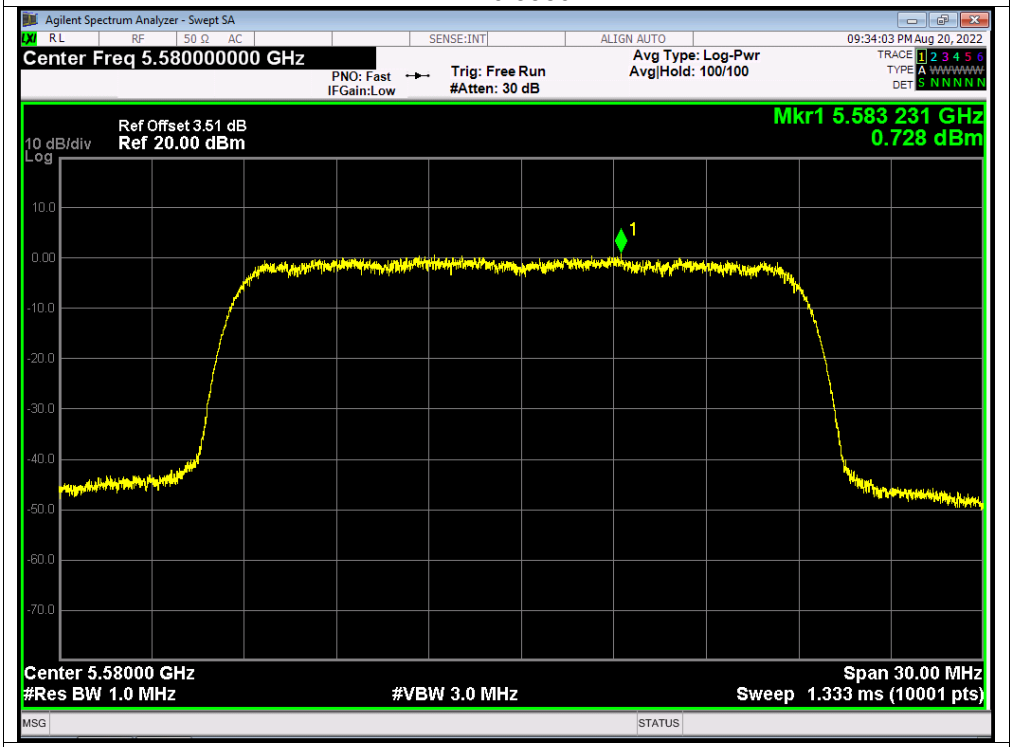
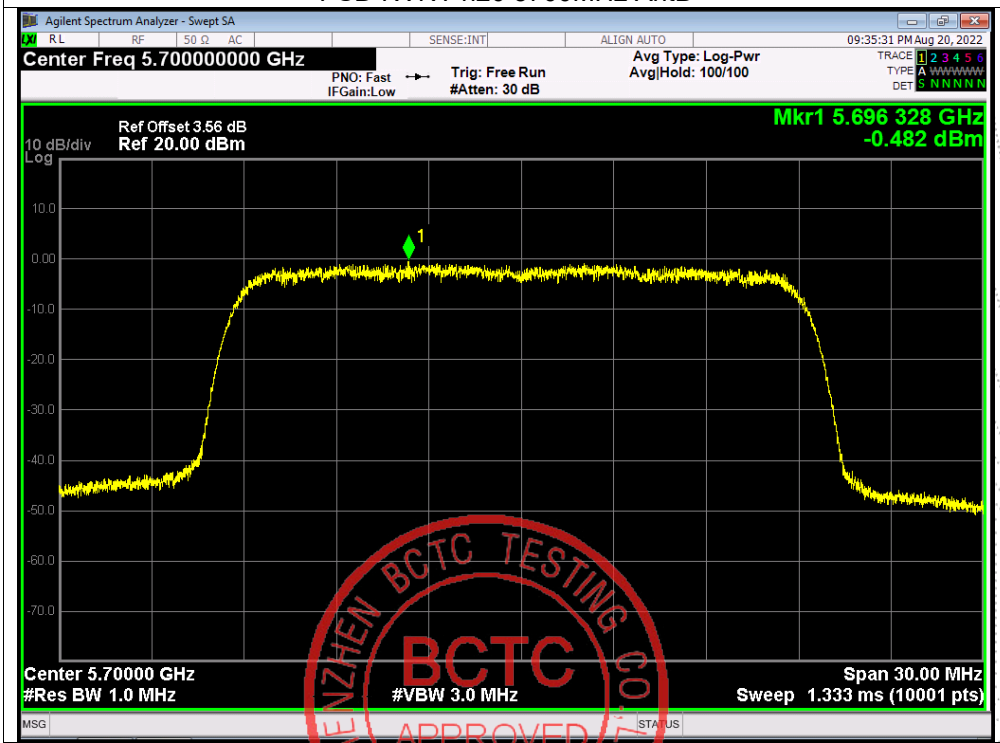
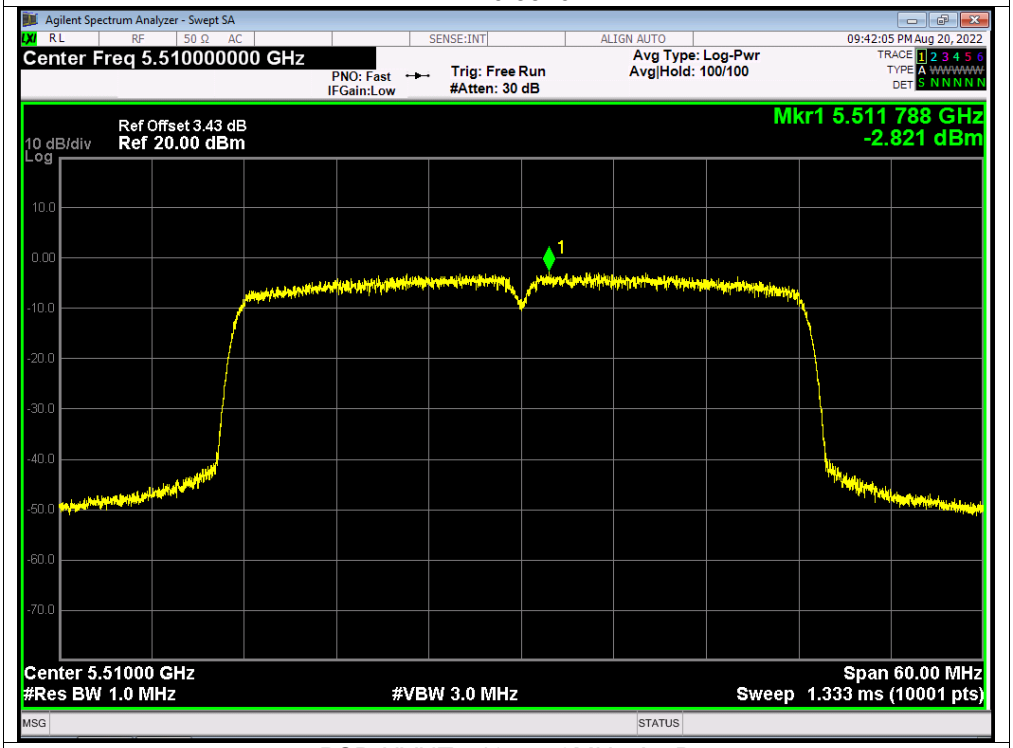
PSD NVNT n20 5580MHz AntB



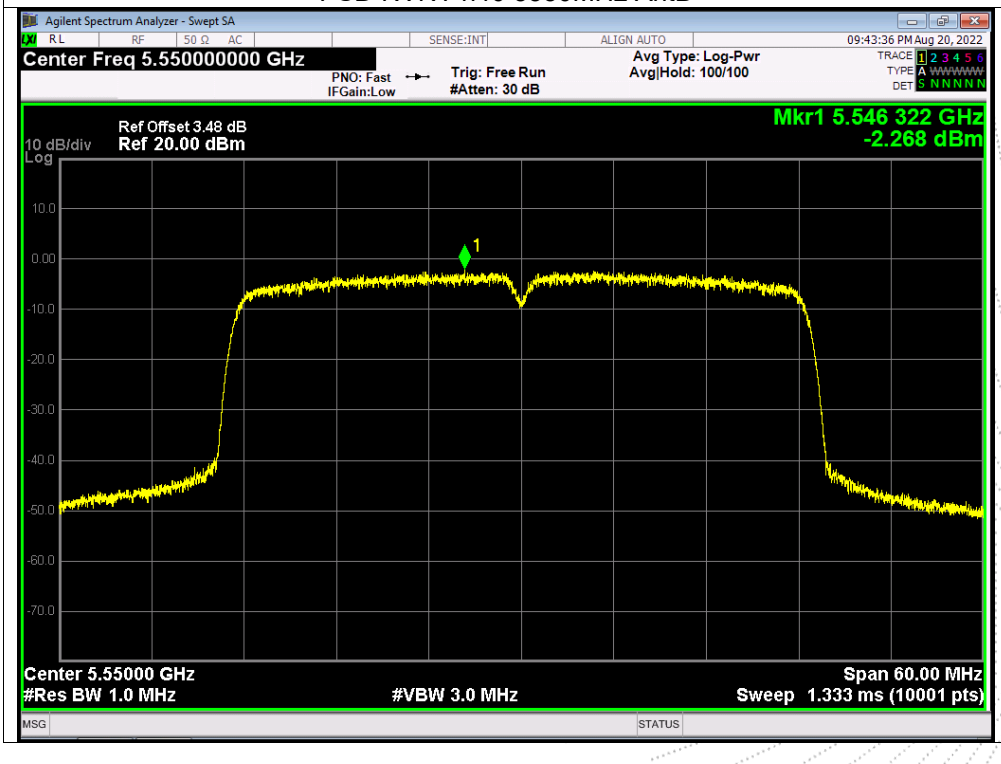
PSD NVNT n20 5700MHz AntB



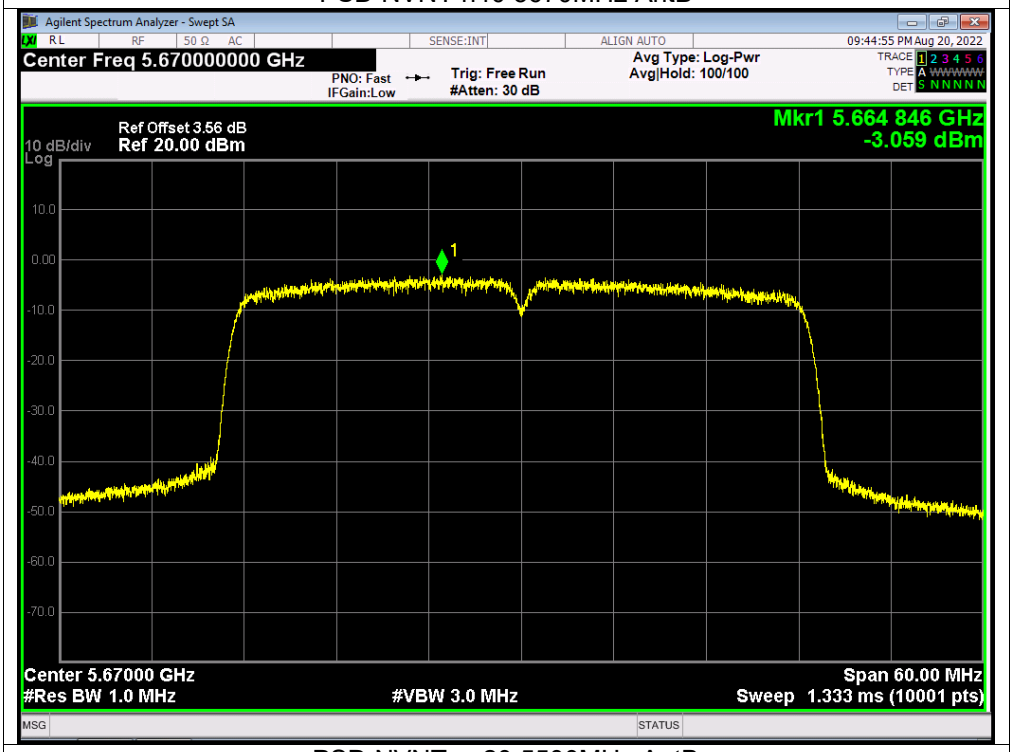
PSD NVNT n40 5510MHz AntB



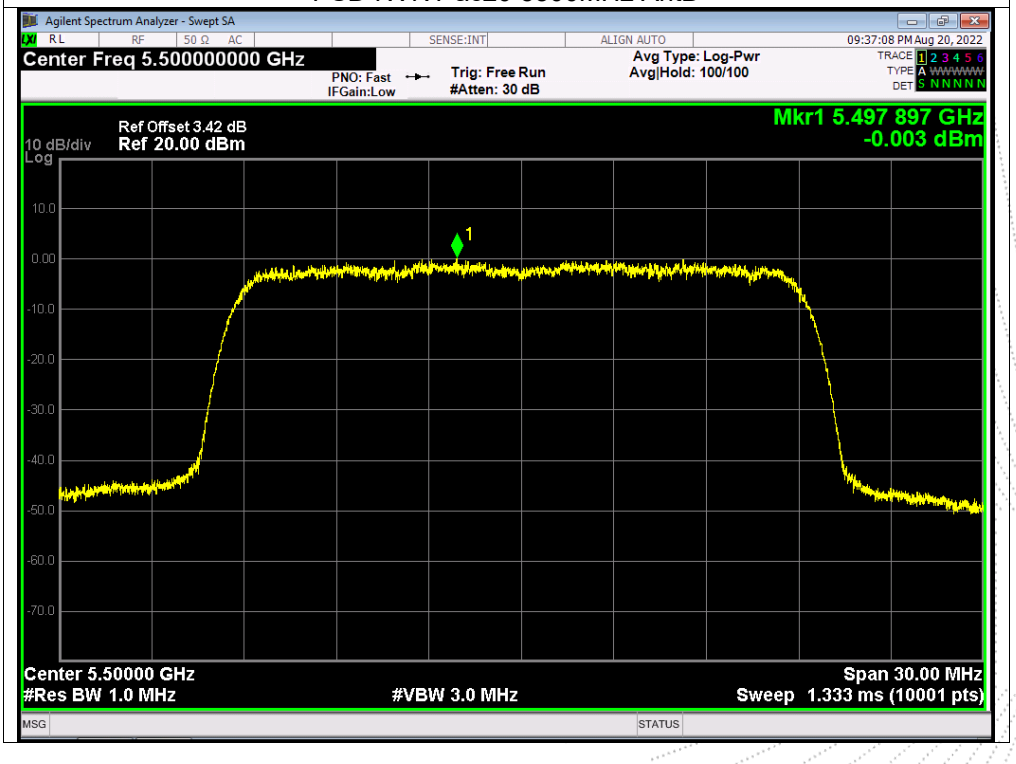
PSD NVNT n40 5550MHz AntB



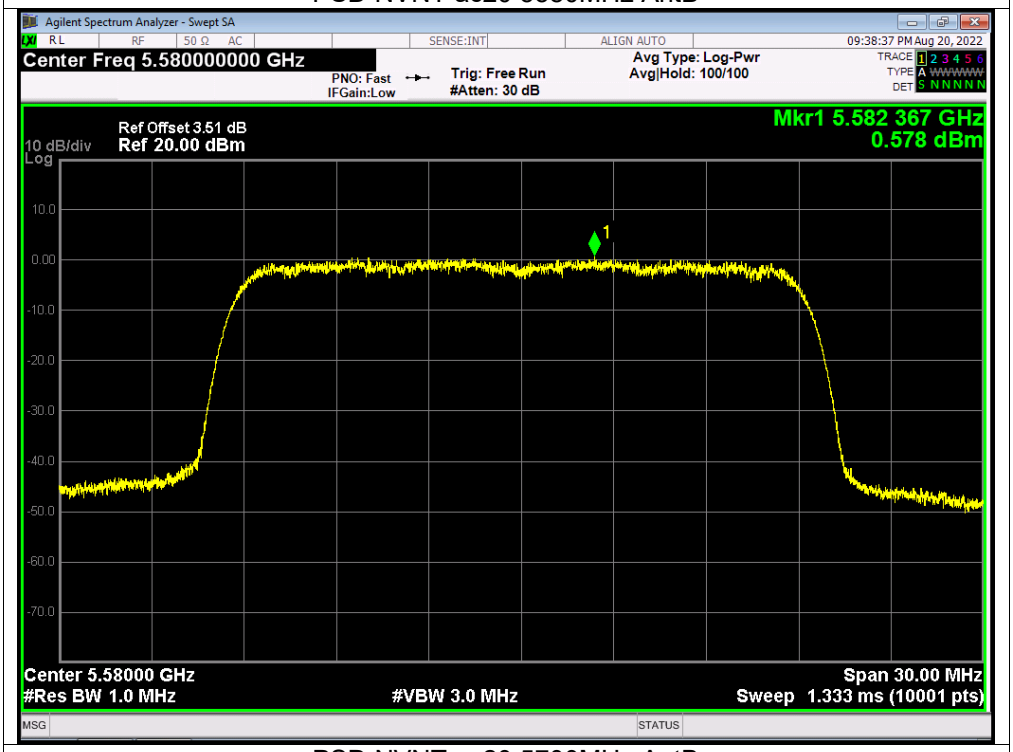
PSD NVNT n40 5670MHz AntB



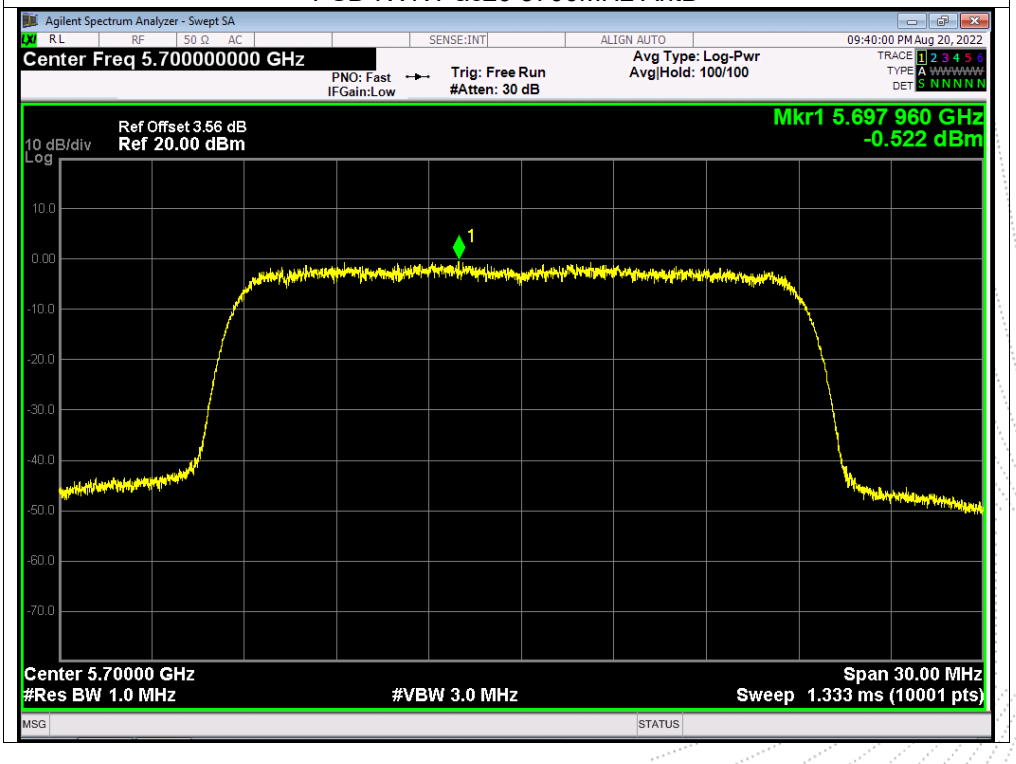
PSD NVNT ac20 5500MHz AntB



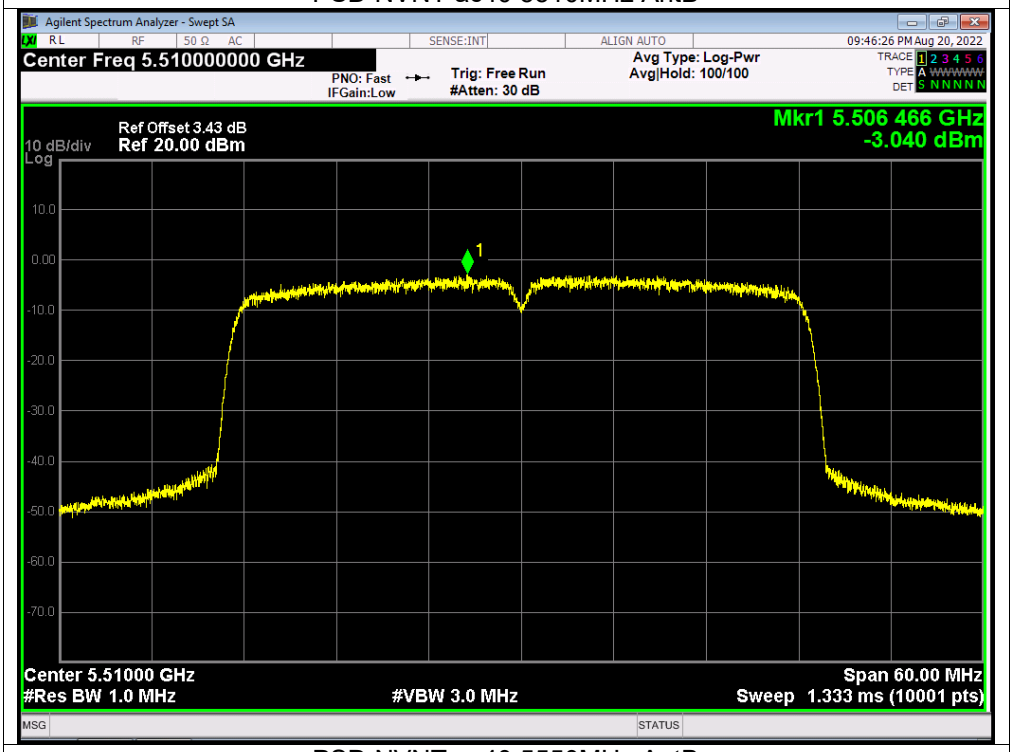
PSD NVNT ac20 5580MHz AntB



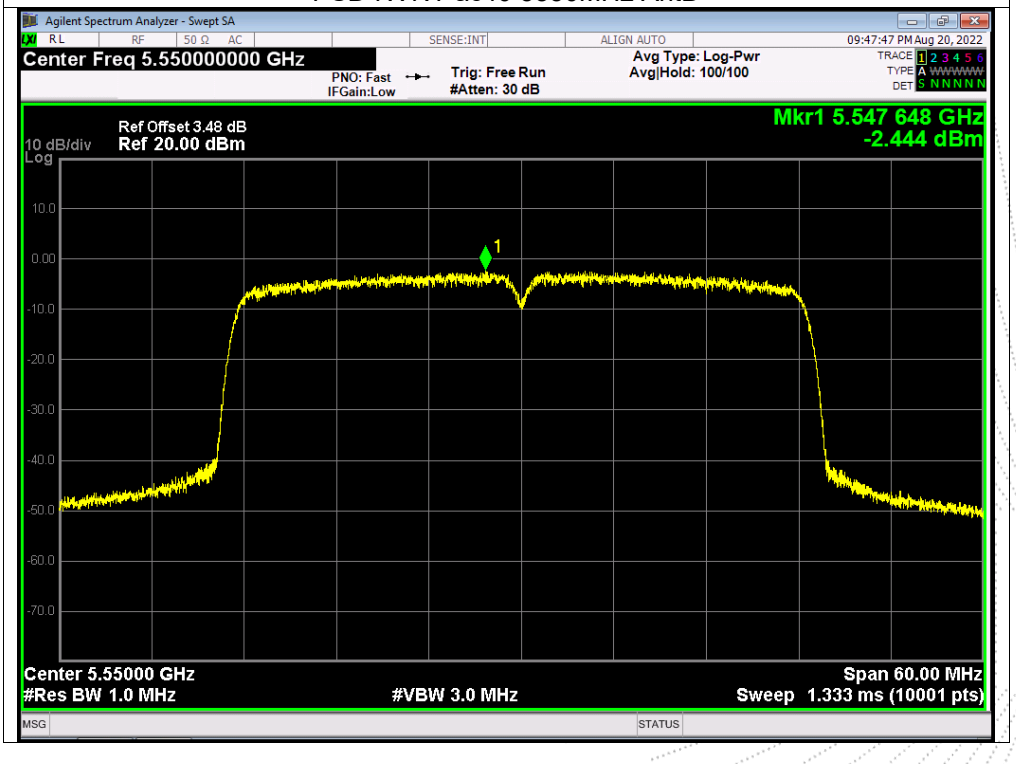
PSD NVNT ac20 5700MHz AntB



PSD NVNT ac40 5510MHz AntB



PSD NVNT ac40 5550MHz AntB



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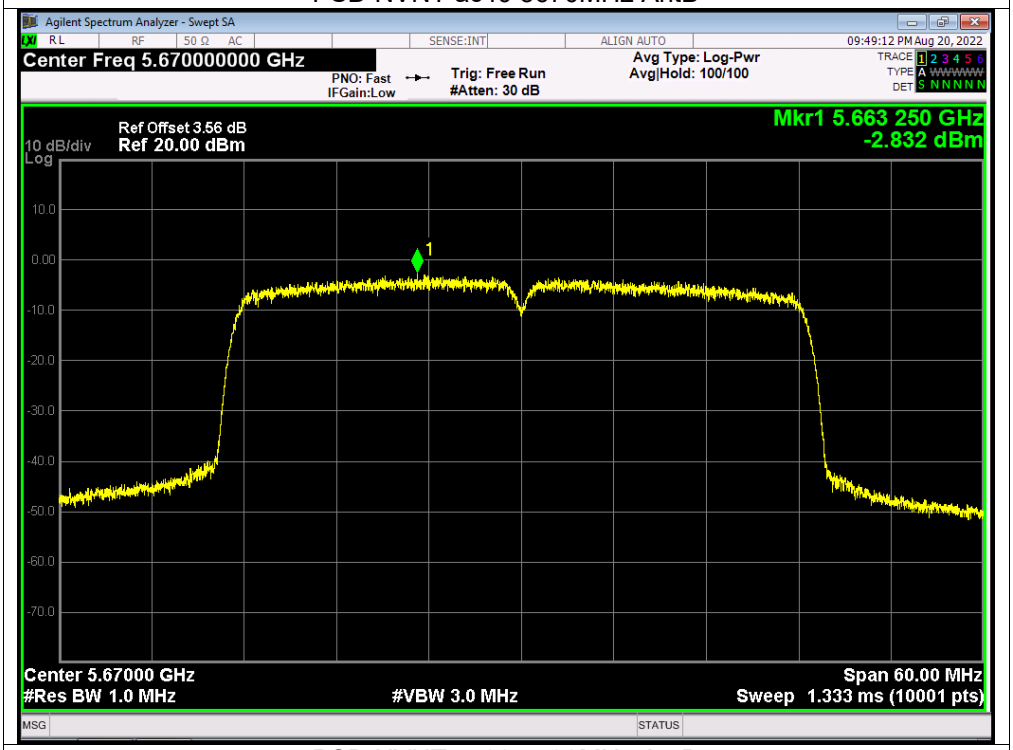
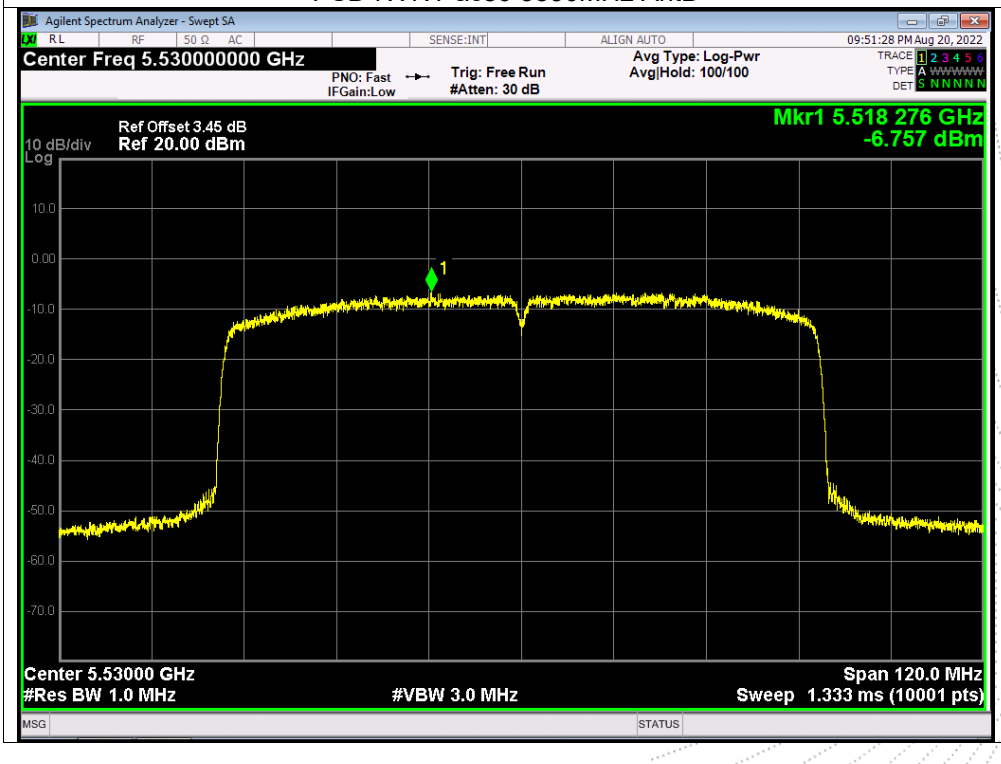


PSD NVNT ac80 5530MHz AntB



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5745-5825MHz)		

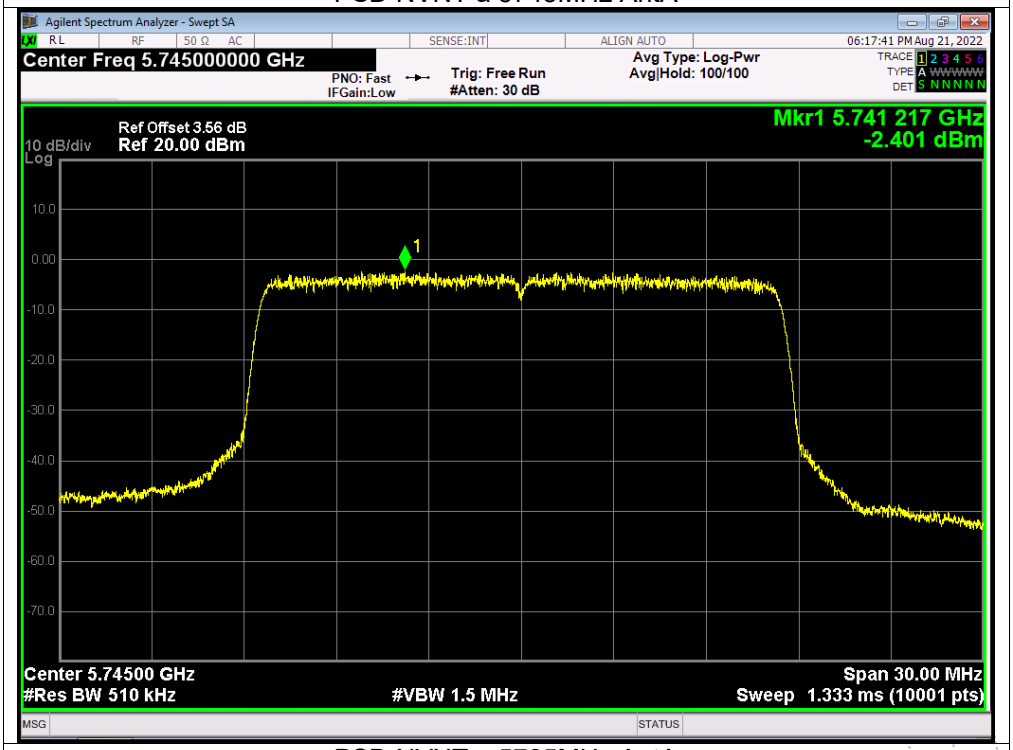
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)		Total (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
			Ant A	Ant B			
NVNT	a	5745	**-2.4**	-2.67	/	30	Pass
NVNT	a	5785	-3.11	-3.01	/	30	Pass
NVNT	a	5825	-4.17	-3.53	/	30	Pass
NVNT	n20	5745	-4.01	-3.67	-0.83	29.09	Pass
NVNT	n20	5785	-4.57	-4.35	-1.45	29.09	Pass
NVNT	n20	5825	-5.59	-4.49	-1.99	29.09	Pass
NVNT	n40	5755	-7.35	-7.46	-4.39	29.09	Pass
NVNT	n40	5795	-8.47	-8.29	-5.37	29.09	Pass
NVNT	ac20	5745	-4.01	-3.6	-0.79	29.09	Pass
NVNT	ac20	5785	-4.46	-4.44	-1.44	29.09	Pass
NVNT	ac20	5825	-5.48	-4.85	-2.14	29.09	Pass
NVNT	ac40	5755	-7.45	-7.09	-4.26	29.09	Pass
NVNT	ac40	5795	-8.32	-8.29	-5.29	29.09	Pass
NVNT	ac80	5775	-11.63	-11.48	-8.54	29.09	Pass

