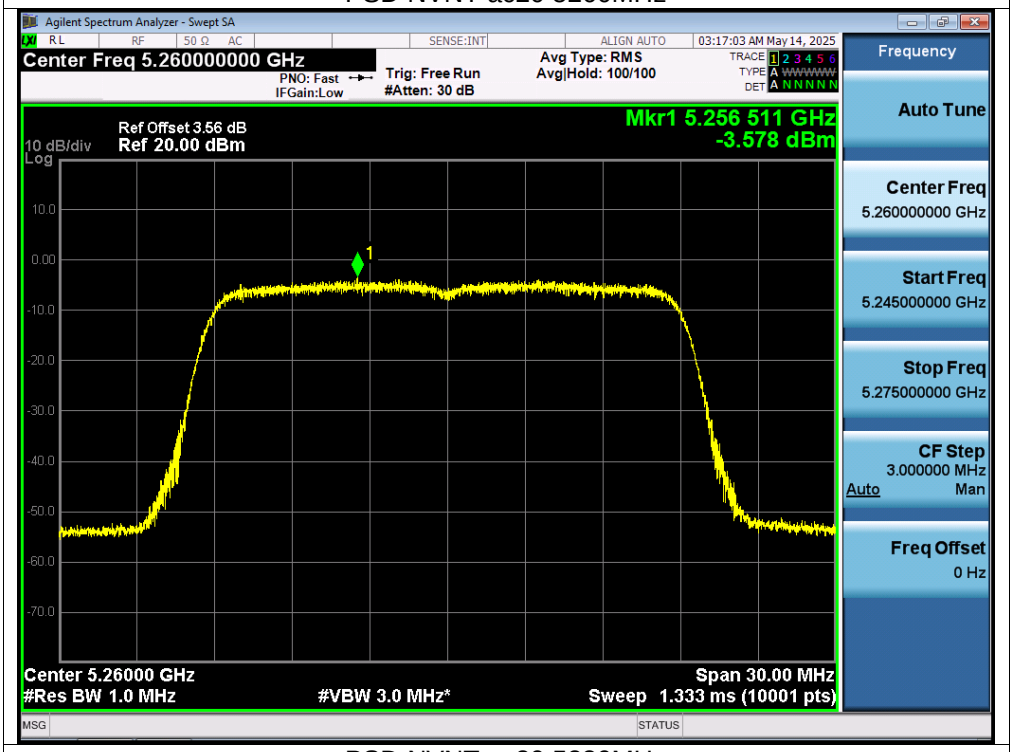
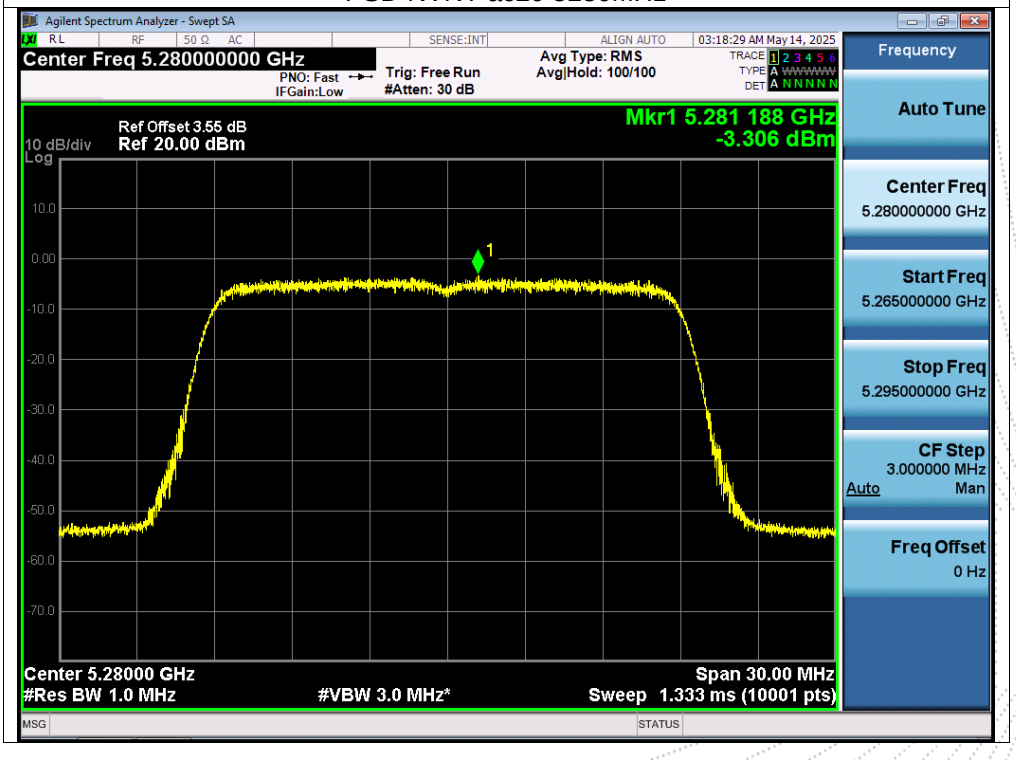
PSD NVNT ac20 5260MHz

