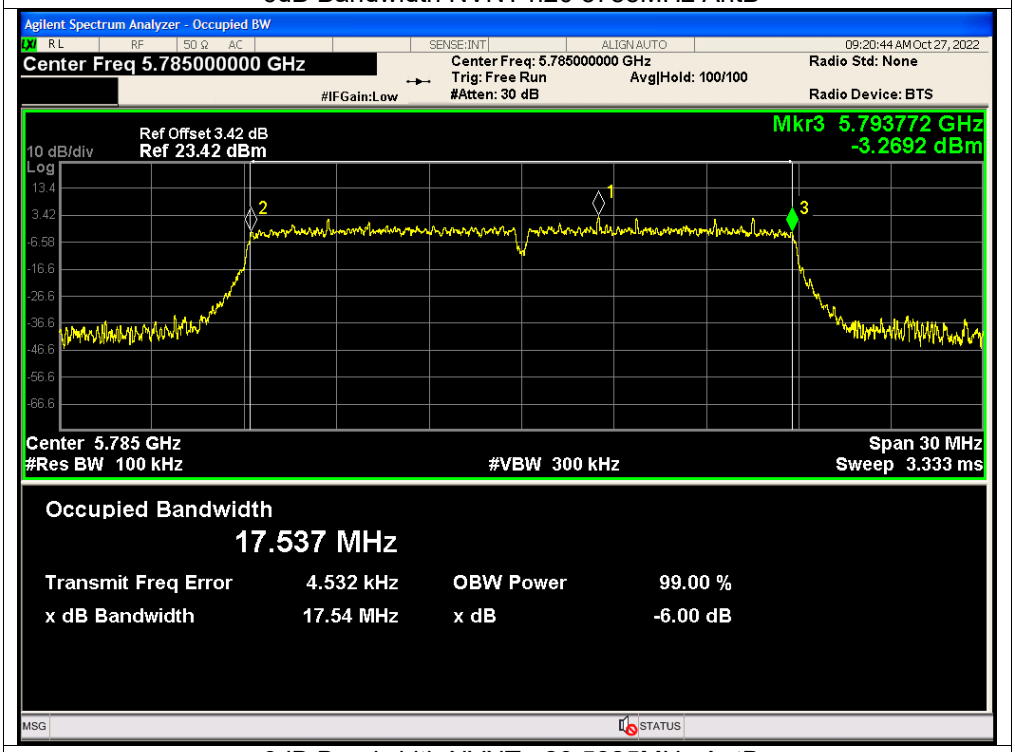
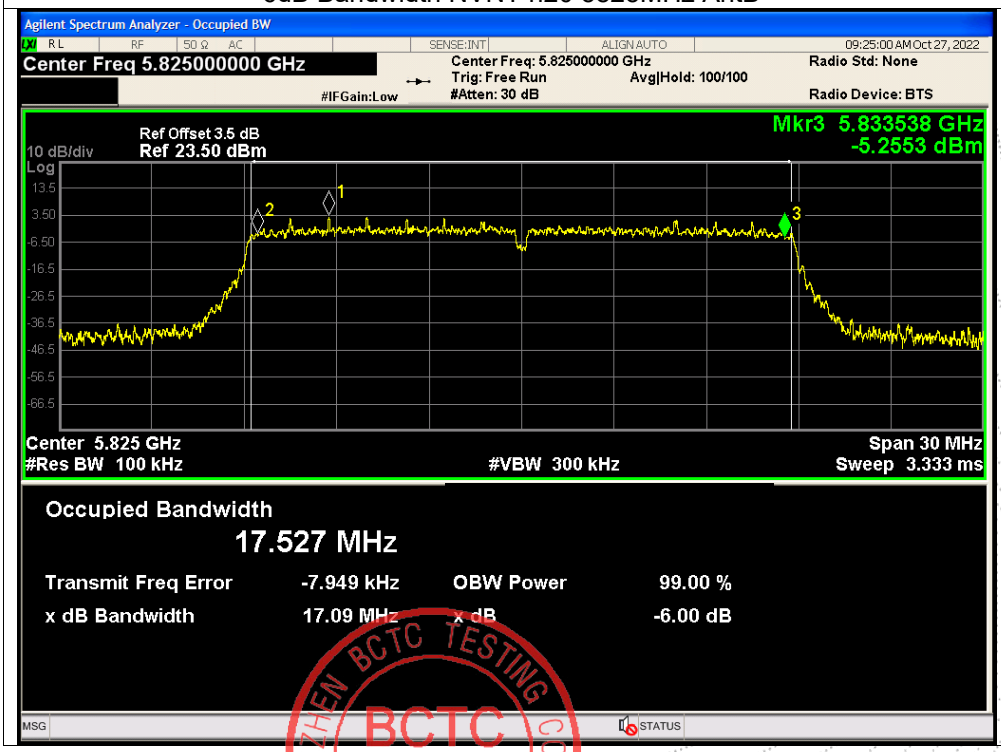
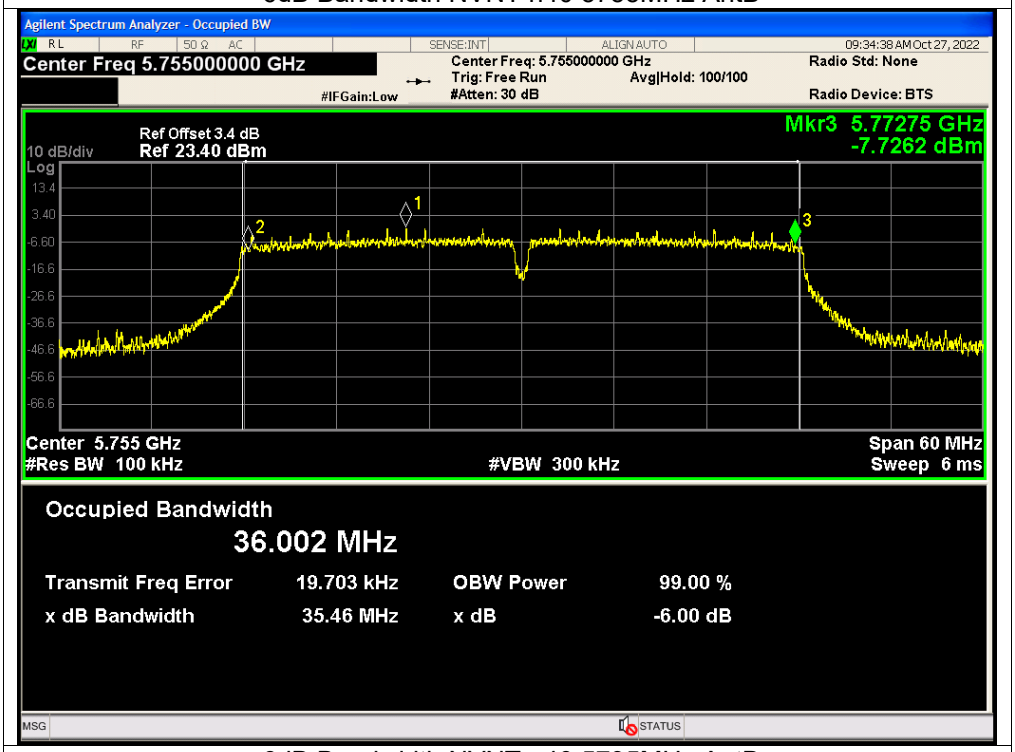
-6dB Bandwidth NVNT n20 5785MHz AntB



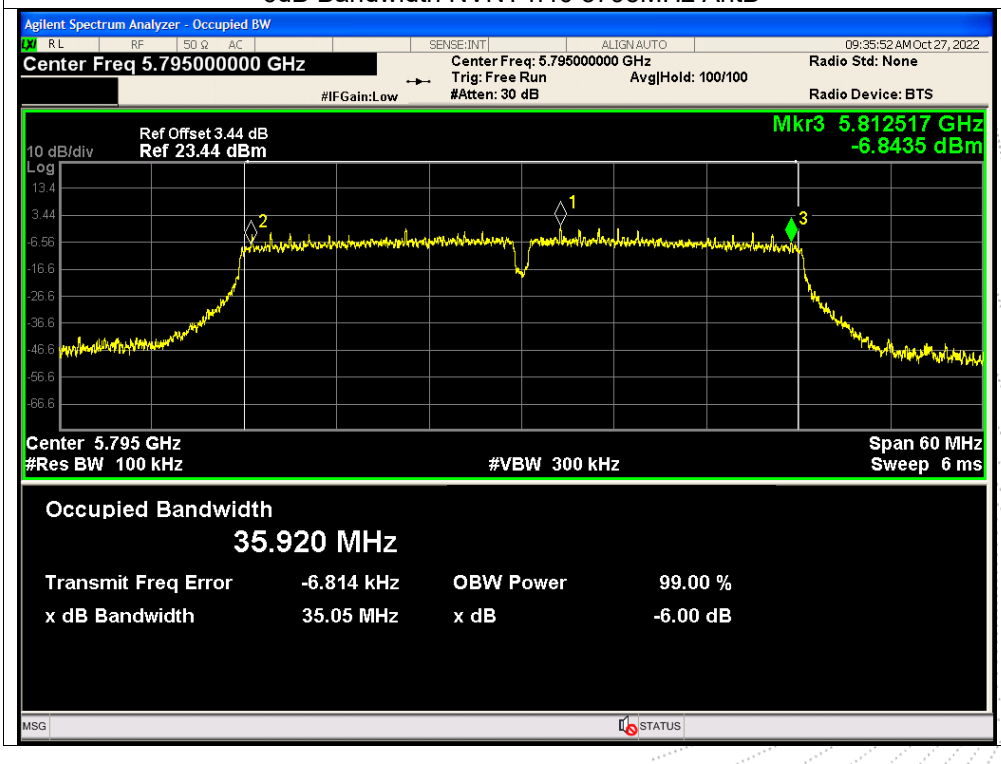
-6dB Bandwidth NVNT n20 5825MHz AntB



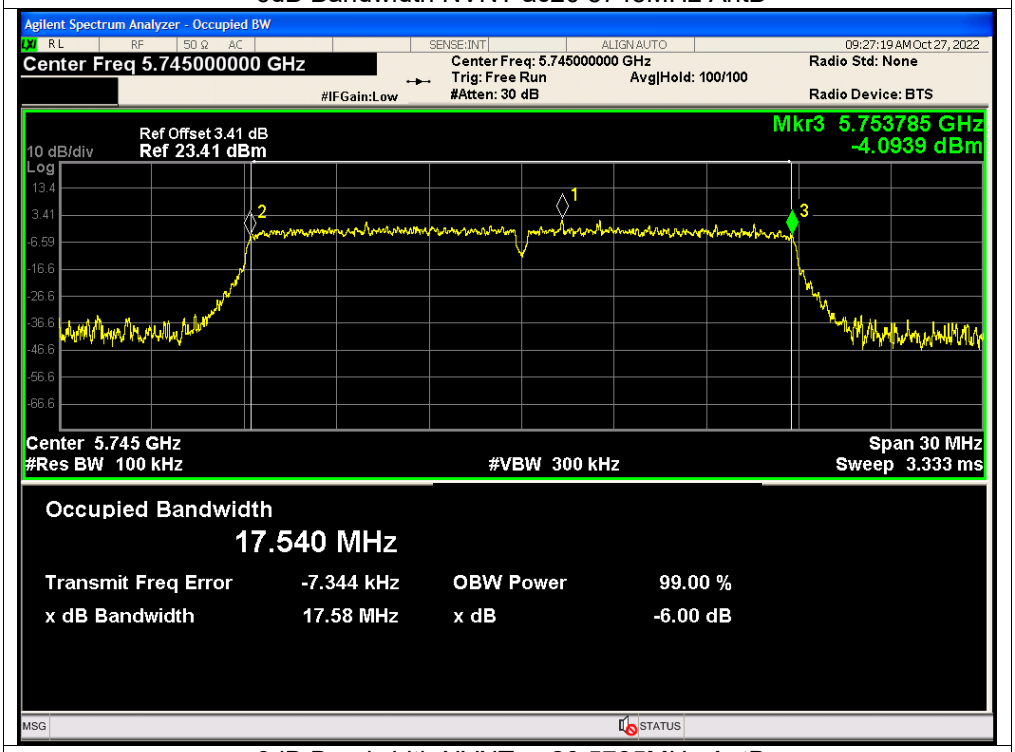
-6dB Bandwidth NVNT n40 5755MHz AntB



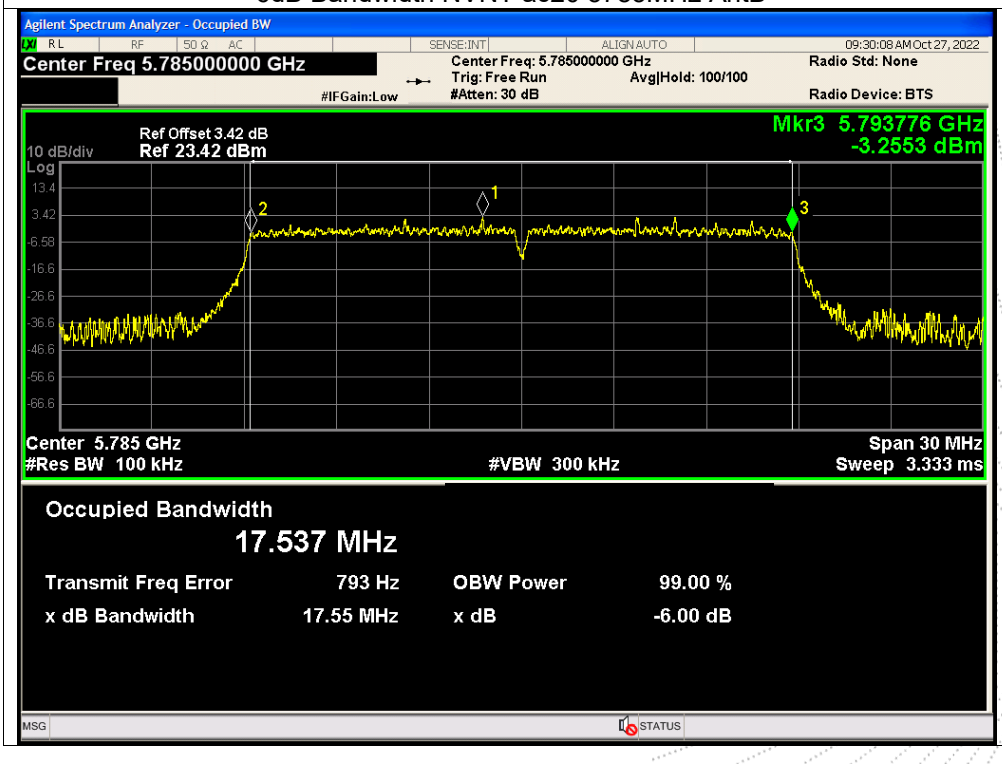
-6dB Bandwidth NVNT n40 5795MHz AntB



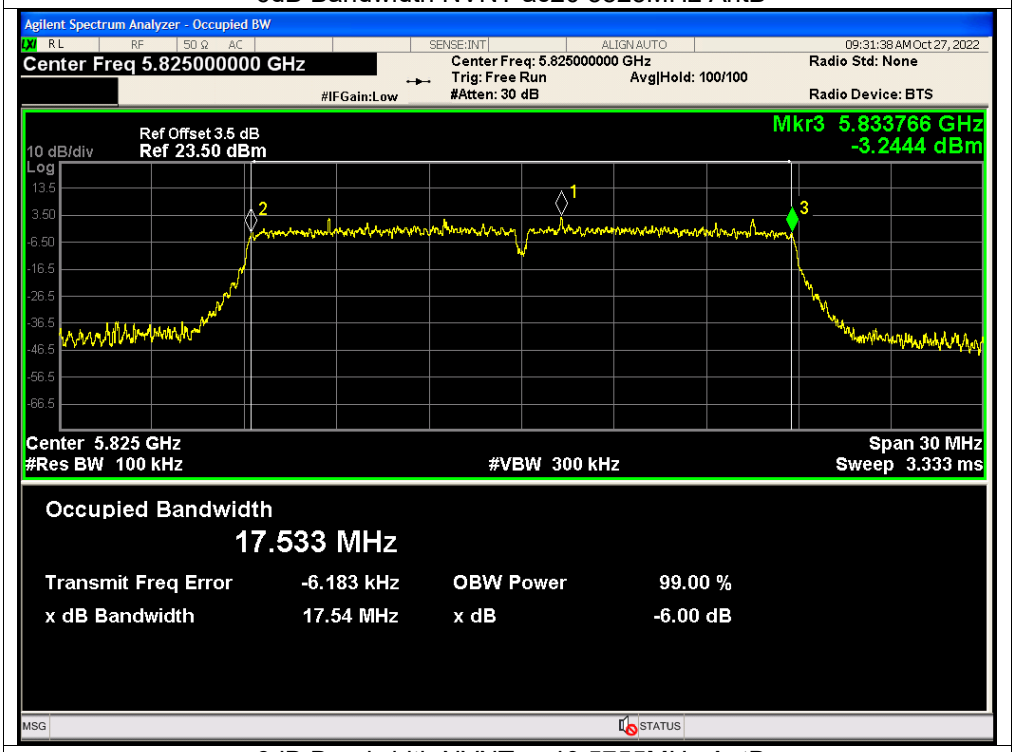
-6dB Bandwidth NVNT ac20 5745MHz AntB



-6dB Bandwidth NVNT ac20 5785MHz AntB



-6dB Bandwidth NVNT ac20 5825MHz AntB



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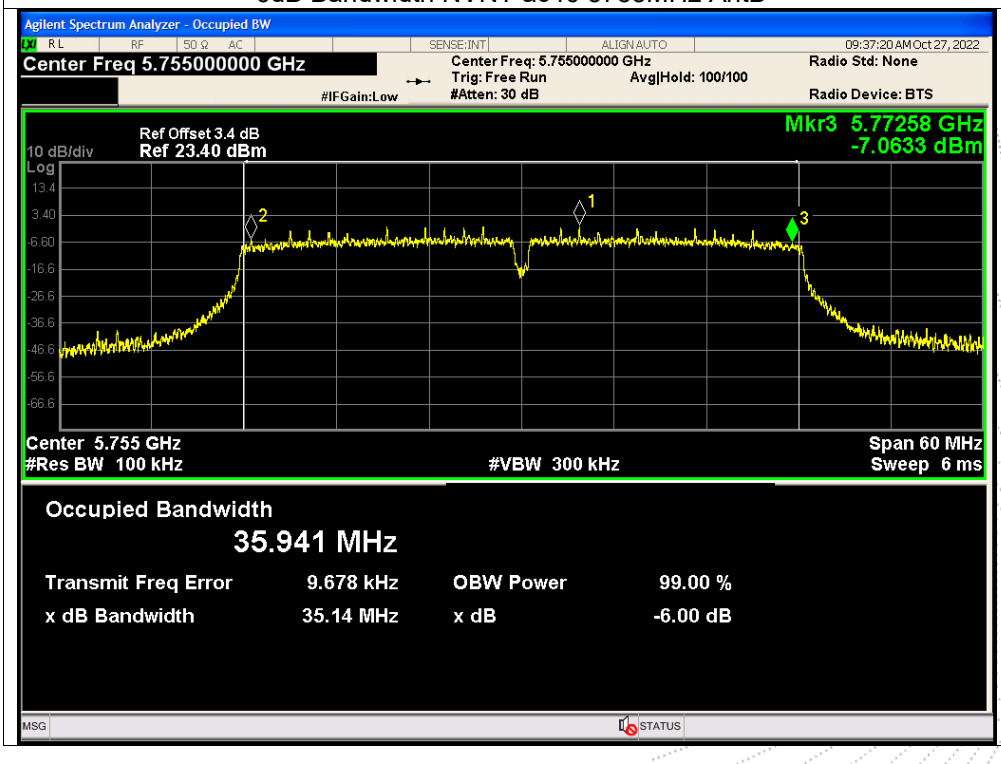
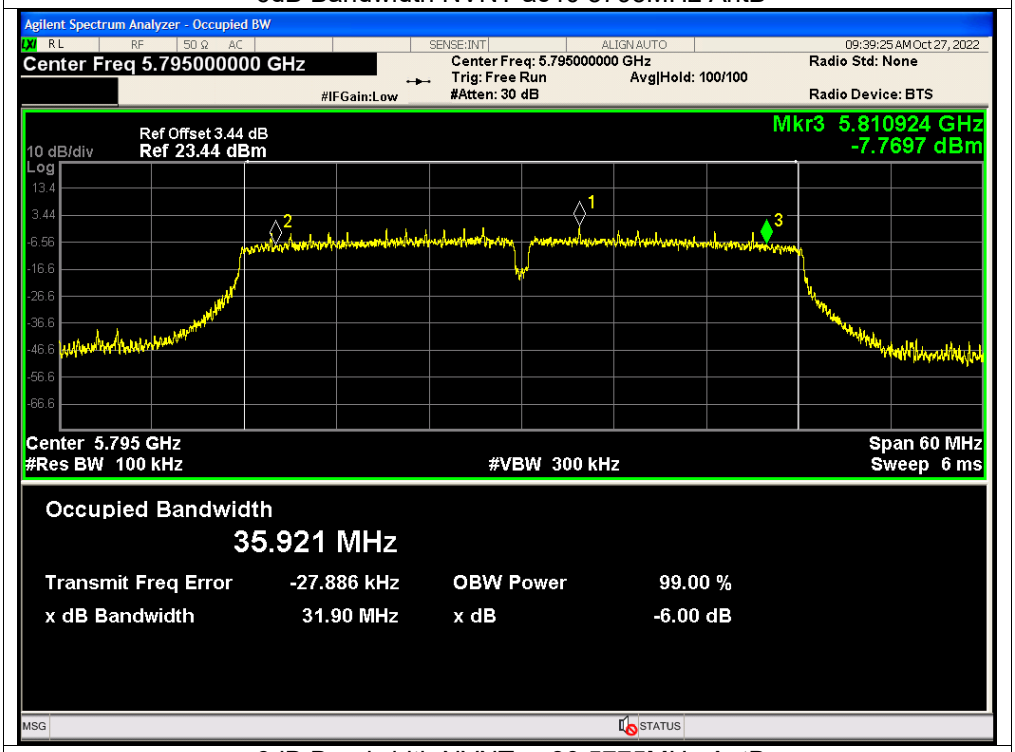
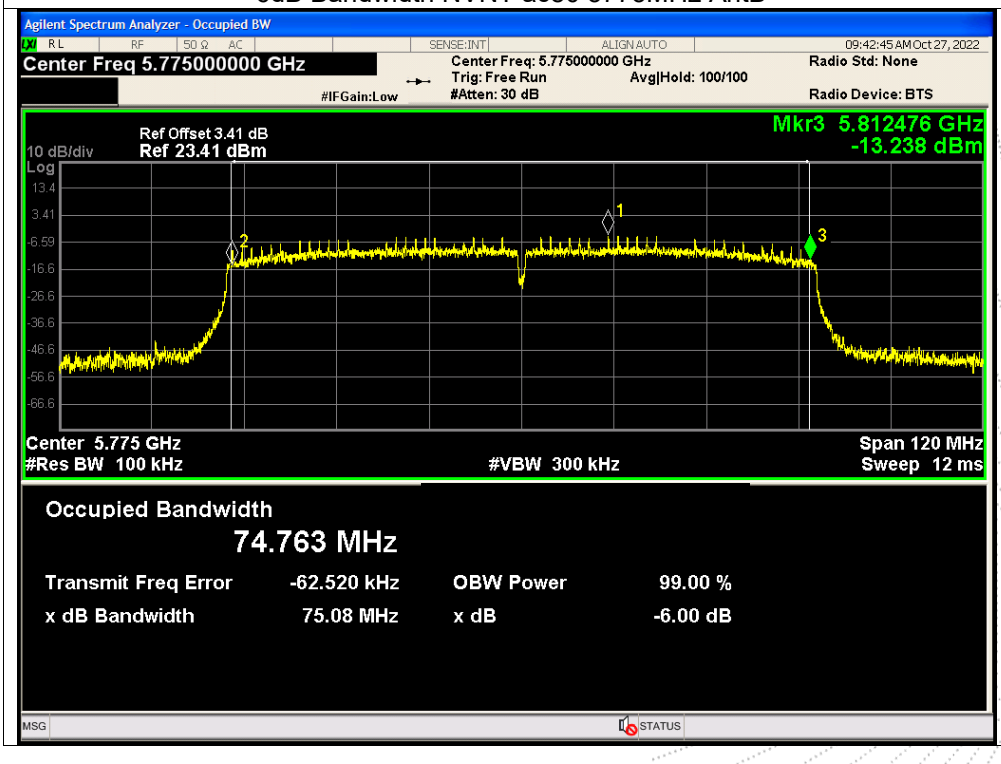