Note:
Antenna A gain:3.90 dBi, Antenna B gain: 3.90 dBi, Directional gain=[GainANT + 10 log(NANT) dBi] =6.91 dbi>6dbi
Limit=30-(6.91-6)=29.09 dbi

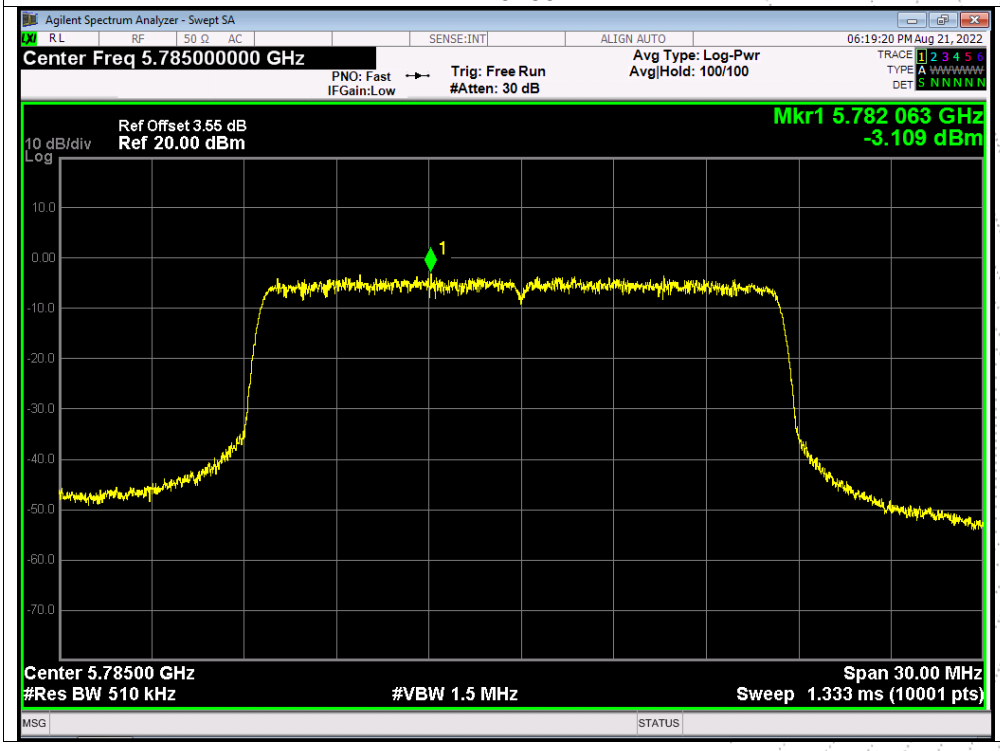
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

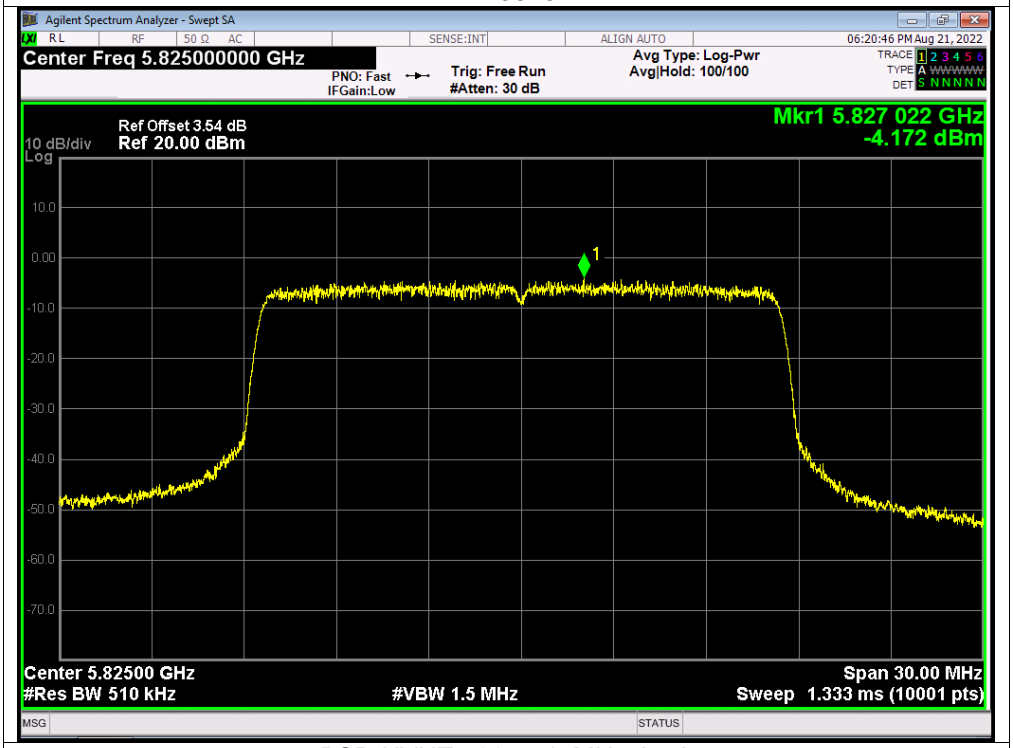
PSD NVNT a 5745MHz AntA



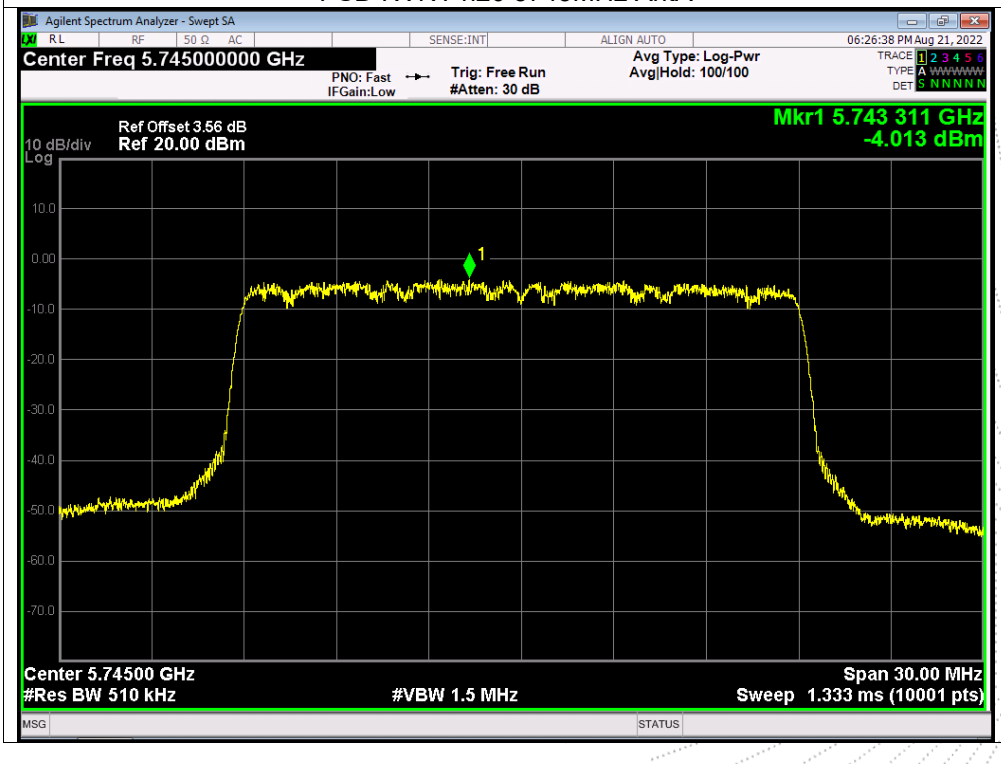
PSD NVNT a 5785MHz AntA



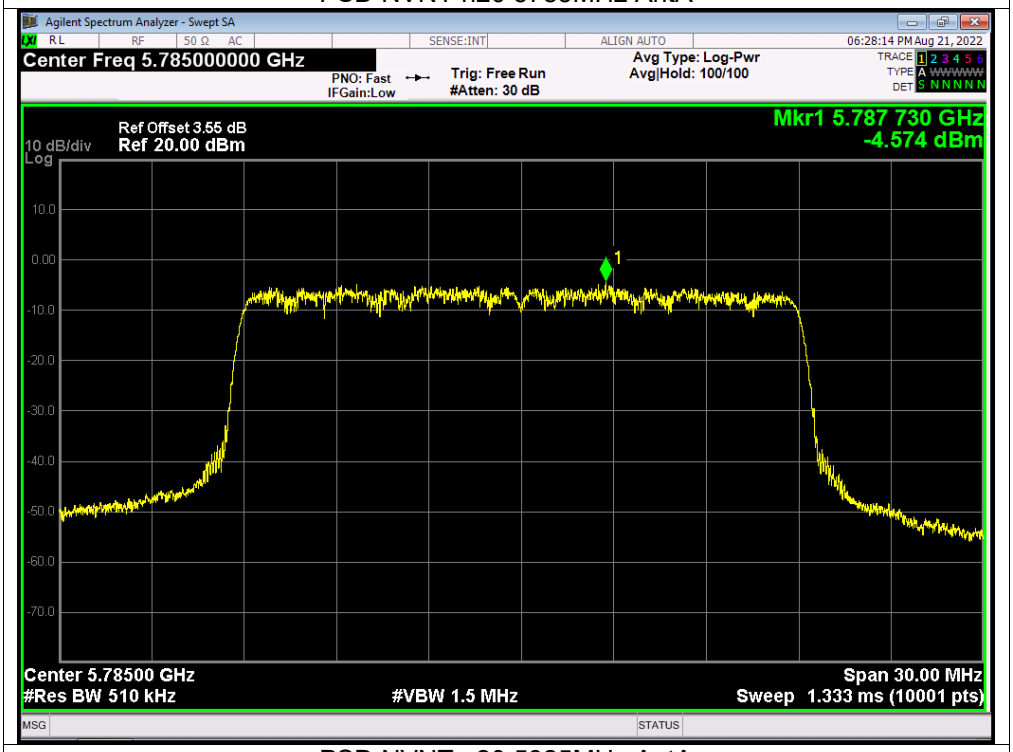
PSD NVNT a 5825MHz AntA



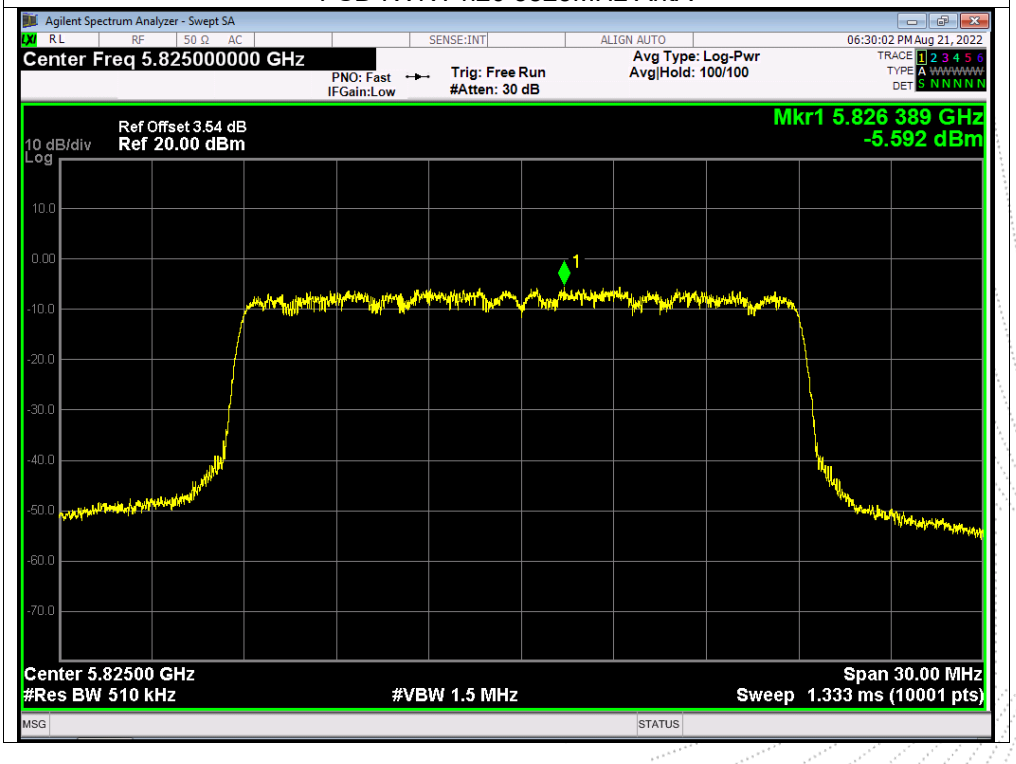
PSD NVNT n20 5745MHz AntA



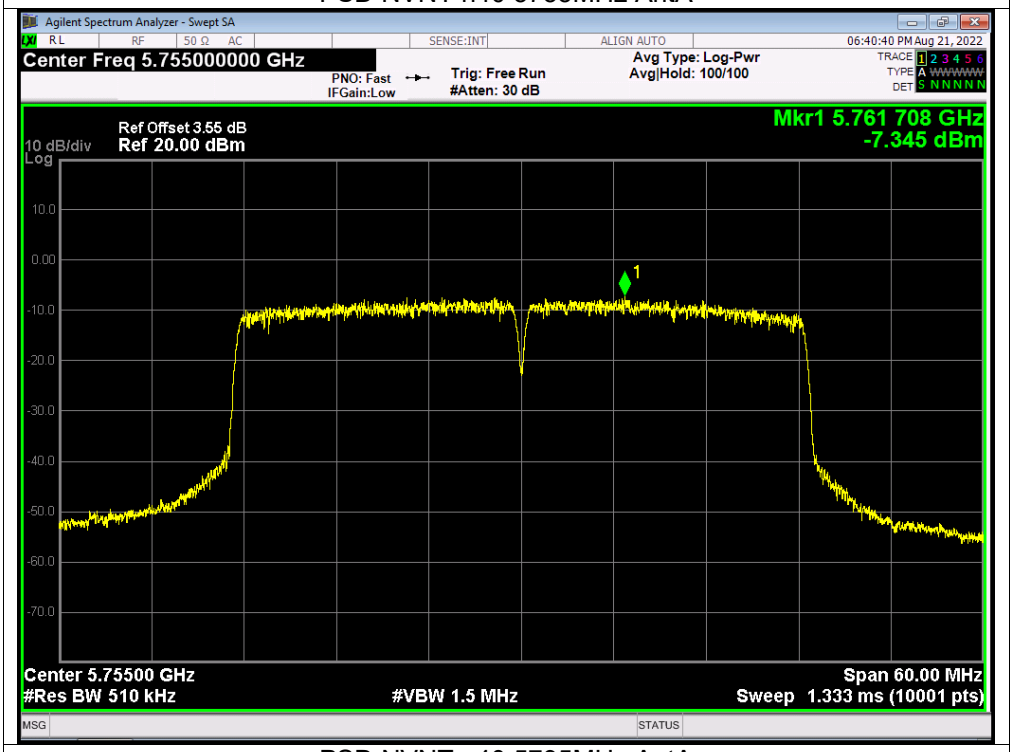
PSD NVNT n20 5785MHz AntA



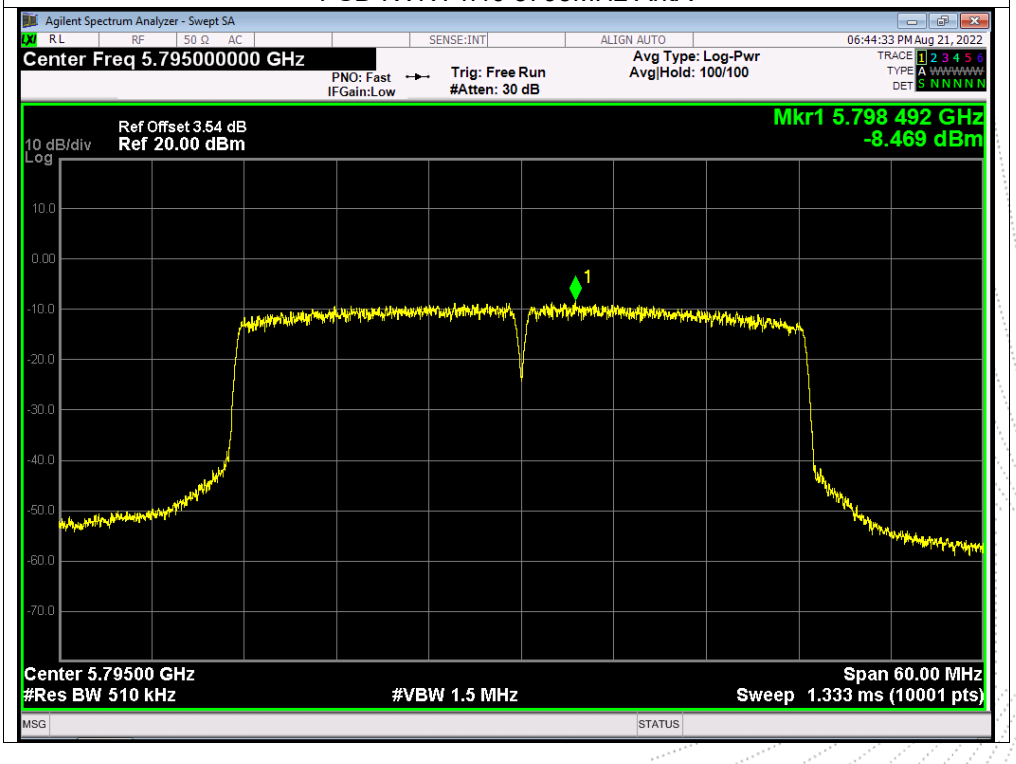
PSD NVNT n20 5825MHz AntA



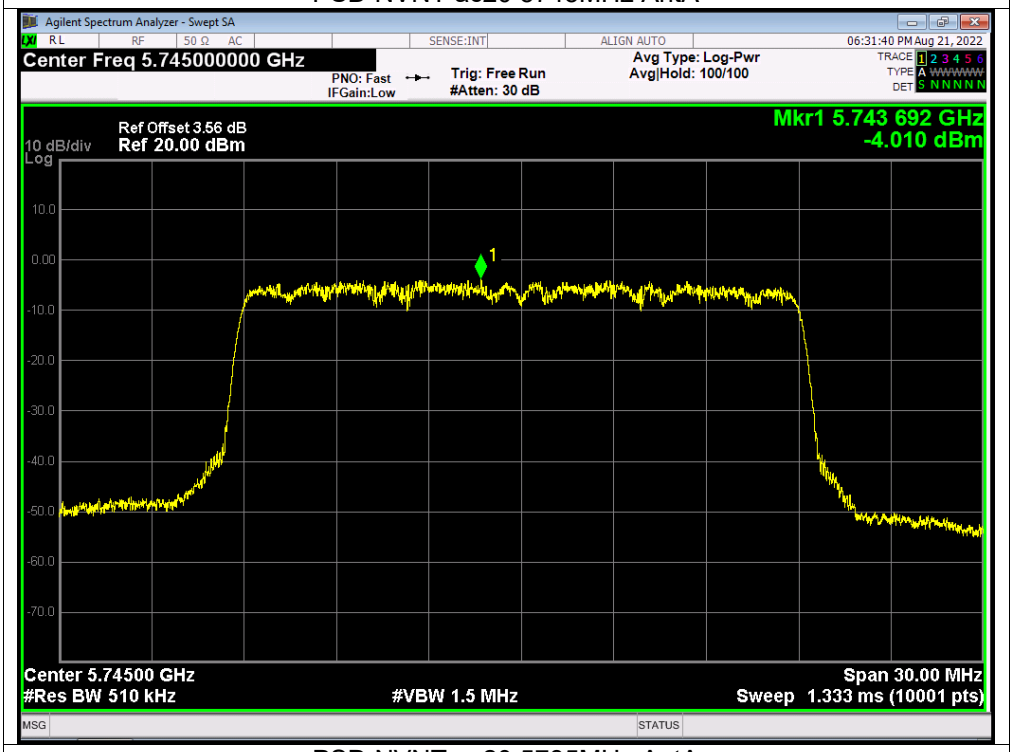
PSD NVNT n40 5755MHz AntA



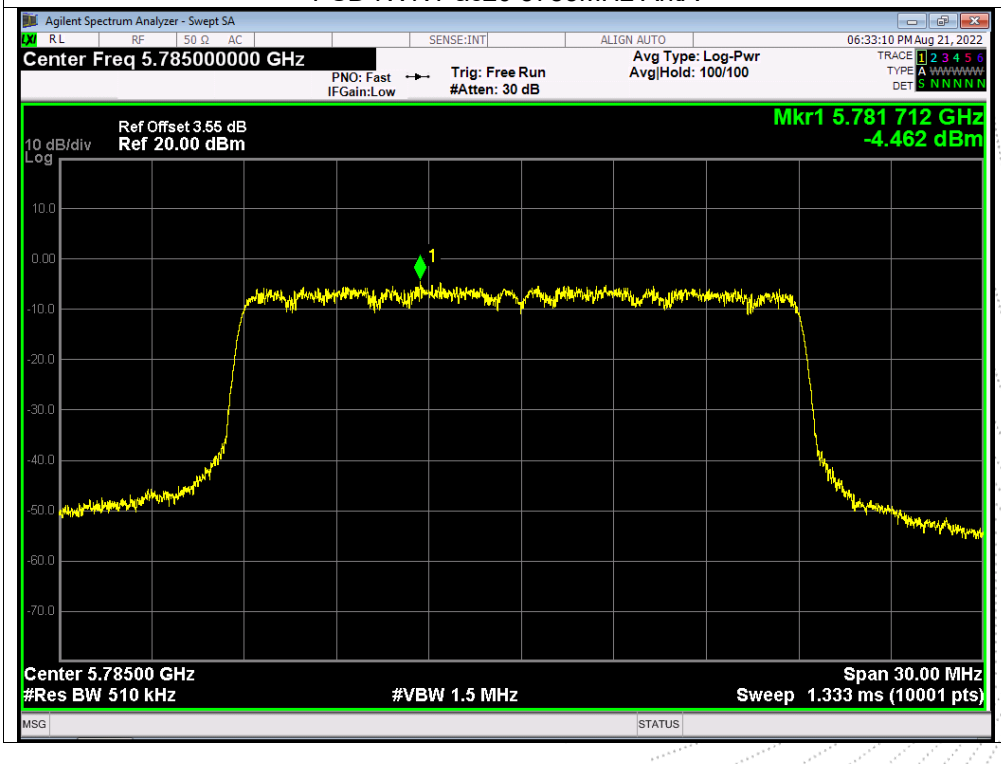
PSD NVNT n40 5795MHz AntA



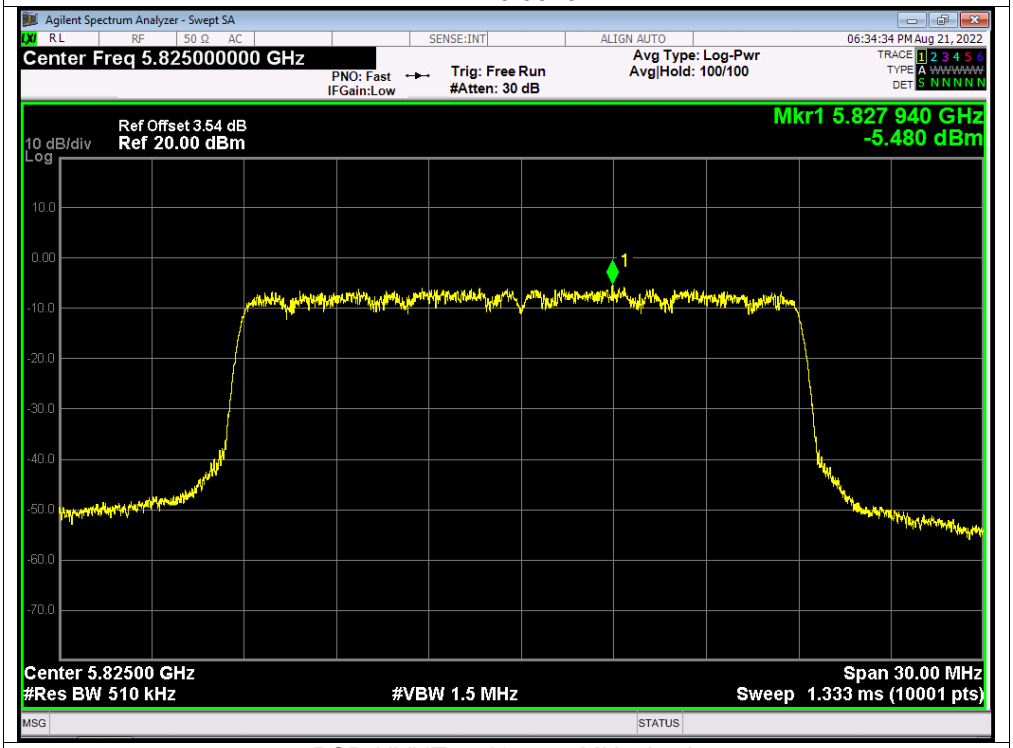
PSD NVNT ac20 5745MHz AntA



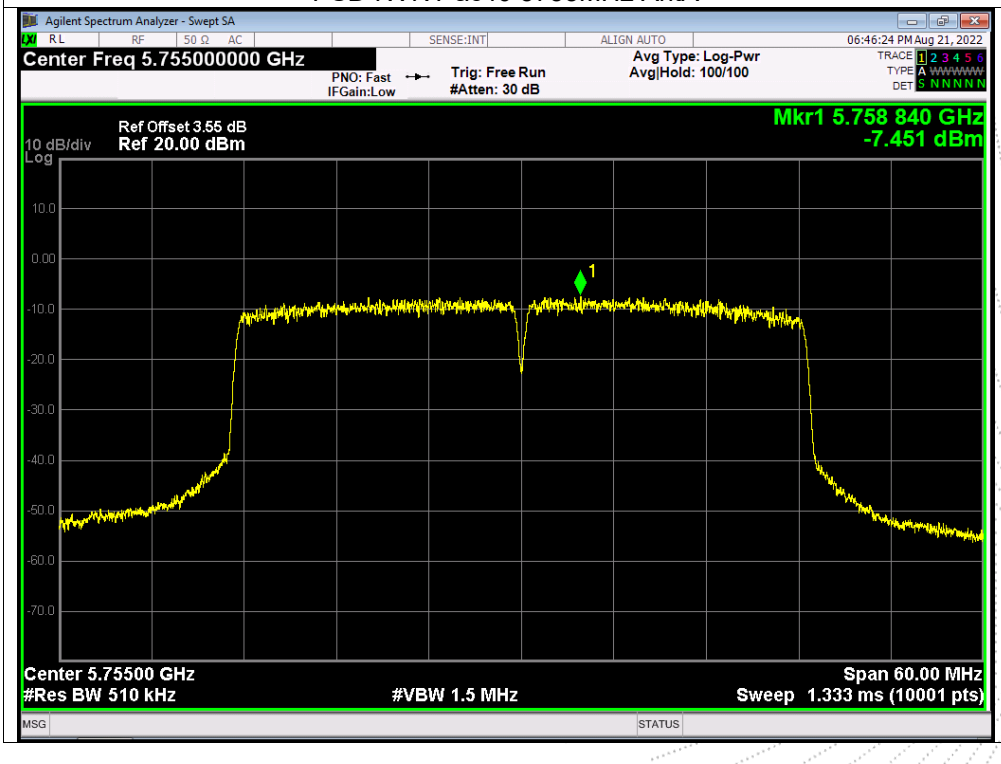
PSD NVNT ac20 5785MHz AntA



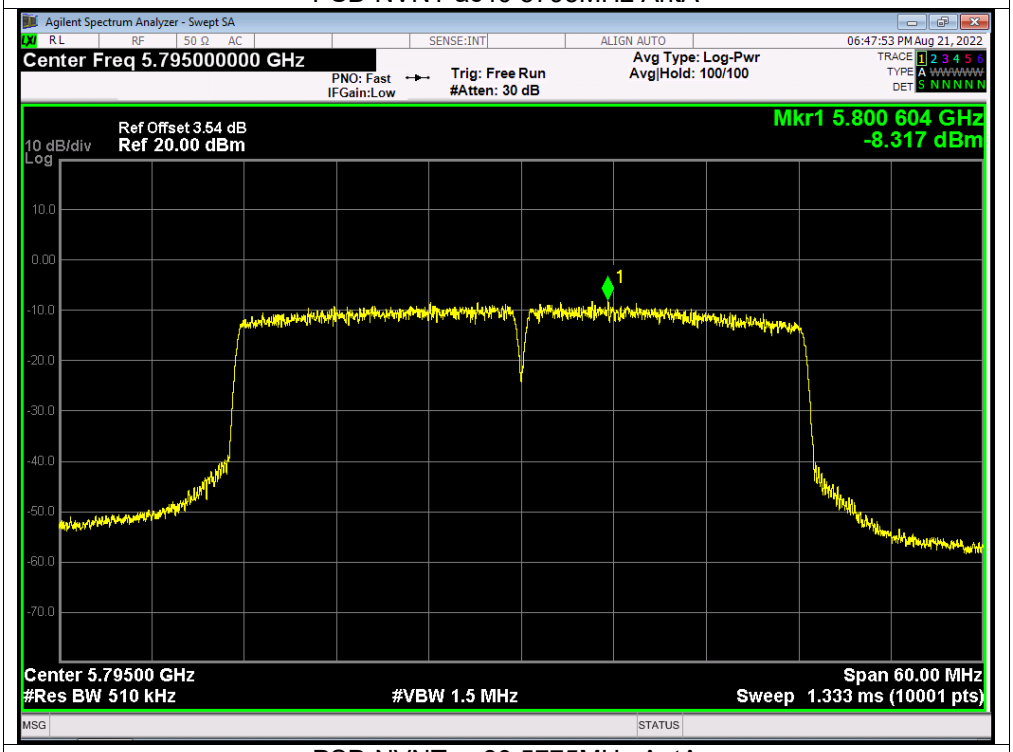
PSD NVNT ac20 5825MHz AntA



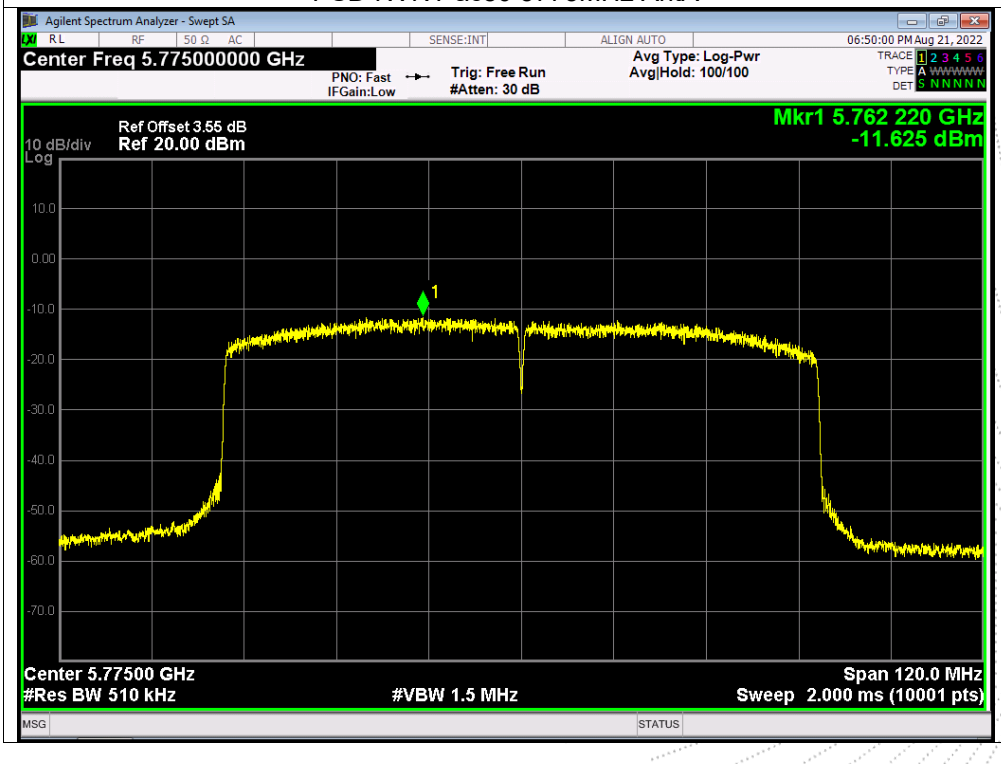
PSD NVNT ac40 5755MHz AntA



PSD NVNT ac40 5795MHz AntA

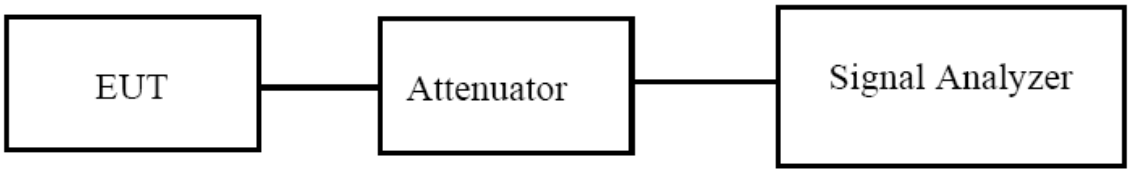


PSD NVNT ac80 5775MHz AntA



9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

(1) For the band 5.15-5.25 GHz.
(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

9.3 Test Procedure

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 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.

