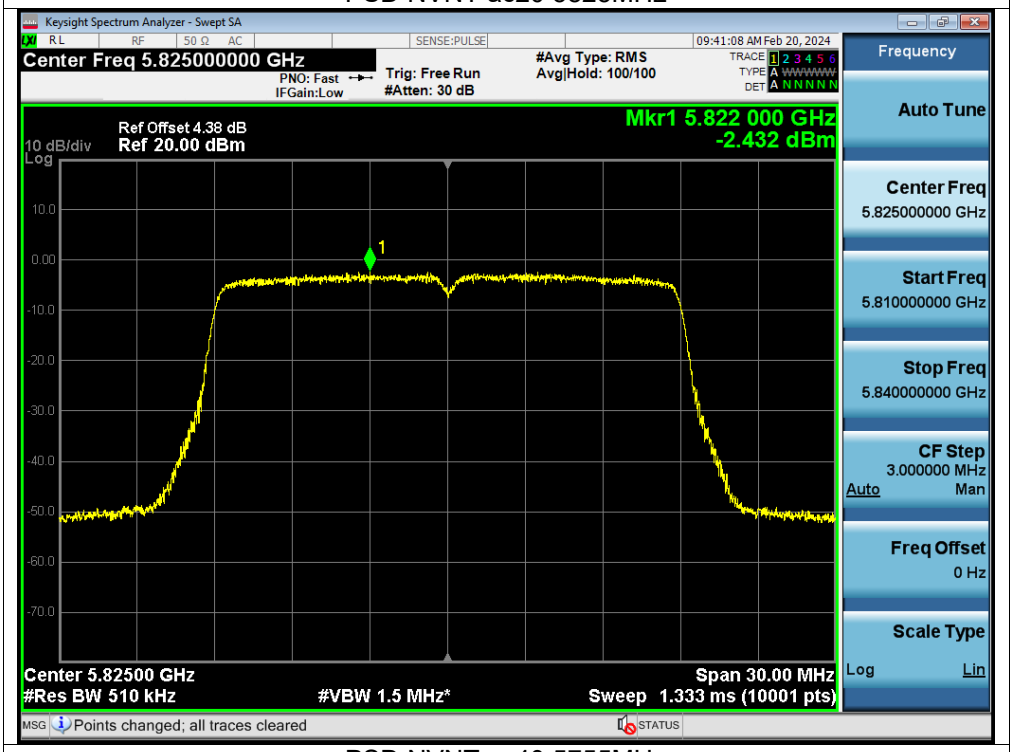
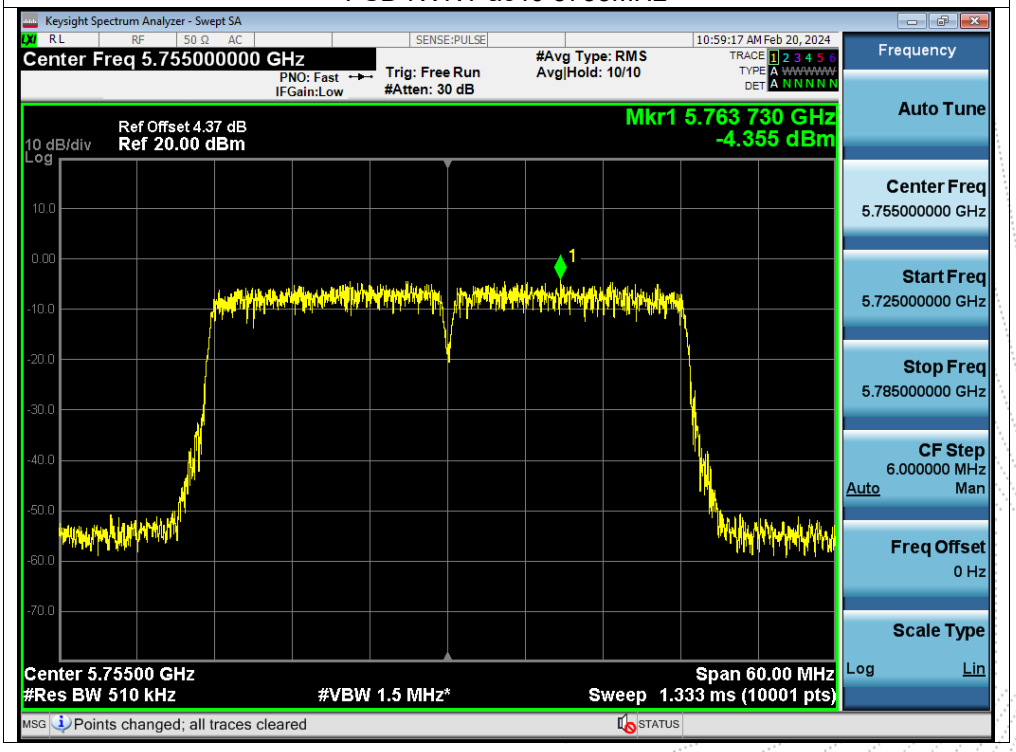
PSD NVNT ac20 5825MHz



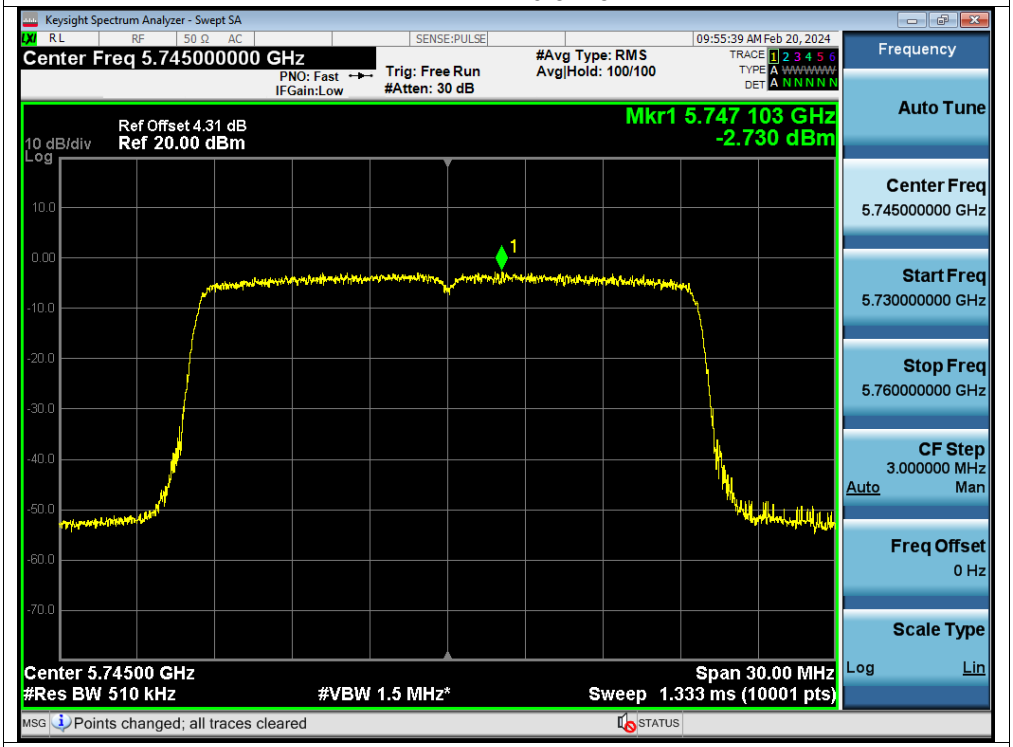
PSD NVNT ac40 5755MHz



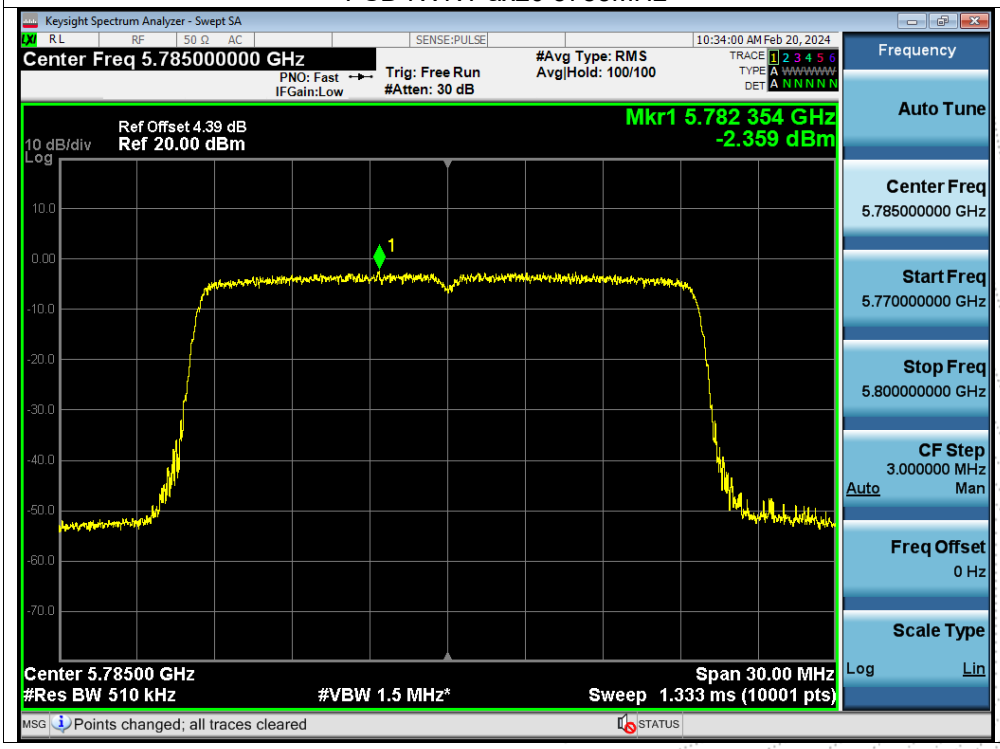
PSD NVNT ac40 5795MHz

PSD NVNT ac80 5775MHz

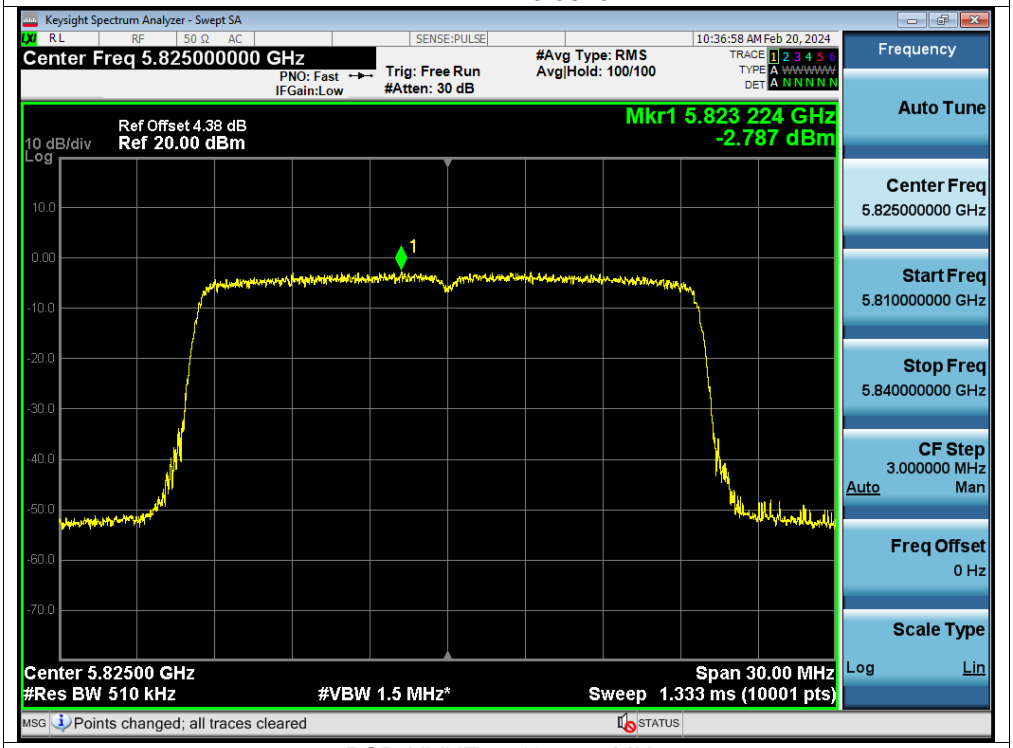
PSD NVNT ax20 5745MHz



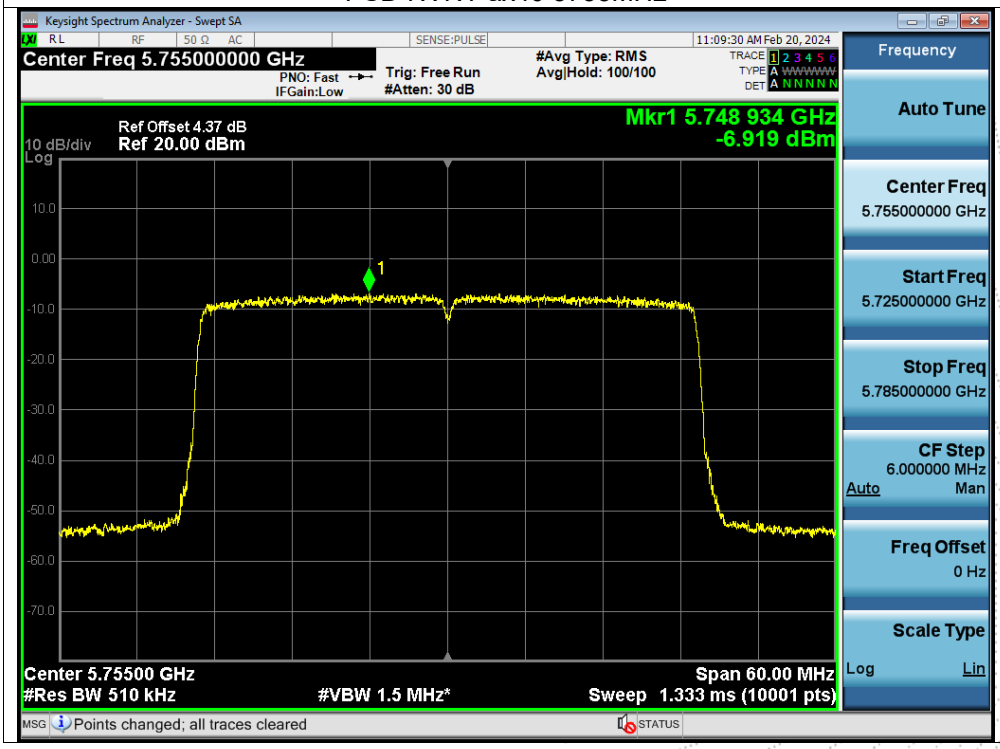
PSD NVNT ax20 5785MHz



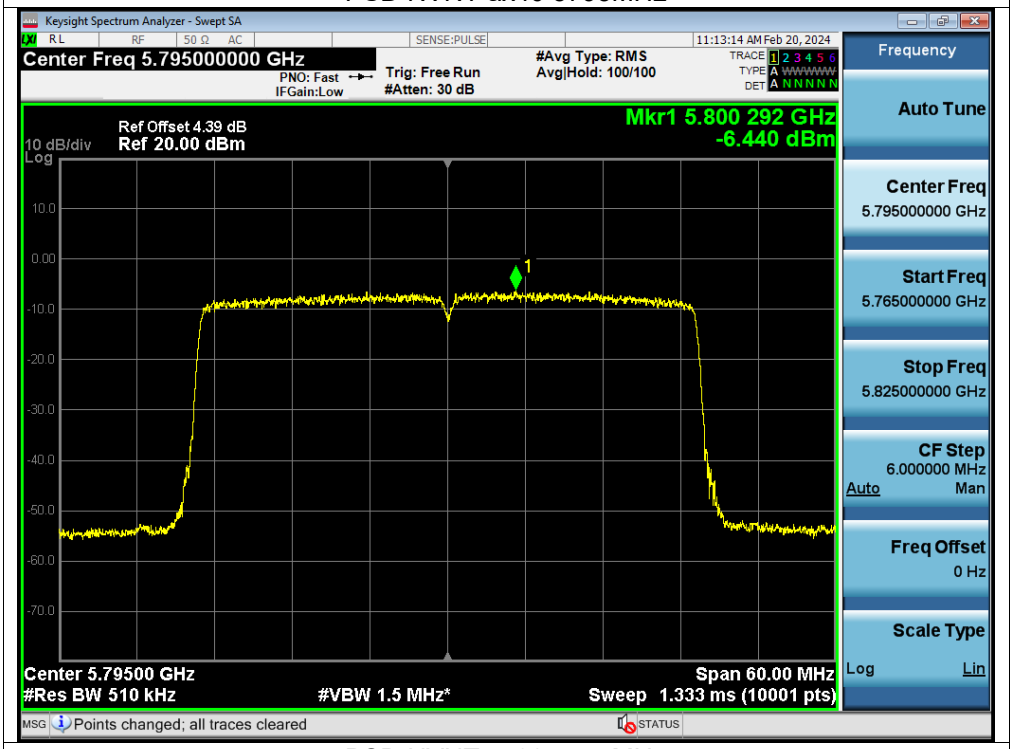
PSD NVNT ax20 5825MHz



PSD NVNT ax40 5755MHz



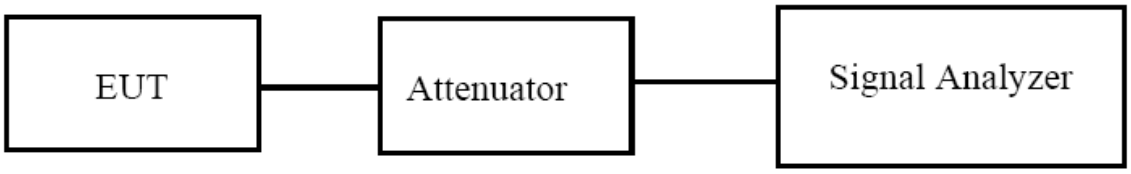
PSD NVNT ax40 5795MHz



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

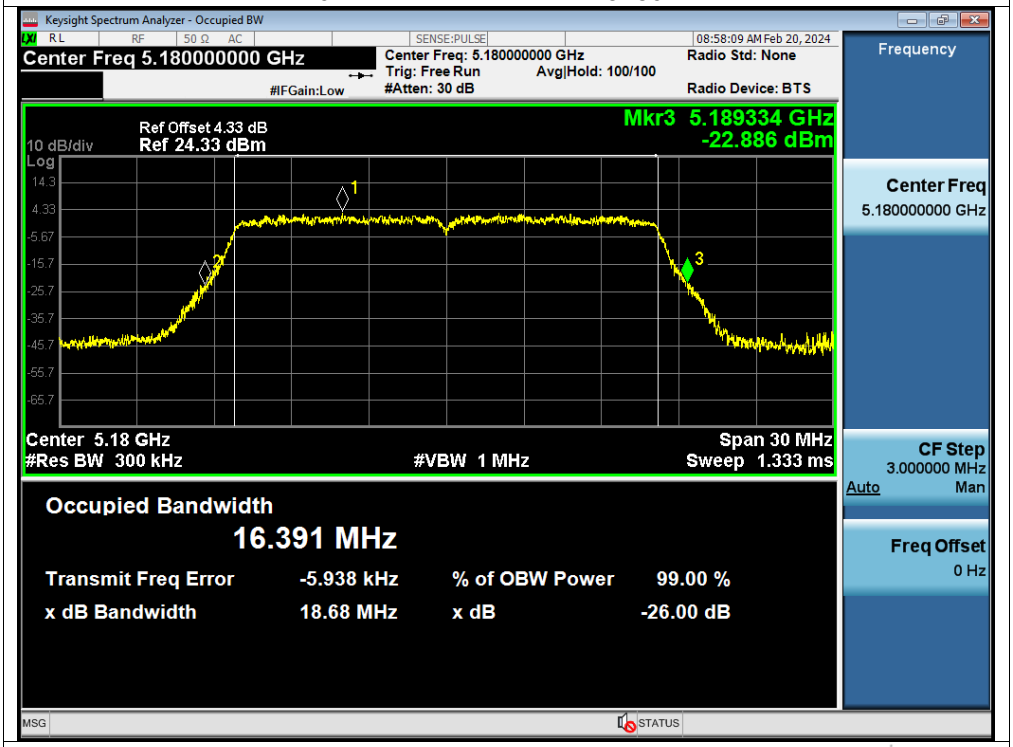
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		99% OBW (MHz)		Verdict
			Ant A	Ant B	Ant A	Ant B	
NVNT	a	5180	18.543	18.681	16.327	16.334	Pass
NVNT	a	5200	18.644	18.594	16.334	16.327	Pass
NVNT	a	5240	18.535	18.594	16.331	16.34	Pass
NVNT	n20	5180	19.557	19.629	17.493	17.507	Pass
NVNT	n20	5200	19.625	19.509	17.491	17.506	Pass
NVNT	n20	5240	19.524	19.653	17.481	17.51	Pass
NVNT	n40	5190	38.529	38.691	36.015	36.003	Pass
NVNT	n40	5230	38.677	38.755	36	36	Pass
NVNT	ac20	5180	19.613	19.679	17.489	17.506	Pass
NVNT	ac20	5200	19.532	19.585	17.5	17.509	Pass
NVNT	ac20	5240	19.563	19.526	17.508	17.502	Pass
NVNT	ac40	5190	38.304	38.489	36.045	36.042	Pass
NVNT	ac40	5230	38.555	38.714	36.021	36.042	Pass
NVNT	ac80	5210	83.436	**83.893**	76.066	76.094	Pass
NVNT	ax20	5180	20.577	20.467	18.866	18.883	Pass
NVNT	ax20	5200	20.256	20.393	18.881	18.886	Pass
NVNT	ax20	5240	20.383	20.298	18.885	18.883	Pass
NVNT	ax40	5190	39.565	39.375	37.614	37.639	Pass
NVNT	ax40	5230	39.464	39.567	37.633	37.624	Pass
NVNT	ax80	5210	80.72	81.03	77.112	**77.216**	Pass

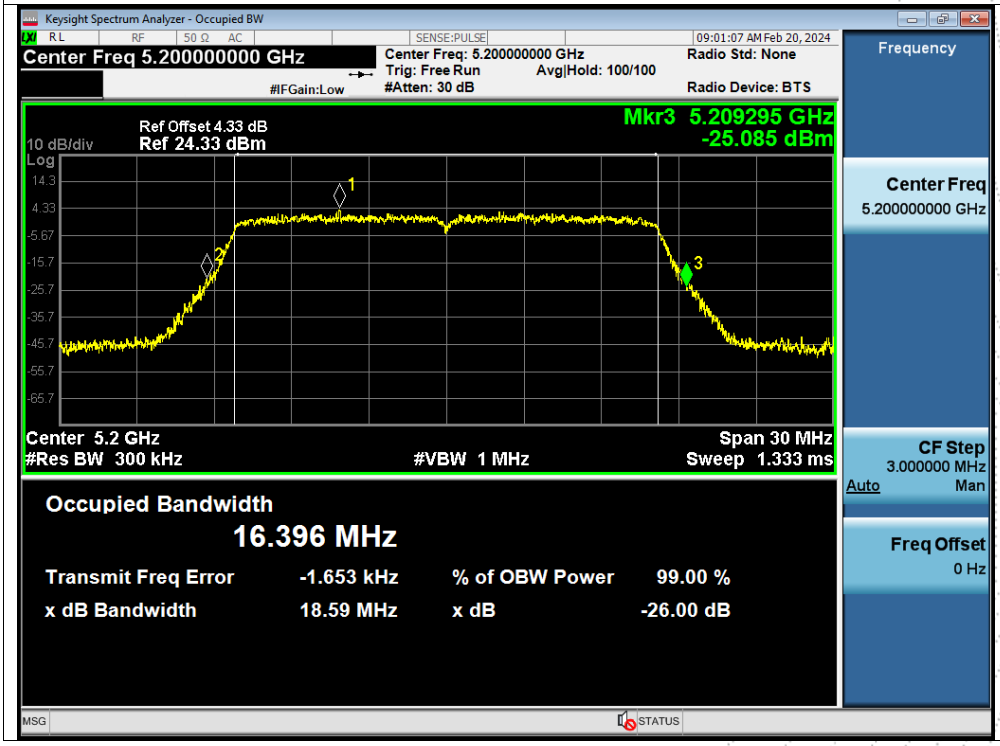
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