-6dB Bandwidth NVNT ac40 5795MHz AntB

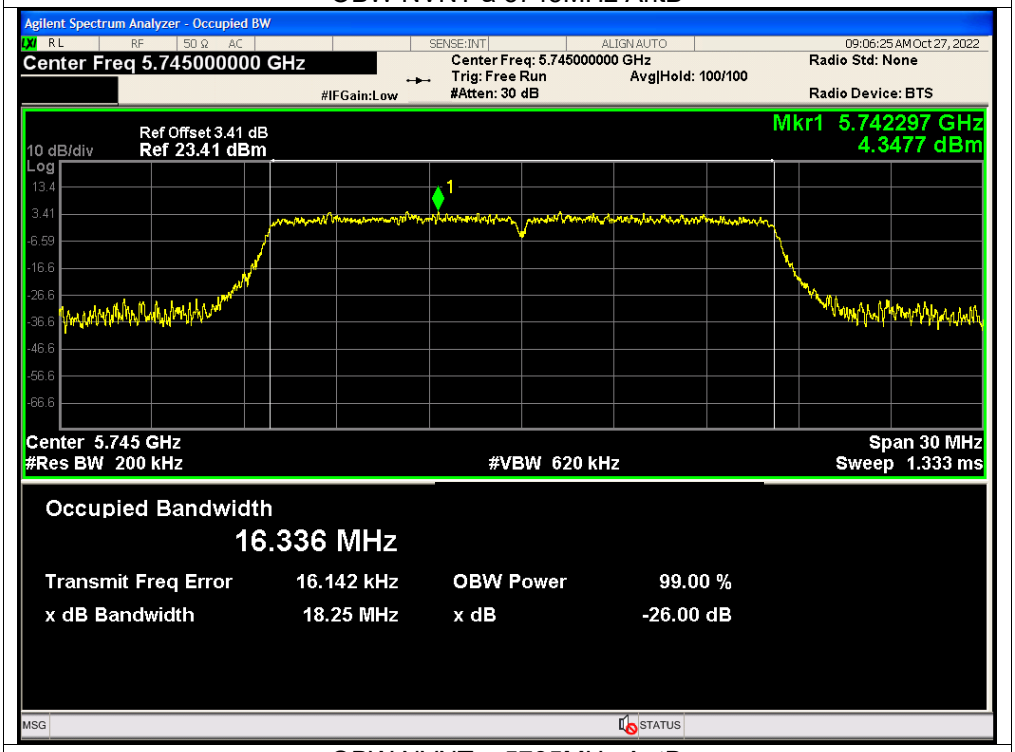


-6dB Bandwidth NVNT ac80 5775MHz AntB

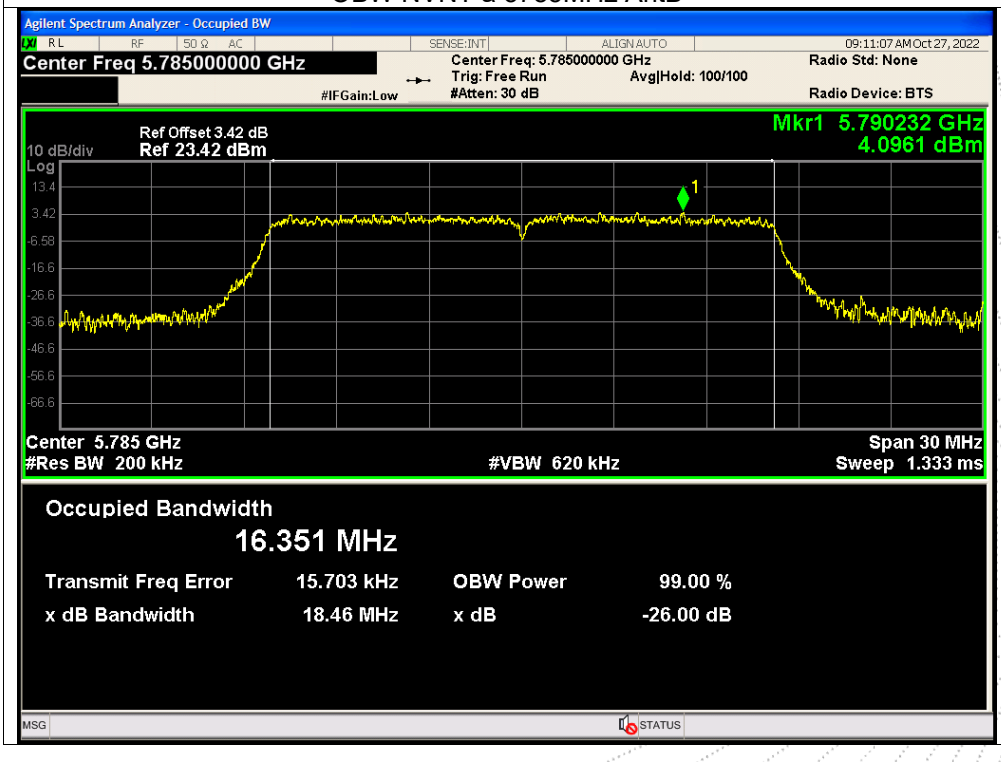


Test Graphs

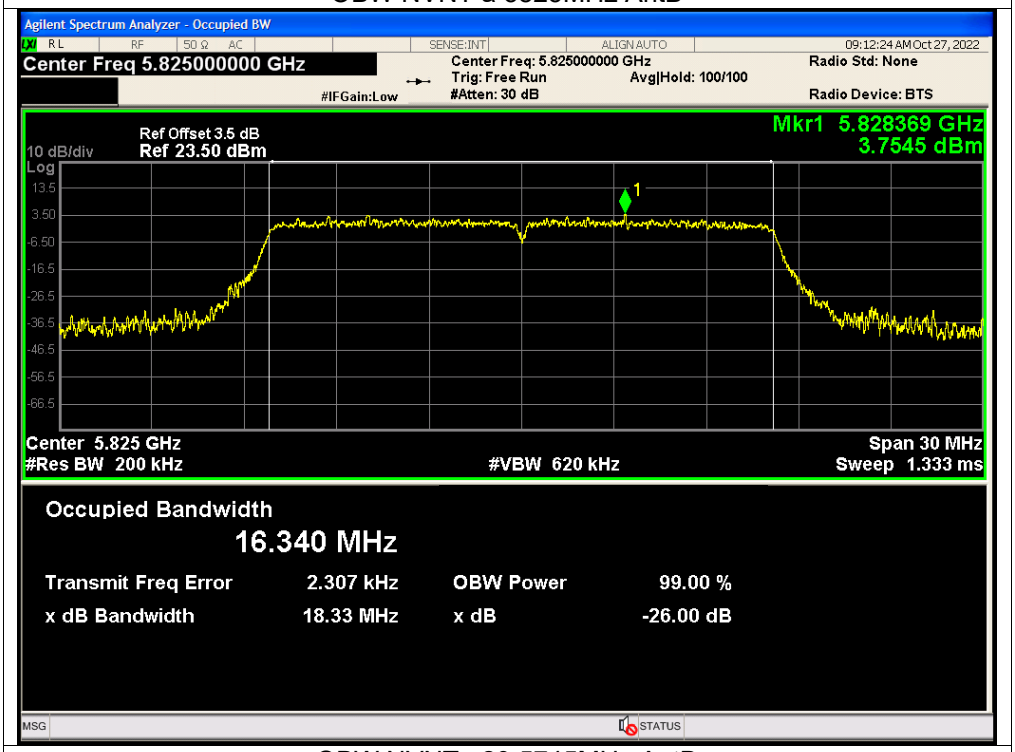
OBW NVNT a 5745MHz AntB



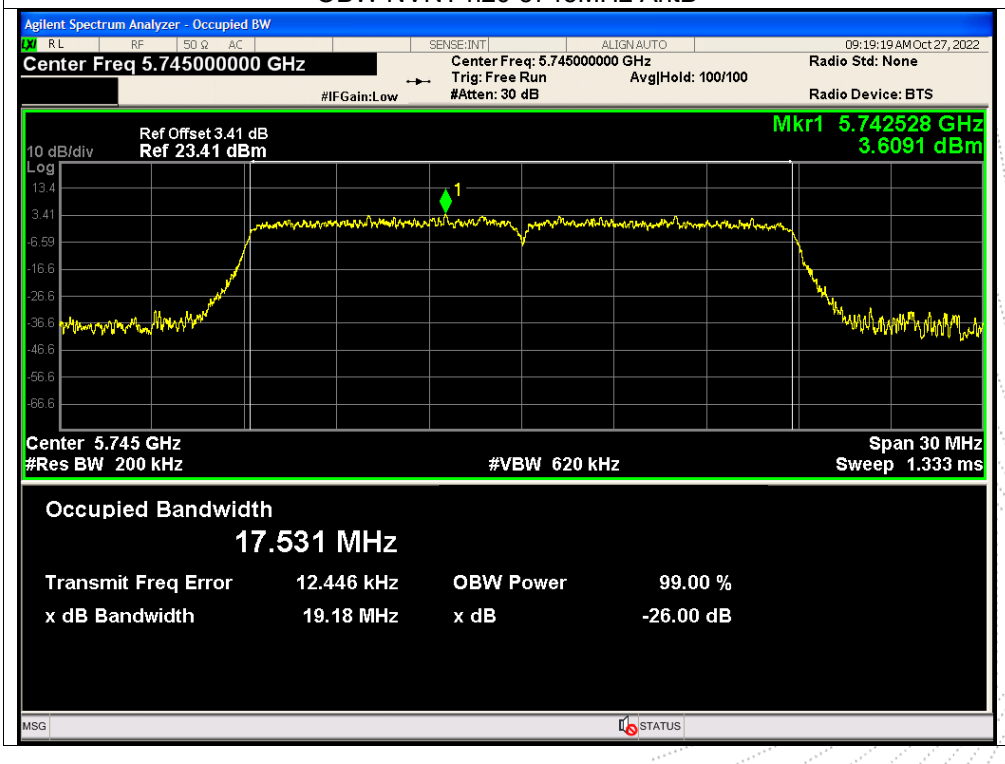
OBW NVNT a 5785MHz AntB



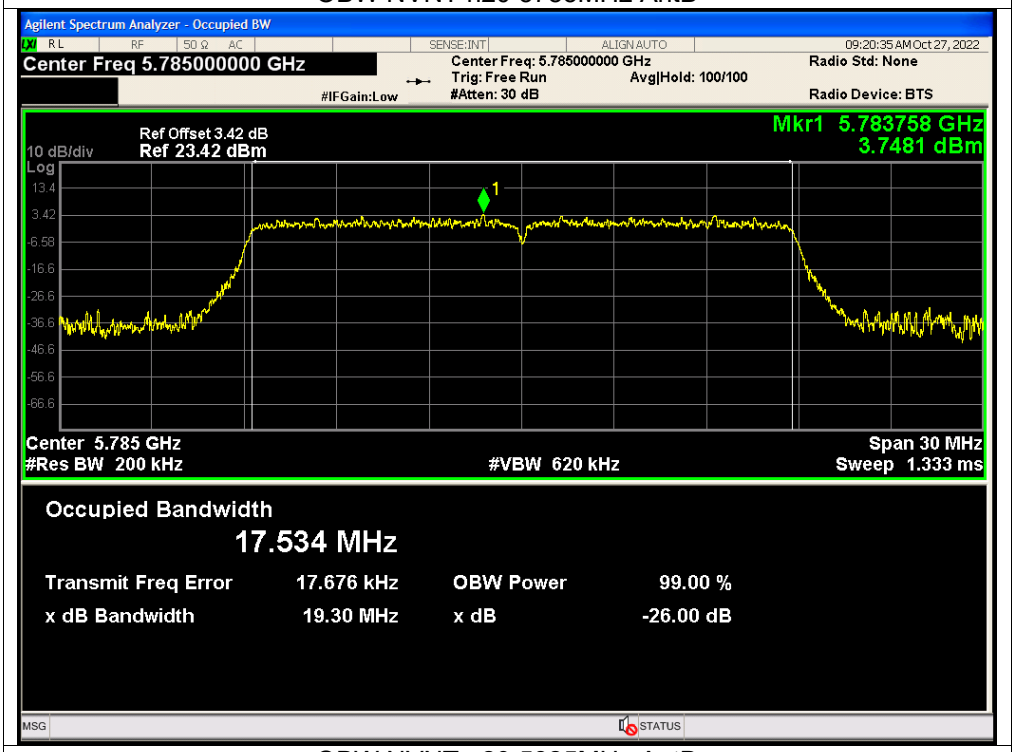
OBW NVNT a 5825MHz AntB



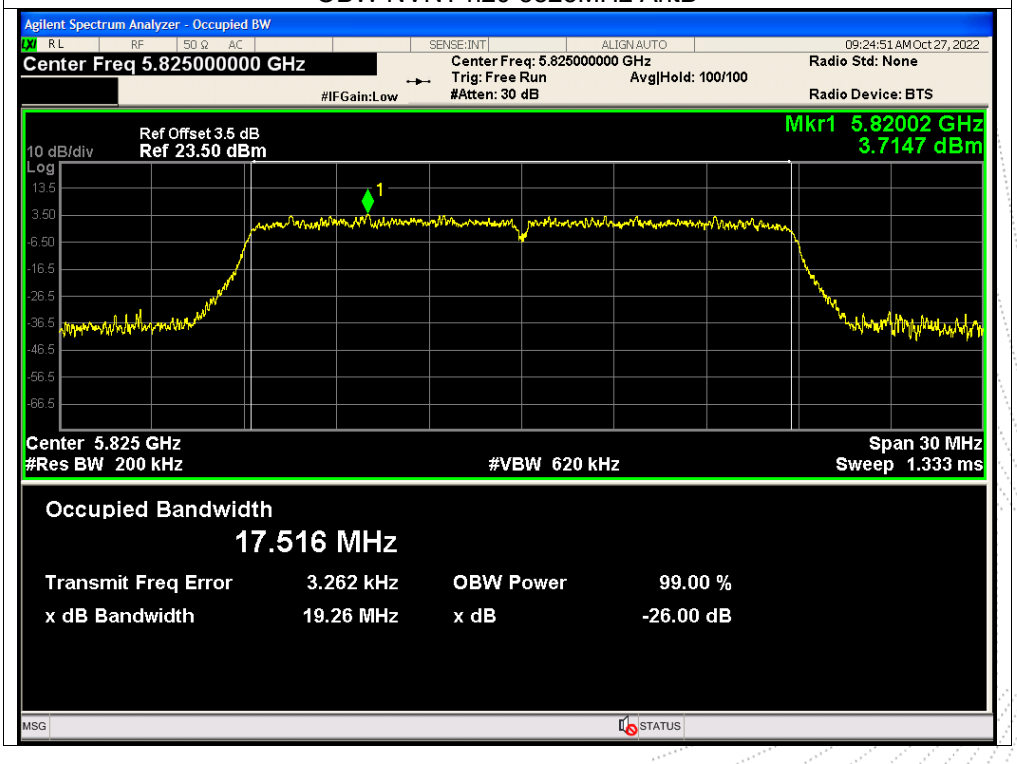
OBW NVNT n20 5745MHz AntB



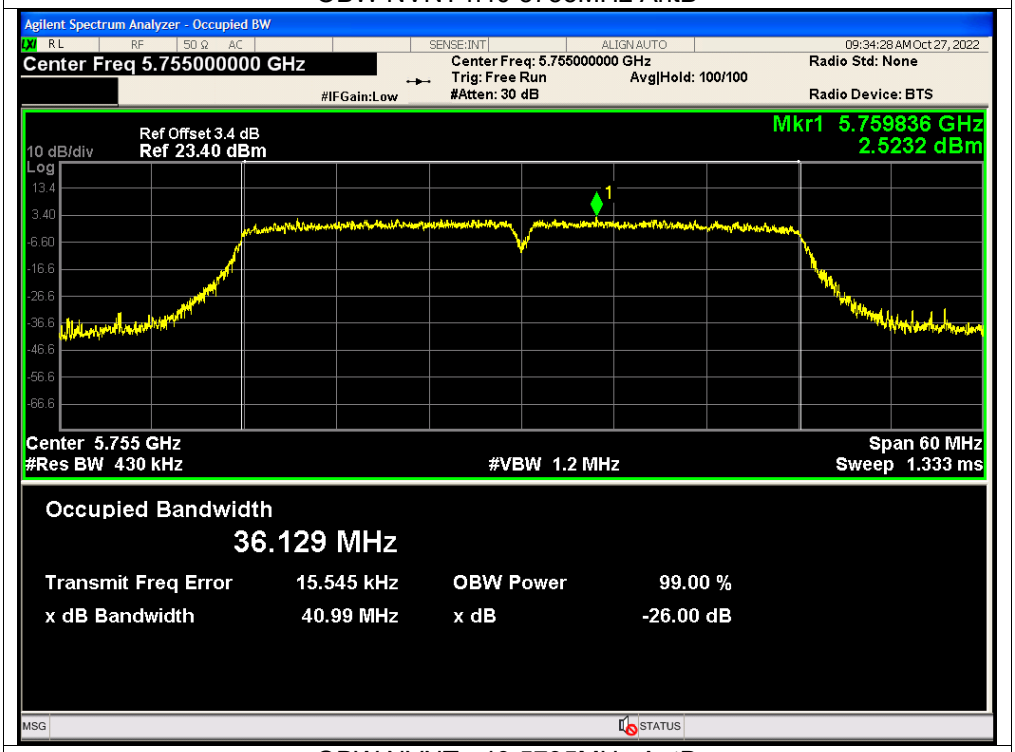
OBW NVNT n20 5785MHz AntB



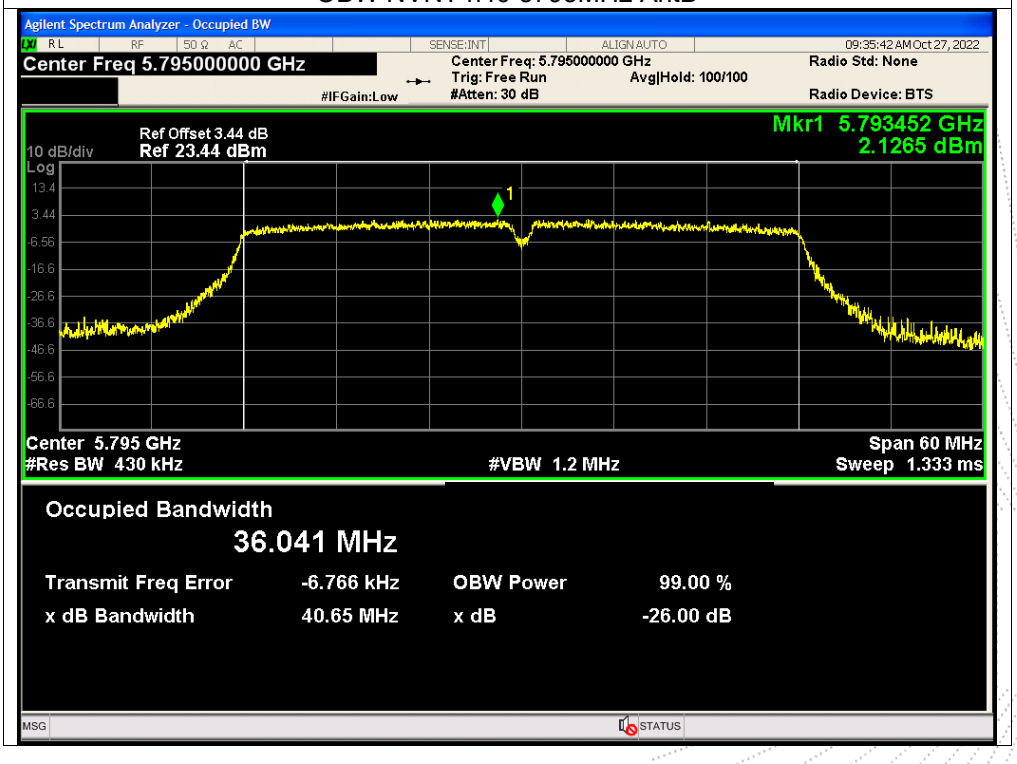
OBW NVNT n20 5825MHz AntB



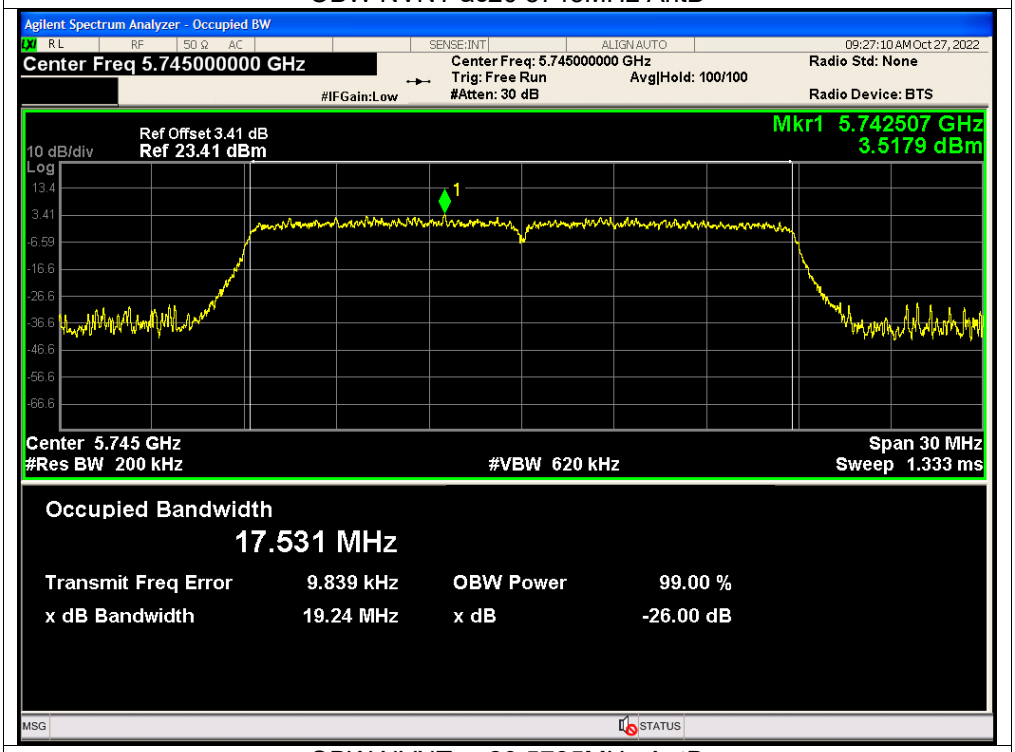
OBW NVNT n40 5755MHz AntB



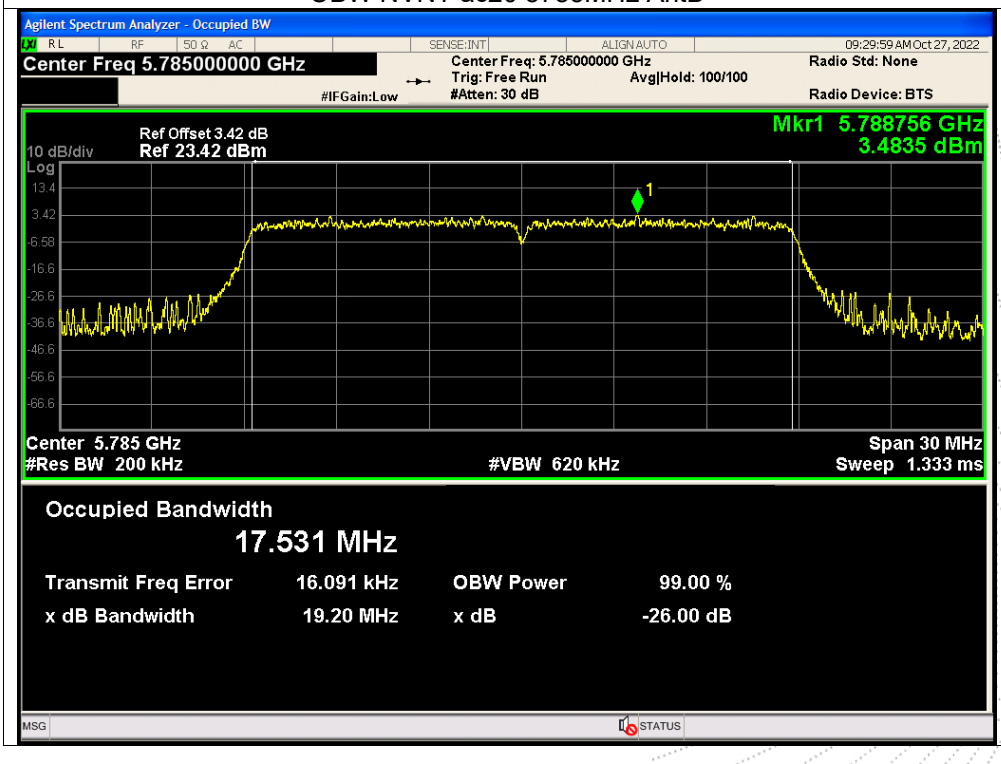
OBW NVNT n40 5795MHz AntB



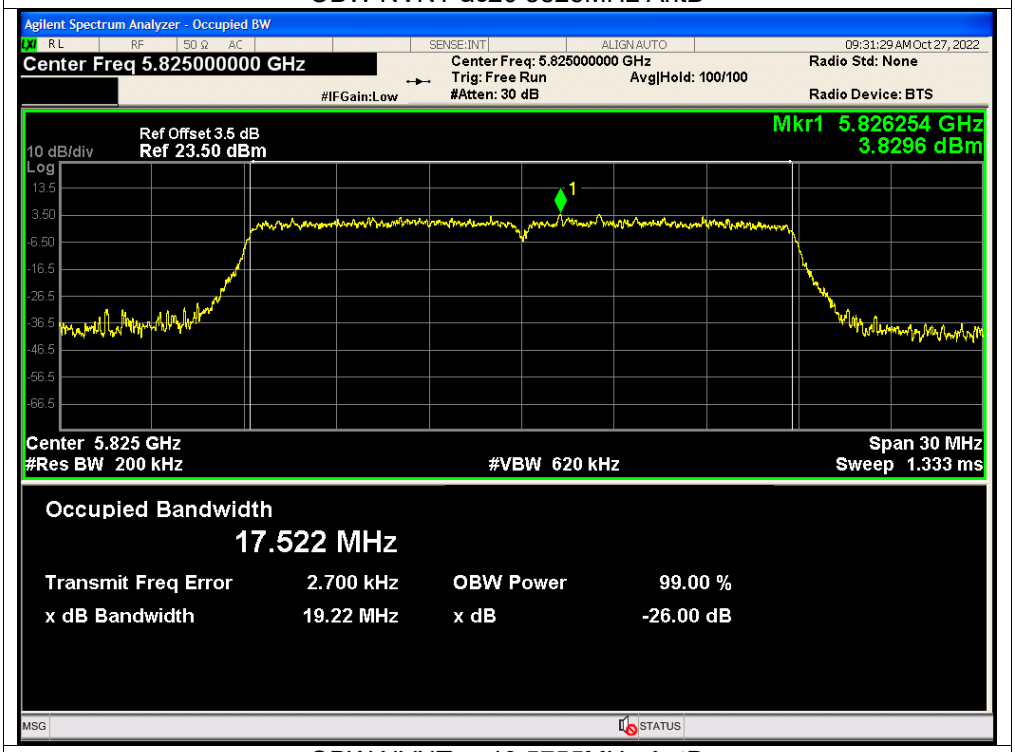
OBW NVNT ac20 5745MHz AntB



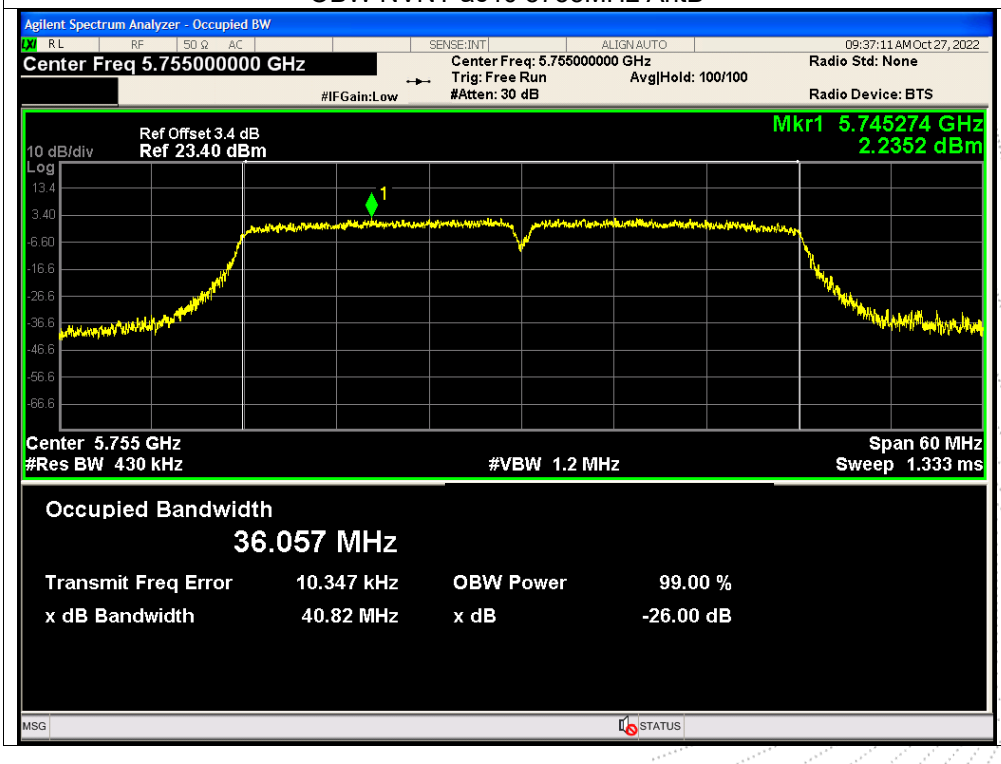
OBW NVNT ac20 5785MHz AntB



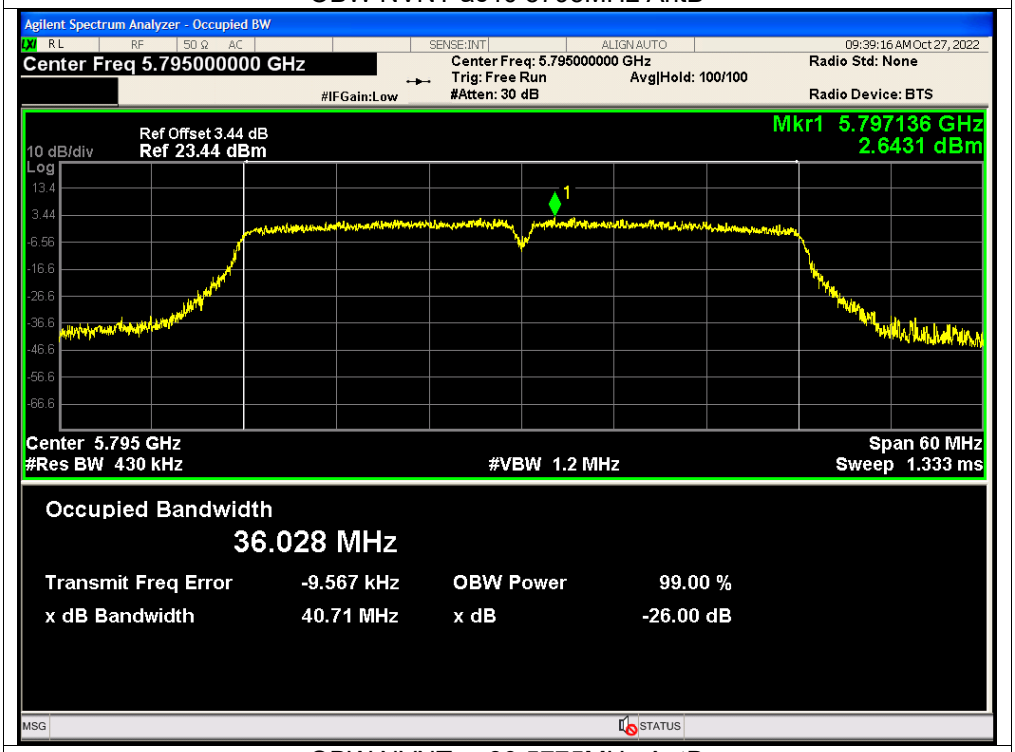
OBW NVNT ac20 5825MHz AntB



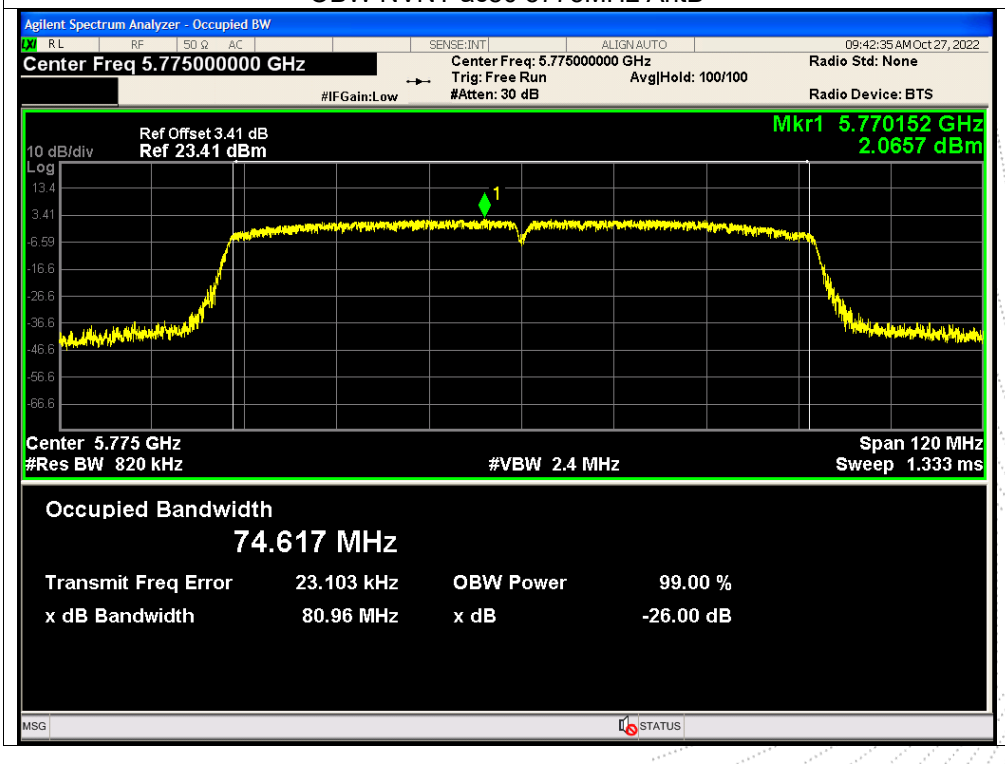
OBW NVNT ac40 5755MHz AntB



OBW NVNT ac40 5795MHz AntB

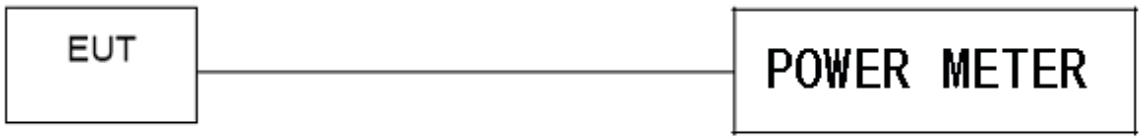


OBW NVNT ac80 5775MHz AntB



10. Maximum Conducted Output Power

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407
The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

10.3 Test Procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration
If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)
Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each

transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

10.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

10.5 Test Result

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX (5G) Mode Frequency U-NII-1 (5180-5240MHz)		

Test Mode	Test Channel	Frequency	Maximum output power. Antenna port (AV)			Limit	Result
		(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode	CH36	5180	14.03	14.85	/	24	Pass
	CH40	5200	14.04	**15.02**	/	24	Pass
	CH48	5240	14.65	15.01	/	24	Pass
TX 802.11 n20M Mode	CH36	5180	13.14	13.95	16.57	24	Pass
	CH40	5200	13.24	13.84	16.56	24	Pass
	CH48	5240	13.61	13.92	16.78	24	Pass
