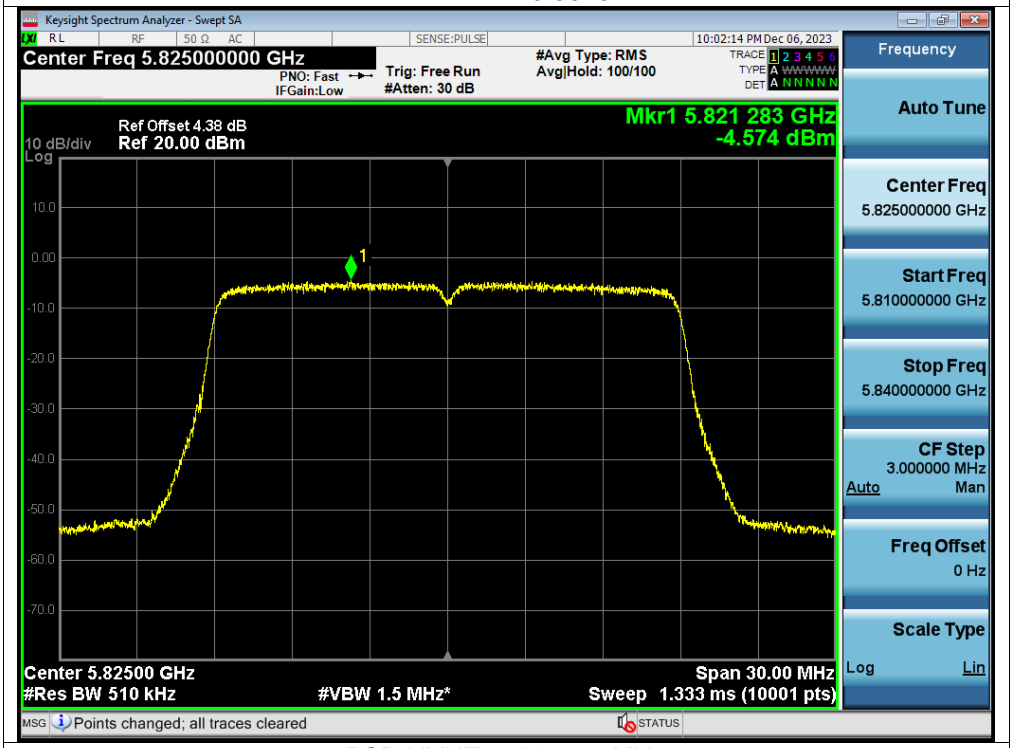
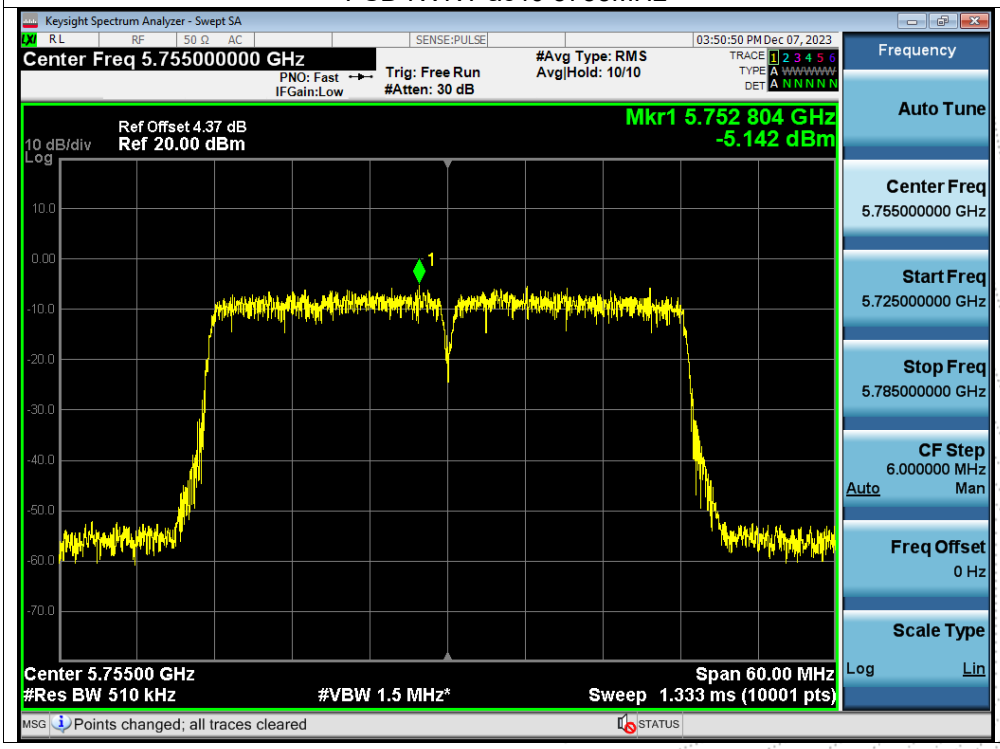
PSD NVNT ac20 5825MHz



PSD NVNT ac40 5755MHz



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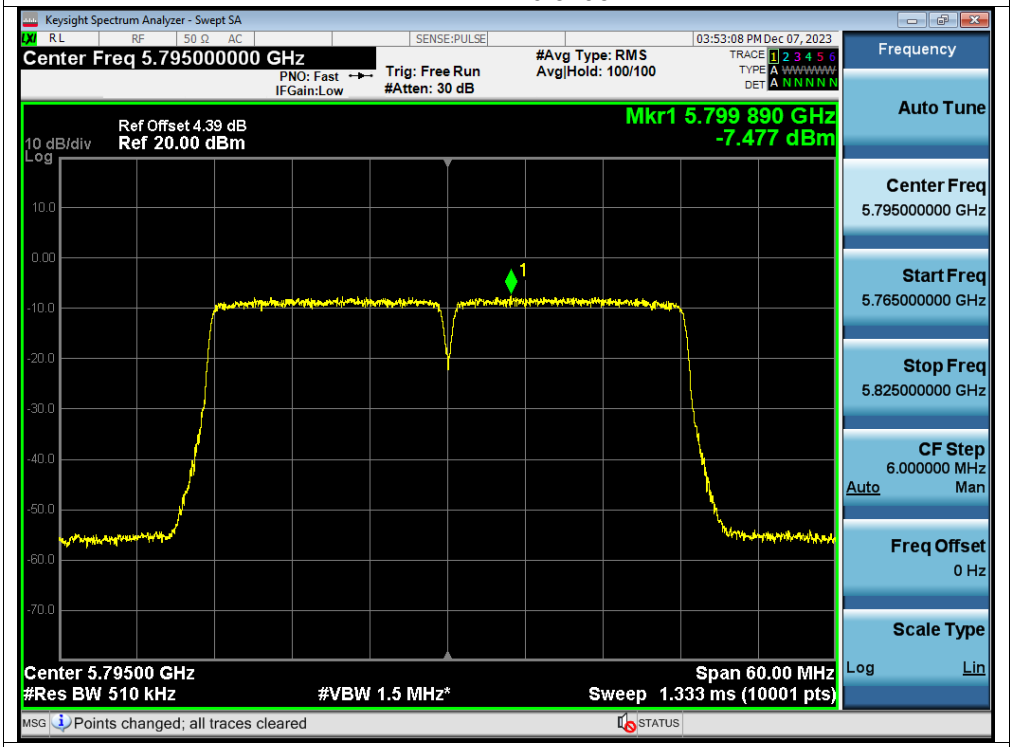
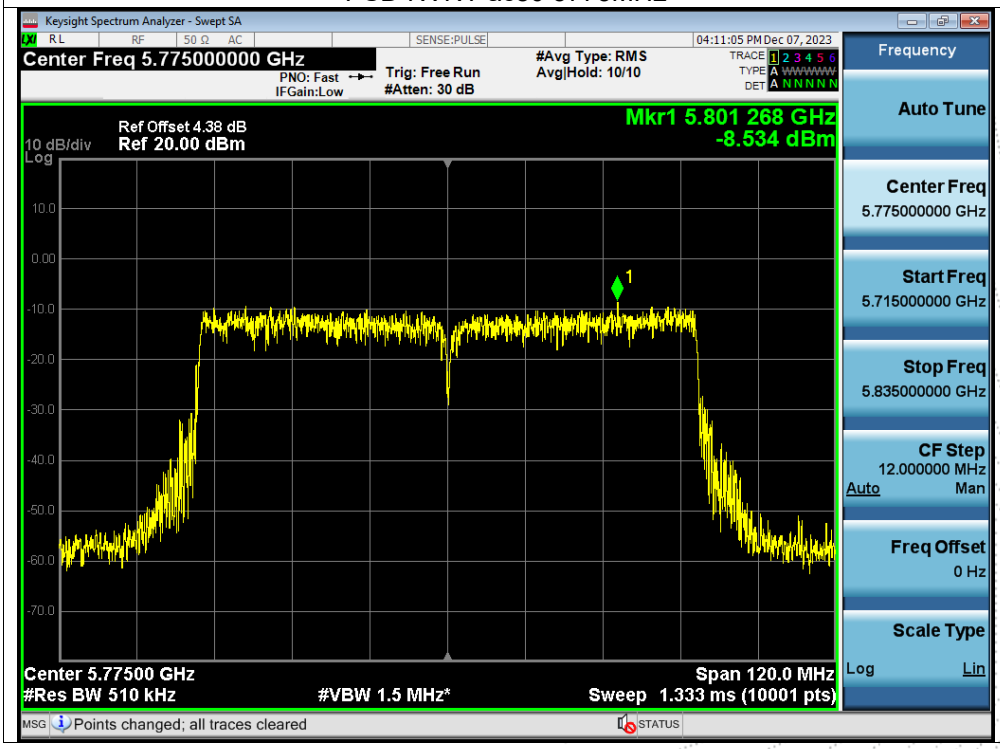


PSD NVNT ac80 5775MHz



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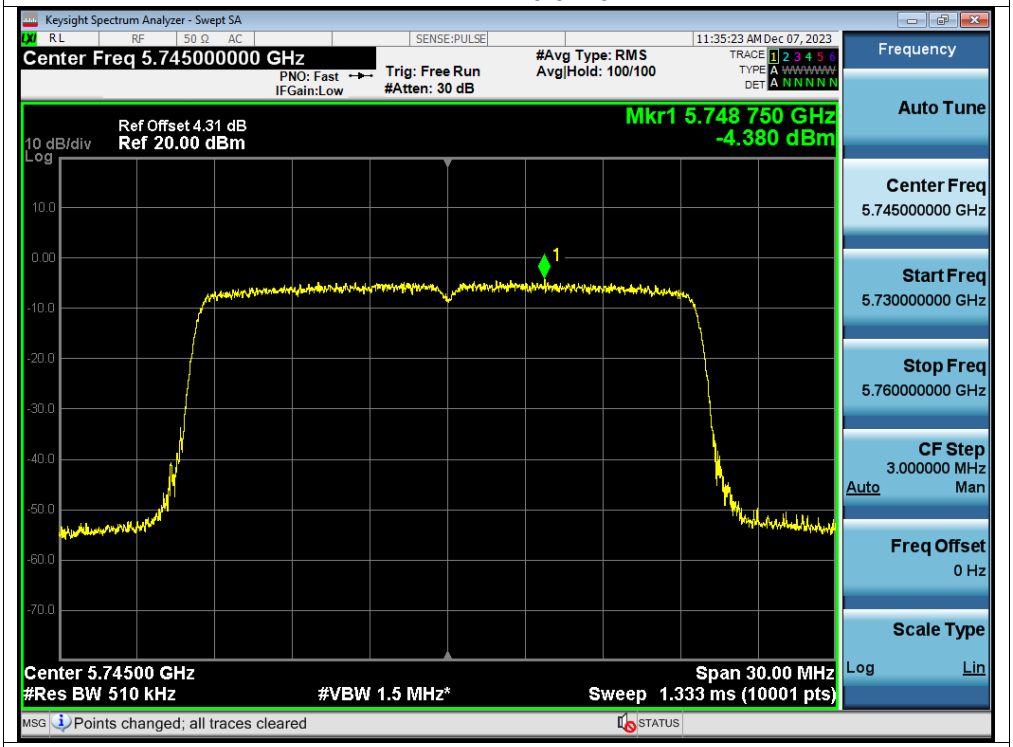
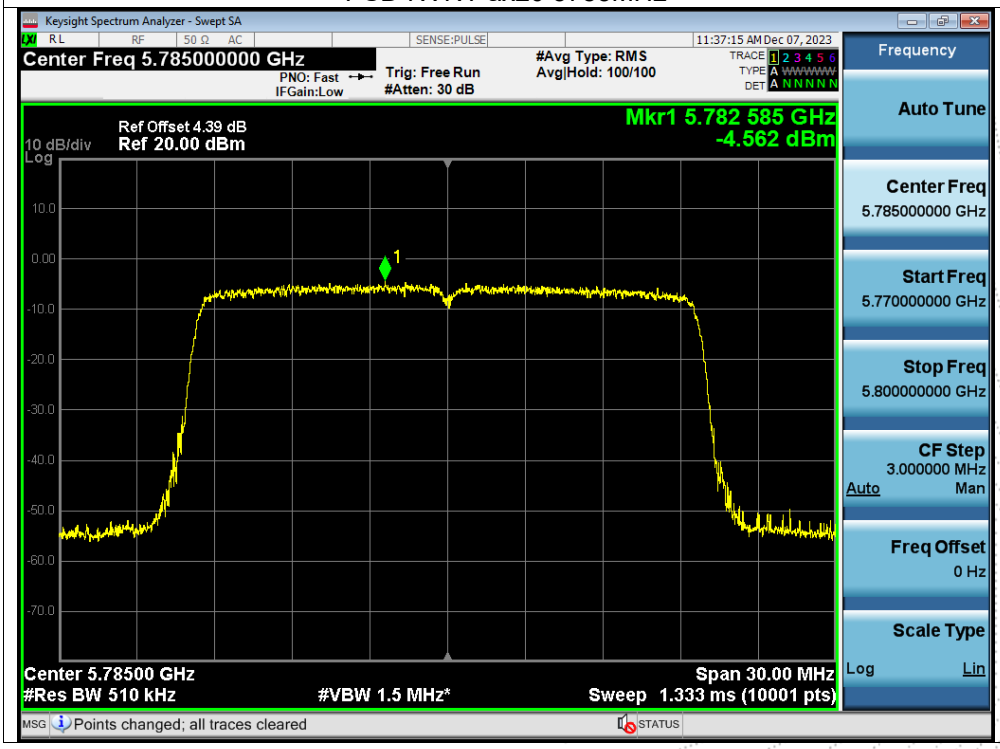
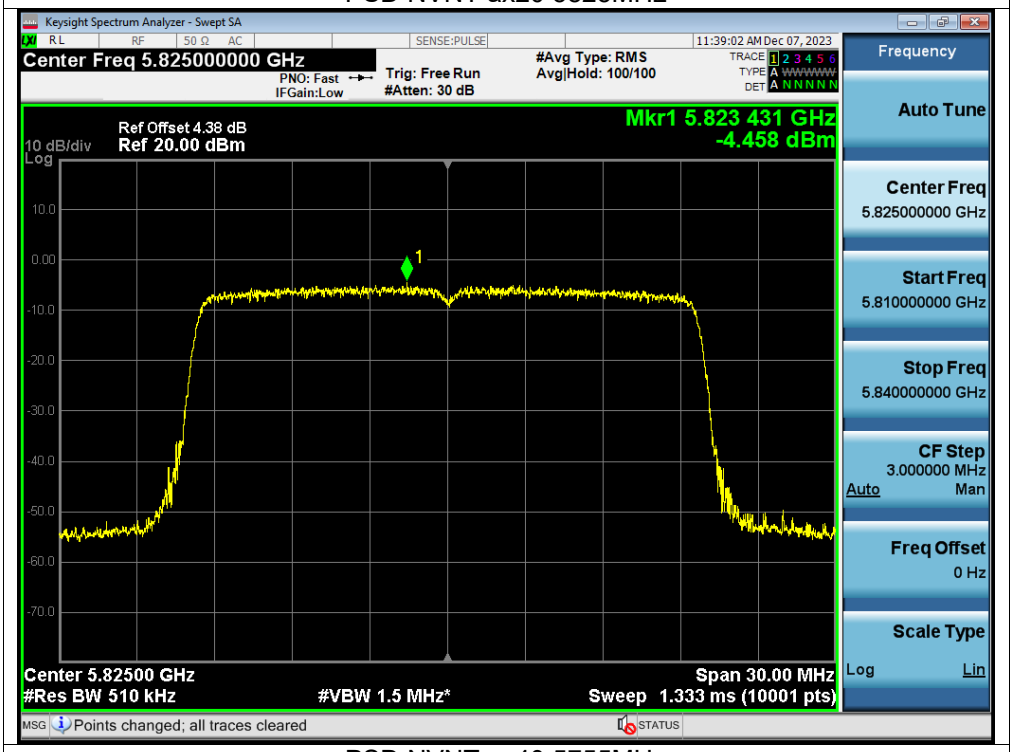


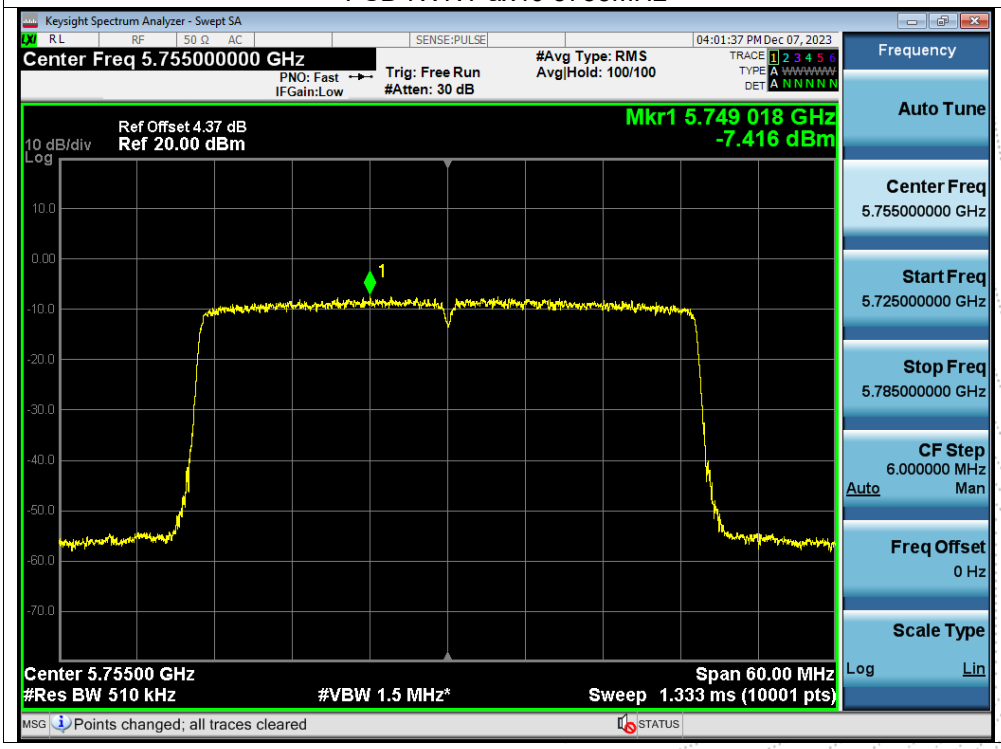
PSD NVNT ax20 5785MHz



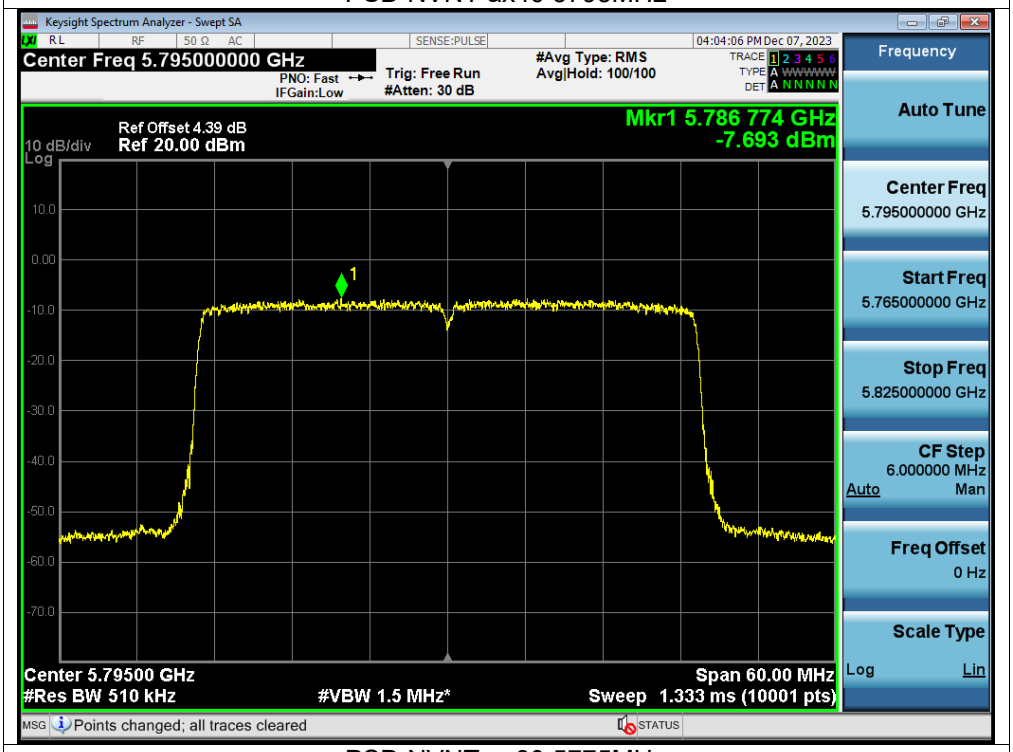
PSD NVNT ax20 5825MHz



PSD NVNT ax40 5755MHz



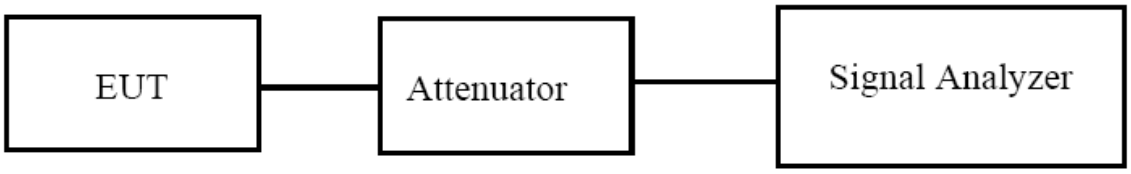
PSD NVNT ax40 5795MHz



PSD NVNT ax80 5775MHz

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:	AC 120V/60Hz
Test Mode:	(5180-5240MHz)		

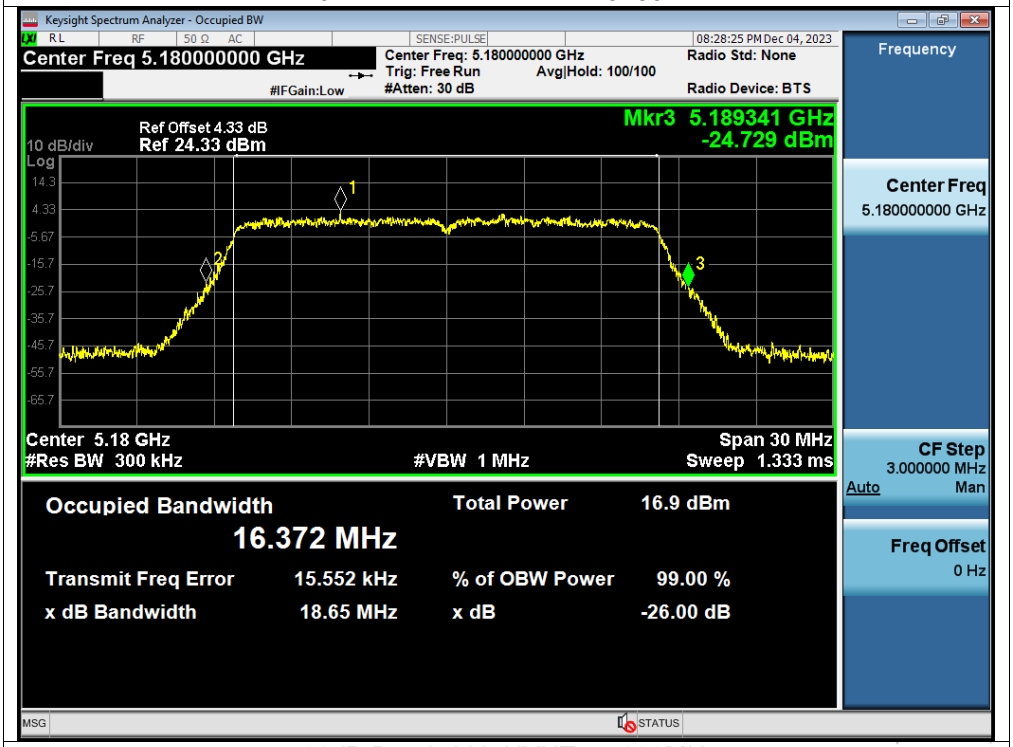
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5180	18.652	18.603	Pass
NVNT	a	5200	18.64	18.522	Pass
NVNT	a	5240	18.611	18.597	Pass
NVNT	n20	5180	19.485	19.582	Pass
NVNT	n20	5200	19.612	19.633	Pass
NVNT	n20	5240	19.499	19.544	Pass
NVNT	n40	5190	38.657	38.734	Pass
NVNT	n40	5230	38.658	38.783	Pass
NVNT	ac20	5180	19.63	19.544	Pass
NVNT	ac20	5200	19.553	19.521	Pass
NVNT	ac20	5240	19.541	19.524	Pass
NVNT	ac40	5190	38.525	38.407	Pass
NVNT	ac40	5230	38.452	38.76	Pass
NVNT	ac80	5210	**84.577**	84.364	Pass
NVNT	ax20	5180	20.502	20.553	Pass
NVNT	ax20	5200	20.642	20.409	Pass
NVNT	ax20	5240	20.604	20.523	Pass
NVNT	ax40	5190	39.418	39.539	Pass
NVNT	ax40	5230	39.496	39.551	Pass
NVNT	ax80	5210	80.844	80.776	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.327	16.333
NVNT	a	5200	16.345	16.343
NVNT	a	5240	16.336	16.331
NVNT	n20	5180	17.502	17.497
NVNT	n20	5200	17.493	17.508
NVNT	n20	5240	17.504	17.498
NVNT	n40	5190	36.018	36.022
NVNT	n40	5230	36.008	36.02
NVNT	ac20	5180	17.487	17.494
NVNT	ac20	5200	17.497	17.495
NVNT	ac20	5240	17.506	17.512
NVNT	ac40	5190	36.034	36.06
NVNT	ac40	5230	36.09	36.073
NVNT	ac80	5210	76.222	76.184
NVNT	ax20	5180	18.867	18.875
NVNT	ax20	5200	18.872	18.901
NVNT	ax20	5240	18.865	18.866
NVNT	ax40	5190	37.651	37.647
NVNT	ax40	5230	37.636	37.679
NVNT	ax80	5210	77.313	**77.339**

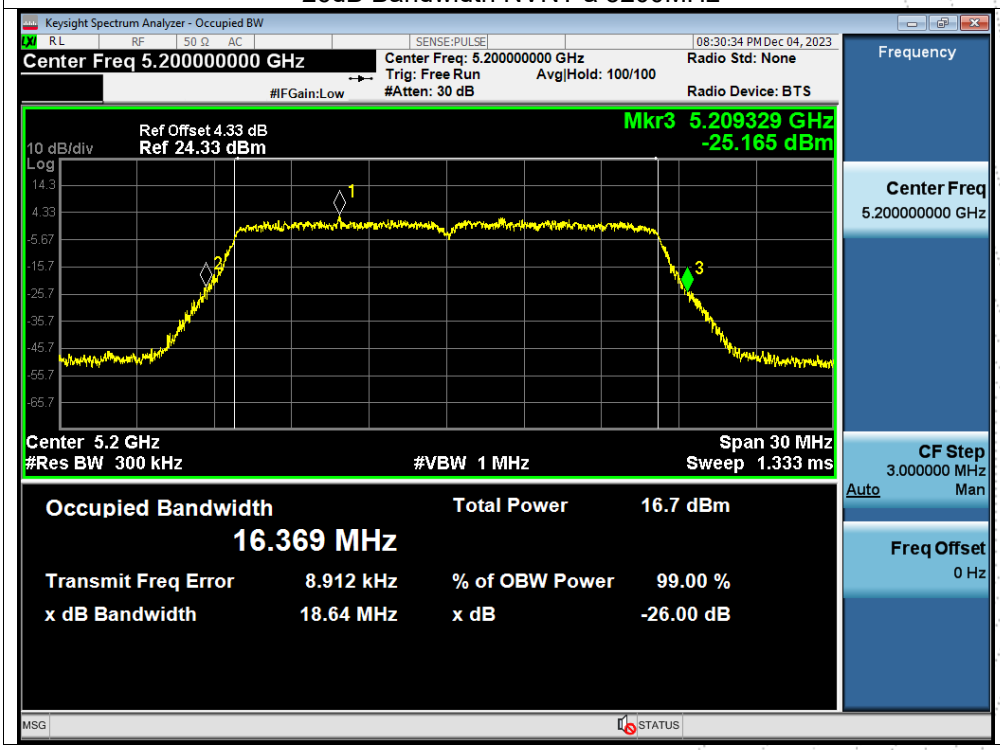
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