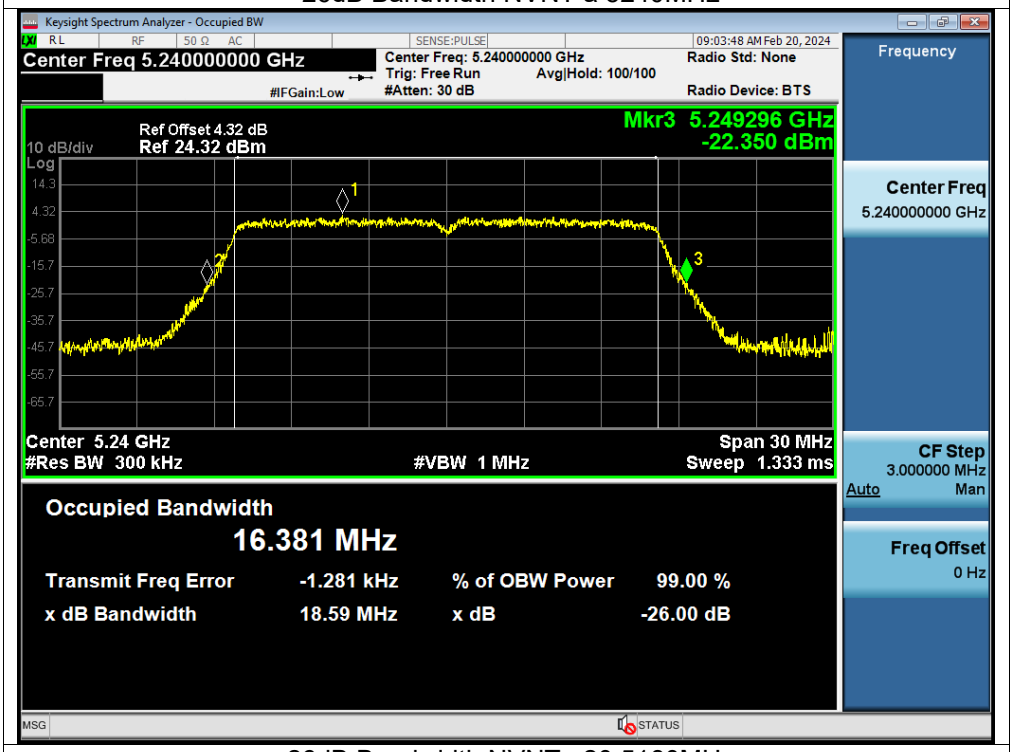
-26dB Bandwidth NVNT a 5180MHz



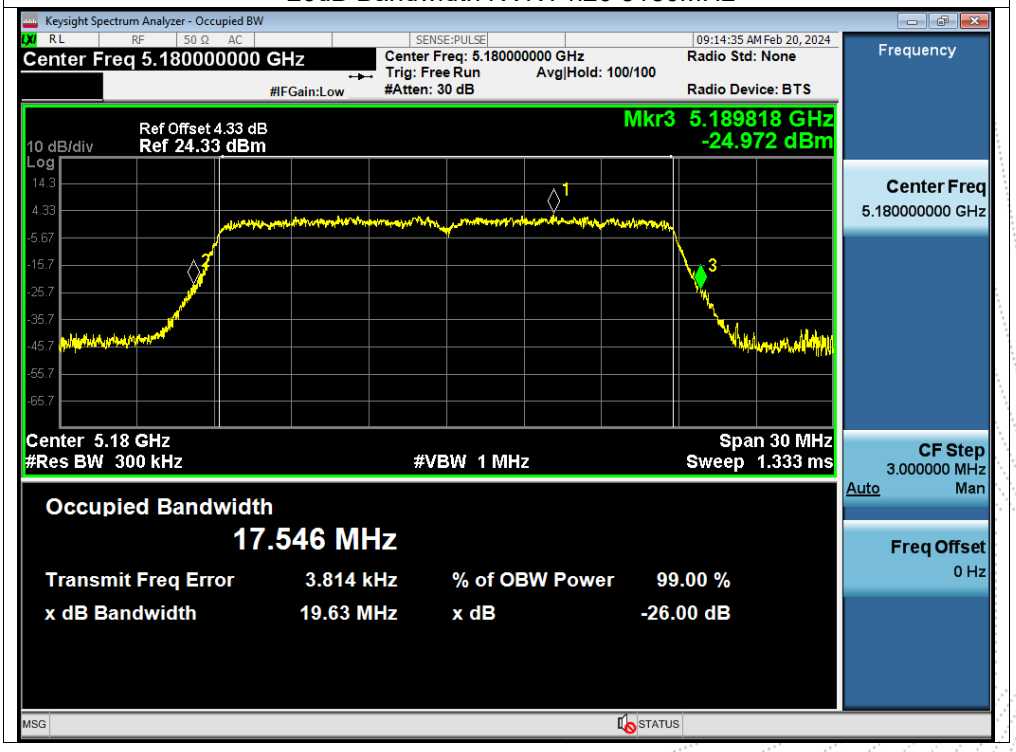
-26dB Bandwidth NVNT a 5200MHz



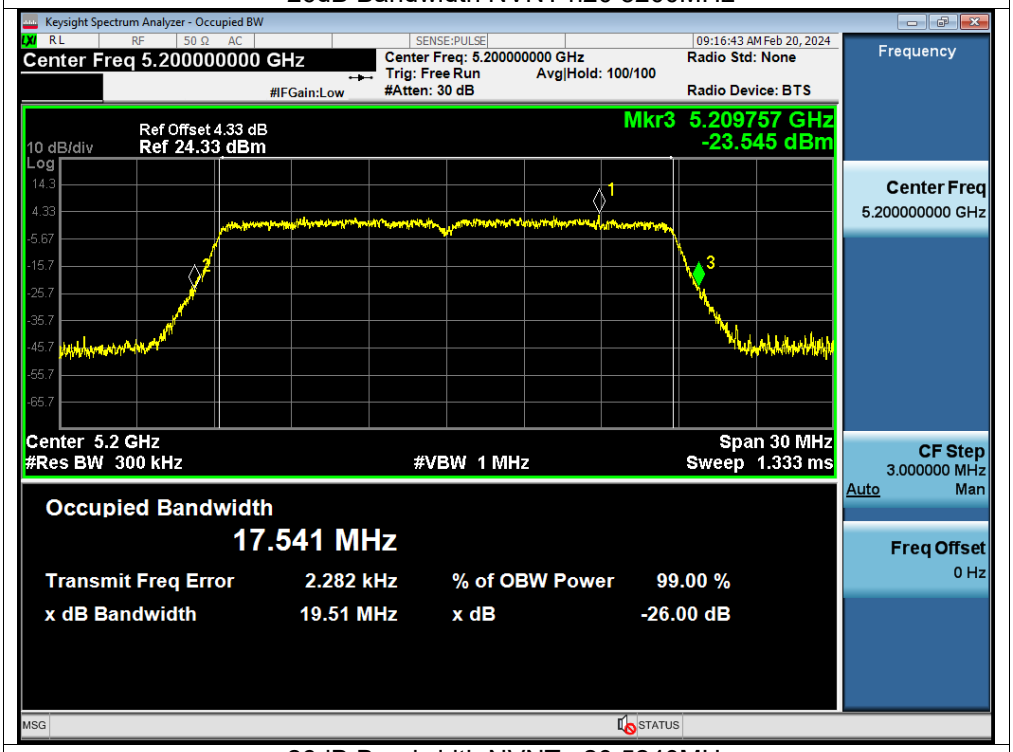
-26dB Bandwidth NVNT a 5240MHz



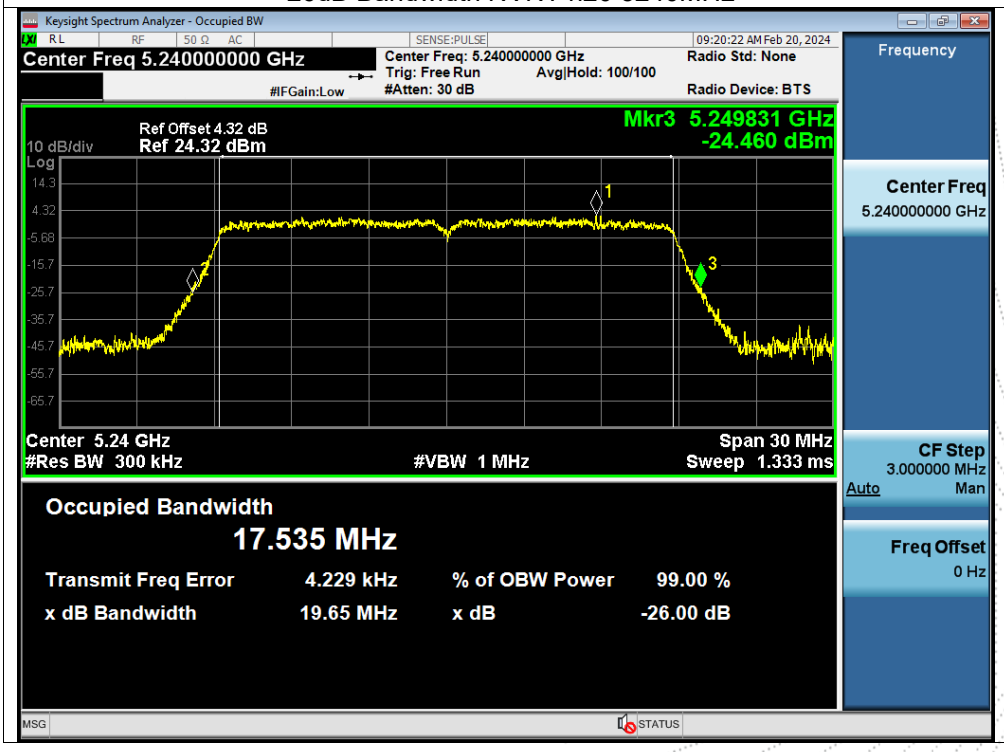
-26dB Bandwidth NVNT n20 5180MHz



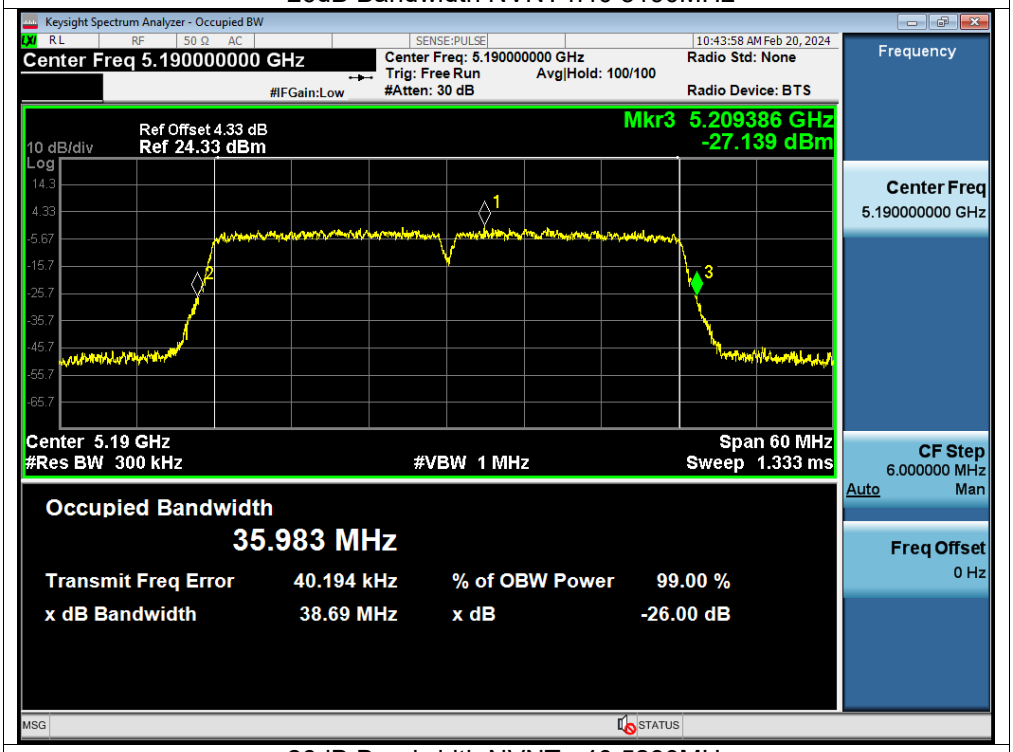
-26dB Bandwidth NVNT n20 5200MHz



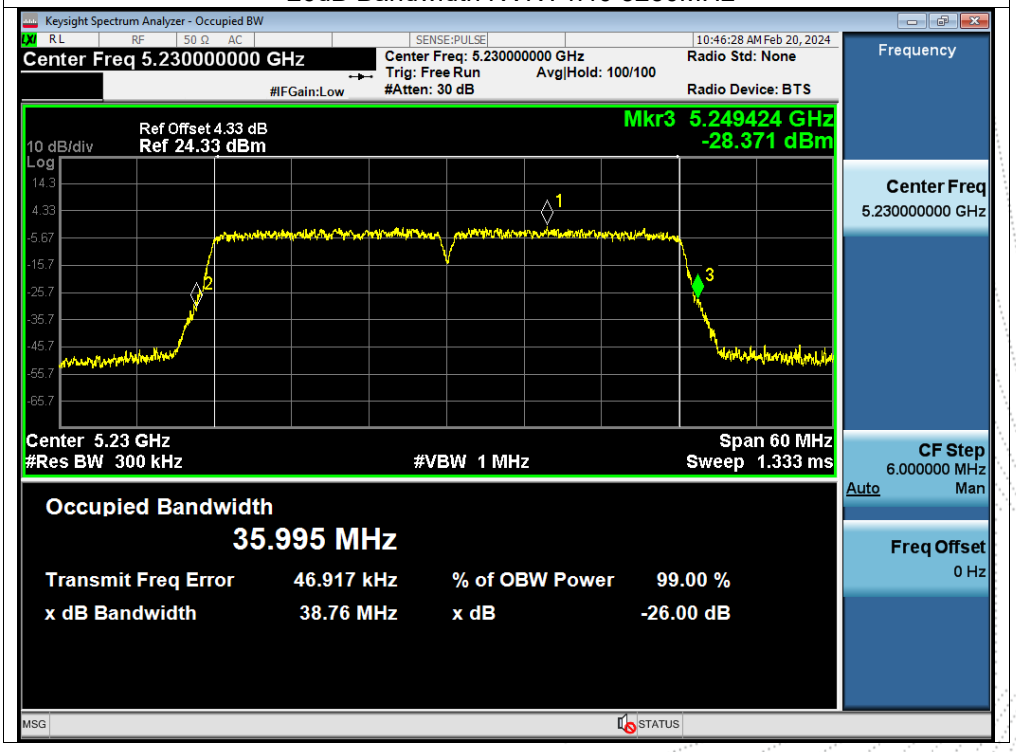
-26dB Bandwidth NVNT n20 5240MHz



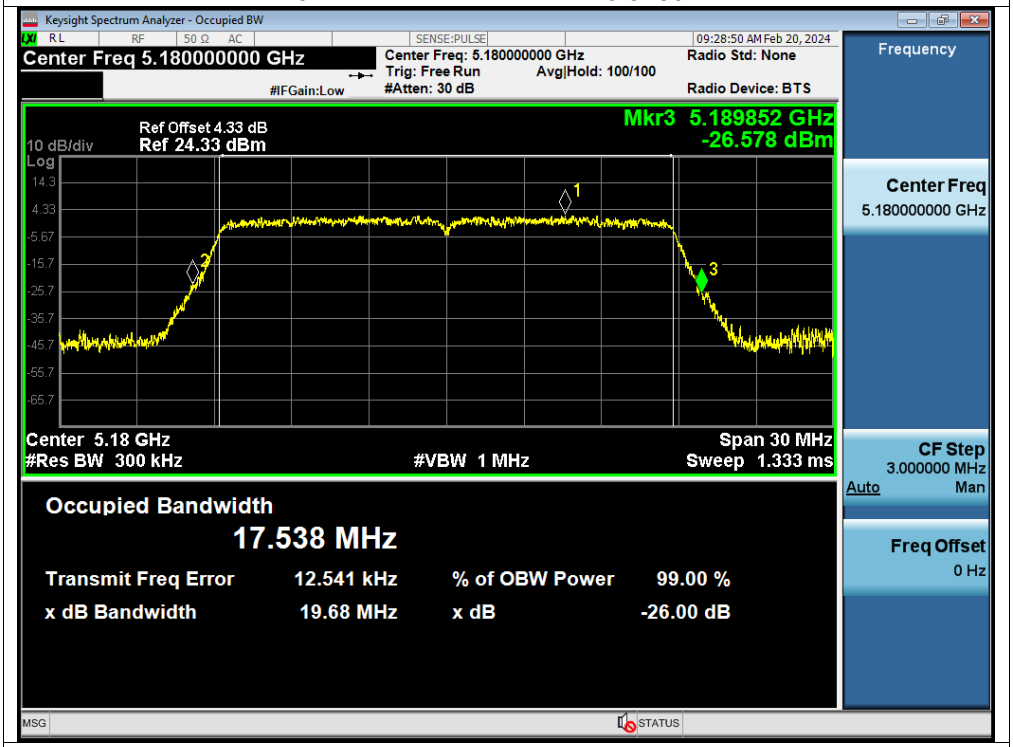
-26dB Bandwidth NVNT n40 5190MHz



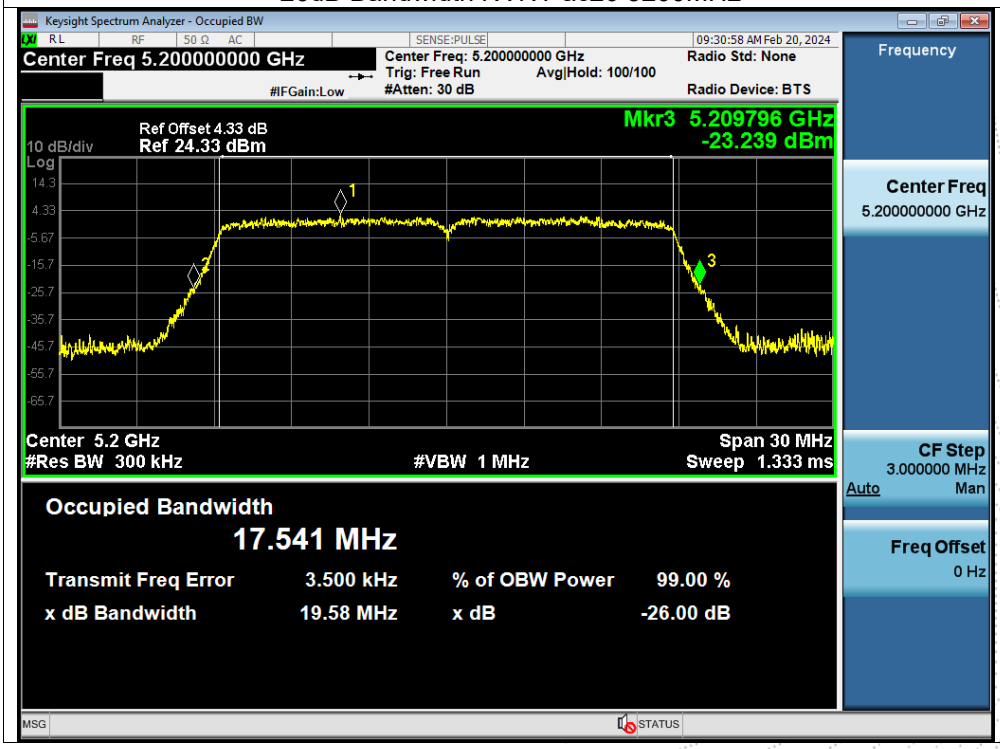
-26dB Bandwidth NVNT n40 5230MHz



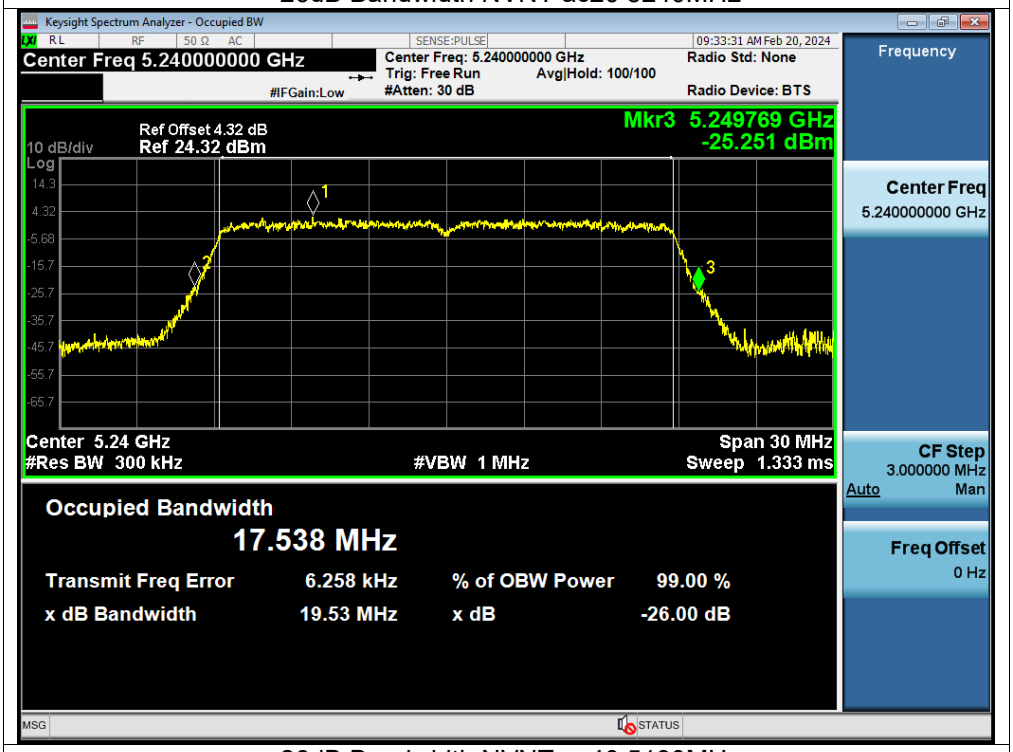
-26dB Bandwidth NVNT ac20 5180MHz



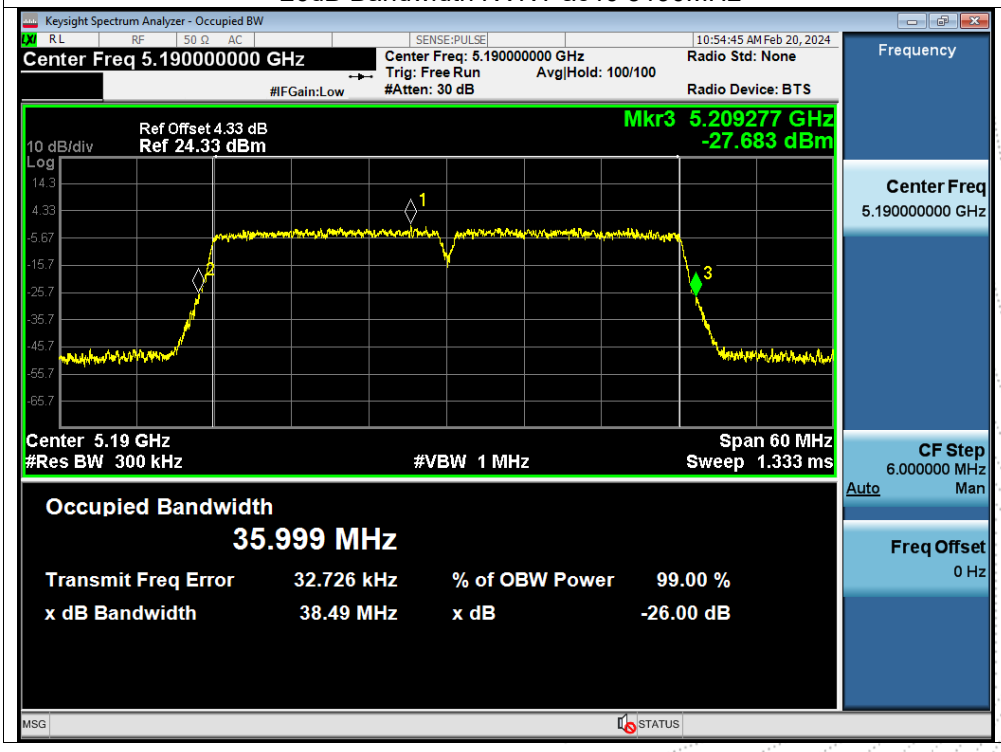
-26dB Bandwidth NVNT ac20 5200MHz



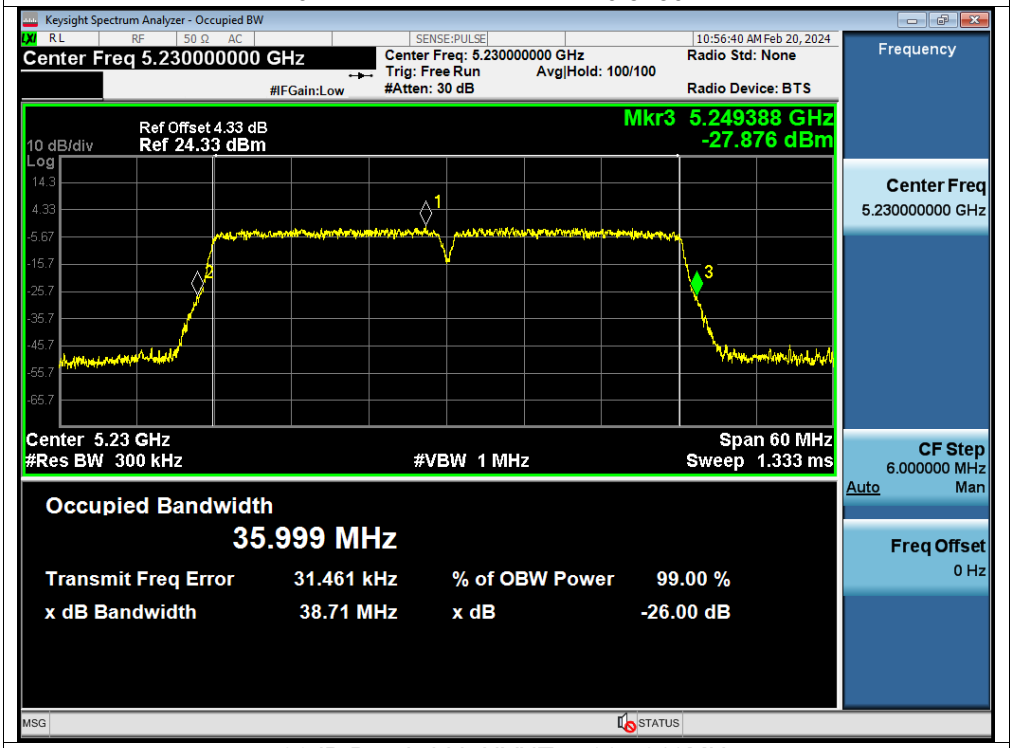
-26dB Bandwidth NVNT ac20 5240MHz



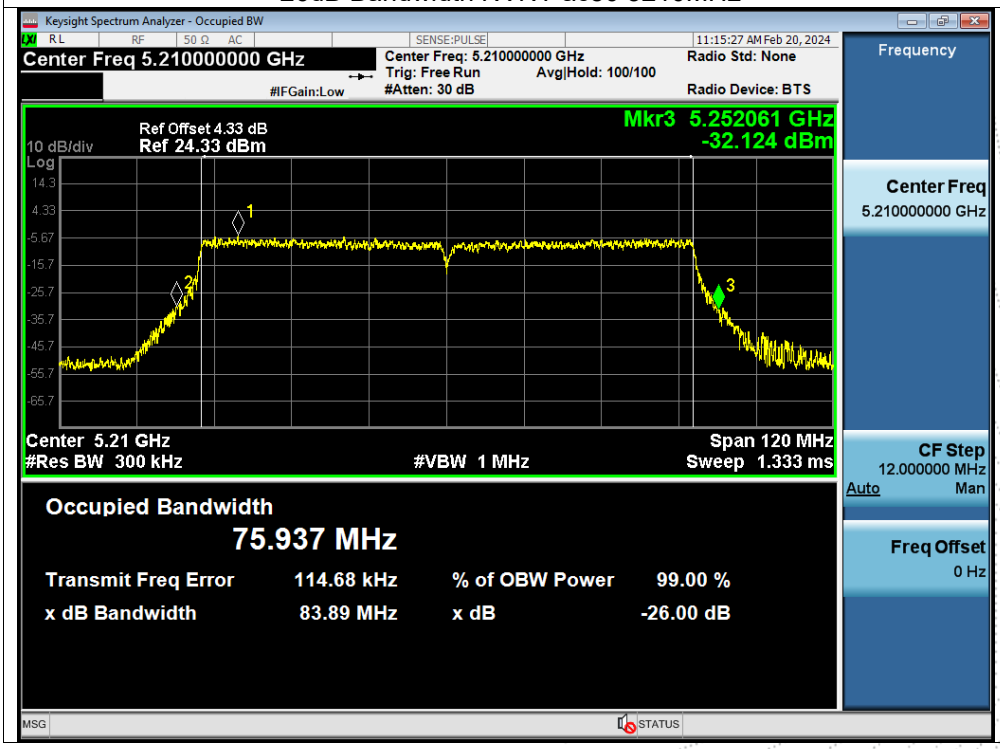
-26dB Bandwidth NVNT ac40 5190MHz



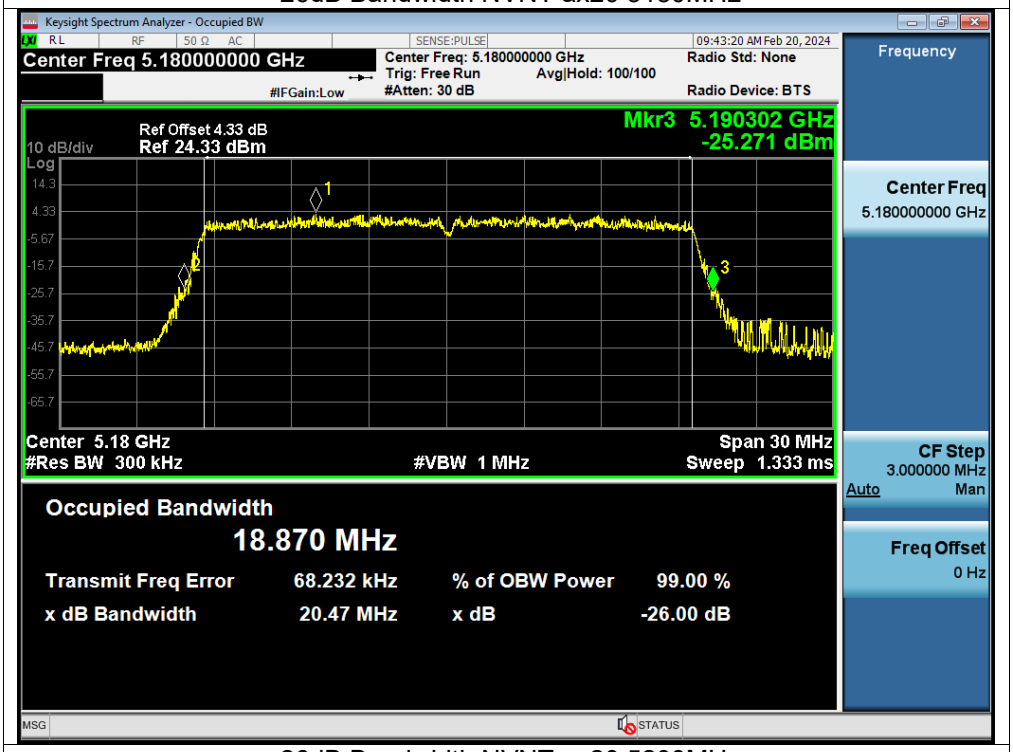
-26dB Bandwidth NVNT ac40 5230MHz



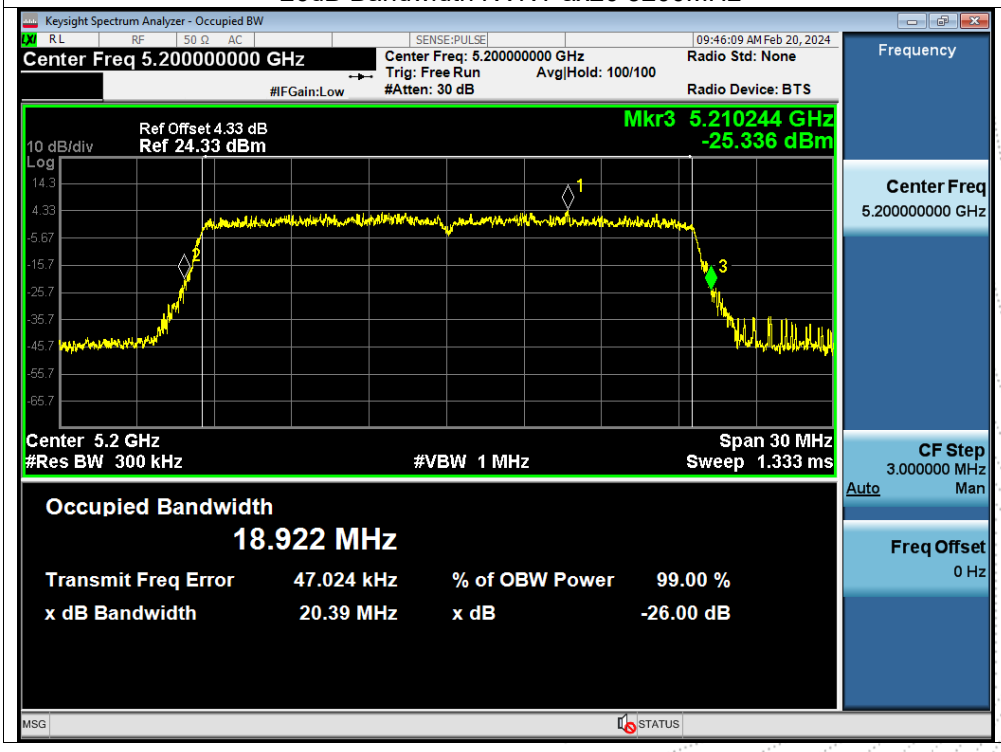
-26dB Bandwidth NVNT ac80 5210MHz



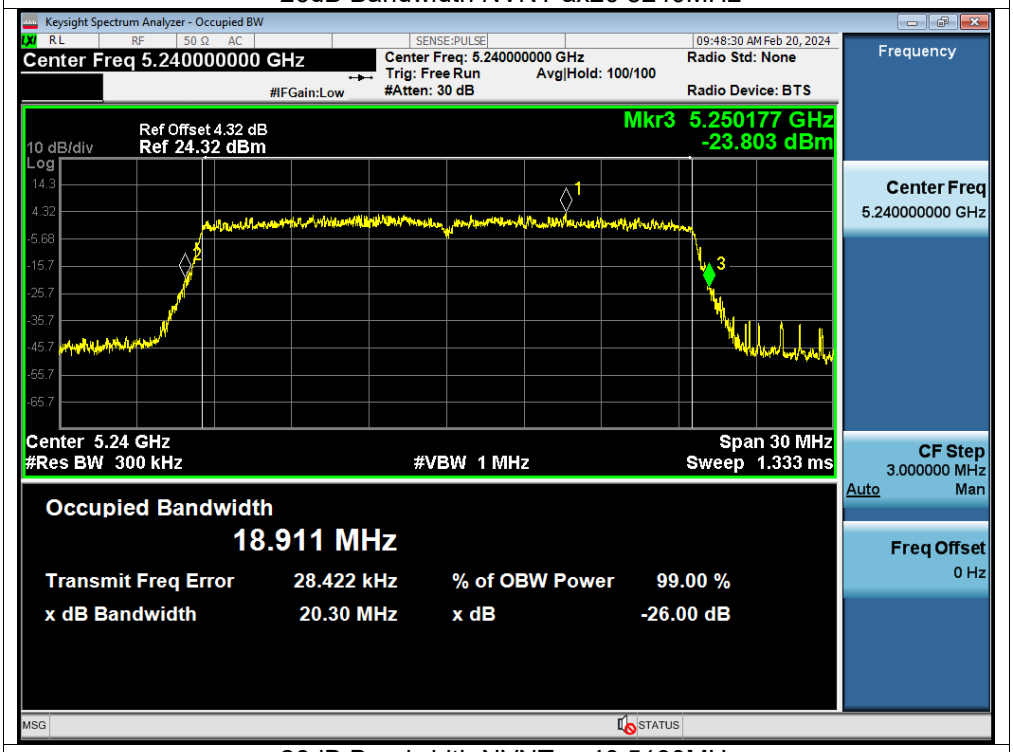
-26dB Bandwidth NVNT ax20 5180MHz



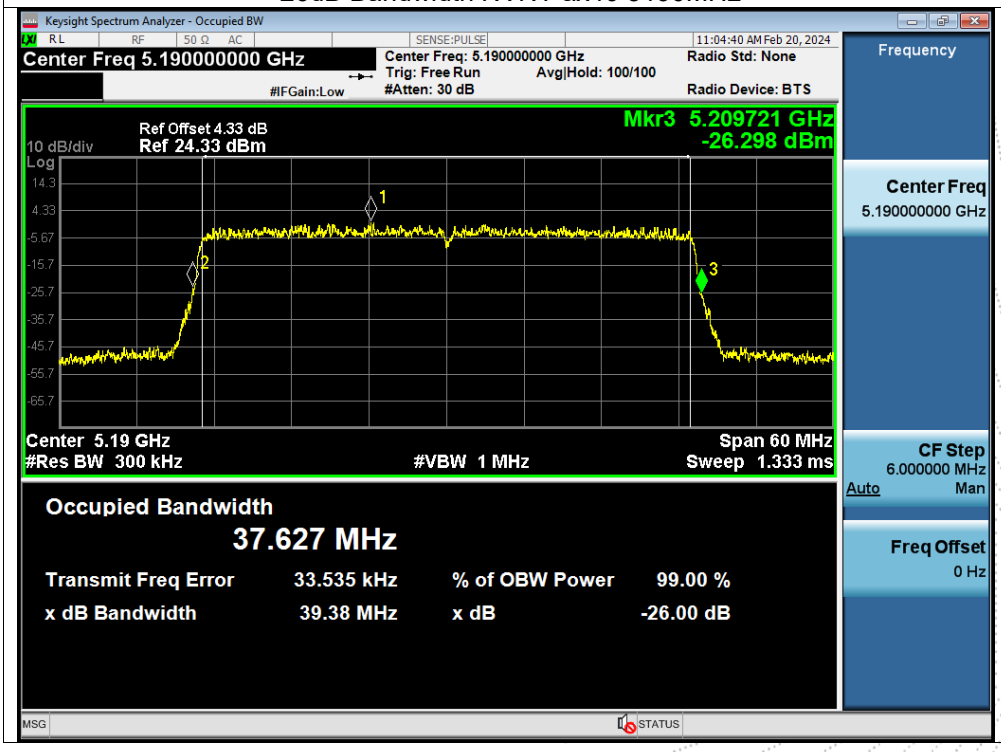
-26dB Bandwidth NVNT ax20 5200MHz



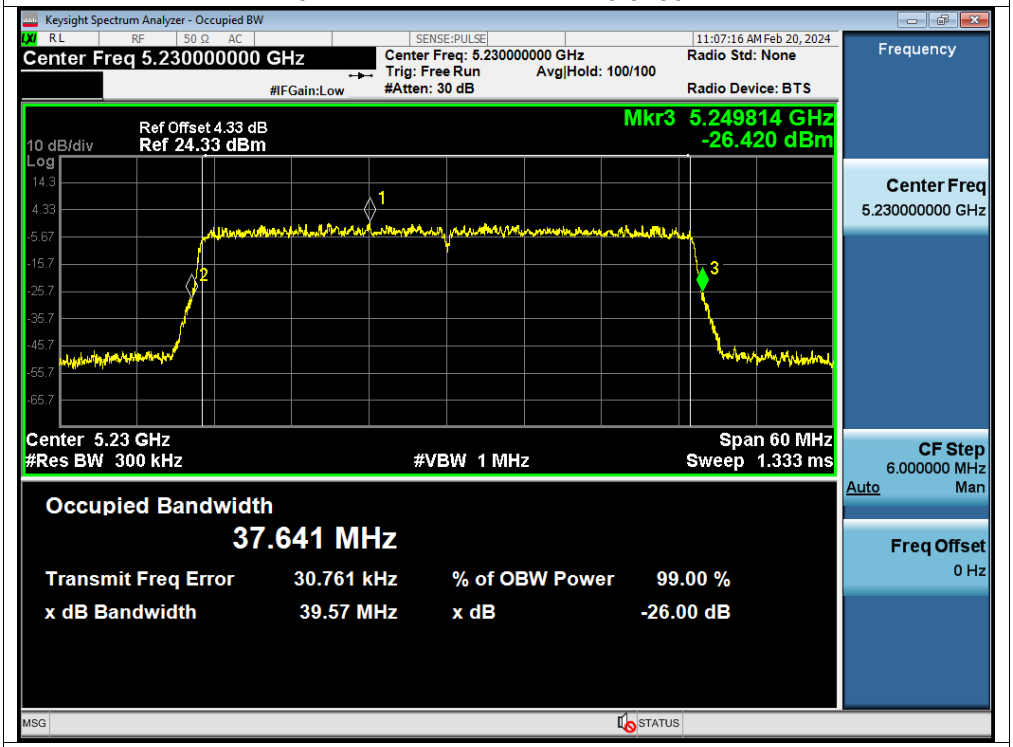
-26dB Bandwidth NVNT ax20 5240MHz



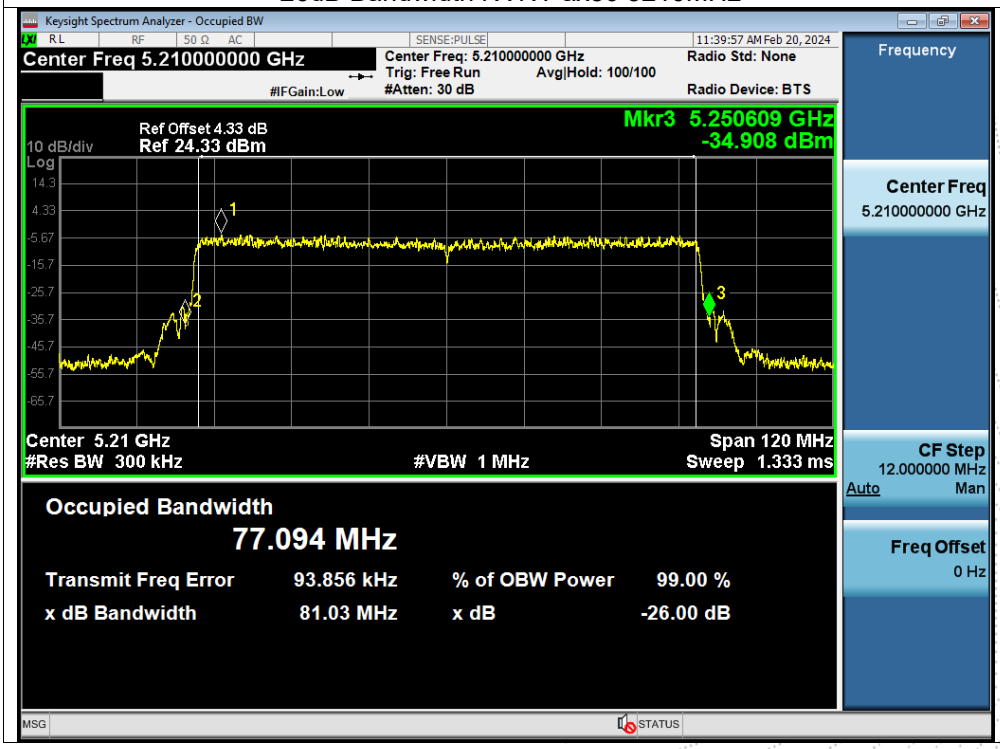
-26dB Bandwidth NVNT ax40 5190MHz



-26dB Bandwidth NVNT ax40 5230MHz



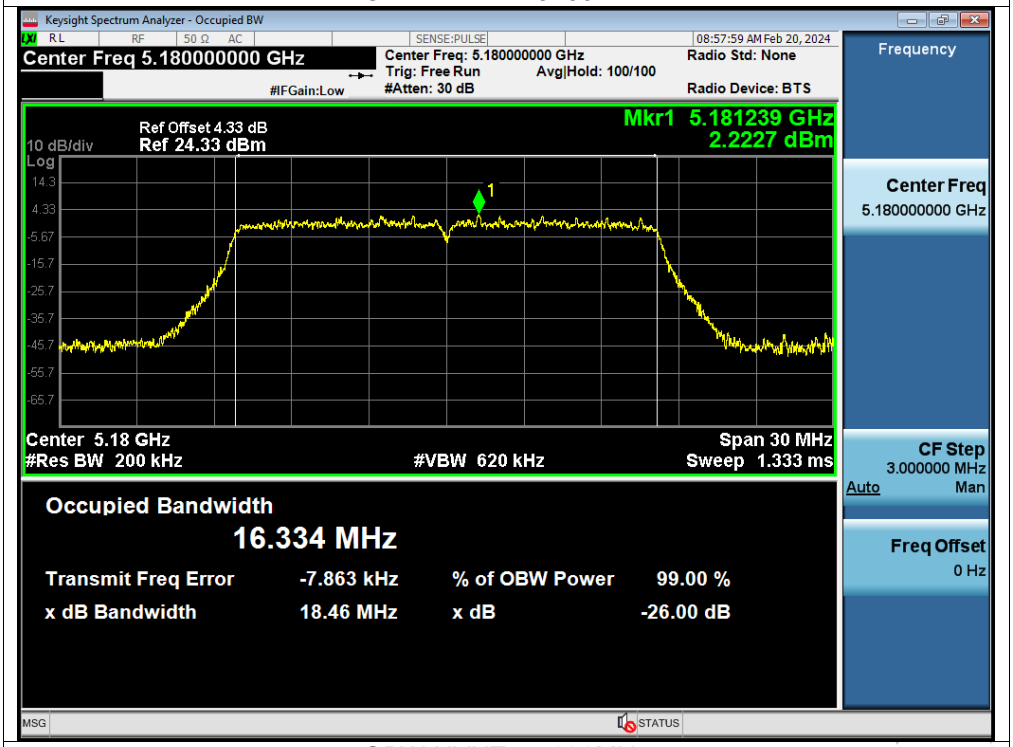
-26dB Bandwidth NVNT ax80 5210MHz



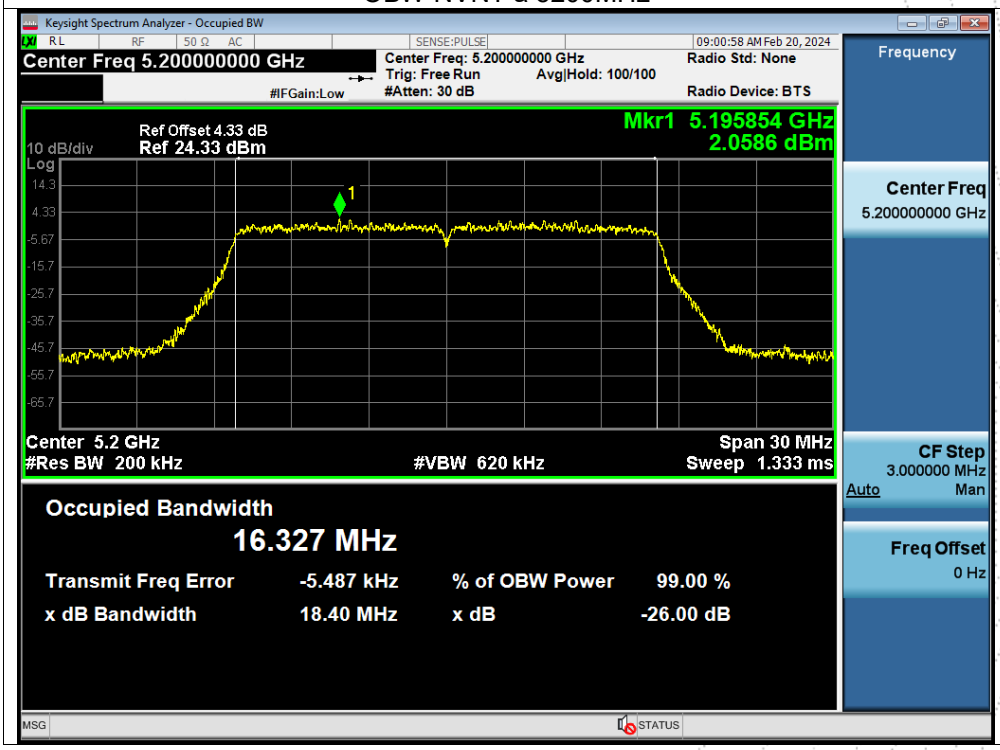
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

