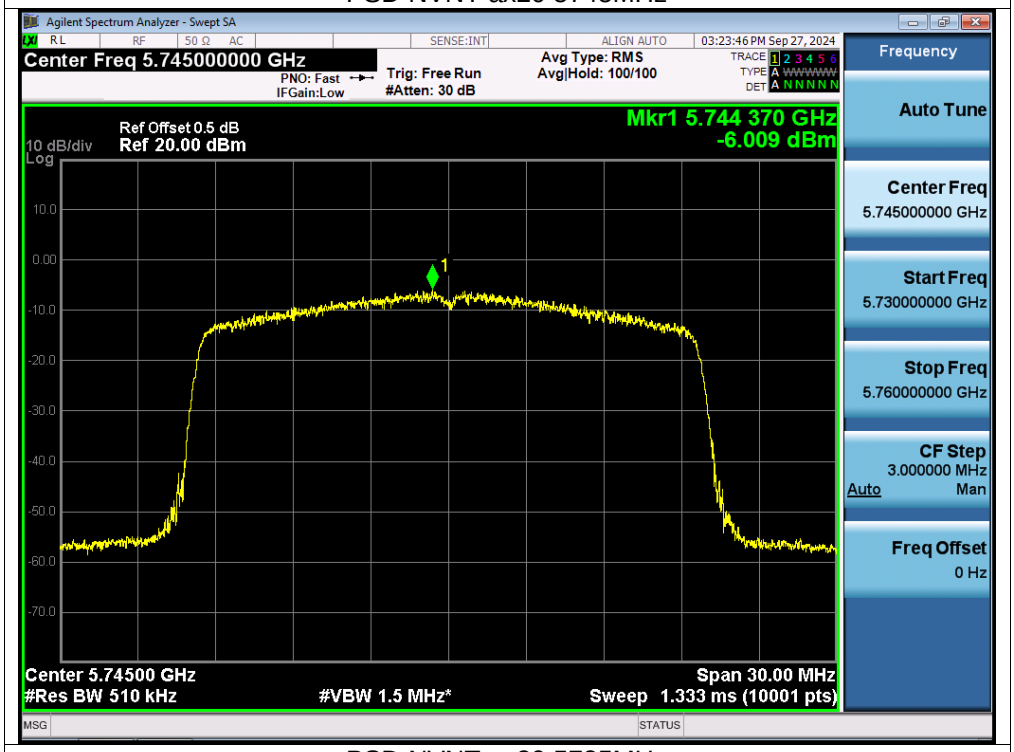
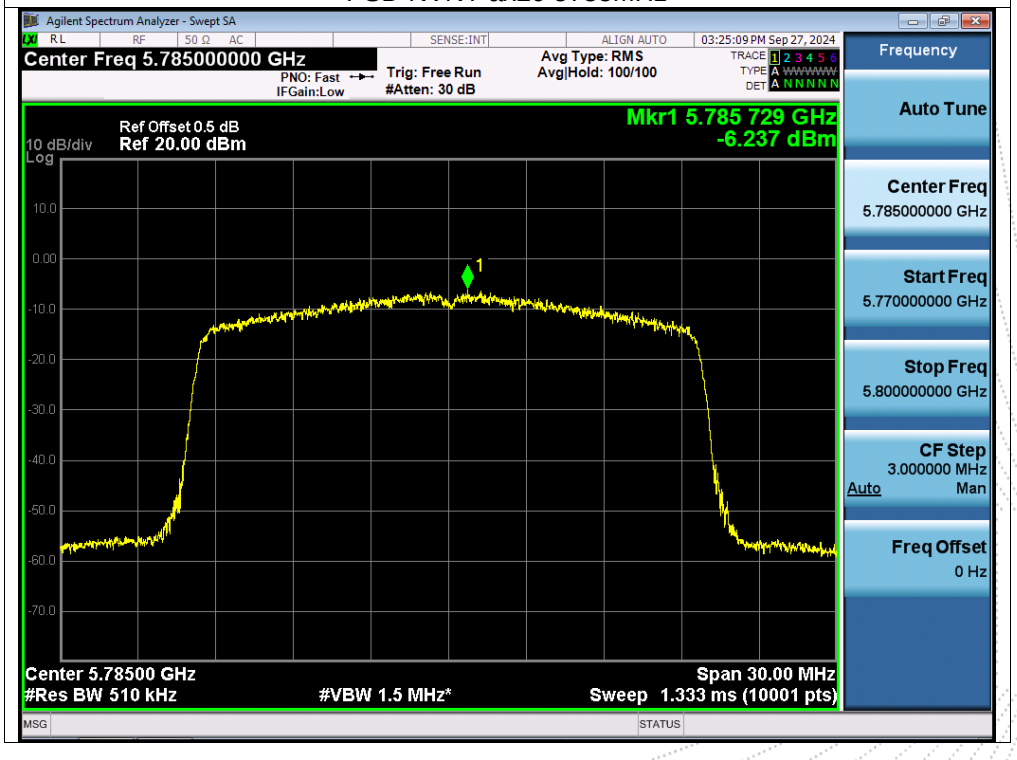
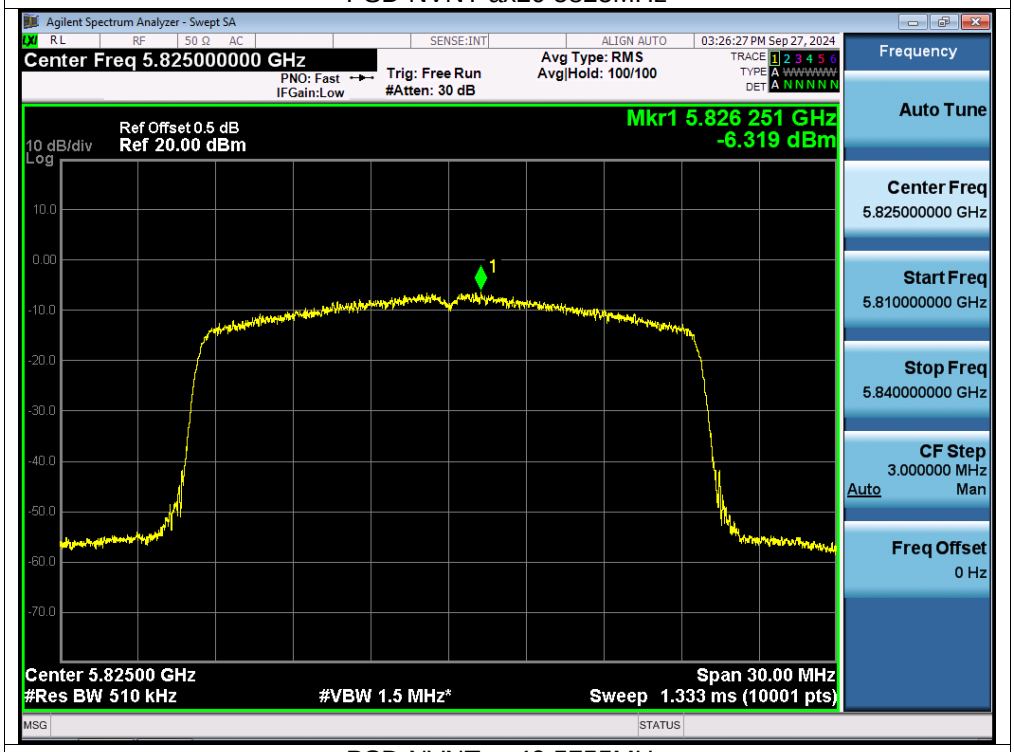
PSD NVNT ax20 5745MHz



PSD NVNT ax20 5785MHz

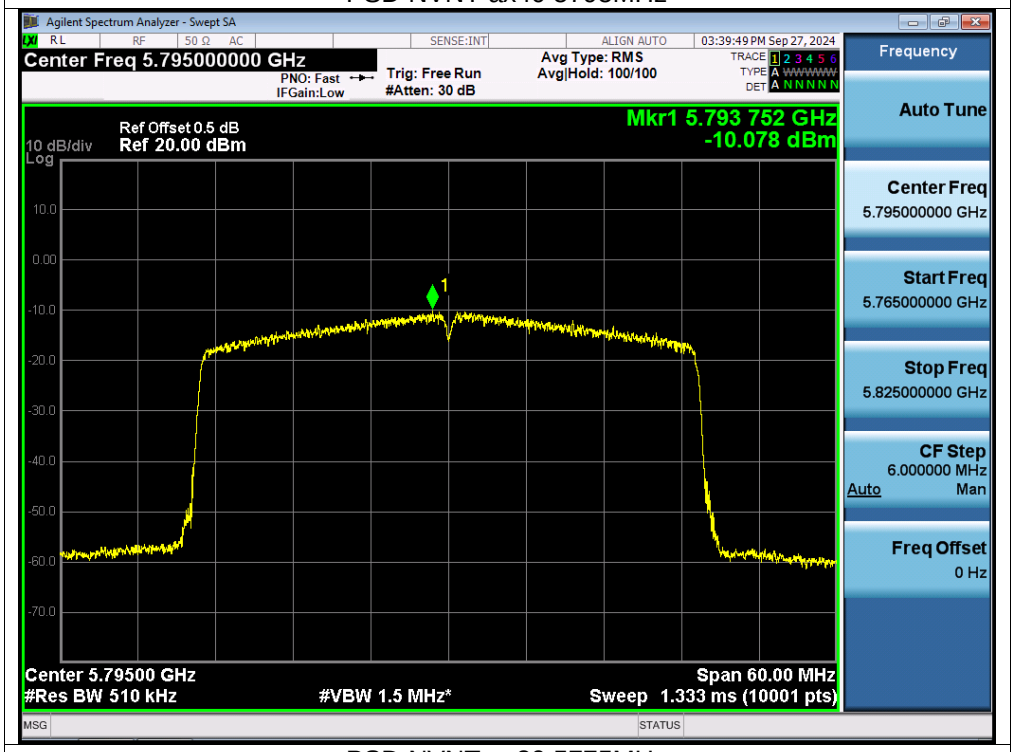


PSD NVNT ax20 5825MHz



PSD NVNT ax40 5755MHz

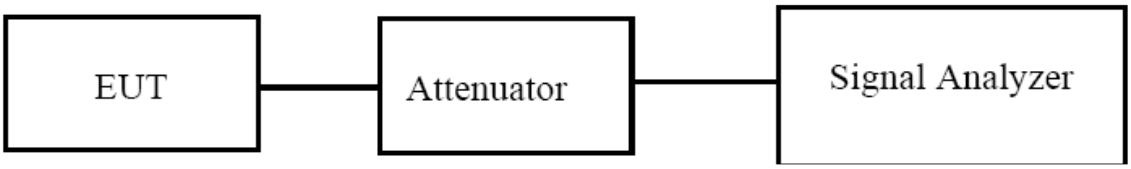
PSD NVNT ax40 5795MHz



PSD NVNT ax80 5775MHz

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

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power
is integrated over the full reference bandwidth.
(6dB bandwidth)>500kHz

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.

6dB
1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.

6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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

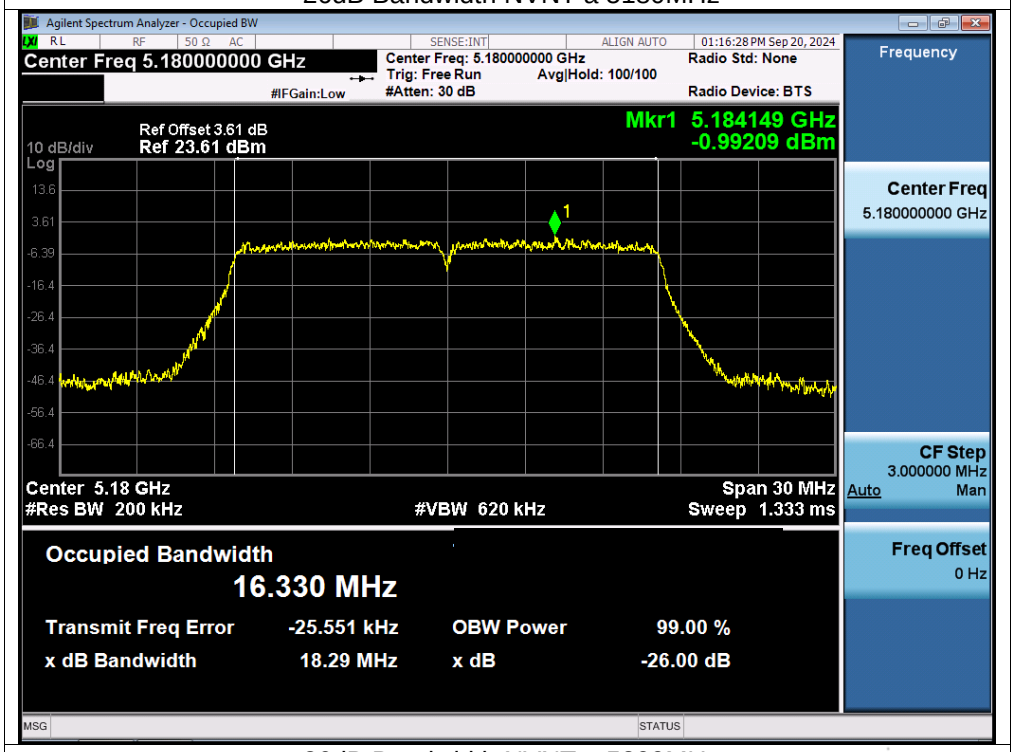
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	DC 19V
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		99% OBW (MHz)		Verdict
			Ant A	Ant B	Ant A	Ant B	
NVNT	a	5180	18.29	17.621	16.323	16.133	Pass
NVNT	a	5200	18.322	17.893	16.34	16.131	Pass
NVNT	a	5240	18.278	17.963	16.35	16.129	Pass
NVNT	n20	5180	19.392	18.769	17.54	17.233	Pass
NVNT	n20	5200	19.349	18.869	17.541	17.236	Pass
NVNT	n20	5240	19.225	18.789	17.533	17.239	Pass
NVNT	n40	5190	40.696	38.195	36.016	35.524	Pass
NVNT	n40	5230	41.09	38.191	36.024	35.504	Pass
NVNT	ac20	5180	19.373	18.86	17.548	17.21	Pass
NVNT	ac20	5200	19.349	18.868	17.539	17.221	Pass
NVNT	ac20	5240	19.29	18.819	17.534	17.239	Pass
NVNT	ac40	5190	41.017	38.327	36.006	35.572	Pass
NVNT	ac40	5230	40.804	38.215	35.986	35.544	Pass
NVNT	ac80	5210	**80.671**	78.659	74.724	74.57	Pass
NVNT	ax20	5180	19.905	19.906	18.57	18.581	Pass
NVNT	ax20	5200	19.812	19.775	18.575	18.591	Pass
NVNT	ax20	5240	19.794	19.919	18.566	18.544	Pass
NVNT	ax40	5190	39.389	39.252	37.186	37.113	Pass
NVNT	ax40	5230	39.407	39.343	37.127	37.07	Pass
NVNT	ax80	5210	78.794	79.895	74.361	**76.225**	Pass

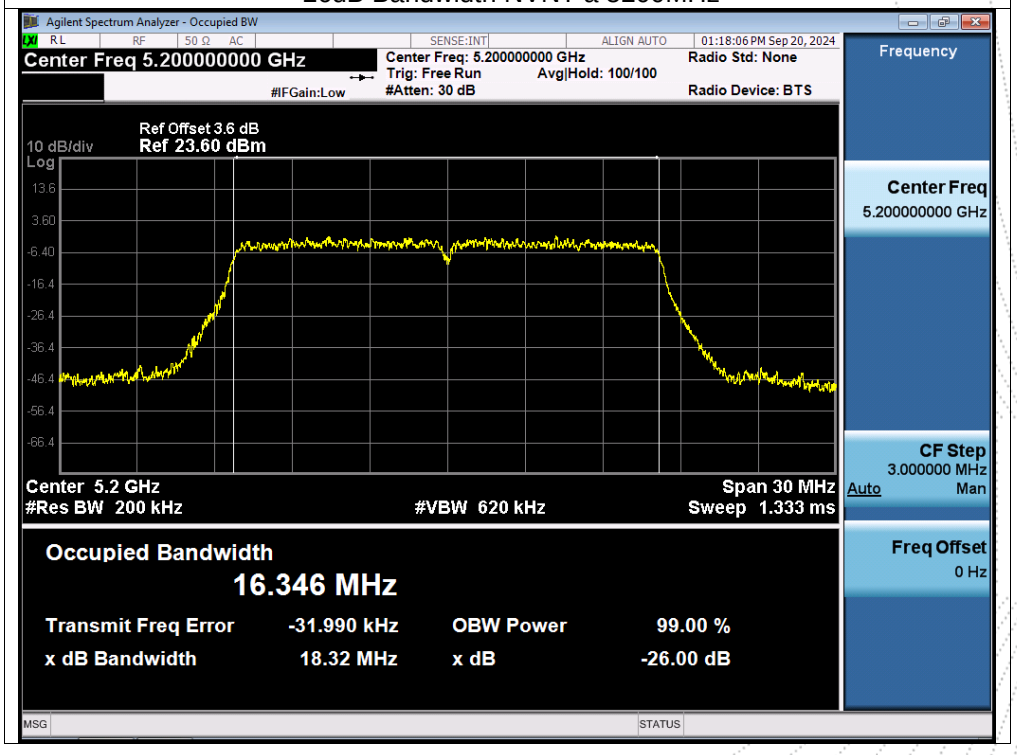
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