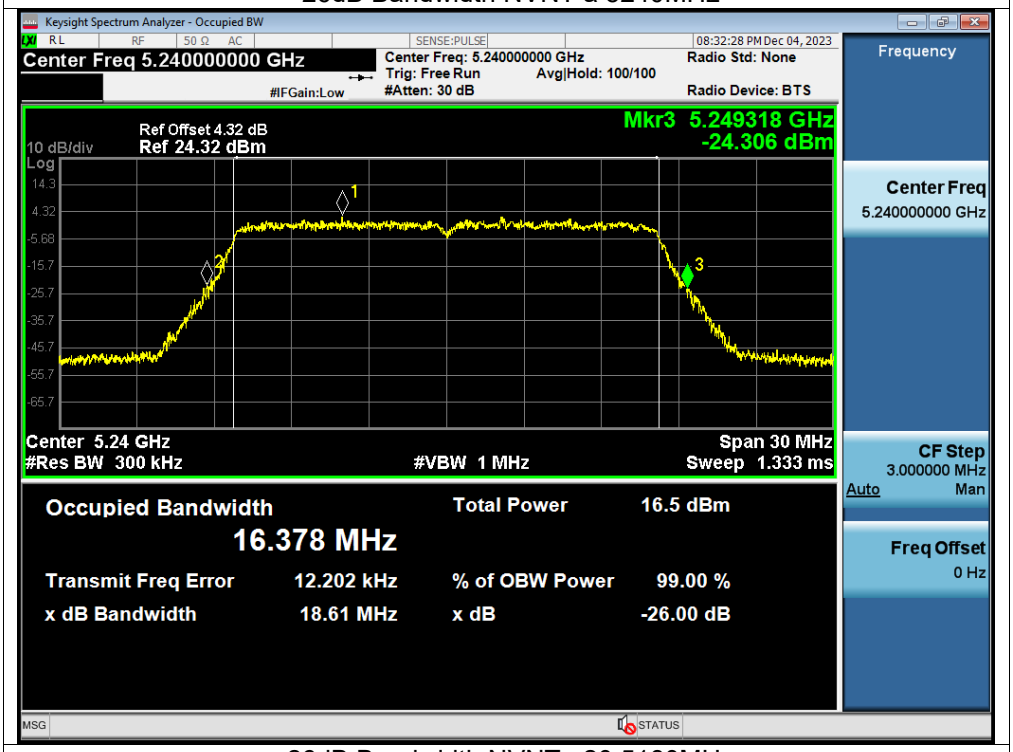
-26dB Bandwidth NVNT a 5180MHz



-26dB Bandwidth NVNT a 5200MHz

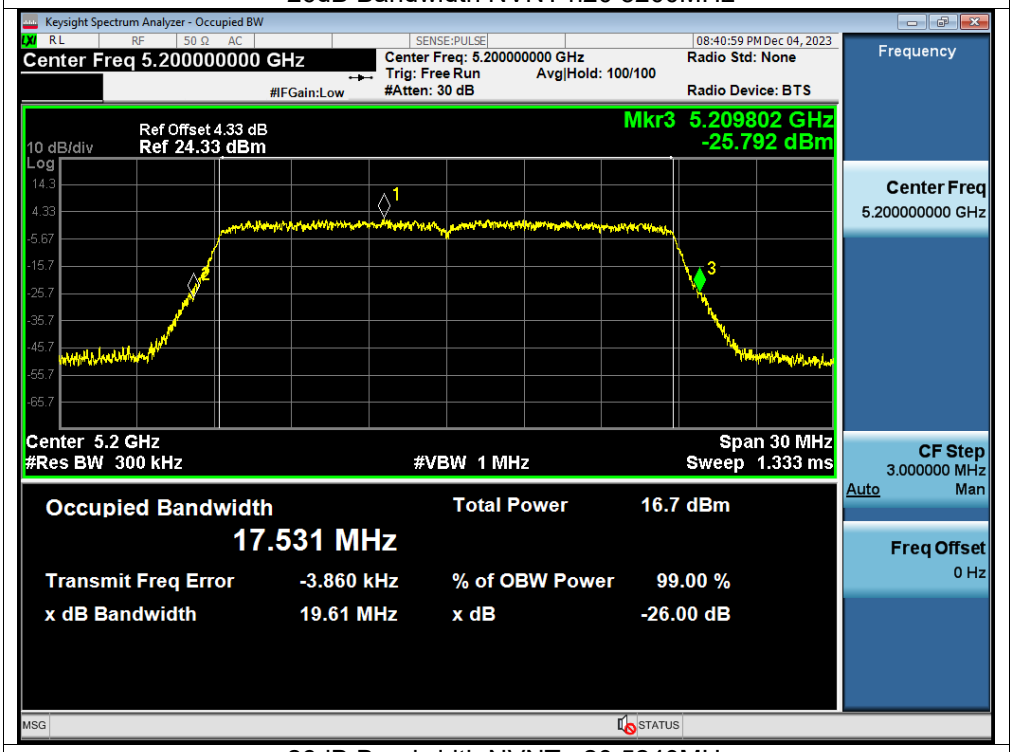


-26dB Bandwidth NVNT a 5240MHz



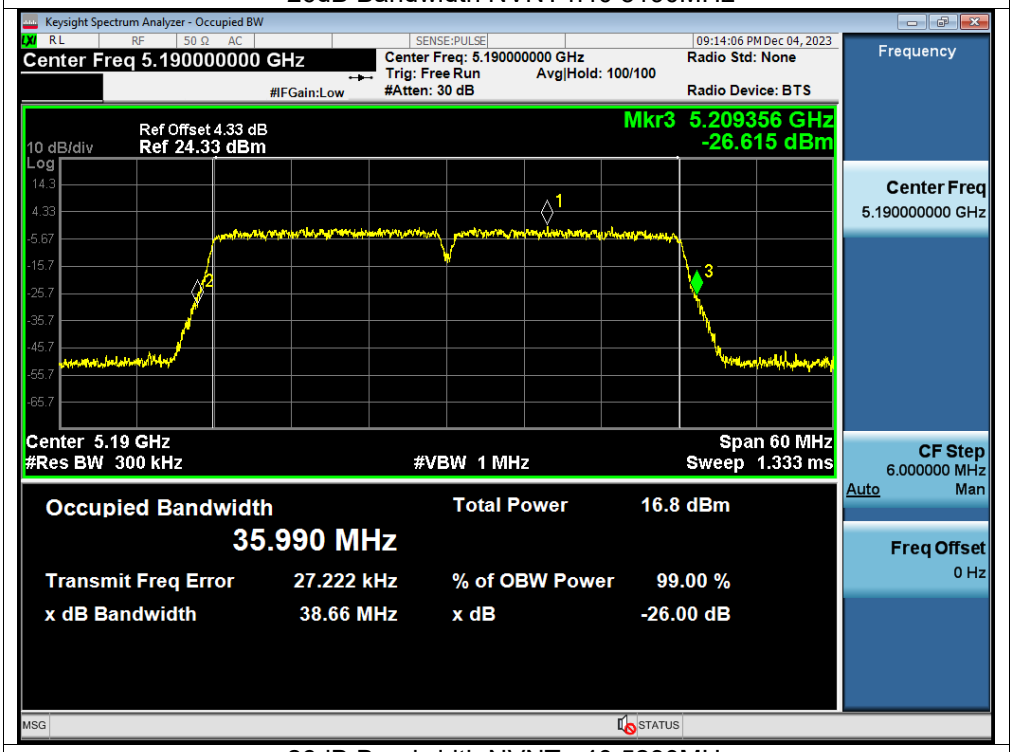
-26dB Bandwidth NVNT n20 5180MHz

-26dB Bandwidth NVNT n20 5200MHz

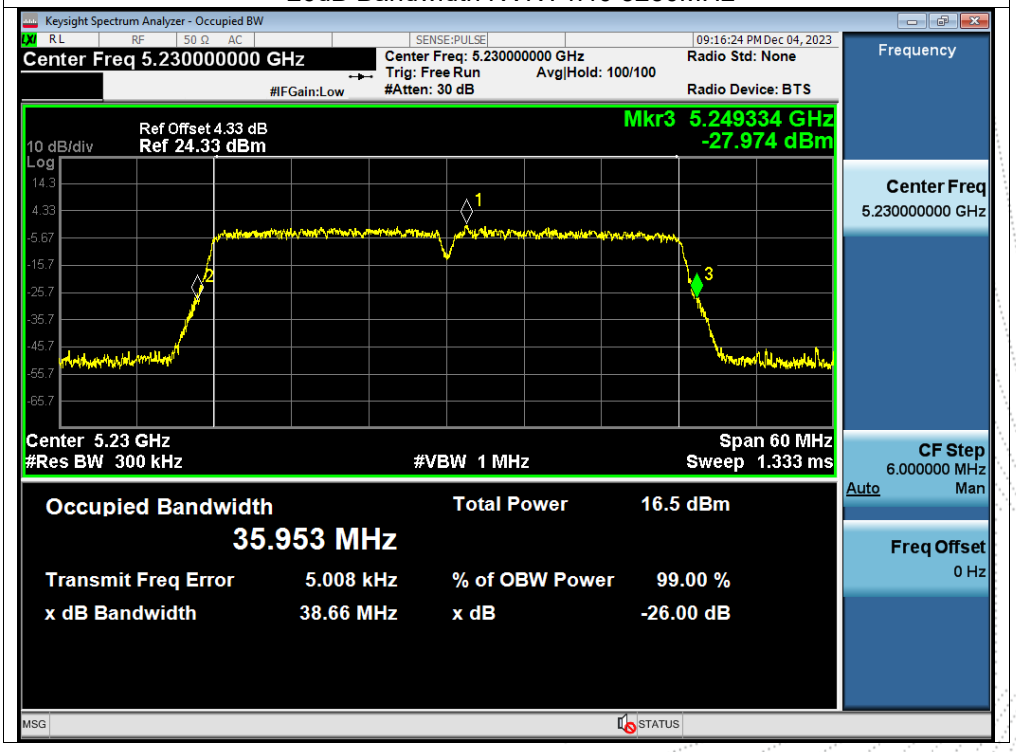


-26dB Bandwidth NVNT n20 5240MHz

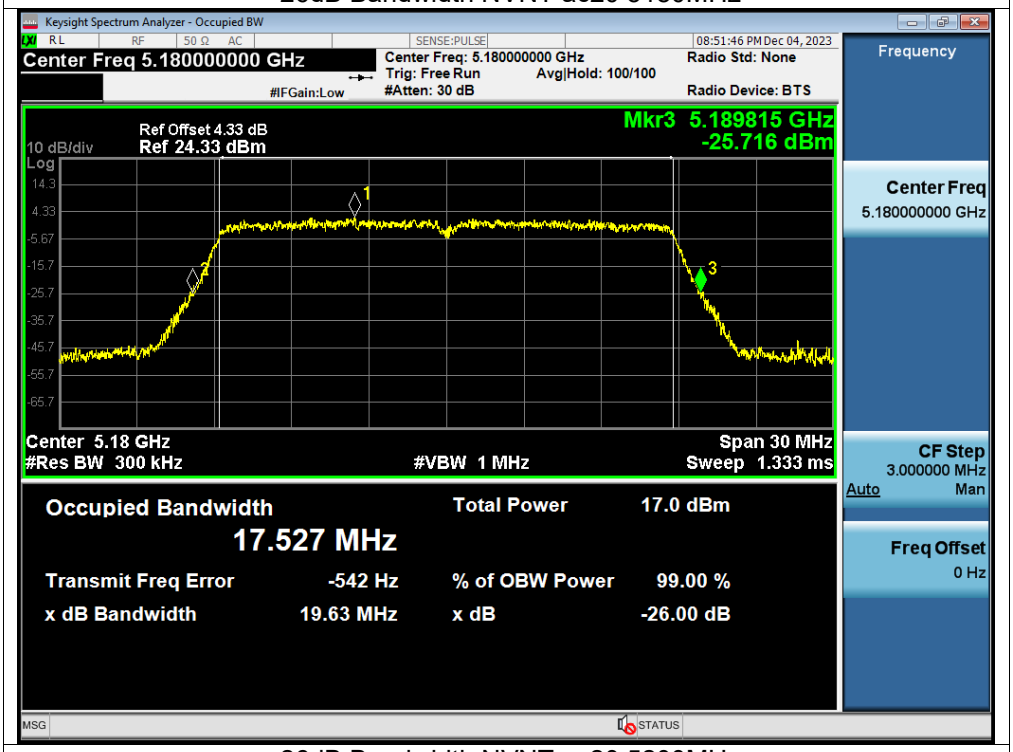
-26dB Bandwidth NVNT n40 5190MHz



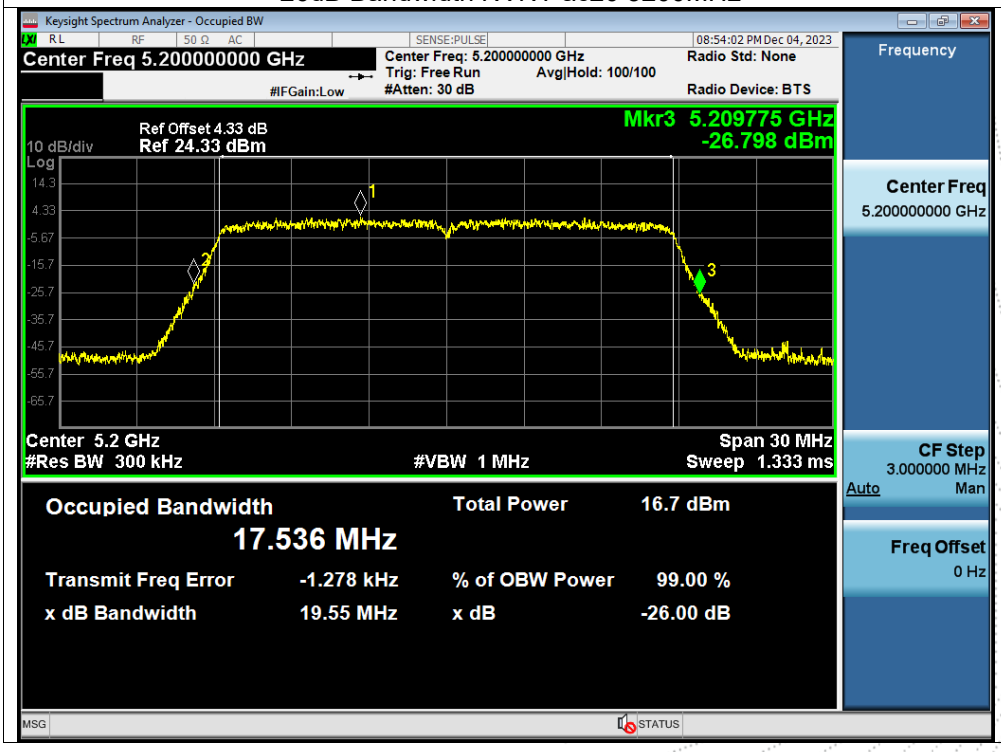
-26dB Bandwidth NVNT n40 5230MHz



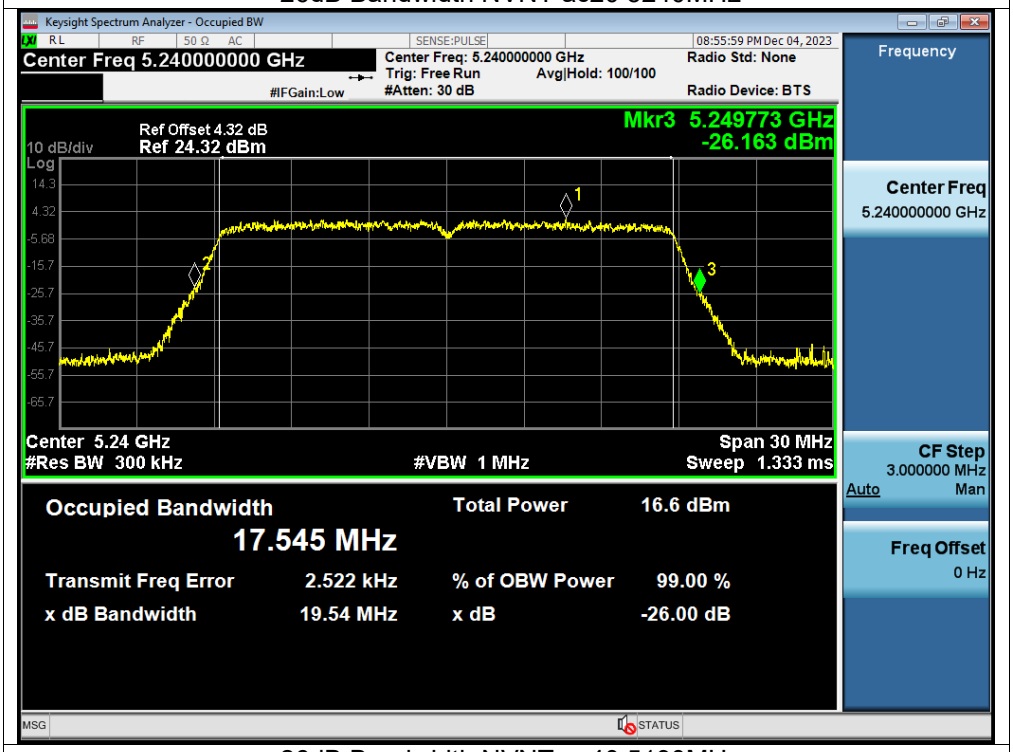
-26dB Bandwidth NVNT ac20 5180MHz



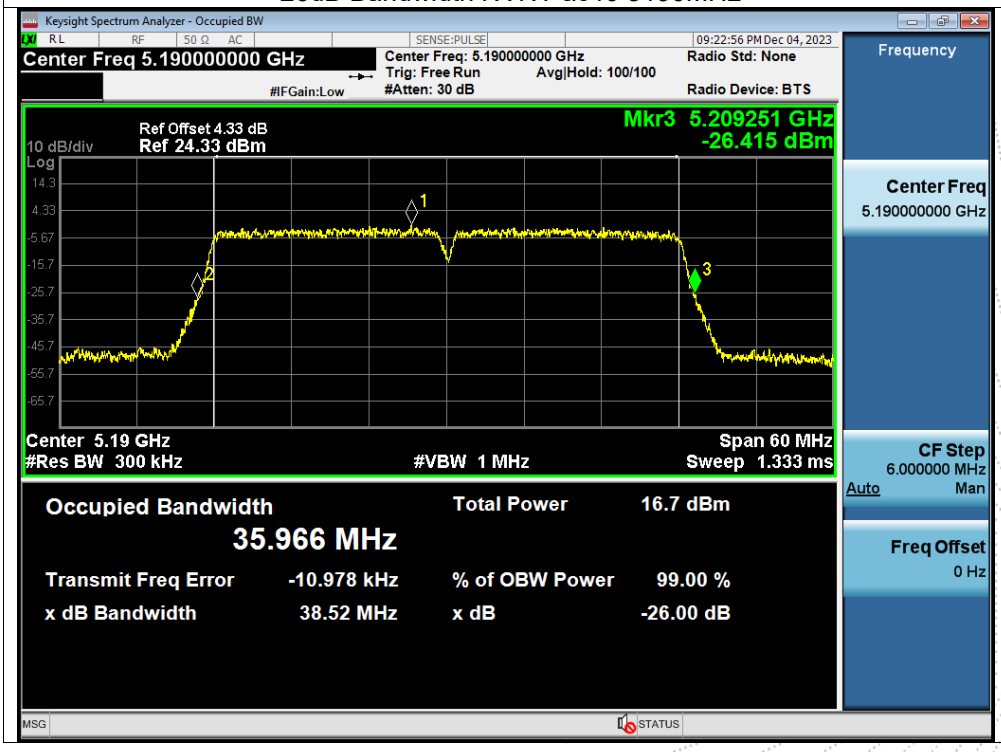
-26dB Bandwidth NVNT ac20 5200MHz



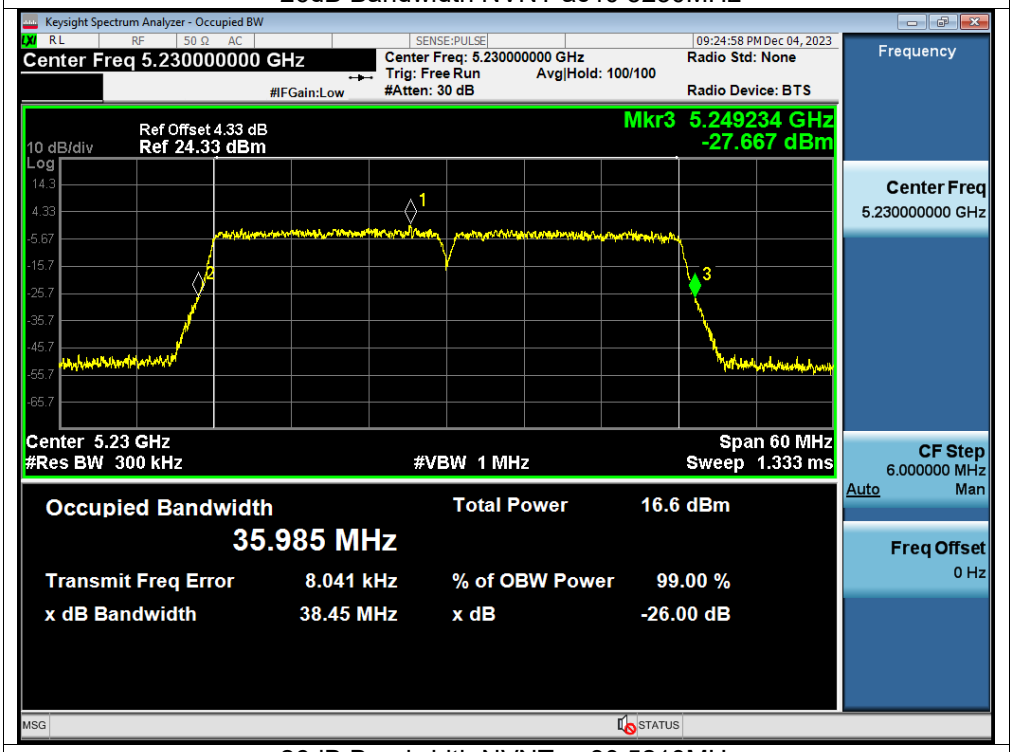
-26dB Bandwidth NVNT ac20 5240MHz



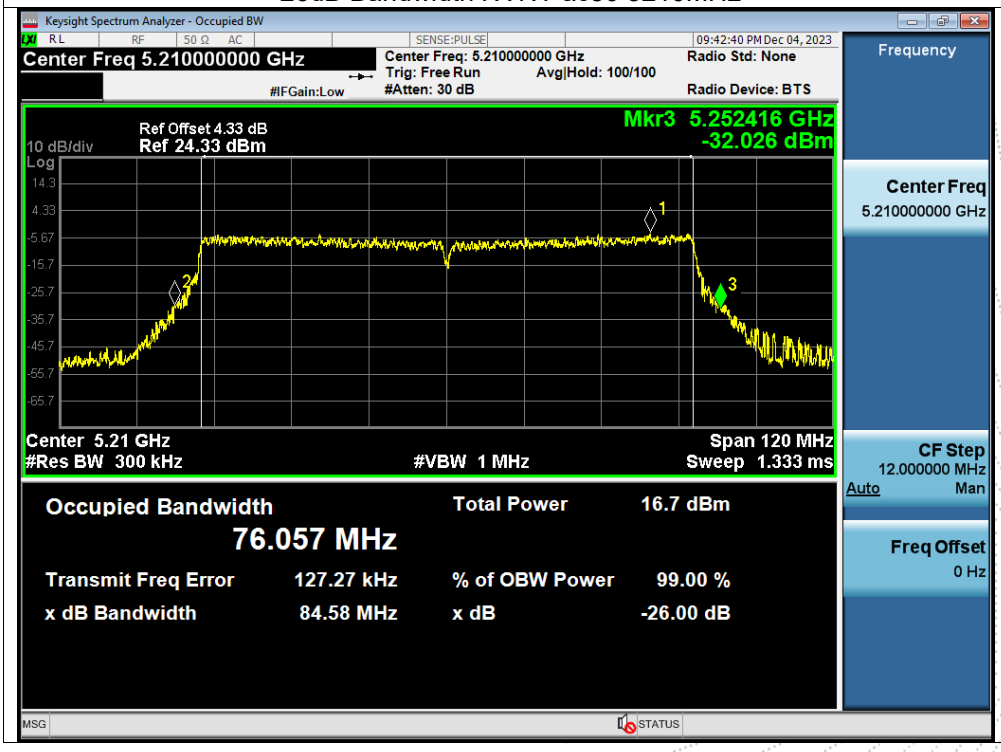
-26dB Bandwidth NVNT ac40 5190MHz



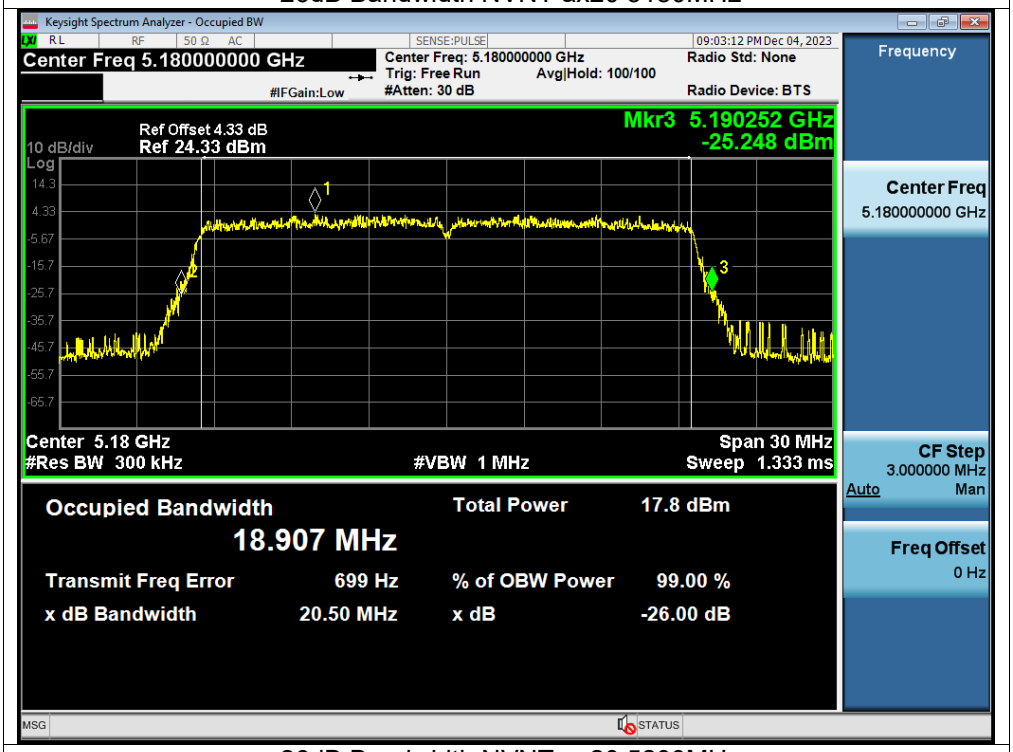
-26dB Bandwidth NVNT ac40 5230MHz



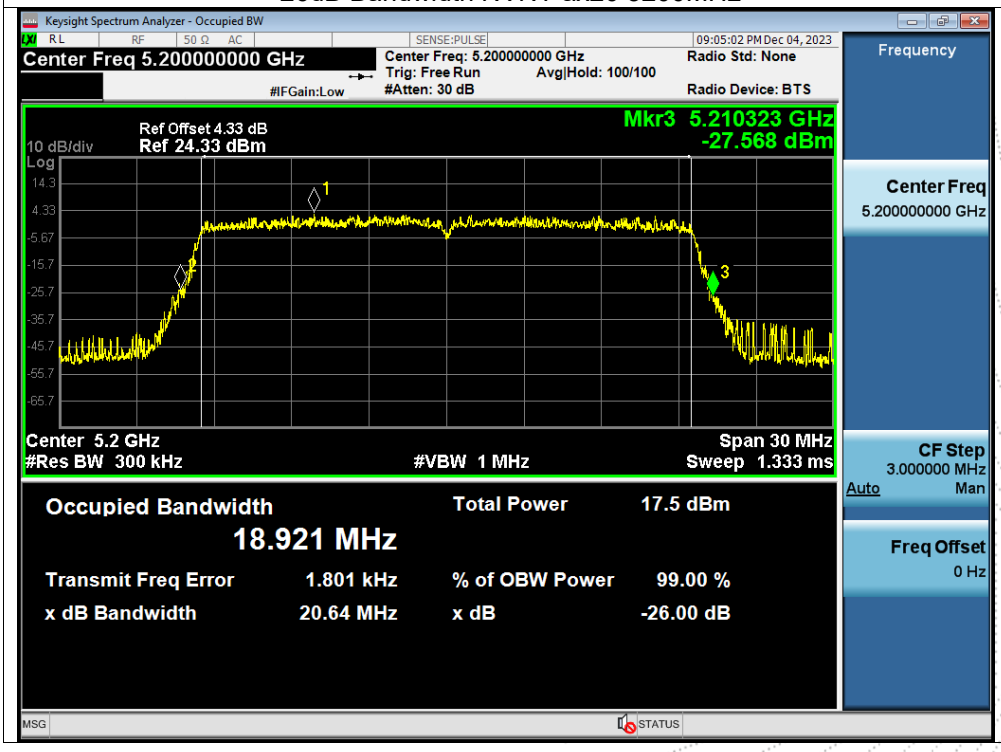
-26dB Bandwidth NVNT ac80 5210MHz



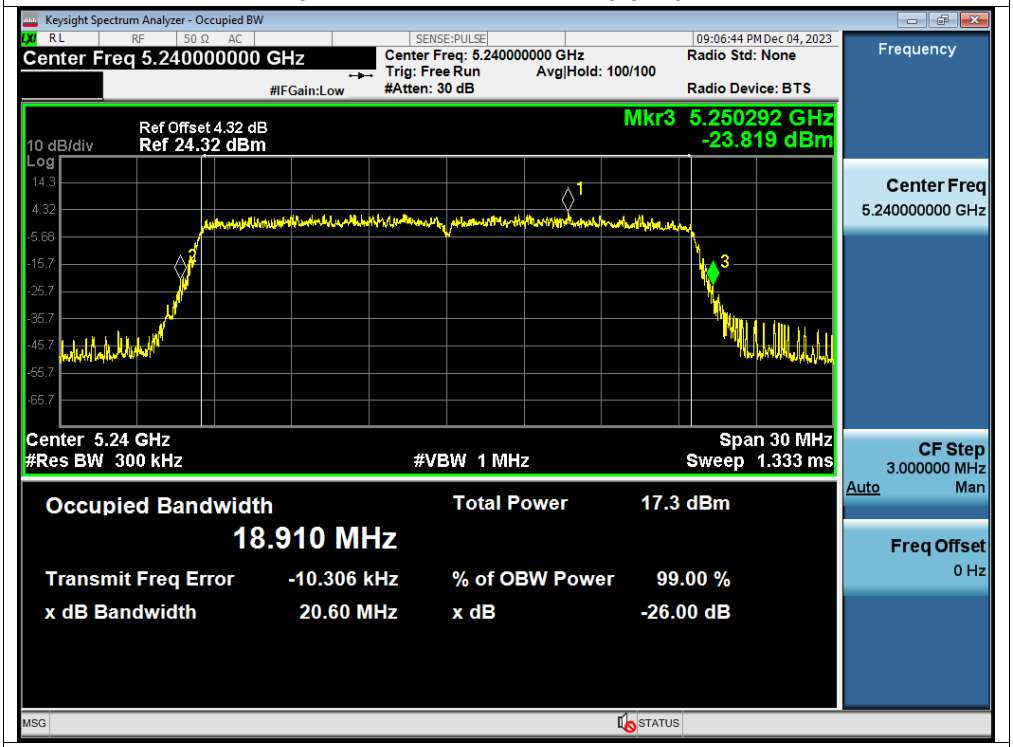
-26dB Bandwidth NVNT ax20 5180MHz



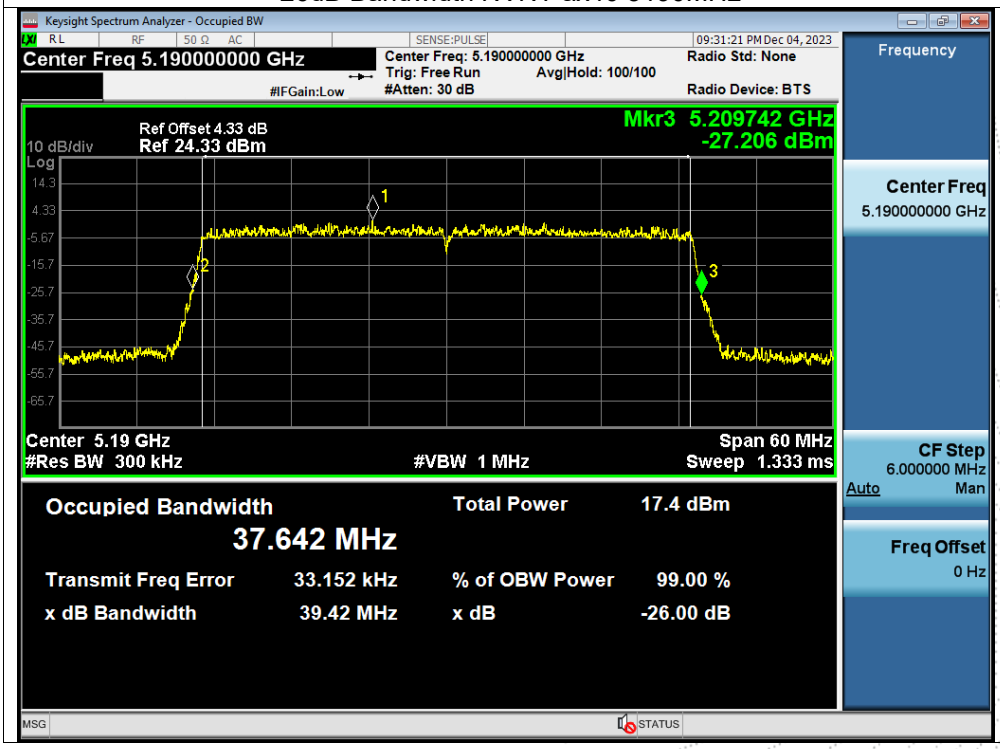
-26dB Bandwidth NVNT ax20 5200MHz



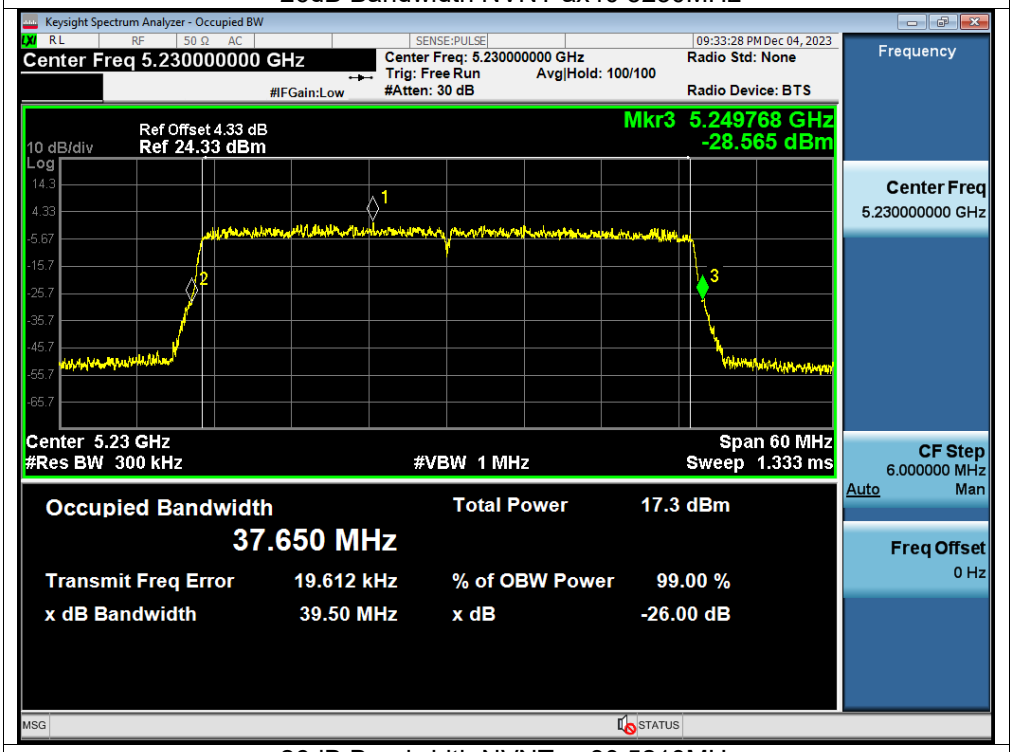
-26dB Bandwidth NVNT ax20 5240MHz



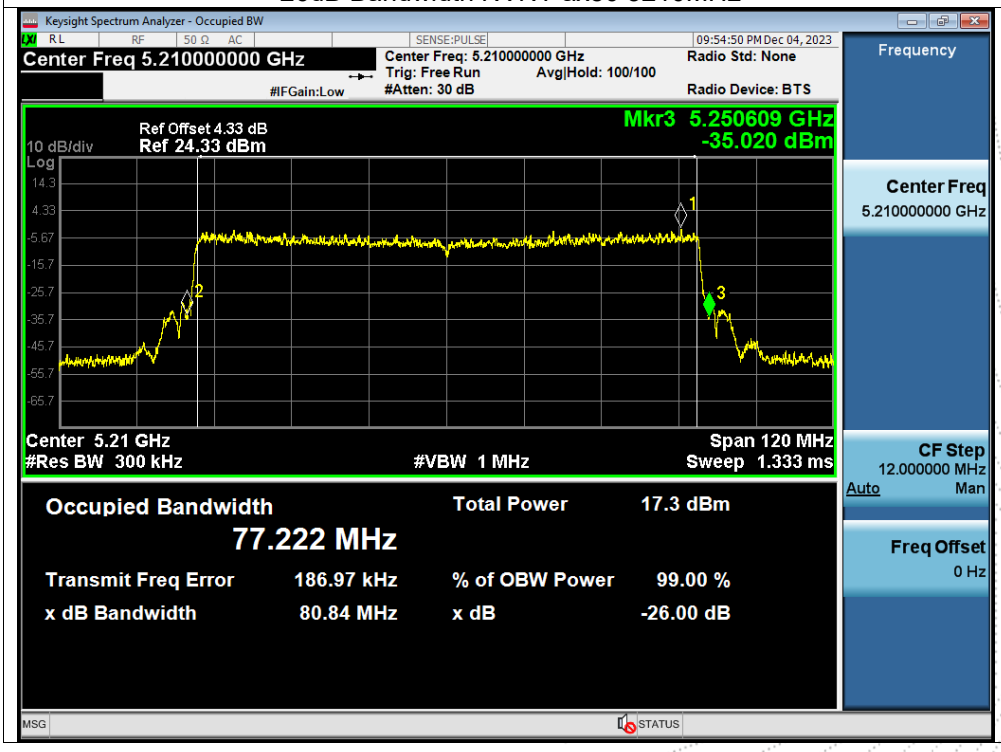
-26dB Bandwidth NVNT ax40 5190MHz



-26dB Bandwidth NVNT ax40 5230MHz



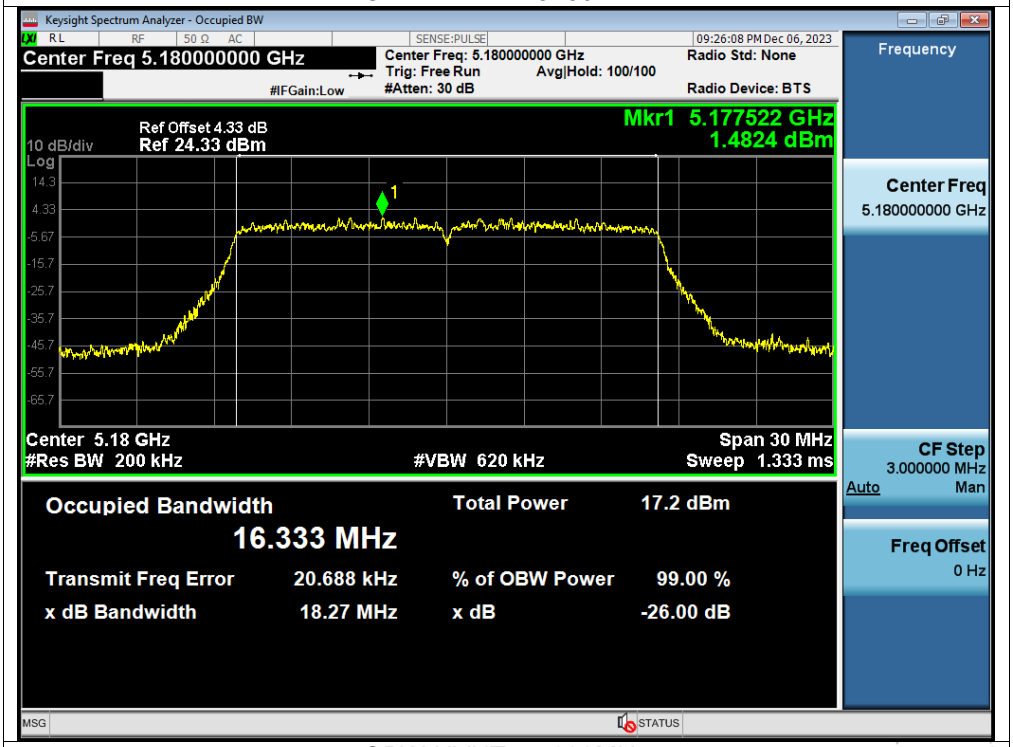
-26dB Bandwidth NVNT ax80 5210MHz



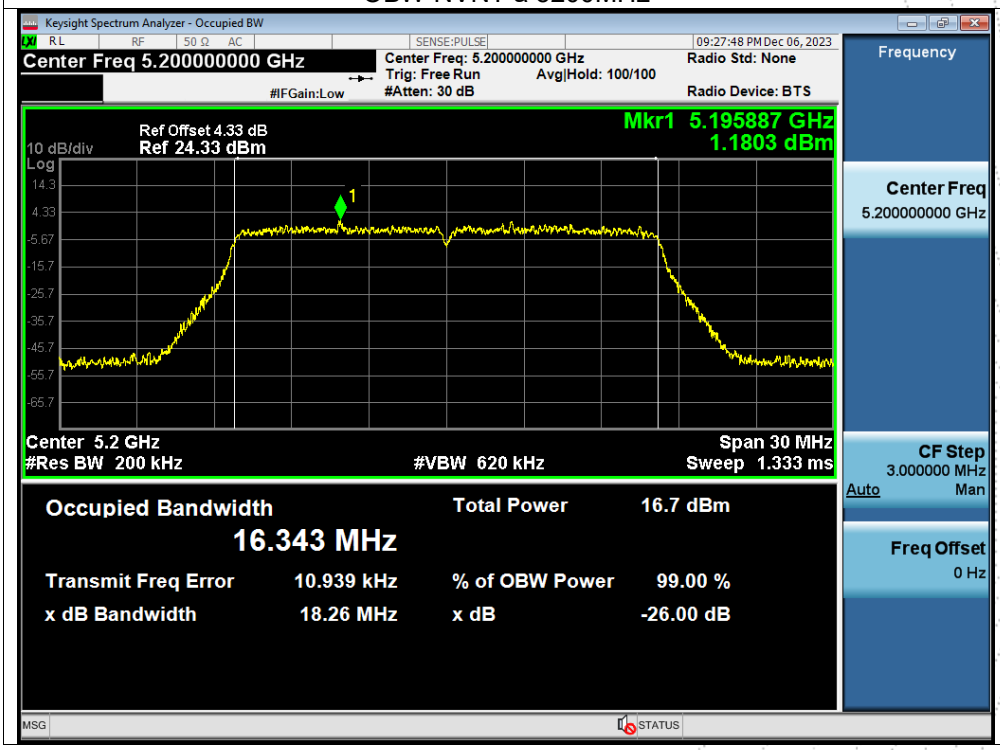
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

