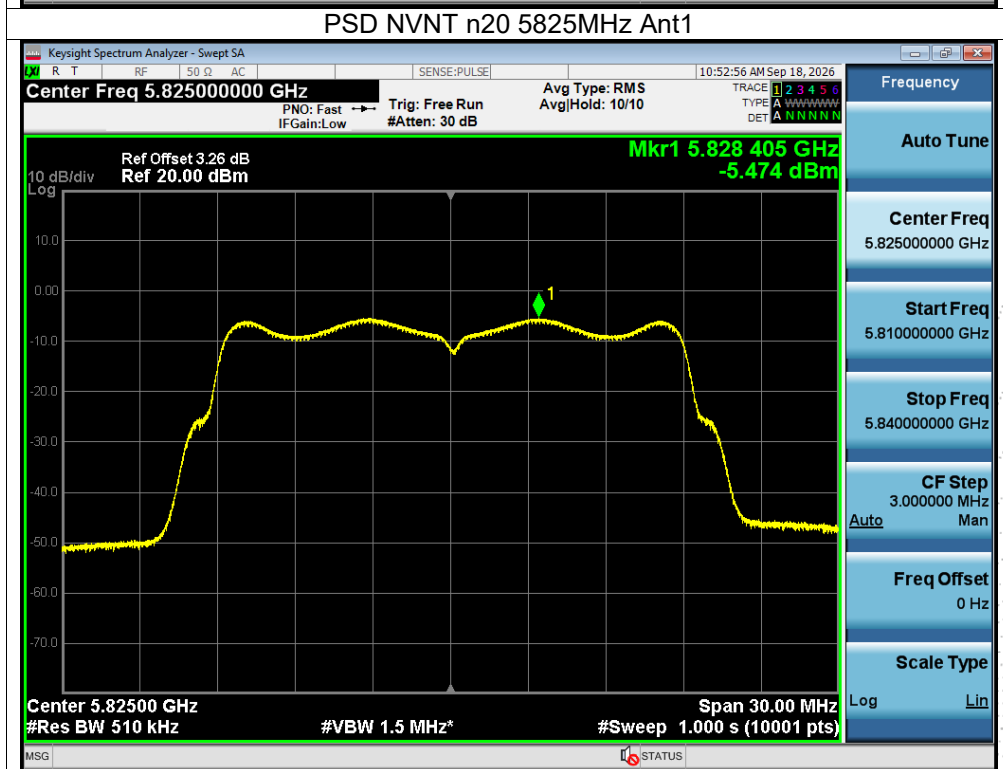
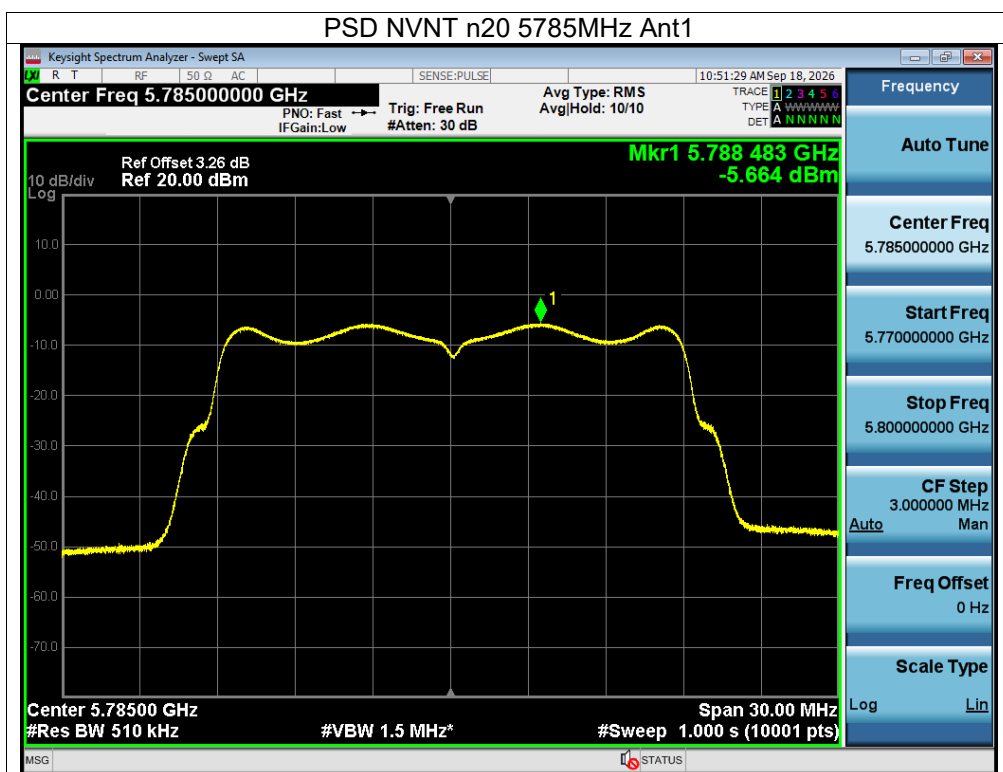
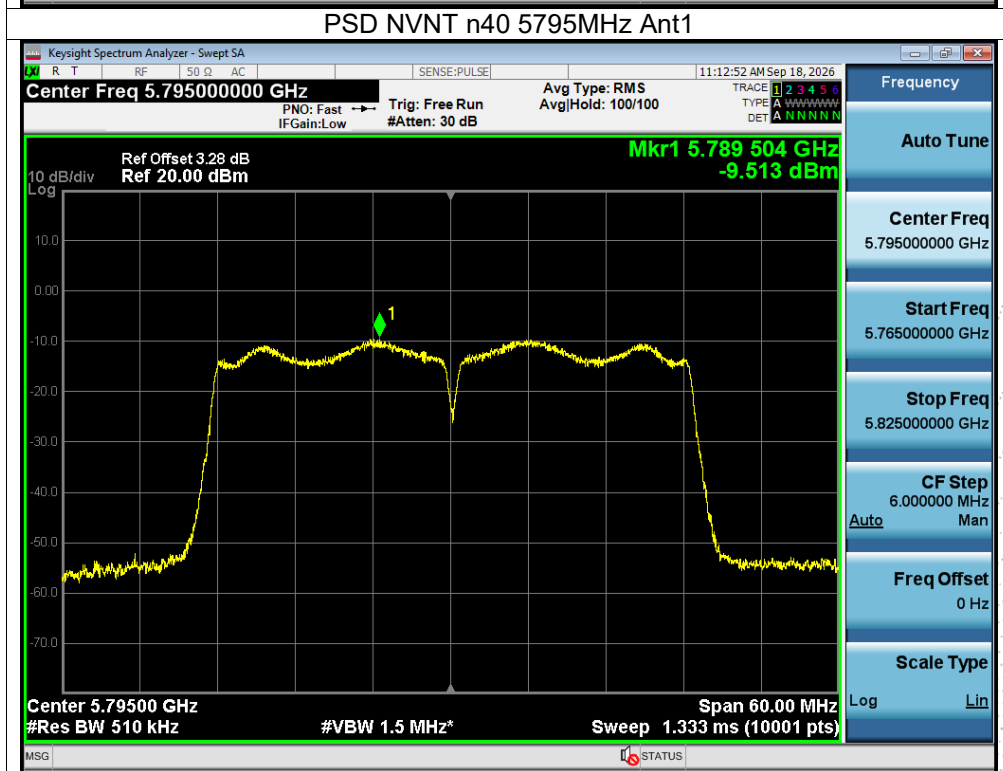
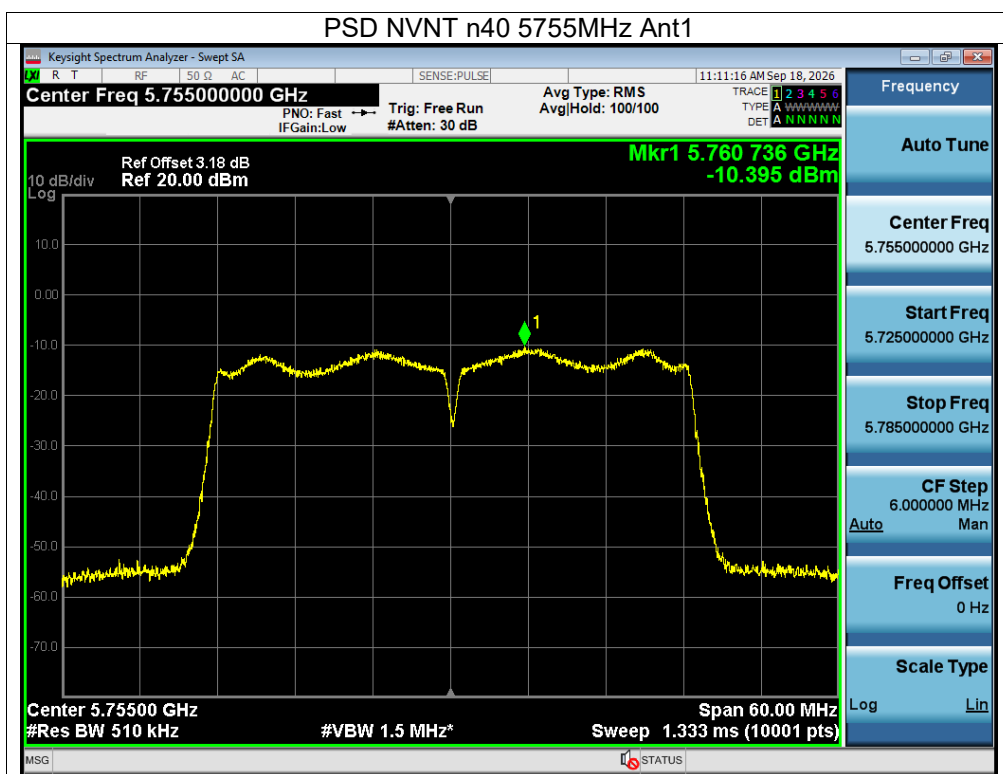
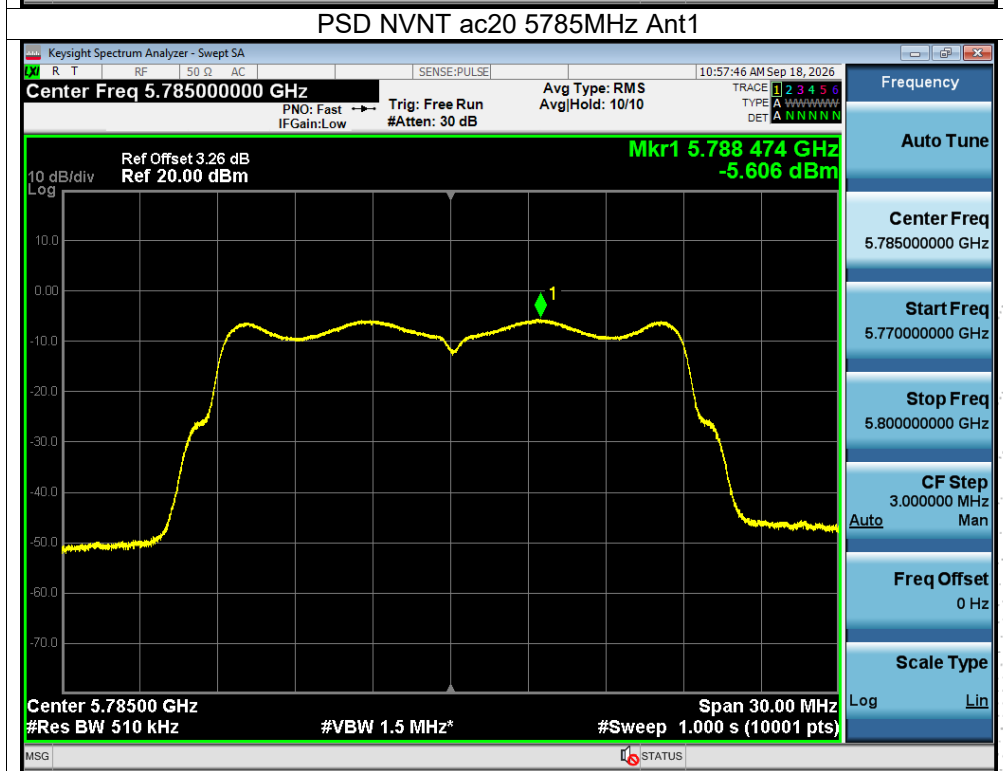
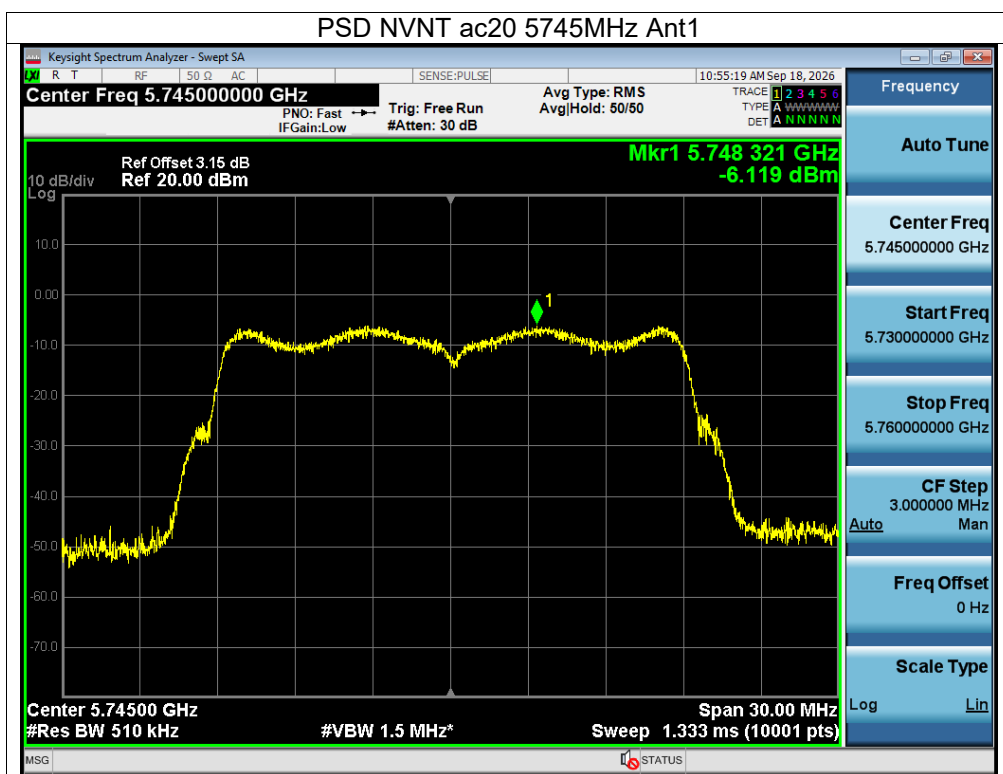
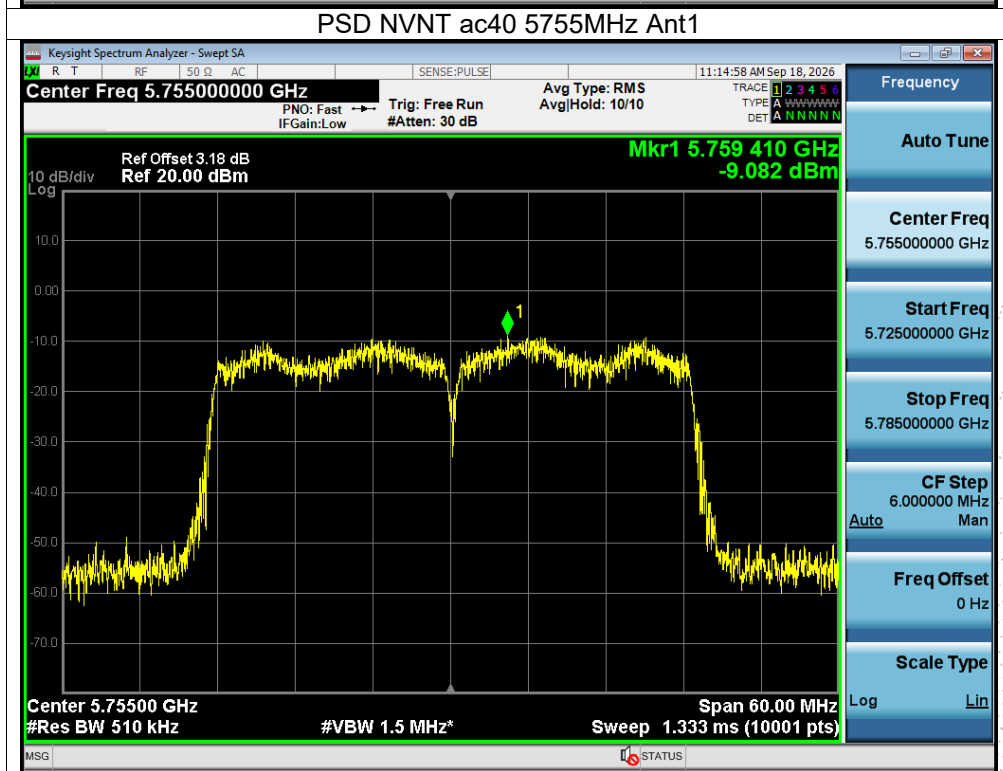
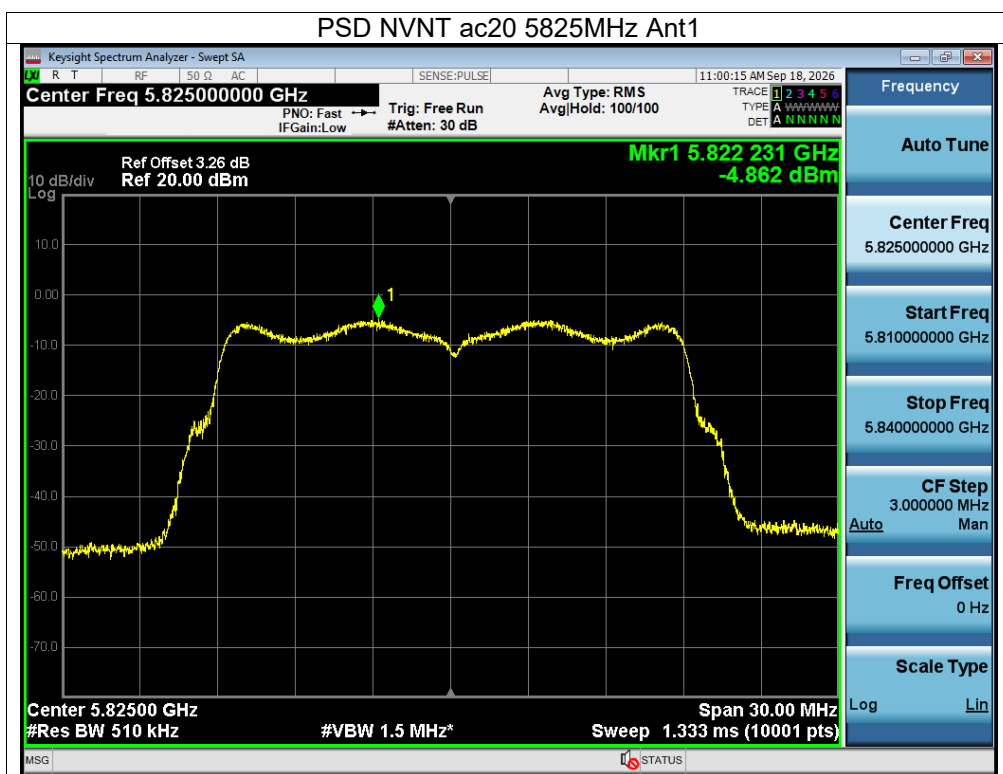
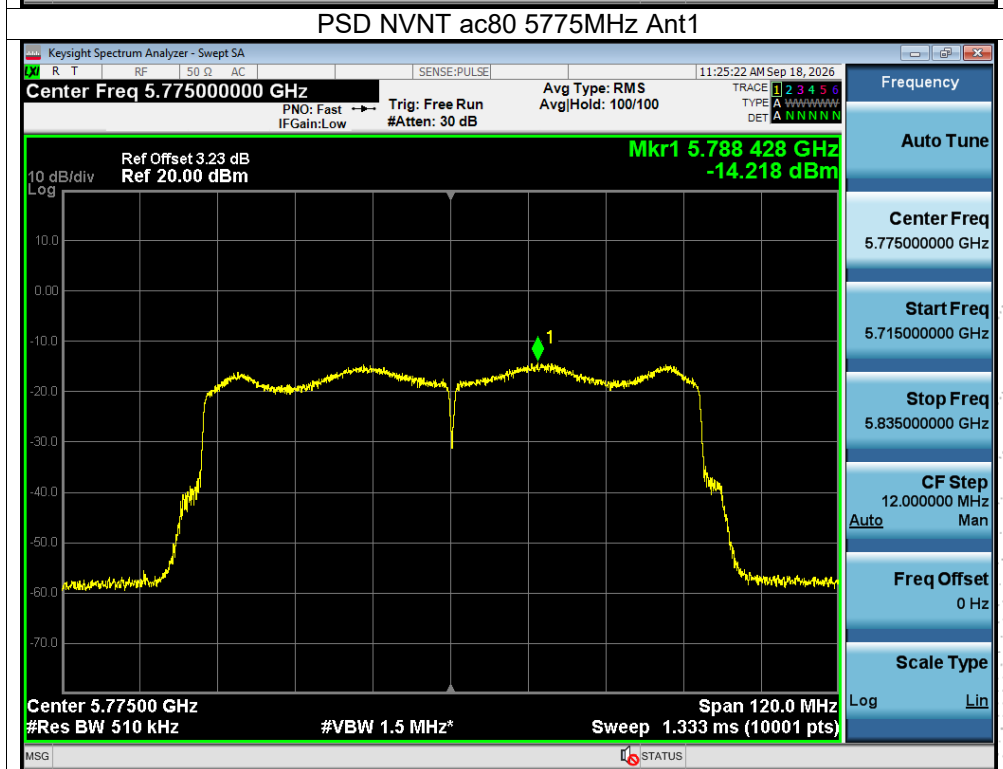
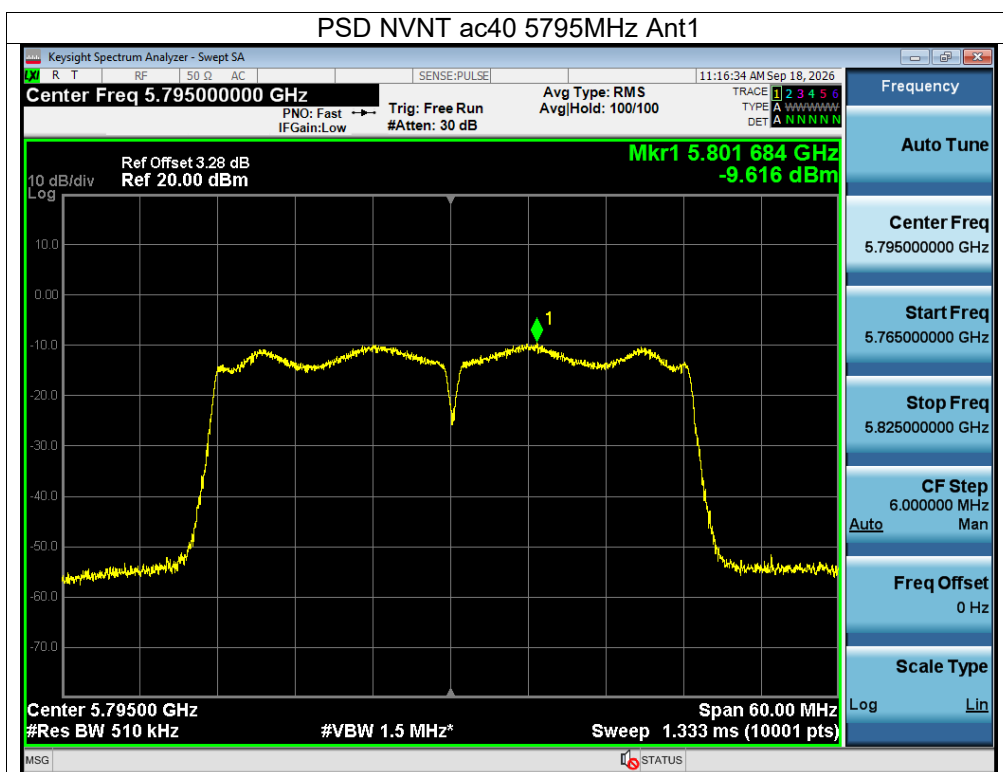


