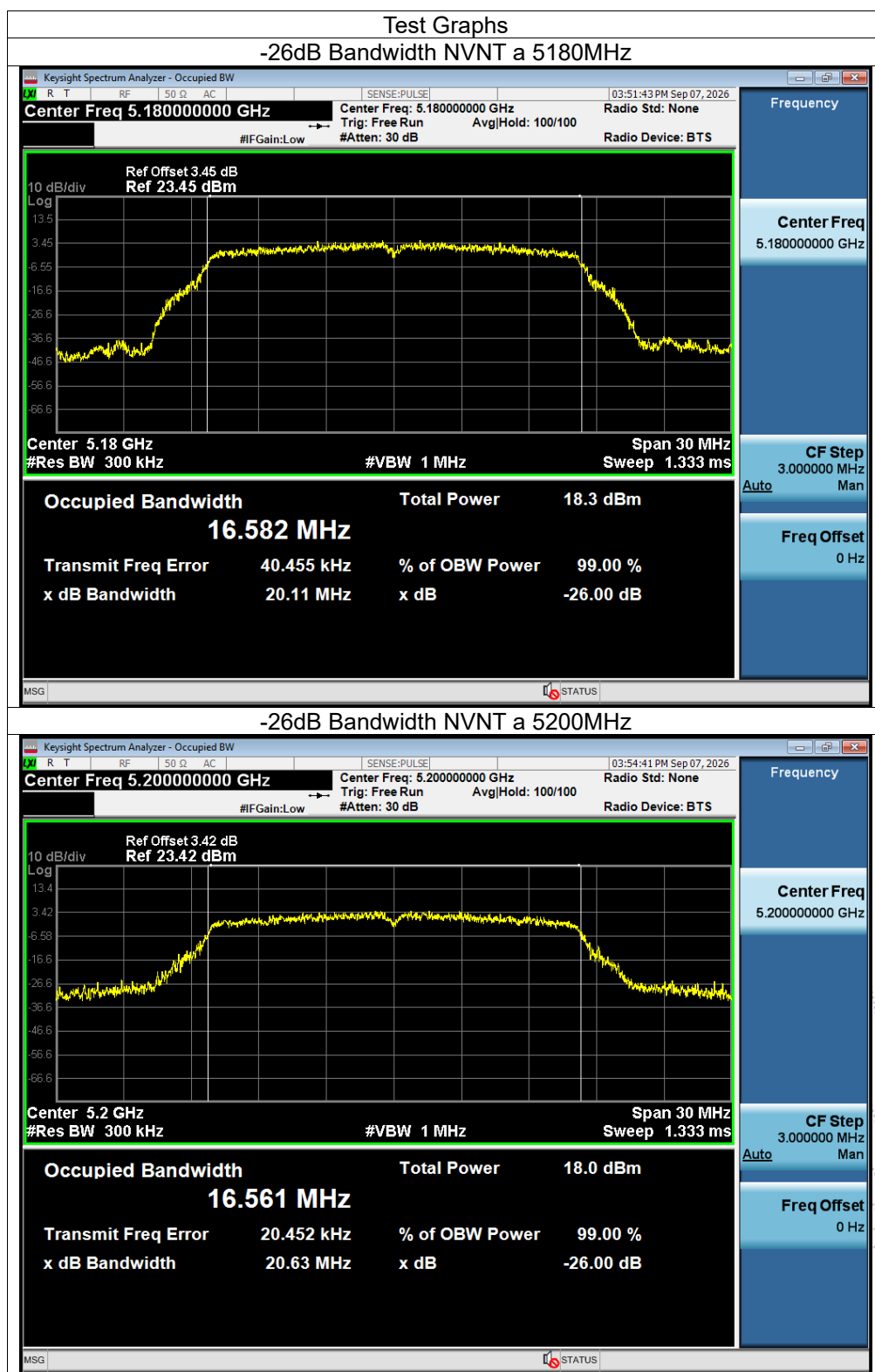


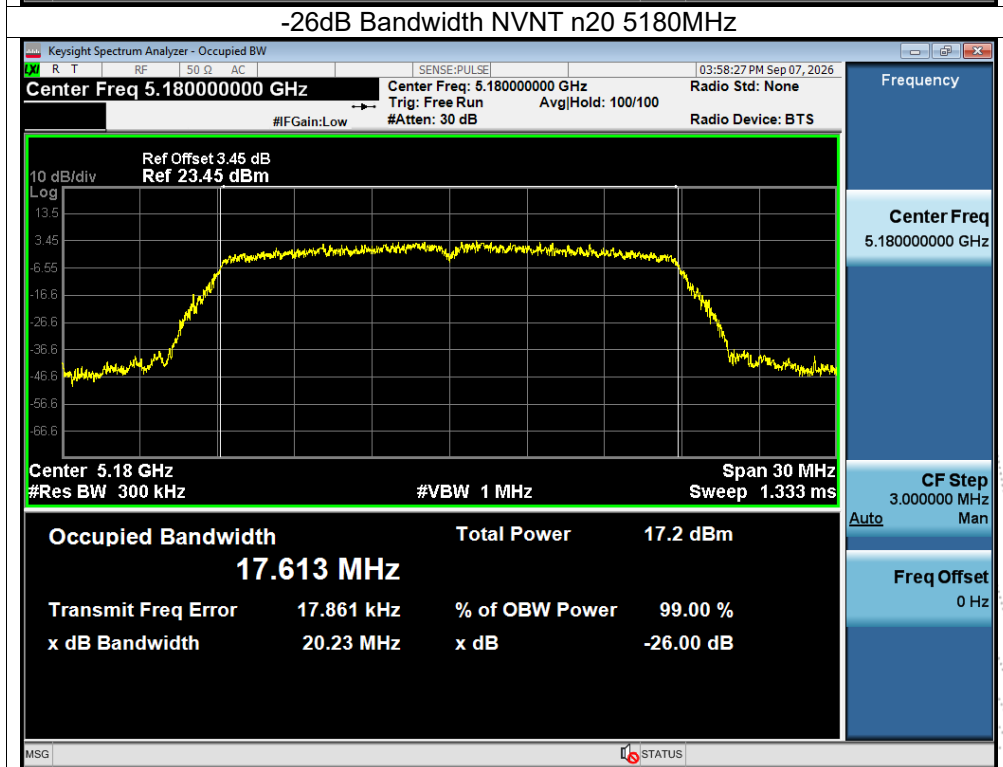
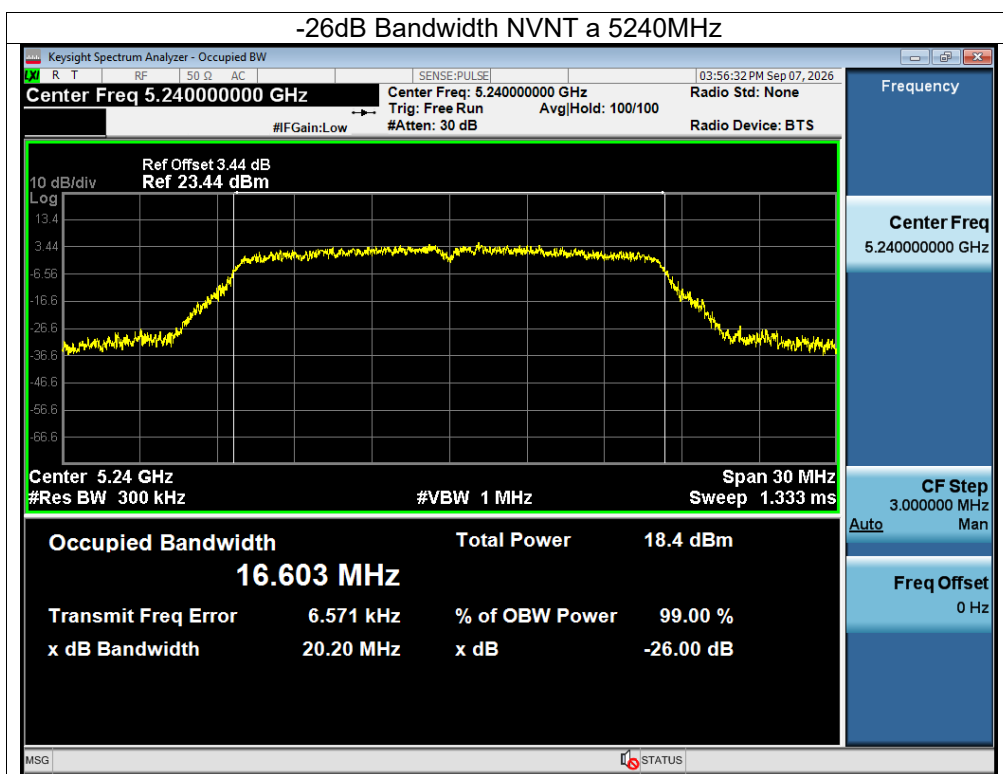
9.5 Test Result

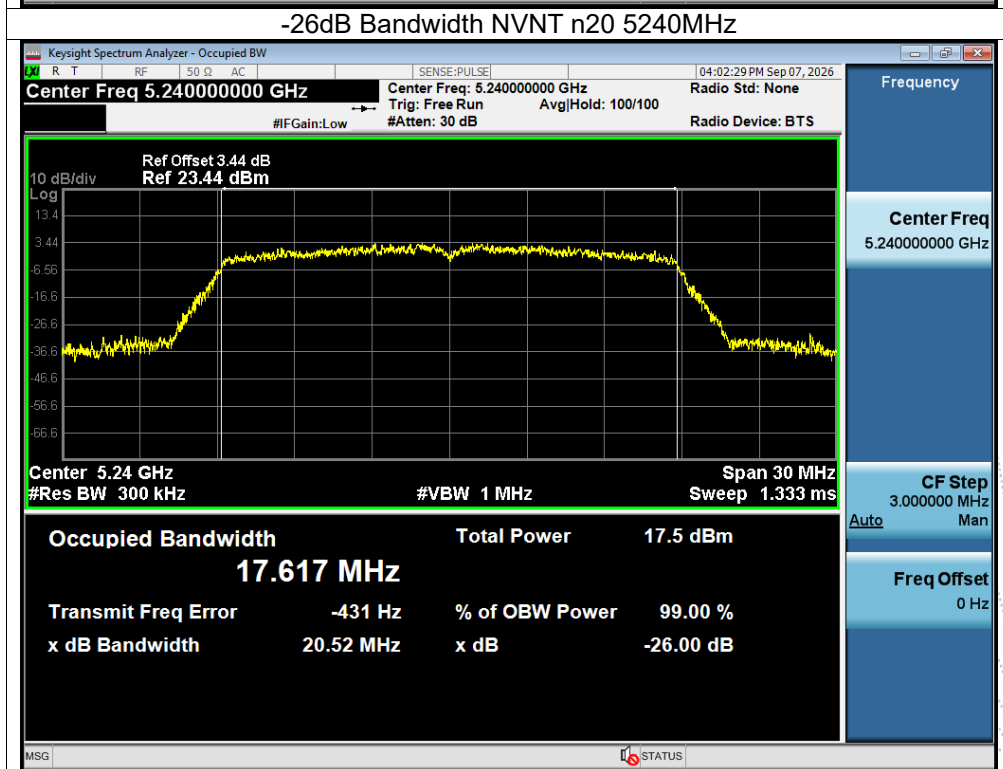
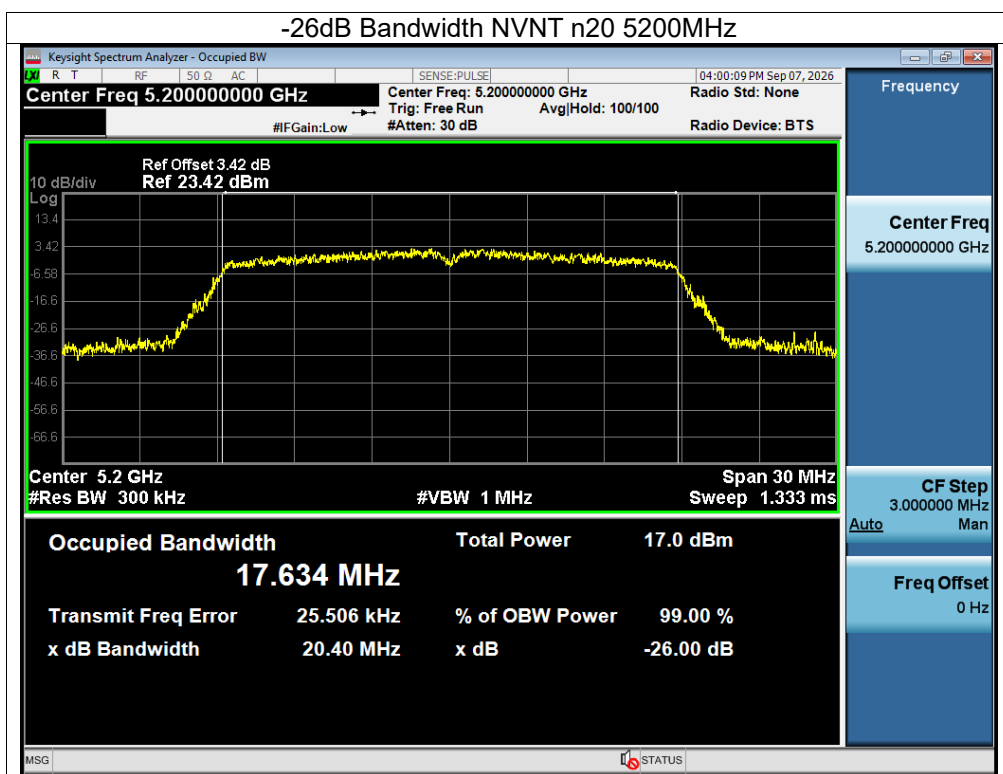
Temperature:	23.6 °C	Relative Humidity:	50%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5180-5240MHz)		

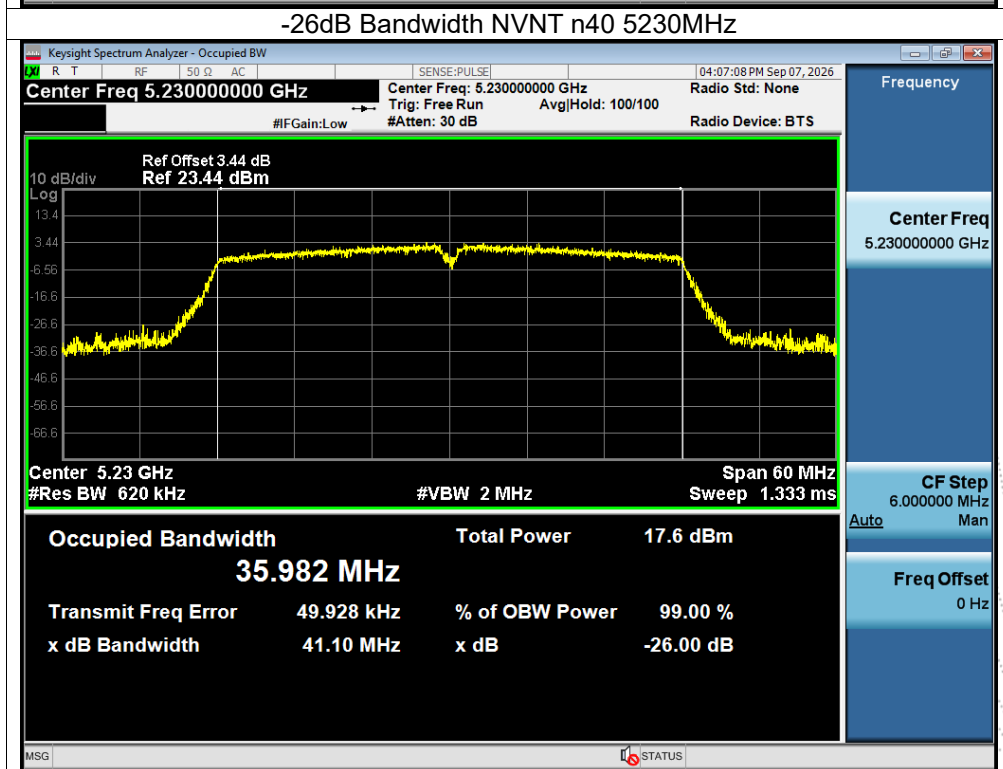
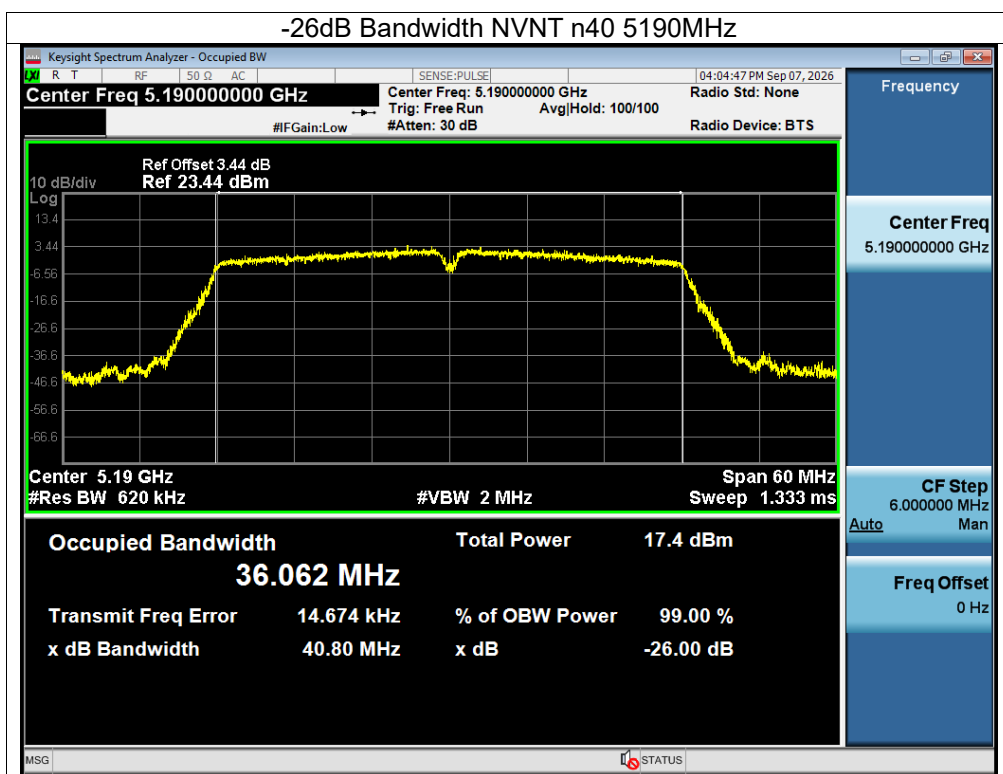
Mode	Channel	Frequency (MHz)	26dB bandwidth (MHz)		99% OBW (MHz)		Result
			ANT A	ANT B	ANT A	ANT B	
NVNT	a	5180	20.110	19.949	16.402	16.395	Pass
NVNT	a	5200	20.632	20.257	16.474	16.432	Pass
NVNT	a	5240	20.203	20.204	16.453	16.445	Pass
NVNT	n20	5180	20.230	20.335	17.552	17.522	Pass
NVNT	n20	5200	20.402	20.404	17.562	17.576	Pass
NVNT	n20	5240	20.520	20.406	17.544	17.558	Pass
NVNT	n40	5190	40.798	40.568	35.962	35.974	Pass
NVNT	n40	5230	41.099	40.975	35.962	36.005	Pass
NVNT	ac20	5180	20.566	20.084	17.551	17.562	Pass
NVNT	ac20	5200	20.343	20.549	17.563	17.571	Pass
NVNT	ac20	5240	20.267	20.393	17.547	17.549	Pass
NVNT	ac40	5190	40.969	40.750	35.988	35.953	Pass
NVNT	ac40	5230	40.940	40.874	35.981	36.029	Pass
NVNT	ac80	5210	82.316	81.976	75.313	75.369	Pass
NVNT	ax20	5180	20.110	19.949	16.402	16.395	Pass
NVNT	ax20	5200	20.632	20.257	16.474	16.432	Pass
NVNT	ax20	5240	20.203	20.204	16.453	16.445	Pass
NVNT	ax40	5190	20.230	20.335	17.552	17.522	Pass
NVNT	ax40	5230	20.402	20.404	17.562	17.576	Pass
NVNT	ax80	5210	20.520	20.406	17.544	17.558	Pass

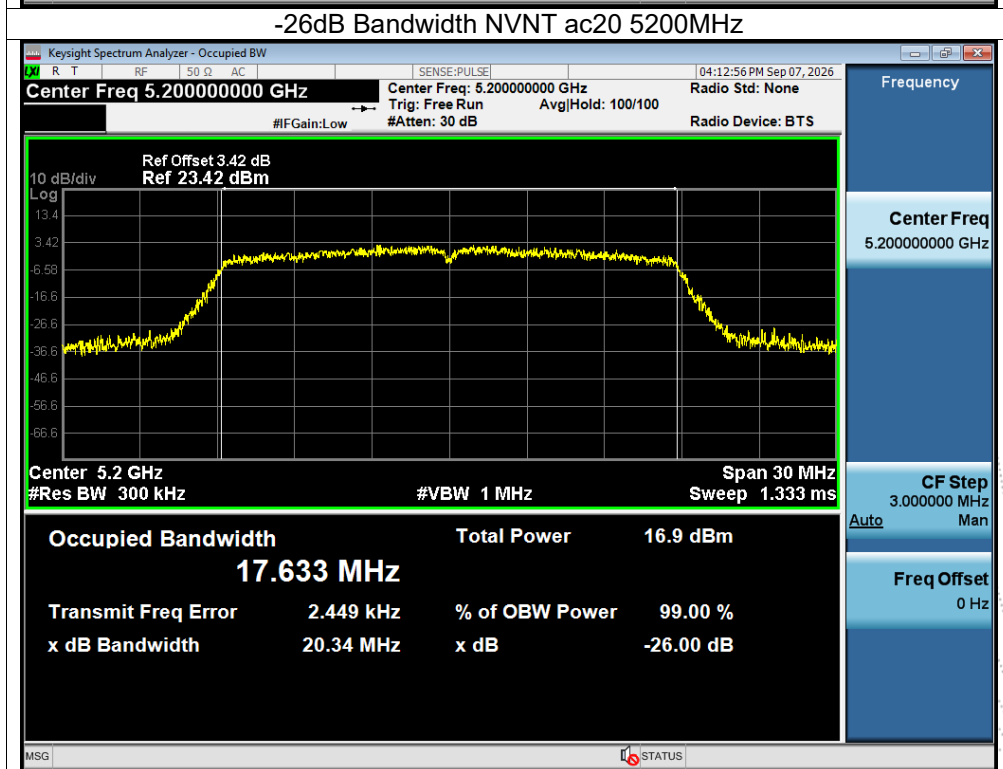
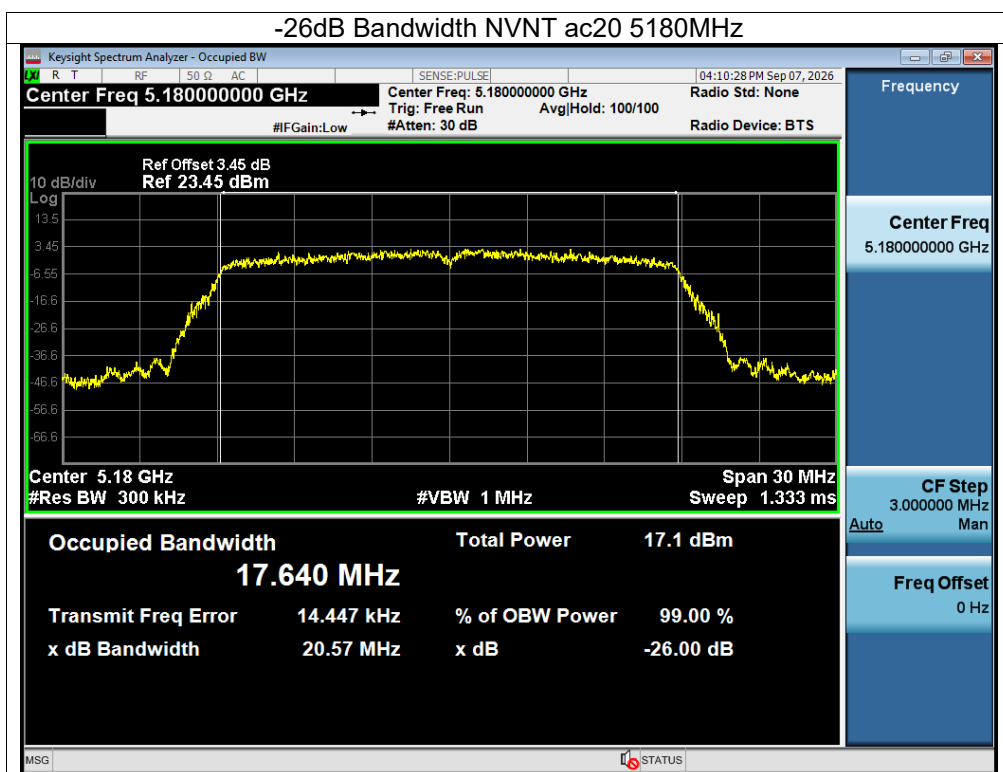
Note: A(B) Represent the value of antenna A and B. The worst data is Antenna A, only shown Antenna A Plot.