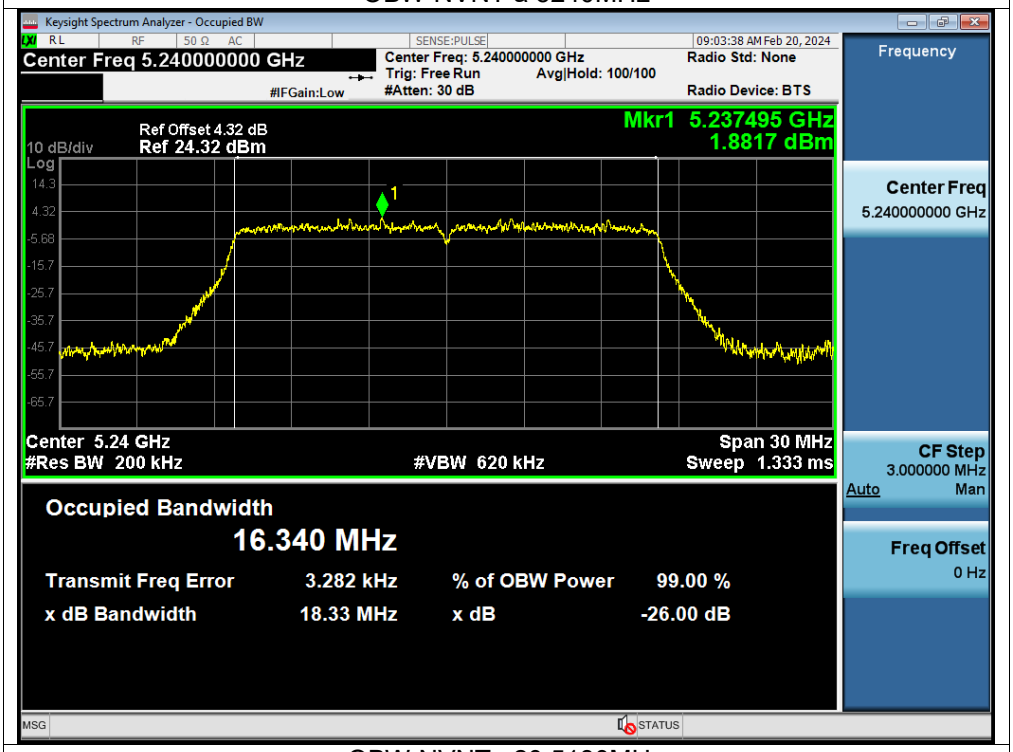
OBW NVNT a 5180MHz



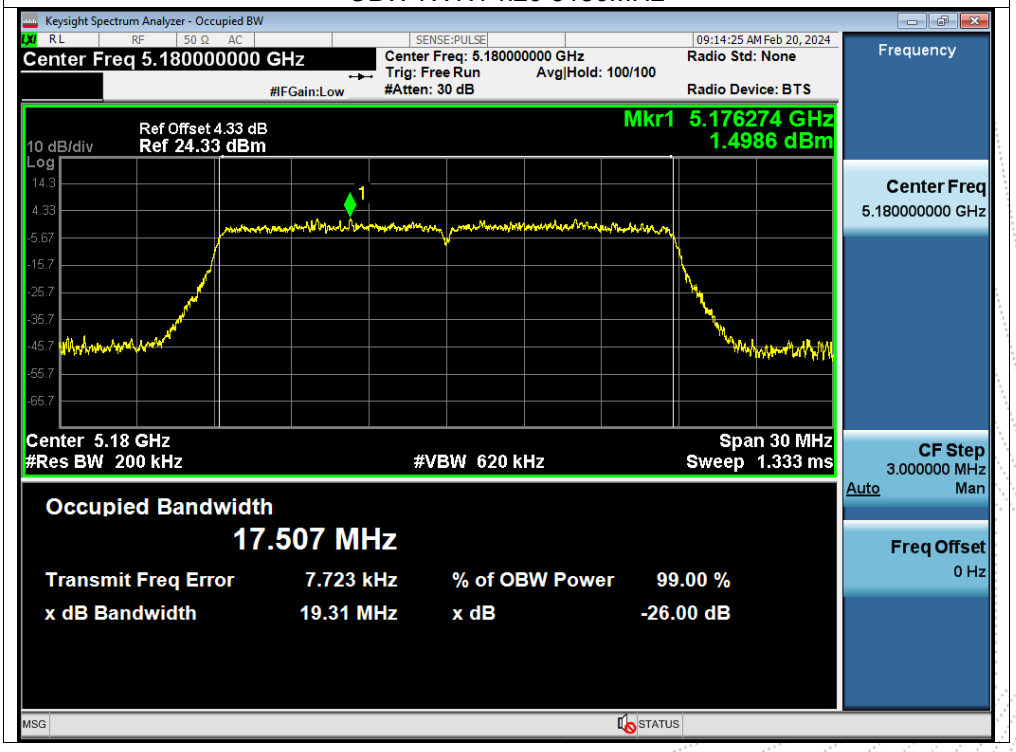
OBW NVNT a 5200MHz



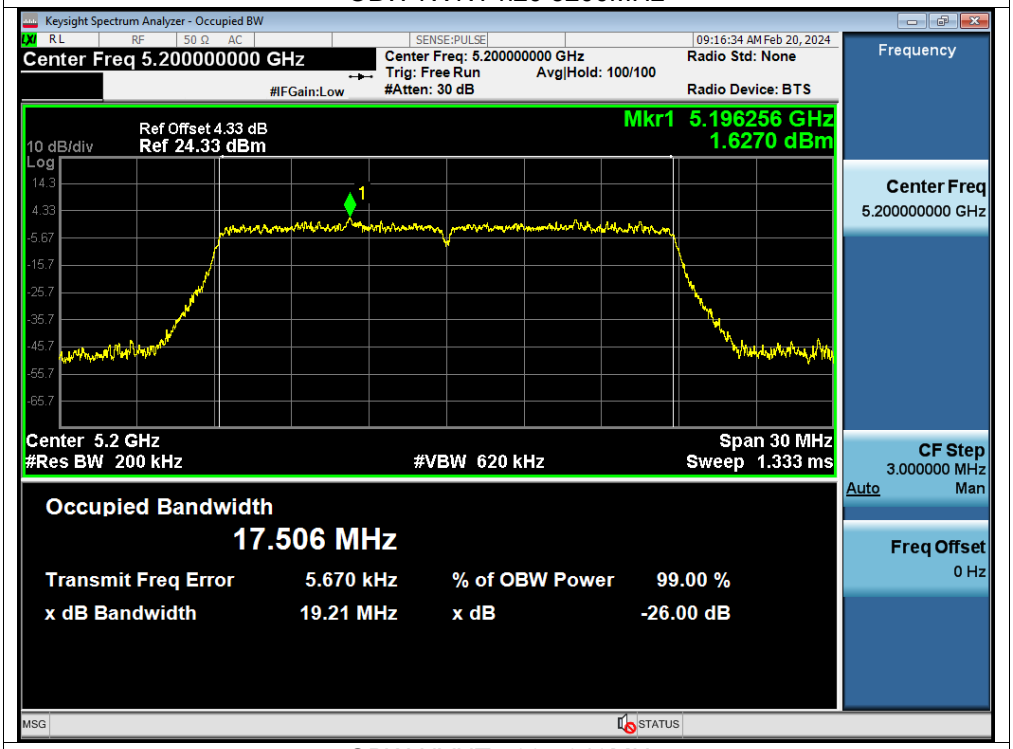
OBW NVNT a 5240MHz



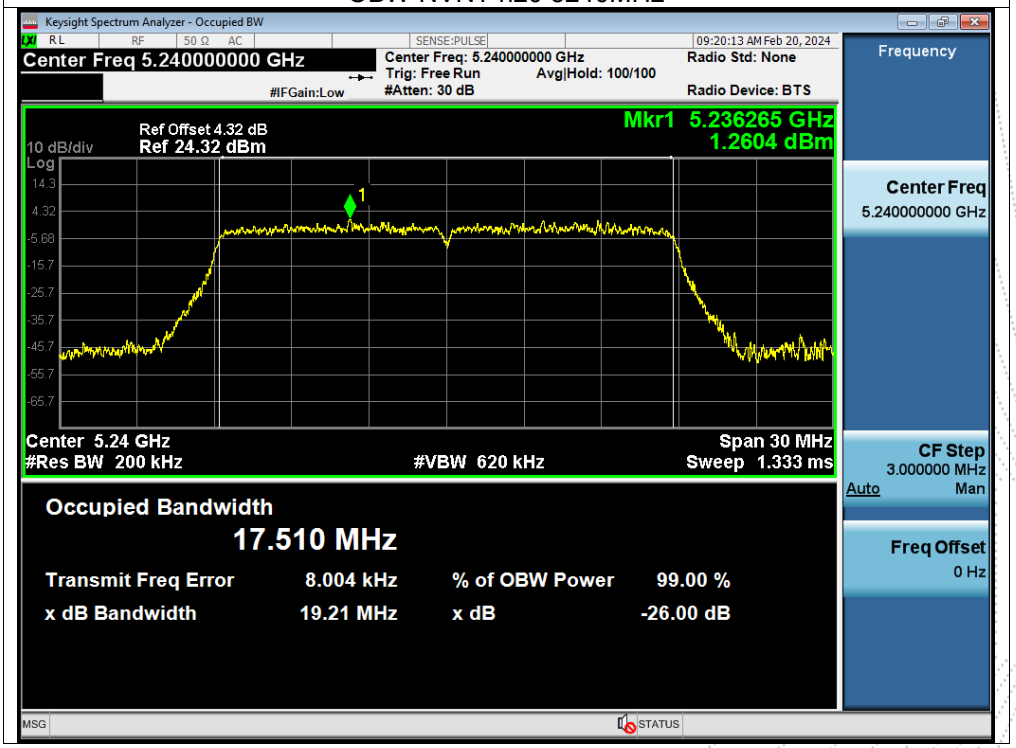
OBW NVNT n20 5180MHz



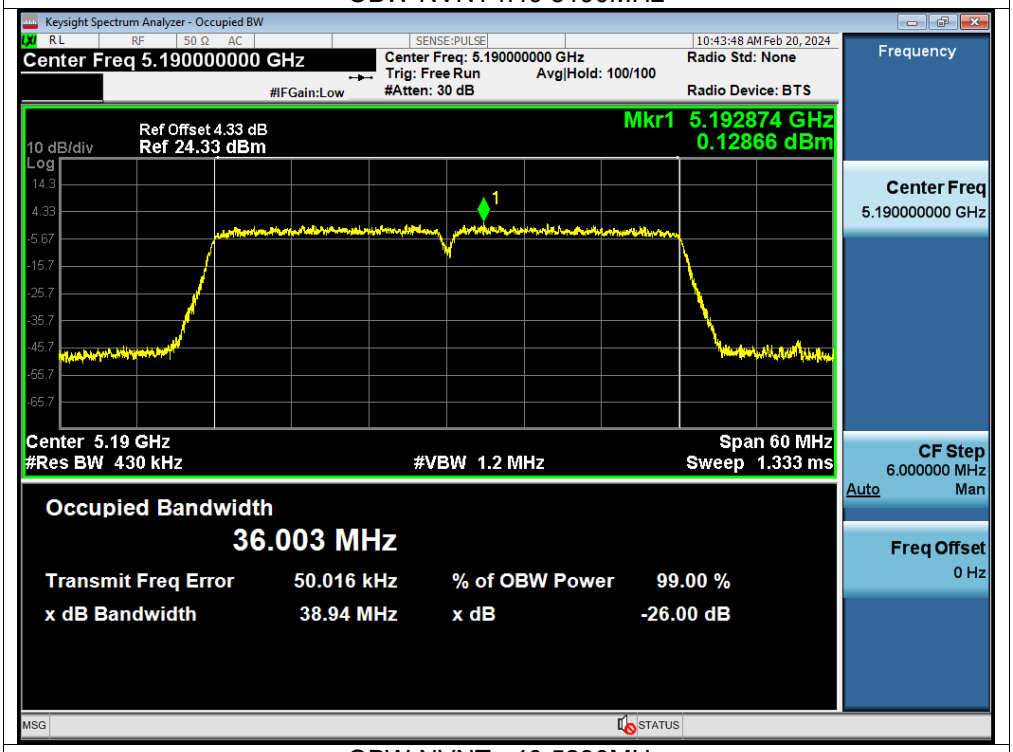
OBW NVNT n20 5200MHz



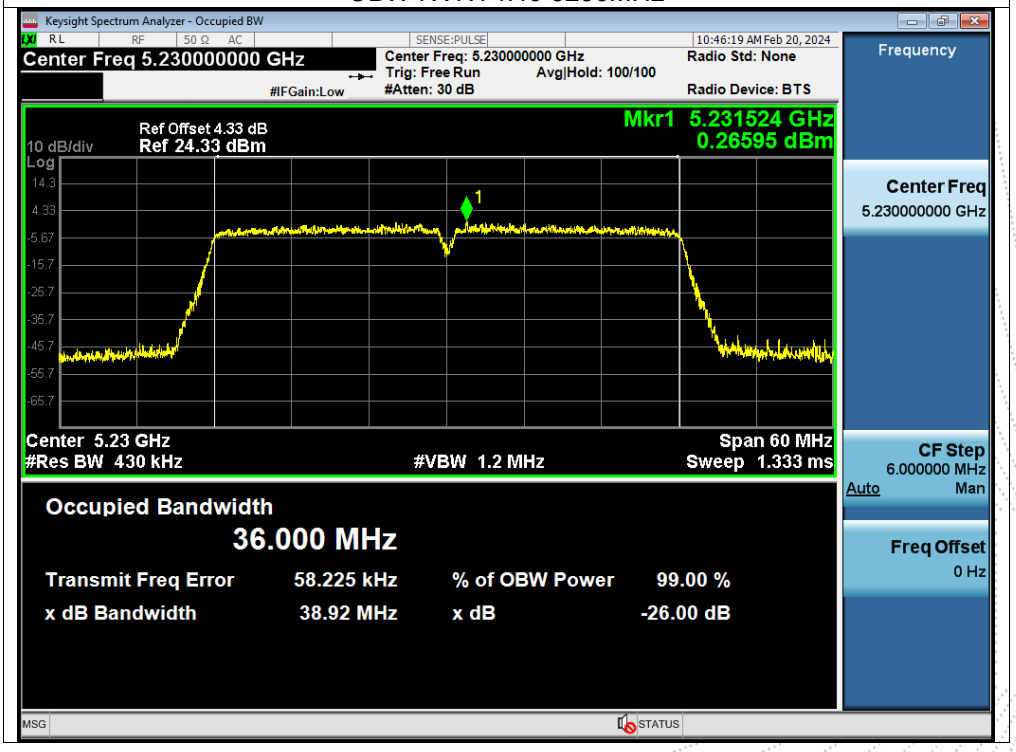
OBW NVNT n20 5240MHz



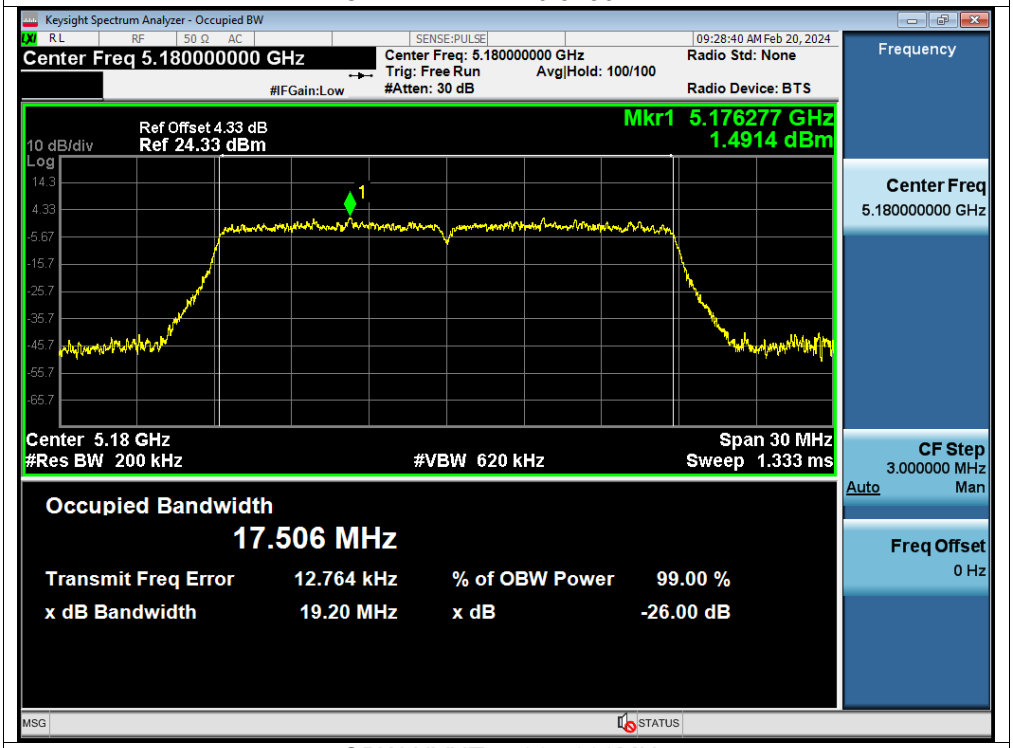
OBW NVNT n40 5190MHz



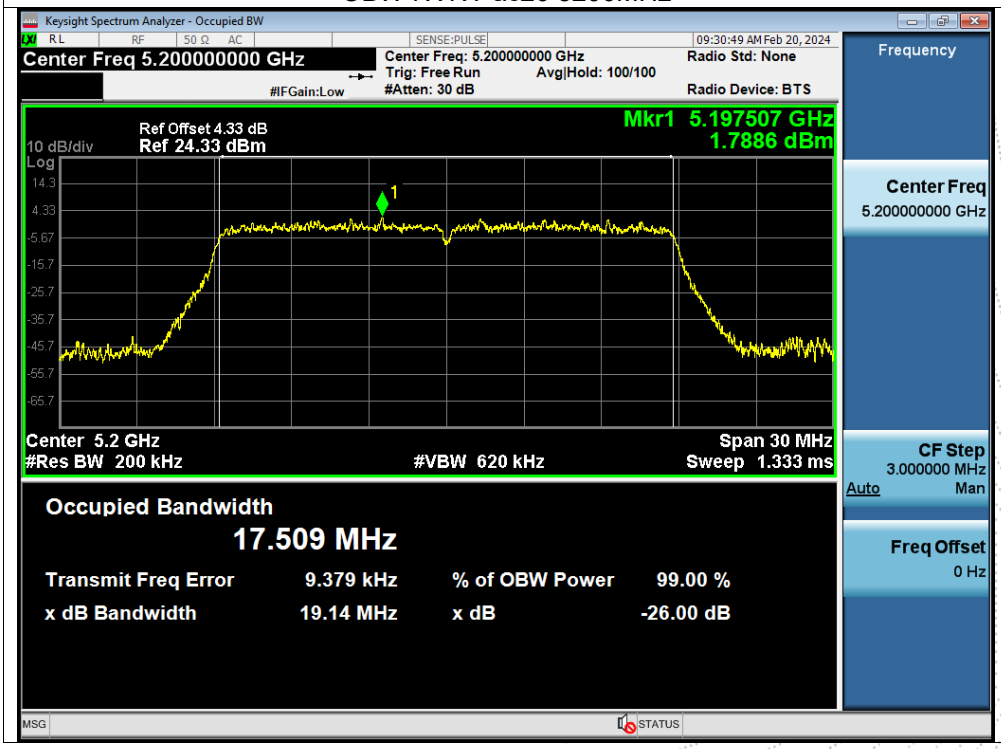
OBW NVNT n40 5230MHz



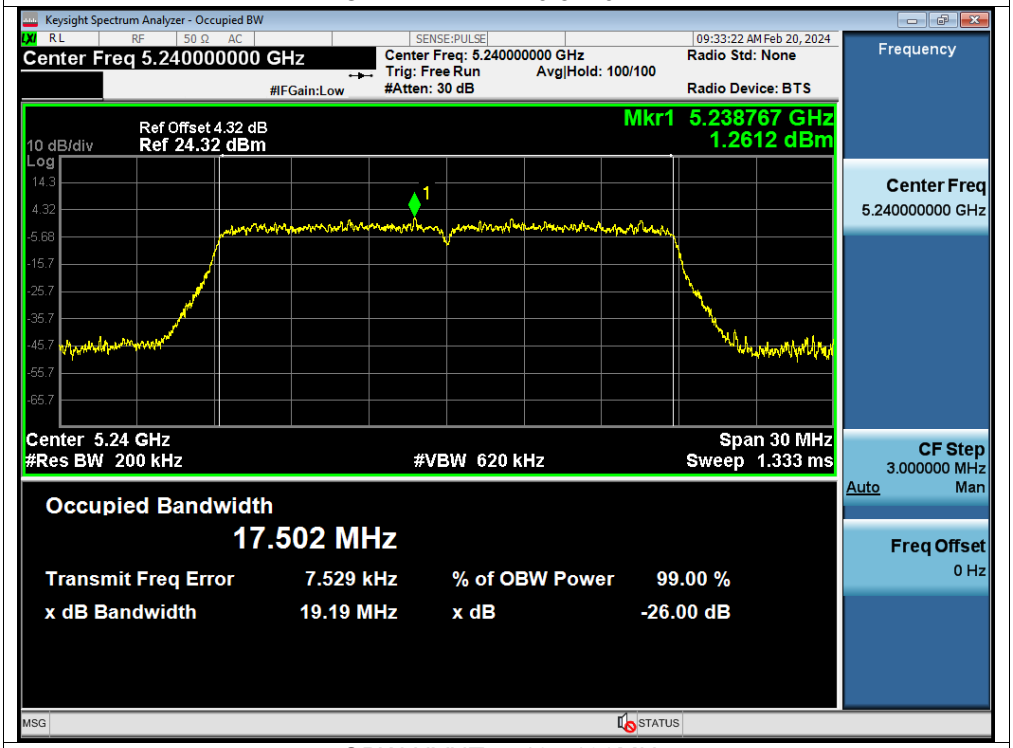
OBW NVNT ac20 5180MHz



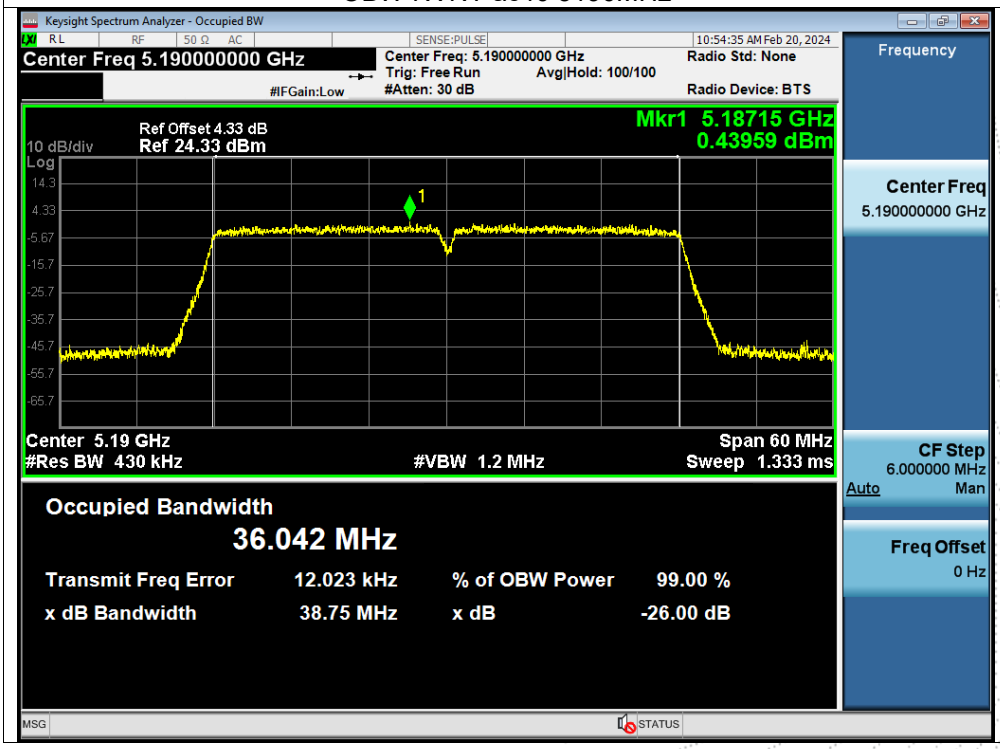
OBW NVNT ac20 5200MHz



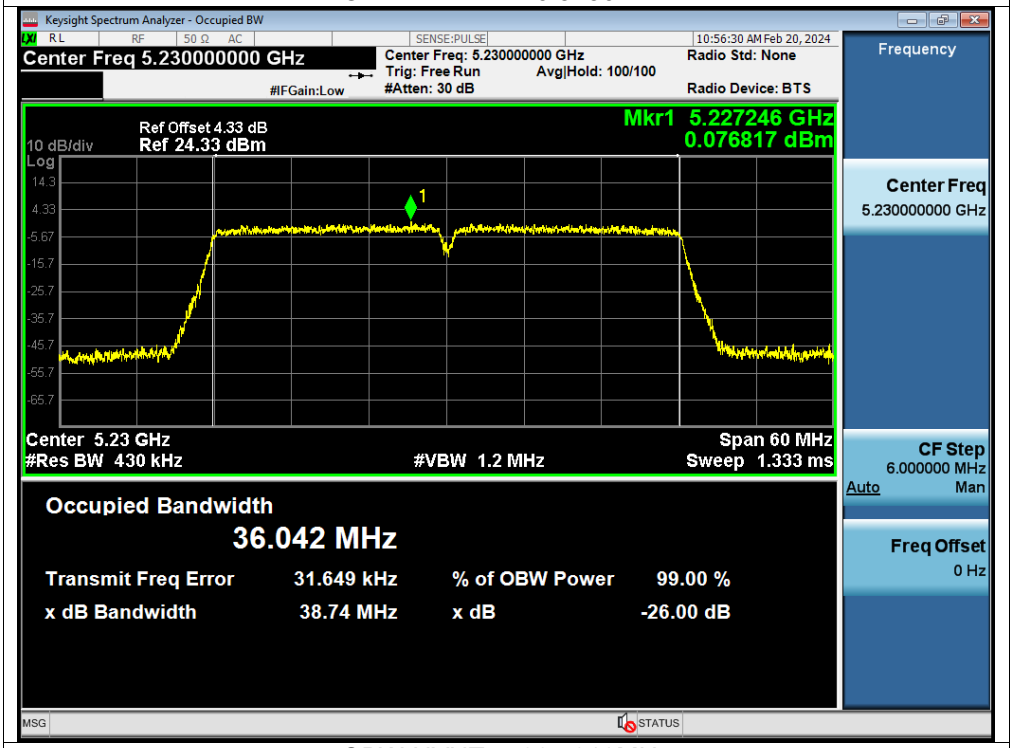
OBW NVNT ac20 5240MHz



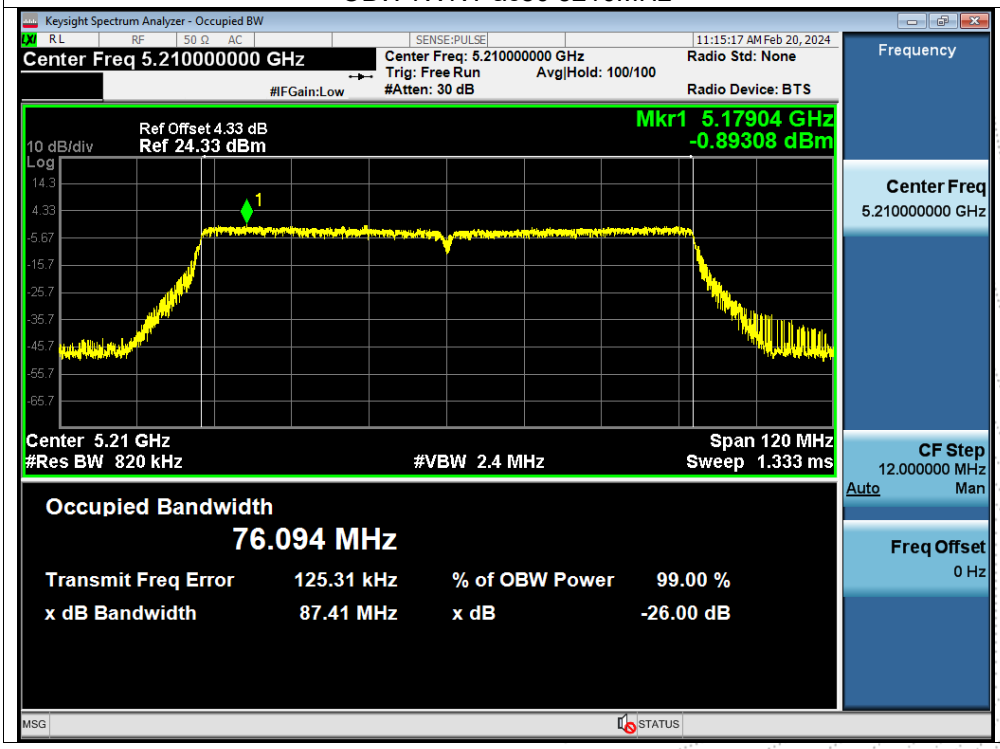
OBW NVNT ac40 5190MHz



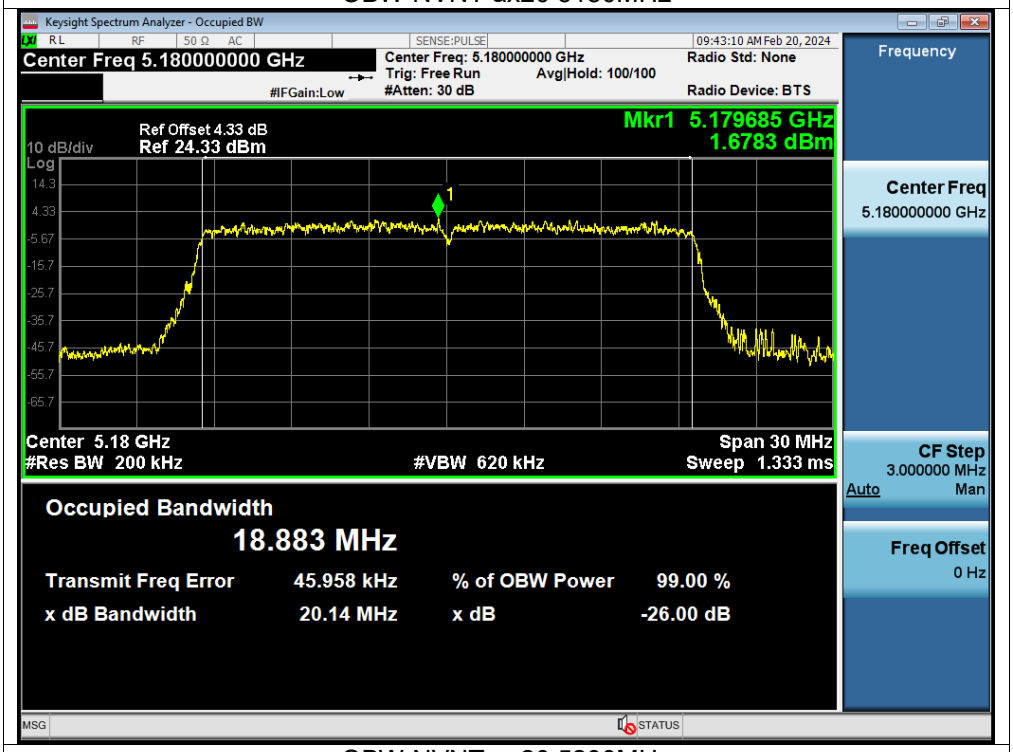
OBW NVNT ac40 5230MHz



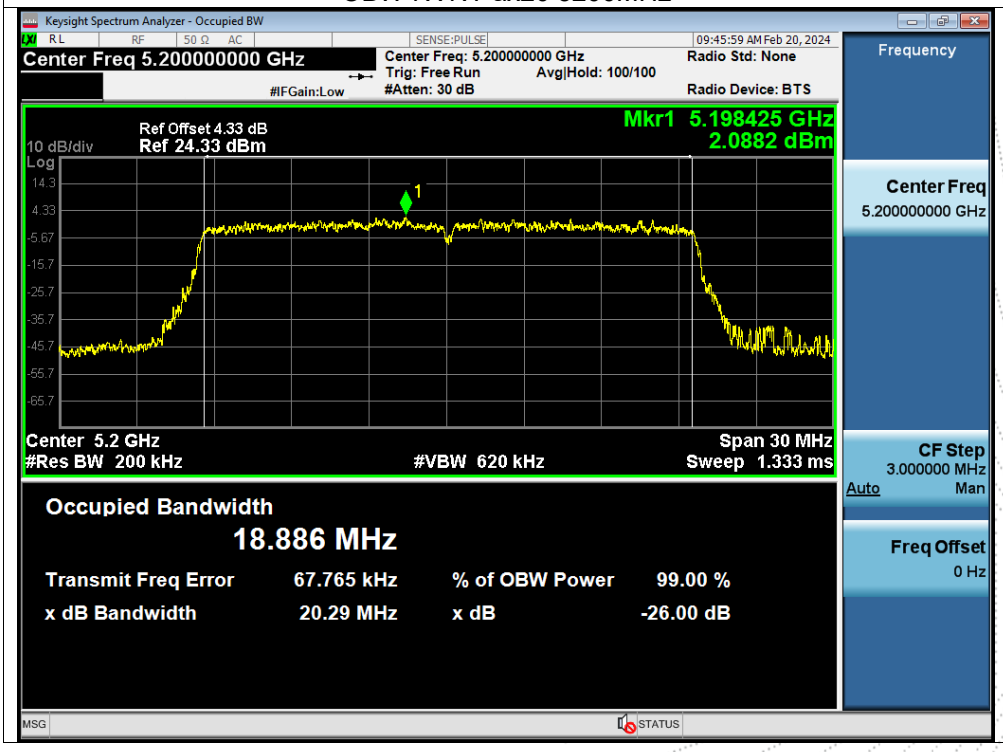
OBW NVNT ac80 5210MHz



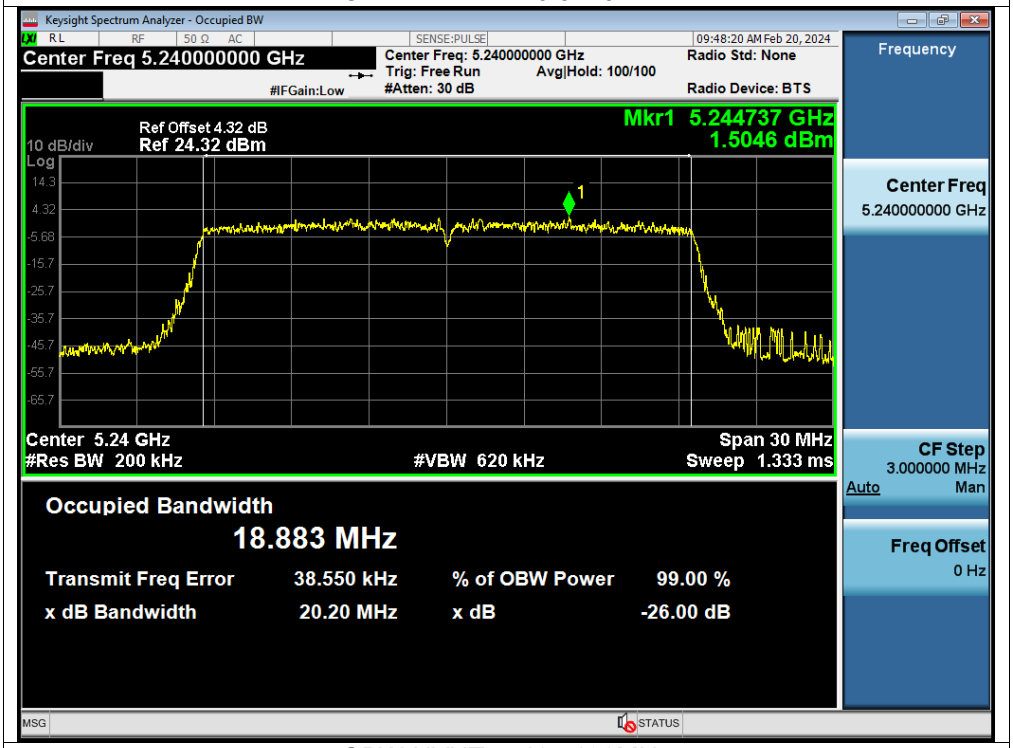
OBW NVNT ax20 5180MHz



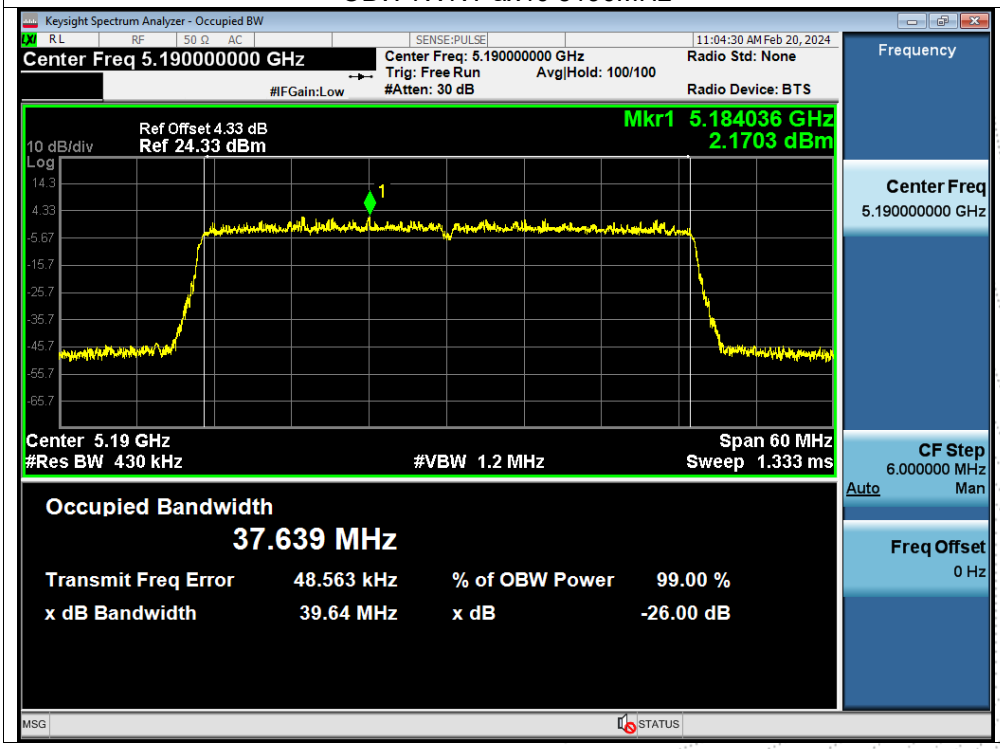
OBW NVNT ax20 5200MHz



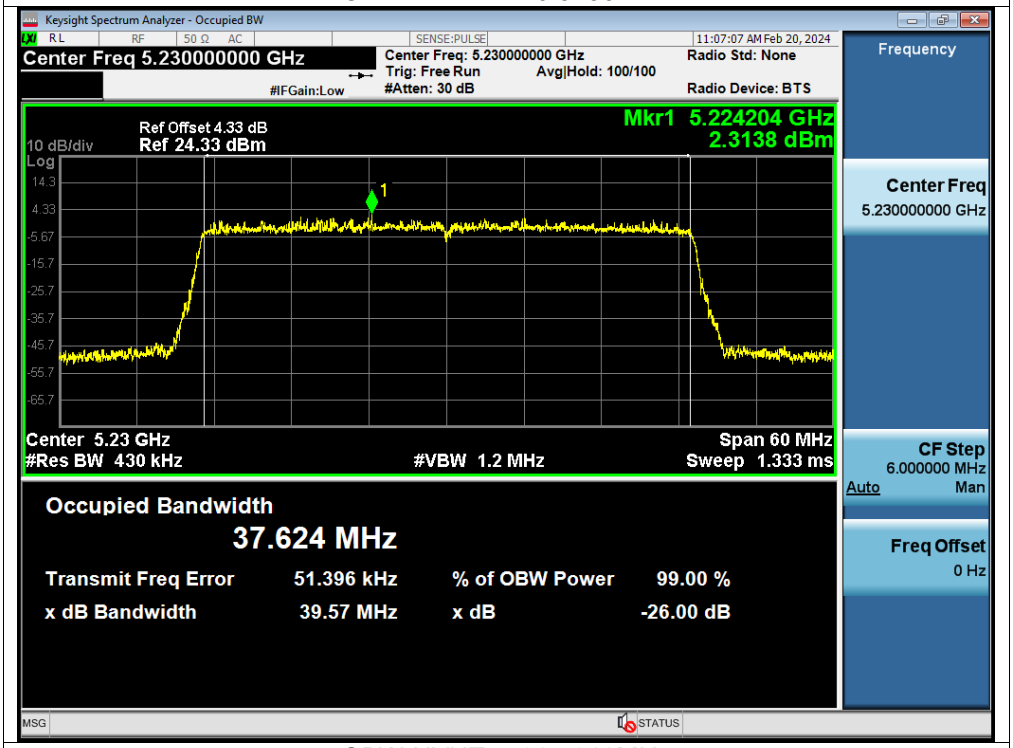
OBW NVNT ax20 5240MHz



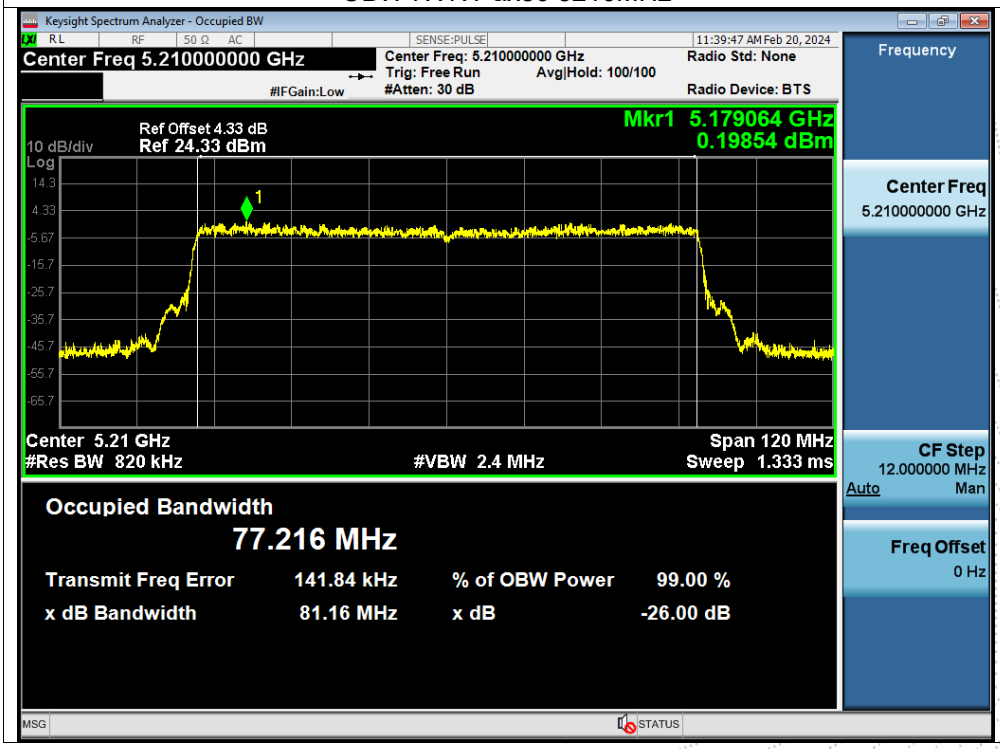
OBW NVNT ax40 5190MHz



OBW NVNT ax40 5230MHz



OBW NVNT ax80 5210MHz