9.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5180	18.769	18.711	Pass
NVNT	a	5200	18.534	18.581	Pass
NVNT	a	5240	18.454	18.568	Pass
NVNT	n20	5180	19.59	19.536	Pass
NVNT	n20	5200	19.564	19.463	Pass
NVNT	n20	5240	19.545	19.661	Pass
NVNT	n40	5190	42.219	42.211	Pass
NVNT	n40	5230	42.275	42.351	Pass
NVNT	ac20	5180	19.515	19.492	Pass
NVNT	ac20	5200	19.498	19.493	Pass
NVNT	ac20	5240	19.493	19.535	Pass
NVNT	ac40	5190	42.448	42.599	Pass
NVNT	ac40	5230	42.114	42.094	Pass
NVNT	ac80	5210	80.828	**81.007**	Pass

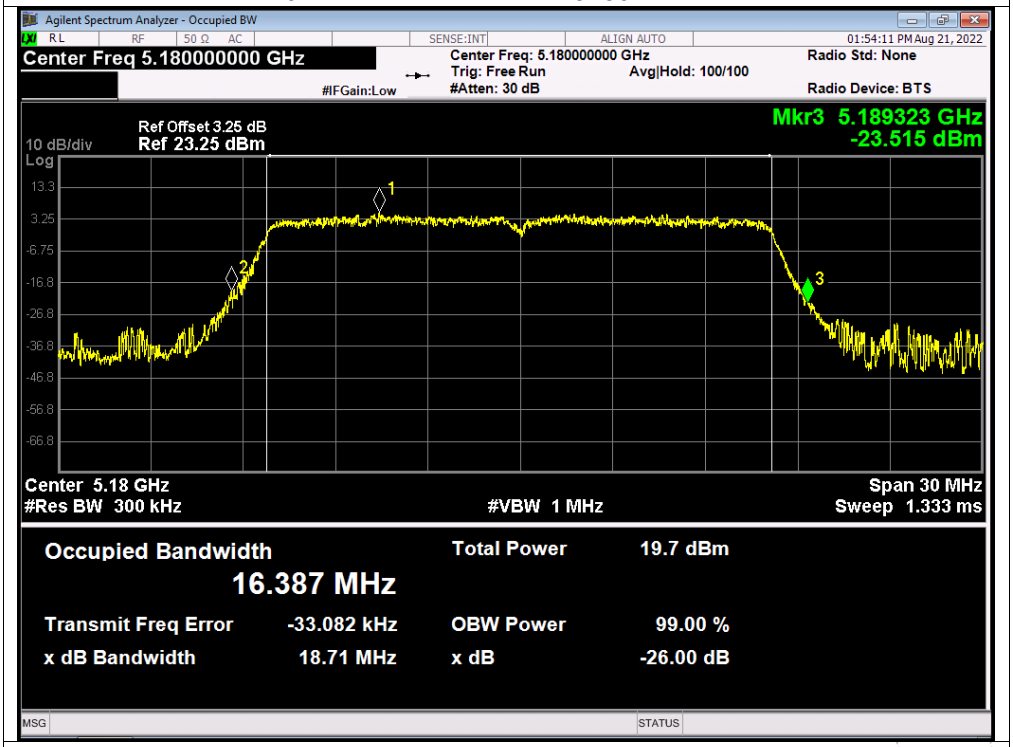
Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.338	16.33
NVNT	a	5200	16.341	16.328
NVNT	a	5240	16.349	16.335
NVNT	n20	5180	17.541	17.525
NVNT	n20	5200	17.54	17.54

NVNT	n20	5240	17.534	17.538
NVNT	n40	5190	36.056	36.059
NVNT	n40	5230	36.013	36.032
NVNT	ac20	5180	17.531	17.535
NVNT	ac20	5200	17.537	17.548
NVNT	ac20	5240	17.536	17.536
NVNT	ac40	5190	36.007	36.06
NVNT	ac40	5230	35.977	36.016
NVNT	ac80	5210	74.399	74.557

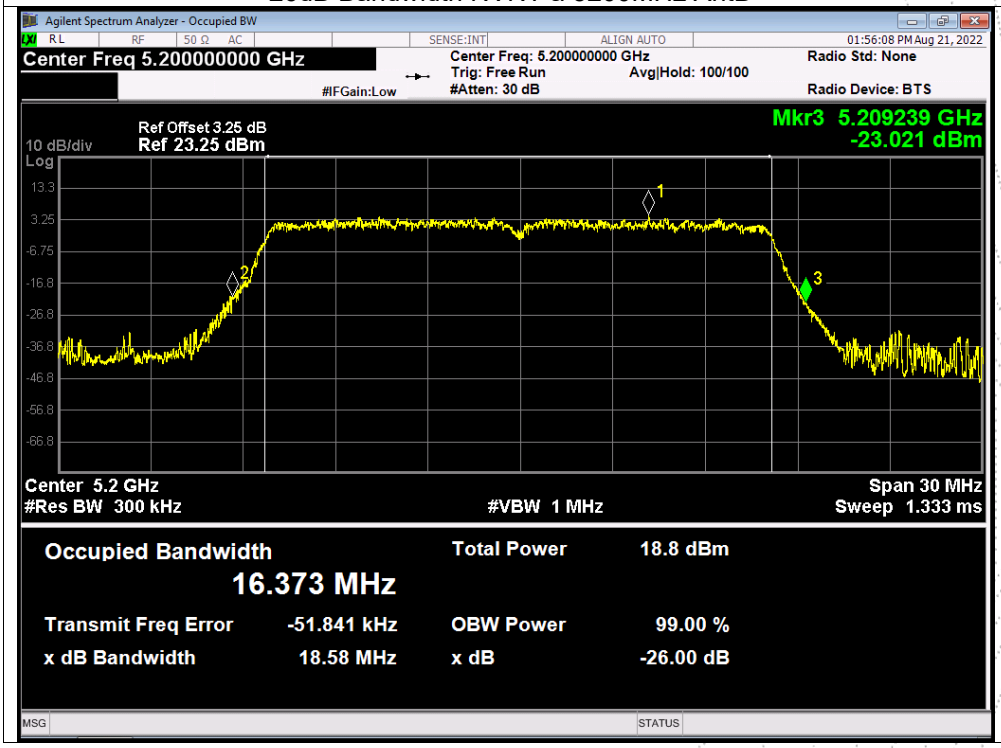
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

