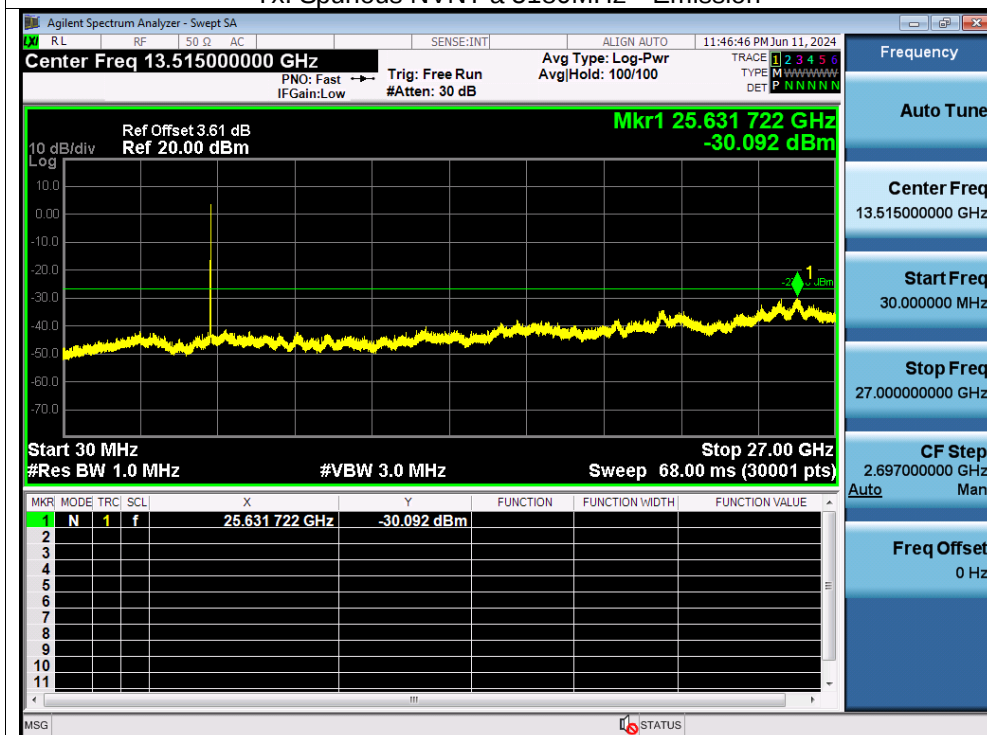
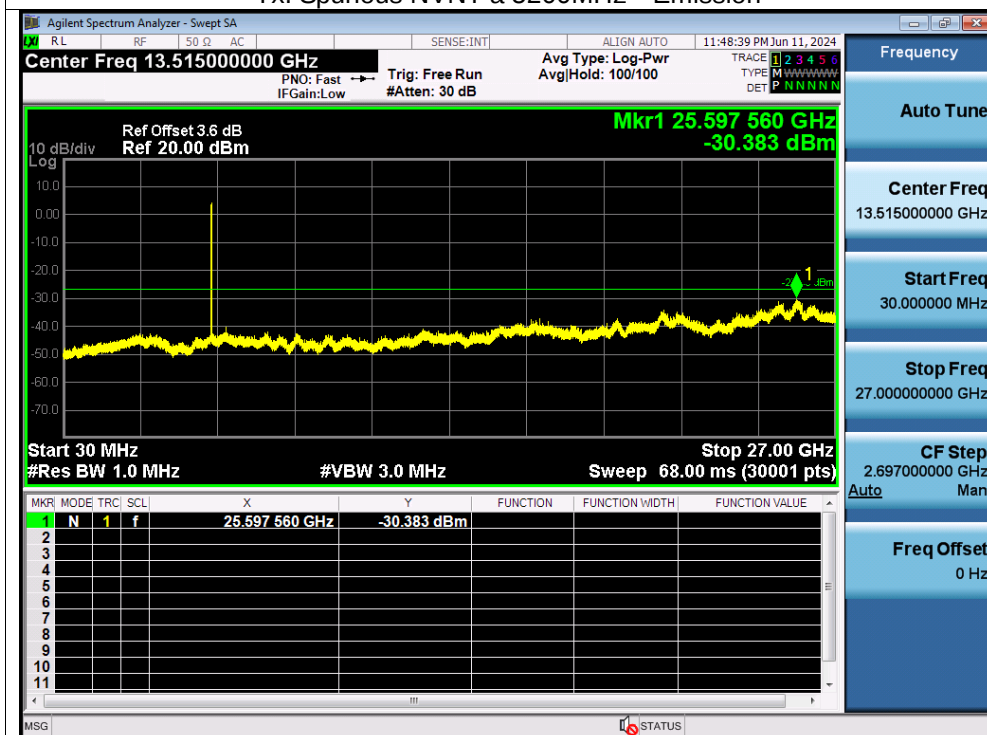


Test Graphs

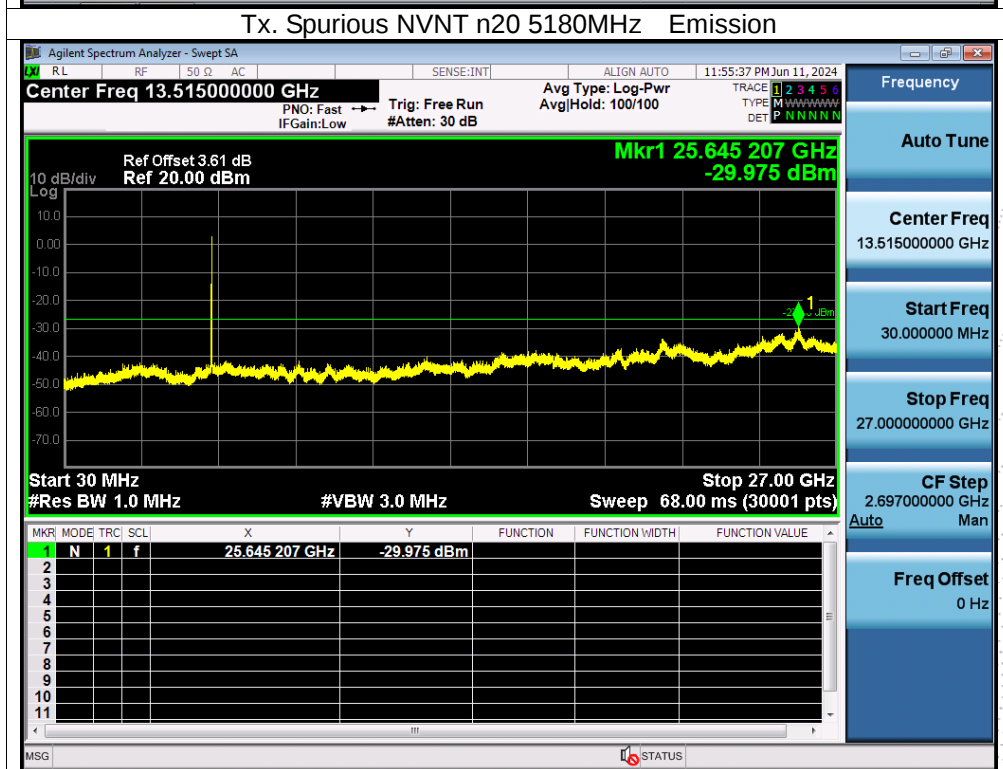
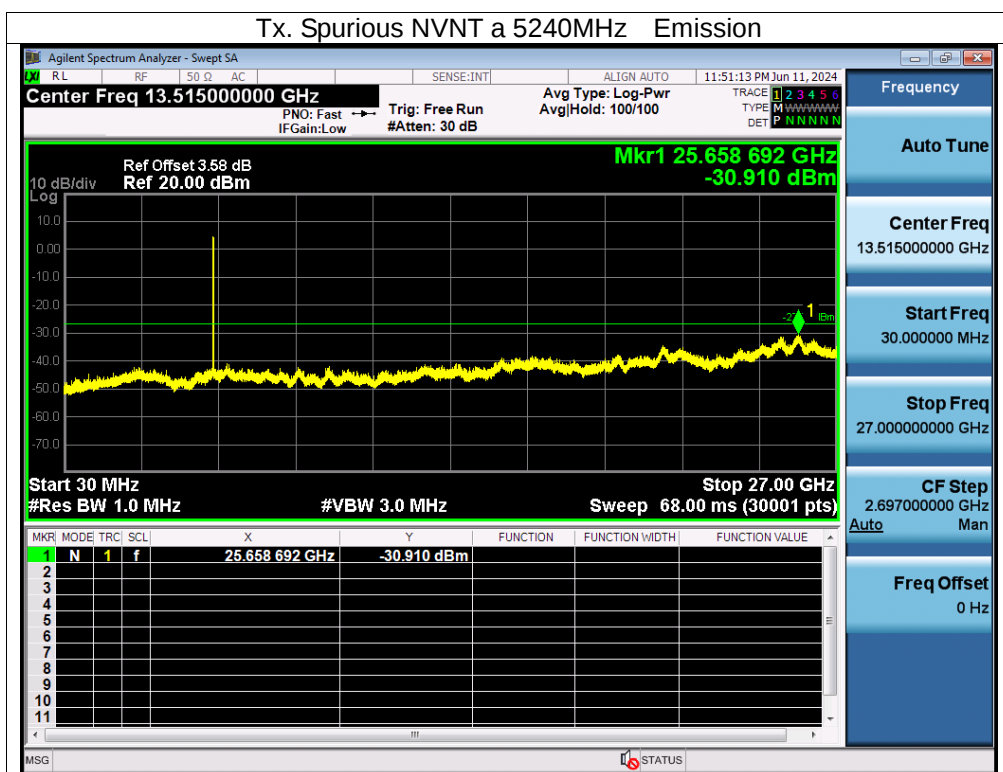
Tx. Spurious NVNT a 5180MHz Emission