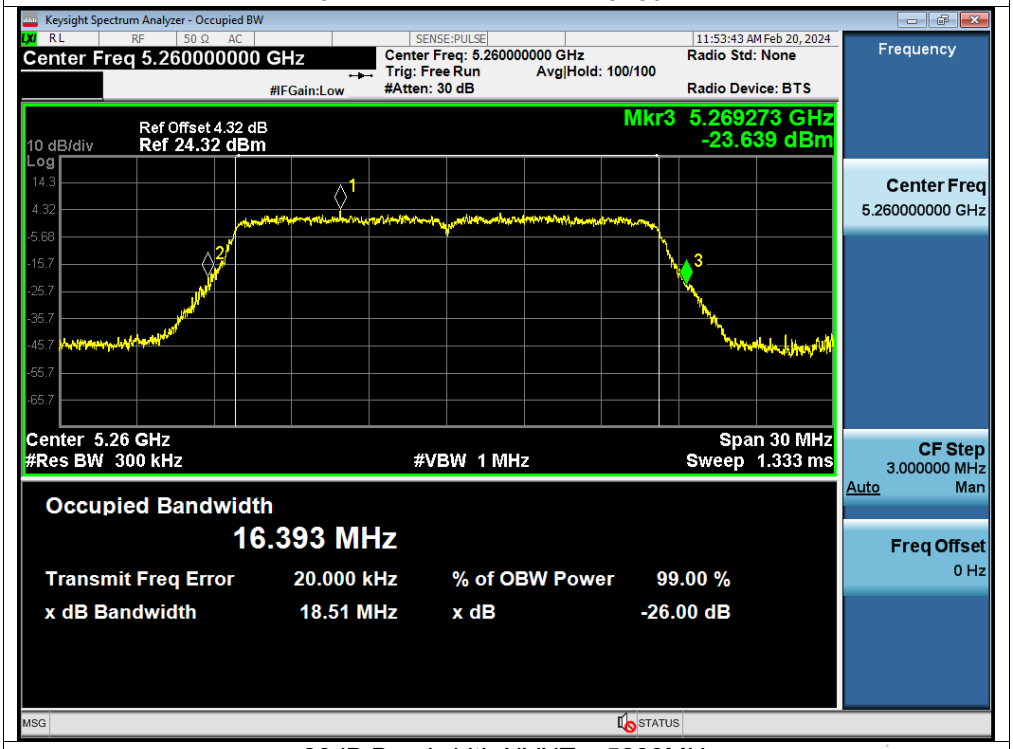
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5260-5320MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		99% OBW (MHz)		Verdict
			Ant A	Ant B	Ant A	Ant B	
NVNT	a	5260	18.604	18.507	16.338	16.332	Pass
NVNT	a	5280	18.576	18.603	16.329	16.346	Pass
NVNT	a	5320	18.699	18.589	16.327	16.34	Pass
NVNT	n20	5260	19.62	19.517	17.501	17.491	Pass
NVNT	n20	5280	19.473	19.512	17.506	17.497	Pass
NVNT	n20	5320	19.488	19.471	17.497	17.486	Pass
NVNT	n40	5270	38.605	38.581	36.041	35.997	Pass
NVNT	n40	5310	38.724	38.671	36.01	36.041	Pass
NVNT	ac20	5260	19.597	19.711	17.509	17.502	Pass
NVNT	ac20	5280	19.535	19.477	17.497	17.516	Pass
NVNT	ac20	5320	19.719	19.716	17.501	17.519	Pass
NVNT	ac40	5270	38.749	38.483	36.076	36.045	Pass
NVNT	ac40	5310	38.432	38.739	36.048	36.045	Pass
NVNT	ac80	5290	**84.399**	83.803	76.186	76.164	Pass
NVNT	ax20	5260	20.299	20.601	18.888	18.882	Pass
NVNT	ax20	5280	20.607	20.627	18.877	18.886	Pass
NVNT	ax20	5320	20.567	20.601	18.892	18.894	Pass
NVNT	ax40	5270	39.568	39.45	37.639	37.688	Pass
NVNT	ax40	5310	39.398	39.443	37.662	37.647	Pass
NVNT	ax80	5290	79.62	80.569	**77.237**	77.183	Pass

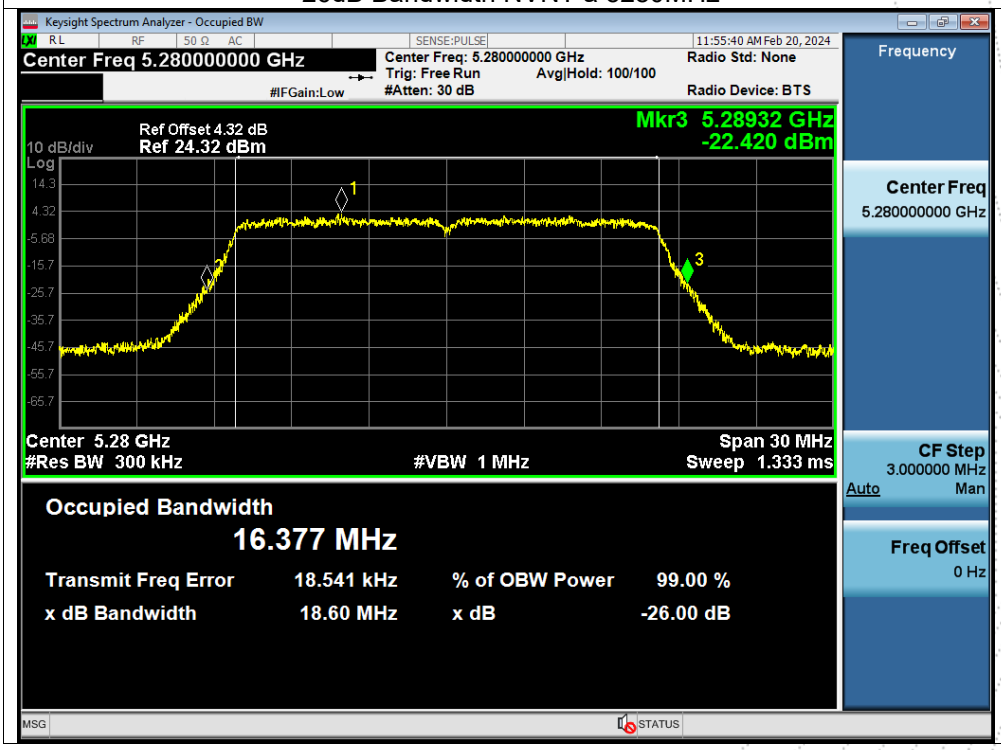
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