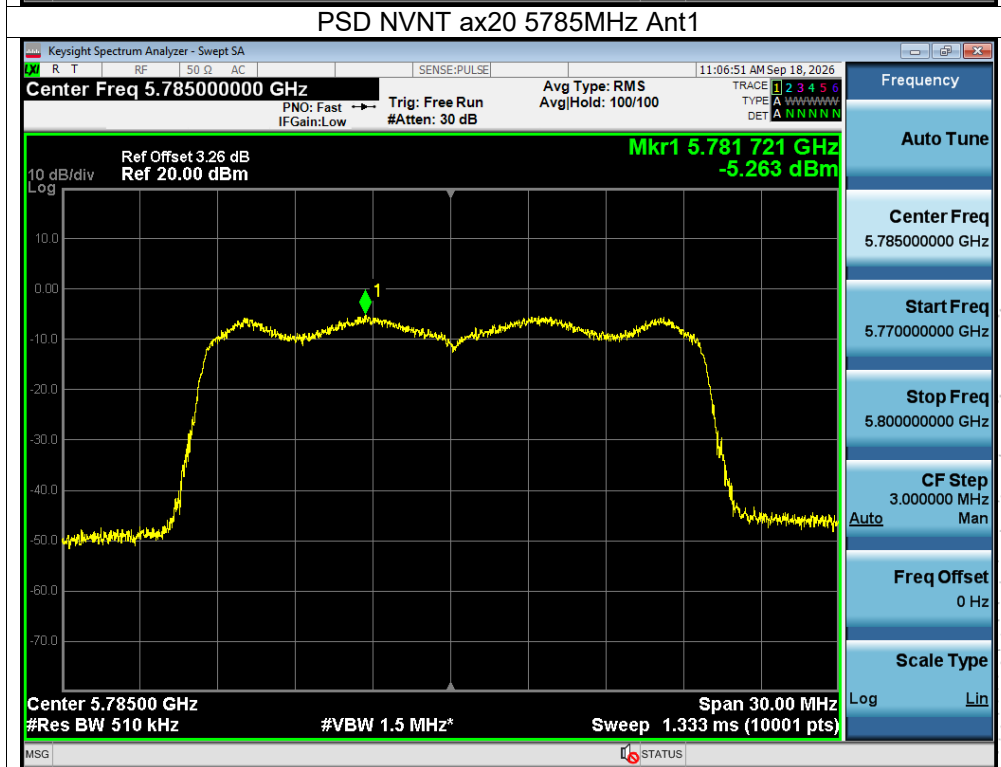
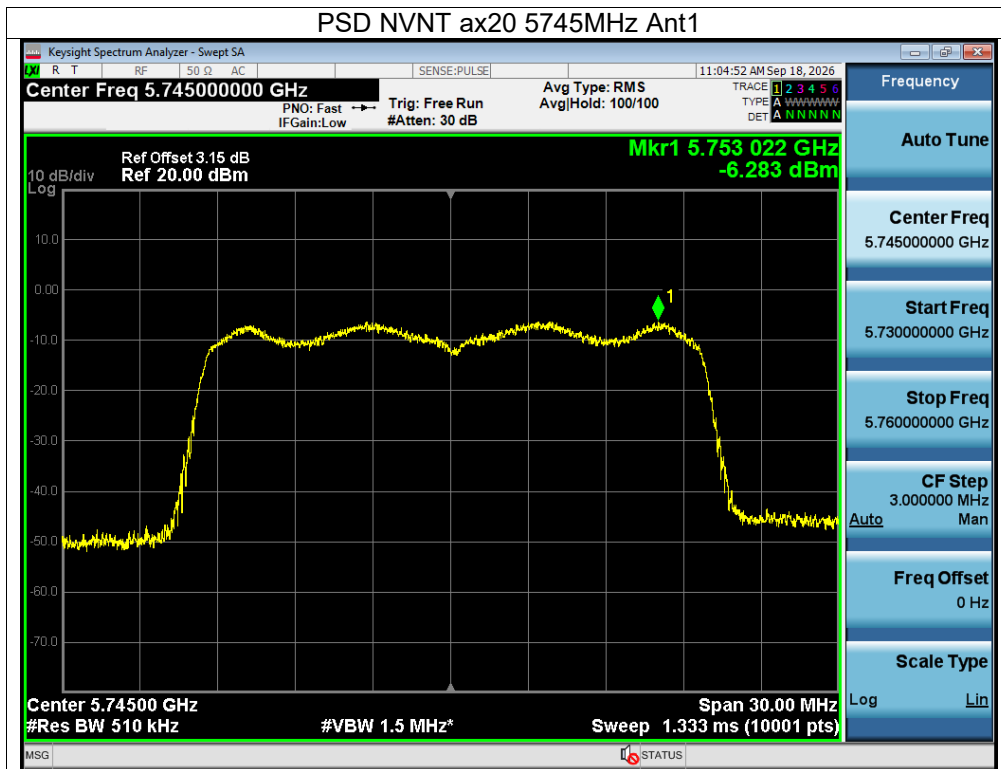


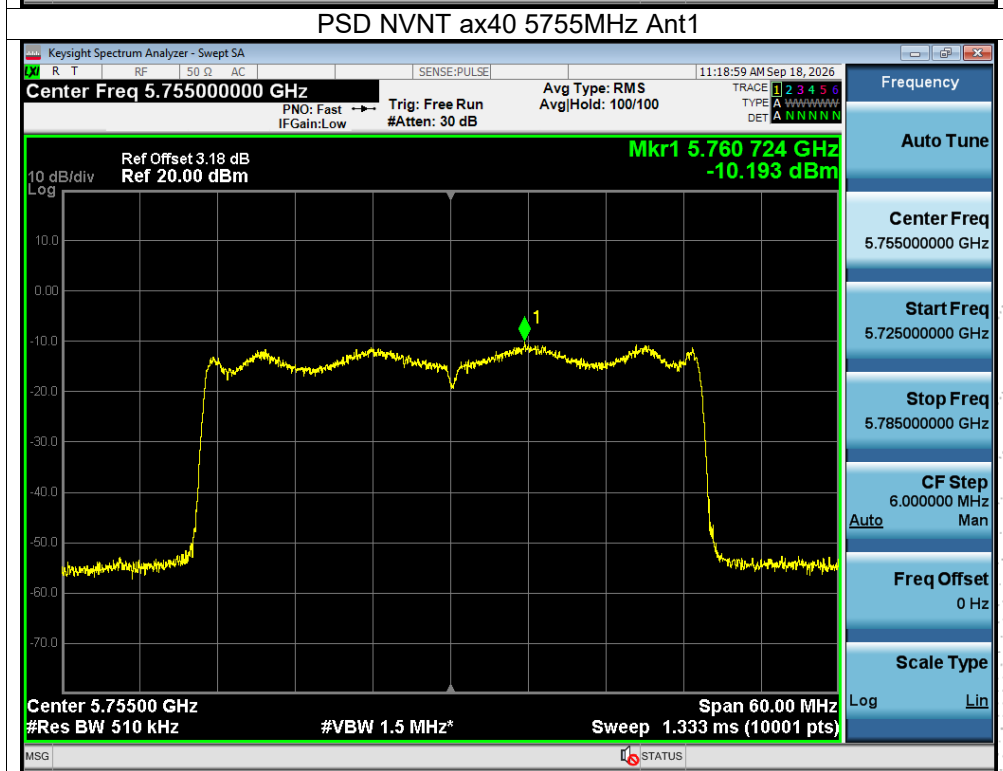
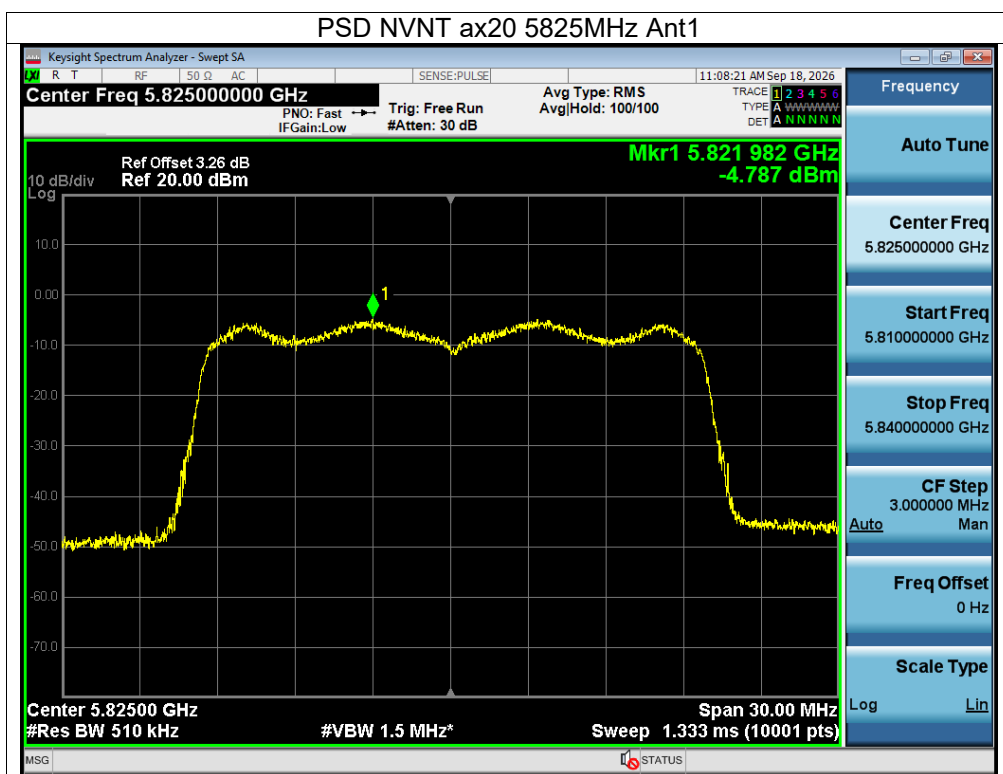




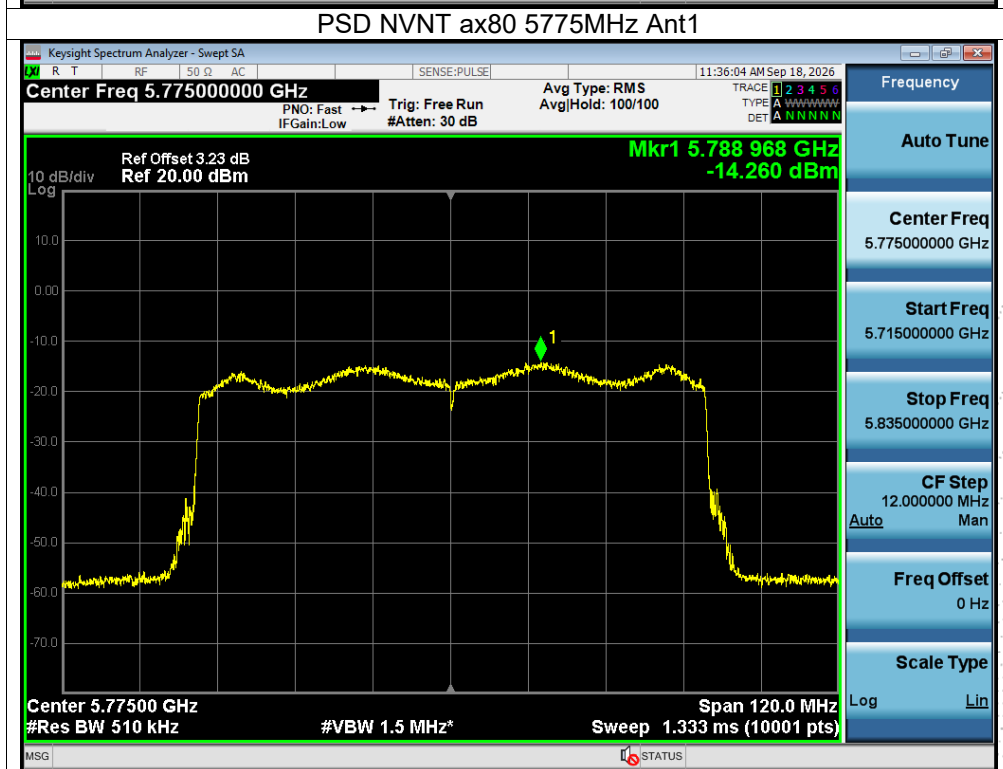
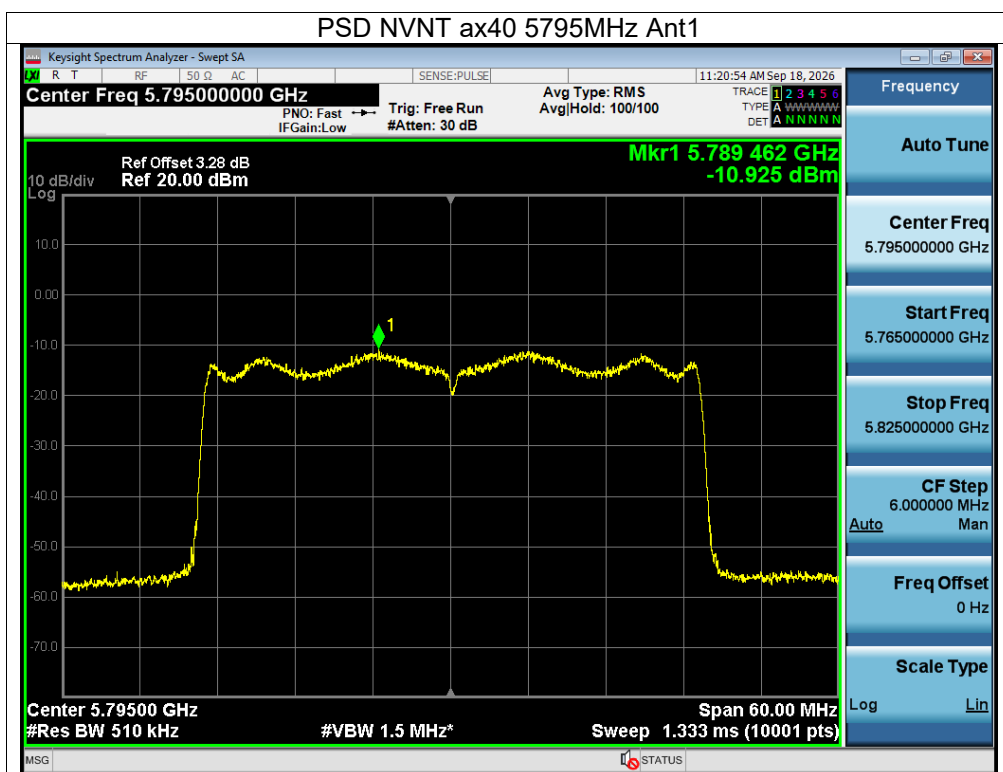






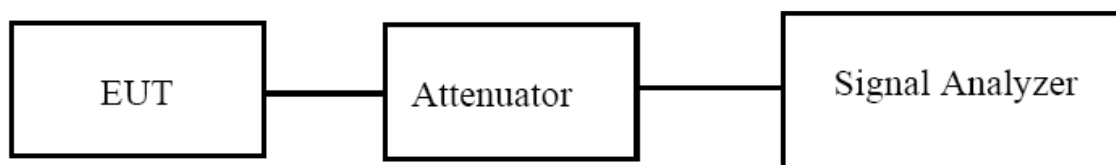


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9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

(1) For the band 5.15-5.25 GHz.