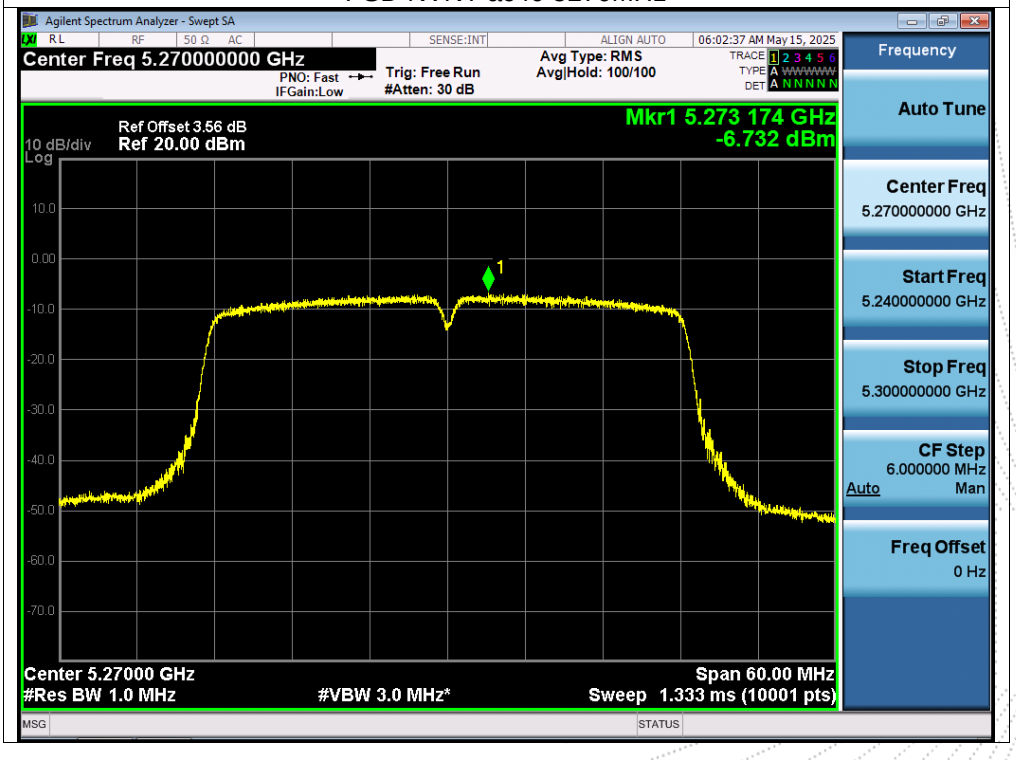


PSD NVNT ac20 5280MHz

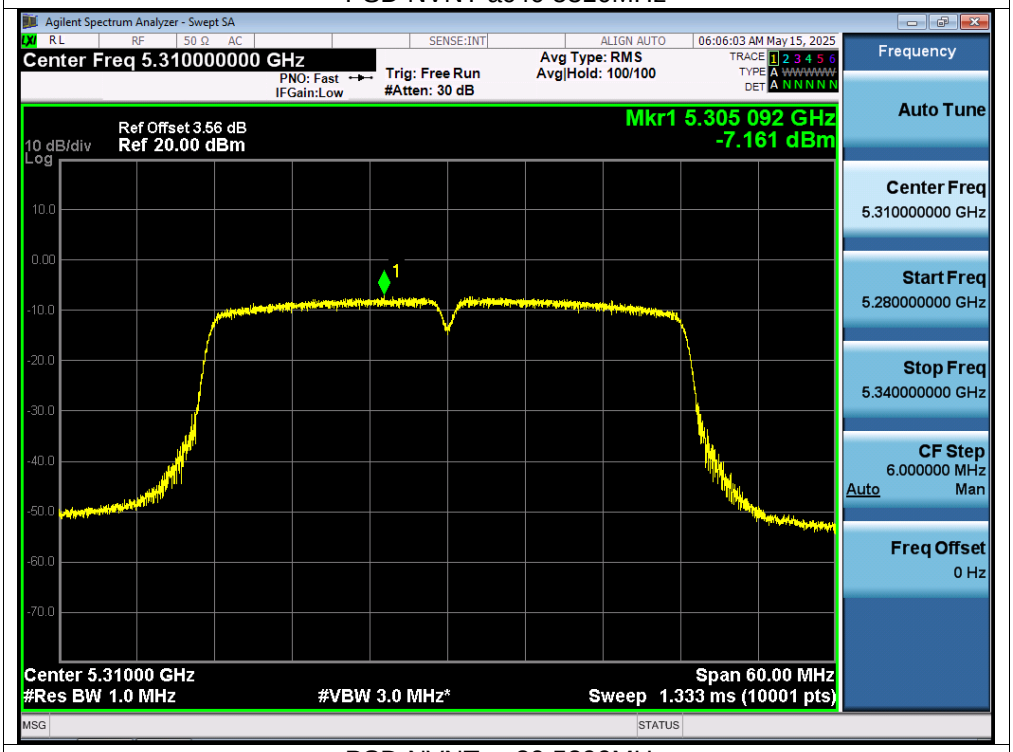


PSD NVNT ac20 5320MHz

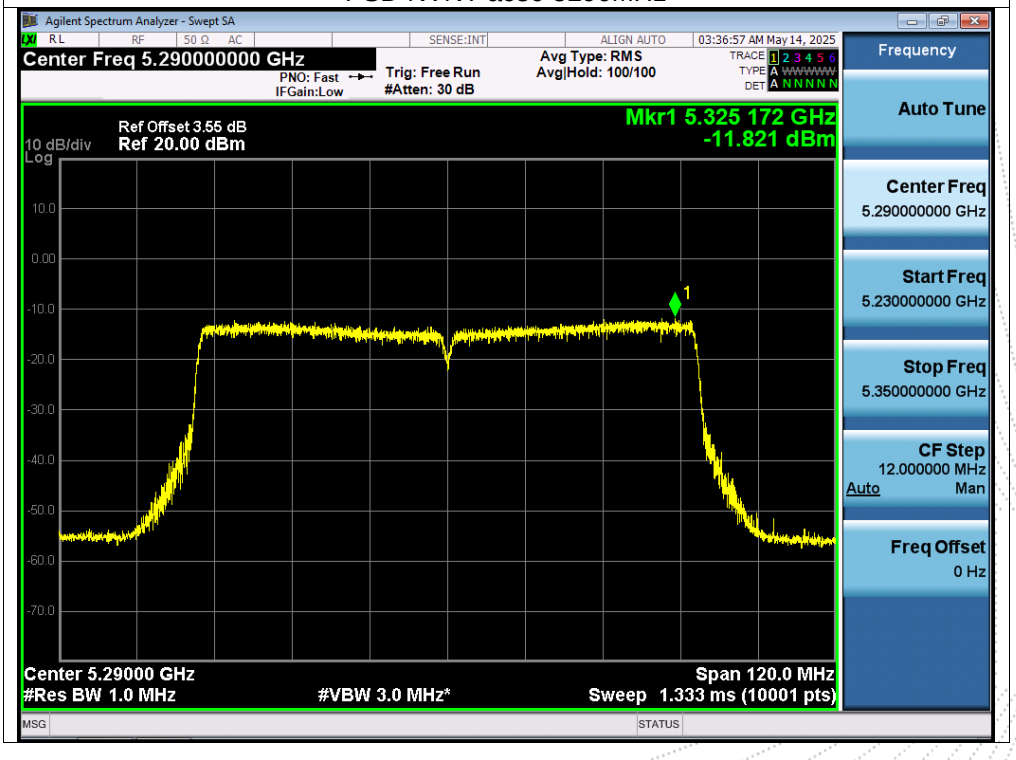
PSD NVNT ac40 5270MHz



PSD NVNT ac40 5310MHz

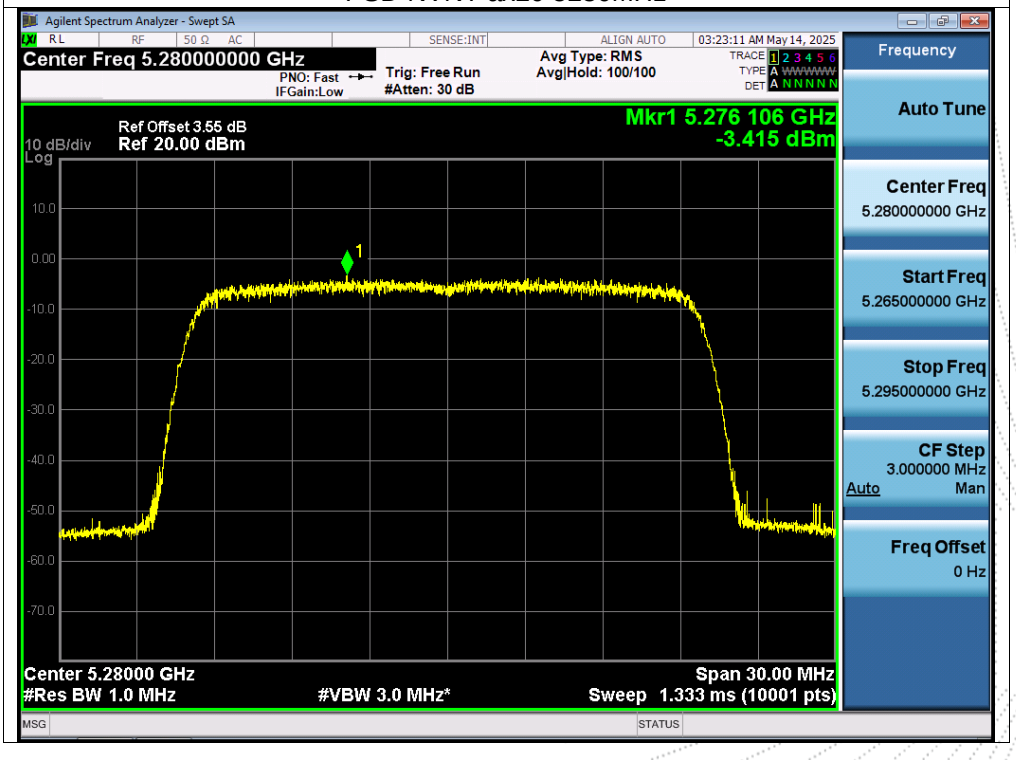


PSD NVNT ac80 5290MHz



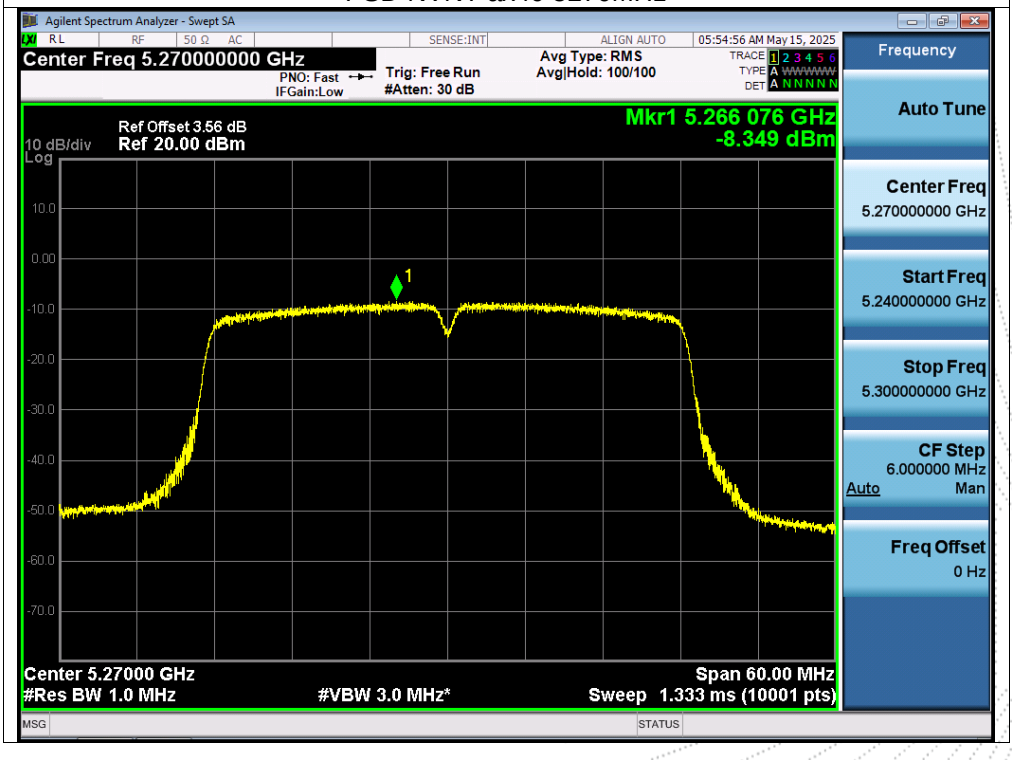
PSD NVNT ax20 5260MHz

PSD NVNT ax20 5280MHz

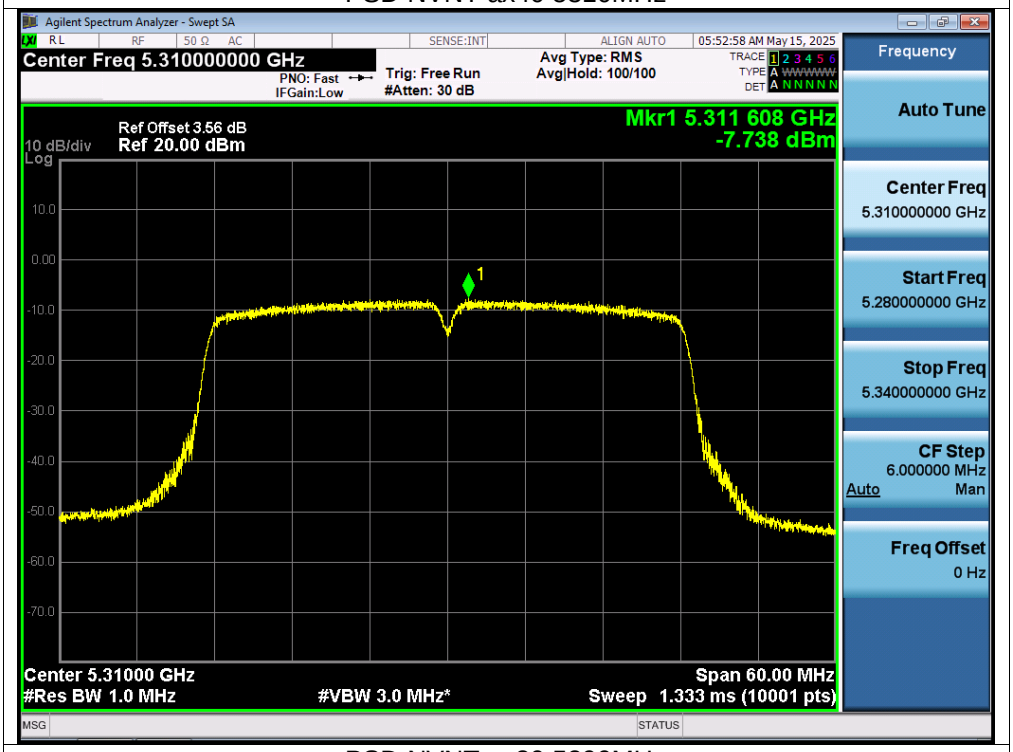


PSD NVNT ax20 5320MHz

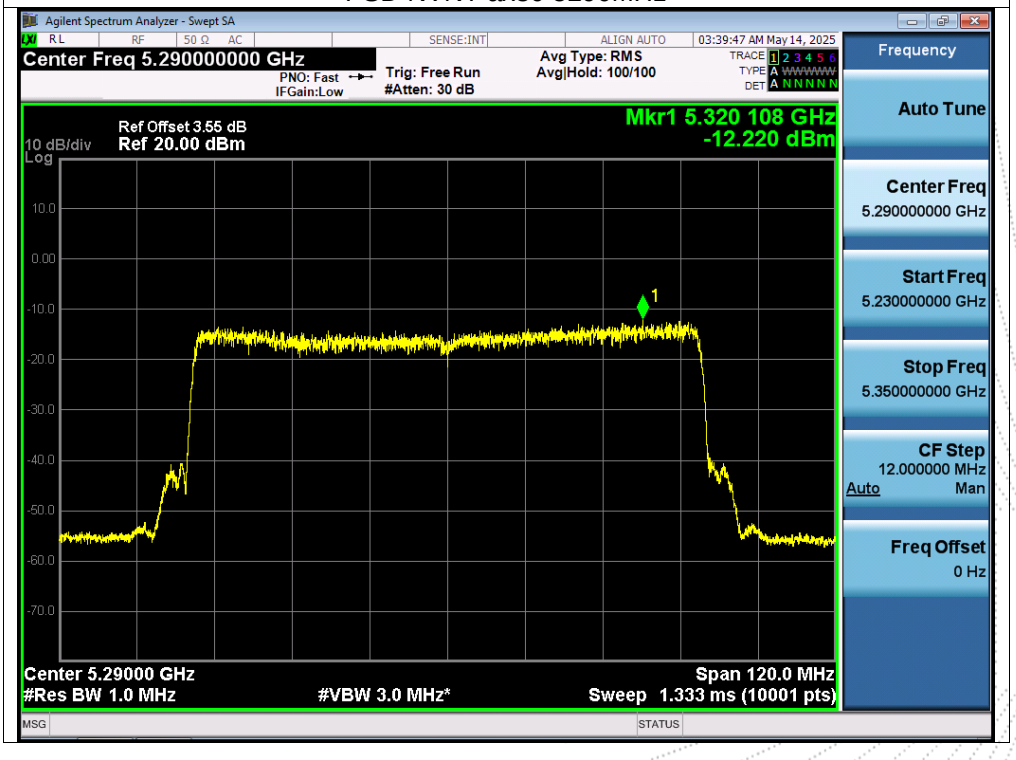
PSD NVNT ax40 5270MHz



PSD NVNT ax40 5310MHz



PSD NVNT ax80 5290MHz



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.3V
Test Mode:	(U-NII-2C) 5500MHz-5700MHz		

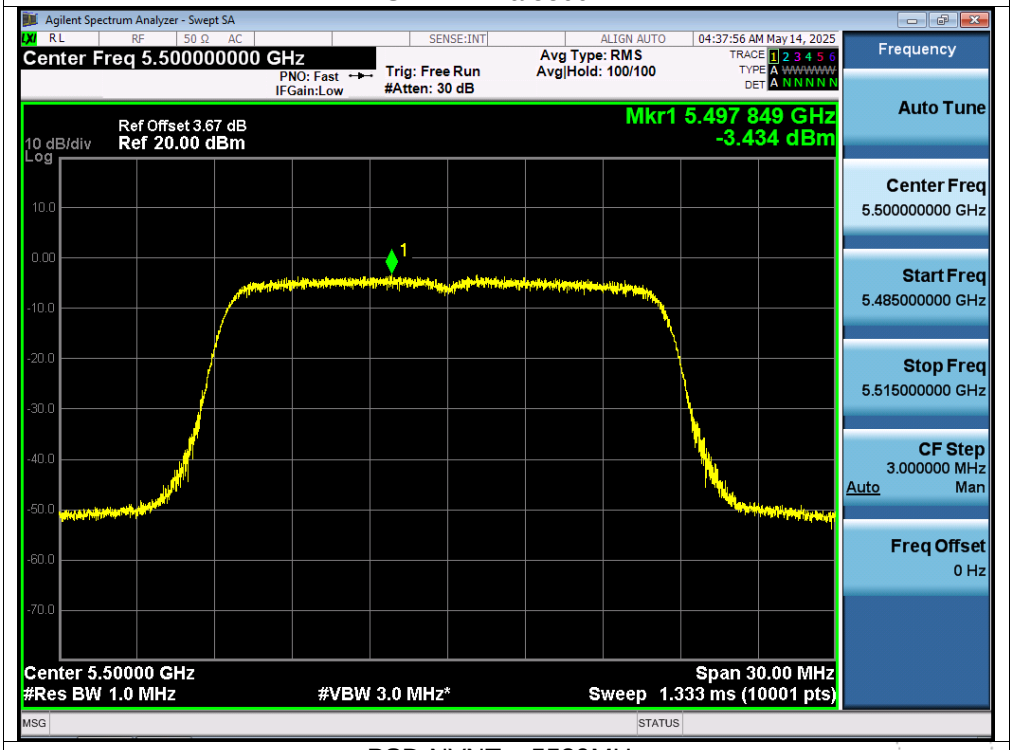
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)			Limit (dBm/MHz)	Verdict
			Ant A	Ant B	Total		
NVNT	a	5500	-3.75	-3.43	/	11	Pass
NVNT	a	5580	-3.39	-3.26	/	11	Pass
NVNT	a	5700	-0.17	**0.04**	/	11	Pass
NVNT	n20	5500	-5.05	-4.7	-1.86	10.16	Pass
NVNT	n20	5580	-4.29	-4.34	-1.30	10.16	Pass
NVNT	n20	5700	-0.71	-1.54	1.91	10.16	Pass
NVNT	n40	5510	-9.47	-9.18	-6.31	10.16	Pass
NVNT	n40	5550	-9.7	-9.63	-6.65	10.16	Pass
NVNT	n40	5670	-5.95	-5.56	-2.74	10.16	Pass
NVNT	ac20	5500	-4.86	-4.84	-1.84	10.16	Pass
NVNT	ac20	5580	-4.28	-4.72	-1.48	10.16	Pass
NVNT	ac20	5700	-1.53	-1.29	1.60	10.16	Pass
NVNT	ac40	5510	-9.28	-8.66	-5.95	10.16	Pass
NVNT	ac40	5550	-10.82	-8.56	-6.53	10.16	Pass
NVNT	ac40	5670	-6.81	-5.26	-2.96	10.16	Pass
NVNT	ac80	5530	-15.65	-13.89	-11.67	10.16	Pass
NVNT	ax20	5500	-5.38	-5.22	-2.29	10.16	Pass
NVNT	ax20	5580	-5.32	-6.11	-2.69	10.16	Pass
NVNT	ax20	5700	-1.99	-2.45	0.80	10.16	Pass
NVNT	ax40	5510	-10.87	-8.73	-6.66	10.16	Pass
NVNT	ax40	5550	-10.99	-7.86	-6.14	10.16	Pass
NVNT	ax40	5670	-7.67	-5.01	-3.13	10.16	Pass
NVNT	ax80	5530	-14.19	-13.93	-11.05	10.16	Pass

Note:
Antenna 1 gain: 2.55 dBi, Antenna 2 gain: 3.83dBi, Directional gain=[GainANT + 10 log(NANT) dBi] =6.84 dbi>6dbi
Limit=11-(6.84-6)=10.16 dbi

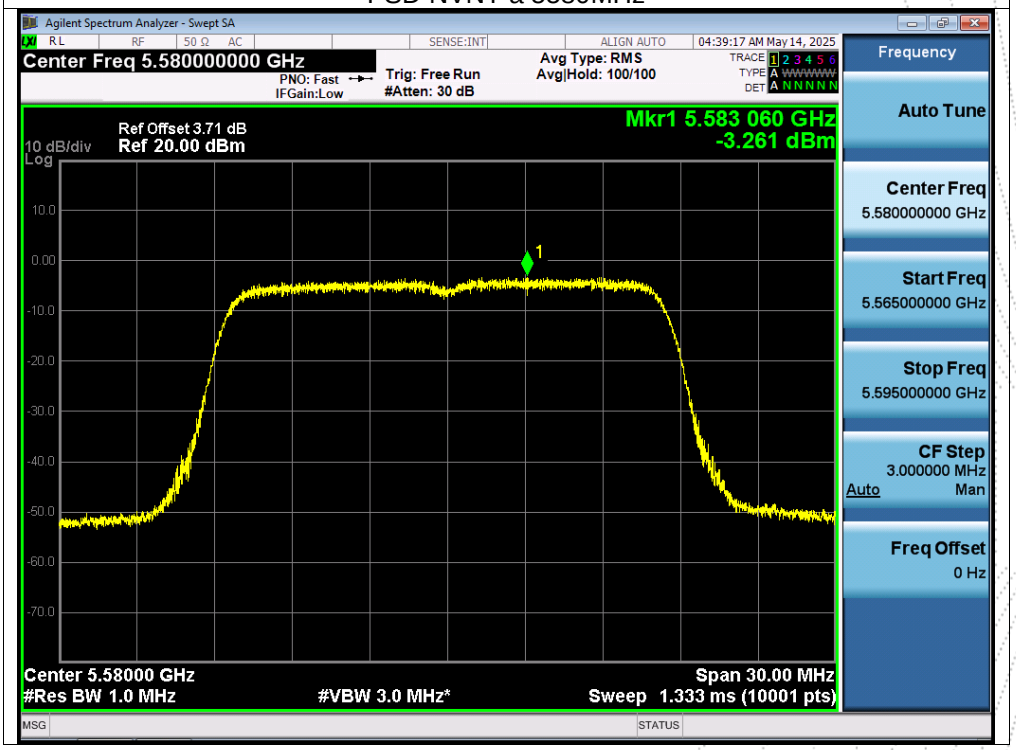
The worst case is Antenna 2, Antenna Gain=3.83 dBi