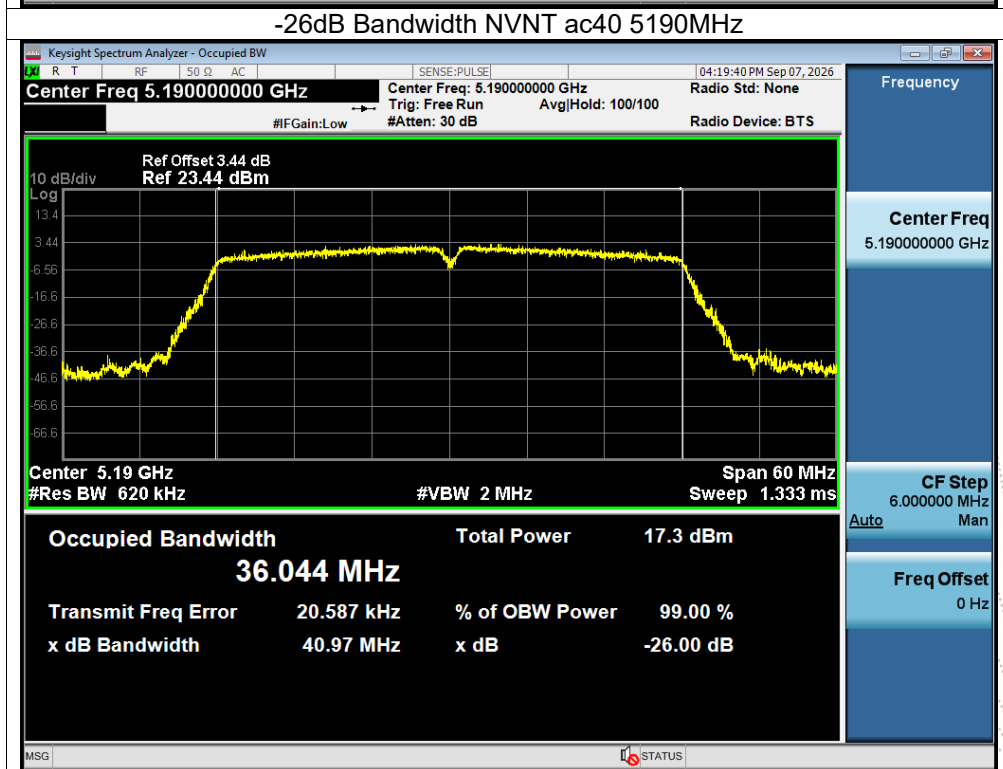
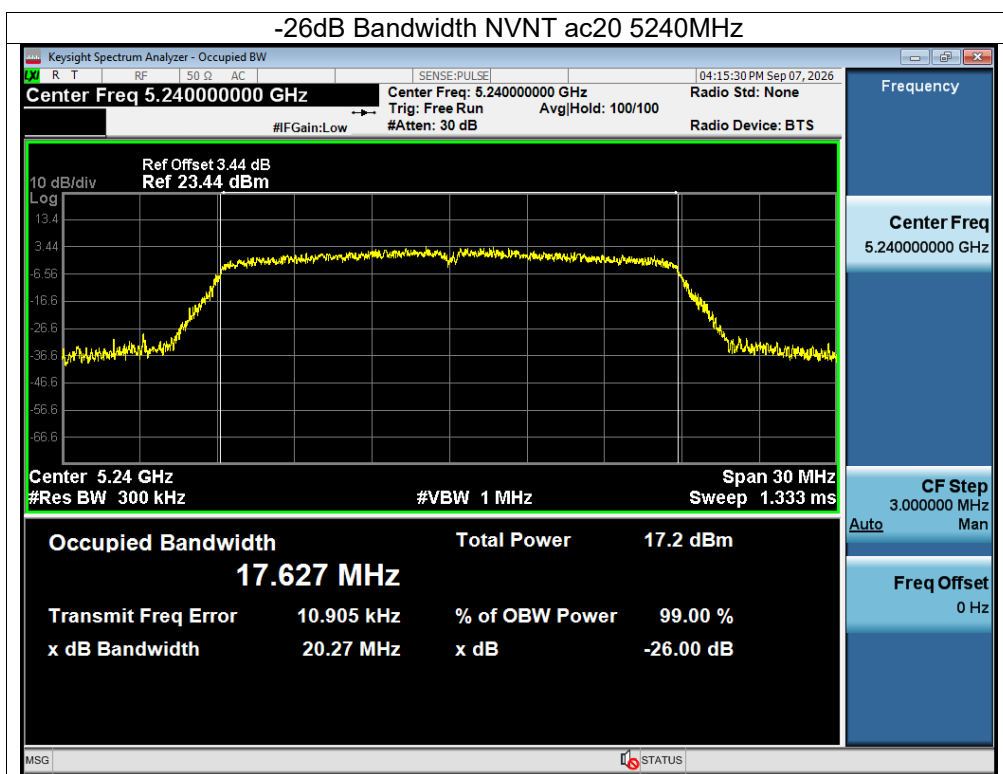


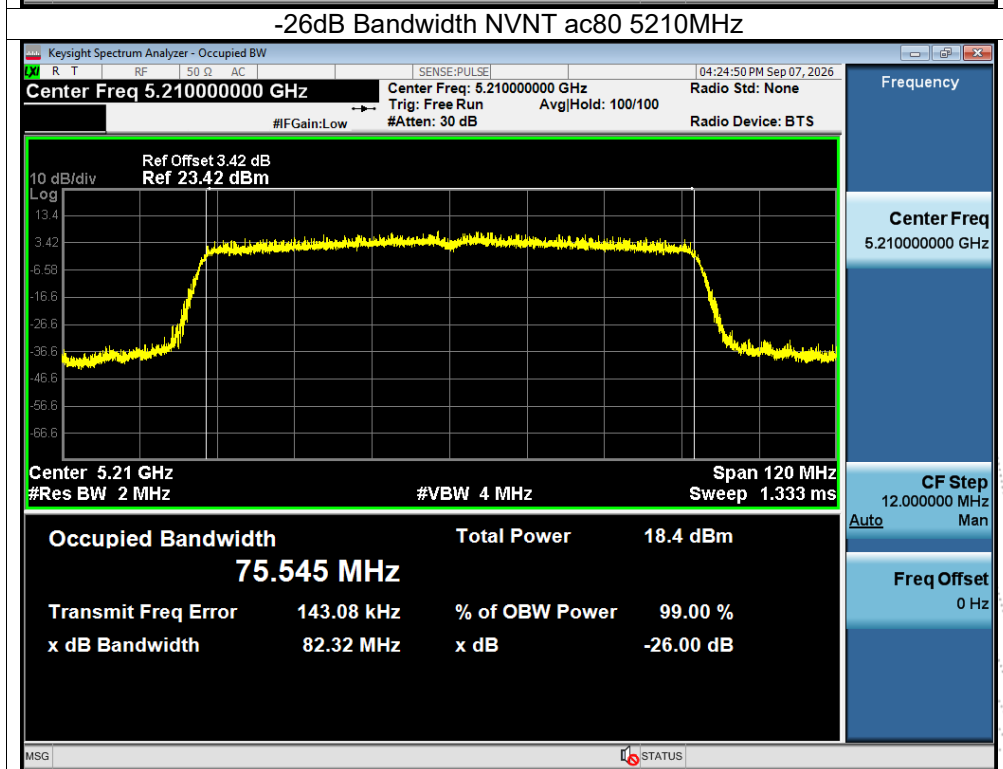
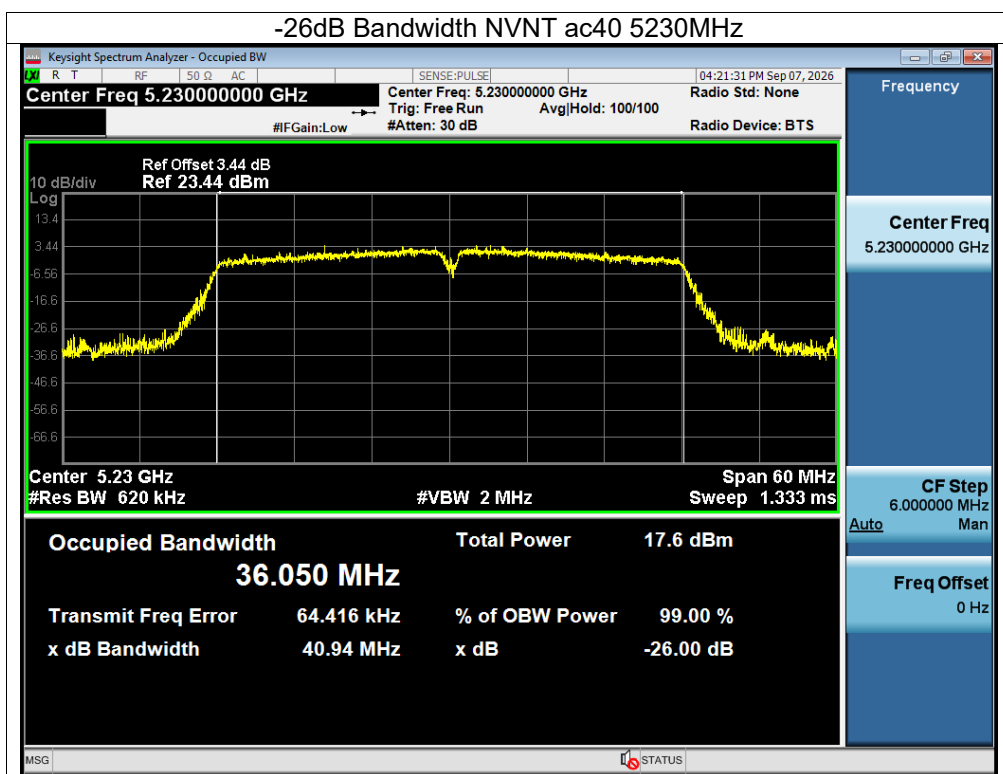


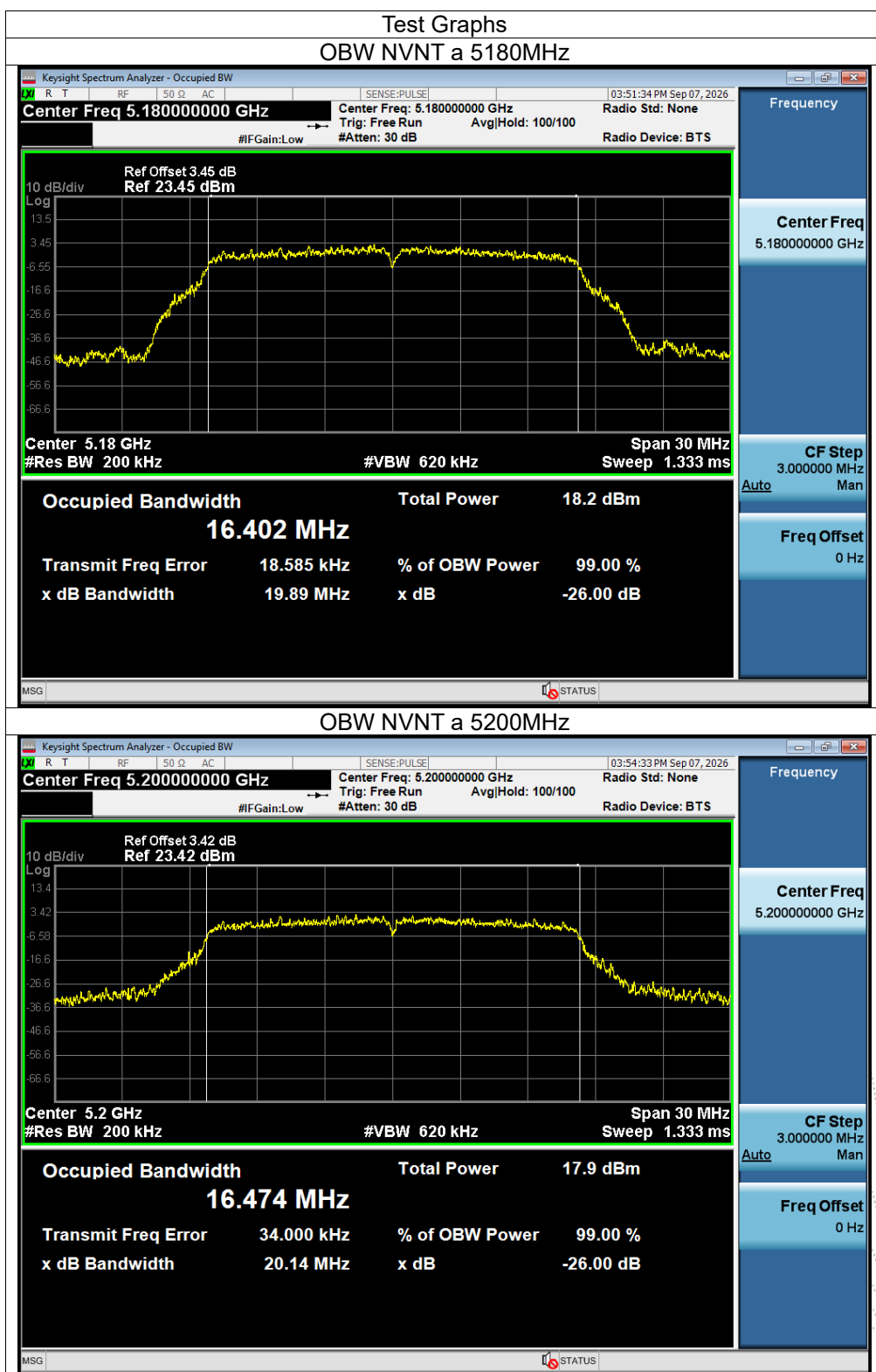


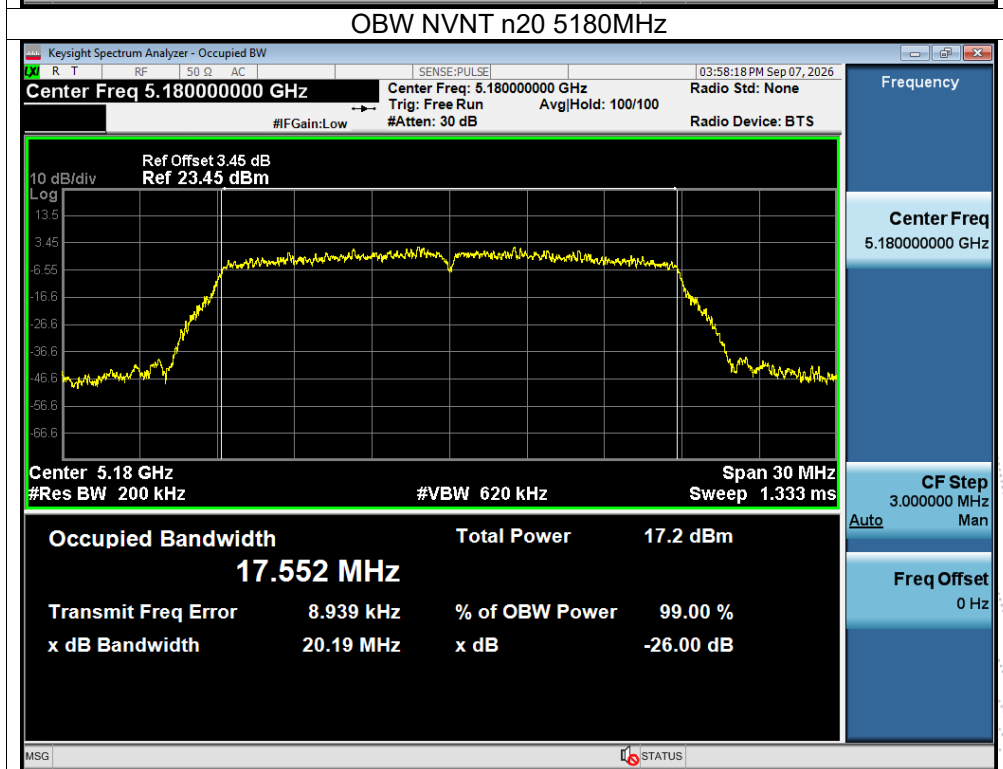
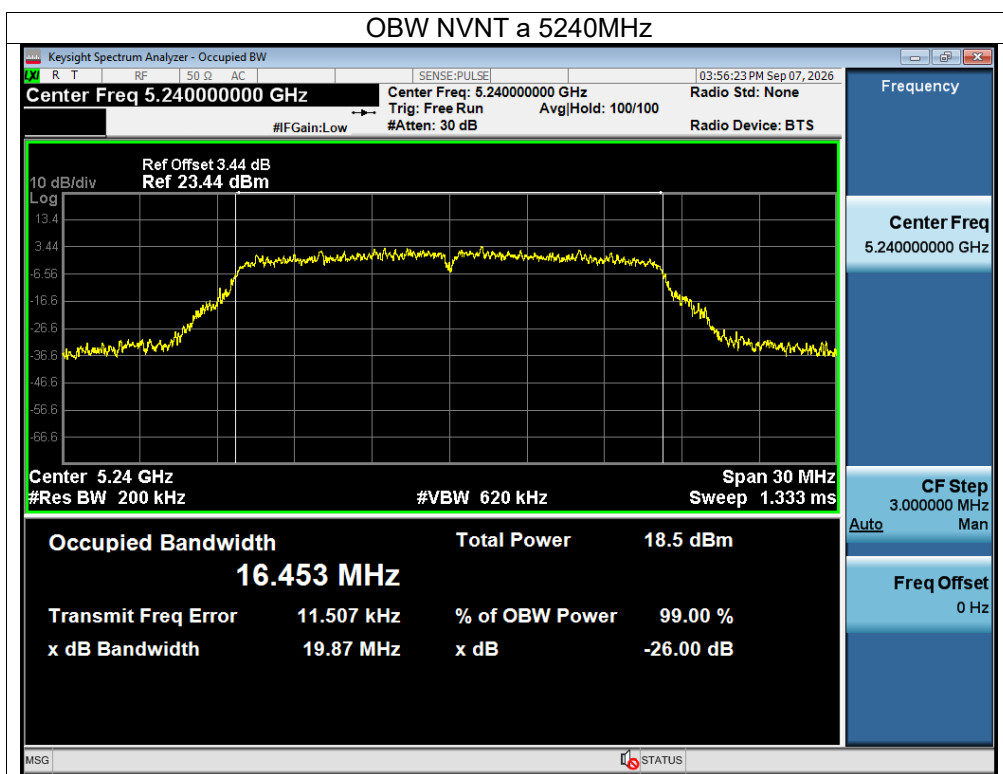


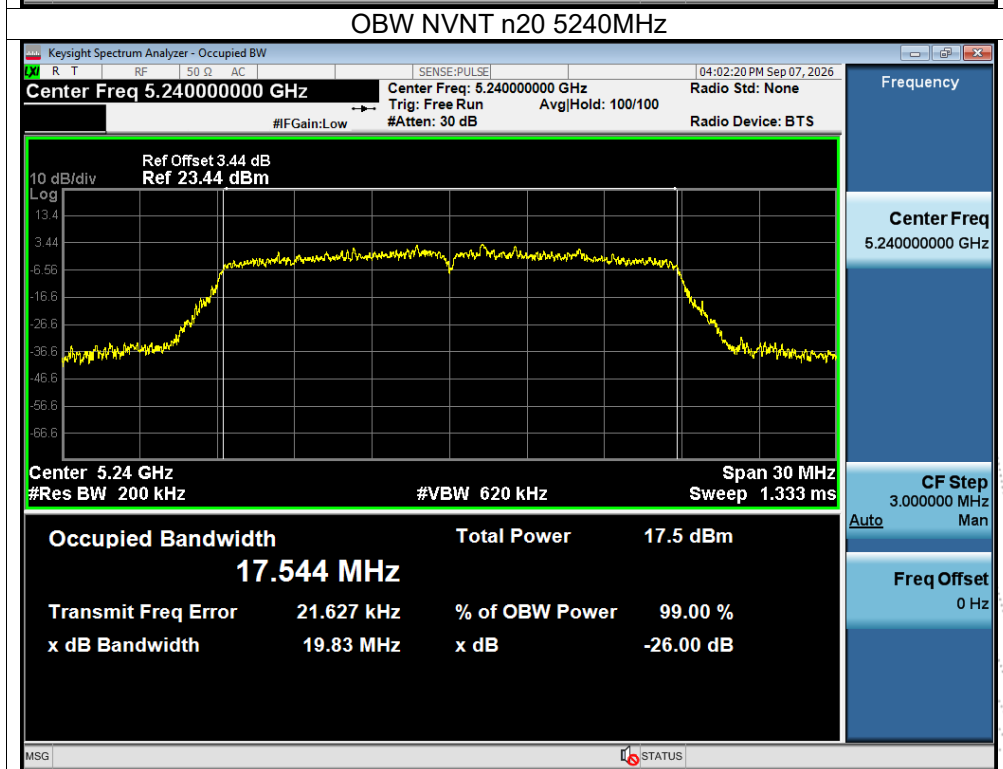
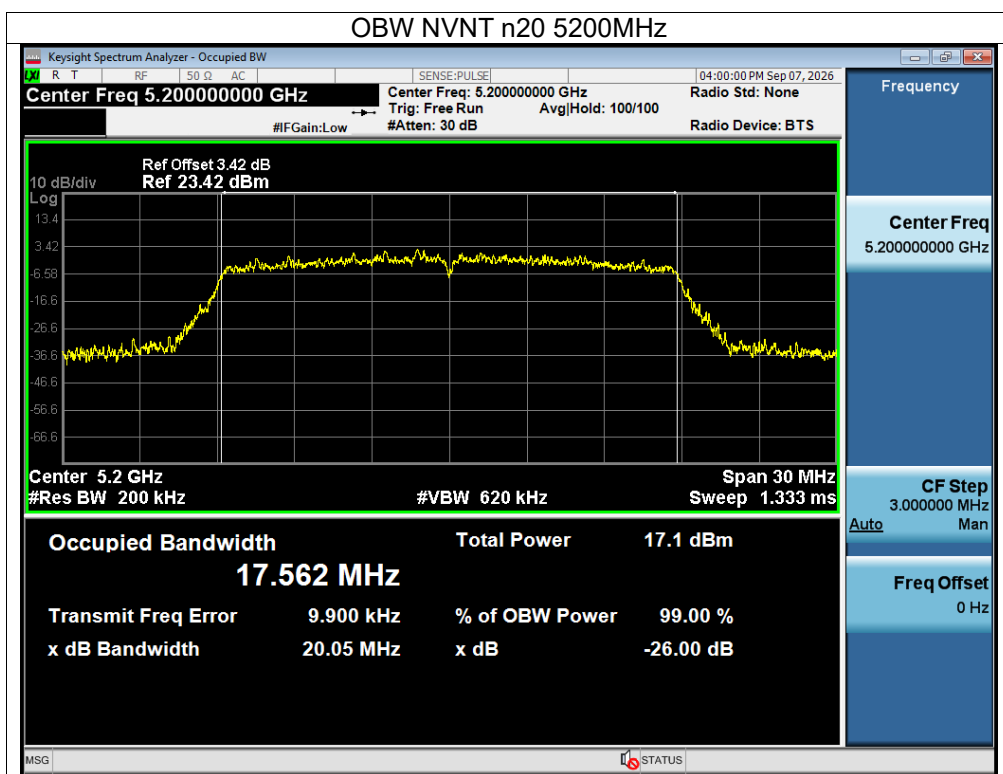
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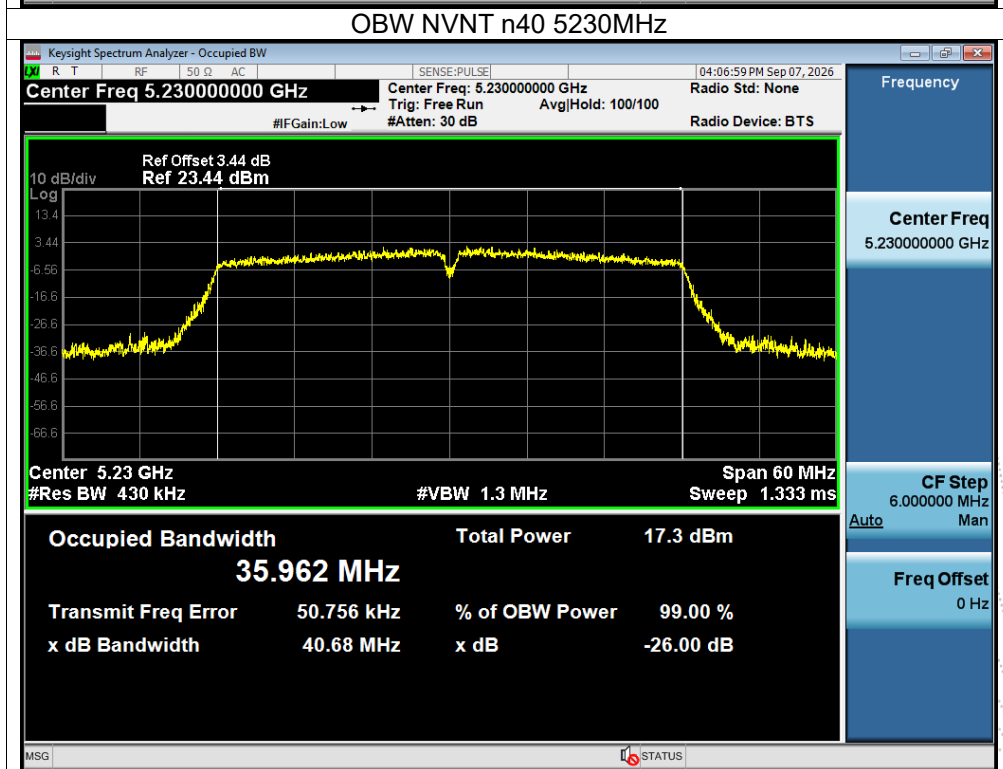
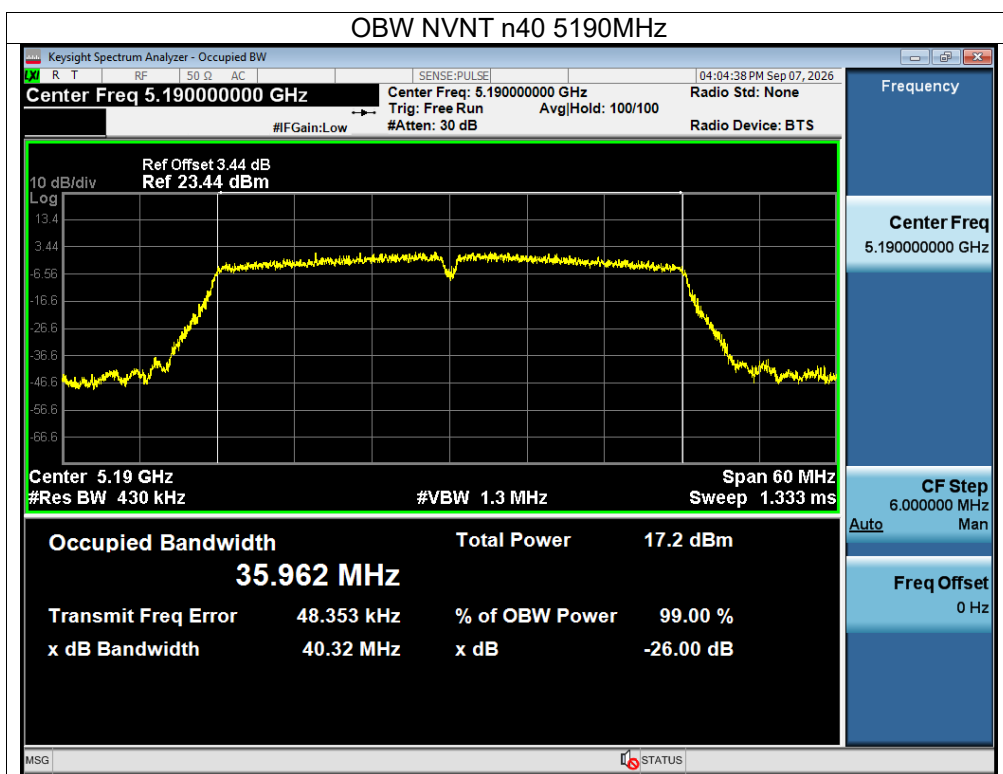