TX 802.11 n40M Mode	CH38	5190	12.18	12.64	15.43	24	Pass
	CH46	5230	12	12.4	15.21	24	Pass
TX 802.11 AC20M Mode	CH36	5180	13.52	13.98	16.77	24	Pass
	CH40	5200	13.3	14.14	16.75	24	Pass
	CH48	5240	13.55	13.98	16.78	24	Pass
TX 802.11 AC40M Mode	CH38	5190	12.26	12.52	15.40	24	Pass
	CH46	5230	12.24	12.36	15.31	24	Pass
TX 802.11 AC80M Mode	CH42	5210	11.13	11.61	14.39	24	Pass

For power measurements,
The Array gain=0 dB for NANT≤4,
So the directional gain for Power measurements is 3.83 dBi

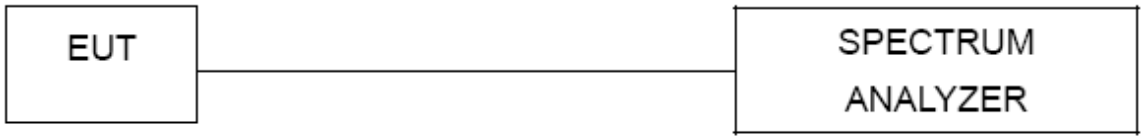
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX (5G) Mode Frequency U-NII-3 (5745-5825MHz)		

Test Mode	Test Channel	Frequency	Maximum output power. Antenna port (AV)			Limit	Result
		(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode	CH 149	5745	14.38	14.7	/	30	Pass
	CH 157	5785	**14.49**	14.48	/	30	Pass
	CH 165	5825	14.02	13.64	/	30	Pass
TX 802.11 n20M Mode	CH 149	5745	13.26	13.77	16.53	30	Pass
	CH 157	5785	13.59	13.62	16.62	30	Pass
	CH 165	5825	13.38	13.88	16.65	30	Pass
TX 802.11 n40M Mode	CH 151	5755	11.98	12.72	15.38	30	Pass
	CH 159	5795	12.13	12.39	15.27	30	Pass
TX 802.11 AC20M Mode	CH 151	5755	11.96	13.49	15.80	30	Pass
	CH 159	5795	13.8	13.69	16.76	30	Pass
	CH 151	5755	13.65	13.73	16.70	30	Pass
TX 802.11 AC40M Mode	CH 151	5755	13.34	12.57	15.98	30	Pass
	CH 159	5795	12.4	12.54	15.48	30	Pass
TX 802.11 AC80M Mode	CH 155	5775	11.99	11.66	14.84	30	Pass

For power measurements,
The Array gain=0 dB for NANT≤4,
So the directional gain for Power measurements is 3.83 dBi

11. Out Of Band Emissions

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)
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) 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.

11.3 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.

11.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

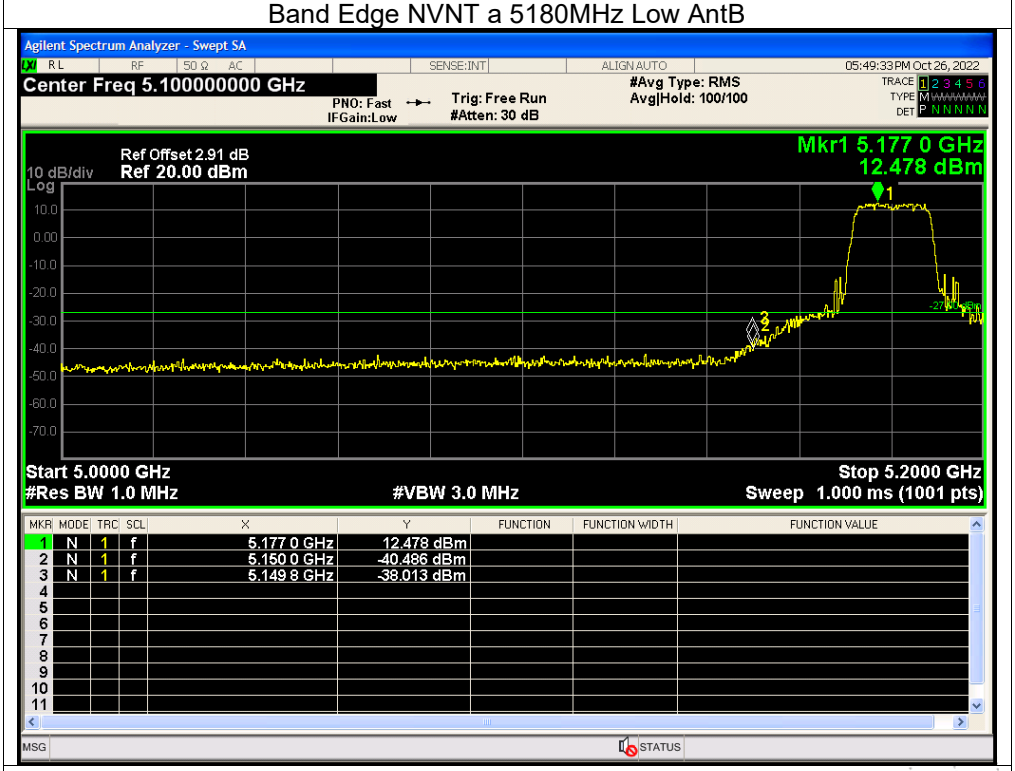
11.5 Test Result

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz

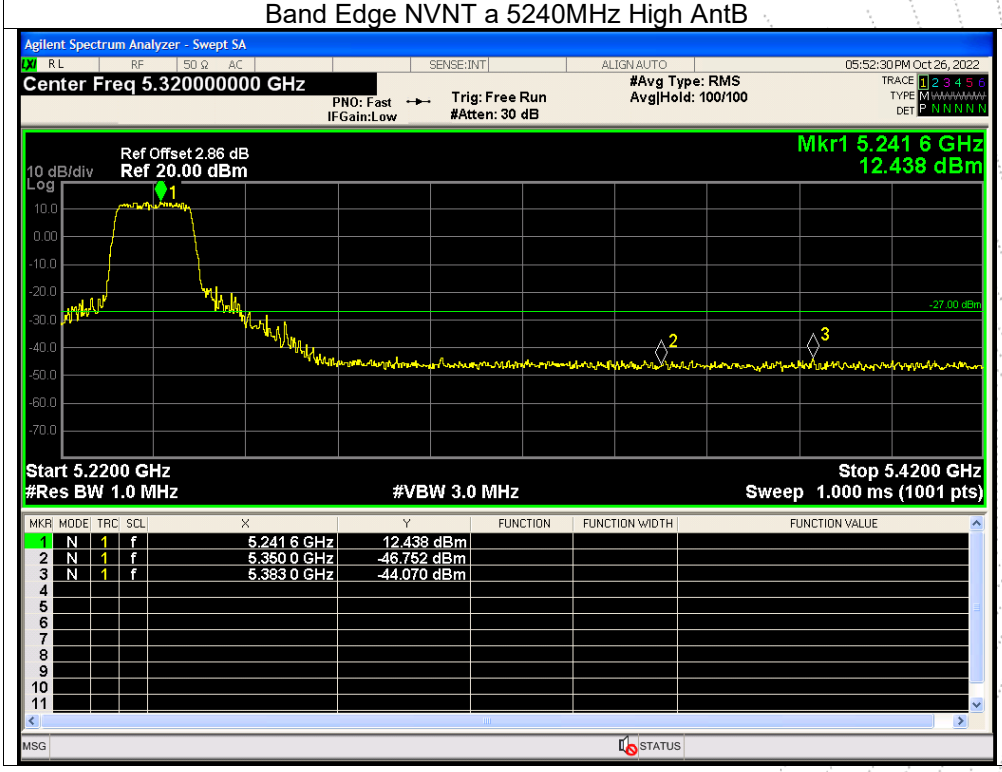
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B .
Plot. Antenna B: 5180-5240MHz