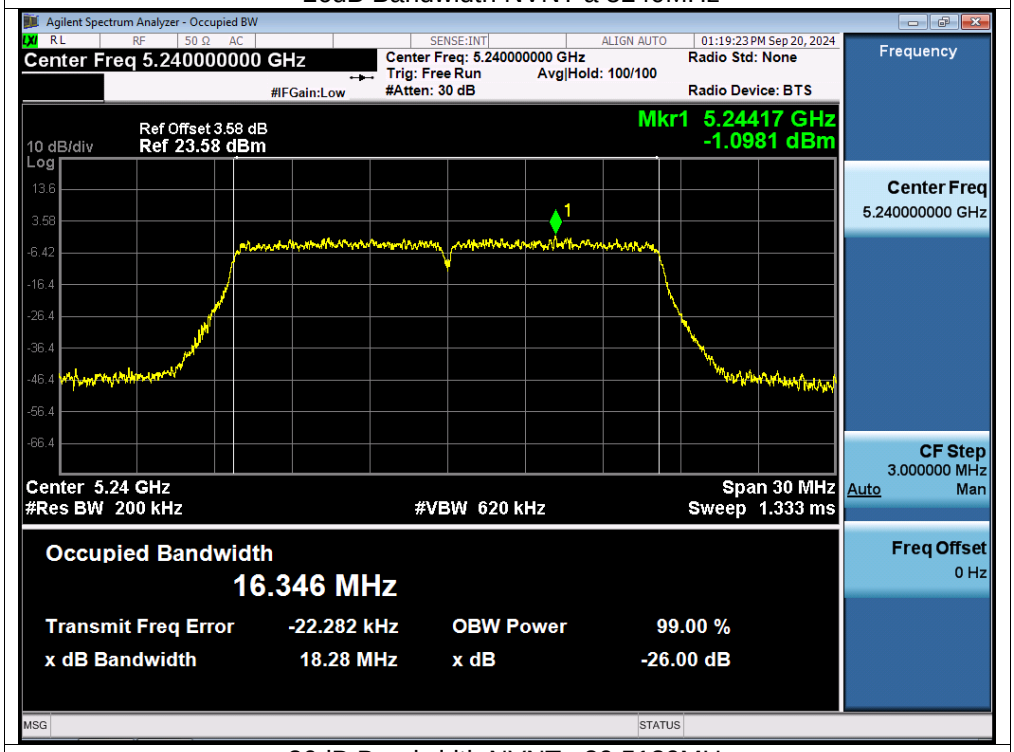
-26dB Bandwidth NVNT a 5180MHz



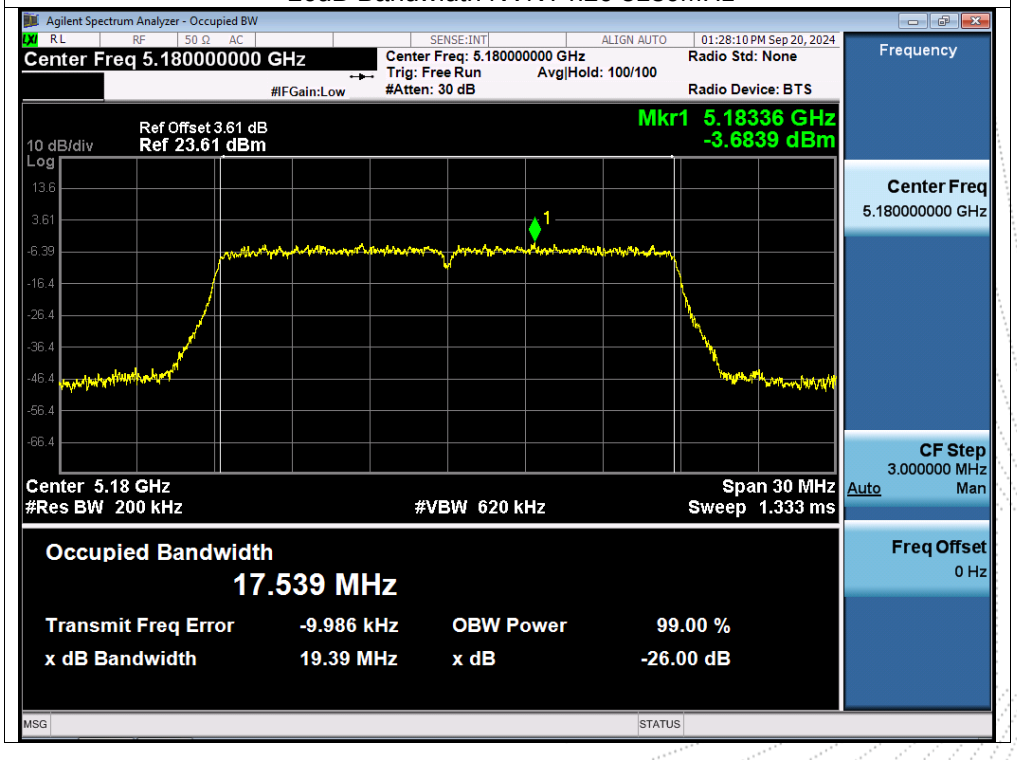
-26dB Bandwidth NVNT a 5200MHz



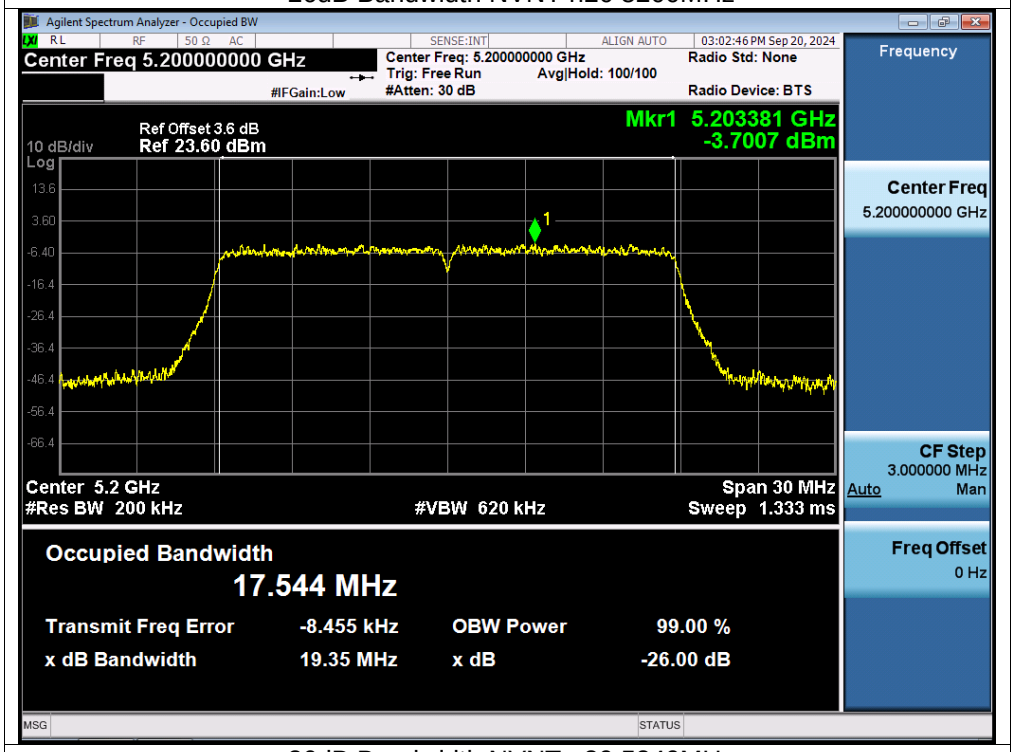
-26dB Bandwidth NVNT a 5240MHz



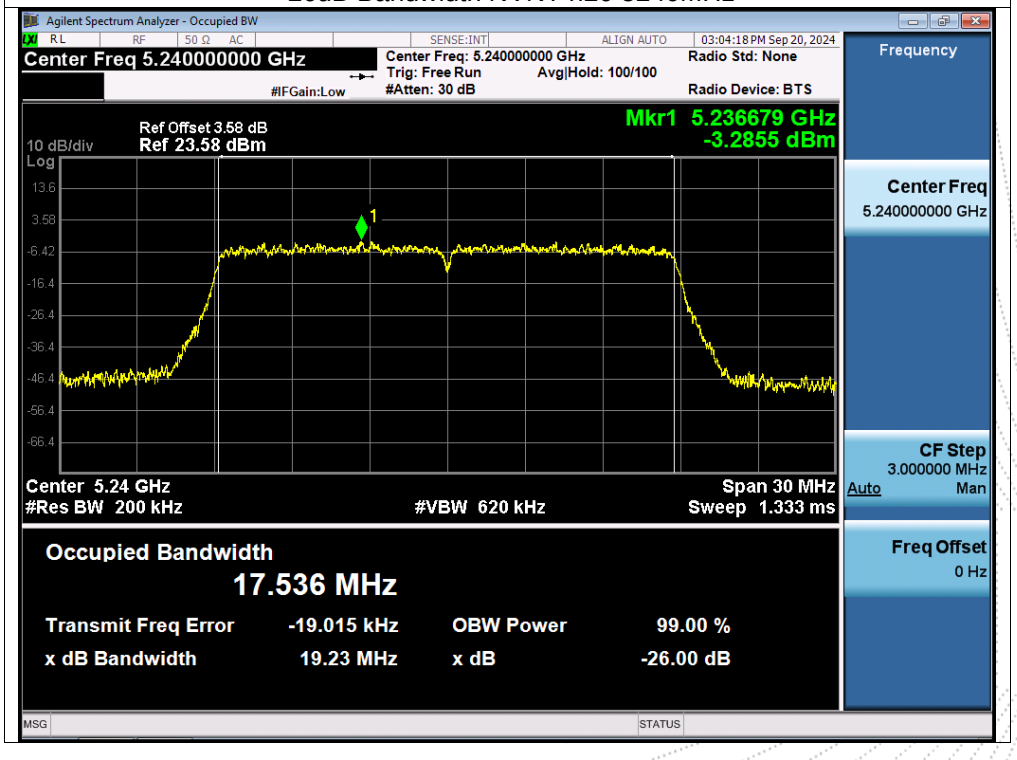
-26dB Bandwidth NVNT n20 5180MHz



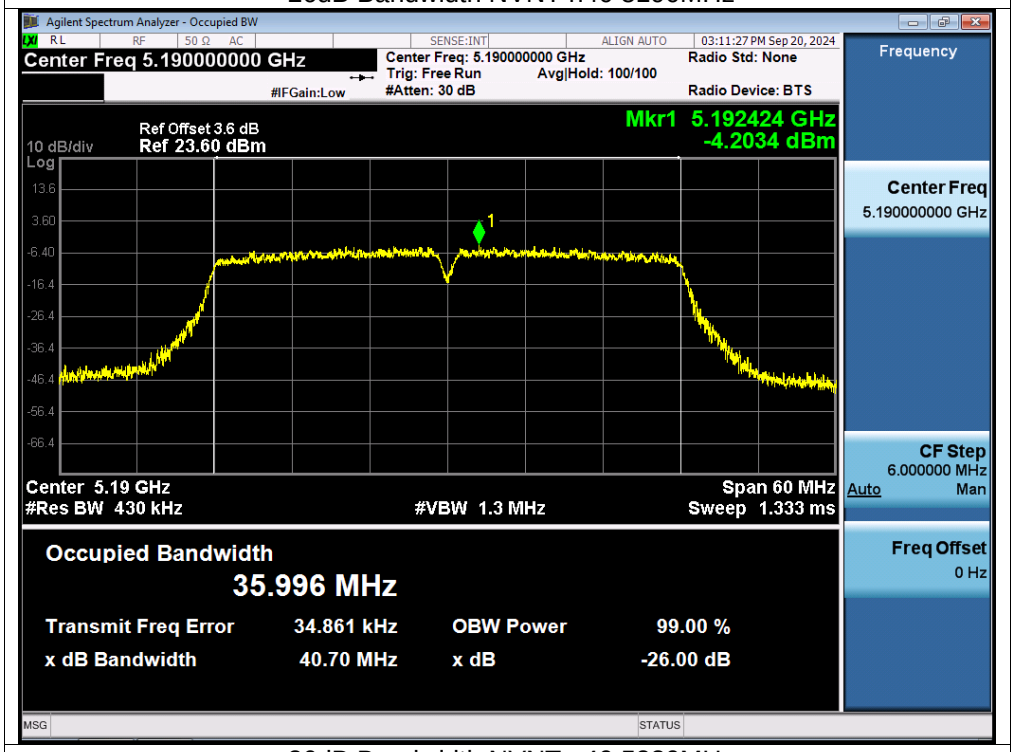
-26dB Bandwidth NVNT n20 5200MHz



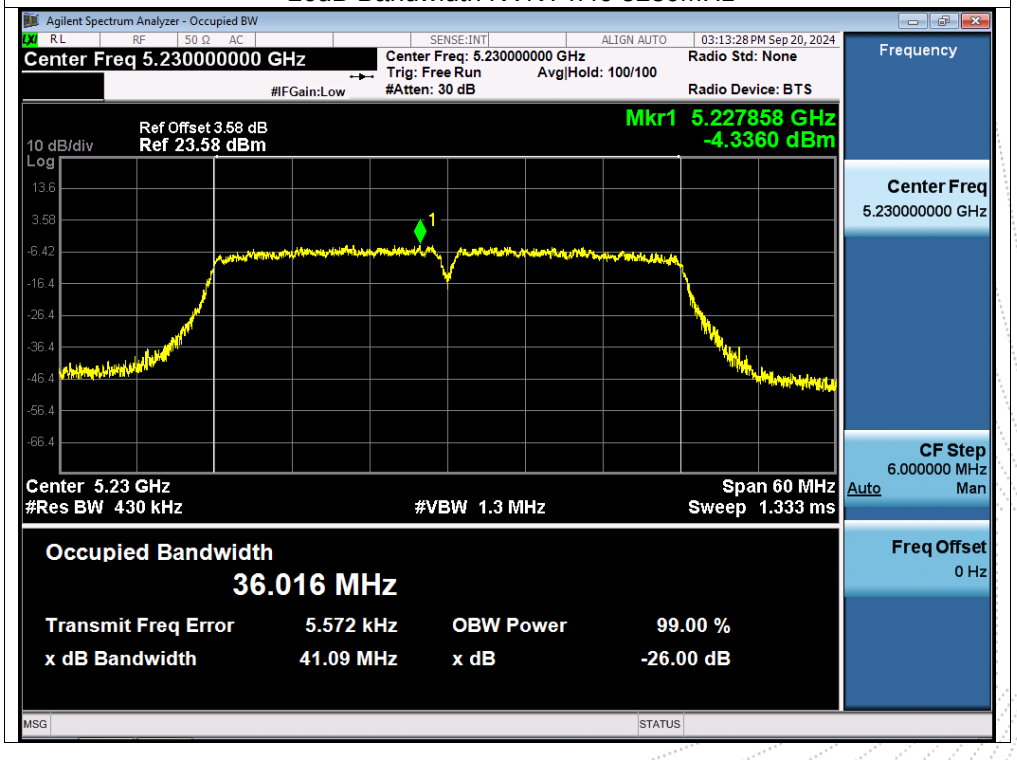
-26dB Bandwidth NVNT n20 5240MHz



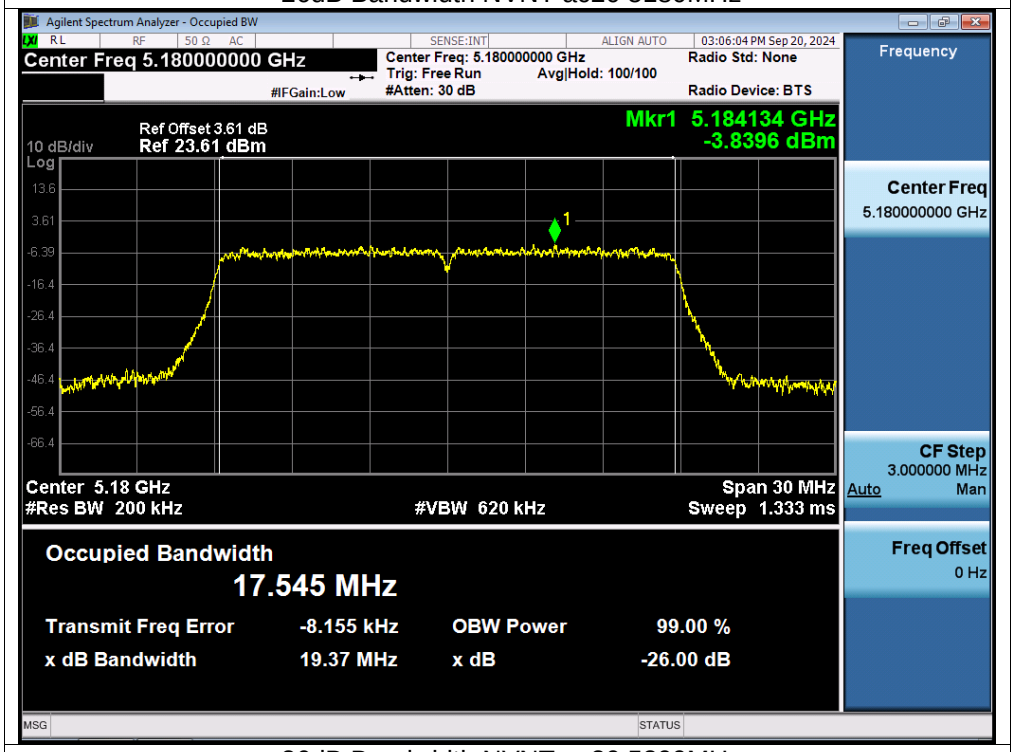
-26dB Bandwidth NVNT n40 5190MHz



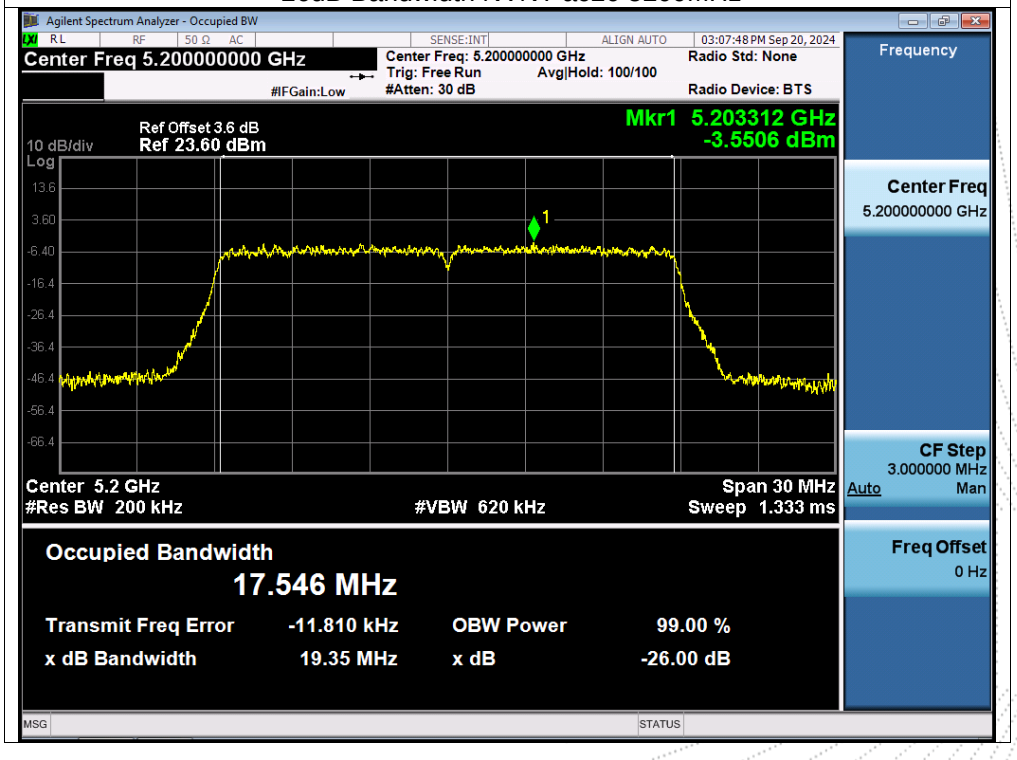
-26dB Bandwidth NVNT n40 5230MHz



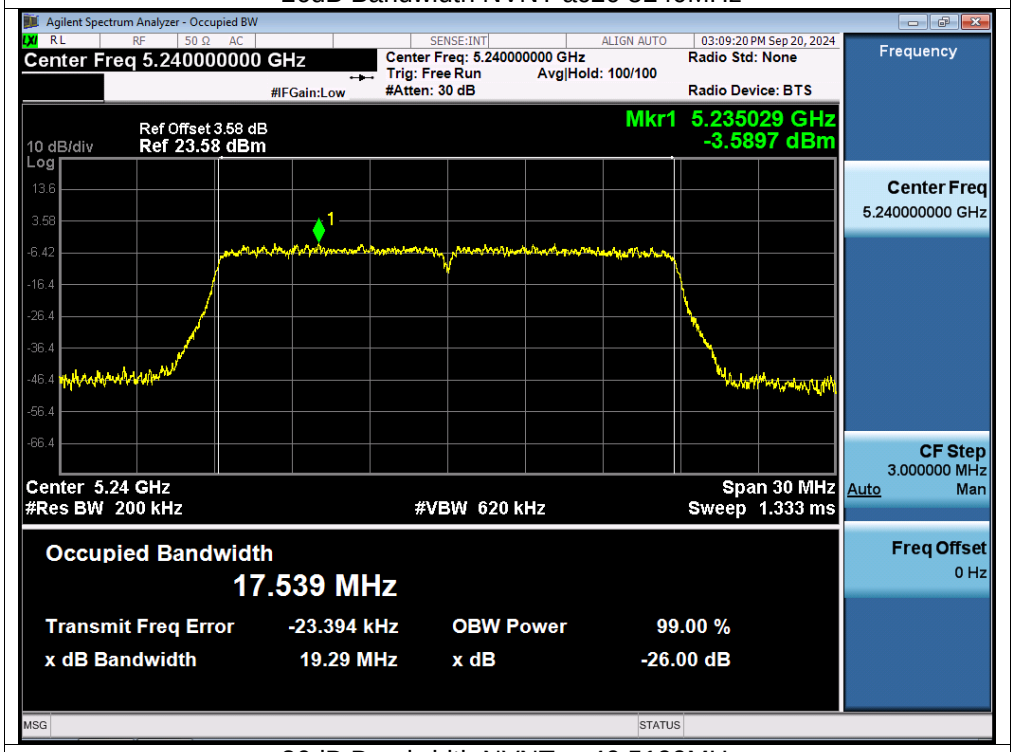
-26dB Bandwidth NVNT ac20 5180MHz



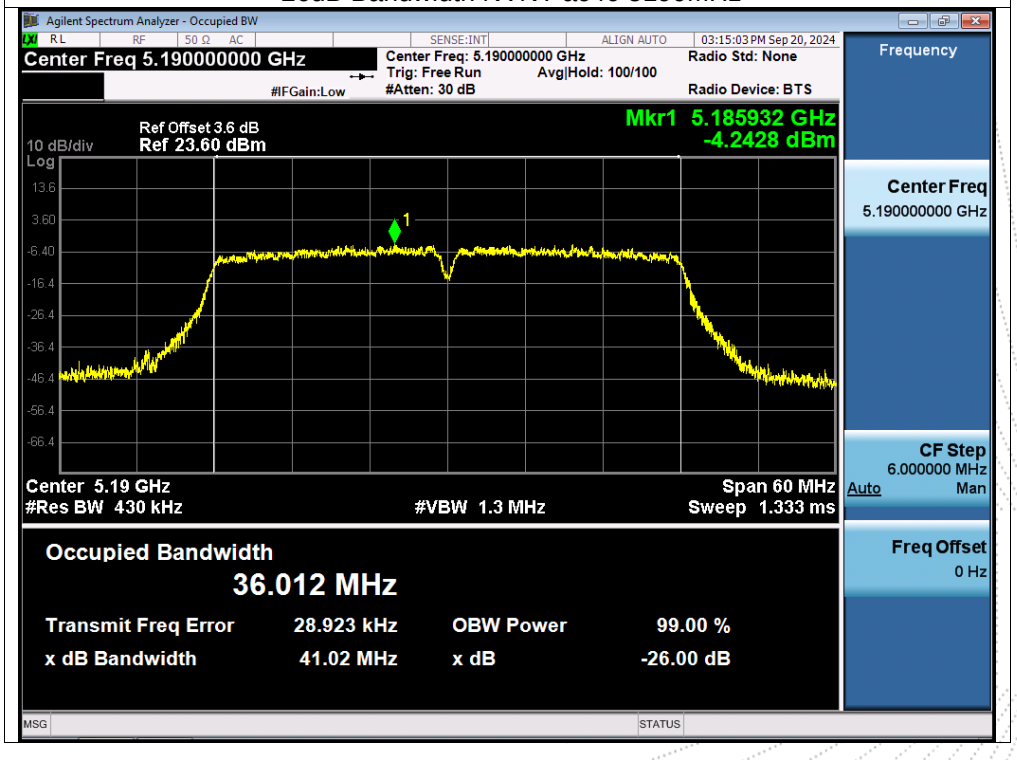
-26dB Bandwidth NVNT ac20 5200MHz



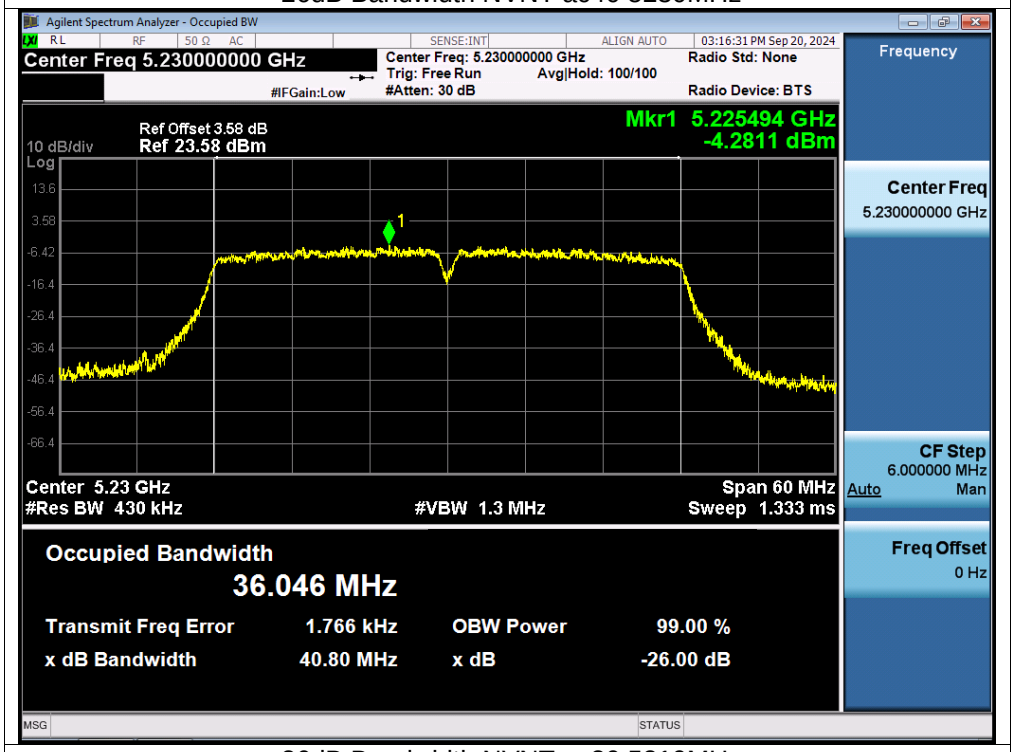