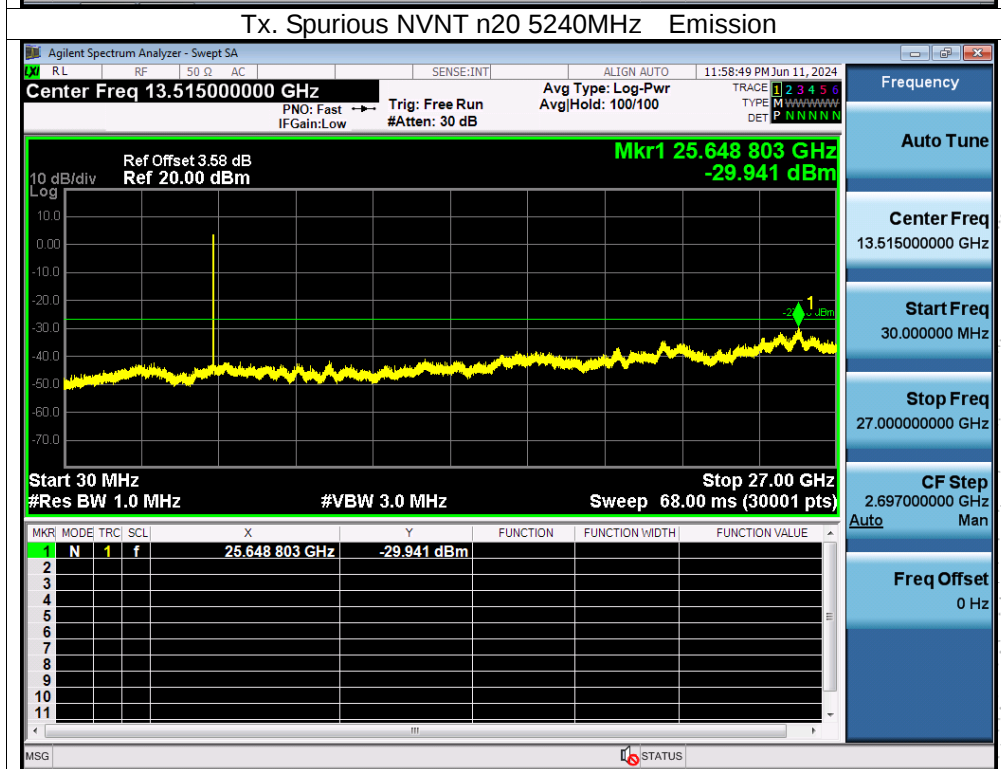
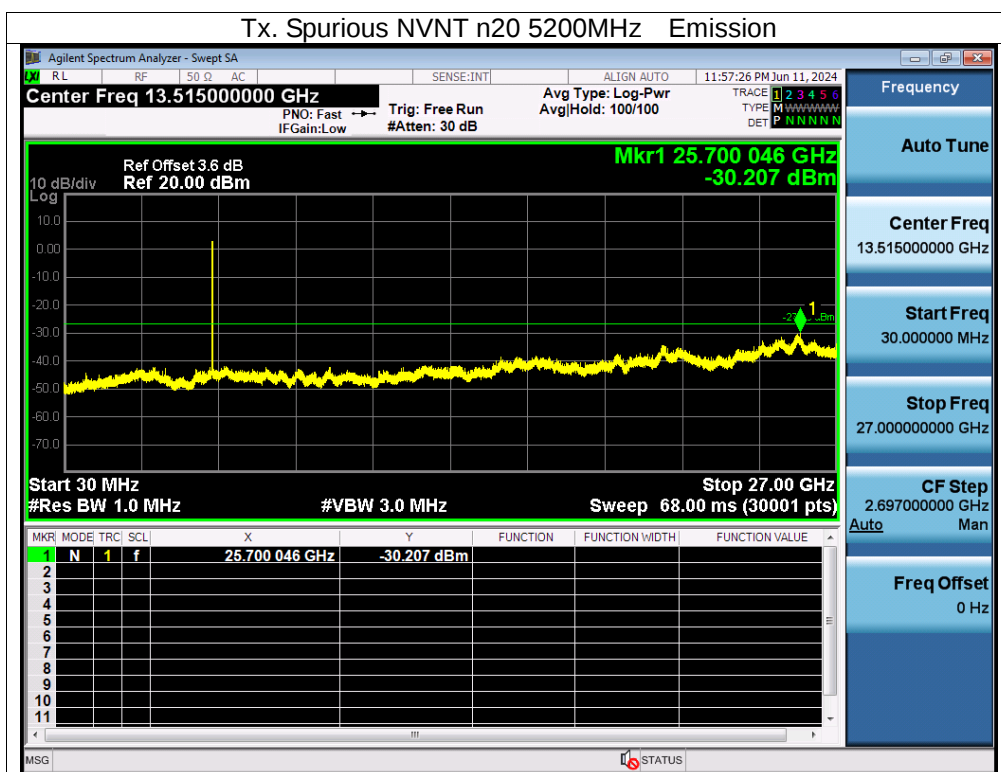


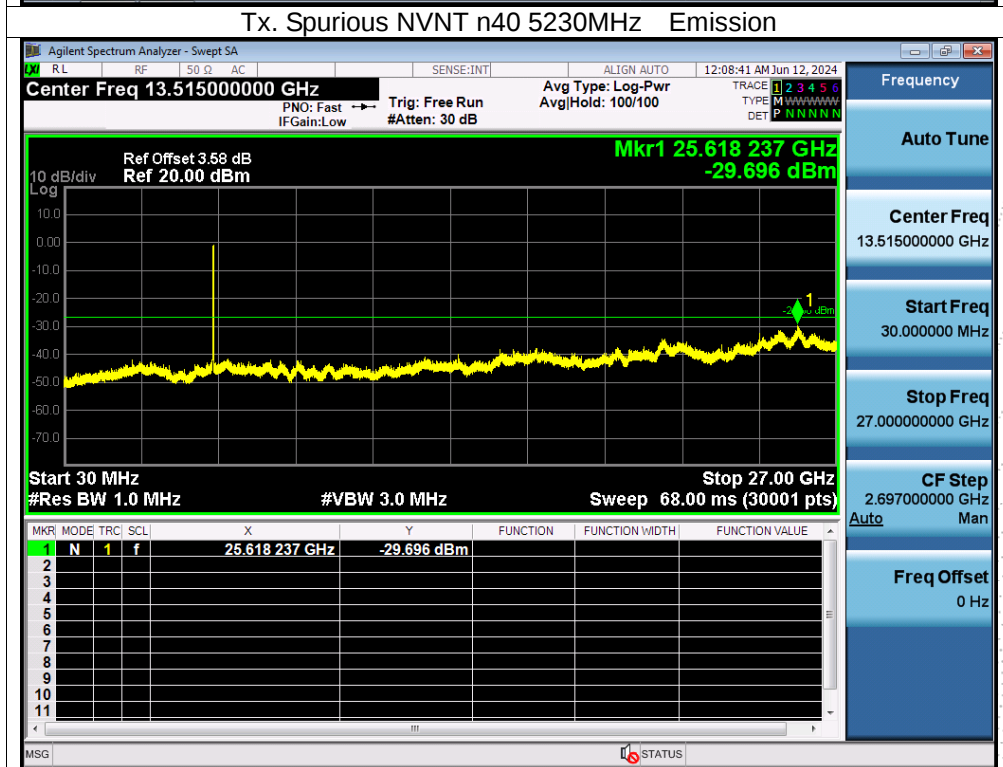
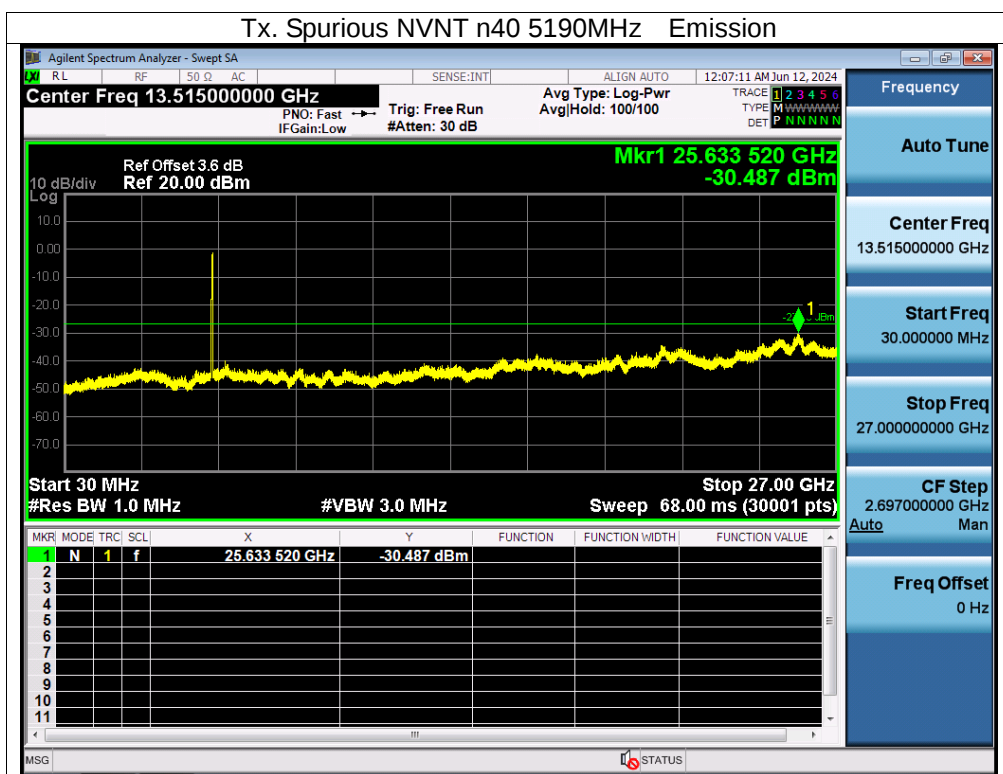
Tx. Spurious NVNT a 5200MHz Emission

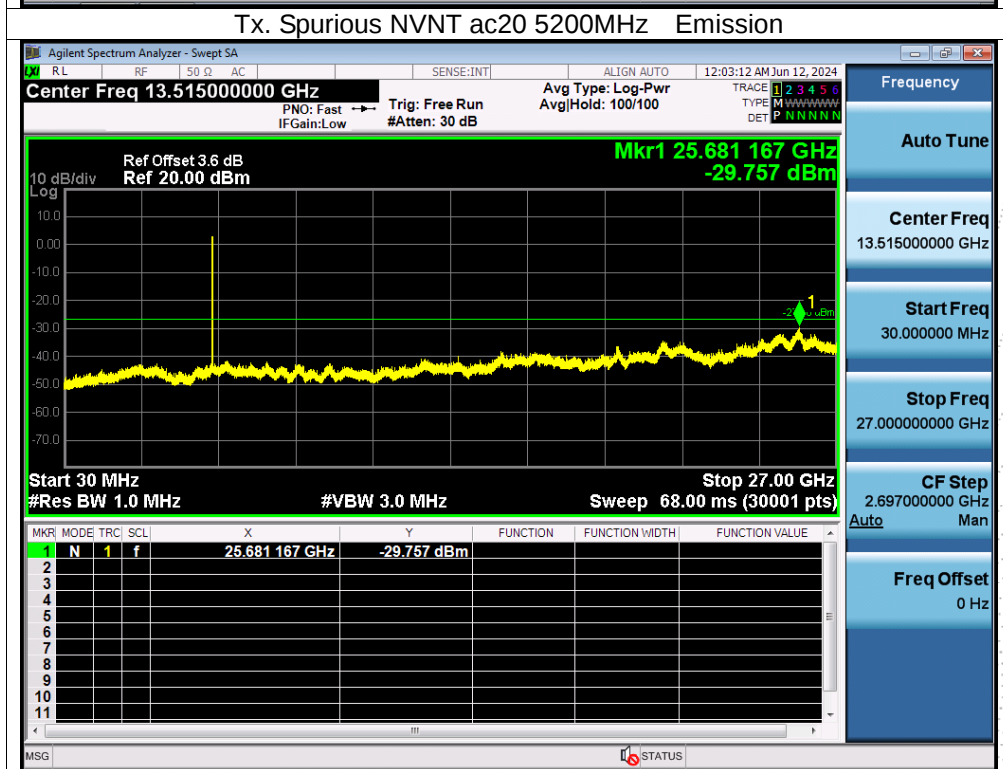
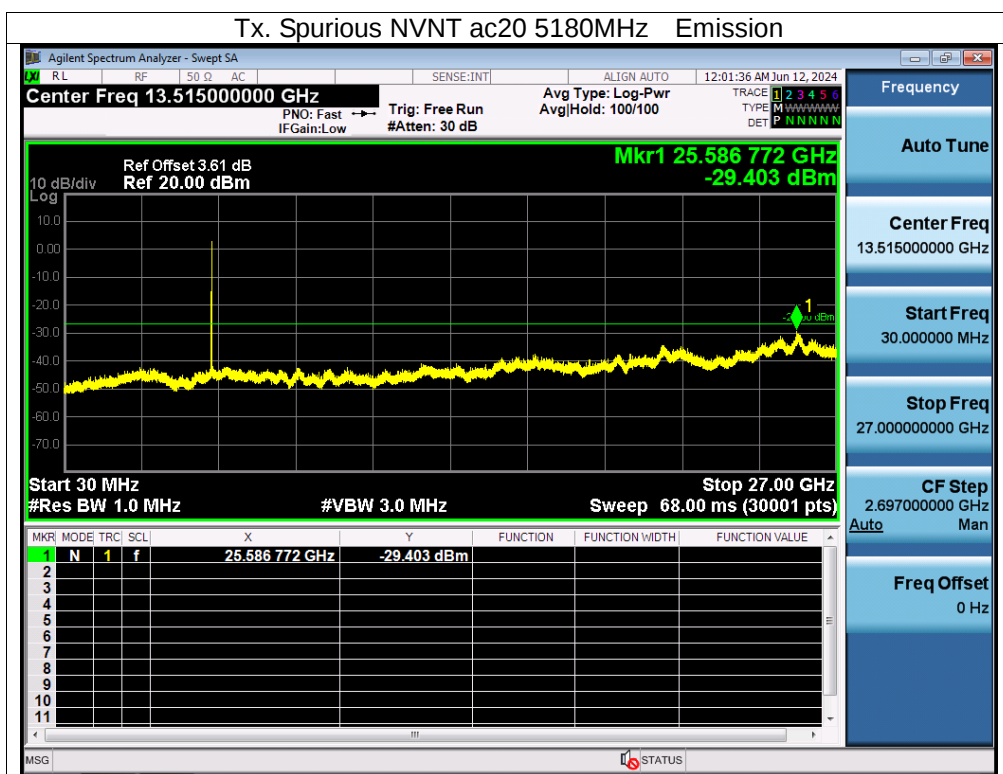


