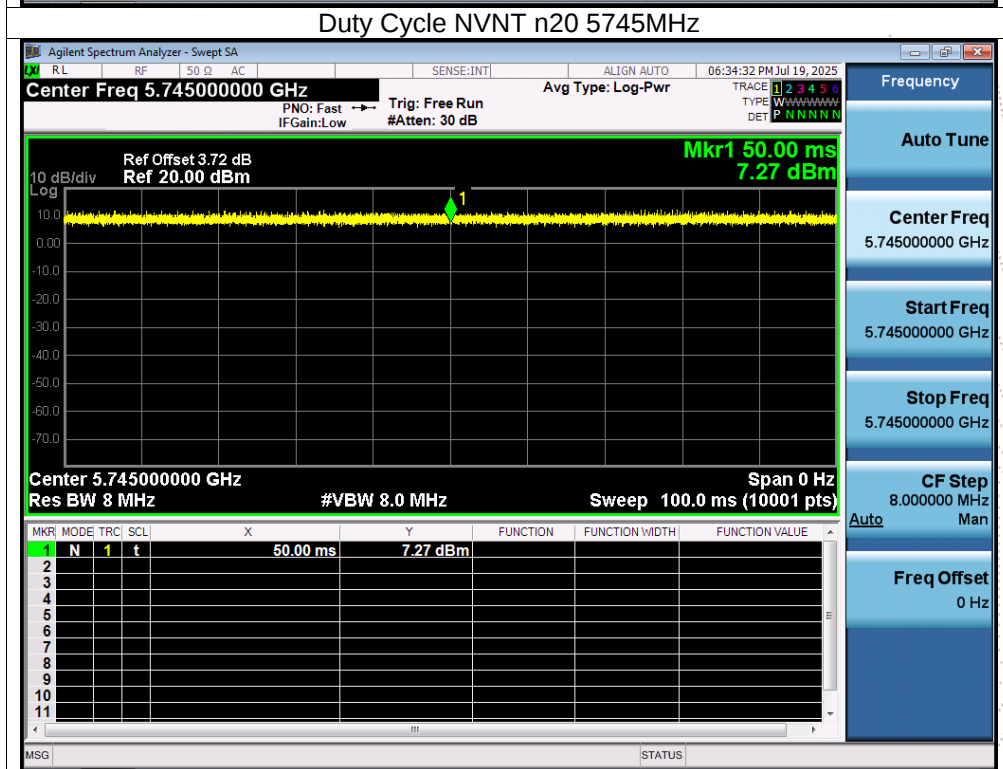
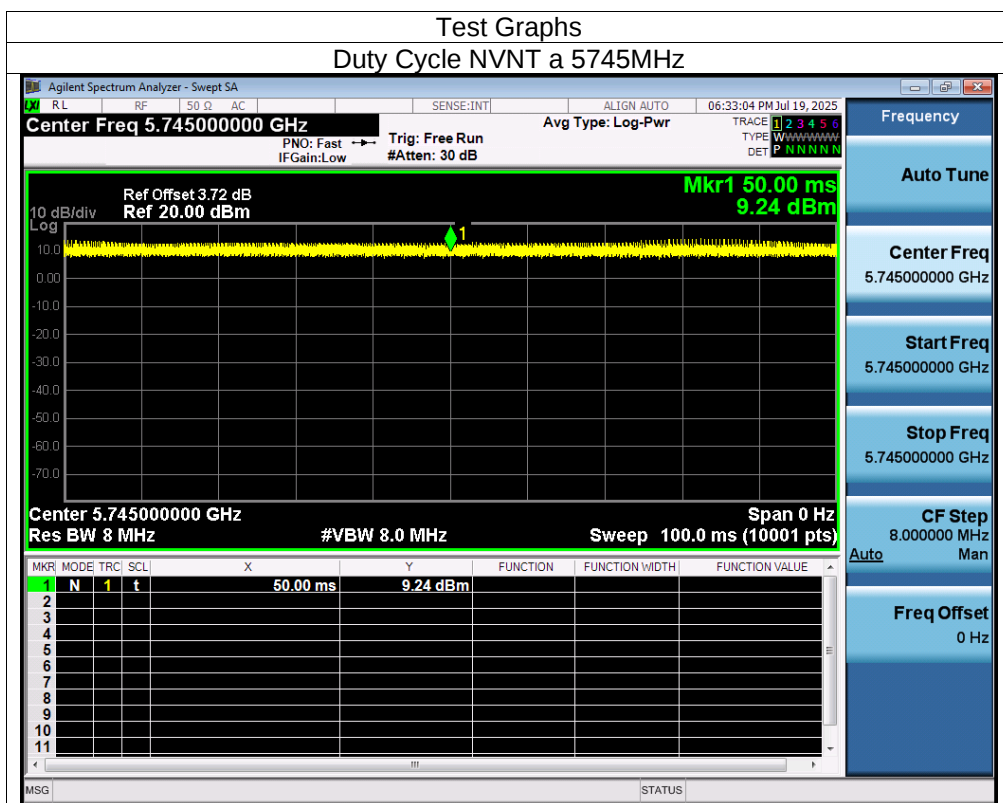
Condition	Mode	Frequency (MHz)	Duty Cycle (%)
NVNT	a	5500	100
NVNT	n20	5500	100
NVNT	n40	5510	100