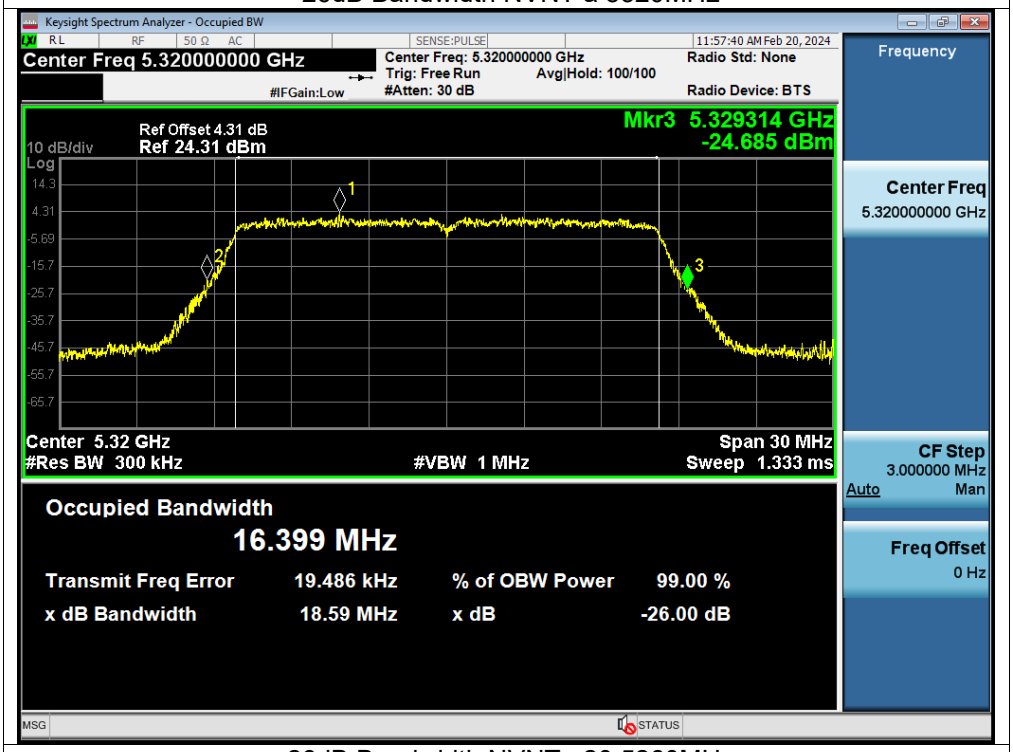
-26dB Bandwidth NVNT a 5260MHz



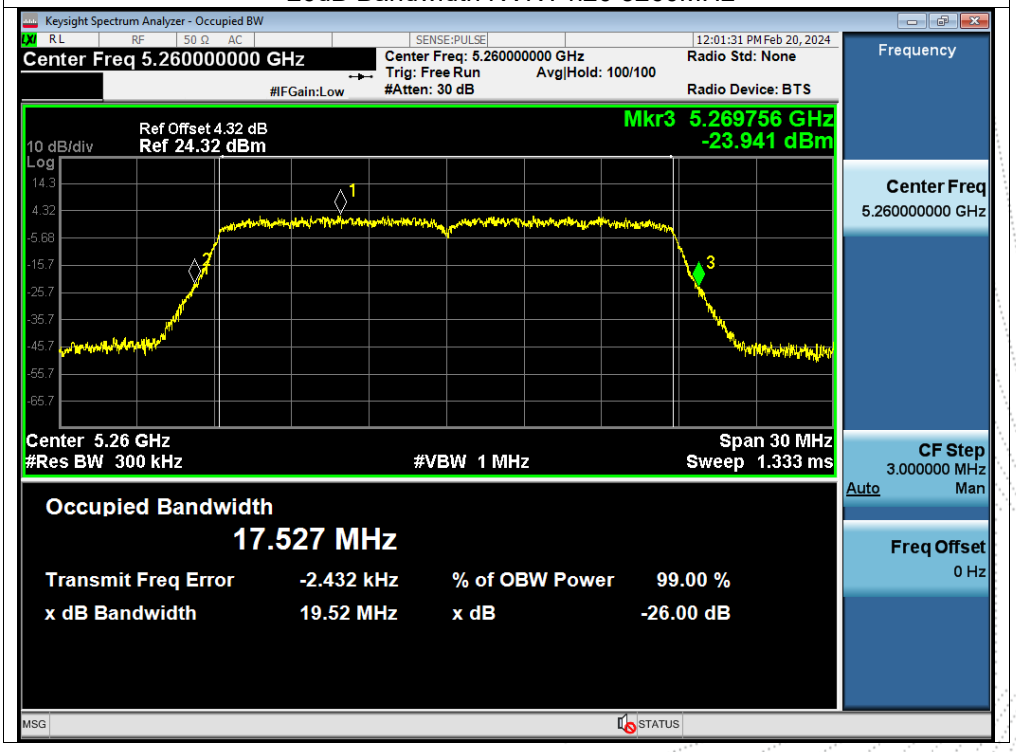
-26dB Bandwidth NVNT a 5280MHz



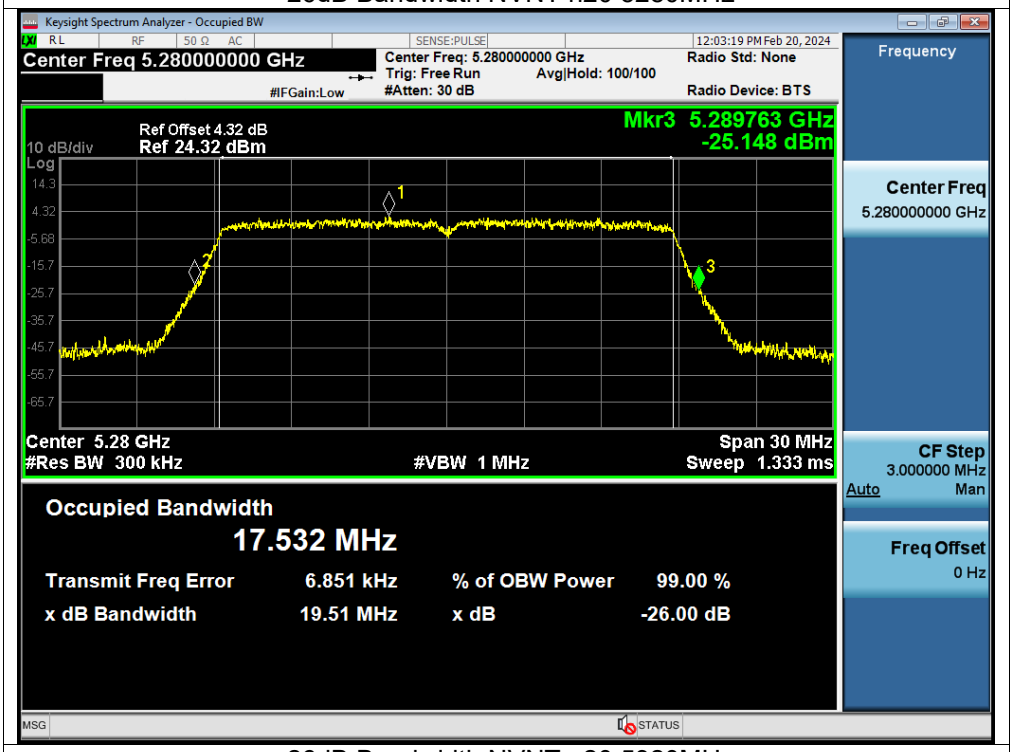
-26dB Bandwidth NVNT a 5320MHz



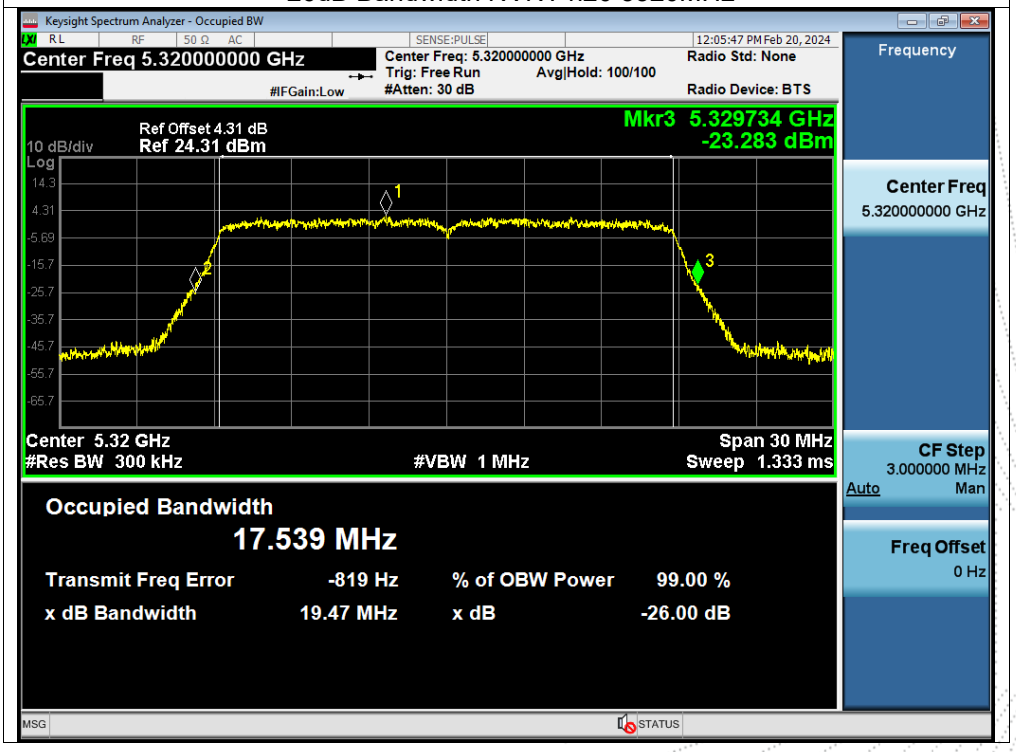
-26dB Bandwidth NVNT n20 5260MHz



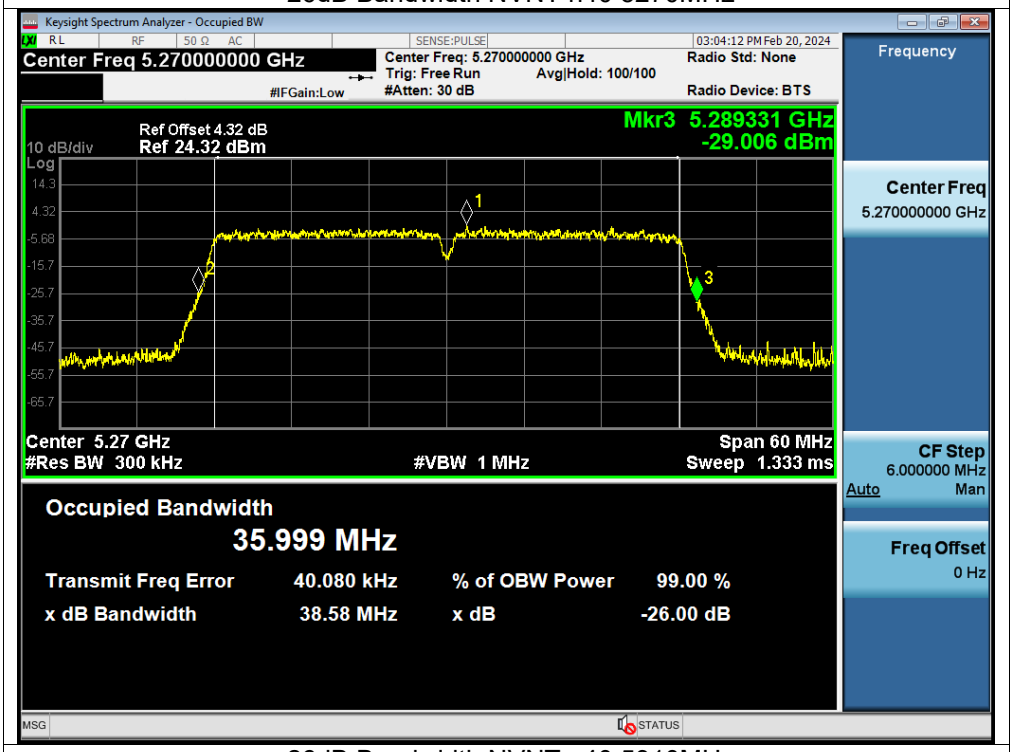
-26dB Bandwidth NVNT n20 5280MHz



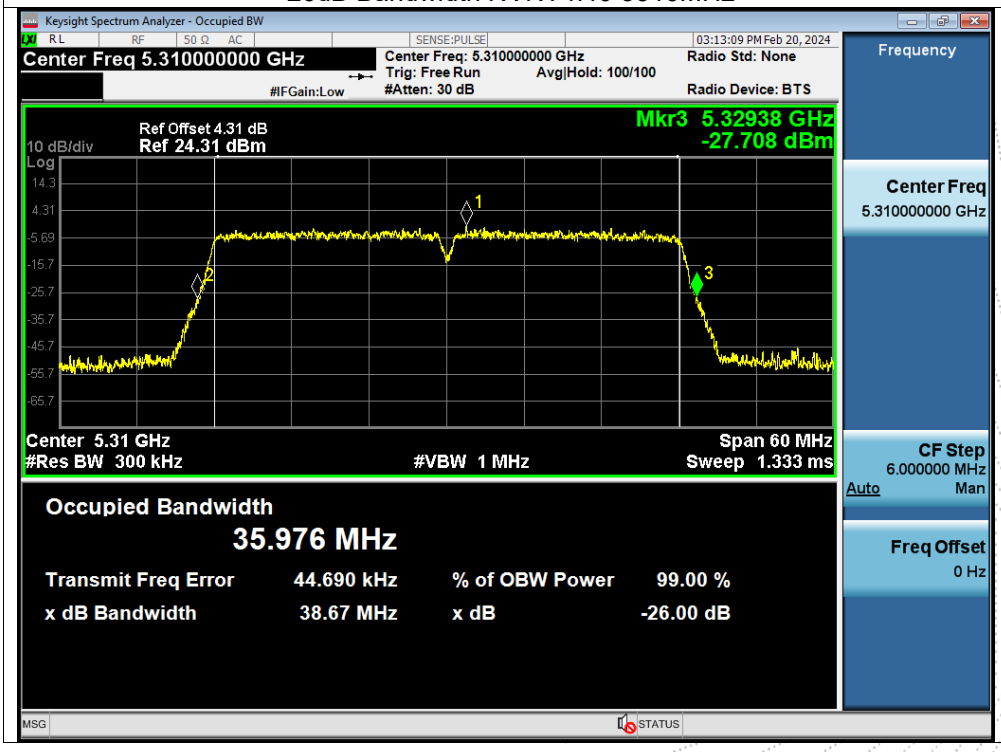
-26dB Bandwidth NVNT n20 5320MHz



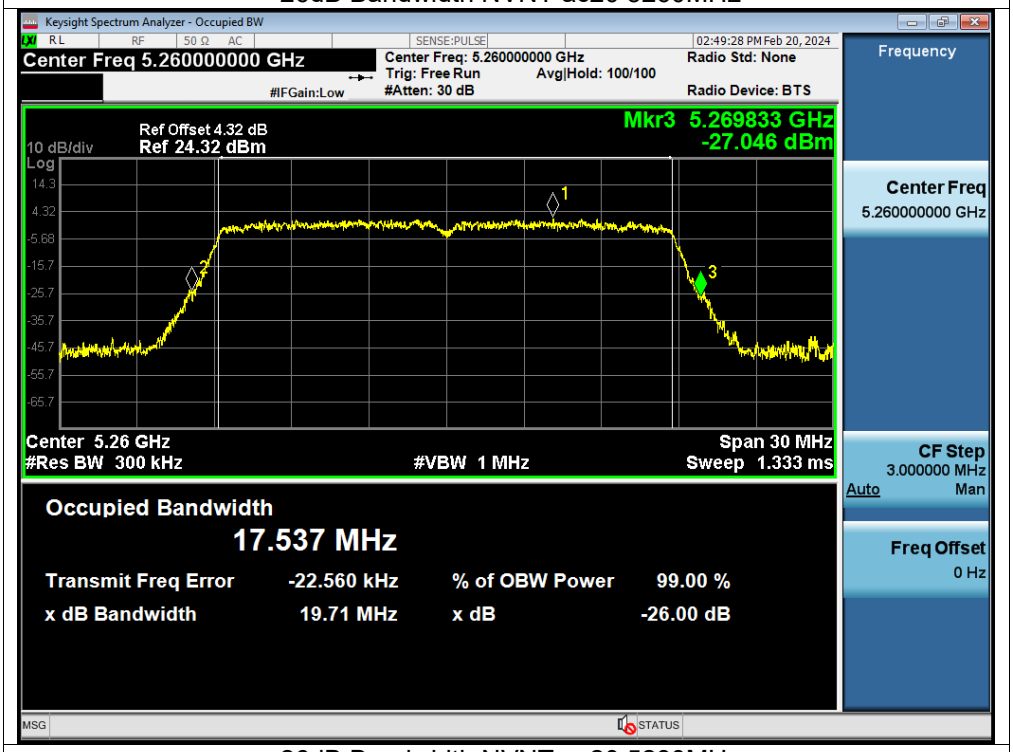
-26dB Bandwidth NVNT n40 5270MHz



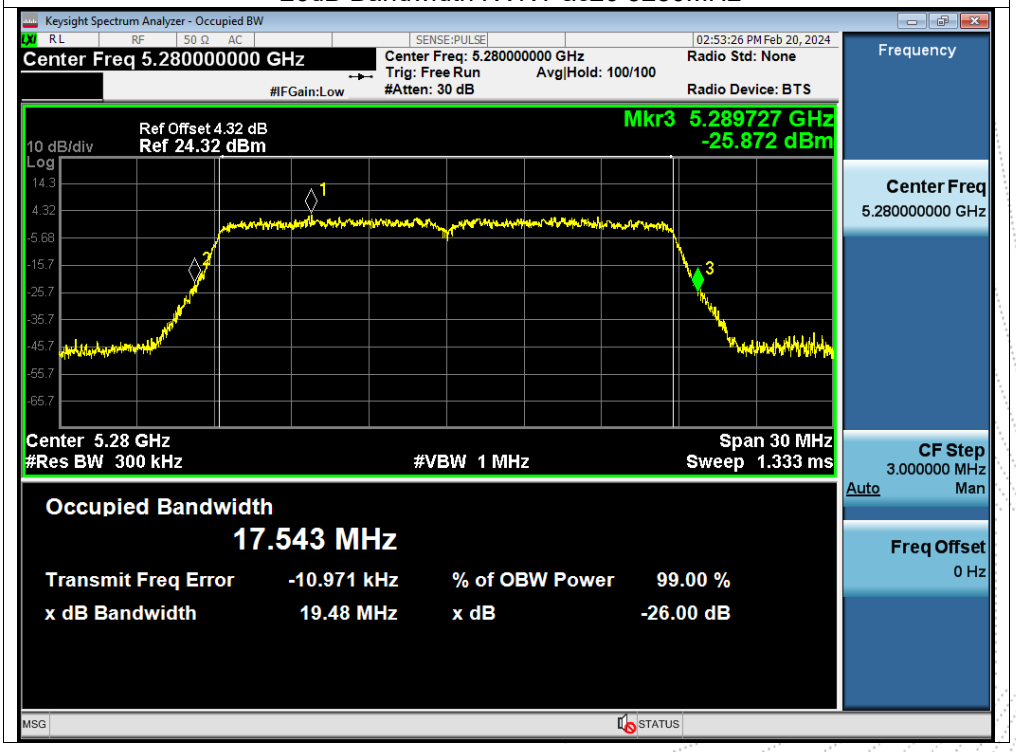
-26dB Bandwidth NVNT n40 5310MHz



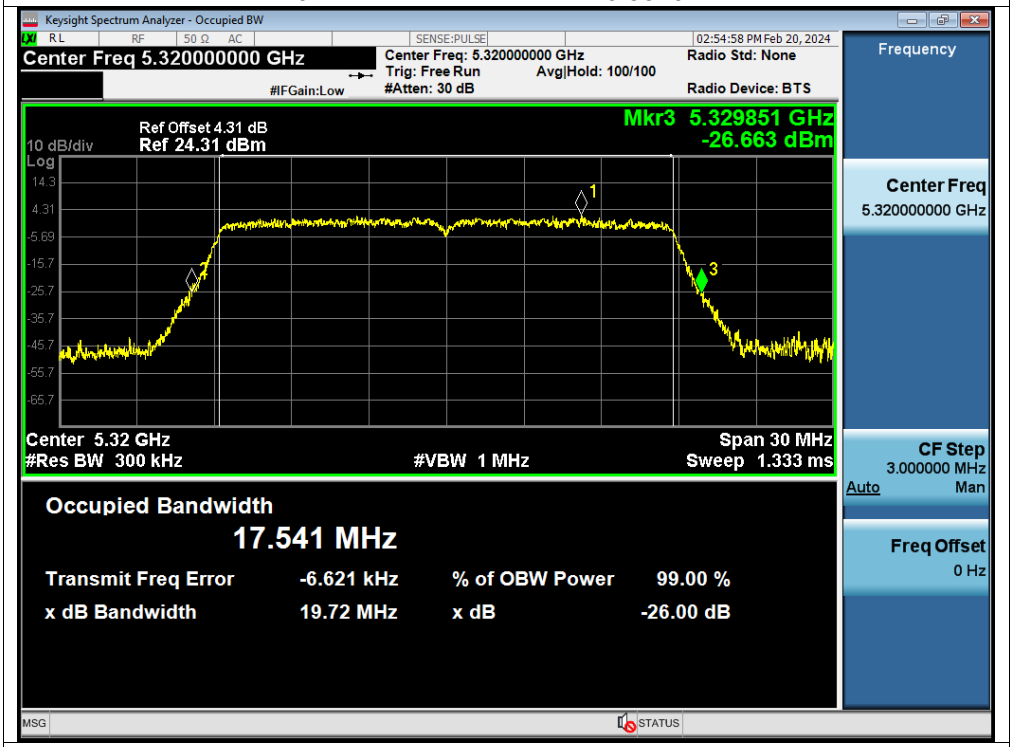
-26dB Bandwidth NVNT ac20 5260MHz



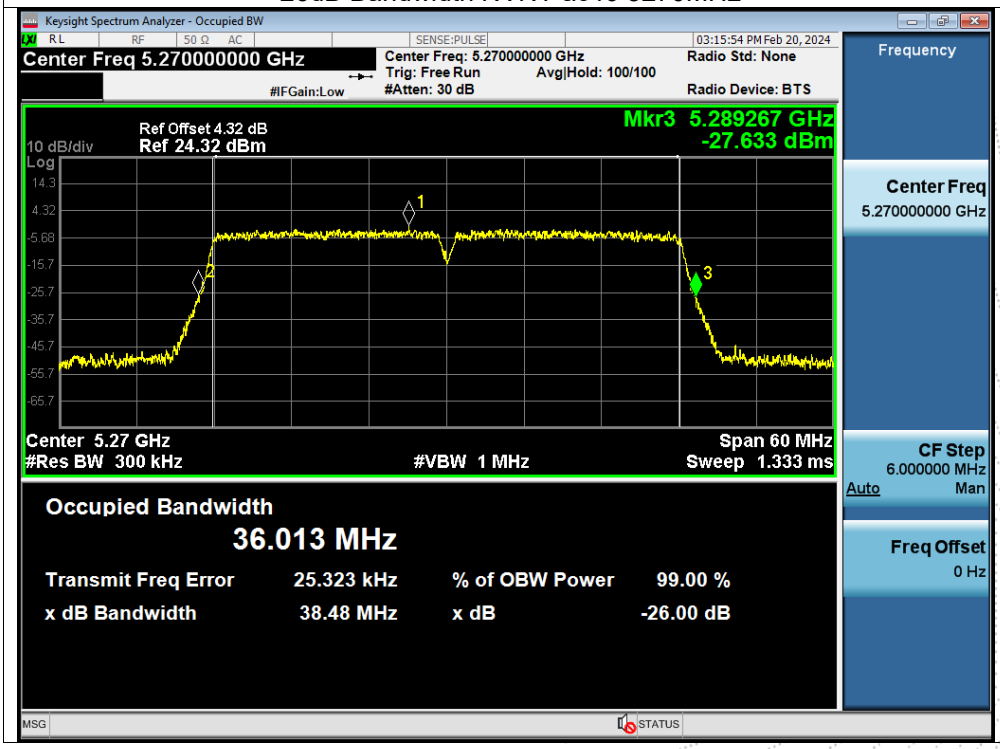
-26dB Bandwidth NVNT ac20 5280MHz



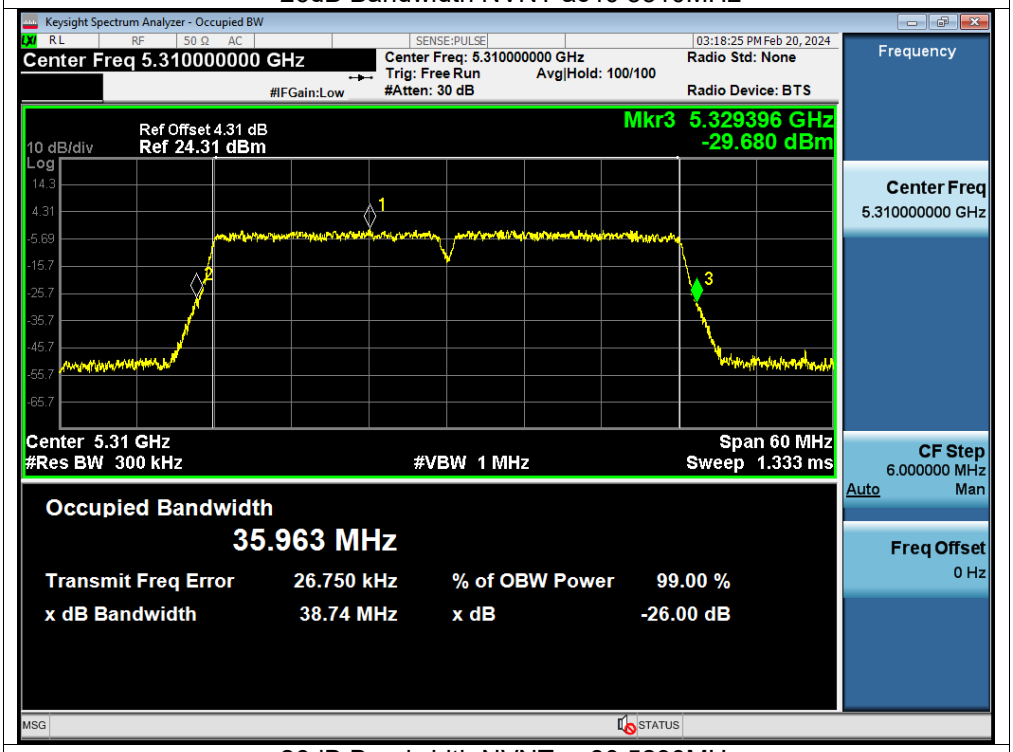
-26dB Bandwidth NVNT ac20 5320MHz



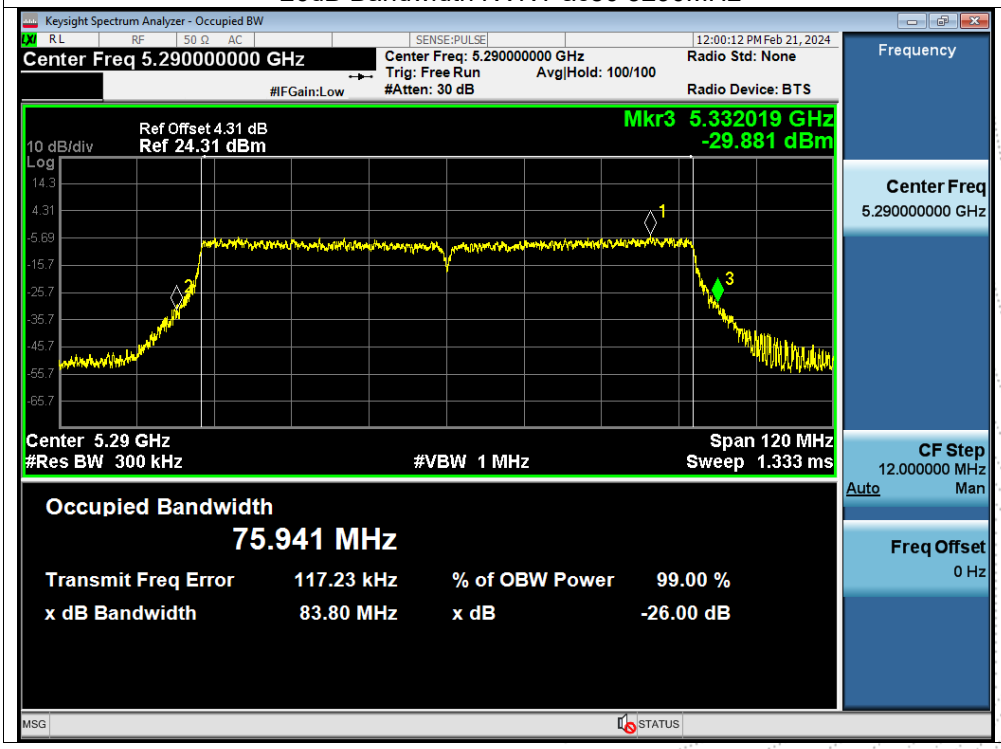
-26dB Bandwidth NVNT ac40 5270MHz



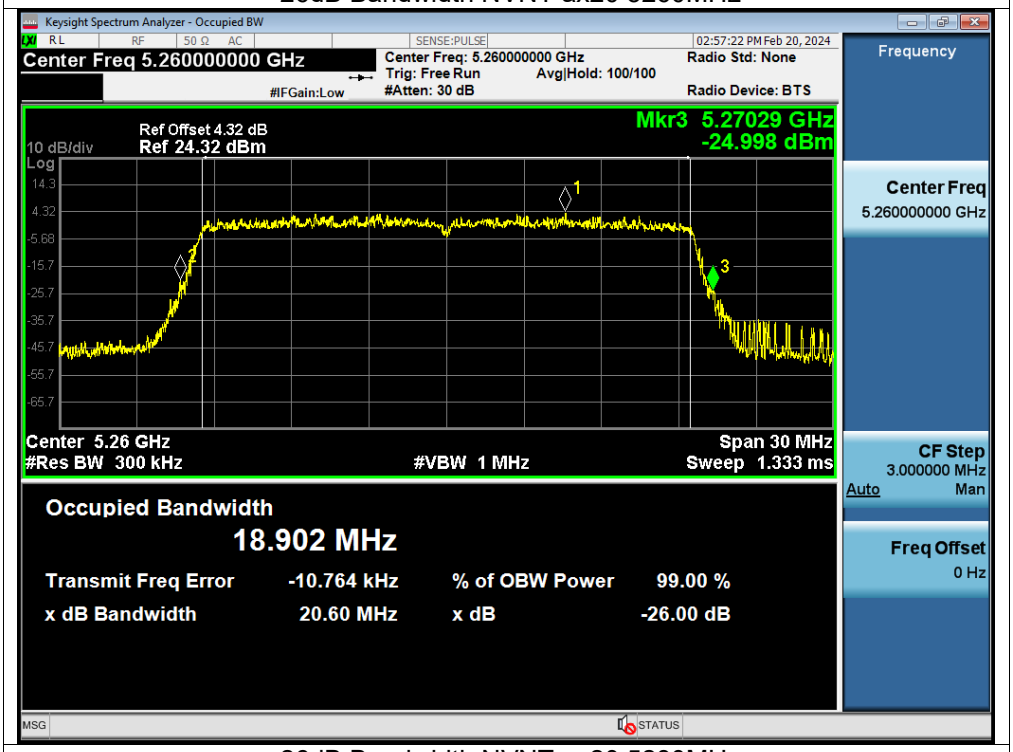
-26dB Bandwidth NVNT ac40 5310MHz



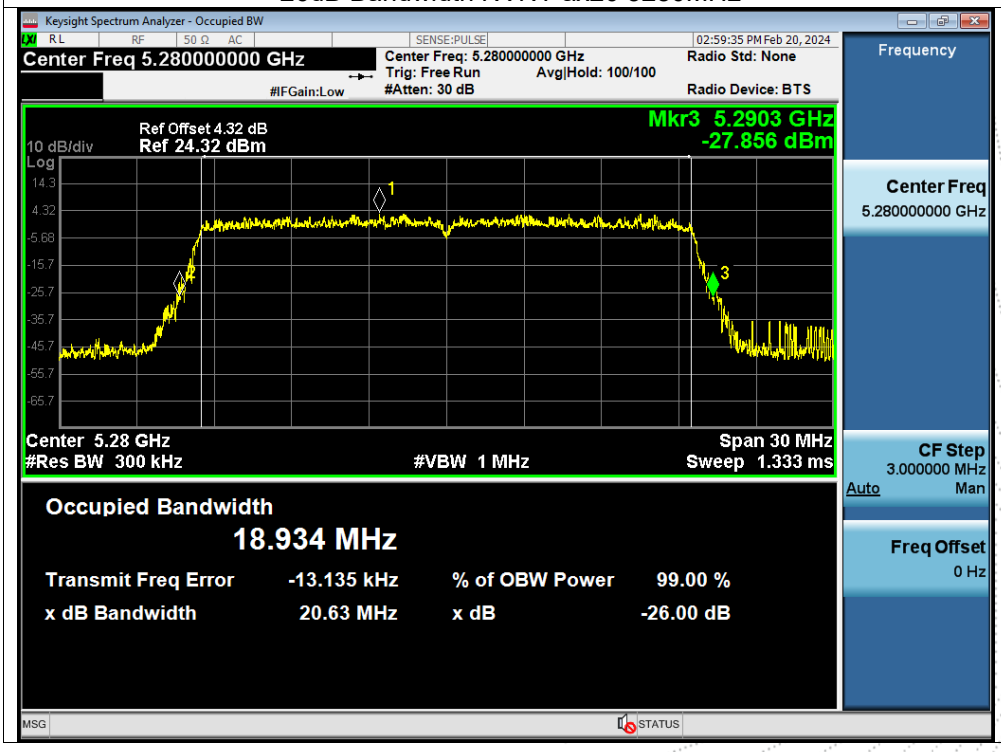
-26dB Bandwidth NVNT ac80 5290MHz



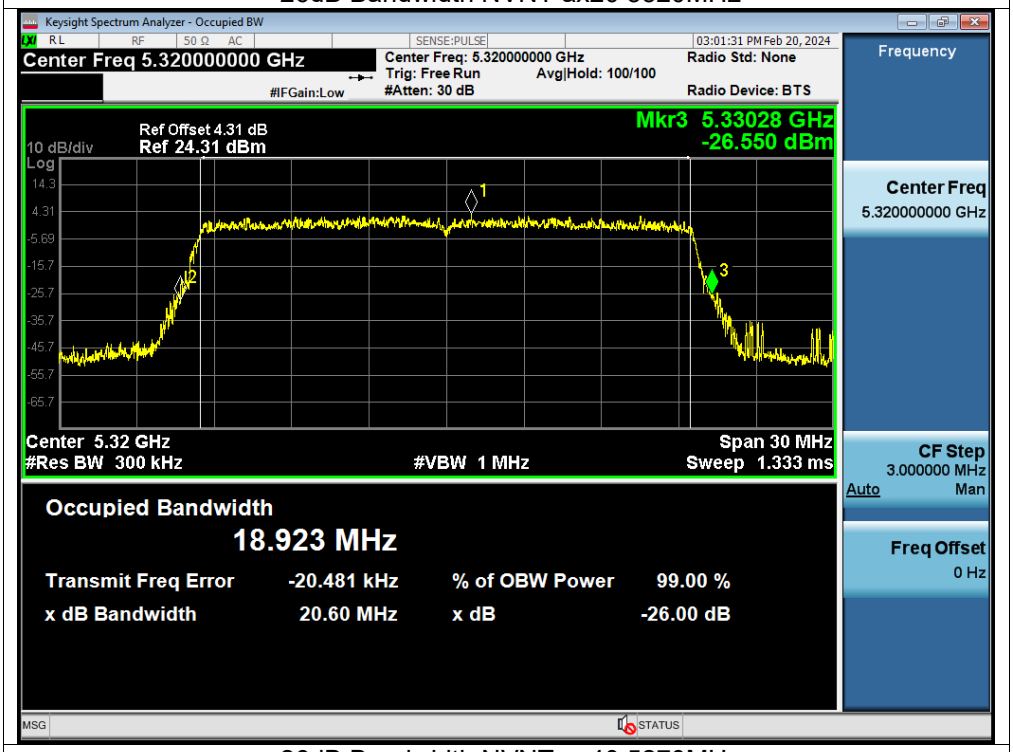
-26dB Bandwidth NVNT ax20 5260MHz



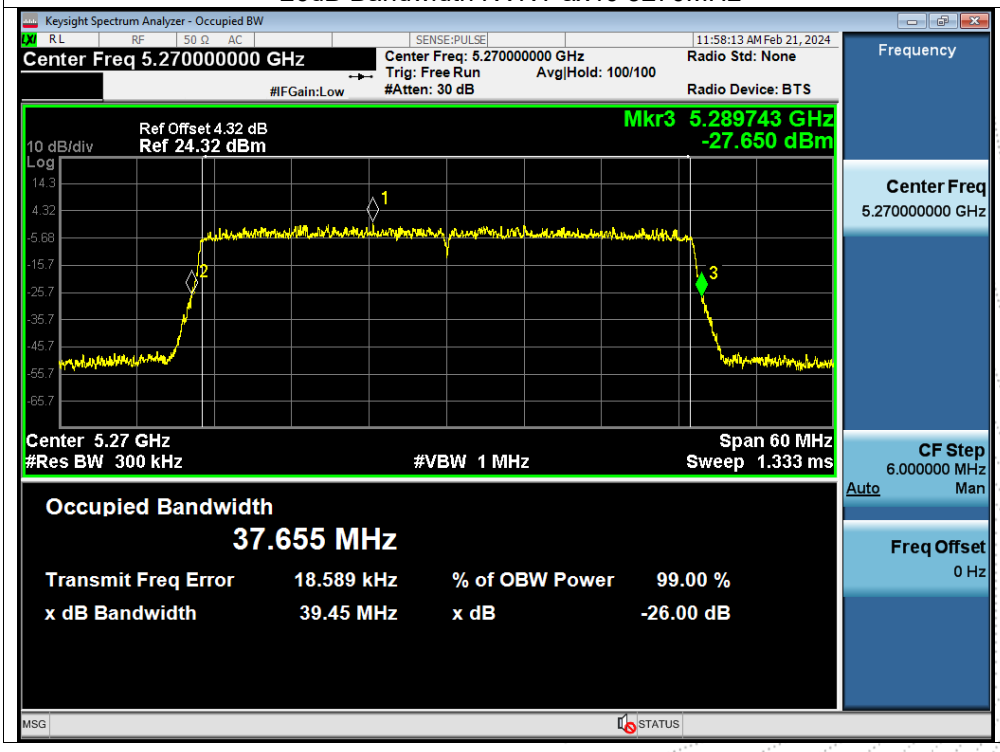
-26dB Bandwidth NVNT ax20 5280MHz



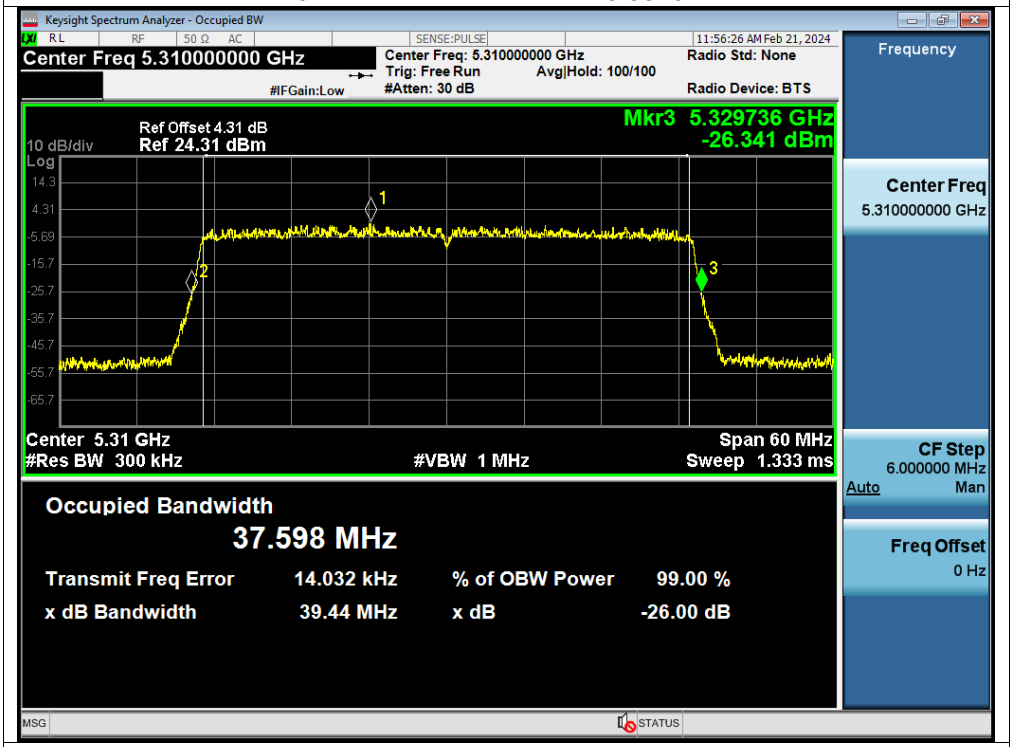
-26dB Bandwidth NVNT ax20 5320MHz



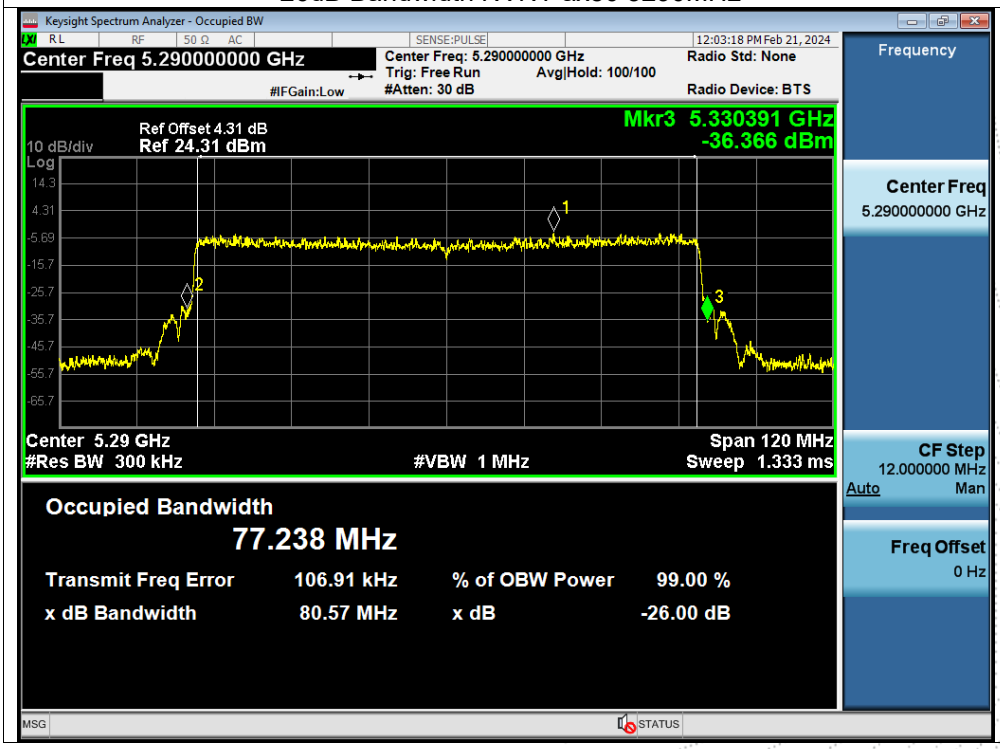
-26dB Bandwidth NVNT ax40 5270MHz



-26dB Bandwidth NVNT ax40 5310MHz



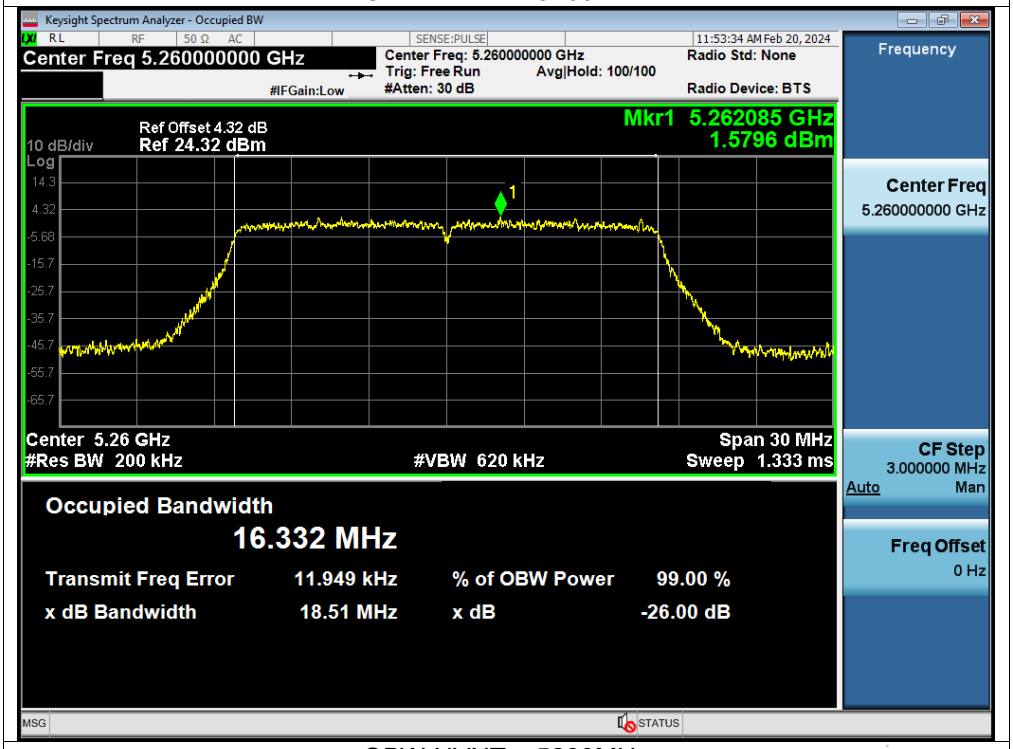
-26dB Bandwidth NVNT ax80 5290MHz



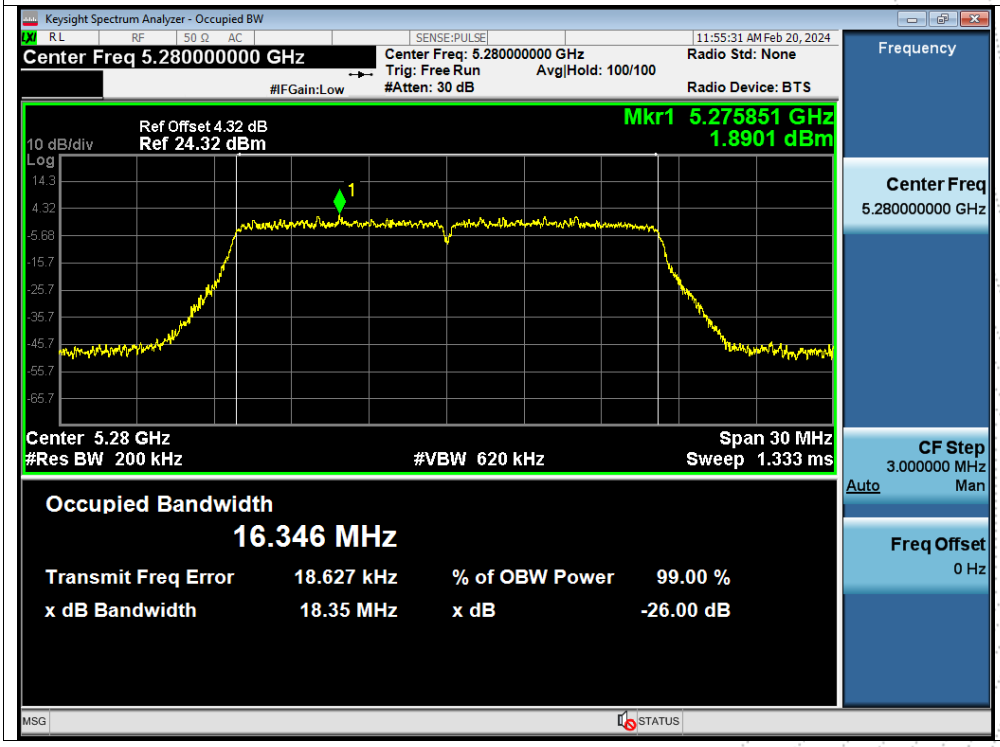
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