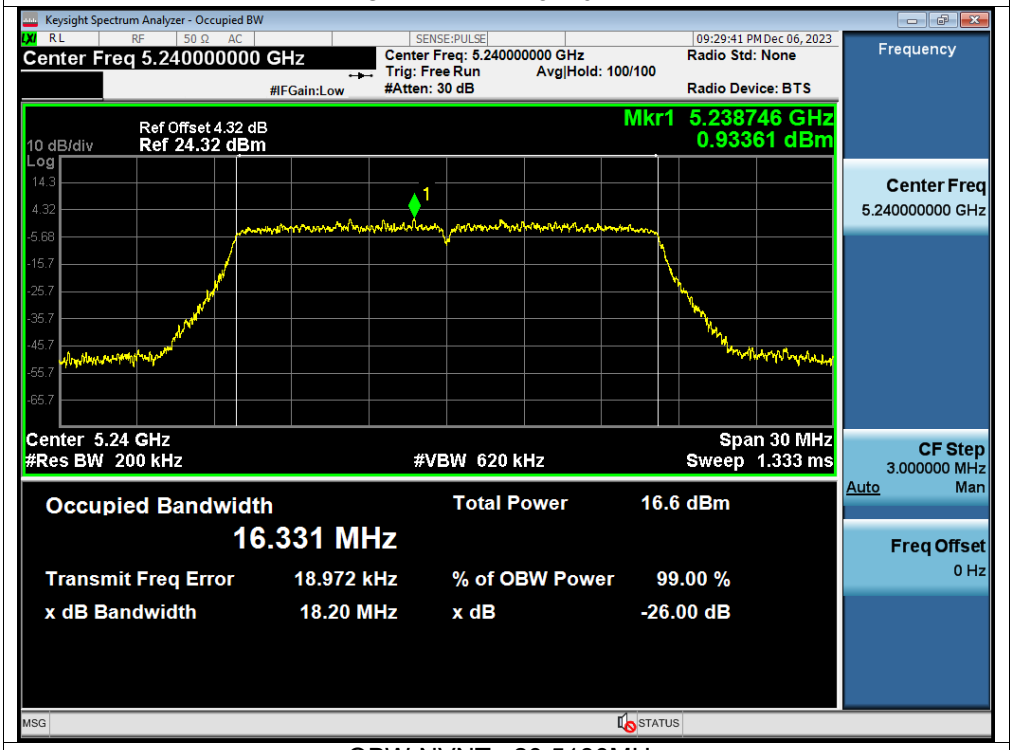
OBW NVNT a 5180MHz



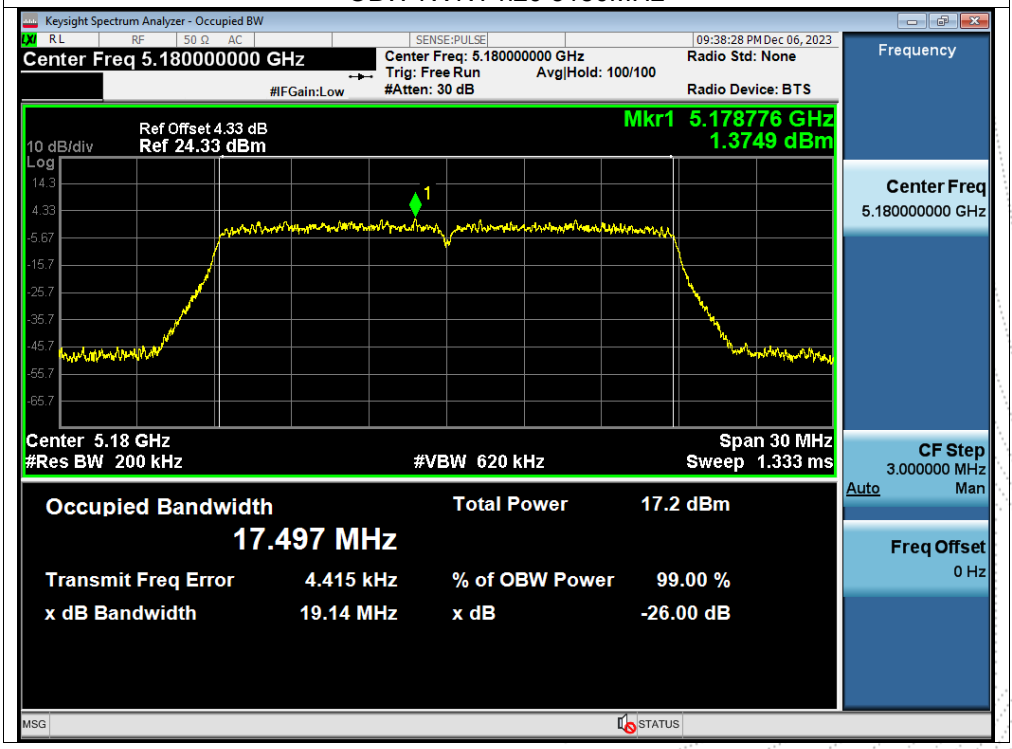
OBW NVNT a 5200MHz



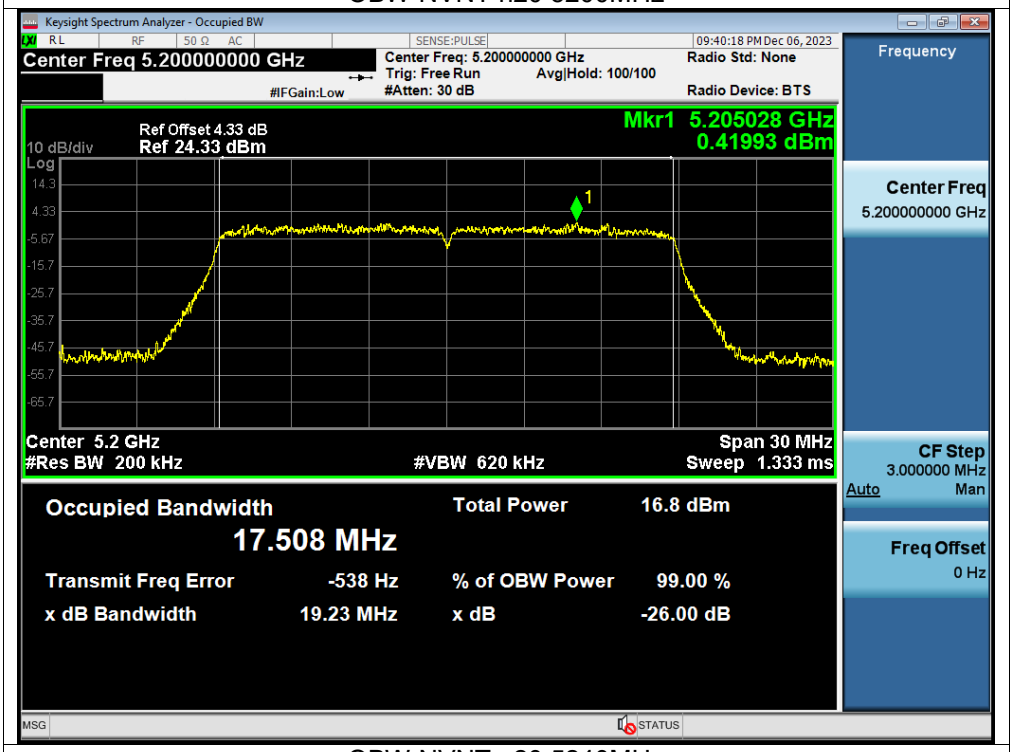
OBW NVNT a 5240MHz



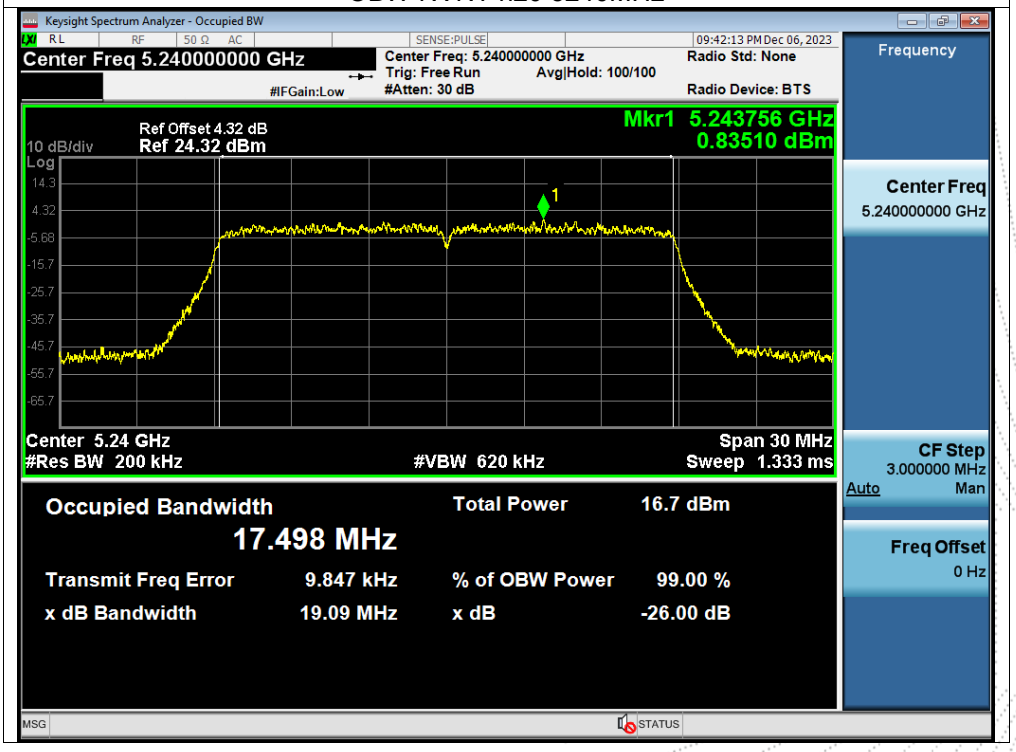
OBW NVNT n20 5180MHz



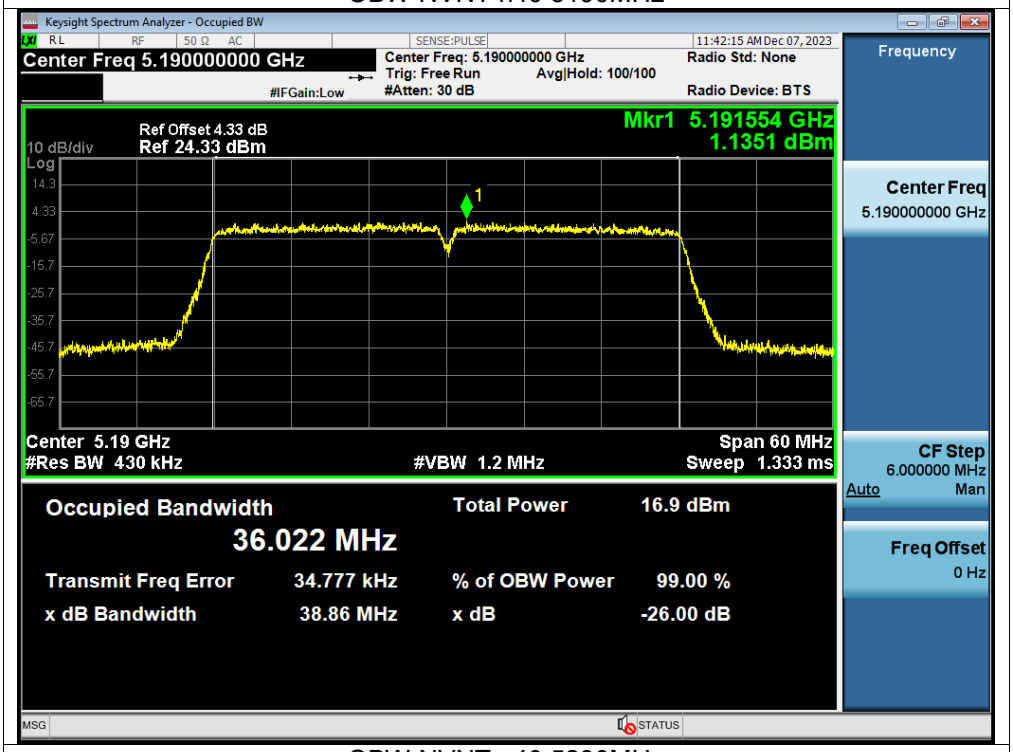
OBW NVNT n20 5200MHz



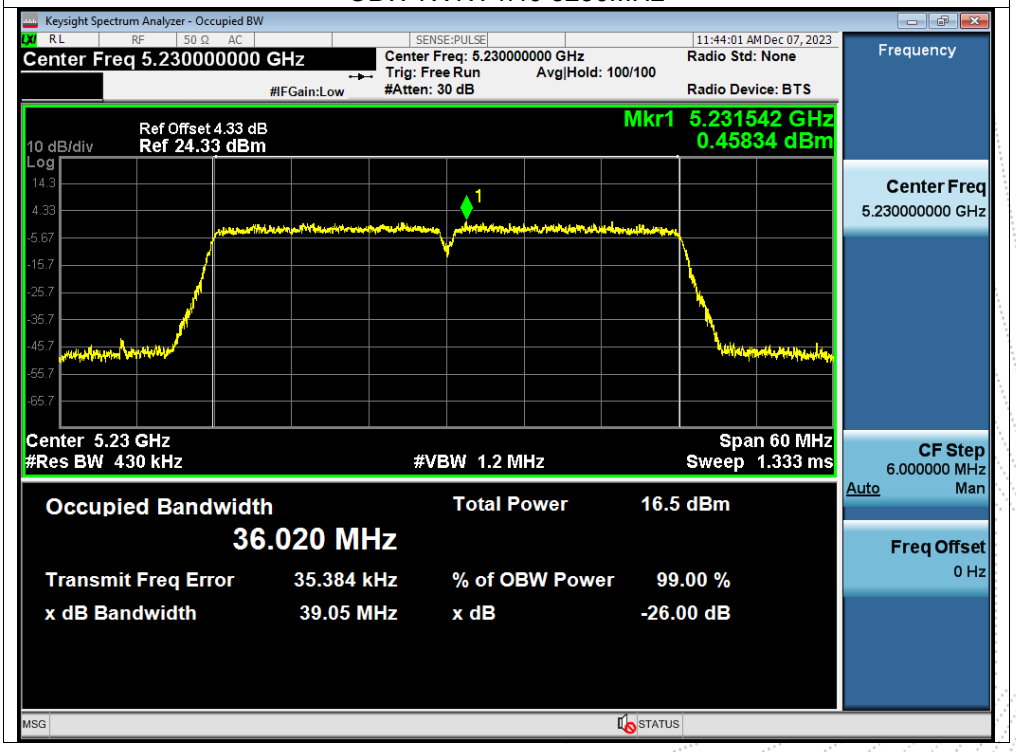
OBW NVNT n20 5240MHz



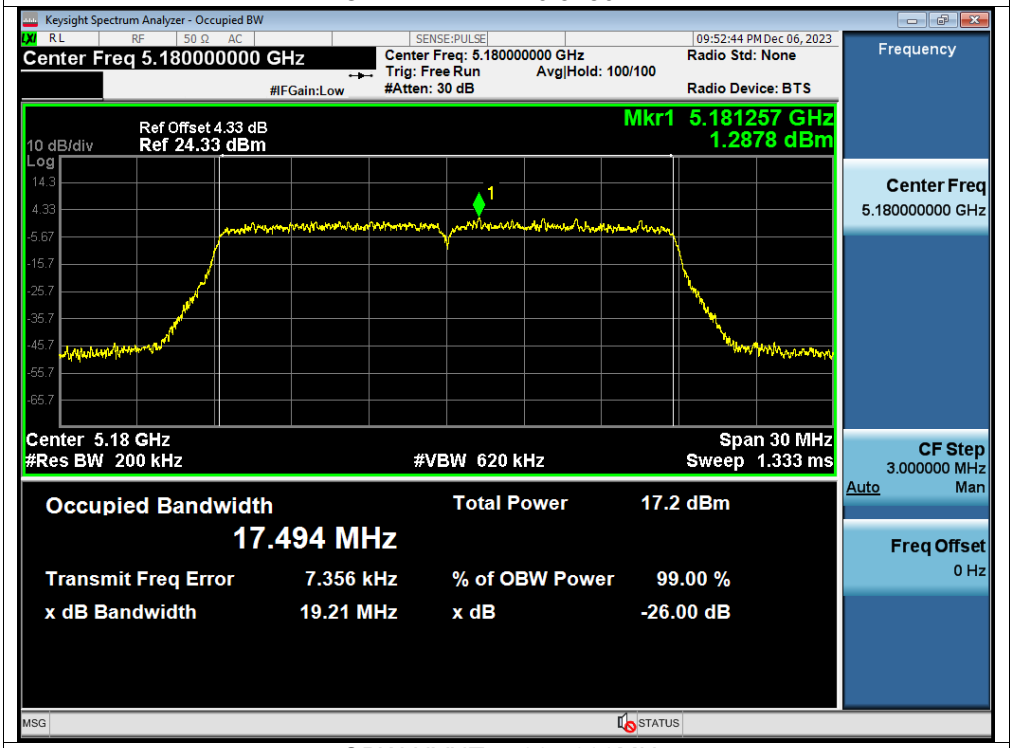
OBW NVNT n40 5190MHz



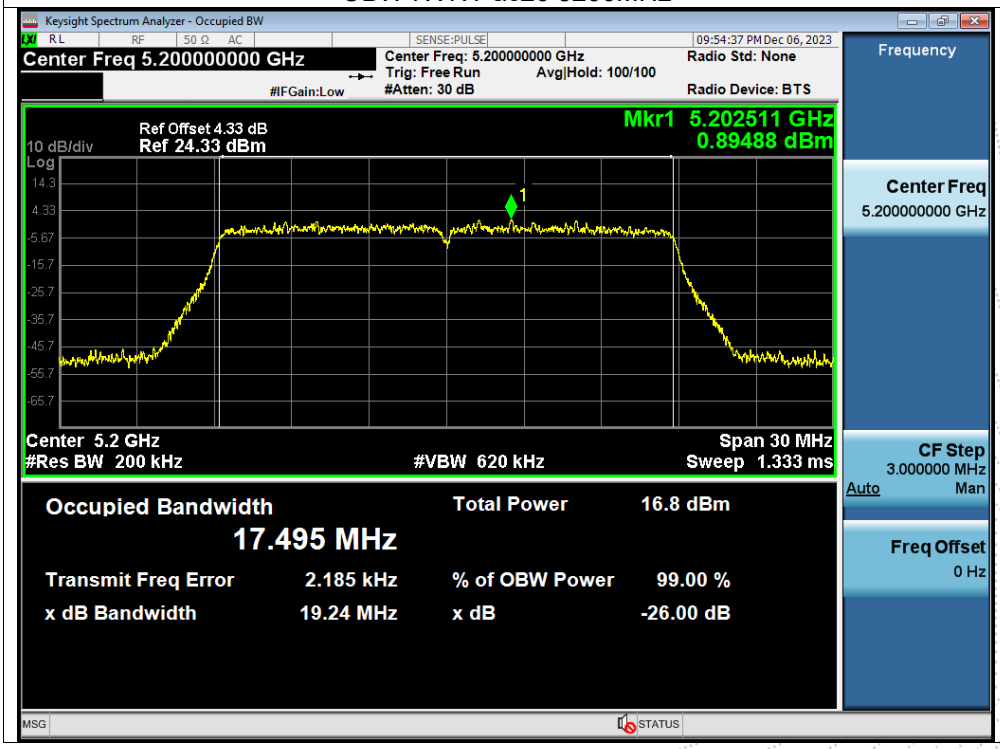
OBW NVNT n40 5230MHz



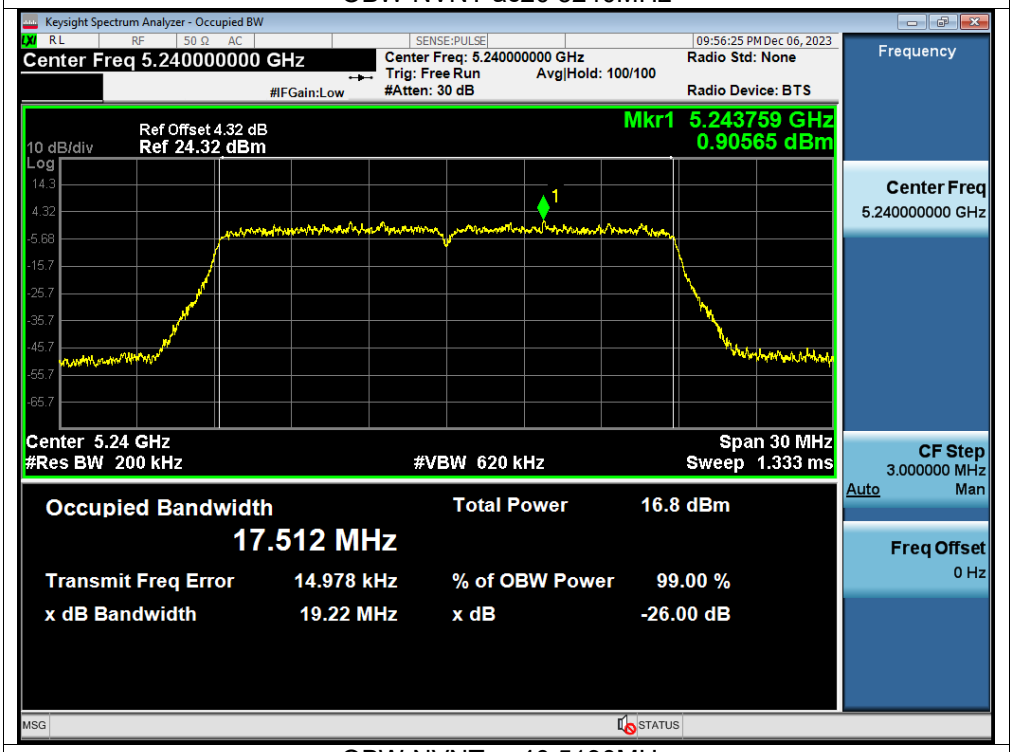
OBW NVNT ac20 5180MHz



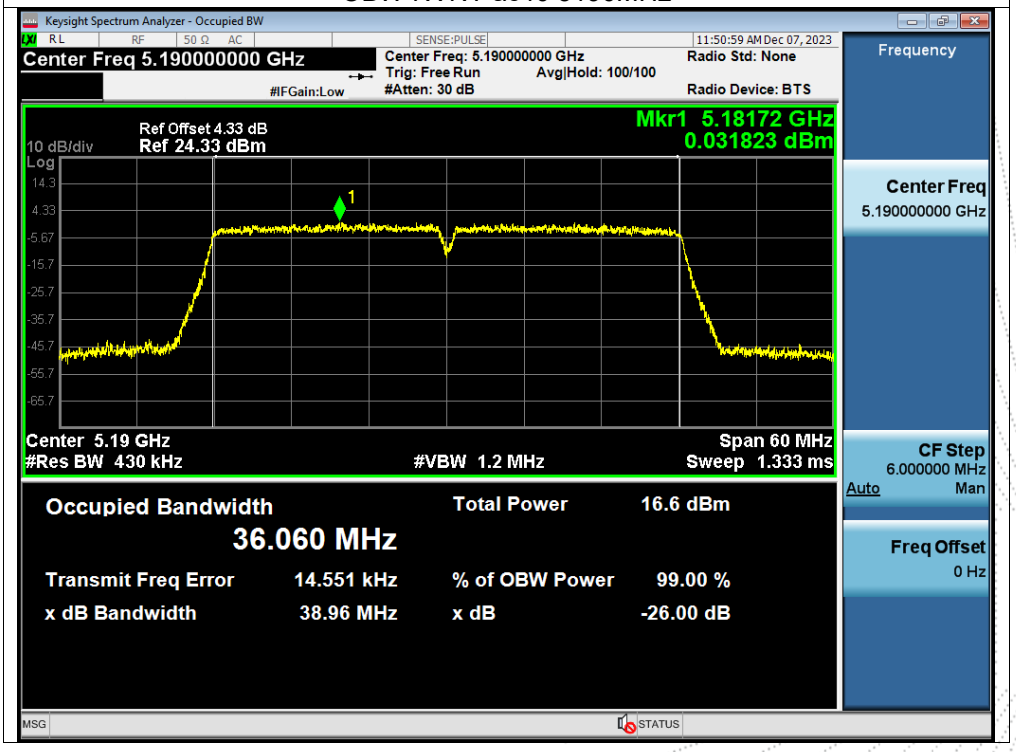
OBW NVNT ac20 5200MHz



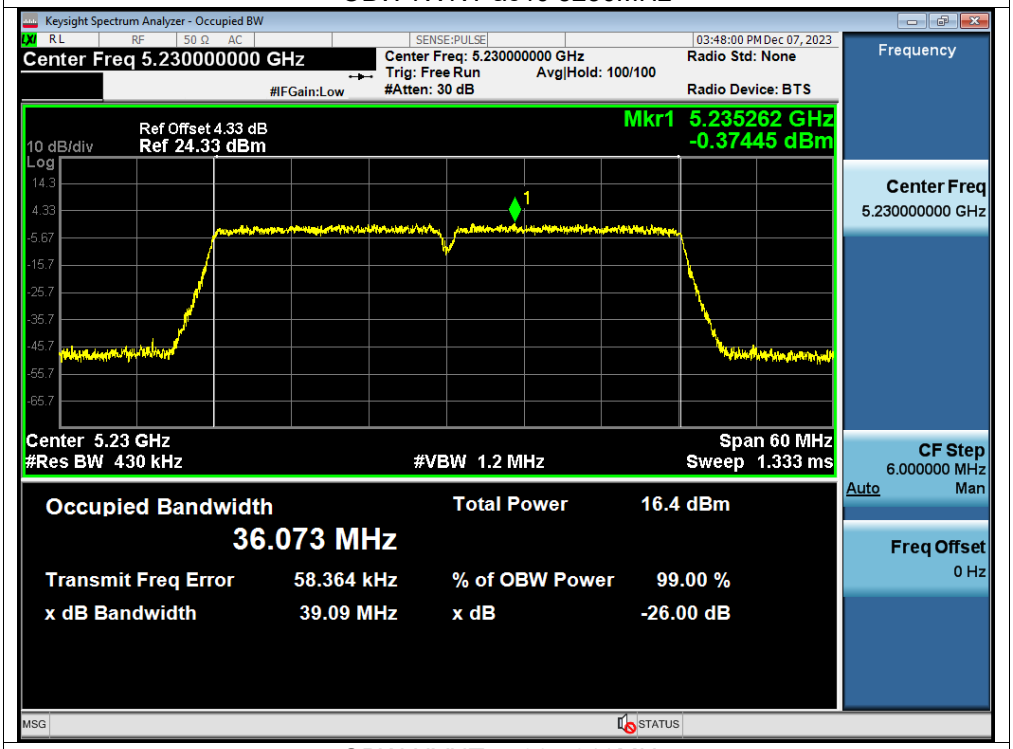
OBW NVNT ac20 5240MHz



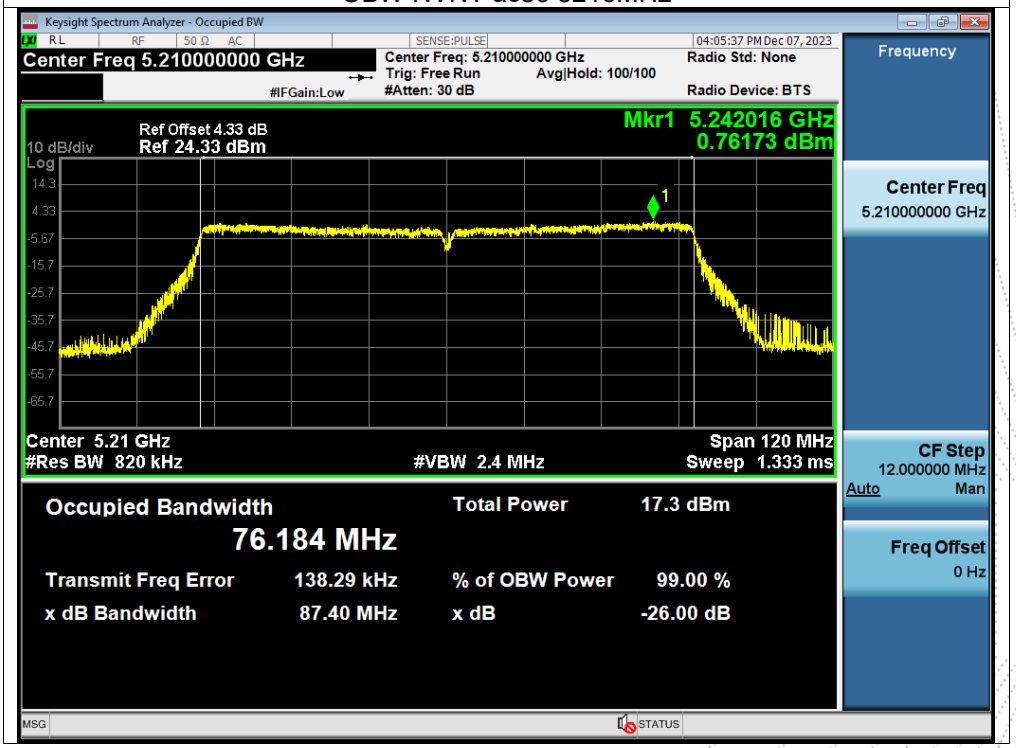
OBW NVNT ac40 5190MHz



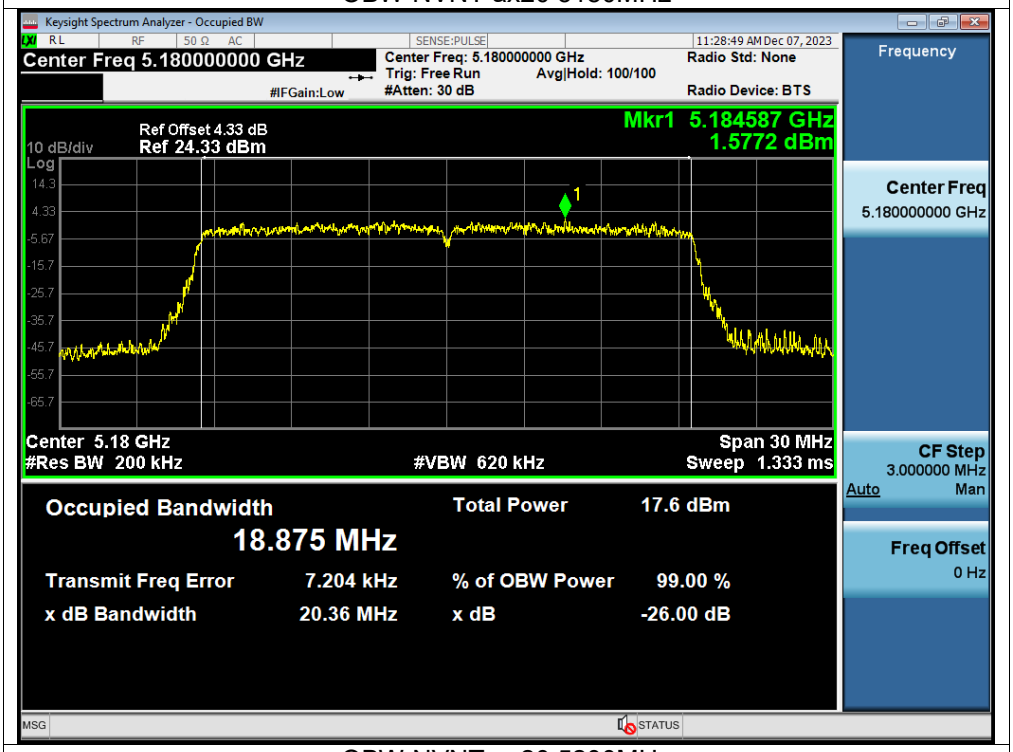
OBW NVNT ac40 5230MHz



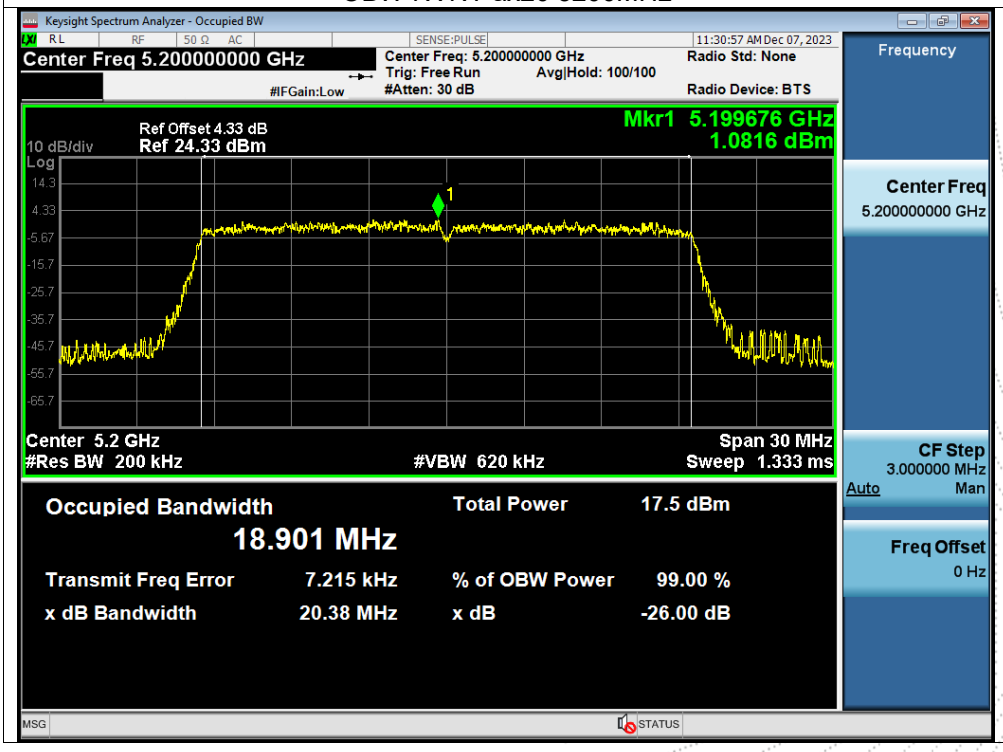
OBW NVNT ac80 5210MHz



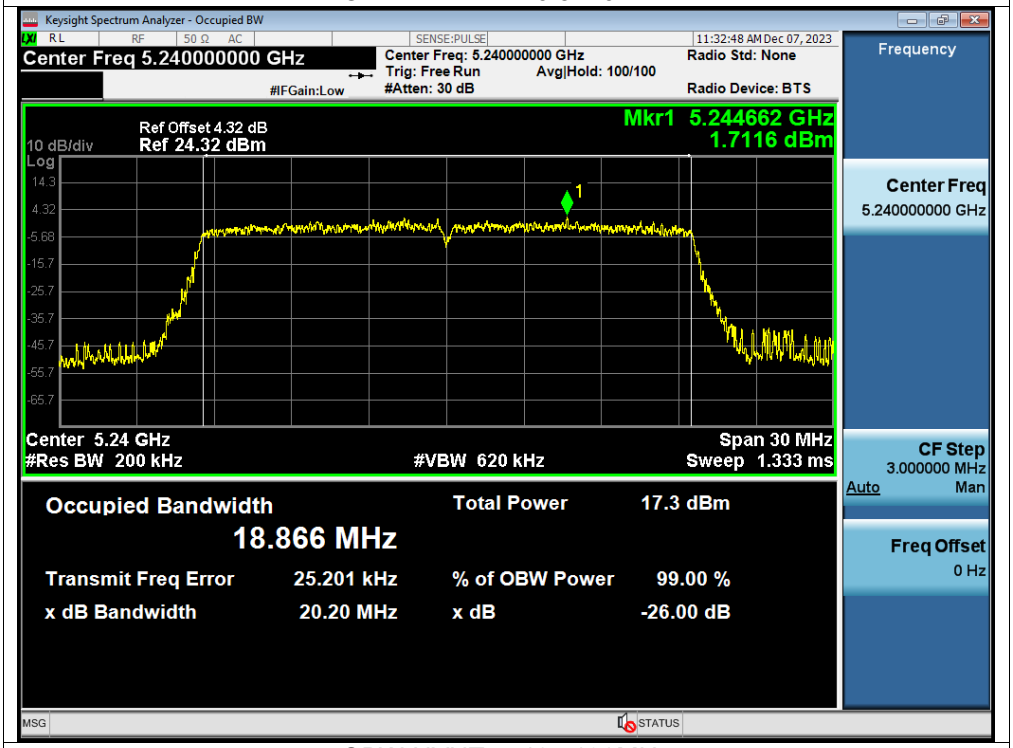
OBW NVNT ax20 5180MHz



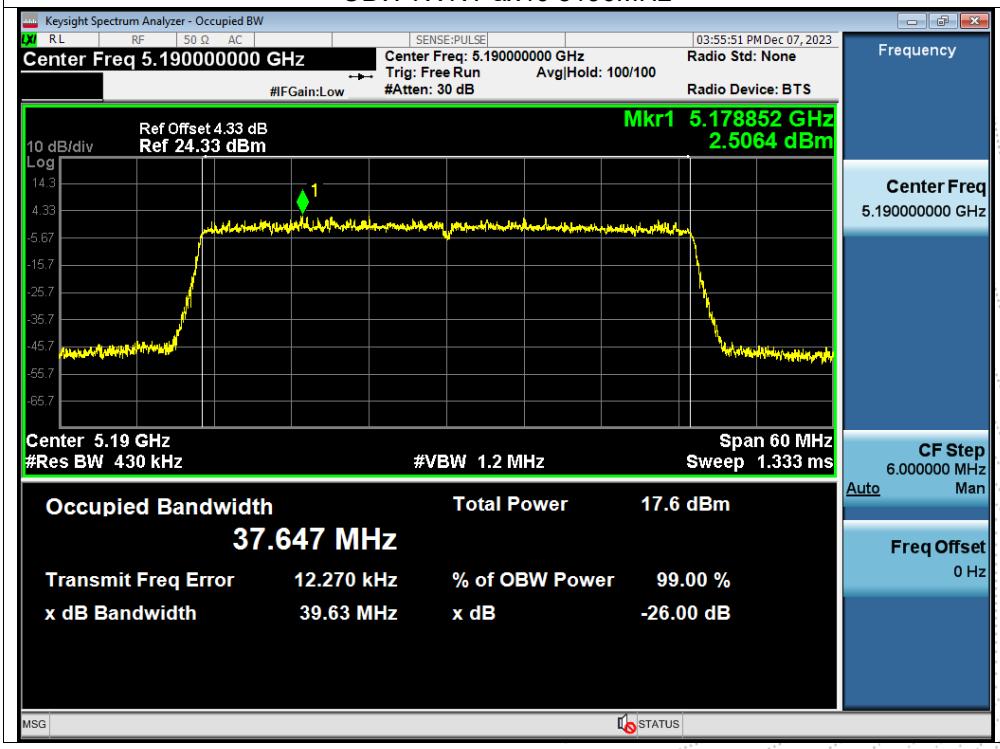
OBW NVNT ax20 5200MHz



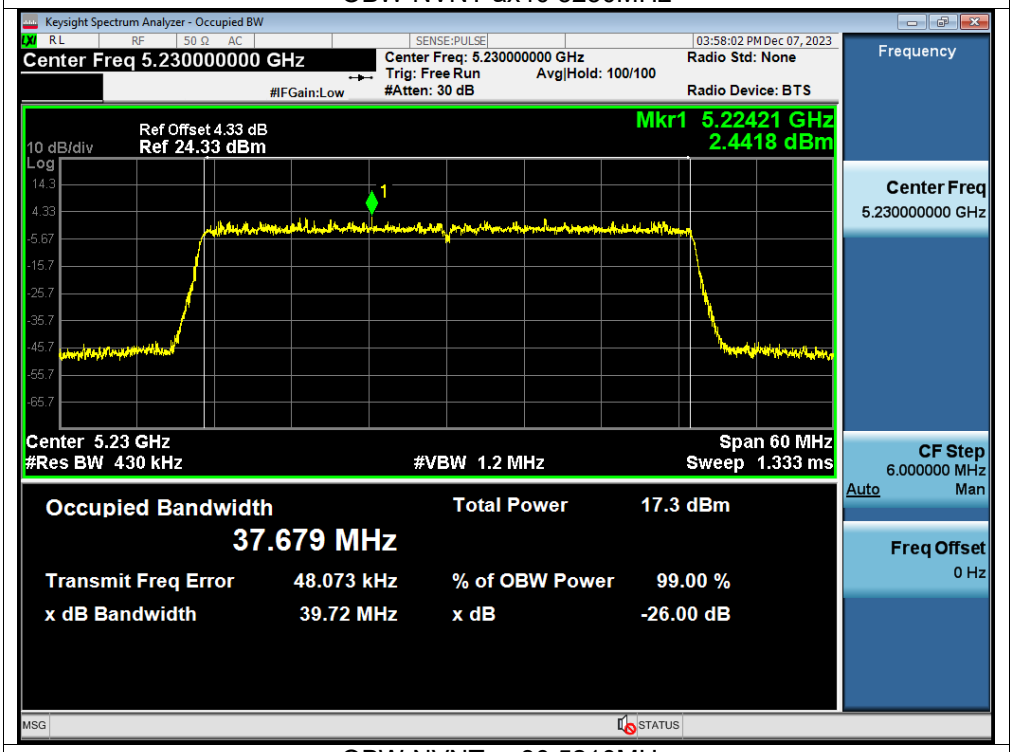
OBW NVNT ax20 5240MHz



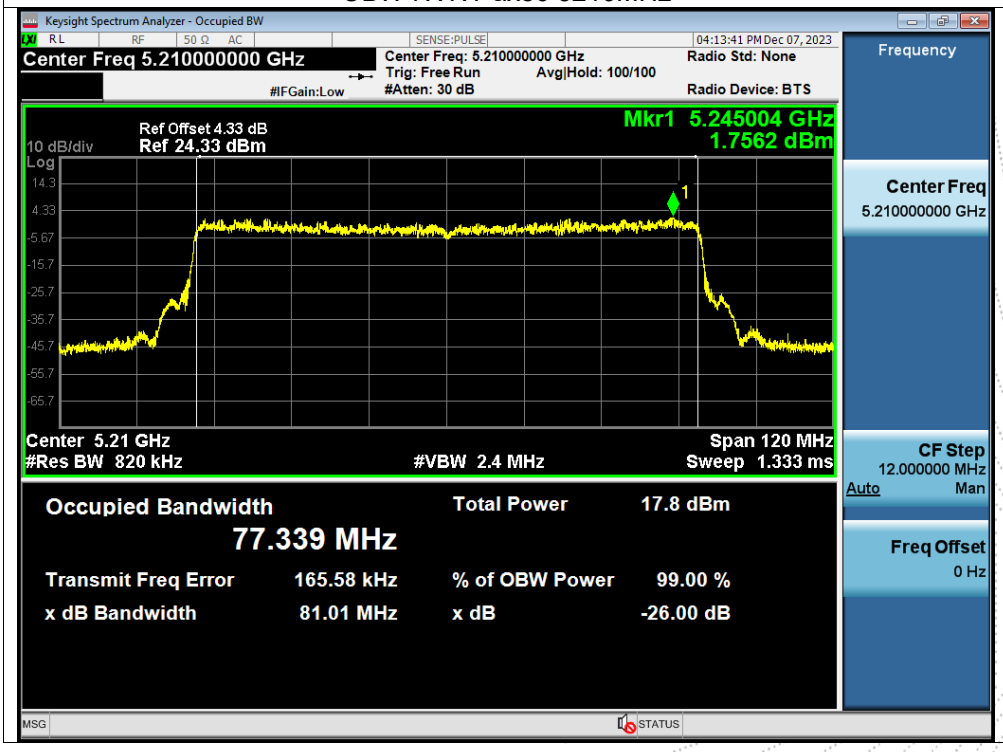
OBW NVNT ax40 5190MHz



OBW NVNT ax40 5230MHz



OBW NVNT ax80 5210MHz



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5260-5320MHz)		