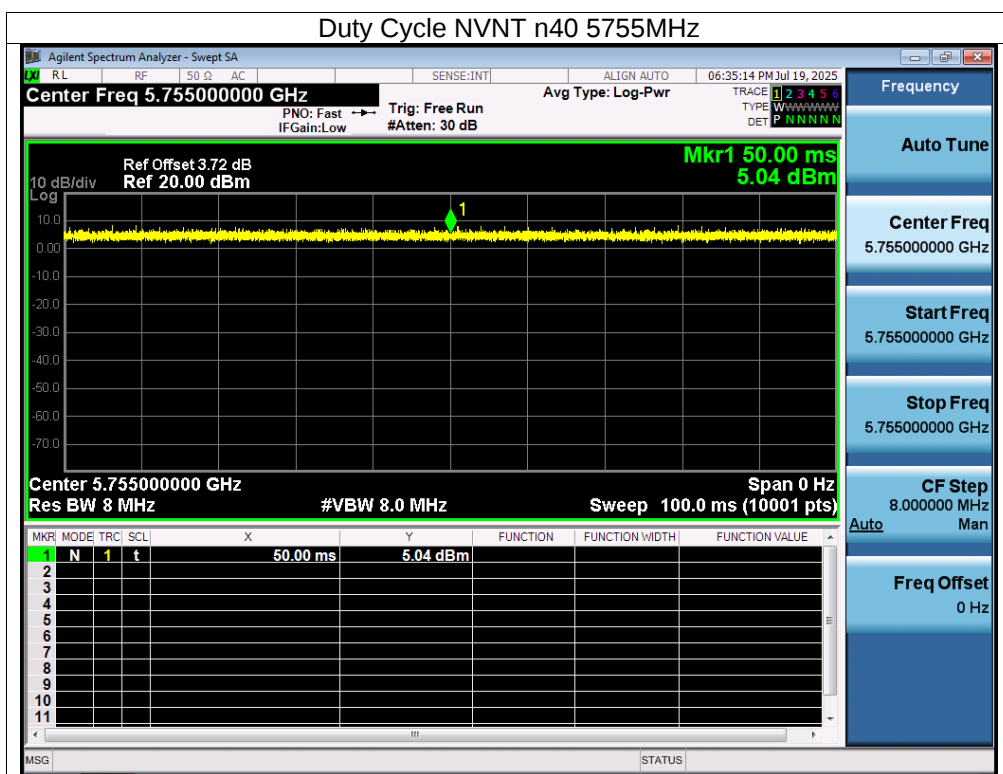






Condition	Mode	Frequency (MHz)	Duty Cycle (%)
NVNT	a	5745	100
NVNT	n20	5745	100
NVNT	n40	5755	100