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

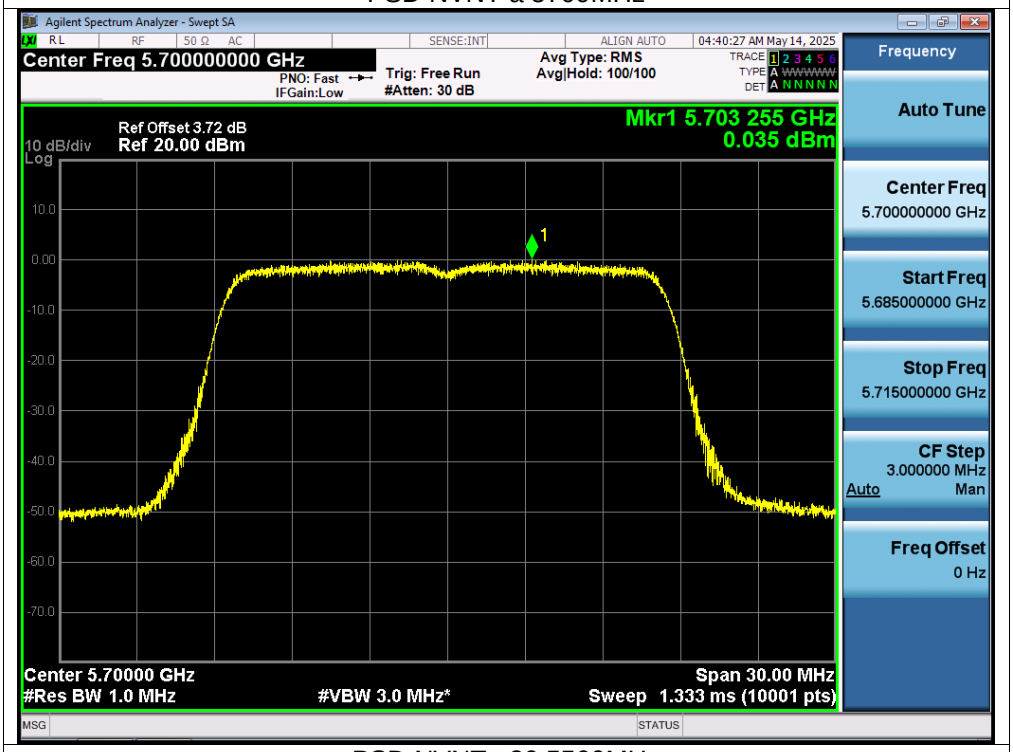
Test Graphs
PSD NVNT a 5500MHz



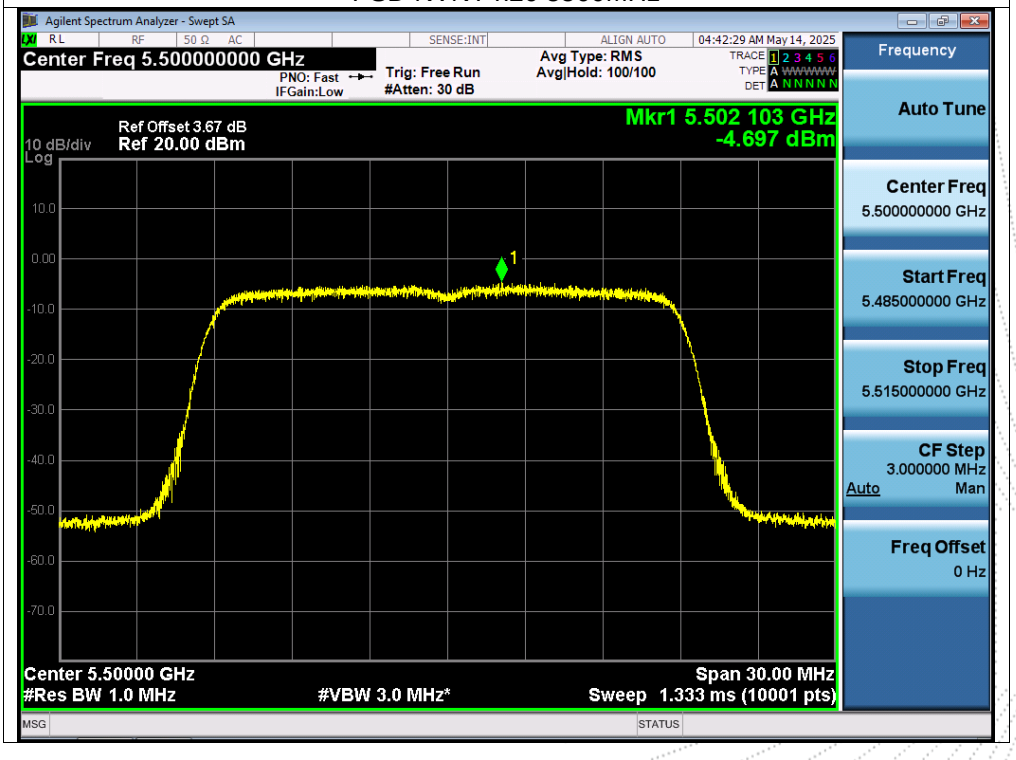
PSD NVNT a 5580MHz



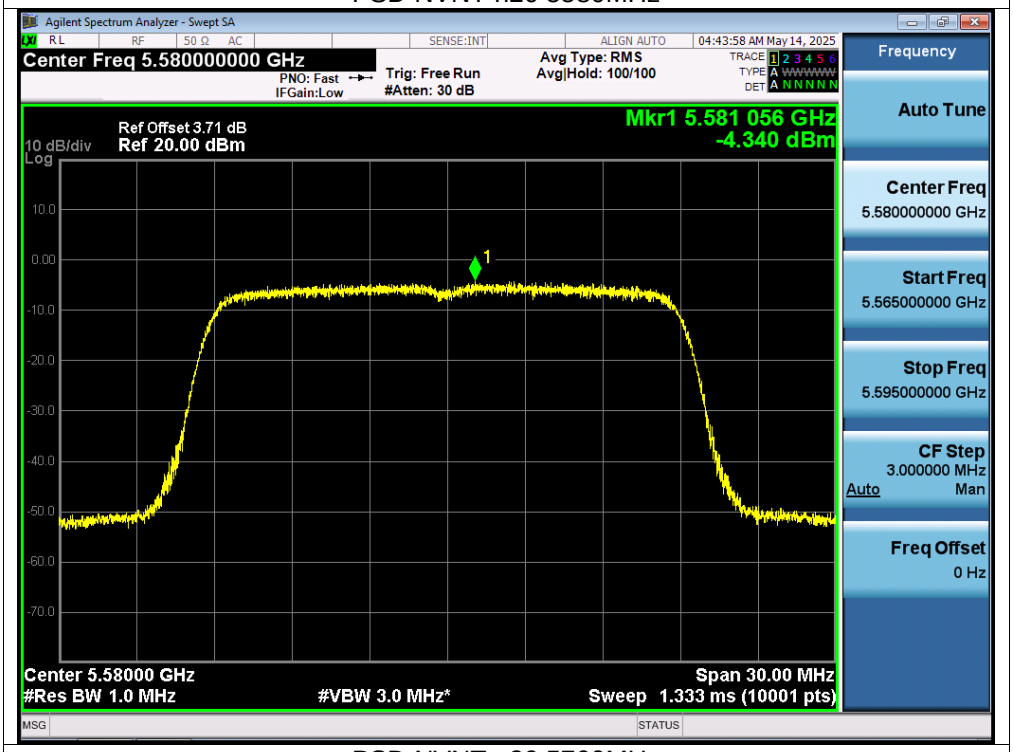
PSD NVNT a 5700MHz



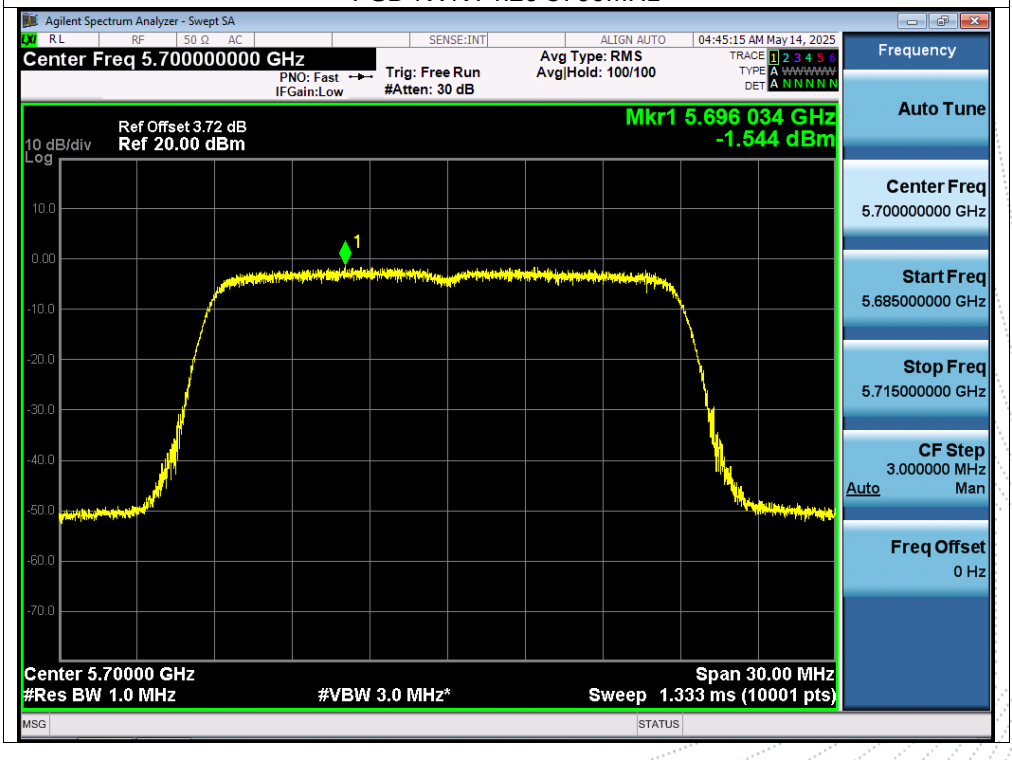
PSD NVNT n20 5500MHz



PSD NVNT n20 5580MHz



PSD NVNT n20 5700MHz

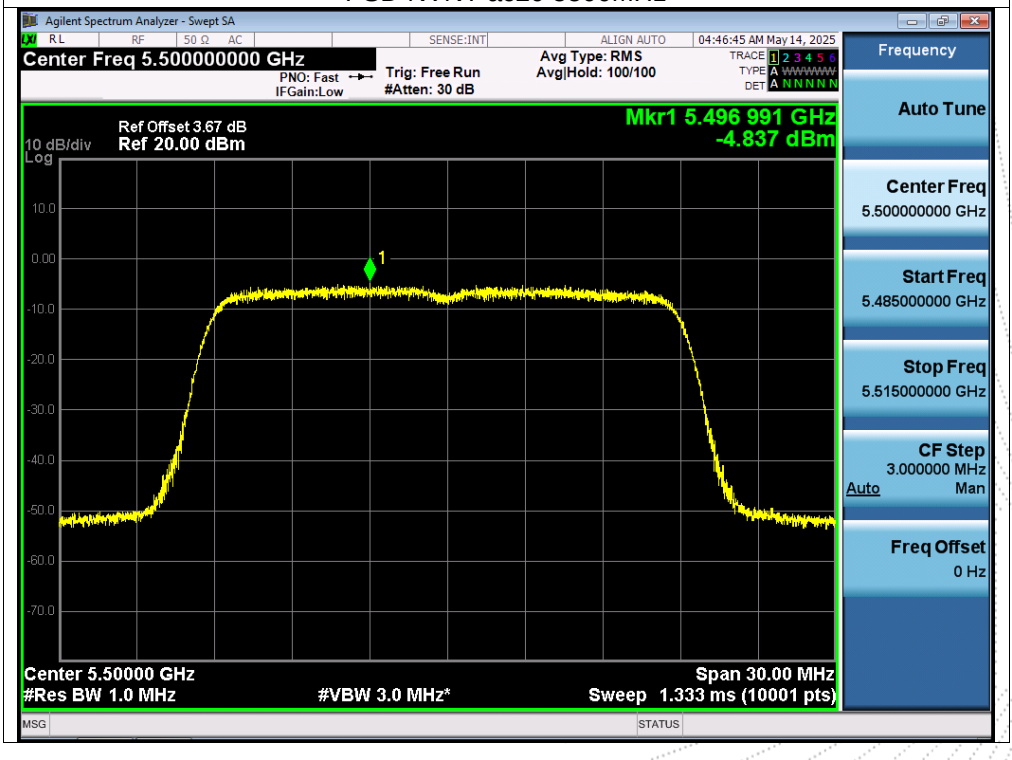


PSD NVNT n40 5510MHz

PSD NVNT n40 5550MHz

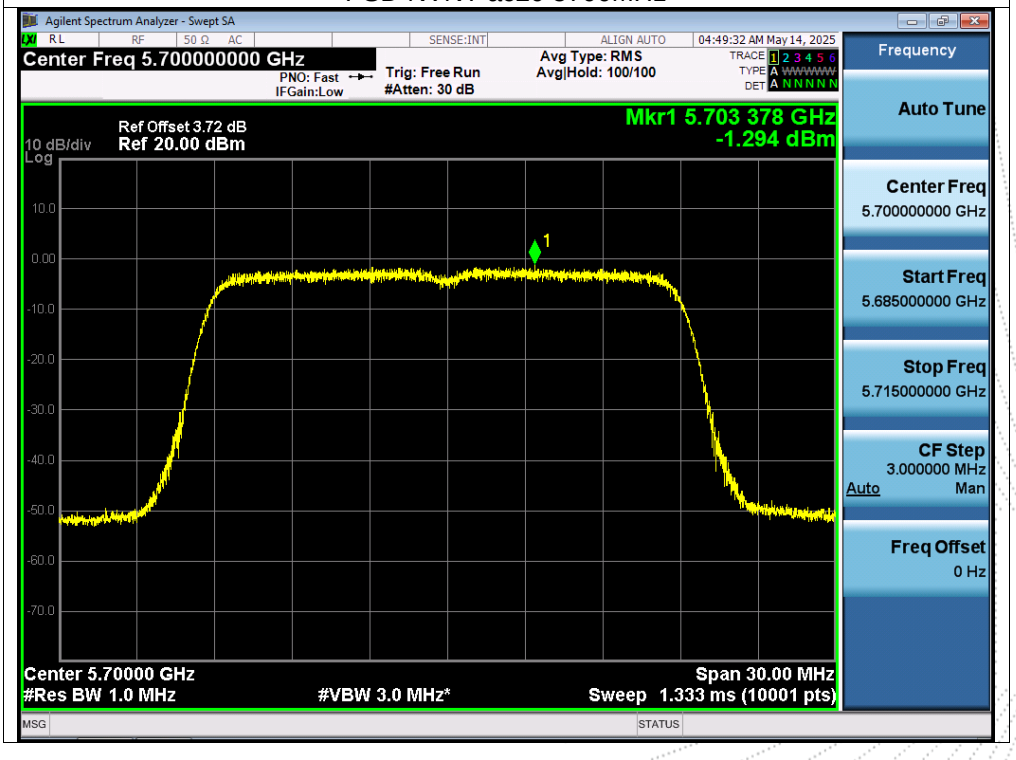
PSD NVNT n40 5670MHz

PSD NVNT ac20 5500MHz



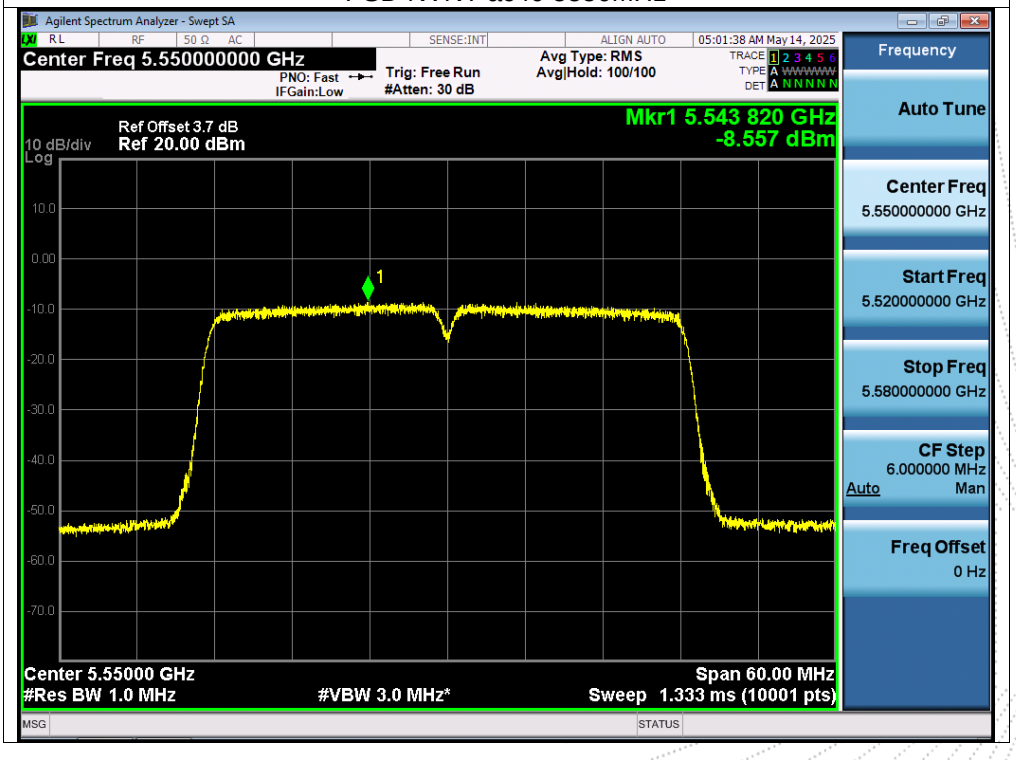
PSD NVNT ac20 5580MHz

PSD NVNT ac20 5700MHz



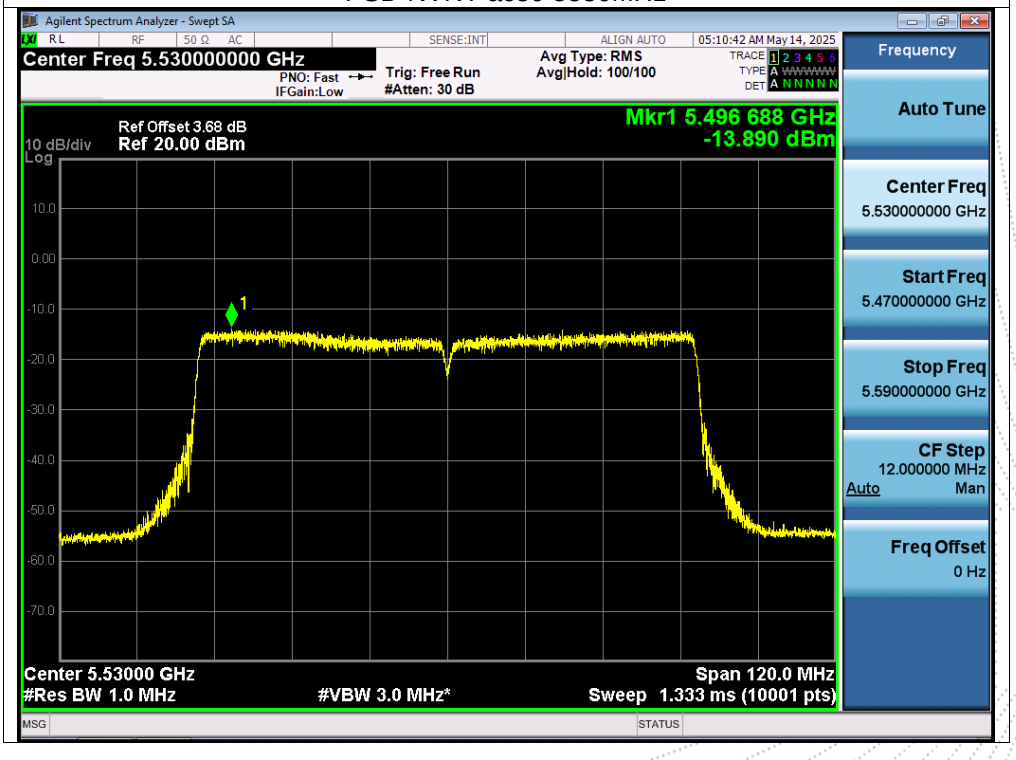
PSD NVNT ac40 5510MHz

PSD NVNT ac40 5550MHz

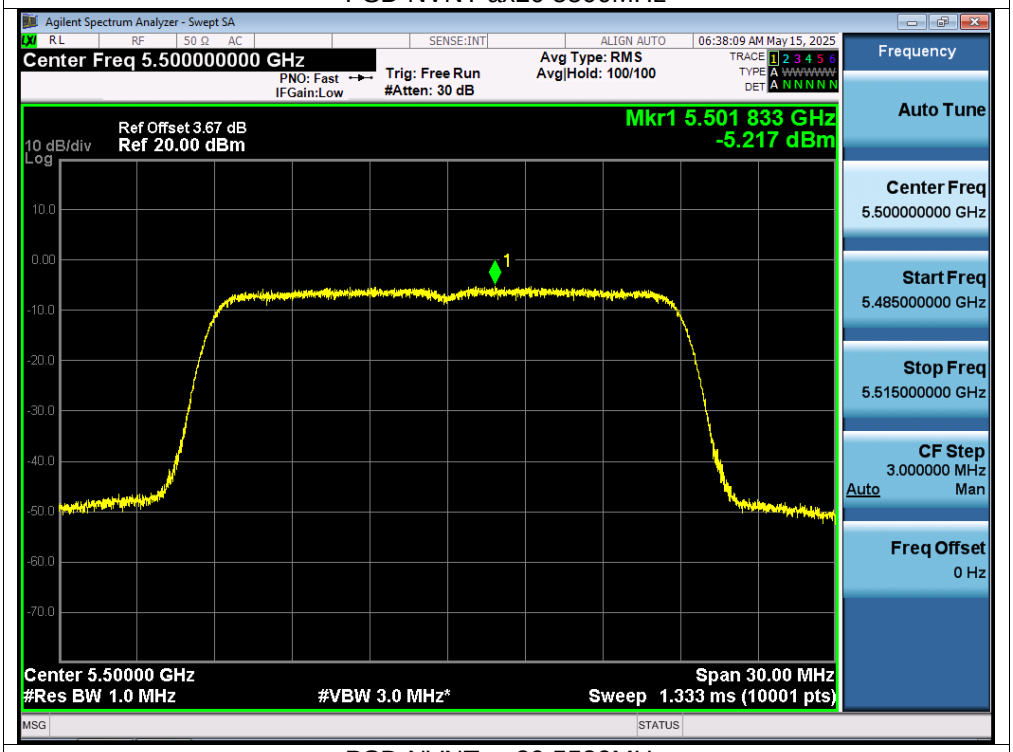


PSD NVNT ac40 5670MHz

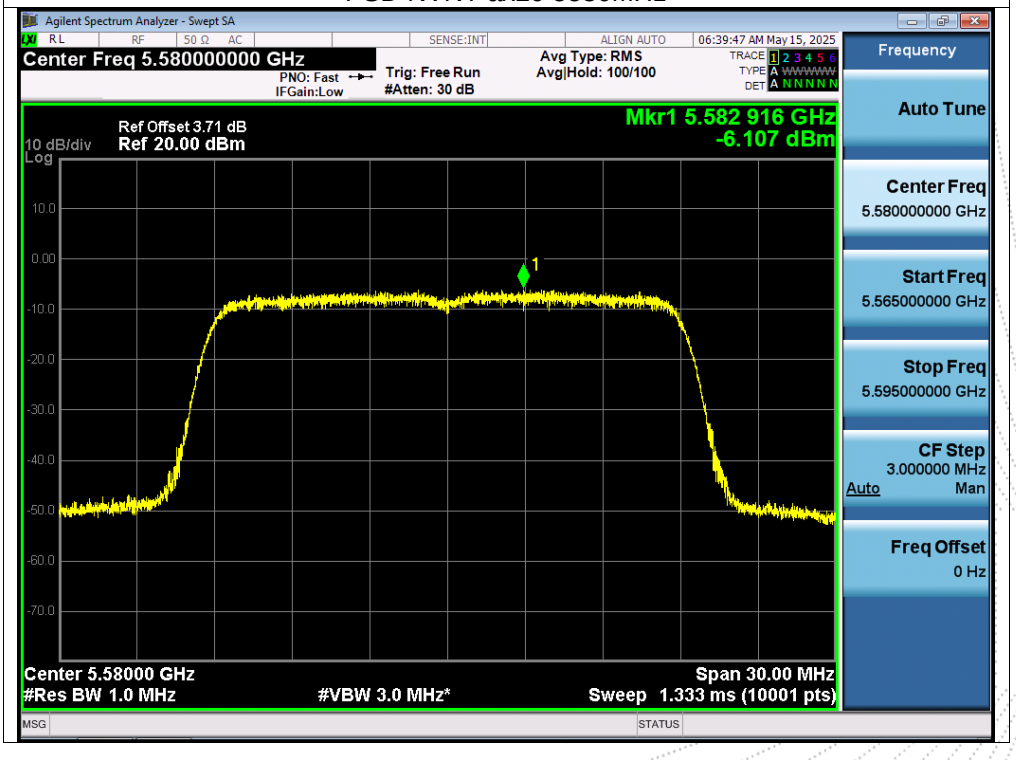
PSD NVNT ac80 5530MHz



PSD NVNT ax20 5500MHz

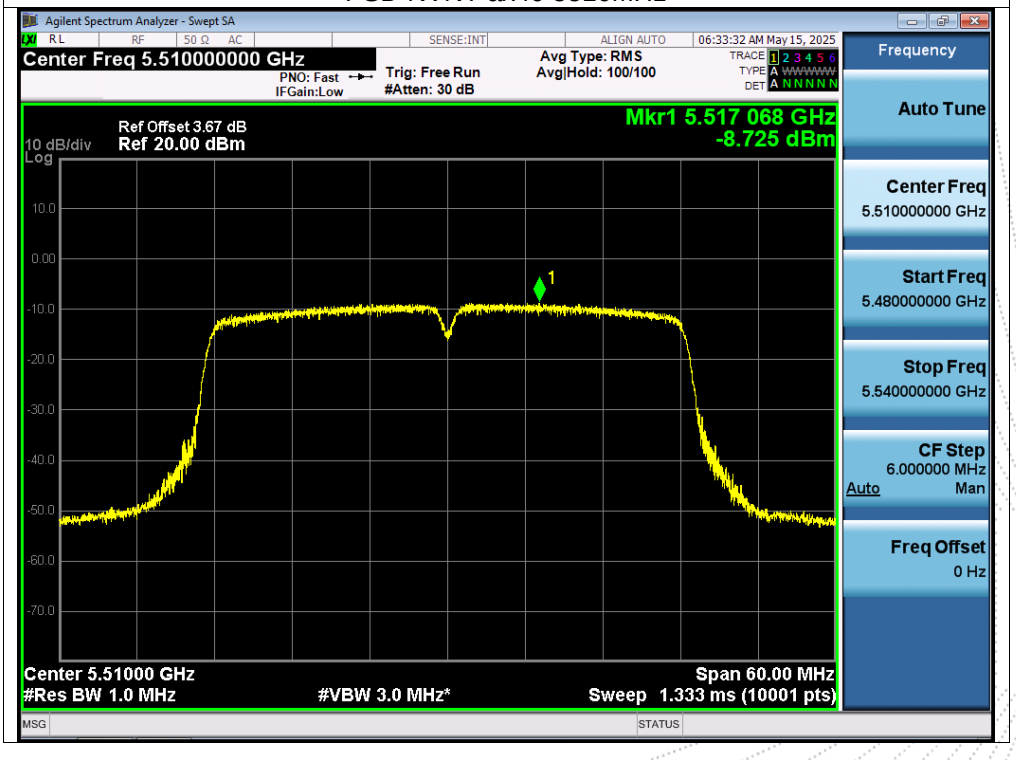


PSD NVNT ax20 5580MHz

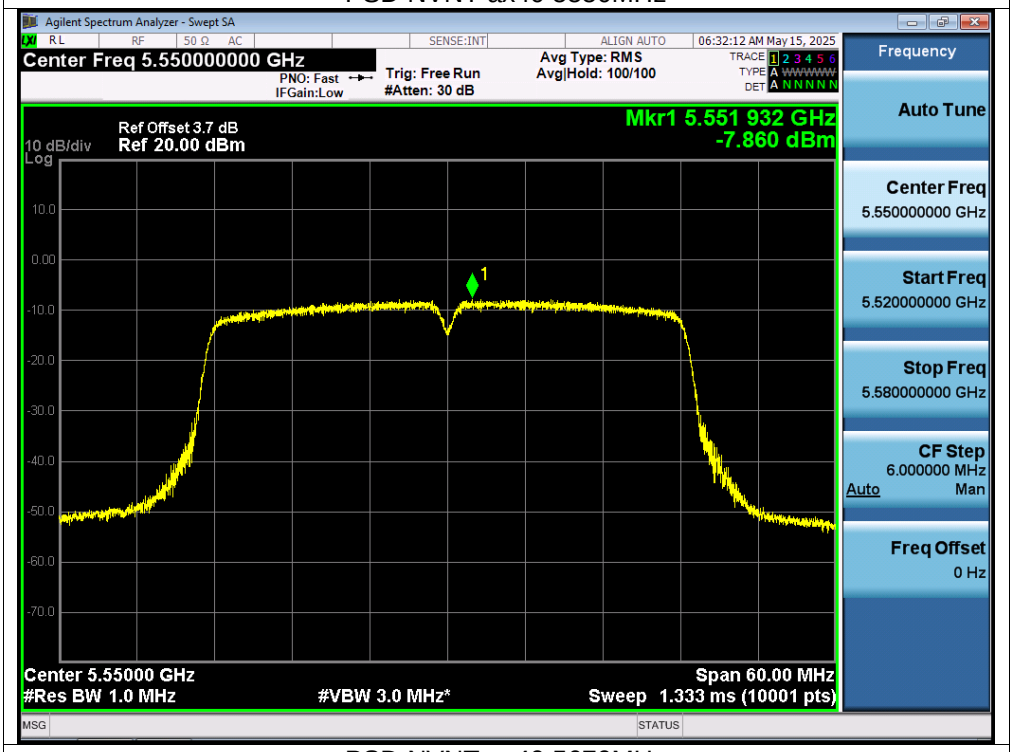


PSD NVNT ax20 5700MHz

PSD NVNT ax40 5510MHz



PSD NVNT ax40 5550MHz



PSD NVNT ax40 5670MHz

PSD NVNT ax80 5530MHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.3V
Test Mode:	(U-NII-3) 5745MHz-5825MHz		

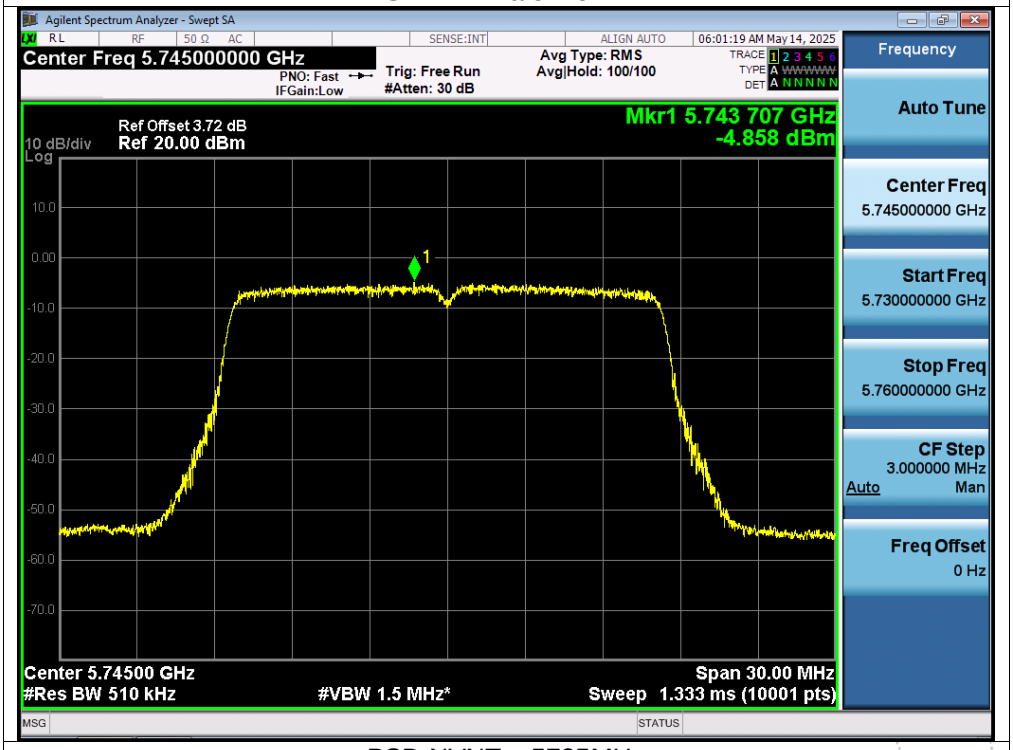
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/510KHz)		Conducted PSD (dBm/500KHz)				Verdict
			ANT A	ANT B	ANT A	ANT B	Total	Limit	