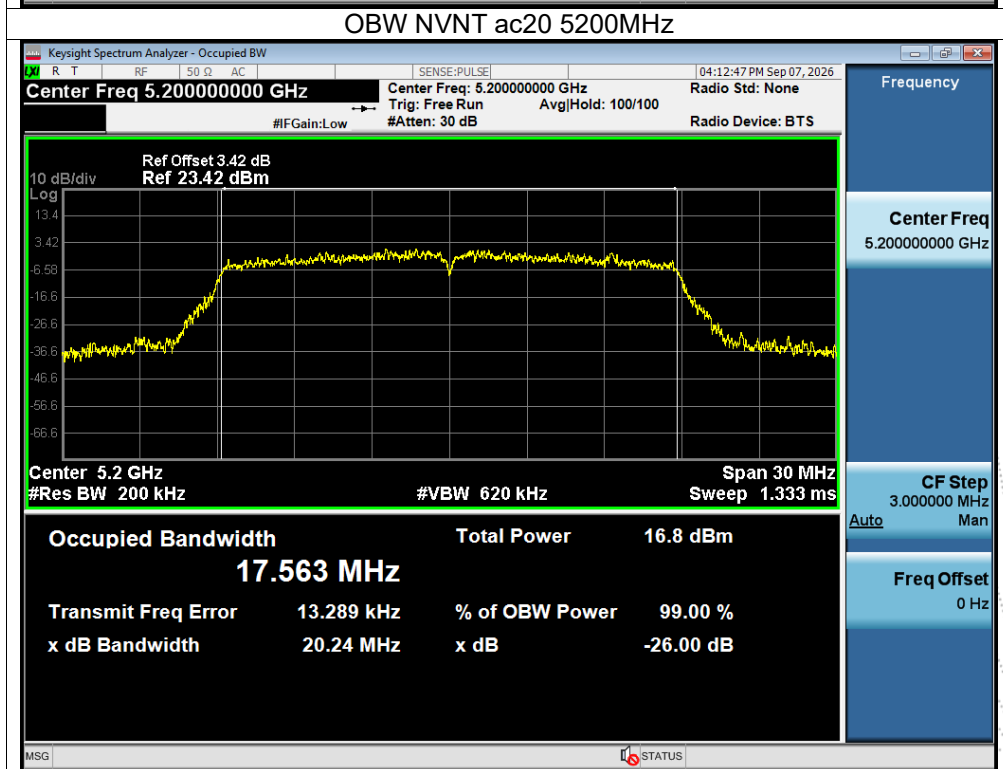
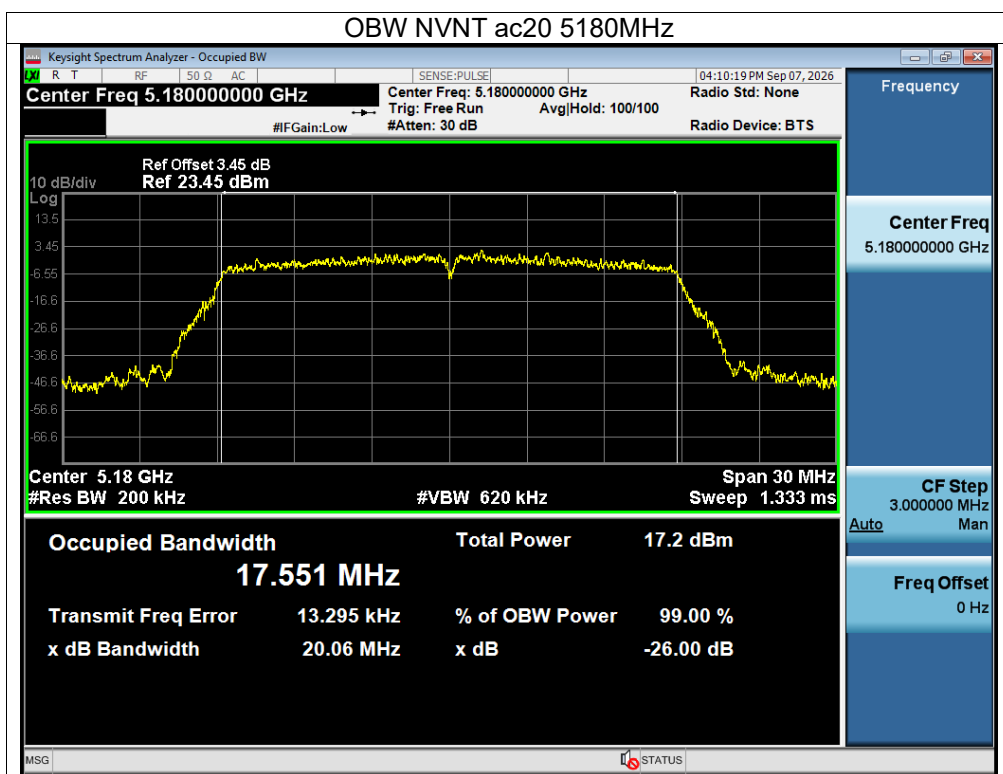


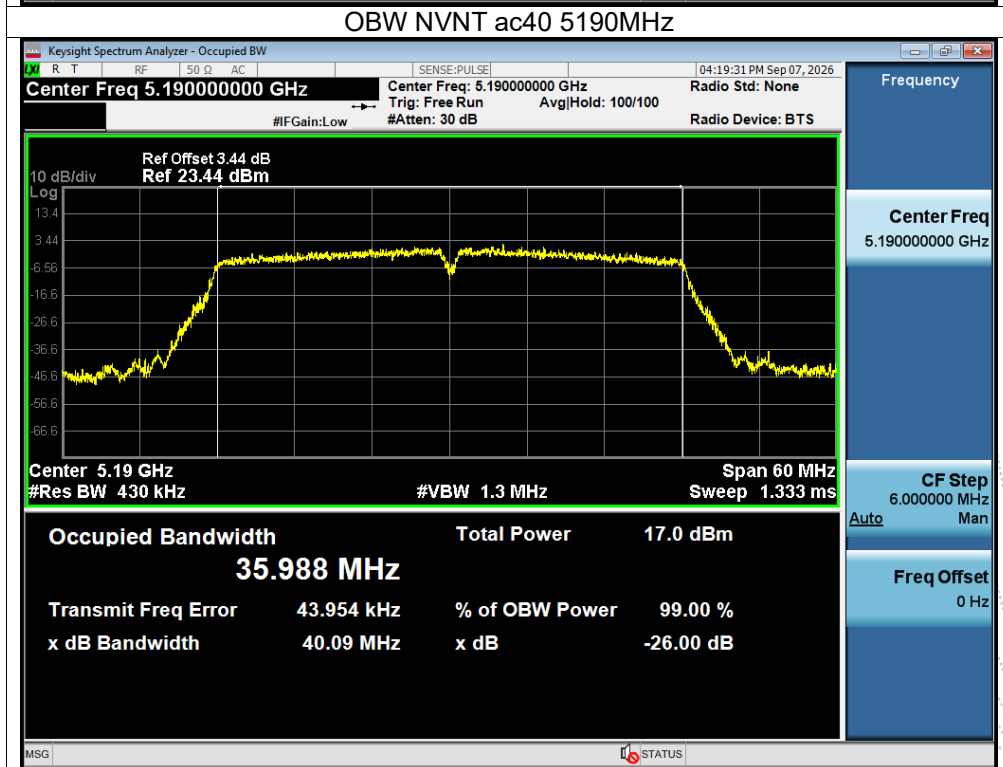
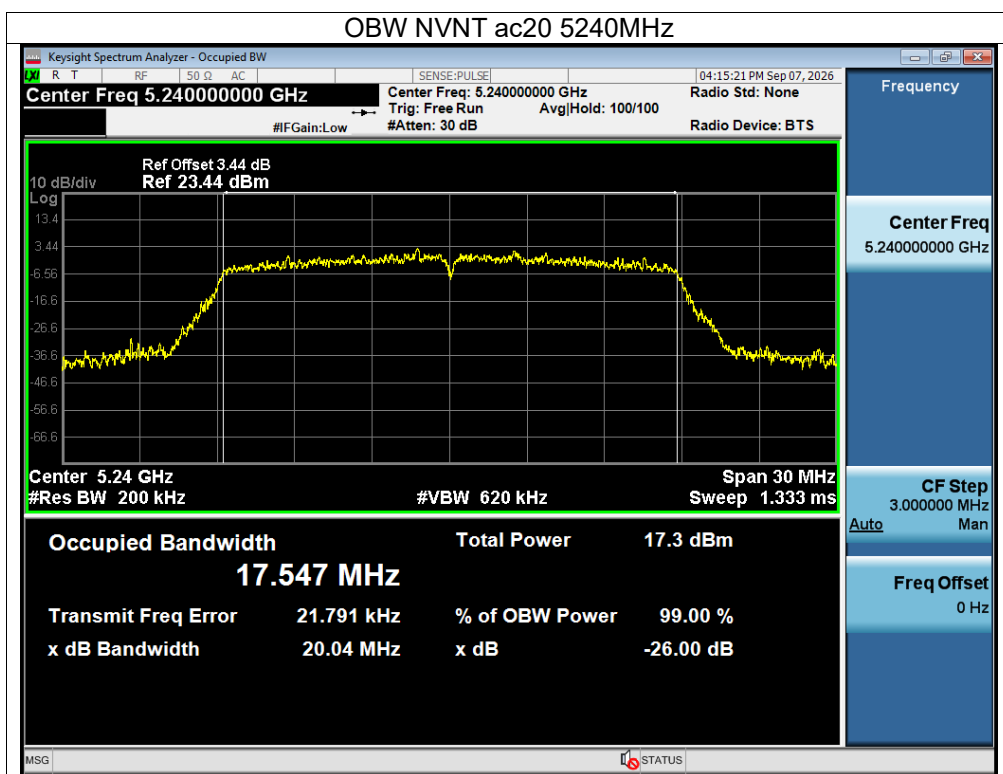


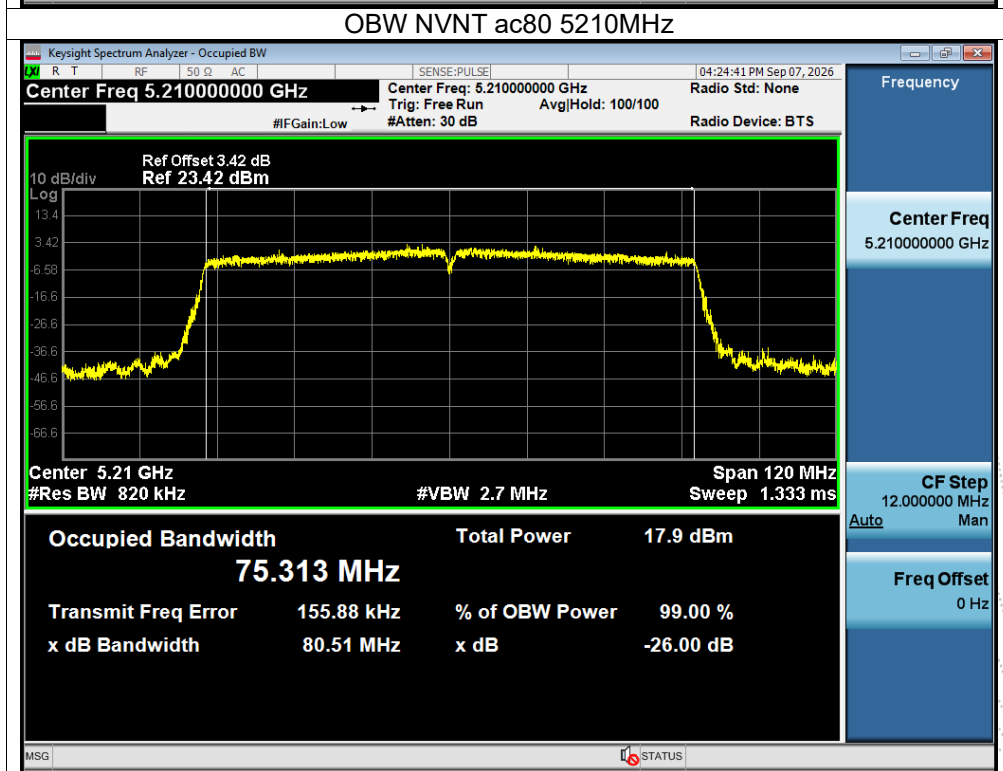
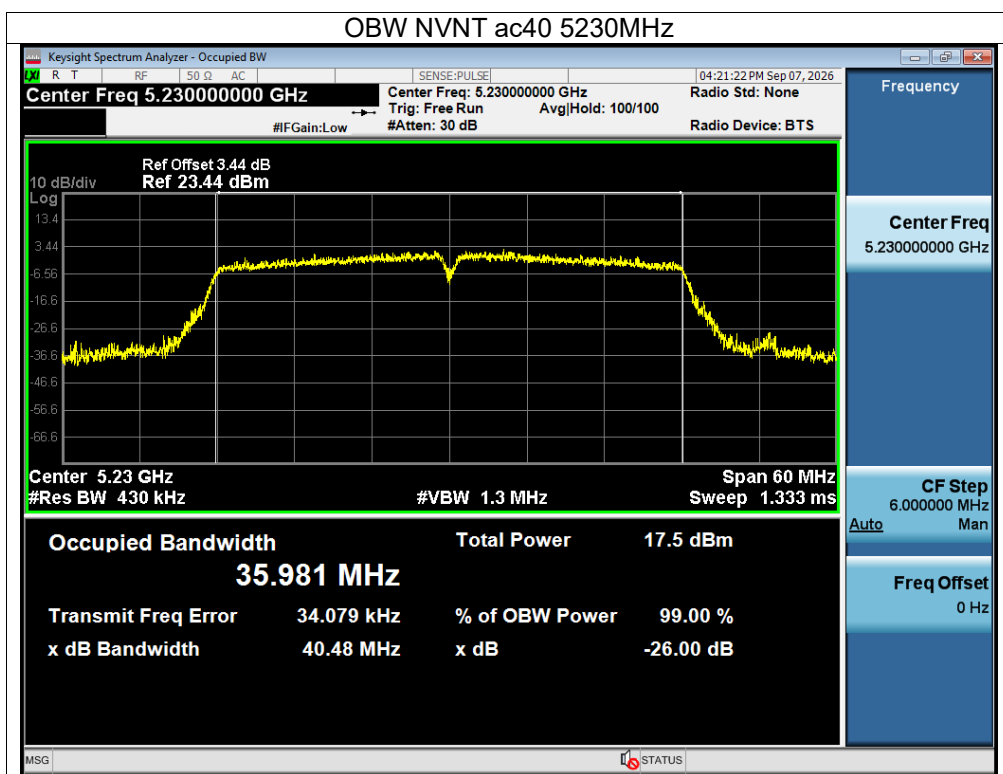




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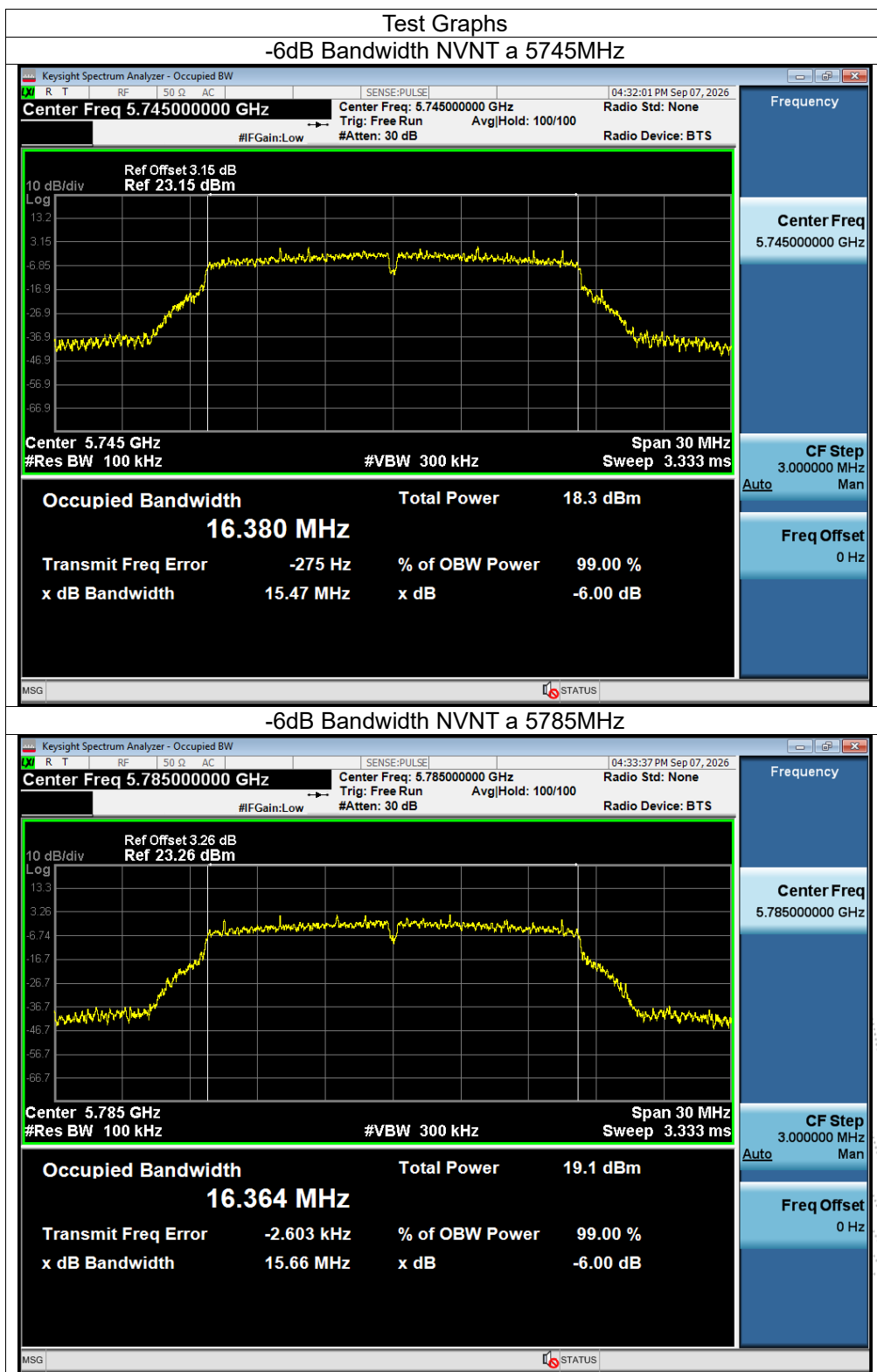


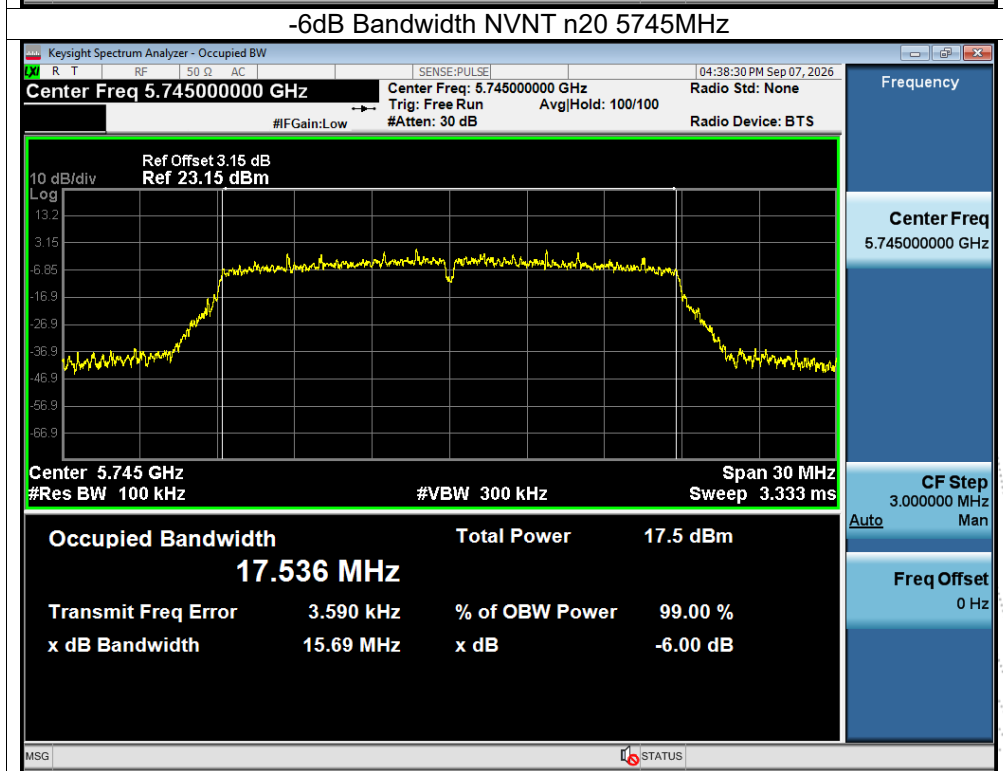
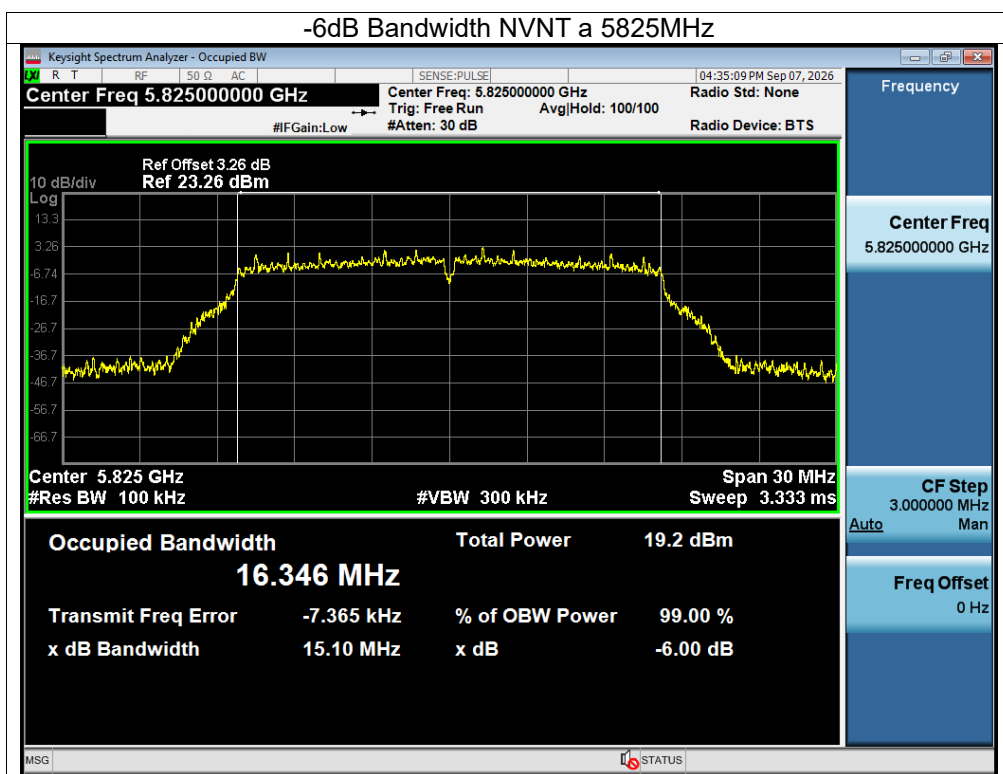