Test Graphs

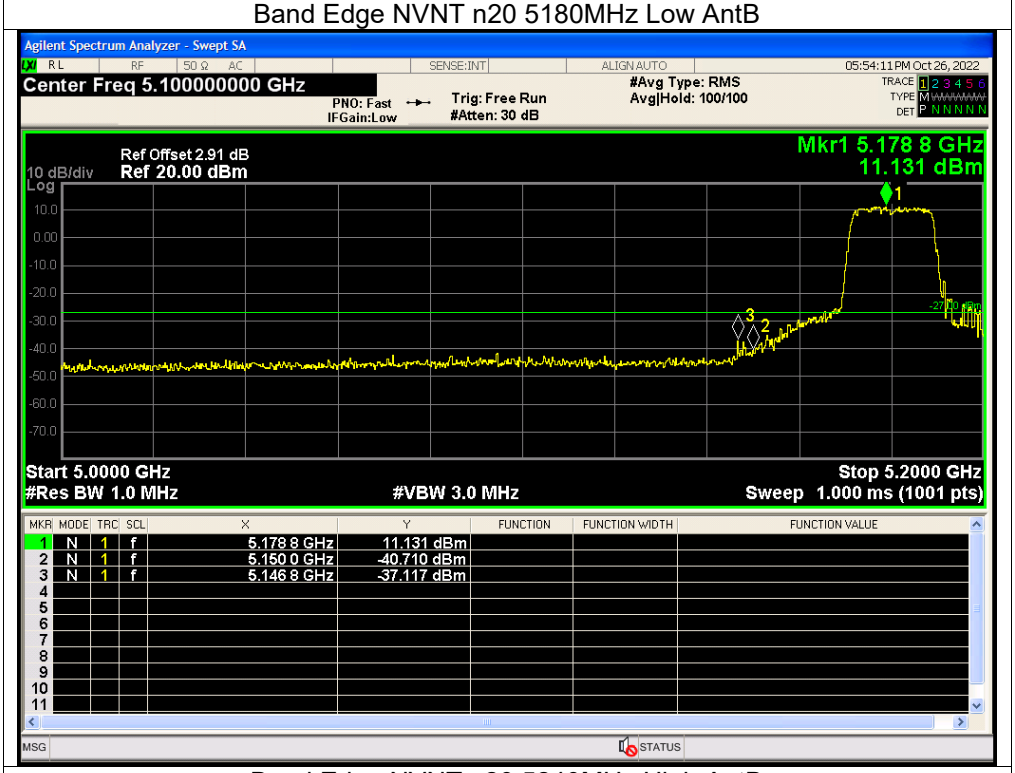
Band Edge NVNT a 5180MHz Low AntB



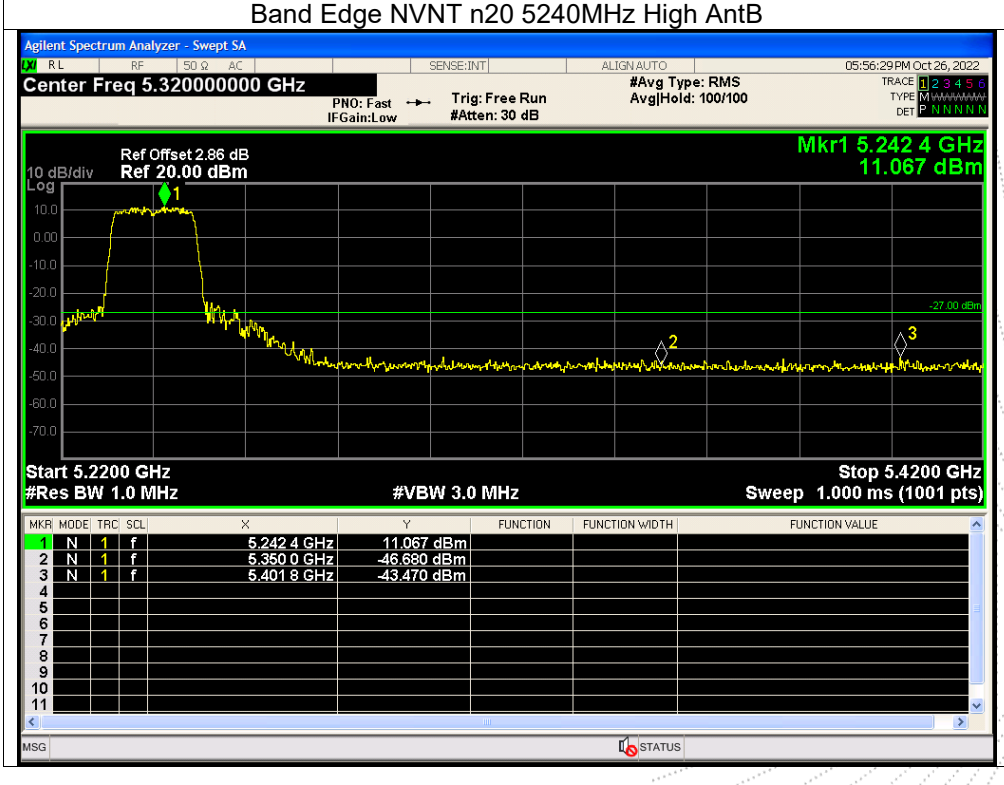
Band Edge NVNT a 5240MHz High AntB



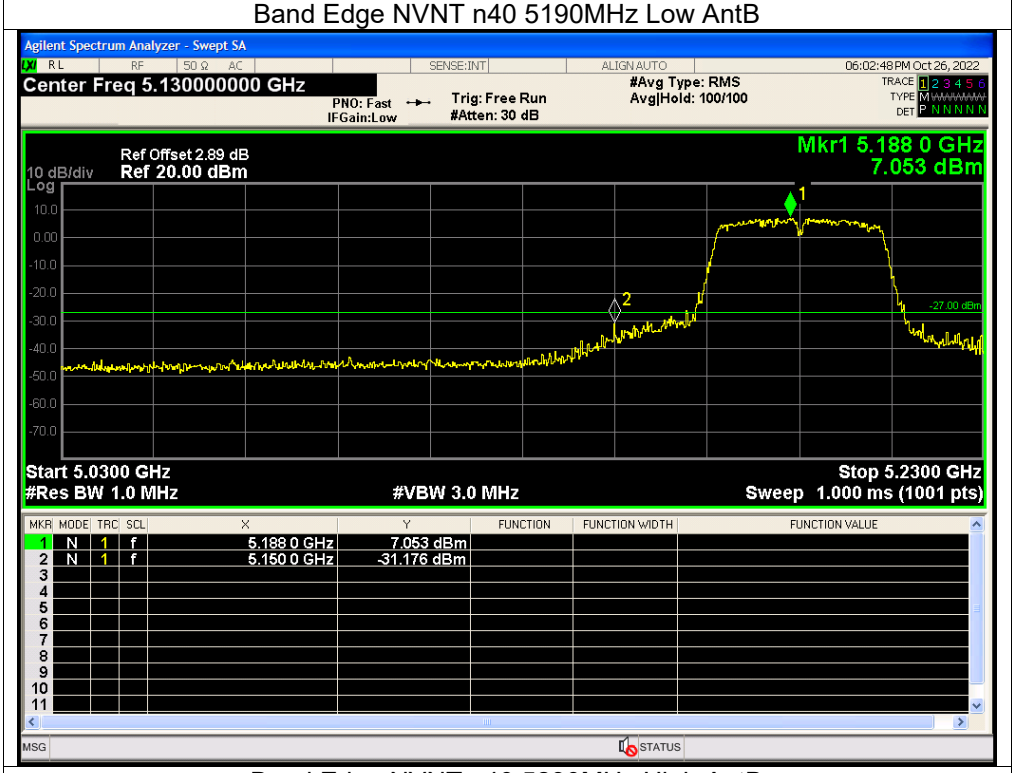
Band Edge NVNT n20 5180MHz Low AntB



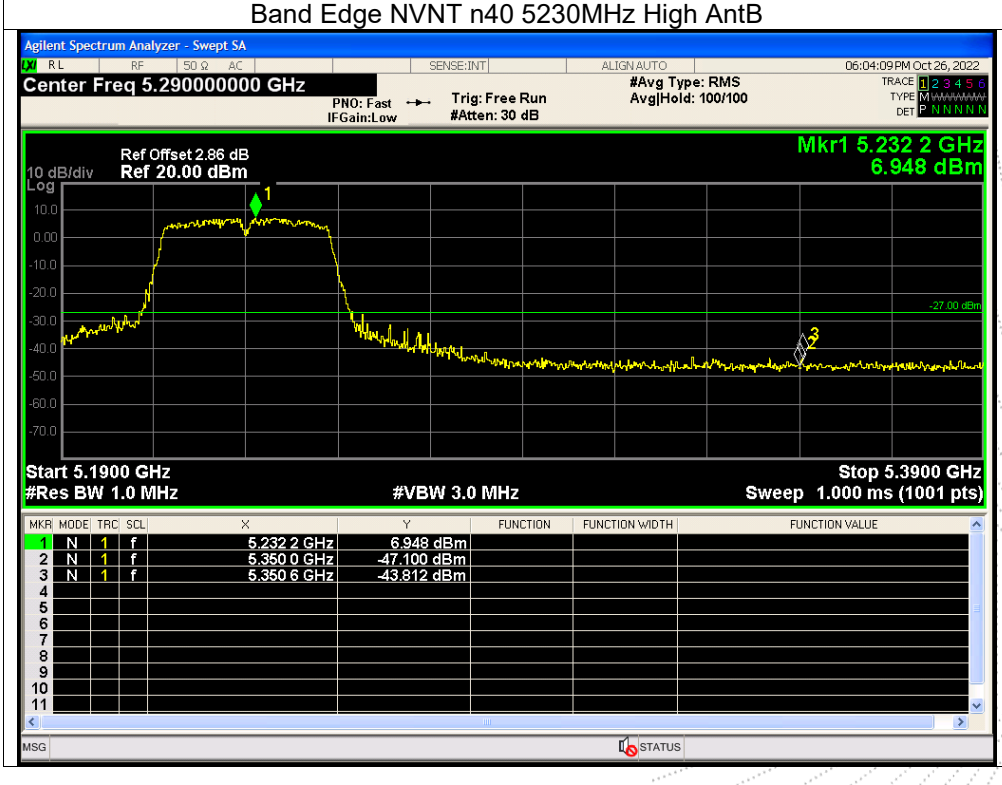
Band Edge NVNT n20 5240MHz High AntB



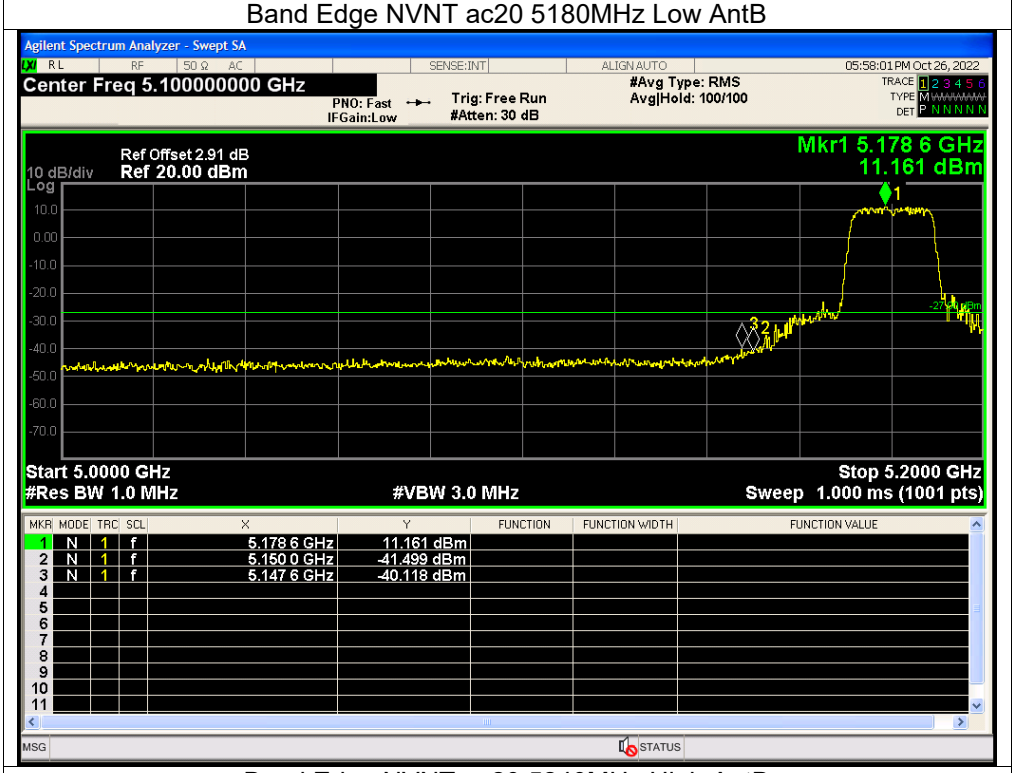
Band Edge NVNT n40 5190MHz Low AntB



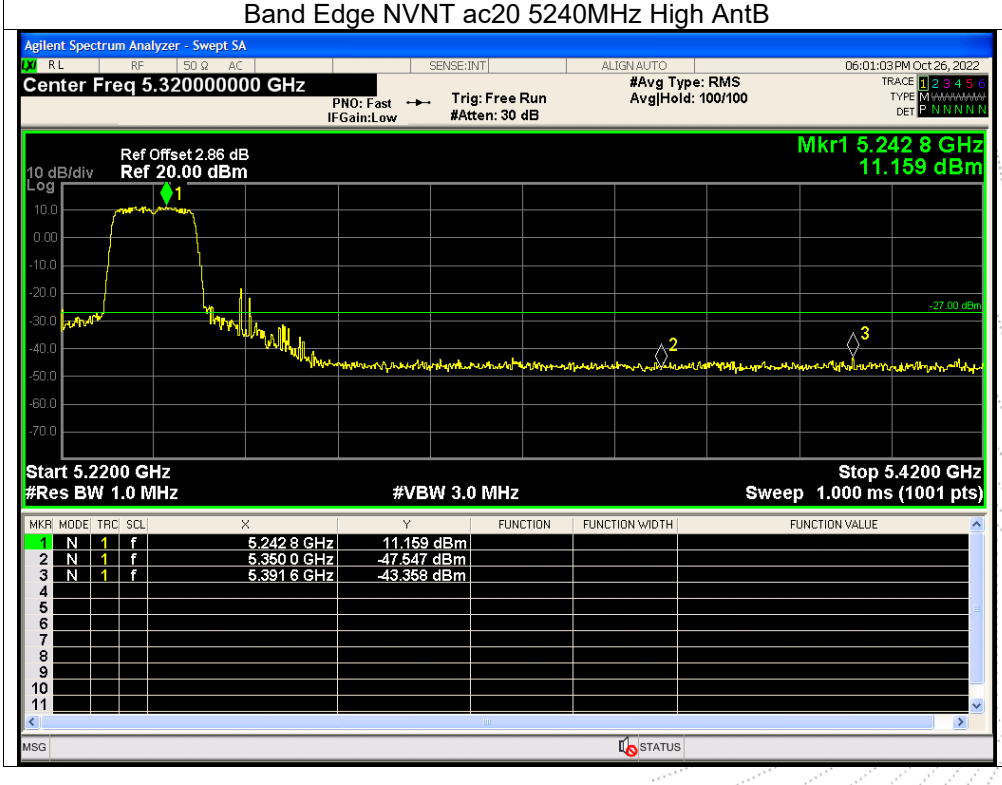
Band Edge NVNT n40 5230MHz High AntB



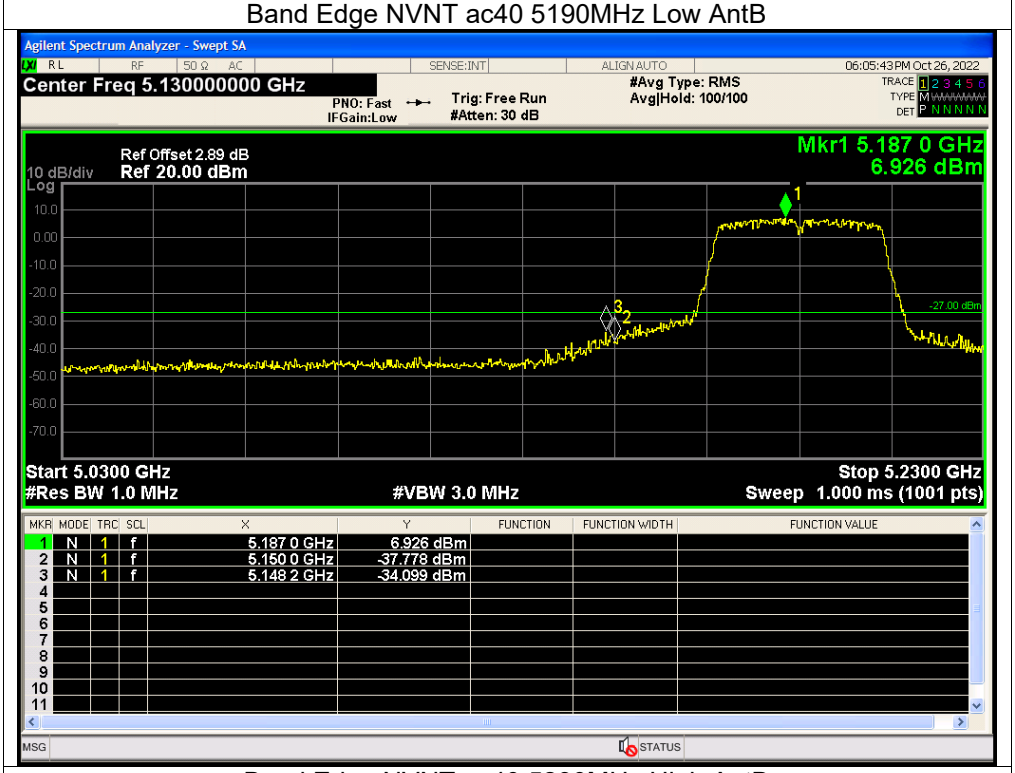
Band Edge NVNT ac20 5180MHz Low AntB



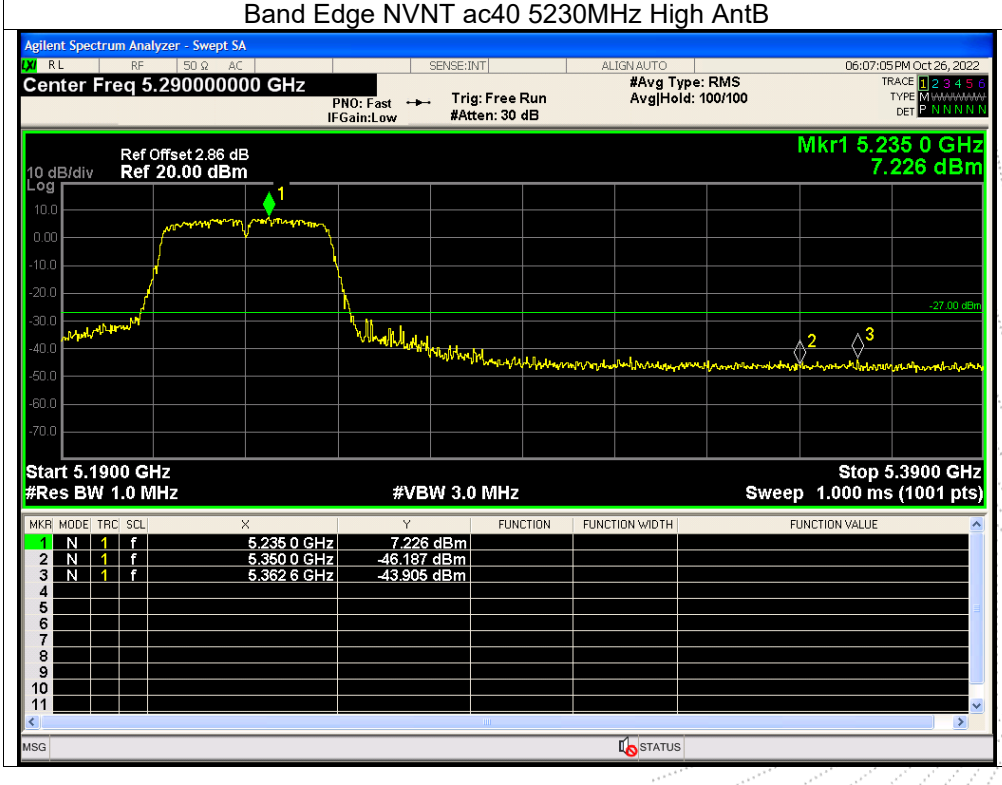
Band Edge NVNT ac20 5240MHz High AntB



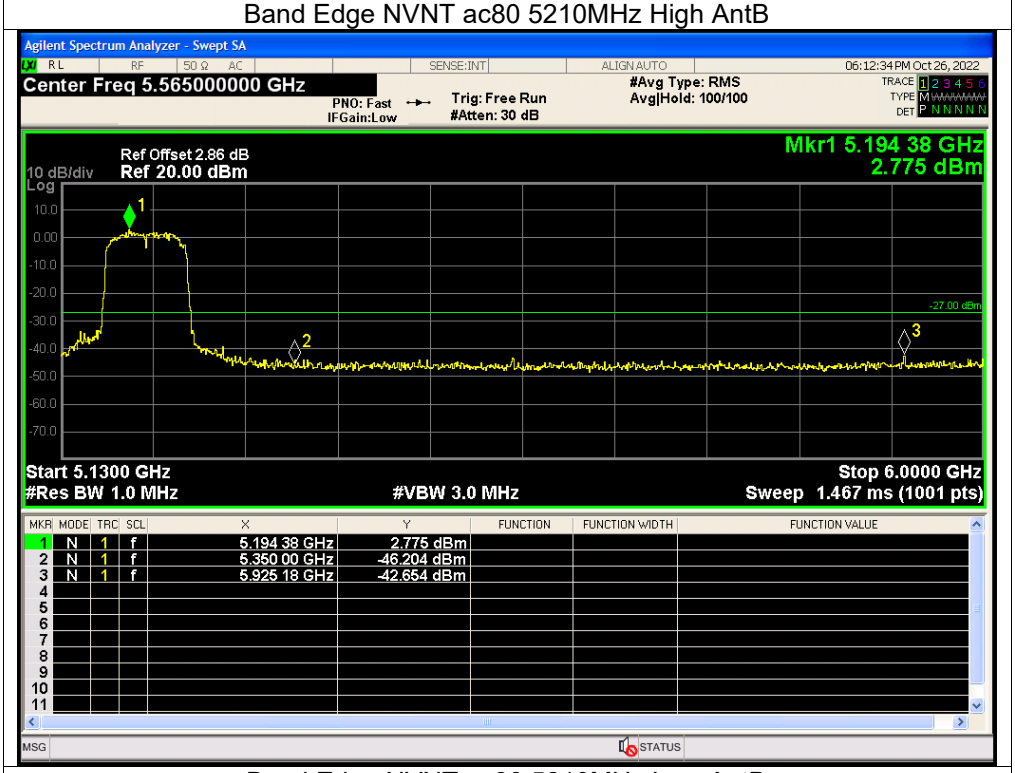
Band Edge NVNT ac40 5190MHz Low AntB



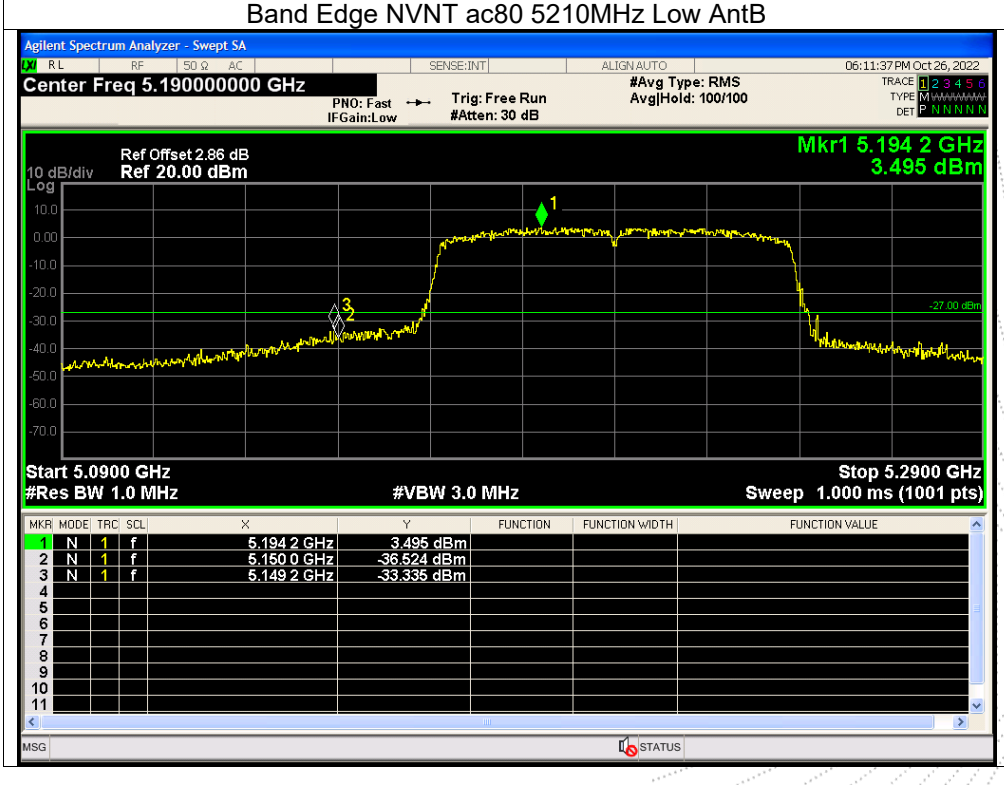
Band Edge NVNT ac40 5230MHz High AntB



Band Edge NVNT ac80 5210MHz High AntB



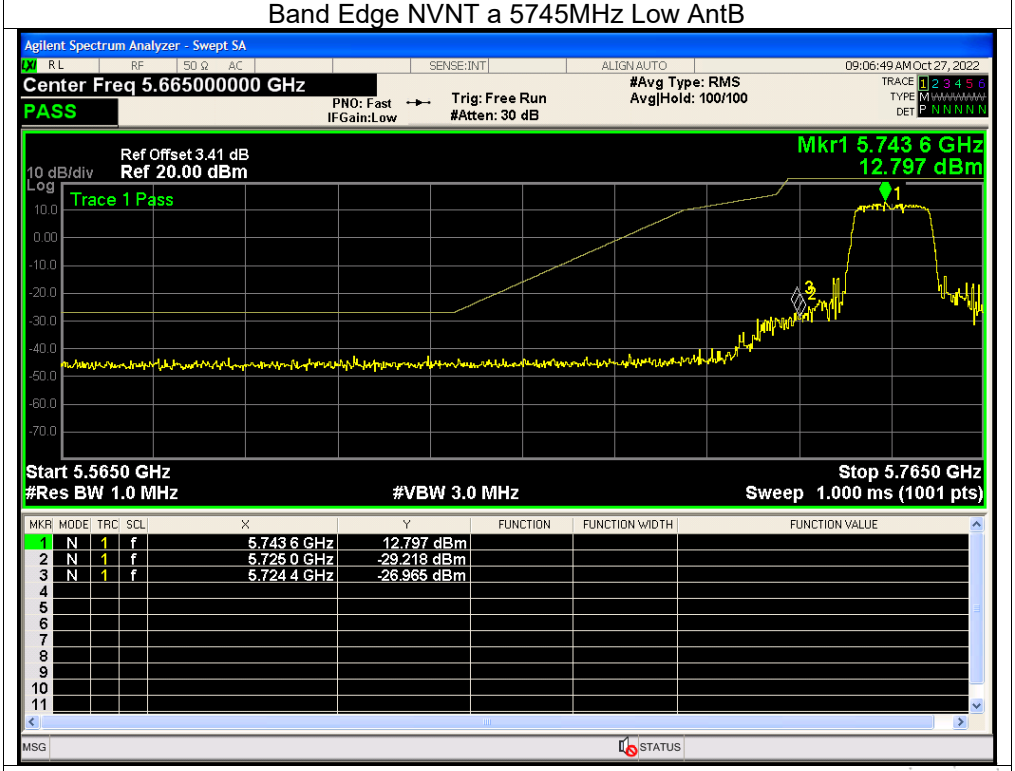
Band Edge NVNT ac80 5210MHz Low AntB



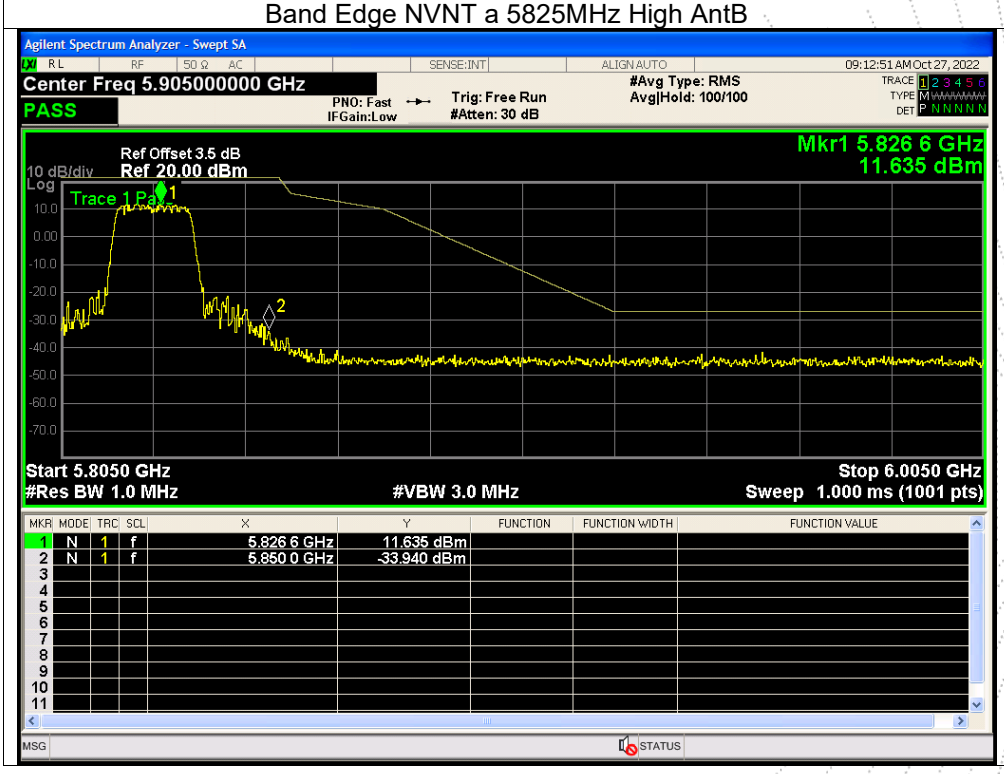
Note: A(B) Represent the value of antenna A and B. The worst data is Antenna B, only shown Antenna B.
Antenna B: 5745-58250MHz