NVNT	a	5745	-4.86	-4.39	-4.946	-4.476	/	30	Pass
NVNT	a	5785	-5.85	-4.89	-5.936	-4.976	/	30	Pass
NVNT	a	5825	-6.62	-5.82	-6.706	-5.906	/	30	Pass
NVNT	n20	5745	-6.3	-6.87	-6.386	-6.956	0.90	29.16	Pass
NVNT	n20	5785	-6.41	-7.26	-6.496	-7.346	0.88	29.16	Pass
NVNT	n20	5825	-7.42	-8.62	-7.506	-8.706	0.71	29.16	Pass
NVNT	n40	5755	-10.86	-10.9	-10.946	-10.986	0.34	29.16	Pass
NVNT	n40	5795	-10.85	-12.64	-10.936	-12.726	0.34	29.16	Pass
NVNT	ac20	5745	-4.75	-7.04	-4.836	-7.126	1.23	29.16	Pass
NVNT	ac20	5785	-4.67	-7.59	-4.756	-7.676	1.25	29.16	Pass
NVNT	ac20	5825	-6.24	-8.62	-6.326	-8.706	0.91	29.16	Pass
NVNT	ac40	5755	-10.53	-11.22	-10.616	-11.306	0.36	29.16	Pass
NVNT	ac40	5795	-11.43	-12.58	-11.516	-12.666	0.30	29.16	Pass
NVNT	ac80	5775	-15.09	-16.18	-15.176	-16.266	0.13	29.16	Pass
NVNT	ax20	5745	**-4.24**	-7.36	-4.326	-7.446	1.37	29.16	Pass
NVNT	ax20	5785	-5.47	-7.62	-5.556	-7.706	1.07	29.16	Pass
NVNT	ax20	5825	-6	-9.54	-6.086	-9.626	0.96	29.16	Pass
NVNT	ax40	5755	-10.72	-11.56	-10.806	-11.646	0.35	29.16	Pass
NVNT	ax40	5795	-11.96	-12.04	-12.046	-12.126	0.26	29.16	Pass
NVNT	ax80	5775	-15.15	-15.9	-15.236	-15.986	0.13	29.16	Pass
Note: Correction Factor = 10log(500KHz/RBW in measurement) =-0.086									

Note:
Antenna 1 gain: 2.55 dBi, Antenna 2 gain: 3.83dBi, Directional gain=[GainANT + 10 log(NANT) dBi] =6.84 dbi>6dbi
Limit=30-(6.84-6)=29.16 dbi