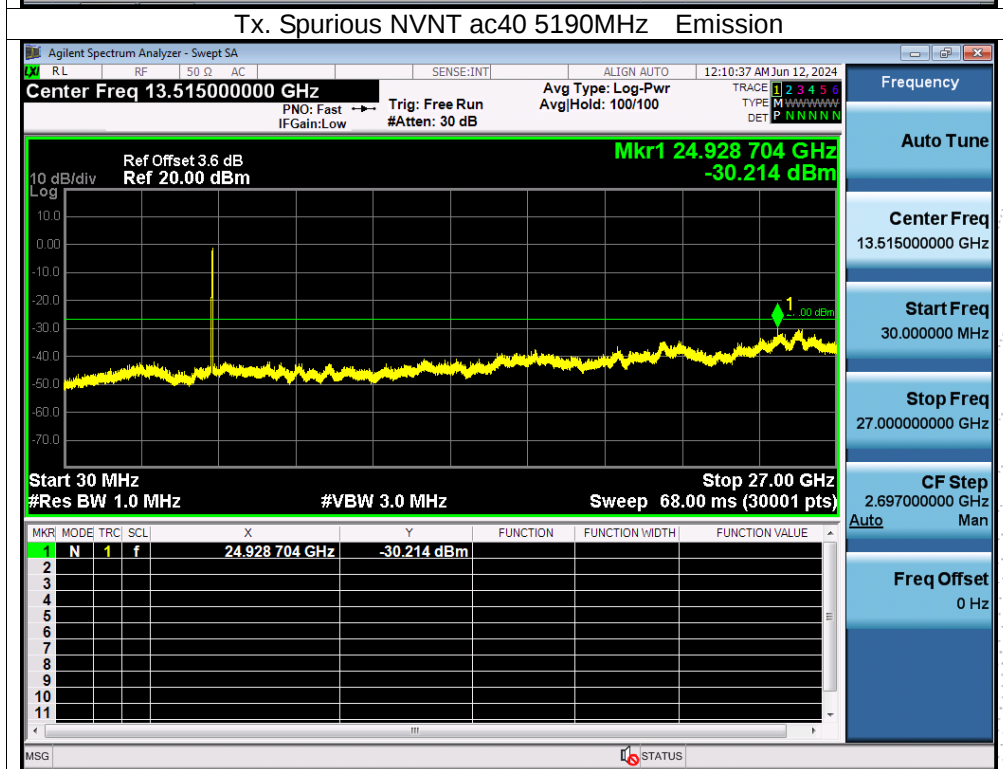
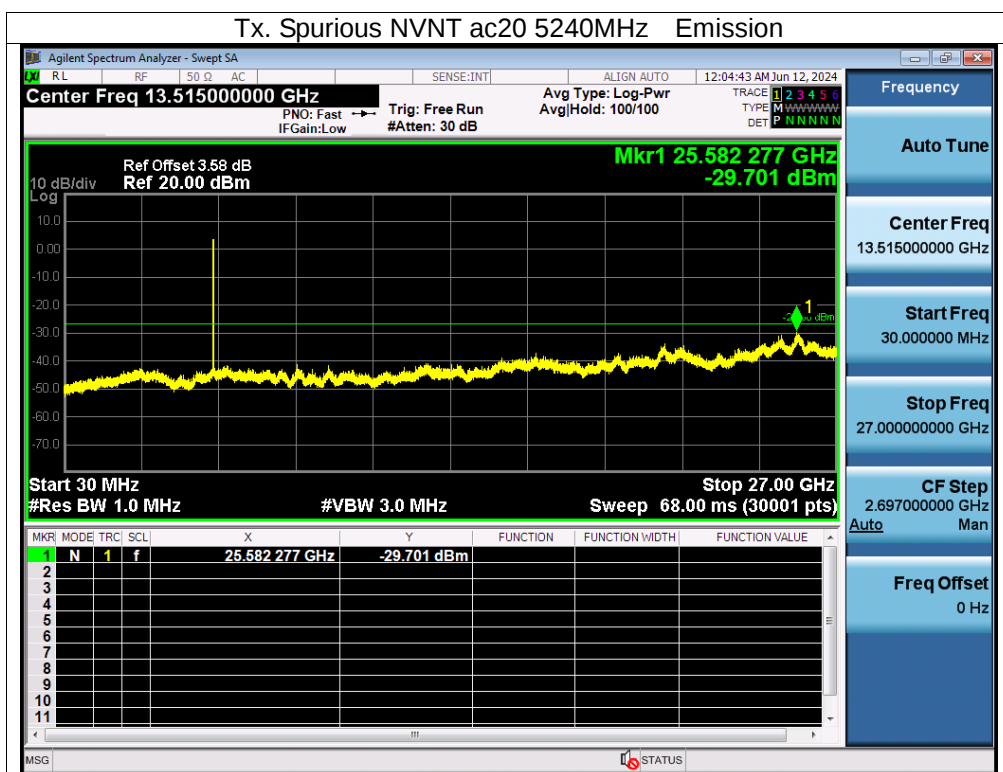
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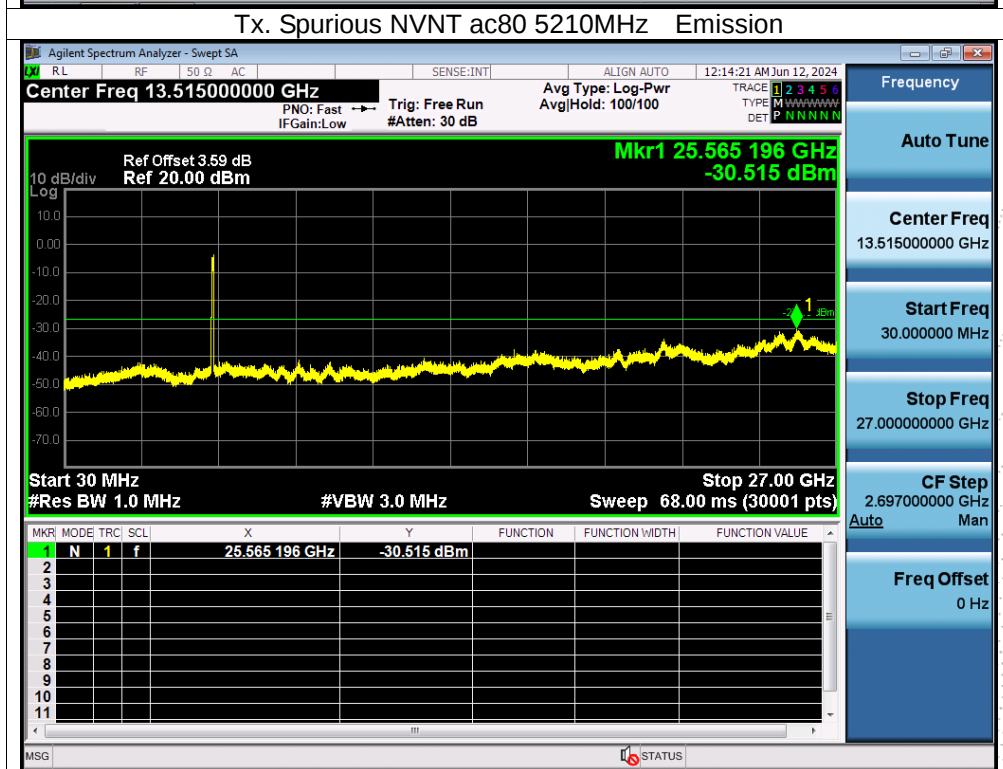
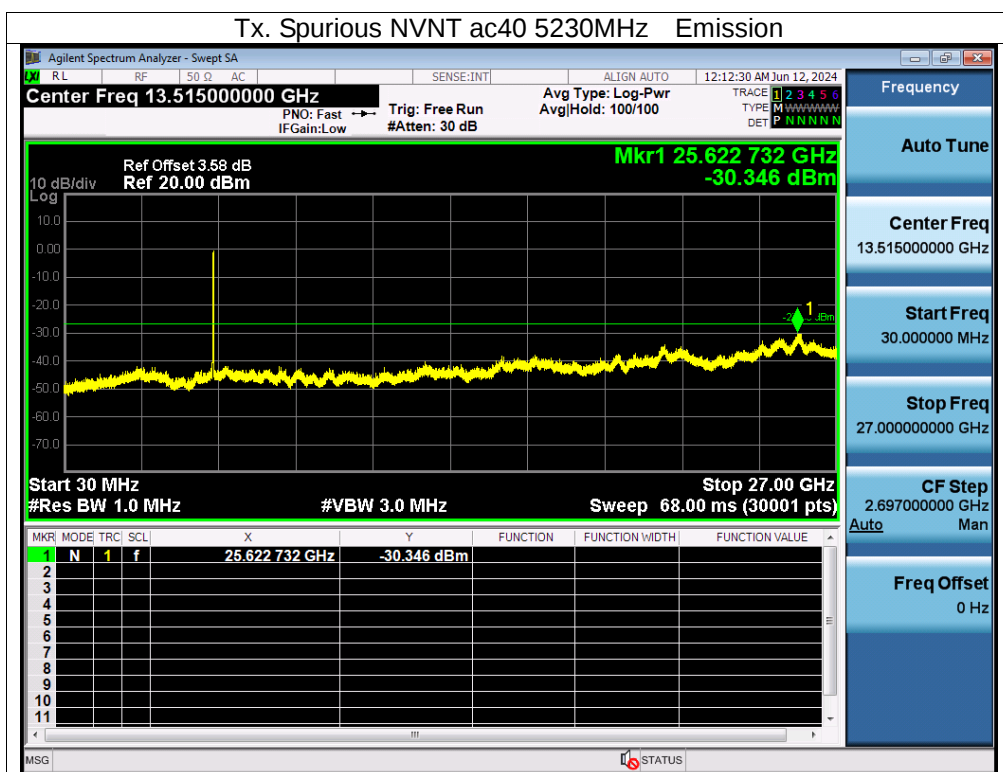