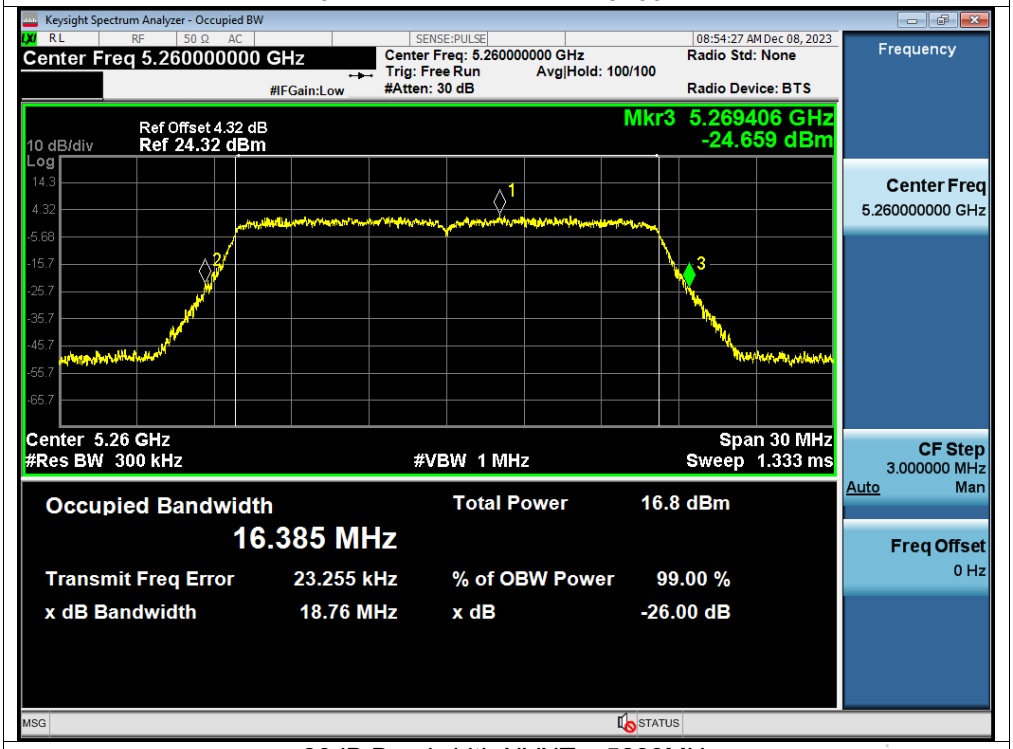
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5260	18.551	18.765	Pass
NVNT	a	5280	18.628	18.578	Pass
NVNT	a	5320	18.6	18.63	Pass
NVNT	n20	5260	19.539	19.52	Pass
NVNT	n20	5280	19.415	19.628	Pass
NVNT	n20	5320	19.487	19.549	Pass
NVNT	n40	5270	38.627	38.616	Pass
NVNT	n40	5310	38.598	38.663	Pass
NVNT	ac20	5260	19.681	19.536	Pass
NVNT	ac20	5280	19.564	19.537	Pass
NVNT	ac20	5320	19.598	19.541	Pass
NVNT	ac40	5270	38.54	38.543	Pass
NVNT	ac40	5310	38.419	38.526	Pass
NVNT	ac80	5290	84.076	**84.213**	Pass
NVNT	ax20	5260	20.458	20.382	Pass
NVNT	ax20	5280	20.532	20.425	Pass
NVNT	ax20	5320	20.383	20.405	Pass
NVNT	ax40	5270	39.458	39.399	Pass
NVNT	ax40	5310	39.461	39.64	Pass
NVNT	ax80	5290	79.415	79.392	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5260	16.337	16.344
NVNT	a	5280	16.32	16.318
NVNT	a	5320	16.323	16.334
NVNT	n20	5260	17.506	17.507
NVNT	n20	5280	17.5	17.491
NVNT	n20	5320	17.495	17.494
NVNT	n40	5270	36.021	36.005
NVNT	n40	5310	35.986	36
NVNT	ac20	5260	17.503	17.509
NVNT	ac20	5280	17.487	17.499
NVNT	ac20	5320	17.506	17.494
NVNT	ac40	5270	36.058	36.02
NVNT	ac40	5310	36.04	36.018
NVNT	ac80	5290	76.094	76.194
NVNT	ax20	5260	18.885	18.861
NVNT	ax20	5280	18.88	18.862
NVNT	ax20	5320	18.878	18.861
NVNT	ax40	5270	37.614	37.651
NVNT	ax40	5310	37.633	37.621
NVNT	ax80	5290	**77.233**	77.158

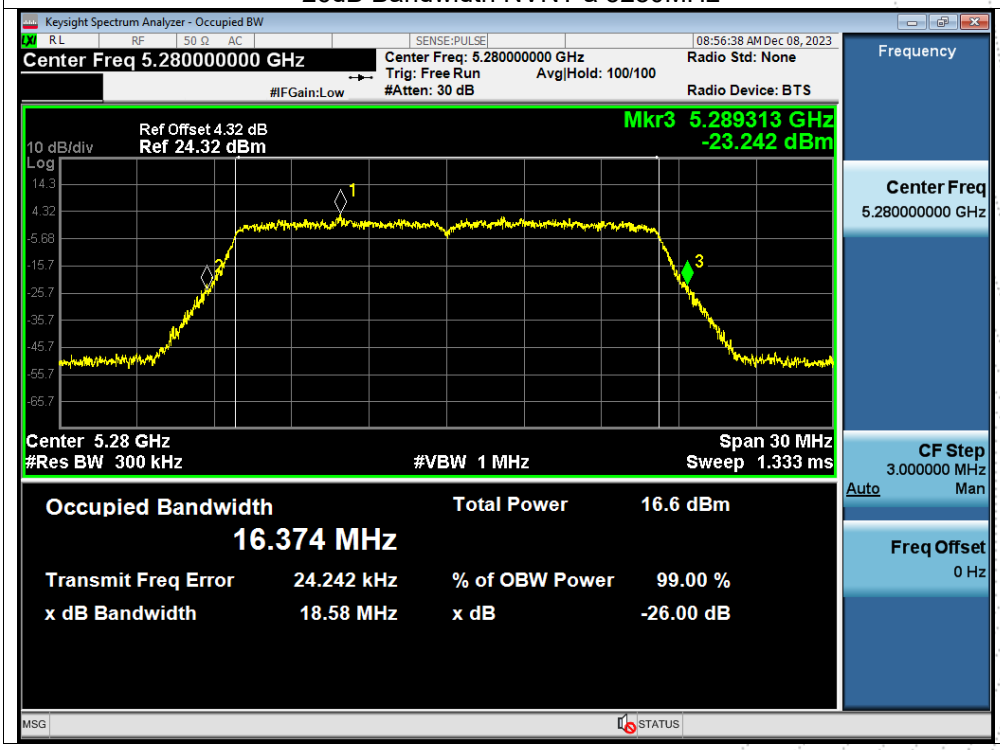
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