-26dB Bandwidth NVNT ac20 5240MHz



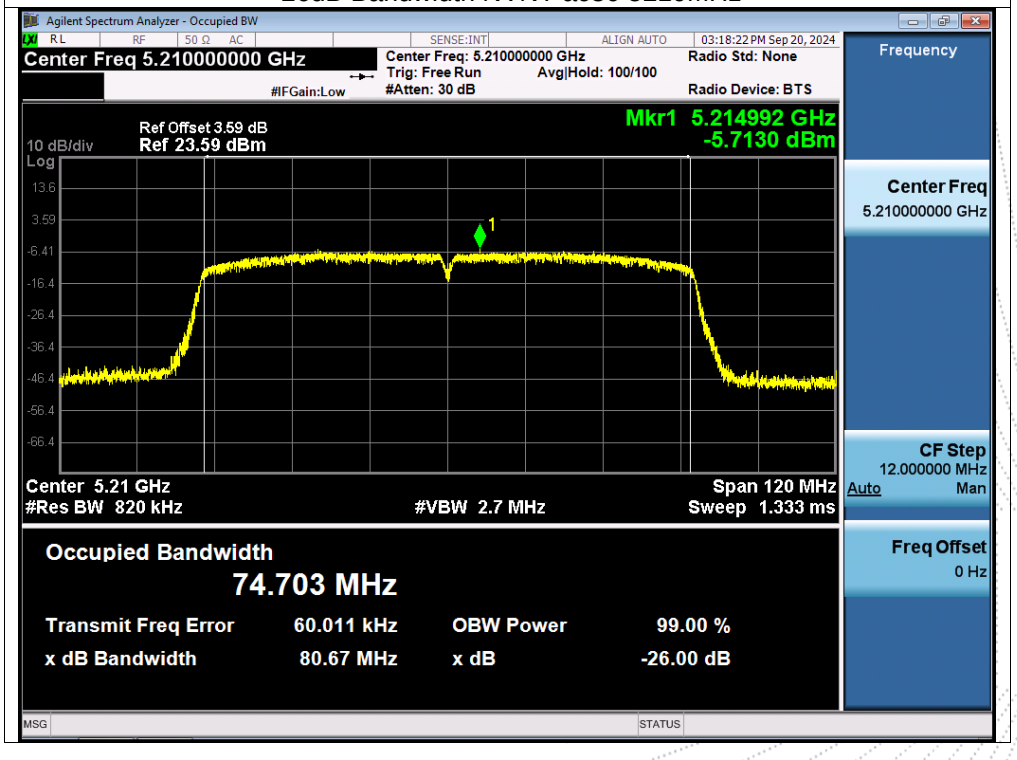
-26dB Bandwidth NVNT ac40 5190MHz



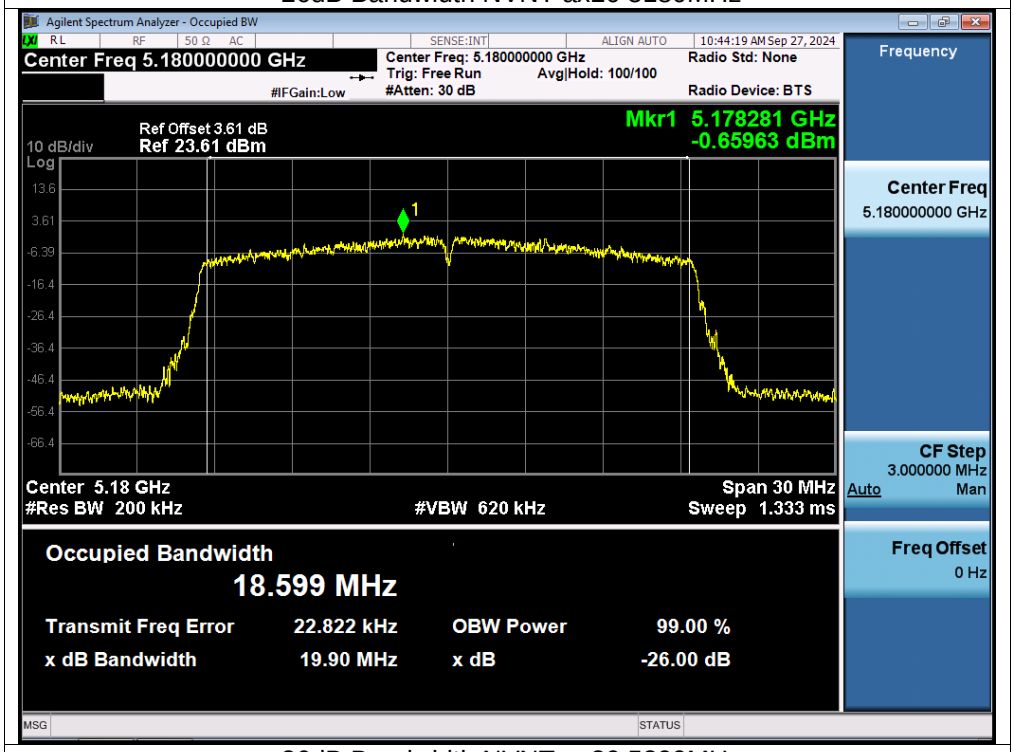
-26dB Bandwidth NVNT ac40 5230MHz



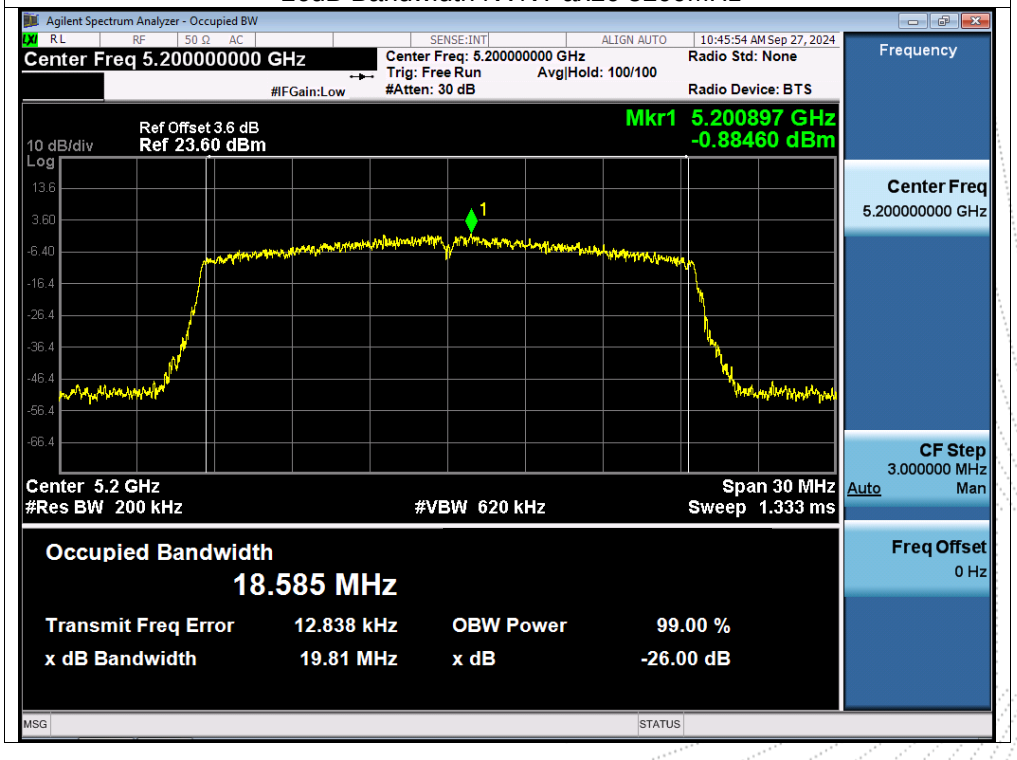
-26dB Bandwidth NVNT ac80 5210MHz



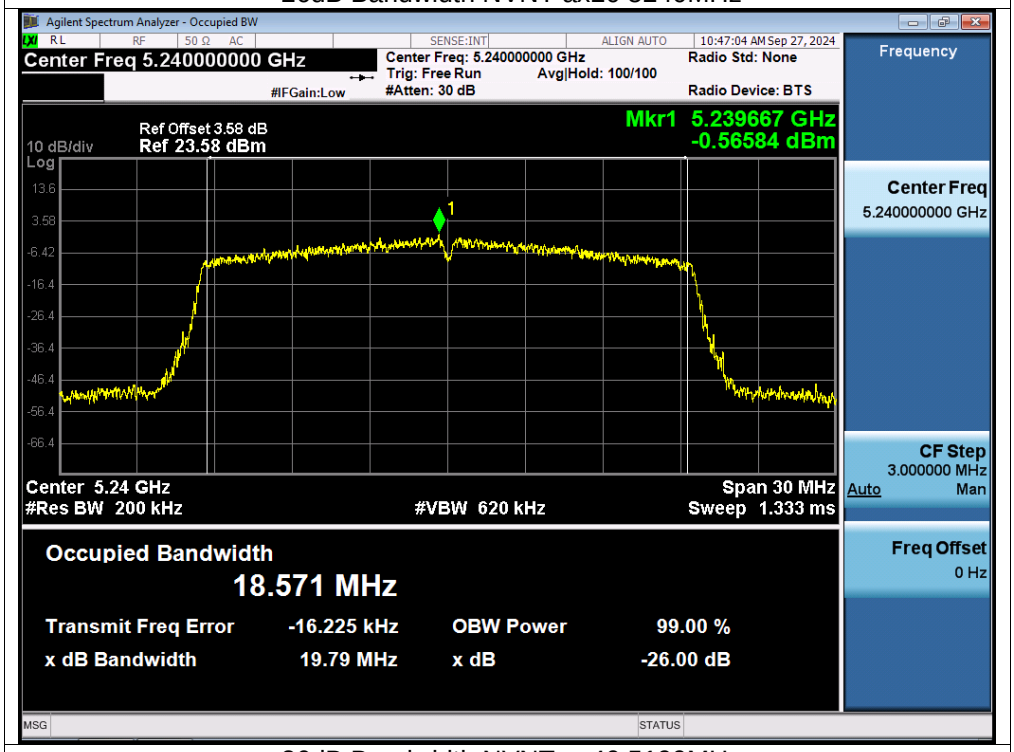
-26dB Bandwidth NVNT ax20 5180MHz



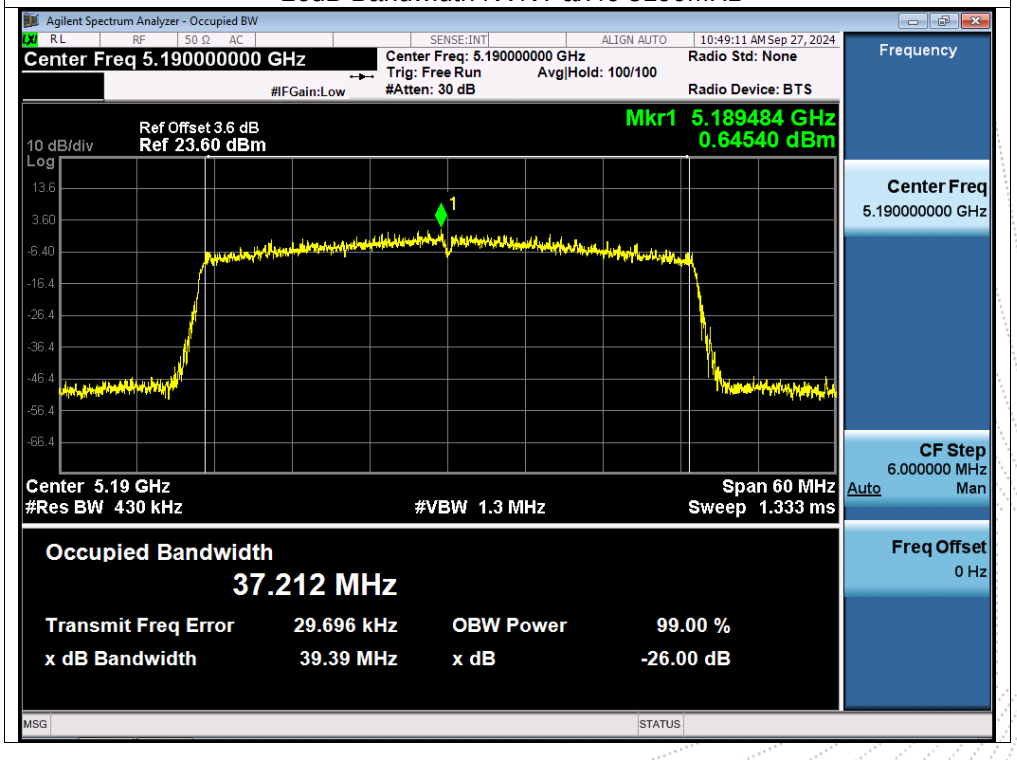
-26dB Bandwidth NVNT ax20 5200MHz



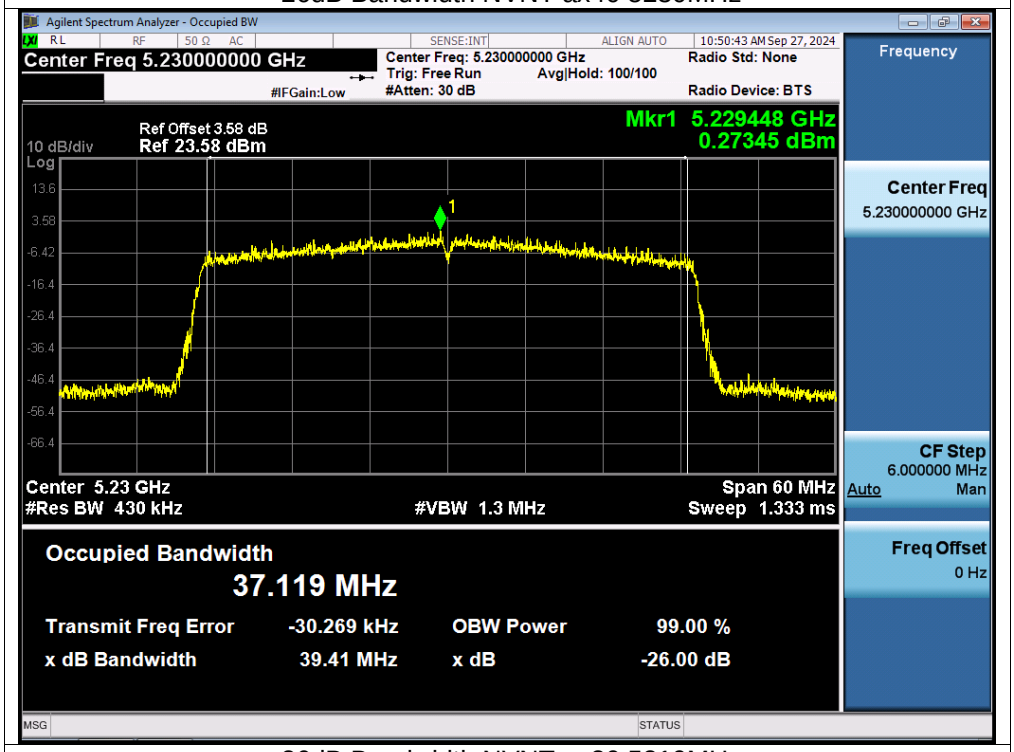
-26dB Bandwidth NVNT ax20 5240MHz



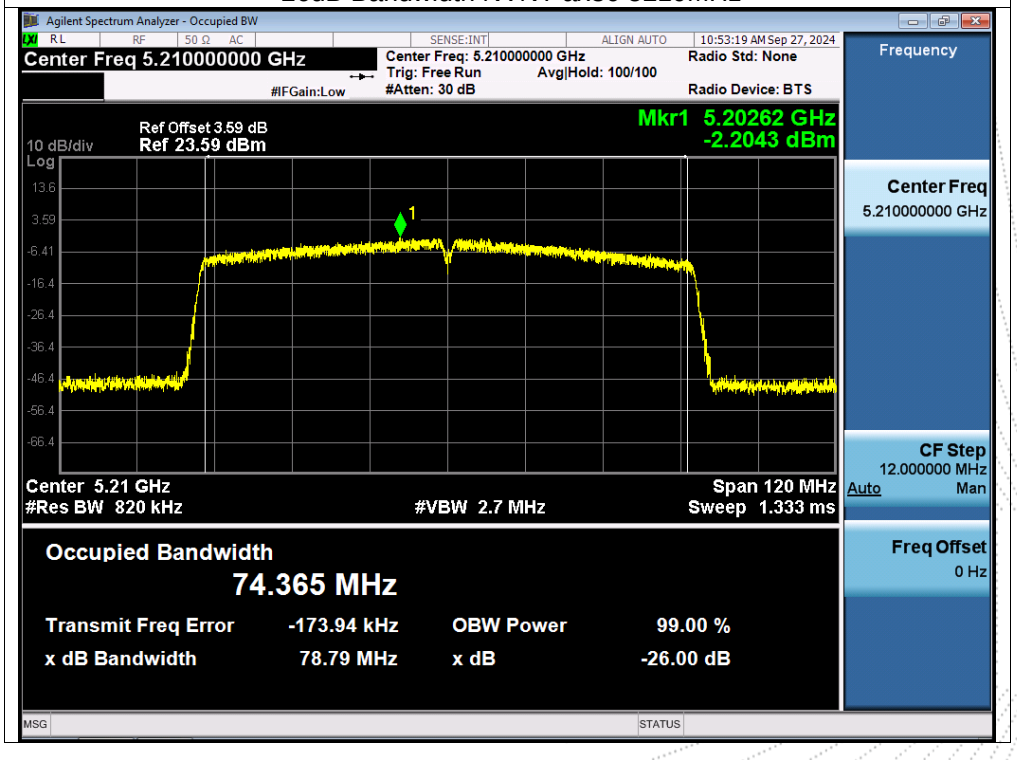
-26dB Bandwidth NVNT ax40 5190MHz



-26dB Bandwidth NVNT ax40 5230MHz



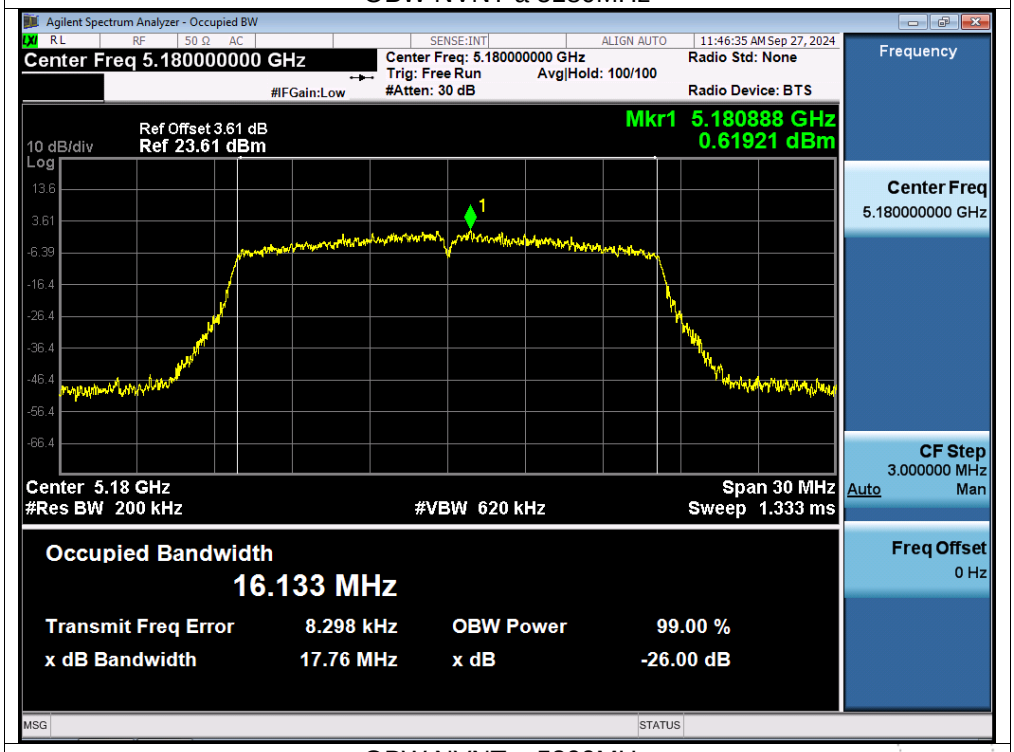
-26dB Bandwidth NVNT ax80 5210MHz



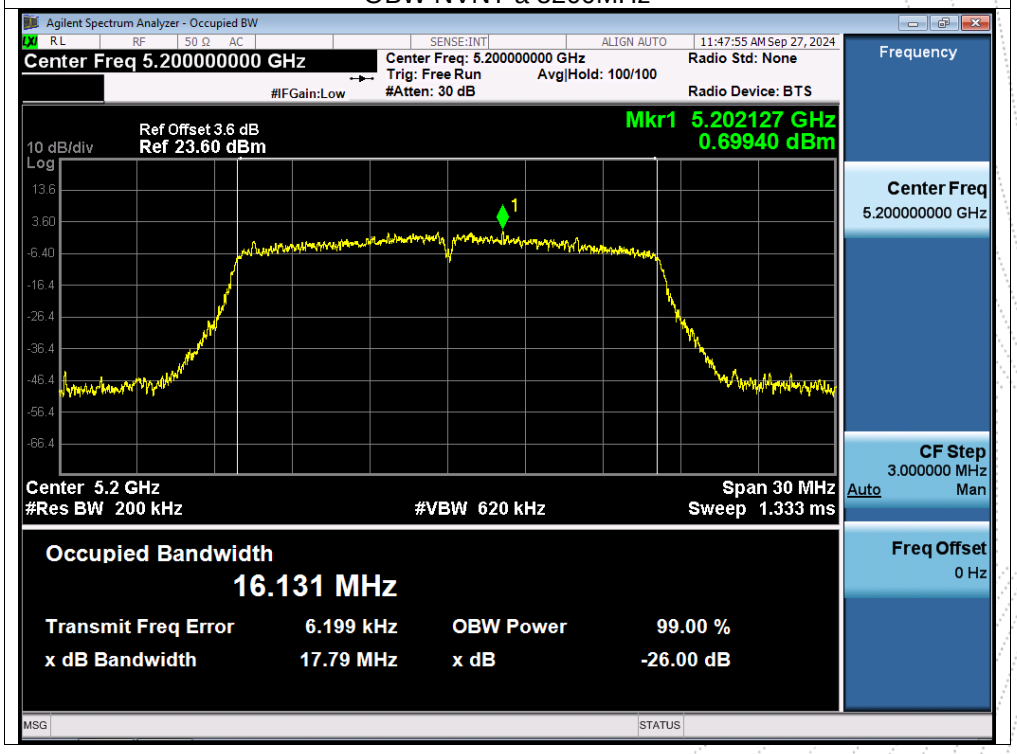
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