(iv) For 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 $11 \text{ dBm} + 10 \log B$, 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 peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is in the range of 1% to 5%.

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 $VBW \geq 3 \cdot RBW$
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.

Emission bandwidth for the band 5.725 GHz to 5.85 GHz

The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times RBW$.
- c) Detector = Peak.
- d) Trace mode = max-hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) 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

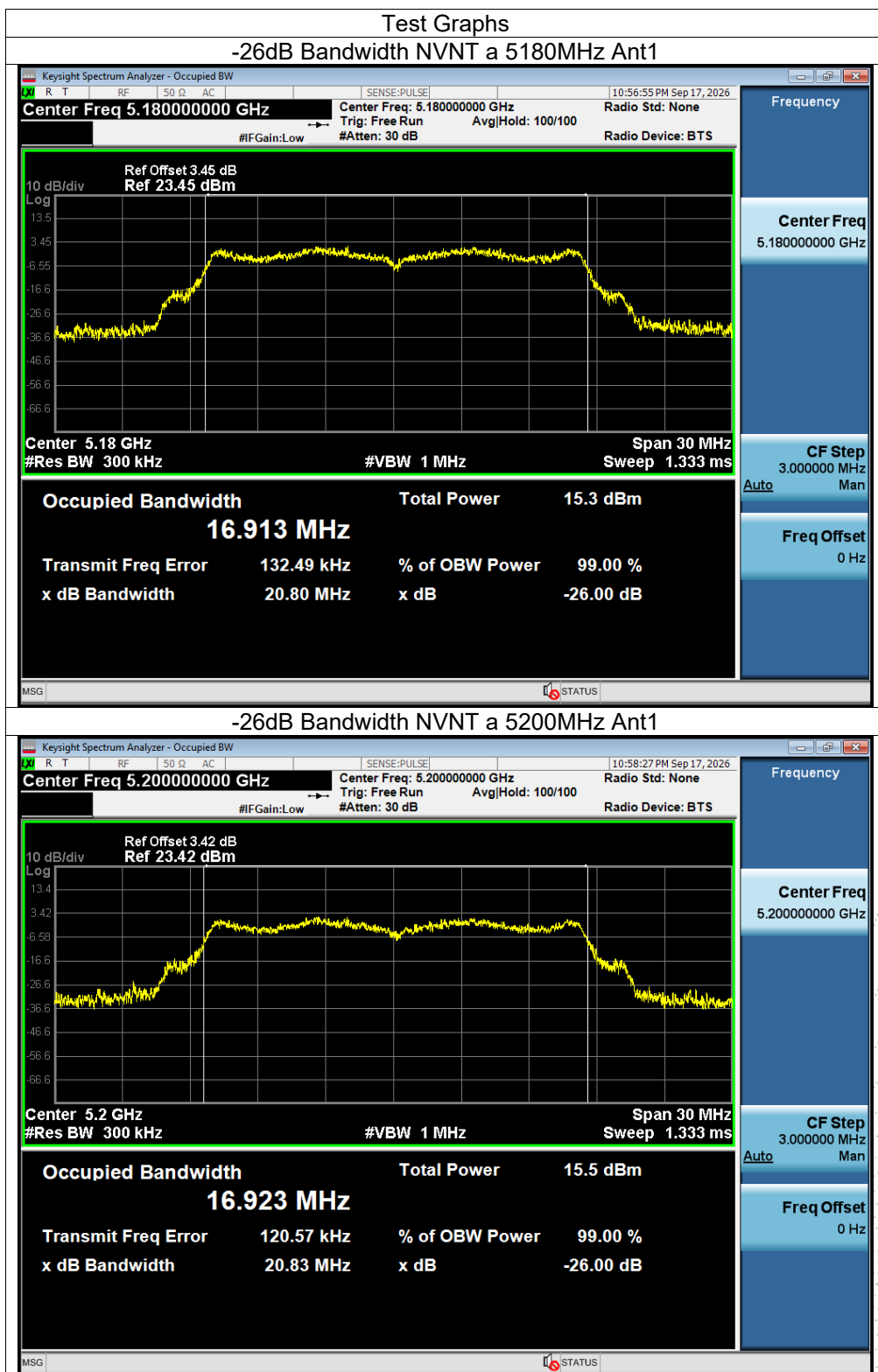
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

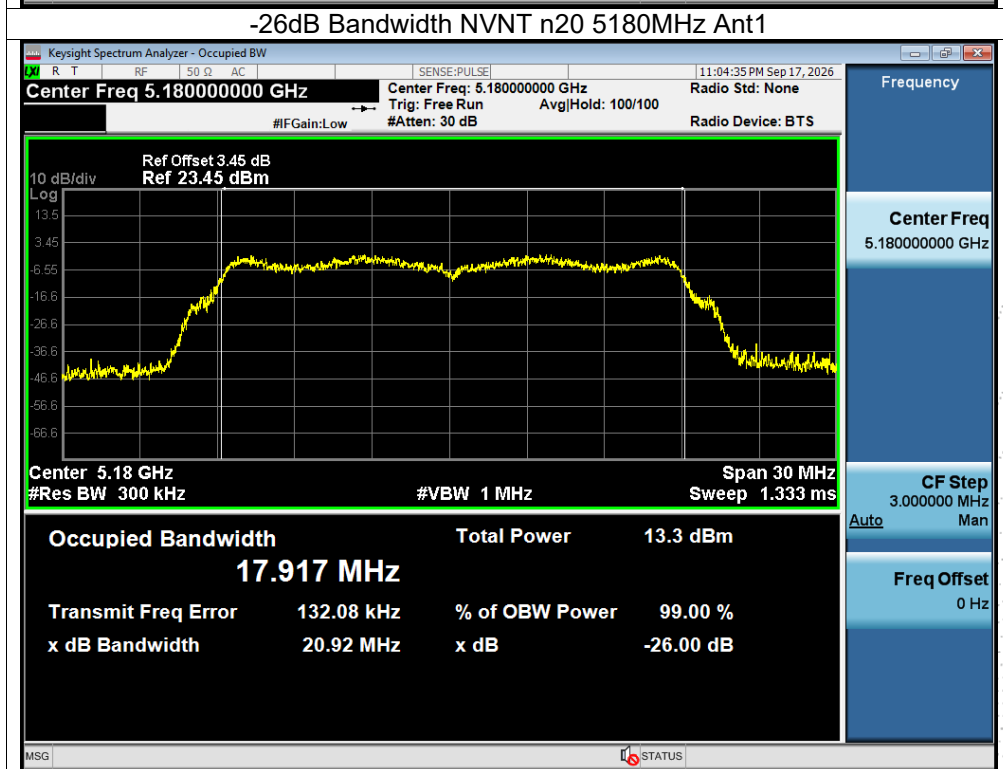
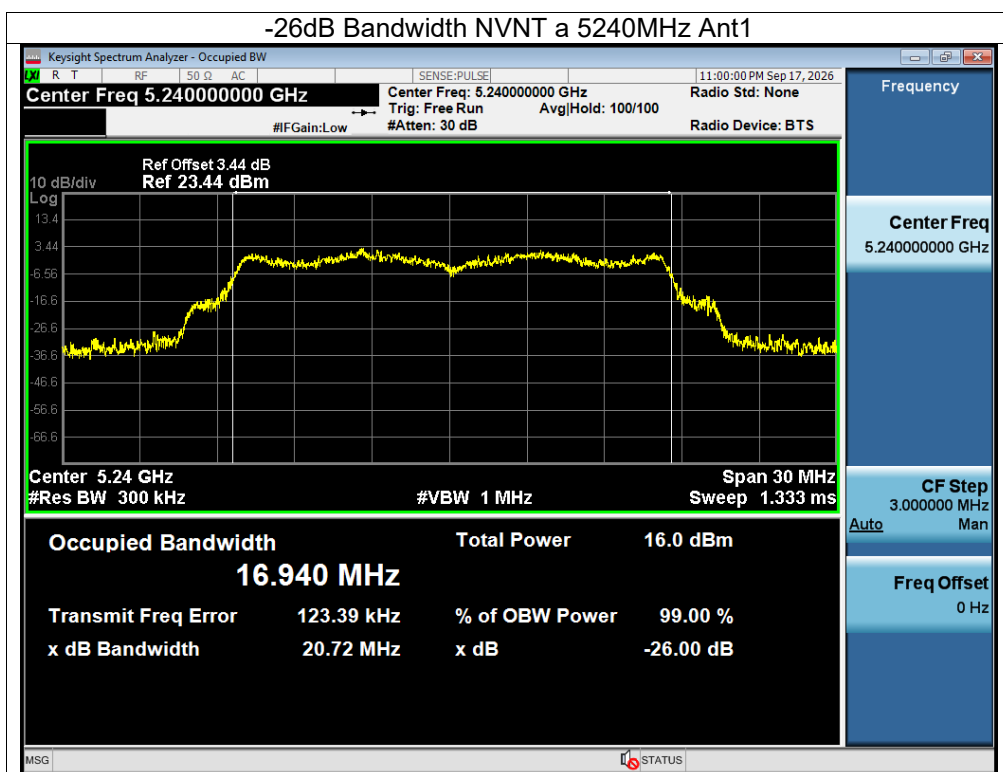
Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	DC 12V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	20.797	0.5	Pass
NVNT	a	5200	20.828	0.5	Pass
NVNT	a	5240	20.715	0.5	Pass
NVNT	n20	5180	20.918	0.5	Pass
NVNT	n20	5200	20.935	0.5	Pass
NVNT	n20	5240	20.936	0.5	Pass
NVNT	n40	5190	39.267	0.5	Pass
NVNT	n40	5230	39.582	0.5	Pass
NVNT	ac20	5180	20.86	0.5	Pass
NVNT	ac20	5200	20.994	0.5	Pass
NVNT	ac20	5240	20.786	0.5	Pass
NVNT	ac40	5190	39.567	0.5	Pass
NVNT	ac40	5230	39.308	0.5	Pass
NVNT	ac80	5210	86.309	0.5	Pass
NVNT	ax20	5180	20.849	0.5	Pass
NVNT	ax20	5200	20.566	0.5	Pass
NVNT	ax20	5240	20.872	0.5	Pass
NVNT	ax40	5190	39.501	0.5	Pass
NVNT	ax40	5230	39.566	0.5	Pass
NVNT	ax80	5210	85.485	0.5	Pass

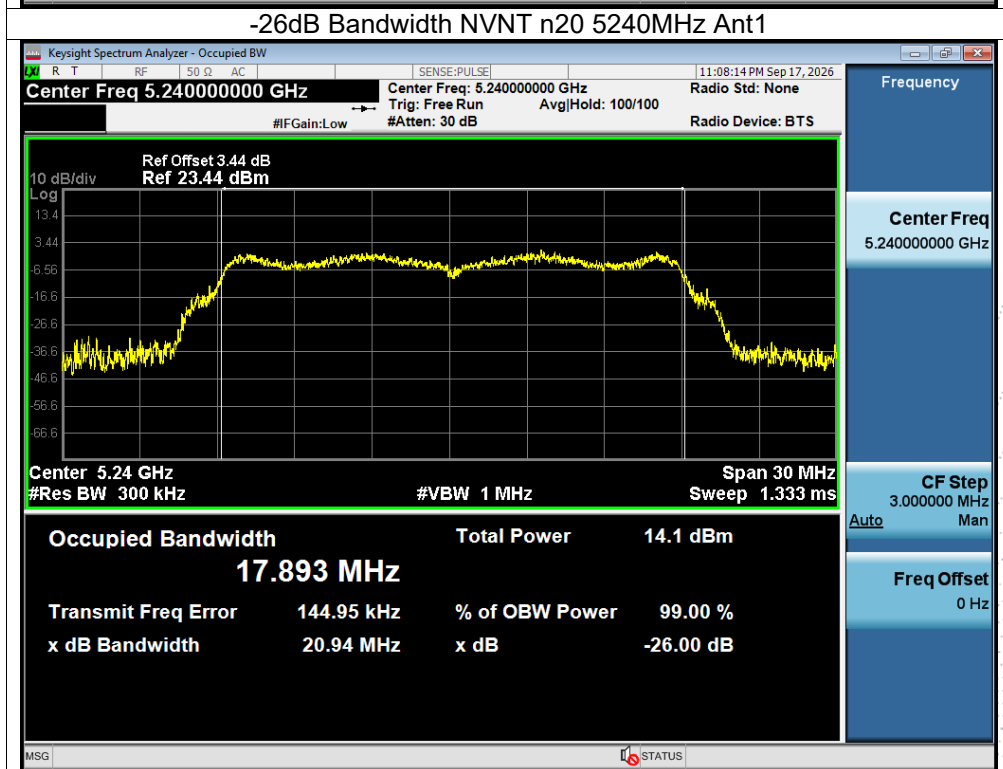
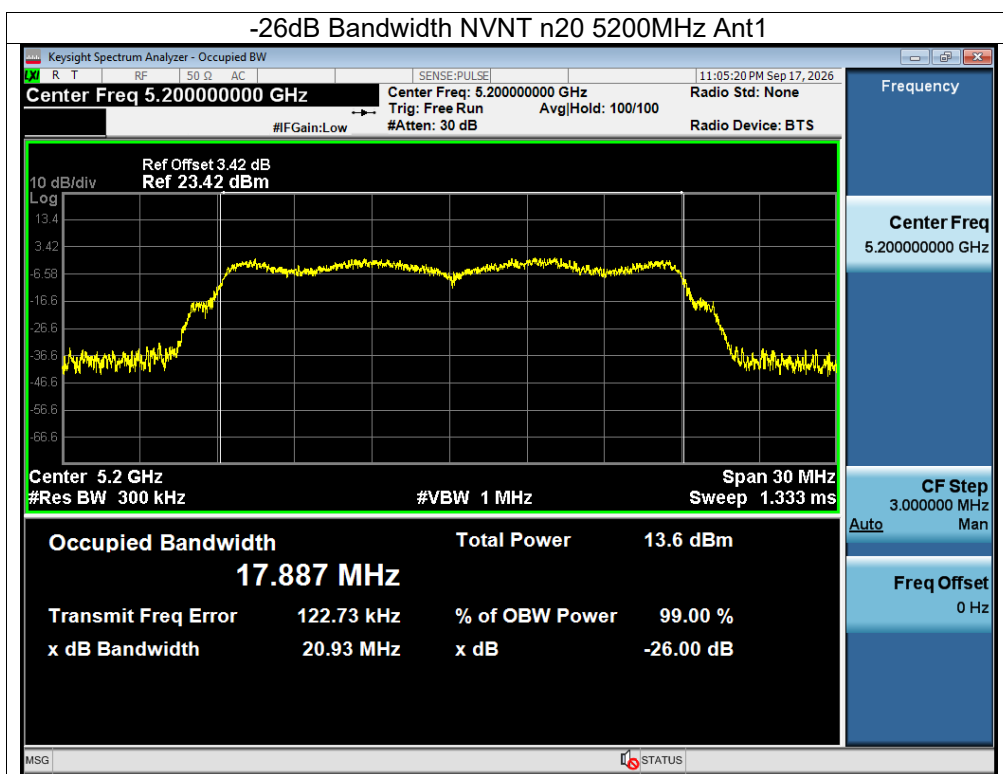
Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5180	16.734
NVNT	a	5200	16.723
NVNT	a	5240	16.707
NVNT	n20	5180	17.72
NVNT	n20	5200	17.741
NVNT	n20	5240	17.742
NVNT	n40	5190	36.447
NVNT	n40	5230	36.448
NVNT	ac20	5180	17.703
NVNT	ac20	5200	17.736
NVNT	ac20	5240	17.752
NVNT	ac40	5190	36.42
NVNT	ac40	5230	36.424
NVNT	ac80	5210	75.613
NVNT	ax20	5180	18.977
NVNT	ax20	5200	18.961
NVNT	ax20	5240	18.988
NVNT	ax40	5190	37.724
NVNT	ax40	5230	37.721
NVNT	ax80	5210	77.044