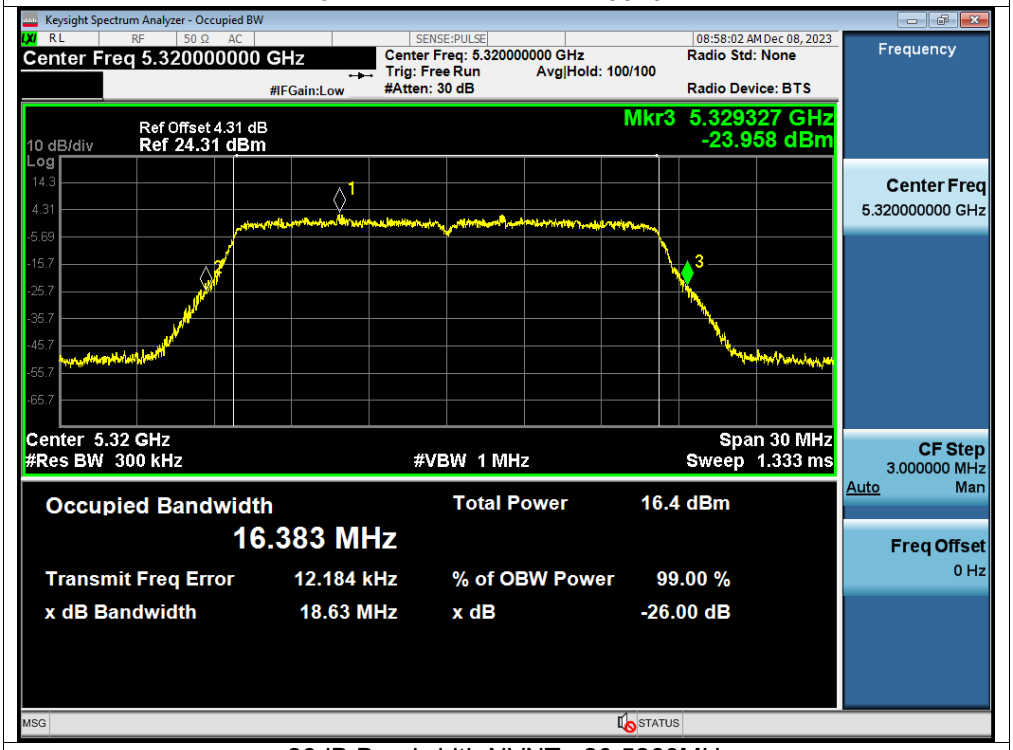
-26dB Bandwidth NVNT a 5260MHz



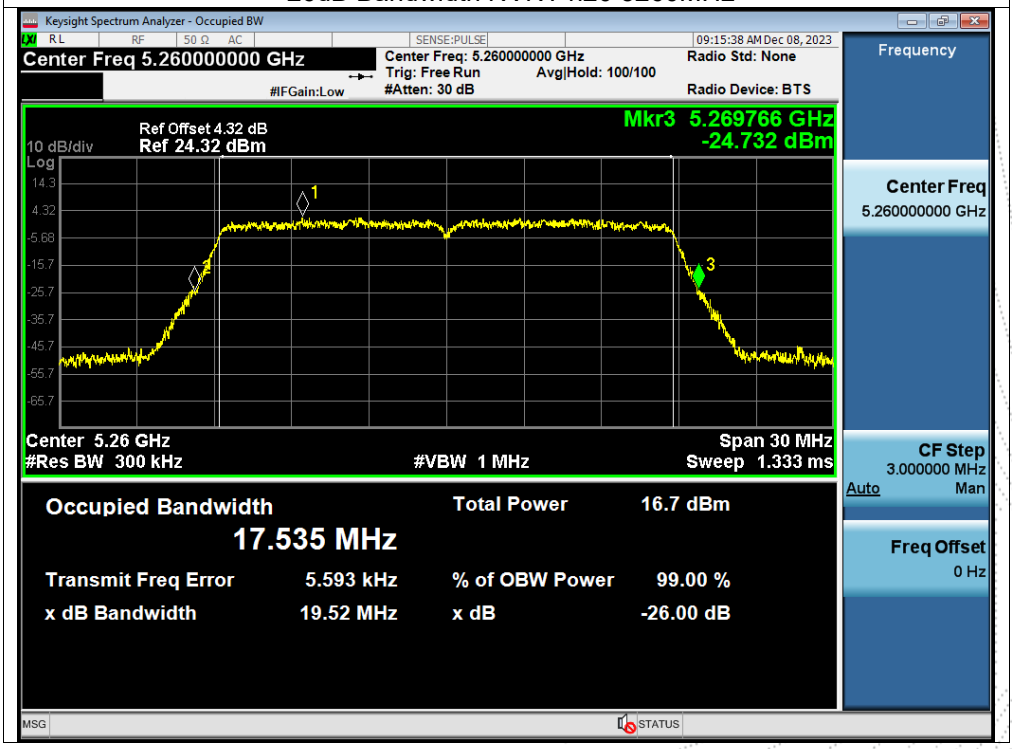
-26dB Bandwidth NVNT a 5280MHz



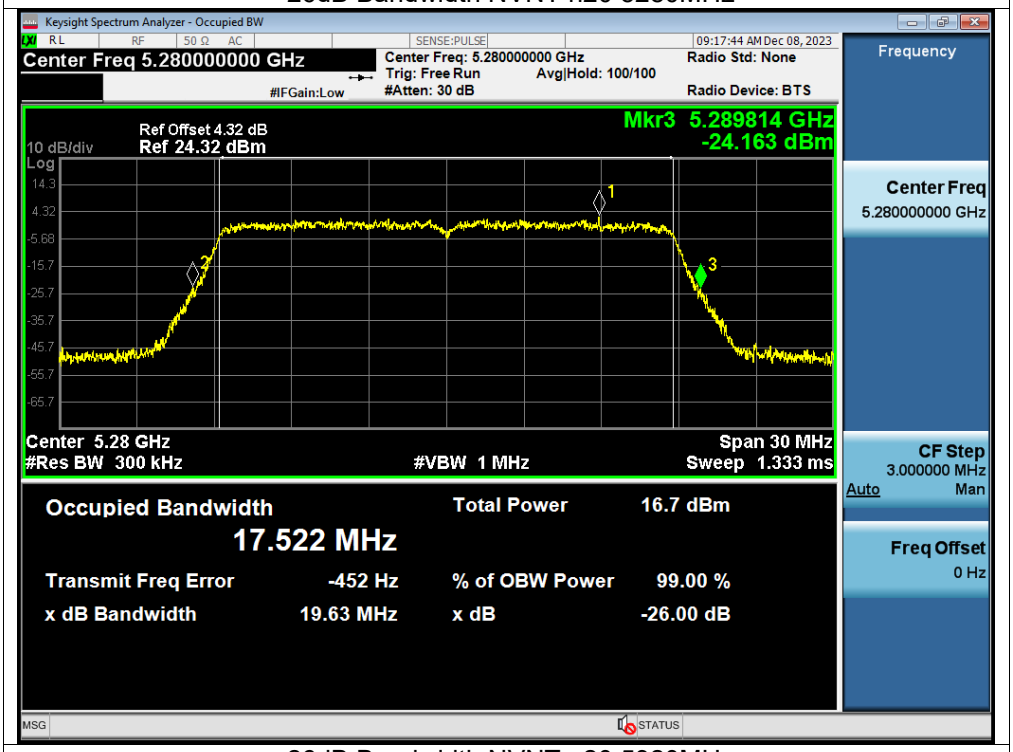
-26dB Bandwidth NVNT a 5320MHz



-26dB Bandwidth NVNT n20 5260MHz

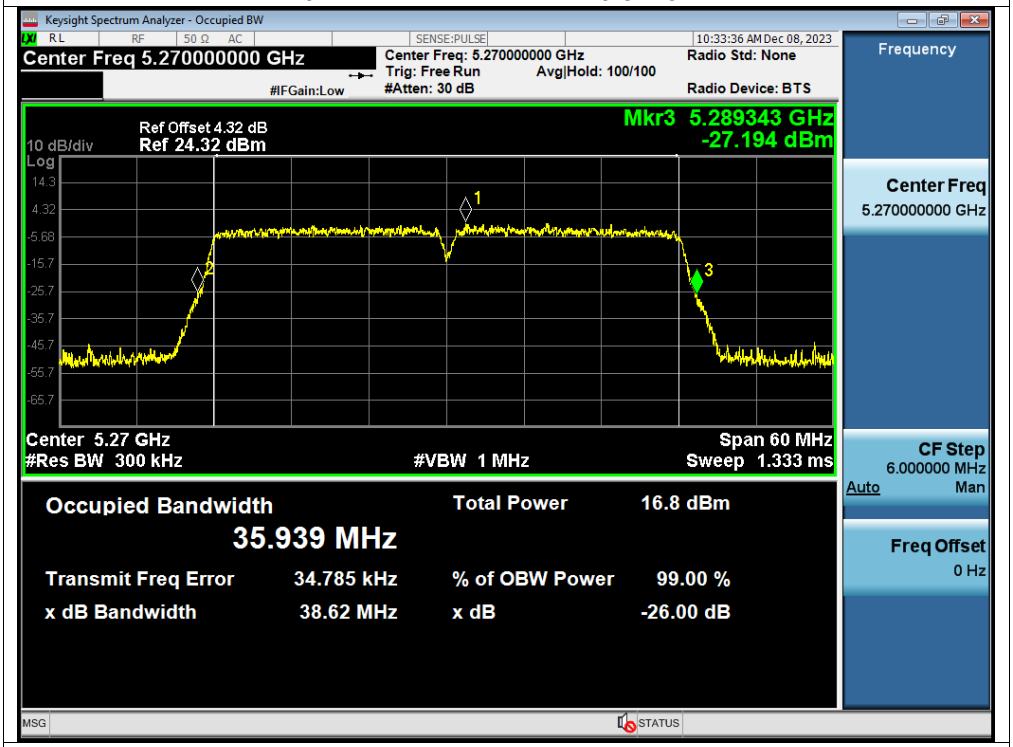


-26dB Bandwidth NVNT n20 5280MHz



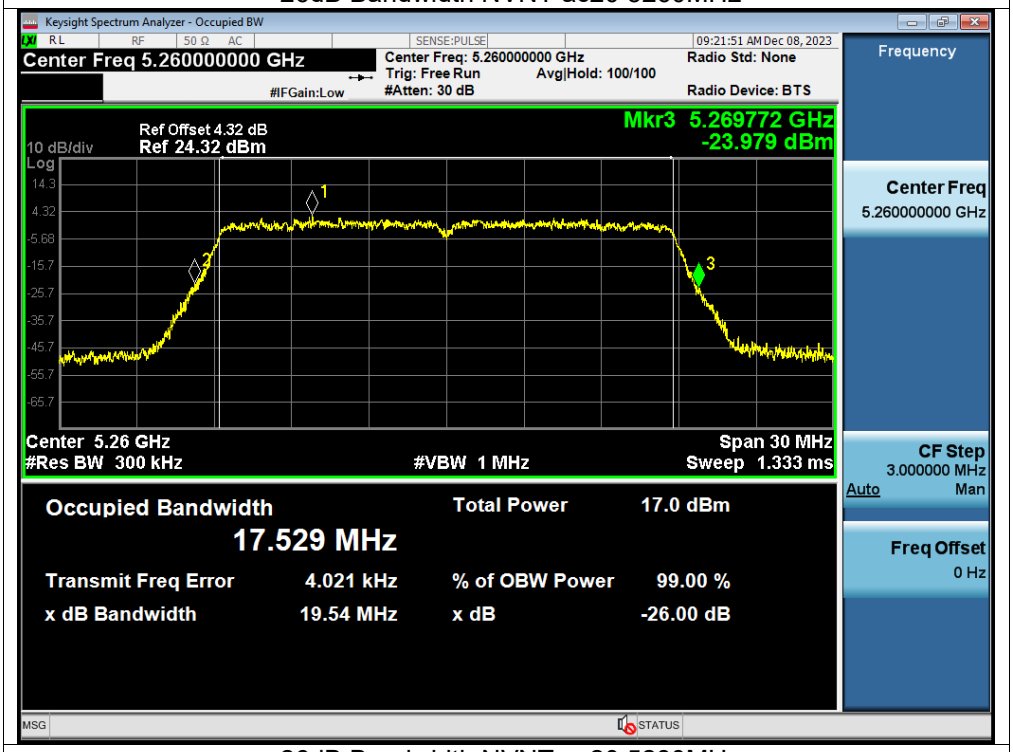
-26dB Bandwidth NVNT n20 5320MHz

-26dB Bandwidth NVNT n40 5270MHz

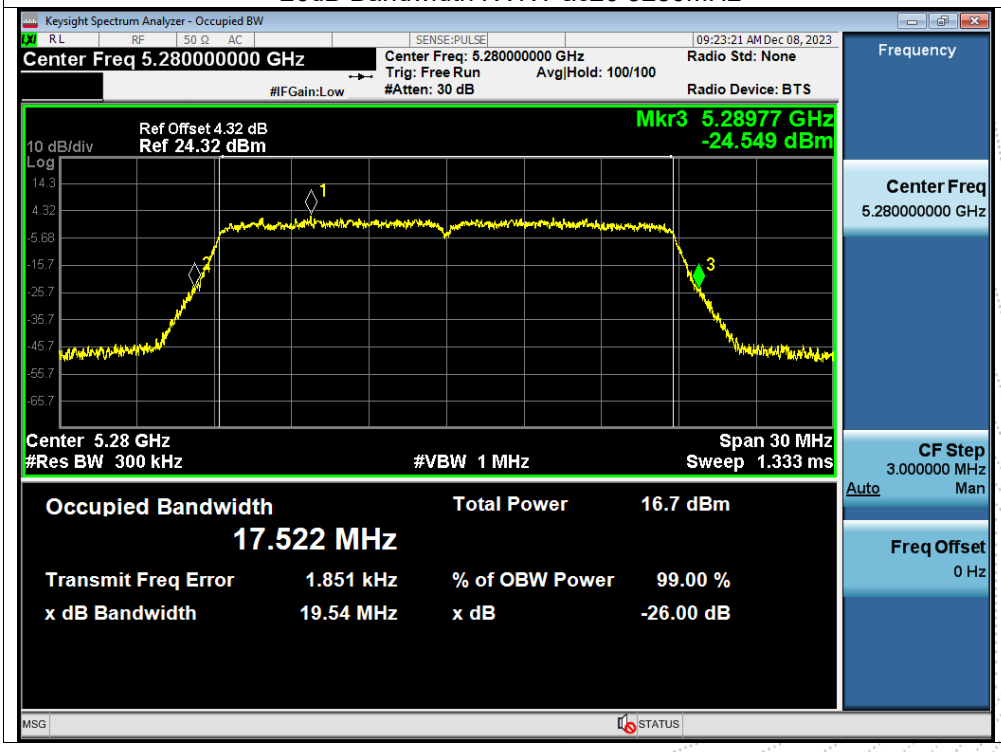


-26dB Bandwidth NVNT n40 5310MHz

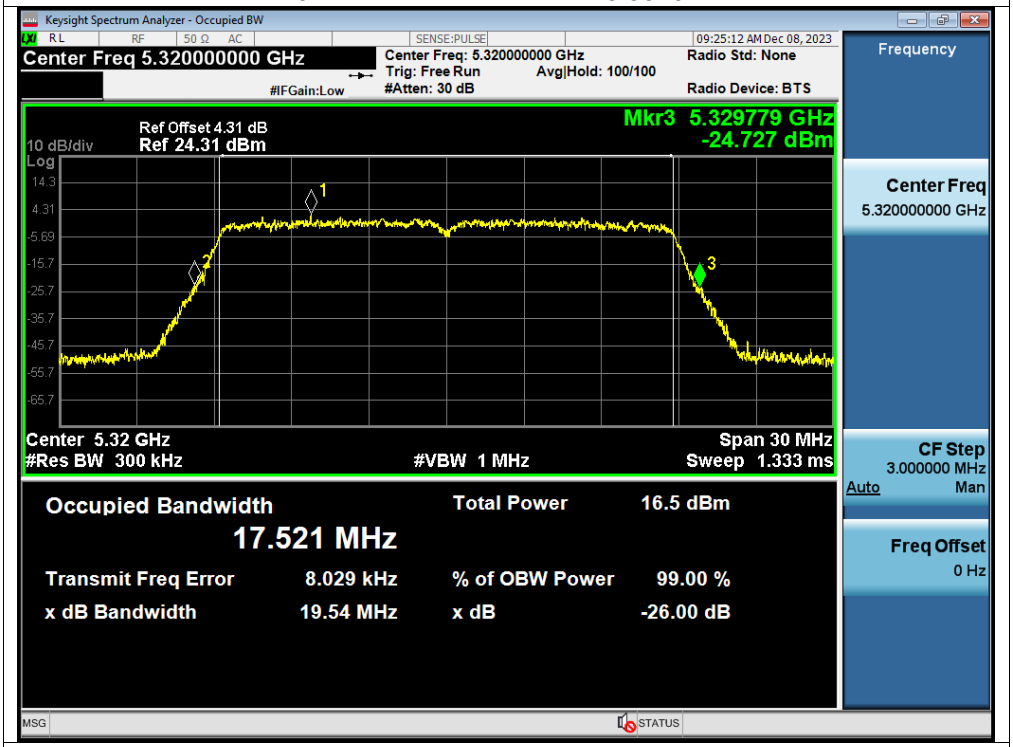
-26dB Bandwidth NVNT ac20 5260MHz



-26dB Bandwidth NVNT ac20 5280MHz

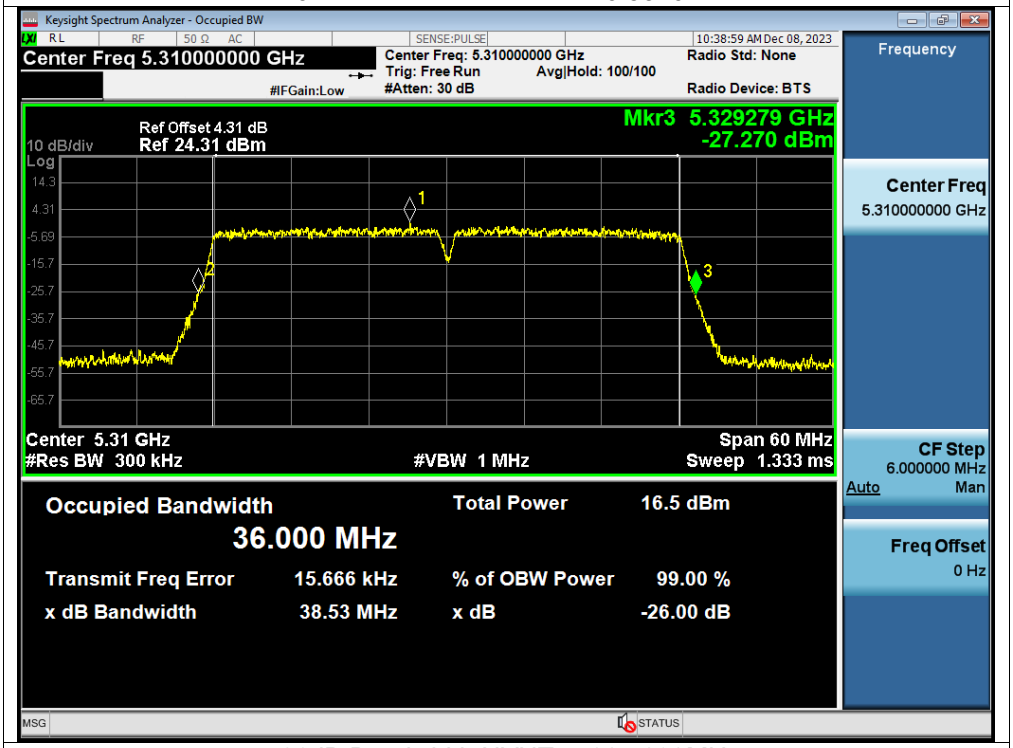


-26dB Bandwidth NVNT ac20 5320MHz



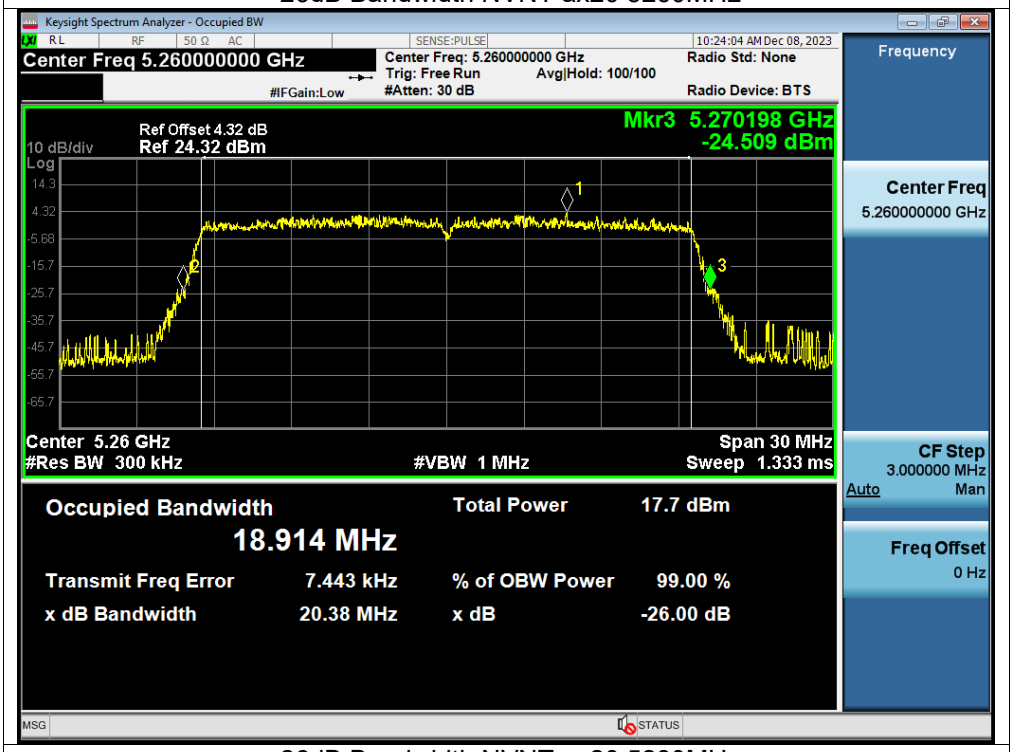
-26dB Bandwidth NVNT ac40 5270MHz

-26dB Bandwidth NVNT ac40 5310MHz

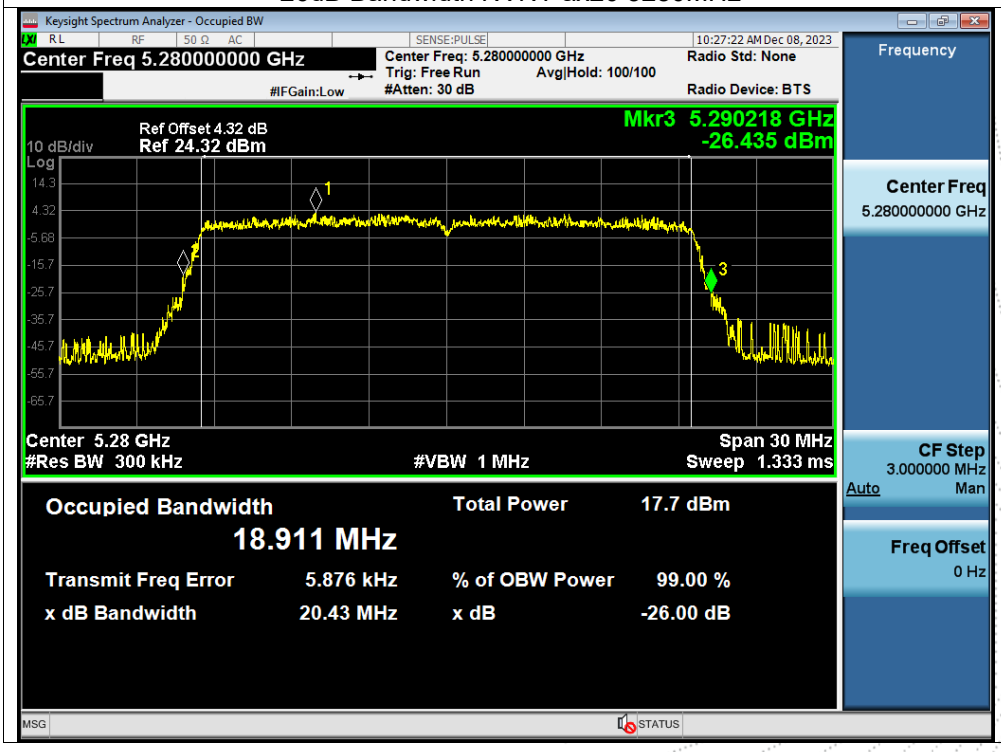


-26dB Bandwidth NVNT ac80 5290MHz

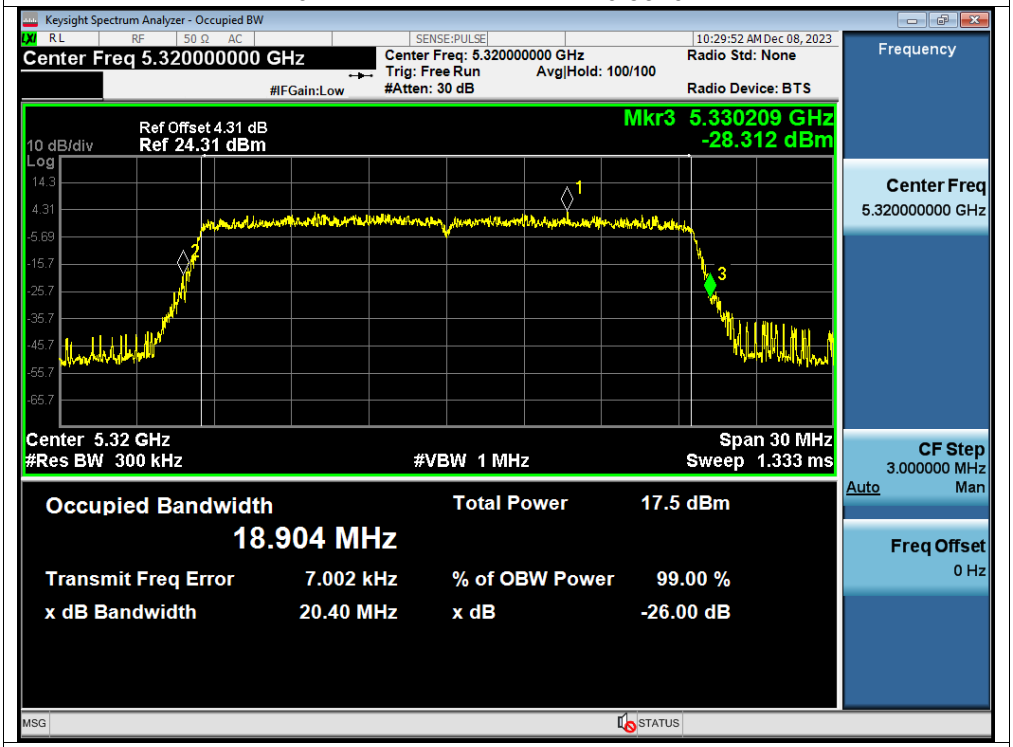
-26dB Bandwidth NVNT ax20 5260MHz



-26dB Bandwidth NVNT ax20 5280MHz

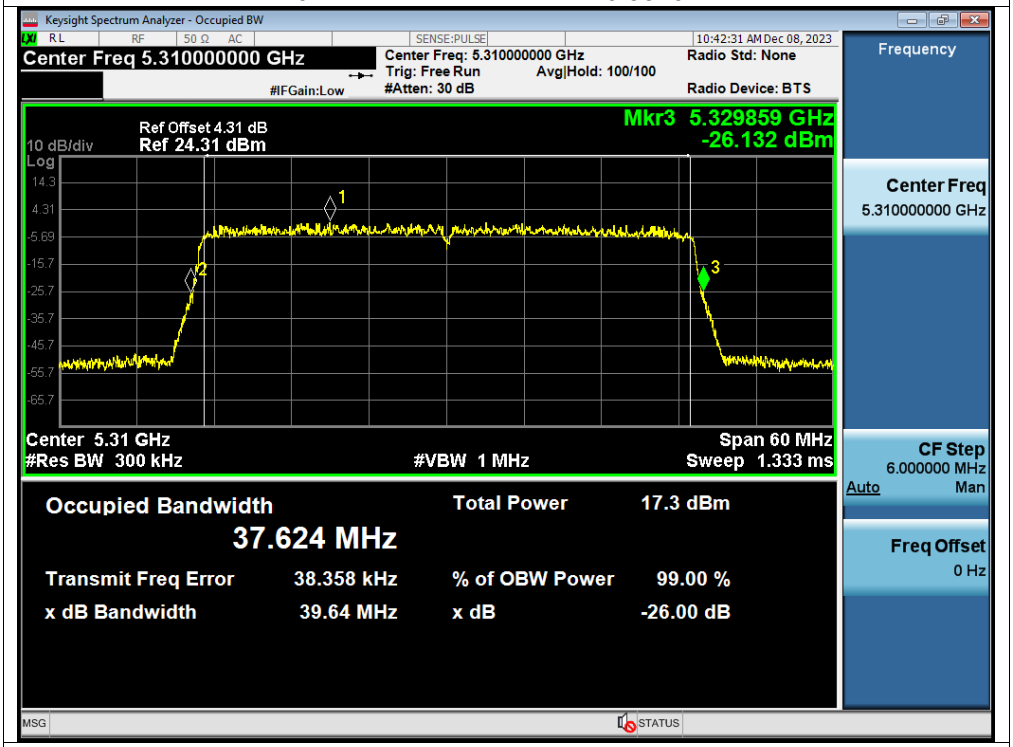


-26dB Bandwidth NVNT ax20 5320MHz



-26dB Bandwidth NVNT ax40 5270MHz

-26dB Bandwidth NVNT ax40 5310MHz

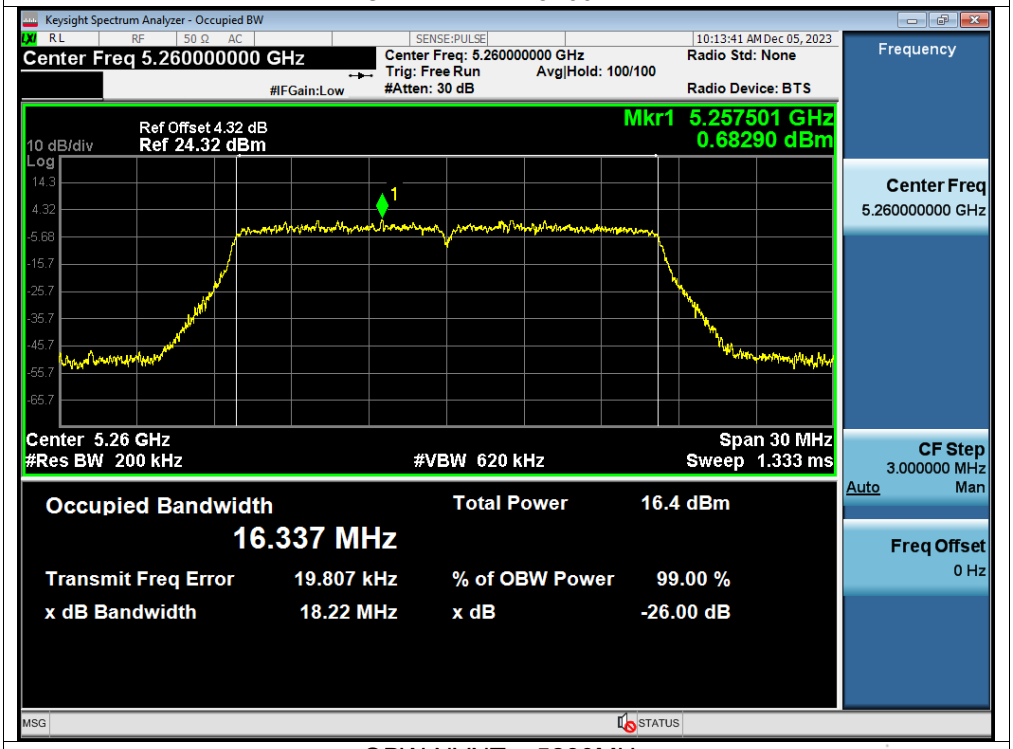


-26dB Bandwidth NVNT ax80 5290MHz

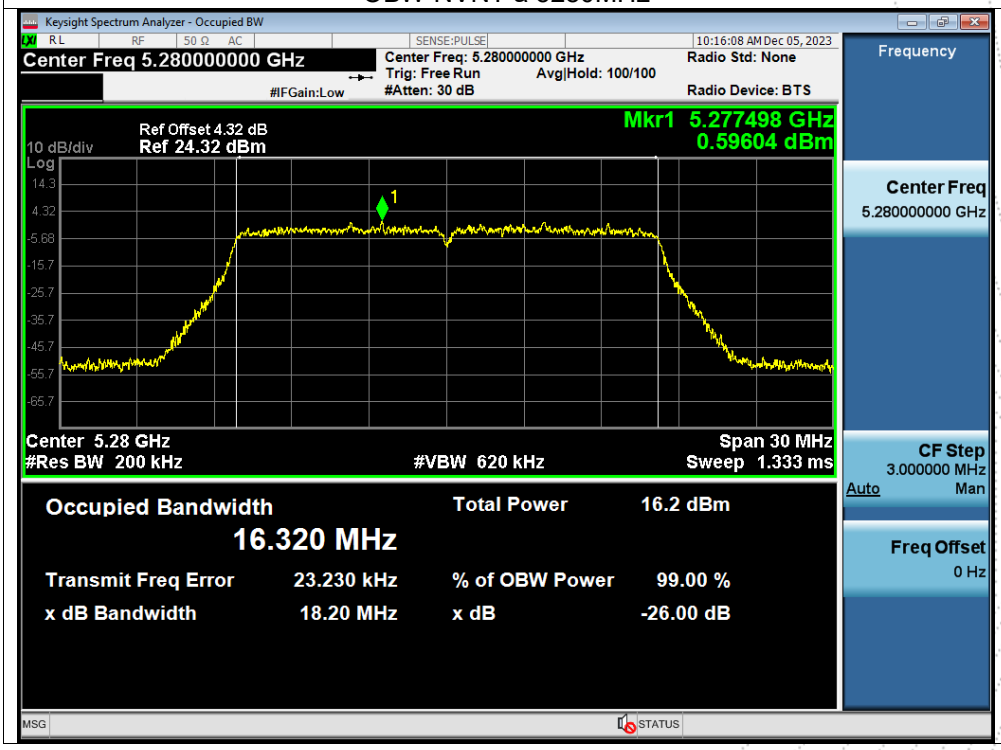
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