Test Graphs

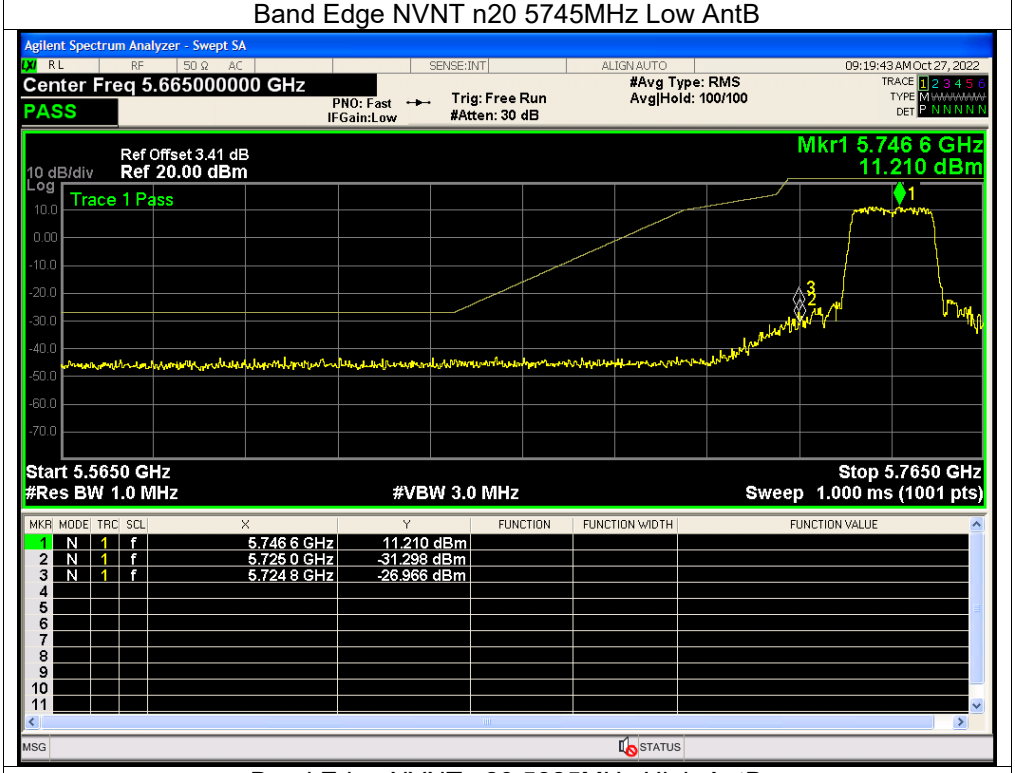
Band Edge NVNT a 5745MHz Low AntB



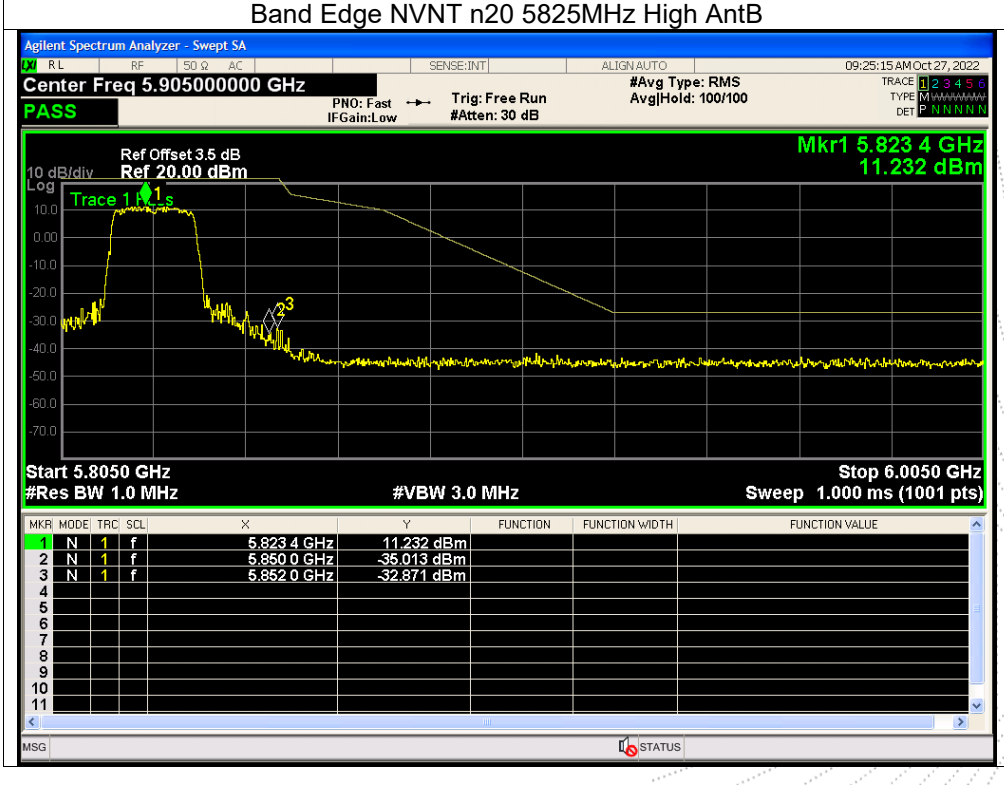
Band Edge NVNT a 5825MHz High AntB



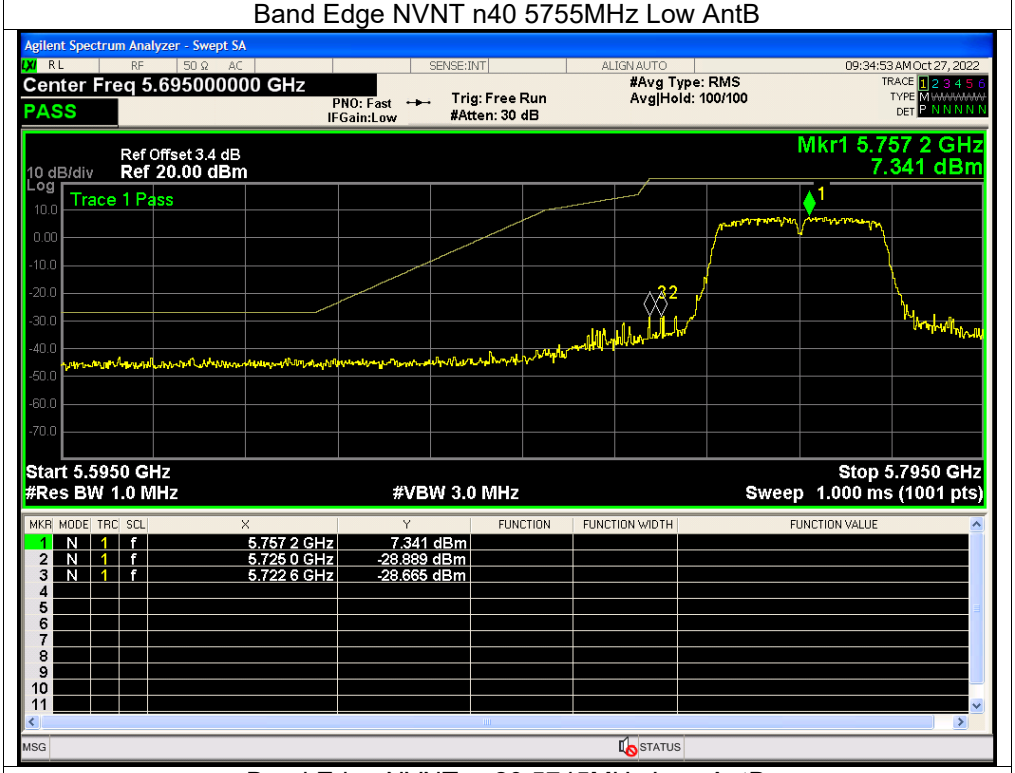
Band Edge NVNT n20 5745MHz Low AntB



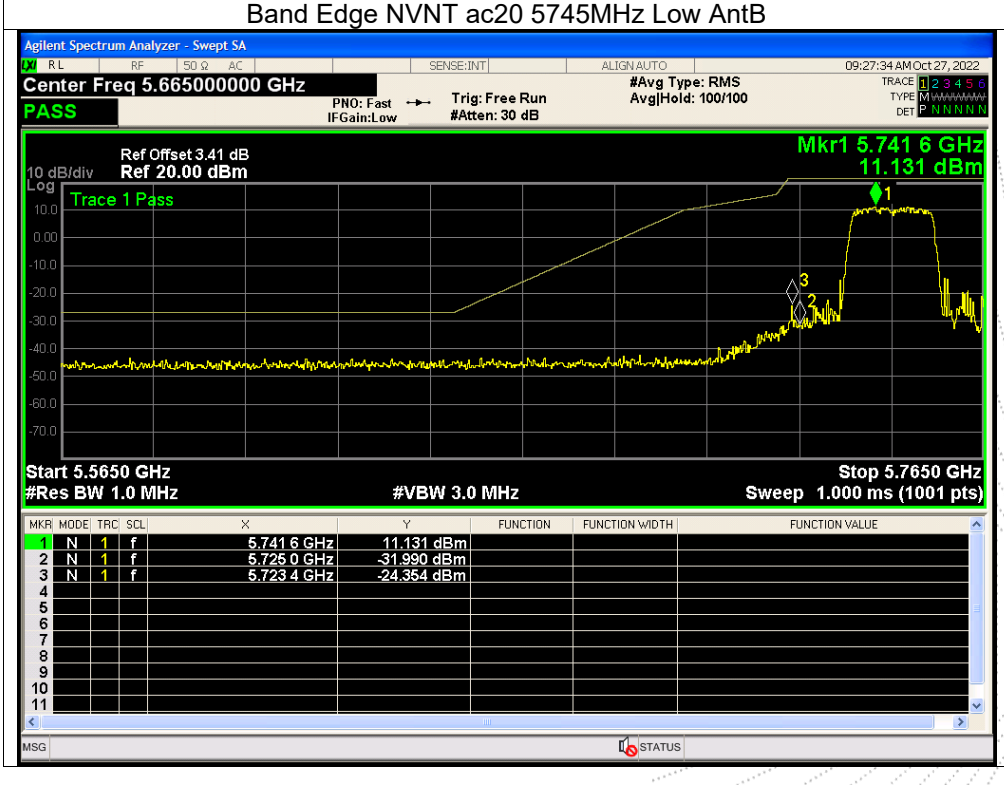
Band Edge NVNT n20 5825MHz High AntB



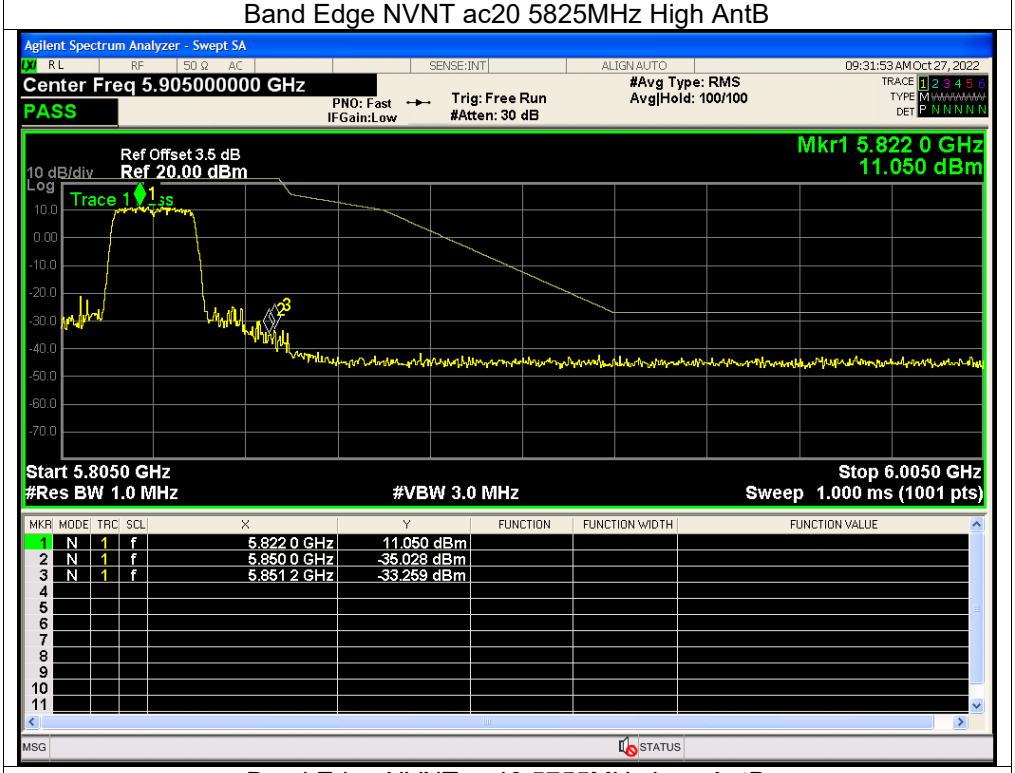
Band Edge NVNT n40 5755MHz Low AntB



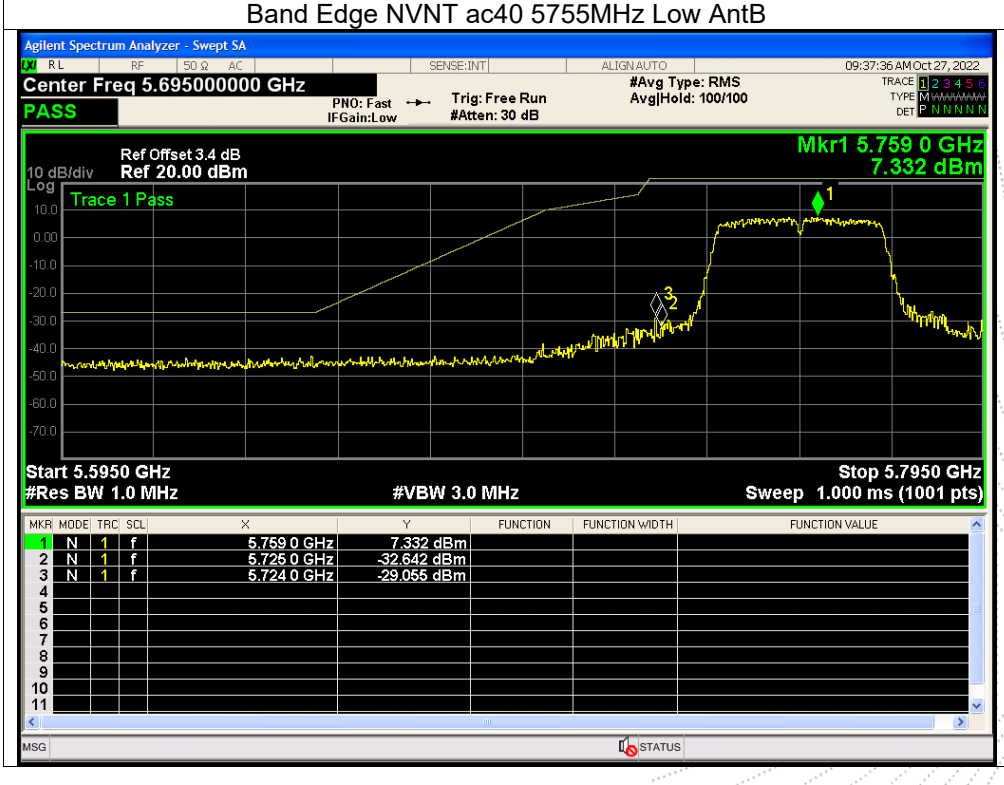
Band Edge NVNT ac20 5745MHz Low AntB



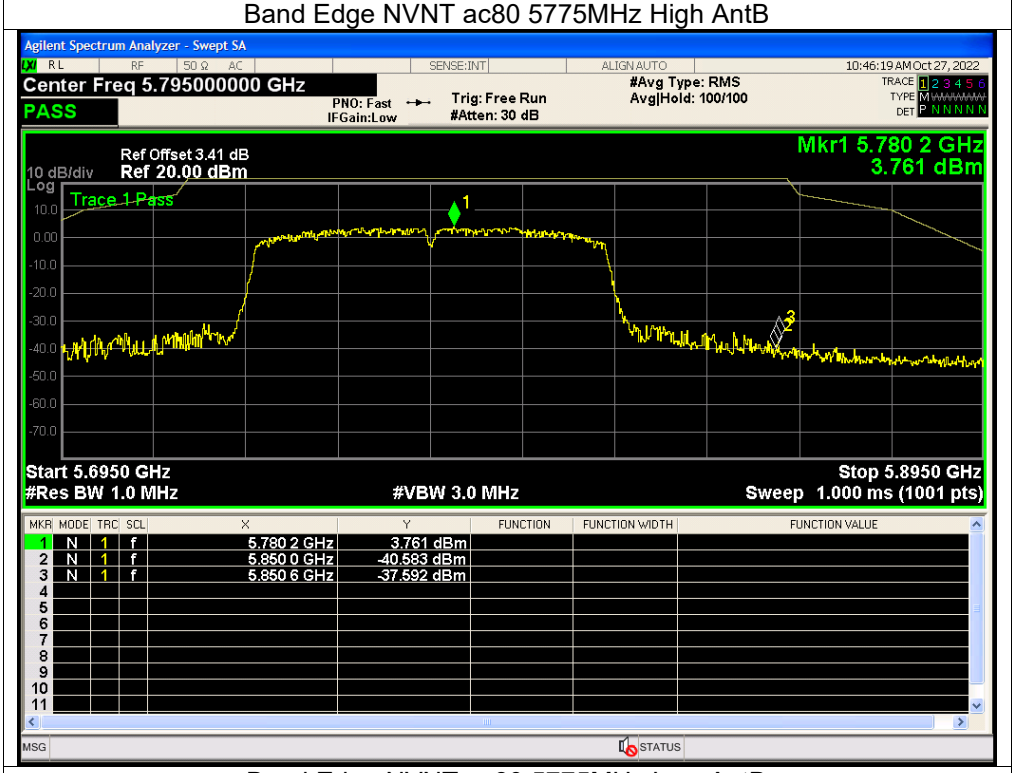
Band Edge NVNT ac20 5825MHz High AntB



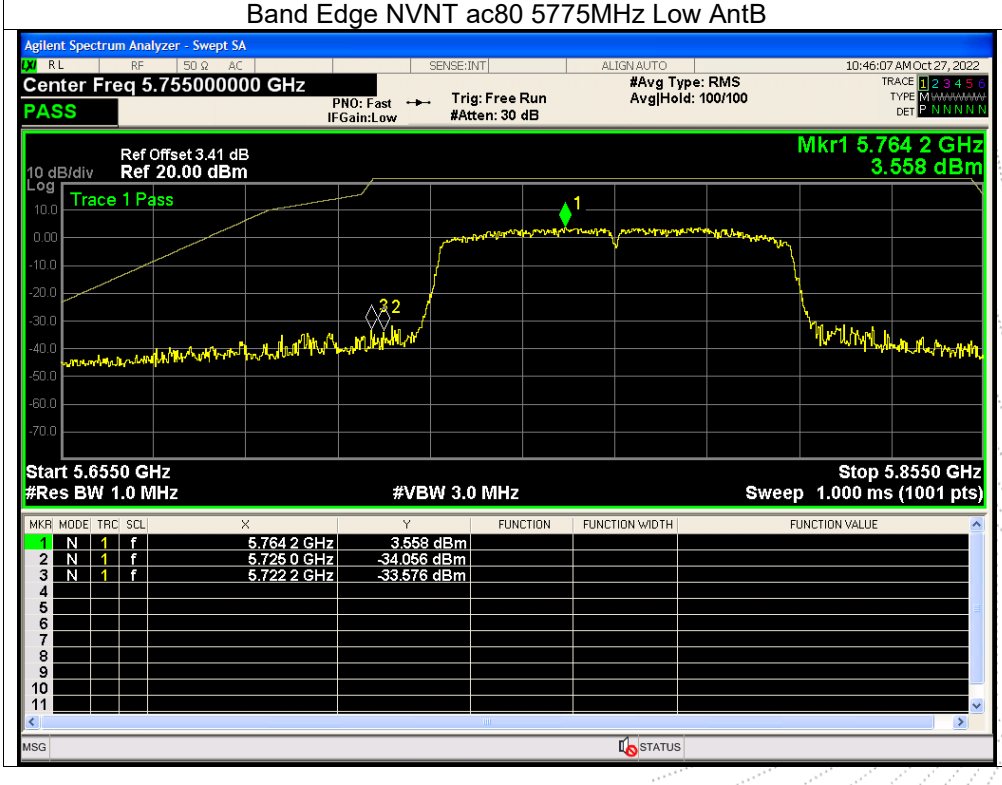
Band Edge NVNT ac40 5755MHz Low AntB



Band Edge NVNT ac80 5775MHz High AntB

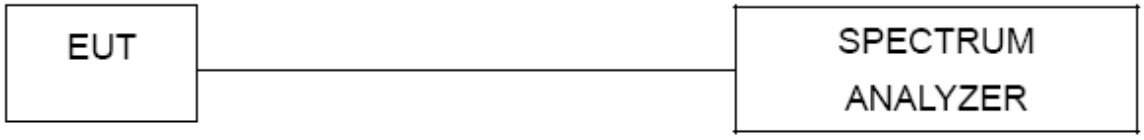


Band Edge NVNT ac80 5775MHz Low AntB



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

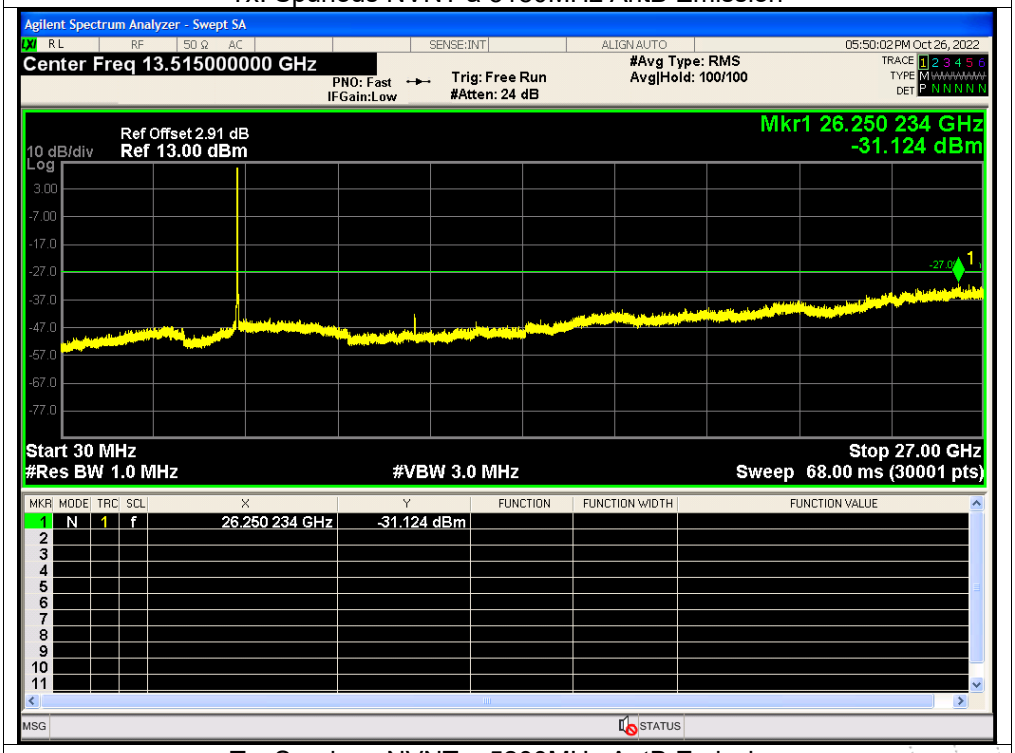
Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

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.