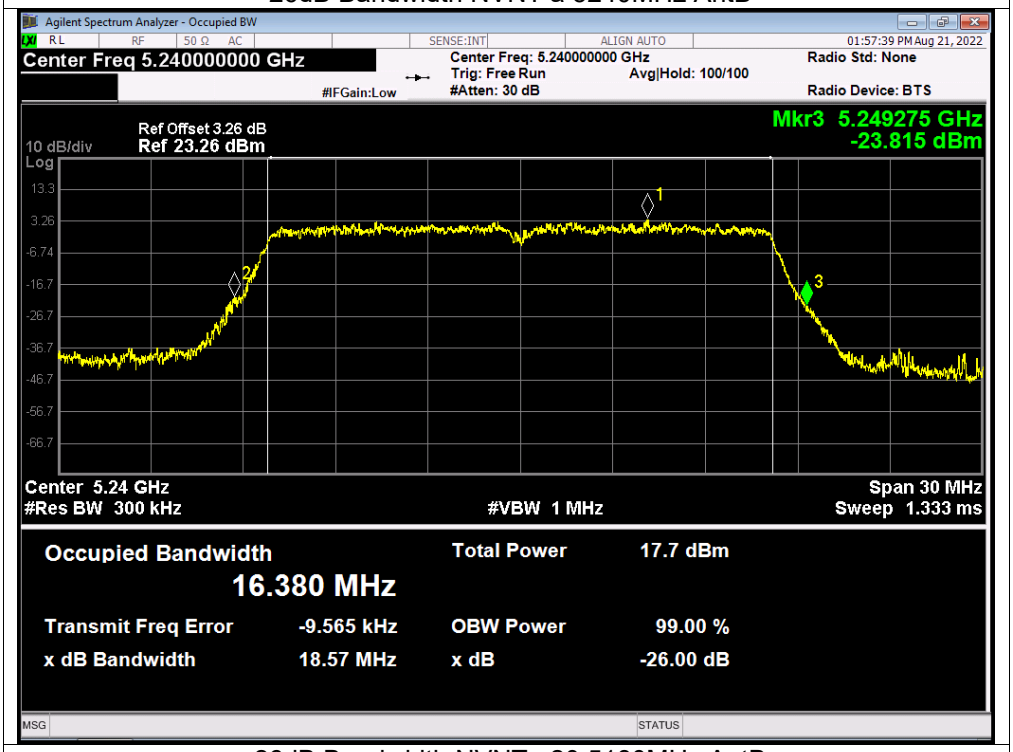
-26dB Bandwidth NVNT a 5180MHz AntB



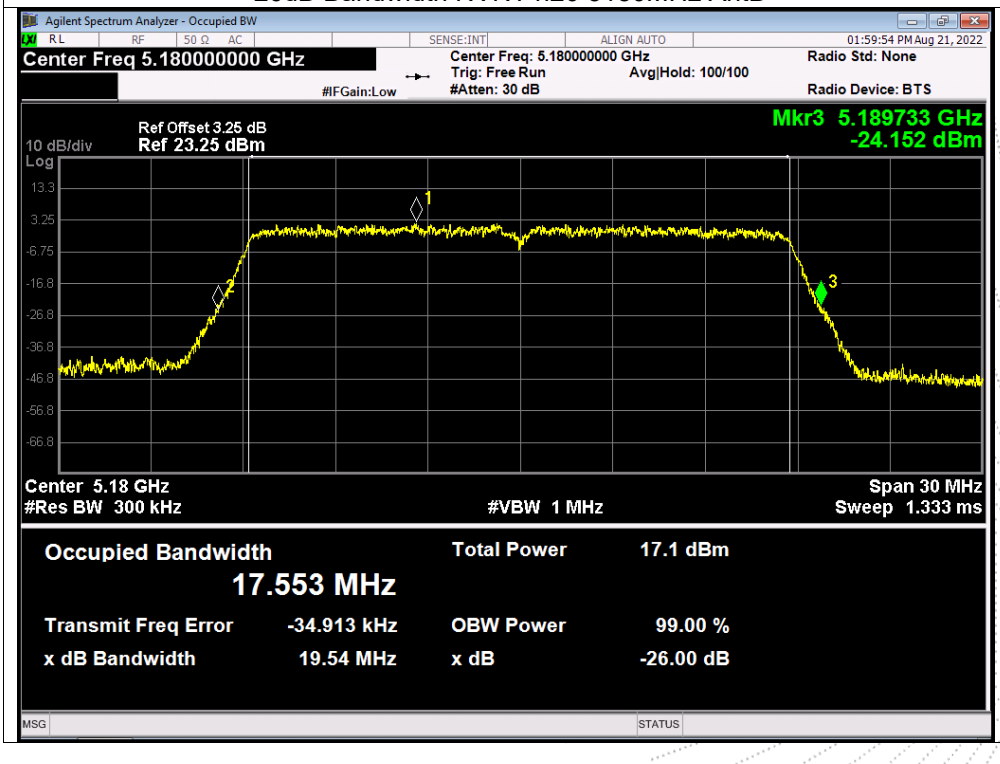
-26dB Bandwidth NVNT a 5200MHz AntB



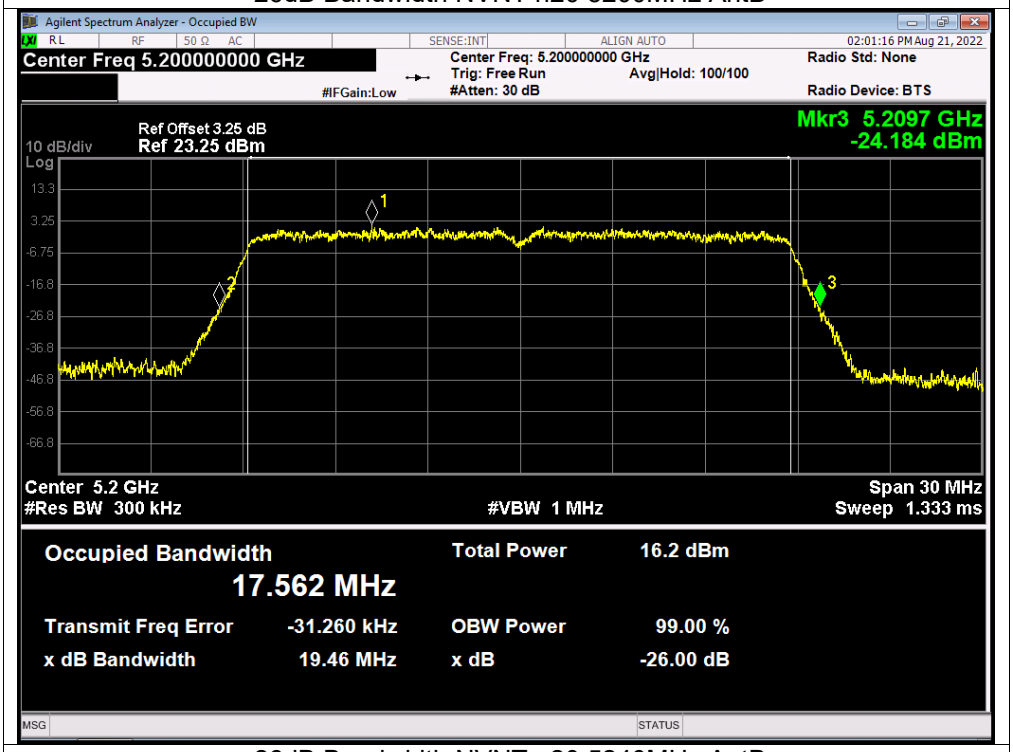
-26dB Bandwidth NVNT a 5240MHz AntB



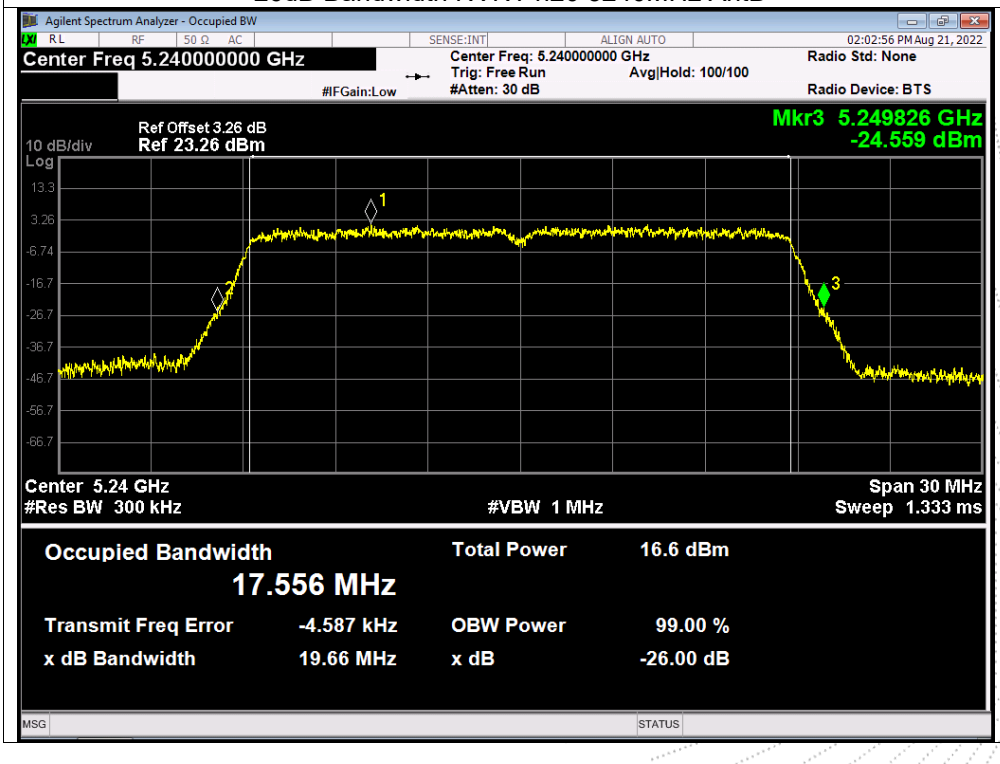
-26dB Bandwidth NVNT n20 5180MHz AntB



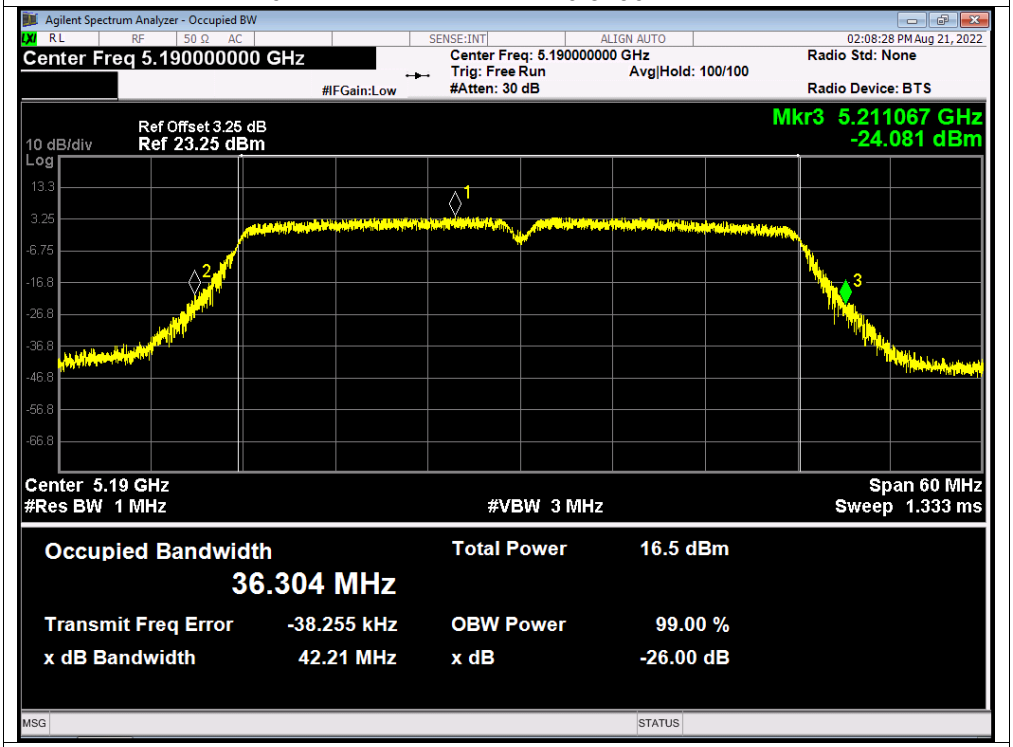
-26dB Bandwidth NVNT n20 5200MHz AntB



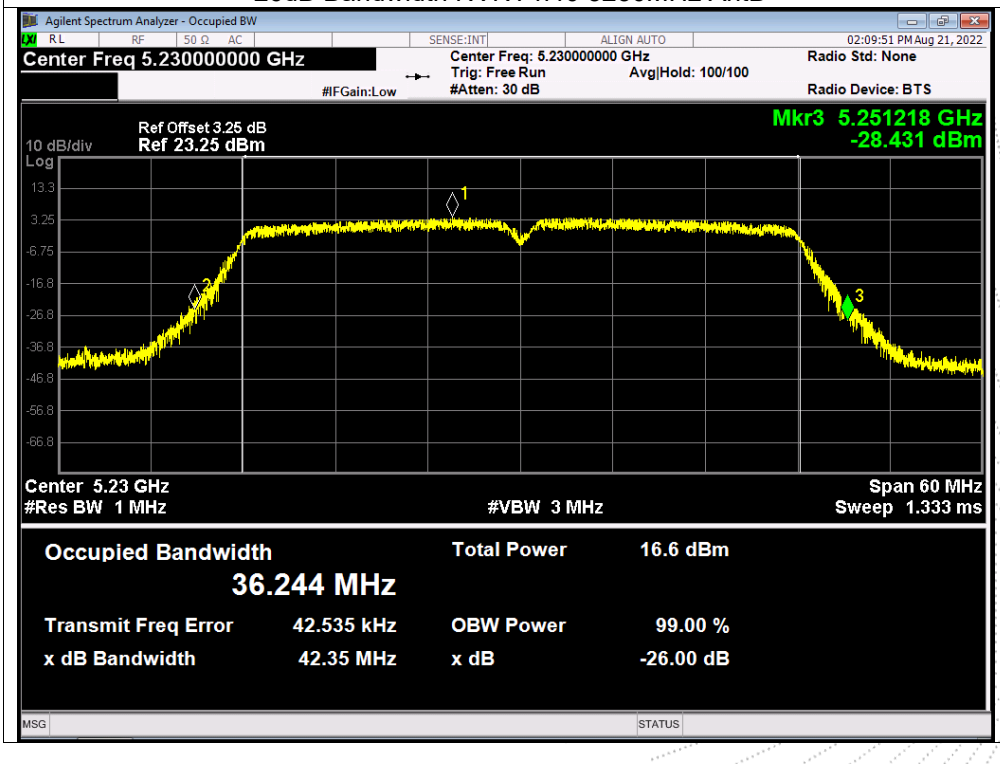
-26dB Bandwidth NVNT n20 5240MHz AntB



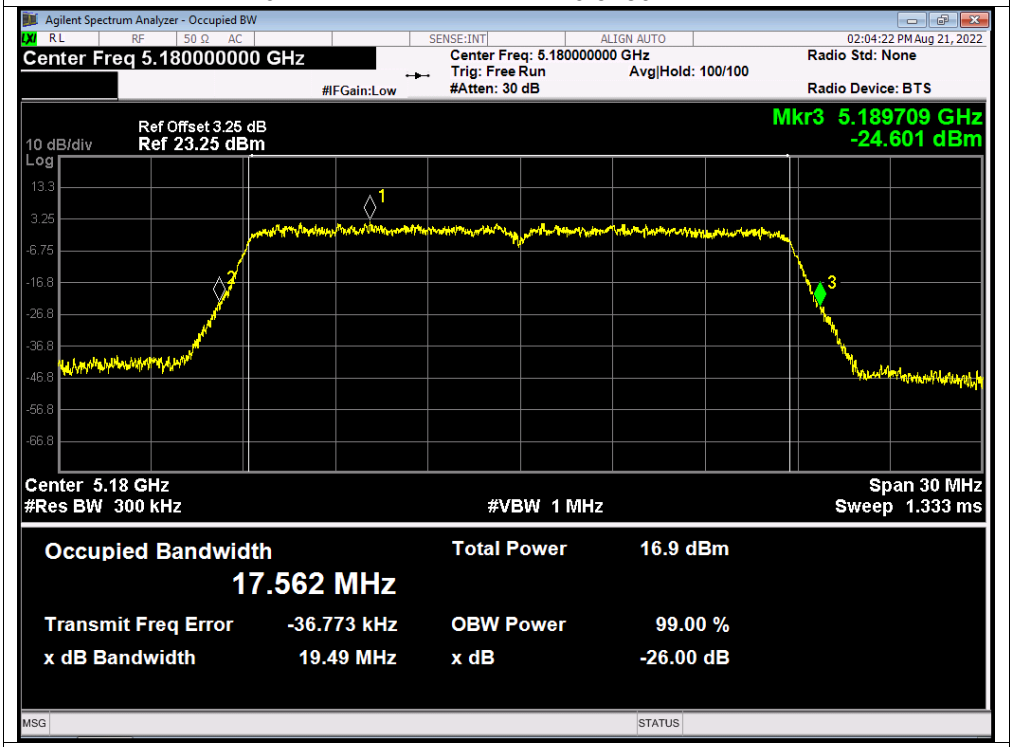
-26dB Bandwidth NVNT n40 5190MHz AntB



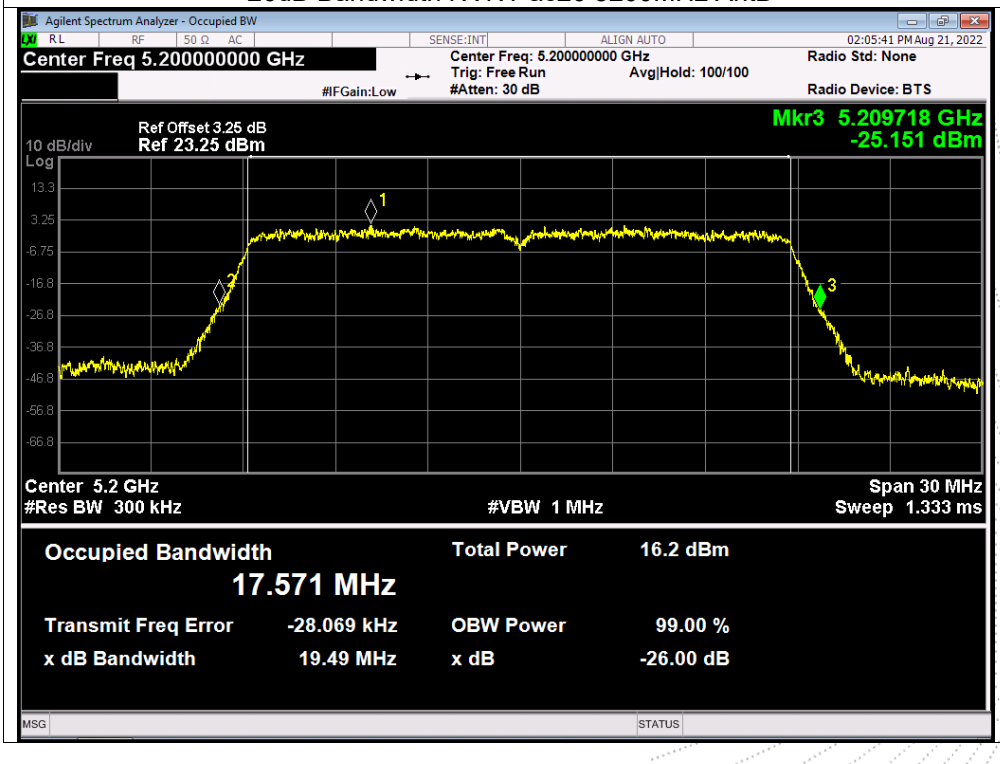
-26dB Bandwidth NVNT n40 5230MHz AntB



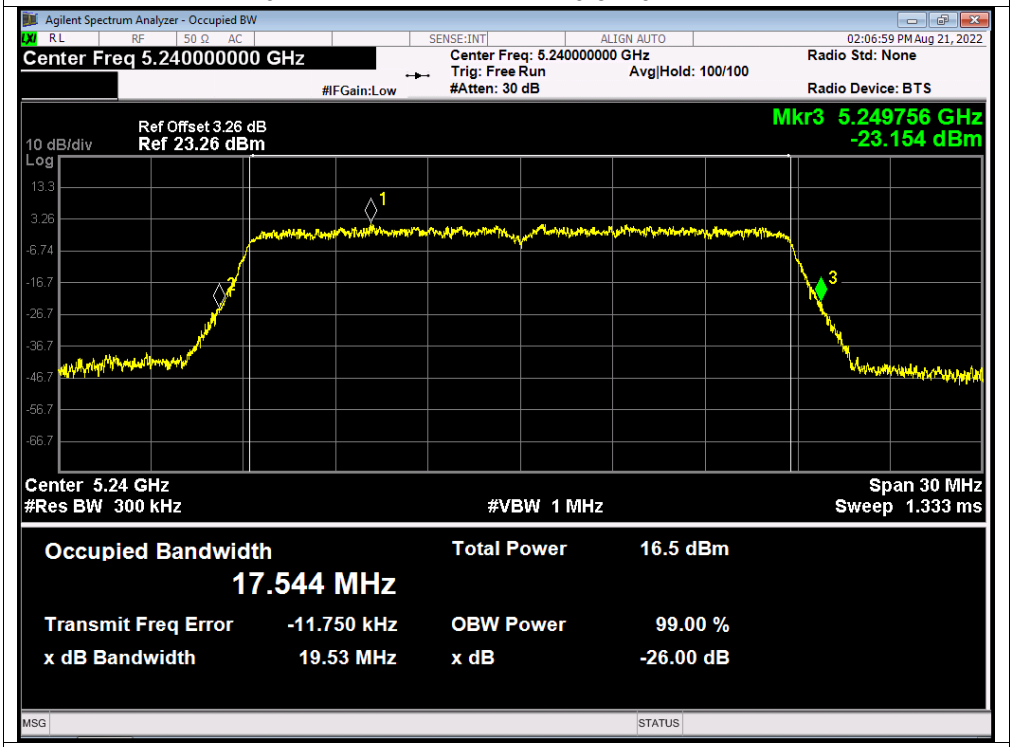
-26dB Bandwidth NVNT ac20 5180MHz AntB



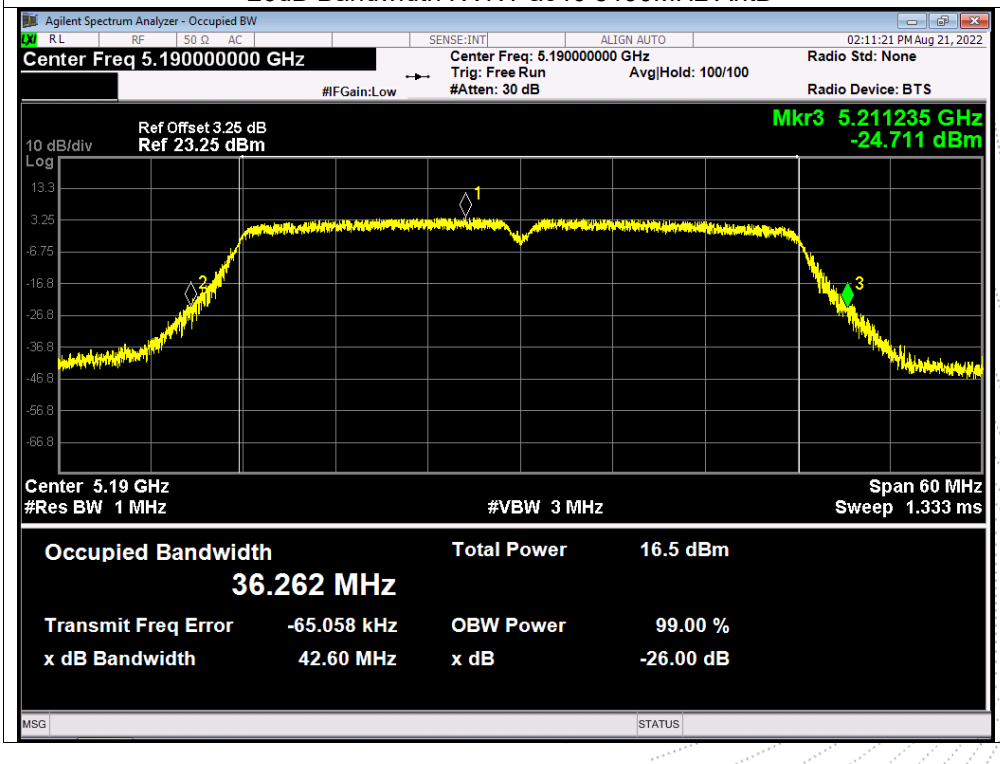
-26dB Bandwidth NVNT ac20 5200MHz AntB



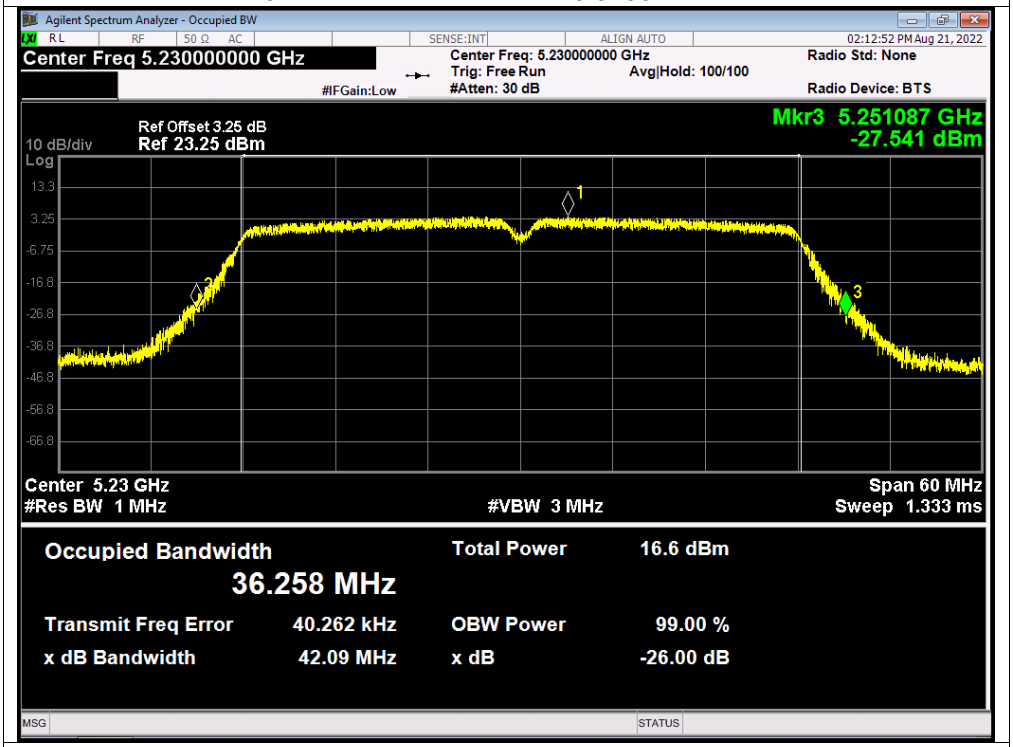
-26dB Bandwidth NVNT ac20 5240MHz AntB



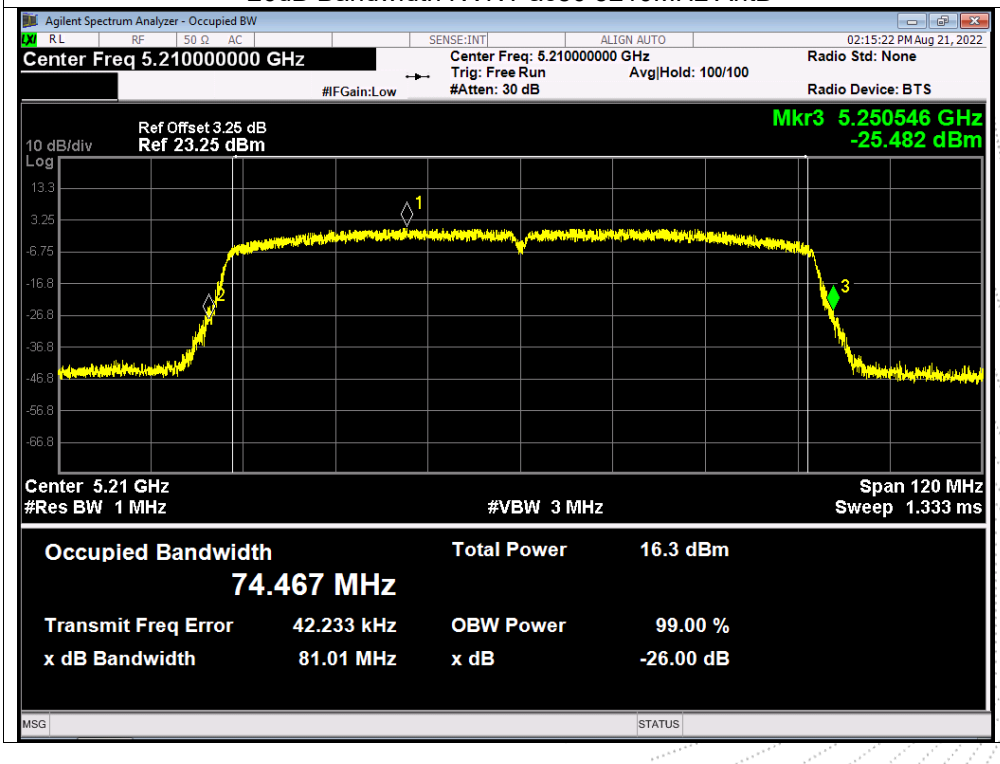
-26dB Bandwidth NVNT ac40 5190MHz AntB



-26dB Bandwidth NVNT ac40 5230MHz AntB

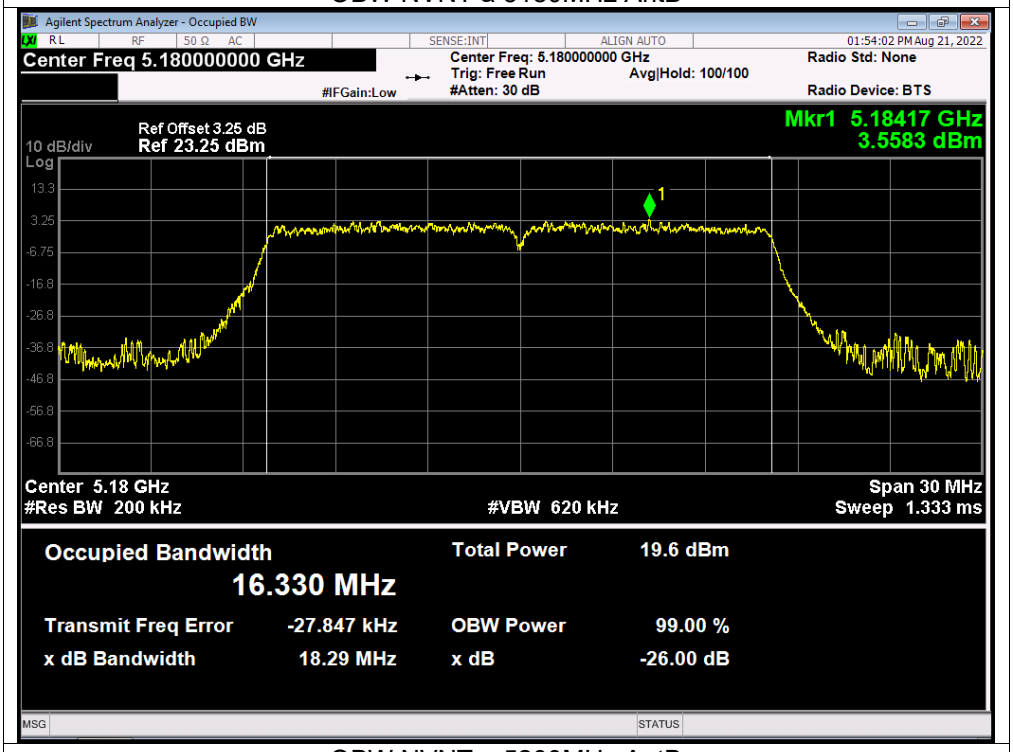


-26dB Bandwidth NVNT ac80 5210MHz AntB

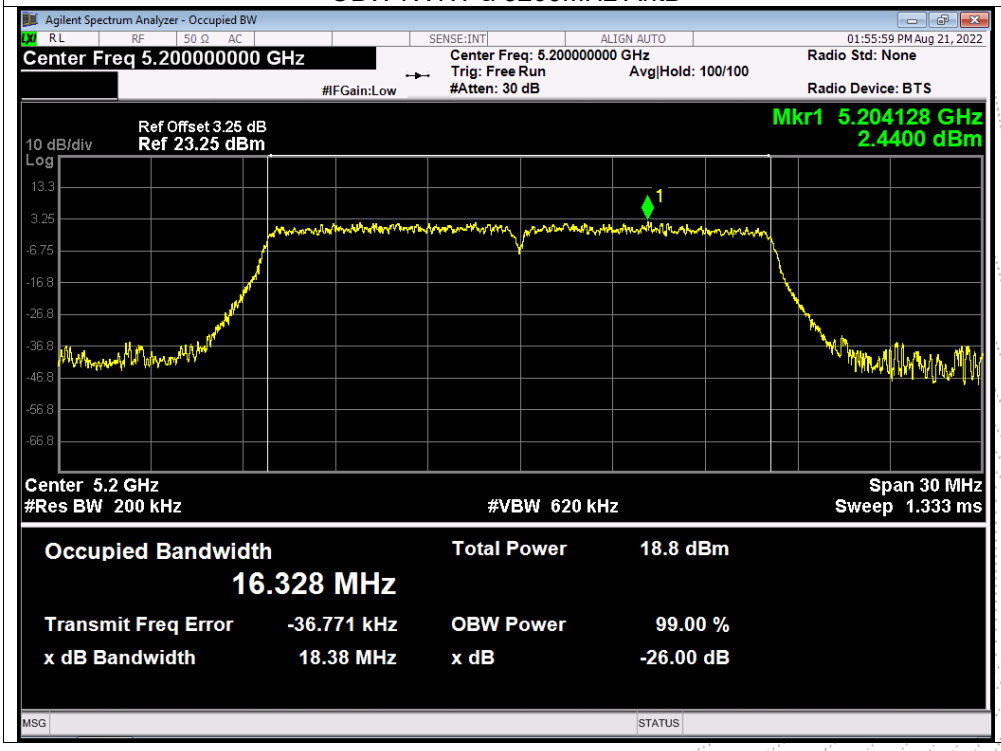


Test Graphs

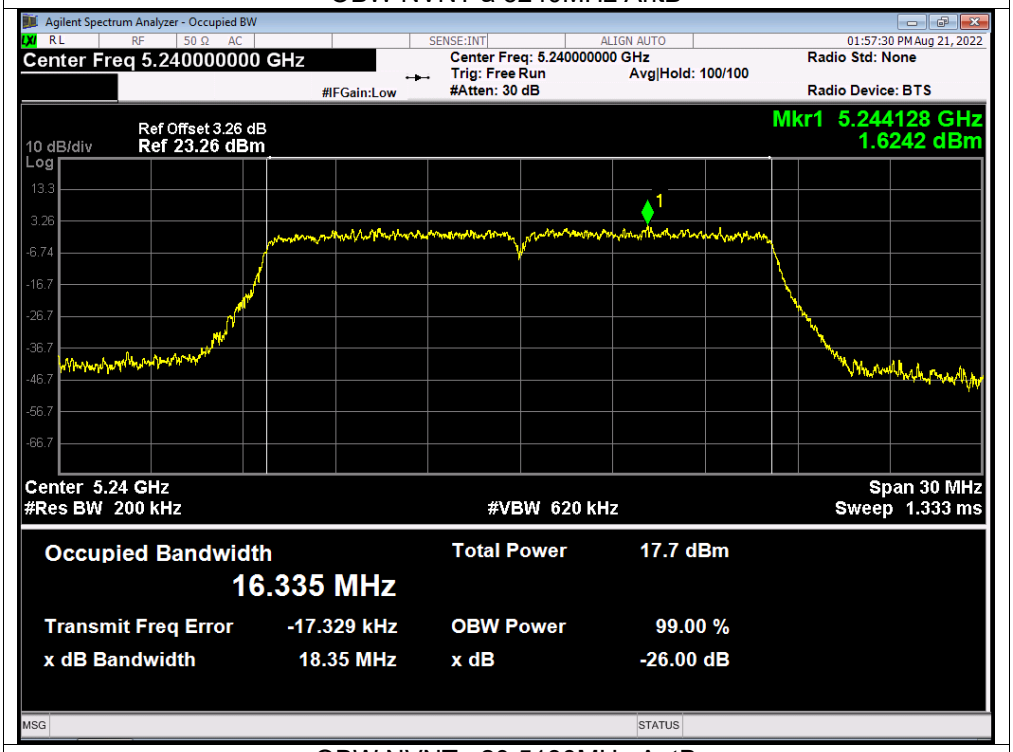
OBW NVNT a 5180MHz AntB



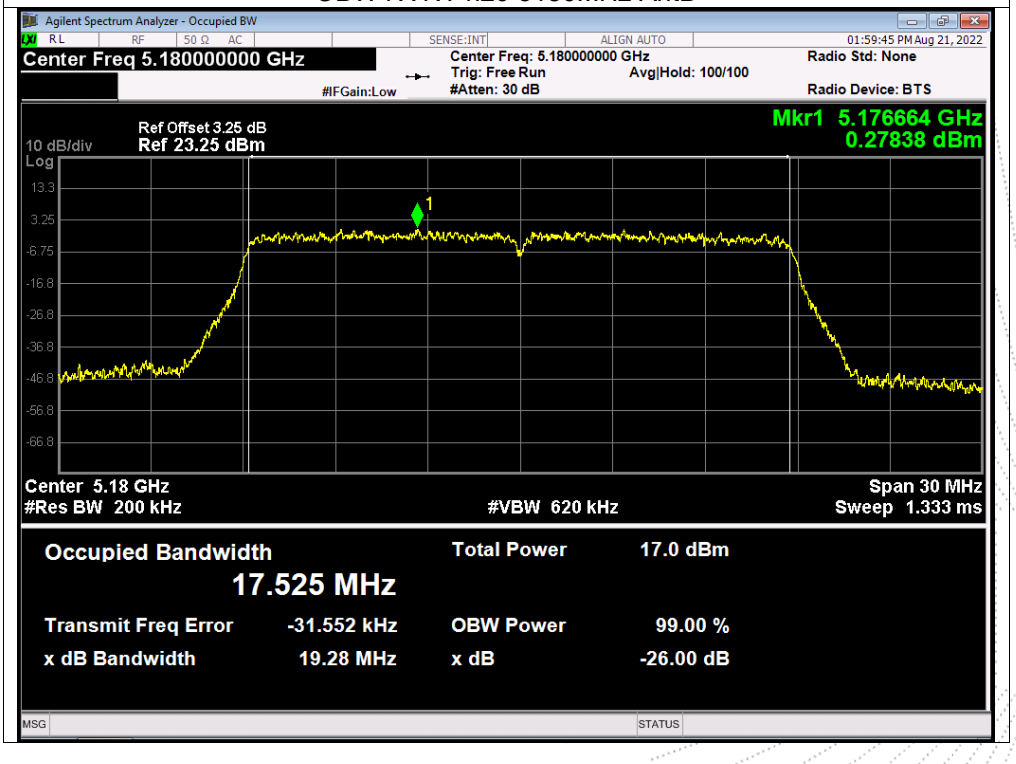
OBW NVNT a 5200MHz AntB



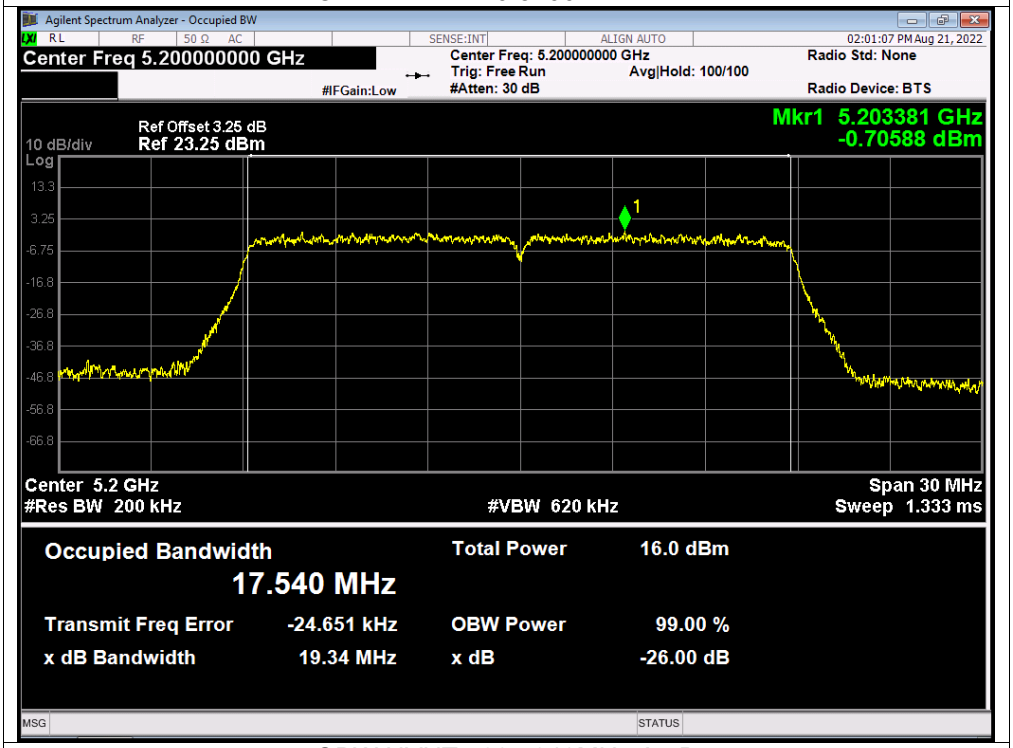
OBW NVNT a 5240MHz AntB



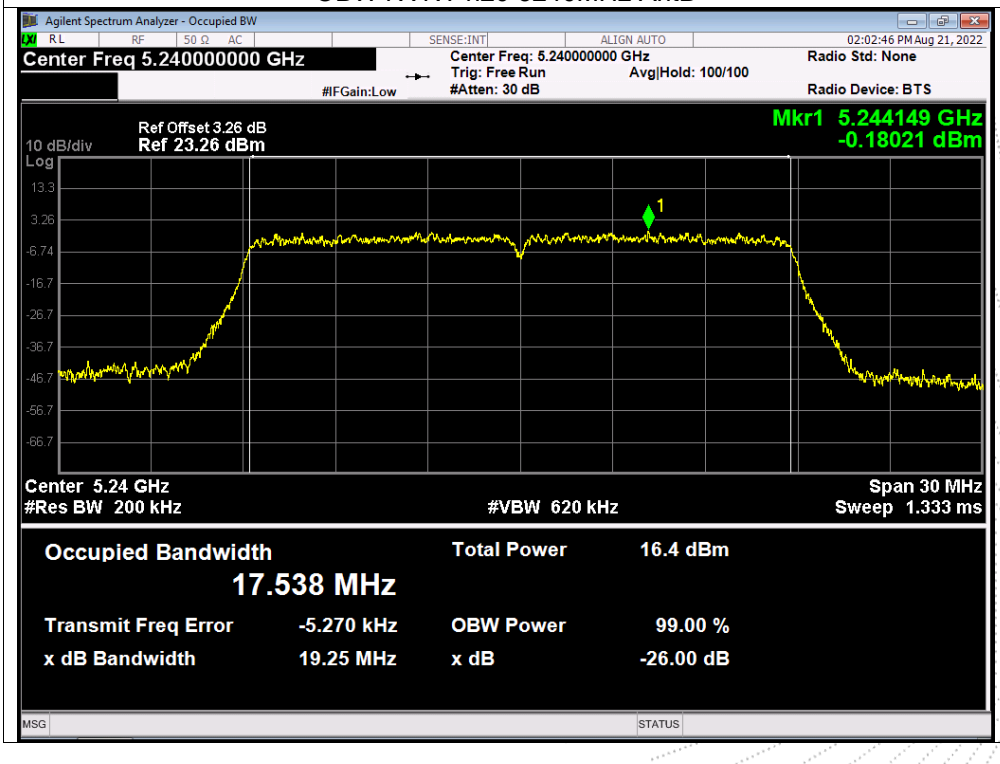
OBW NVNT n20 5180MHz AntB



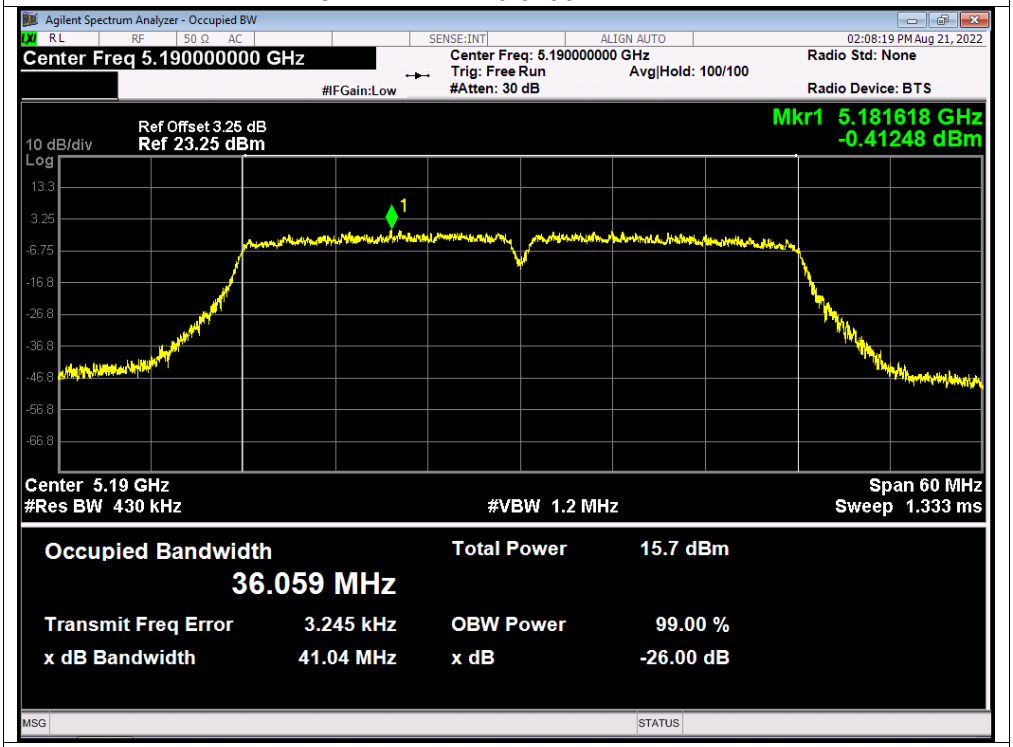
OBW NVNT n20 5200MHz AntB



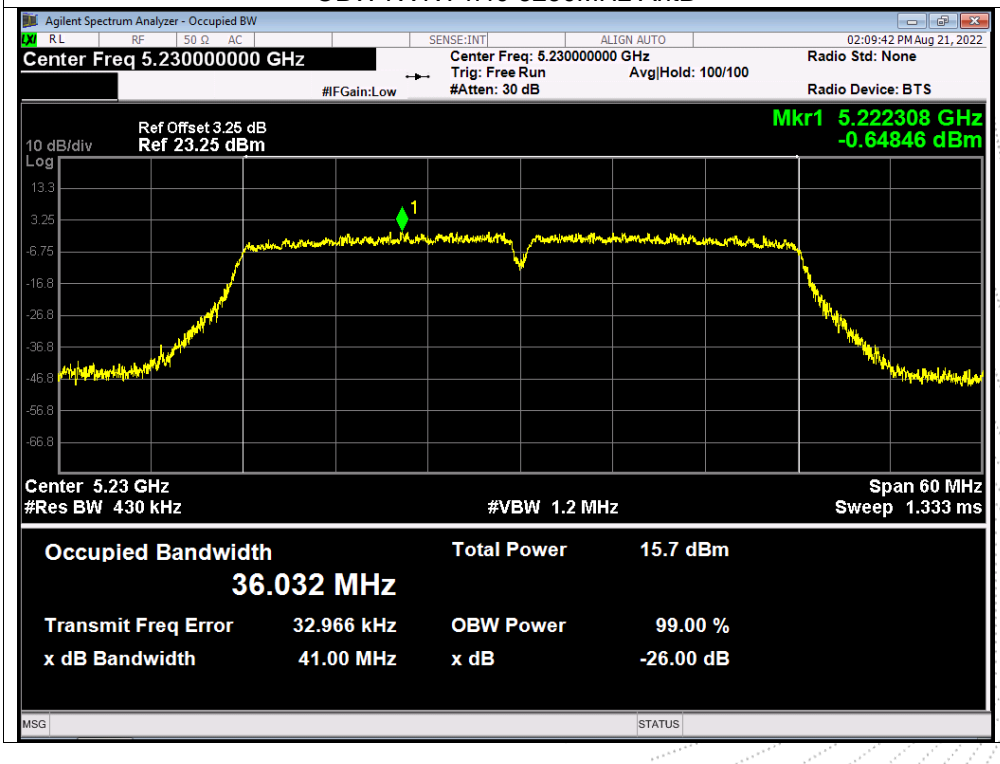
OBW NVNT n20 5240MHz AntB



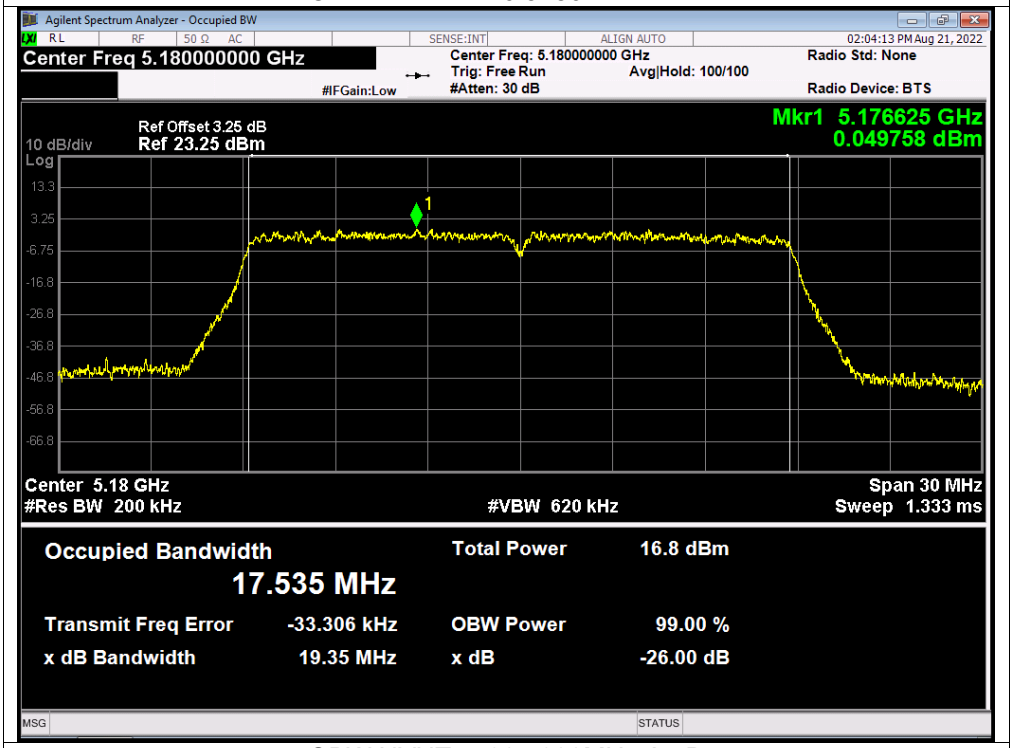