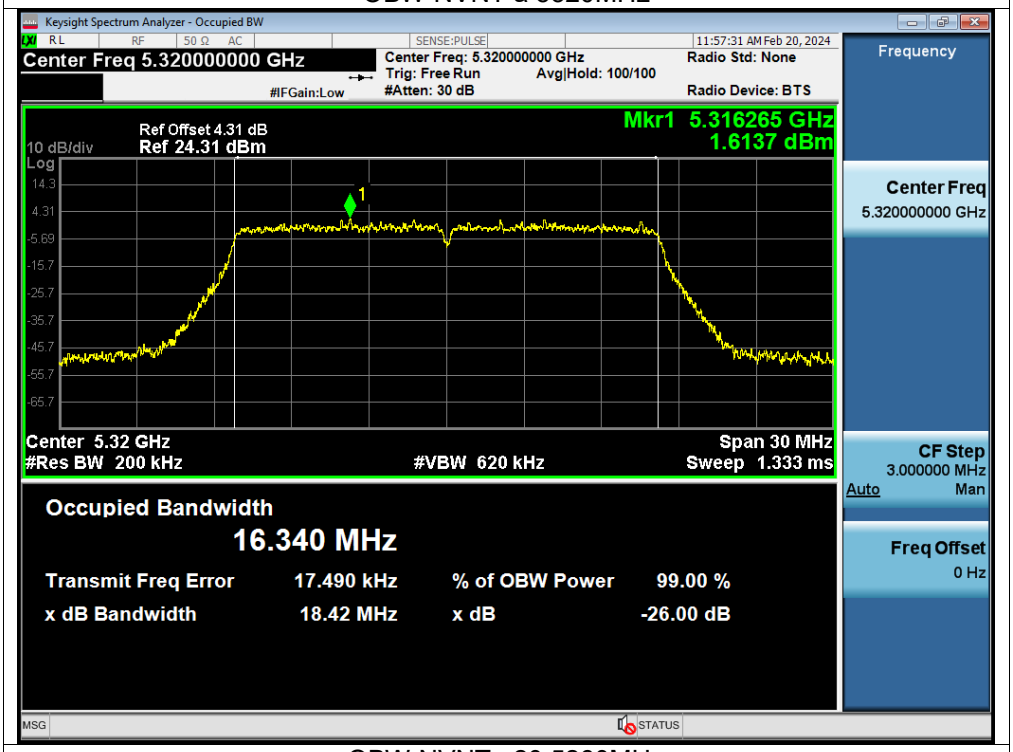
OBW NVNT a 5260MHz



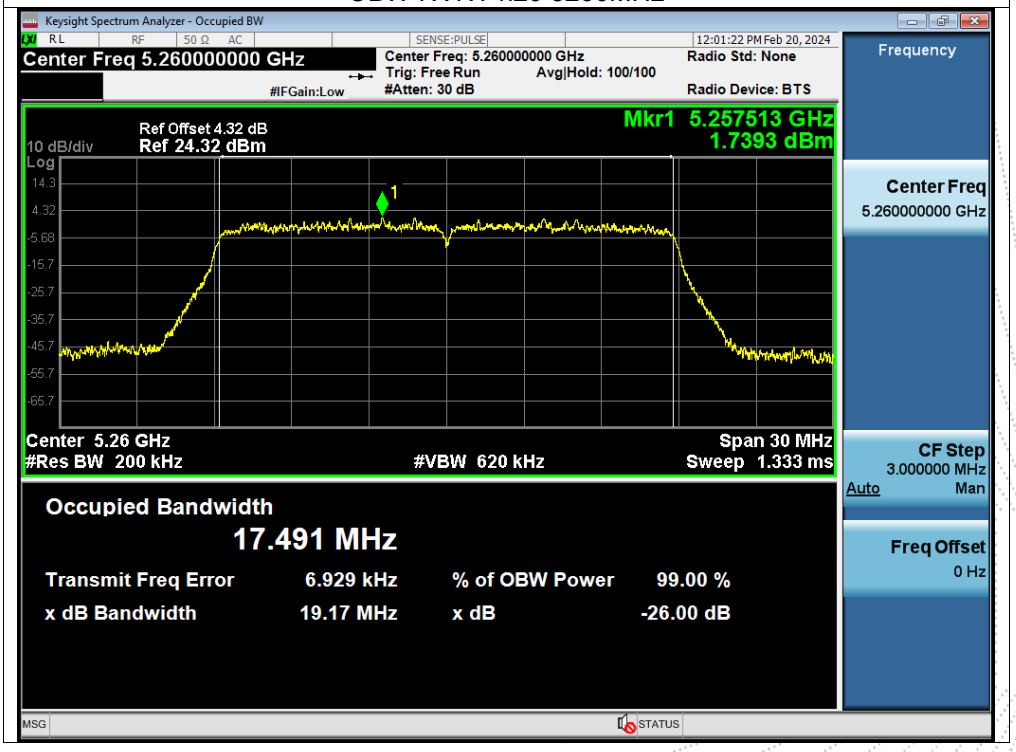
OBW NVNT a 5280MHz



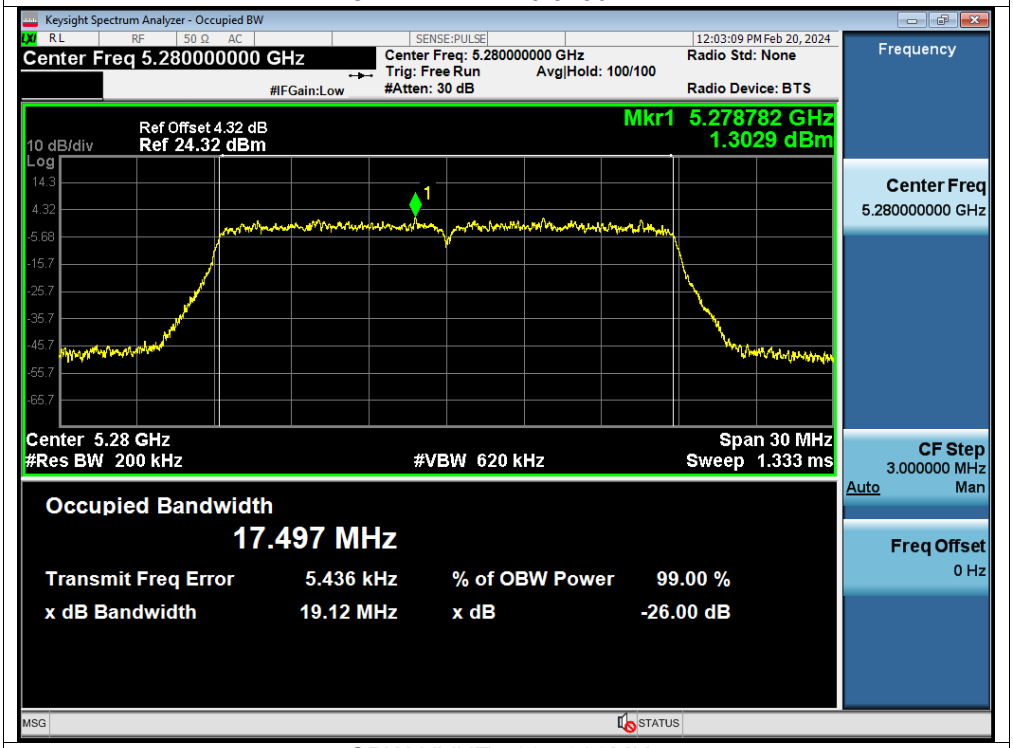
OBW NVNT a 5320MHz



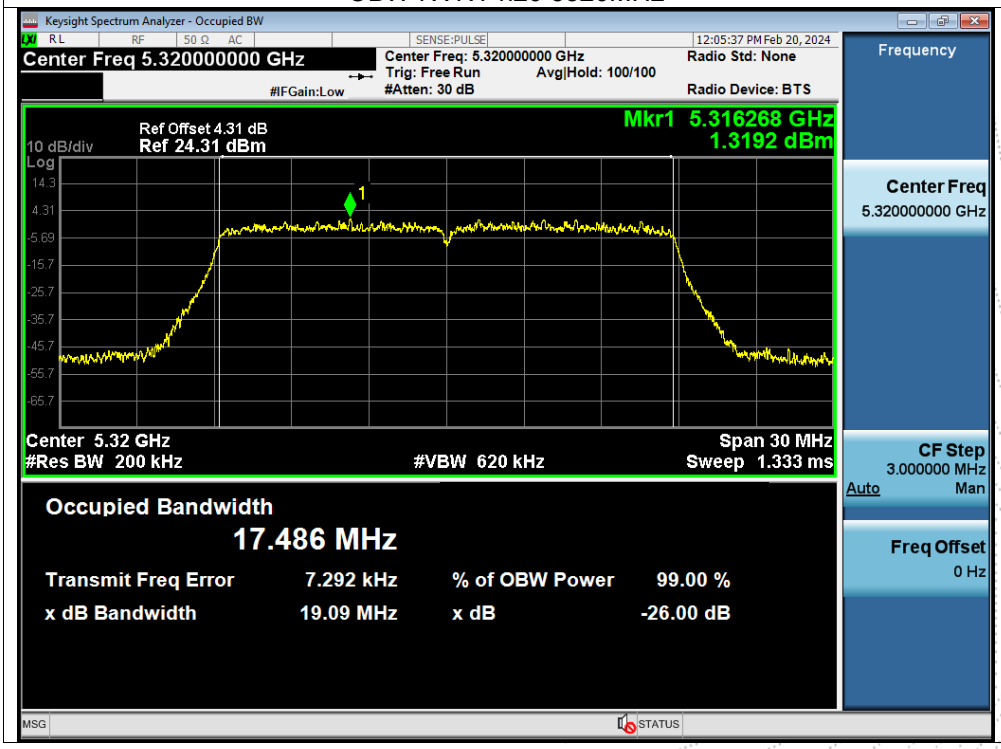
OBW NVNT n20 5260MHz



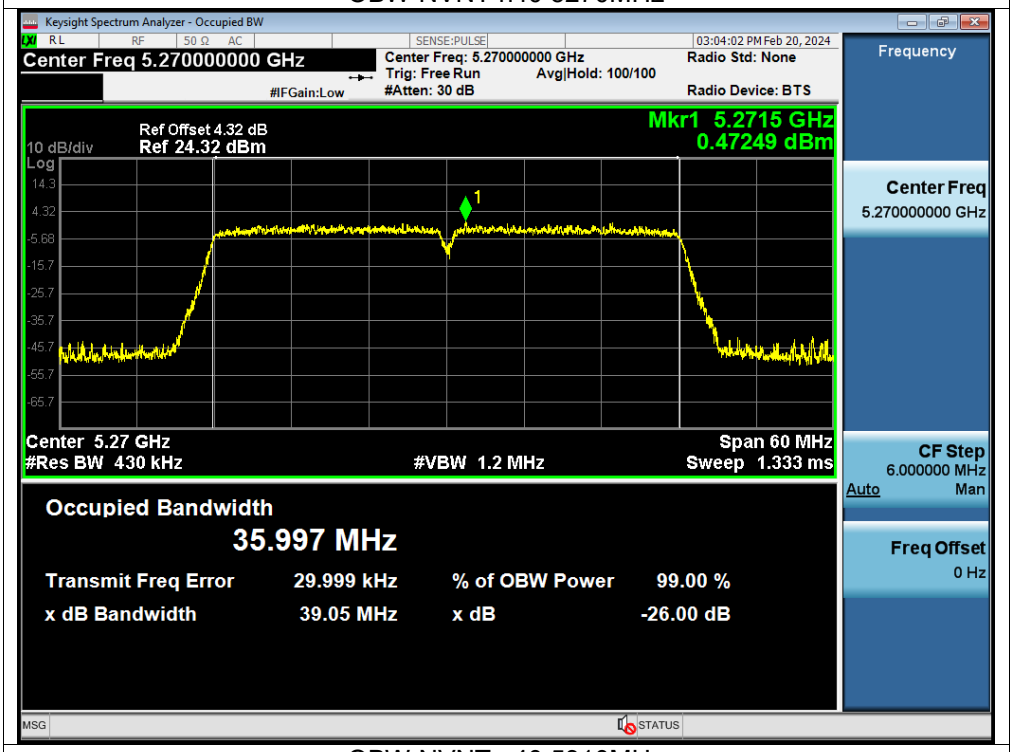
OBW NVNT n20 5280MHz



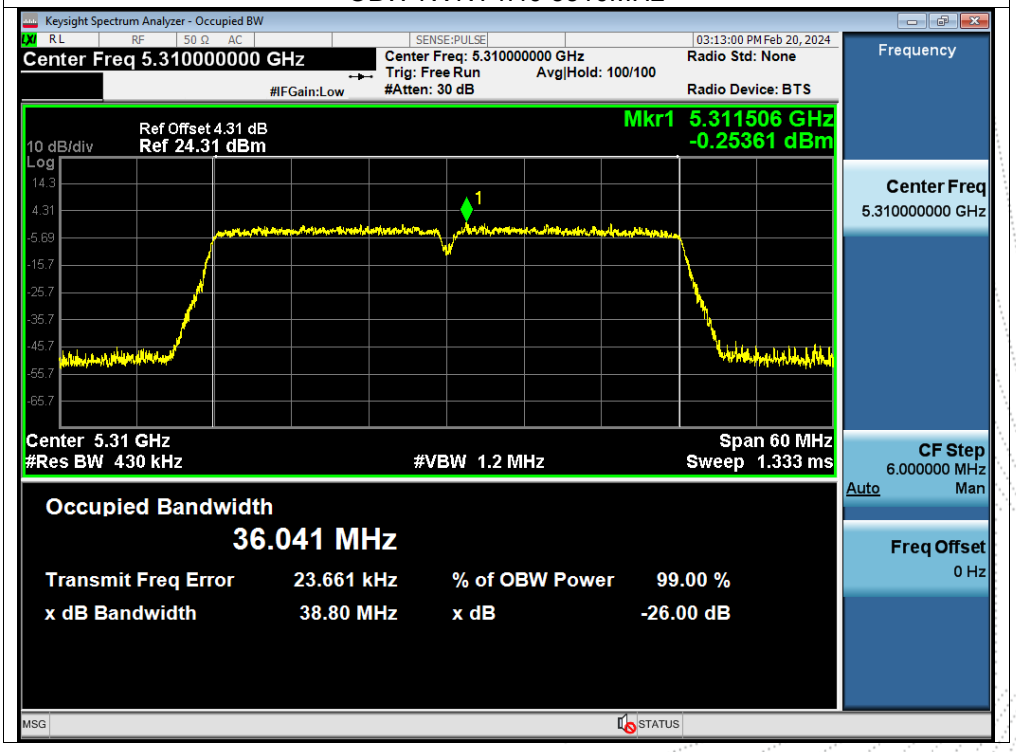
OBW NVNT n20 5320MHz



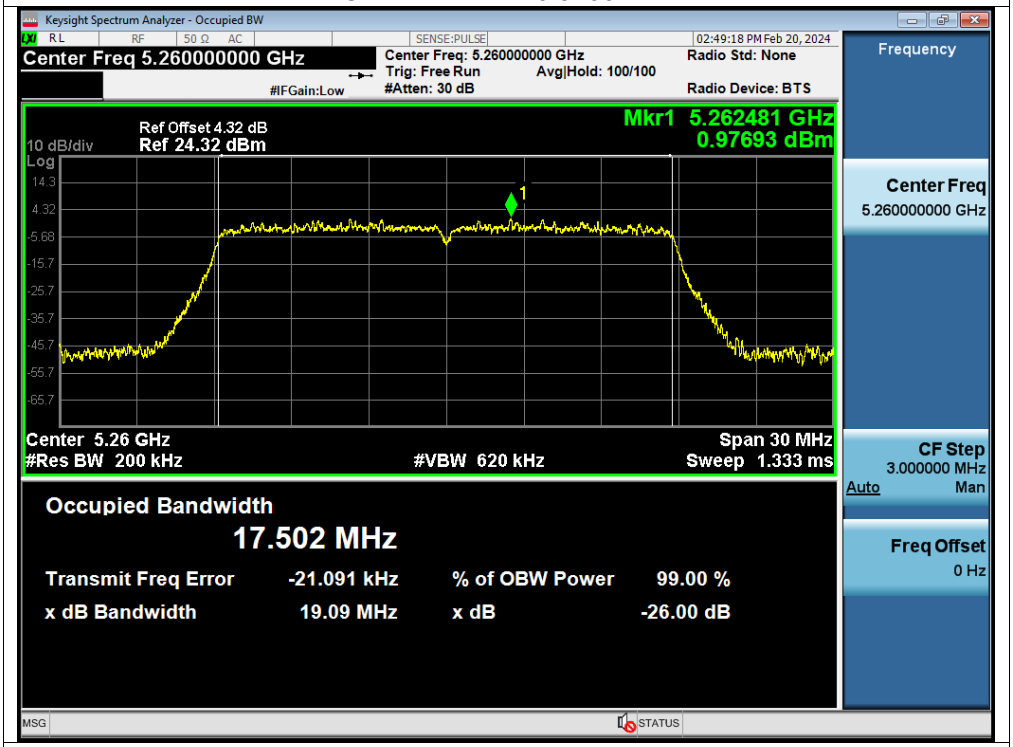
OBW NVNT n40 5270MHz



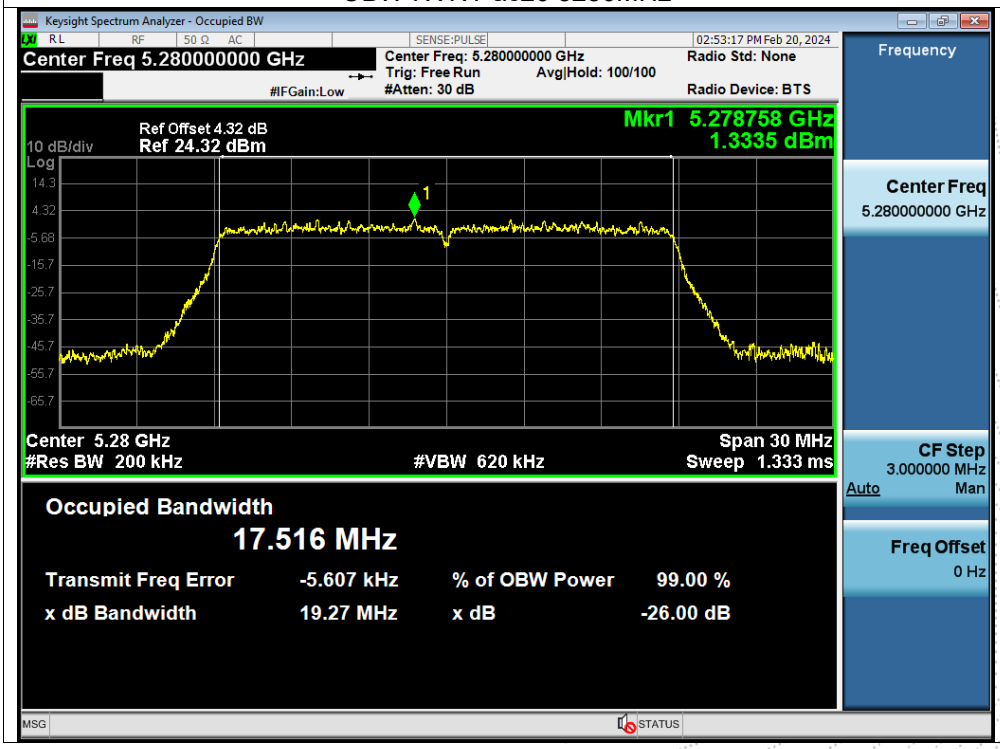
OBW NVNT n40 5310MHz



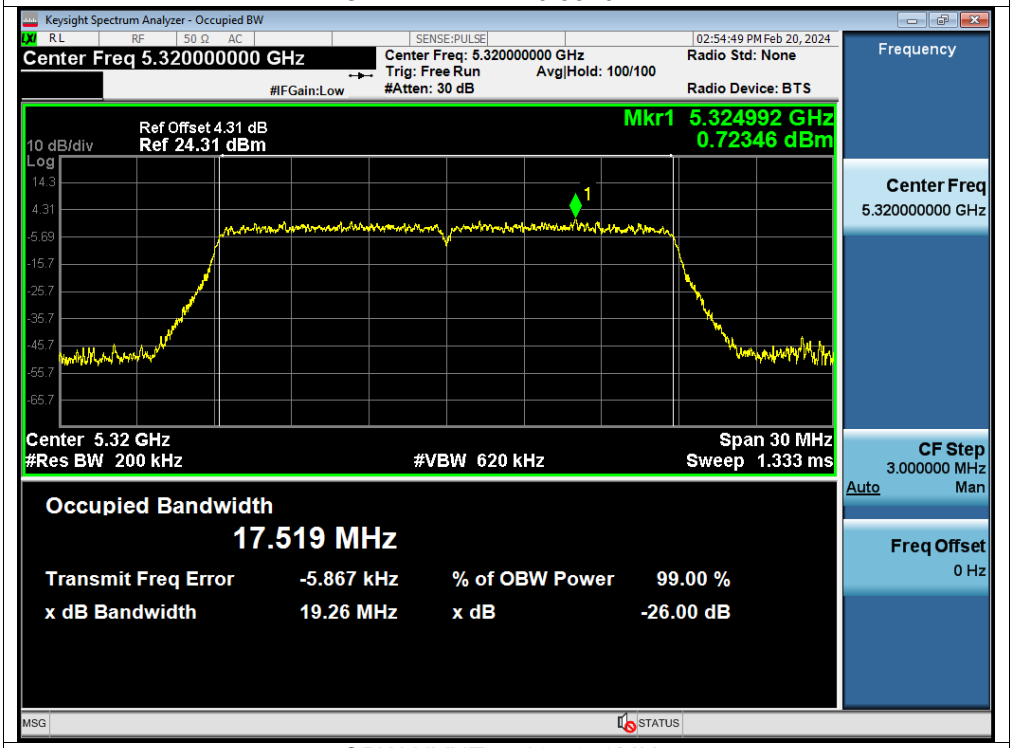
OBW NVNT ac20 5260MHz



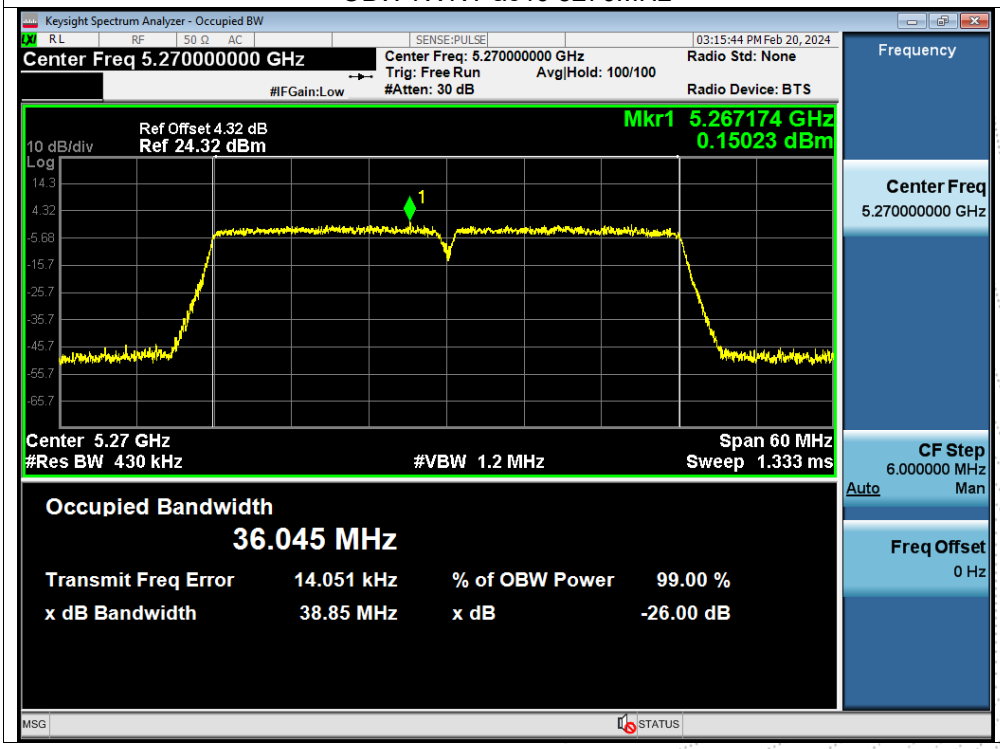
OBW NVNT ac20 5280MHz



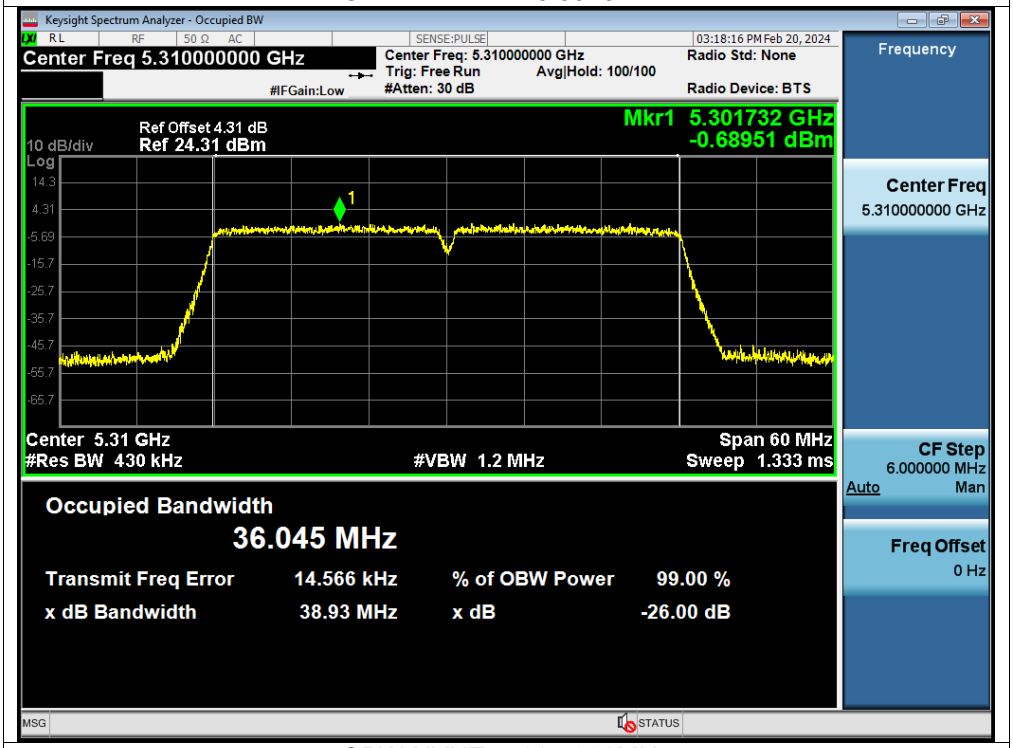
OBW NVNT ac20 5320MHz



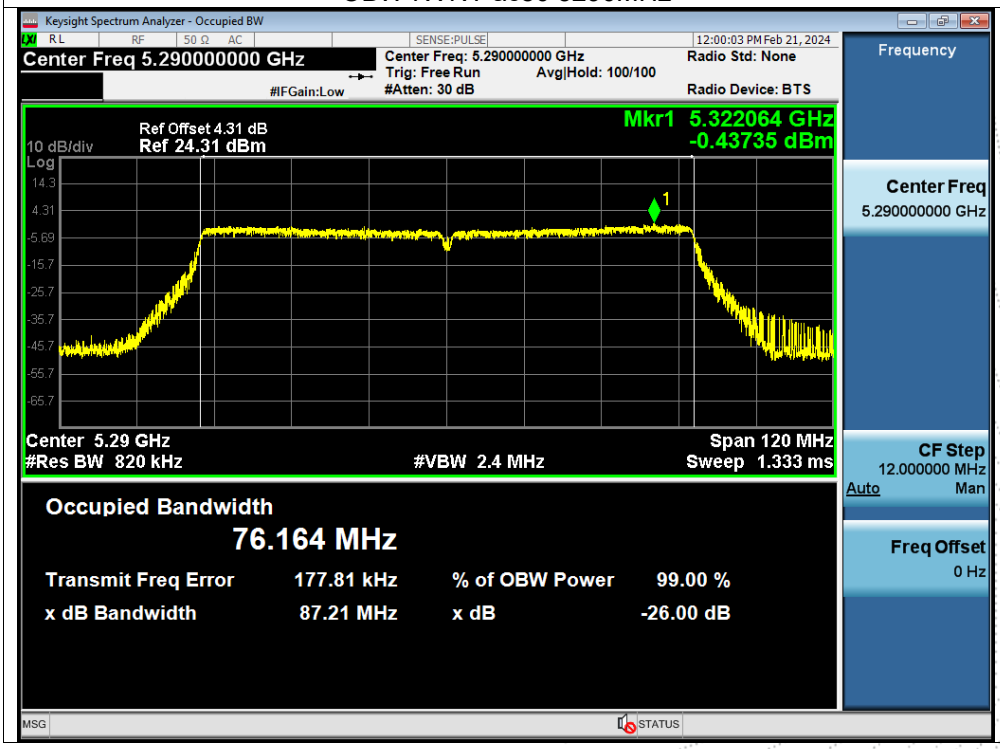
OBW NVNT ac40 5270MHz



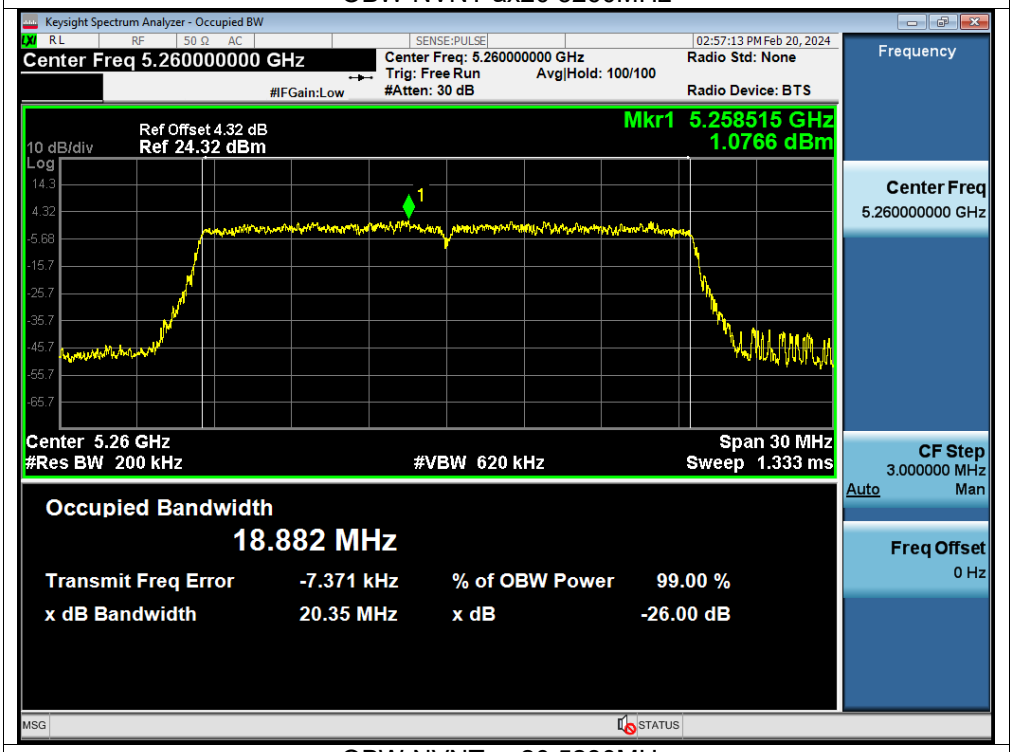
OBW NVNT ac40 5310MHz



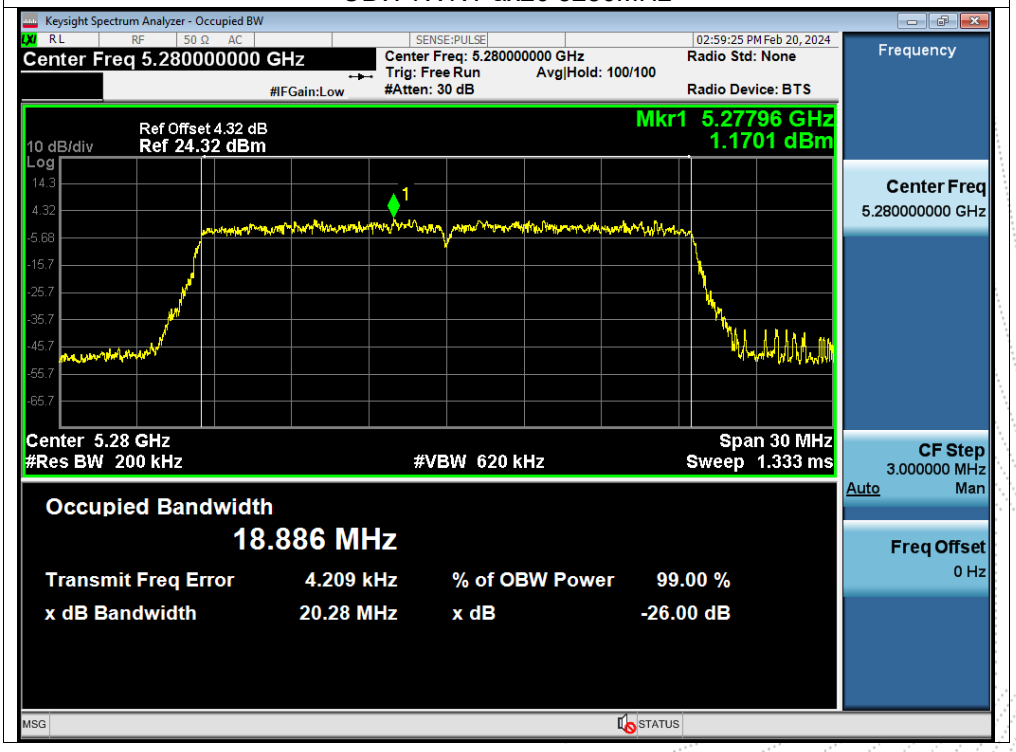
OBW NVNT ac80 5290MHz



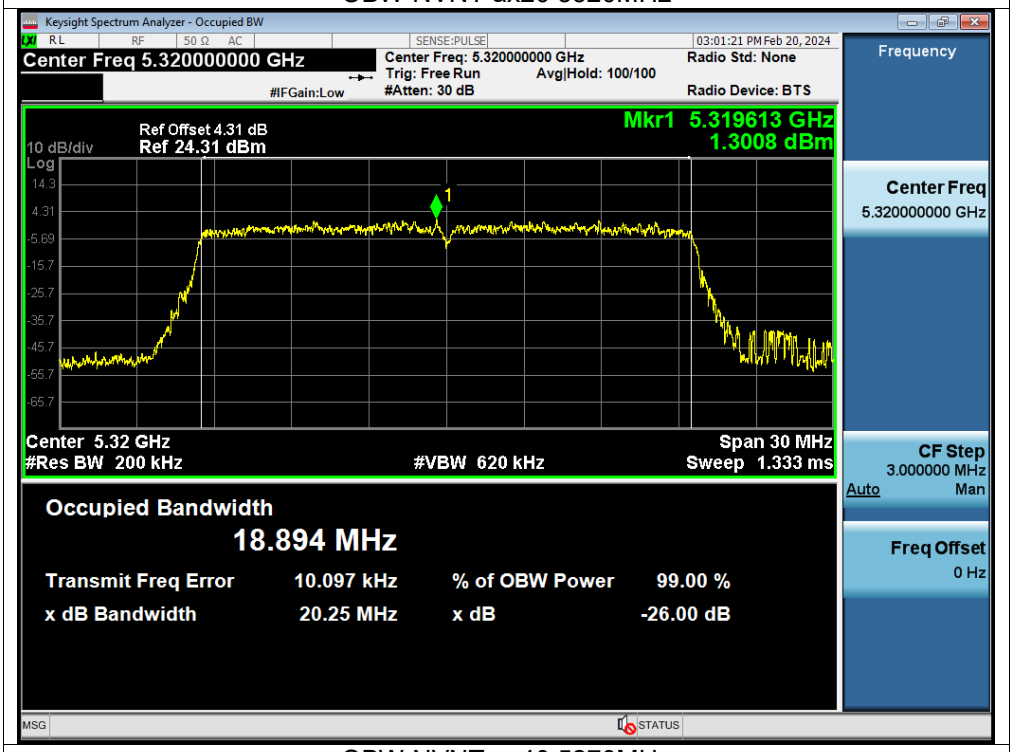
OBW NVNT ax20 5260MHz



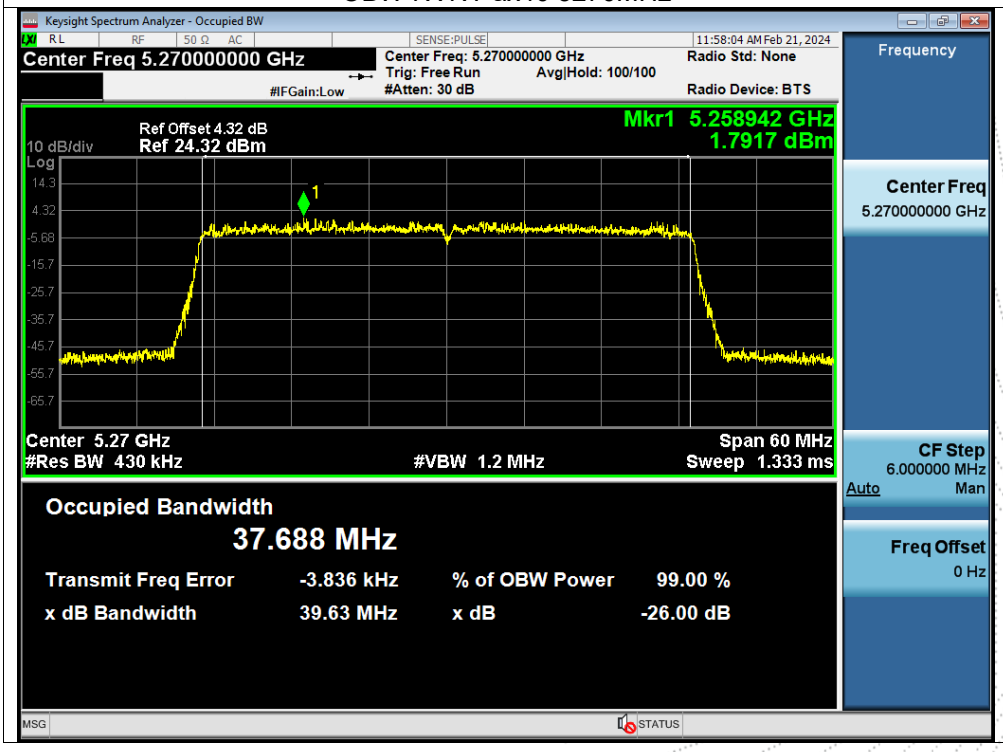
OBW NVNT ax20 5280MHz



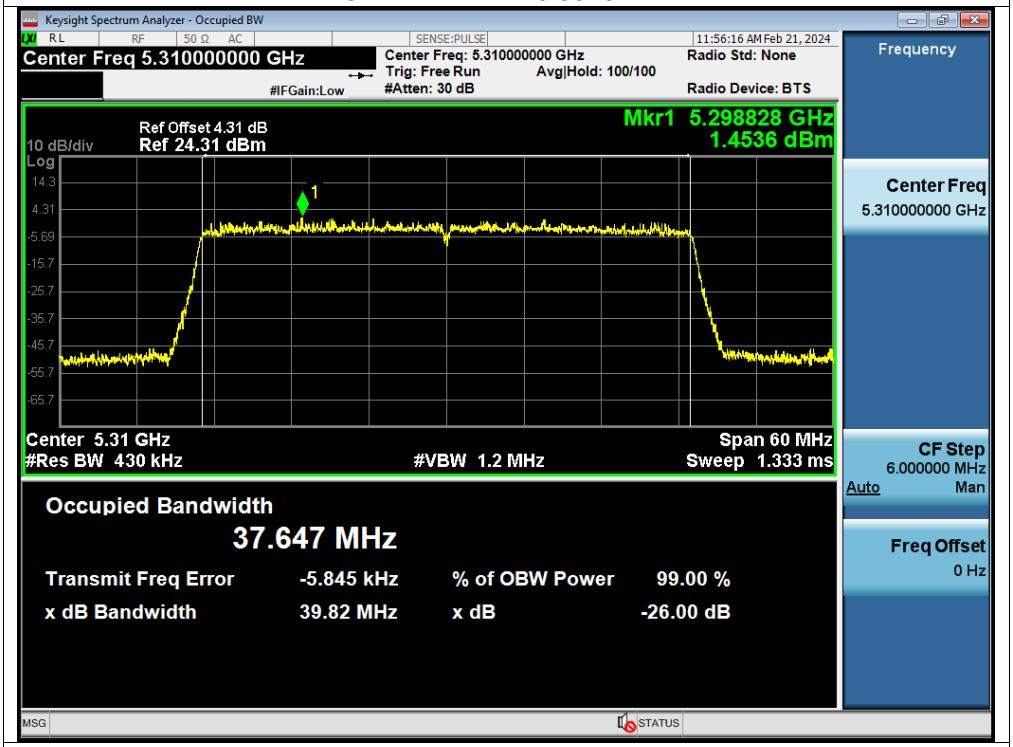
OBW NVNT ax20 5320MHz



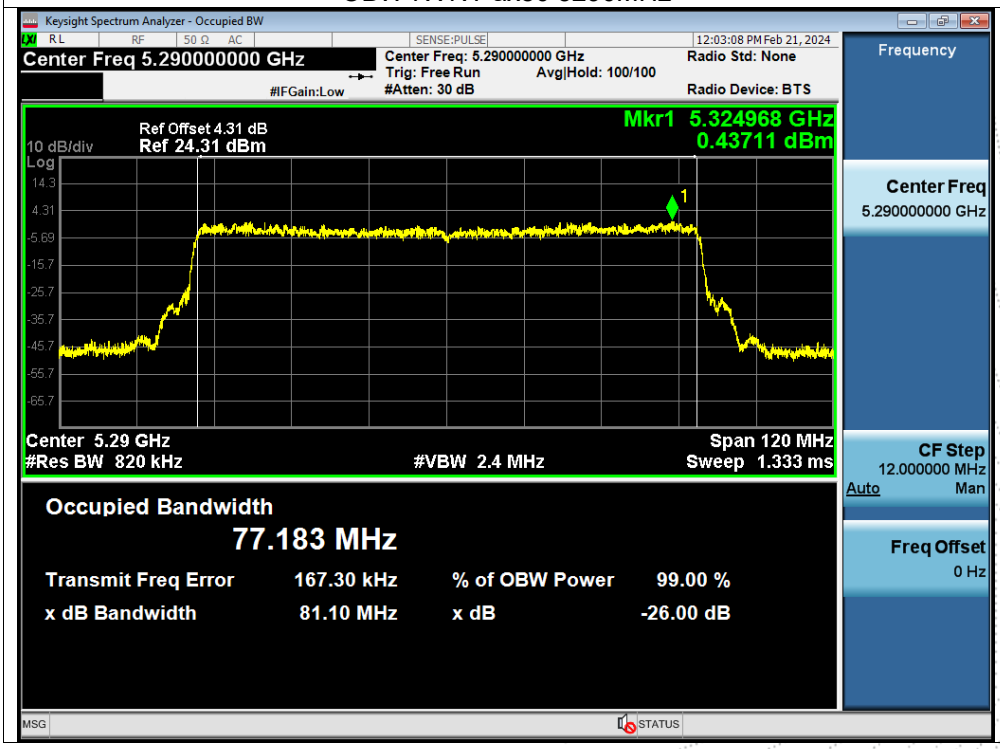
OBW NVNT ax40 5270MHz



OBW NVNT ax40 5310MHz



OBW NVNT ax80 5290MHz



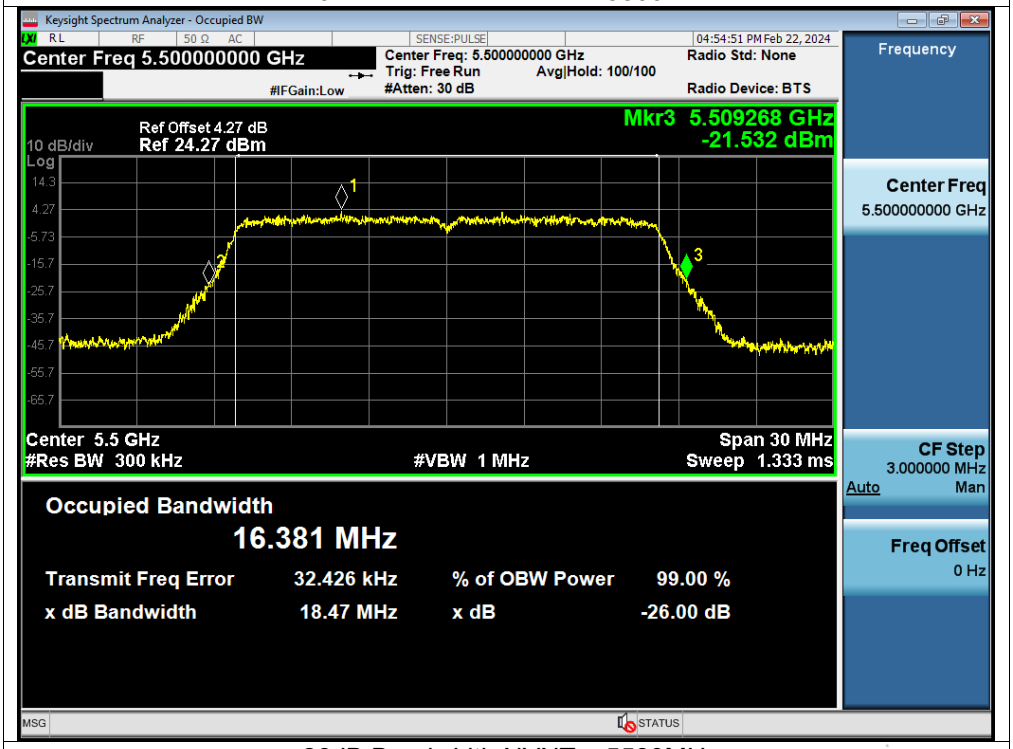