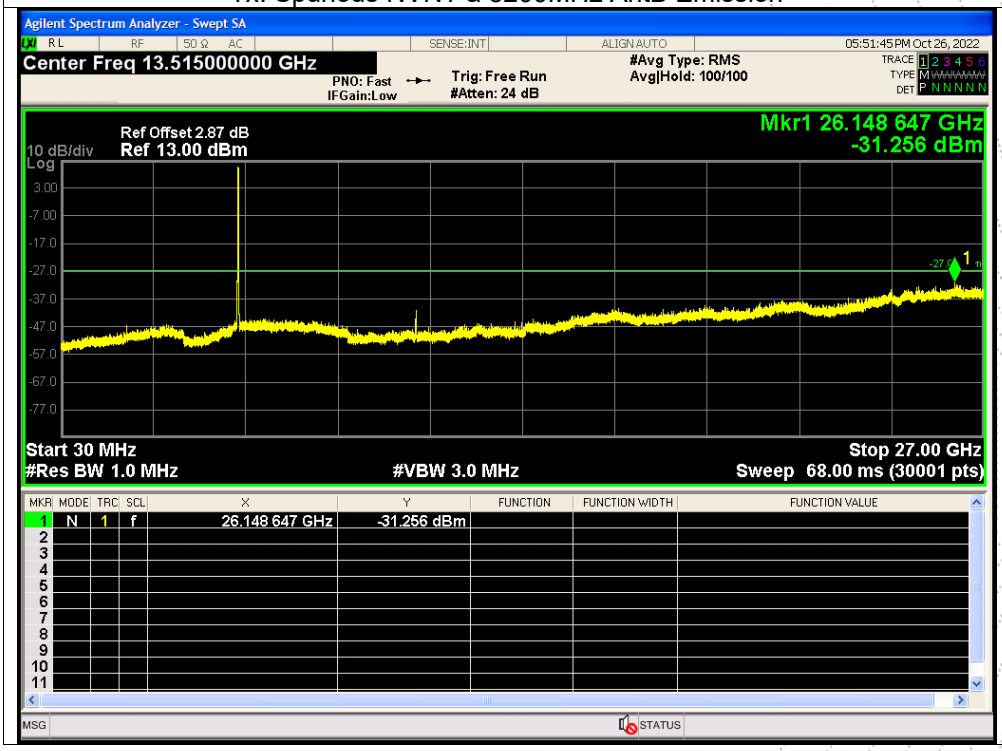
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B.
Plot. Antenna B: 5180-5240MHz

Test Graphs

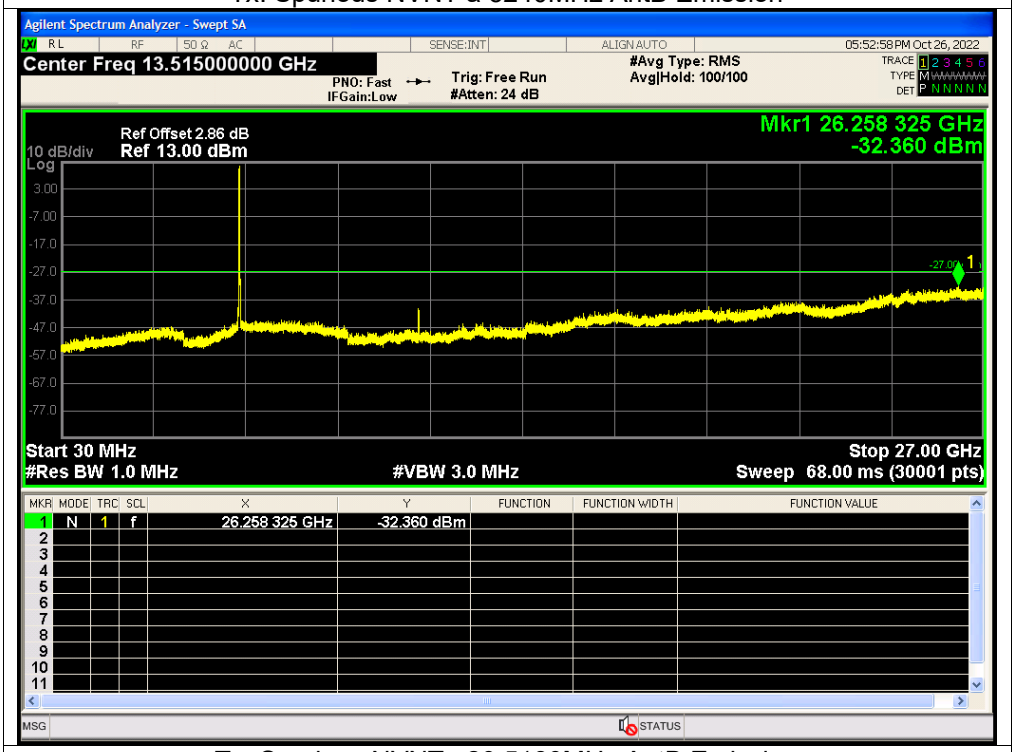
Tx. Spurious NVNT a 5180MHz AntB Emission



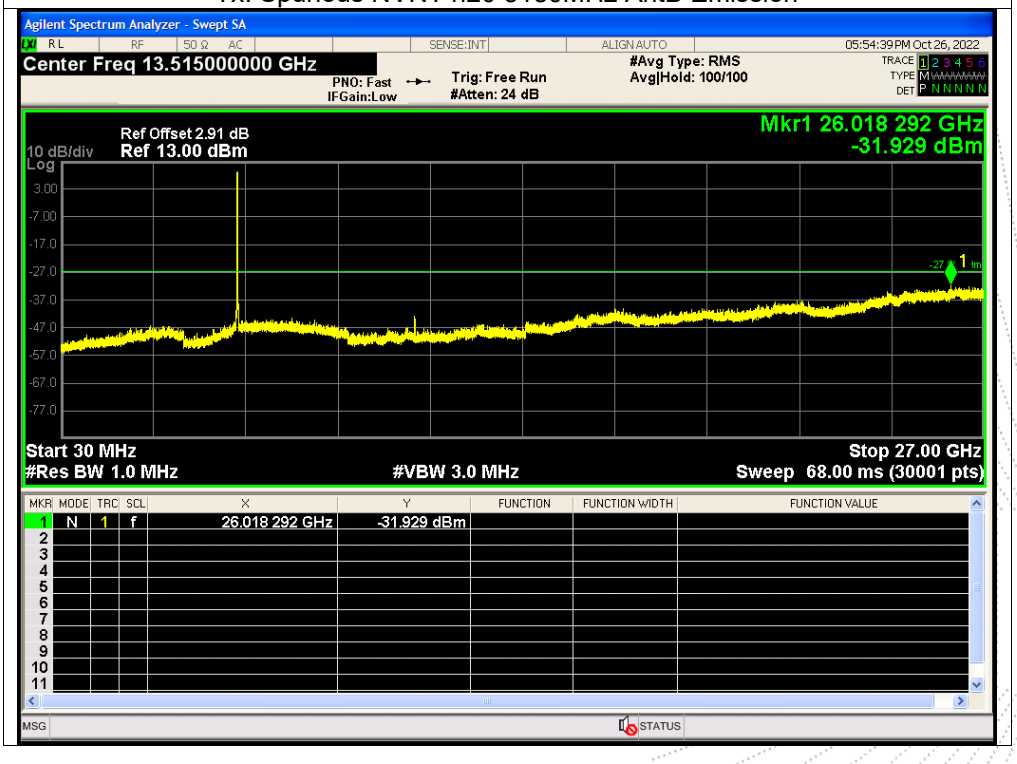
Tx. Spurious NVNT a 5200MHz AntB Emission



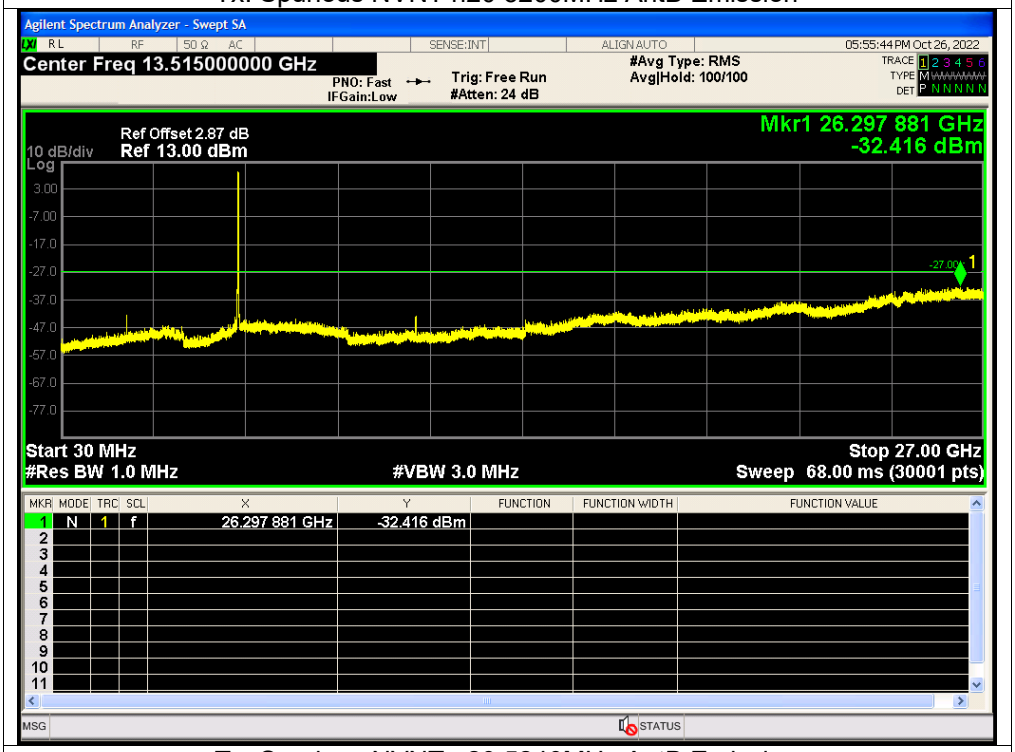
Tx. Spurious NVNT a 5240MHz AntB Emission



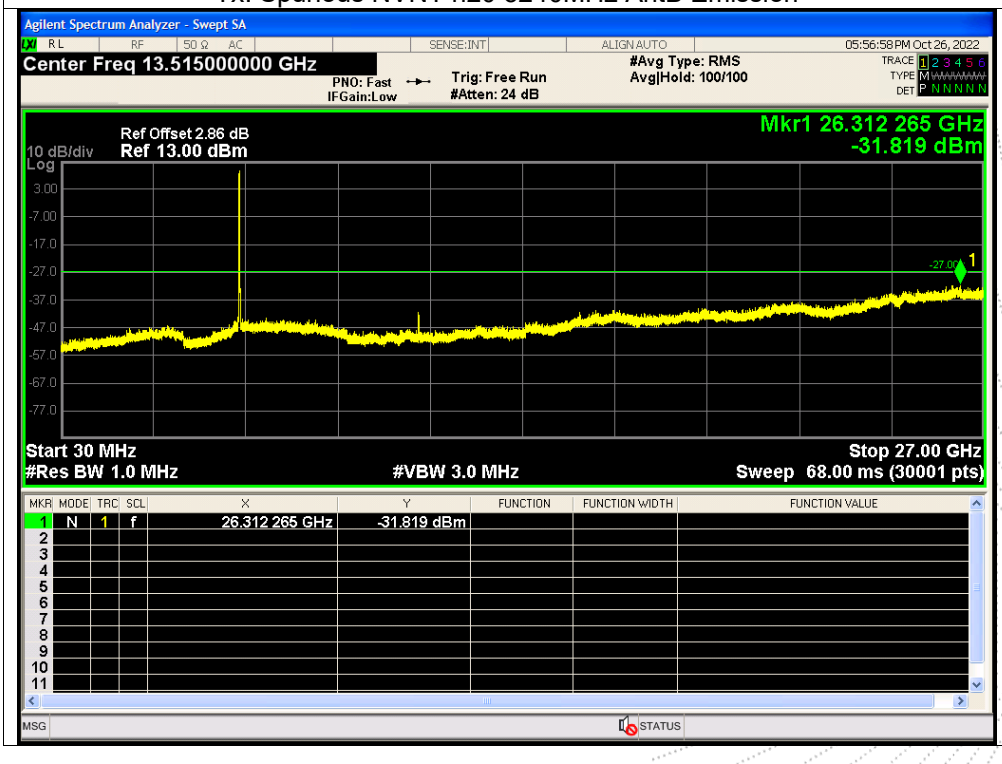
Tx. Spurious NVNT n20 5180MHz AntB Emission



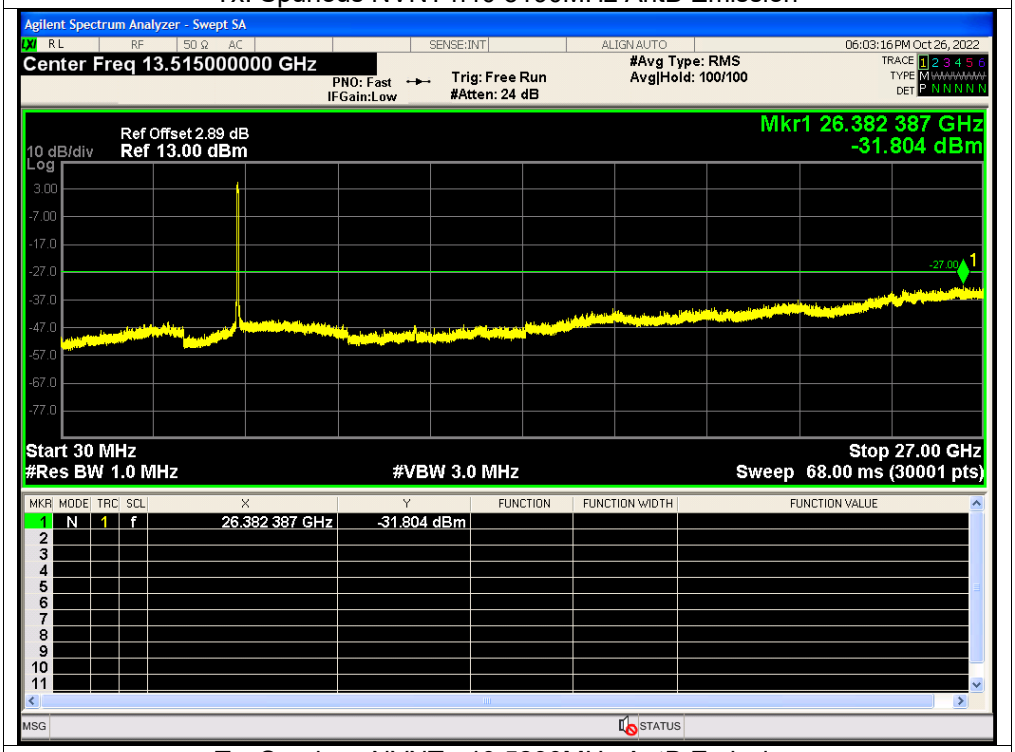
Tx. Spurious NVNT n20 5200MHz AntB Emission



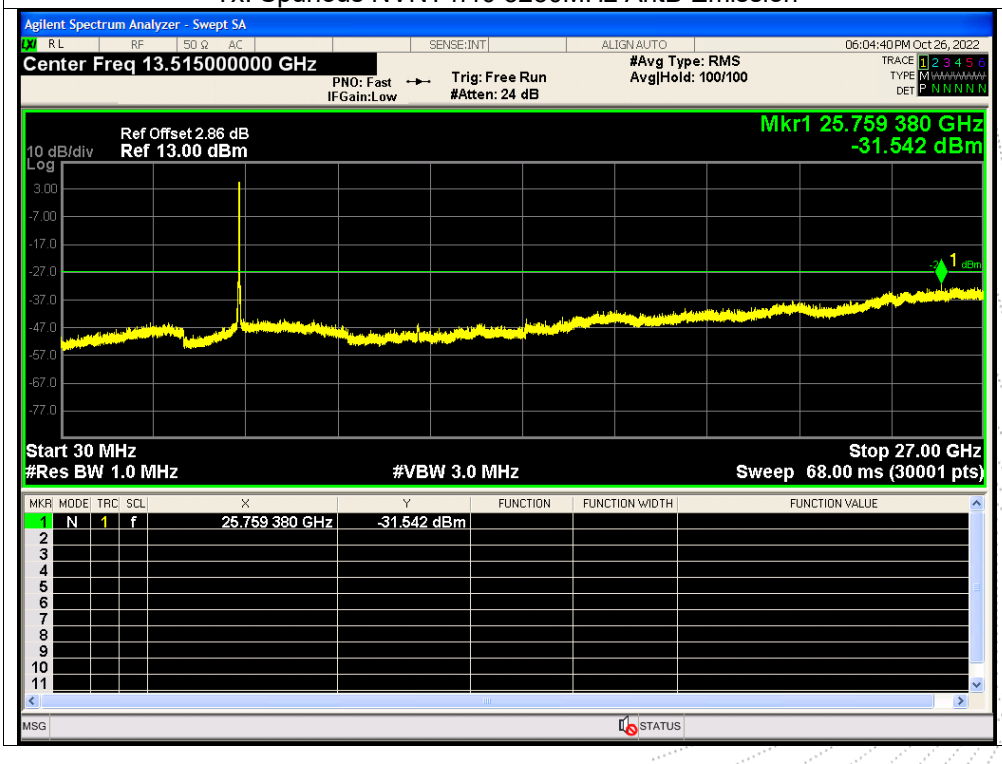
Tx. Spurious NVNT n20 5240MHz AntB Emission



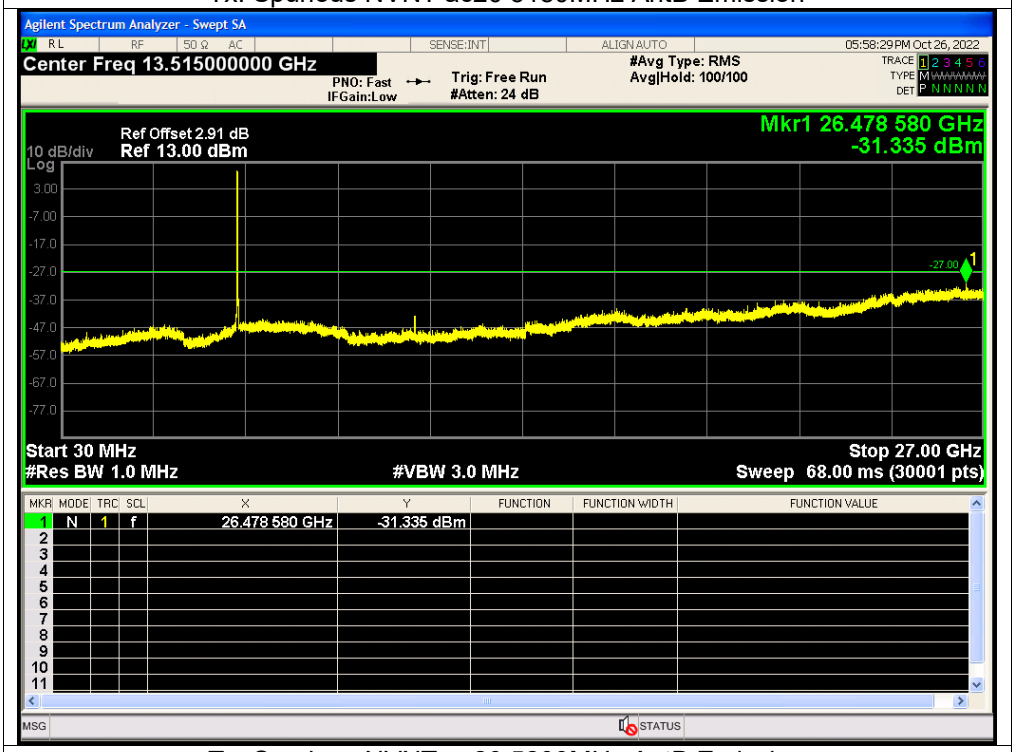
Tx. Spurious NVNT n40 5190MHz AntB Emission



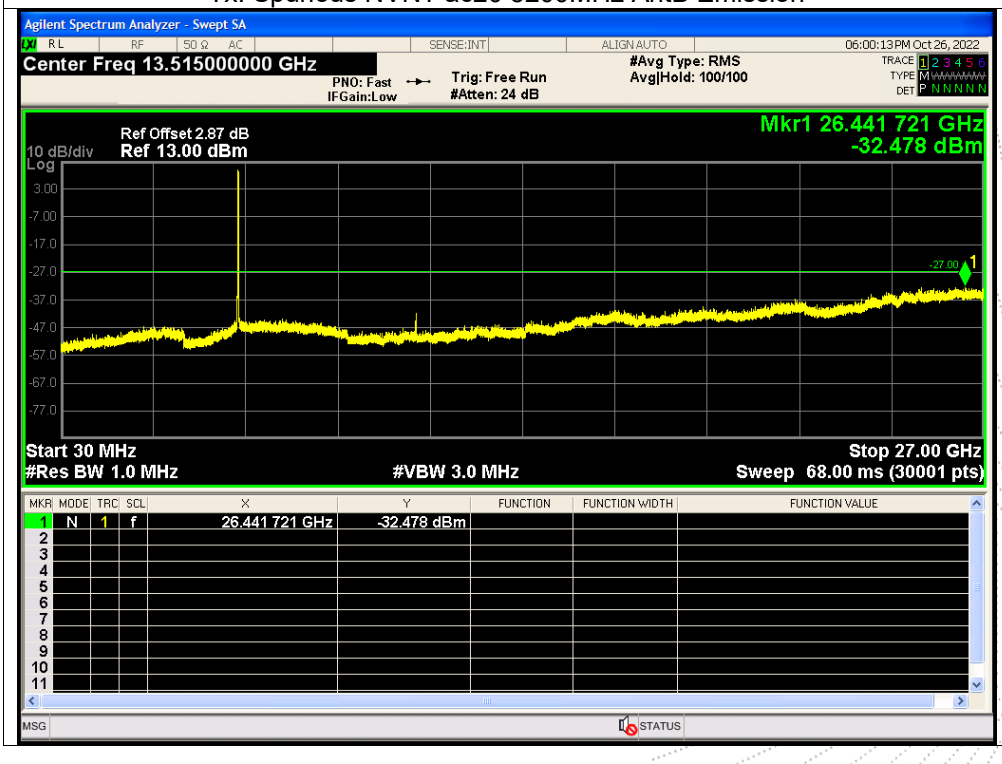
Tx. Spurious NVNT n40 5230MHz AntB Emission



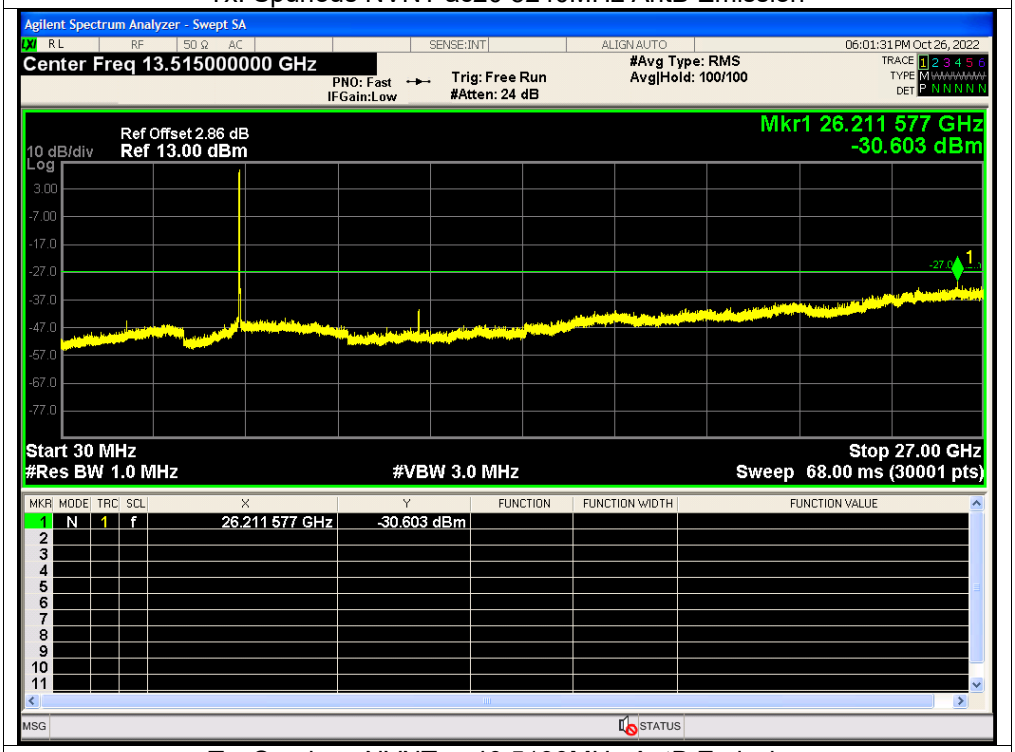
Tx. Spurious NVNT ac20 5180MHz AntB Emission