The worst case is Antenna 2, Antenna Gain=3.83 dBi

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

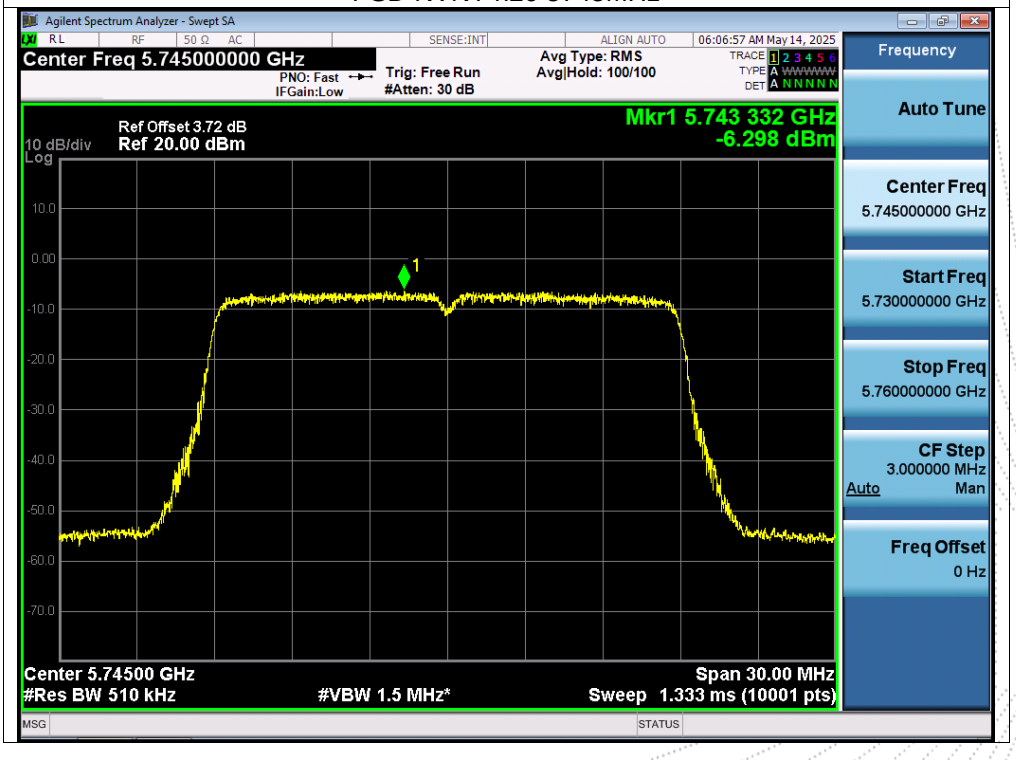
Test Graphs
PSD NVNT a 5745MHz



PSD NVNT a 5785MHz

PSD NVNT a 5825MHz

PSD NVNT n20 5745MHz

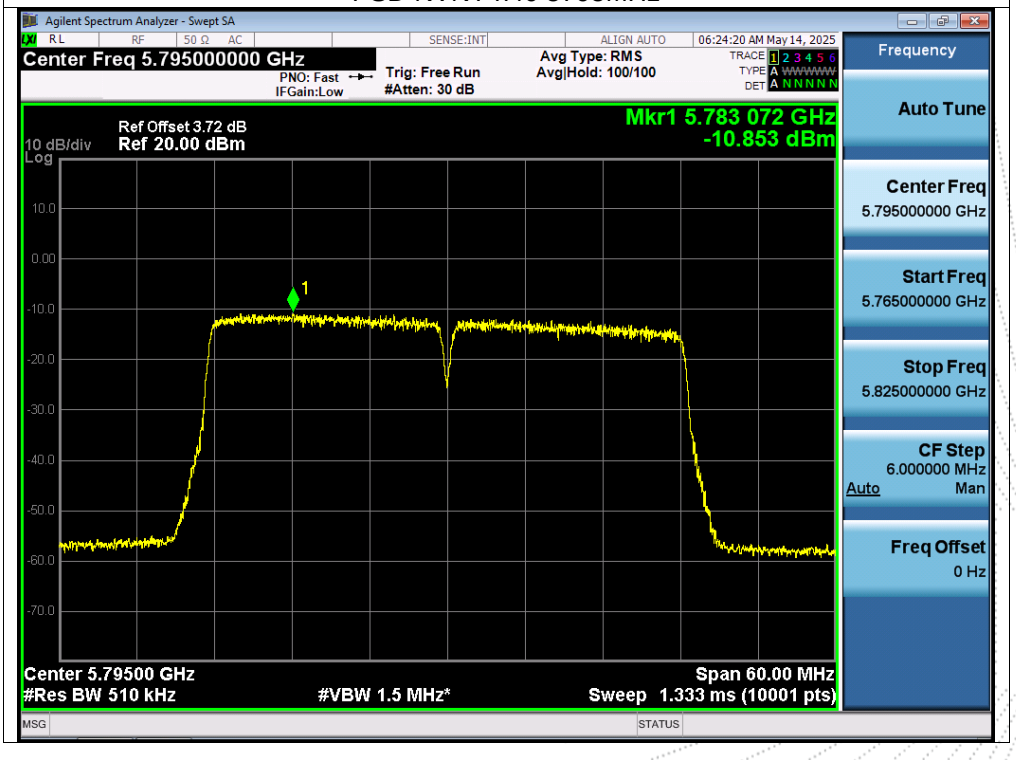


PSD NVNT n20 5785MHz

PSD NVNT n20 5825MHz

PSD NVNT n40 5755MHz

PSD NVNT n40 5795MHz



PSD NVNT ac20 5745MHz

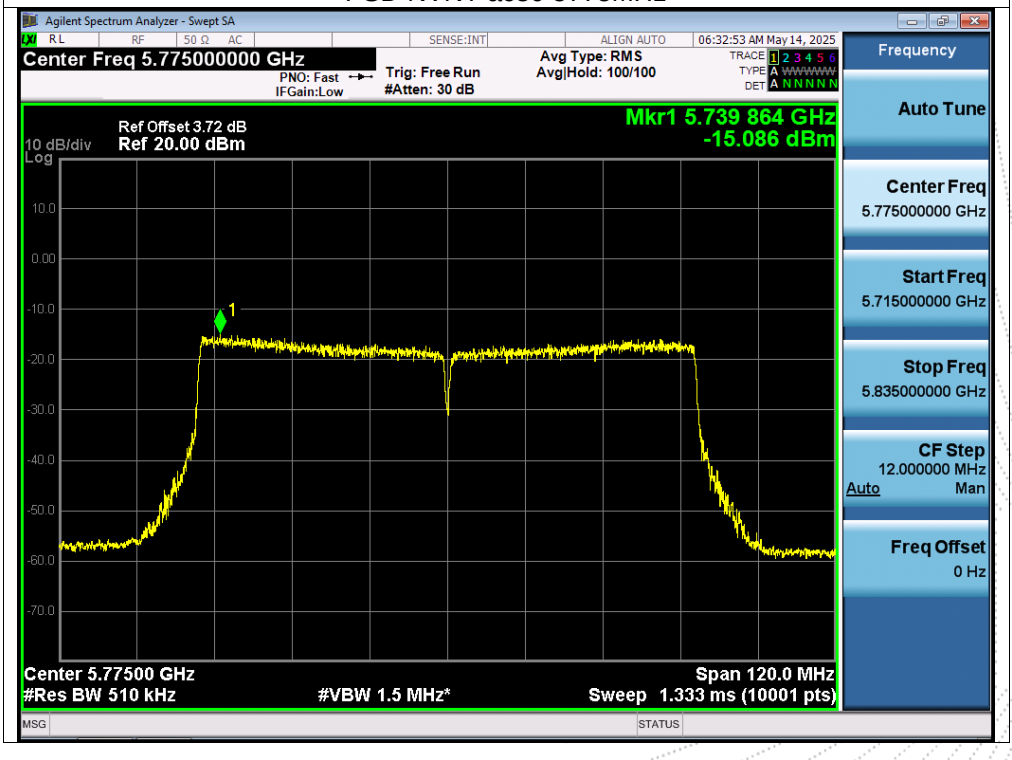
PSD NVNT ac20 5785MHz

PSD NVNT ac20 5825MHz

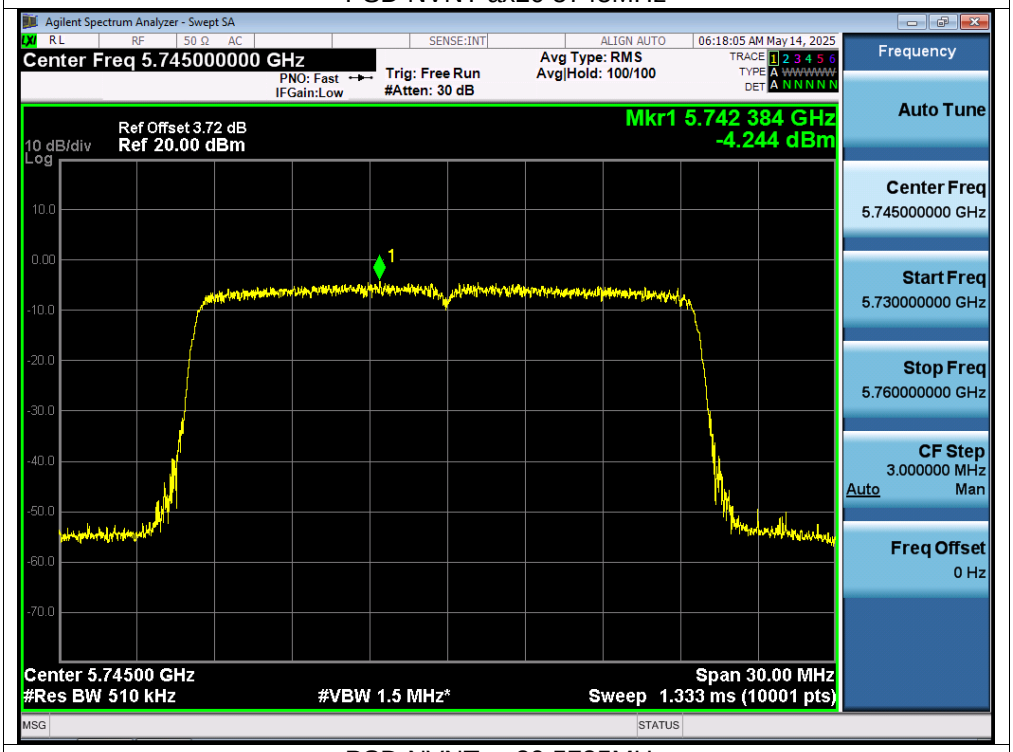
PSD NVNT ac40 5755MHz

PSD NVNT ac40 5795MHz

PSD NVNT ac80 5775MHz



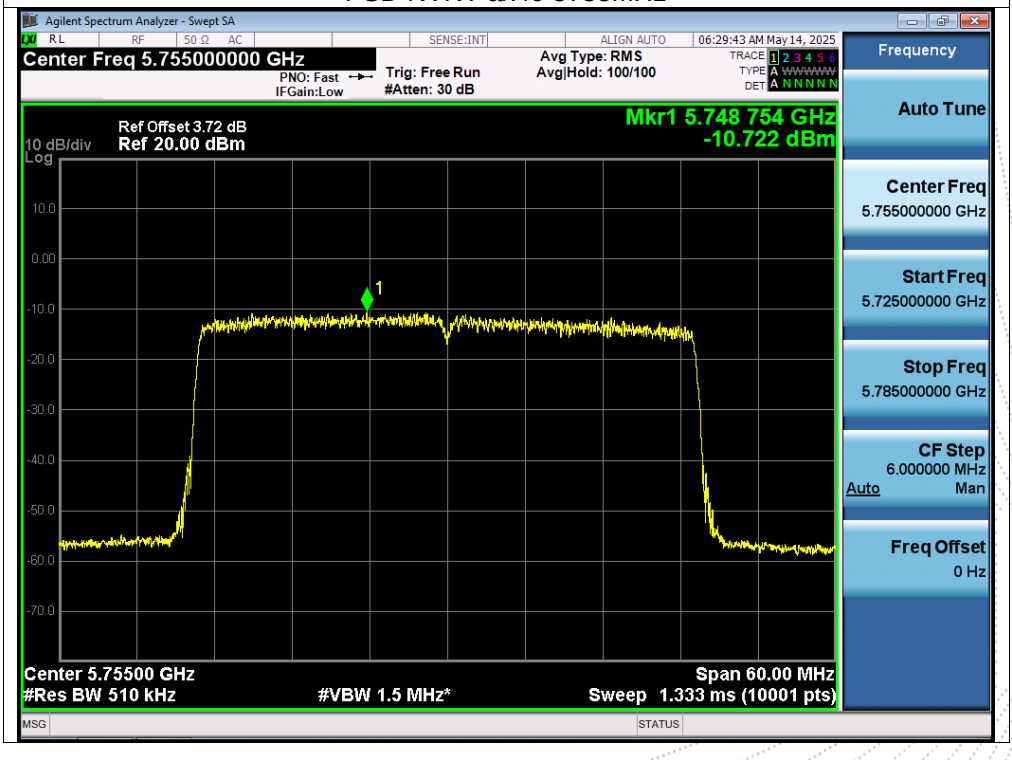
PSD NVNT ax20 5745MHz



PSD NVNT ax20 5785MHz

PSD NVNT ax20 5825MHz

PSD NVNT ax40 5755MHz

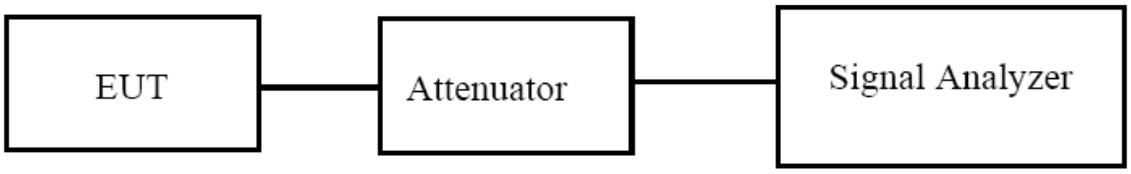


PSD NVNT ax40 5795MHz

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

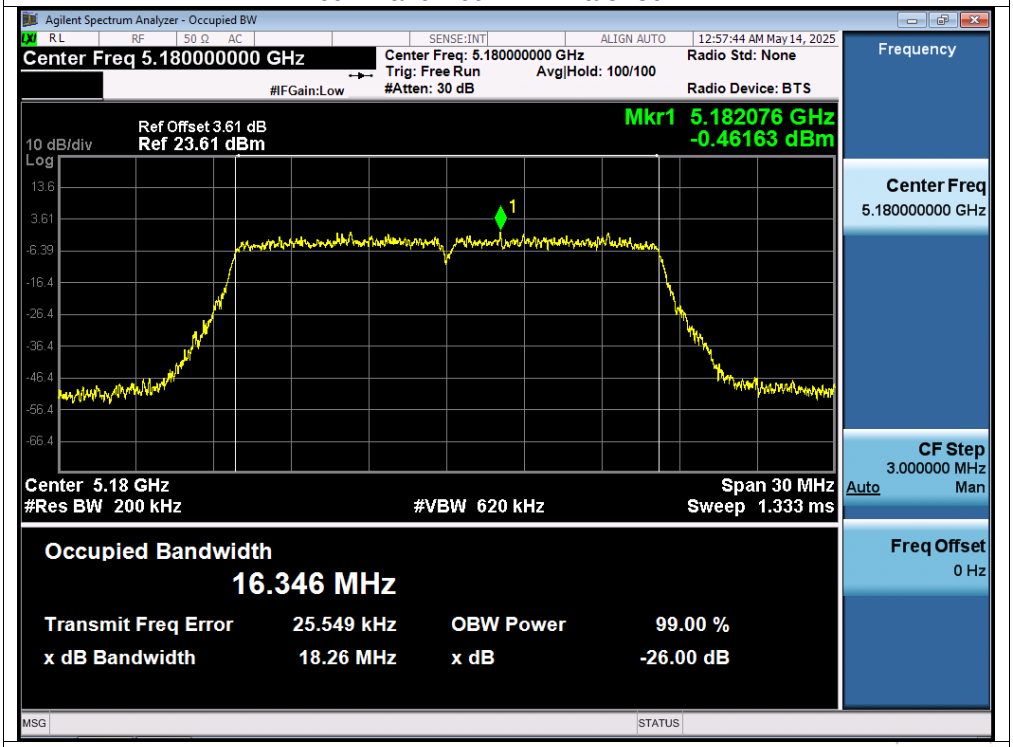
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 3.3V
Test Mode:	(U-NII-1) 5180MHz-5240MHz		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		99% OBW (MHz)		Verdict
			Ant A	Ant B	Ant A	Ant B	
NVNT	a	5180	18.202	18.259	16.357	16.337	Pass
NVNT	a	5200	18.345	18.235	16.337	16.338	Pass
NVNT	a	5240	18.333	18.312	16.333	16.327	Pass
NVNT	n20	5180	19.161	19.247	17.53	17.519	Pass
NVNT	n20	5200	19.251	19.304	17.518	17.529	Pass
NVNT	n20	5240	19.257	19.157	17.546	17.533	Pass
NVNT	n40	5190	38.646	38.499	36.028	36.013	Pass
NVNT	n40	5230	38.807	38.671	36.081	36.019	Pass
NVNT	ac20	5180	19.206	19.306	17.531	17.515	Pass
NVNT	ac20	5200	19.082	19.202	17.531	17.527	Pass
NVNT	ac20	5240	19.3	19.283	17.542	17.519	Pass
NVNT	ac40	5190	38.422	38.619	36.057	35.985	Pass
NVNT	ac40	5230	38.792	38.497	36.124	36.039	Pass
NVNT	ac80	5210	84.997	**85.867**	76.265	76.301	Pass
NVNT	ax20	5180	20.199	20.162	18.903	18.878	Pass
NVNT	ax20	5200	20.155	20.209	18.914	18.849	Pass
NVNT	ax20	5240	20.159	20.021	18.886	18.882	Pass
NVNT	ax40	5190	39.792	39.673	37.584	37.624	Pass
NVNT	ax40	5230	39.812	39.806	37.666	37.664	Pass
NVNT	ax80	5210	81.264	80.552	77.38	**77.445**	Pass