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5500-5700MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		99% OBW (MHz)		Verdict
			Ant A	Ant B	Ant A	Ant B	
NVNT	a	5500	18.471	18.569	16.339	16.333	Pass
NVNT	a	5580	18.638	18.541	16.331	16.333	Pass
NVNT	a	5700	18.606	18.742	16.333	16.339	Pass
NVNT	n20	5500	19.513	19.546	17.493	17.496	Pass
NVNT	n20	5580	19.566	19.485	17.489	17.498	Pass
NVNT	n20	5700	19.595	19.549	17.5	17.499	Pass
NVNT	n40	5510	40.008	40.046	35.999	36.019	Pass
NVNT	n40	5550	39.929	40.076	35.999	36.027	Pass
NVNT	n40	5670	39.917	39.97	36.022	35.978	Pass
NVNT	ac20	5500	19.568	19.579	17.491	17.495	Pass
NVNT	ac20	5580	19.544	19.522	17.501	17.5	Pass
NVNT	ac20	5700	19.544	19.451	17.508	17.519	Pass
NVNT	ac40	5510	39.787	39.805	36.05	36.037	Pass
NVNT	ac40	5550	39.647	39.532	36.068	36.035	Pass
NVNT	ac40	5670	39.62	39.756	36.047	36.036	Pass
NVNT	ac80	5530	**88.034**	87.744	76.185	76.206	Pass
NVNT	ax20	5500	20.491	20.409	18.88	18.872	Pass
NVNT	ax20	5580	20.482	20.506	18.847	18.861	Pass
NVNT	ax20	5700	20.556	20.369	18.885	18.895	Pass
NVNT	ax40	5510	39.408	39.371	37.618	37.657	Pass
NVNT	ax40	5550	39.369	39.585	37.625	37.651	Pass
NVNT	ax40	5670	39.311	39.482	37.645	37.619	Pass
NVNT	ax80	5530	80.858	79.651	77.167	**77.296**	Pass

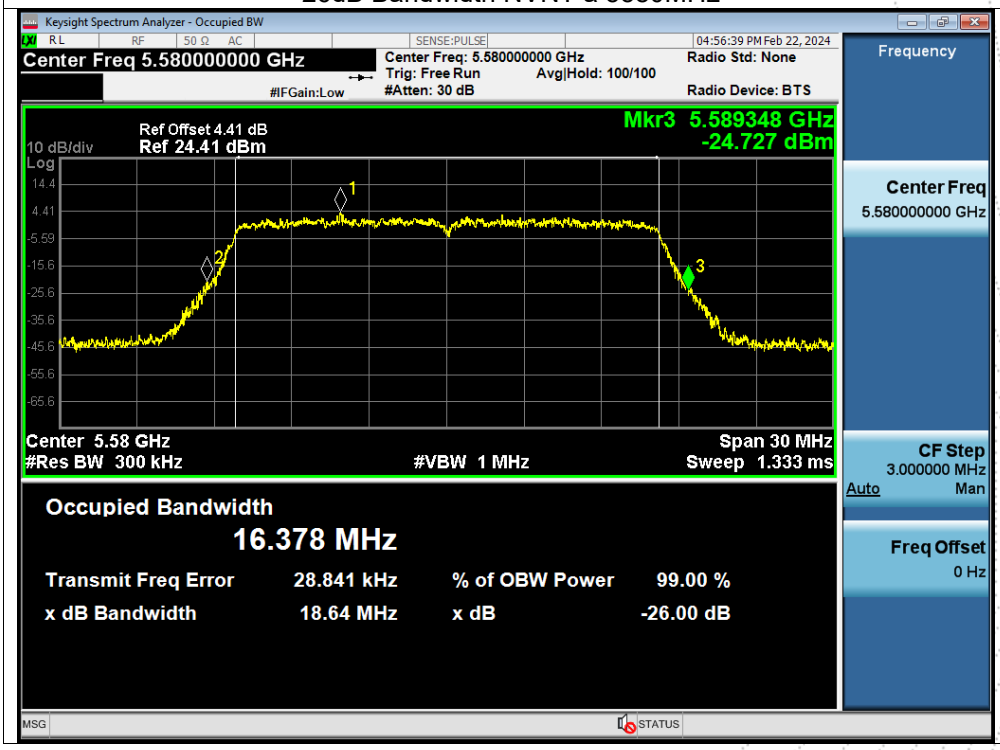
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

