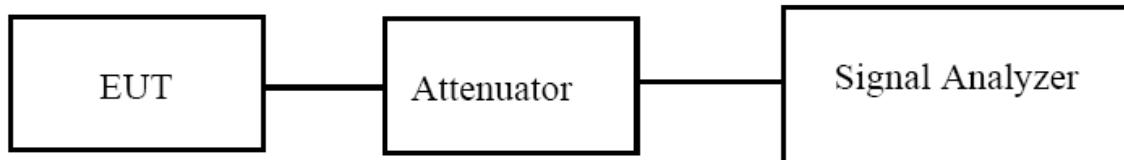


## 9. 26dB & 6dB & 99% Emission Bandwidth

### 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

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- 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:

- Set center frequency to the nominal EUT channel center frequency.
- Set span = 1.5 times to 5.0 times the OBW.
- Set RBW = 1 % to 5 % of the OBW
- Set VBW  $\geq 3 \cdot$  RBW
- 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.
- Use the 99 % power bandwidth function of the instrument (if available).
- 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

- Set RBW = 100 kHz.
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- Detector = Peak.
- Trace mode = max hold.
- 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.

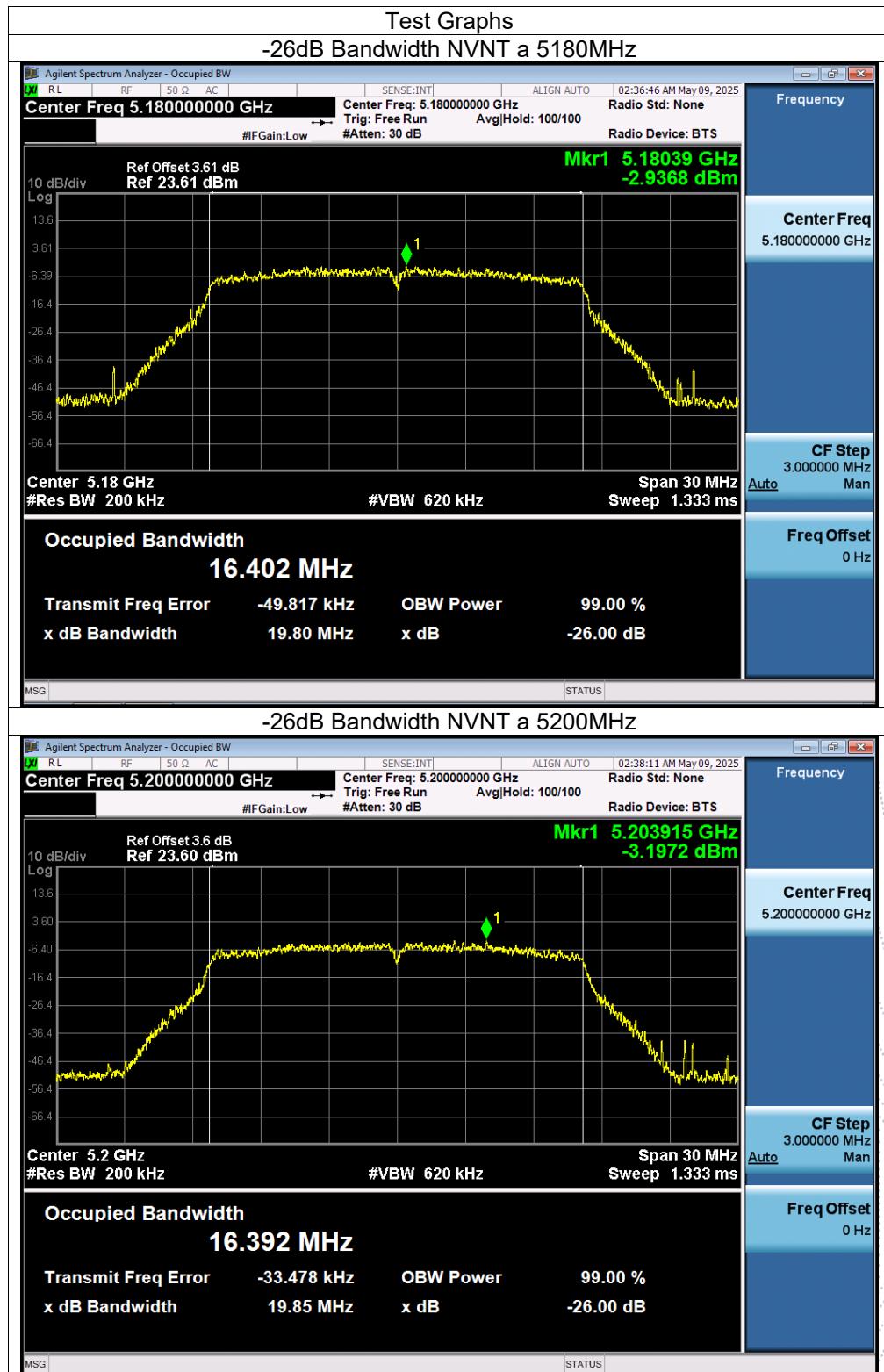
## 9.4 EUT Operating Conditions

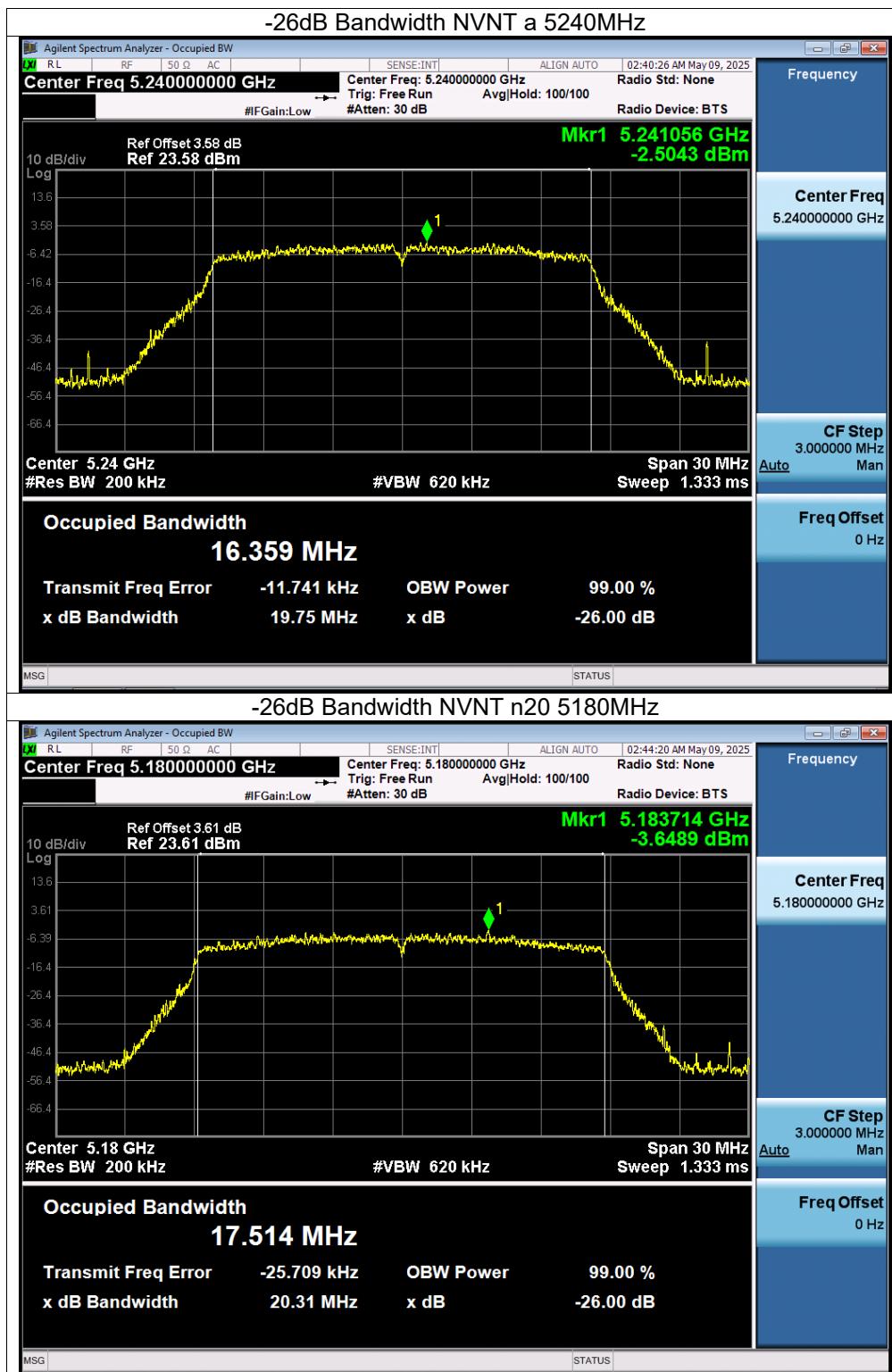
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