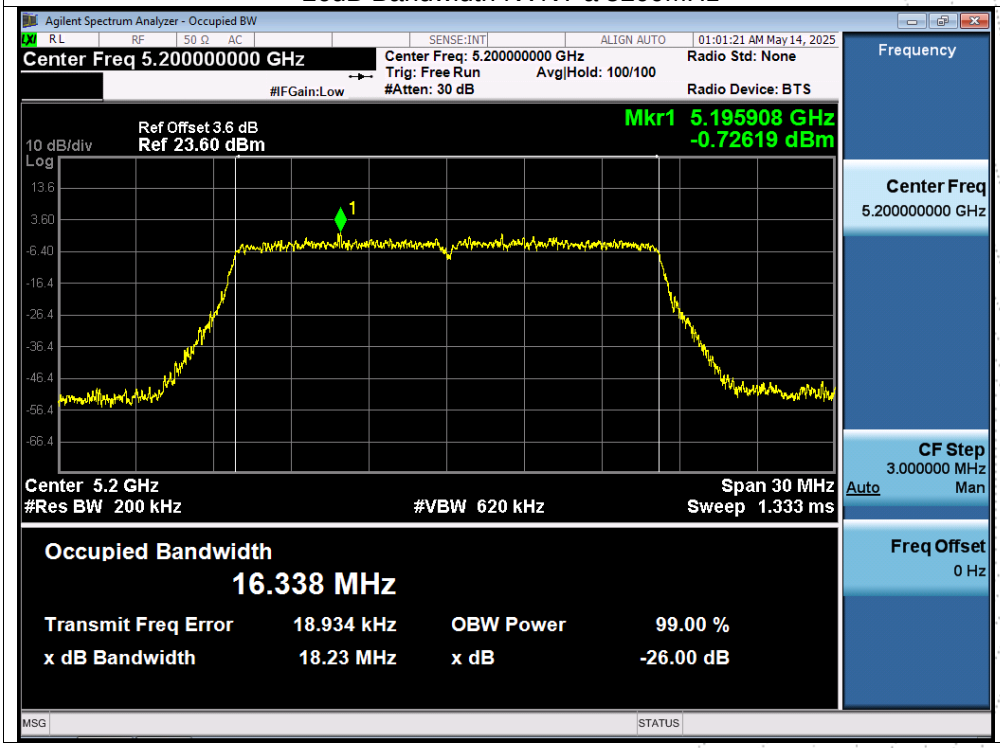
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