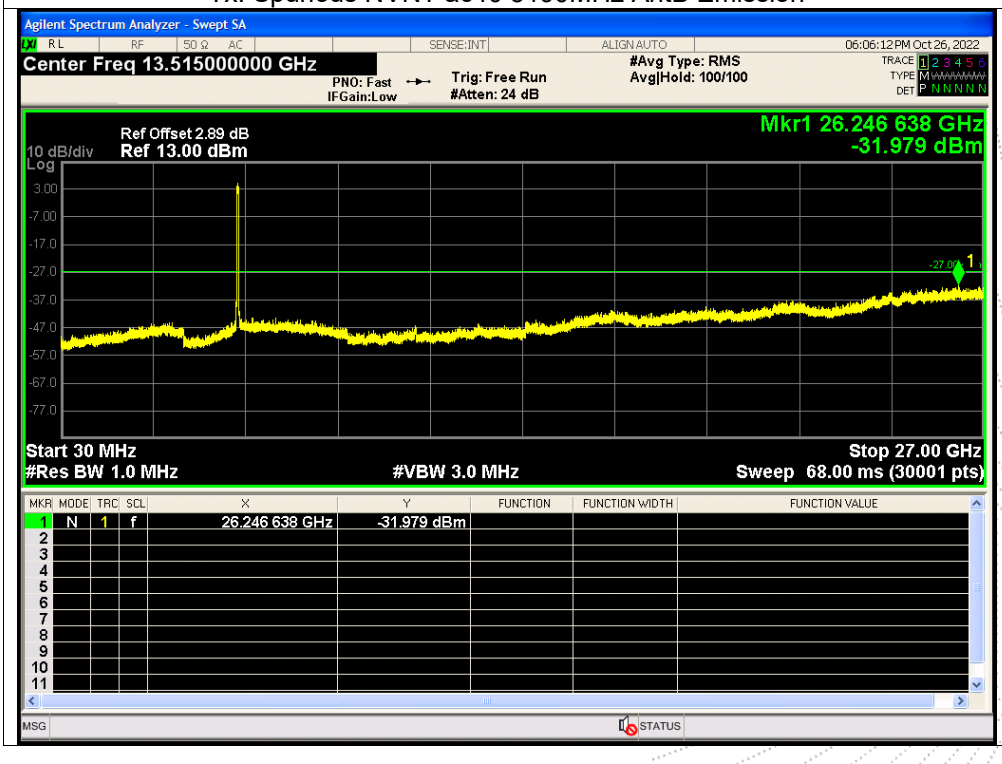
Tx. Spurious NVNT ac20 5200MHz AntB Emission



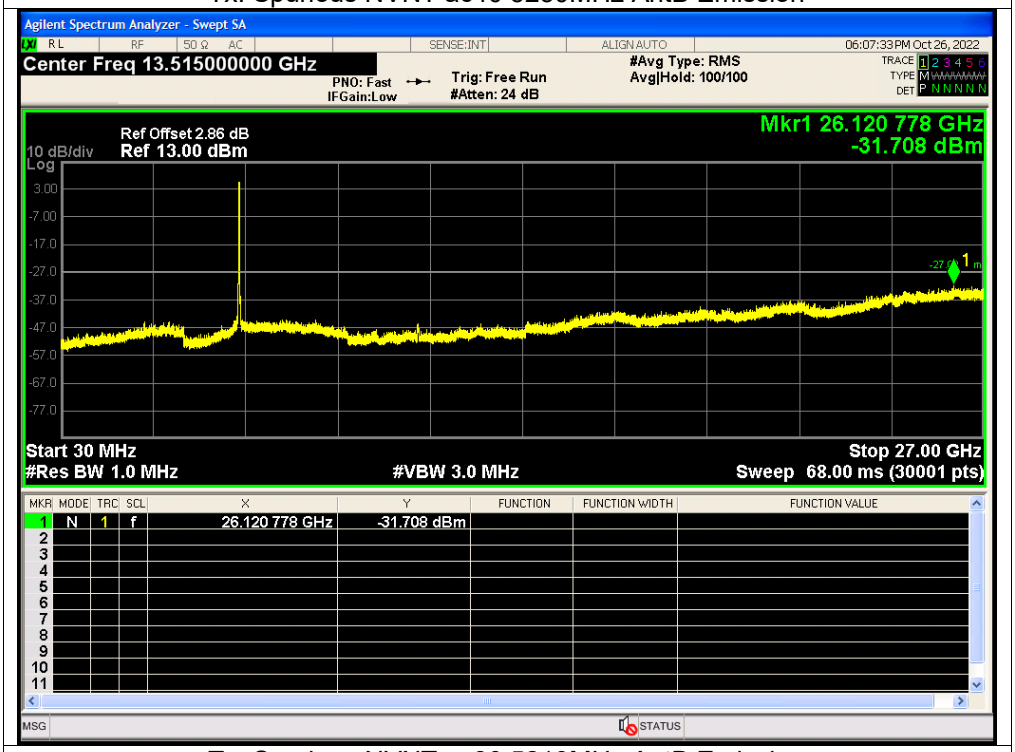
Tx. Spurious NVNT ac20 5240MHz AntB Emission



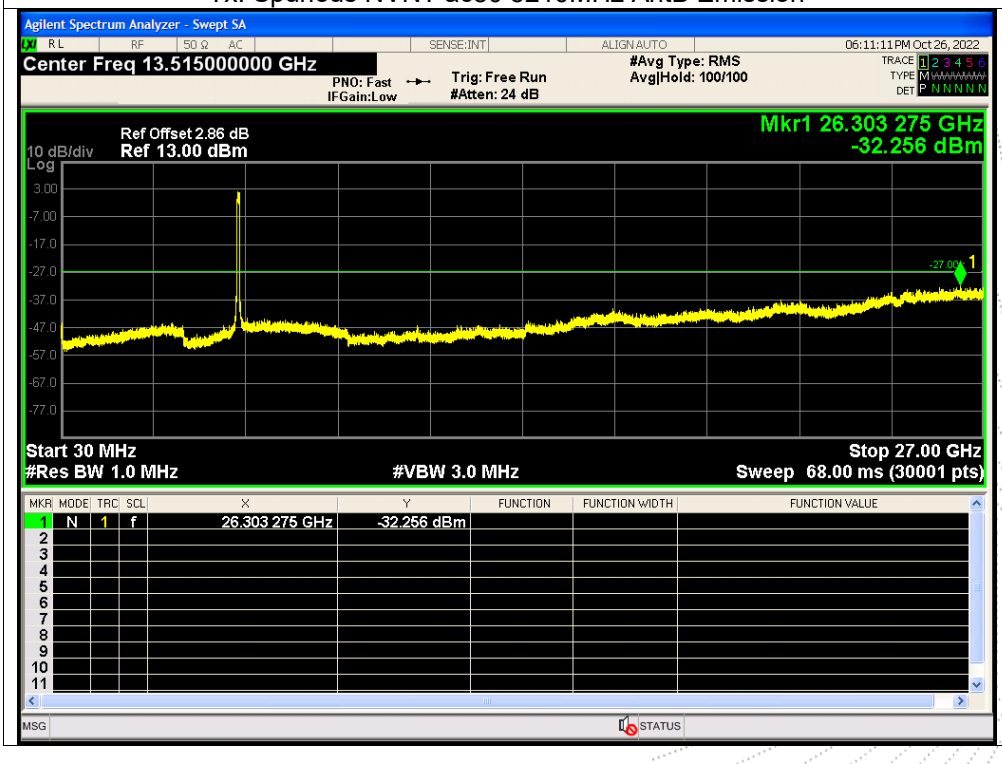
Tx. Spurious NVNT ac40 5190MHz AntB Emission



Tx. Spurious NVNT ac40 5230MHz AntB Emission



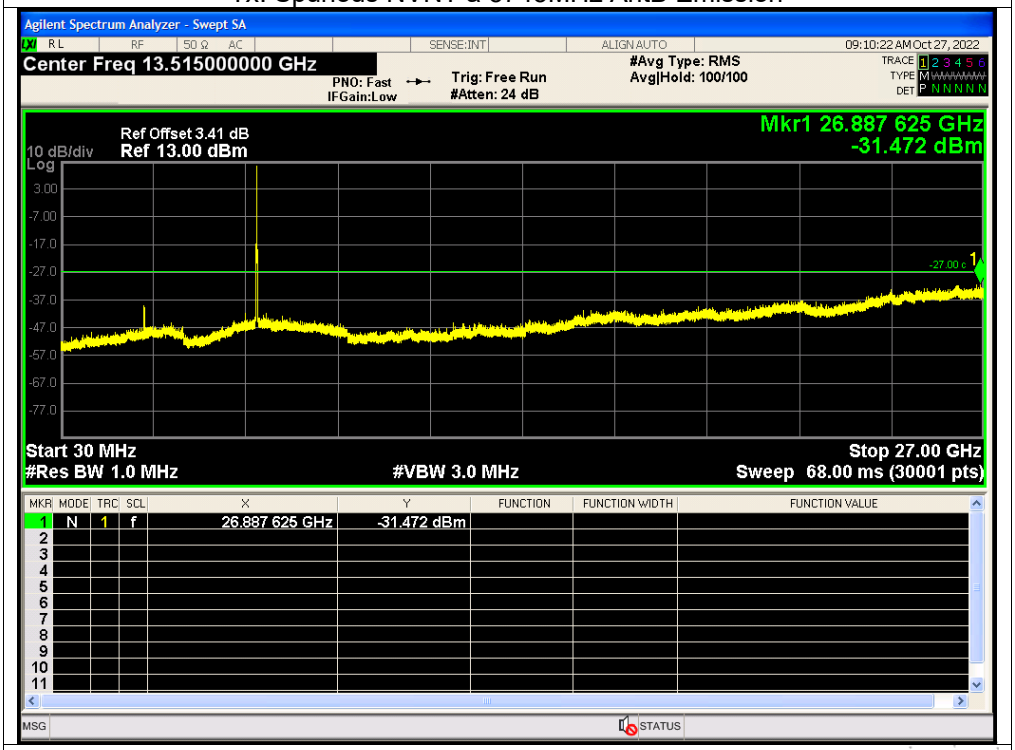
Tx. Spurious NVNT ac80 5210MHz AntB Emission



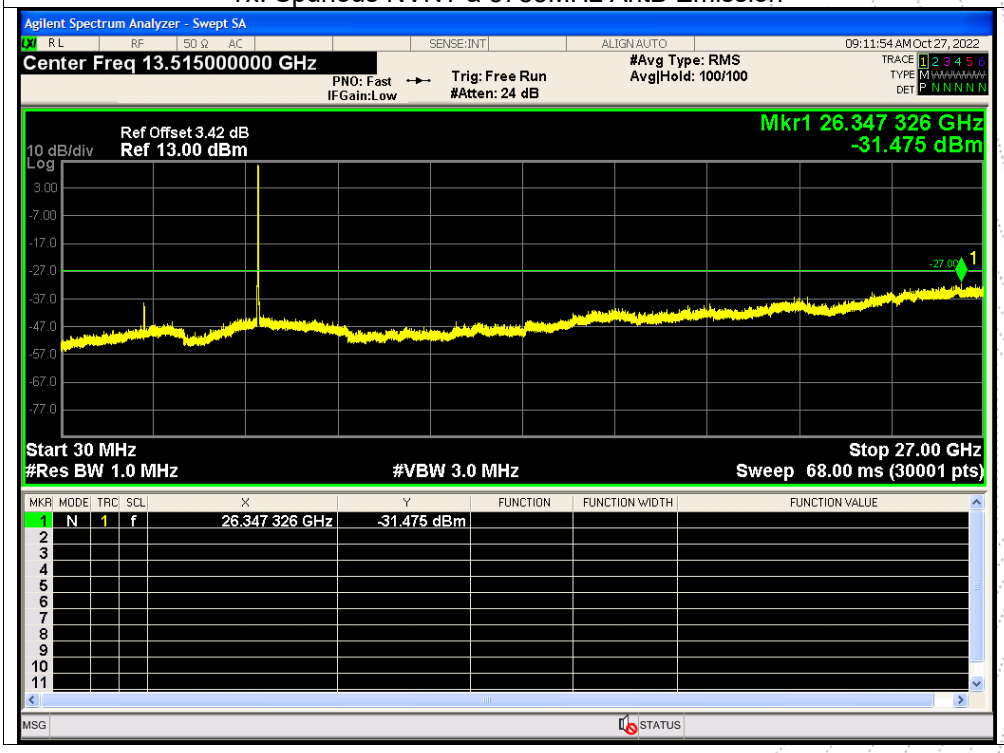
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B.
Antenna B: 5745-58250MHz

Test Graphs

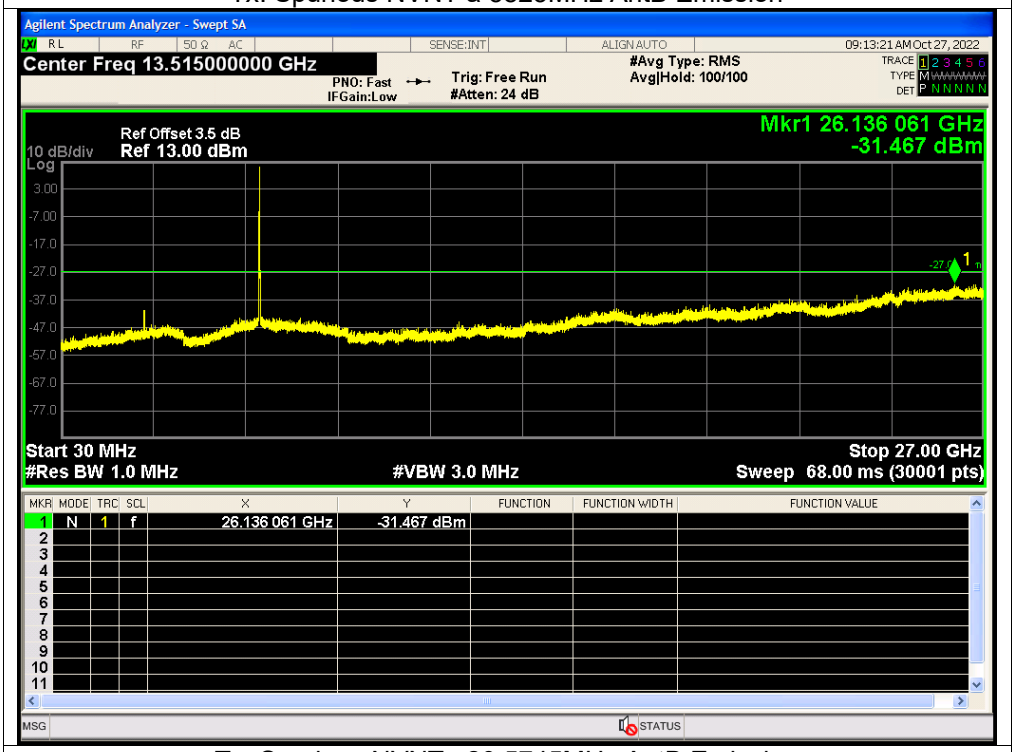
Tx. Spurious NVNT a 5745MHz AntB Emission



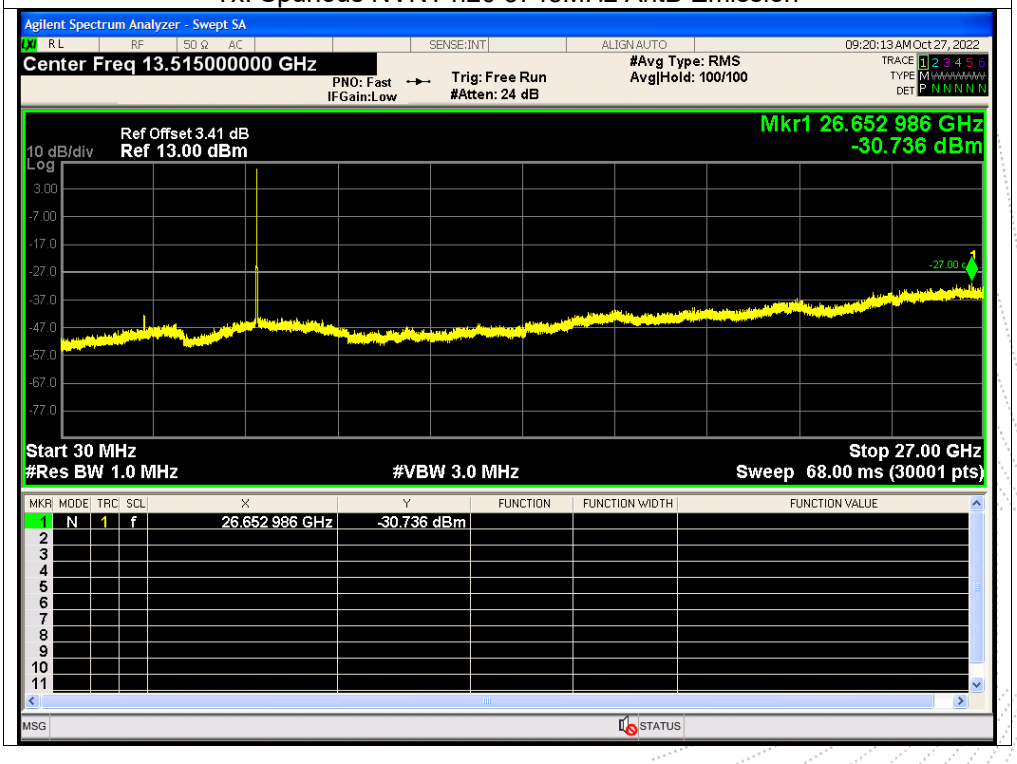
Tx. Spurious NVNT a 5785MHz AntB Emission



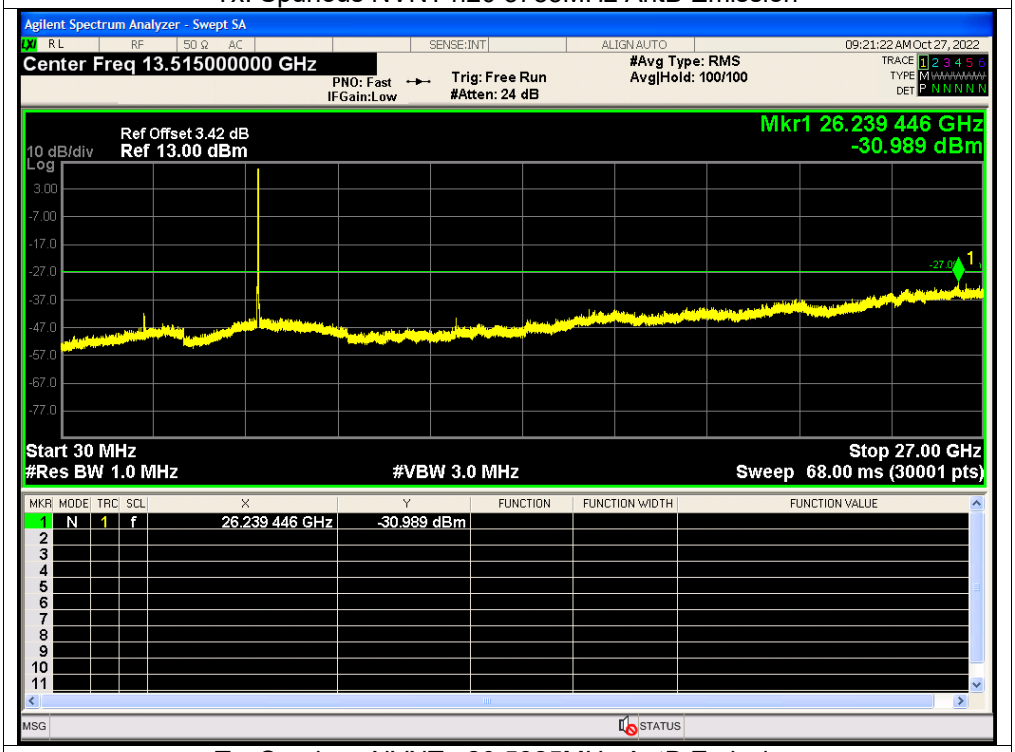
Tx. Spurious NVNT a 5825MHz AntB Emission



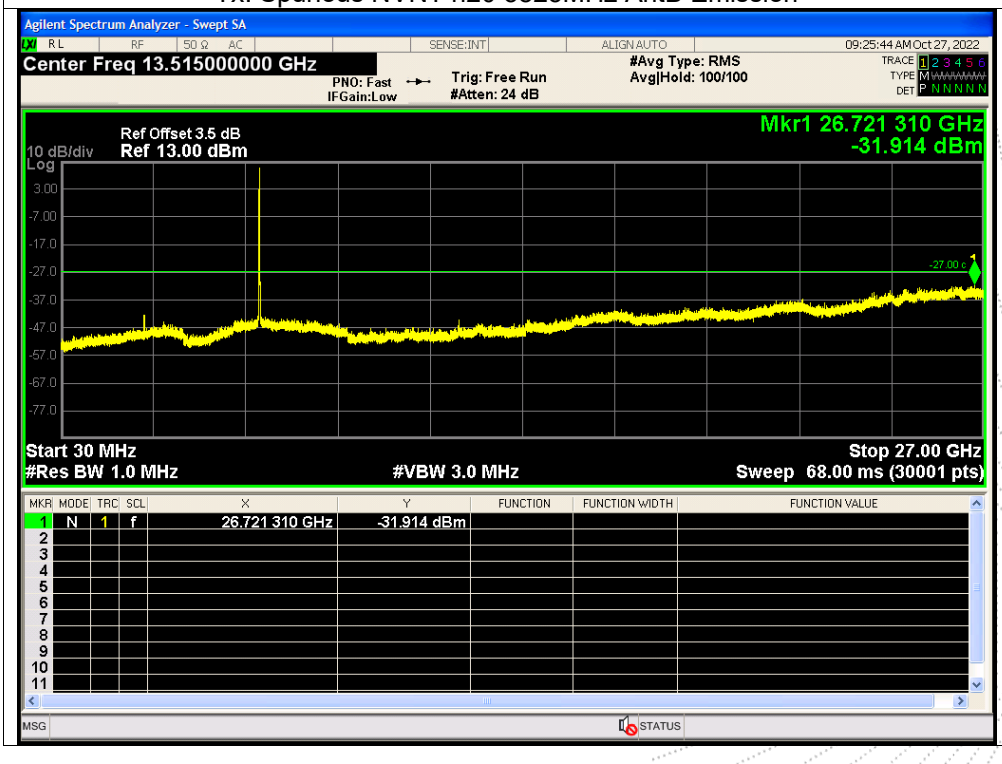
Tx. Spurious NVNT n20 5745MHz AntB Emission



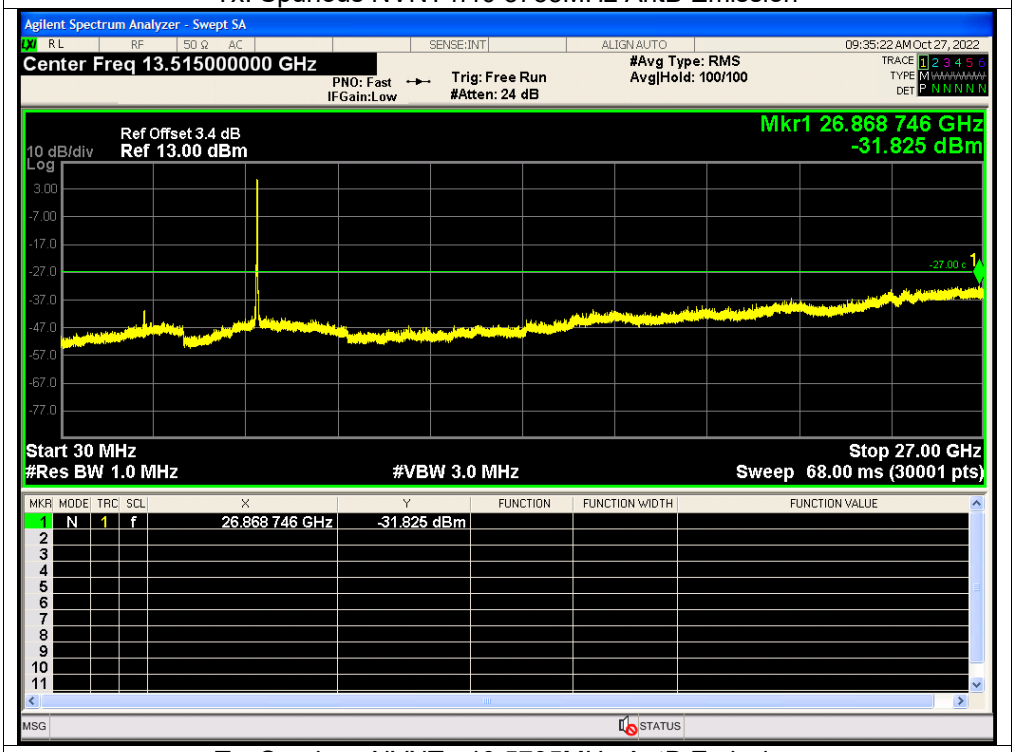
Tx. Spurious NVNT n20 5785MHz AntB Emission