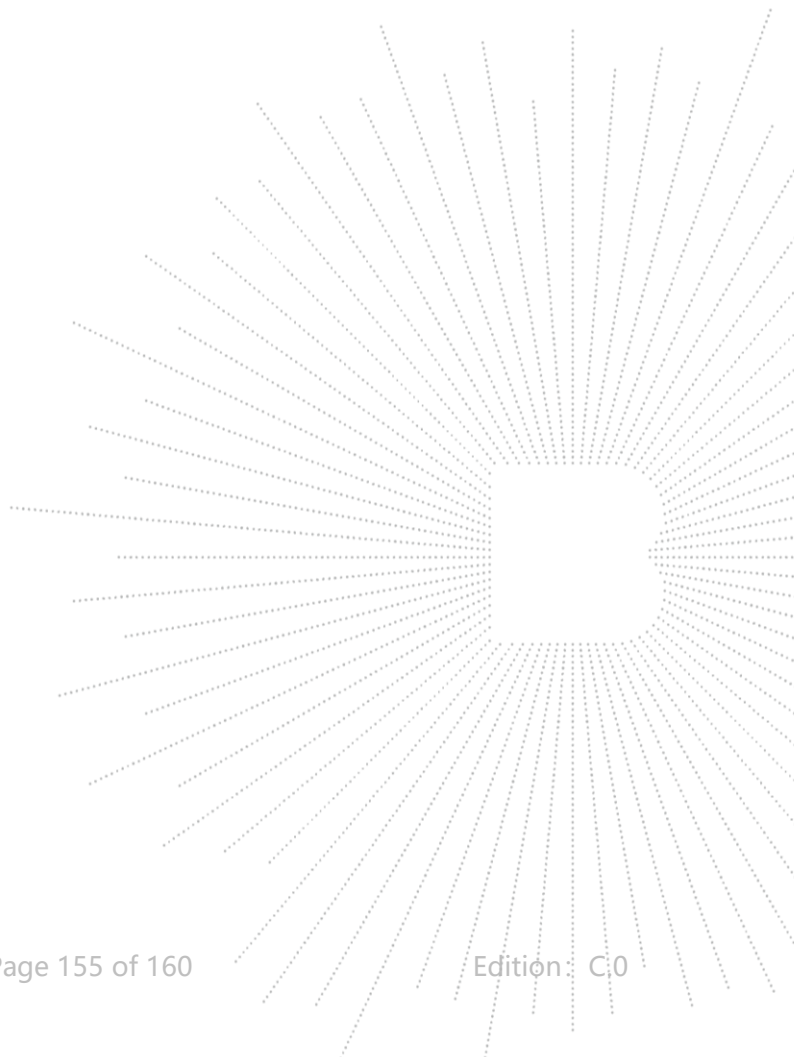
15. Antenna Requirement

15.1 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.