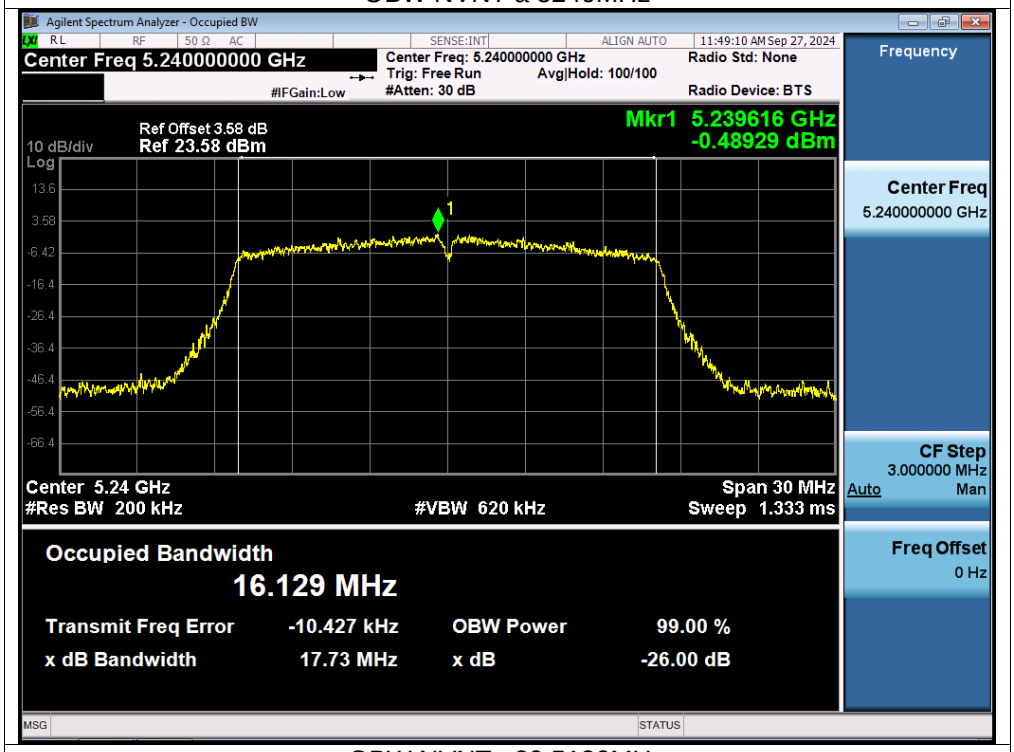
OBW NVNT a 5180MHz



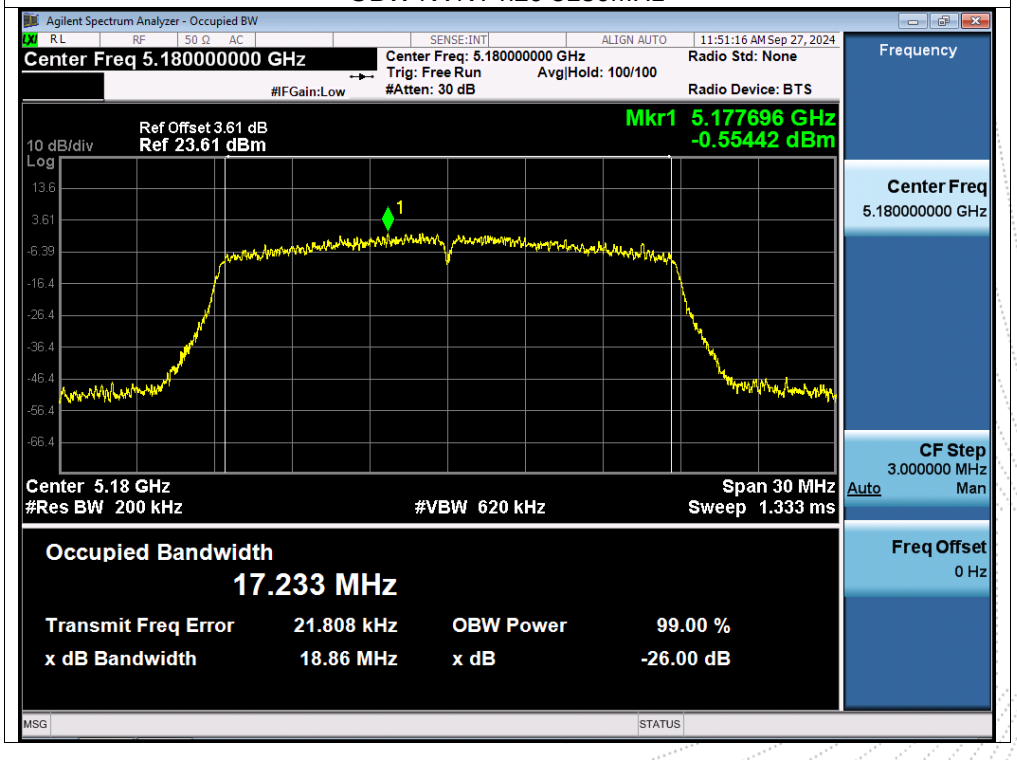
OBW NVNT a 5200MHz



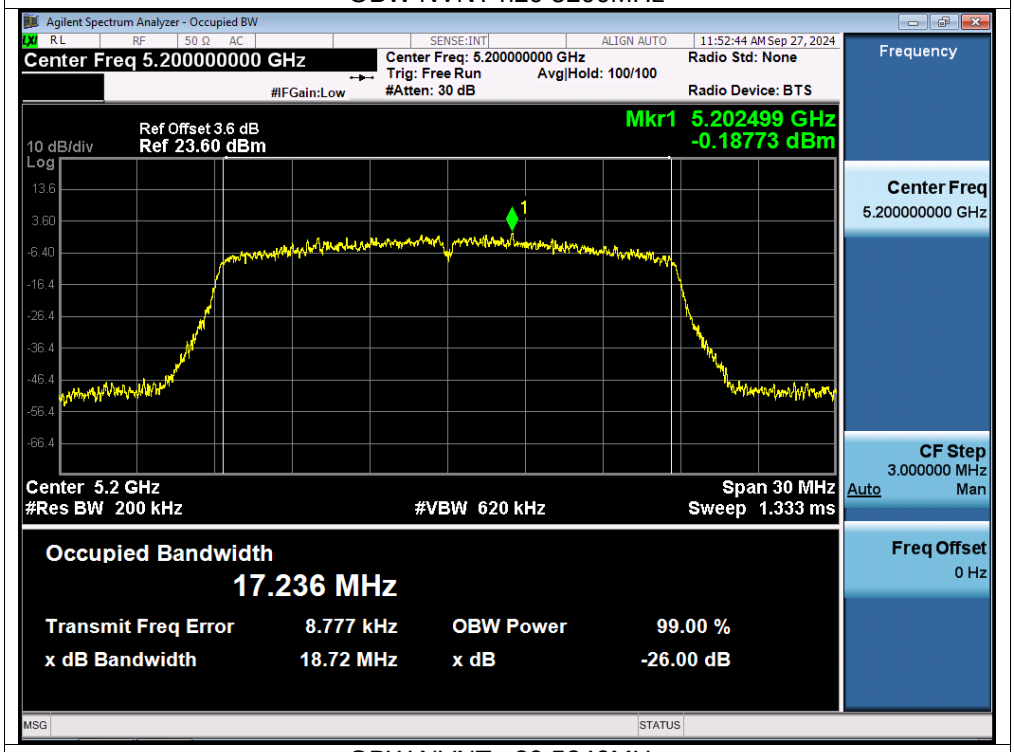
OBW NVNT a 5240MHz



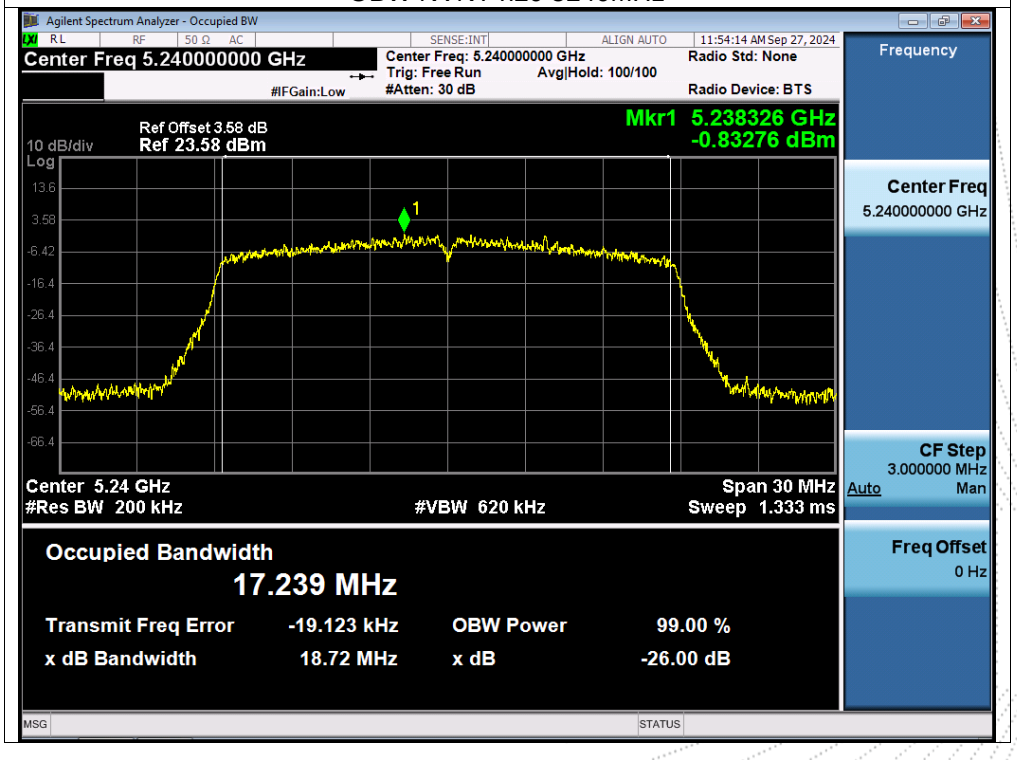
OBW NVNT n20 5180MHz



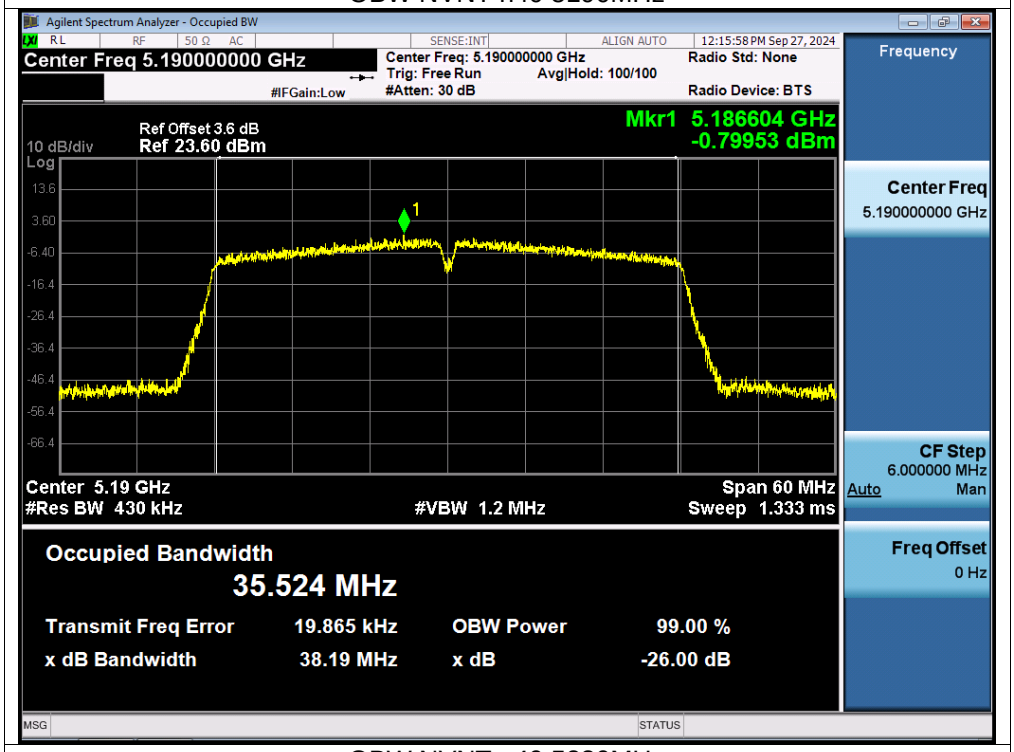
OBW NVNT n20 5200MHz



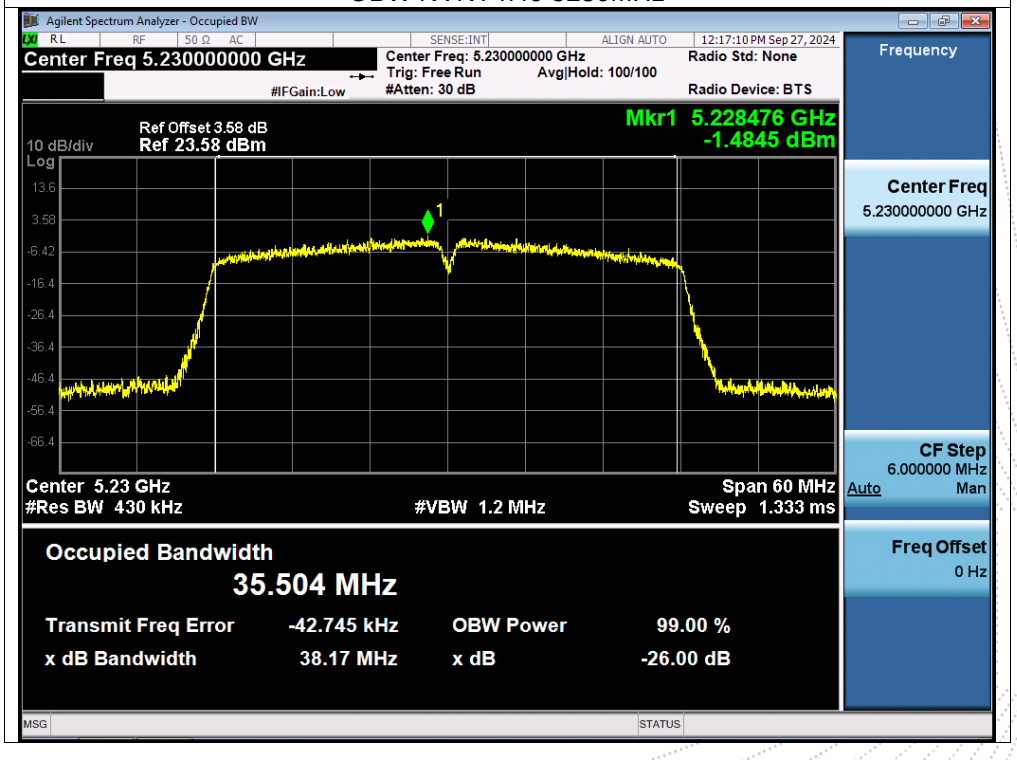
OBW NVNT n20 5240MHz



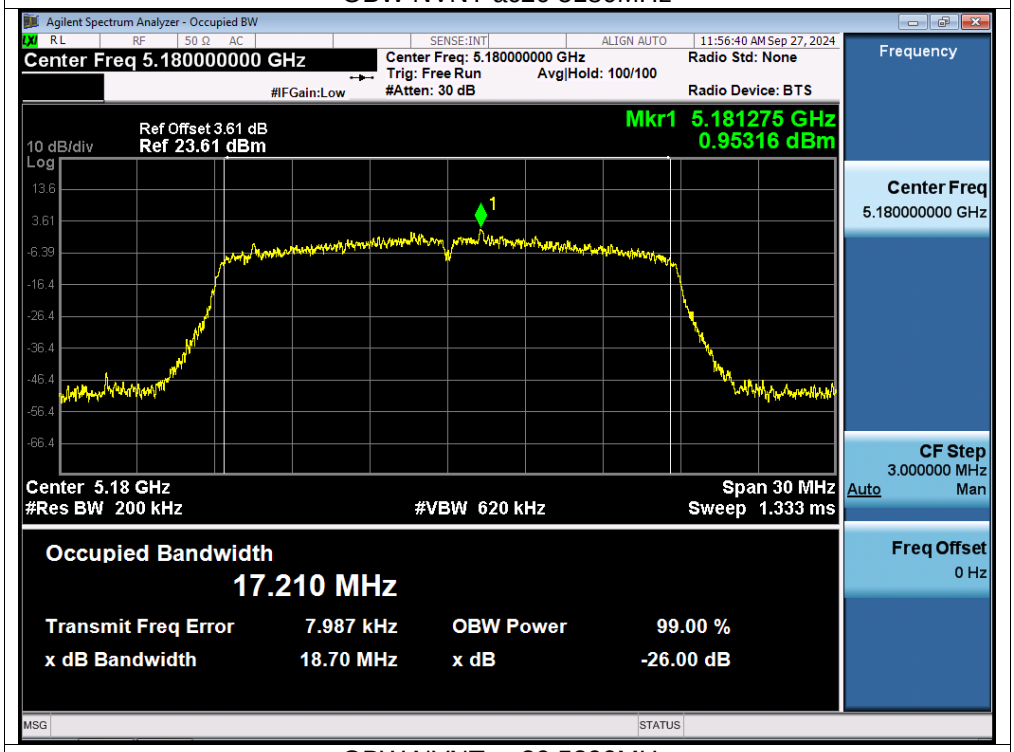
OBW NVNT n40 5190MHz



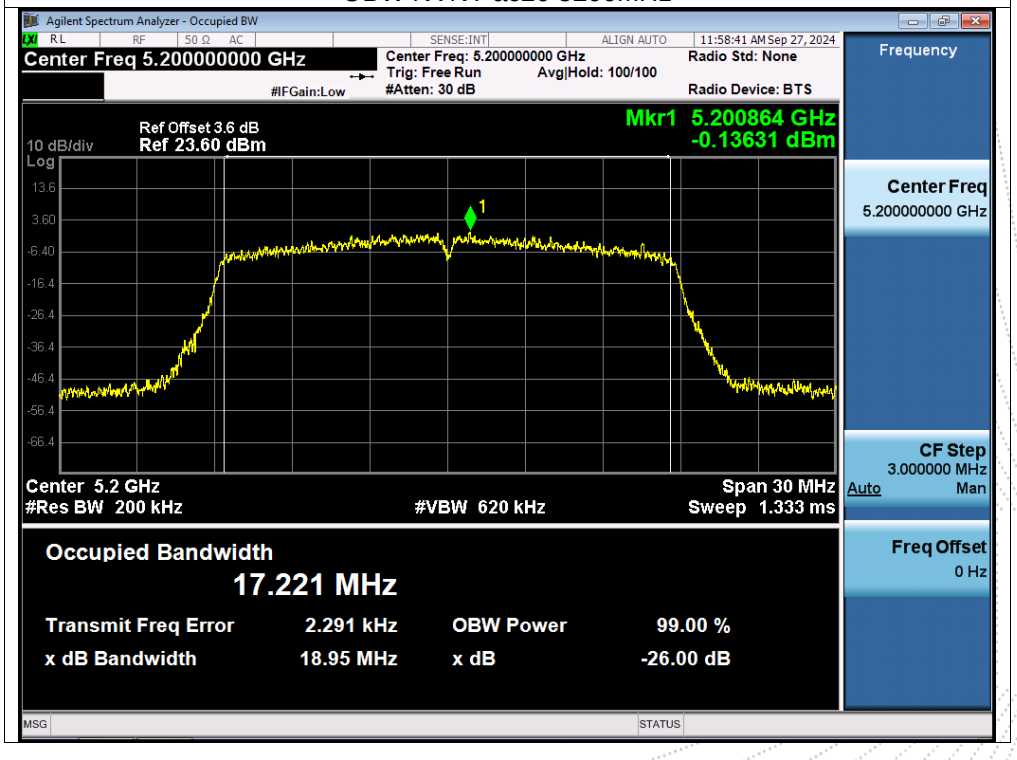
OBW NVNT n40 5230MHz



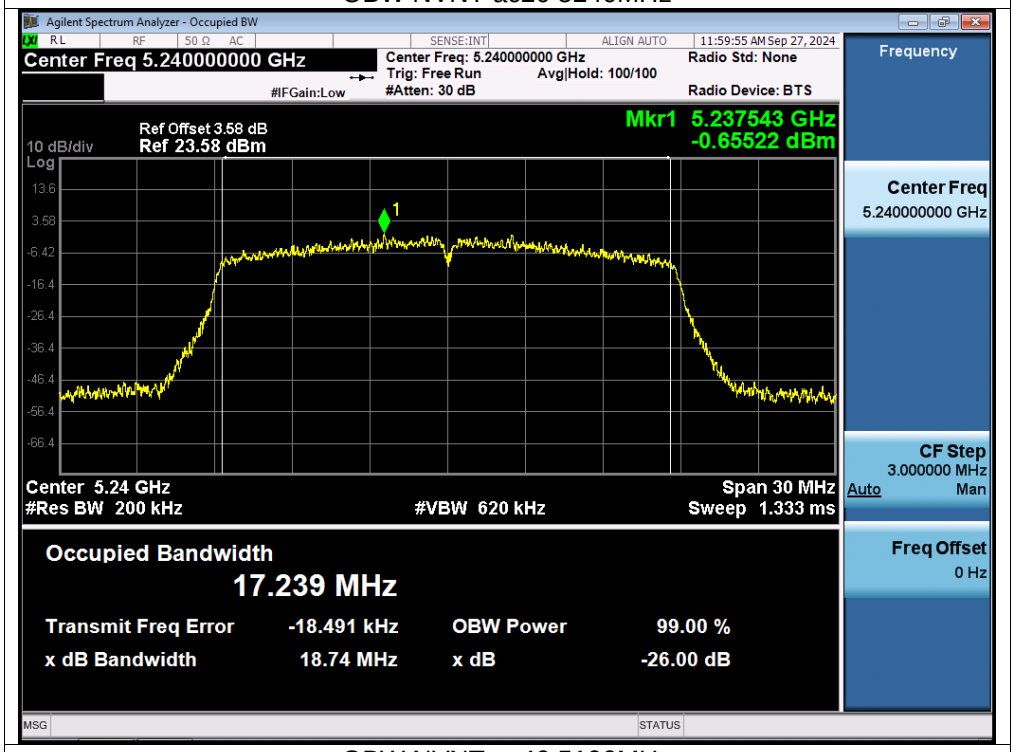
OBW NVNT ac20 5180MHz



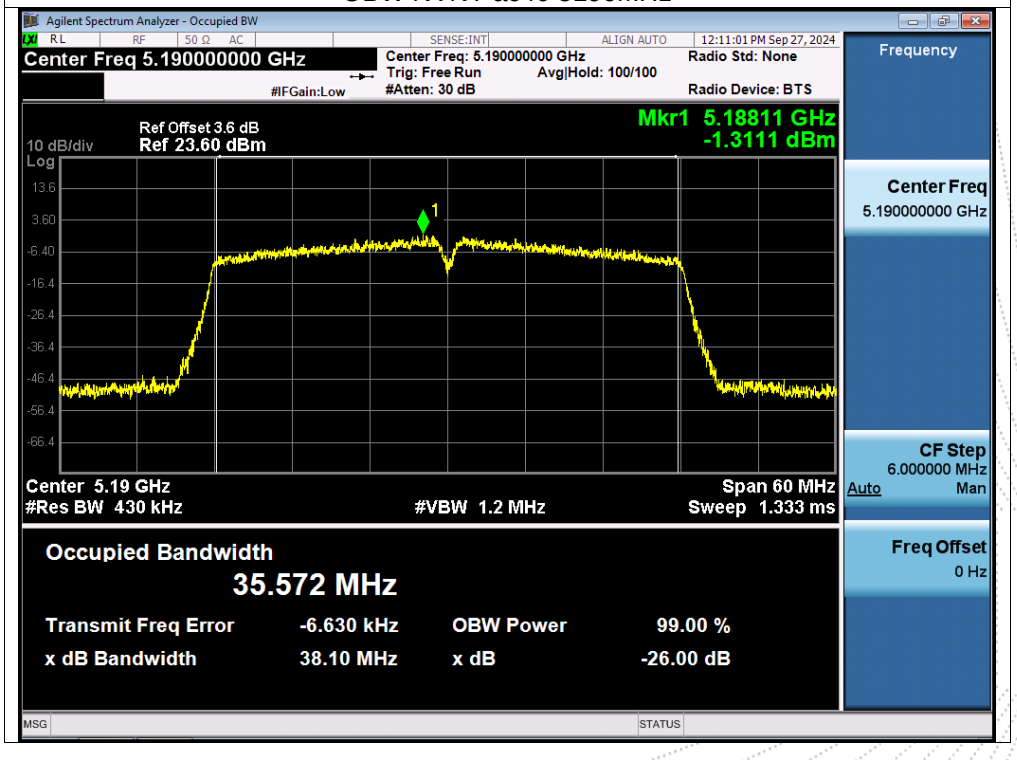
OBW NVNT ac20 5200MHz



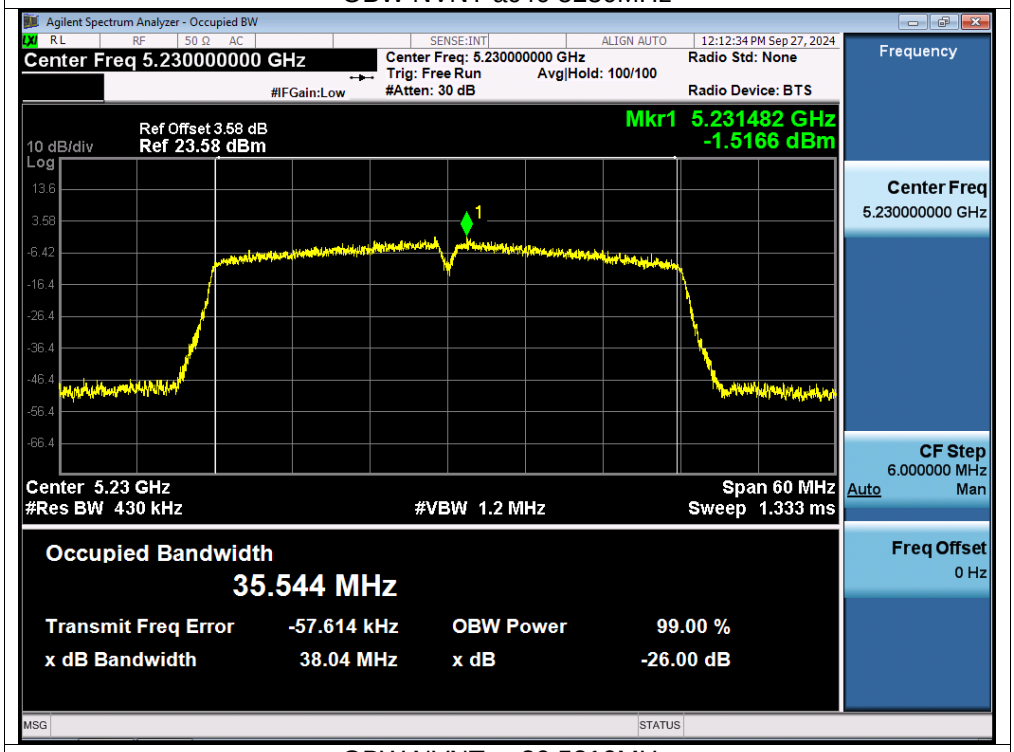
OBW NVNT ac20 5240MHz



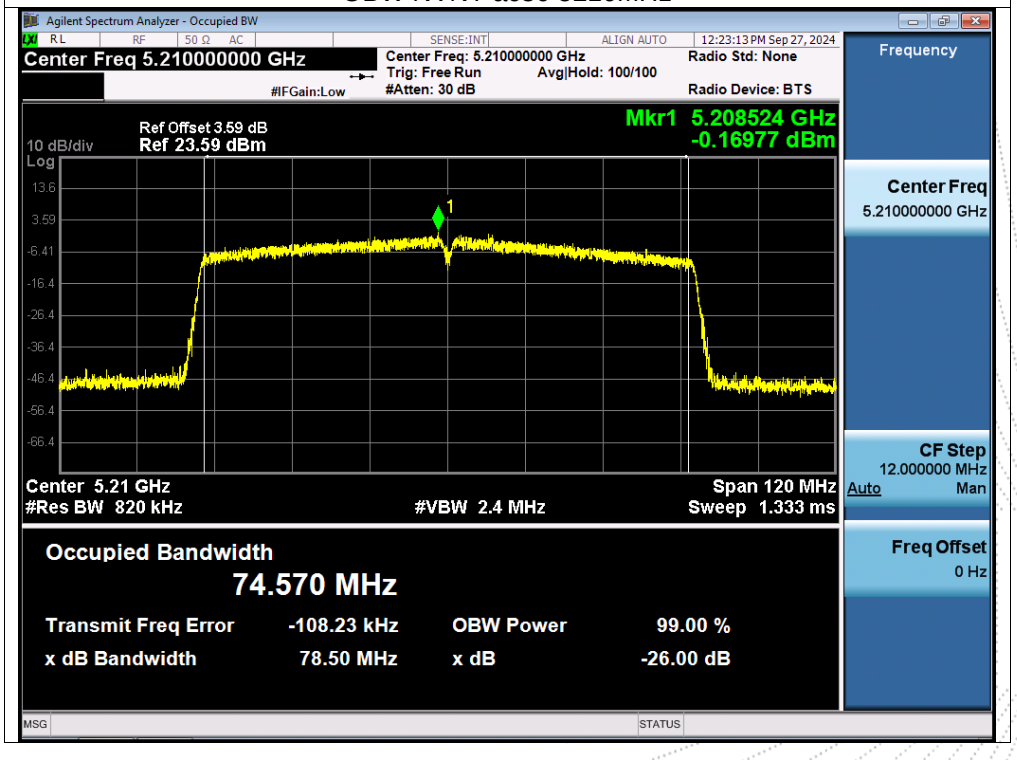
OBW NVNT ac40 5190MHz



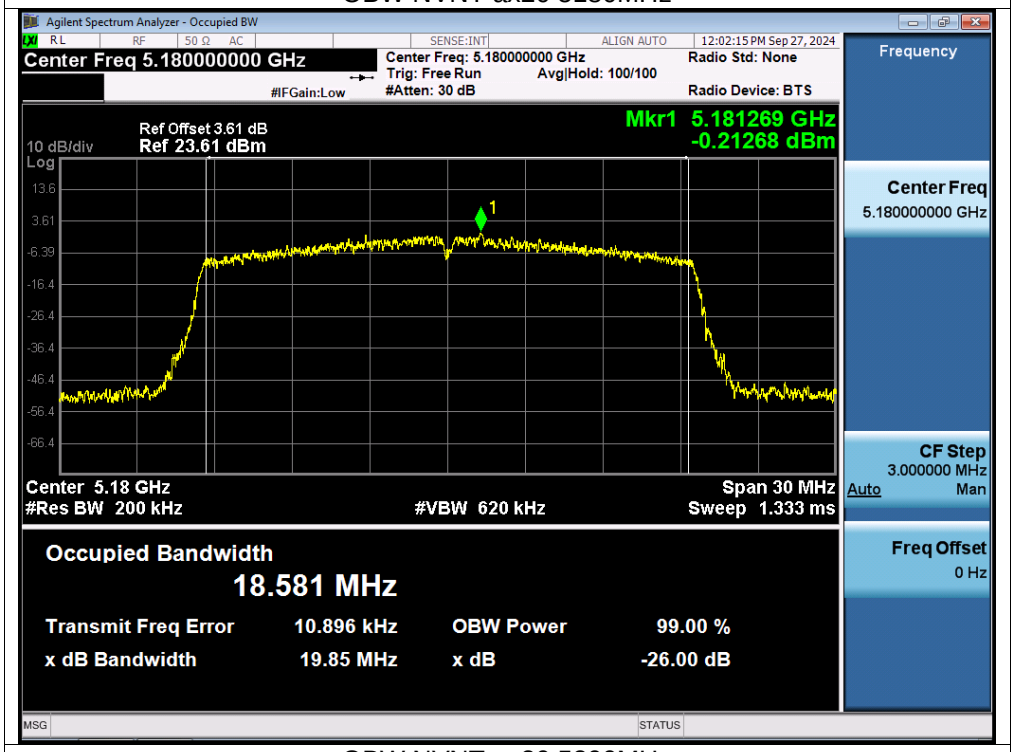
OBW NVNT ac40 5230MHz



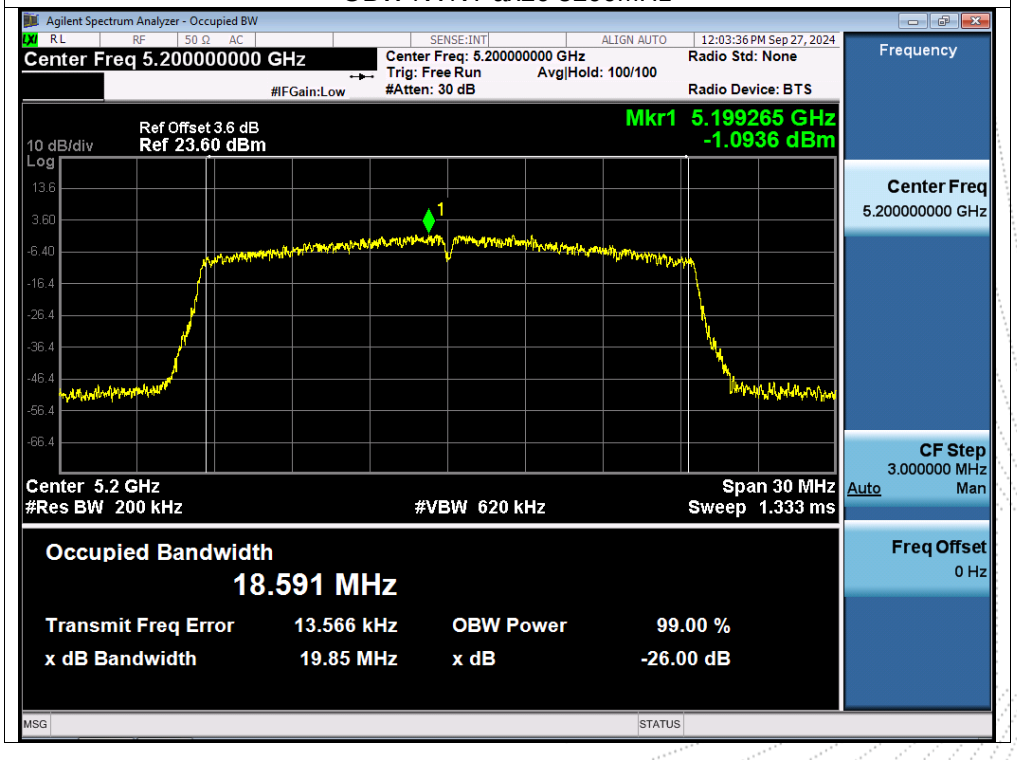
OBW NVNT ac80 5210MHz



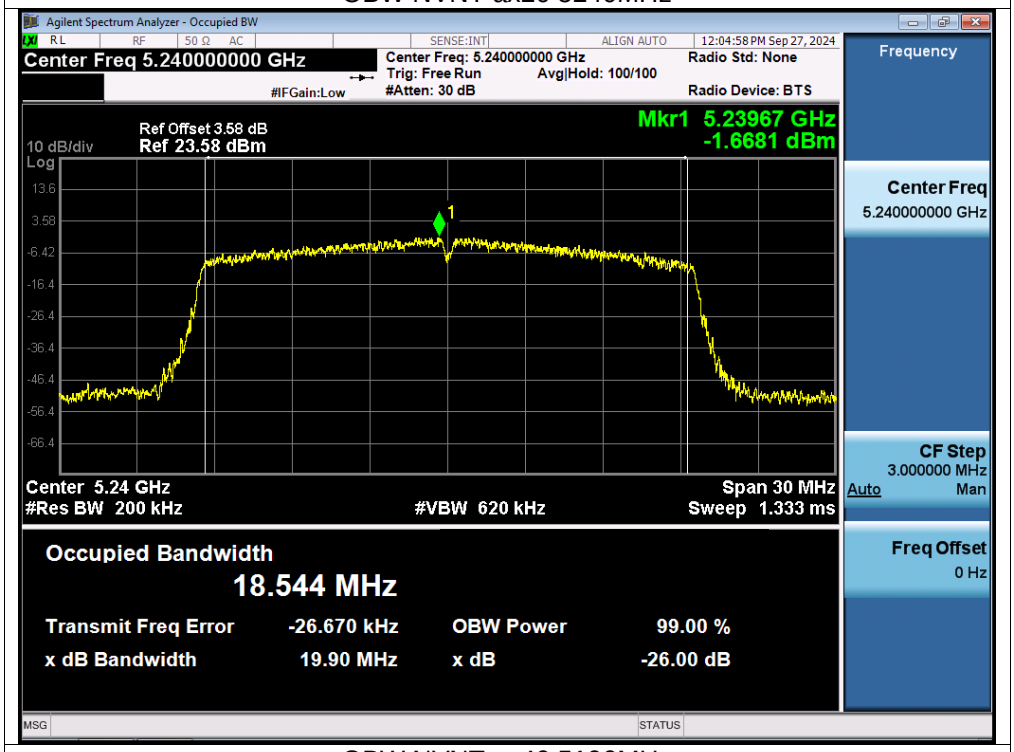
OBW NVNT ax20 5180MHz



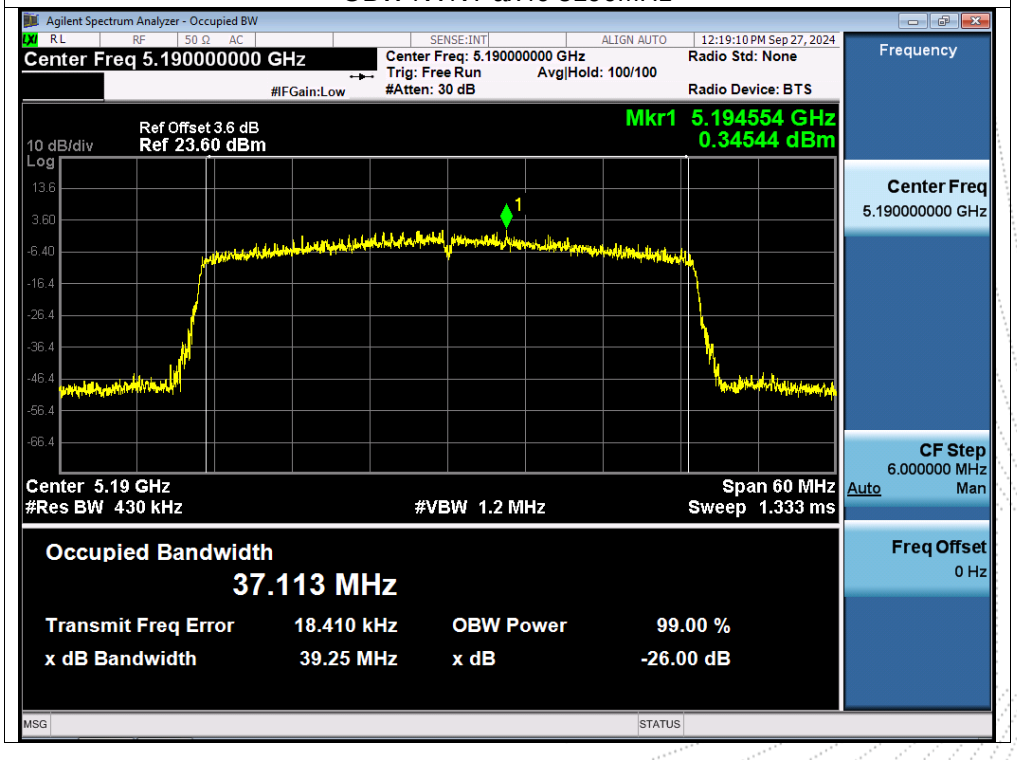
OBW NVNT ax20 5200MHz



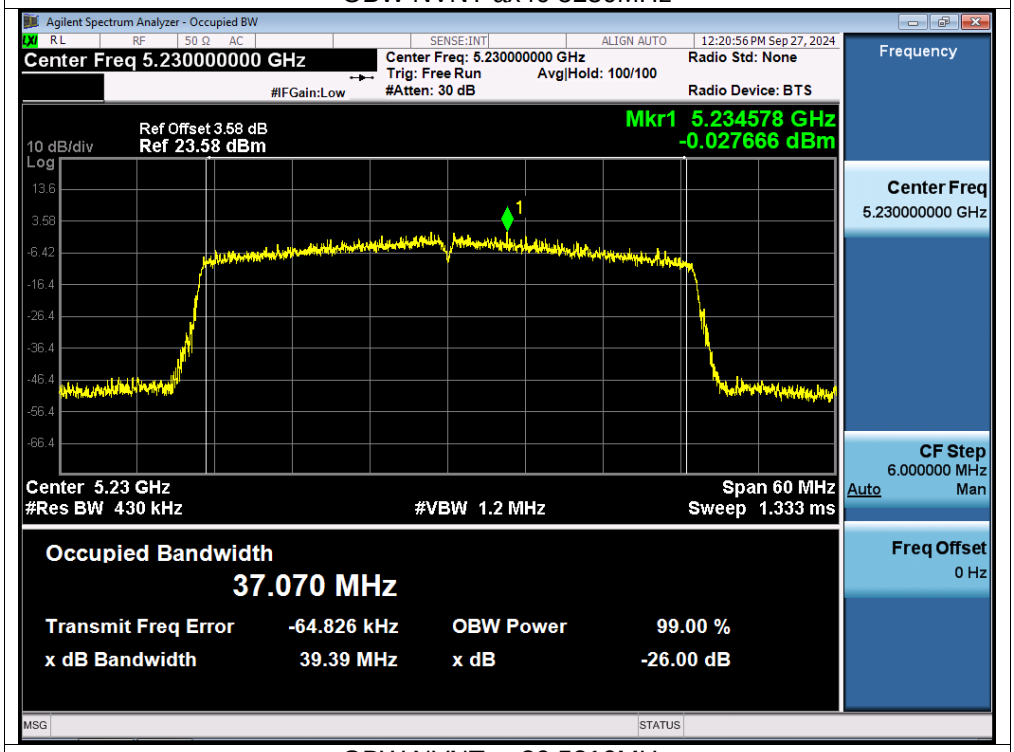
OBW NVNT ax20 5240MHz



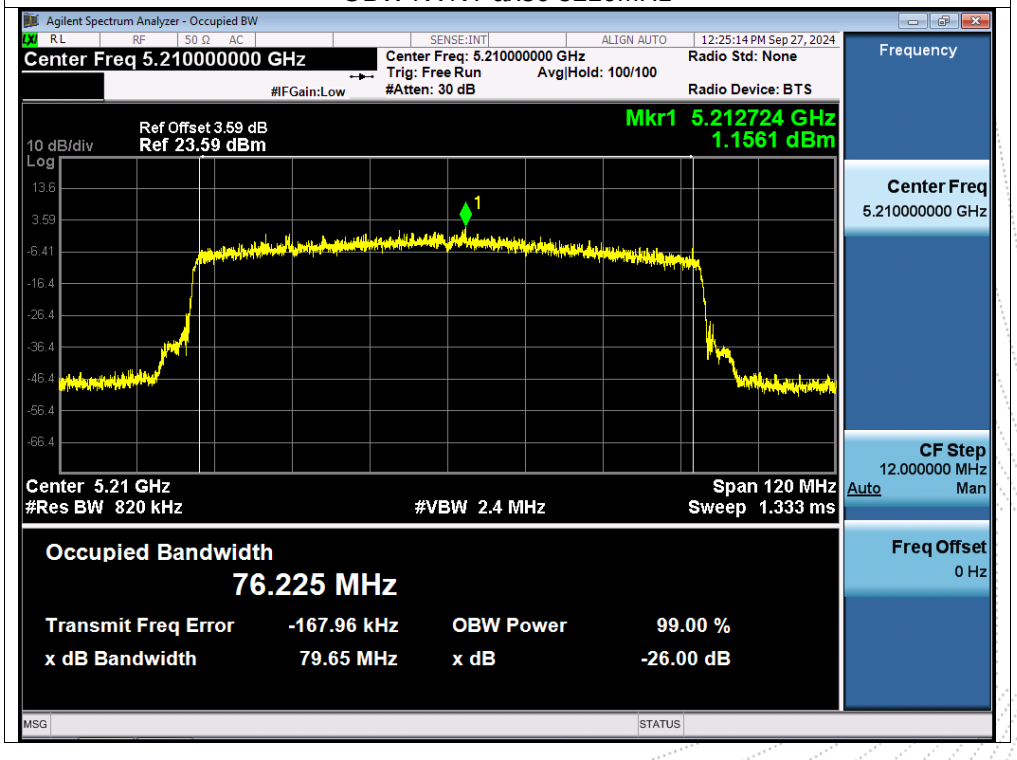
OBW NVNT ax40 5190MHz



OBW NVNT ax40 5230MHz



OBW NVNT ax80 5210MHz



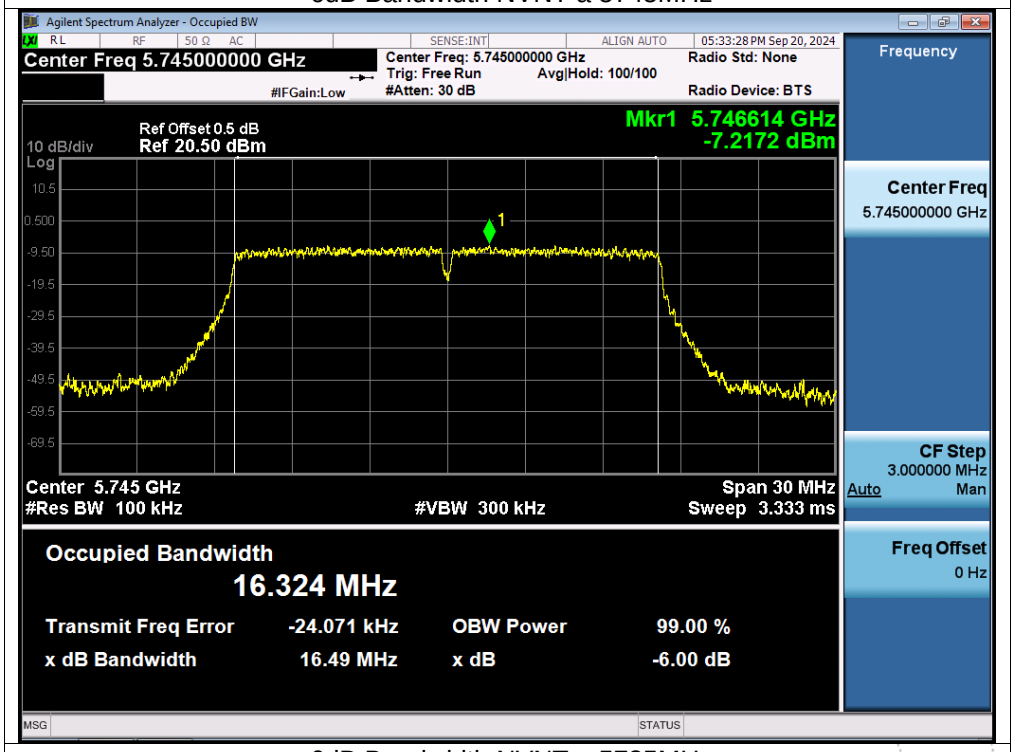