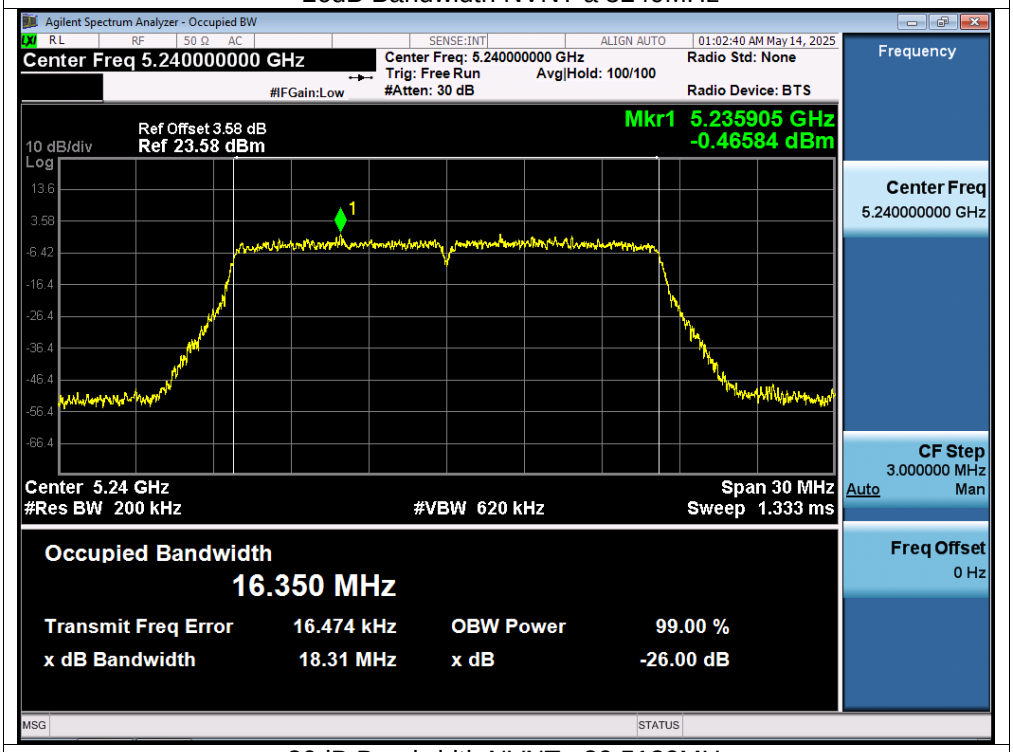
-26dB Bandwidth NVNT a 5180MHz



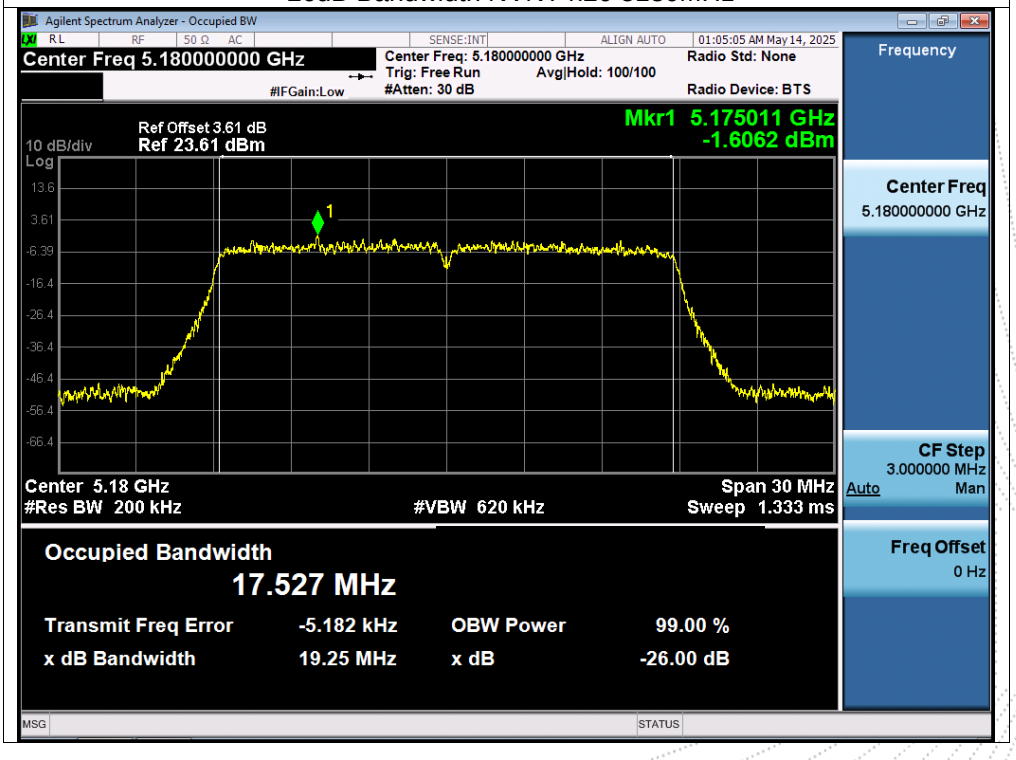
-26dB Bandwidth NVNT a 5200MHz



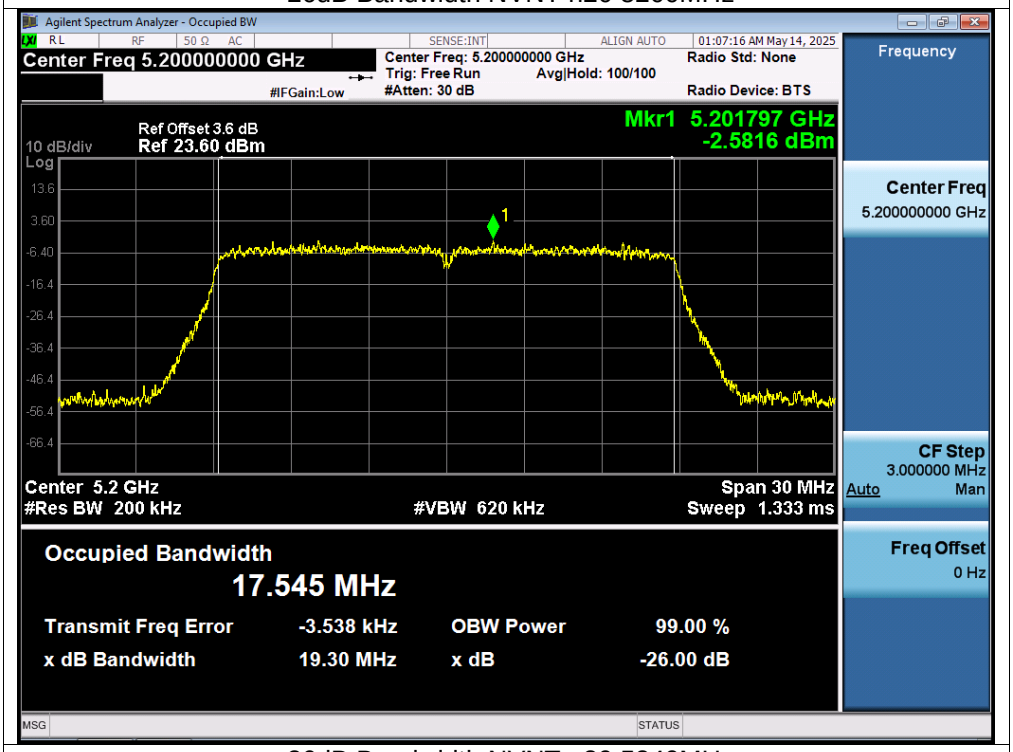
-26dB Bandwidth NVNT a 5240MHz



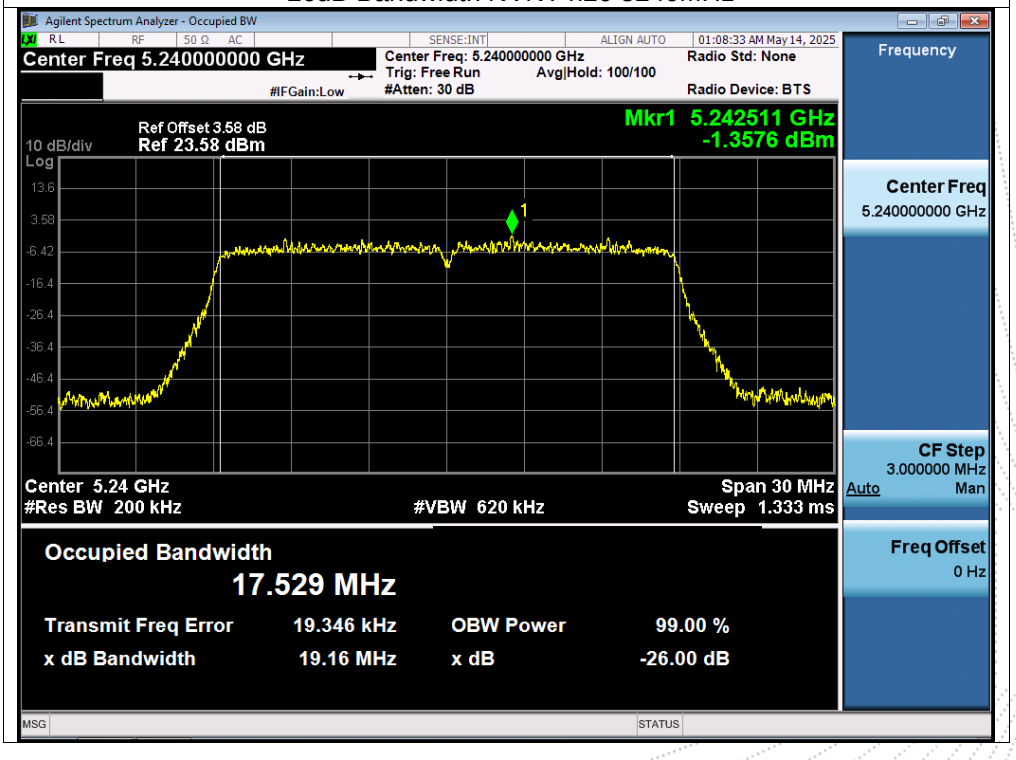
-26dB Bandwidth NVNT n20 5180MHz



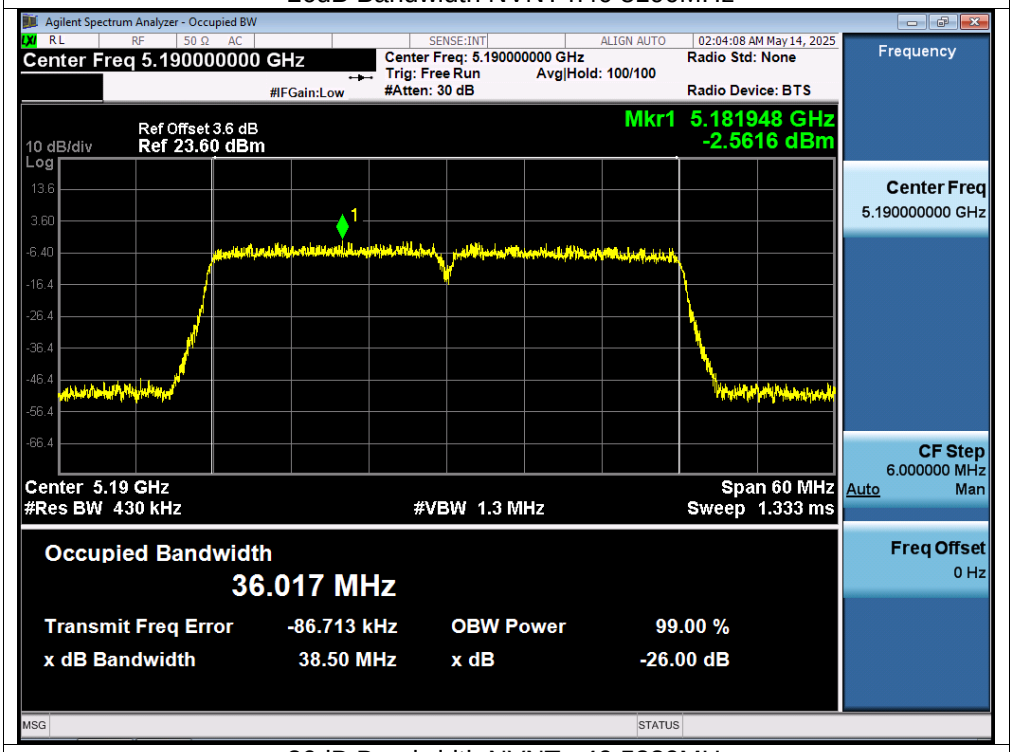
-26dB Bandwidth NVNT n20 5200MHz



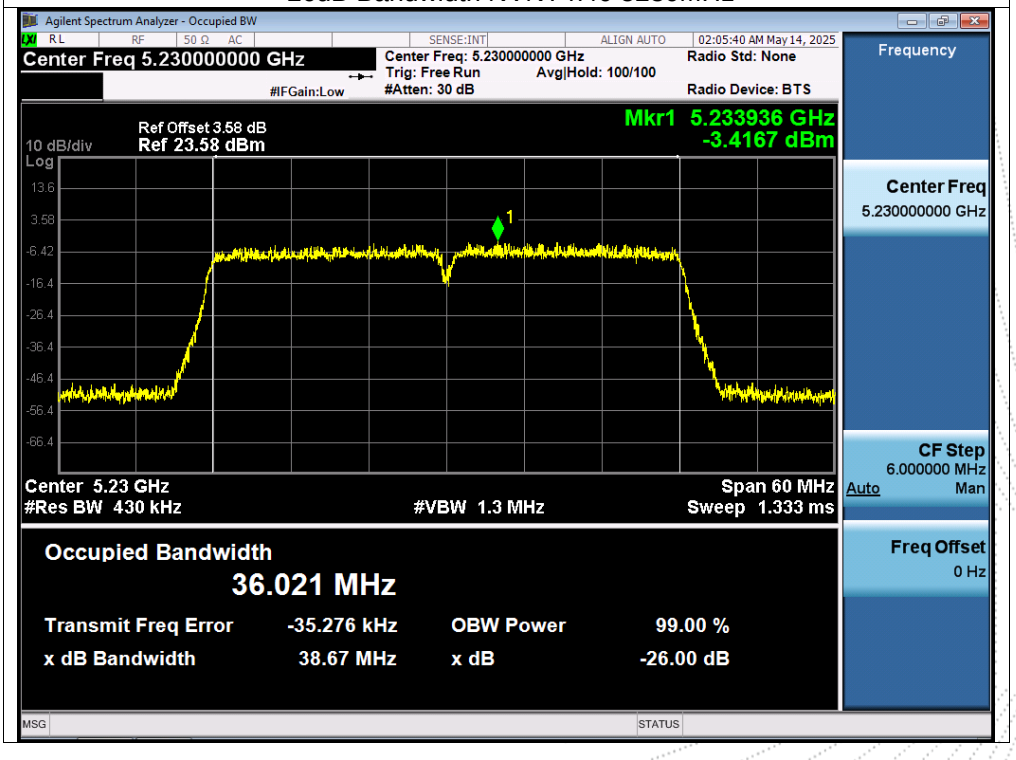
-26dB Bandwidth NVNT n20 5240MHz



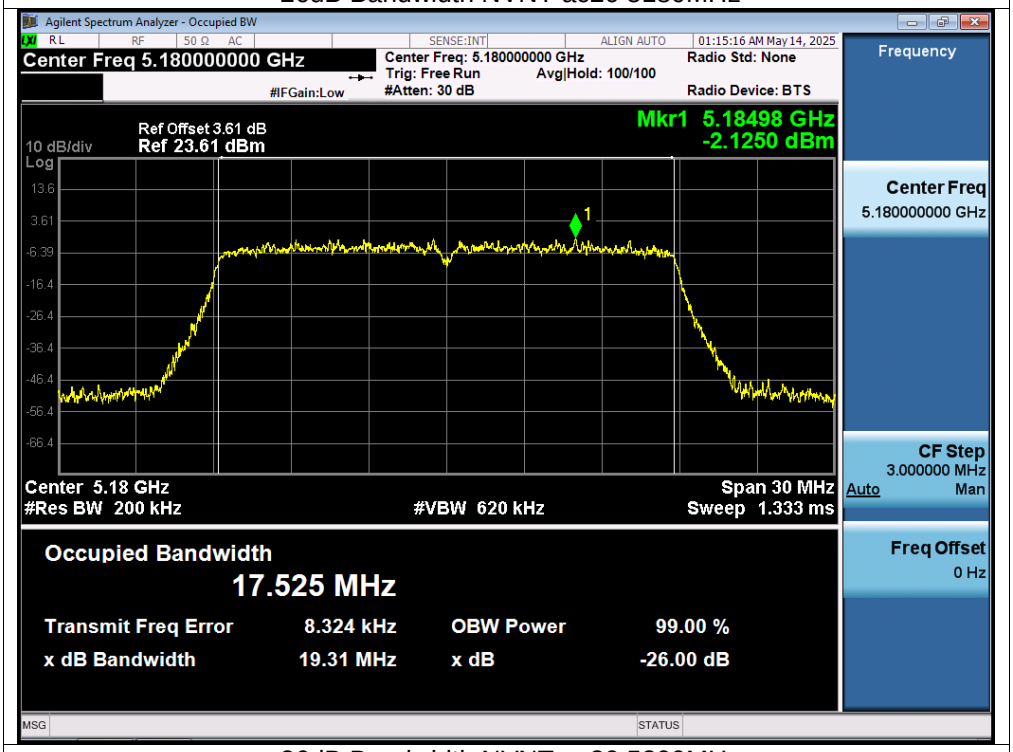
-26dB Bandwidth NVNT n40 5190MHz



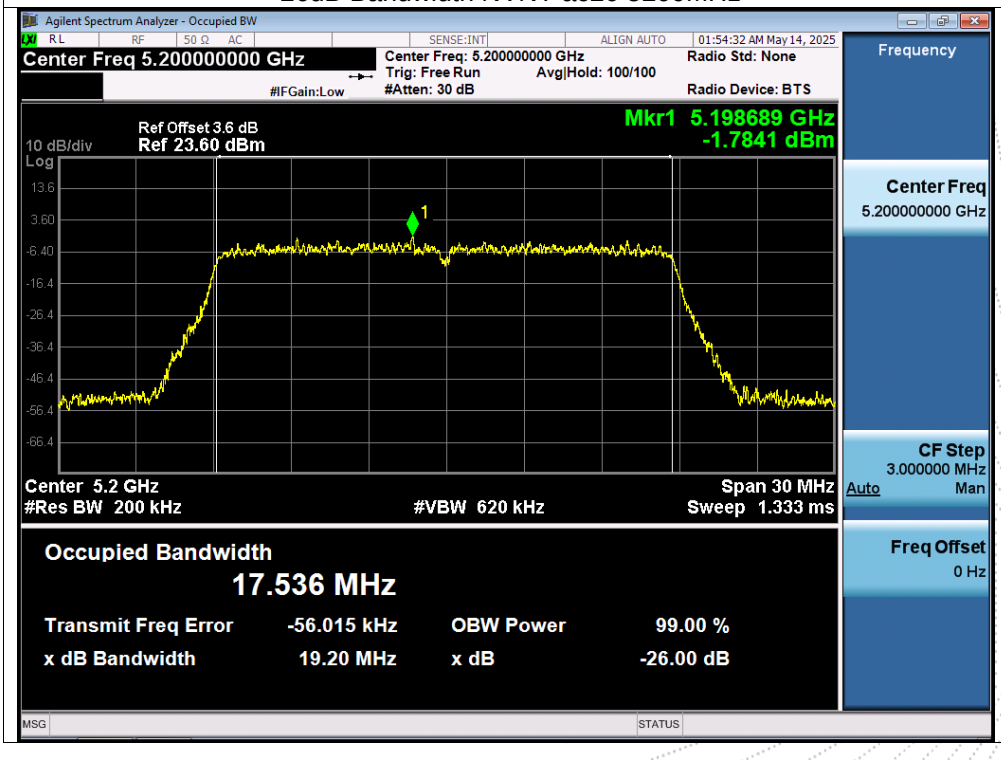
-26dB Bandwidth NVNT n40 5230MHz



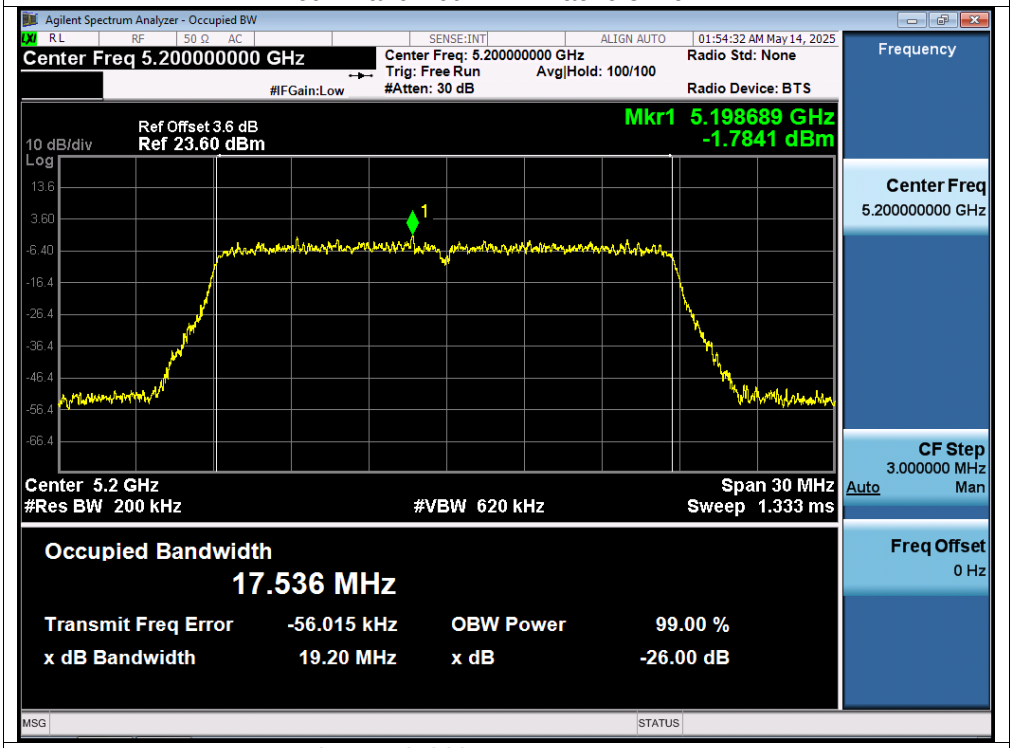
-26dB Bandwidth NVNT ac20 5180MHz



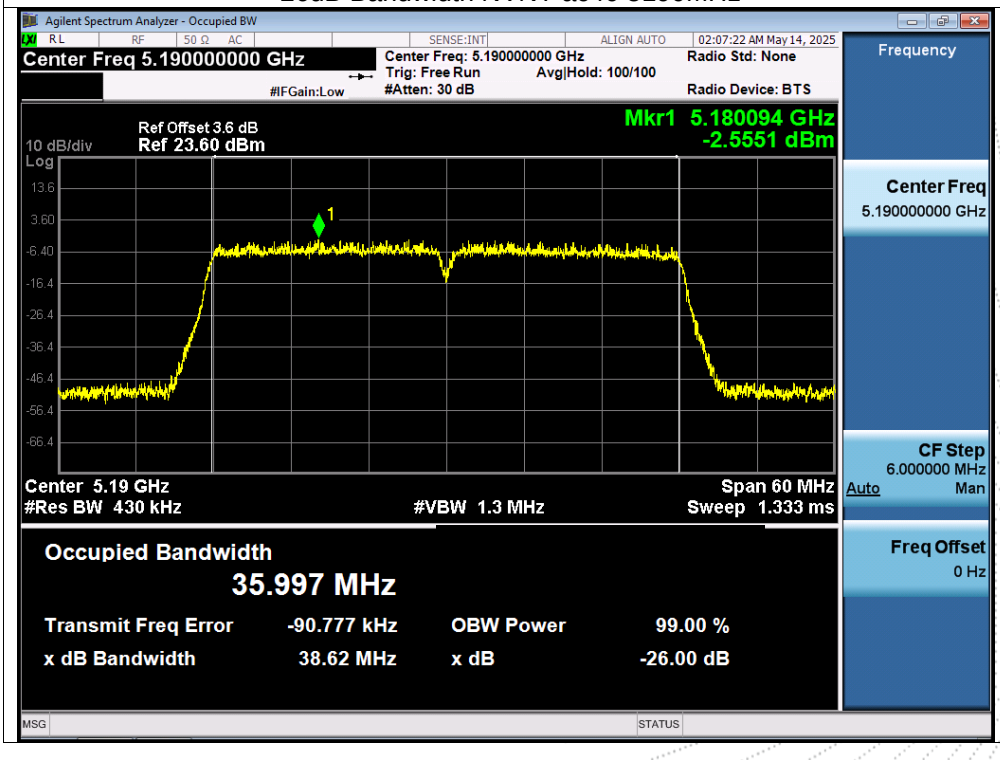
-26dB Bandwidth NVNT ac20 5200MHz