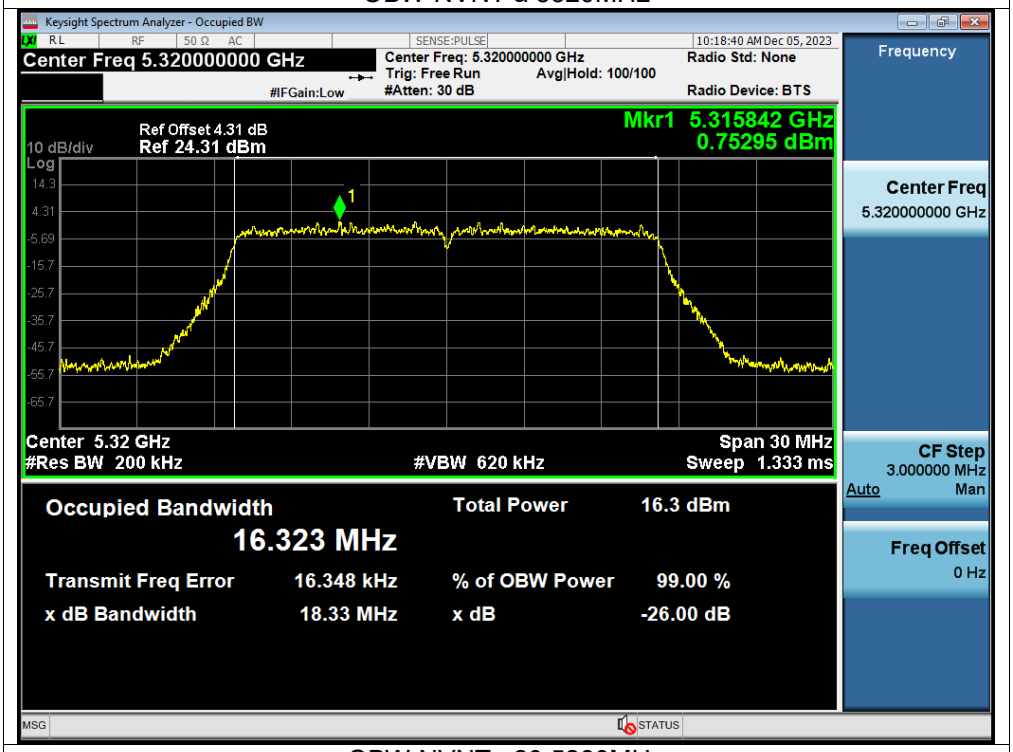
OBW NVNT a 5260MHz



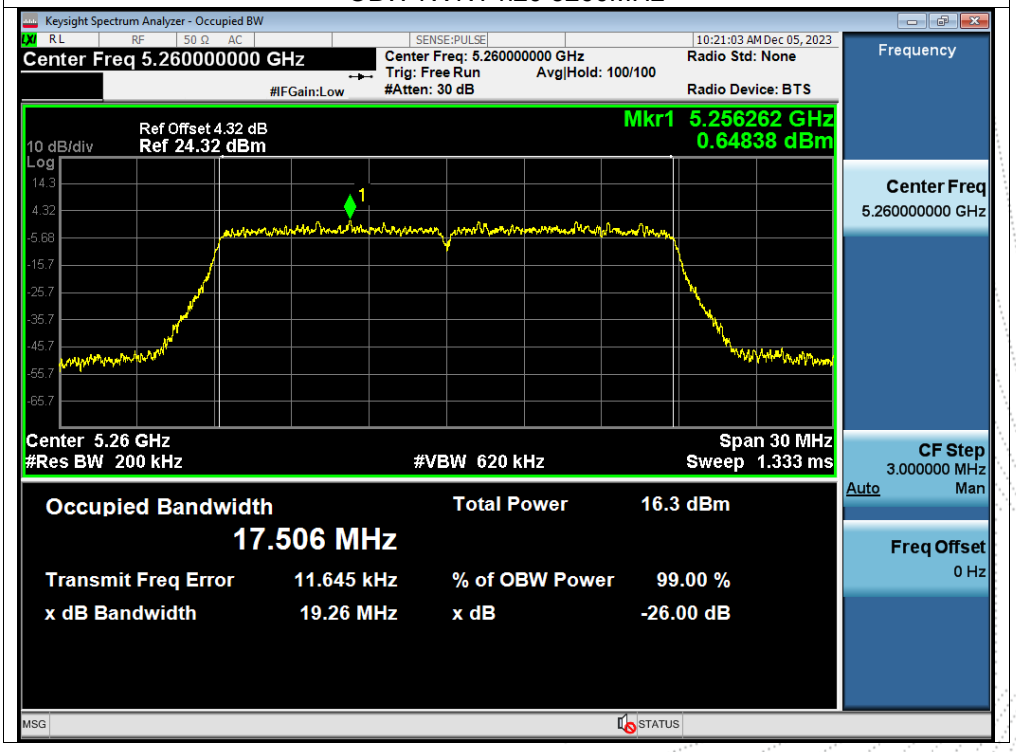
OBW NVNT a 5280MHz



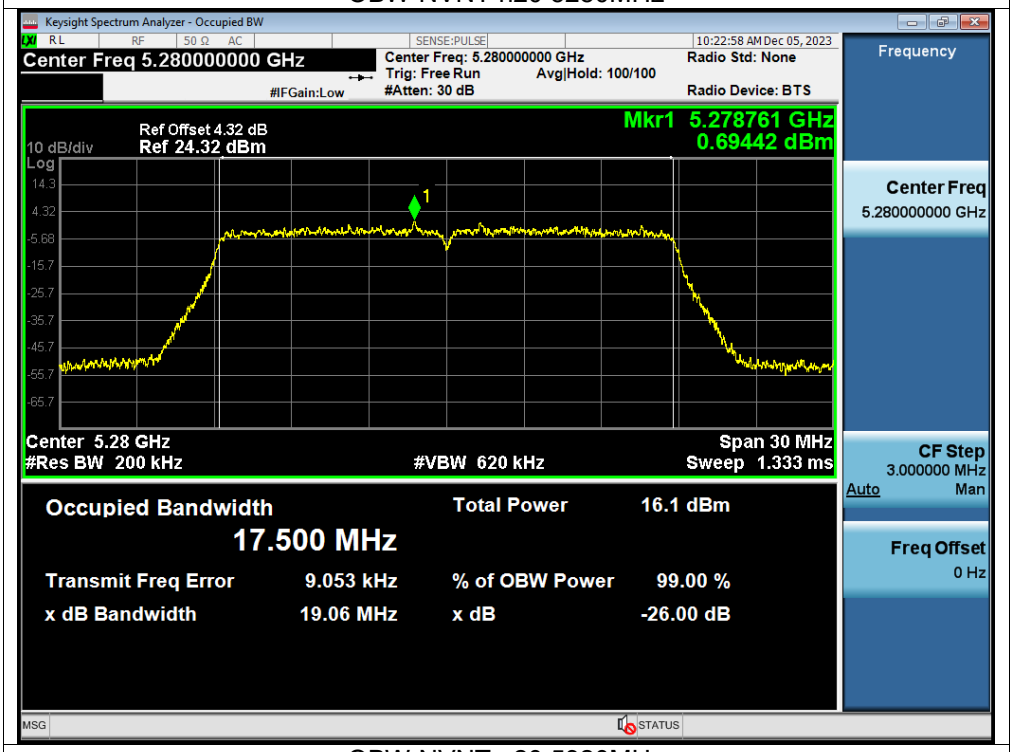
OBW NVNT a 5320MHz



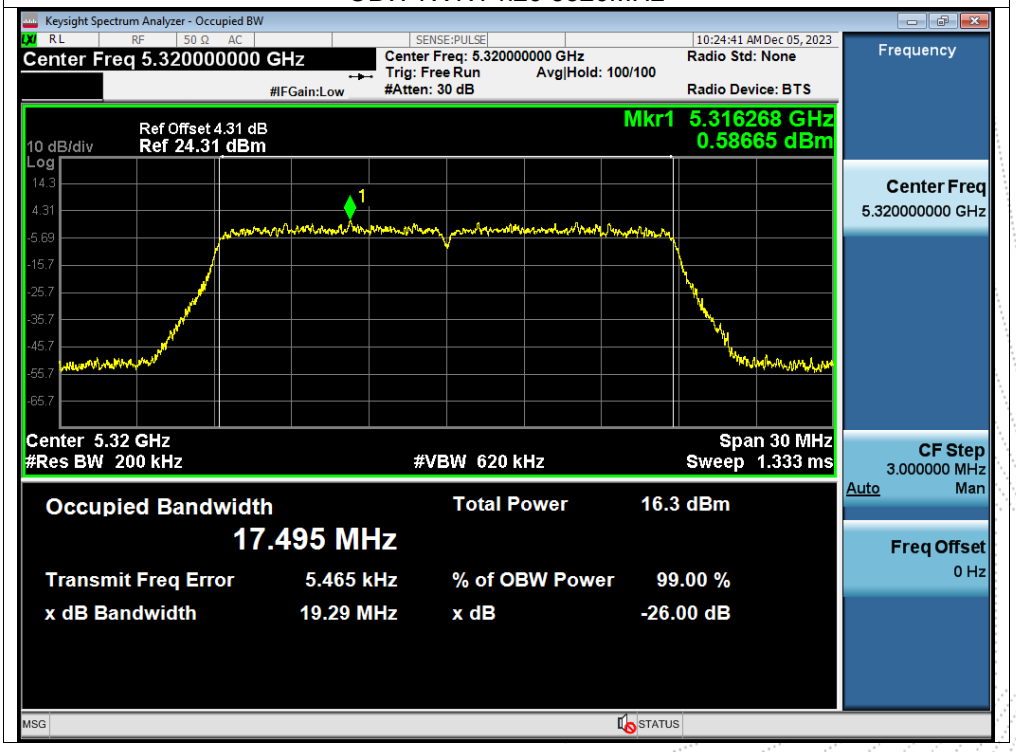
OBW NVNT n20 5260MHz



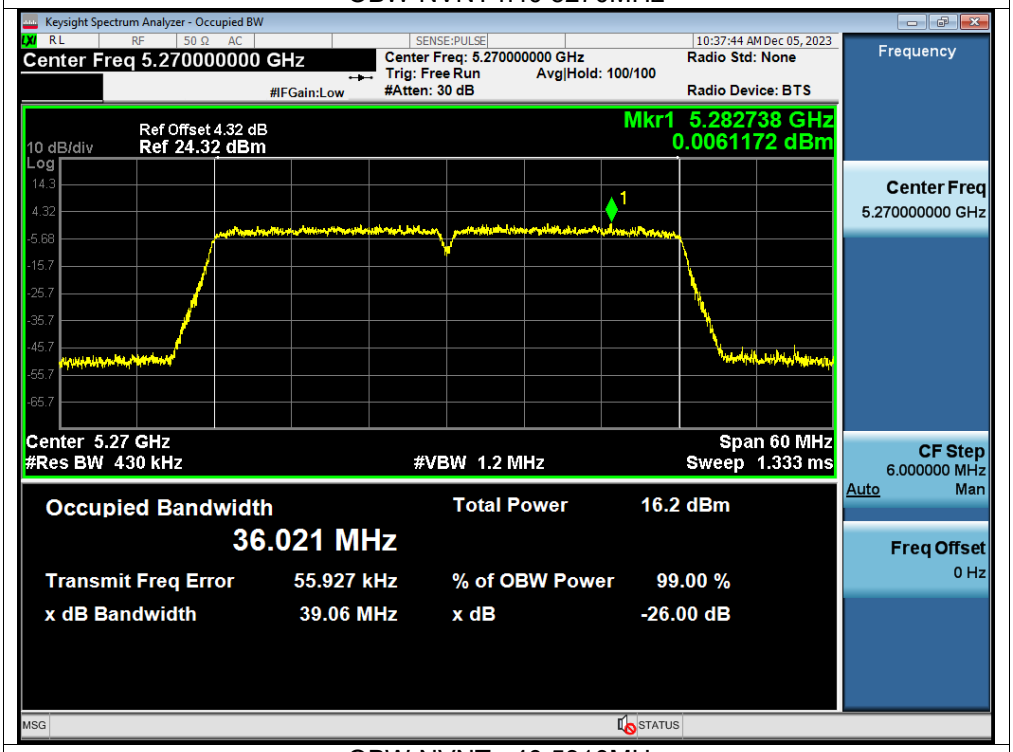
OBW NVNT n20 5280MHz



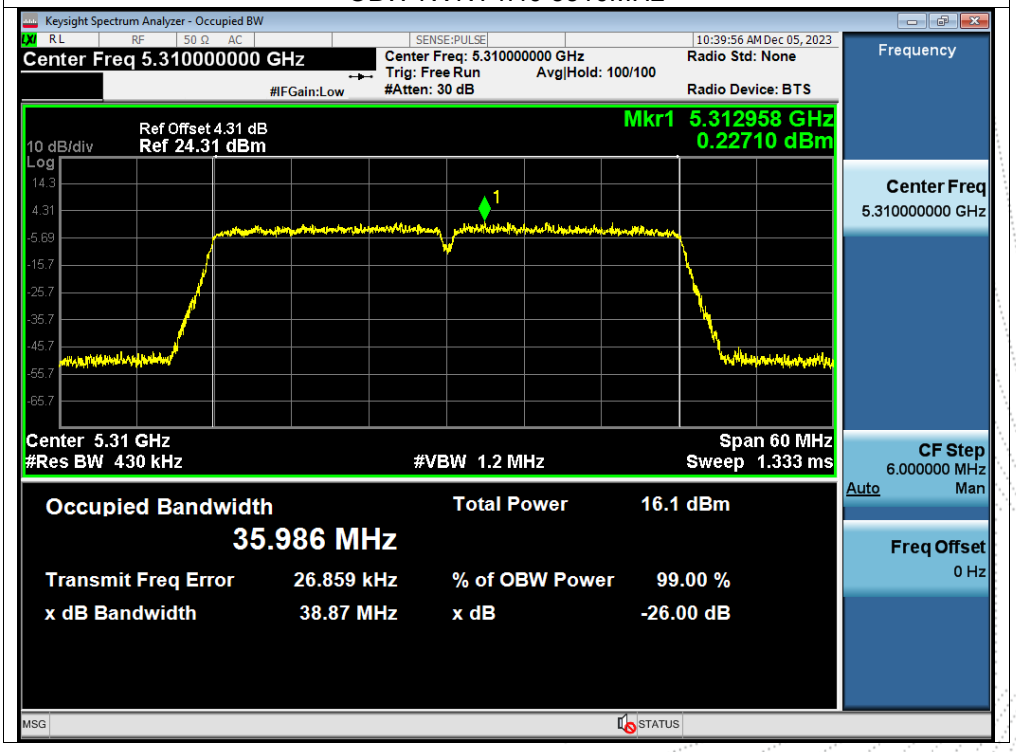
OBW NVNT n20 5320MHz



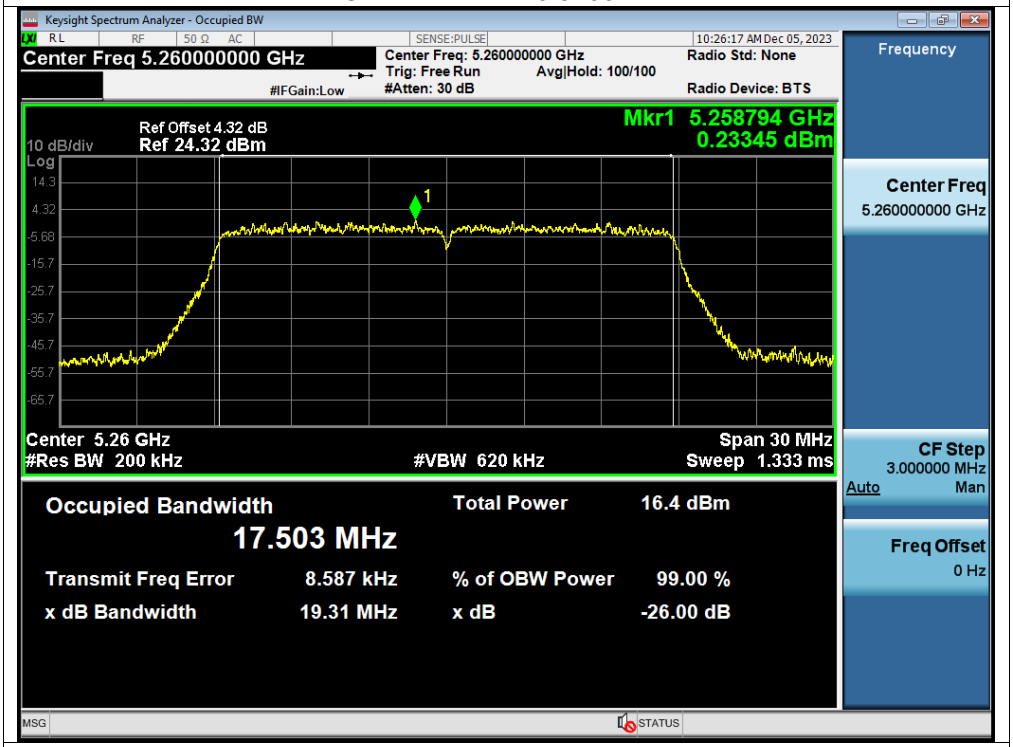
OBW NVNT n40 5270MHz



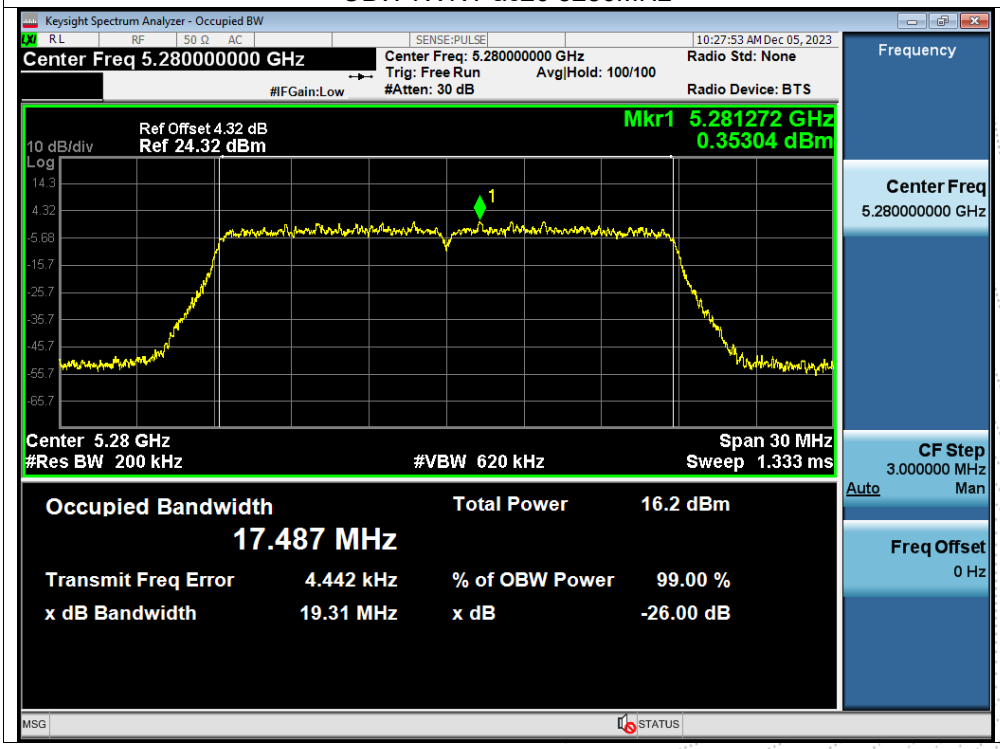
OBW NVNT n40 5310MHz



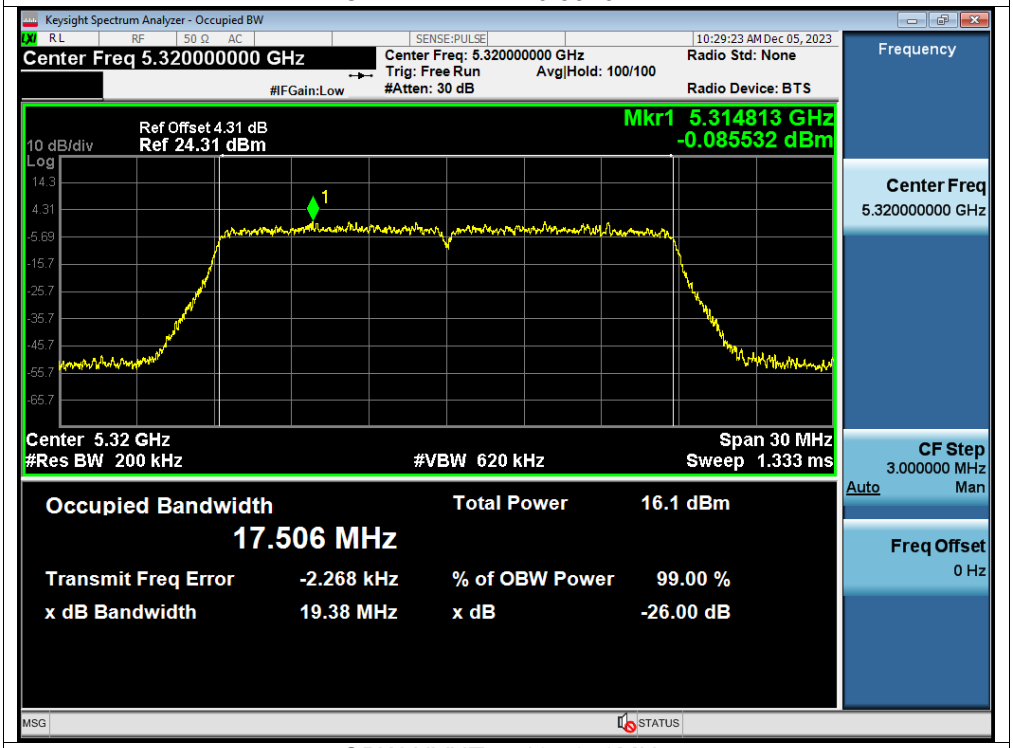
OBW NVNT ac20 5260MHz



OBW NVNT ac20 5280MHz

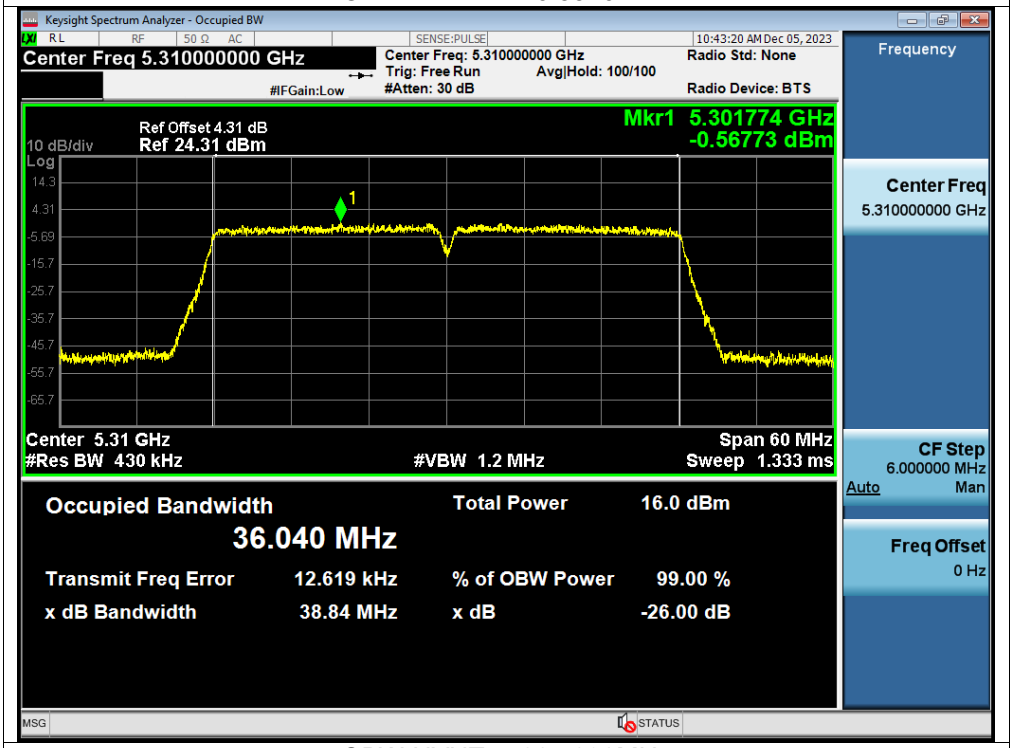


OBW NVNT ac20 5320MHz

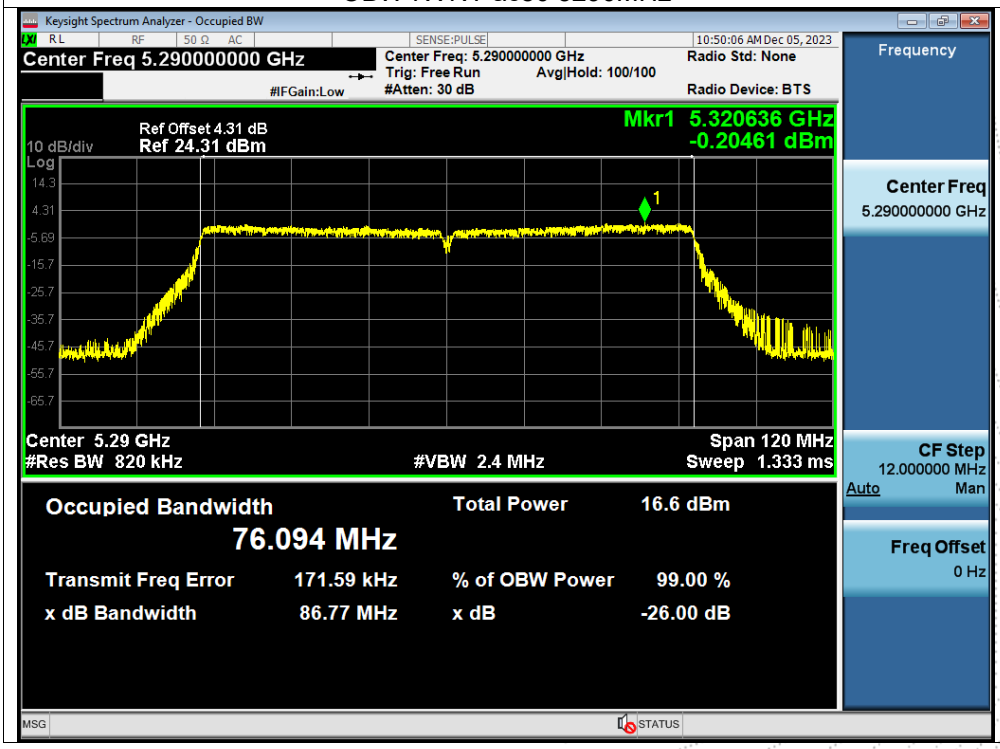


OBW NVNT ac40 5270MHz

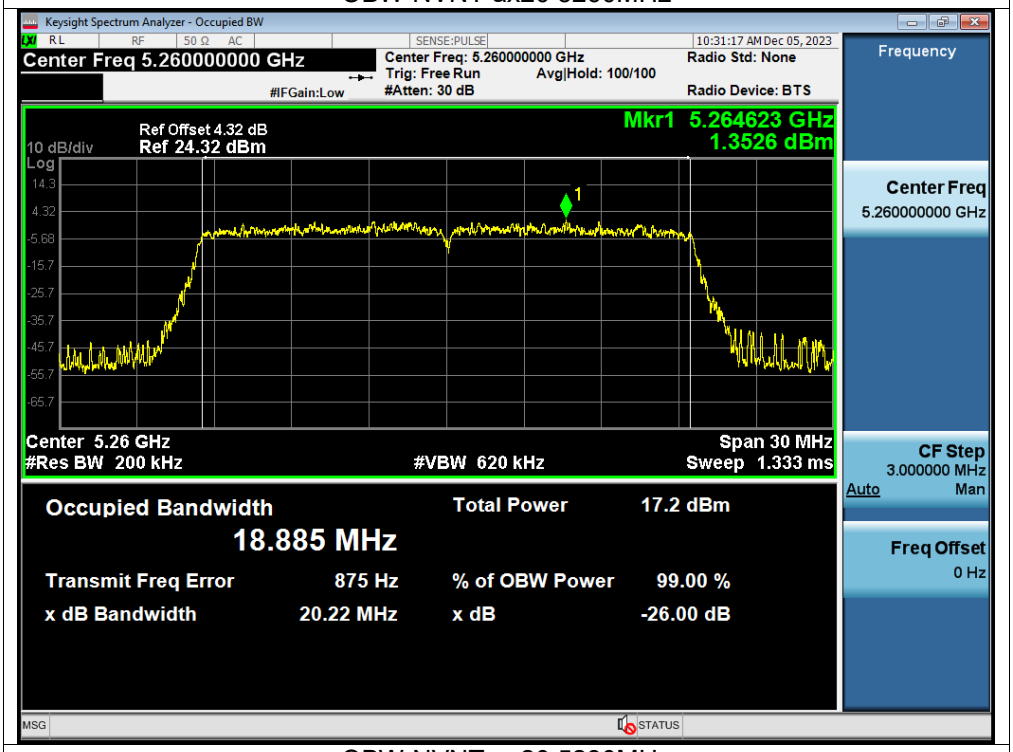
OBW NVNT ac40 5310MHz



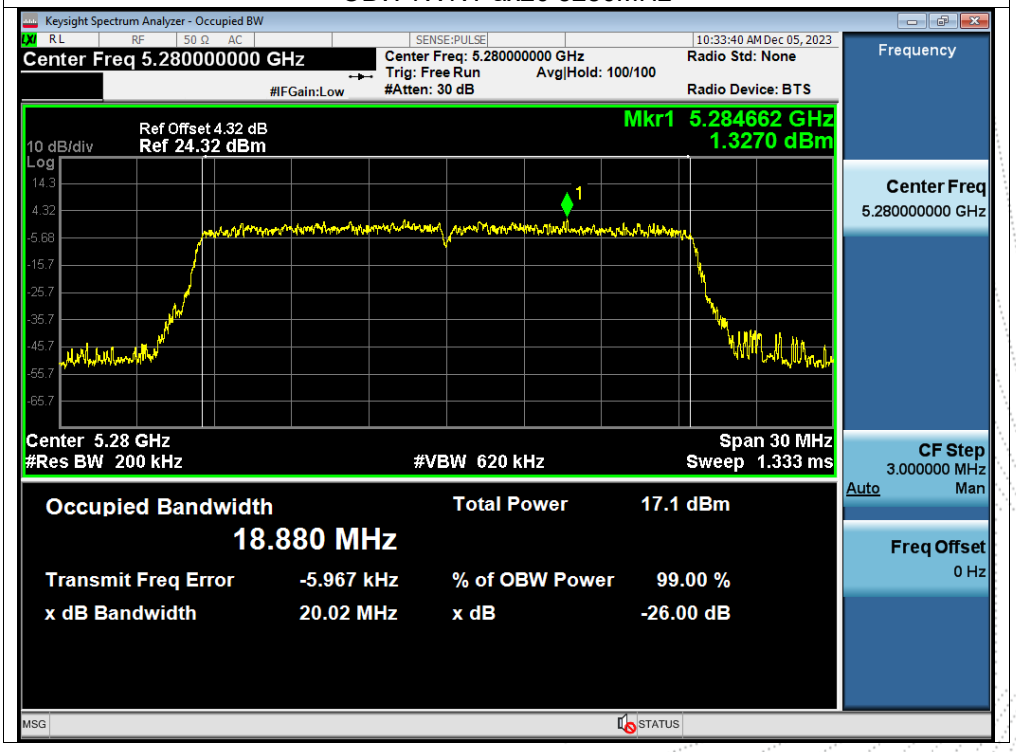
OBW NVNT ac80 5290MHz



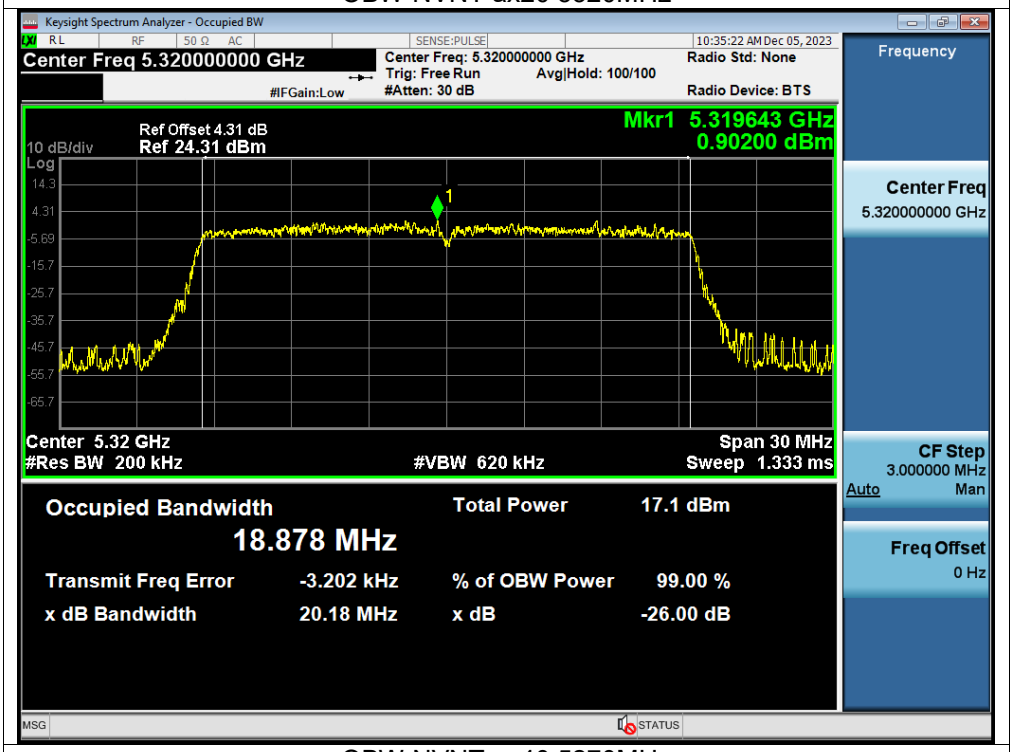
OBW NVNT ax20 5260MHz



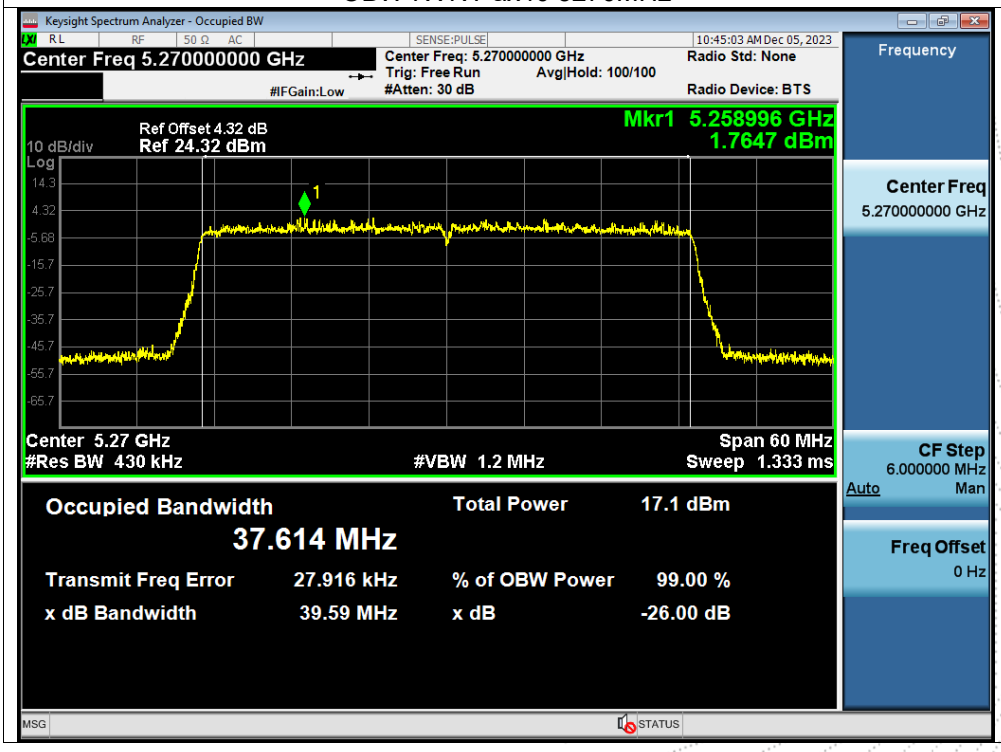
OBW NVNT ax20 5280MHz



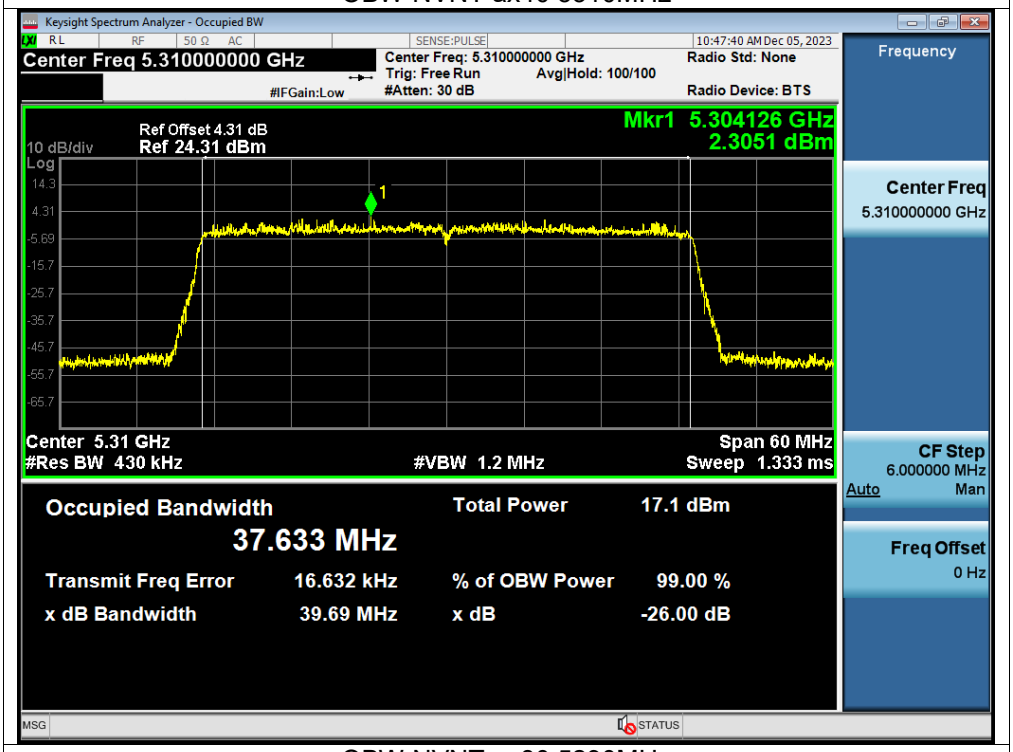
OBW NVNT ax20 5320MHz



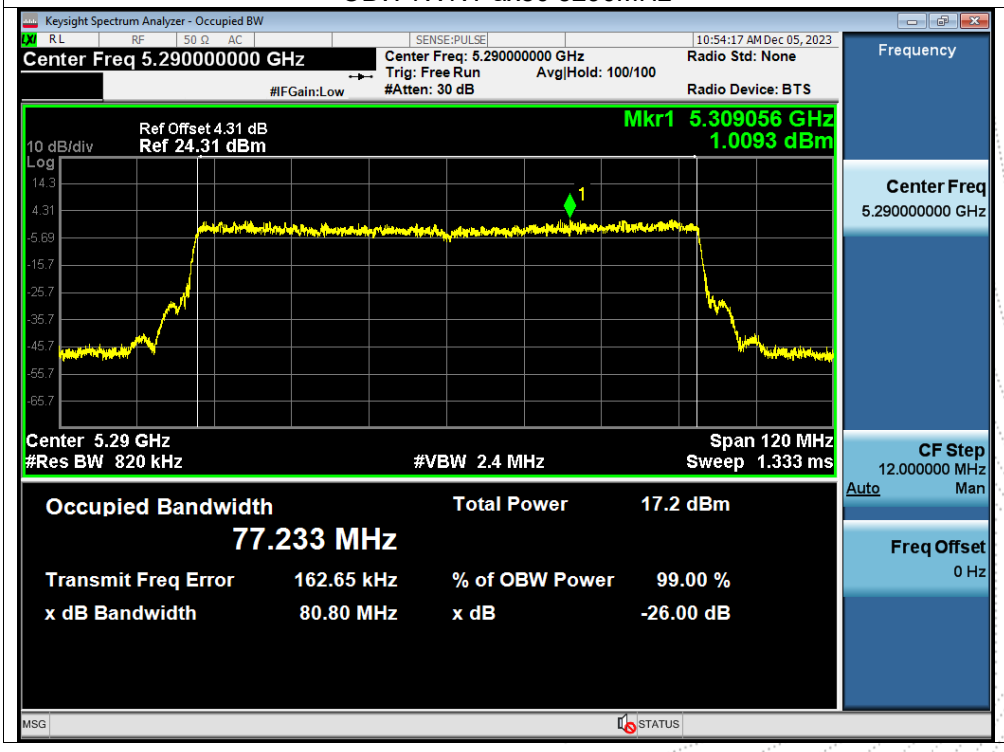
OBW NVNT ax40 5270MHz



OBW NVNT ax40 5310MHz



OBW NVNT ax80 5290MHz



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5500-5700MHz)		

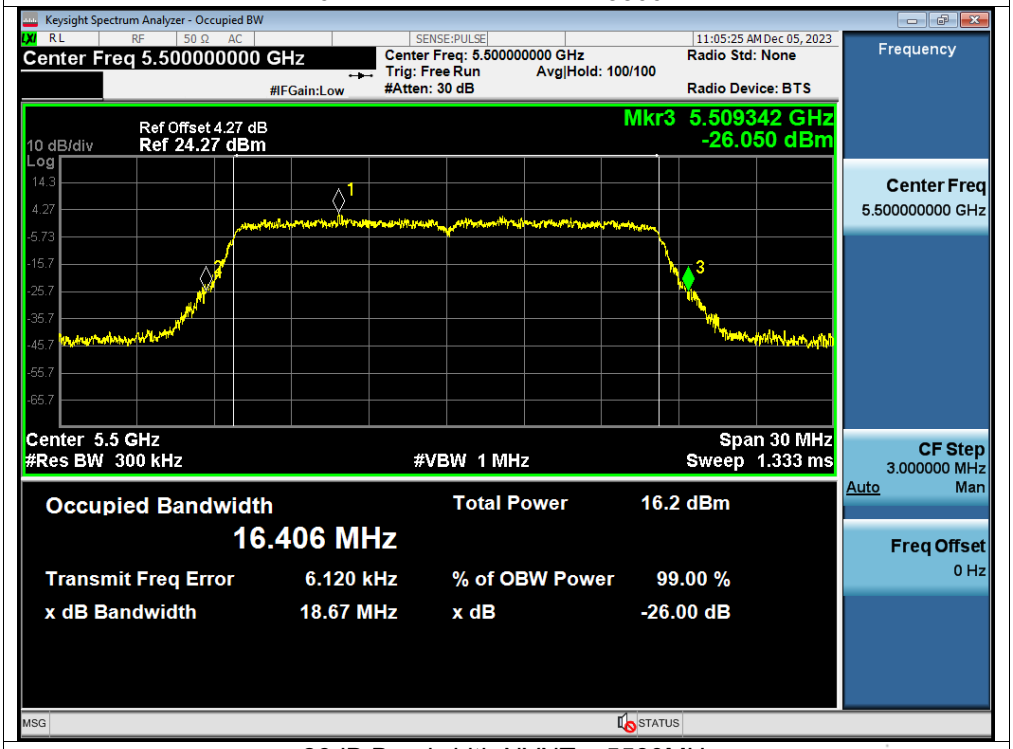
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5500	18.672	18.506	Pass
NVNT	a	5580	18.75	18.591	Pass
NVNT	a	5700	18.658	18.61	Pass
NVNT	n20	5500	19.614	19.593	Pass