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 19V
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)		99% OBW (MHz)		Limit -6 dB Bandwidth (MHz)	Verdict
			Ant A	Ant B	Ant A	Ant B		
NVNT	a	5745	16.485	15.45	16.33	16.125	0.5	Pass
NVNT	a	5785	16.488	14.118	16.341	16.123	0.5	Pass
NVNT	a	5825	16.481	11.616	16.331	16.134	0.5	Pass
NVNT	n20	5745	17.637	14.98	17.544	17.238	0.5	Pass
NVNT	n20	5785	17.629	10.713	17.546	17.223	0.5	Pass
NVNT	n20	5825	17.665	11.651	17.544	17.252	0.5	Pass
NVNT	n40	5755	36.341	23.584	35.973	35.556	0.5	Pass
NVNT	n40	5795	36.368	27.13	35.998	35.551	0.5	Pass
NVNT	ac20	5745	17.634	13.69	17.544	17.249	0.5	Pass
NVNT	ac20	5785	17.64	10.235	17.536	17.231	0.5	Pass
NVNT	ac20	5825	17.658	11.689	17.551	17.244	0.5	Pass
NVNT	ac40	5755	36.356	19.55	36.01	35.484	0.5	Pass
NVNT	ac40	5795	36.347	31.243	35.985	35.586	0.5	Pass
NVNT	ac80	5775	**74.711**	62.31	74.48	74.709	0.5	Pass
NVNT	ax20	5745	15.191	13.424	18.509	18.564	0.5	Pass
NVNT	ax20	5785	15.199	16.32	18.582	18.575	0.5	Pass
NVNT	ax20	5825	10.76	16.023	18.596	18.584	0.5	Pass
NVNT	ax40	5755	35.993	30.318	37.216	37.085	0.5	Pass
NVNT	ax40	5795	29.849	27.762	37.154	37.184	0.5	Pass
NVNT	ax80	5775	71.272	68.838	76.44	**76.451**	0.5	Pass

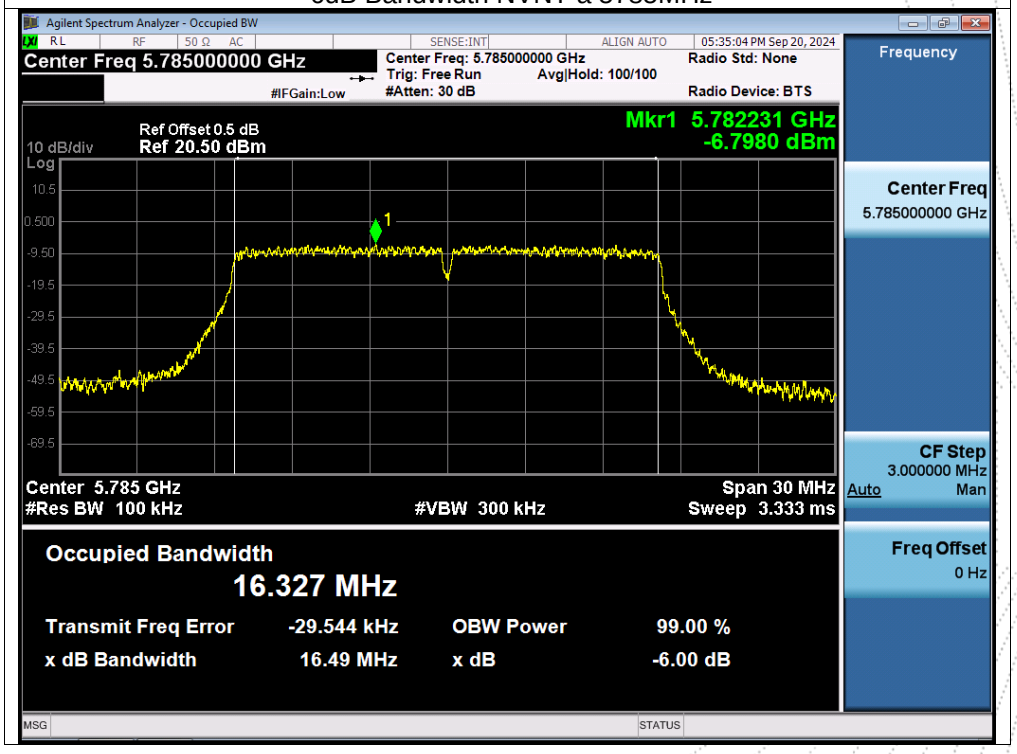
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