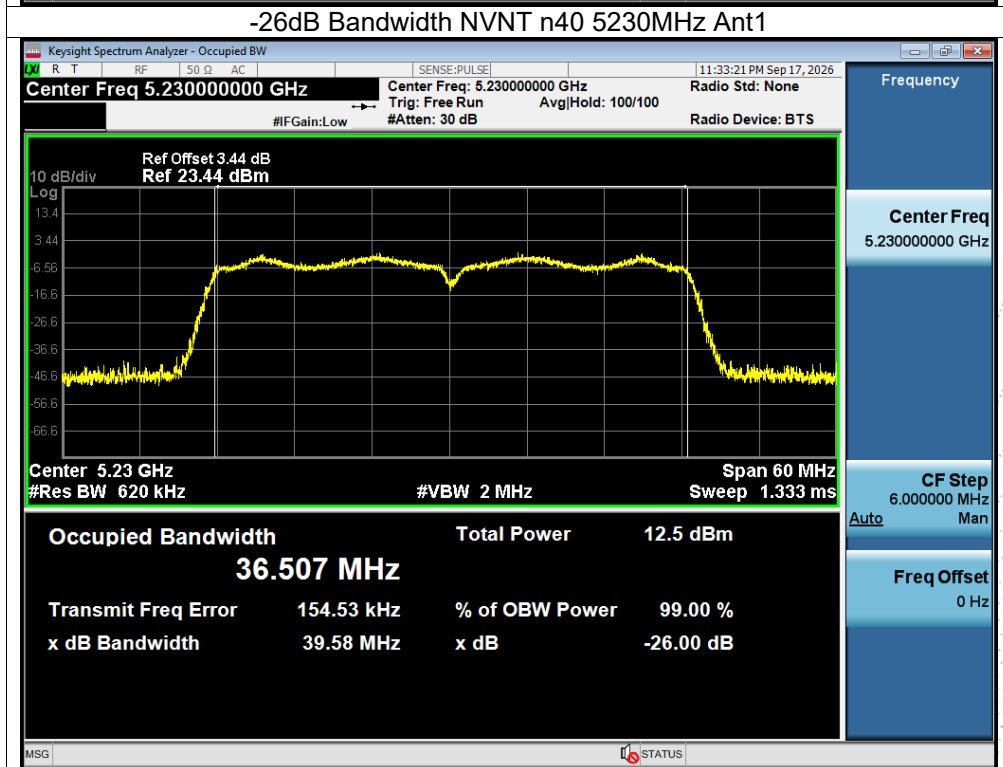
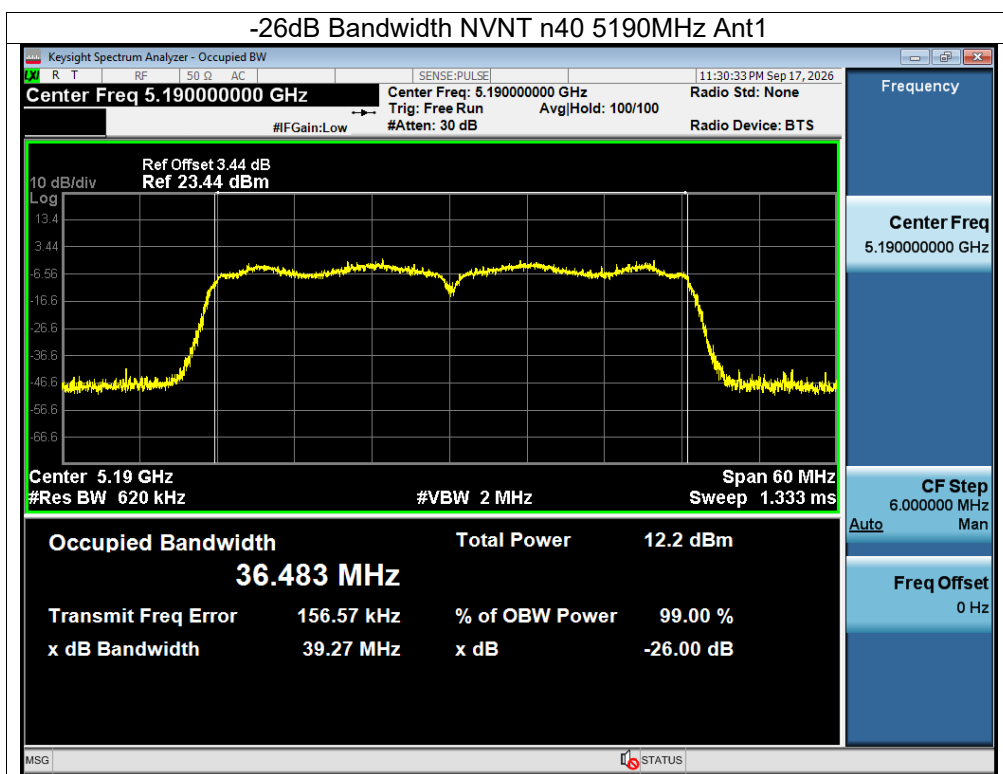


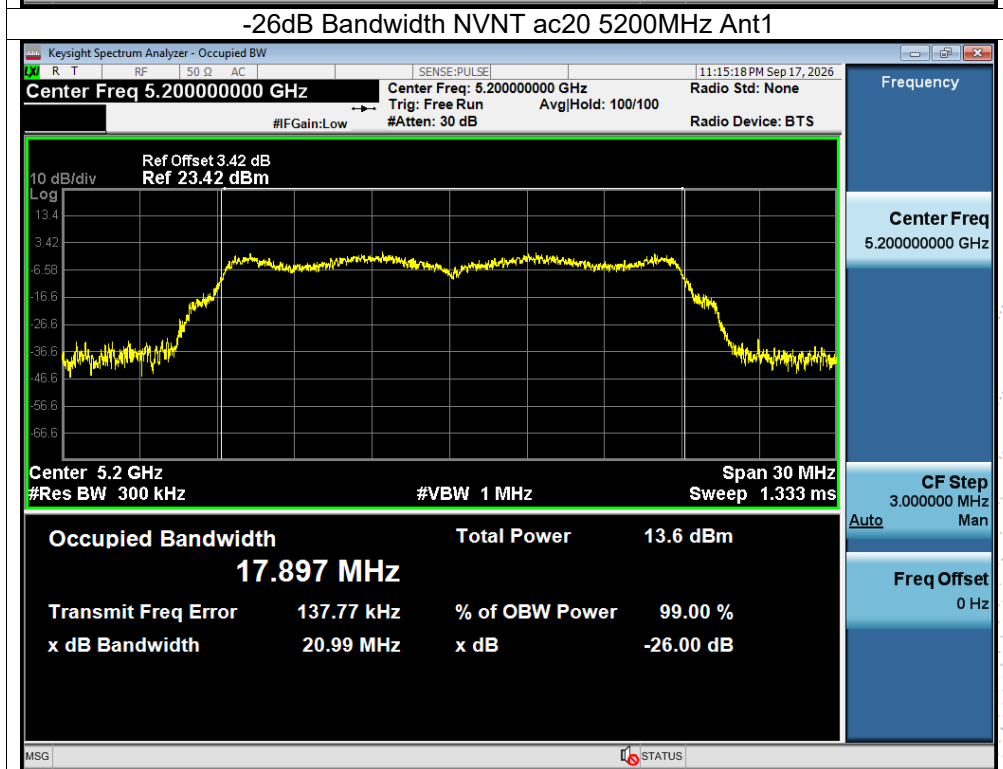
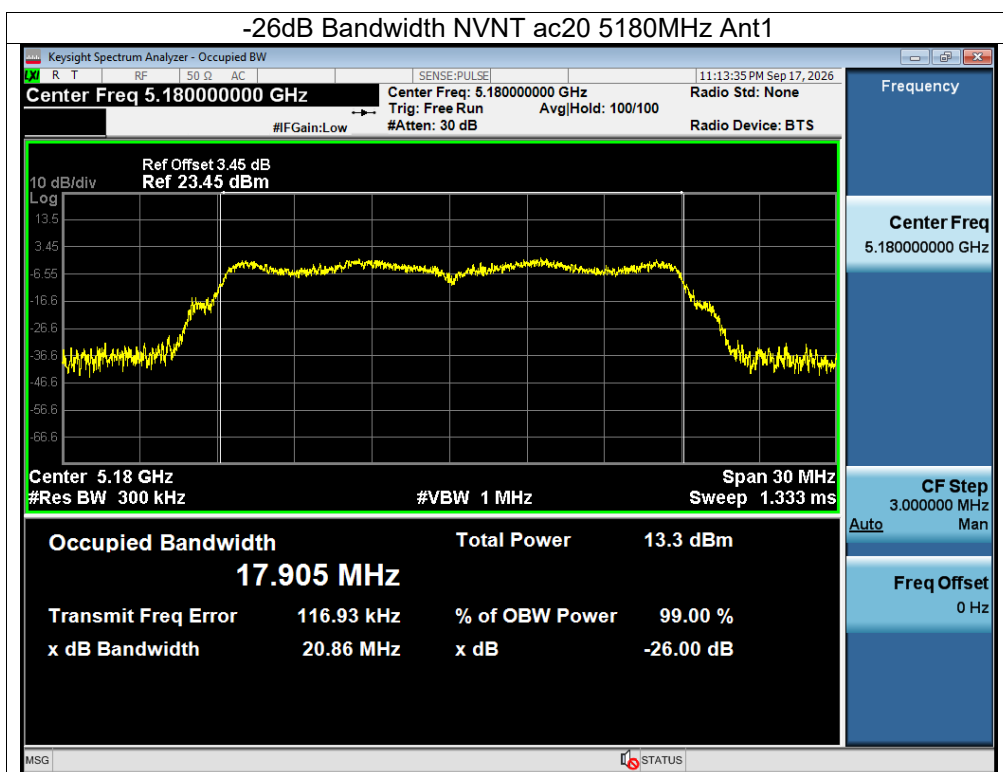
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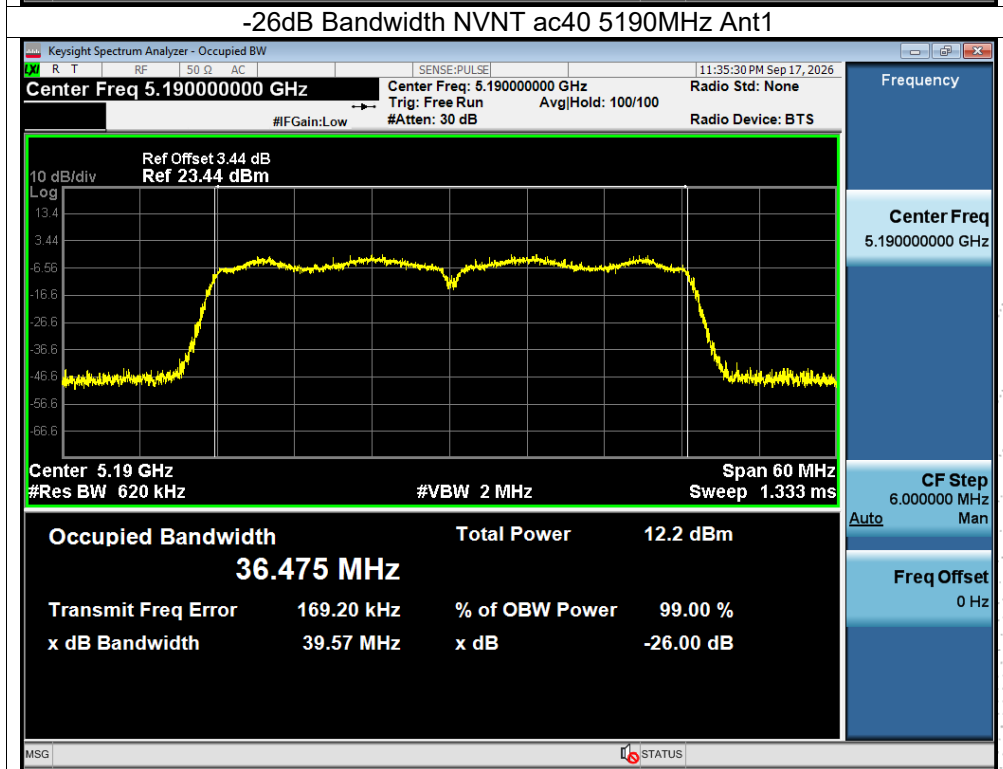
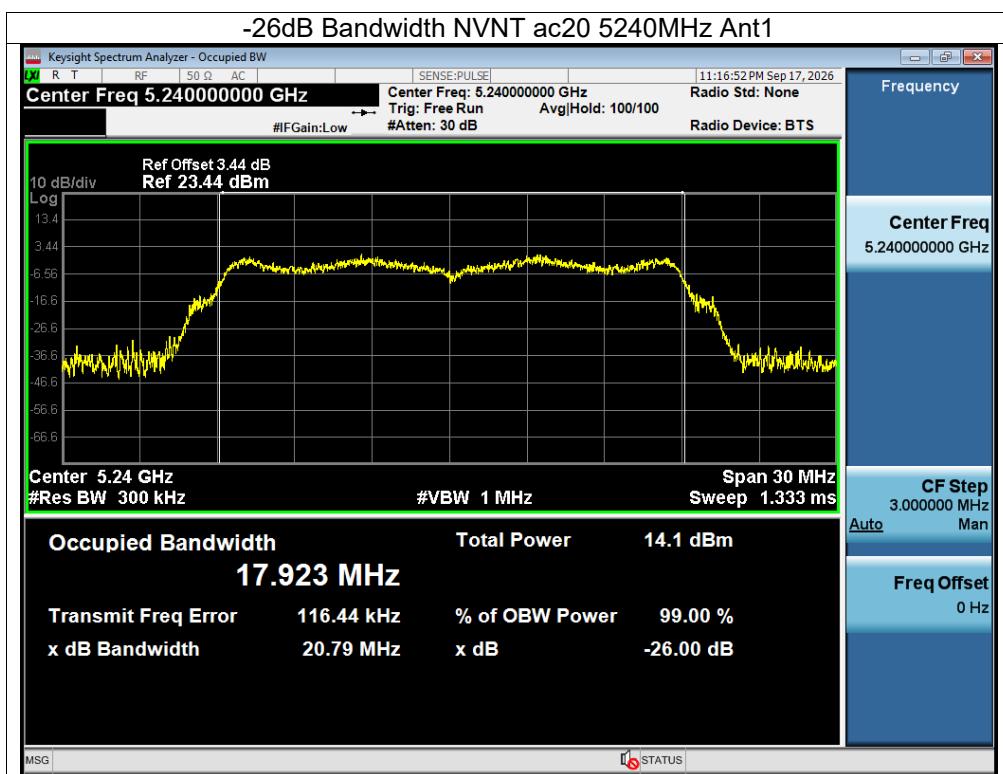


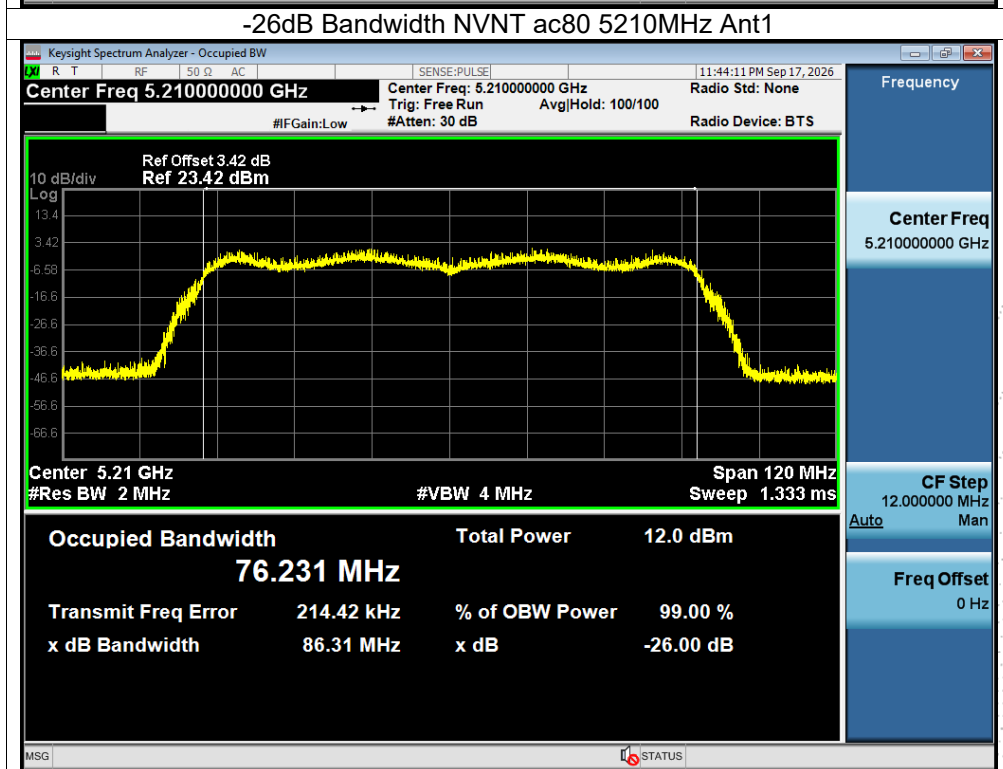
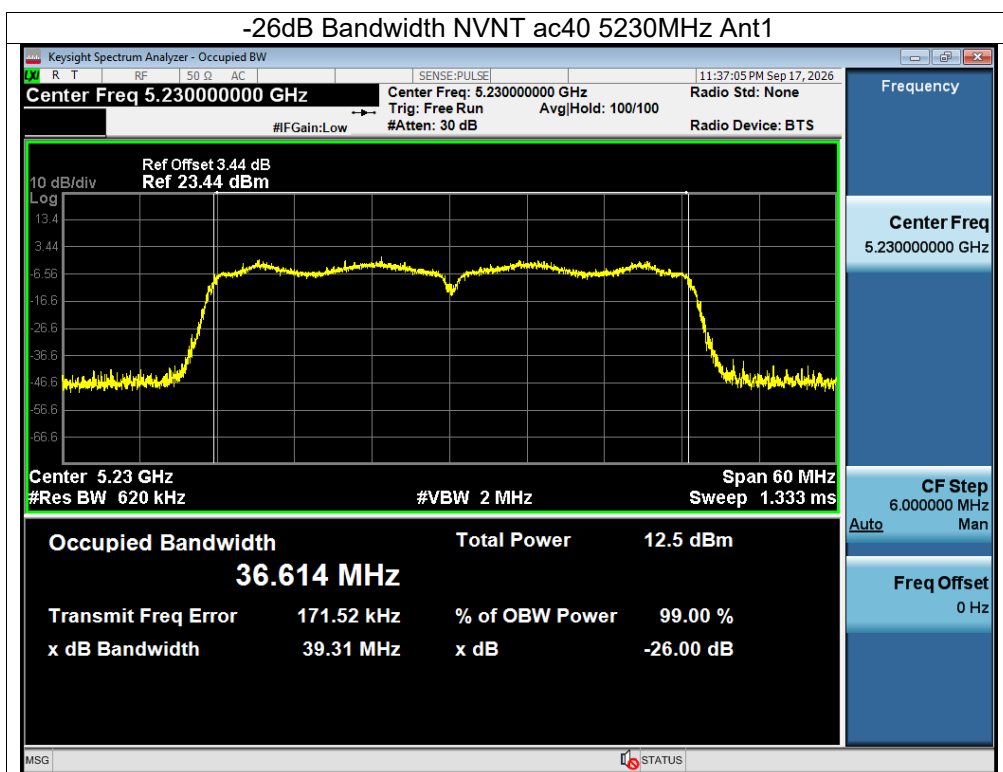
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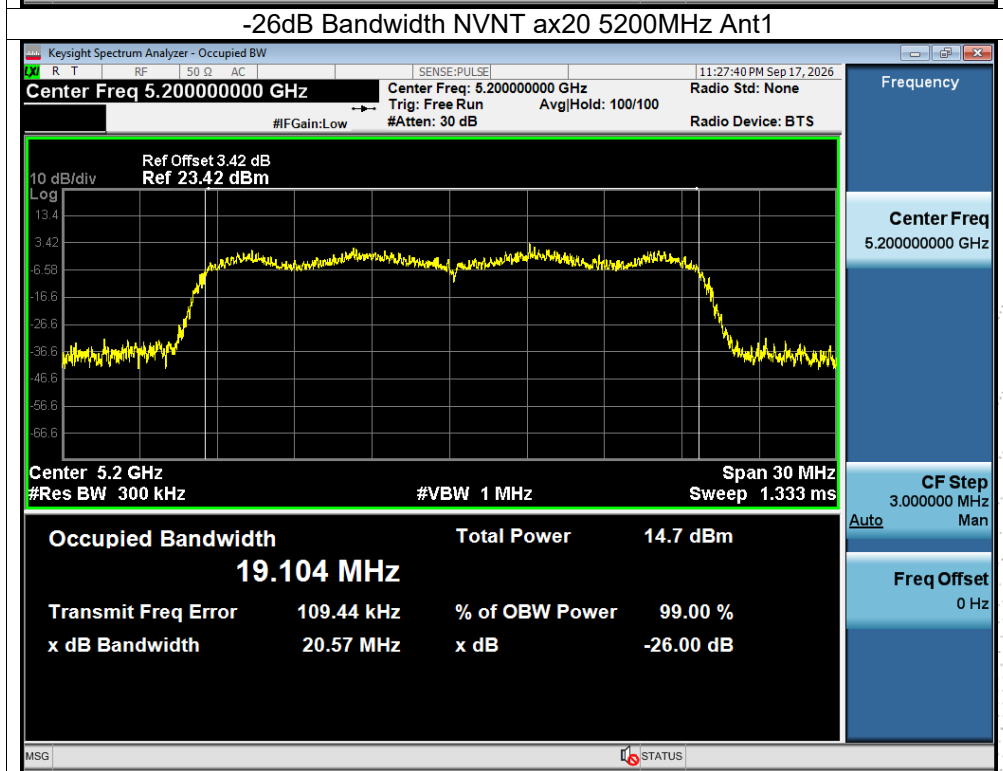
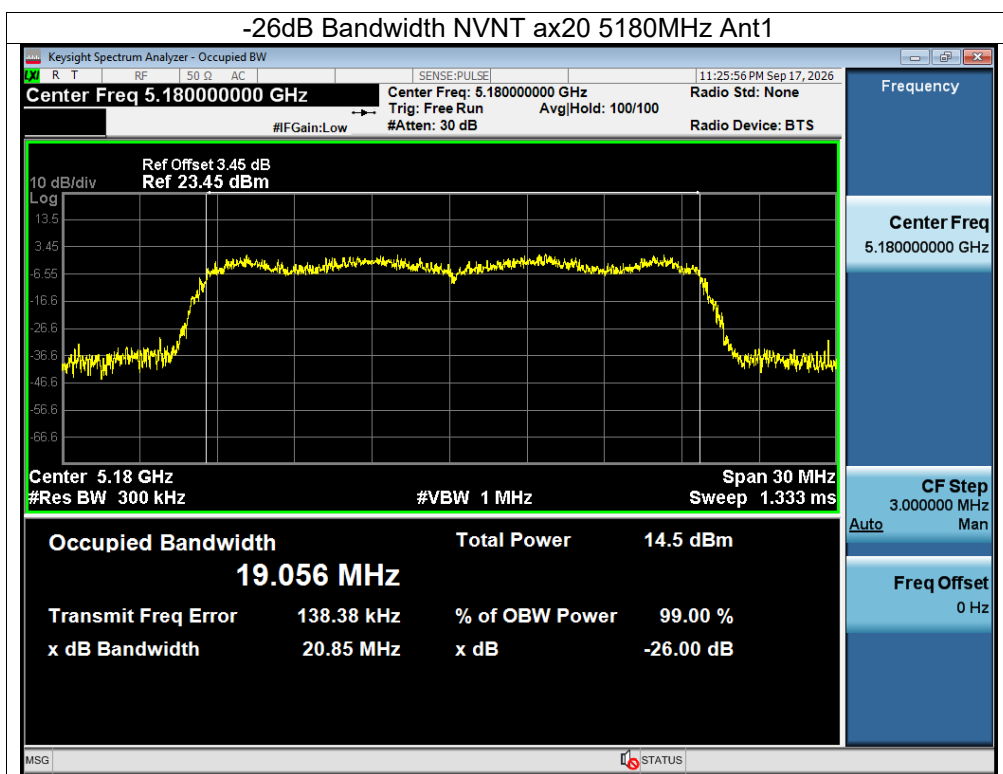