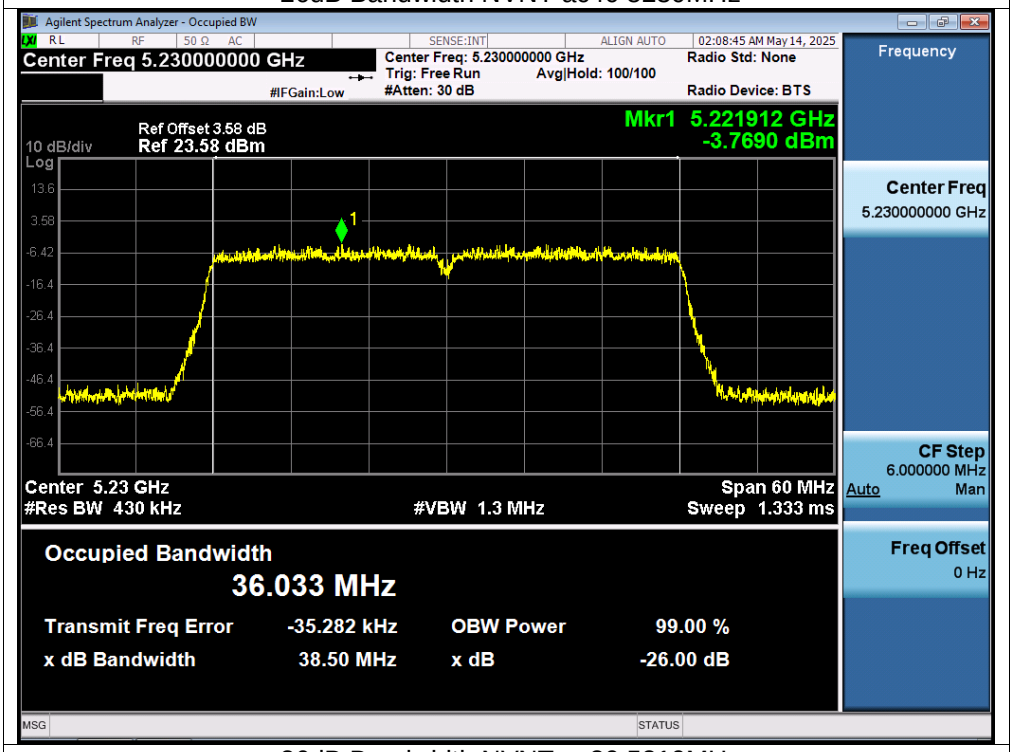
-26dB Bandwidth NVNT ac20 5240MHz



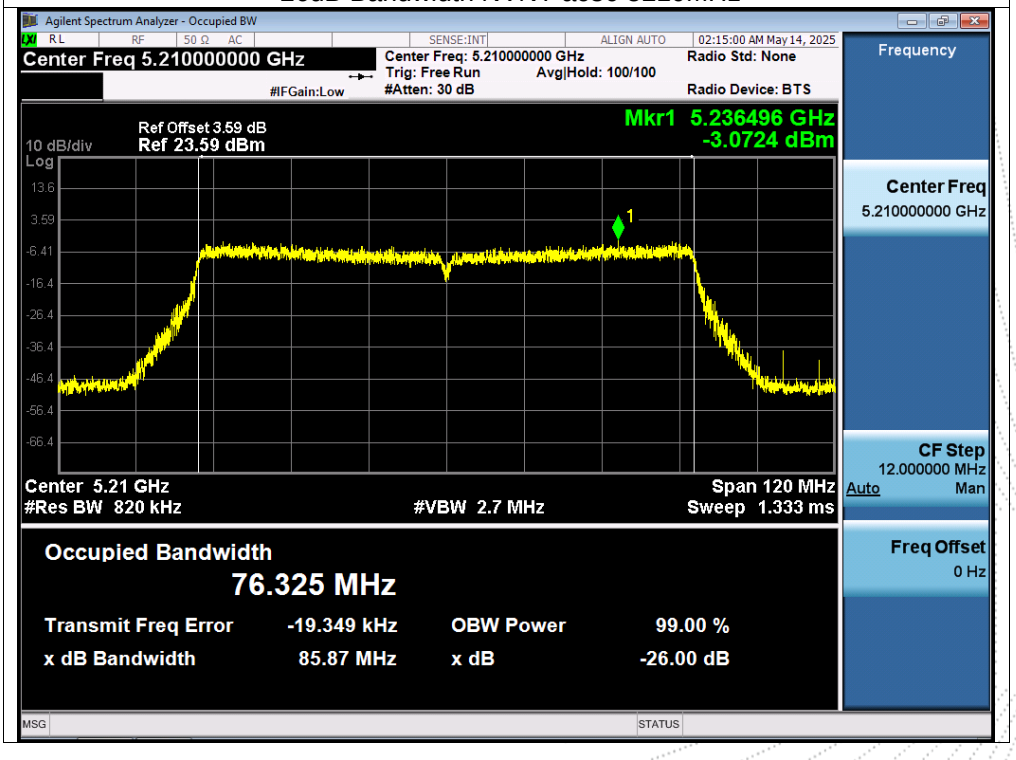
-26dB Bandwidth NVNT ac40 5190MHz



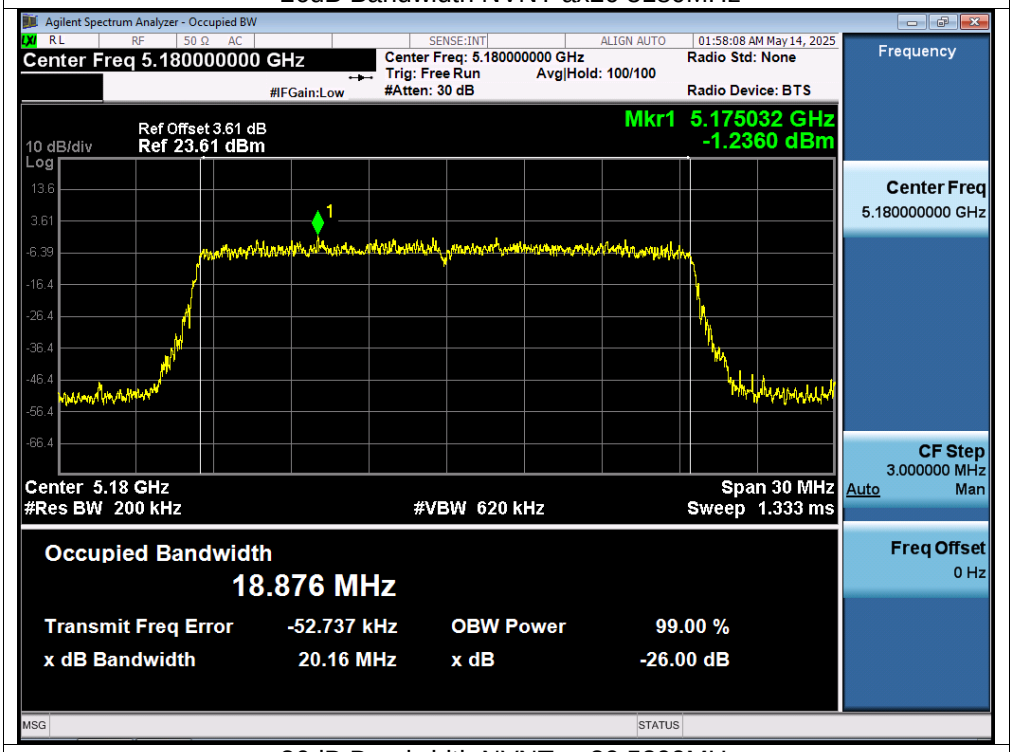
-26dB Bandwidth NVNT ac40 5230MHz



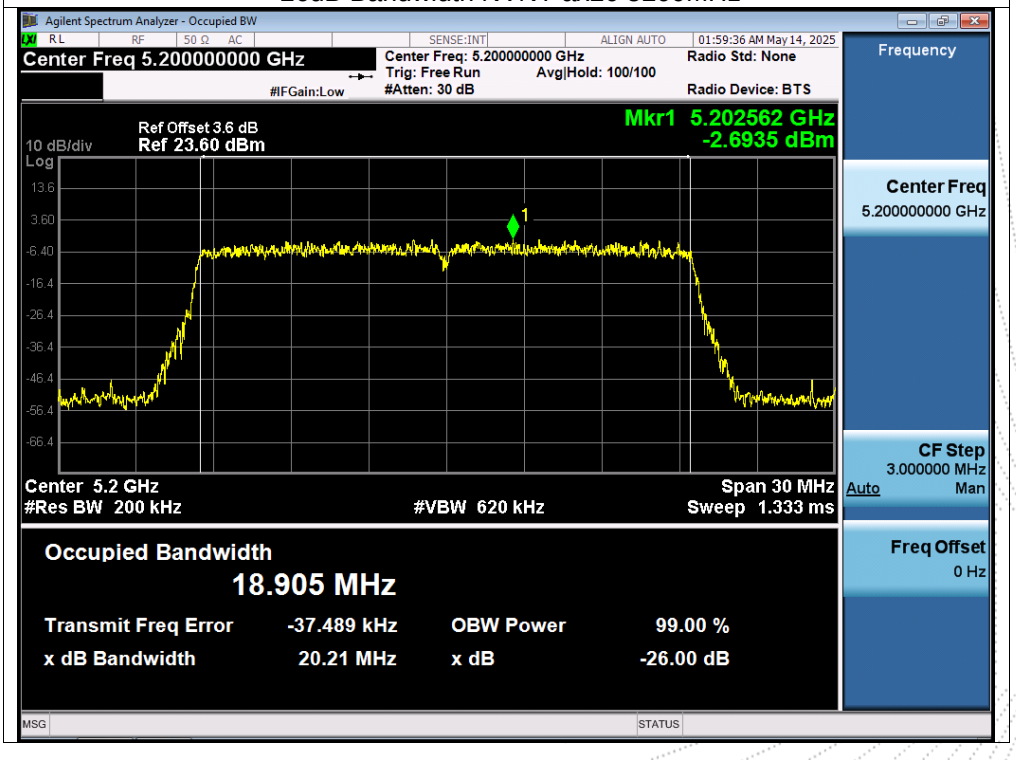
-26dB Bandwidth NVNT ac80 5210MHz



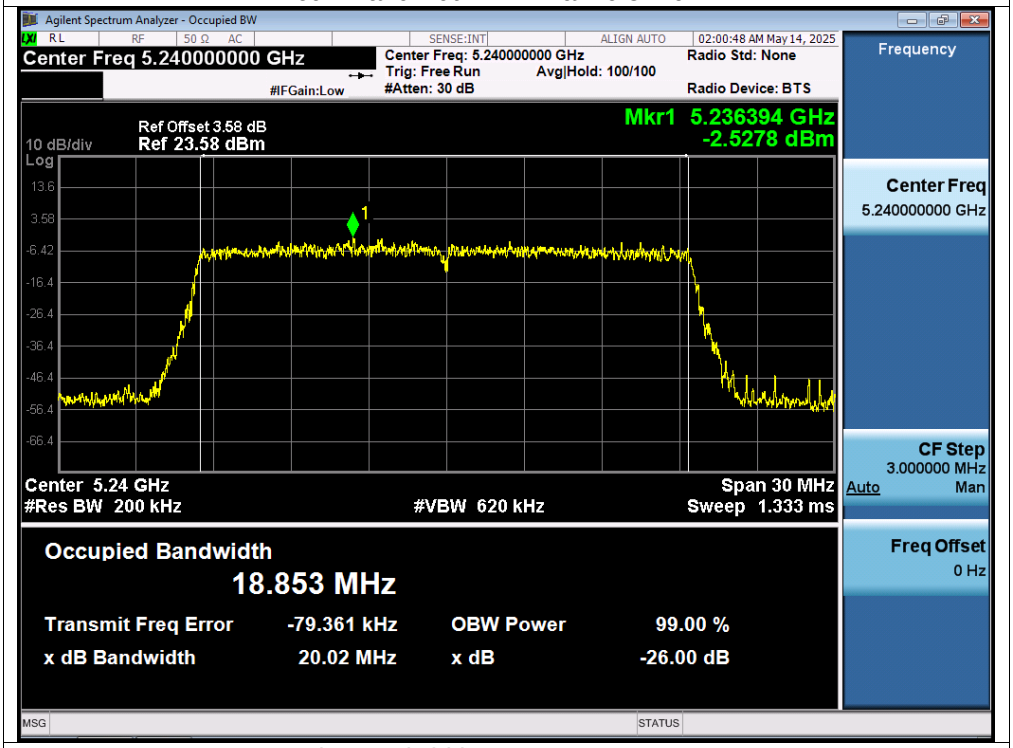
-26dB Bandwidth NVNT ax20 5180MHz



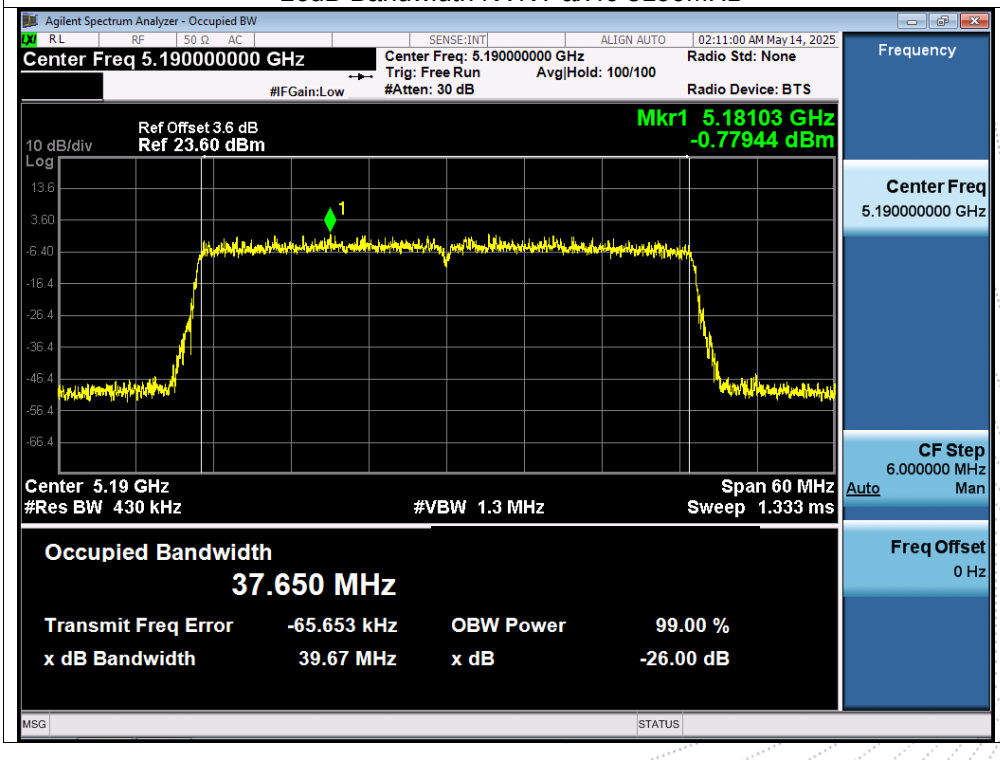
-26dB Bandwidth NVNT ax20 5200MHz



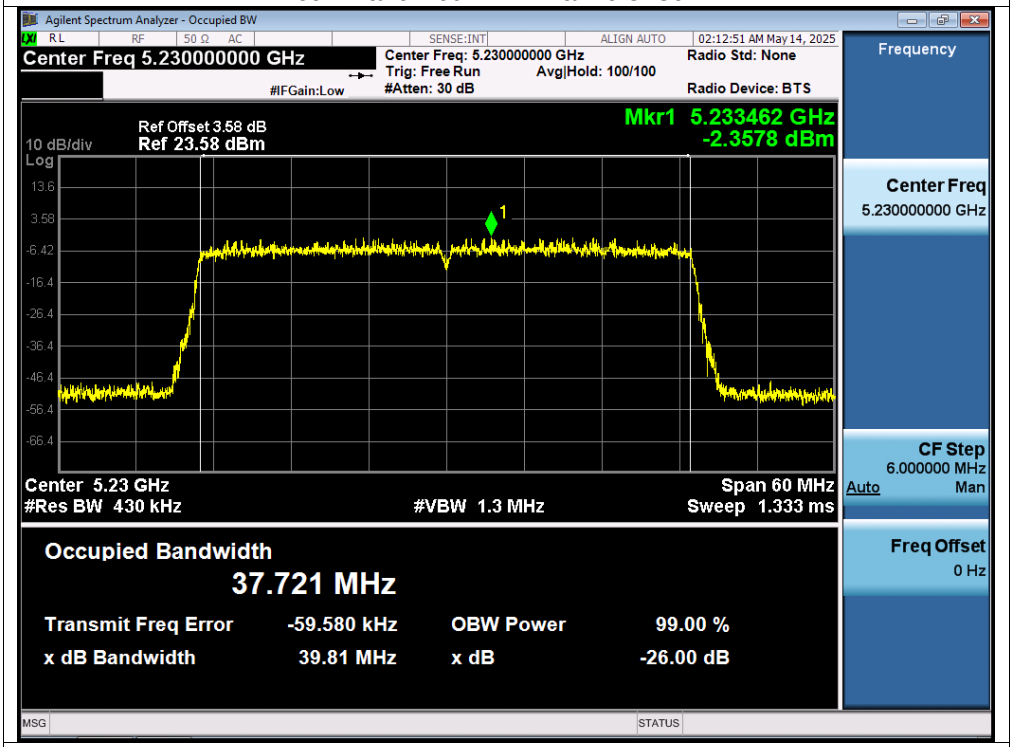
-26dB Bandwidth NVNT ax20 5240MHz



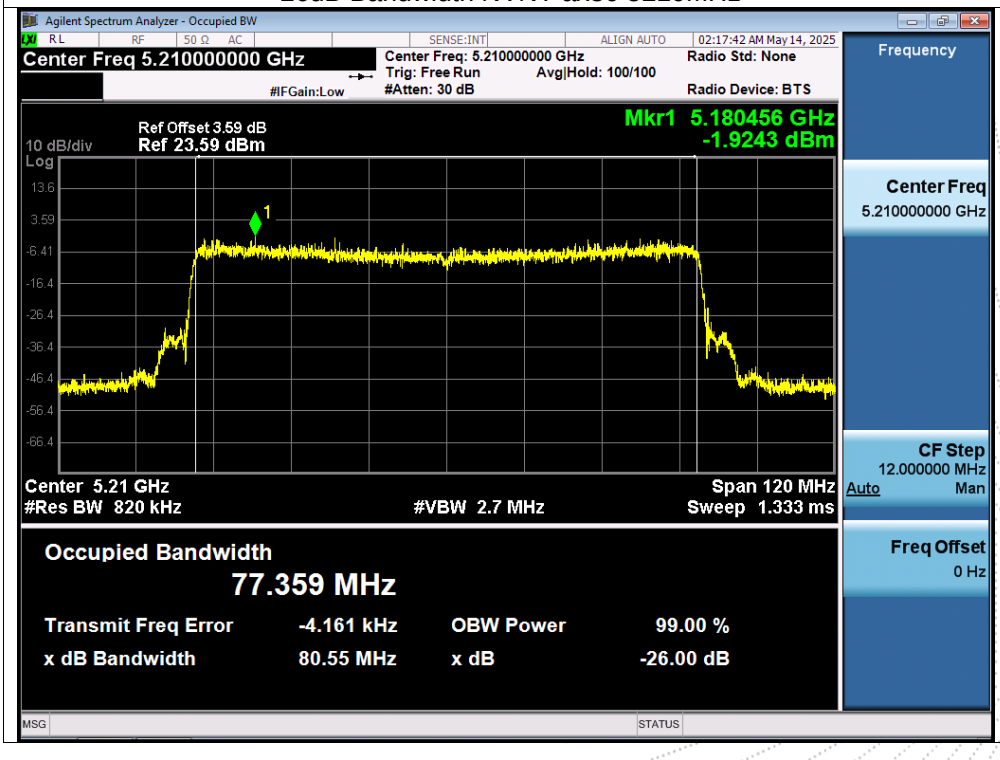
-26dB Bandwidth NVNT ax40 5190MHz



-26dB Bandwidth NVNT ax40 5230MHz

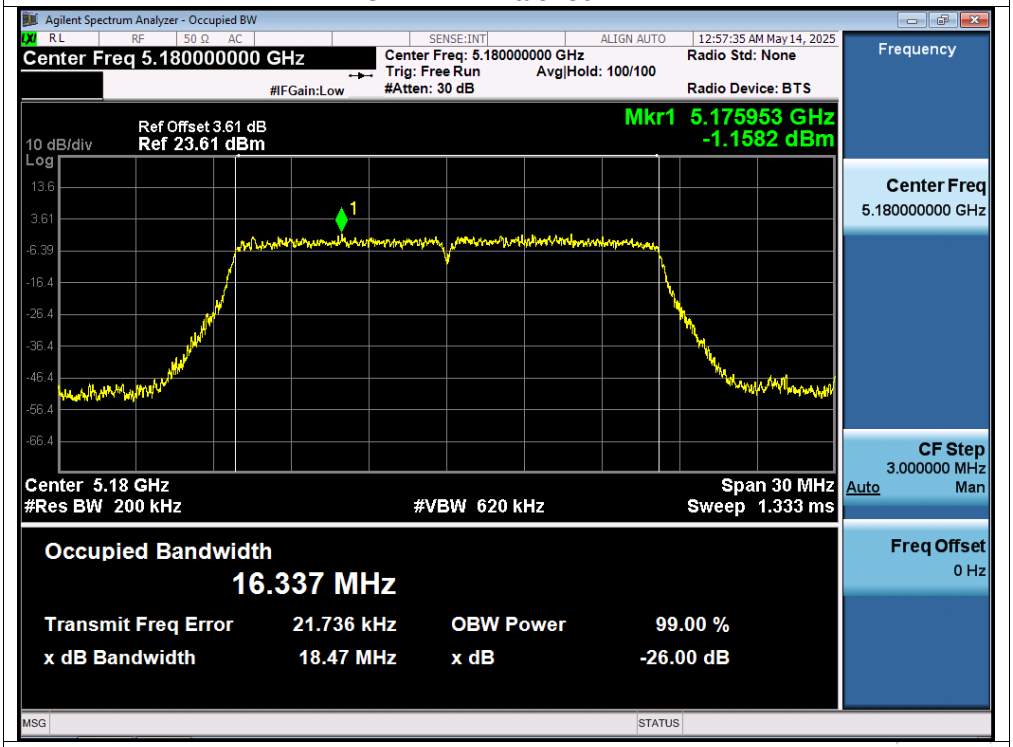


-26dB Bandwidth NVNT ax80 5210MHz



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