OBW NVNT n40 5190MHz AntB



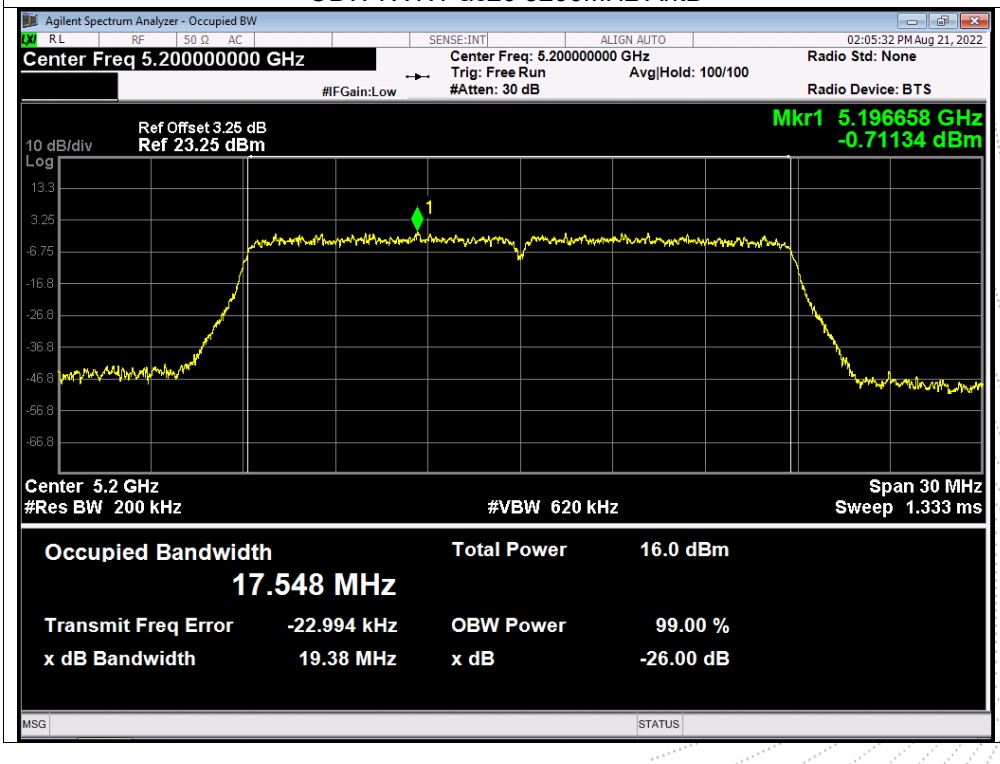
OBW NVNT n40 5230MHz AntB



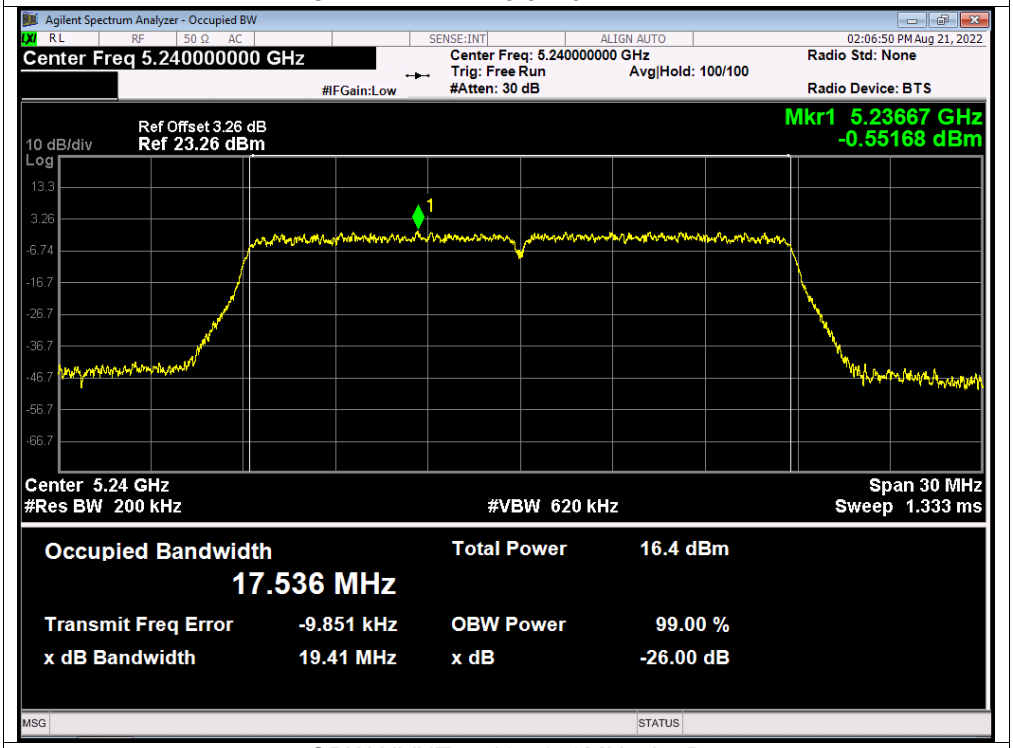
OBW NVNT ac20 5180MHz AntB



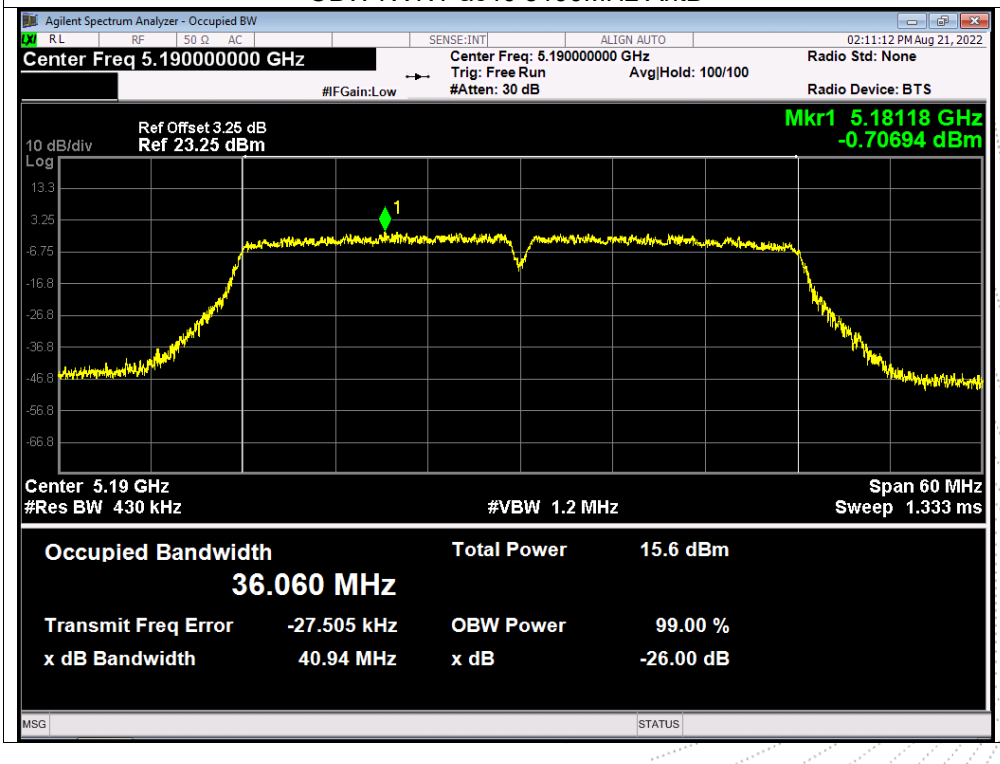
OBW NVNT ac20 5200MHz AntB



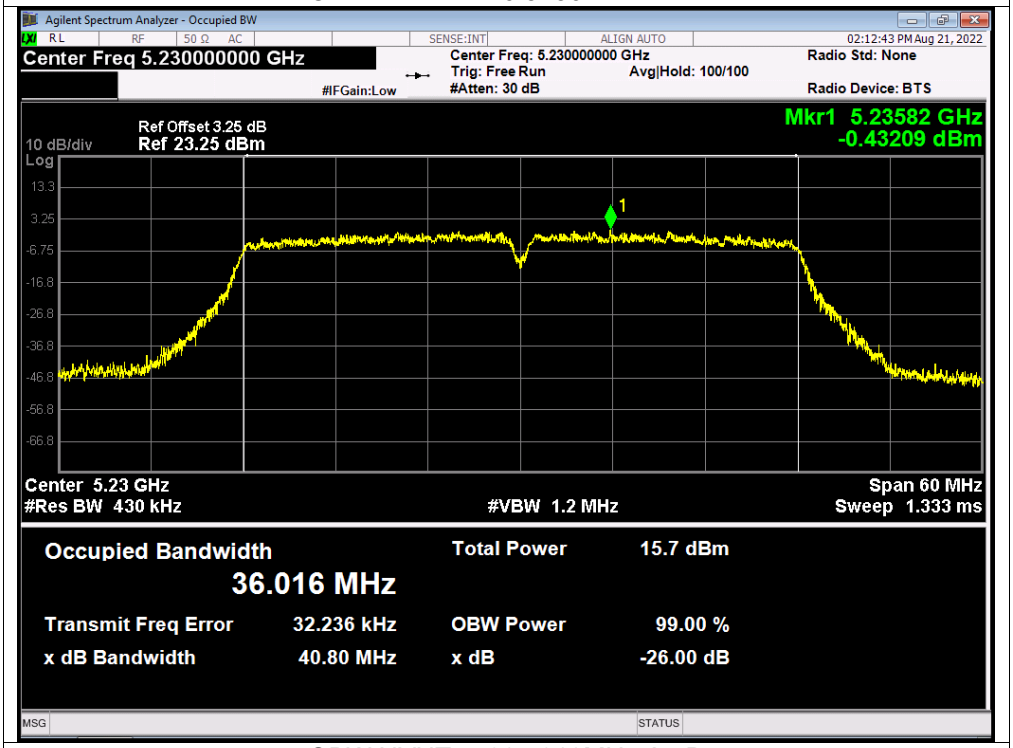
OBW NVNT ac20 5240MHz AntB



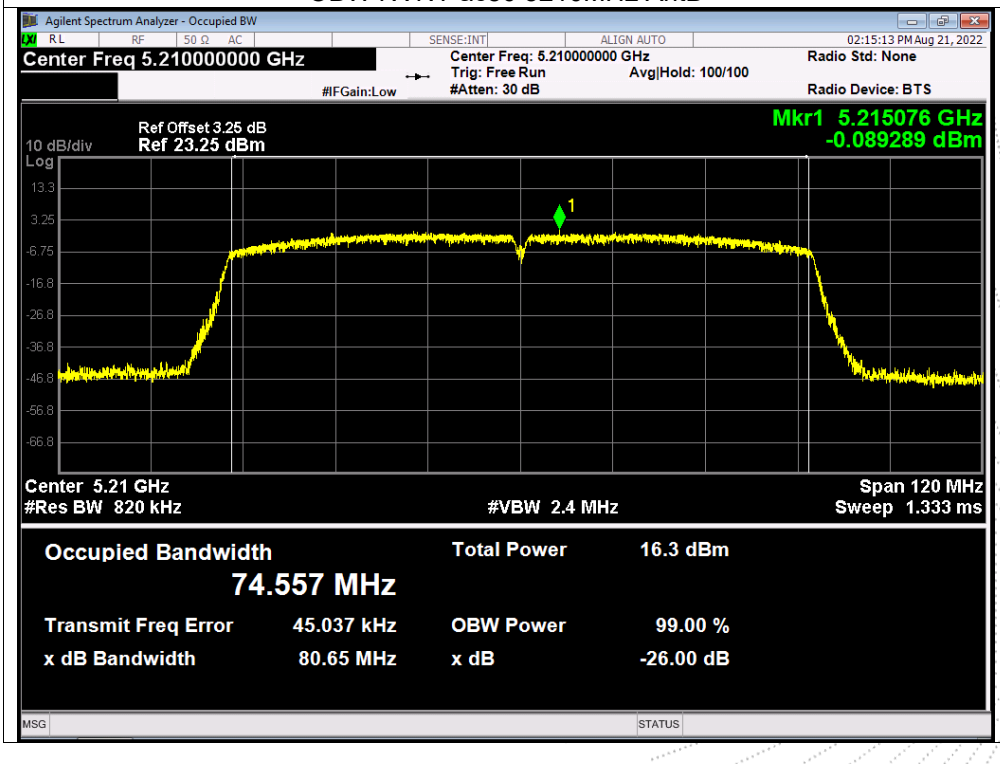
OBW NVNT ac40 5190MHz AntB



OBW NVNT ac40 5230MHz AntB



OBW NVNT ac80 5210MHz AntB



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5260-5320MHz)		

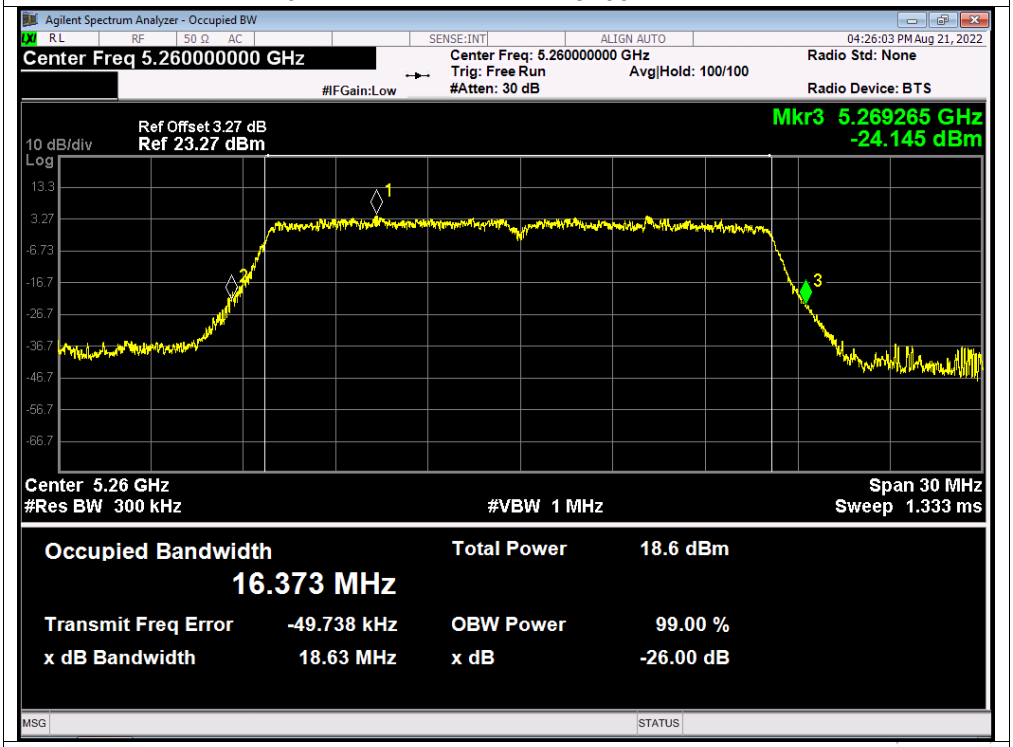
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5260	18.741	18.629	Pass
NVNT	a	5280	18.535	18.552	Pass
NVNT	a	5320	18.509	18.584	Pass
NVNT	n20	5260	19.549	19.498	Pass
NVNT	n20	5280	19.489	19.596	Pass
NVNT	n20	5320	19.682	19.406	Pass
NVNT	n40	5270	41.992	42.07	Pass
NVNT	n40	5310	42.106	42.142	Pass
NVNT	ac20	5260	19.576	19.485	Pass
NVNT	ac20	5280	19.553	19.526	Pass
NVNT	ac20	5320	19.596	19.455	Pass
NVNT	ac40	5270	42.232	42.172	Pass
NVNT	ac40	5310	42.131	42.372	Pass
NVNT	ac80	5290	80.989	**81.179**	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5260	16.349	16.338
NVNT	a	5280	16.336	16.338
NVNT	a	5320	16.334	16.32
NVNT	n20	5260	17.534	17.534
NVNT	n20	5280	17.542	17.533
NVNT	n20	5320	17.534	17.533
NVNT	n40	5270	36.026	36.042
NVNT	n40	5310	36.029	36.009
NVNT	ac20	5260	17.53	17.532
NVNT	ac20	5280	17.534	17.54
NVNT	ac20	5320	17.54	17.53
NVNT	ac40	5270	35.964	36.026
NVNT	ac40	5310	36.015	35.998
NVNT	ac80	5290	74.566	74.559

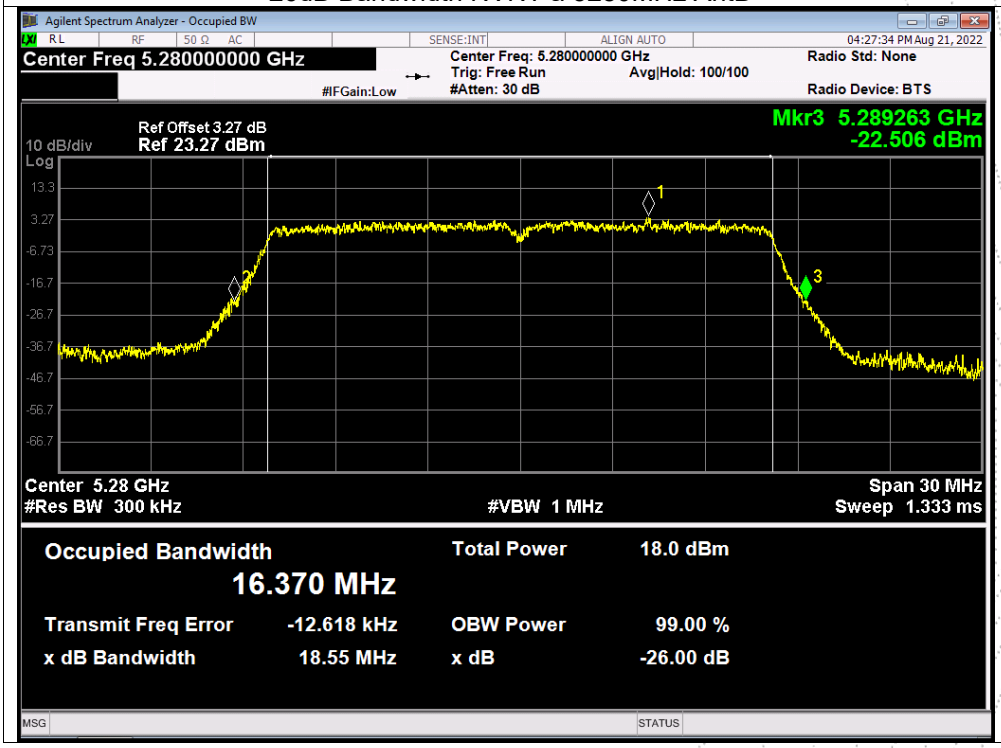
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