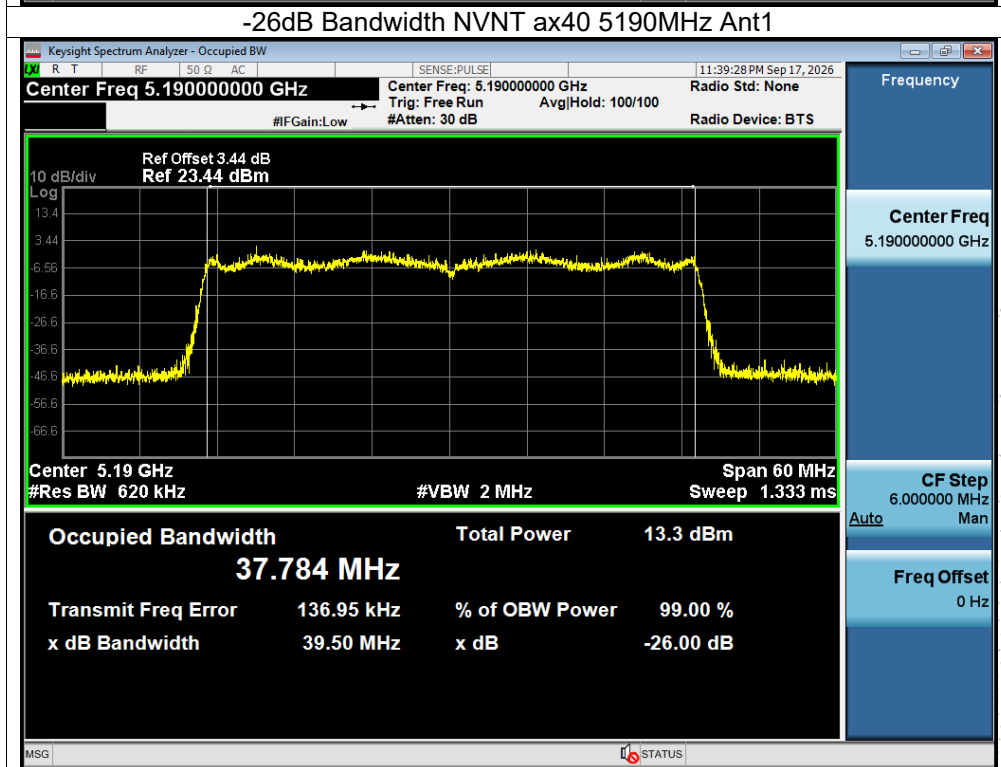
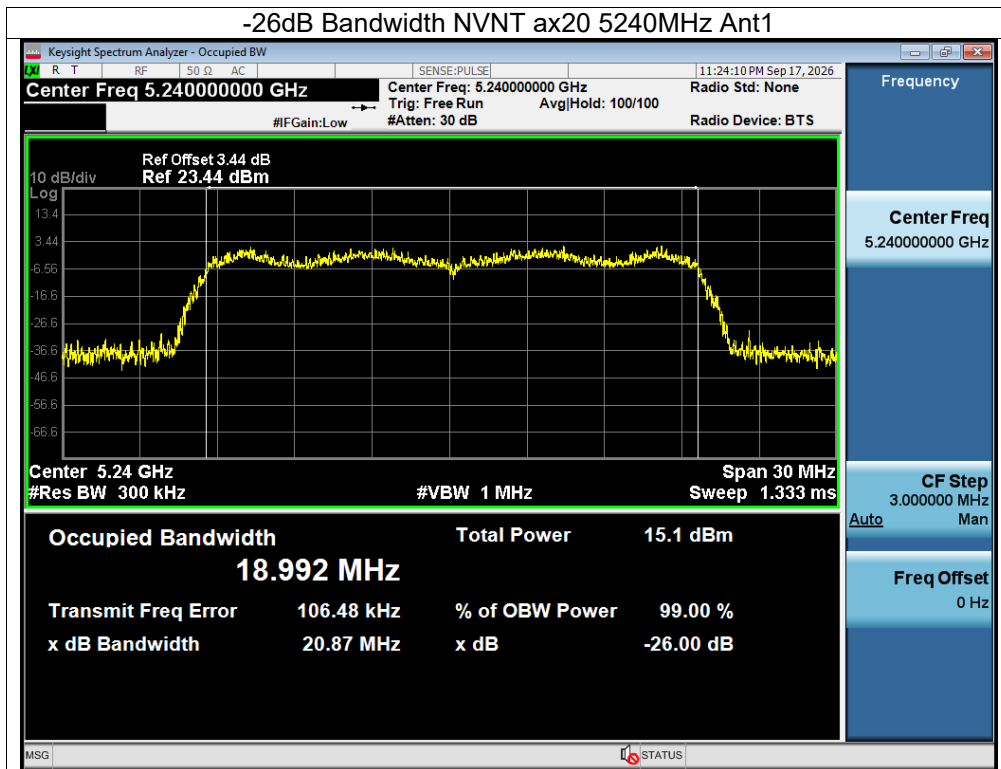


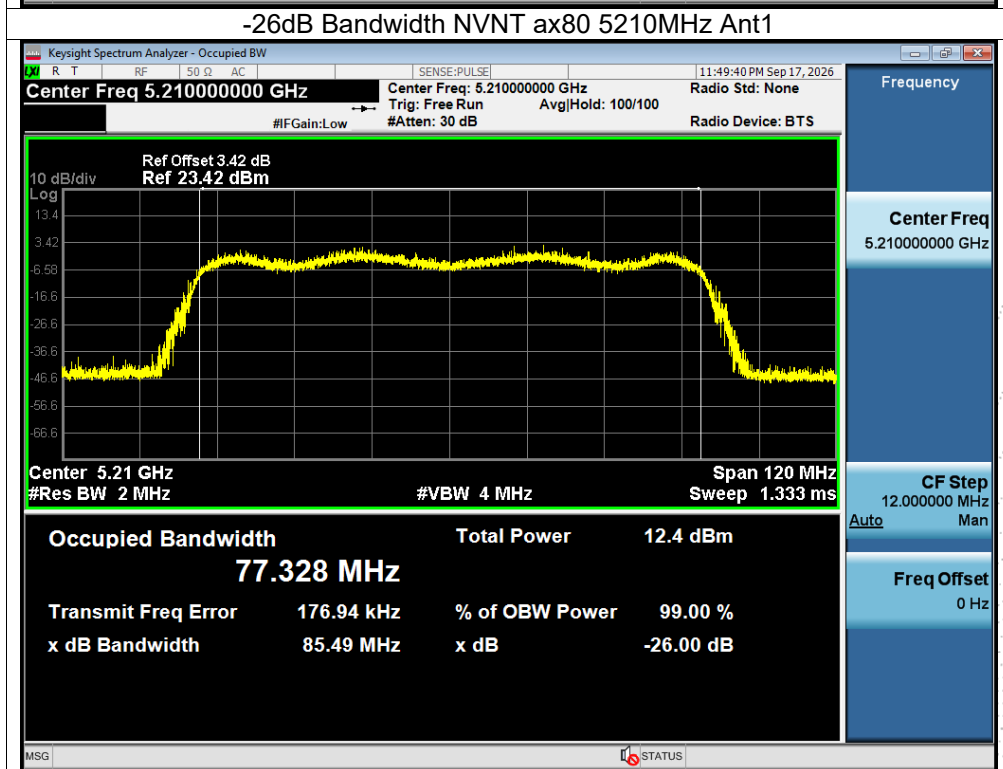
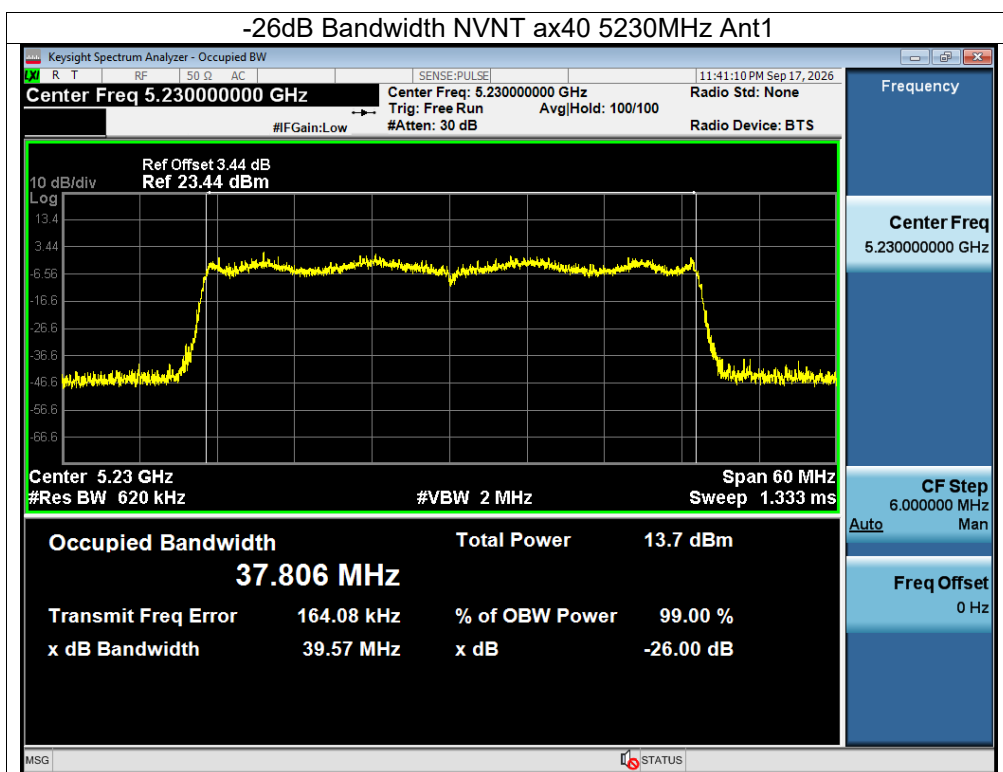