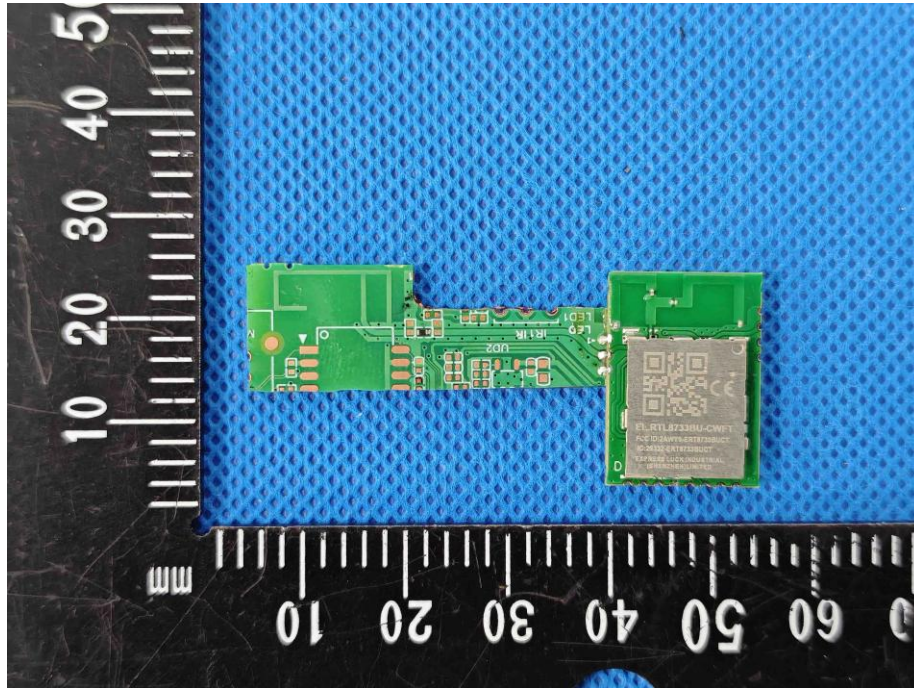
15.2 Test Result

The EUT antenna is PCB antenna. It comply with the standard requirement.