Test Graphs

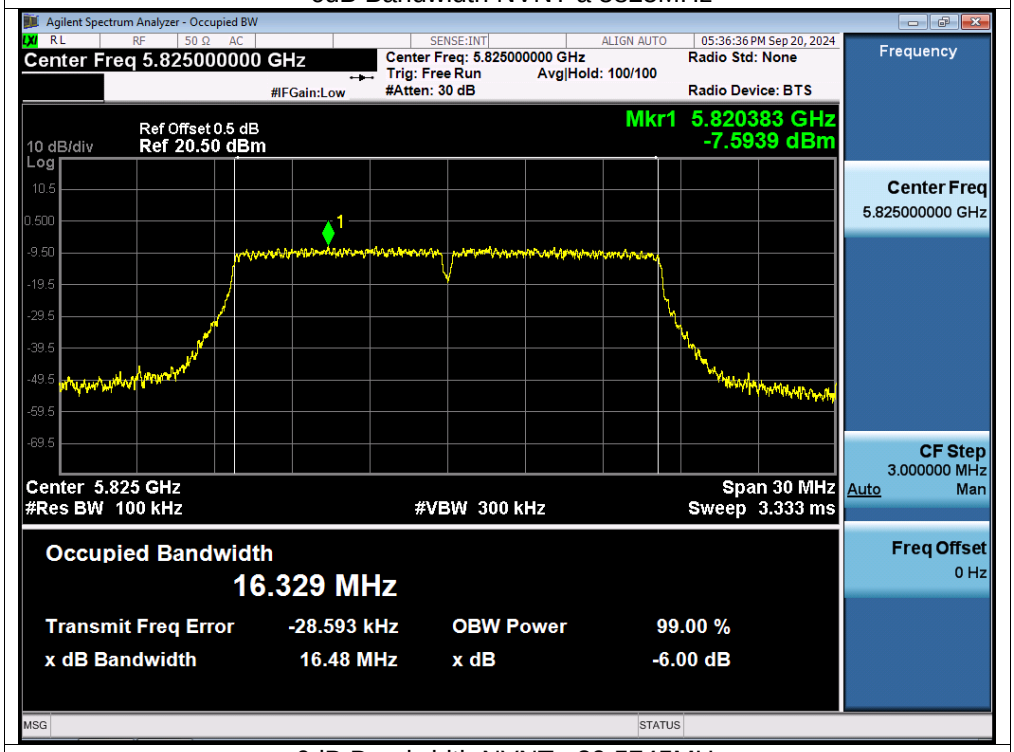
-6dB Bandwidth NVNT a 5745MHz



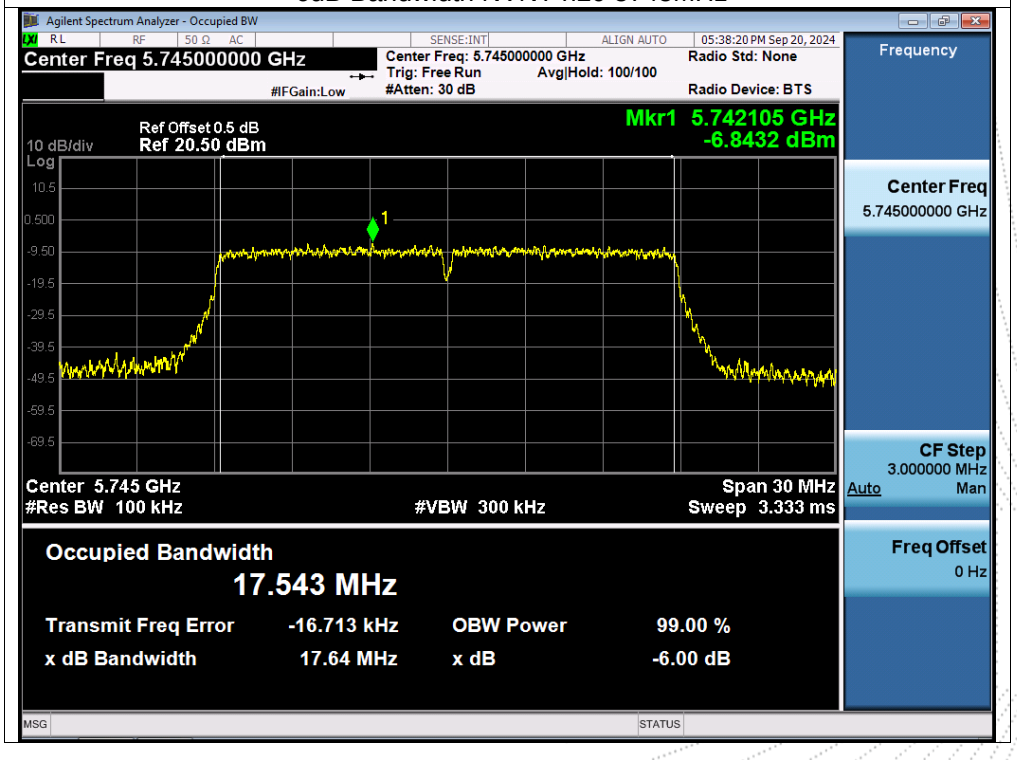
-6dB Bandwidth NVNT a 5785MHz



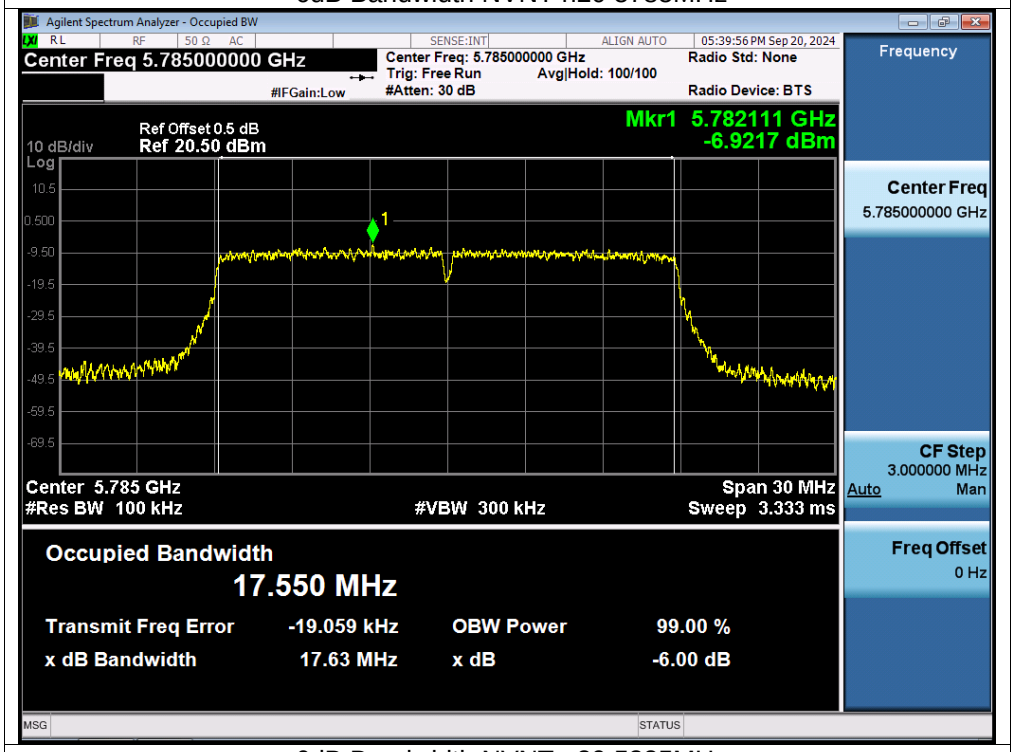
-6dB Bandwidth NVNT a 5825MHz



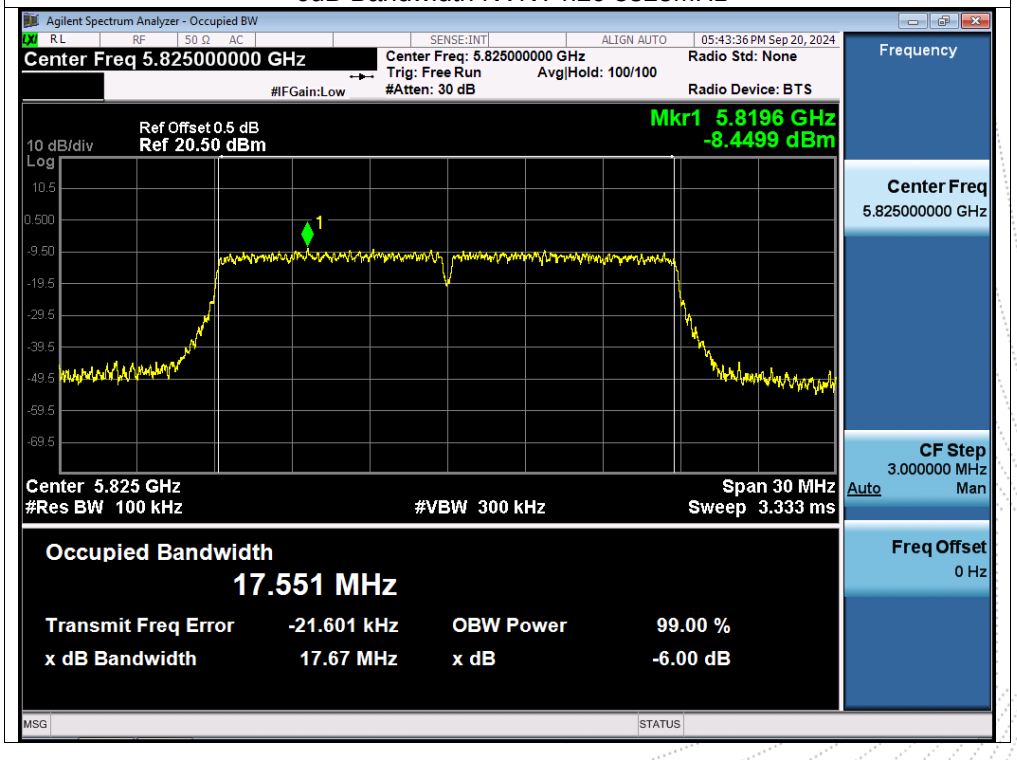
-6dB Bandwidth NVNT n20 5745MHz



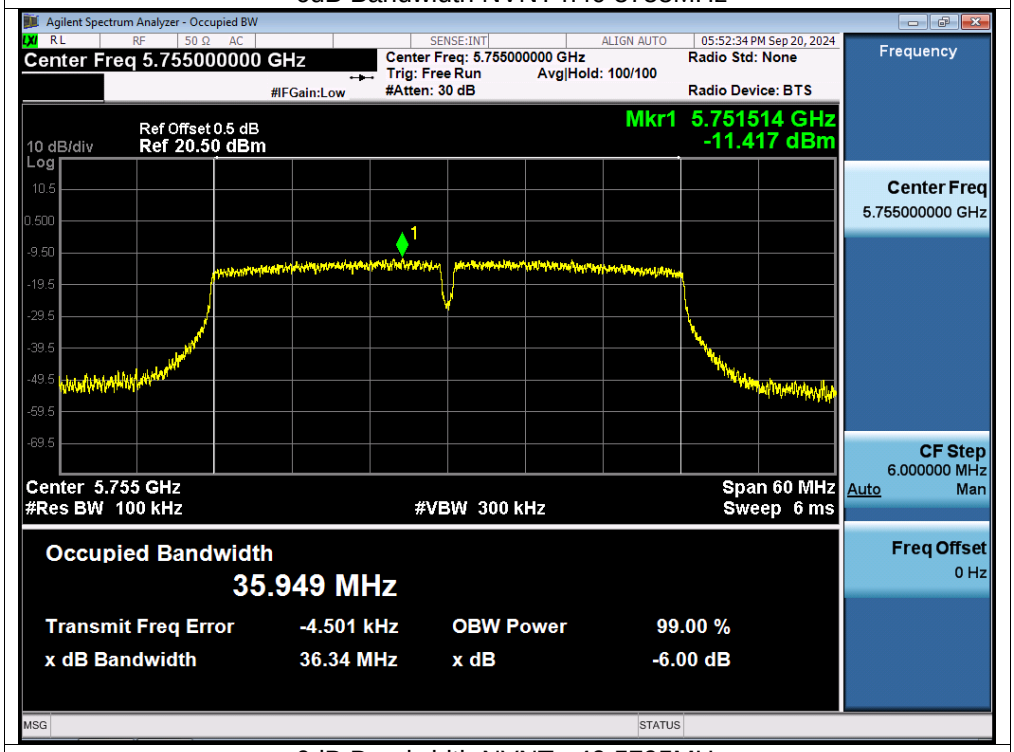
-6dB Bandwidth NVNT n20 5785MHz



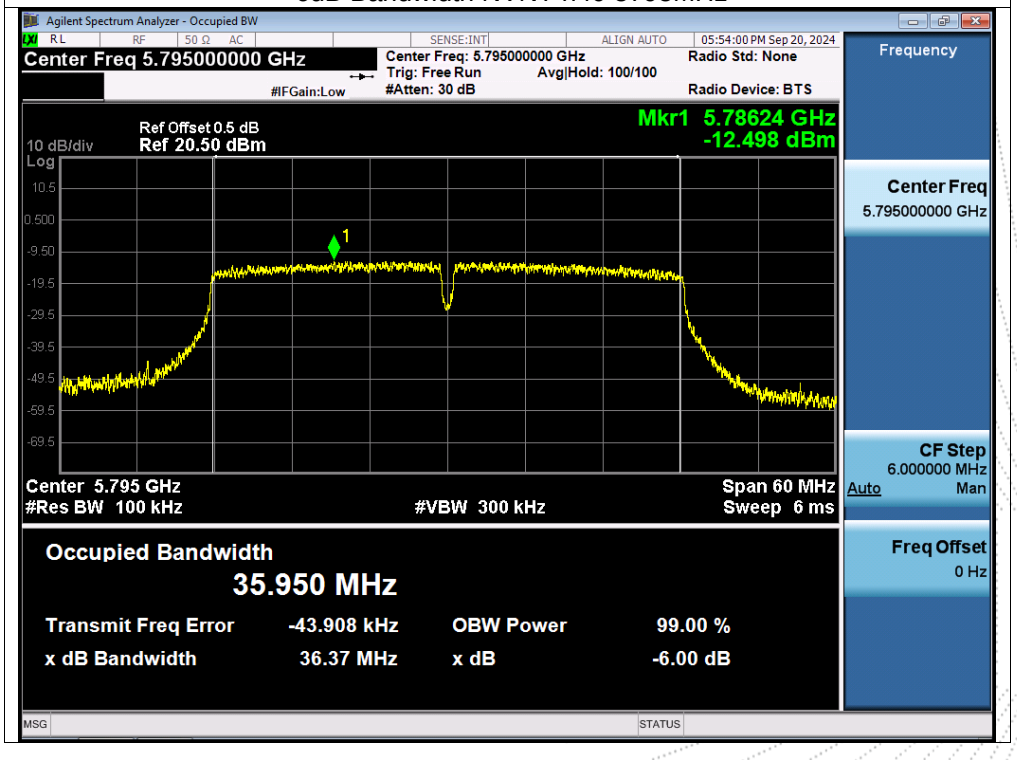
-6dB Bandwidth NVNT n20 5825MHz



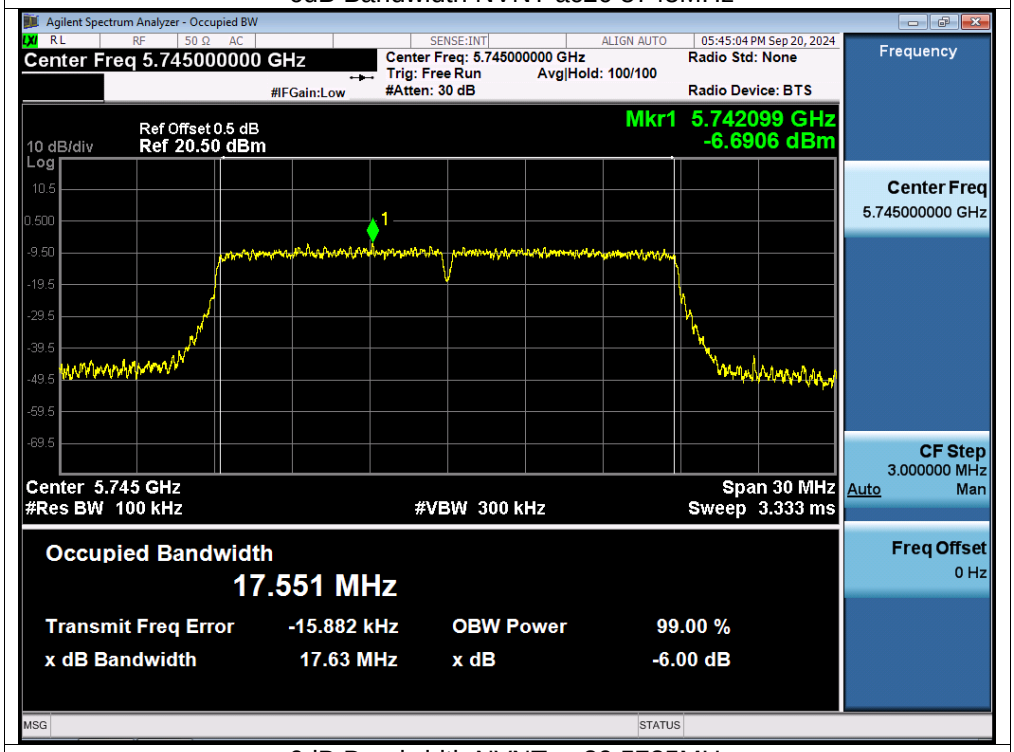
-6dB Bandwidth NVNT n40 5755MHz



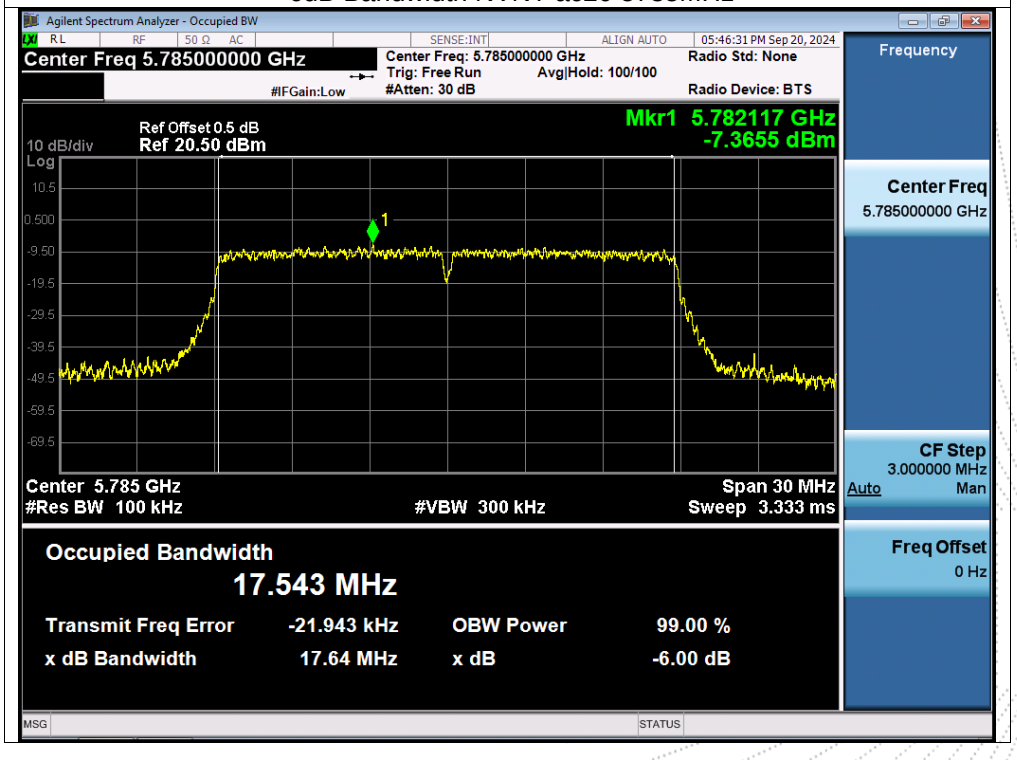
-6dB Bandwidth NVNT n40 5795MHz



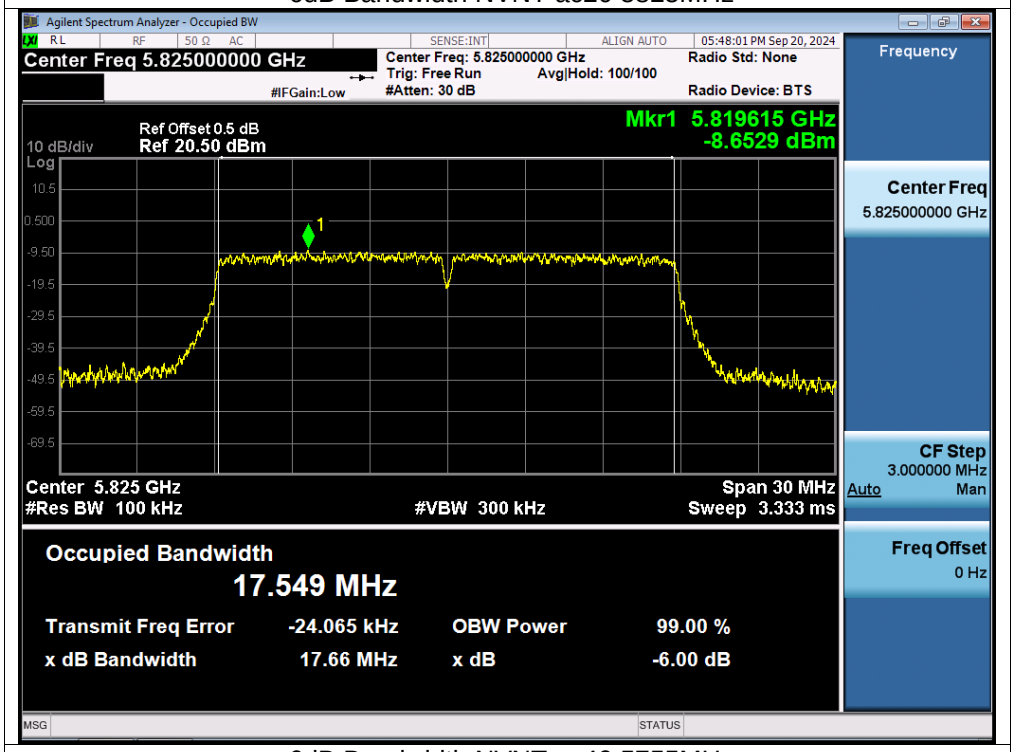
-6dB Bandwidth NVNT ac20 5745MHz



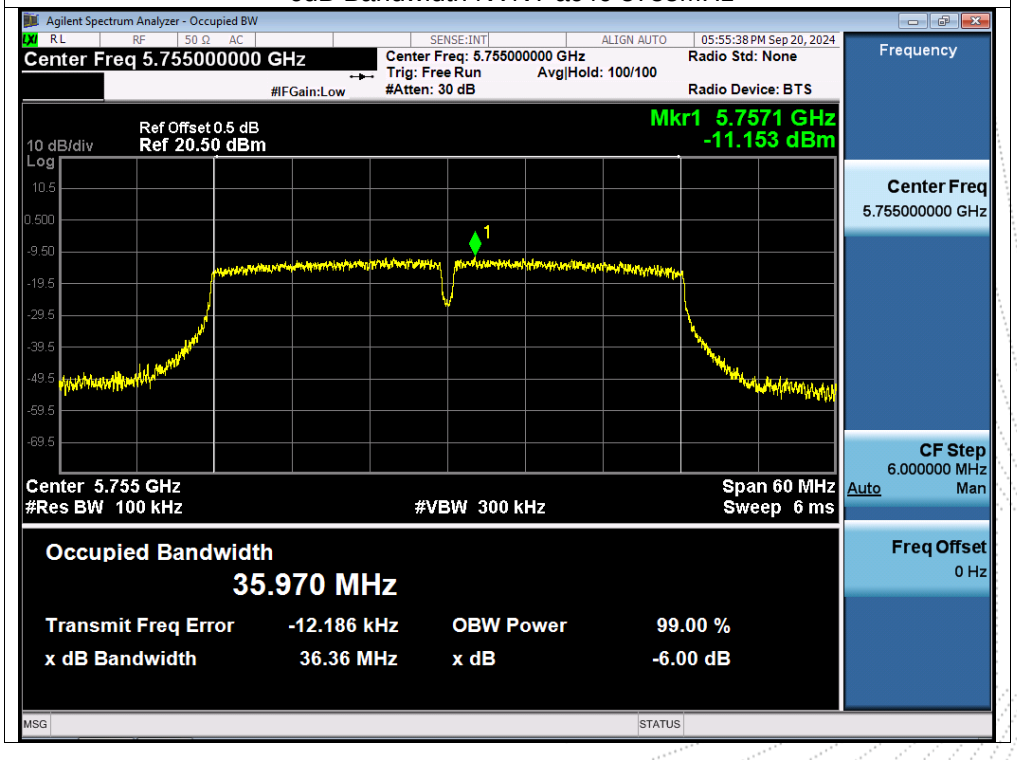
-6dB Bandwidth NVNT ac20 5785MHz



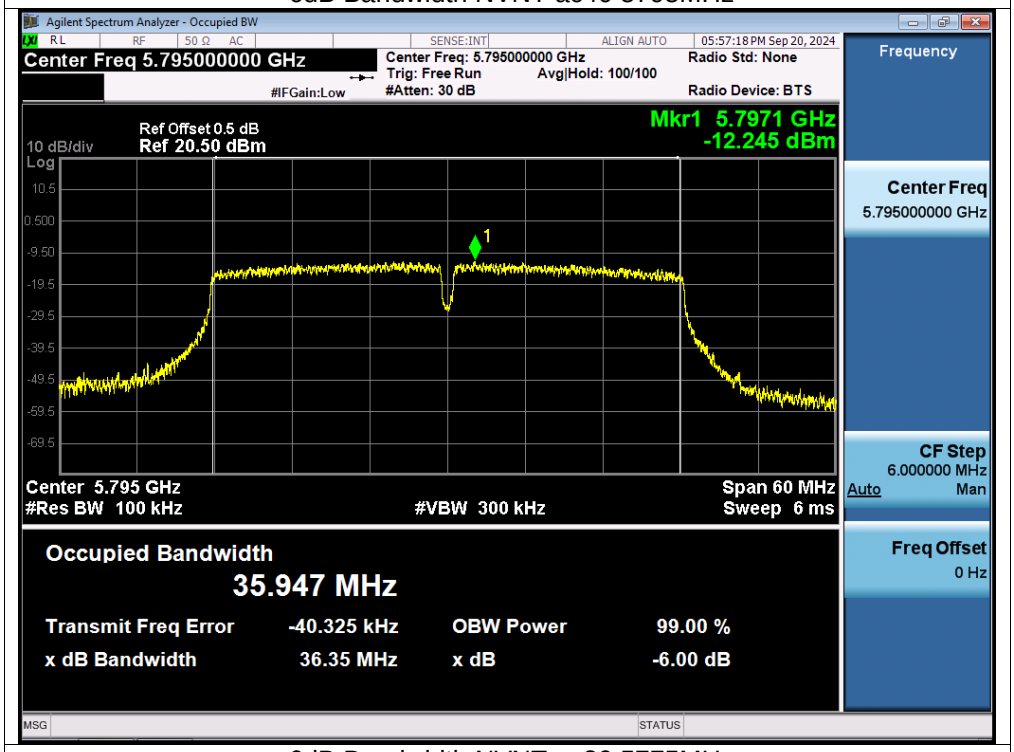