Temperature:	23.6 °C	Relative Humidity:	50%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5745-5825MHz)		

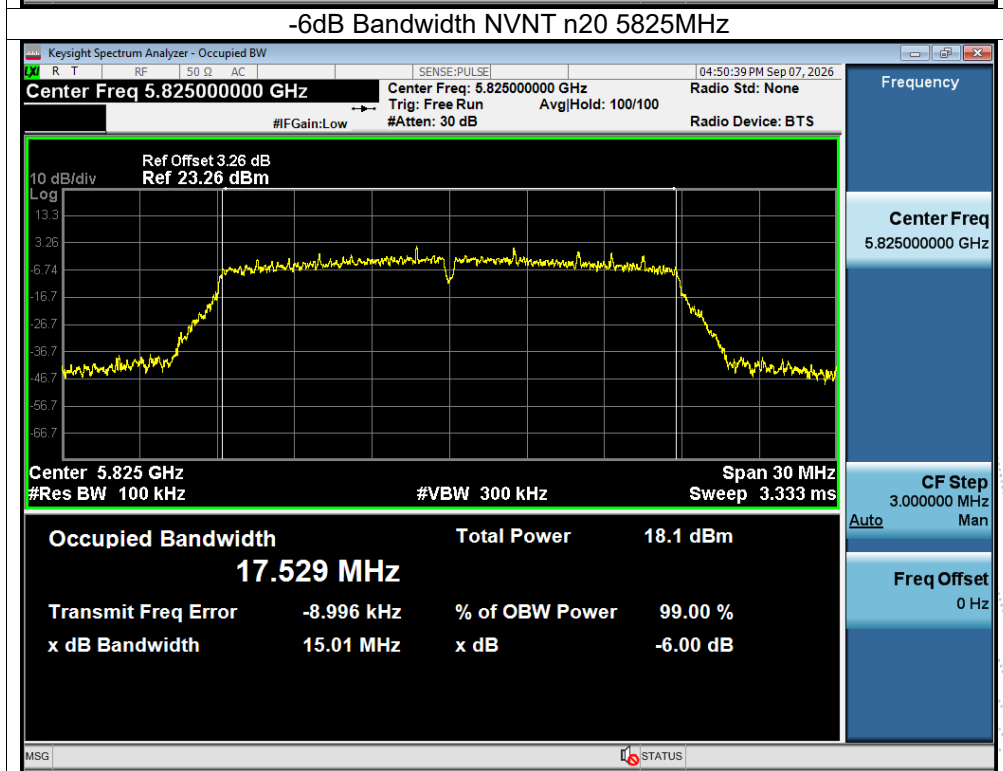
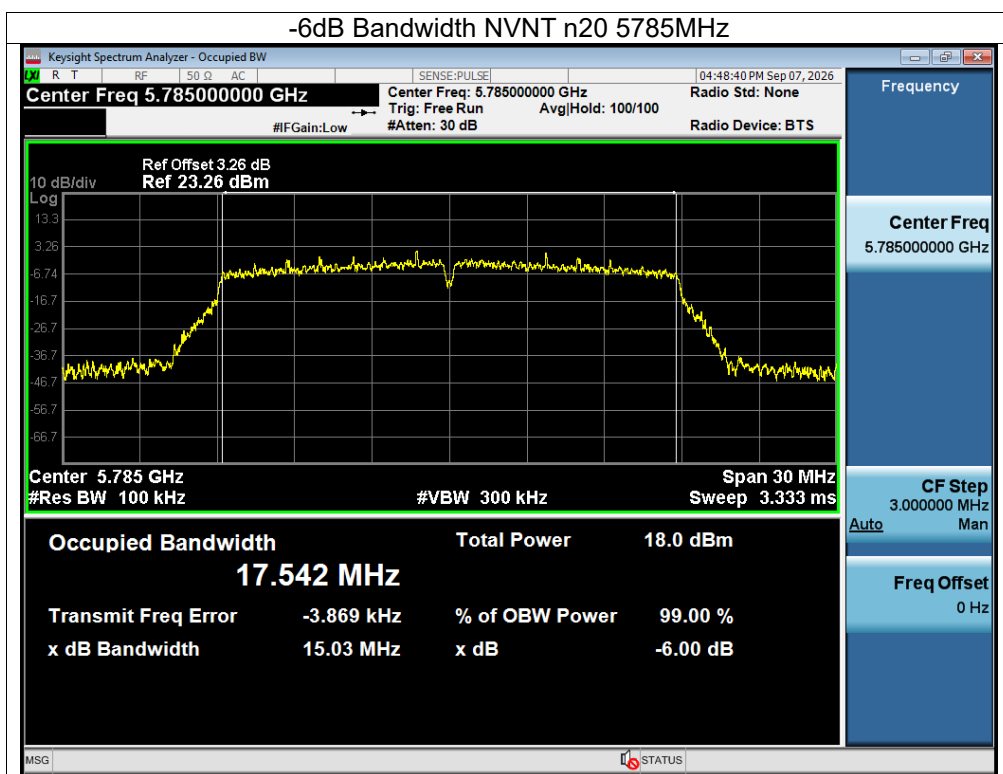
Mode	Channel	Frequency (MHz)	-6dB bandwidth (MHz)		99% OBW (MHz)		Limit -6dB bandwidth MHz	Result
			ANT A	ANT B	ANT A	ANT B		
NVNT	a	5745	15.474	13.976	16.461	16.450	0.5	Pass
NVNT	a	5785	15.658	14.685	16.422	16.450	0.5	Pass
NVNT	a	5825	15.097	15.108	16.434	16.412	0.5	Pass
NVNT	n20	5745	15.695	17.067	17.589	17.564	0.5	Pass
NVNT	n20	5785	15.031	15.945	17.545	17.556	0.5	Pass
NVNT	n20	5825	15.014	14.408	17.575	17.563	0.5	Pass
NVNT	n40	5755	35.030	35.107	36.033	36.023	0.5	Pass
NVNT	n40	5795	35.122	33.839	35.972	35.959	0.5	Pass
NVNT	ac20	5745	15.087	15.086	17.593	17.567	0.5	Pass
NVNT	ac20	5785	14.648	13.769	17.537	17.562	0.5	Pass
NVNT	ac20	5825	15.134	14.831	17.575	17.565	0.5	Pass
NVNT	ac40	5755	35.027	35.047	35.956	35.994	0.5	Pass
NVNT	ac40	5795	35.103	33.880	35.973	36.002	0.5	Pass
NVNT	ac80	5775	75.121	75.116	75.318	75.293	0.5	Pass

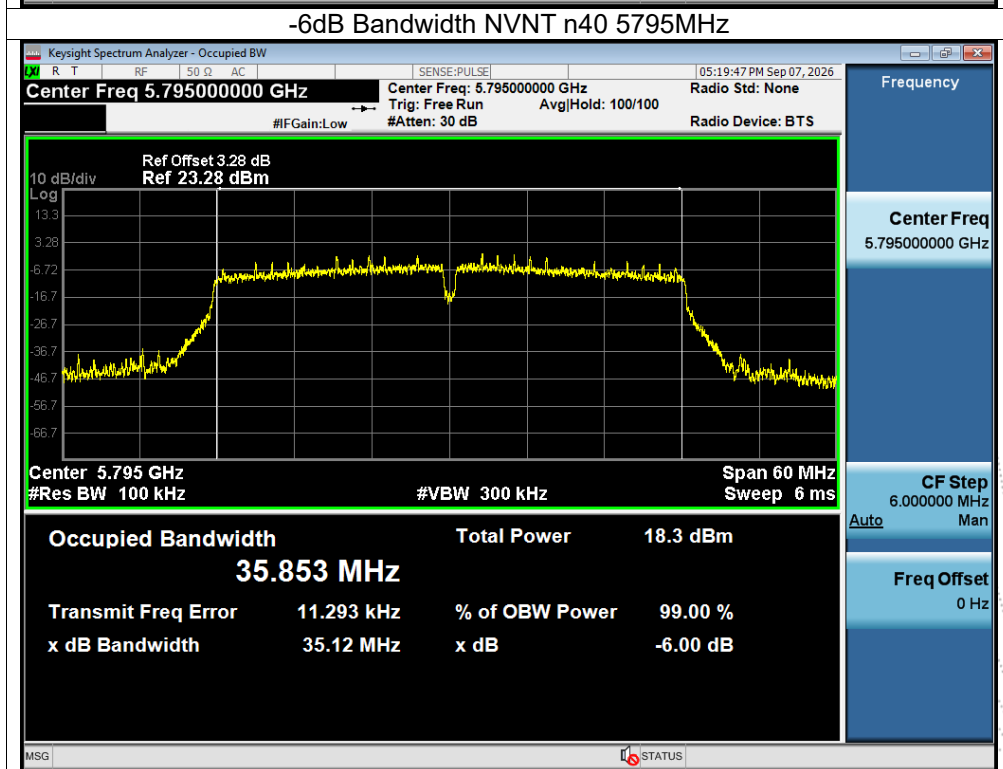
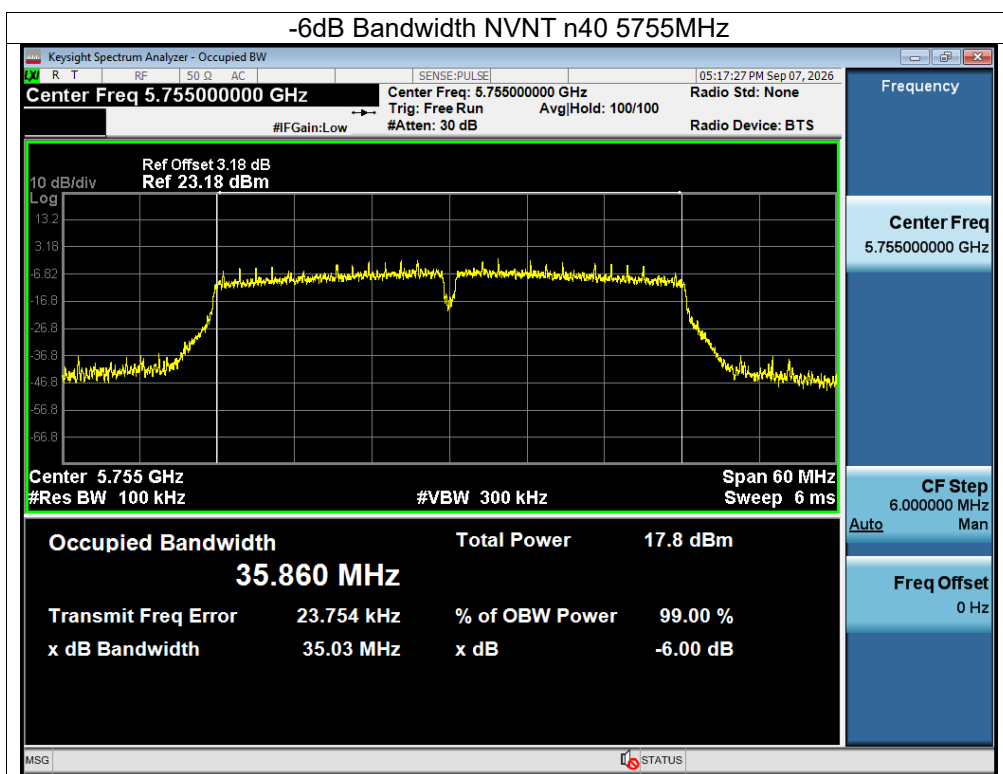
Note: A(B) Represent the value of antenna A and B. The worst data is Antenna A, only shown Antenna A Plot.

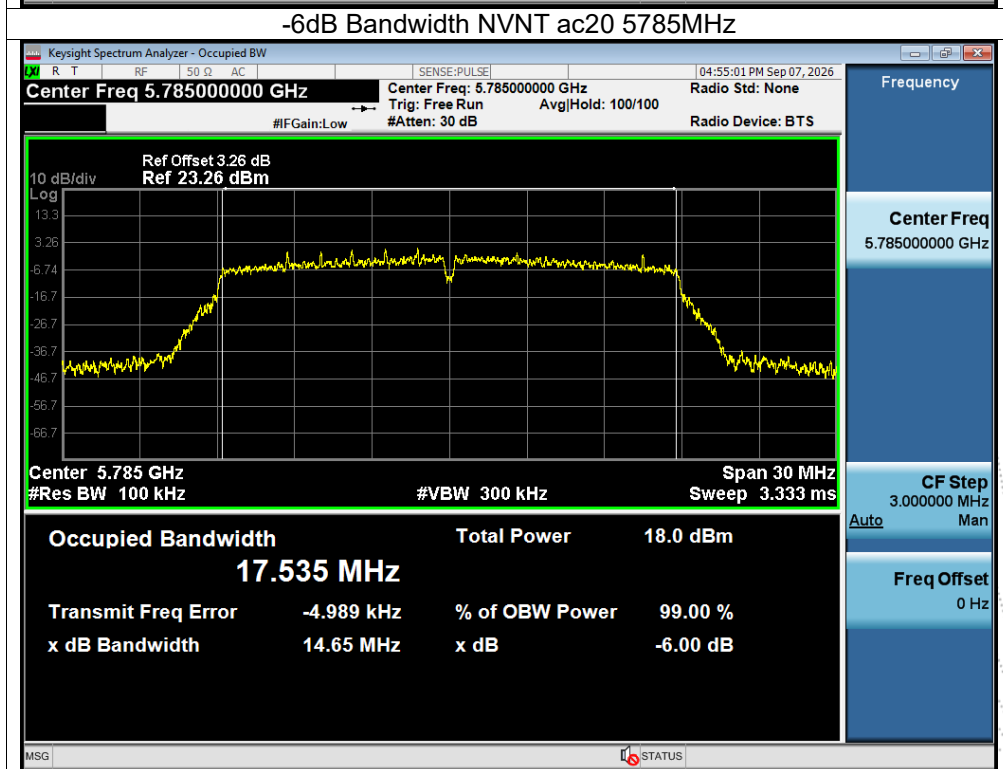
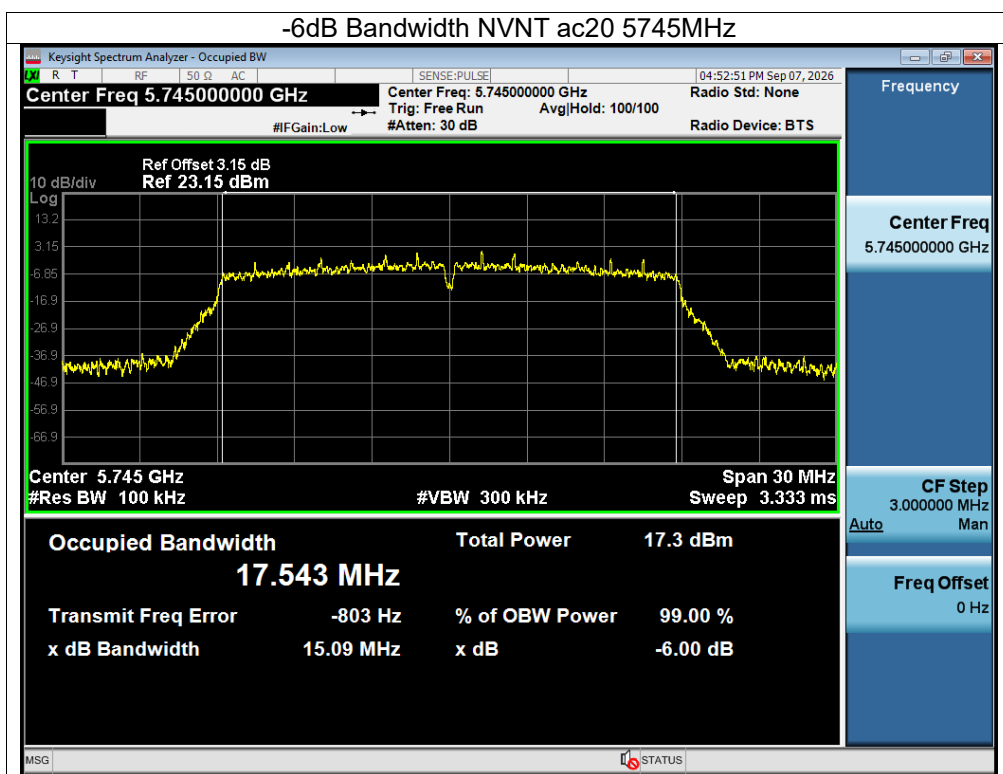


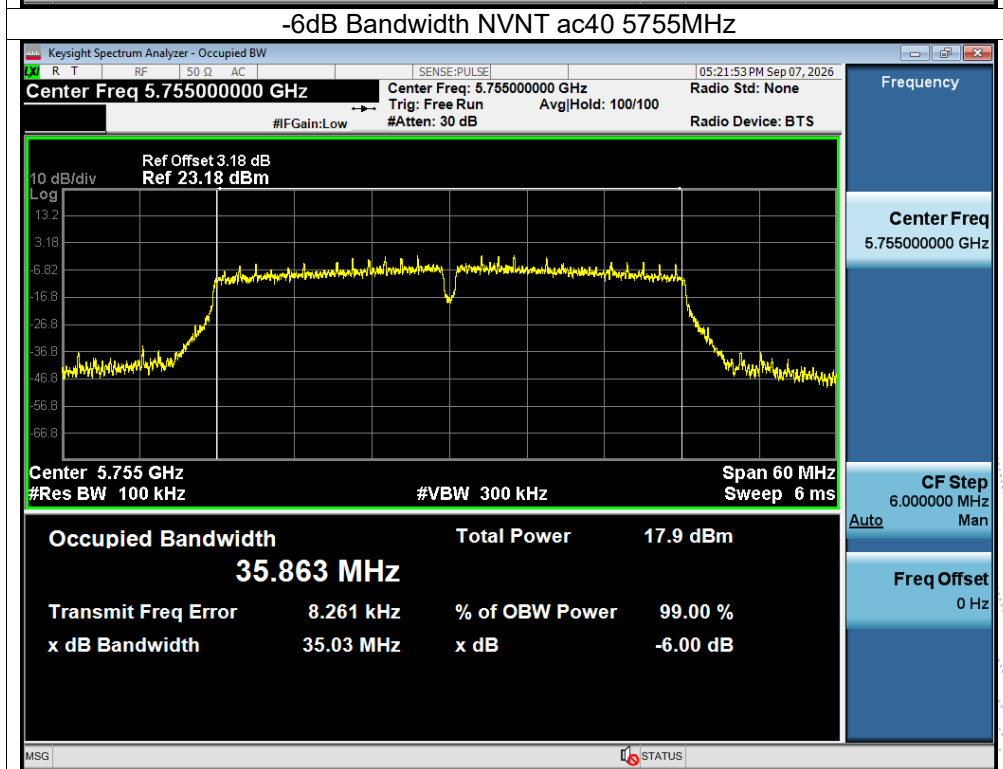
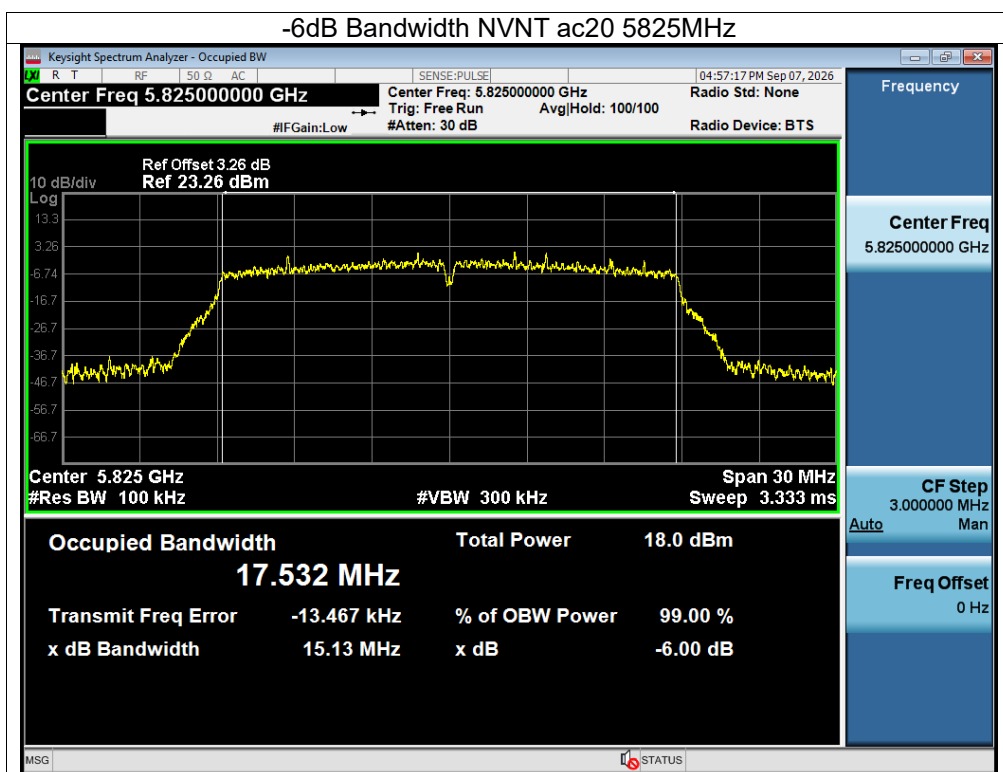