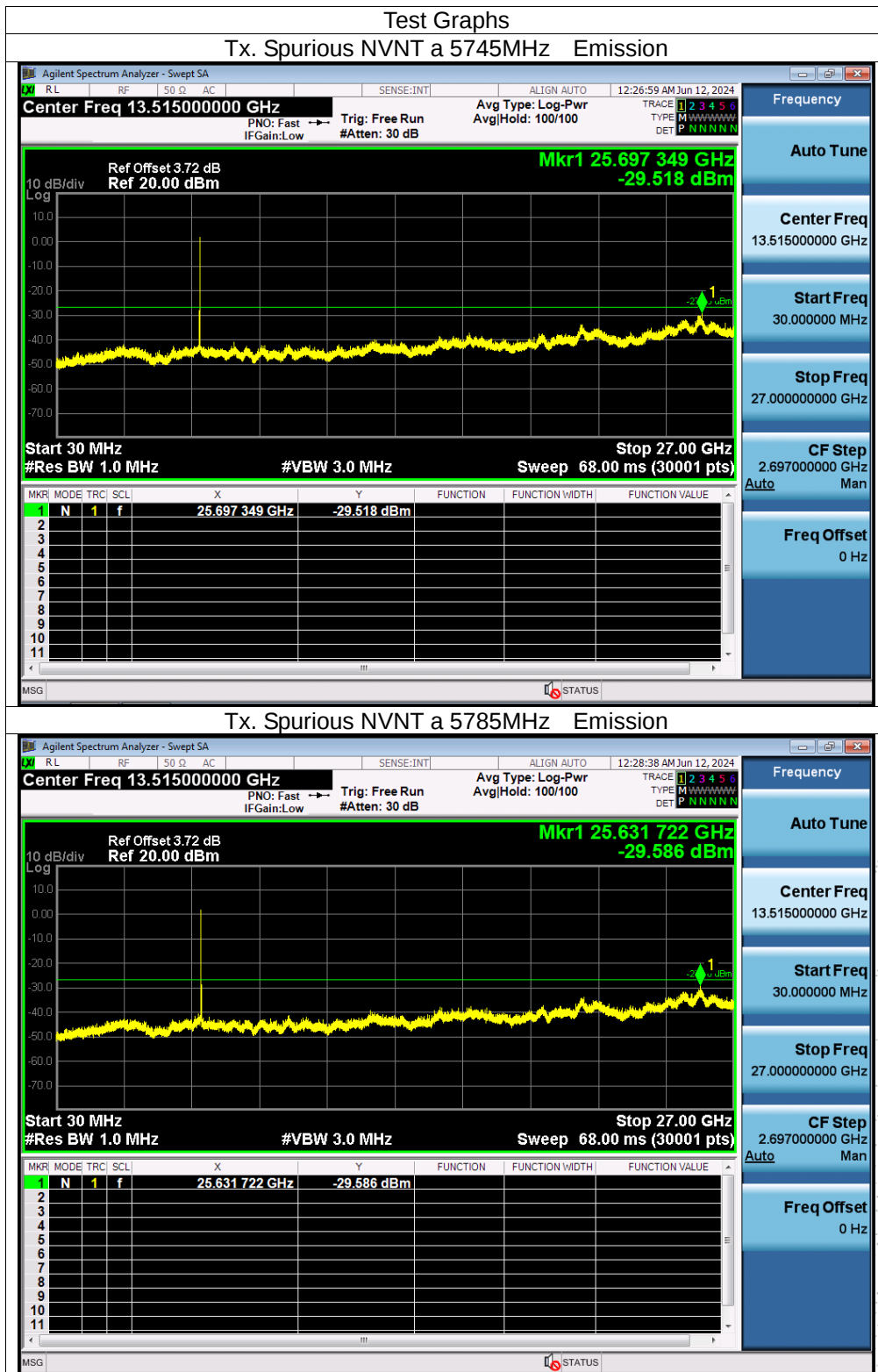


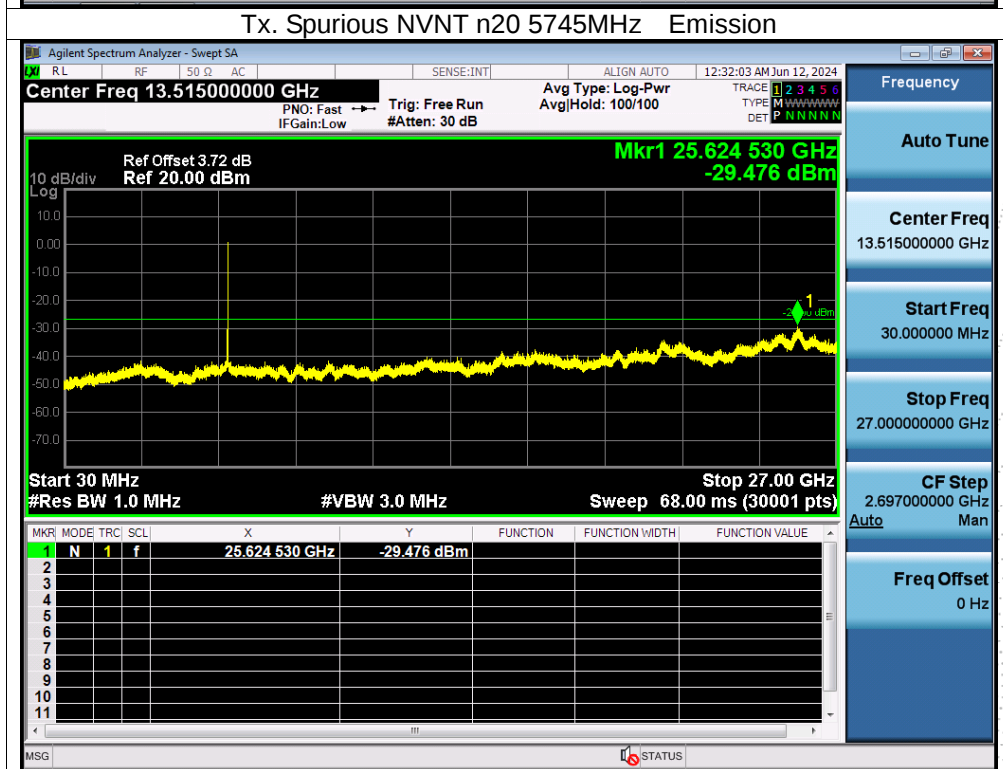
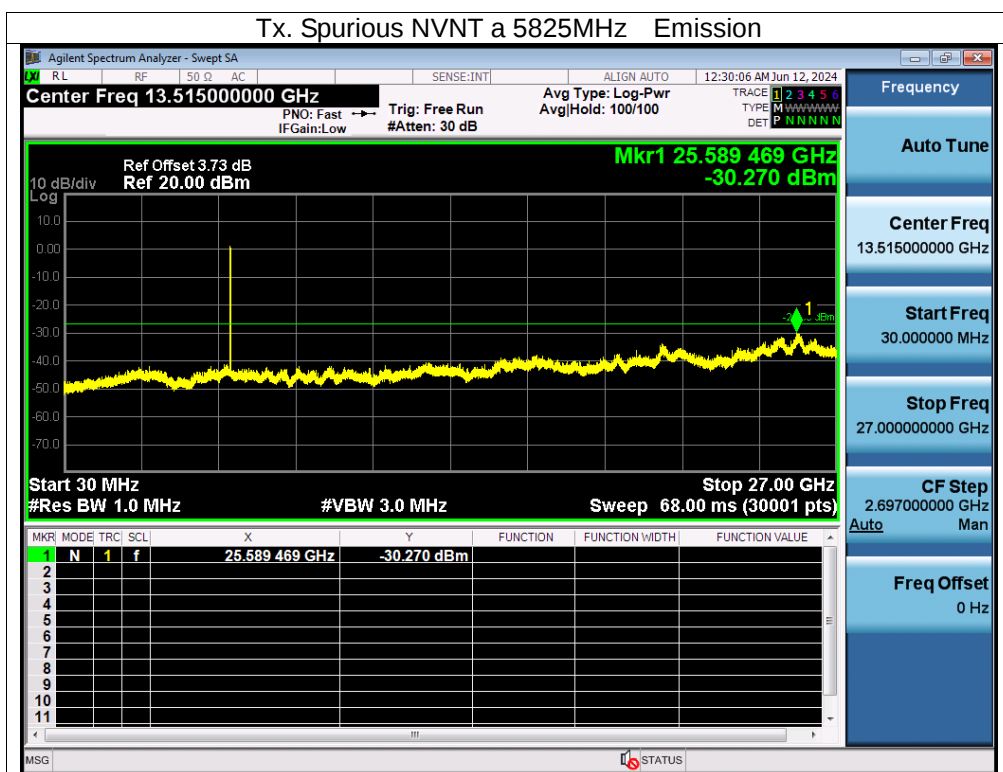