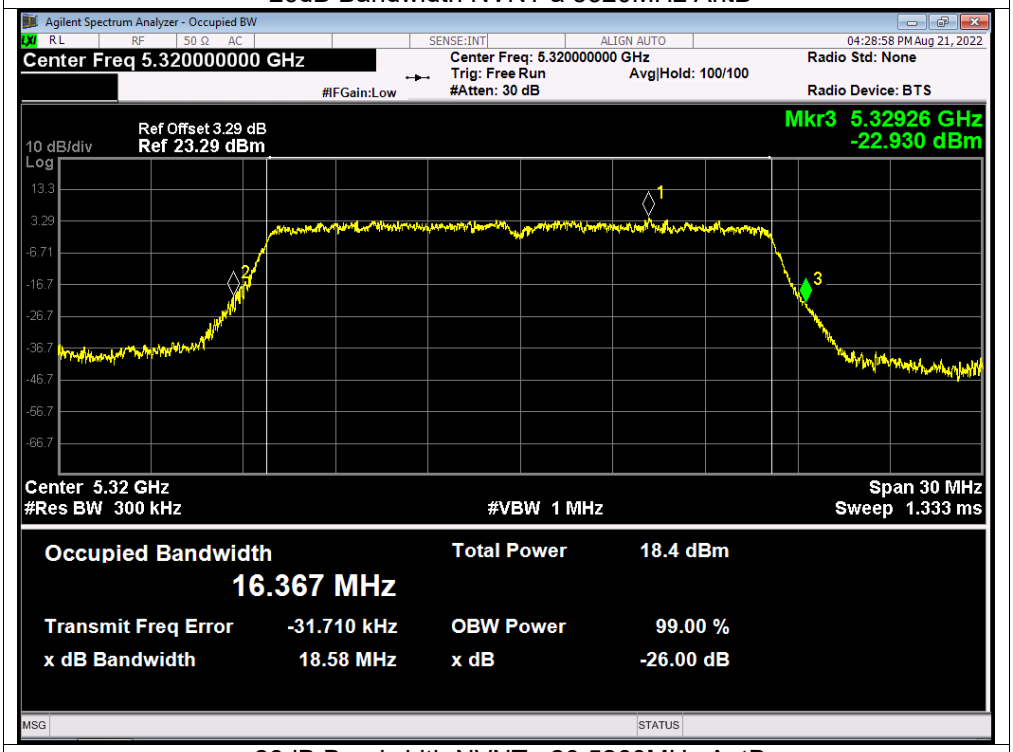
-26dB Bandwidth NVNT a 5260MHz AntB



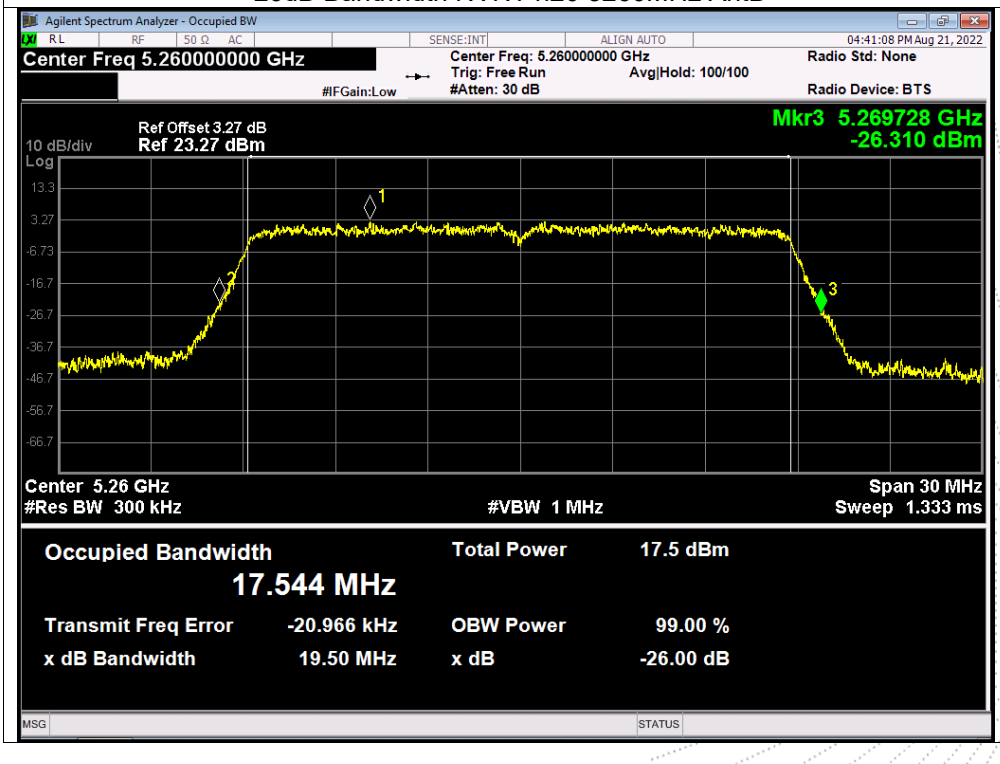
-26dB Bandwidth NVNT a 5280MHz AntB



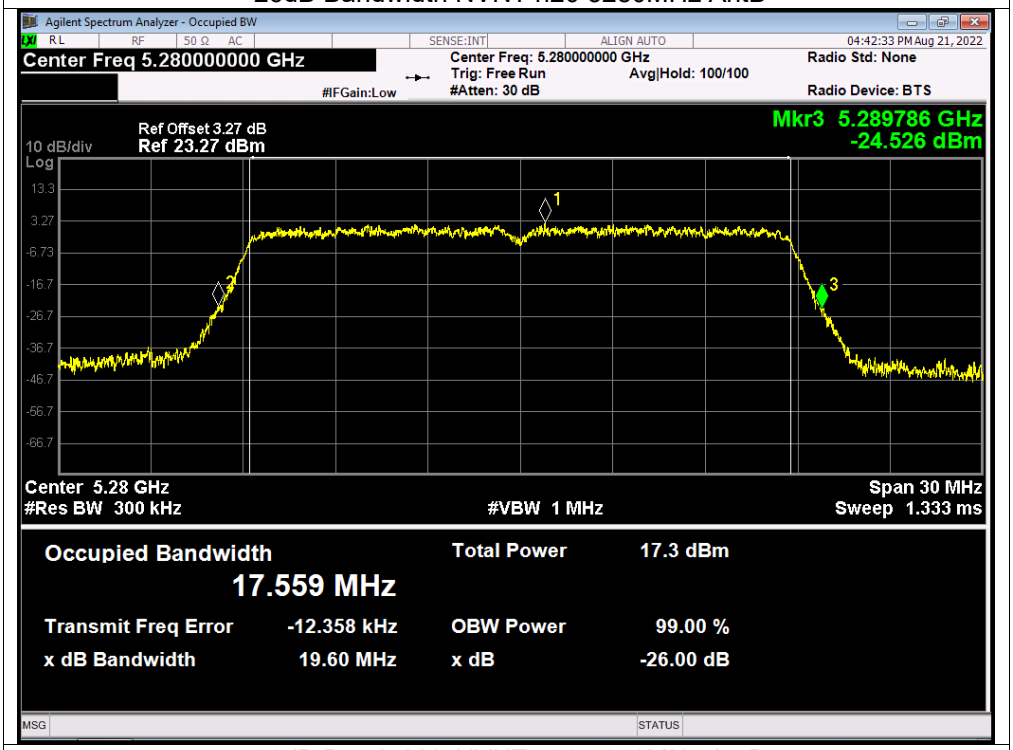
-26dB Bandwidth NVNT a 5320MHz AntB



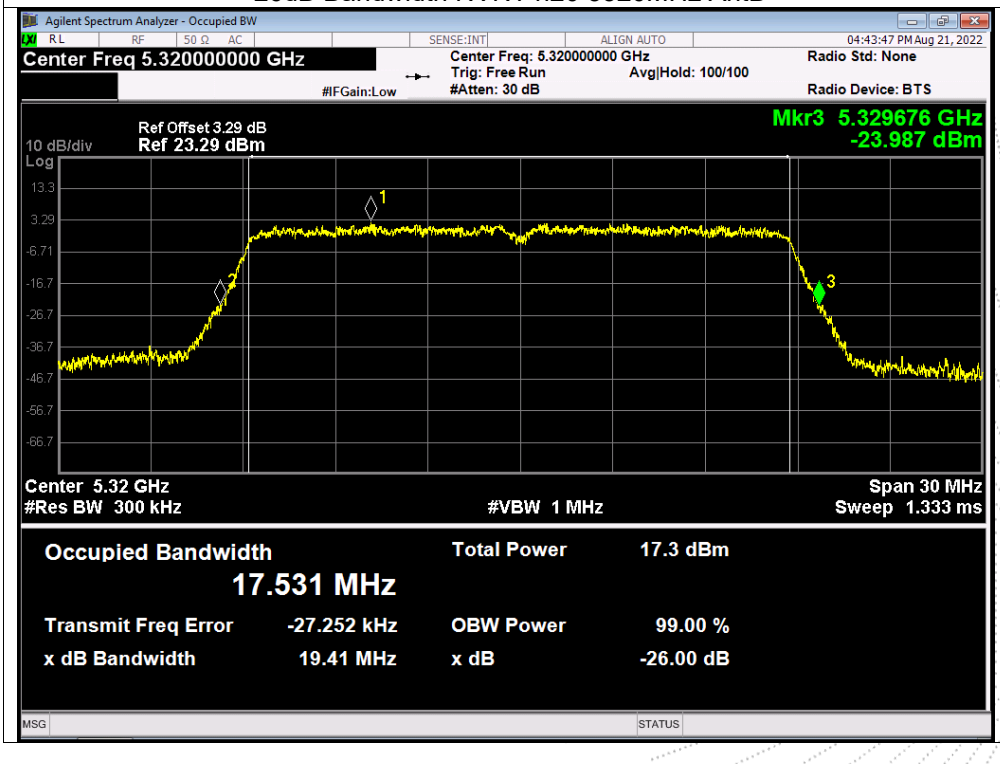
-26dB Bandwidth NVNT n20 5260MHz AntB



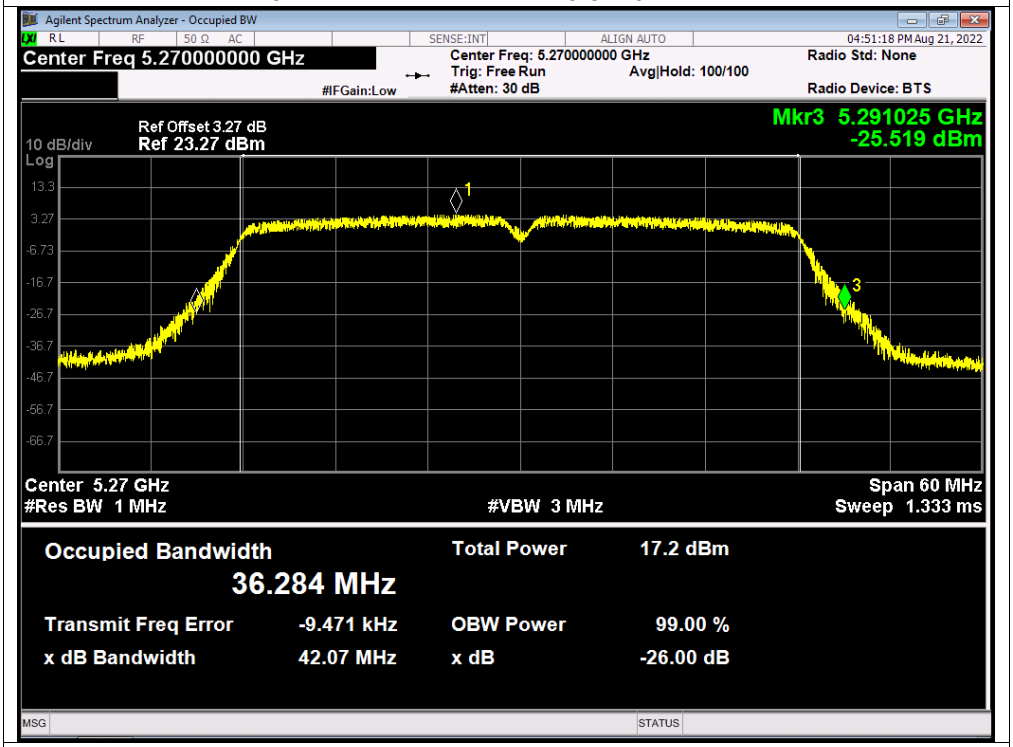
-26dB Bandwidth NVNT n20 5280MHz AntB



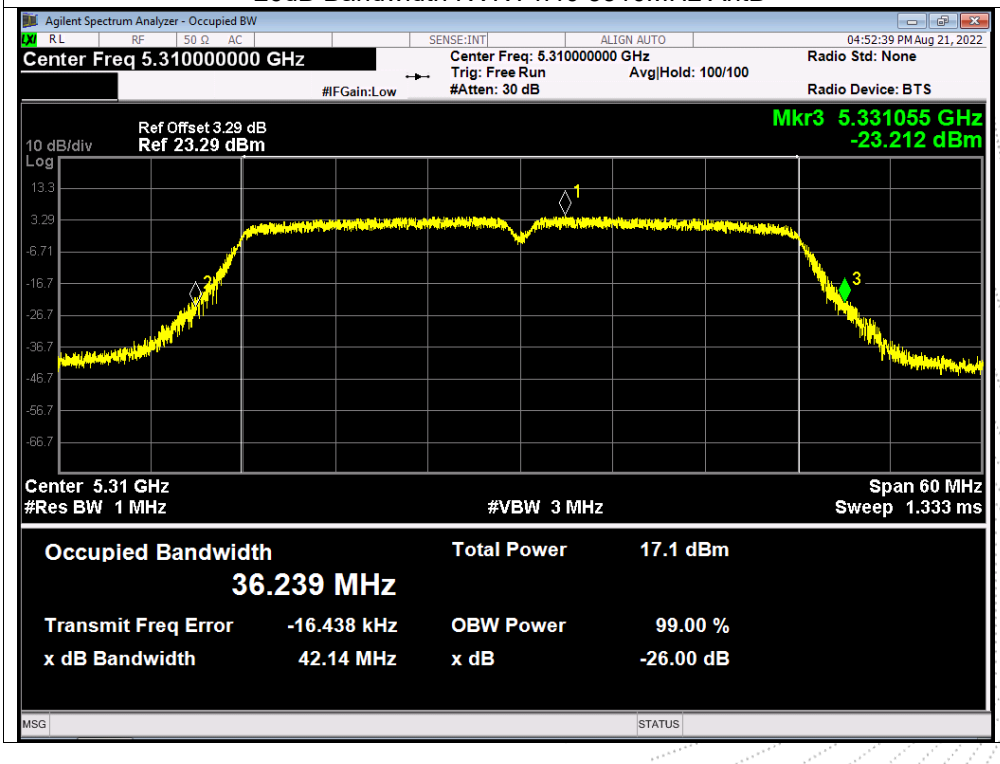
-26dB Bandwidth NVNT n20 5320MHz AntB



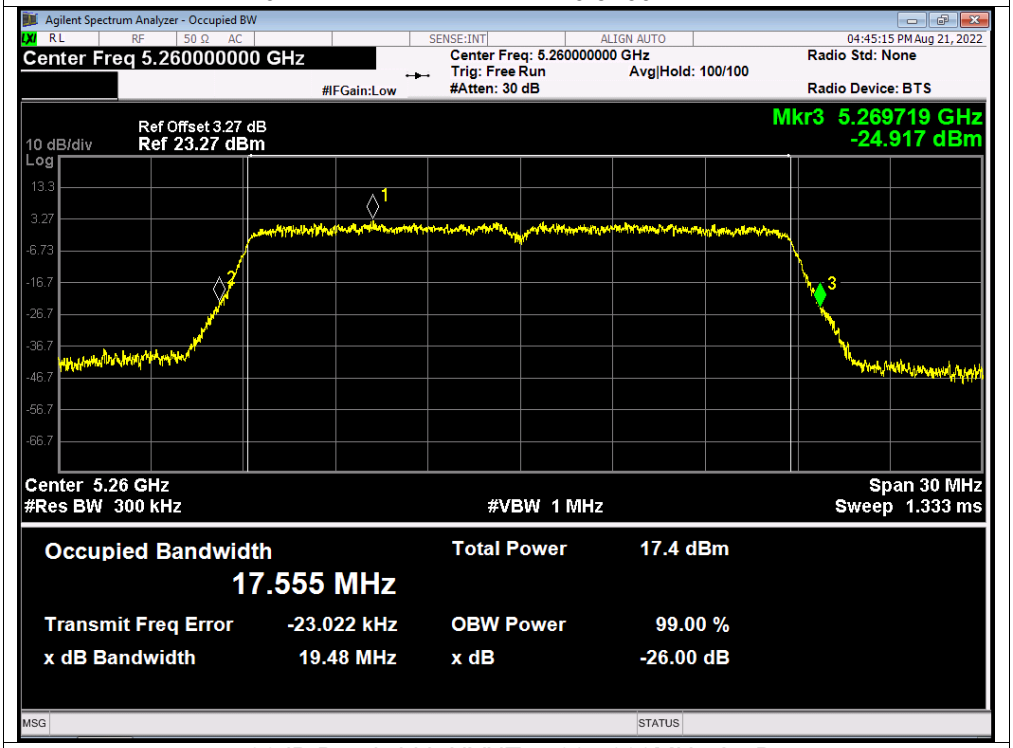
-26dB Bandwidth NVNT n40 5270MHz AntB



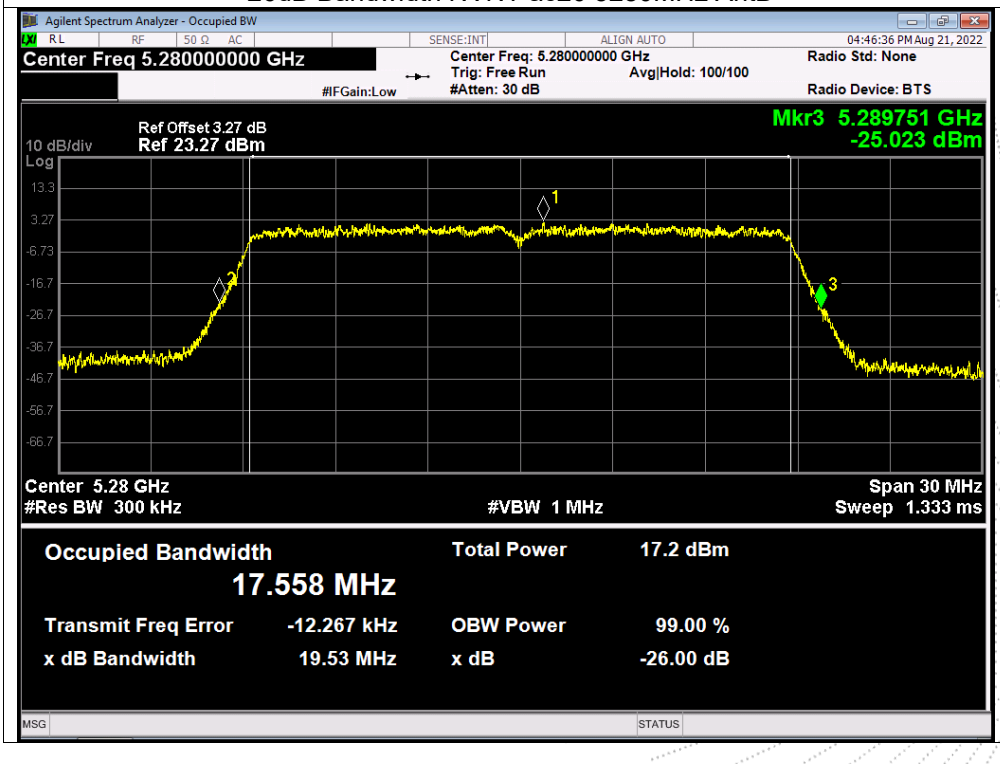
-26dB Bandwidth NVNT n40 5310MHz AntB



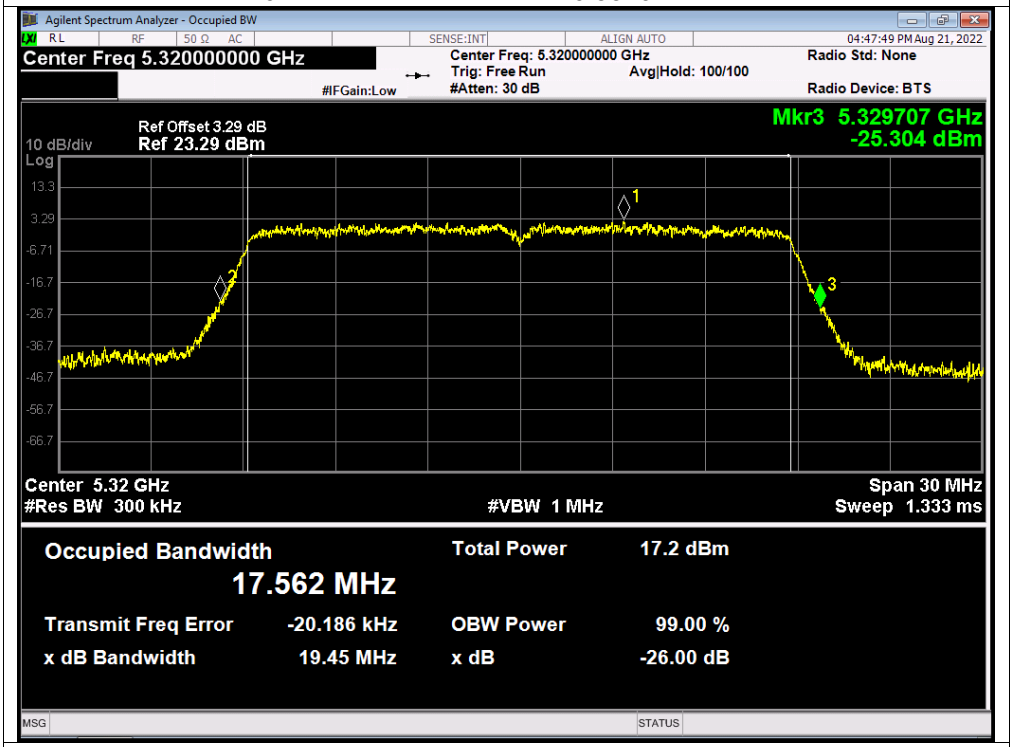
-26dB Bandwidth NVNT ac20 5260MHz AntB



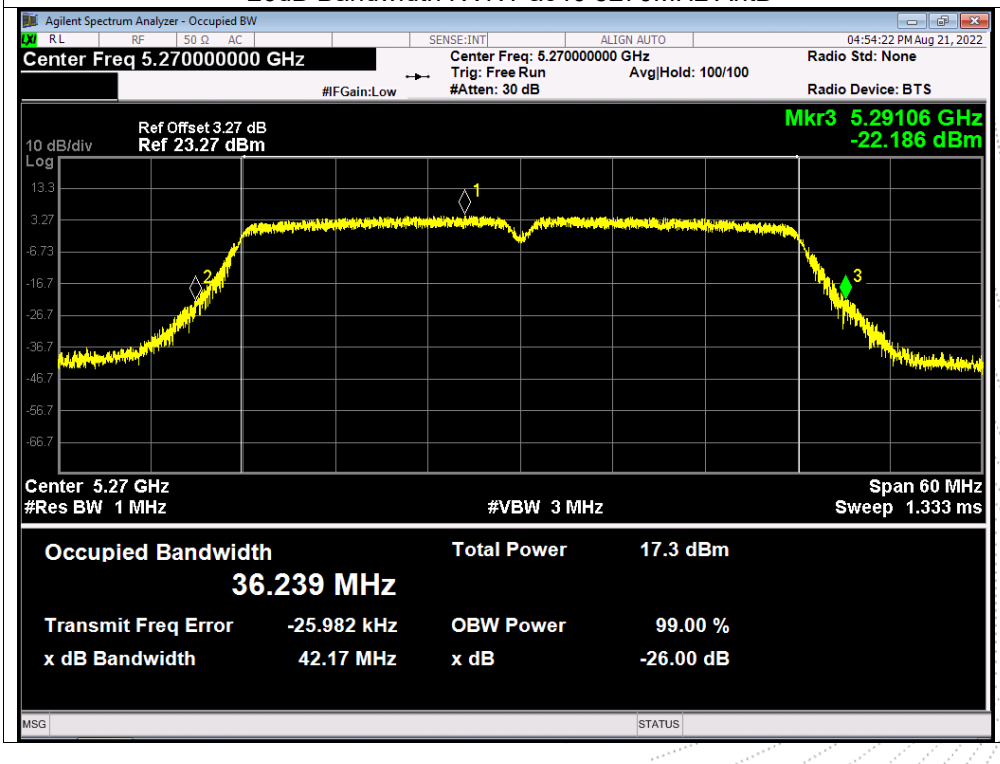
-26dB Bandwidth NVNT ac20 5280MHz AntB



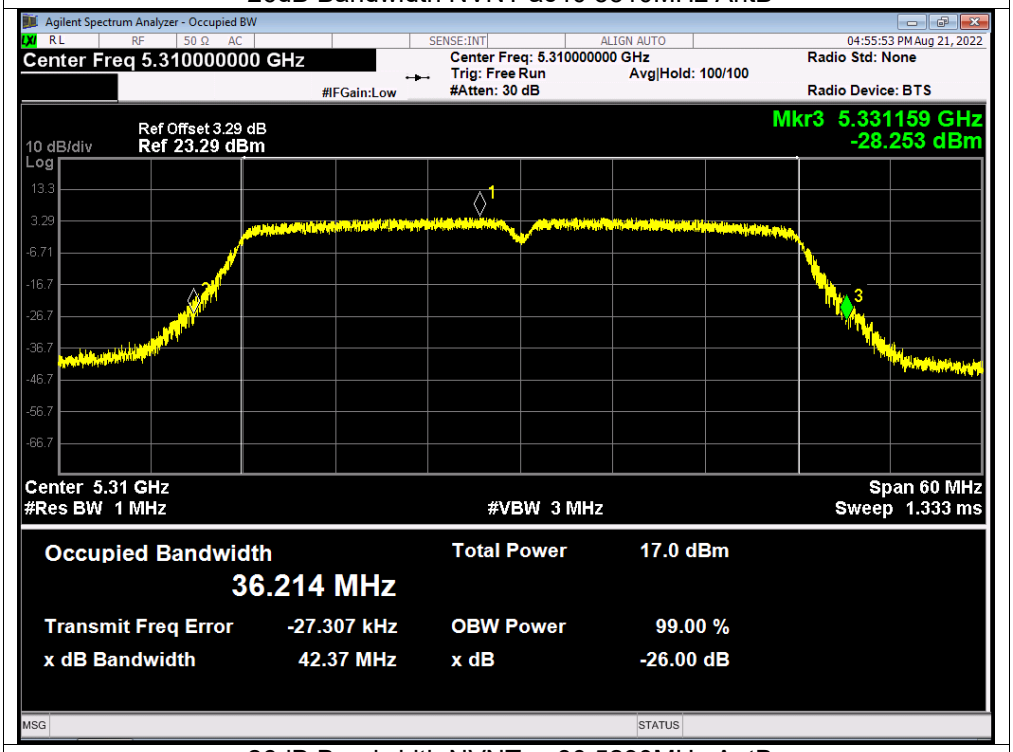
-26dB Bandwidth NVNT ac20 5320MHz AntB



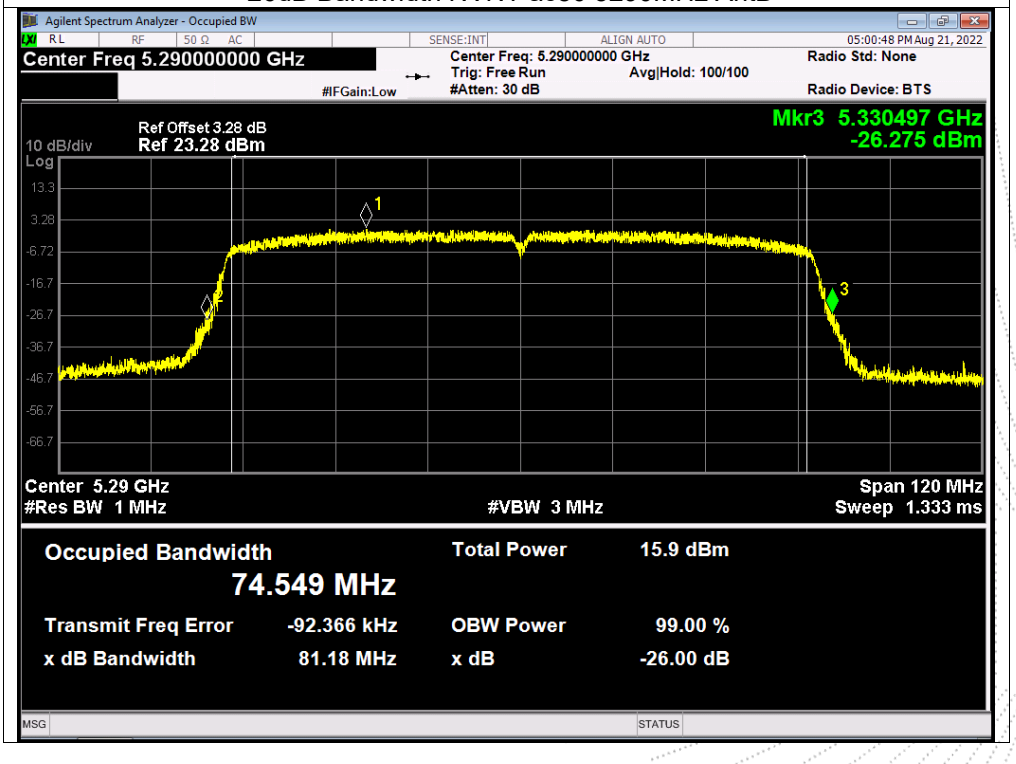
-26dB Bandwidth NVNT ac40 5270MHz AntB



-26dB Bandwidth NVNT ac40 5310MHz AntB

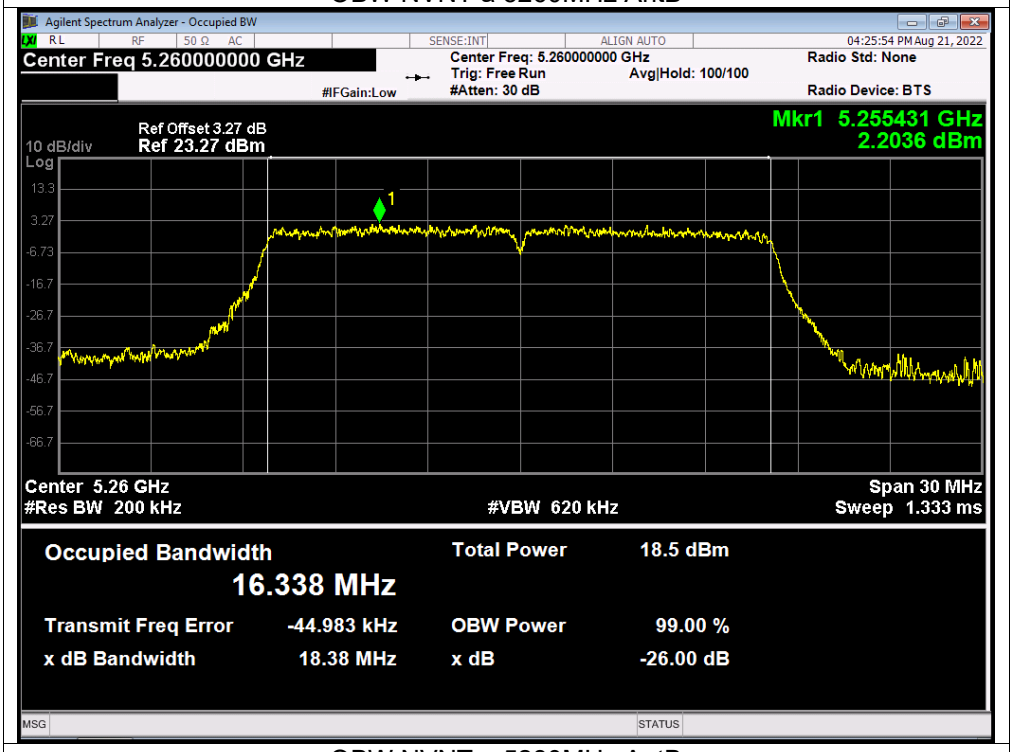


-26dB Bandwidth NVNT ac80 5290MHz AntB

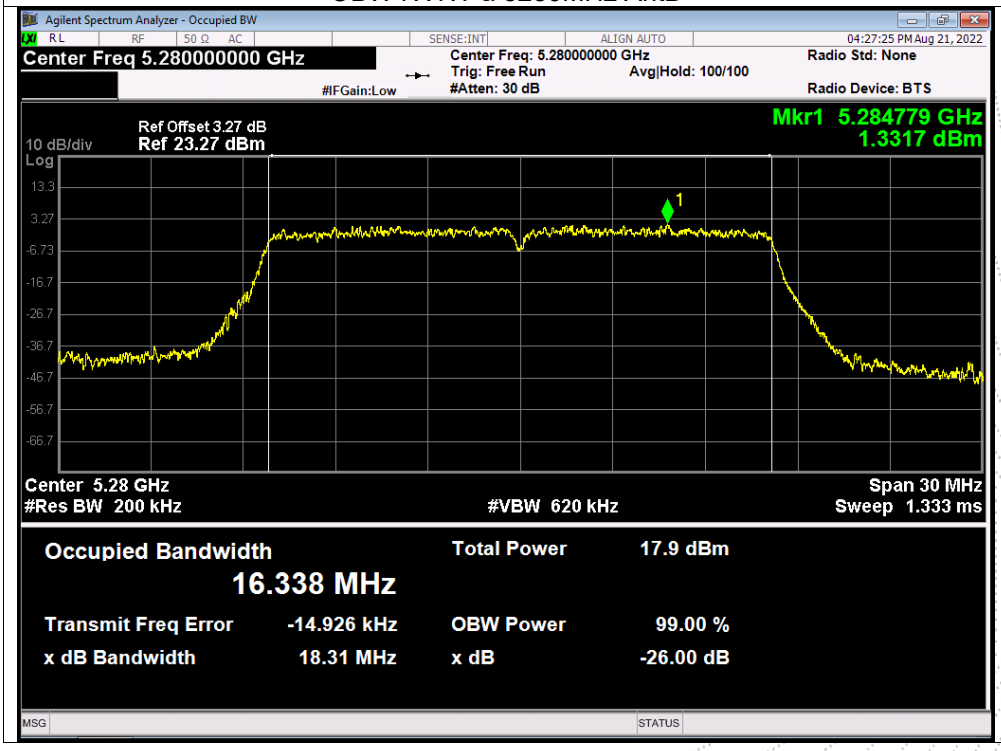


Test Graphs

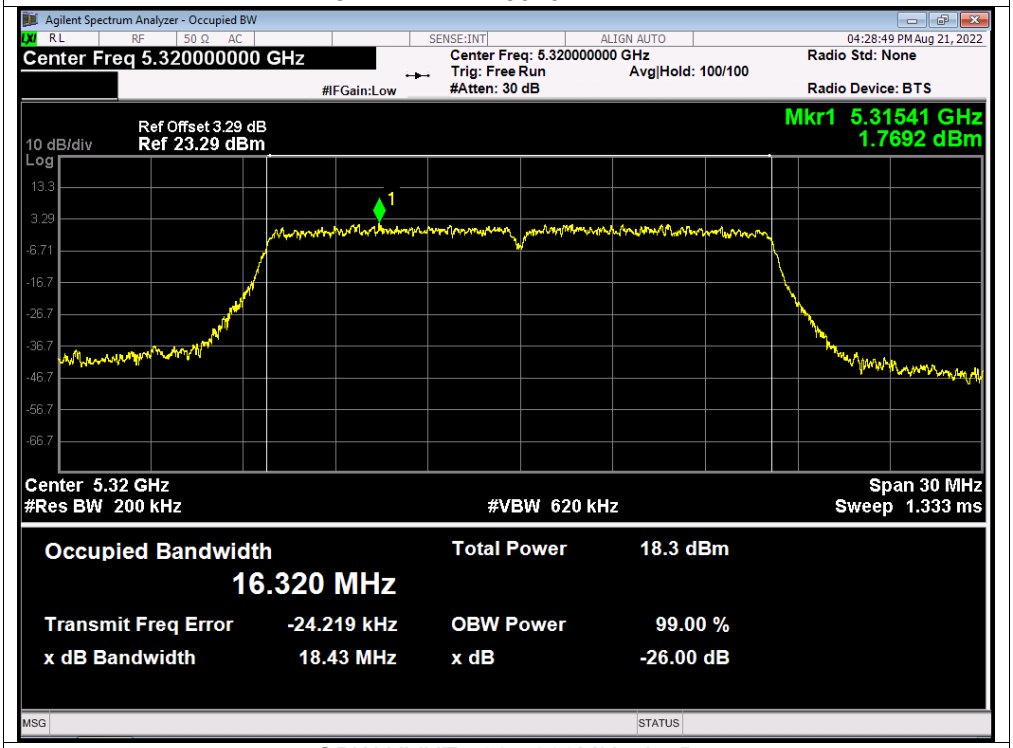
OBW NVNT a 5260MHz AntB



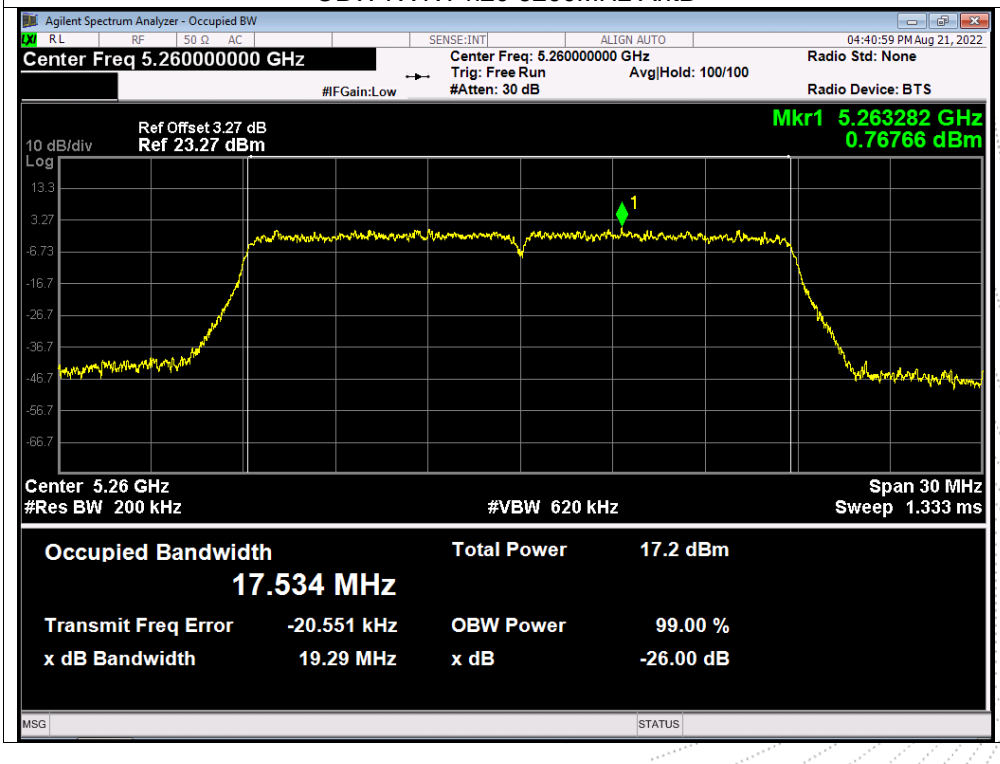
OBW NVNT a 5280MHz AntB



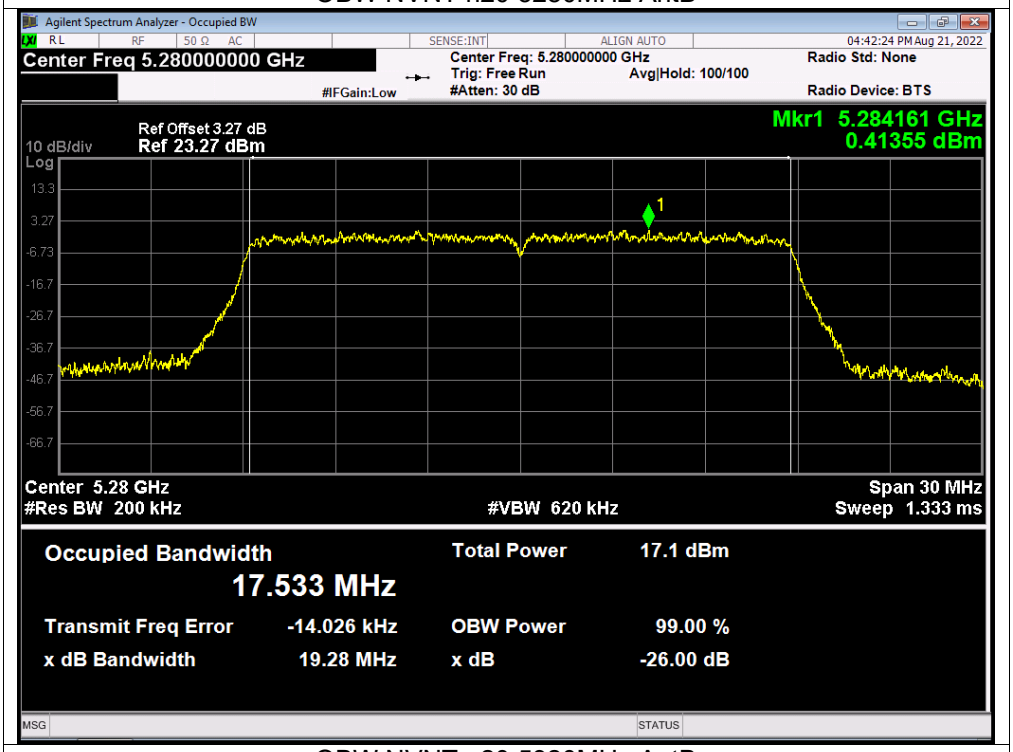
OBW NVNT a 5320MHz AntB



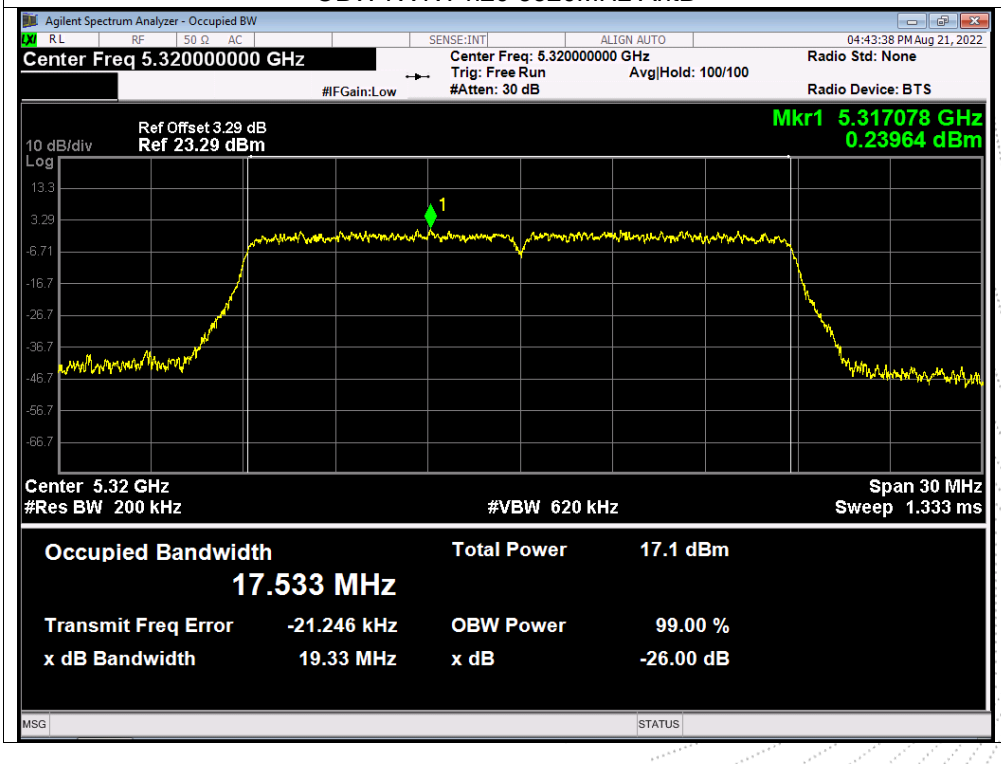
OBW NVNT n20 5260MHz AntB



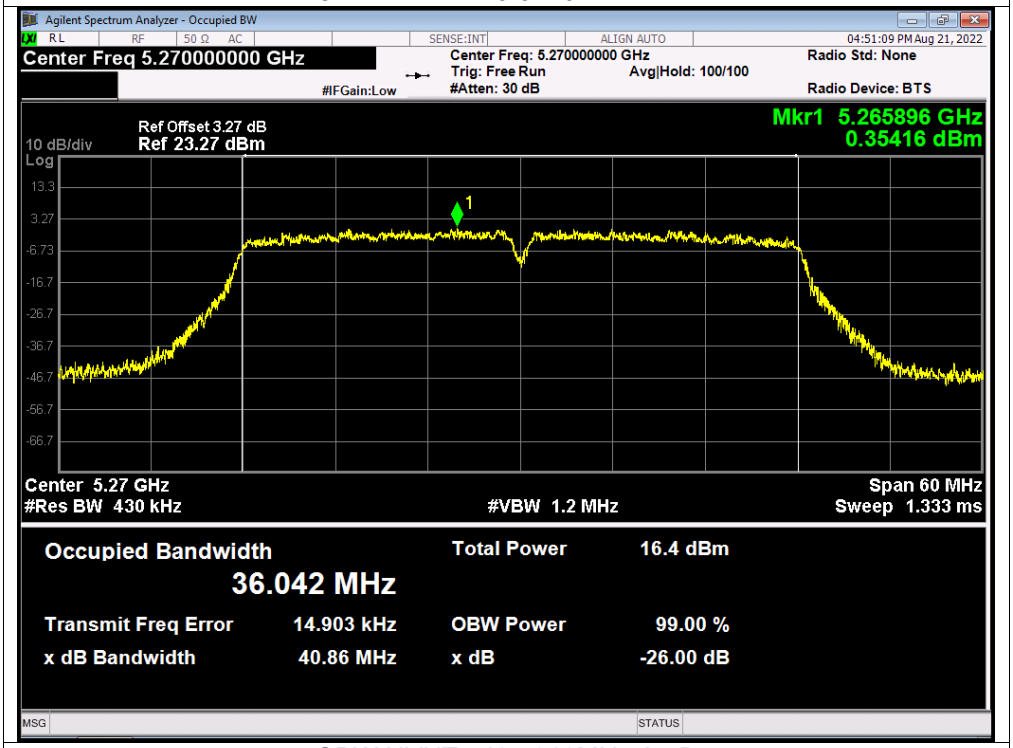
OBW NVNT n20 5280MHz AntB



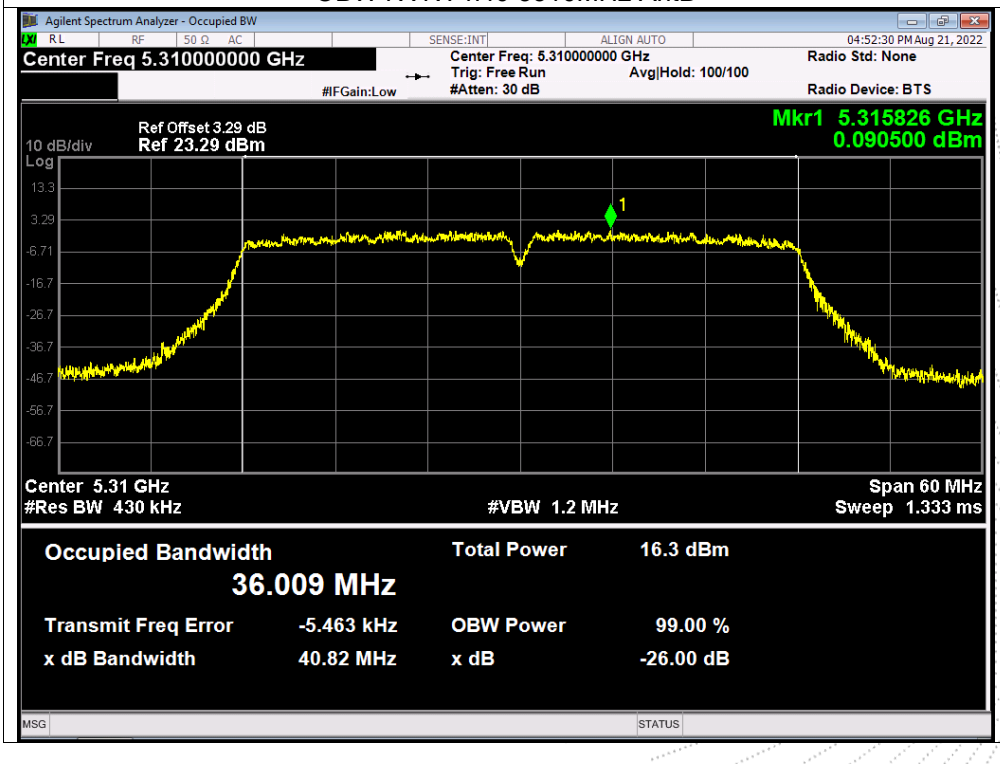
OBW NVNT n20 5320MHz AntB



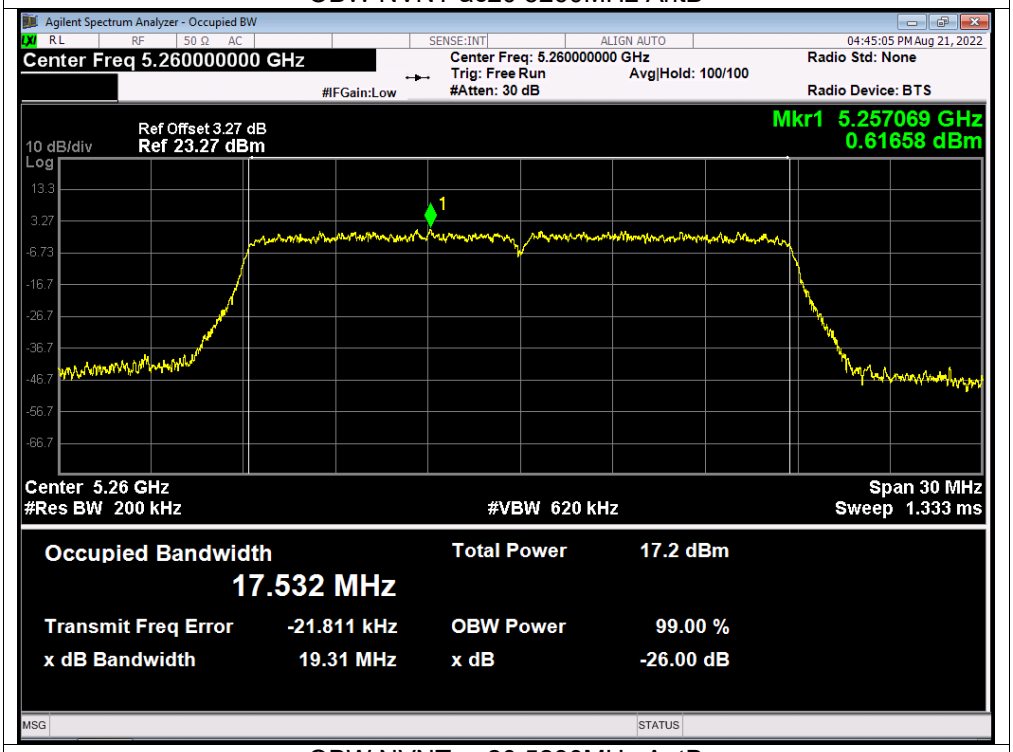
OBW NVNT n40 5270MHz AntB



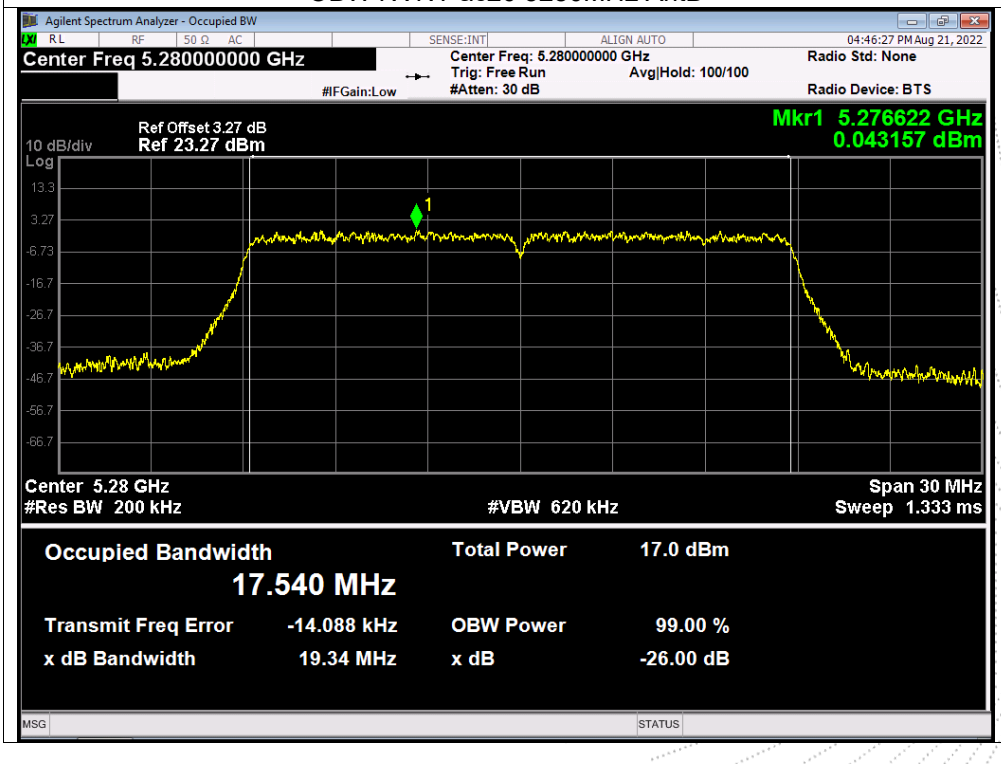