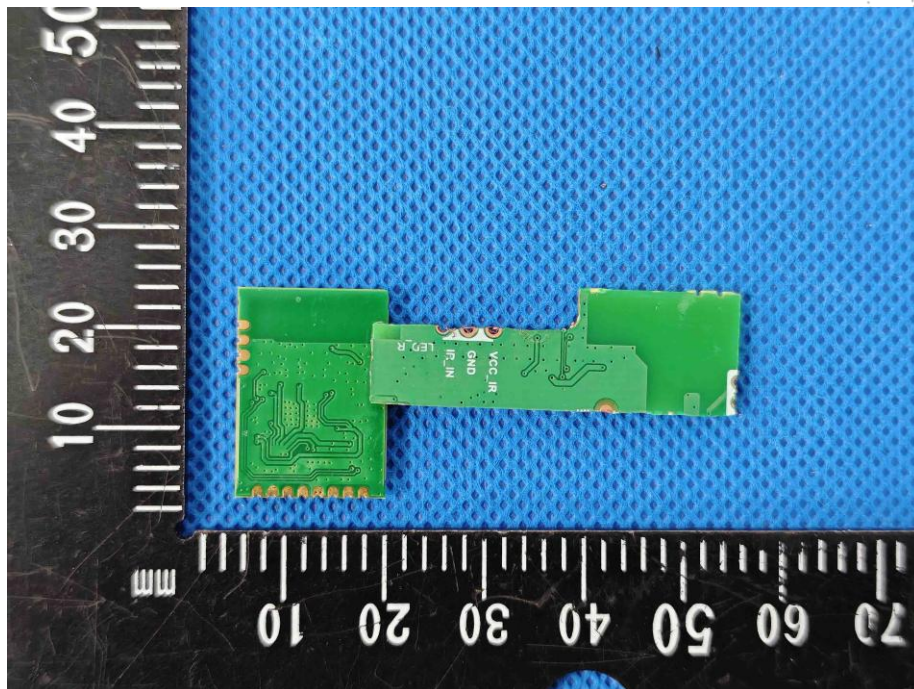


16. EUT Photographs

EUT Photo 1



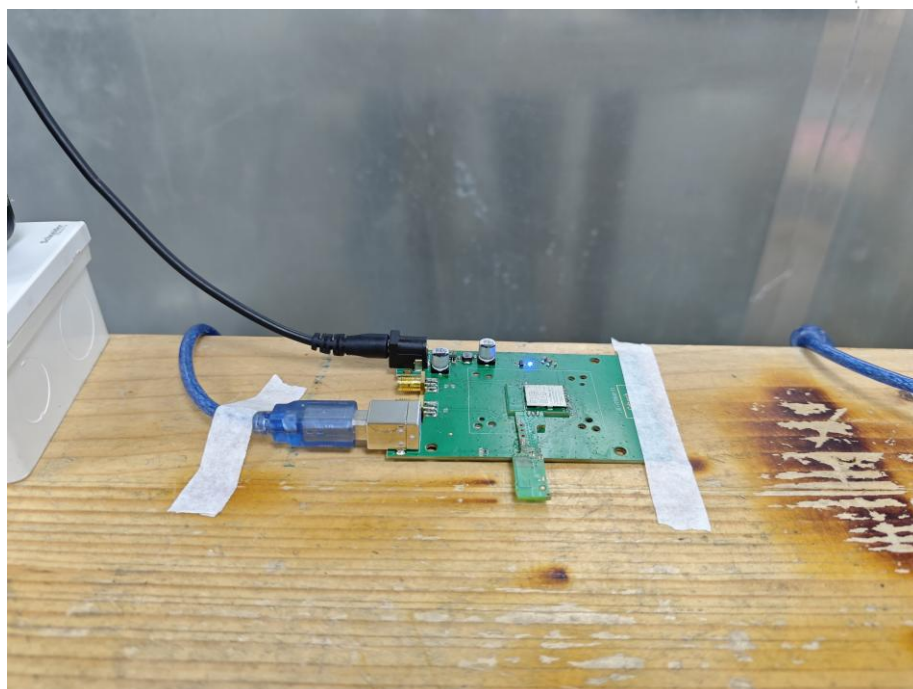
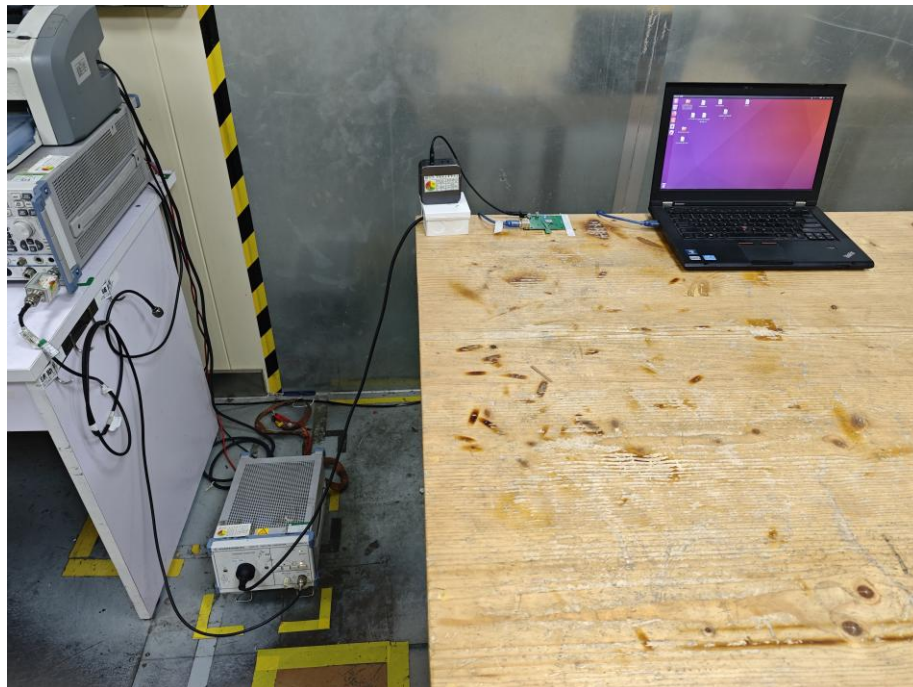
EUT Photo 2