-6dB Bandwidth NVNT ac20 5825MHz



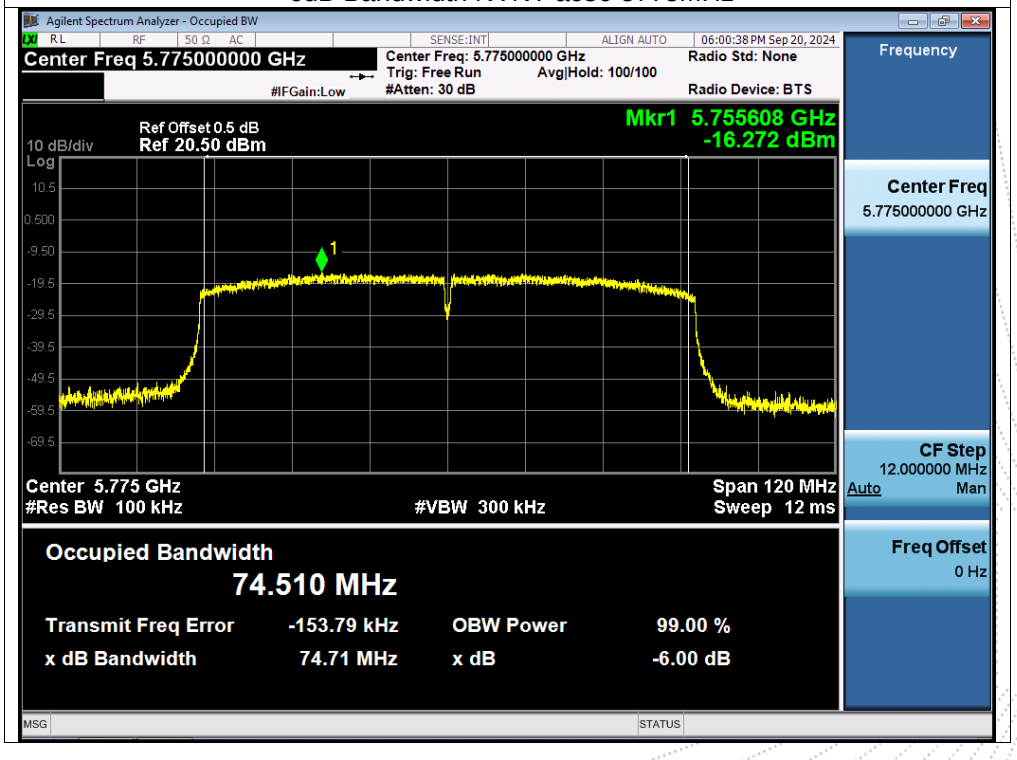
-6dB Bandwidth NVNT ac40 5755MHz



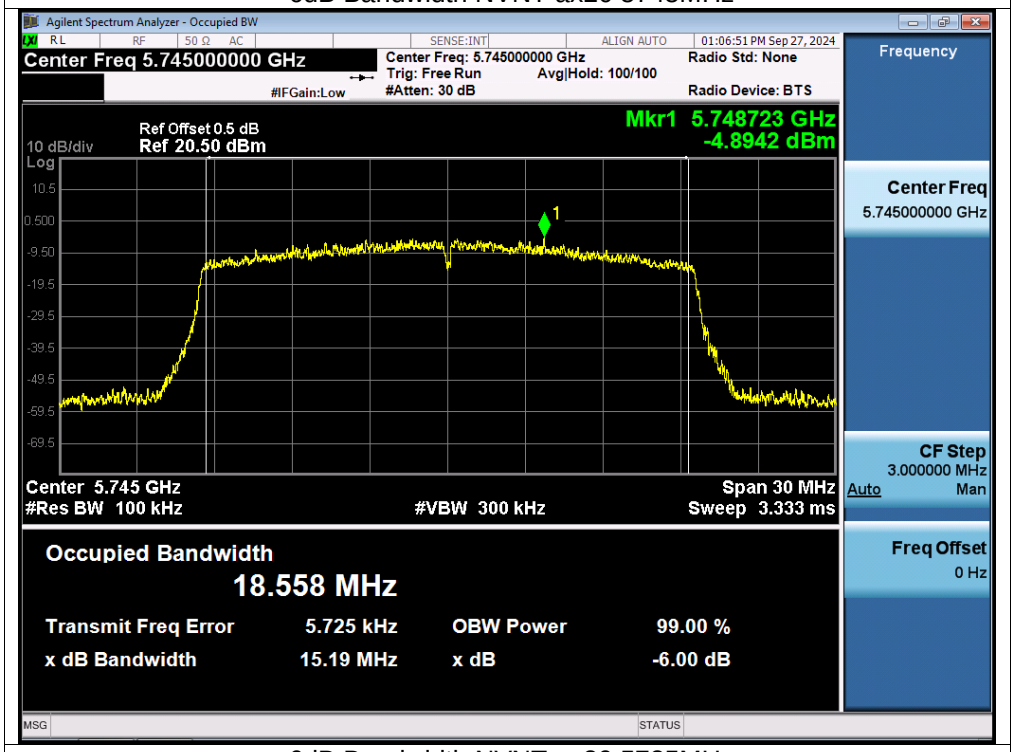
-6dB Bandwidth NVNT ac40 5795MHz



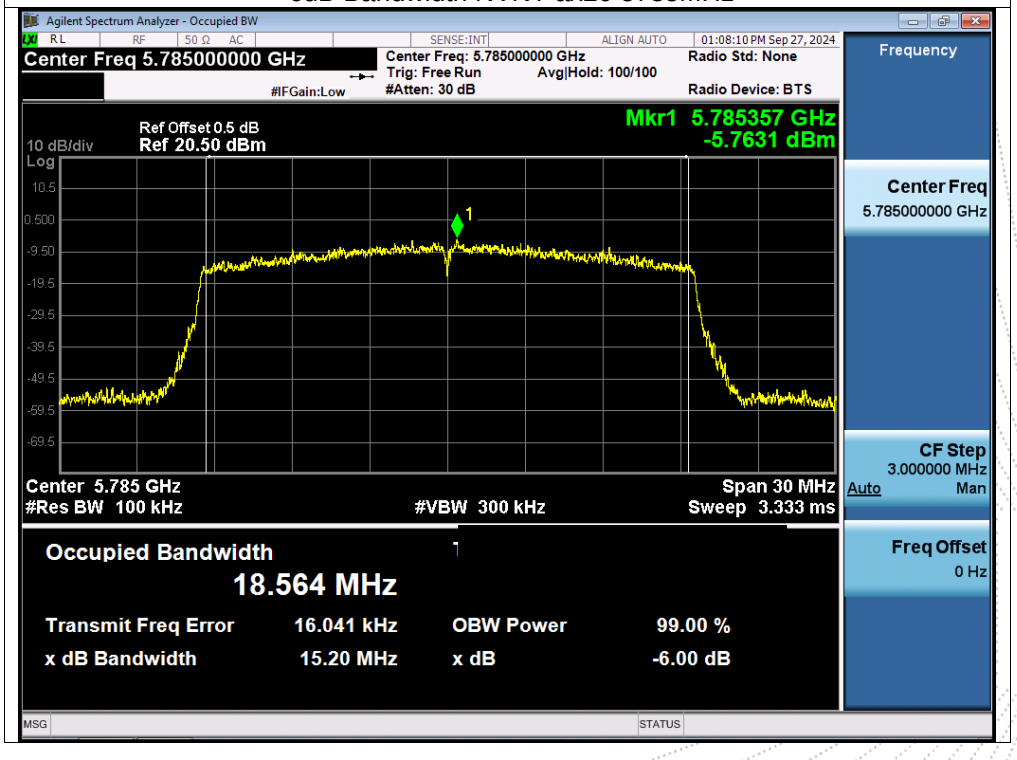
-6dB Bandwidth NVNT ac80 5775MHz



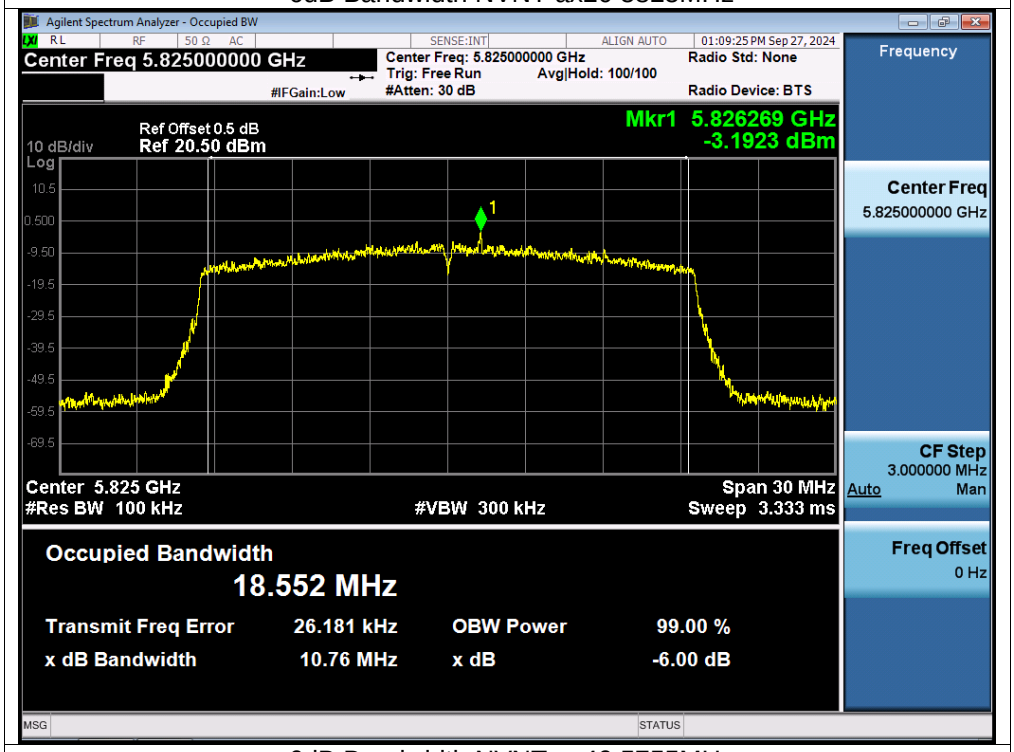
-6dB Bandwidth NVNT ax20 5745MHz



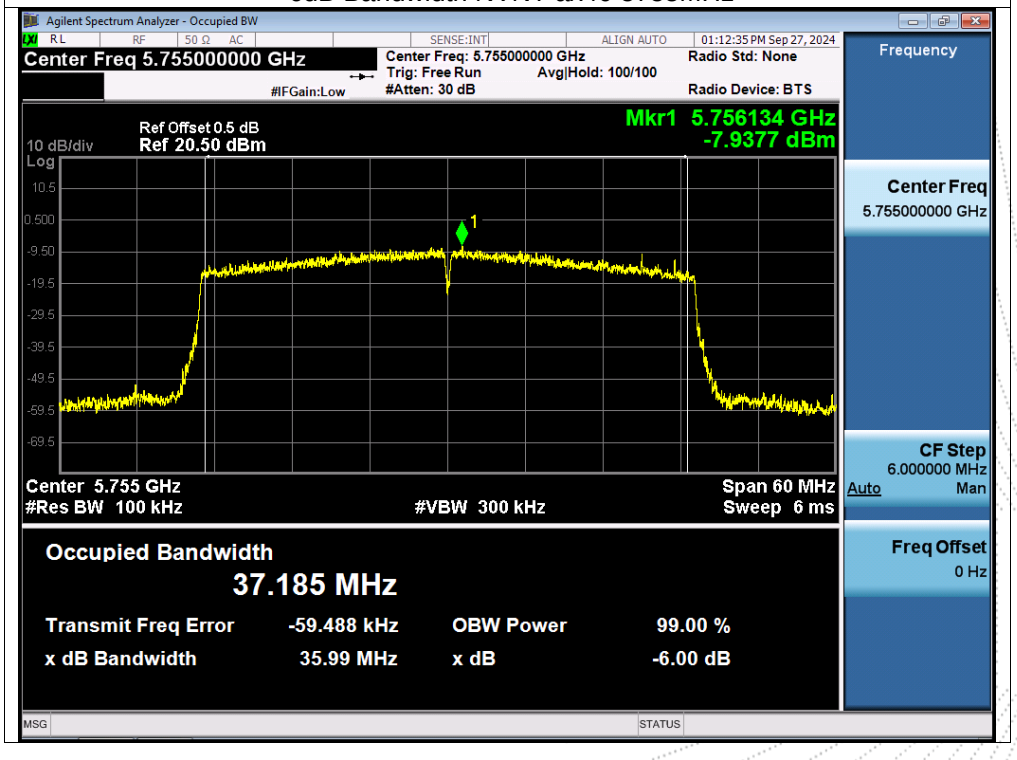
-6dB Bandwidth NVNT ax20 5785MHz



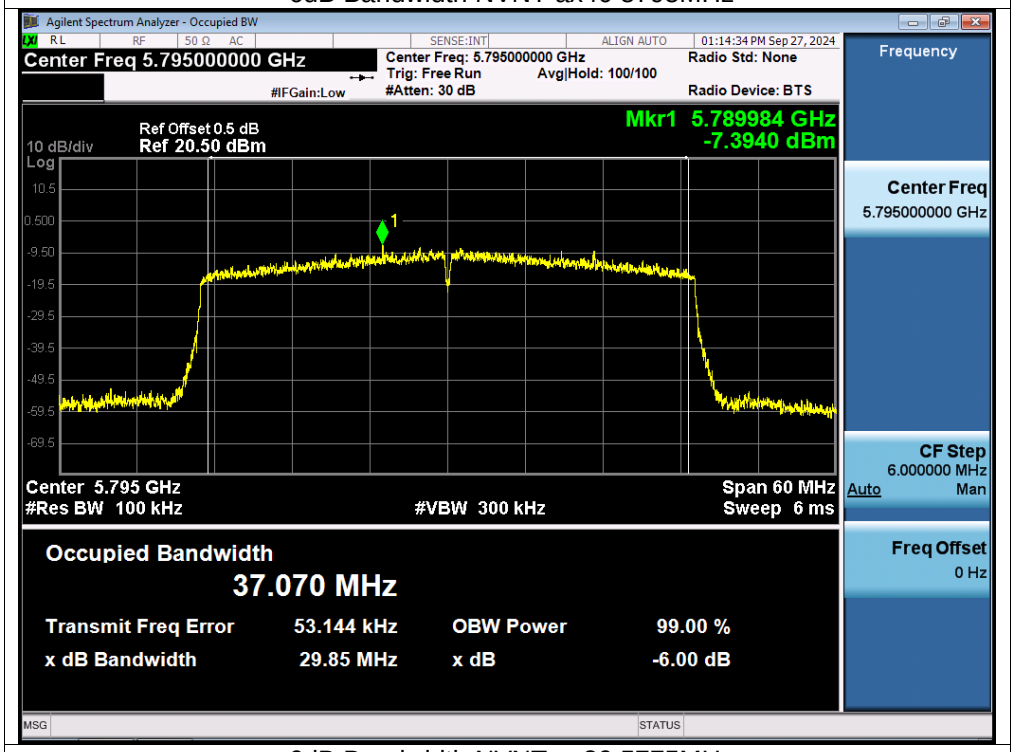
-6dB Bandwidth NVNT ax20 5825MHz



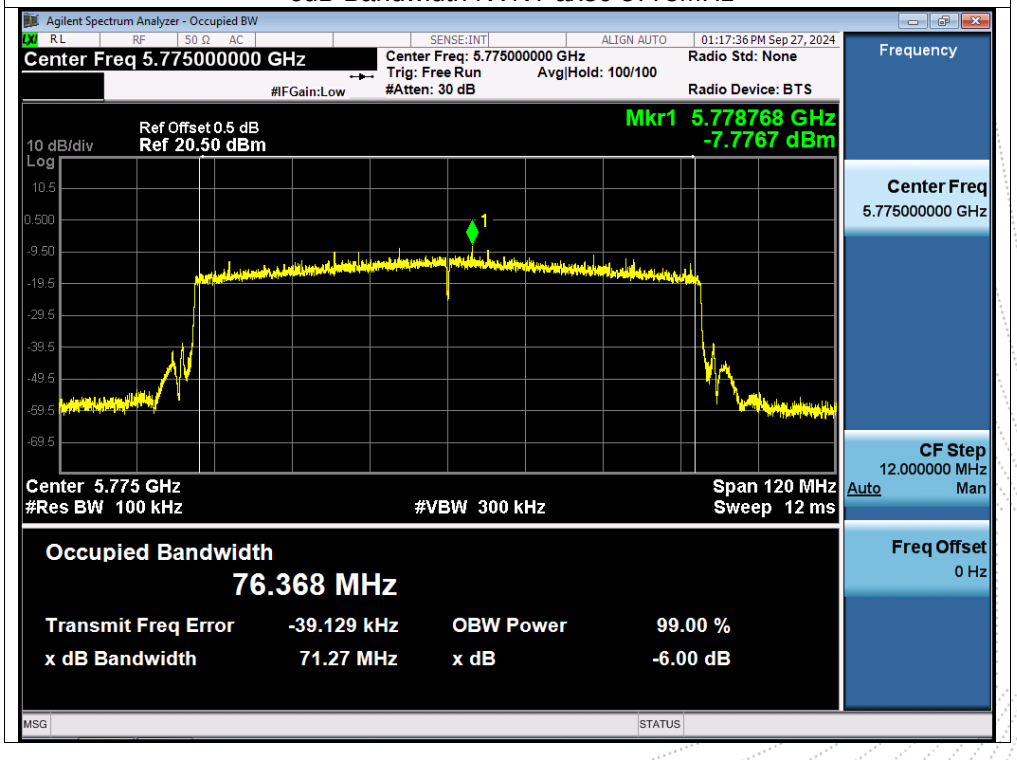
-6dB Bandwidth NVNT ax40 5755MHz



-6dB Bandwidth NVNT ax40 5795MHz



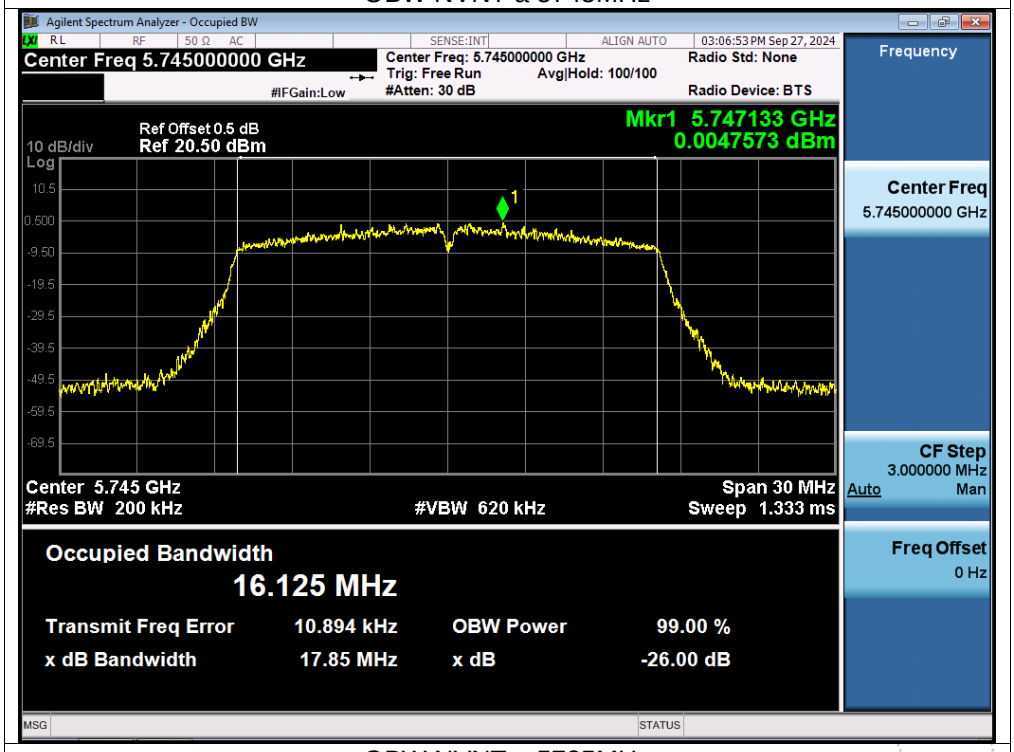
-6dB Bandwidth NVNT ax80 5775MHz



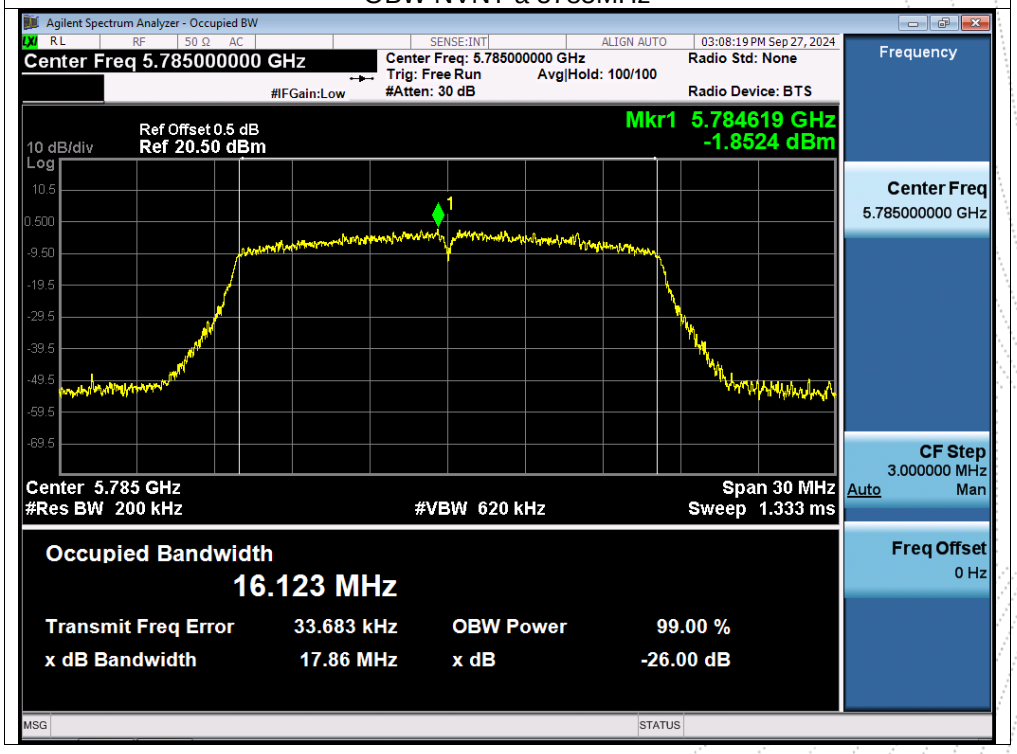
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