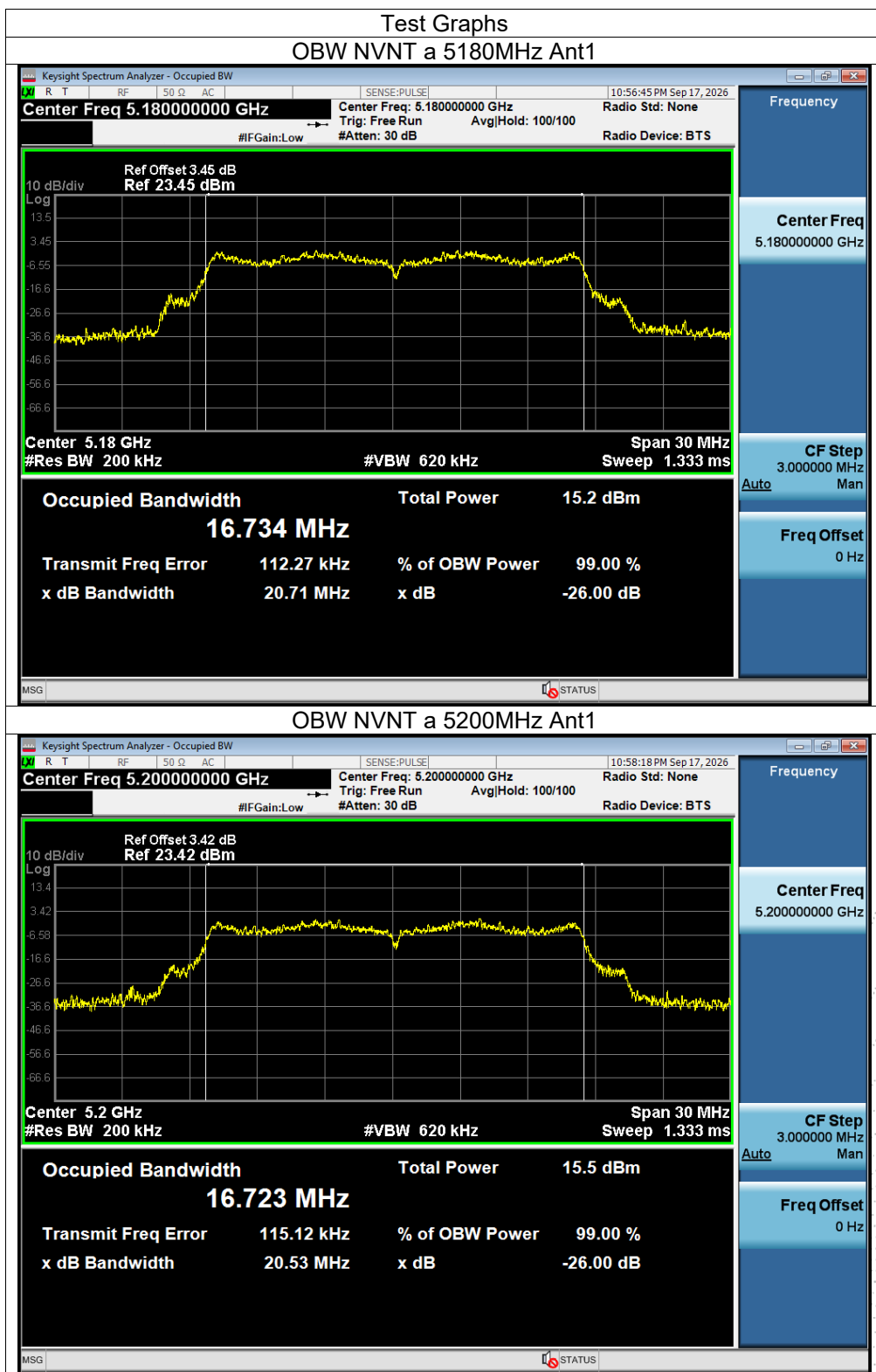


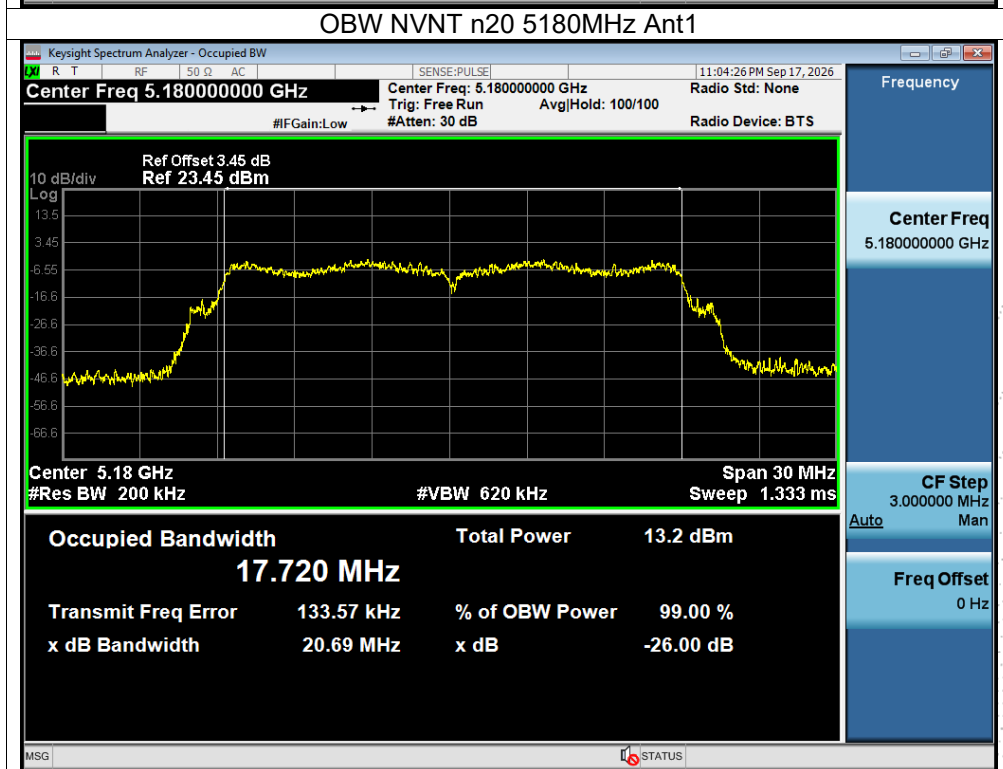
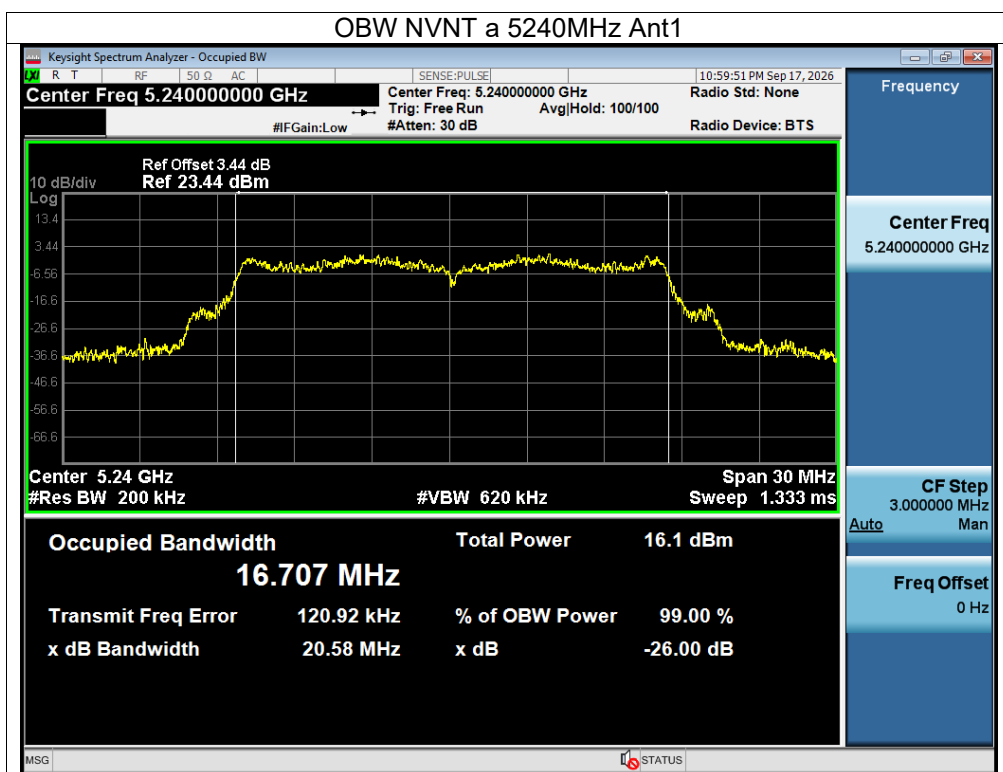
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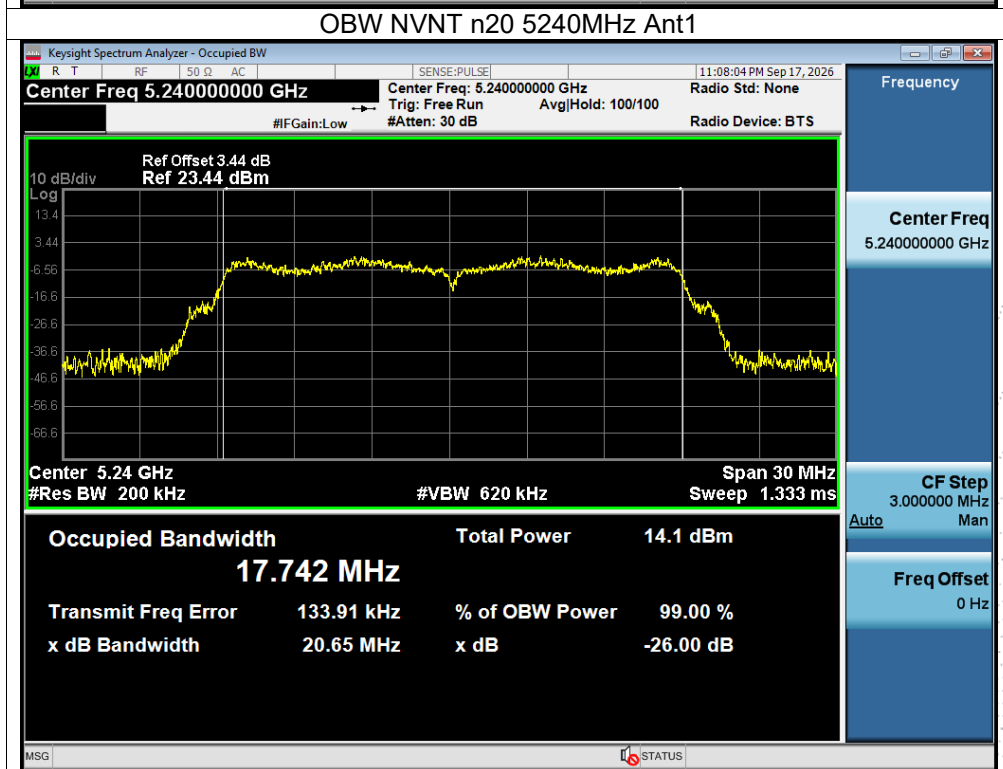
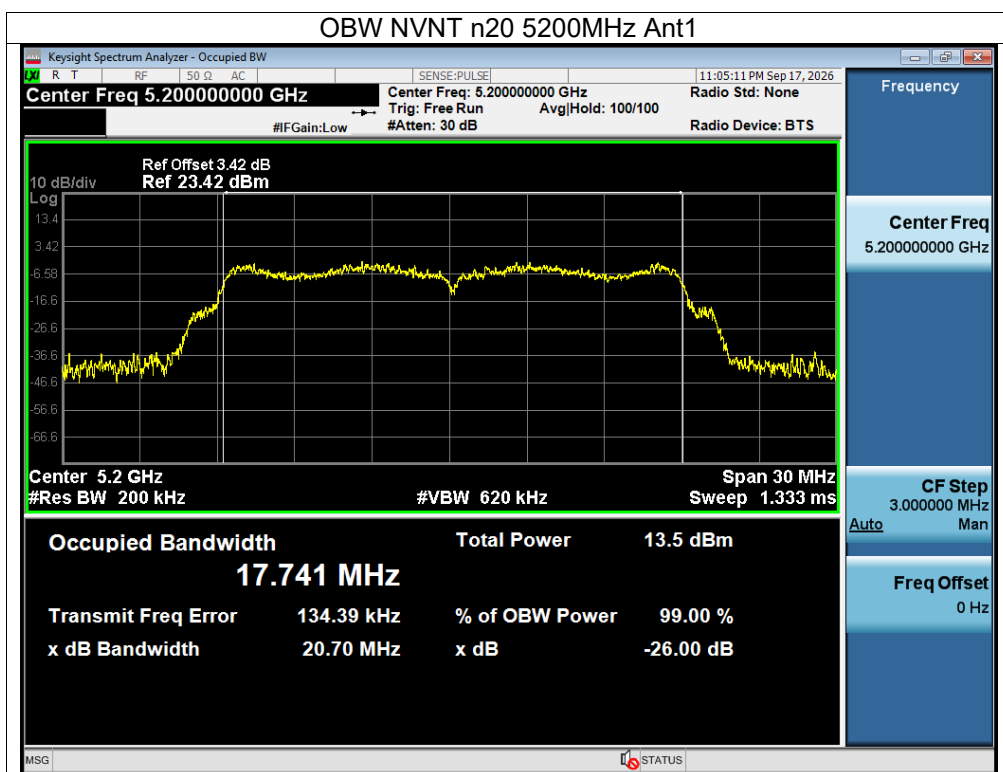




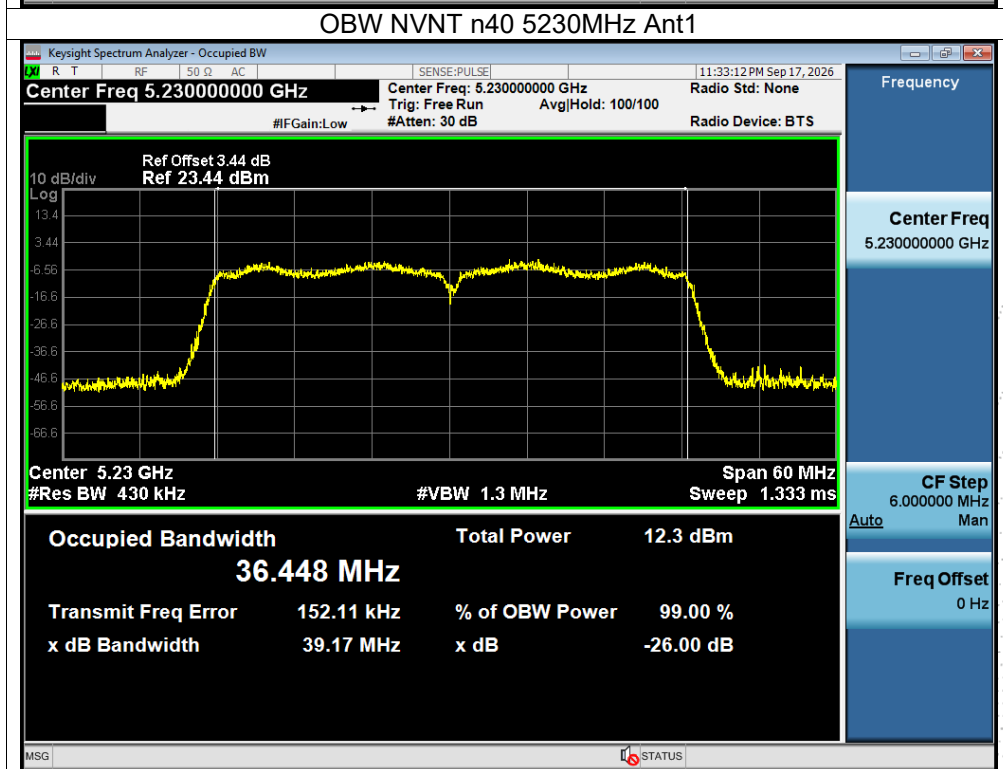
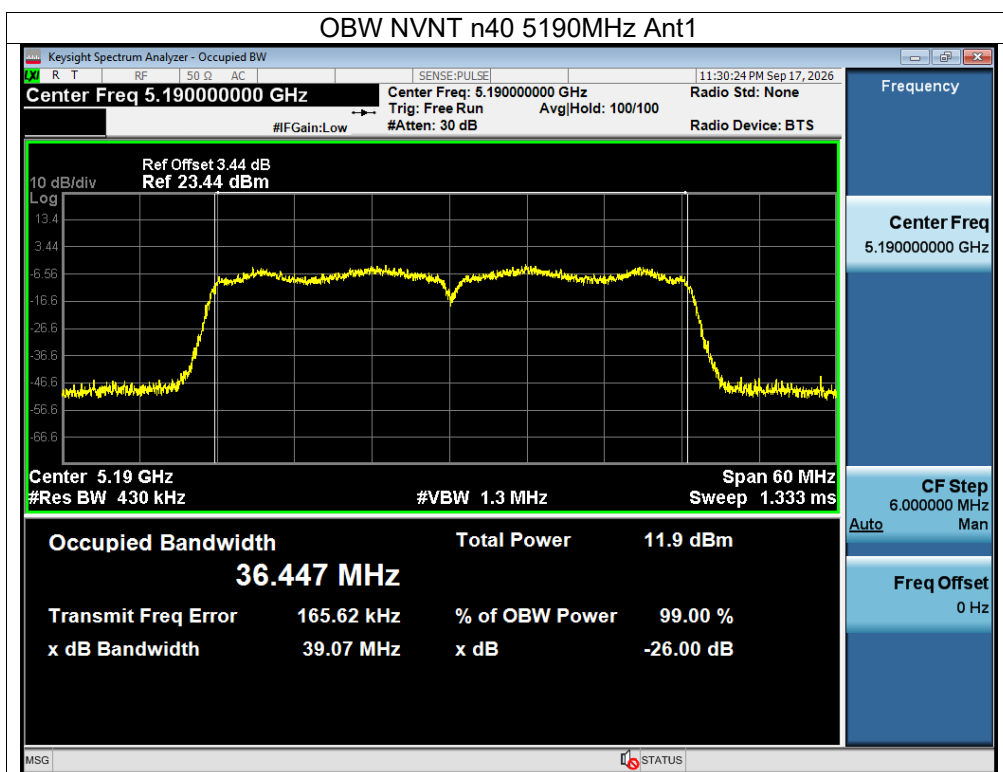


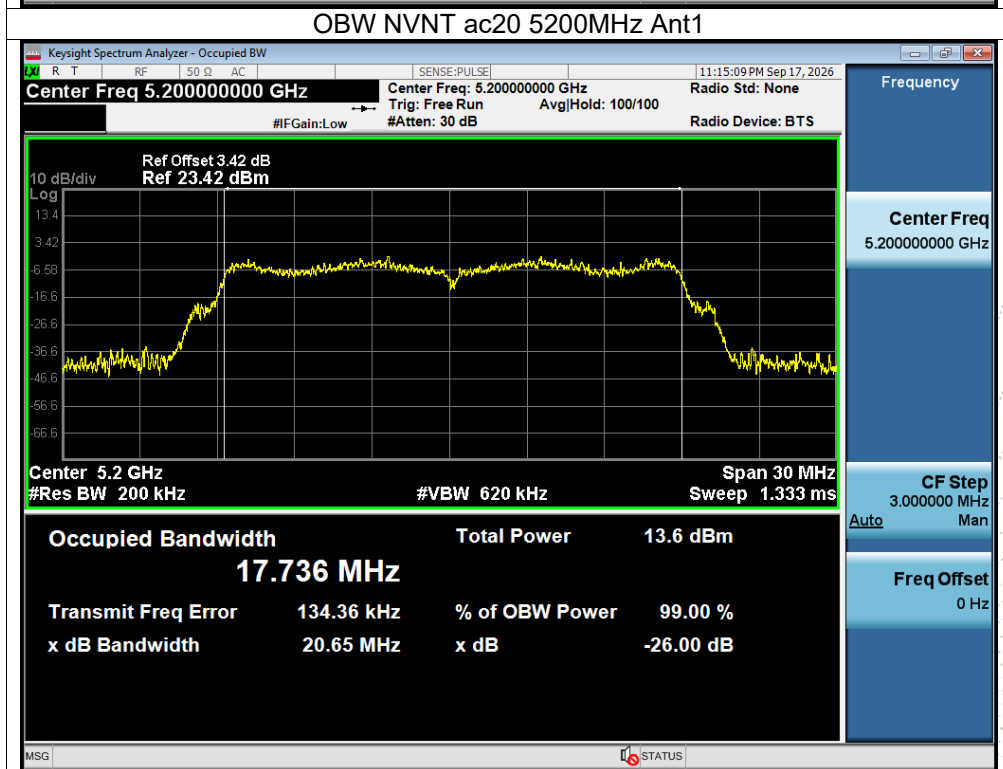
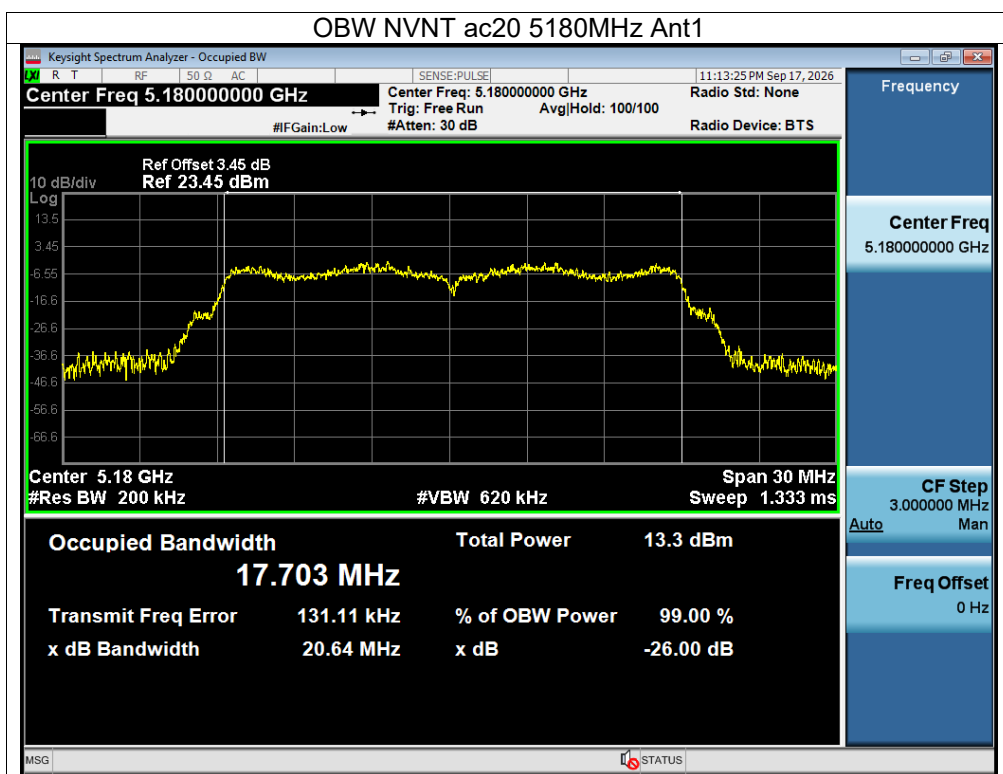


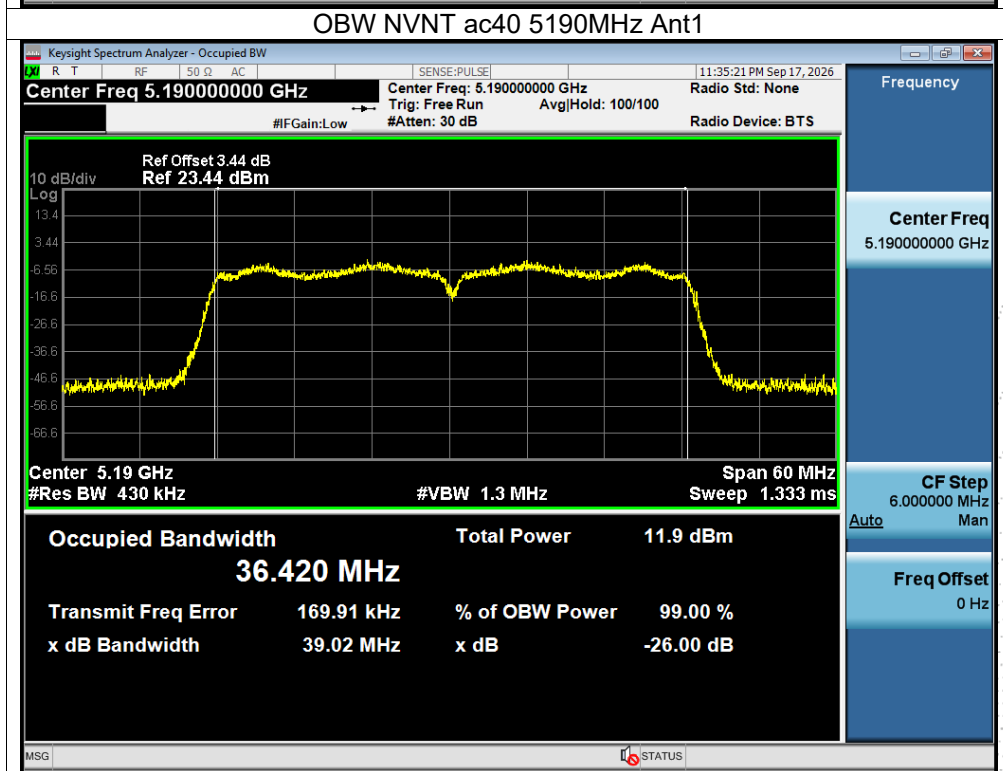
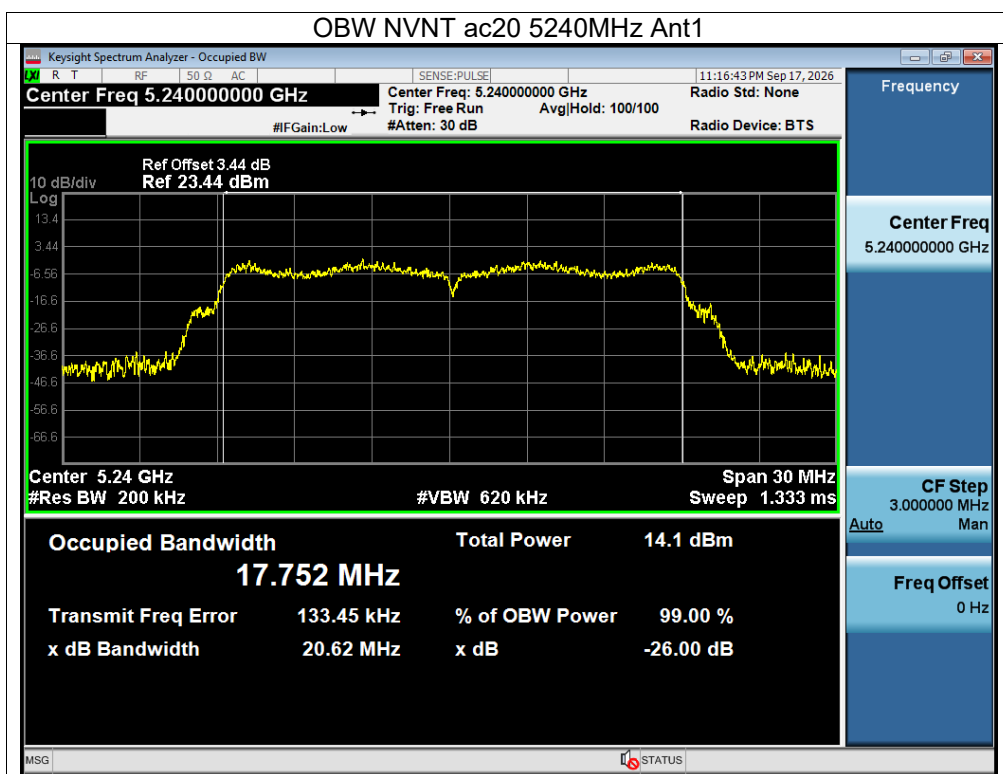