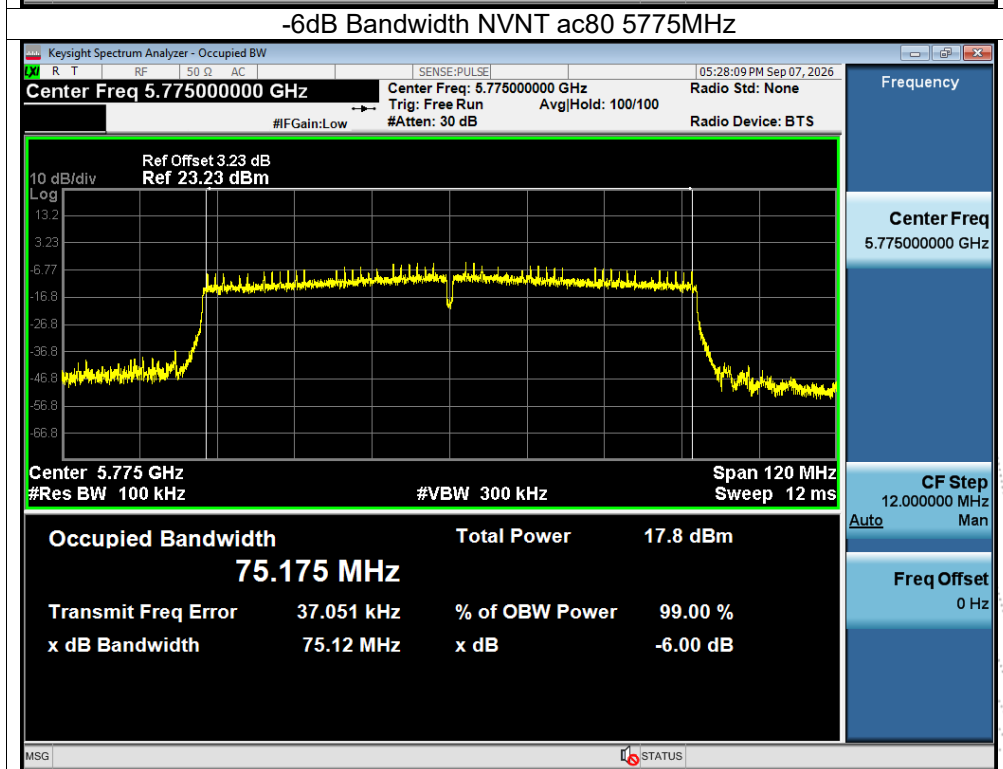
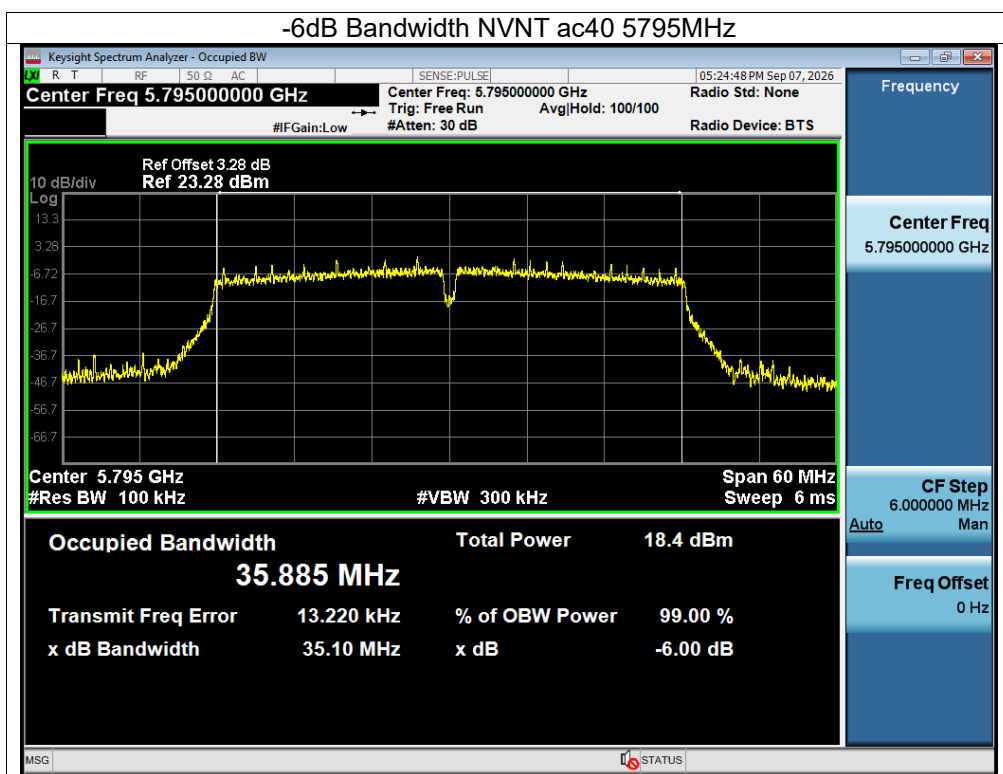
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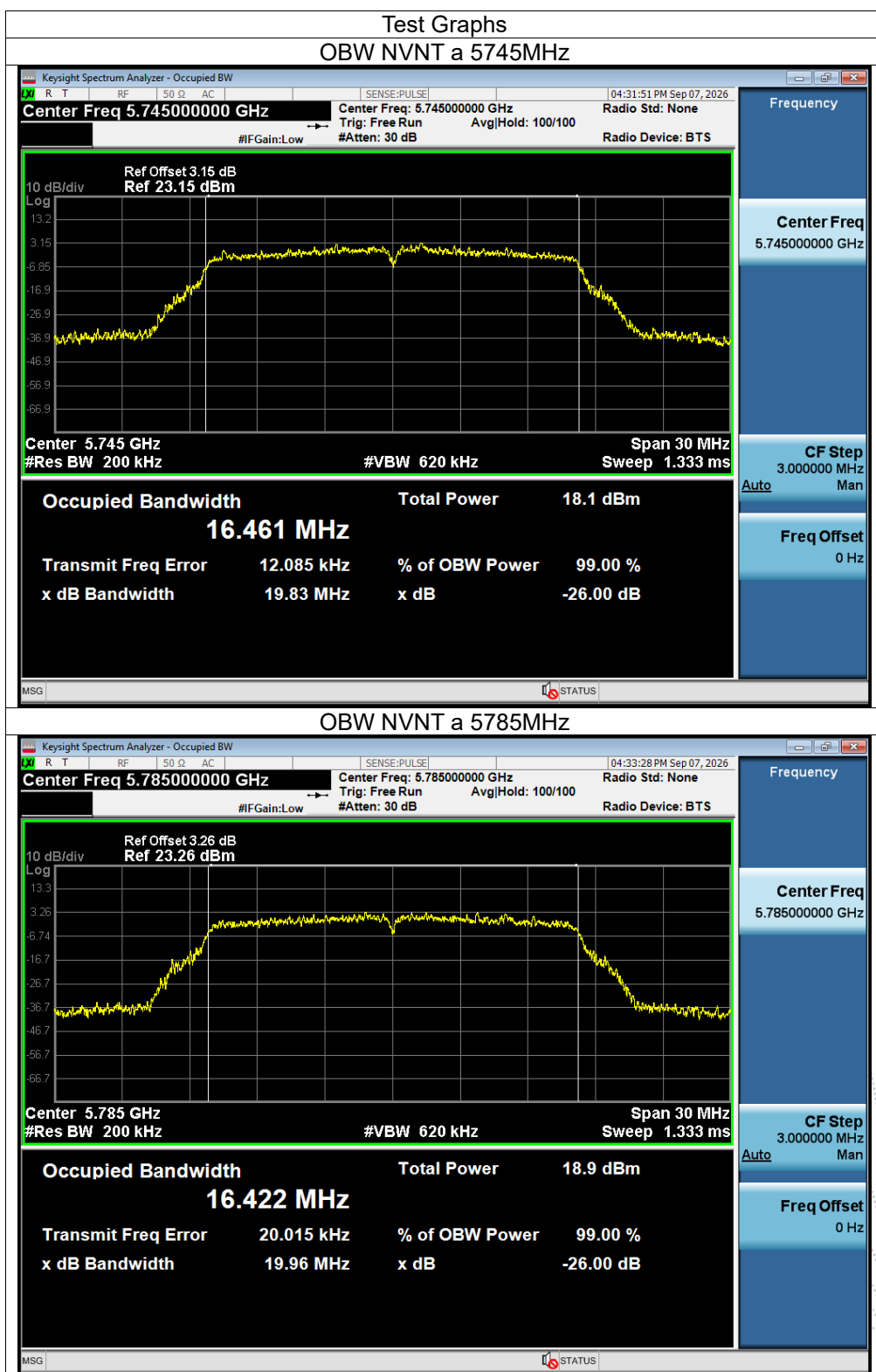




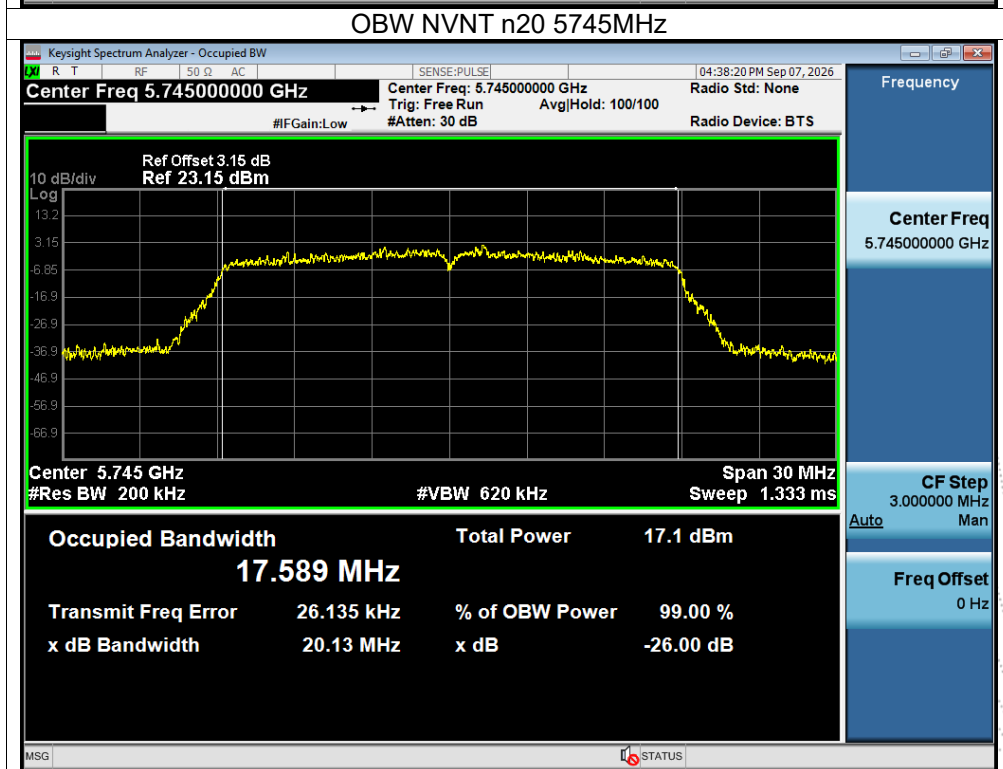
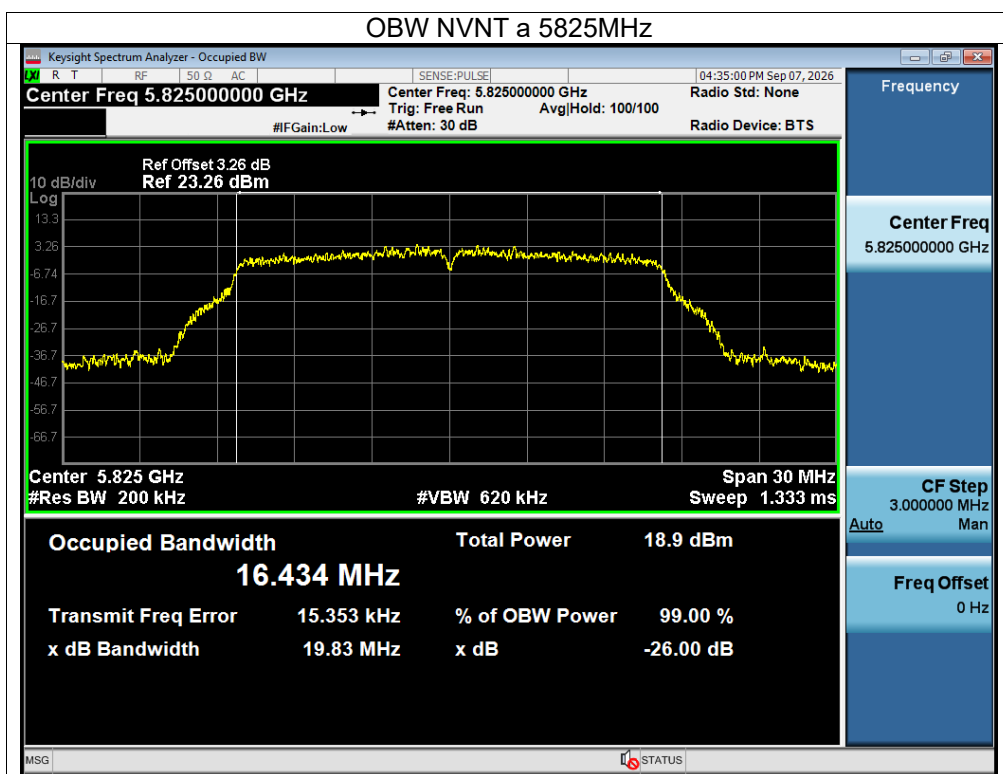


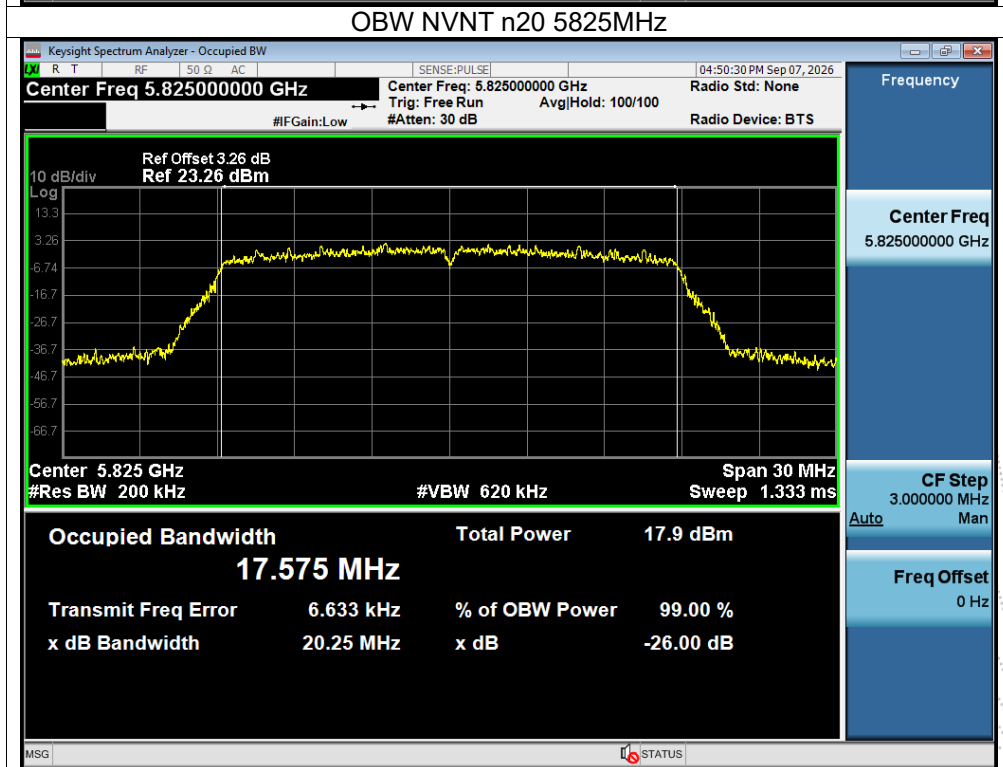
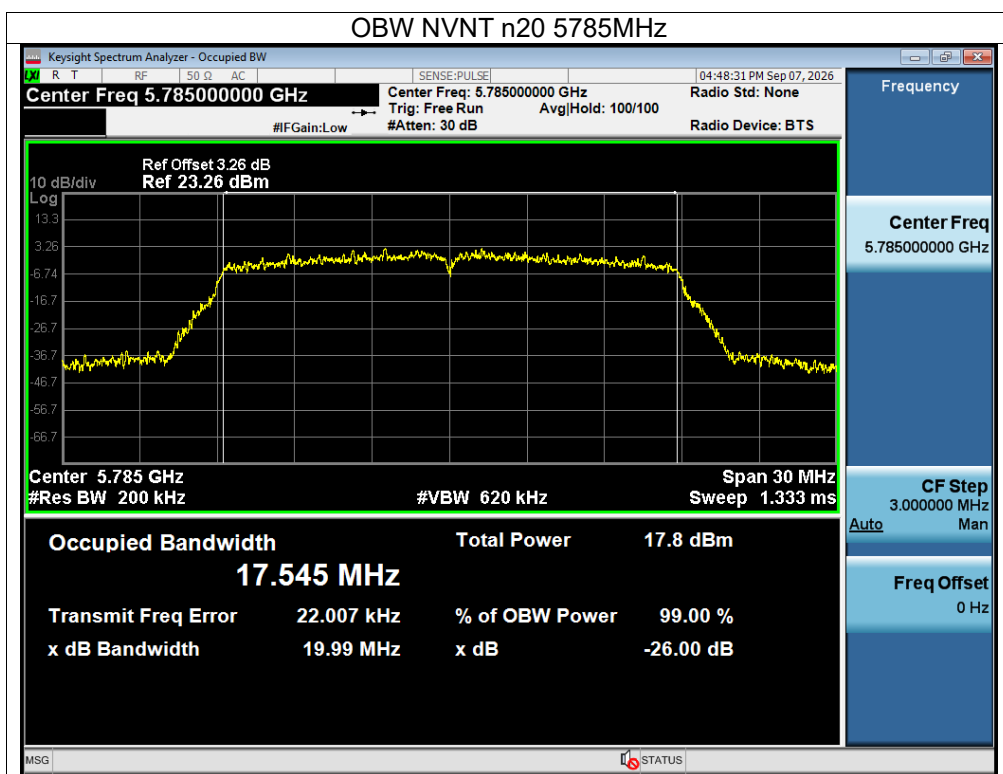


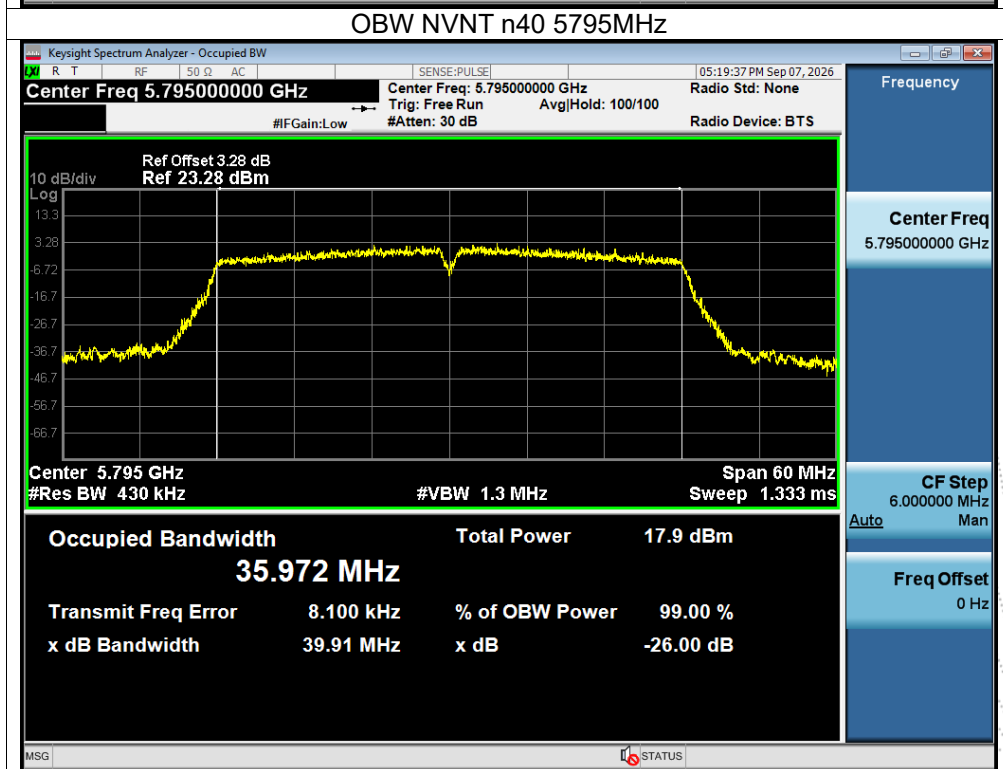
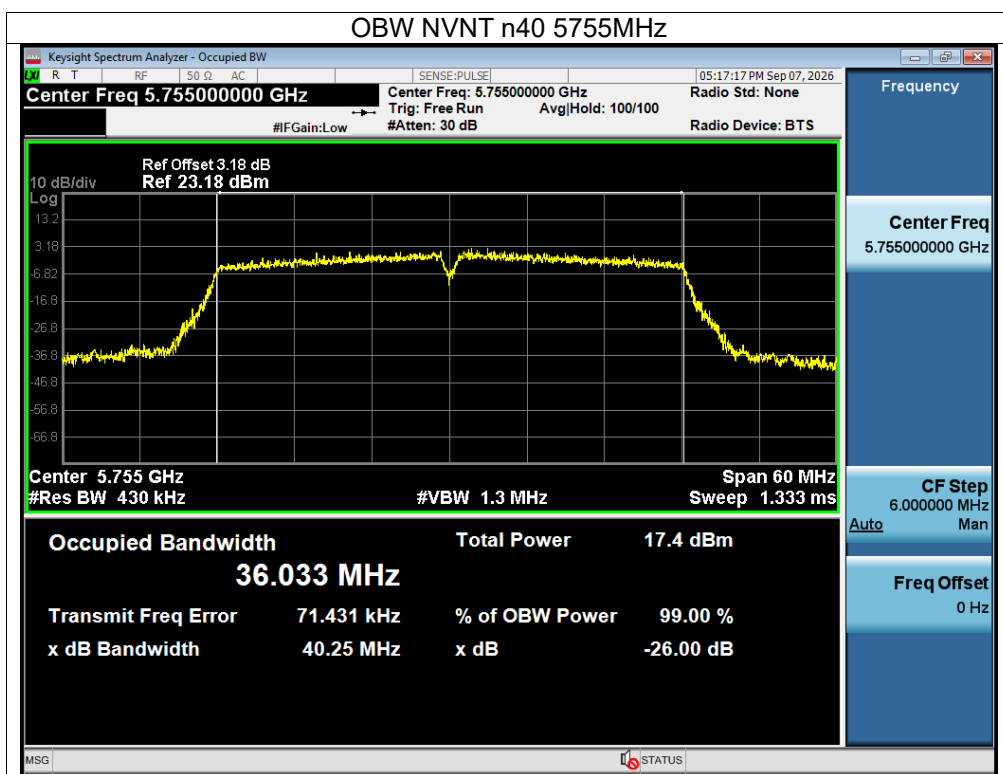


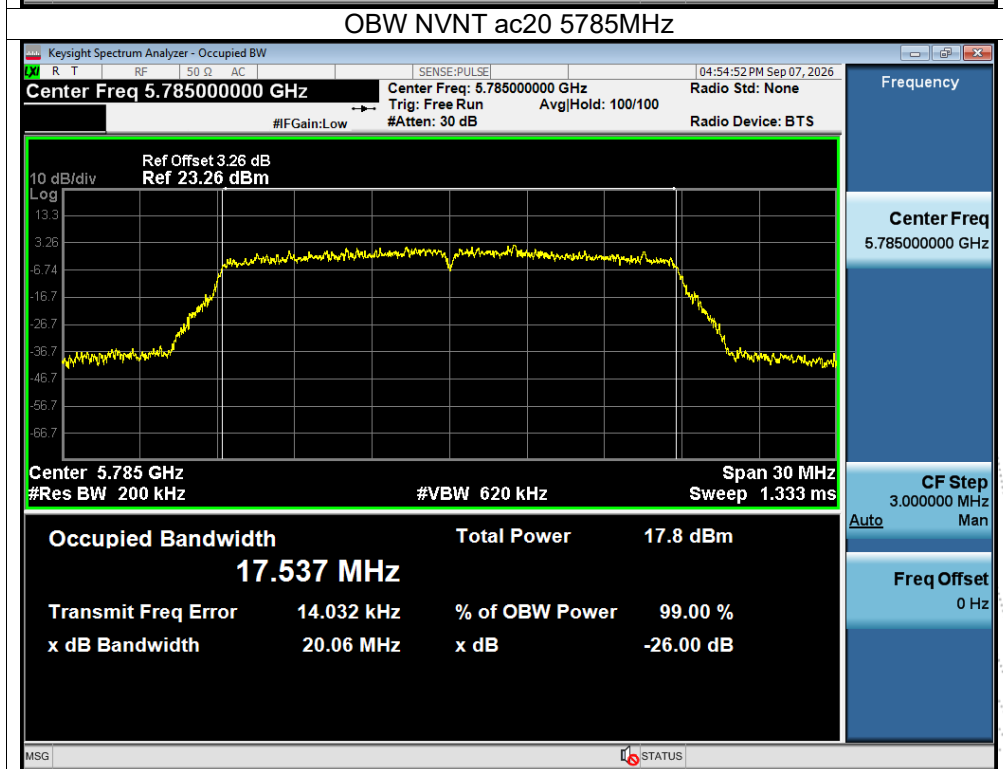
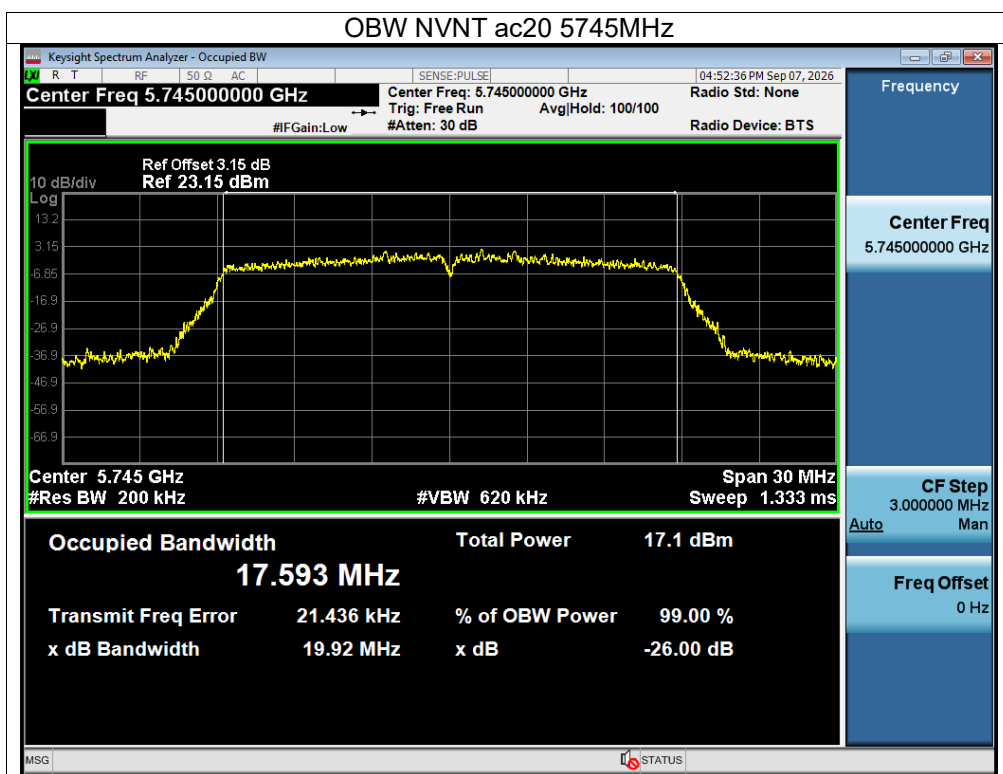