OBW NVNT n40 5310MHz AntB



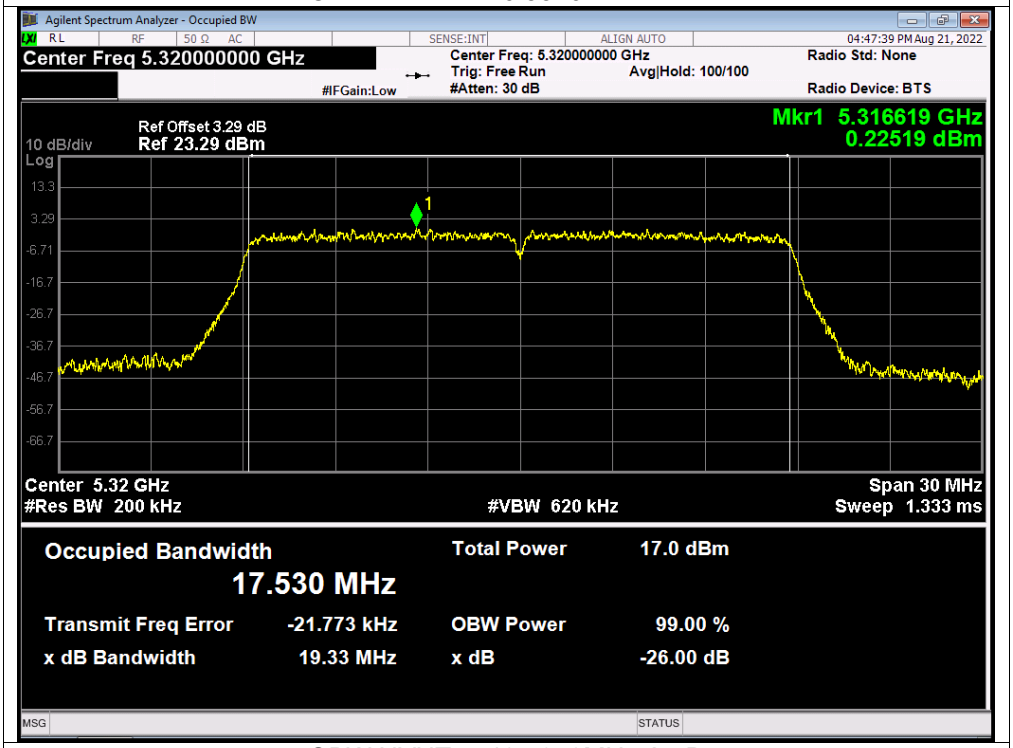
OBW NVNT ac20 5260MHz AntB



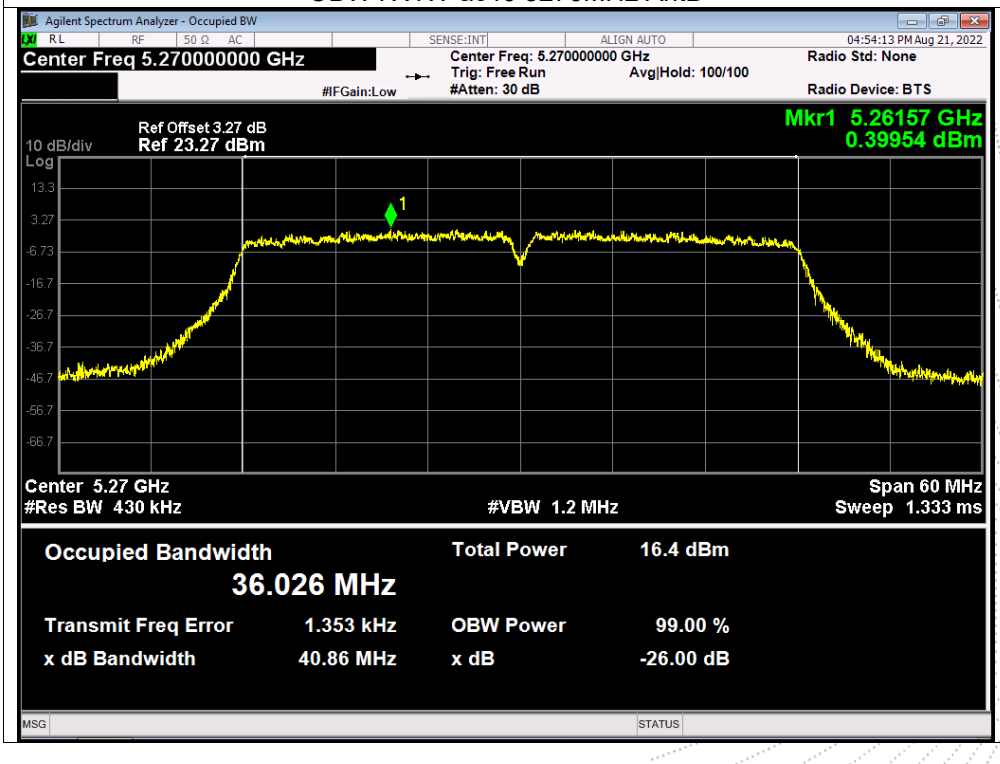
OBW NVNT ac20 5280MHz AntB



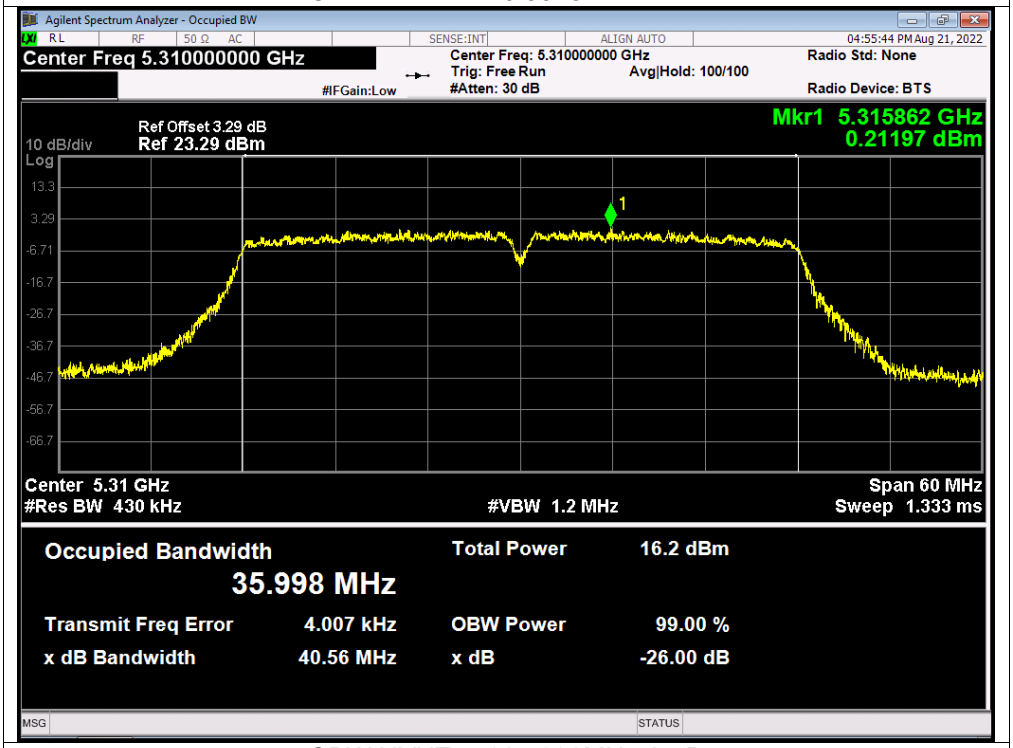
OBW NVNT ac20 5320MHz AntB



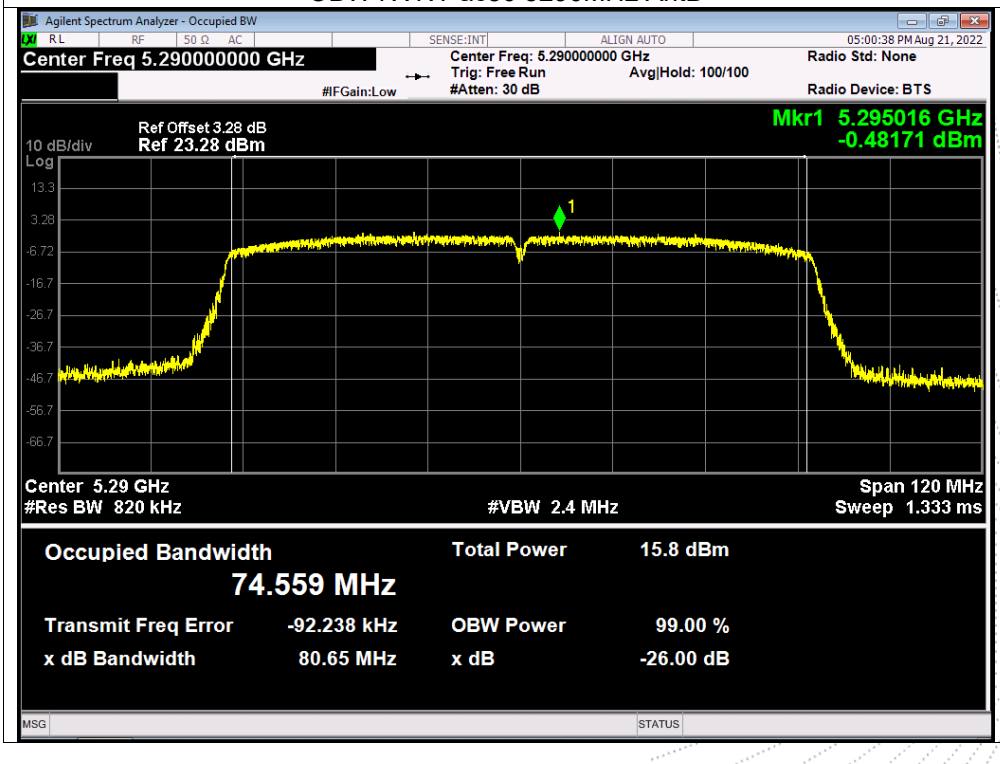
OBW NVNT ac40 5270MHz AntB



OBW NVNT ac40 5310MHz AntB



OBW NVNT ac80 5290MHz AntB



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 5V
Test Mode:	(5500-5700MHz)		

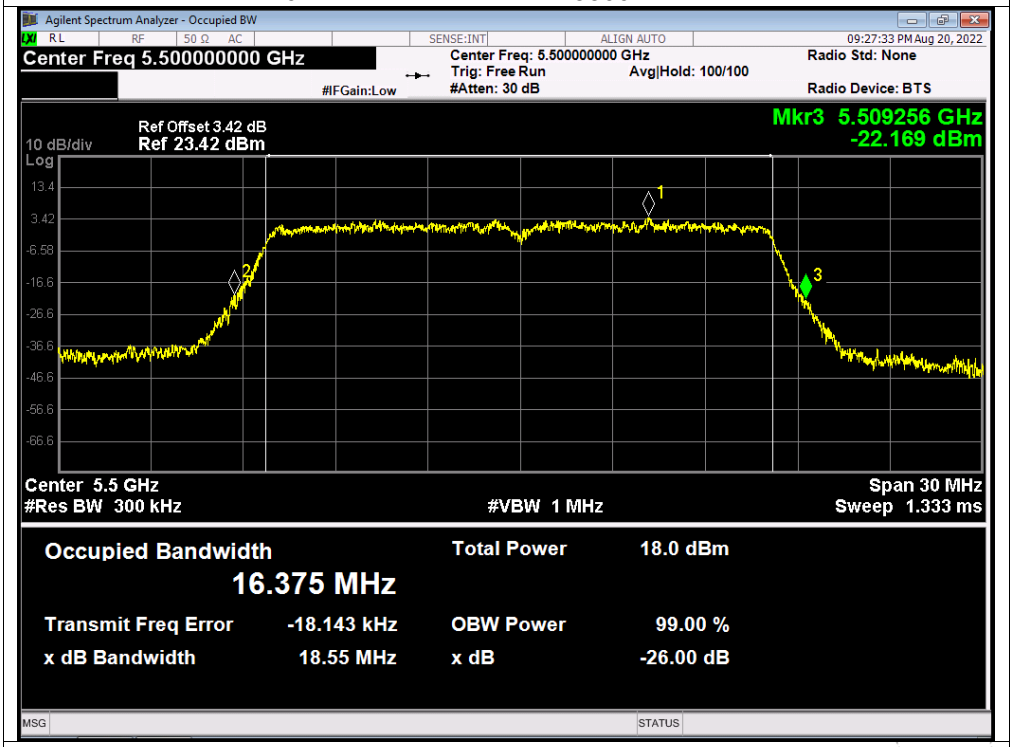
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5500	18.599	18.549	Pass
NVNT	a	5580	18.629	18.654	Pass
NVNT	a	5700	18.567	18.62	Pass
NVNT	n20	5500	19.469	19.454	Pass
NVNT	n20	5580	19.517	19.496	Pass
NVNT	n20	5700	19.455	19.512	Pass
NVNT	n40	5510	42.384	42.319	Pass
NVNT	n40	5590	42.17	42.27	Pass
NVNT	n40	5670	42.219	42.073	Pass
NVNT	ac20	5500	19.527	19.561	Pass
NVNT	ac20	5580	19.589	19.513	Pass
NVNT	ac20	5700	19.444	19.386	Pass
NVNT	ac40	5510	42.222	42.265	Pass
NVNT	ac40	5590	42.285	42.07	Pass
NVNT	ac40	5670	42.182	42.085	Pass
NVNT	ac80	5530	80.743	**81.098**	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5500	16.331	16.333
NVNT	a	5600	16.337	16.328
NVNT	a	5700	16.321	16.324
NVNT	n20	5500	17.535	17.533
NVNT	n20	5600	17.529	17.533
NVNT	n20	5700	17.527	17.519
NVNT	n40	5510	36.006	35.996
NVNT	n40	5590	36.028	36.014
NVNT	n40	5670	36.013	36.033
NVNT	ac20	5500	17.54	17.535
NVNT	ac20	5600	17.533	17.542
NVNT	ac20	5700	17.529	17.521
NVNT	ac40	5510	36.026	36.018
NVNT	ac40	5590	36.015	35.993
NVNT	ac40	5670	35.992	36.008
NVNT	ac80	5530	74.512	74.395

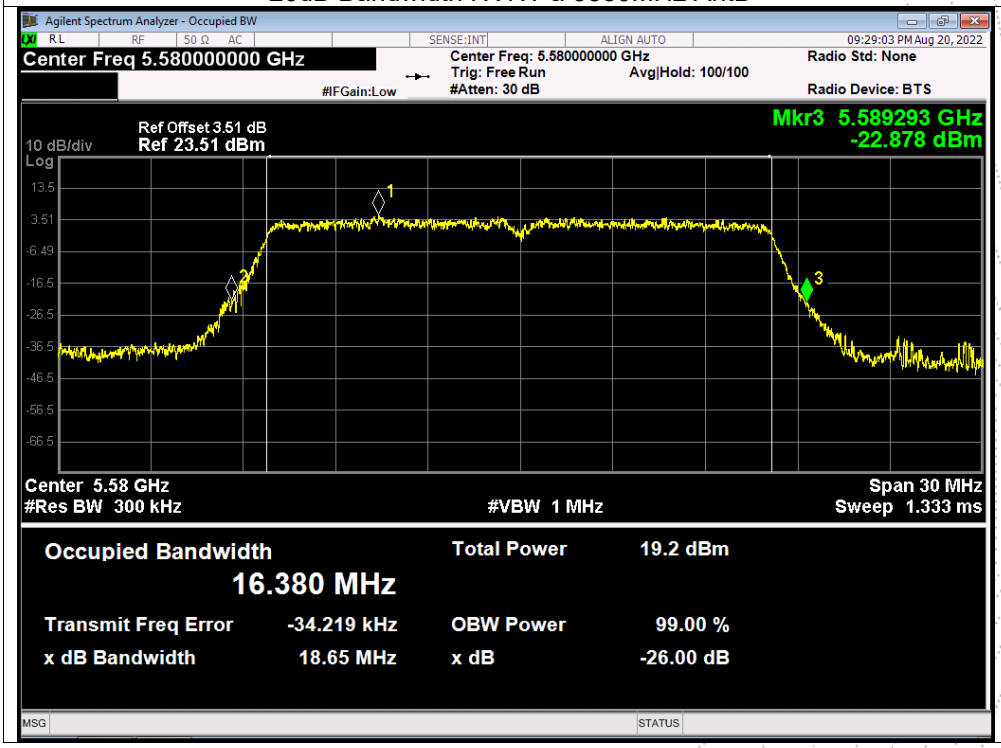
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