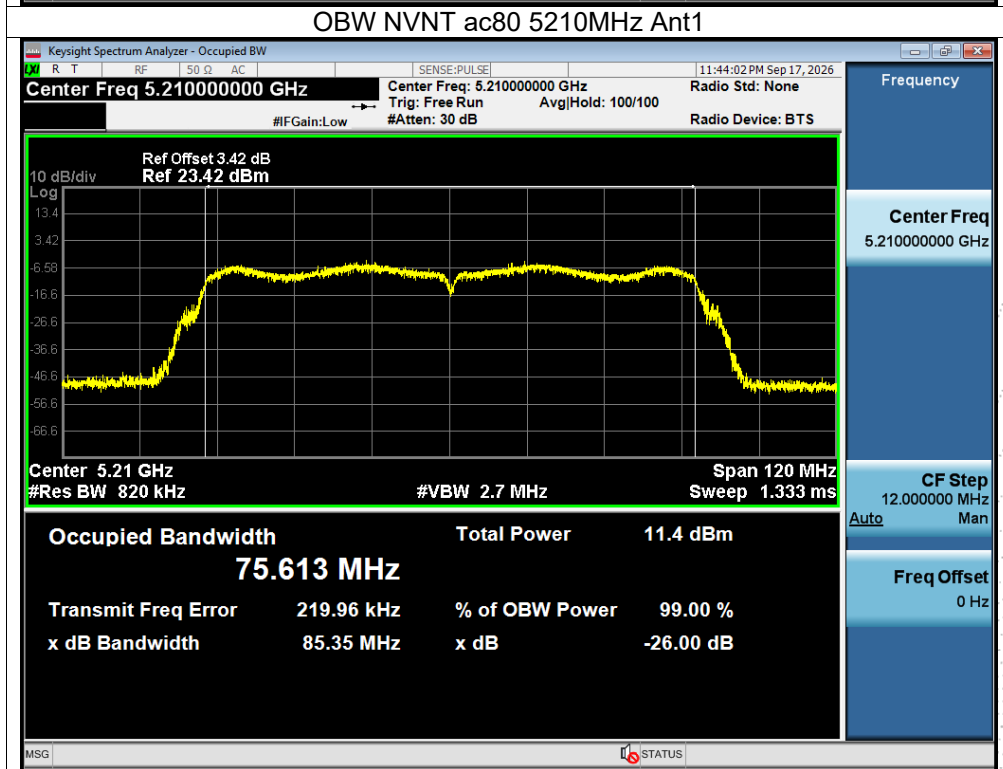
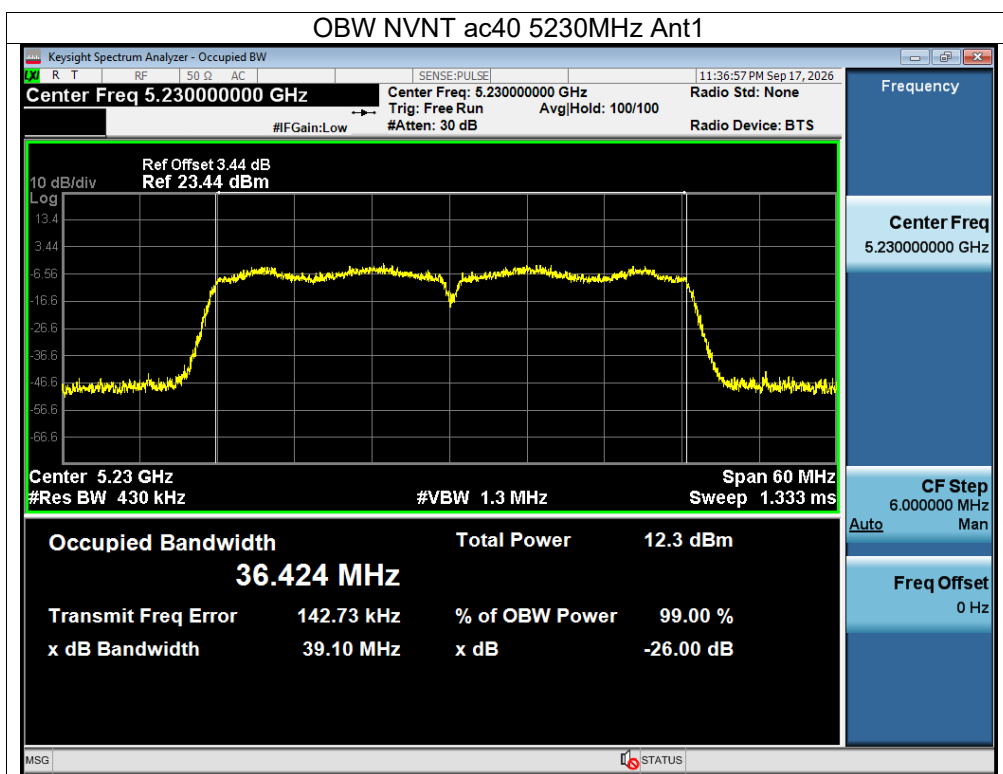


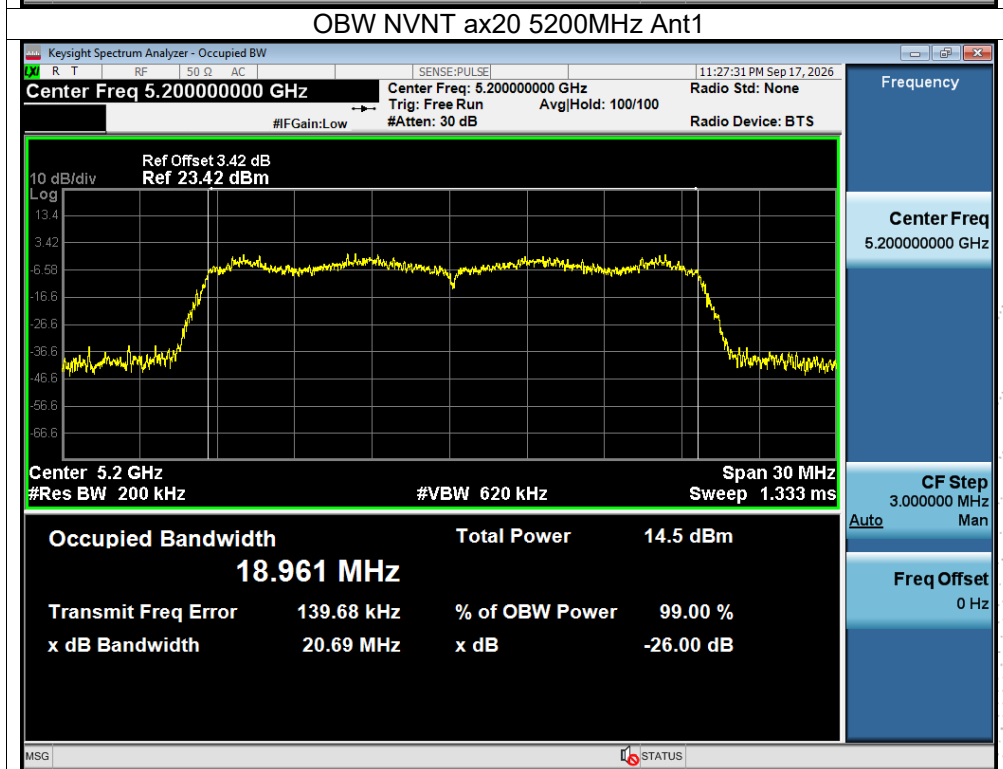
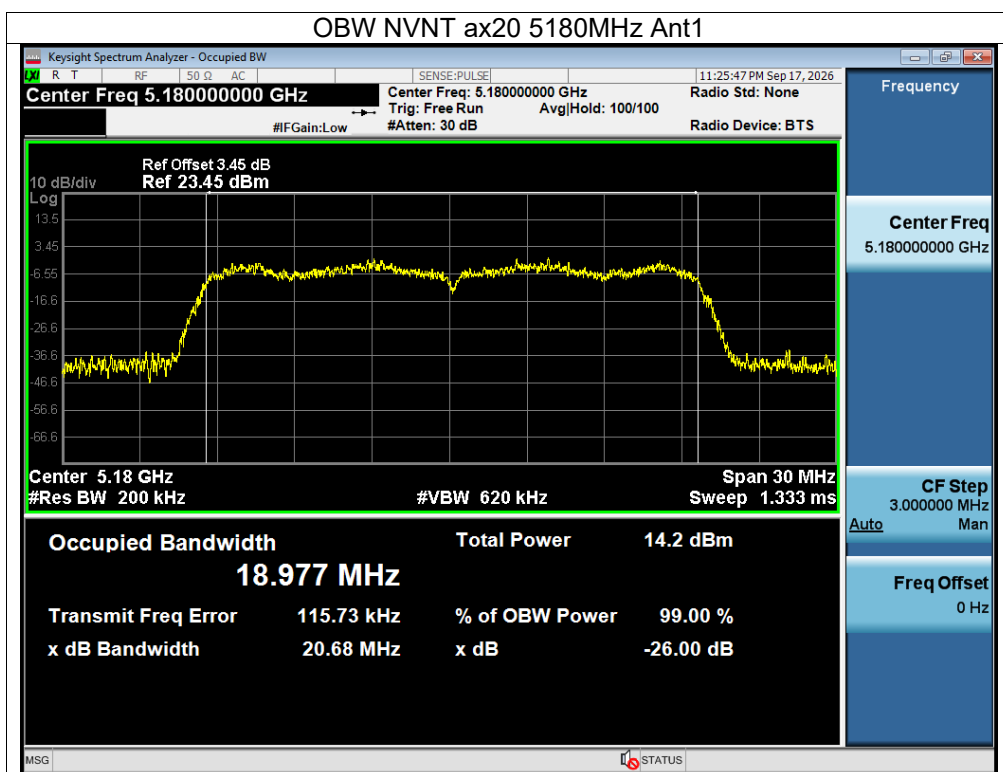
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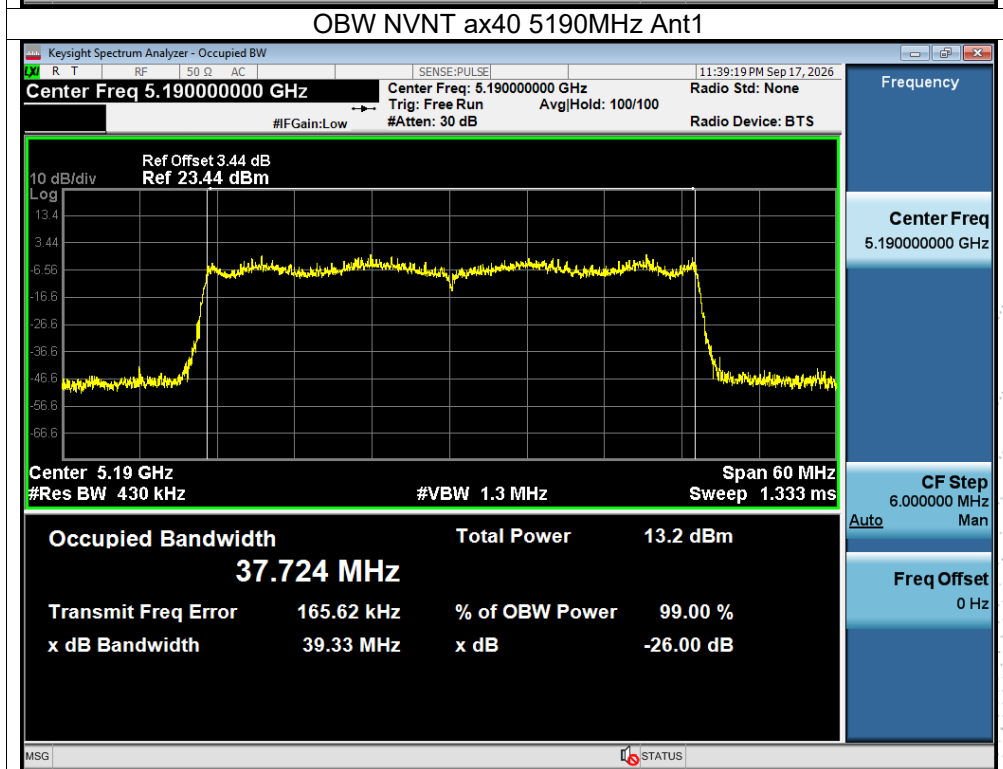
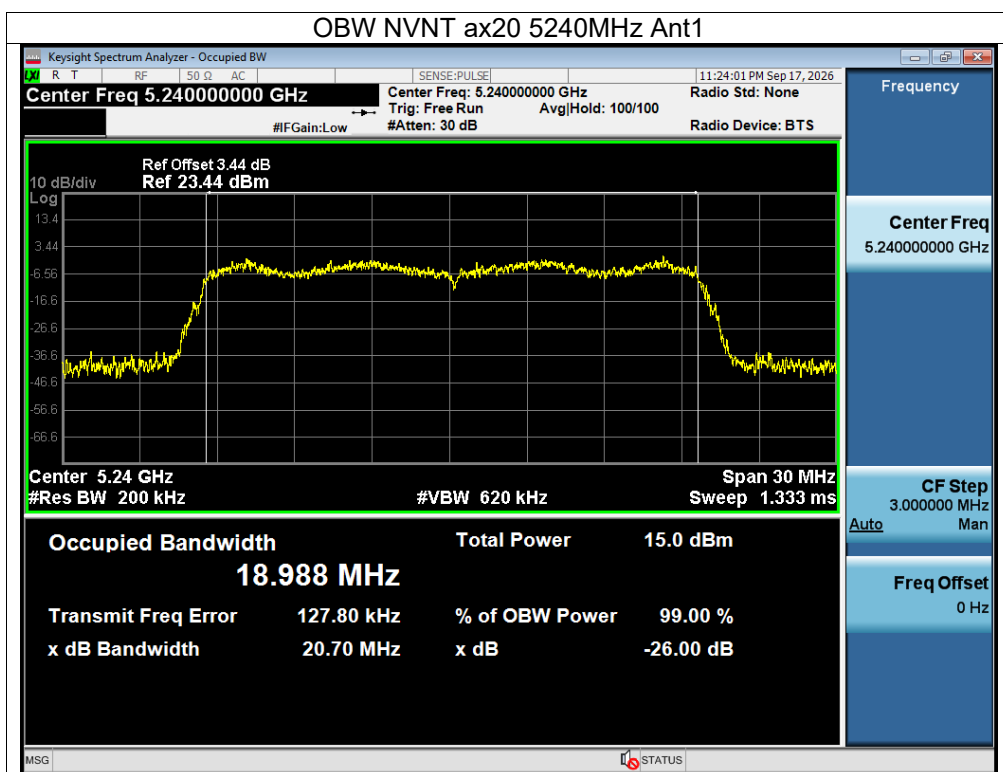