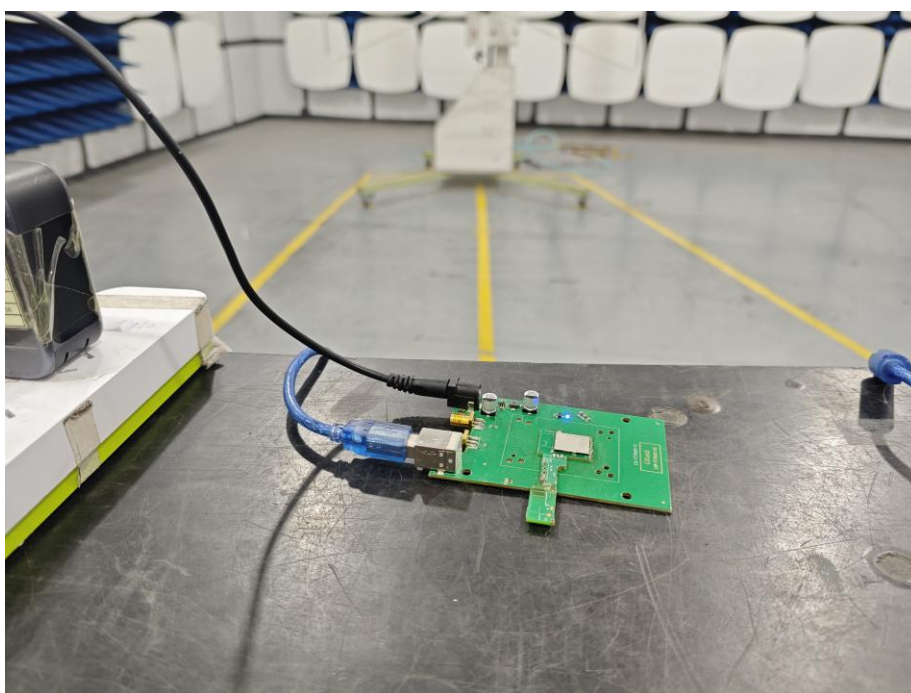
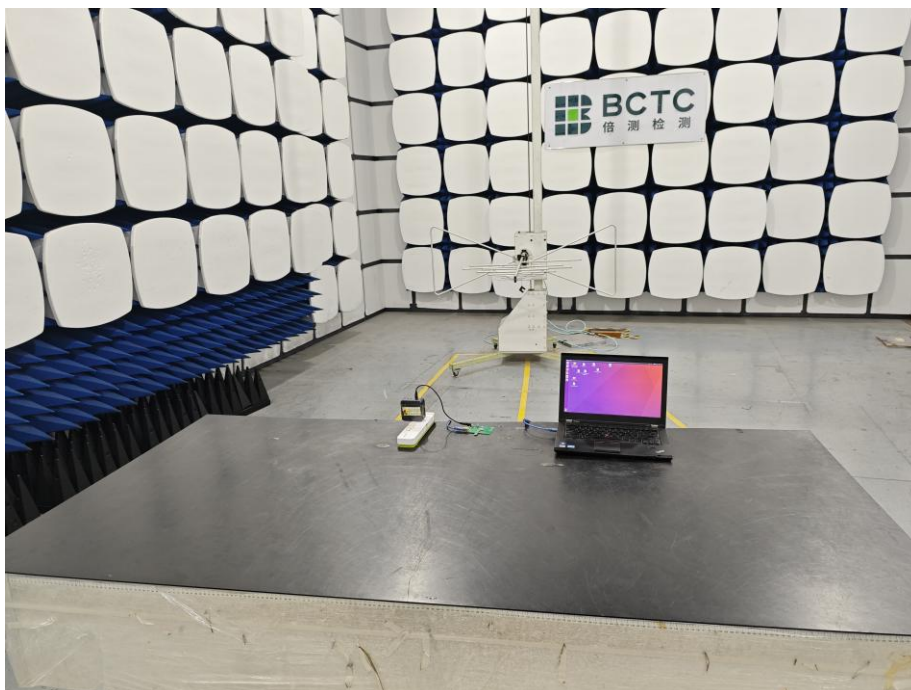
NOTE: Appendix-Photographs Of EUT Constructional Details.