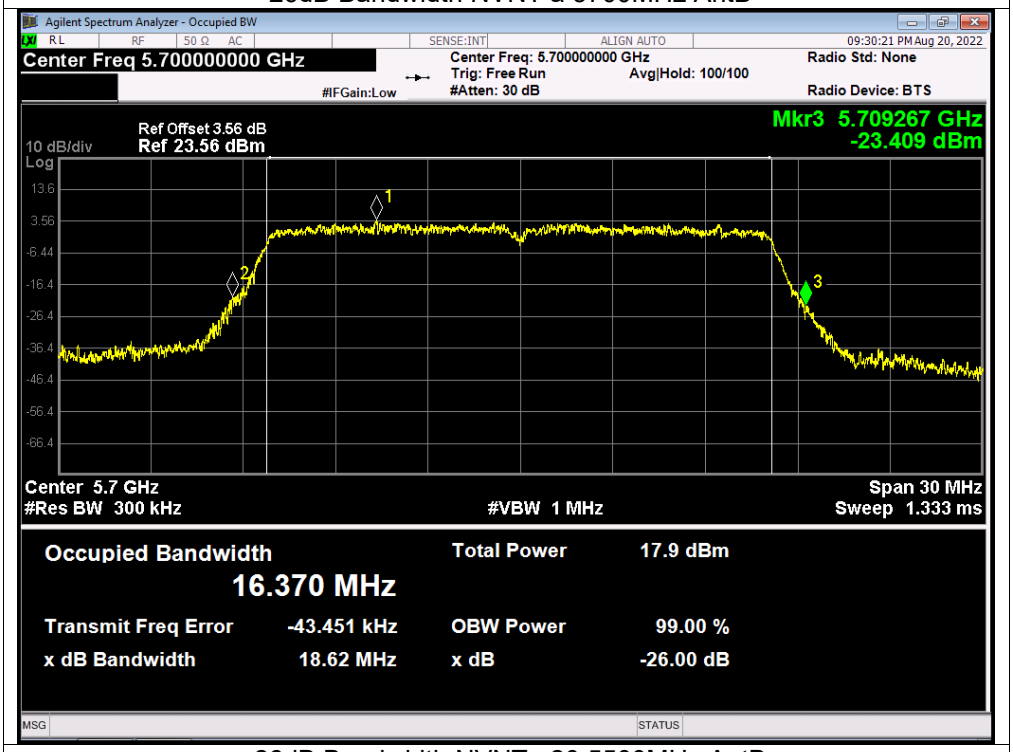
-26dB Bandwidth NVNT a 5500MHz AntB



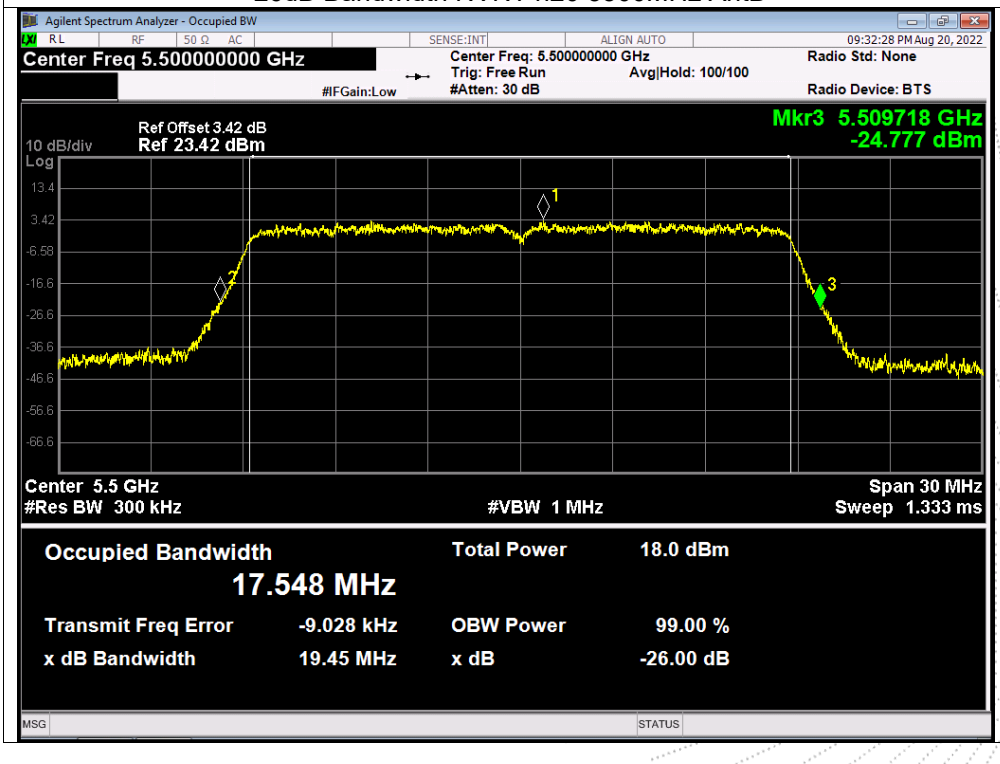
-26dB Bandwidth NVNT a 5580MHz AntB



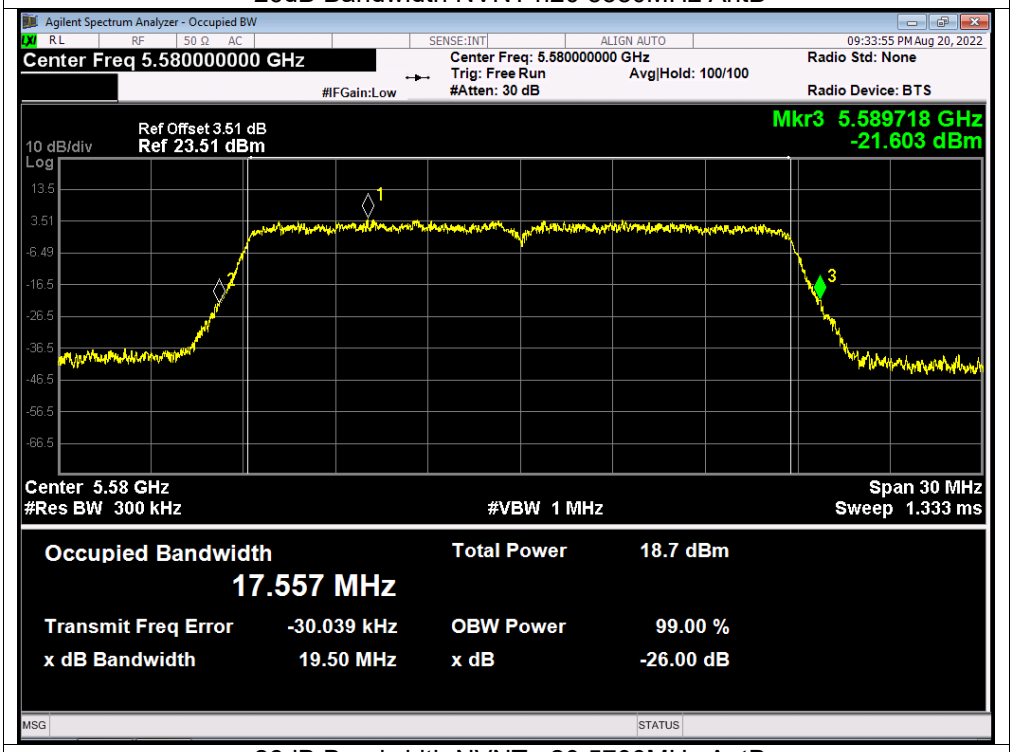
-26dB Bandwidth NVNT a 5700MHz AntB



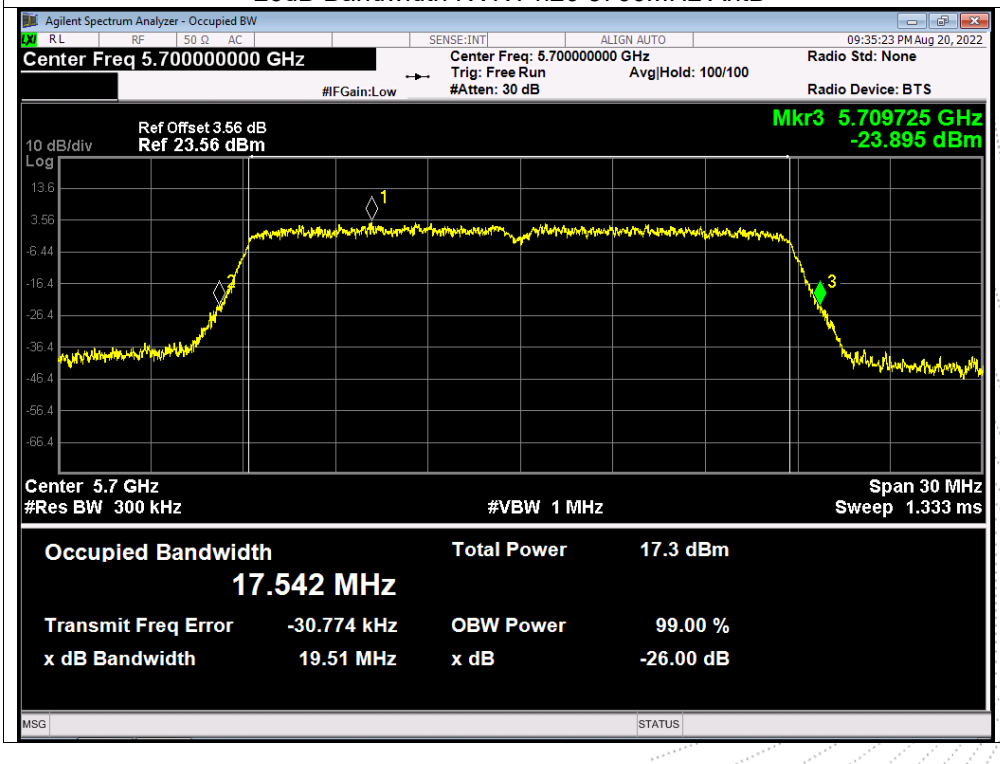
-26dB Bandwidth NVNT n20 5500MHz AntB



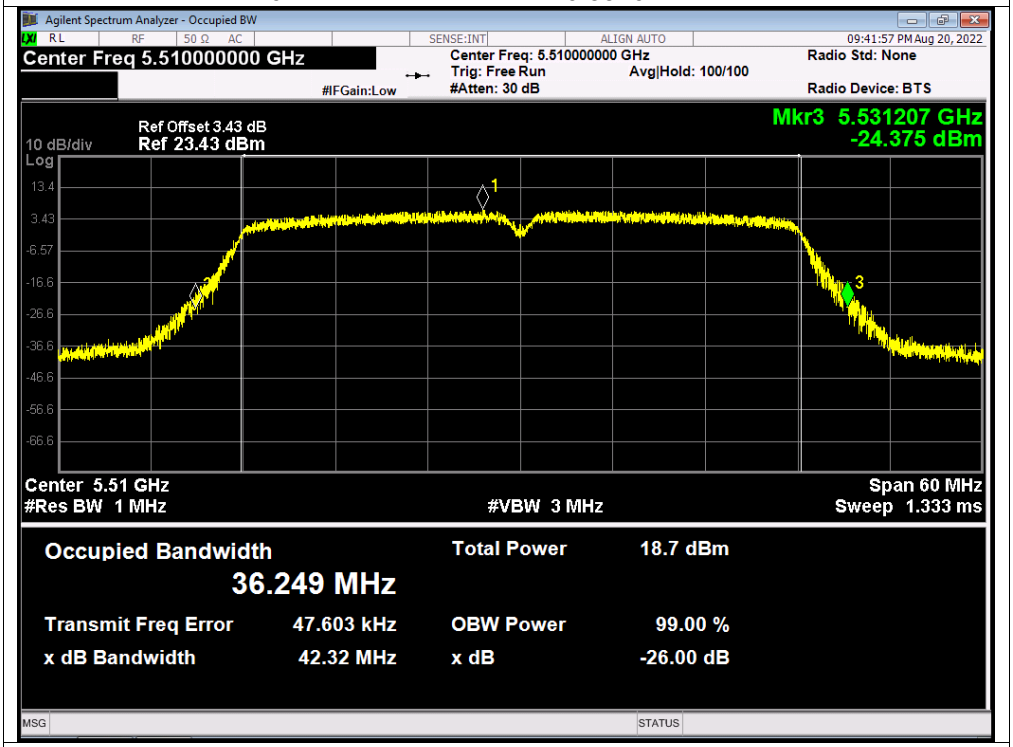
-26dB Bandwidth NVNT n20 5580MHz AntB



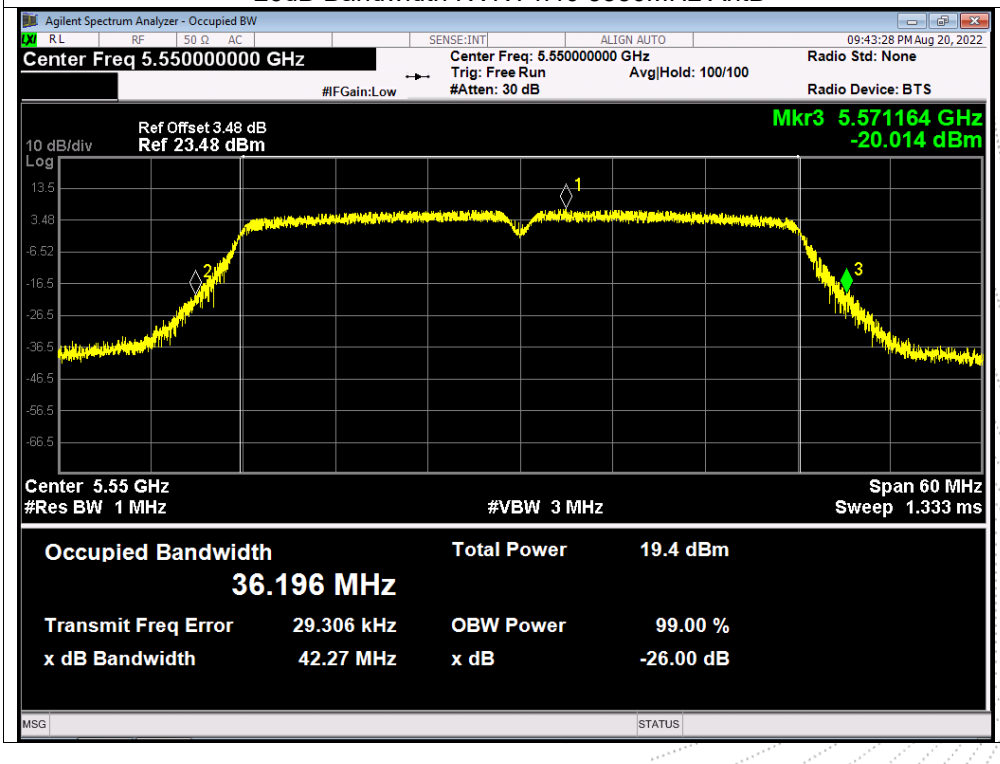
-26dB Bandwidth NVNT n20 5700MHz AntB



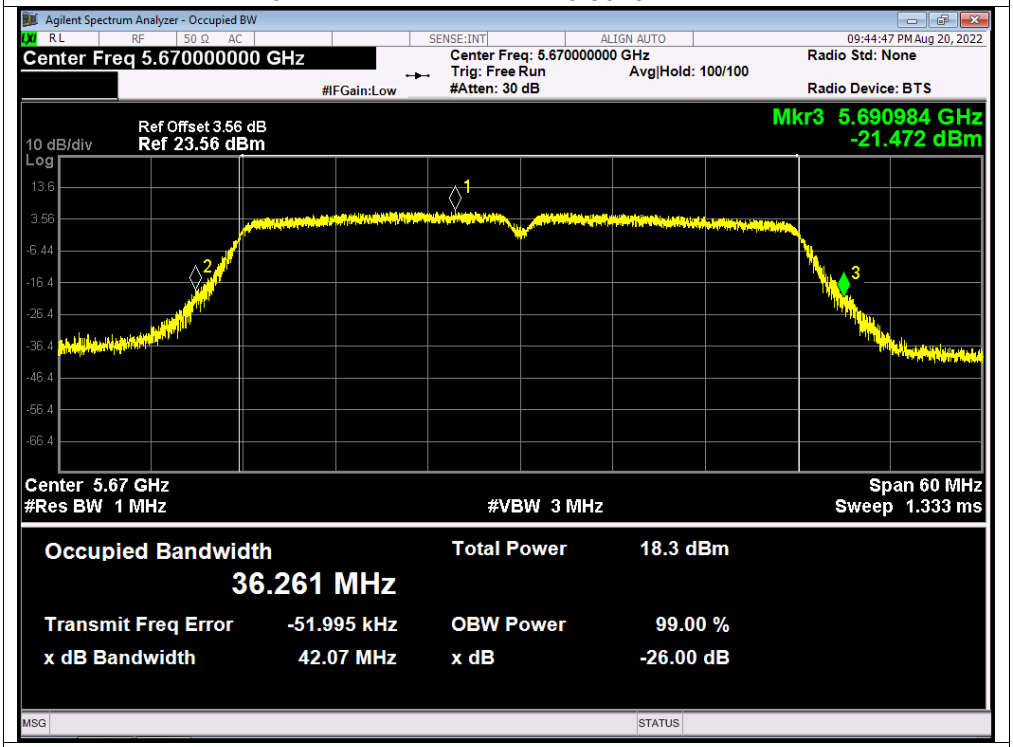
-26dB Bandwidth NVNT n40 5510MHz AntB



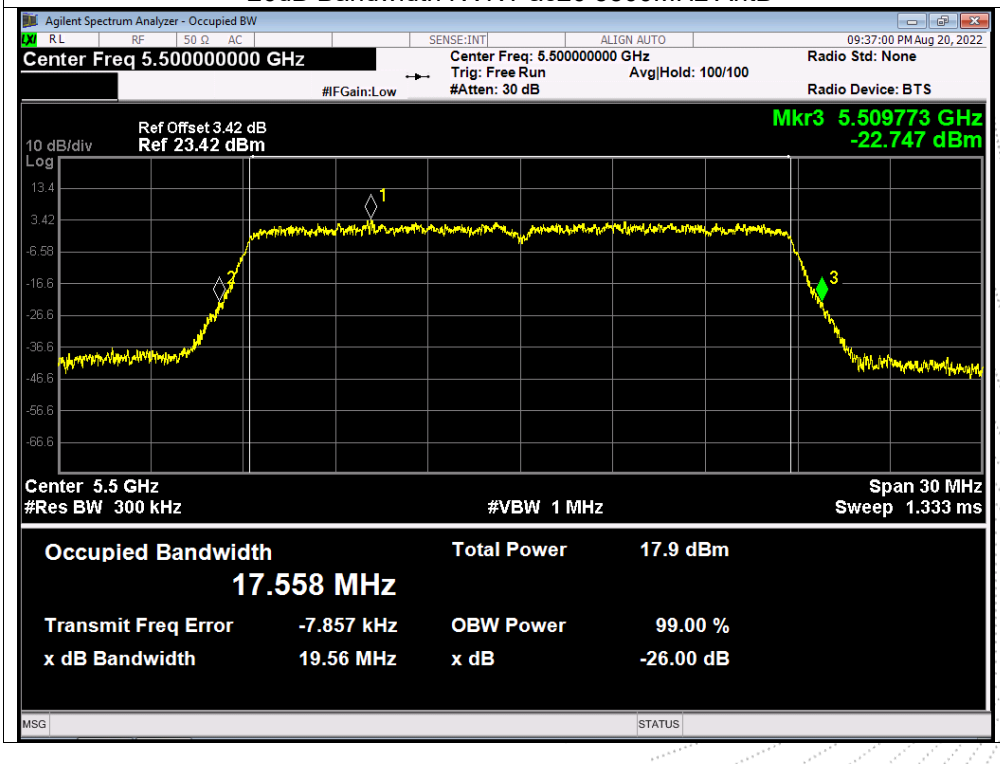
-26dB Bandwidth NVNT n40 5550MHz AntB



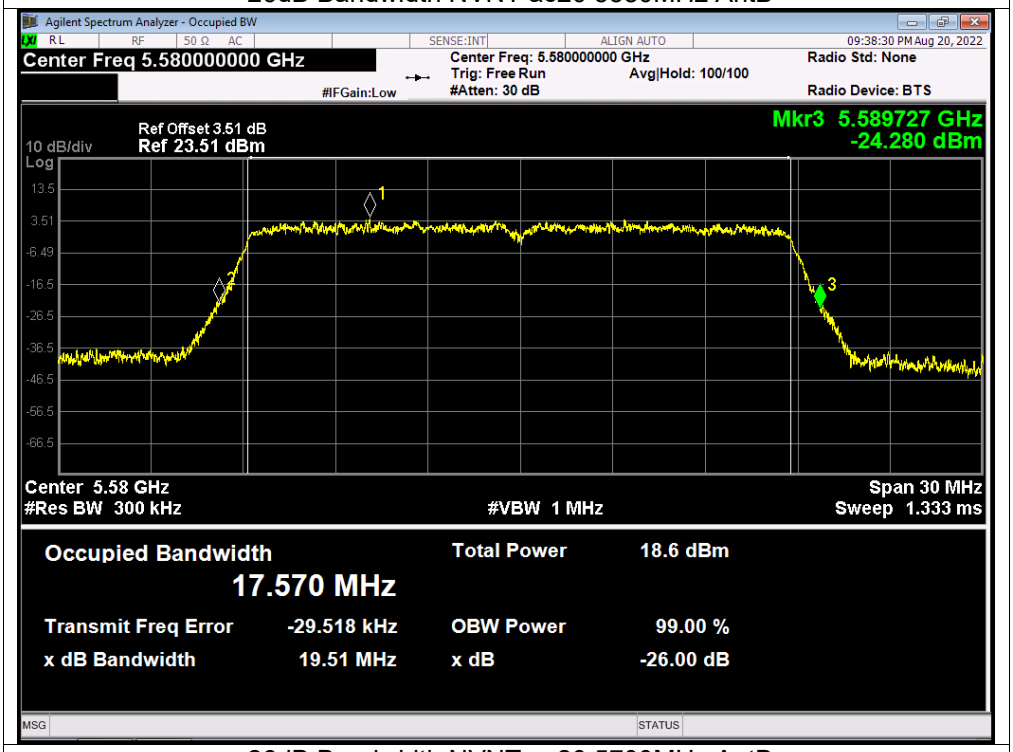
-26dB Bandwidth NVNT n40 5670MHz AntB



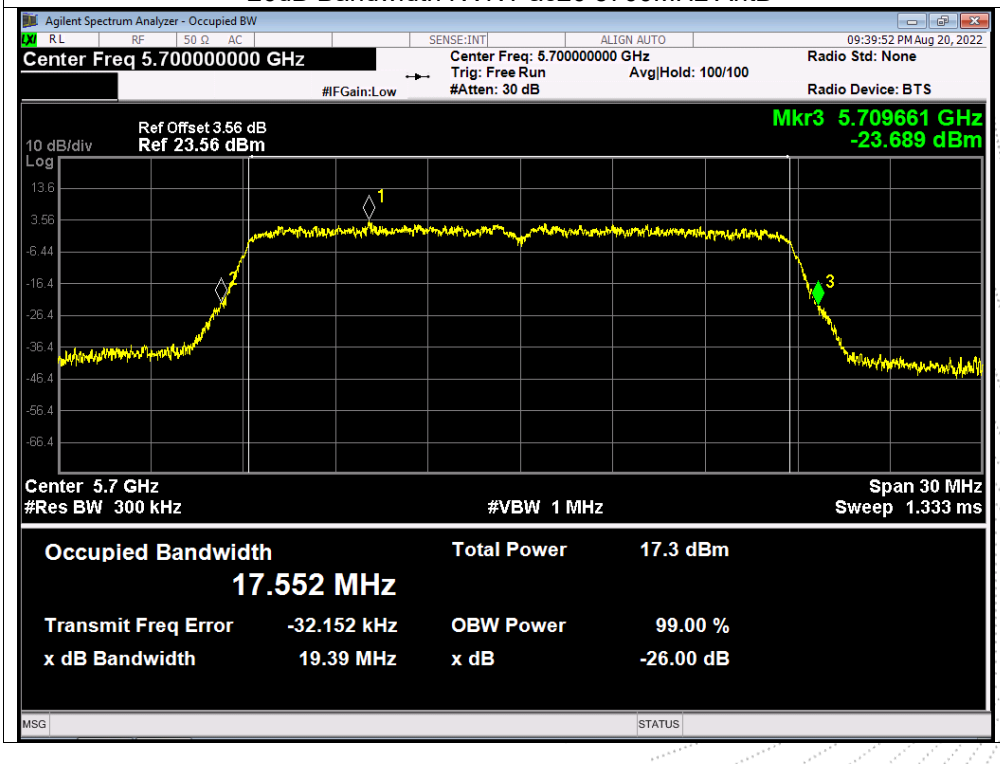
-26dB Bandwidth NVNT ac20 5500MHz AntB



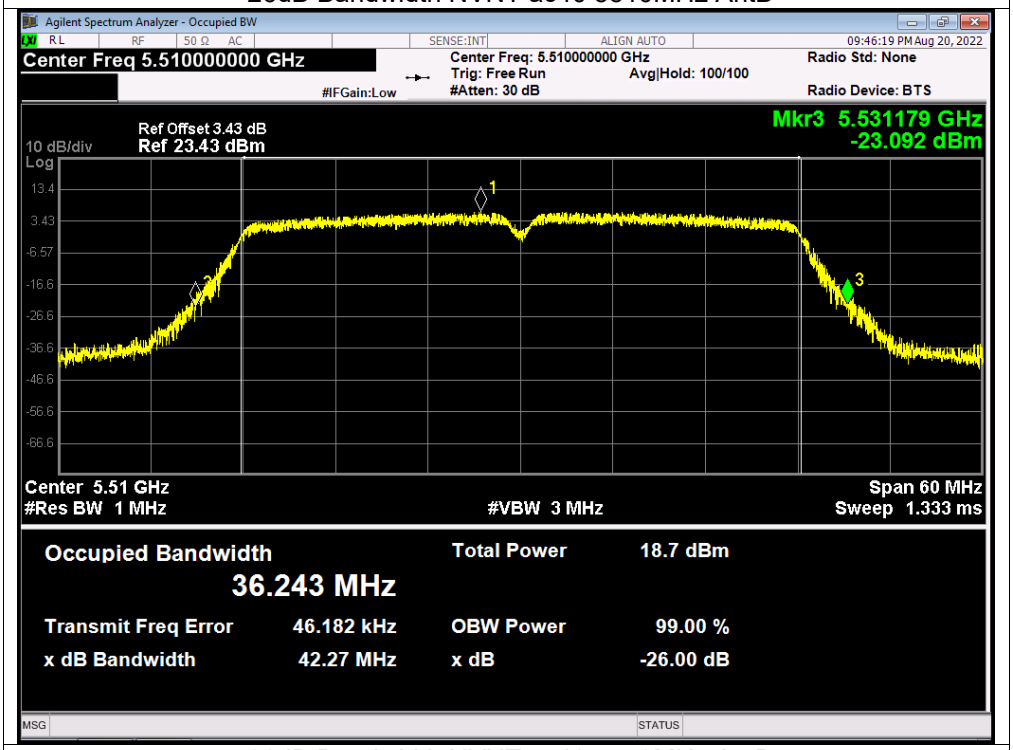
-26dB Bandwidth NVNT ac20 5580MHz AntB



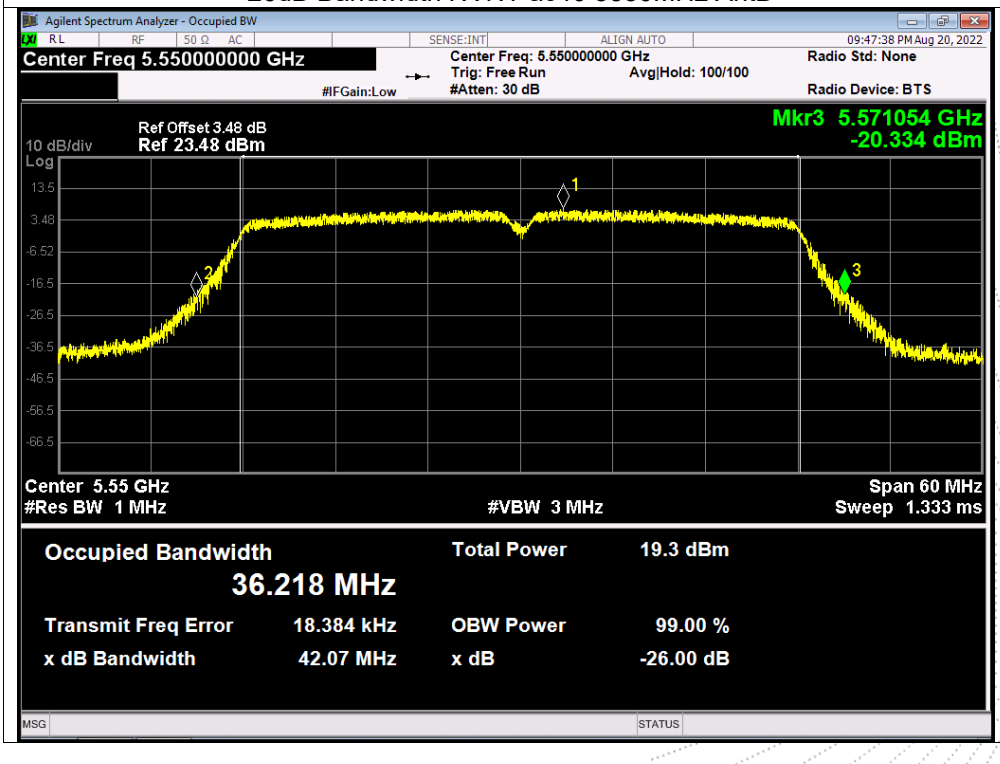
-26dB Bandwidth NVNT ac20 5700MHz AntB



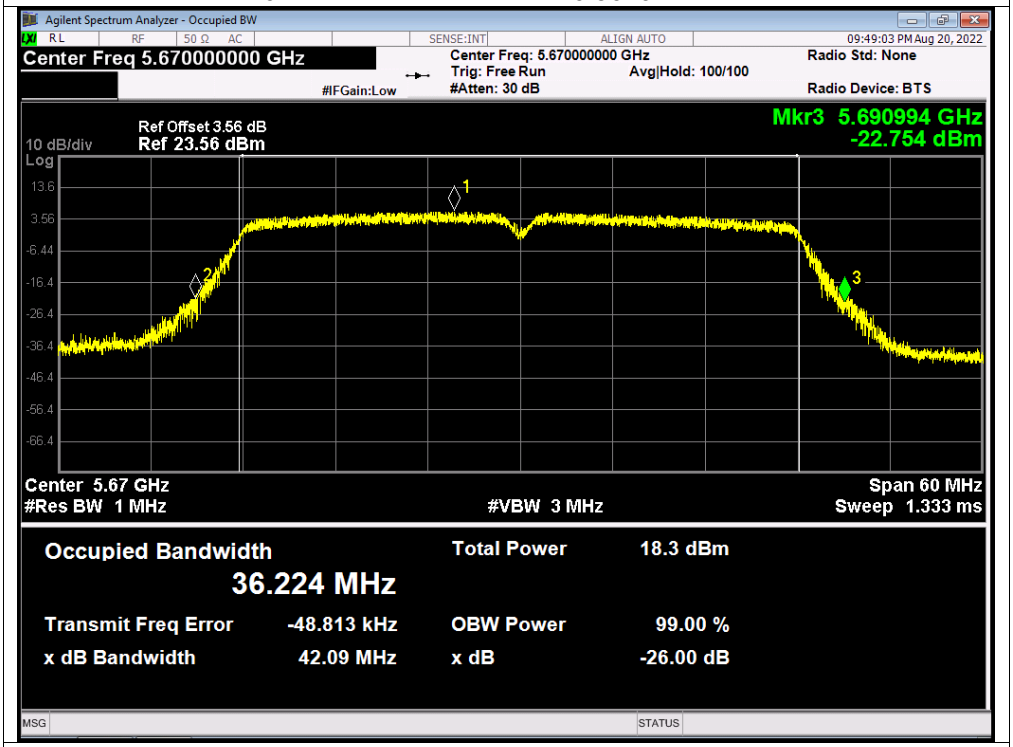
-26dB Bandwidth NVNT ac40 5510MHz AntB



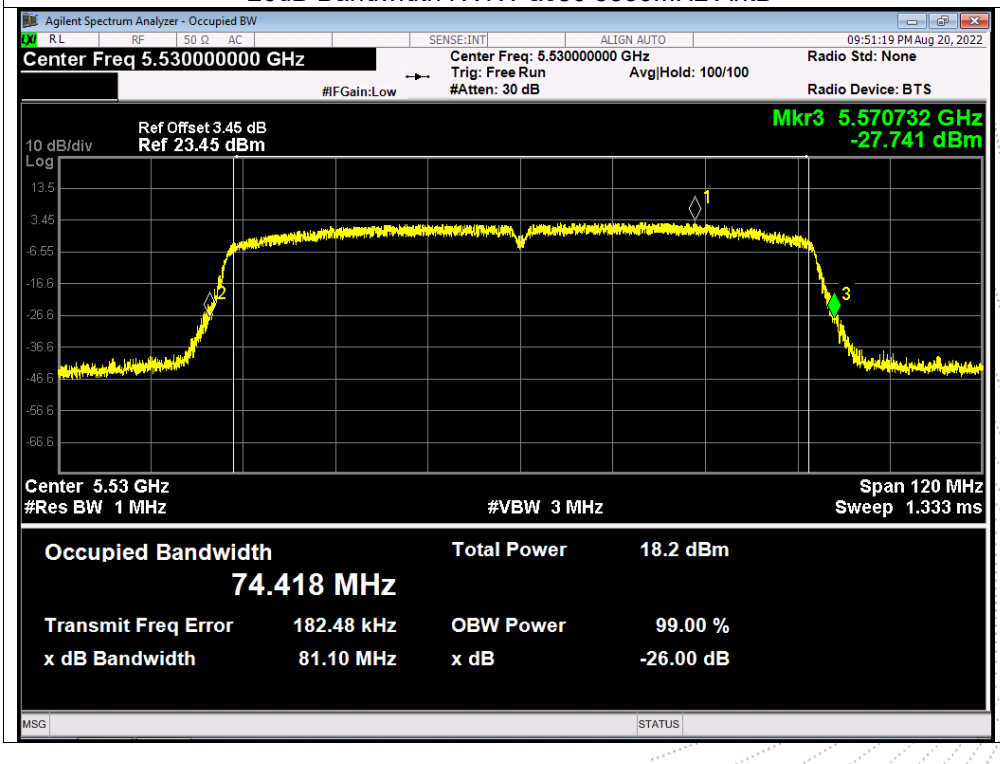
-26dB Bandwidth NVNT ac40 5550MHz AntB



-26dB Bandwidth NVNT ac40 5670MHz AntB

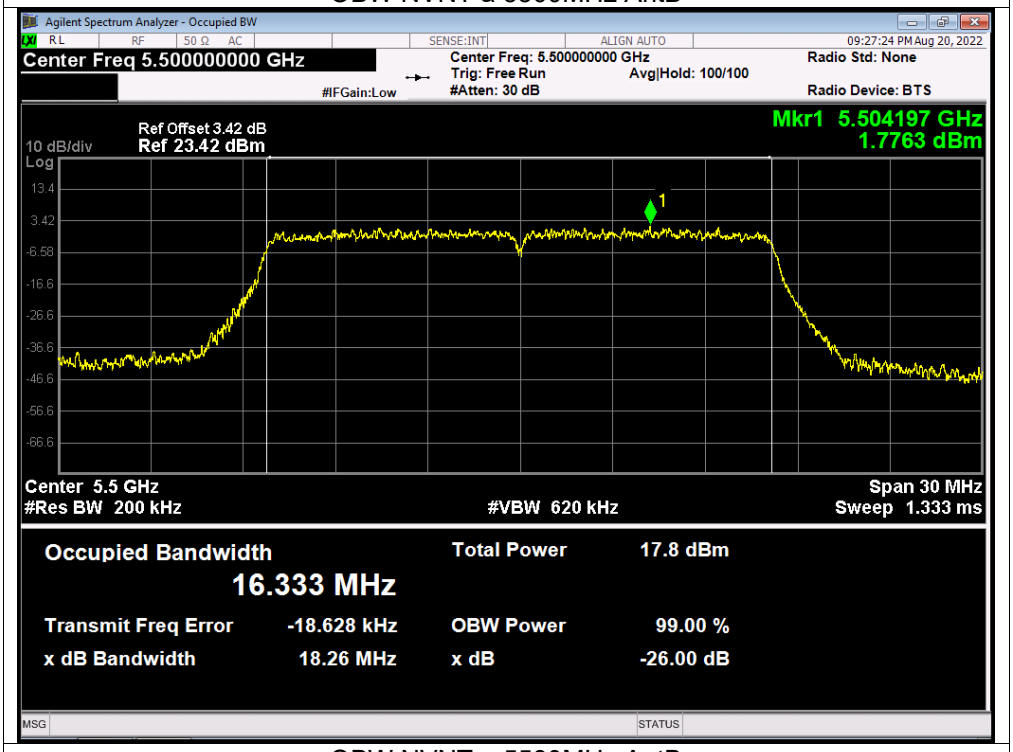


-26dB Bandwidth NVNT ac80 5530MHz AntB

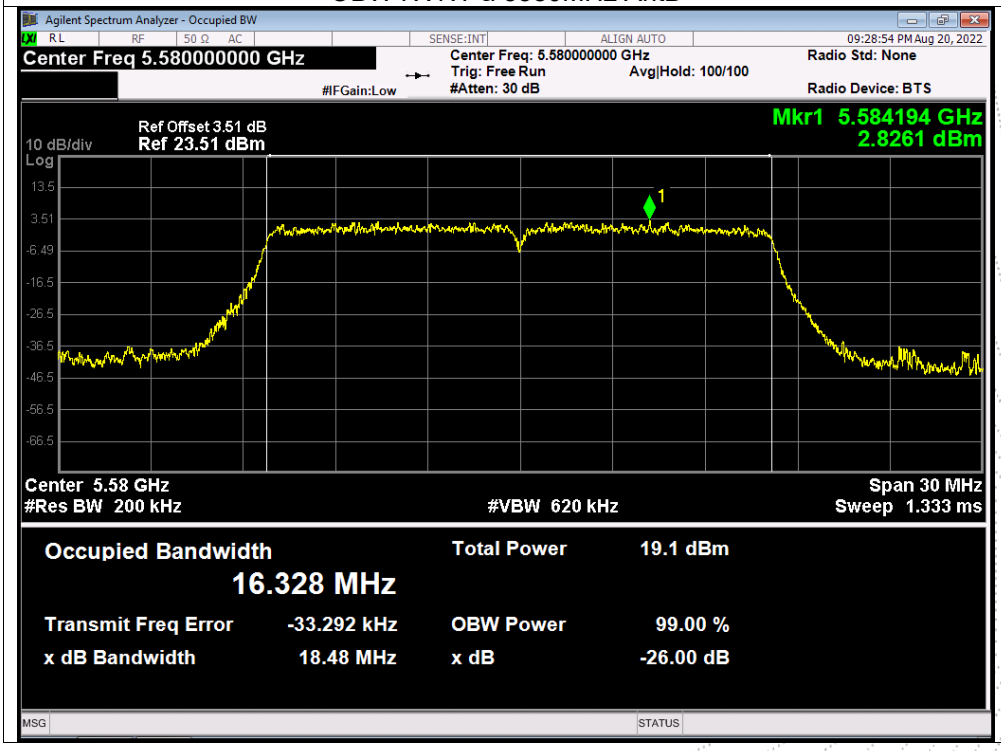


Test Graphs

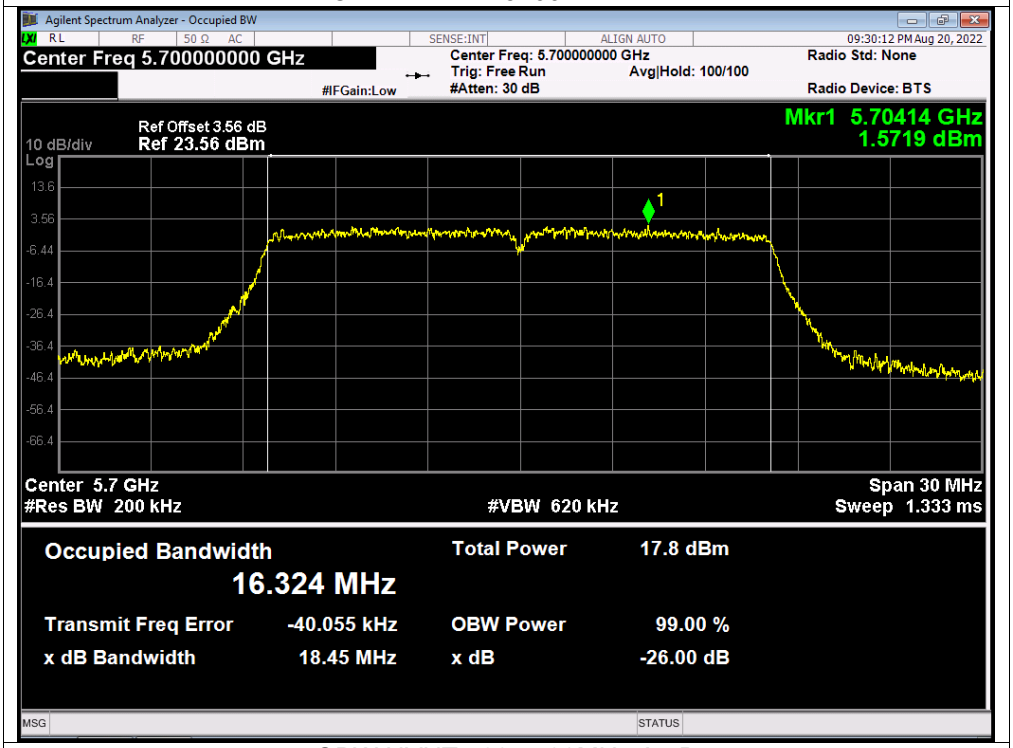
OBW NVNT a 5500MHz AntB



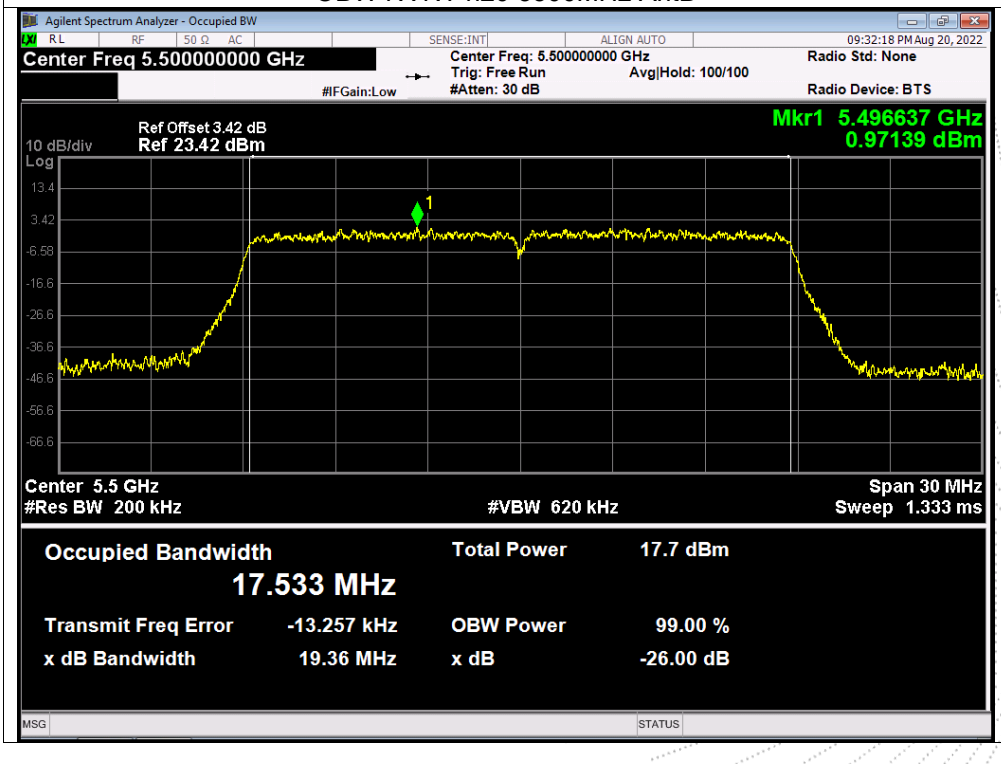
OBW NVNT a 5580MHz AntB



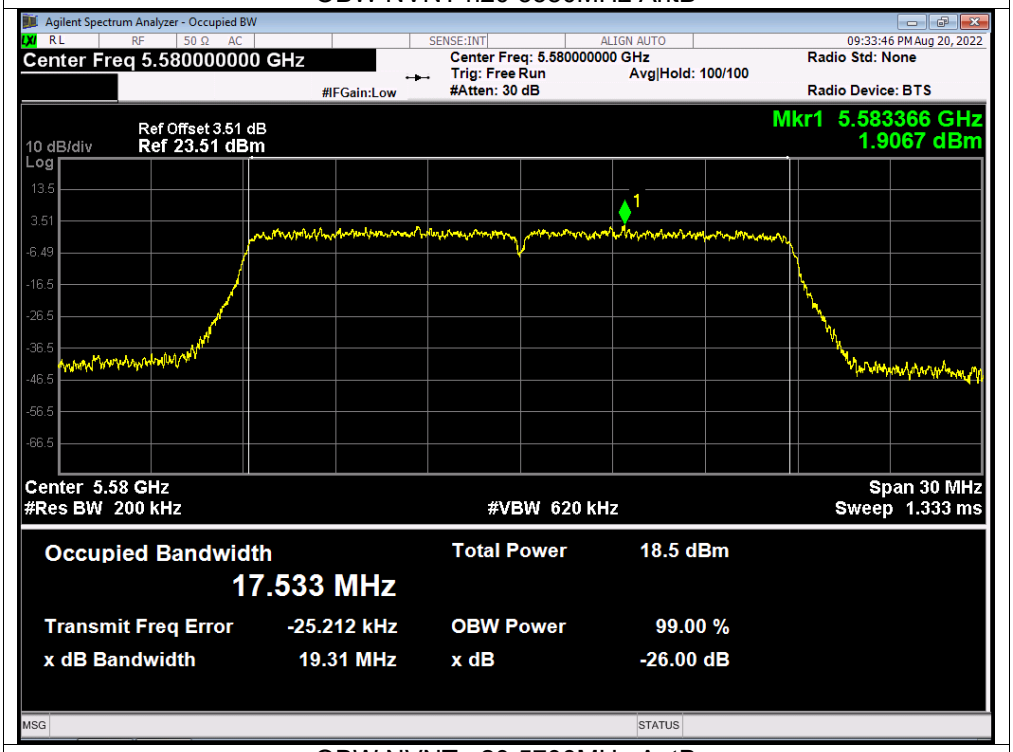
OBW NVNT a 5700MHz AntB



OBW NVNT n20 5500MHz AntB



OBW NVNT n20 5580MHz AntB



OBW NVNT n20 5700MHz AntB