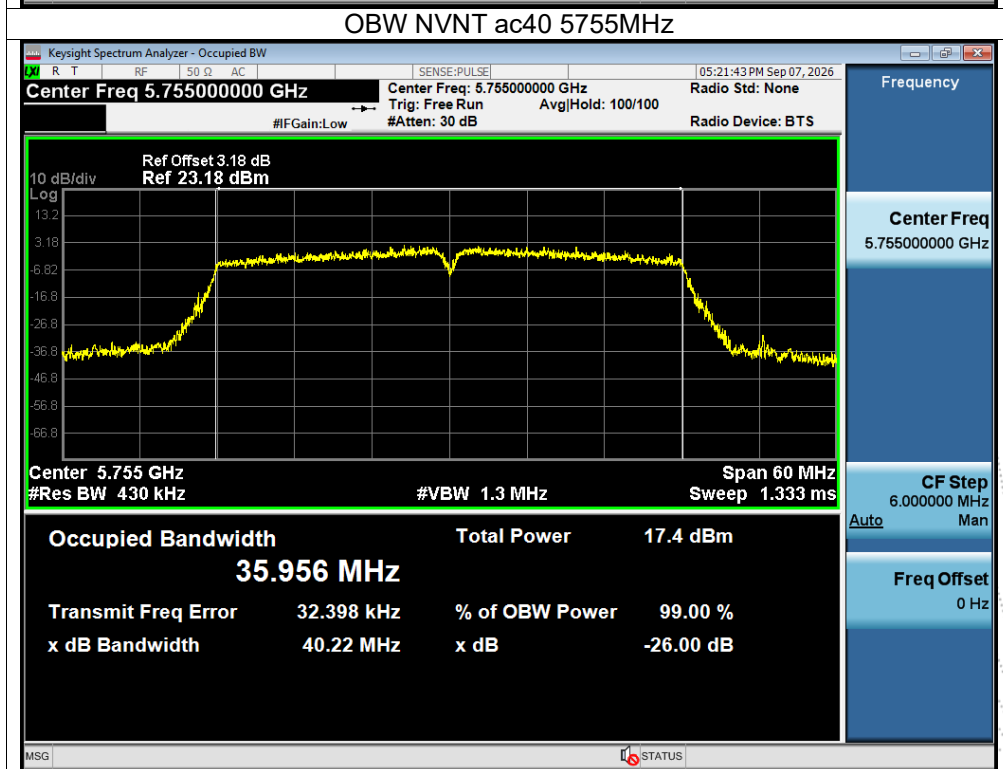
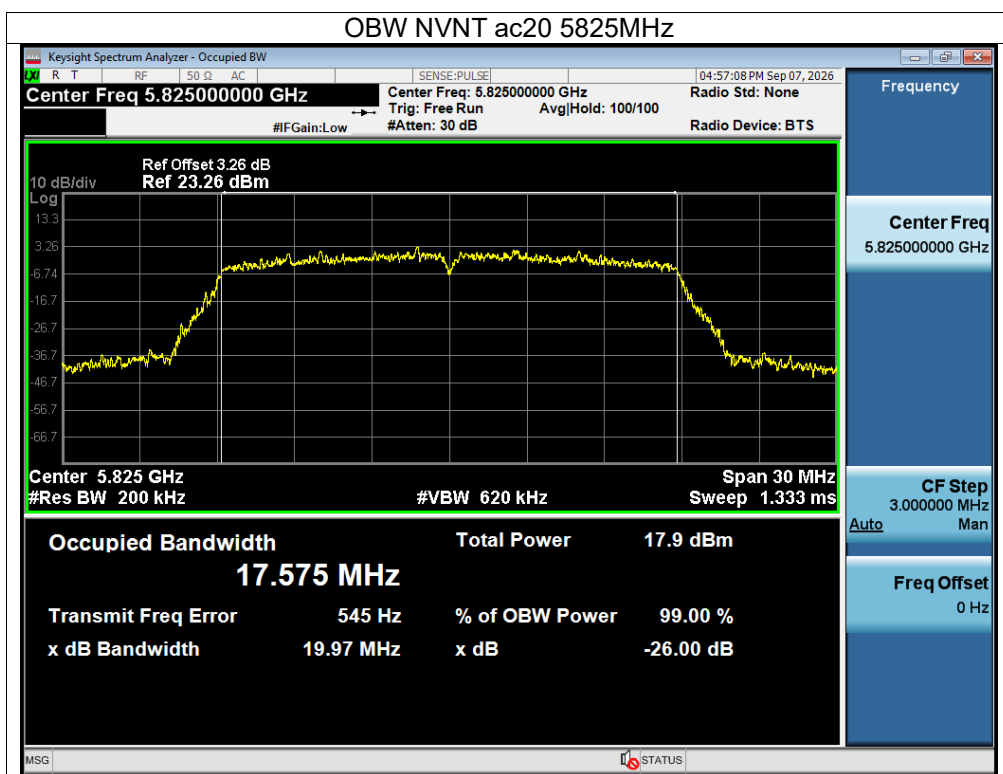
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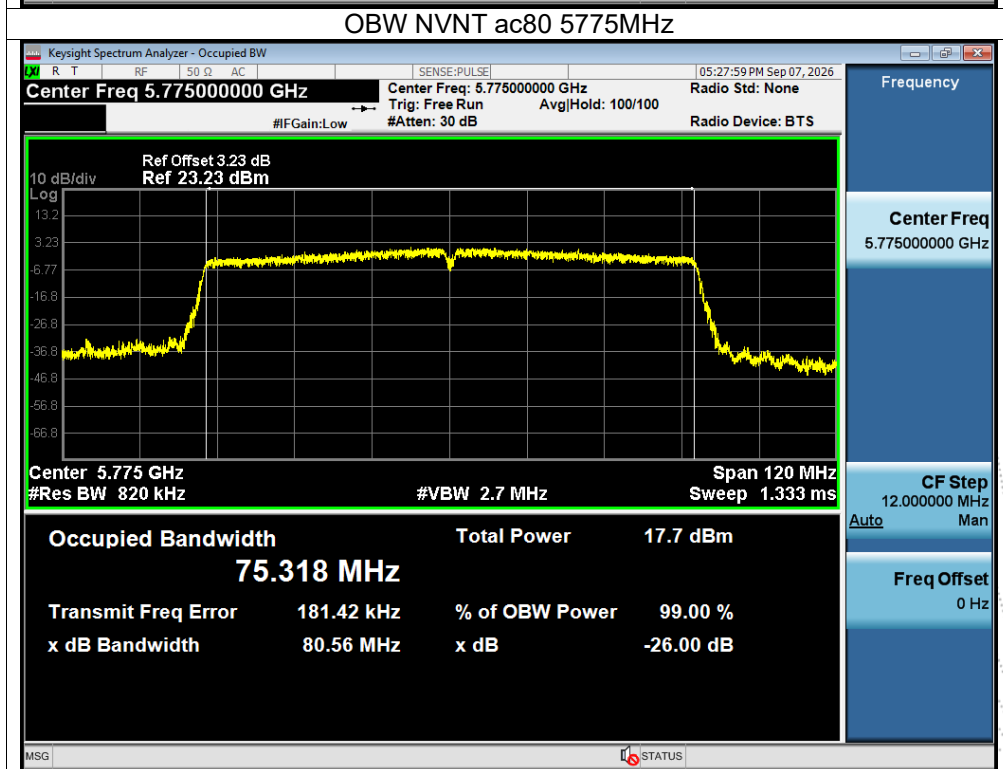
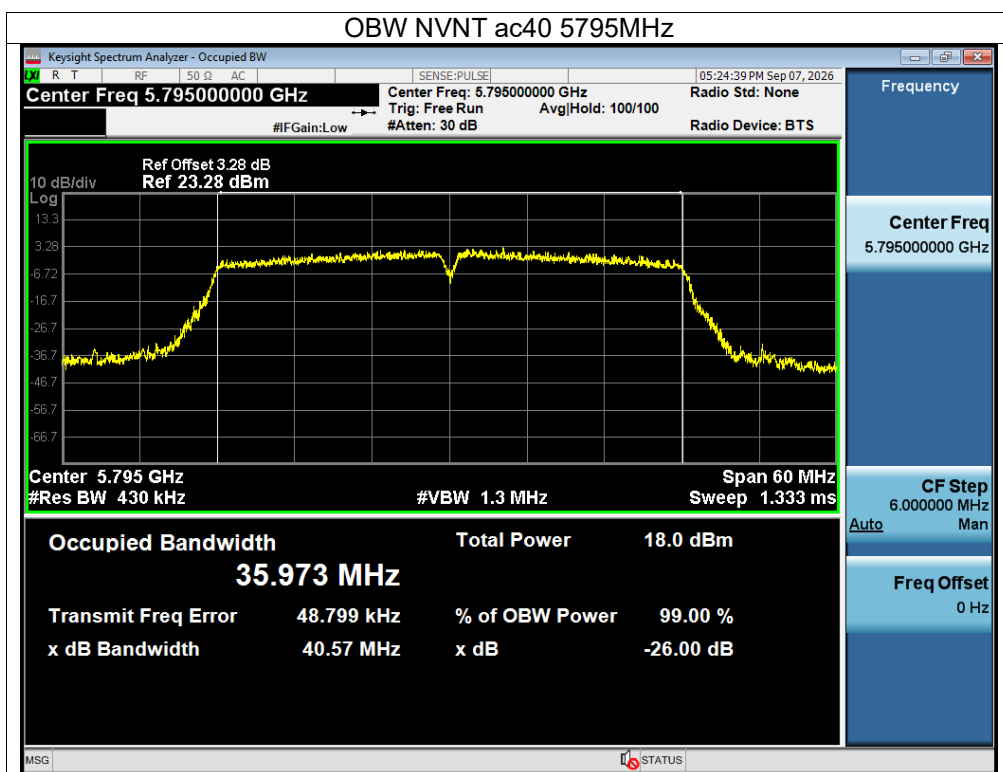












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10. Maximum Conducted Output Power

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407

The maximum conducted output should not exceed:

Frequency Band(MHz)	Limit
5150~5250	0.25W
5250~5350	250 mW or 11 dBm + 10log B, whichever is less.
5470~5725	250 mW or 11 dBm + 10log B, whichever is less.
5725~5850	1W
Note: Where "B" is the 26 dB emissions bandwidth in MHz.	

10.3 Test Procedure

Method SA-1 or method SA-1A (alternative) shall be applied if either of the following conditions can be satisfied:

1) The EUT transmits continuously (or with a $D \geq 98\%$).

Method SA-1 uses trace averaging with the EUT transmitting at full power throughout each sweep. The procedure for this method is as follows:

a) Set span to encompass the entire 99% OBW of the signal.

b) Set RBW = 1 MHz.

c) Set VBW ≥ 3 MHz.

d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)

e) Sweep time = auto.

f) Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.

g) If transmit duty cycle $< 98\%$, use a video trigger with the trigger level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or at duty cycle $\geq 98\%$, and if each transmission is entirely at the maximum power control level, then the

trigger shall be set to “free run.”

- h) Trace average at least 100 traces in power averaging (rms) mode.
- i) Compute power by integrating the spectrum across the 99% OBW of the signal using the instrument's band-power measurement function, with band limits set equal to the OBW band-edges. If the instrument does not have a band-power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.

Method SA-2 or method SA-2A (alternative) shall be applied if the conditions of the preceding item a) cannot be achieved, and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than $\pm 2\%$. Method SA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The procedure for this method is as follows:

- a) Measure the duty cycle D of the transmitter output signal as described in 12.2.
- b) Set span to encompass the entire 99% OBW of the signal.
- c) Set RBW = 1 MHz.
- d) Set VBW ≥ 3 MHz.
- e) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- f) Sweep time = auto.
- g) Detector = Power averaging (rms), if available. Otherwise, use sample detector mode.
- h) Do not use sweep triggering. Allow the sweep to “free run.”
- i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
- j) Compute power by integrating the spectrum across the 99% OBW of the signal using the instrument's band-power measurement function with band limits set equal to the EBW or OBW band-edges. If the instrument does not have a band-power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 99% OBW of the spectrum.
- k) Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add $[10 \log (1 / 0.25)] = 6$ dB if the duty cycle is 25%.

10.4 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.

10.5 Test Result

Temperature:	23.6 °C	Relative Humidity:	50%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	5180-5240MHz		

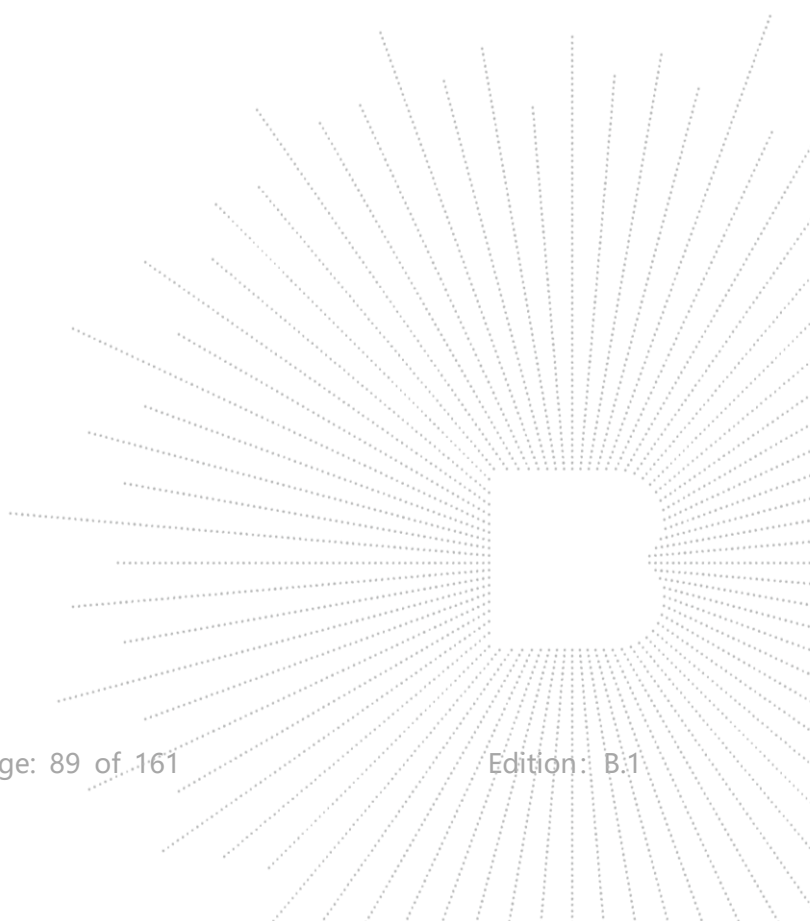
Mode	Channel	Frequency (MHz)	Conducted Power (dBm)			Limit (dBm)	Result
			ANT A	ANT B	Total		
NVNT	a	5180	12.49	12.03	/	24	Pass
NVNT	a	5200	12.12	11.90	/	24	Pass
NVNT	a	5240	12.71	12.56	/	24	Pass
NVNT	n20	5180	11.33	10.90	14.13	24	Pass
NVNT	n20	5200	11.14	10.76	13.96	24	Pass
NVNT	n20	5240	11.62	11.37	14.51	24	Pass
NVNT	n40	5190	11.10	10.30	13.73	24	Pass
NVNT	n40	5230	11.29	10.72	14.02	24	Pass
NVNT	ac20	5180	11.25	10.97	14.12	24	Pass
NVNT	ac20	5200	11.04	10.73	13.90	24	Pass
NVNT	ac20	5240	11.49	11.39	14.45	24	Pass
NVNT	ac40	5190	11.14	10.46	13.82	24	Pass
NVNT	ac40	5230	11.38	10.82	14.12	24	Pass
NVNT	ac80	5210	10.83	10.08	13.48	24	Pass

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Temperature:	23.6 °C	Relative Humidity:	50%
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	5745-5825MHz		

Mode	Channel	Frequency (MHz)	Conducted Power (dBm)			Limit (dBm)	Result
			ANT A	ANT B	Total		
NVNT	a	5745	12.33	12.55	/	30	Pass
NVNT	a	5785	13.08	13.03	/	30	Pass
NVNT	a	5825	13.12	13.01	/	30	Pass
NVNT	n20	5745	11.17	11.66	14.43	30	Pass
NVNT	n20	5785	11.96	11.84	14.91	30	Pass
NVNT	n20	5825	11.99	11.67	14.84	30	Pass
NVNT	n40	5755	11.26	11.03	14.16	30	Pass
NVNT	n40	5795	11.78	11.44	14.62	30	Pass
NVNT	ac20	5745	11.15	11.53	14.35	30	Pass
NVNT	ac20	5785	12.00	11.83	14.93	30	Pass
NVNT	ac20	5825	12.00	11.86	14.94	30	Pass
NVNT	ac40	5755	11.33	11.07	14.21	30	Pass
NVNT	ac40	5795	11.96	11.50	14.75	30	Pass
NVNT	ac80	5775	10.56	10.42	13.50	30	Pass

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11. Out Of Band Emissions

11.1 Block Diagram Of Test Setup



11.2 Limit

According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(10) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2 dBuV/m@3m).
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2 dBuV/m@3m).
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2 dBuV/m@3m).
- (4) For transmitters operating solely in the 5.725-5.850 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

11.3 Test Procedure

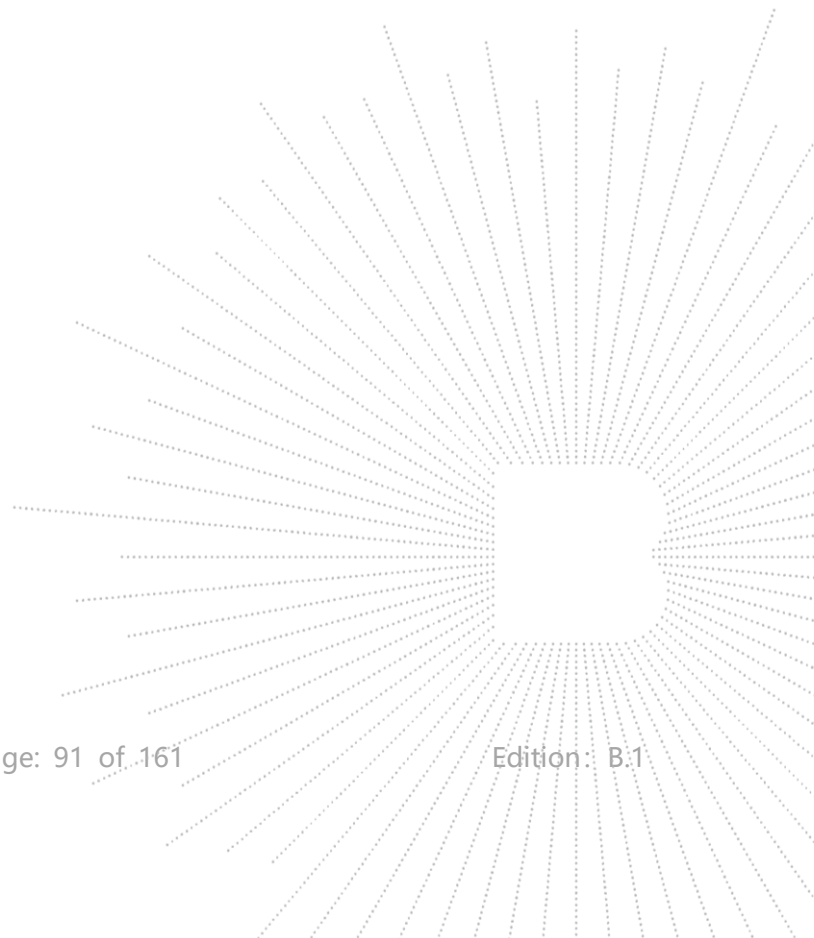
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

11.4 EUT Operating Conditions

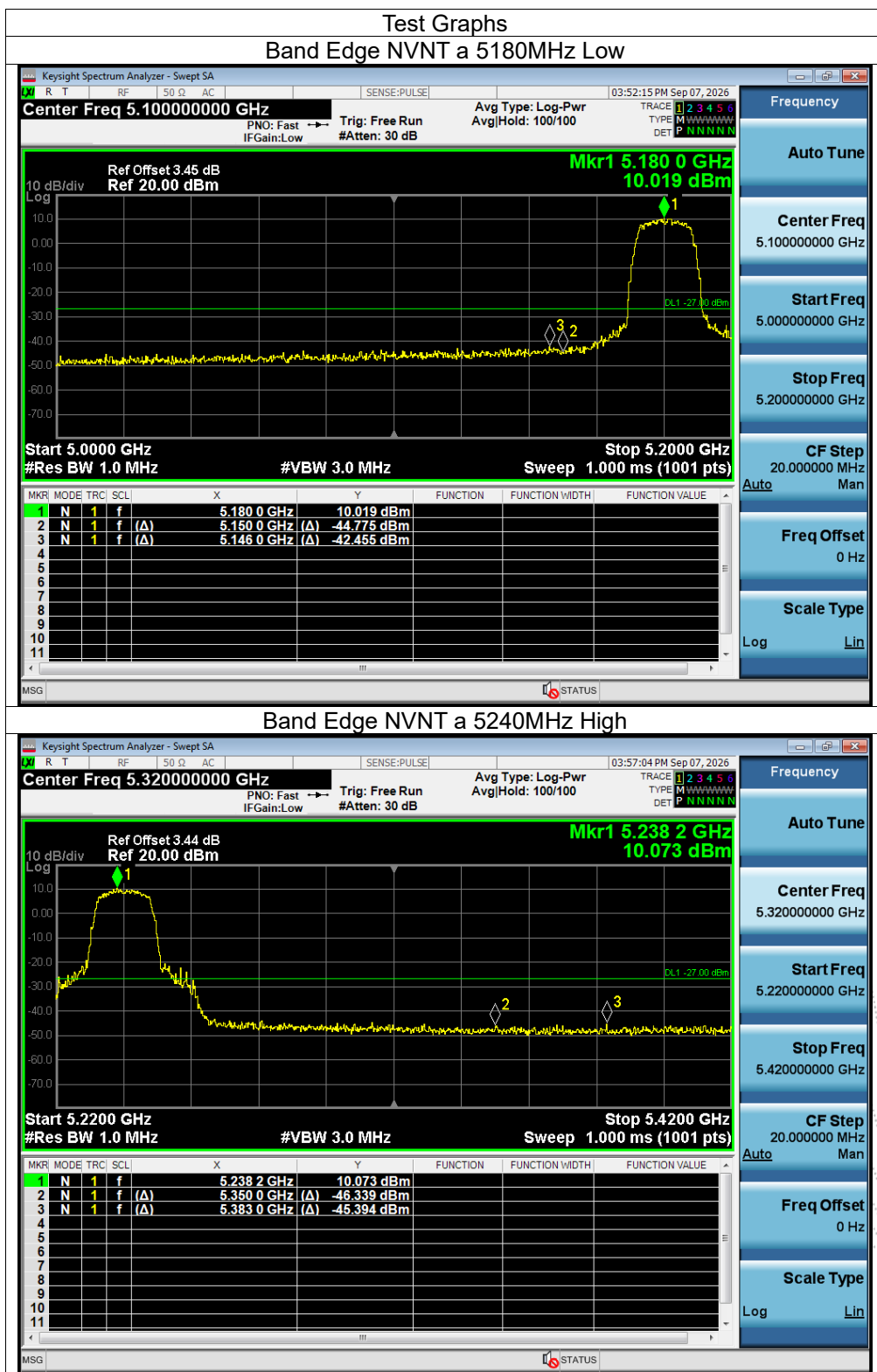
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