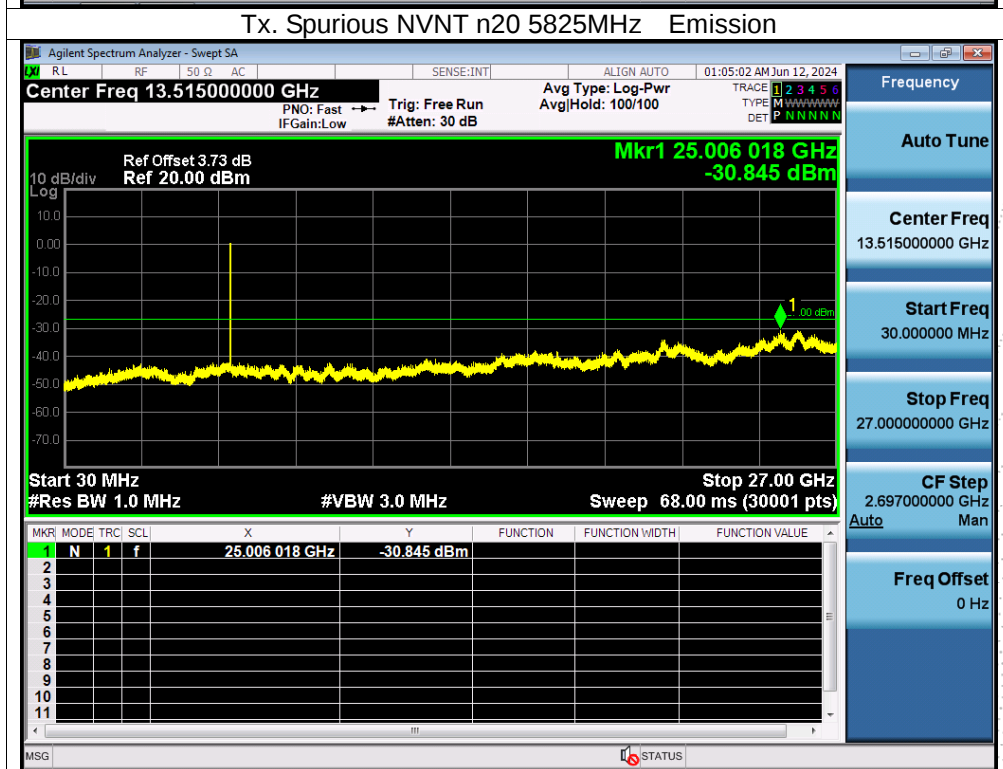
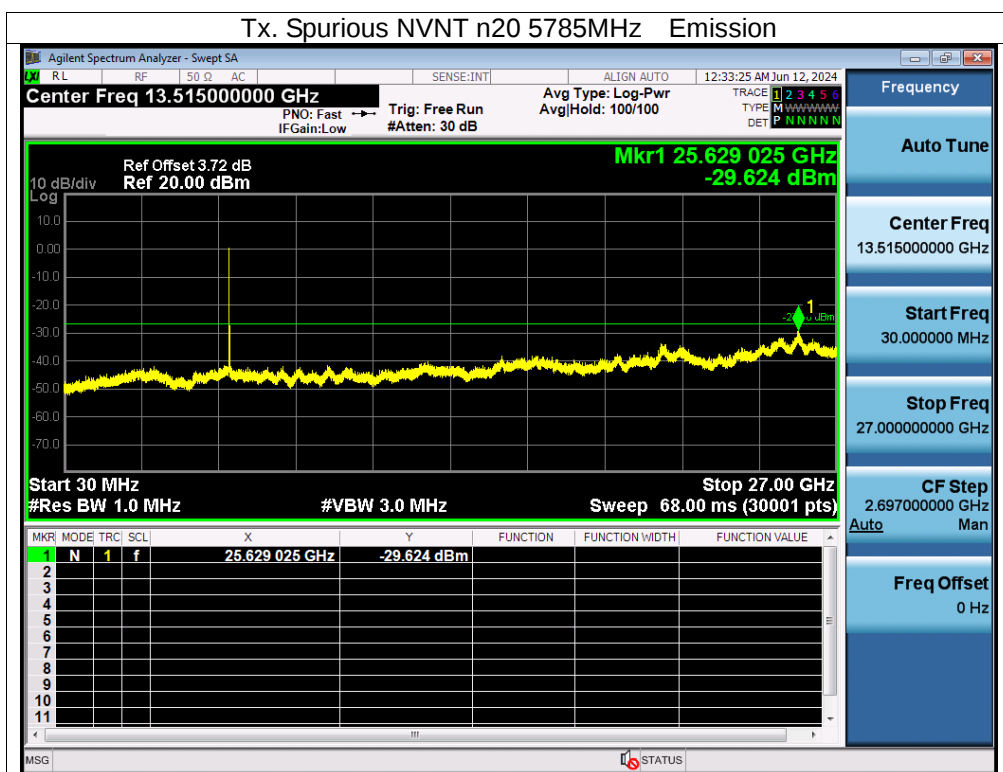
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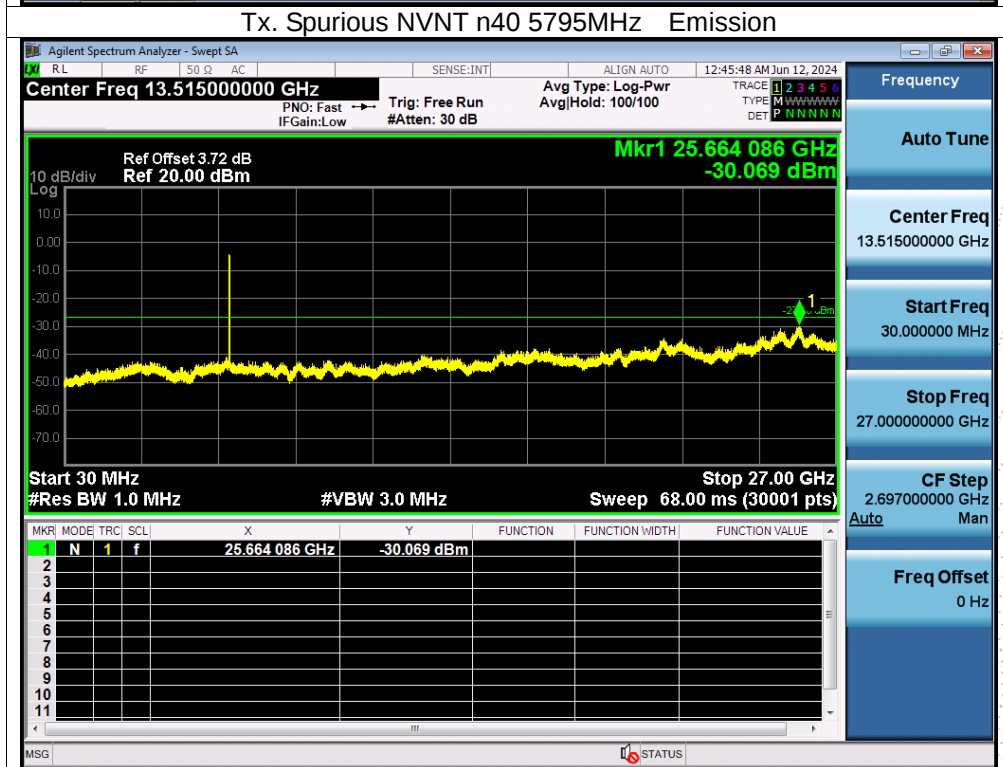
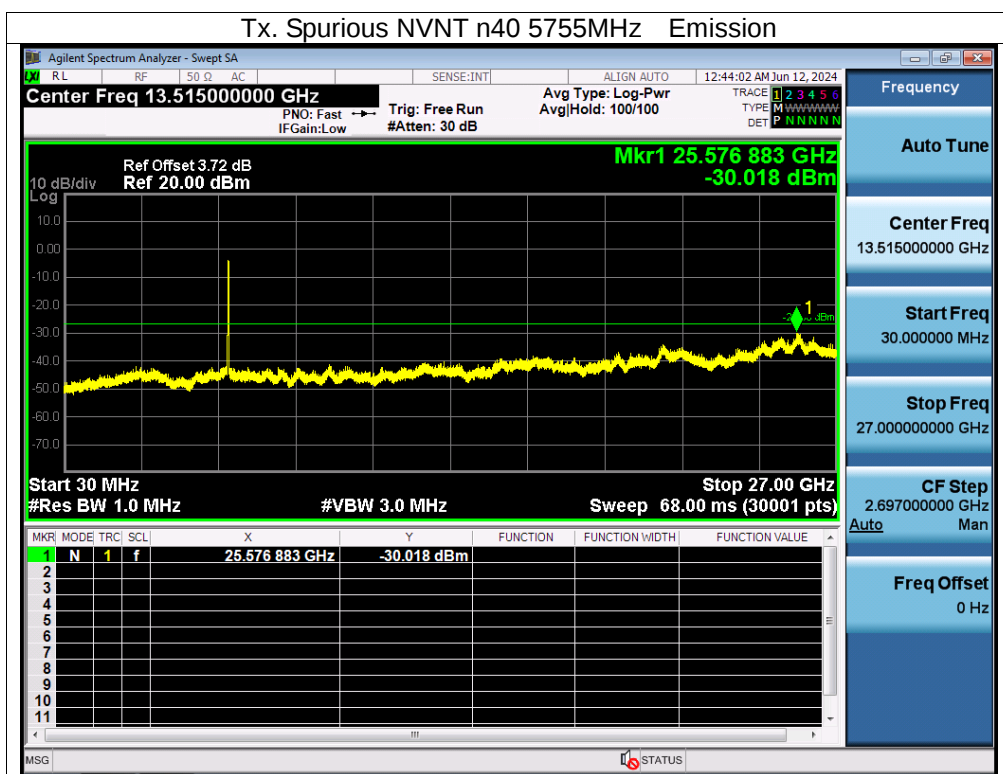


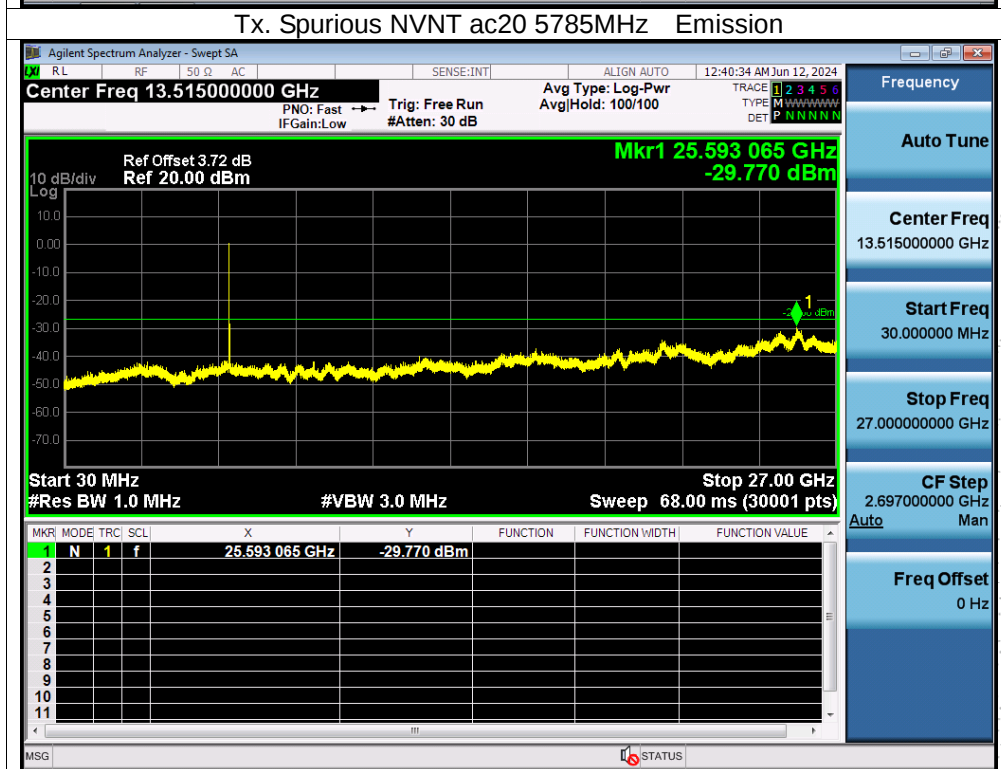
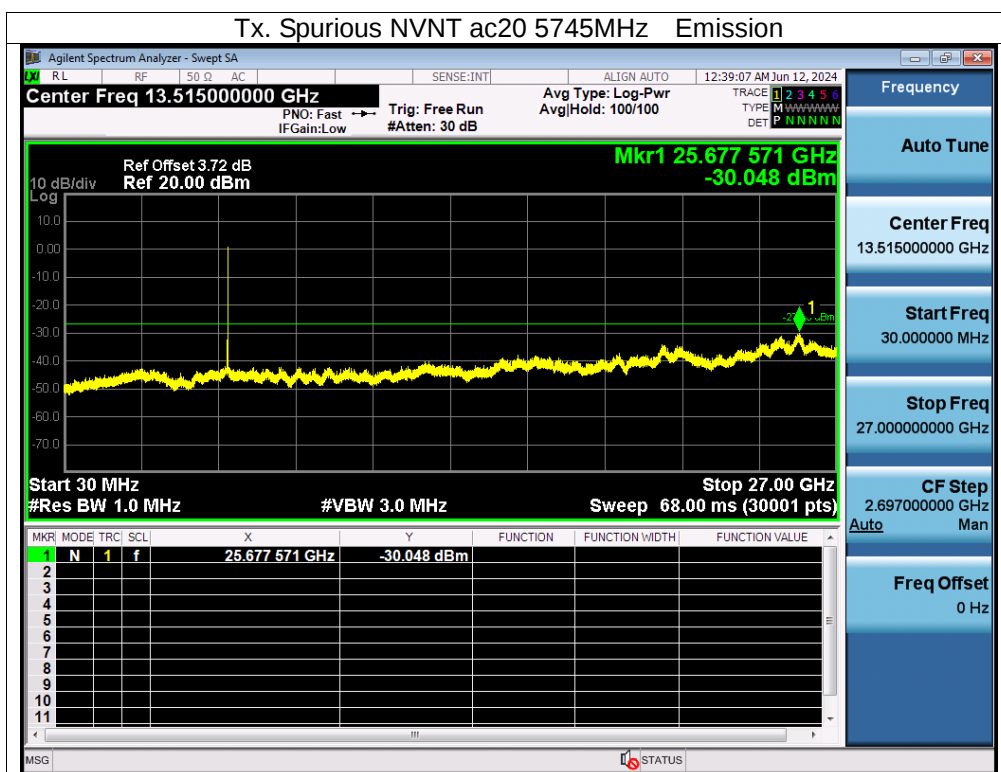
SHENZHEN