NVNT	n20	5580	19.548	19.606	Pass
NVNT	n20	5700	19.555	19.538	Pass
NVNT	n40	5510	39.996	39.701	Pass
NVNT	n40	5550	39.895	40.077	Pass
NVNT	n40	5670	39.995	39.99	Pass
NVNT	ac20	5500	19.559	19.486	Pass
NVNT	ac20	5580	19.563	19.635	Pass
NVNT	ac20	5700	19.537	19.495	Pass
NVNT	ac40	5510	39.643	39.78	Pass
NVNT	ac40	5550	39.911	39.725	Pass
NVNT	ac40	5670	39.623	39.765	Pass
NVNT	ac80	5530	**87.867**	87.564	Pass
NVNT	ax20	5500	20.564	20.533	Pass
NVNT	ax20	5580	20.339	20.371	Pass
NVNT	ax20	5700	20.494	20.524	Pass
NVNT	ax40	5510	39.529	39.484	Pass
NVNT	ax40	5550	39.553	39.444	Pass
NVNT	ax40	5670	39.624	39.382	Pass
NVNT	ax80	5530	79.491	79.647	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5500	16.346	16.348
NVNT	a	5580	16.324	16.336
NVNT	a	5700	16.318	16.344
NVNT	n20	5500	17.504	17.504
NVNT	n20	5580	17.504	17.497
NVNT	n20	5700	17.49	17.509
NVNT	n40	5510	36.03	35.998
NVNT	n40	5550	36.044	35.996
NVNT	n40	5670	36.03	35.982
NVNT	ac20	5500	17.507	17.509
NVNT	ac20	5580	17.502	17.495
NVNT	ac20	5700	17.505	17.503
NVNT	ac40	5510	36.071	36.03
NVNT	ac40	5550	36.01	36.055
NVNT	ac40	5670	36.082	36.012
NVNT	ac80	5530	76.181	76.204
NVNT	ax20	5500	18.873	18.882
NVNT	ax20	5580	18.863	18.867
NVNT	ax20	5700	18.874	18.881
NVNT	ax40	5510	37.663	37.606
NVNT	ax40	5550	37.668	37.654
NVNT	ax40	5670	37.629	37.62
NVNT	ax80	5530	**77.305**	77.234

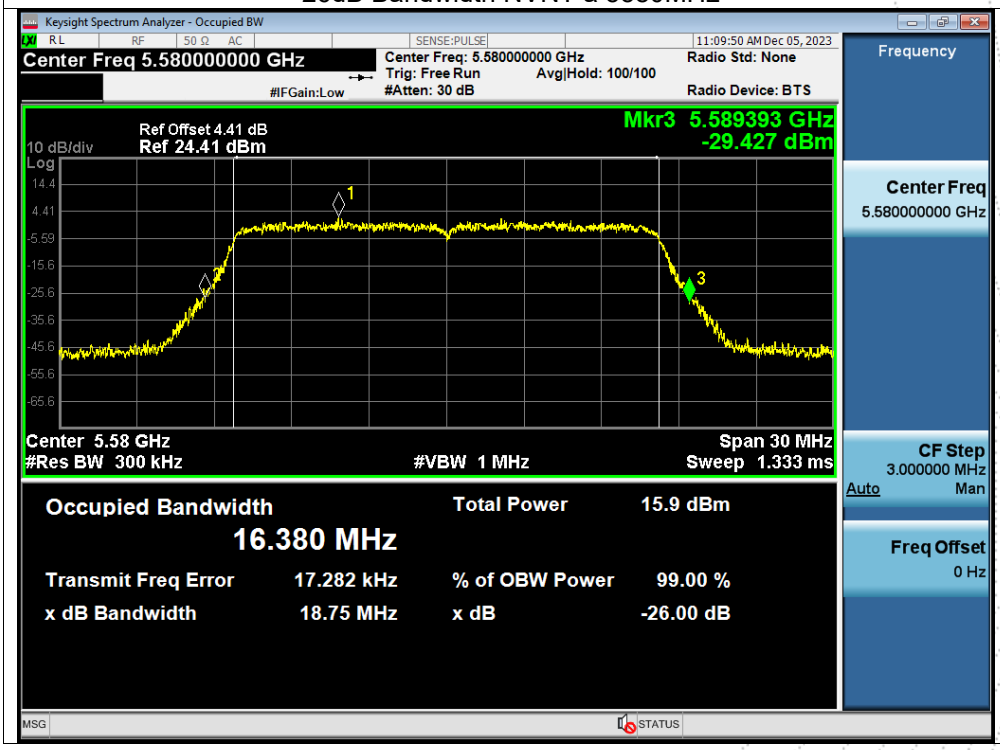
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