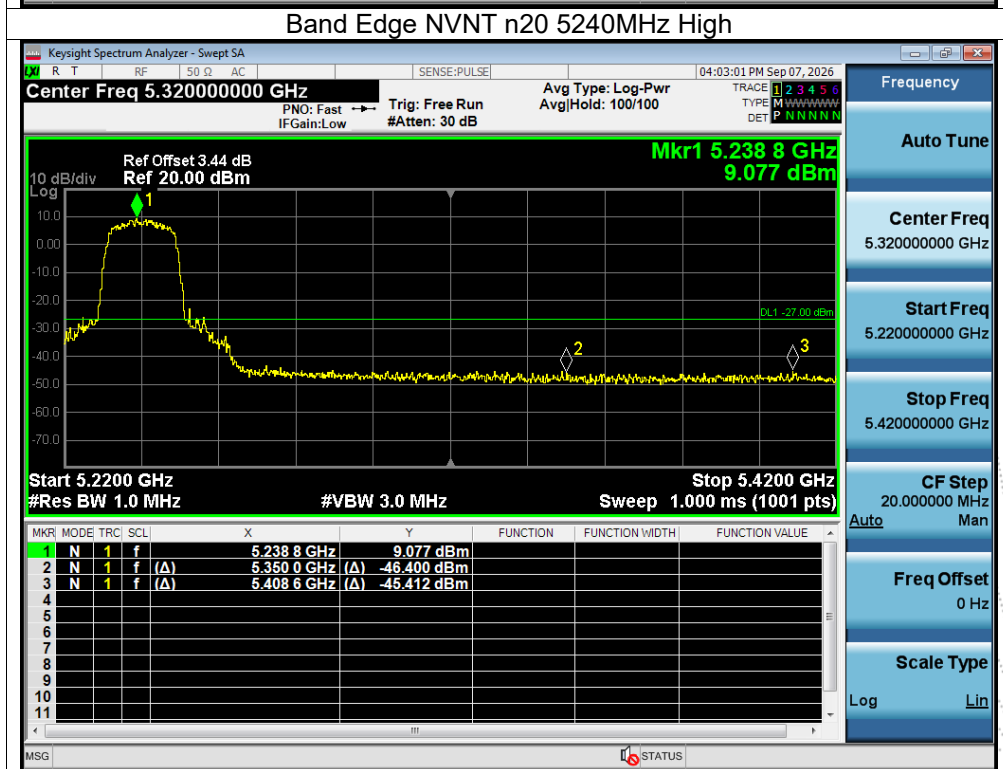
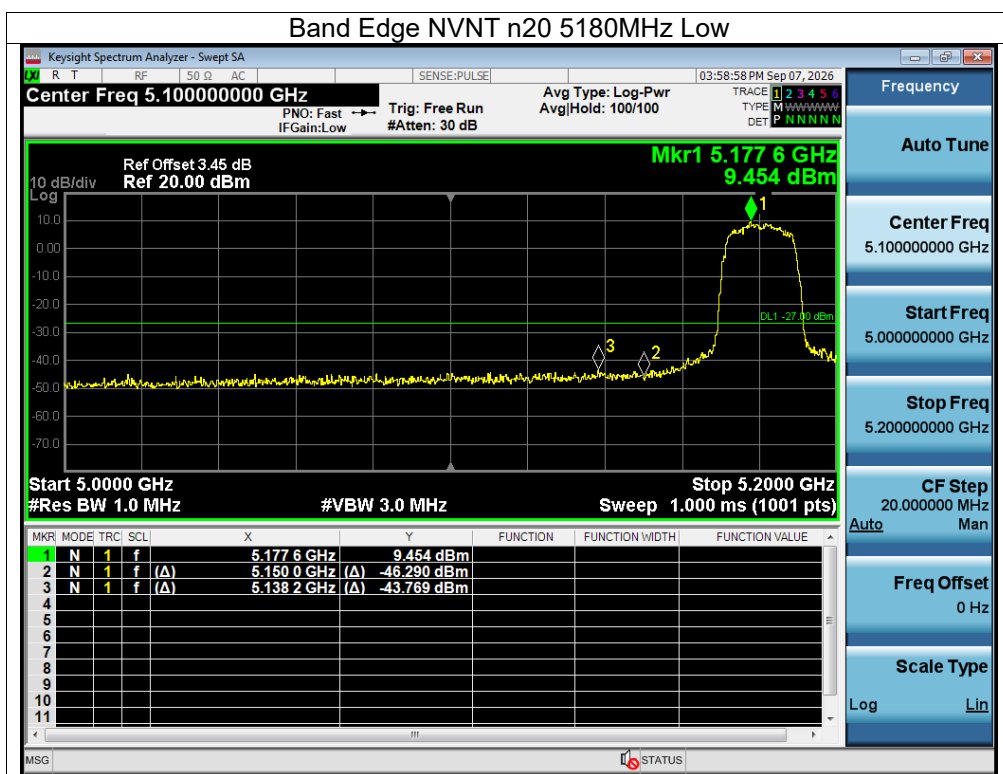
11.5 Test Result

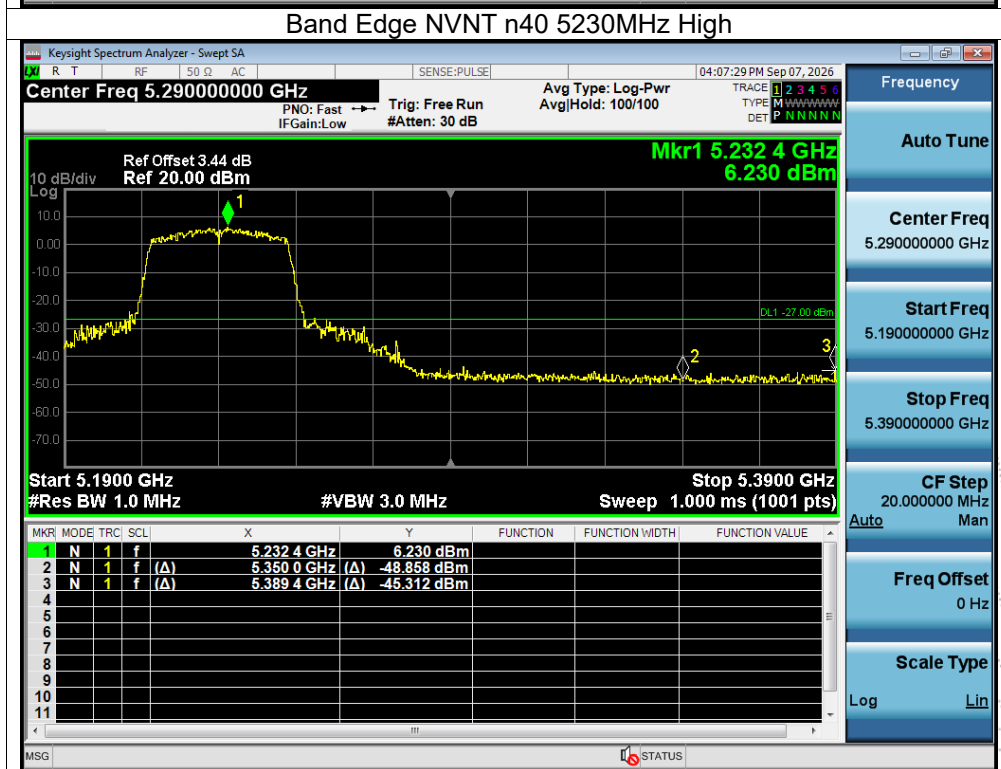
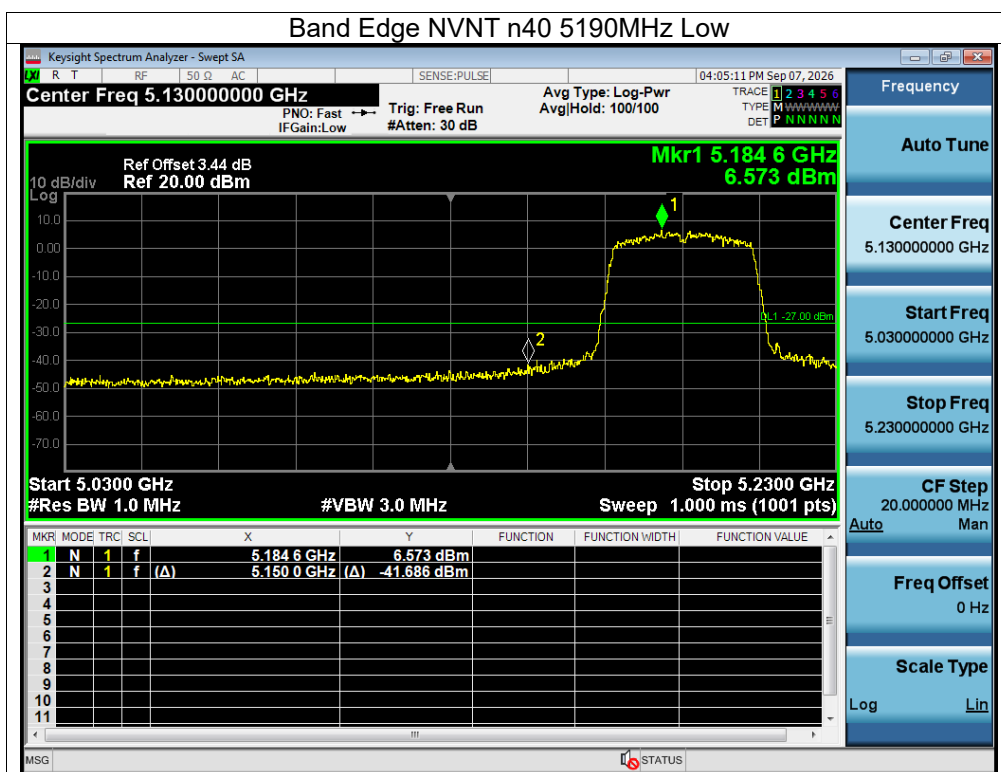
Temperature:	23.6 °C	Relative Humidity:	50%
Pressure:	101kPa	Test Voltage:	AC 120V/60Hz

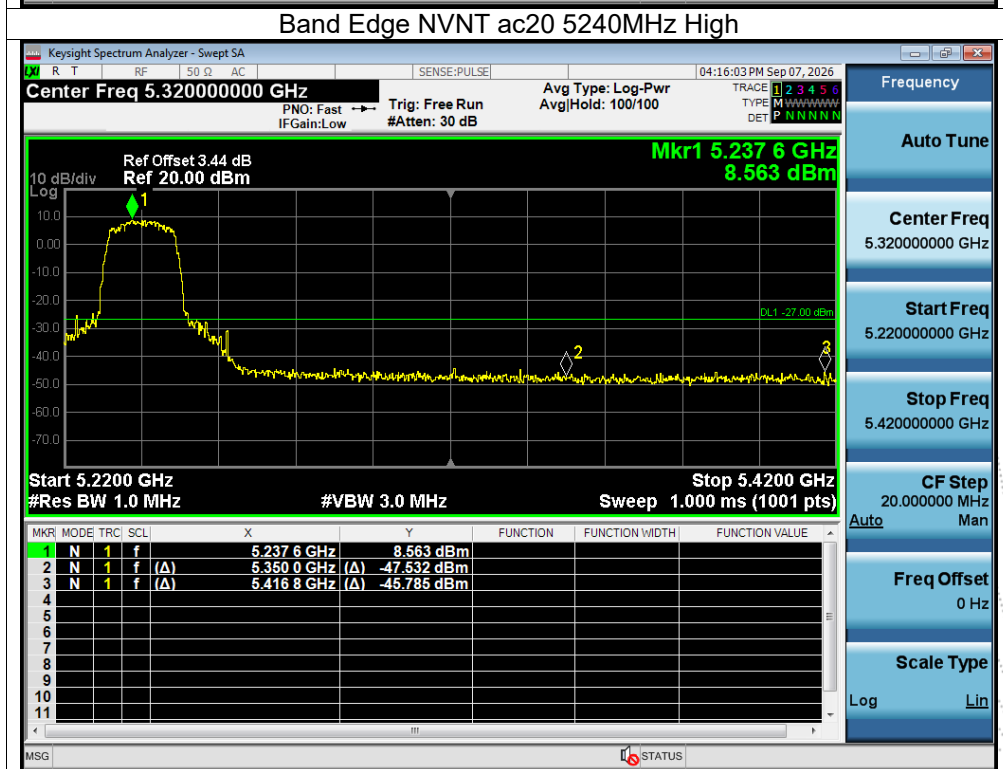
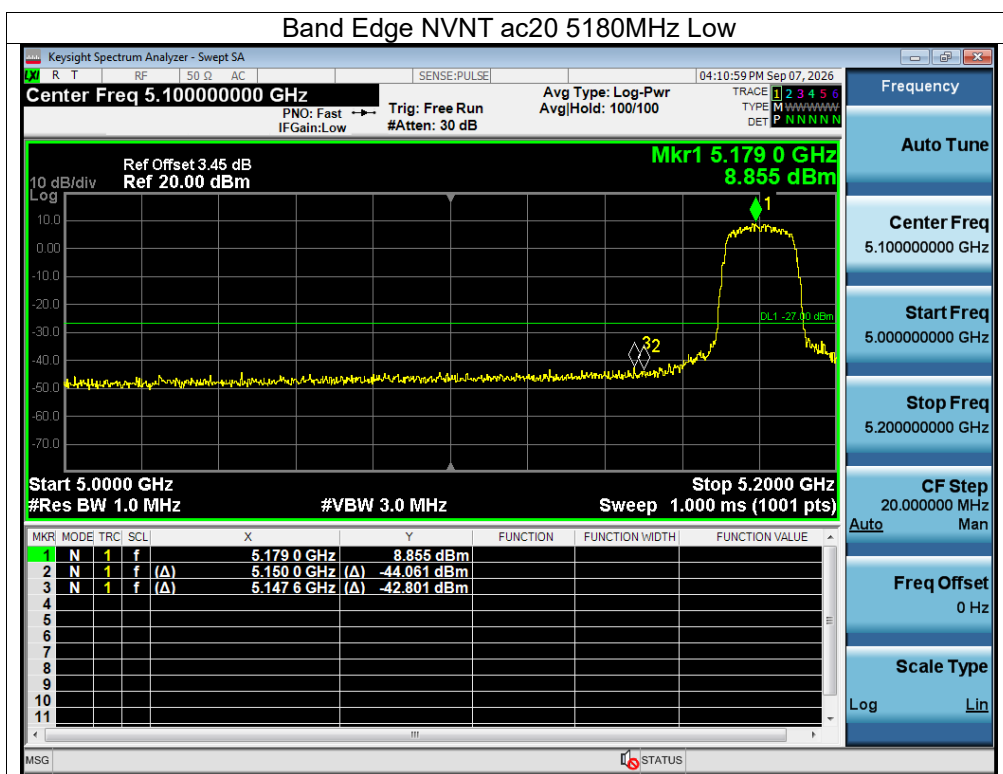


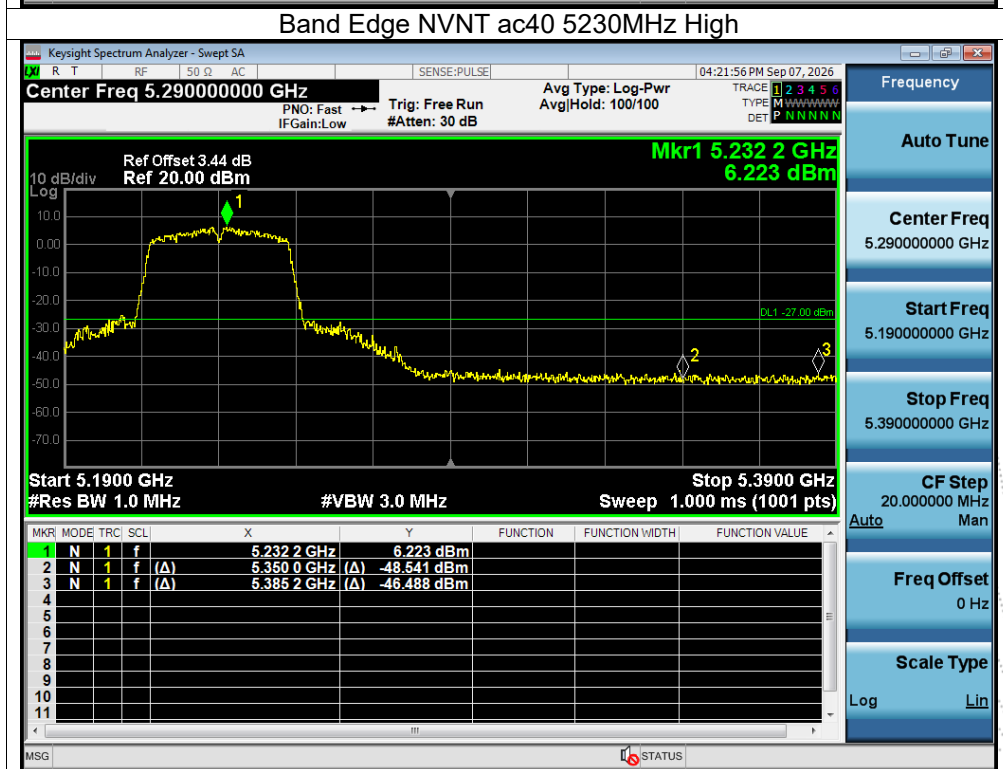
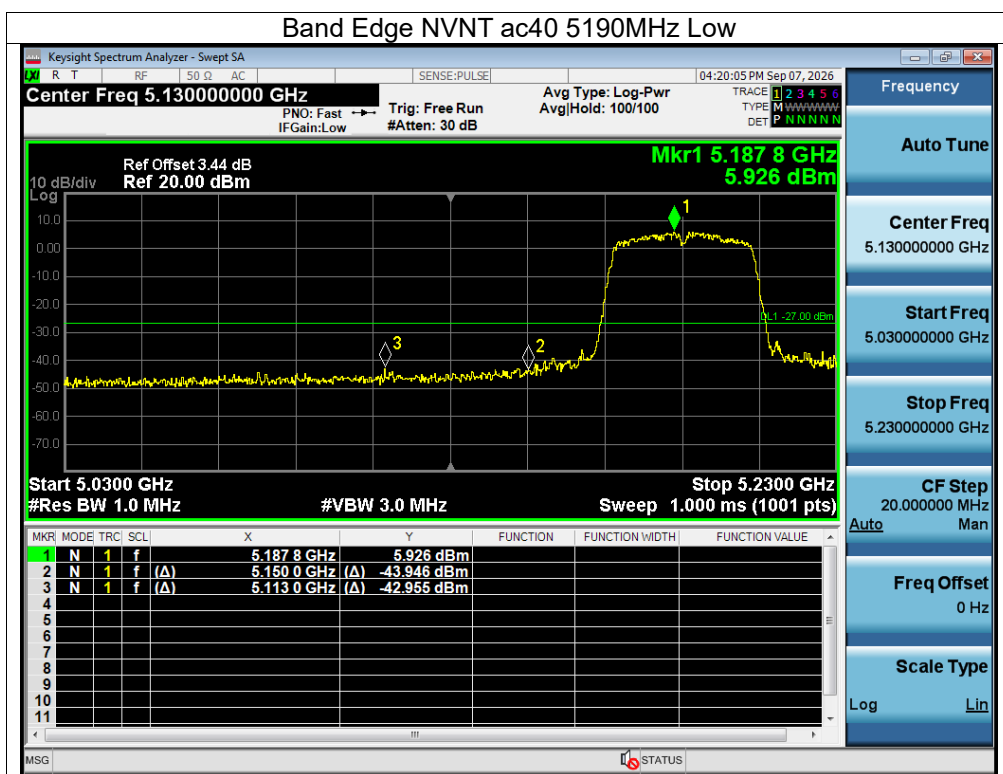
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A.
Plot. Antenna A: 5180-5240MHz

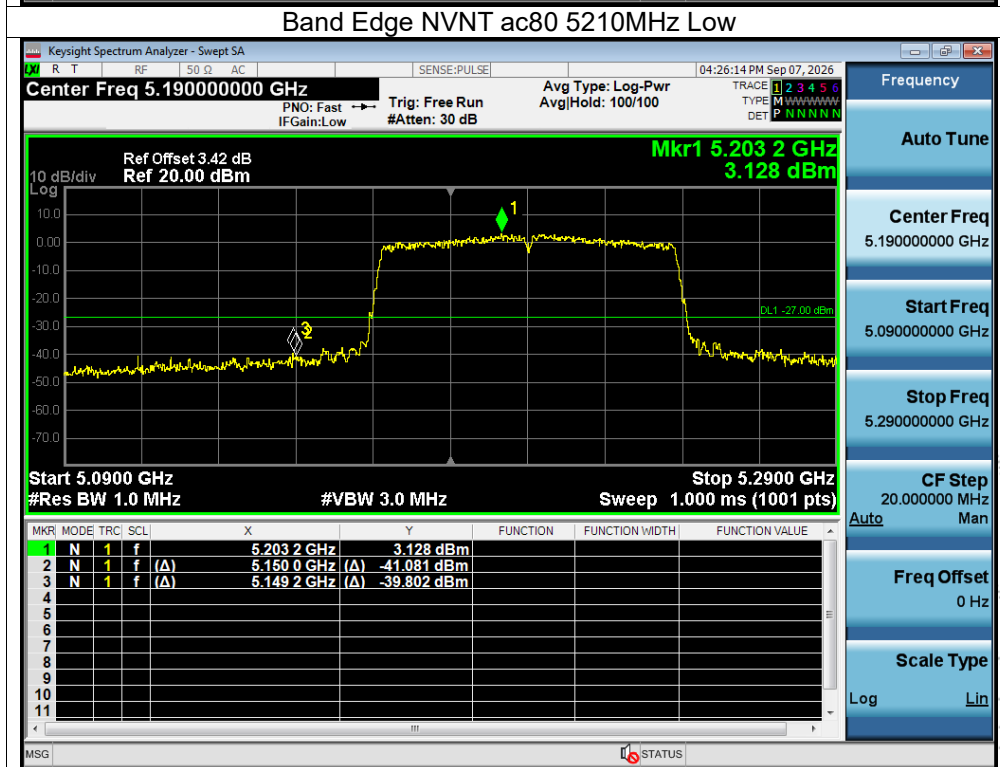
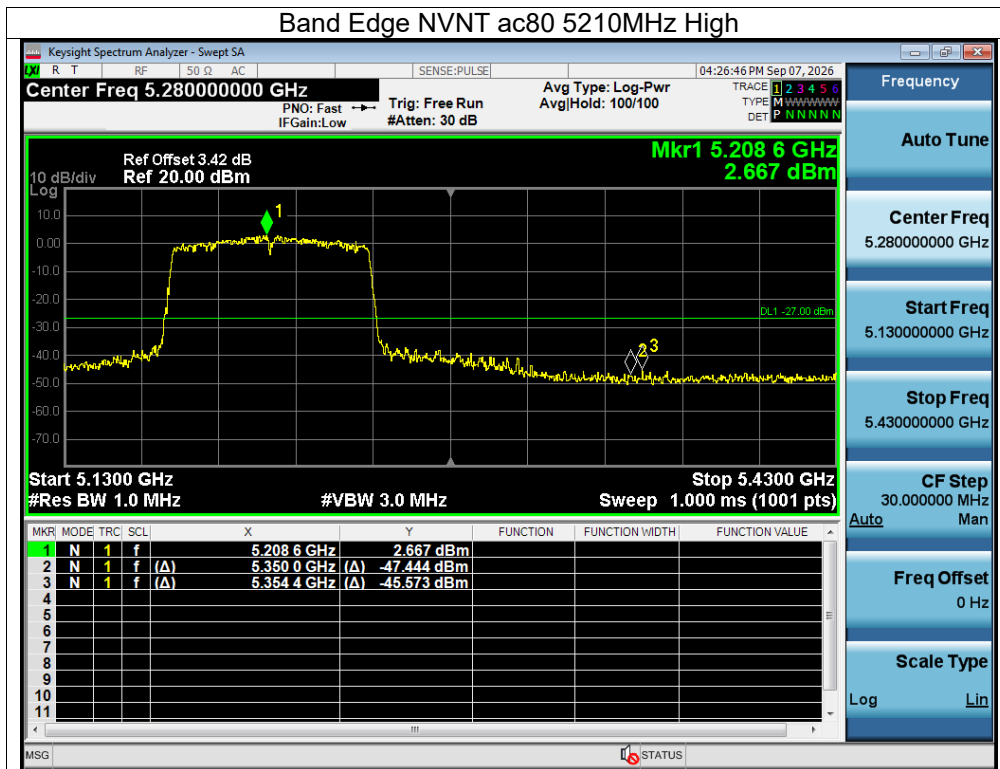