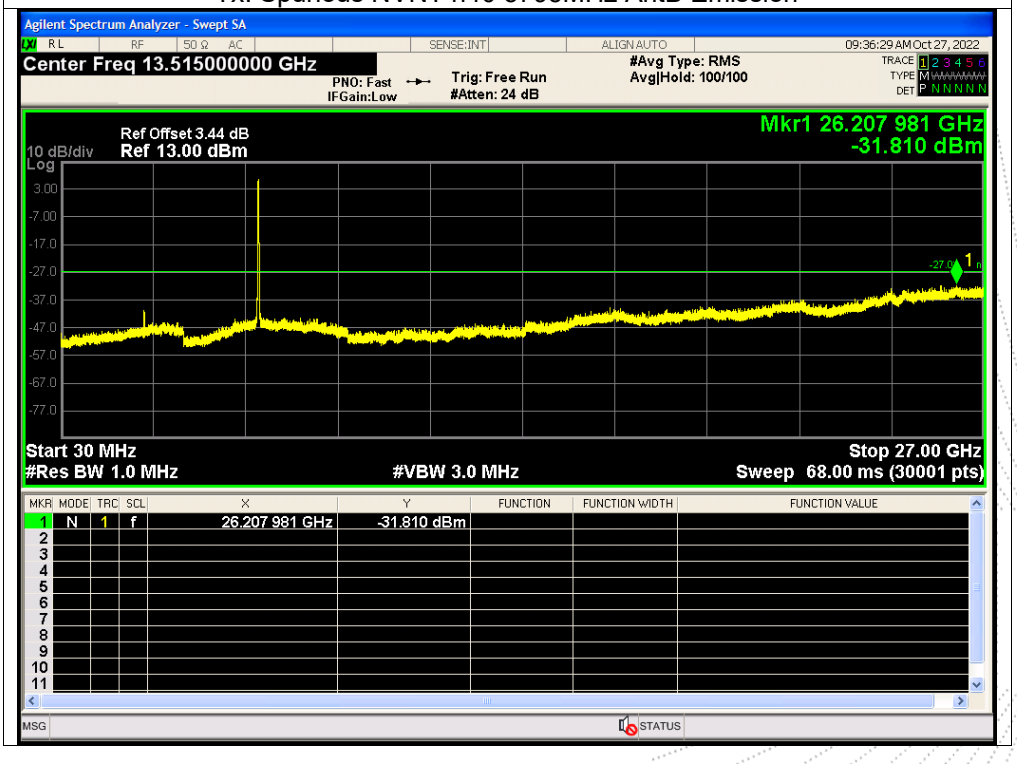
Tx. Spurious NVNT n20 5825MHz AntB Emission



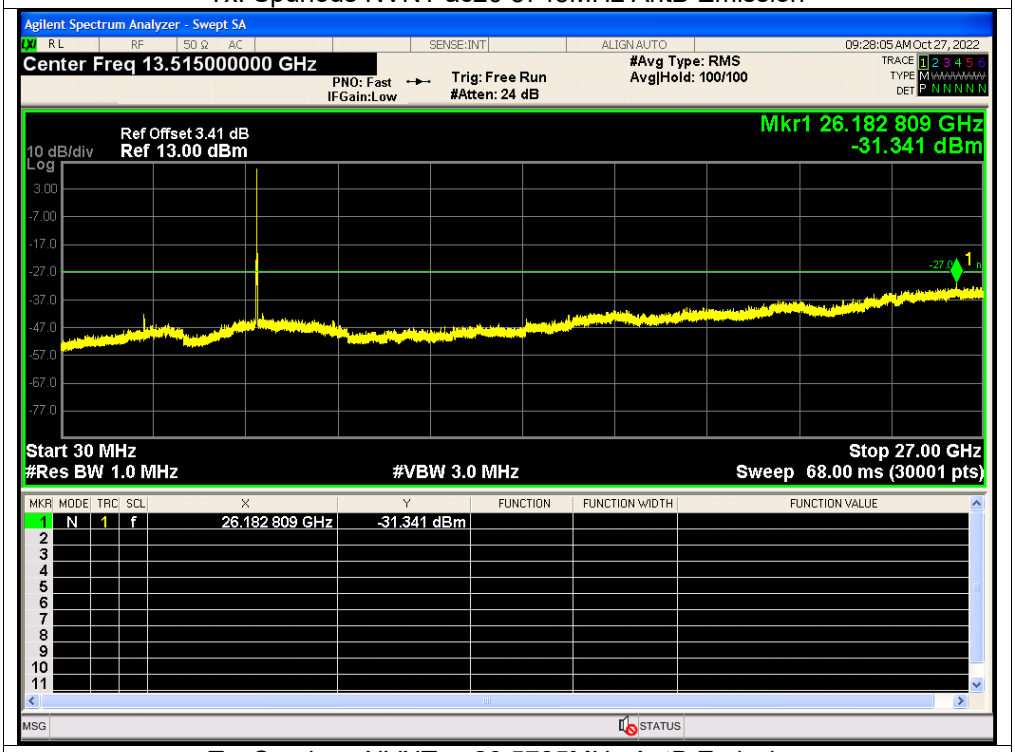
Tx. Spurious NVNT n40 5755MHz AntB Emission



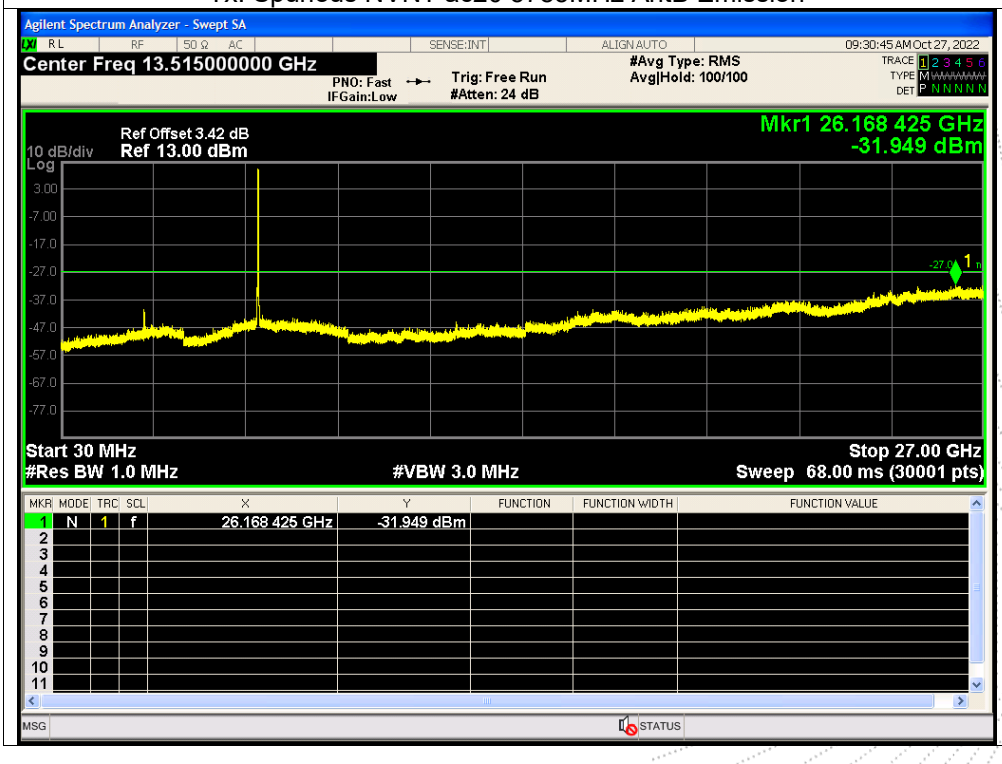
Tx. Spurious NVNT n40 5795MHz AntB Emission



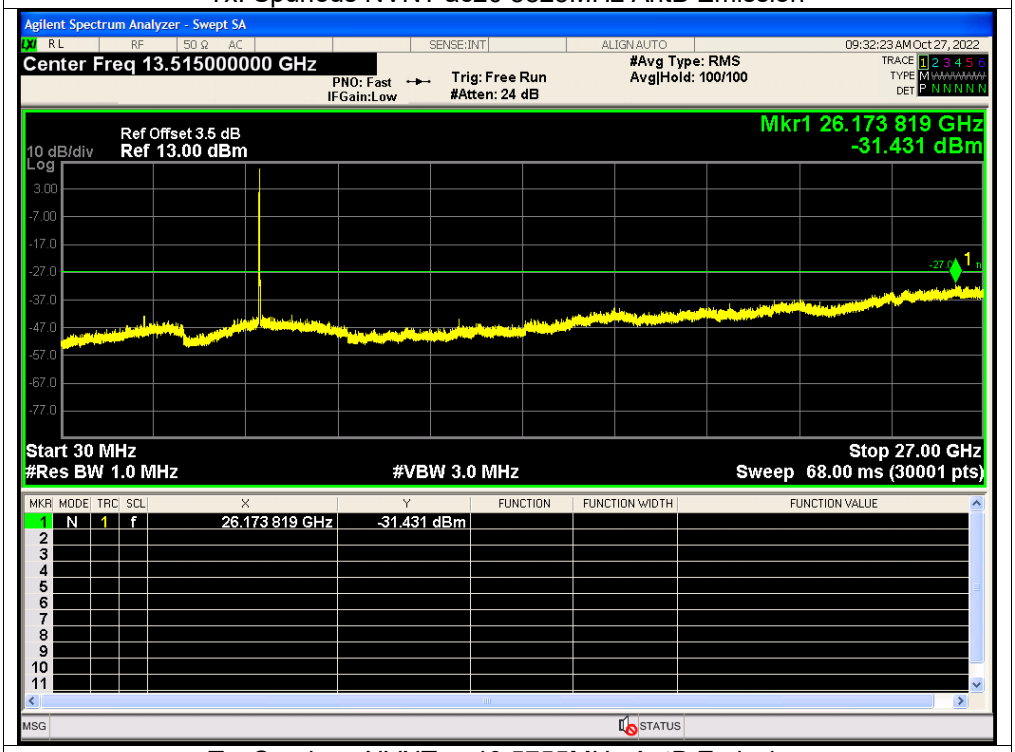
Tx. Spurious NVNT ac20 5745MHz AntB Emission



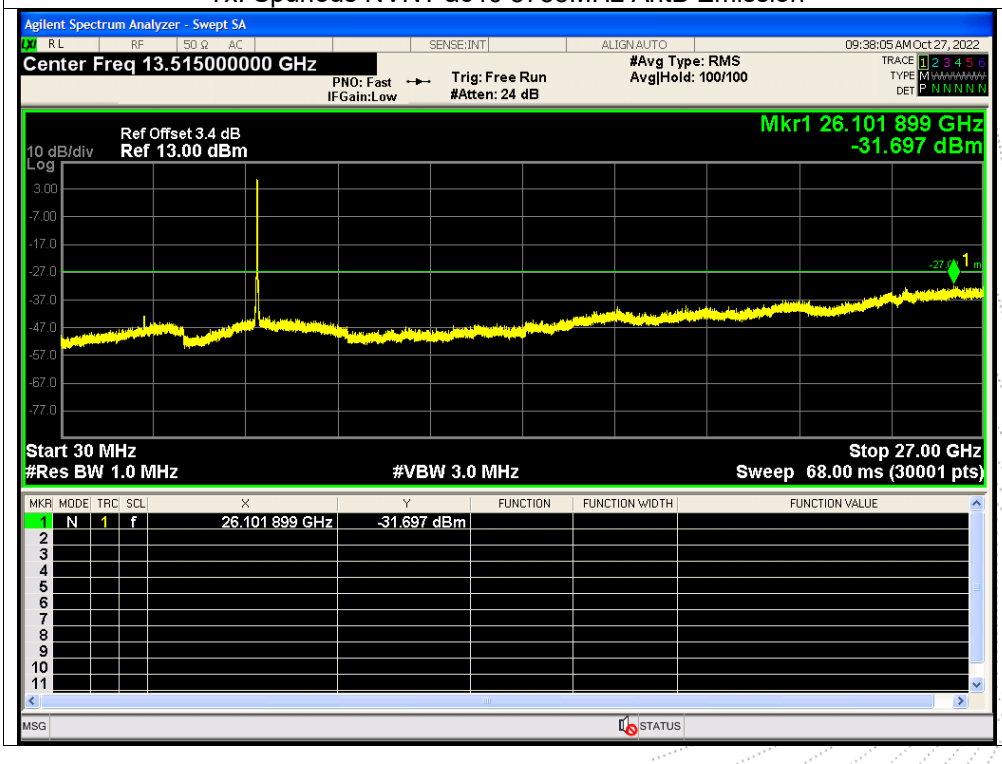
Tx. Spurious NVNT ac20 5785MHz AntB Emission



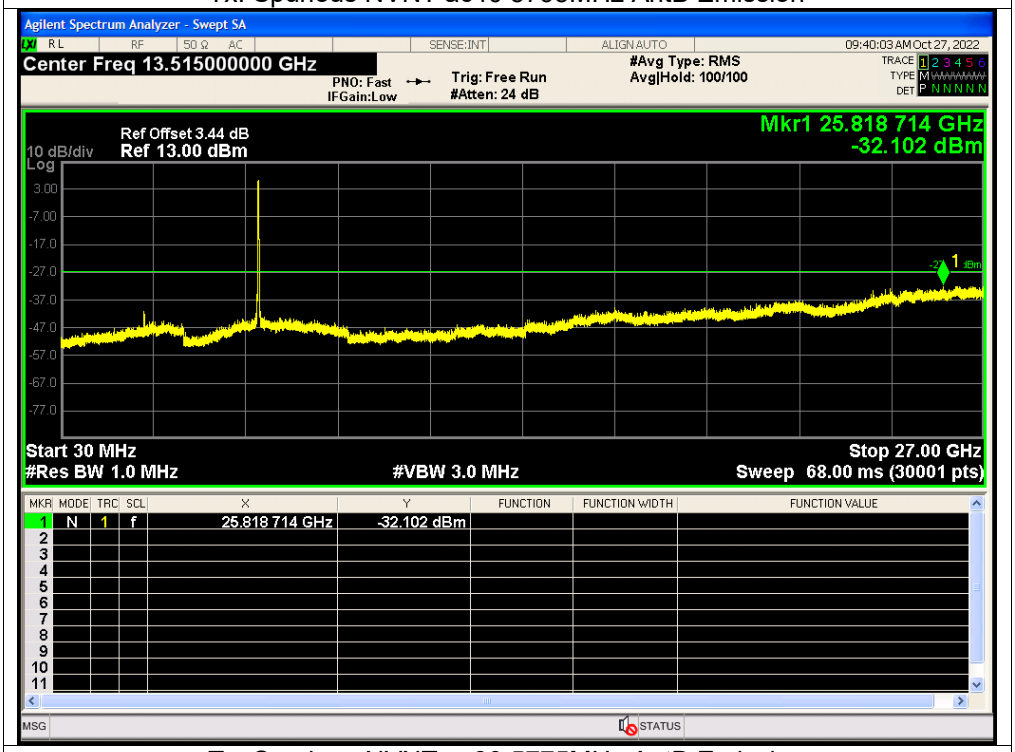
Tx. Spurious NVNT ac20 5825MHz AntB Emission



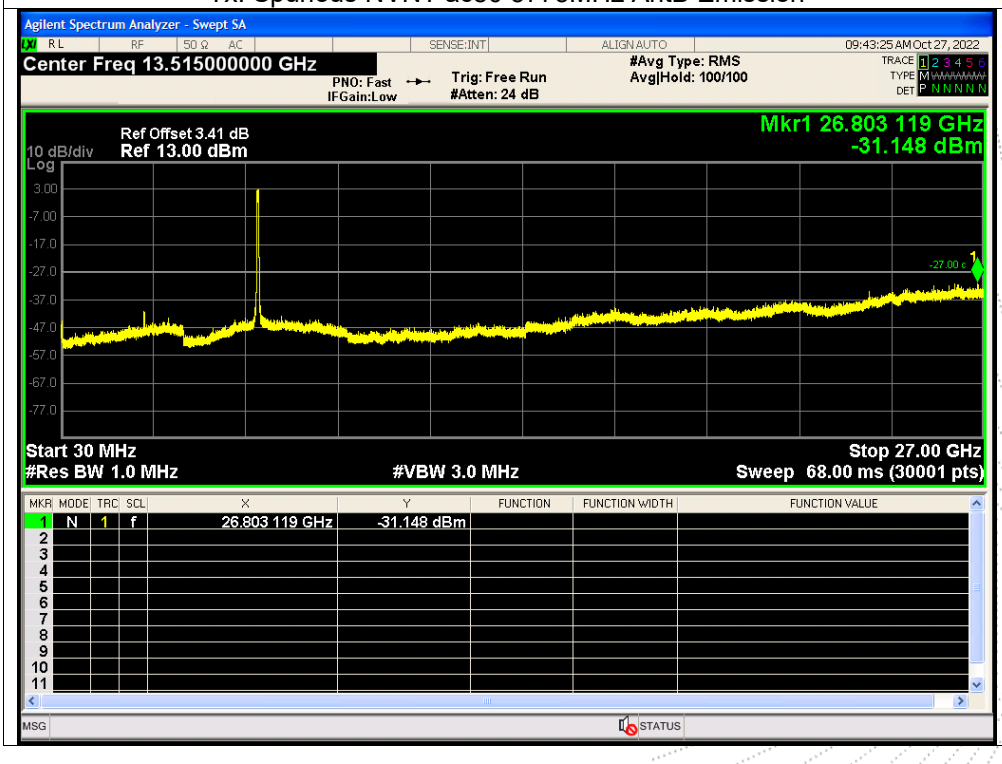
Tx. Spurious NVNT ac40 5755MHz AntB Emission



Tx. Spurious NVNT ac40 5795MHz AntB Emission

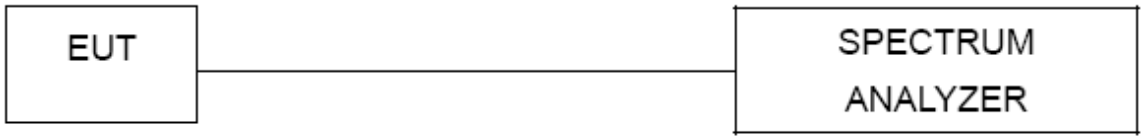


Tx. Spurious NVNT ac80 5775MHz AntB Emission



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. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and he limit is less than ±20ppm (IEEE 802.11nspecification).
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 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
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)	120.00	5180.0135	5180	0.0135	2.6020
		V max (V)	138.00	5180.0114	5180	0.0114	2.1992
		V min (V)	102.00	5180.0125	5180	0.0125	2.4052
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	5180.0024	5180	0.0024	0.4691
		T (°C)	-10	5180.0077	5180	0.0077	1.4835
		T (°C)	0	5180.0132	5180	0.0132	2.5498
		T (°C)	10	5180.0067	5180	0.0067	1.3028
		T (°C)	20	5180.0067	5180	0.0067	1.2863
		T (°C)	30	5180.0016	5180	0.0016	0.3105
		T (°C)	40	5180.0130	5180	0.0130	2.5155
		T (°C)	50	5180.0096	5180	0.0096	1.8540
		T (°C)	60	5180.0131	5180	0.0131	2.5316
		T (°C)	70	5180.0116	5180	0.0116	2.2353
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	5200.0097	5200	0.0097	1.8701
		V max (V)	138.00	5200.0128	5200	0.0128	2.4663
		V min (V)	102.00	5200.0123	5200	0.0123	2.3694
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)	120	T (°C)	-20	5200.00329	5200	0.00329	0.6334
		T (°C)	-10	5200.00470	5200	0.00470	0.9037
		T (°C)	0	5200.00472	5200	0.00472	0.9086
		T (°C)	10	5200.01085	5200	0.01085	2.0859
		T (°C)	20	5200.01064	5200	0.01064	2.0464
		T (°C)	30	5200.00170	5200	0.00170	0.3274
		T (°C)	40	5200.01030	5200	0.01030	1.9799
		T (°C)	50	5200.01308	5200	0.01308	2.5163
		T (°C)	60	5200.01099	5200	0.01099	2.1140
		T (°C)	70	5200.00080	5200	0.00080	0.1534
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)	120.00	5240.0058	5240	0.0058	1.1152
		V max (V)	138.00	5240.0005	5240	0.0005	0.0888
		V min (V)	102.00	5240.0077	5240	0.0077	1.4713
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	5240.0113	5240	0.0113	2.1477
		T (°C)	-10	5240.0082	5240	0.0082	1.5722
		T (°C)	0	5240.0106	5240	0.0106	2.0257
		T (°C)	10	5240.0008	5240	0.0008	0.1443
		T (°C)	20	5240.0037	5240	0.0037	0.7093
		T (°C)	30	5240.0038	5240	0.0038	0.7305
		T (°C)	40	5240.0123	5240	0.0123	2.3488
		T (°C)	50	5240.0095	5240	0.0095	1.8211
		T (°C)	60	5240.0029	5240	0.0029	0.5492
		T (°C)	70	5240.0066	5240	0.0066	1.2629
Limits				5150-5250 MHz			
Result				Complies			

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
Hzst Mode ：	TX Frequency(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	5745.00501	5745	0.00501	0.8712
		V max (V)	138.00	5745.01059	5745	0.01059	1.8438
		V min (V)	102.00	5745.00071	5745	0.00071	0.1242
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	5745.01353	5745	0.01353	2.3558
		T (°C)	-10	5745.00418	5745	0.00418	0.7275
		T (°C)	0	5745.01155	5745	0.01155	2.0112
		T (°C)	10	5745.01120	5745	0.01120	1.9501
		T (°C)	20	5745.01135	5745	0.01135	1.9755
		T (°C)	30	5745.01062	5745	0.01062	1.8487
		T (°C)	40	5745.00256	5745	0.00256	0.4465
		T (°C)	50	5745.00620	5745	0.00620	1.0787
		T (°C)	60	5745.00252	5745	0.00252	0.4388
		T (°C)	70	5745.00211	5745	0.00211	0.3677
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	5785.00376	5785	0.00376	0.6508
		V max (V)	138.00	5785.00554	5785	0.00554	0.9572
		V min (V)	102.00	5785.01317	5785	0.01317	2.2773
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)	120	T (°C)	-20	5785.01295	5785	0.01295	2.2377
		T (°C)	-10	5785.00103	5785	0.00103	0.1774
		T (°C)	0	5785.00625	5785	0.00625	1.0805
		T (°C)	10	5785.00676	5785	0.00676	1.1687
		T (°C)	20	5785.01288	5785	0.01288	2.2267
		T (°C)	30	5785.00737	5785	0.00737	1.2739
		T (°C)	40	5785.01209	5785	0.01209	2.0897
		T (°C)	50	5785.00268	5785	0.00268	0.4628
		T (°C)	60	5785.01002	5785	0.01002	1.7324
		T (°C)	70	5785.01338	5785	0.01338	2.3136
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)	120.00	5825.00841	5825	0.00841	1.4440
		V max (V)	138.00	5825.00008	5825	0.00008	0.0136
		V min (V)	102.00	5825.01249	5825	0.01249	2.1439
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	5825.00982	5825	0.00982	1.6853
		T (°C)	-10	5825.00108	5825	0.00108	0.1861
		T (°C)	0	5825.00625	5825	0.00625	1.0735
		T (°C)	10	5825.00299	5825	0.00299	0.5138
		T (°C)	20	5825.00060	5825	0.00060	0.1036
		T (°C)	30	5825.01217	5825	0.01217	2.0889
		T (°C)	40	5825.01253	5825	0.01253	2.1510
		T (°C)	50	5825.00426	5825	0.00426	0.7313
		T (°C)	60	5825.00218	5825	0.00218	0.3748
		T (°C)	70	5825.01004	5825	0.01004	1.7242
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): 3.83dBi; antenna gain (B) : 3.83dBi). It comply with the standard requirement.

15. EUT Photographs

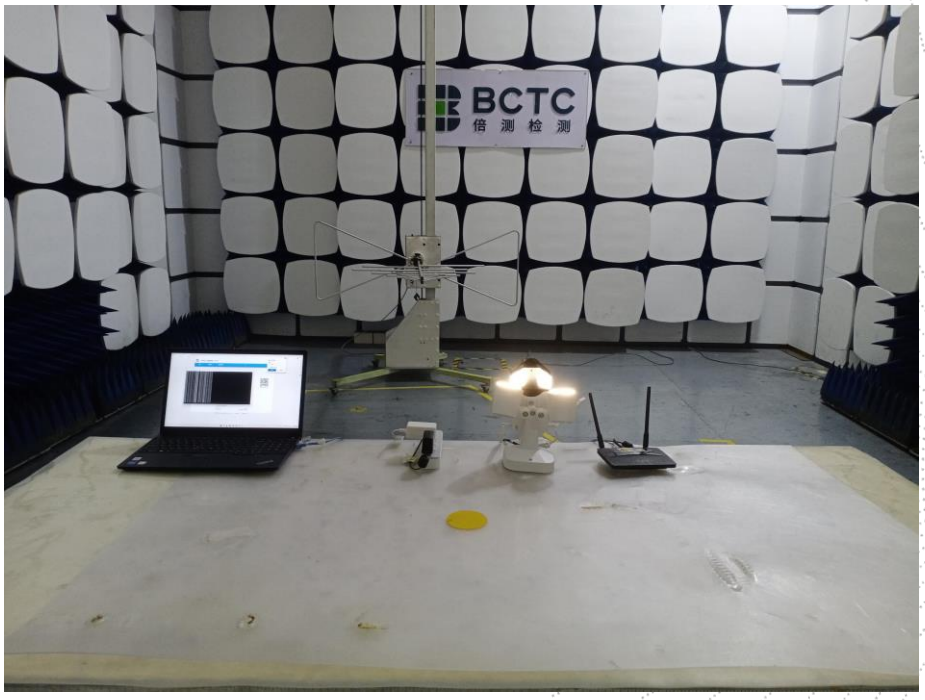
EUT Photo 1

EUT Photo 2

16. EUT Test Setup Photographs

Conducted Measurement Photo

Radiated Measurement Photos

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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 test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.

8. The quality system of our laboratory is in accordance with ISO/IEC17025.

9. 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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