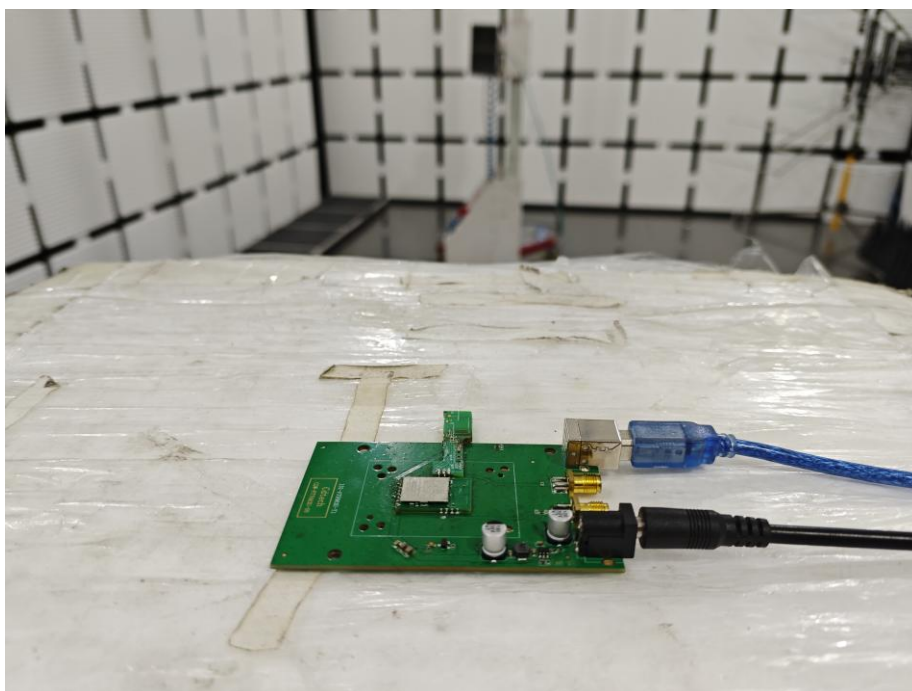
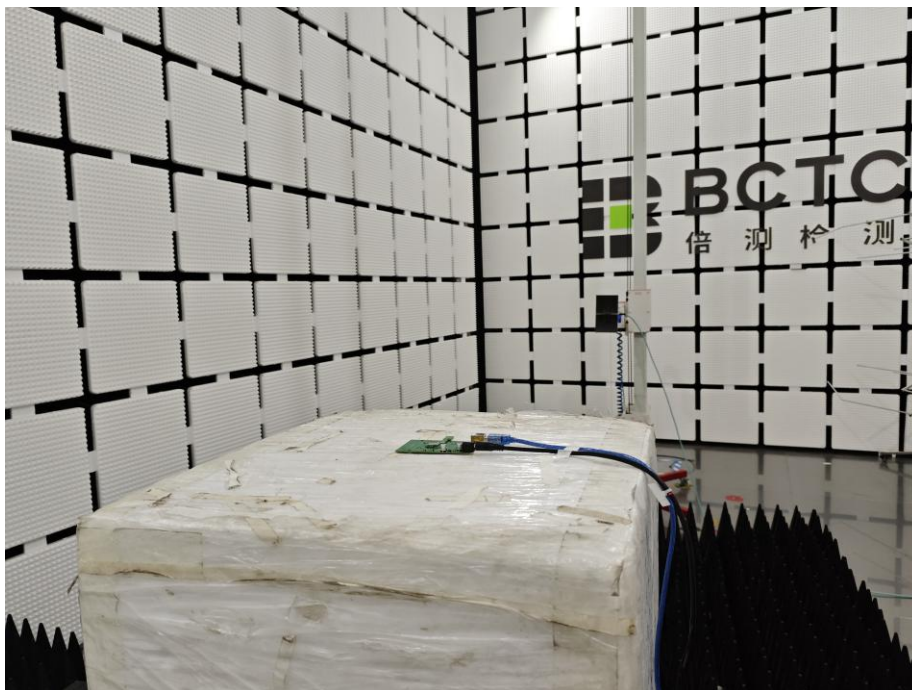
17. EUT Test Setup Photographs

Conducted Emissions Photo



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:

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***** END *****