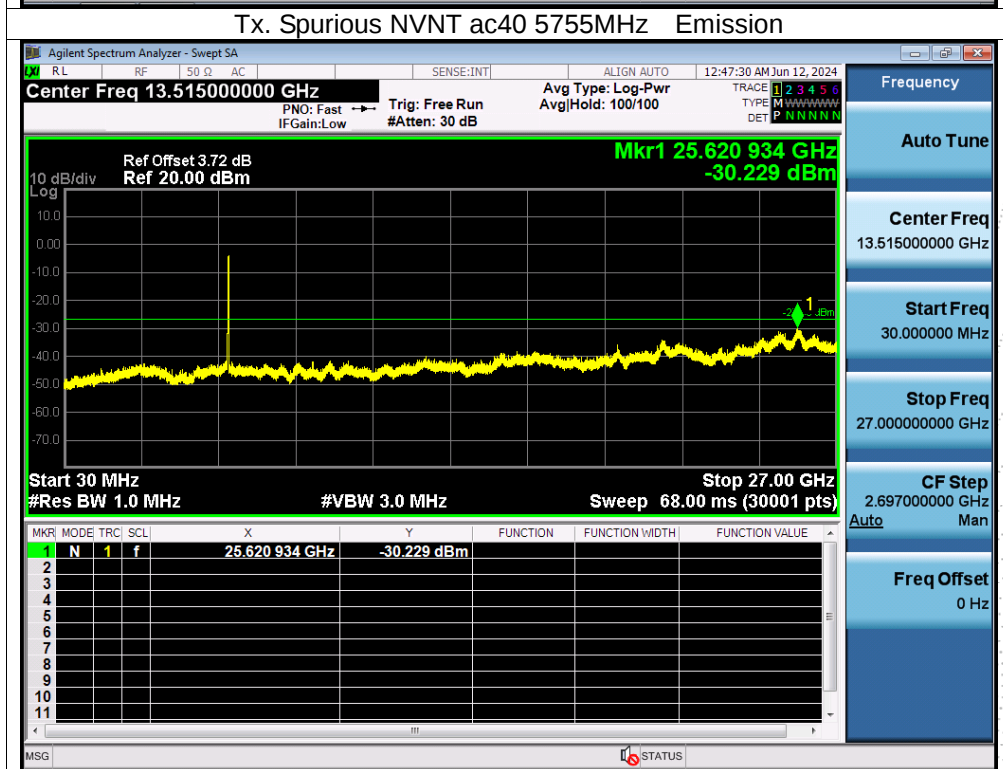
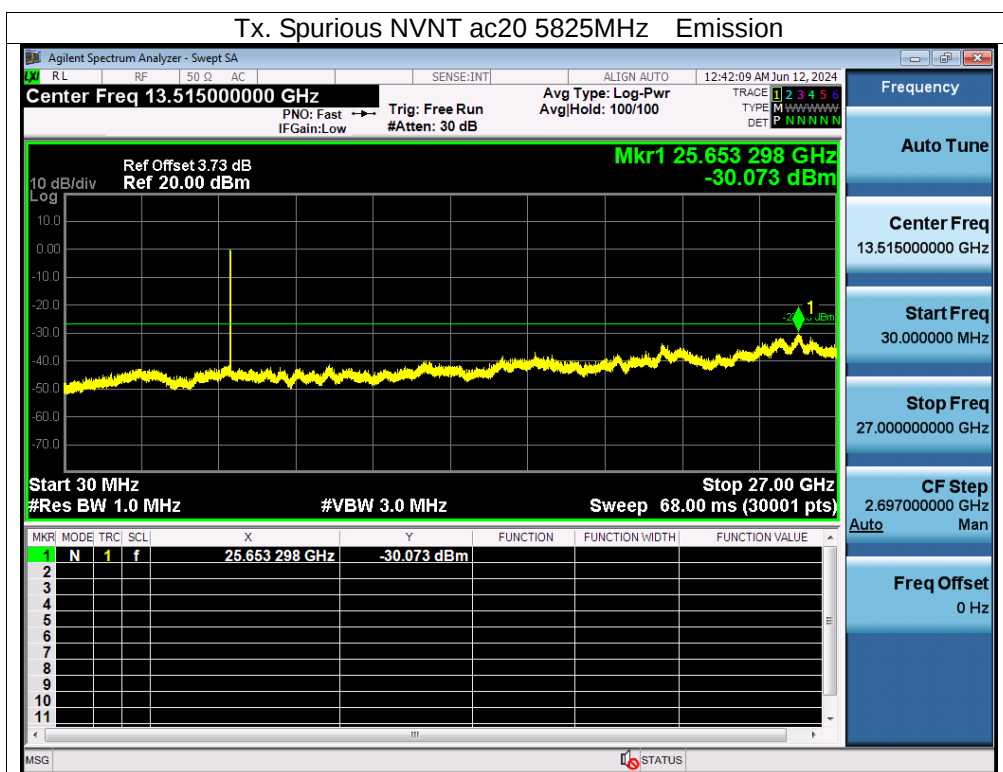


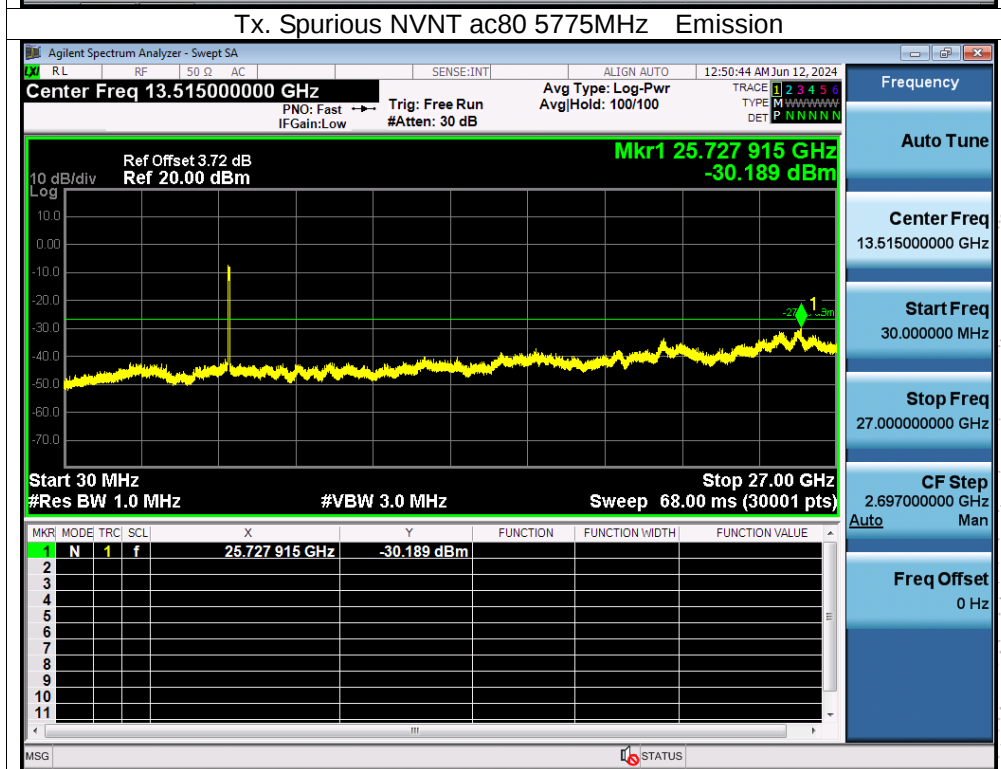
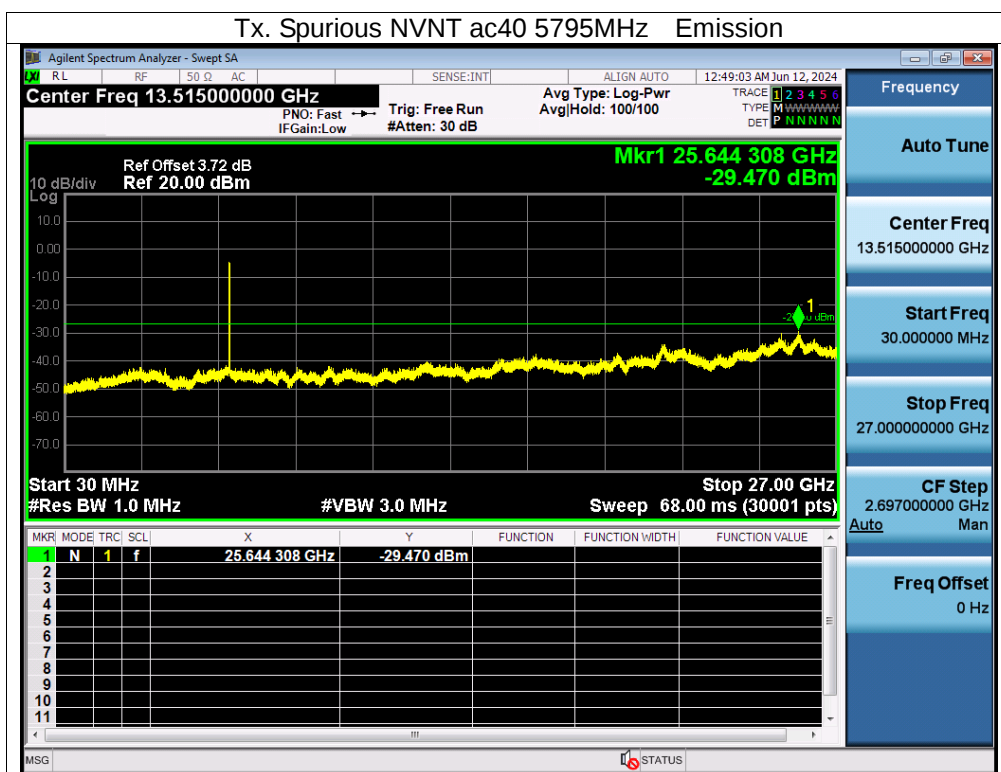