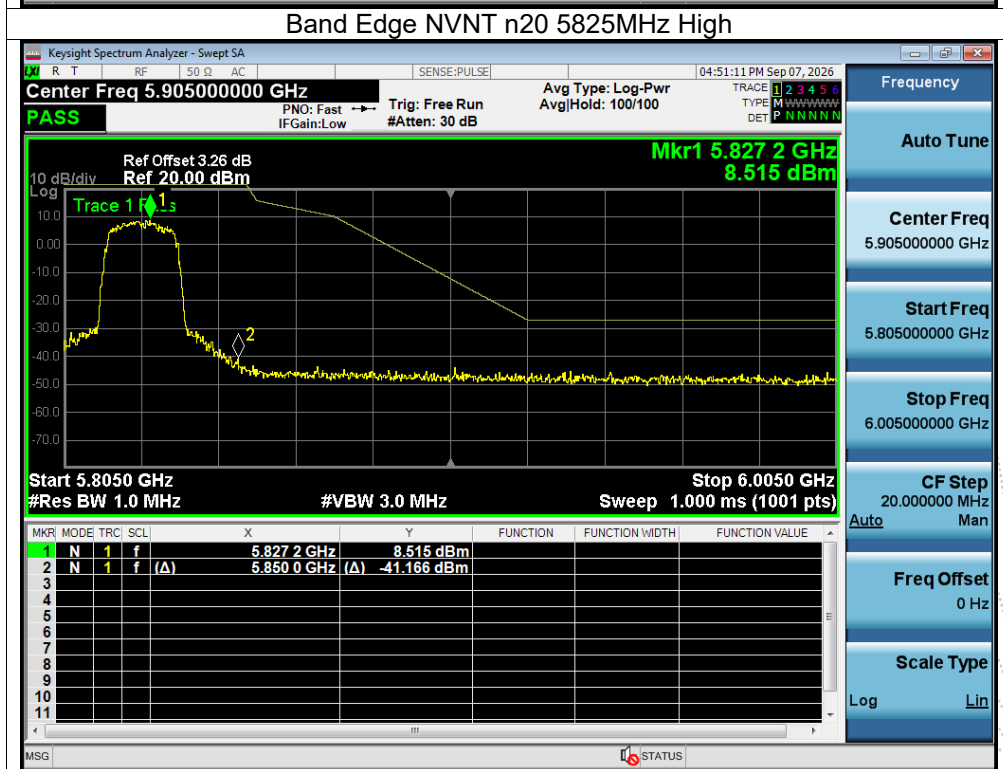
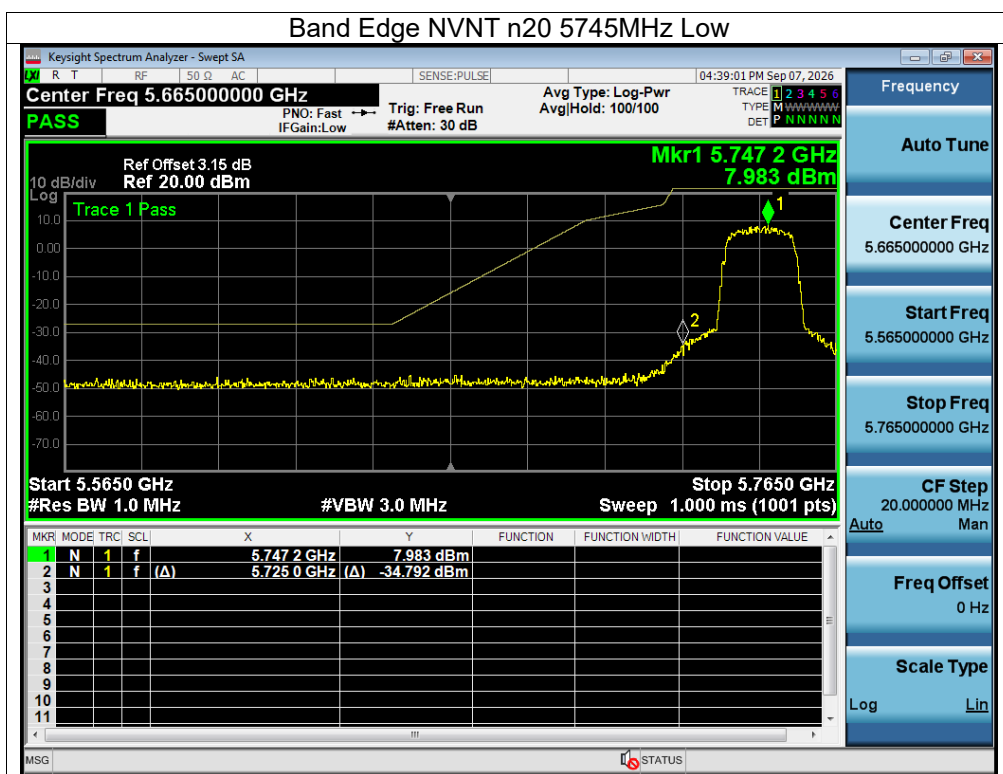


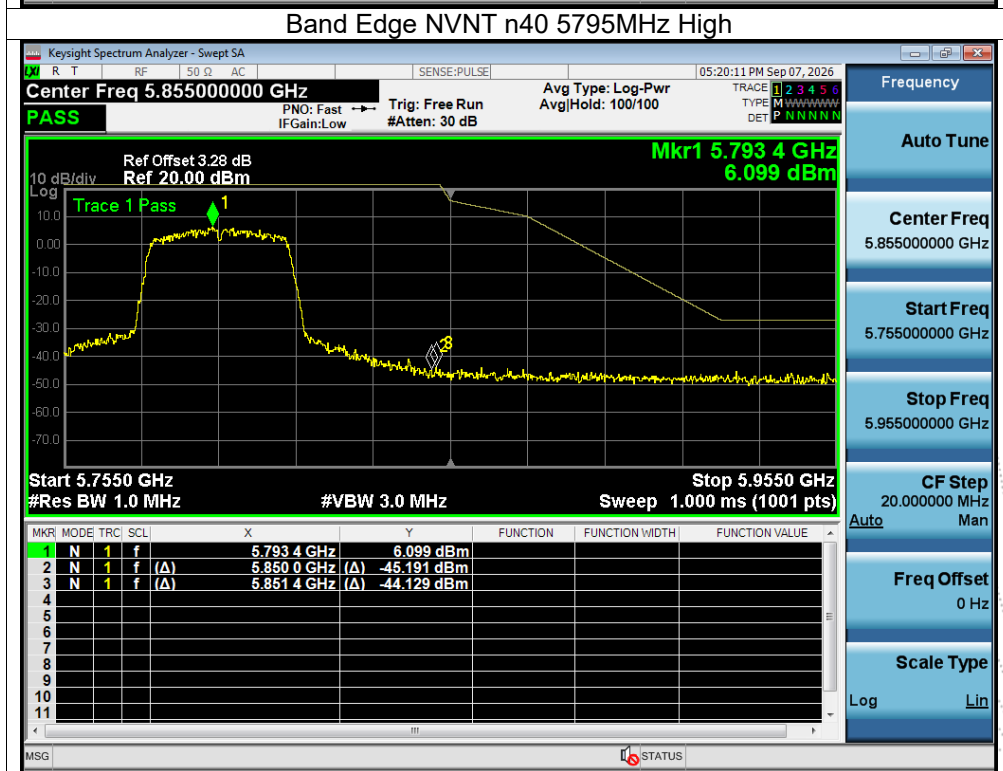
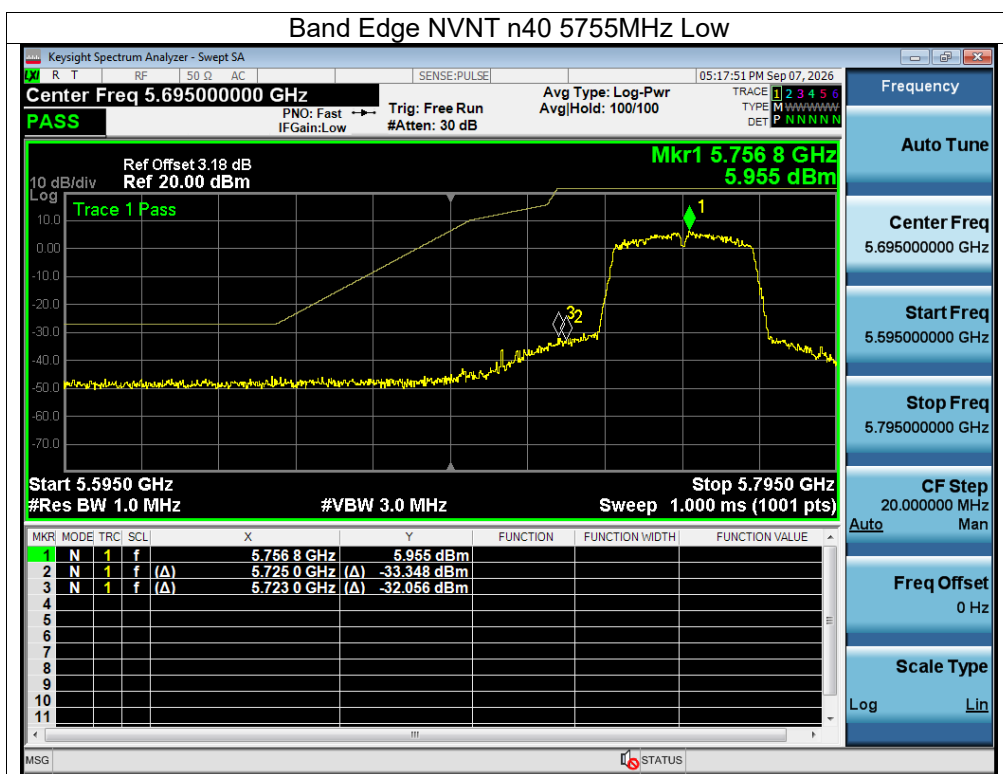


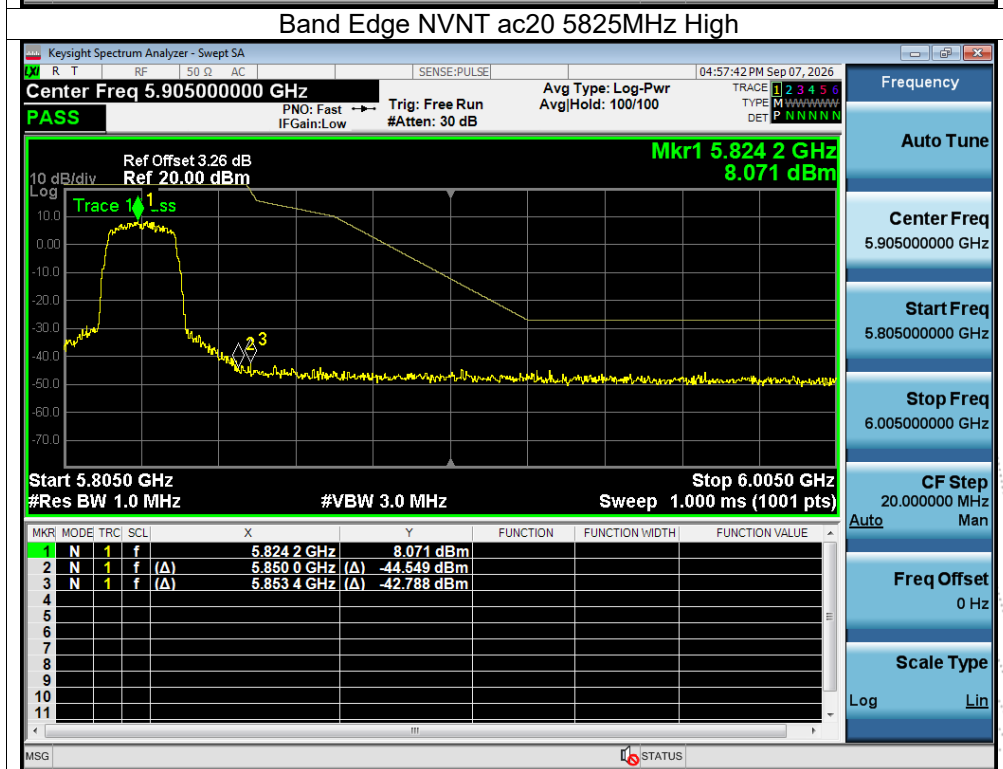
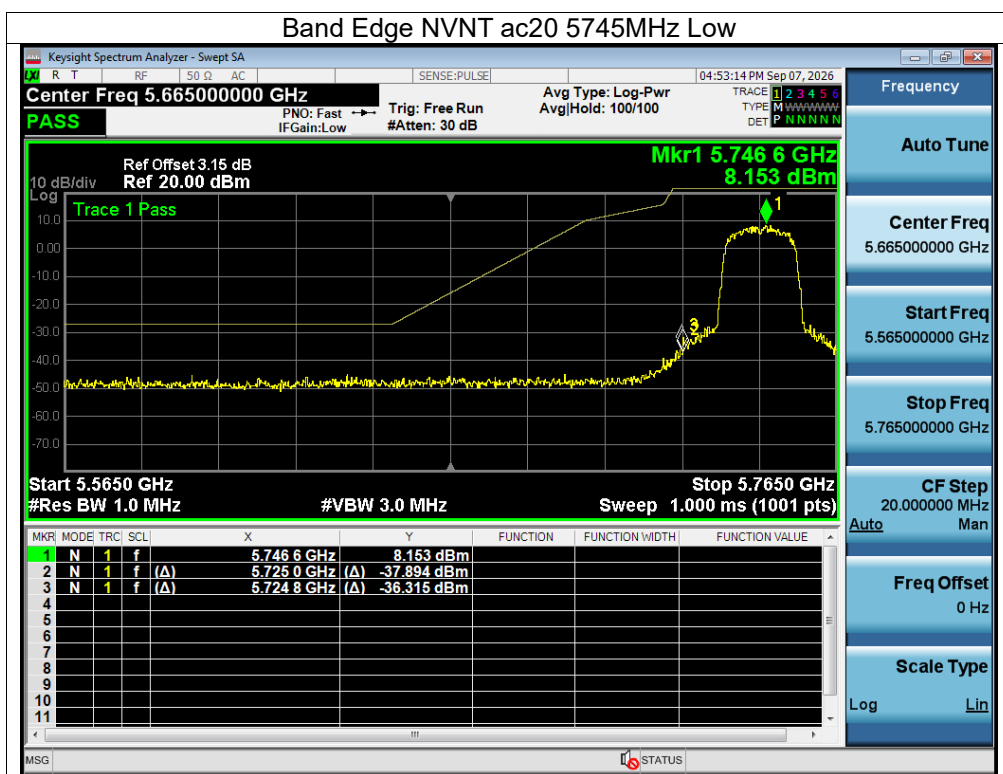


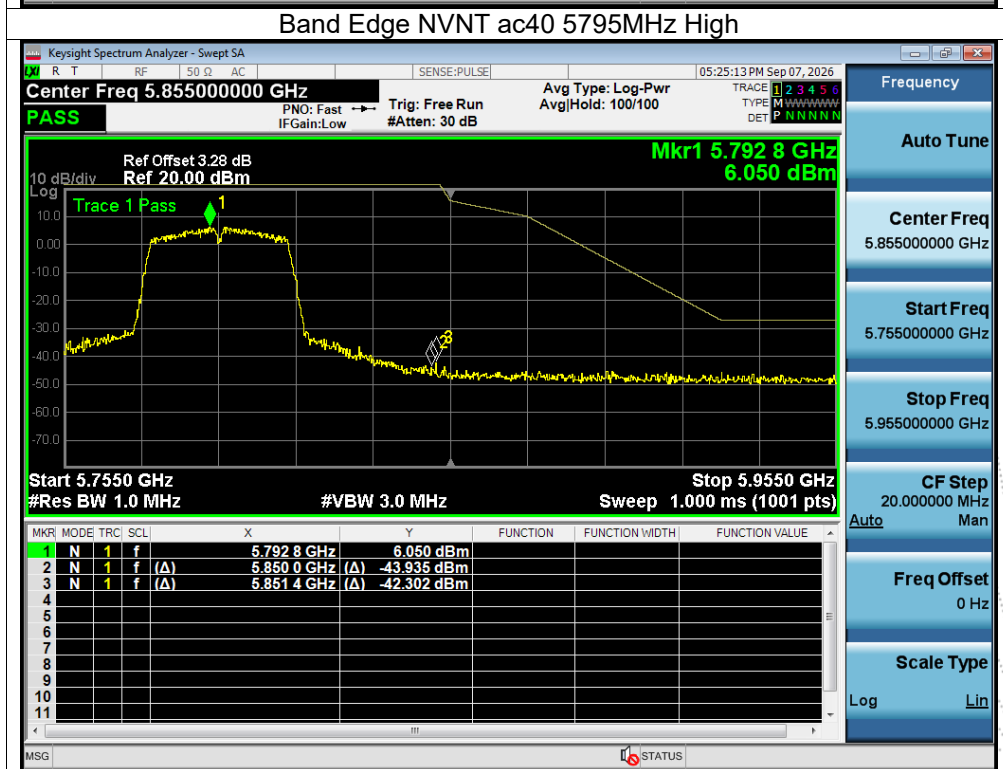
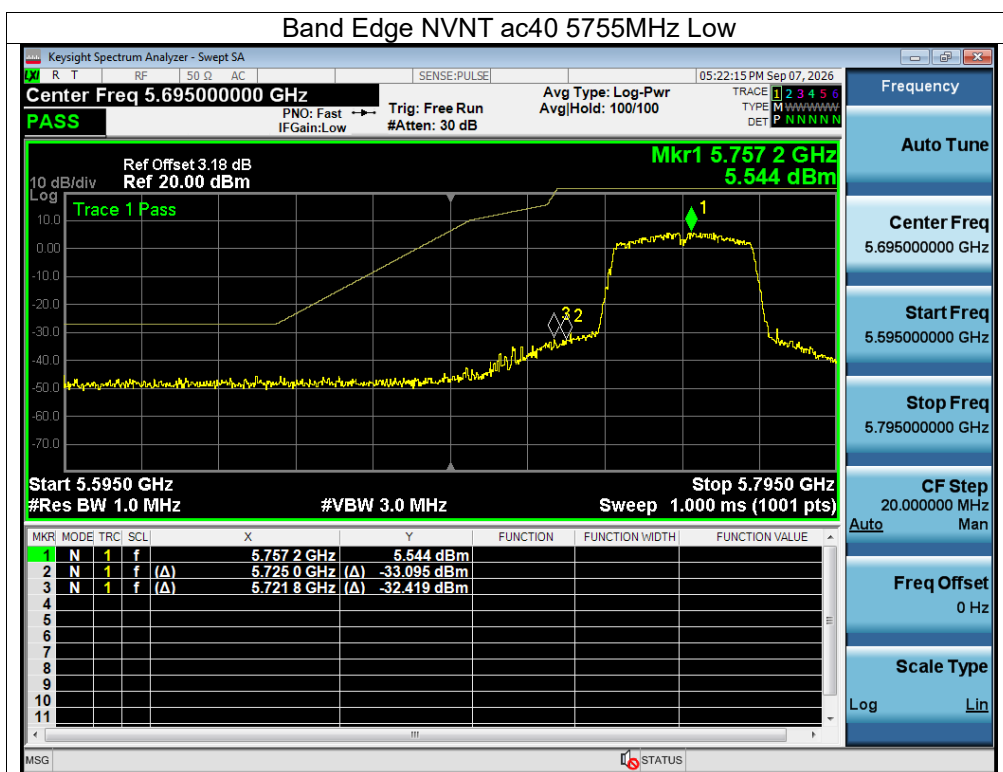
Note: (A)(B)Represent the value of antenna A and B , The worst data is Antenna A, only shown Antenna A.
Antenna A: 5745-5825MHz

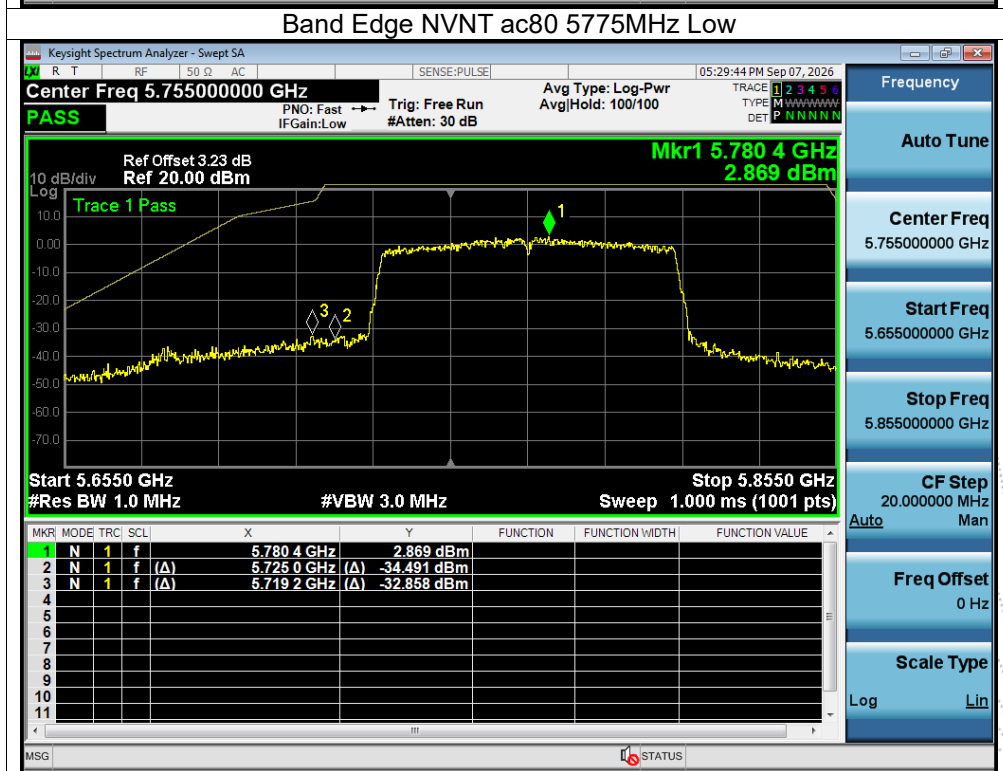
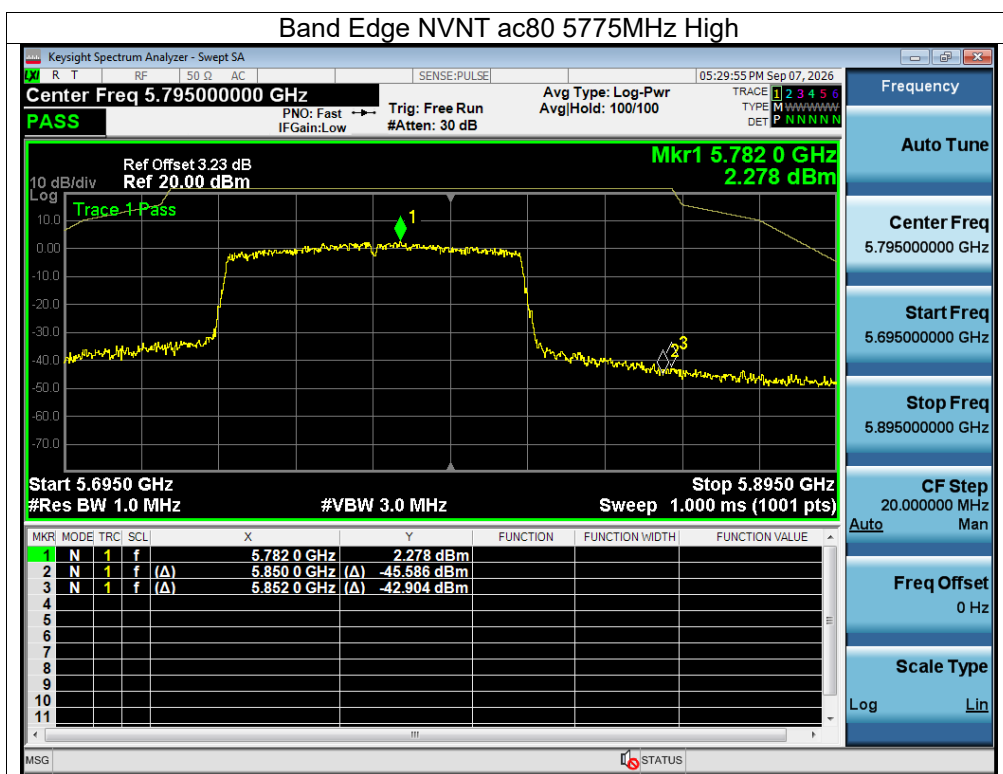












BCTC CO., LTD

12. Spurious RF Conducted Emissions

12.1 Block Diagram Of Test Setup



12.2 Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.725-5.85 GHz band(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge..

12.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

12.4 Test Result

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandedge measurement data.

About: 26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note: A(B) Represent the value of antenna A and B, The worst data is AntennaA, only shown Antenna A .
Plot. Antenna A: 5180-5240MHz