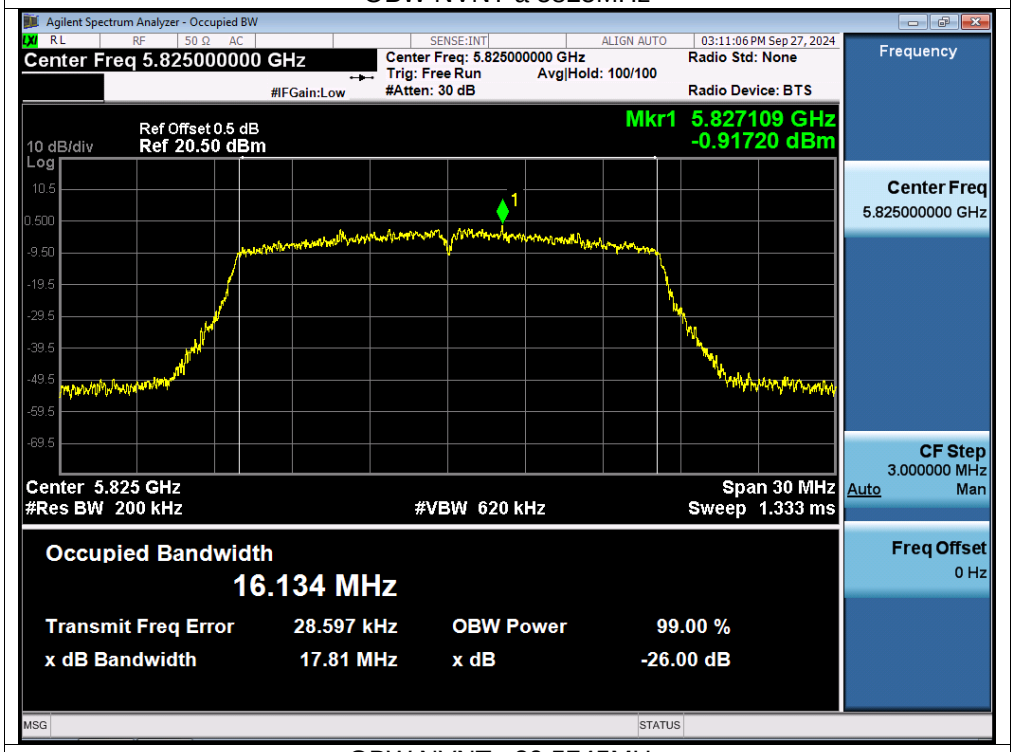
OBW NVNT a 5745MHz



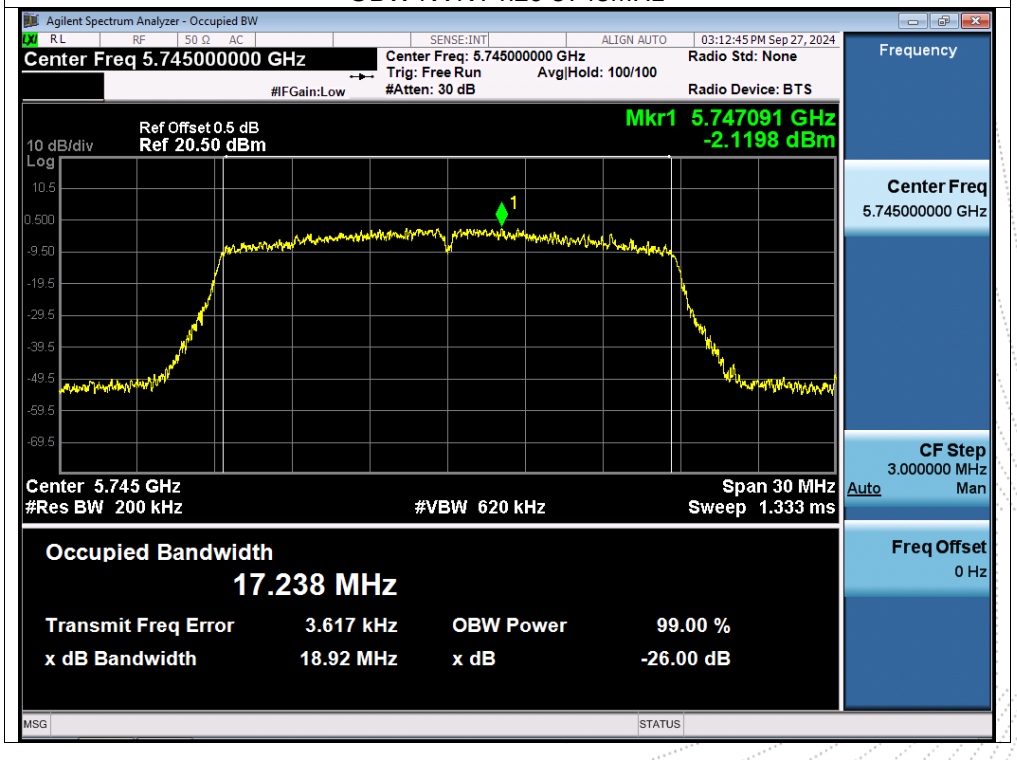
OBW NVNT a 5785MHz



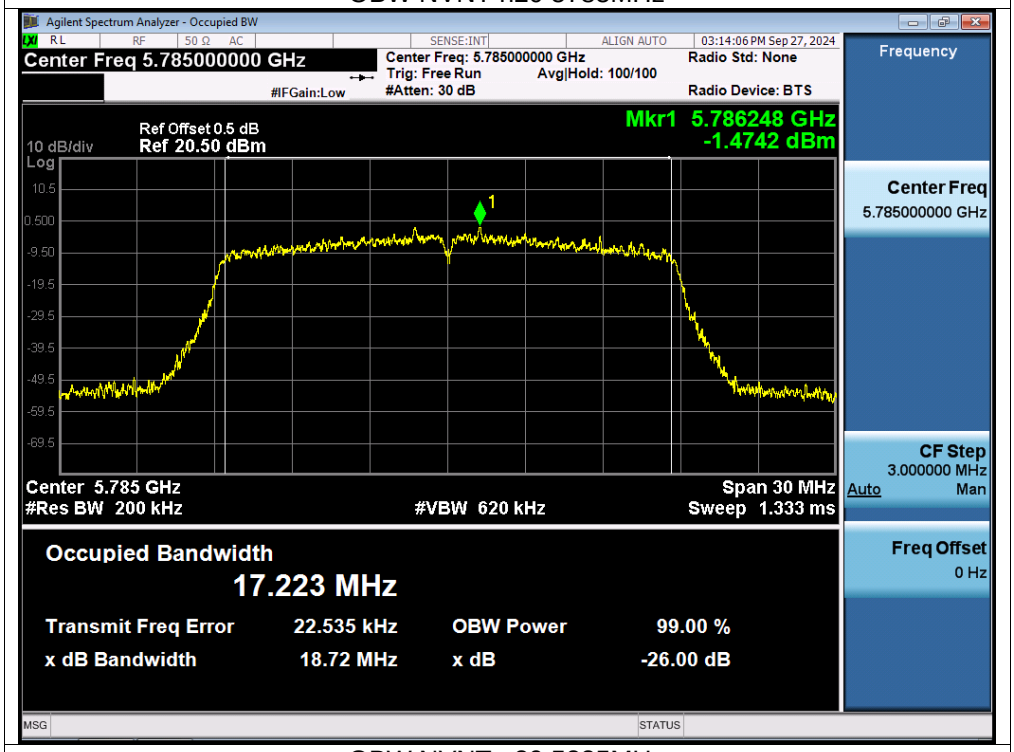
OBW NVNT a 5825MHz



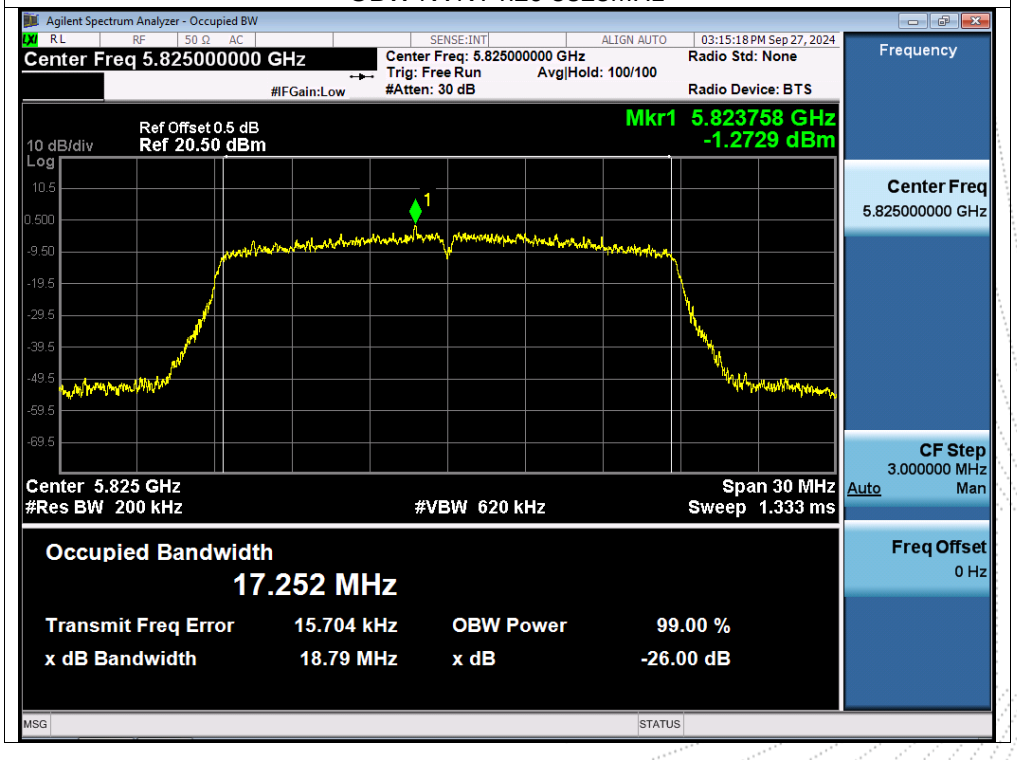
OBW NVNT n20 5745MHz



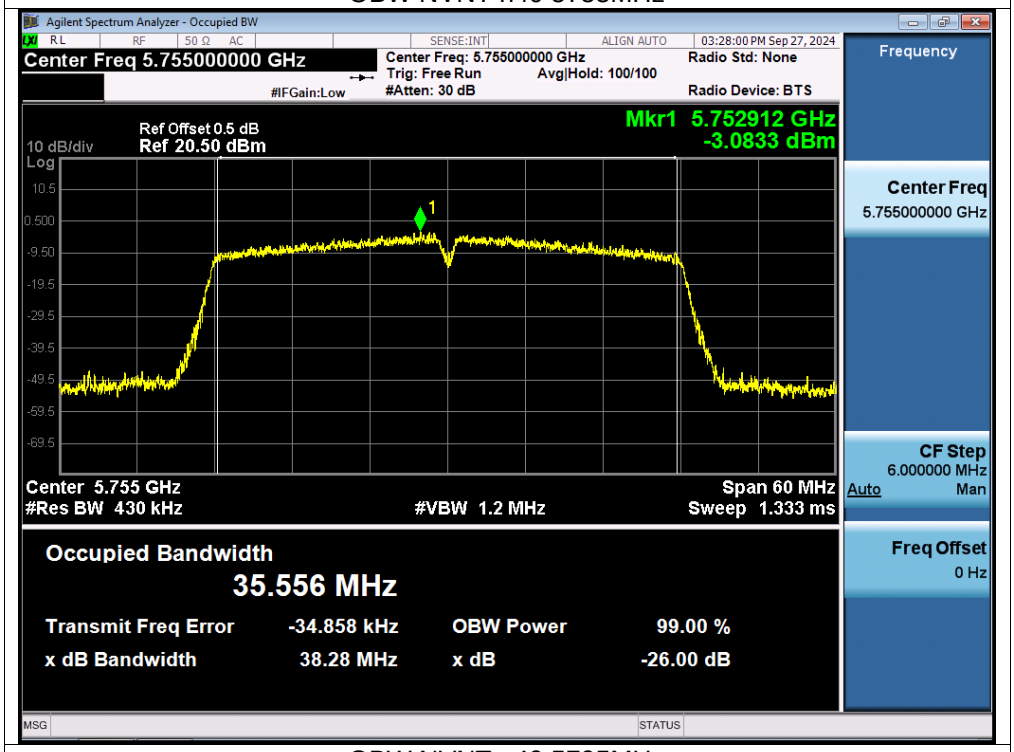
OBW NVNT n20 5785MHz



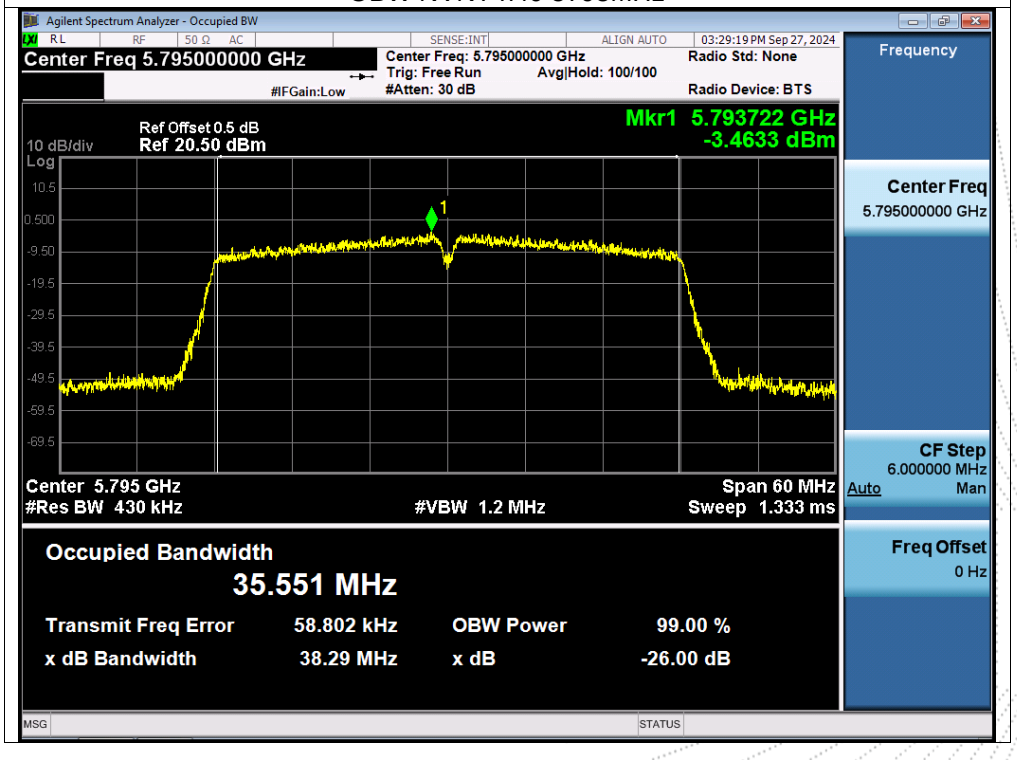
OBW NVNT n20 5825MHz



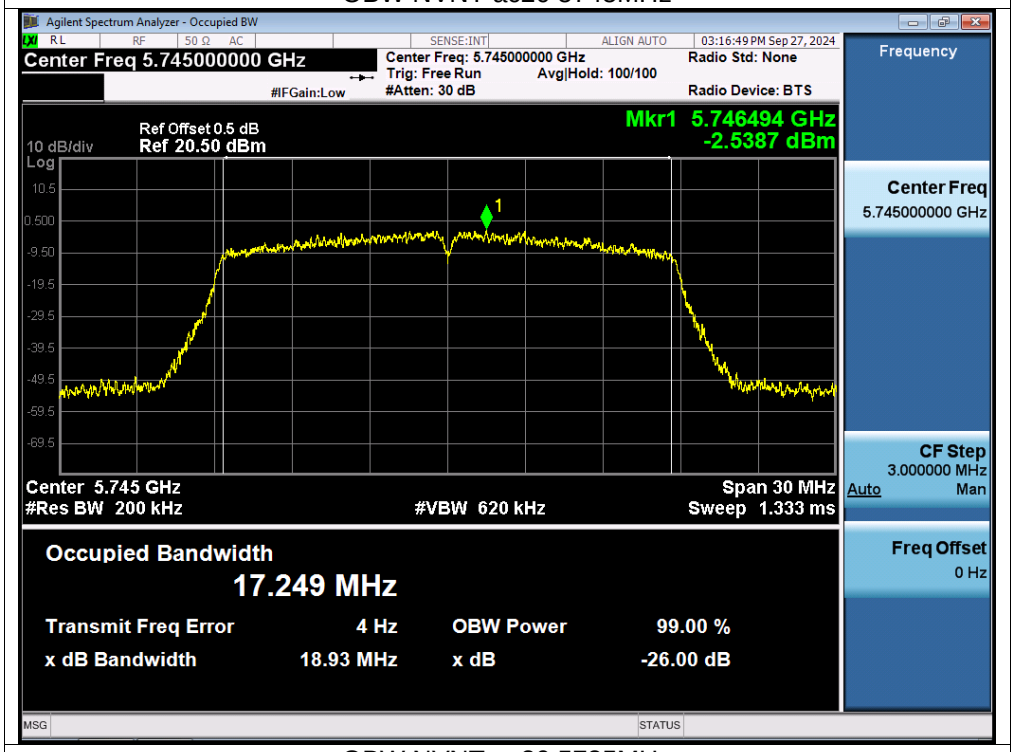
OBW NVNT n40 5755MHz



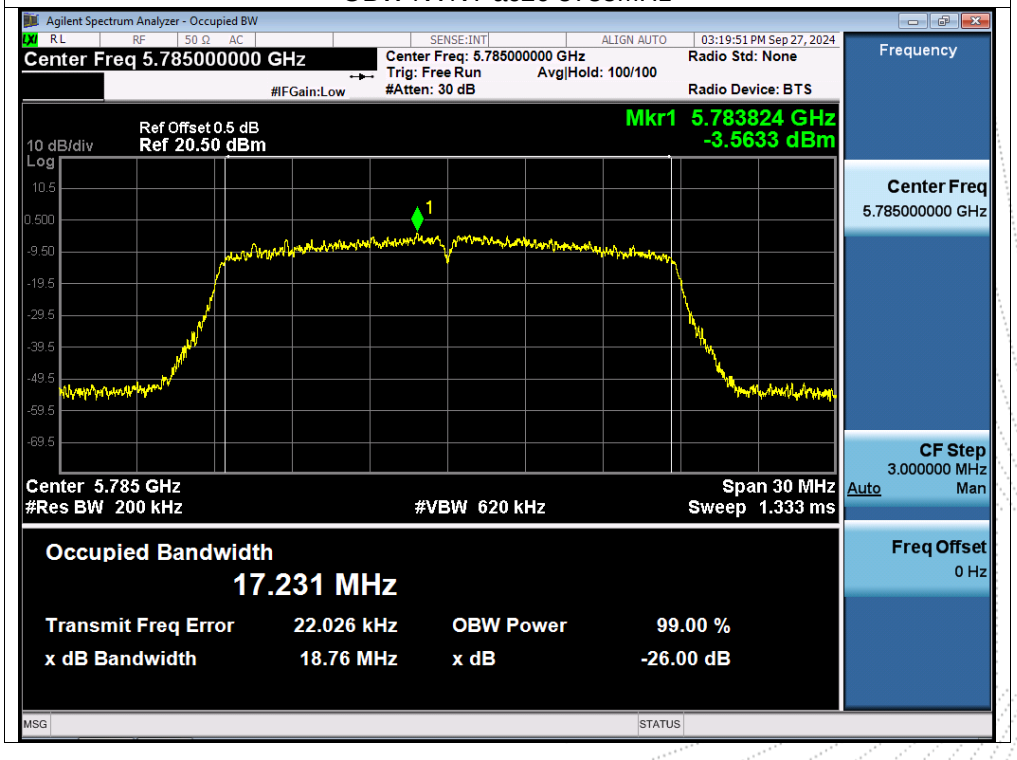
OBW NVNT n40 5795MHz



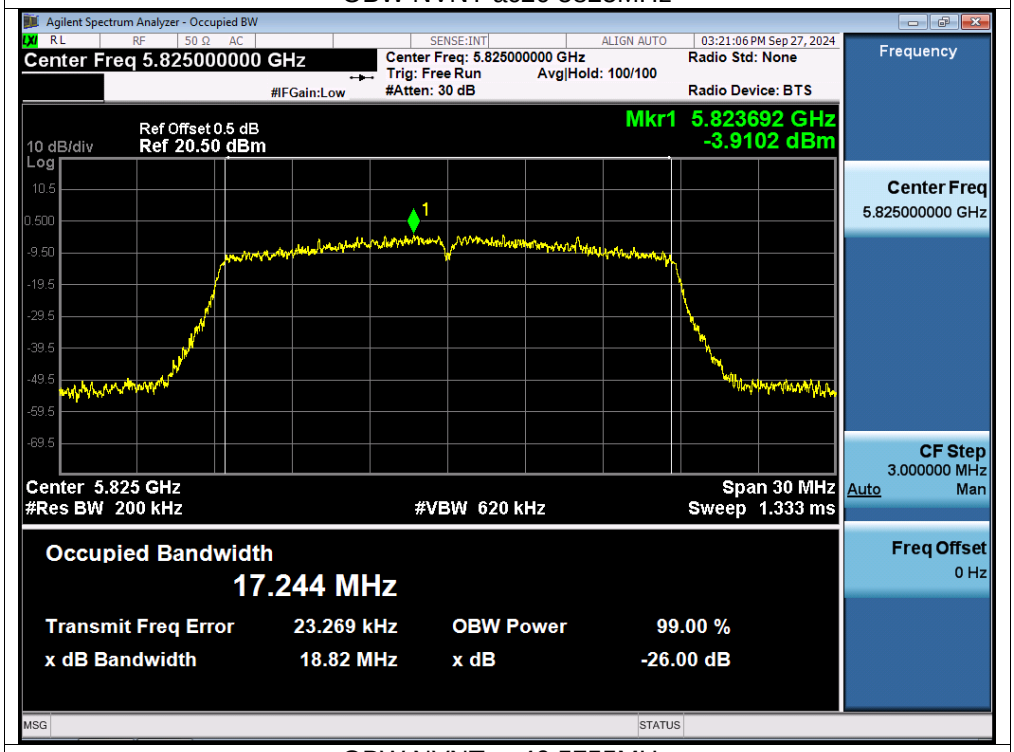
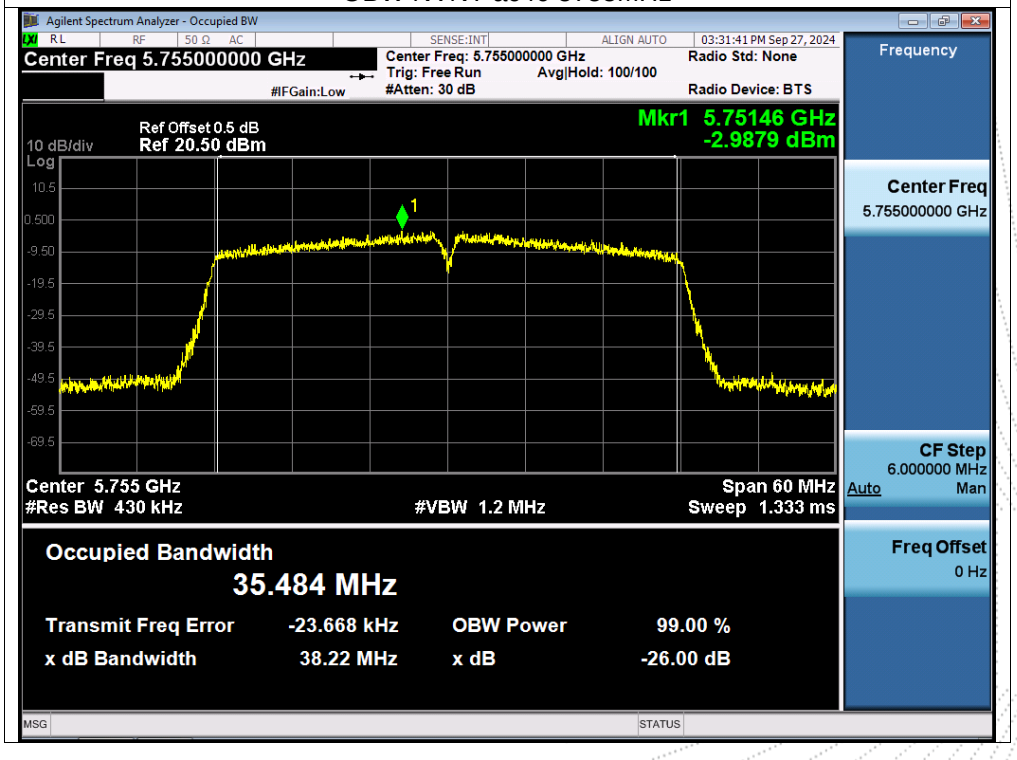
OBW NVNT ac20 5745MHz



OBW NVNT ac20 5785MHz



OBW NVNT ac20 5825MHz



OBW NVNT ac40 5755MHz