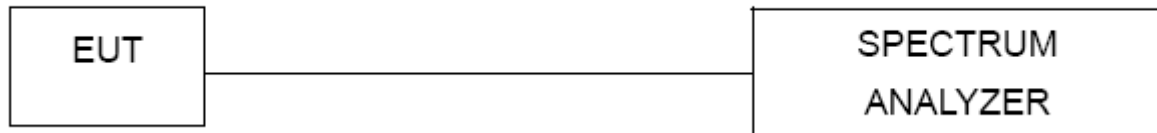
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13. Frequency Stability Measurement

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%RH
Pressure:	101KPa	Test Voltage:	AC120V/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)	120.00	5180.0090	5180	0.0090	1.7375
		V max (V)	138.00	5180.0078	5180	0.0078	1.5058
		V min (V)	102.00	5180.0010	5180	0.0010	0.1931
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)	120	T (°C)	-20	5180.0046	5180	0.0046	0.8880
		T (°C)	-10	5180.0068	5180	0.0068	1.3127
		T (°C)	0	5180.0120	5180	0.0120	2.3166
		T (°C)	10	5180.0038	5180	0.0038	0.7336
		T (°C)	20	5180.0084	5180	0.0084	1.6216
		T (°C)	30	5180.0089	5180	0.0089	1.7181
		T (°C)	40	5180.0089	5180	0.0089	1.7181
		T (°C)	50	5180.0041	5180	0.0041	0.7915
		T (°C)	60	5180.0054	5180	0.0054	1.0425
		T (°C)	70	5180.0022	5180	0.0022	0.4247
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)	120.00	5200.0110	5200	0.0110	2.1154
		V max (V)	138.00	5200.0073	5200	0.0073	1.4038
		V min (V)	102.00	5200.0115	5200	0.0115	2.2115
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)	120	T (°C)	-20	5200.00080	5200	0.00080	0.1538
		T (°C)	-10	5200.01210	5200	0.01210	2.3269
		T (°C)	0	5200.00660	5200	0.00660	1.2692
		T (°C)	10	5200.00790	5200	0.00790	1.5192
		T (°C)	20	5200.00350	5200	0.00350	0.6731
		T (°C)	30	5200.00310	5200	0.00310	0.5962
		T (°C)	40	5200.00650	5200	0.00650	1.2500
		T (°C)	50	5200.01030	5200	0.01030	1.9808
		T (°C)	60	5200.00880	5200	0.00880	1.6923
		T (°C)	70	5200.01070	5200	0.01070	2.0577
Limits				5150-5250 MHz			
Result				Complies			

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Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5240.0131	5240	0.0131	2.5000
		V max (V)	138.00	5240.0004	5240	0.0004	0.0763
		V min (V)	102.00	5240.0120	5240	0.0120	2.2901
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)	120	T (°C)	-20	5240.0071	5240	0.0071	1.3550
		T (°C)	-10	5240.0119	5240	0.0119	2.2710
		T (°C)	0	5240.0004	5240	0.0004	0.0763
		T (°C)	10	5240.0032	5240	0.0032	0.6107
		T (°C)	20	5240.0028	5240	0.0028	0.5344
		T (°C)	30	5240.0011	5240	0.0011	0.2099
		T (°C)	40	5240.0087	5240	0.0087	1.6603
		T (°C)	50	5240.0056	5240	0.0056	1.0687
		T (°C)	60	5240.0012	5240	0.0012	0.2290
		T (°C)	70	5240.0095	5240	0.0095	1.8130
Limits				5150-5250 MHz			
Result				Complies			

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Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz)		

Voltage vs. Frequency Stabilit

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5745.01330	5745	0.01330	2.3151
		V max (V)	138.00	5745.00590	5745	0.00590	1.0270
		V min (V)	102.00	5745.00570	5745	0.00570	0.9922
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)	120	T (°C)	-20	5745.01060	5745	0.01060	1.8451
		T (°C)	-10	5745.00260	5745	0.00260	0.4526
		T (°C)	0	5745.00770	5745	0.00770	1.3403
		T (°C)	10	5745.01100	5745	0.01100	1.9147
		T (°C)	20	5745.00820	5745	0.00820	1.4273
		T (°C)	30	5745.00750	5745	0.00750	1.3055
		T (°C)	40	5745.00690	5745	0.00690	1.2010
		T (°C)	50	5745.00040	5745	0.00040	0.0696
		T (°C)	60	5745.00910	5745	0.00910	1.5840
		T (°C)	70	5745.01000	5745	0.01000	1.7406
Limits				5725-5850 MHz			
Result				Complies			

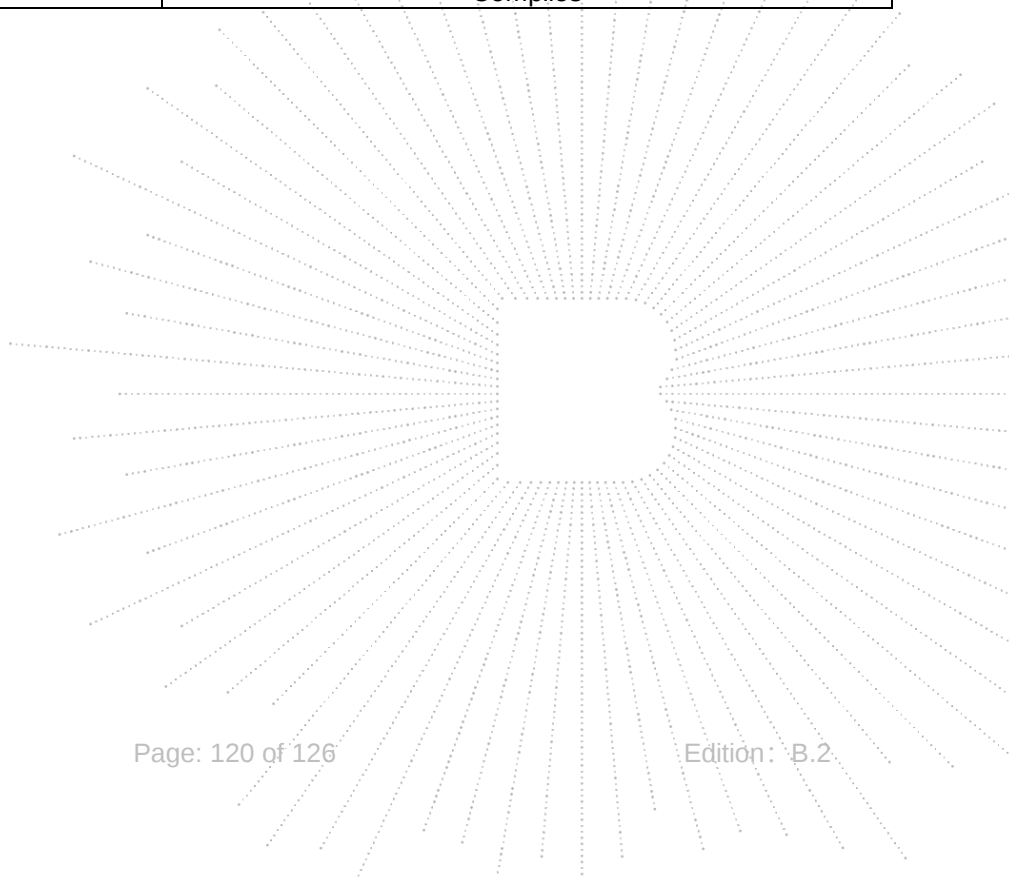
Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5785.00570	5785	0.00570	0.9853
		V max (V)	138.00	5785.00870	5785	0.00870	1.5039
		V min (V)	102.00	5785.01130	5785	0.01130	1.9533
Limits				5725-5850 MHz			
Result				Complies			

Temperature vs. Frequency Stability

Temperature vs. Frequency Stability							
TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	120	T (°C)	-20	5785.00280	5785	0.00280	0.4840
		T (°C)	-10	5785.00180	5785	0.00180	0.3111
		T (°C)	0	5785.00040	5785	0.00040	0.0691
		T (°C)	10	5785.00860	5785	0.00860	1.4866
		T (°C)	20	5785.00300	5785	0.00300	0.5186
		T (°C)	30	5785.01050	5785	0.01050	1.8150
		T (°C)	40	5785.01270	5785	0.01270	2.1953
		T (°C)	50	5785.00660	5785	0.00660	1.1409
		T (°C)	60	5785.00590	5785	0.00590	1.0199
		T (°C)	70	5785.00560	5785	0.00560	0.9680
Limits				5725-5850 MHz			
Result				Complies			

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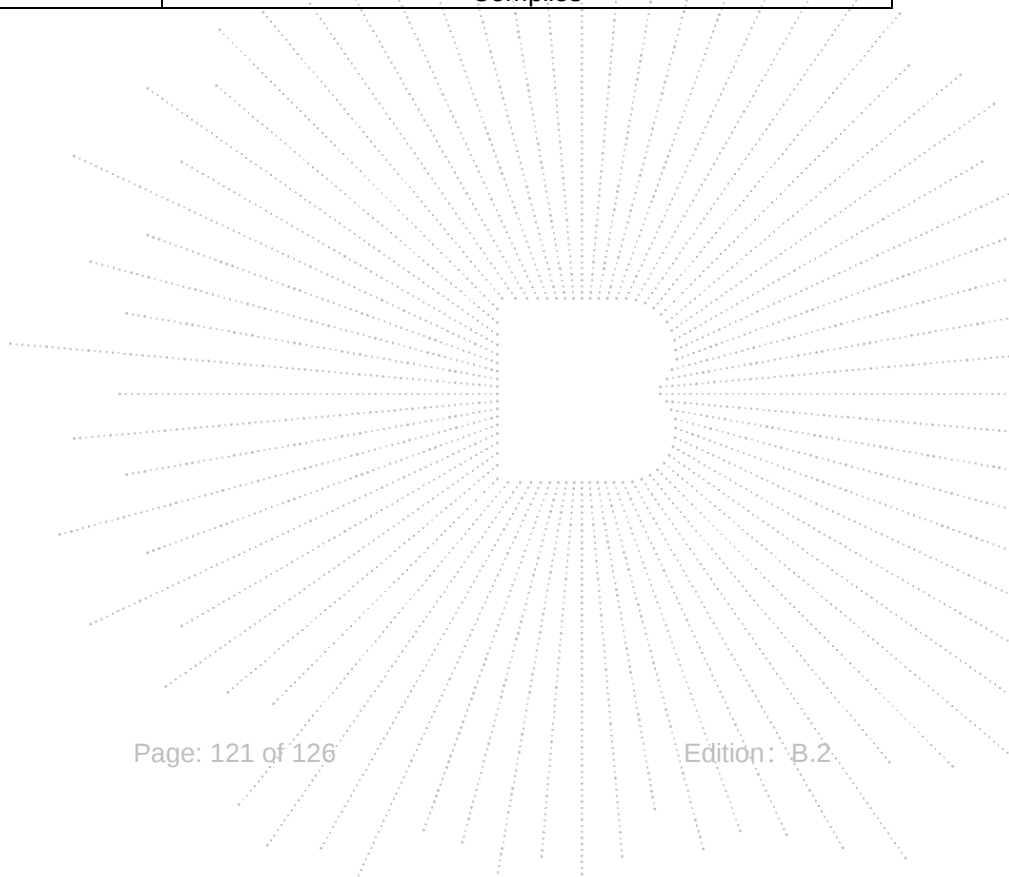
Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	120.00	5825.00940	5825	0.00940	1.6137
		V max (V)	138.00	5825.00230	5825	0.00230	0.3948
		V min (V)	102.00	5825.00640	5825	0.00640	1.0987
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)	120	T (°C)	-20	5825.00160	5825	0.00160	0.2747
		T (°C)	-10	5825.00860	5825	0.00860	1.4764
		T (°C)	0	5825.00940	5825	0.00940	1.6137
		T (°C)	10	5825.01230	5825	0.01230	2.1116
		T (°C)	20	5825.00600	5825	0.00600	1.0300
		T (°C)	30	5825.00960	5825	0.00960	1.6481
		T (°C)	40	5825.01130	5825	0.01130	1.9399
		T (°C)	50	5825.00740	5825	0.00740	1.2704
		T (°C)	60	5825.01260	5825	0.01260	2.1631
		T (°C)	70	5825.00450	5825	0.00450	0.7725
Limits				5725-5850 MHz			
Result				Complies			