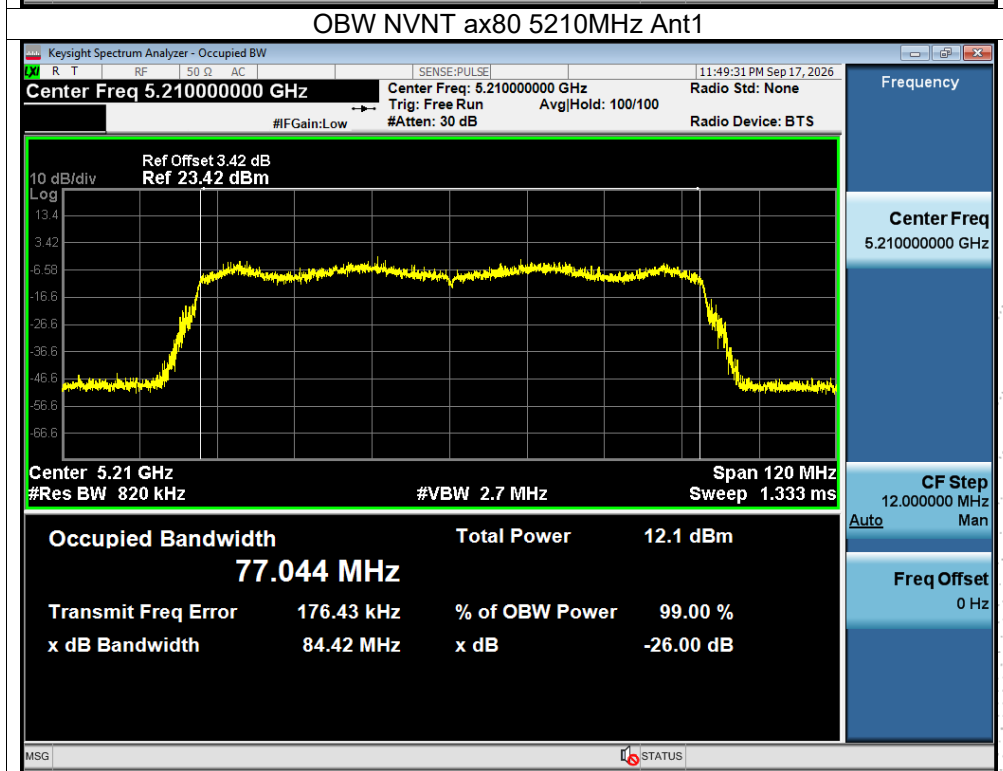
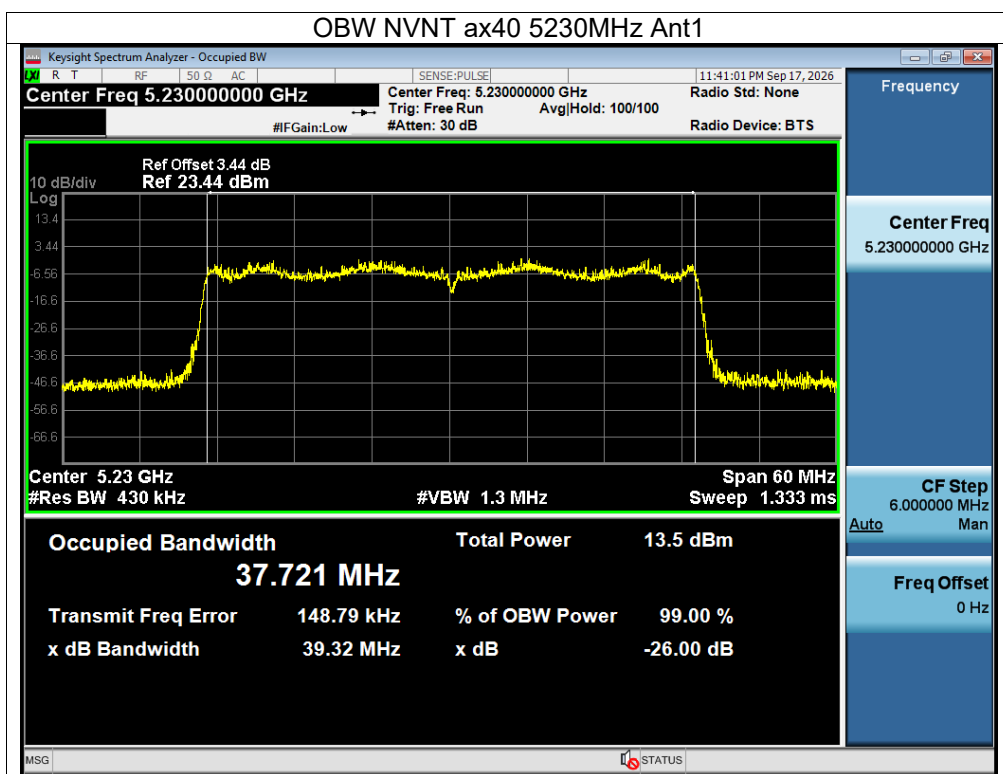








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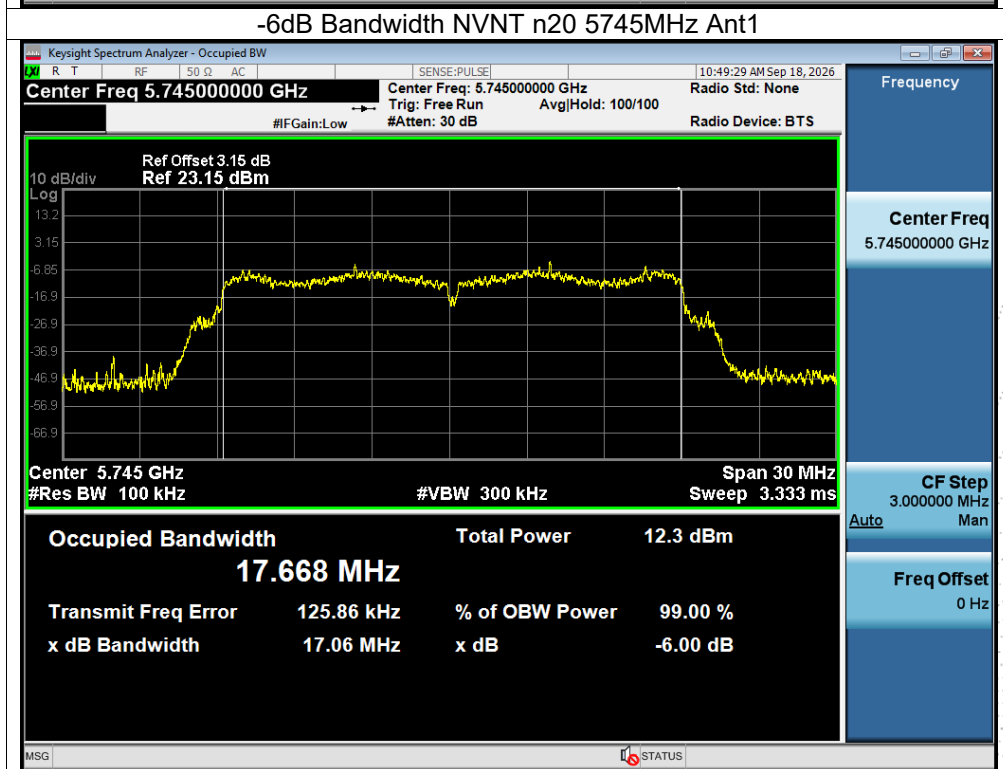
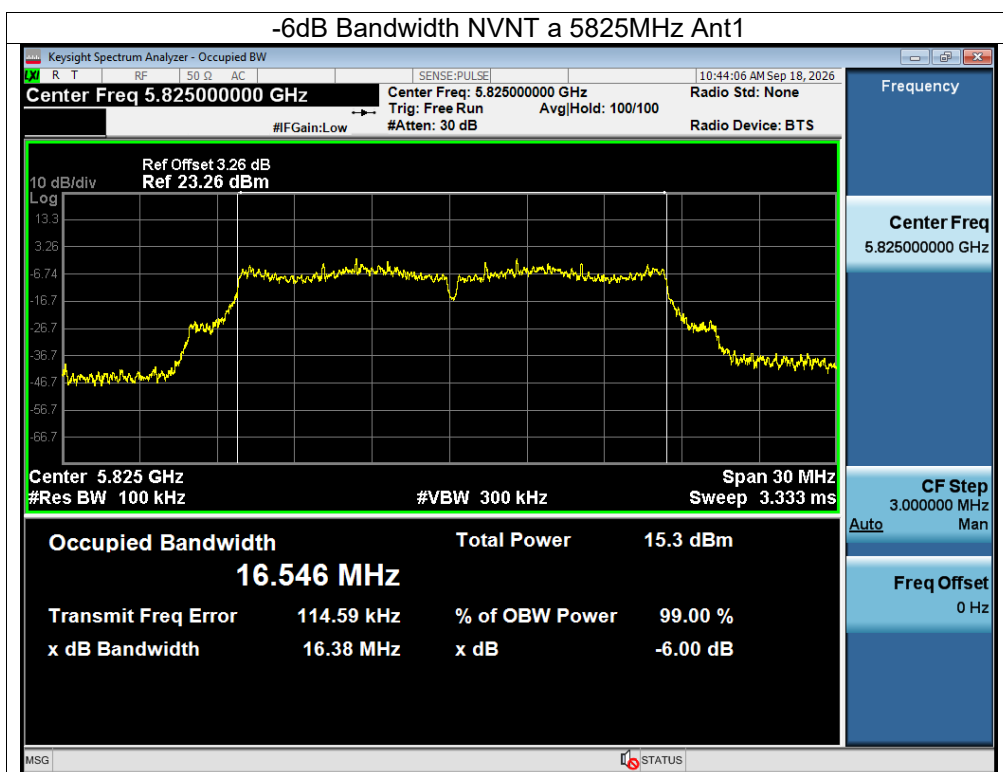


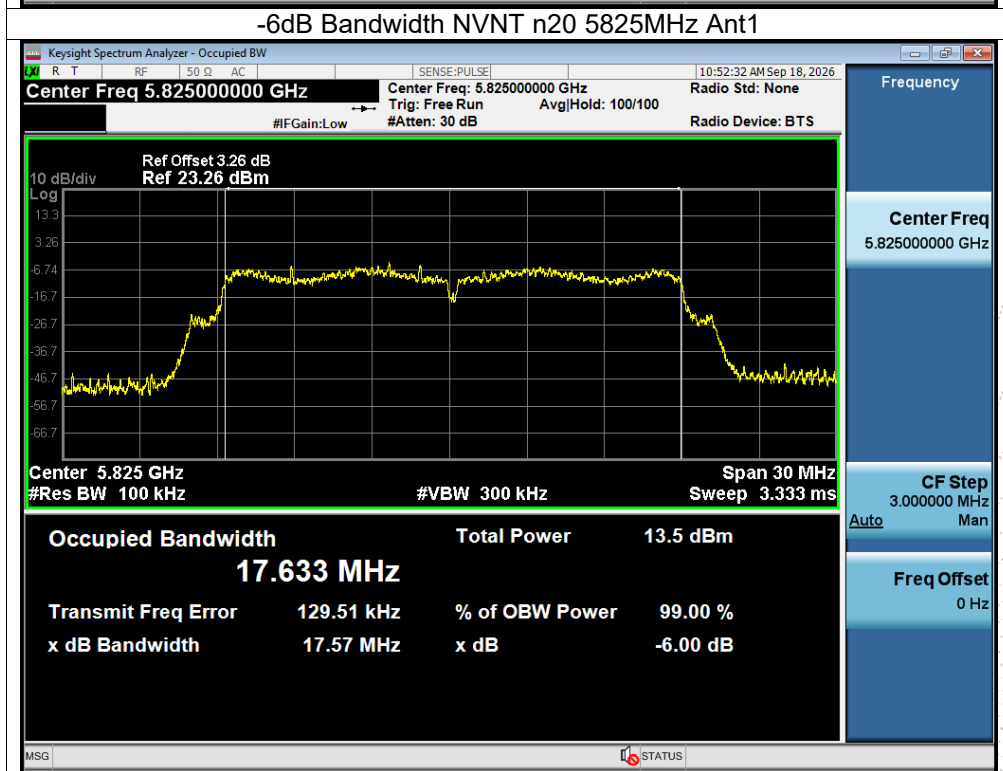
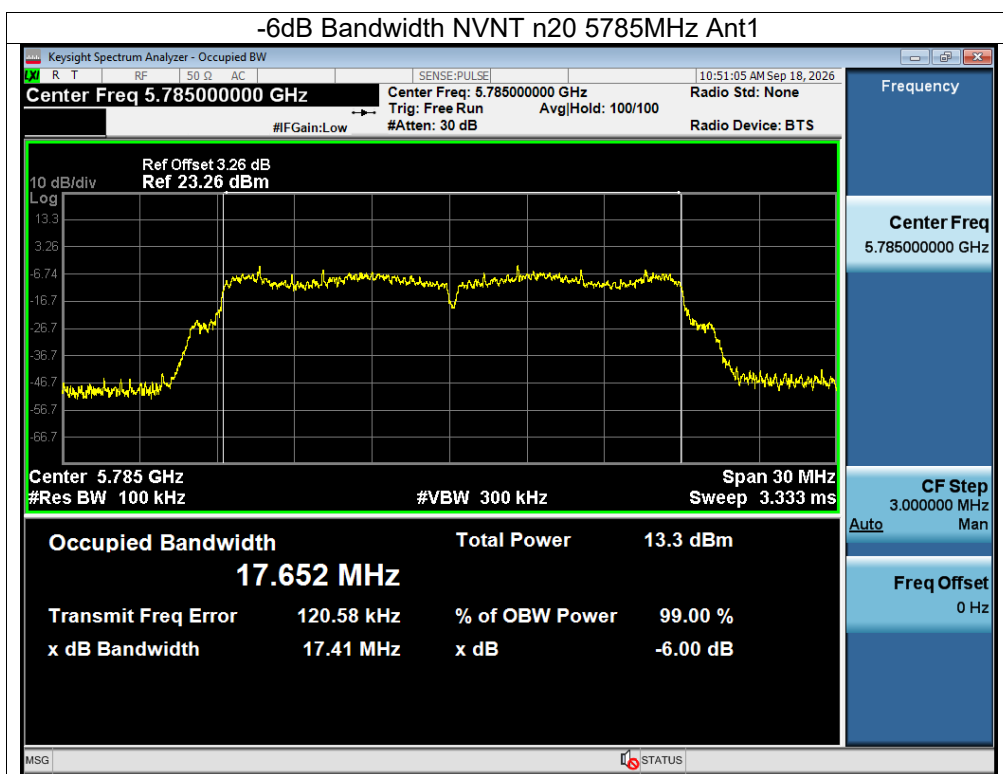
Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	DC 12V
Test Mode:	(5745-5825MHz)		

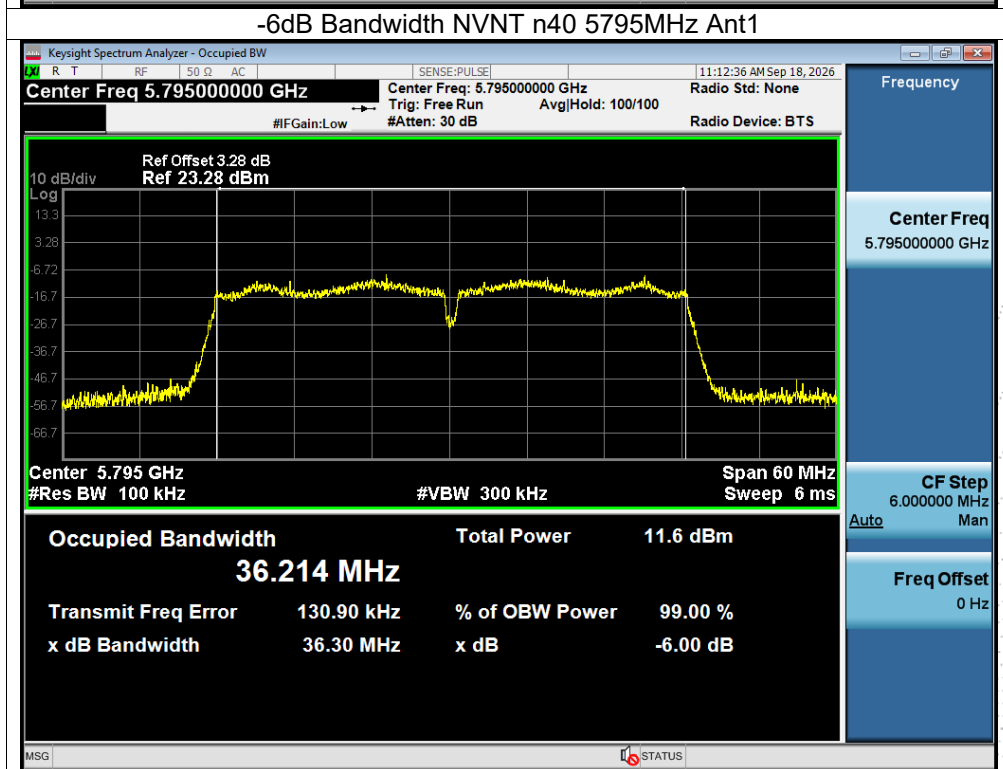
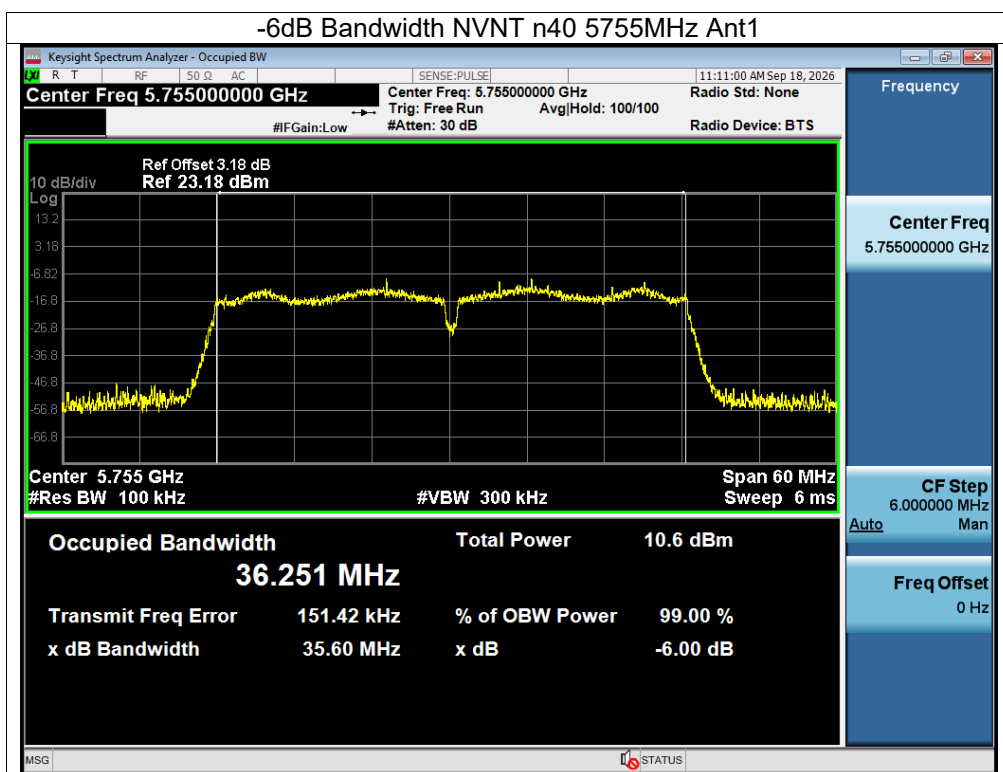
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	16.409	0.5	Pass
NVNT	a	5785	16.357	0.5	Pass
NVNT	a	5825	16.38	0.5	Pass
NVNT	n20	5745	17.055	0.5	Pass
NVNT	n20	5785	17.406	0.5	Pass
NVNT	n20	5825	17.571	0.5	Pass
NVNT	n40	5755	35.6	0.5	Pass
NVNT	n40	5795	36.302	0.5	Pass
NVNT	ac20	5745	17.677	0.5	Pass
NVNT	ac20	5785	17.57	0.5	Pass
NVNT	ac20	5825	17.521	0.5	Pass
NVNT	ac40	5755	36.324	0.5	Pass
NVNT	ac40	5795	36.386	0.5	Pass
NVNT	ac80	5775	73.879	0.5	Pass
NVNT	ax20	5745	18.102	0.5	Pass
NVNT	ax20	5785	18.059	0.5	Pass
NVNT	ax20	5825	18.683	0.5	Pass
NVNT	ax40	5755	37.74	0.5	Pass
NVNT	ax40	5795	37.635	0.5	Pass
NVNT	ax80	5775	71.407	0.5	Pass

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5745	16.71
NVNT	a	5785	16.679
NVNT	a	5825	16.67
NVNT	n20	5745	17.756
NVNT	n20	5785	17.705
NVNT	n20	5825	17.7
NVNT	n40	5755	36.43
NVNT	n40	5795	36.36
NVNT	ac20	5745	17.743
NVNT	ac20	5785	17.691
NVNT	ac20	5825	17.709
NVNT	ac40	5755	36.442
NVNT	ac40	5795	36.343
NVNT	ac80	5775	75.516
NVNT	ax20	5745	18.95
NVNT	ax20	5785	18.989
NVNT	ax20	5825	19.032
NVNT	ax40	5755	37.712
NVNT	ax40	5795	37.64
NVNT	ax80	5775	77.088









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