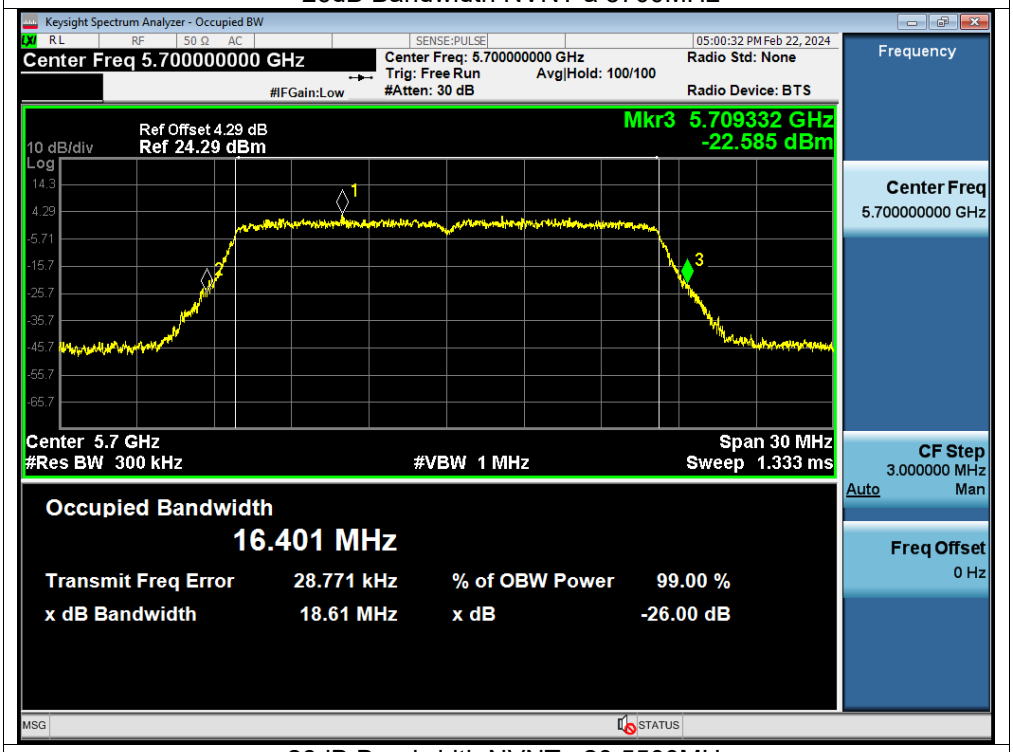
-26dB Bandwidth NVNT a 5500MHz



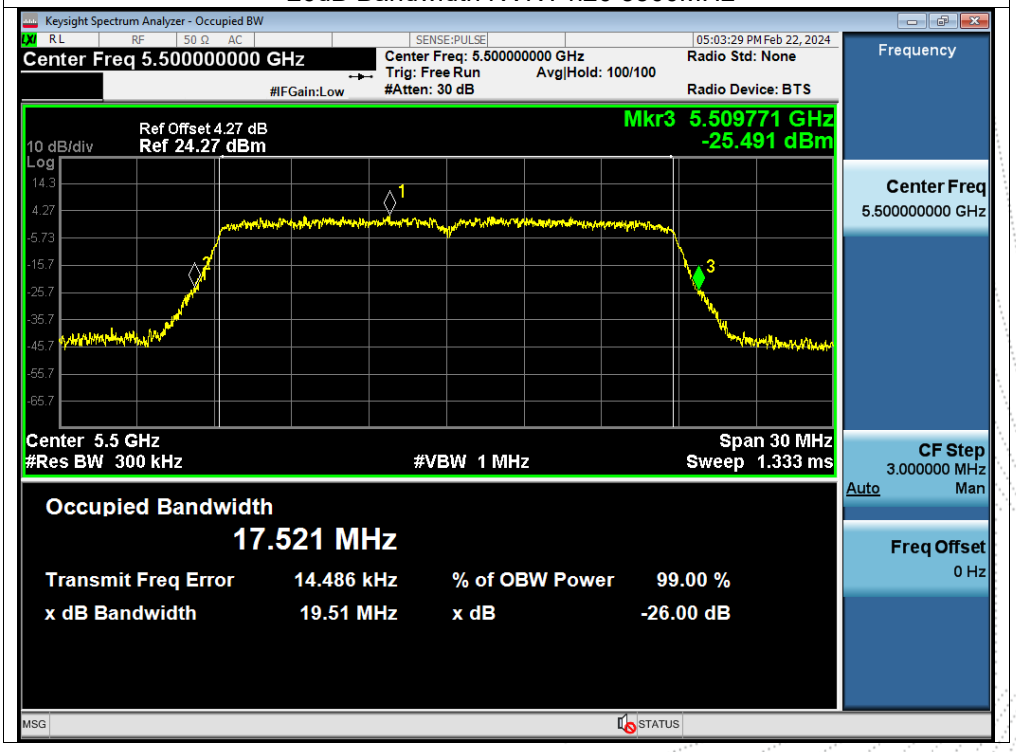
-26dB Bandwidth NVNT a 5580MHz



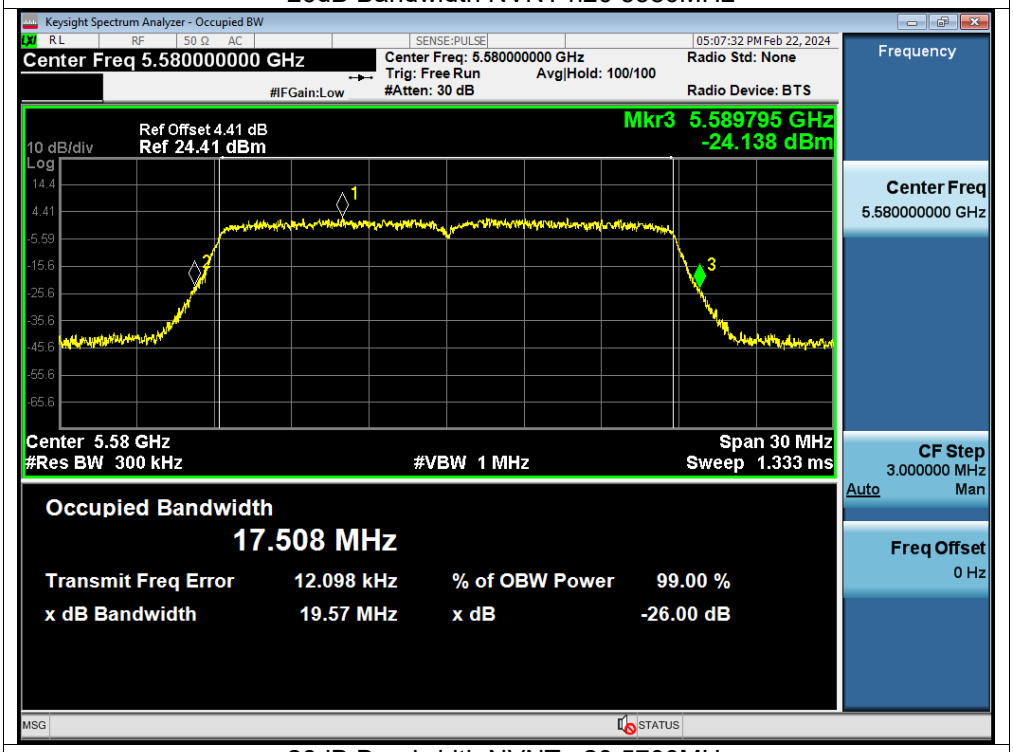
-26dB Bandwidth NVNT a 5700MHz



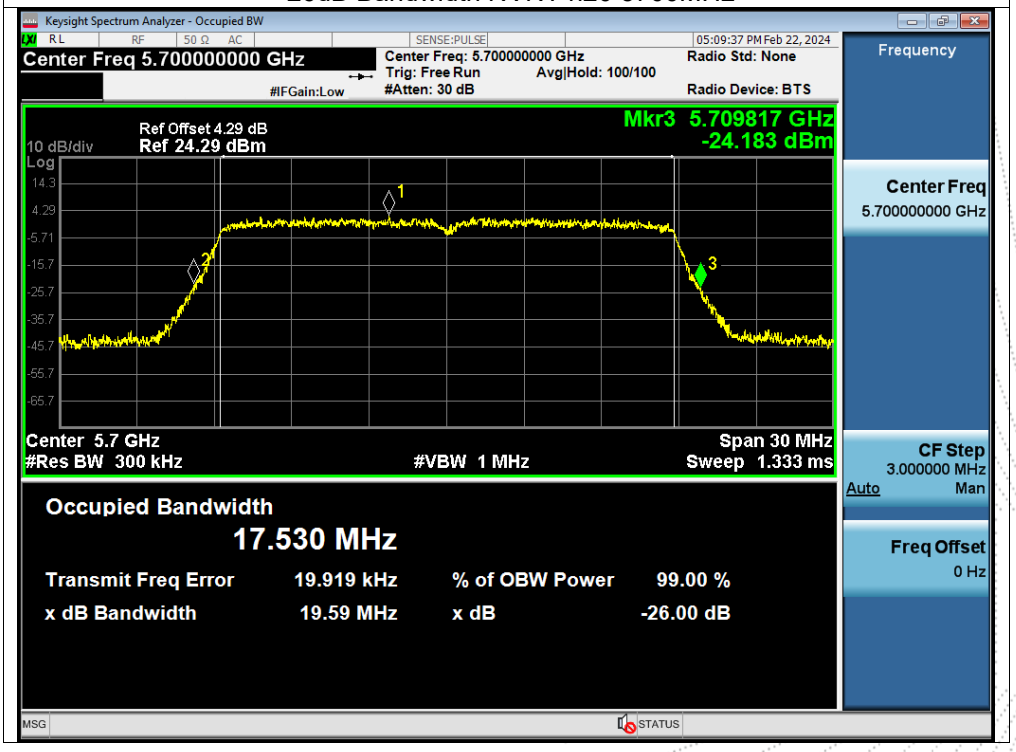
-26dB Bandwidth NVNT n20 5500MHz



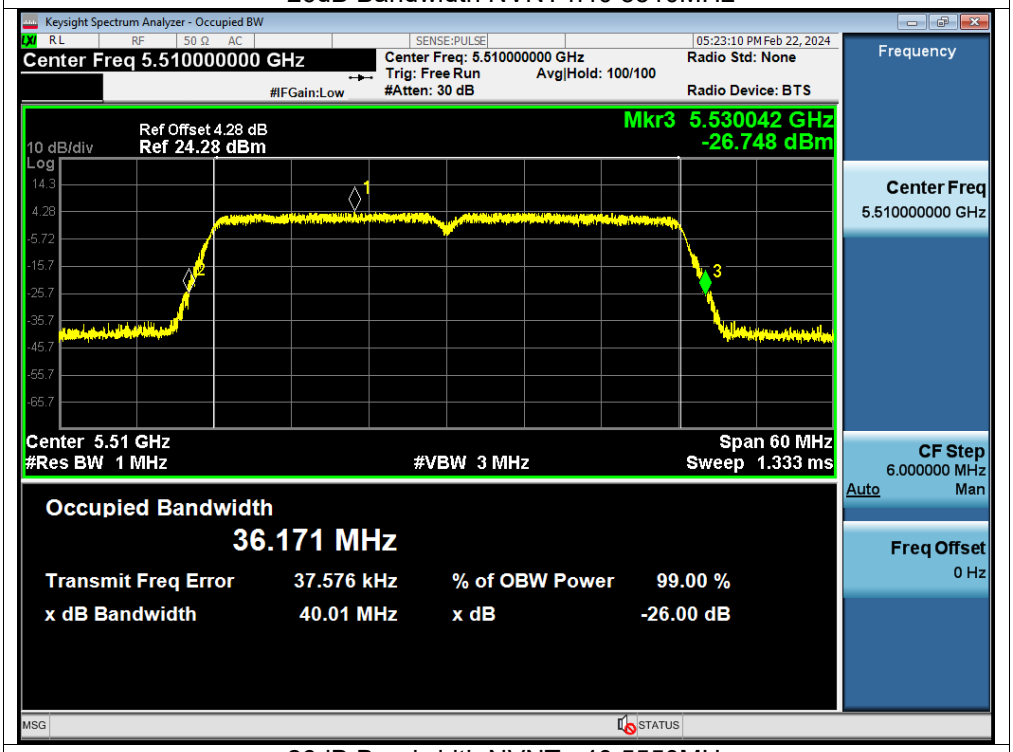
-26dB Bandwidth NVNT n20 5580MHz



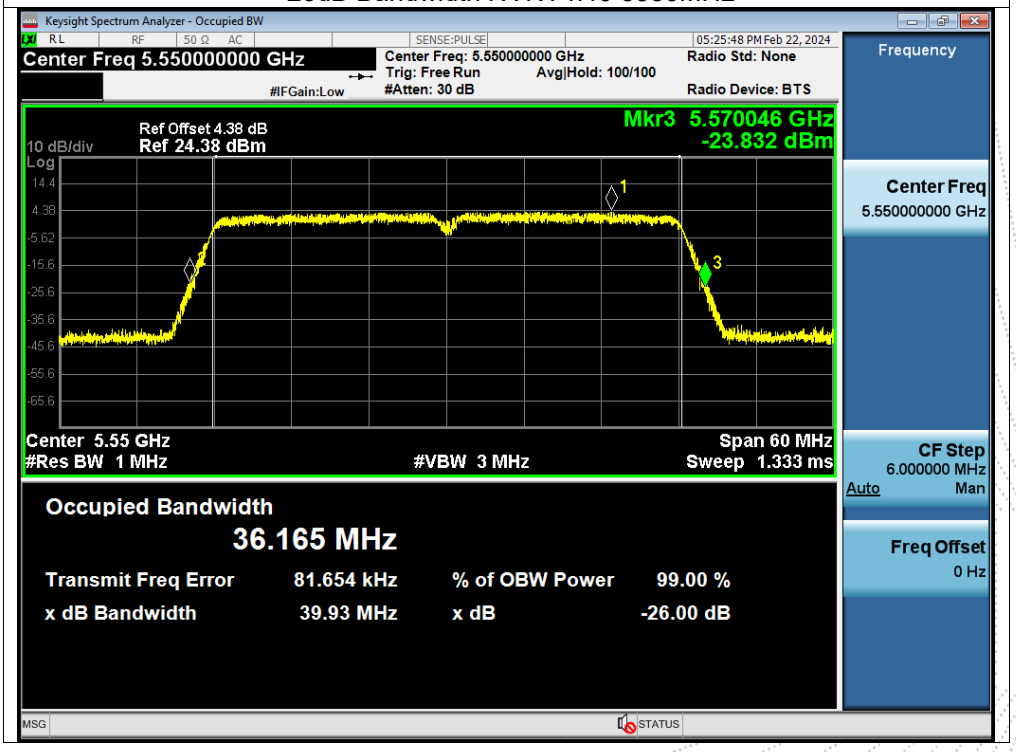
-26dB Bandwidth NVNT n20 5700MHz



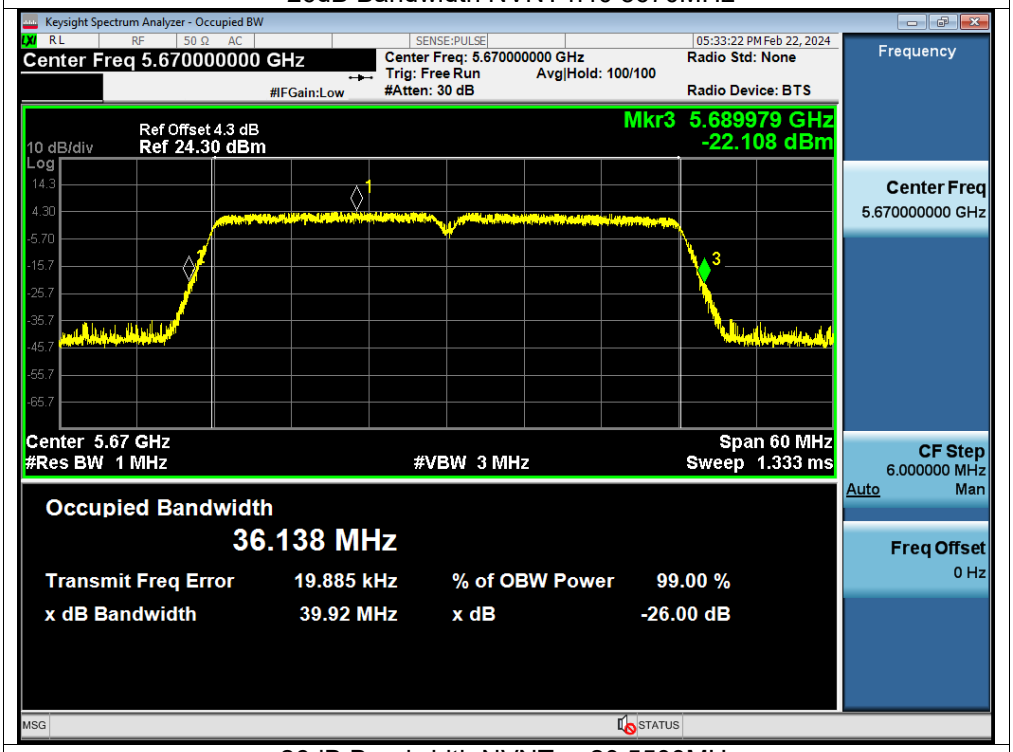
-26dB Bandwidth NVNT n40 5510MHz



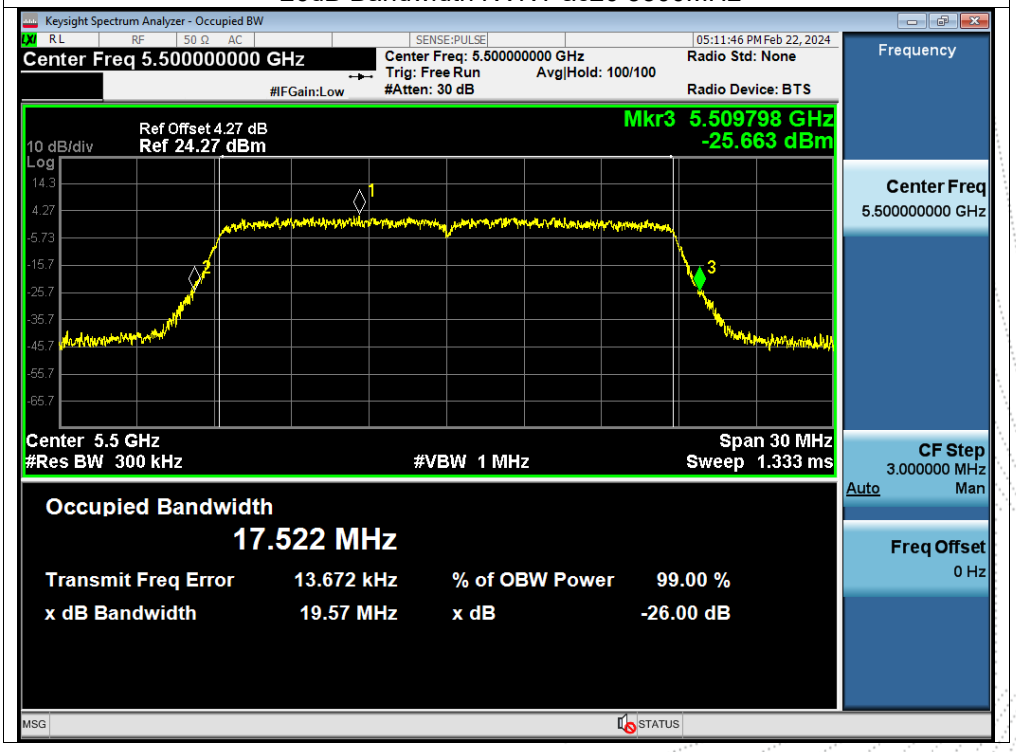
-26dB Bandwidth NVNT n40 5550MHz



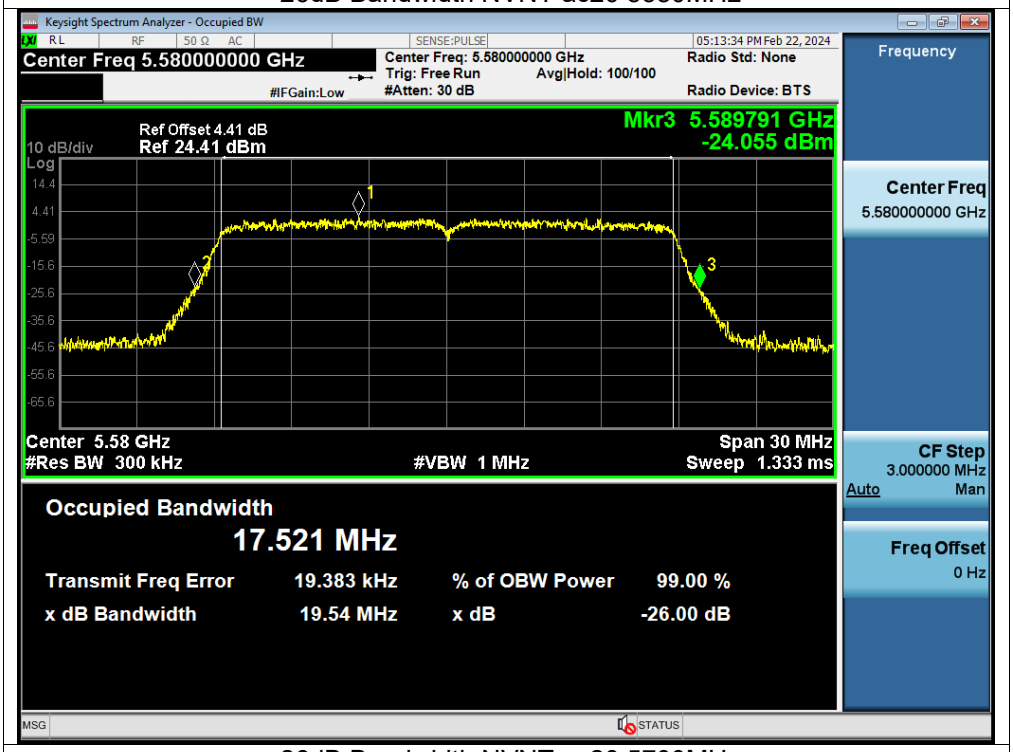
-26dB Bandwidth NVNT n40 5670MHz



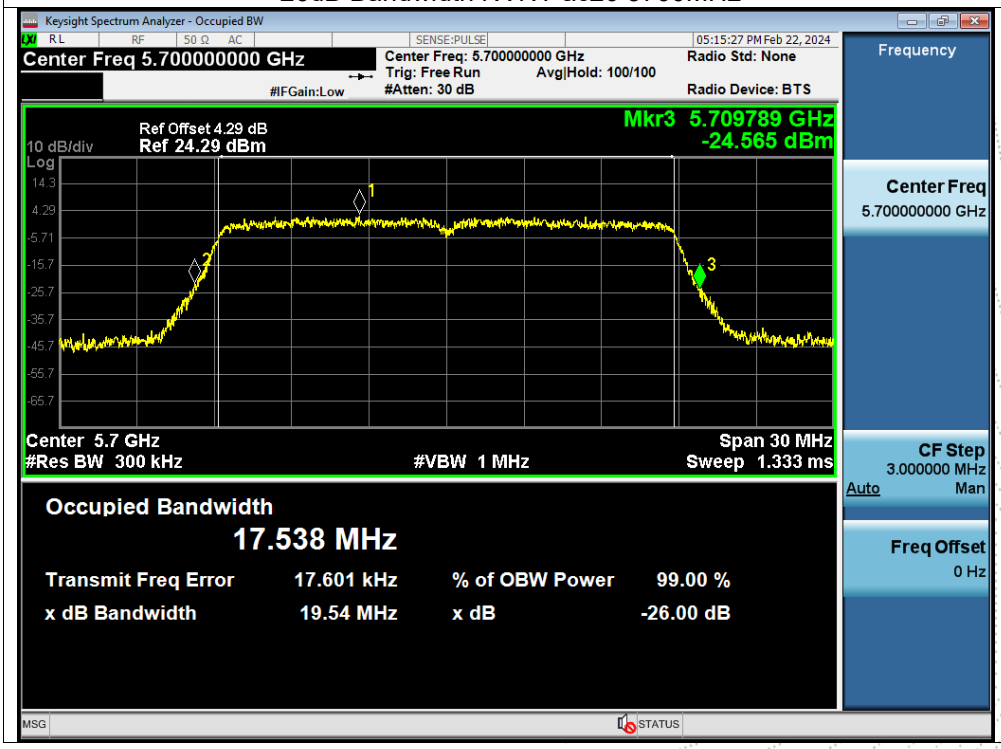
-26dB Bandwidth NVNT ac20 5500MHz



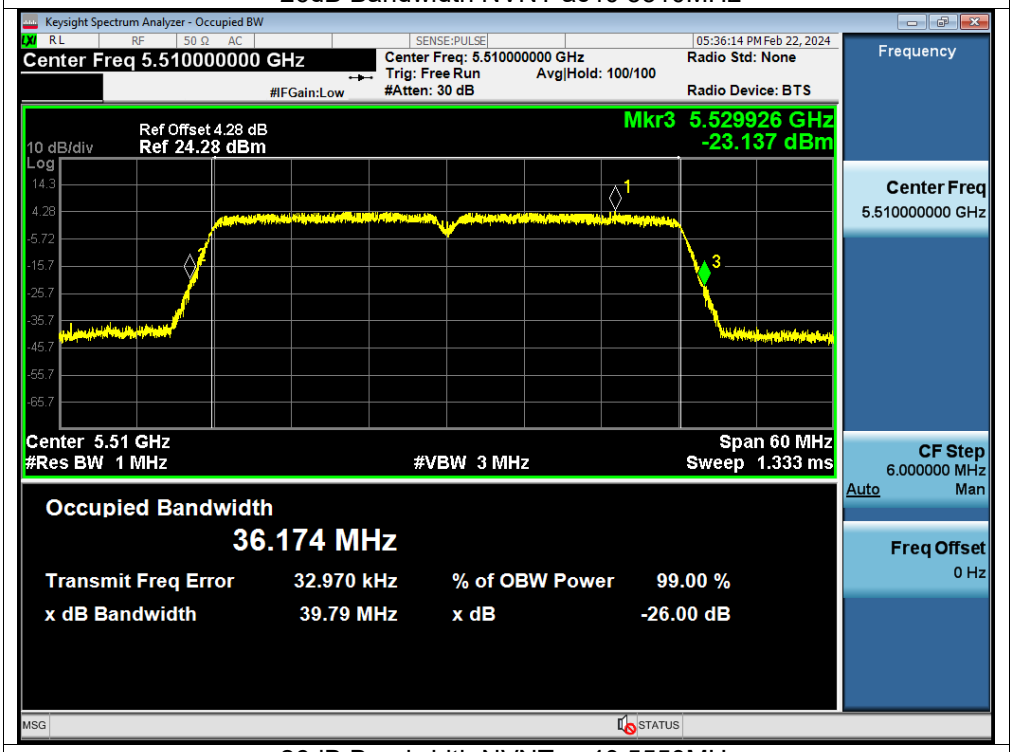
-26dB Bandwidth NVNT ac20 5580MHz



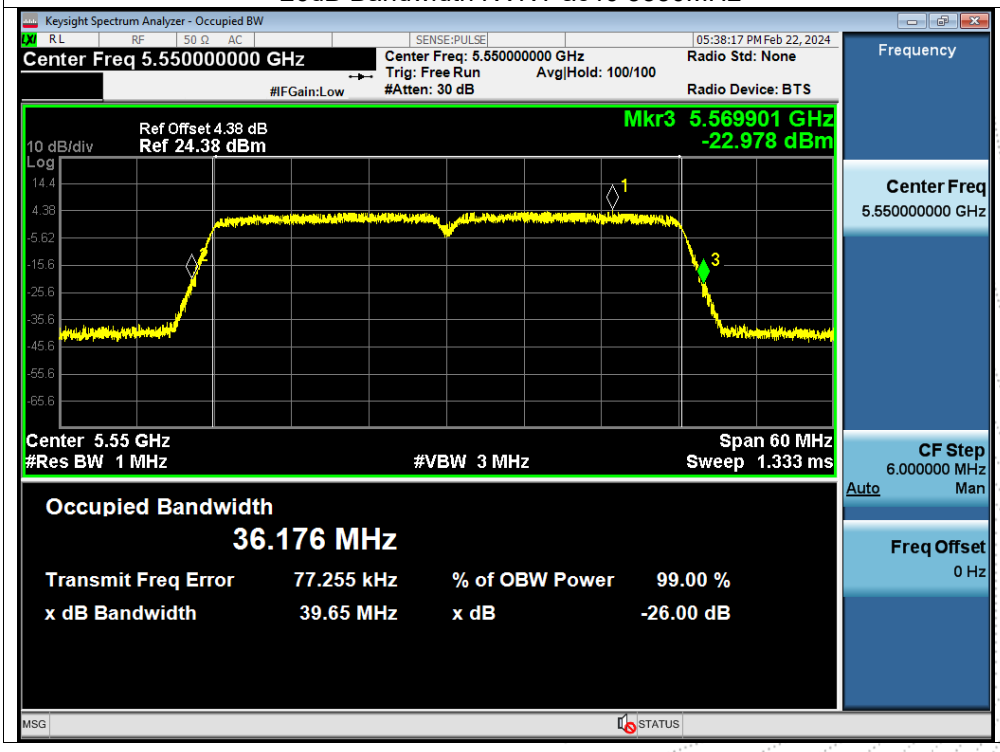
-26dB Bandwidth NVNT ac20 5700MHz



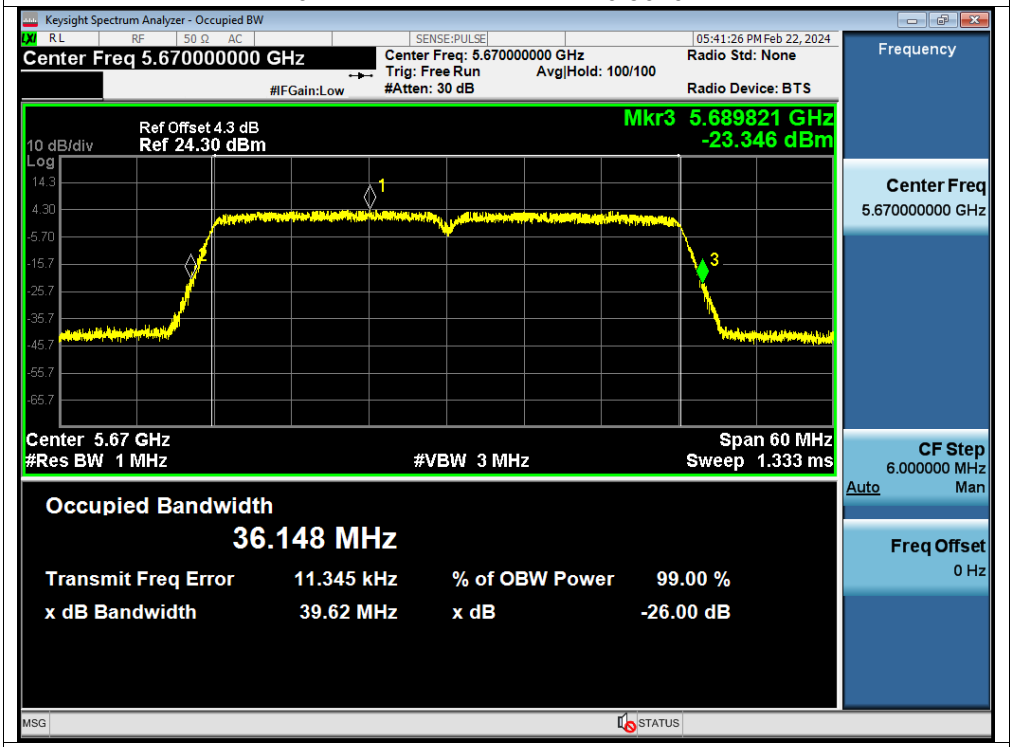
-26dB Bandwidth NVNT ac40 5510MHz



-26dB Bandwidth NVNT ac40 5550MHz



-26dB Bandwidth NVNT ac40 5670MHz



-26dB Bandwidth NVNT ac80 5530MHz