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14. Antenna Requirement

14.1 Limit

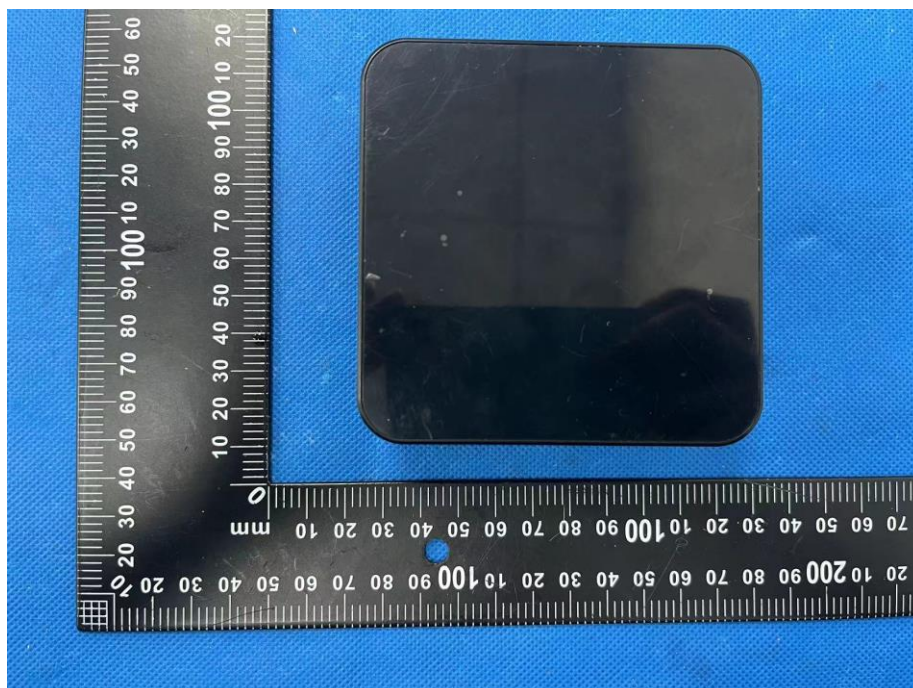
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

14.2 Test Antenna

The EUT antenna is Internal antenna, It comply with the standard requirement.

15. EUT Photographs

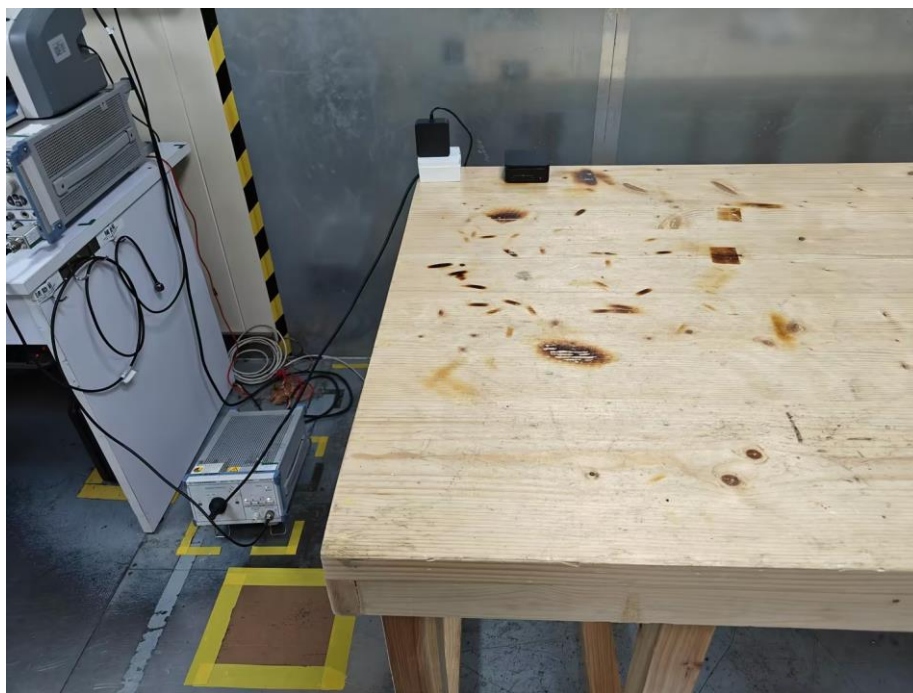
EUT Photo



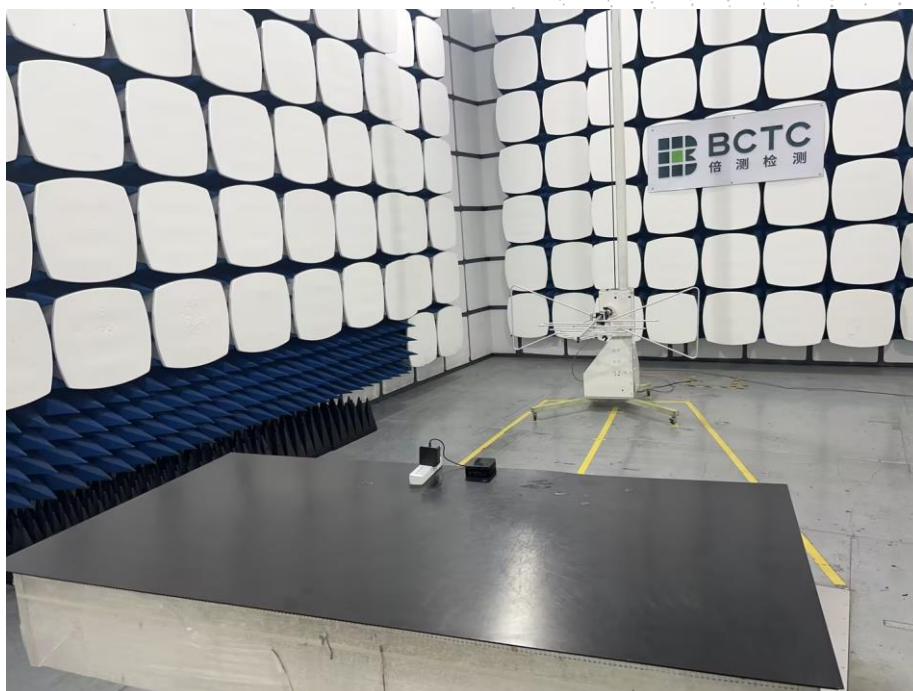
NOTE: Appendix-Photographs Of EUT Constructional Details

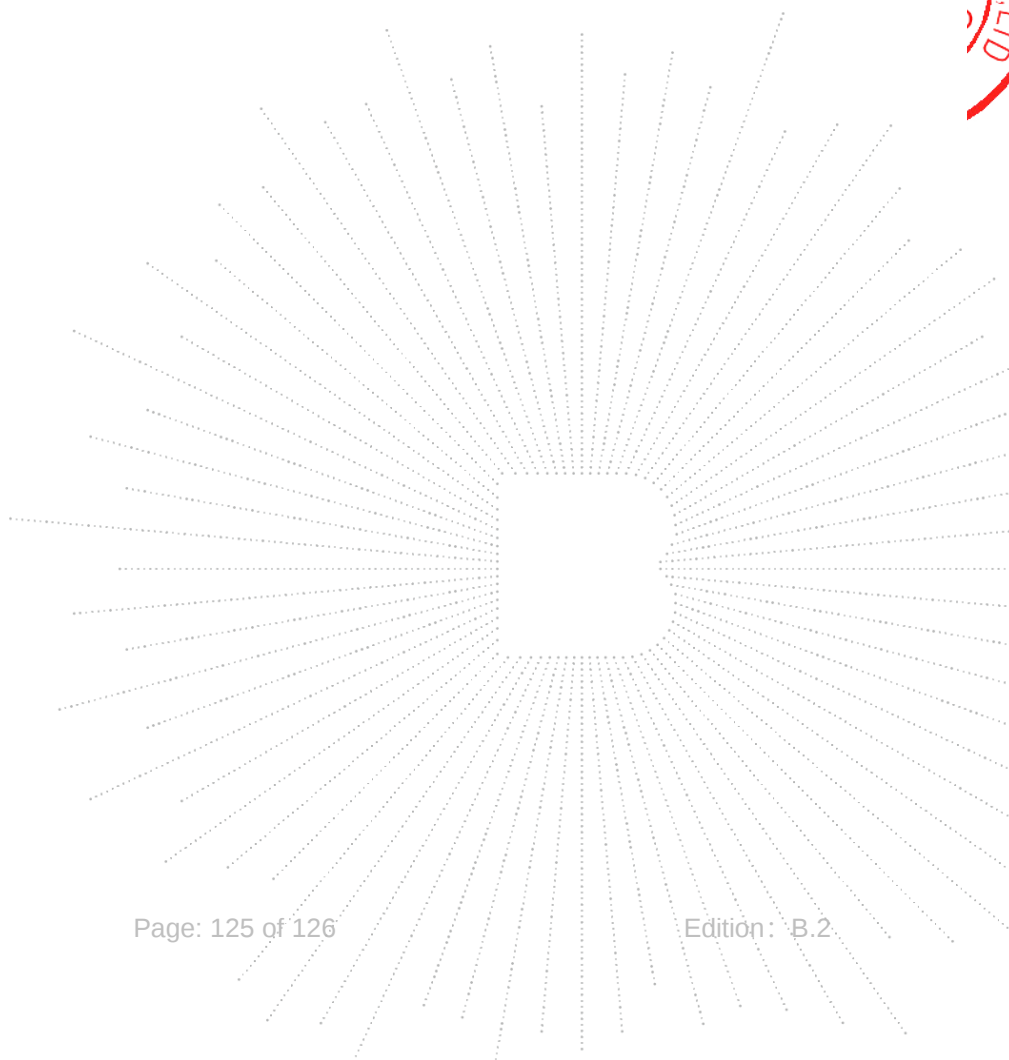
16. EUT Test Setup Photographs

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

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

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

***** END *****