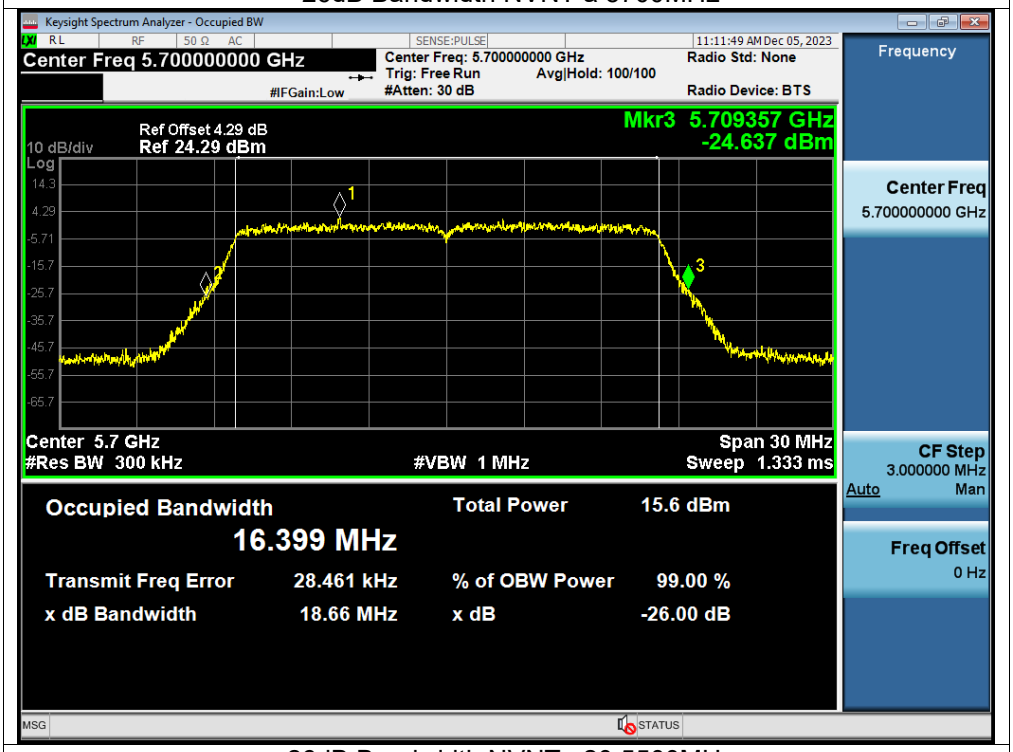
-26dB Bandwidth NVNT a 5500MHz



-26dB Bandwidth NVNT a 5580MHz



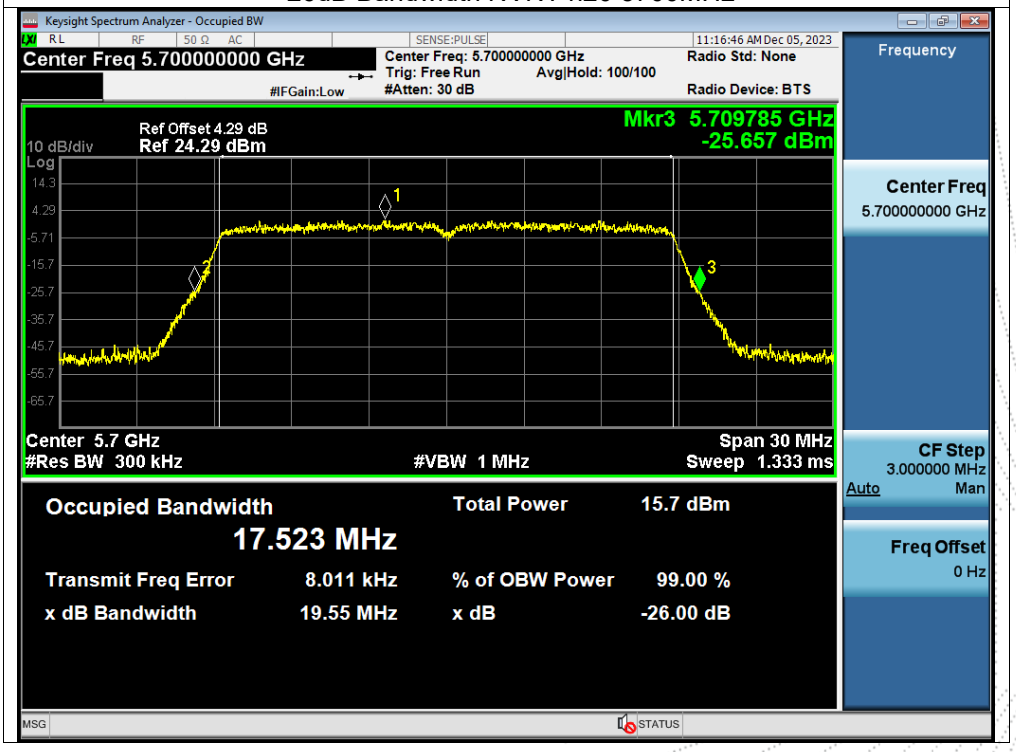
-26dB Bandwidth NVNT a 5700MHz



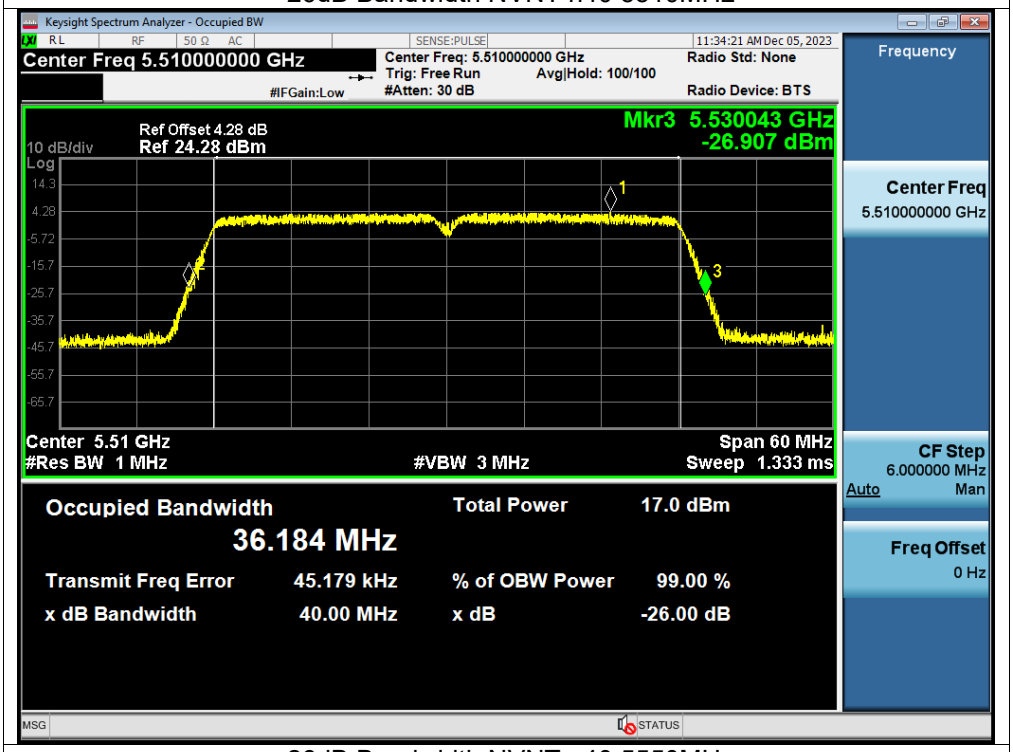
-26dB Bandwidth NVNT n20 5500MHz

-26dB Bandwidth NVNT n20 5580MHz

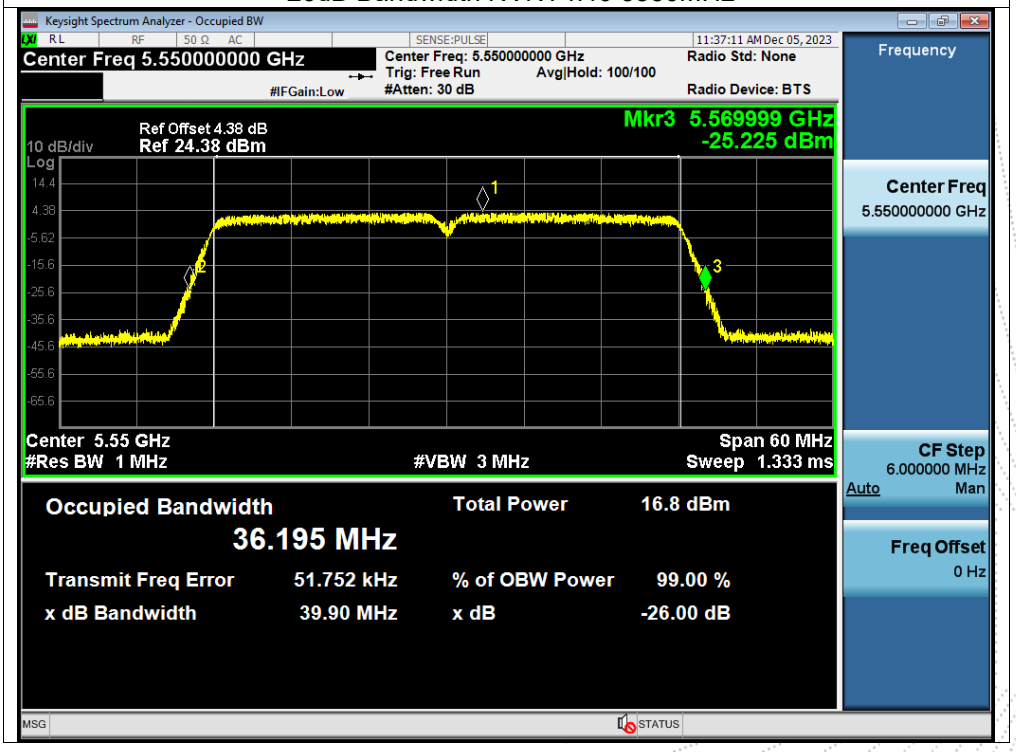
-26dB Bandwidth NVNT n20 5700MHz



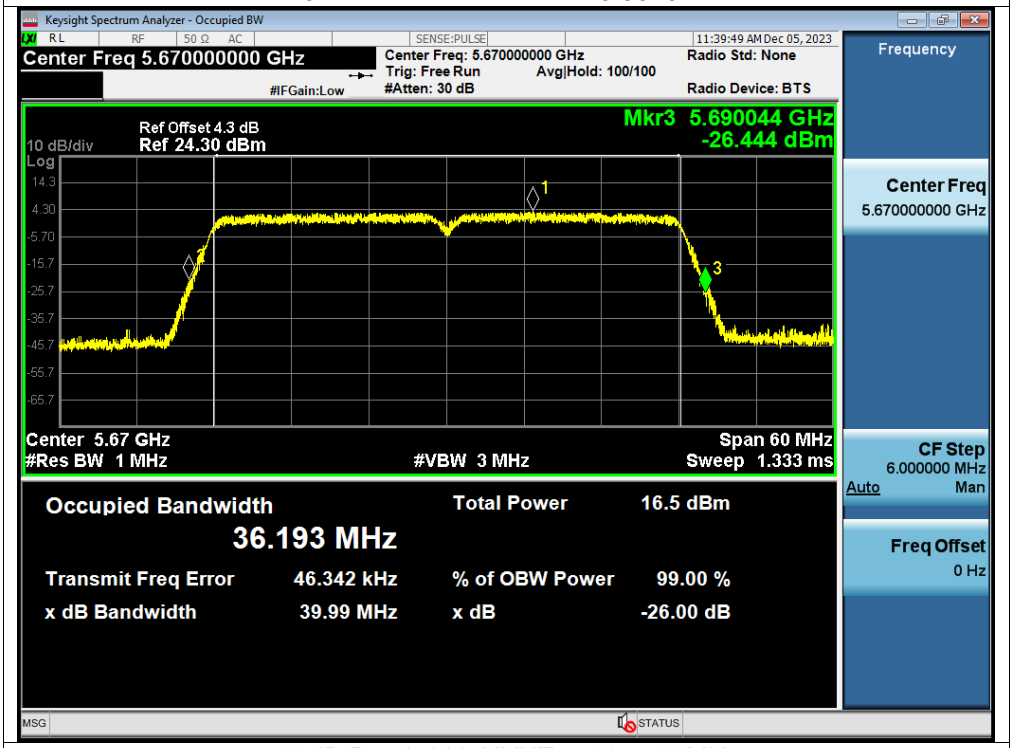
-26dB Bandwidth NVNT n40 5510MHz



-26dB Bandwidth NVNT n40 5550MHz

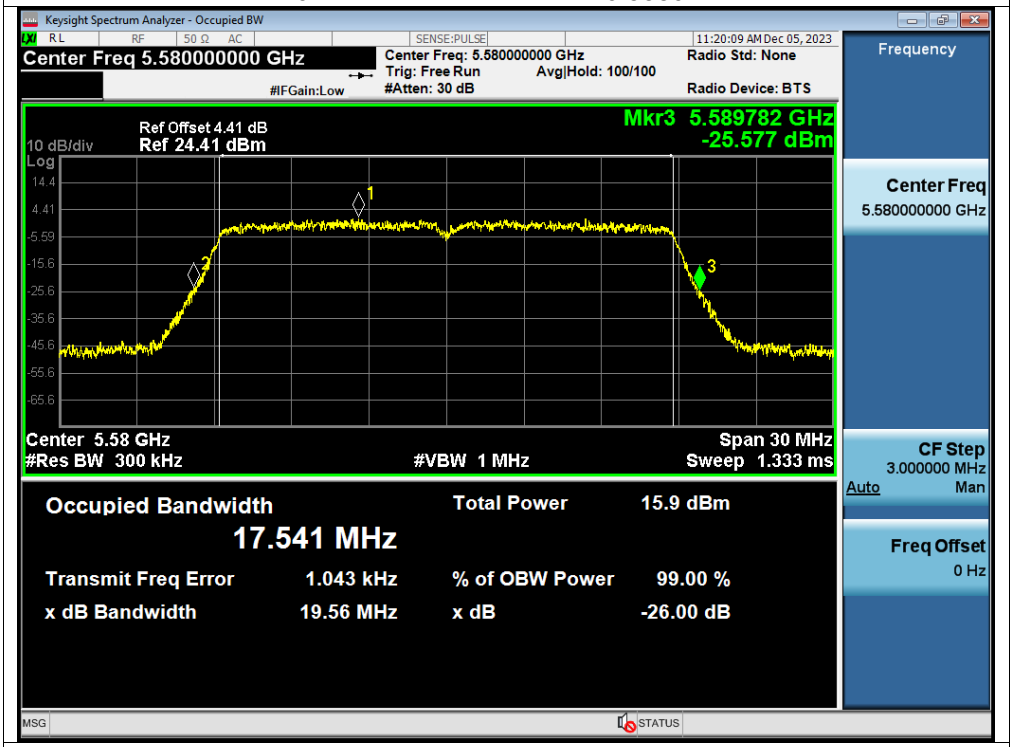


-26dB Bandwidth NVNT n40 5670MHz

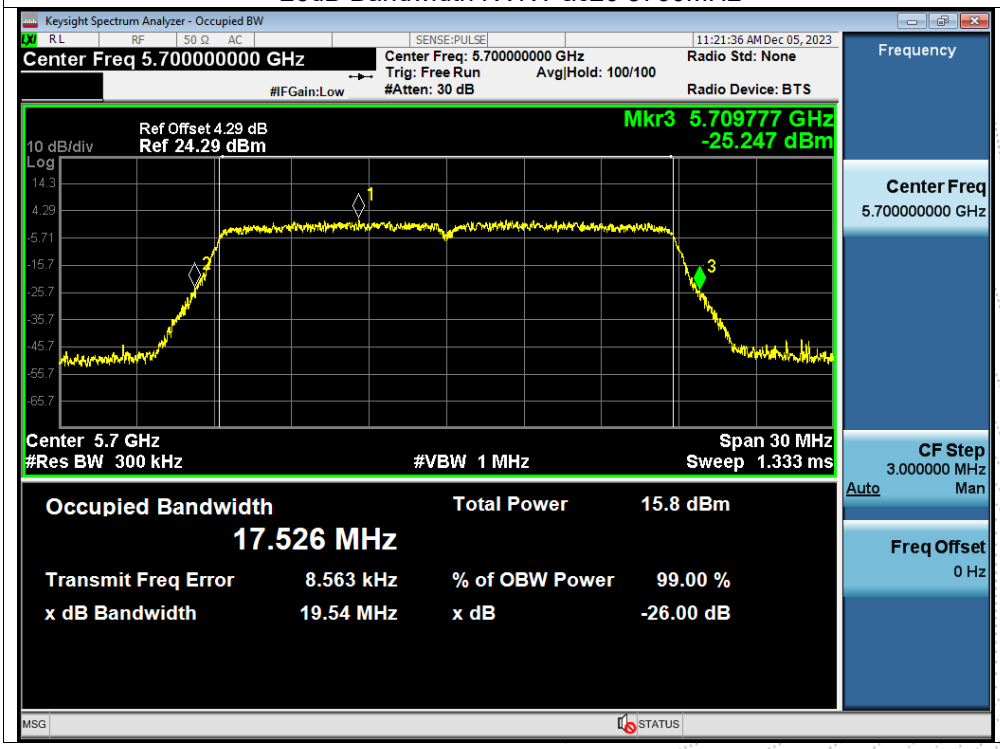


-26dB Bandwidth NVNT ac20 5500MHz

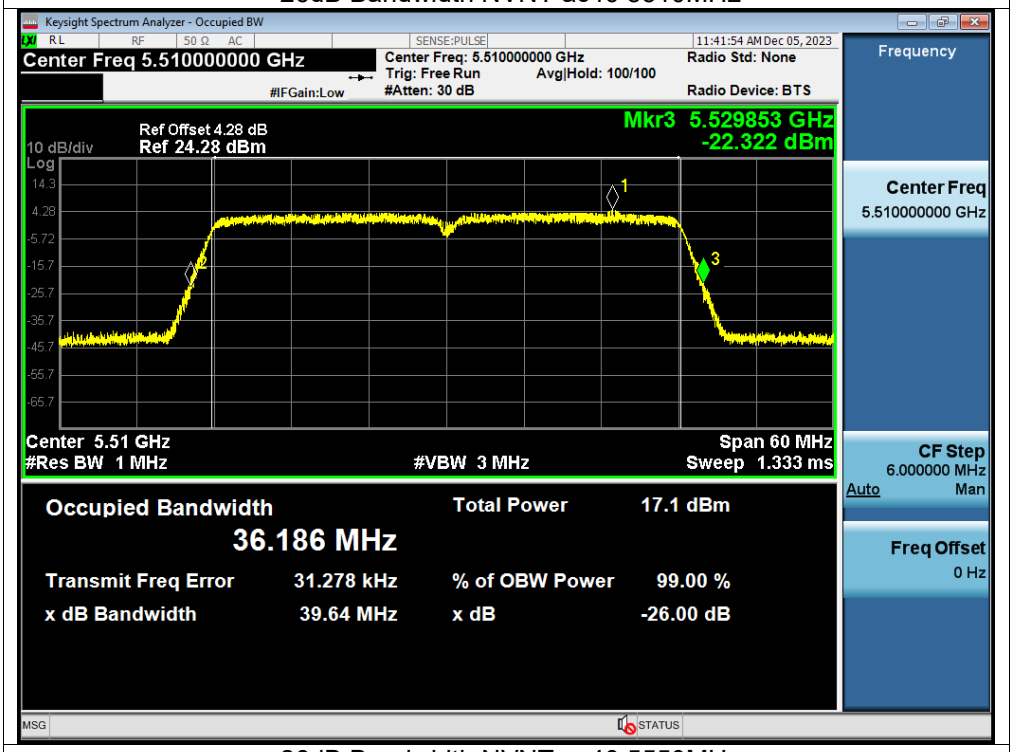
-26dB Bandwidth NVNT ac20 5580MHz



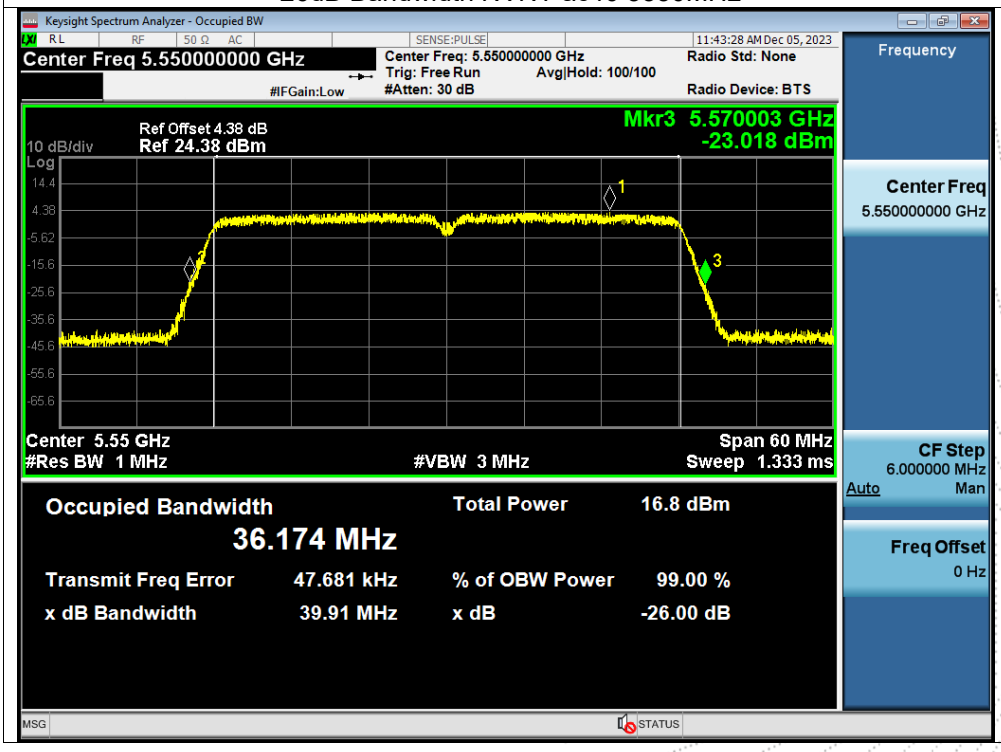
-26dB Bandwidth NVNT ac20 5700MHz



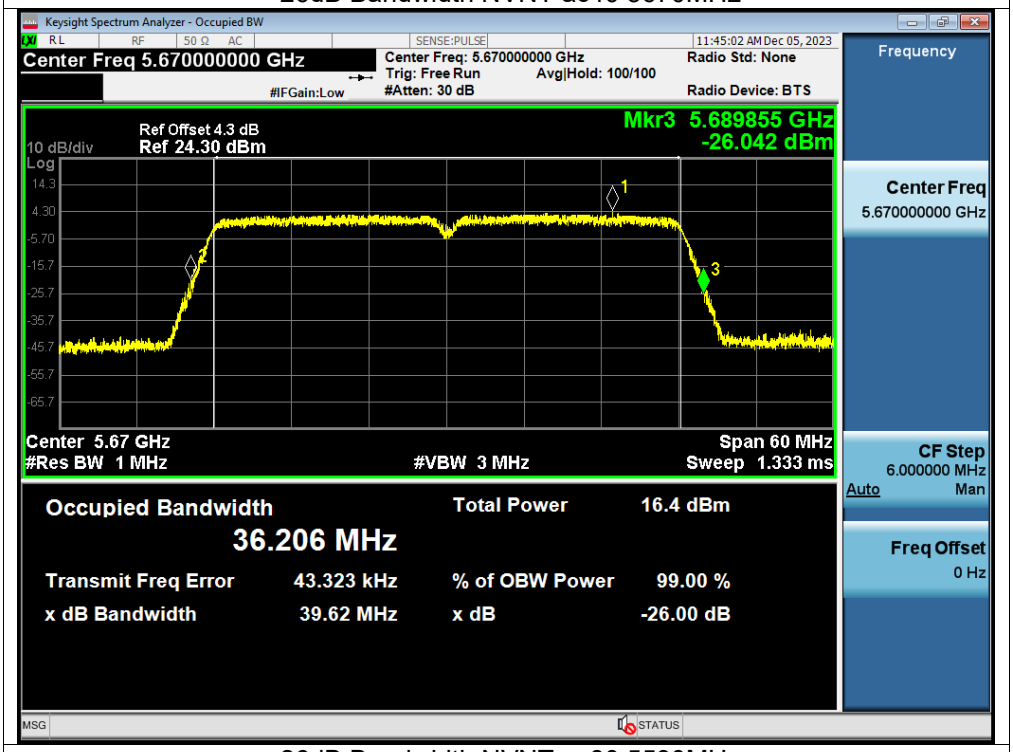
-26dB Bandwidth NVNT ac40 5510MHz



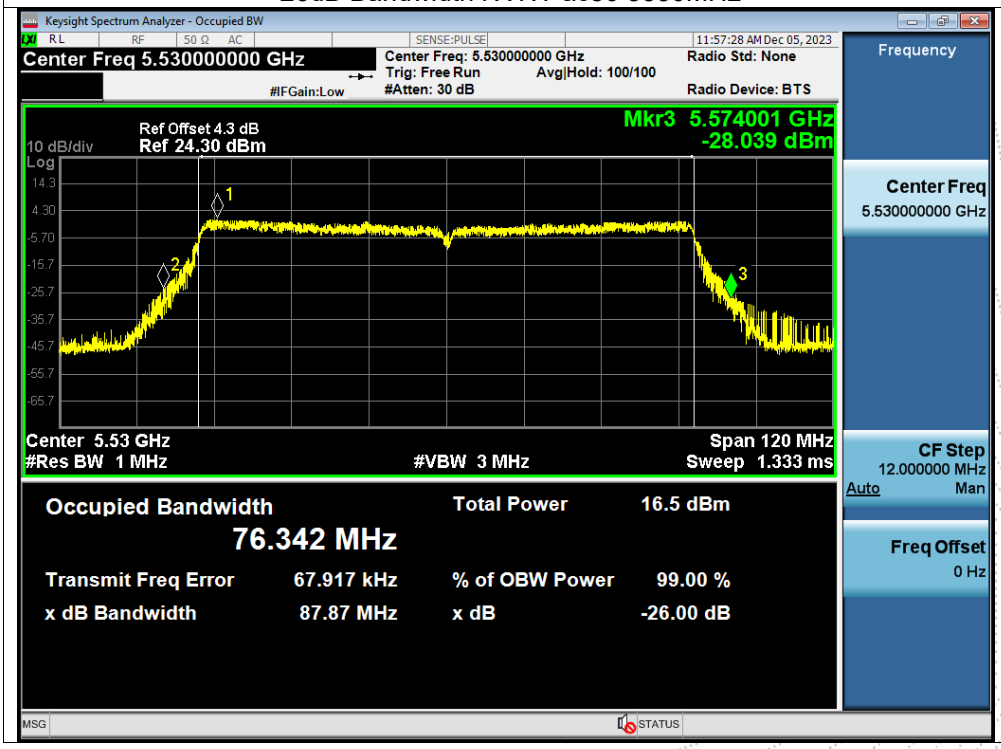
-26dB Bandwidth NVNT ac40 5550MHz



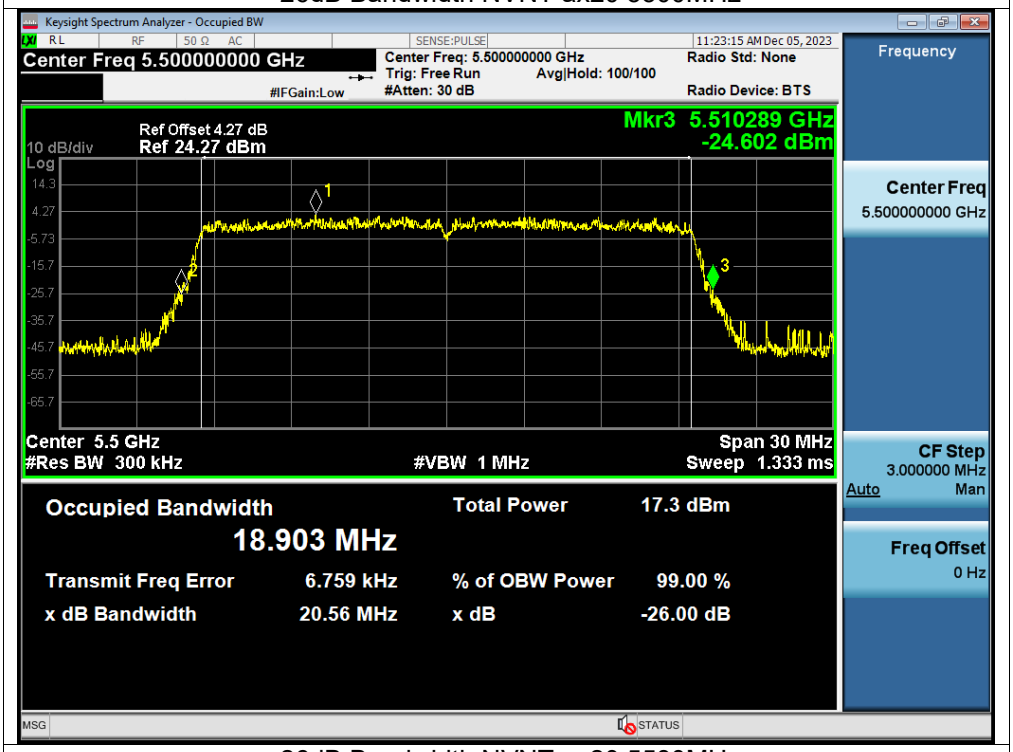
-26dB Bandwidth NVNT ac40 5670MHz



-26dB Bandwidth NVNT ac80 5530MHz



-26dB Bandwidth NVNT ax20 5500MHz



-26dB Bandwidth NVNT ax20 5580MHz