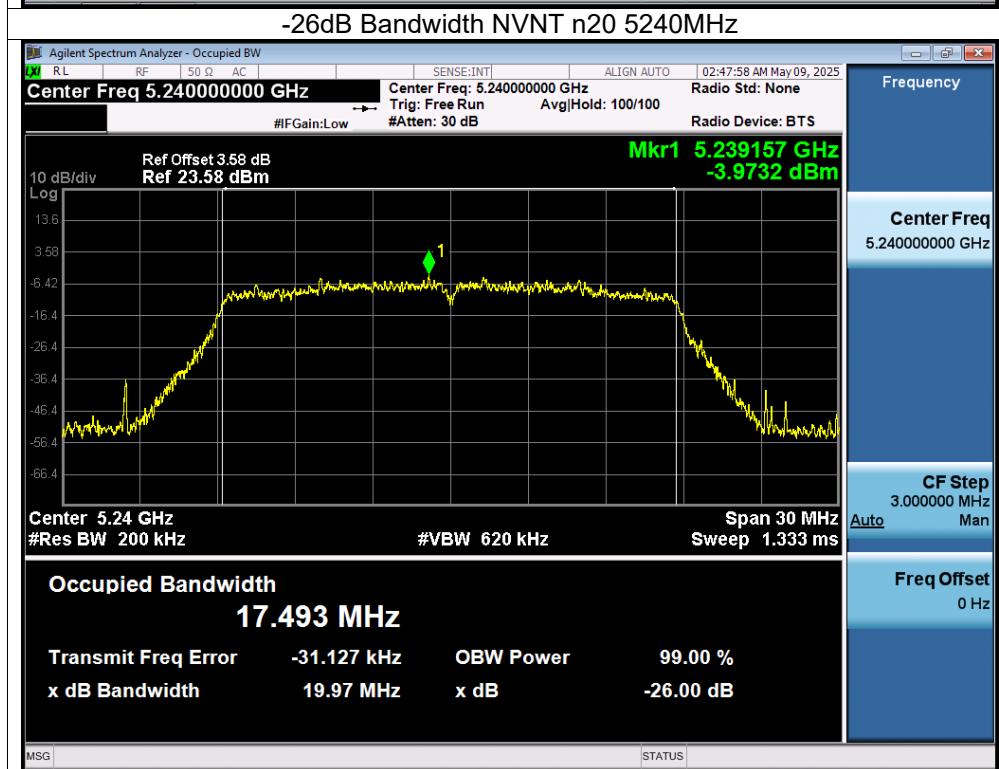
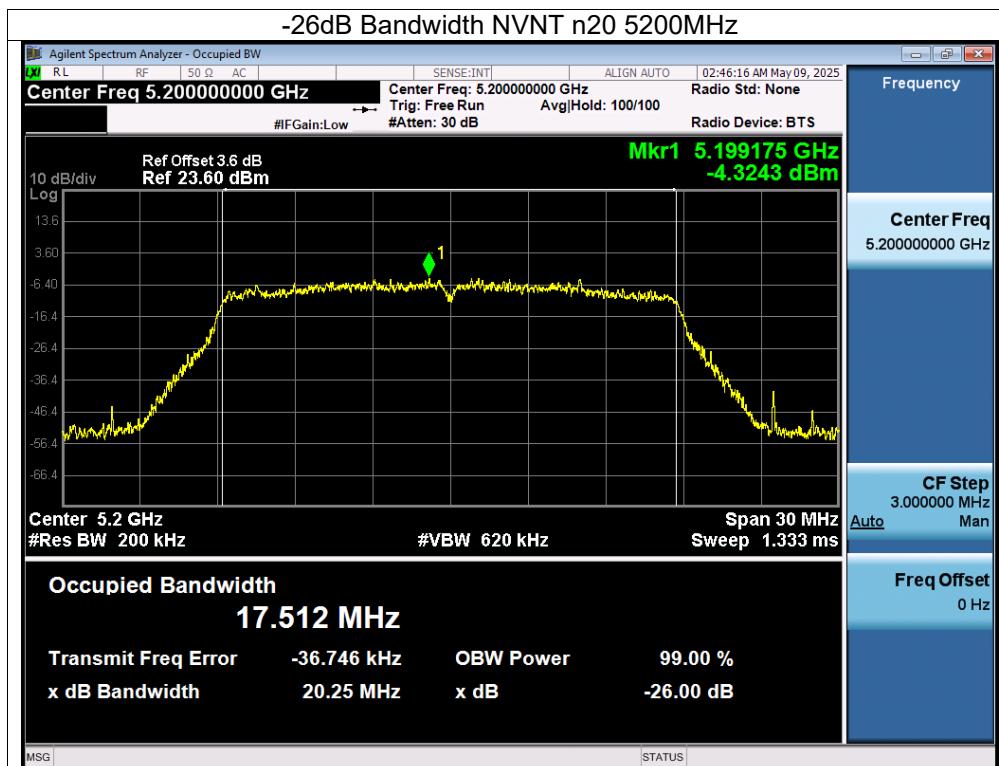
## 9.5 Test Result

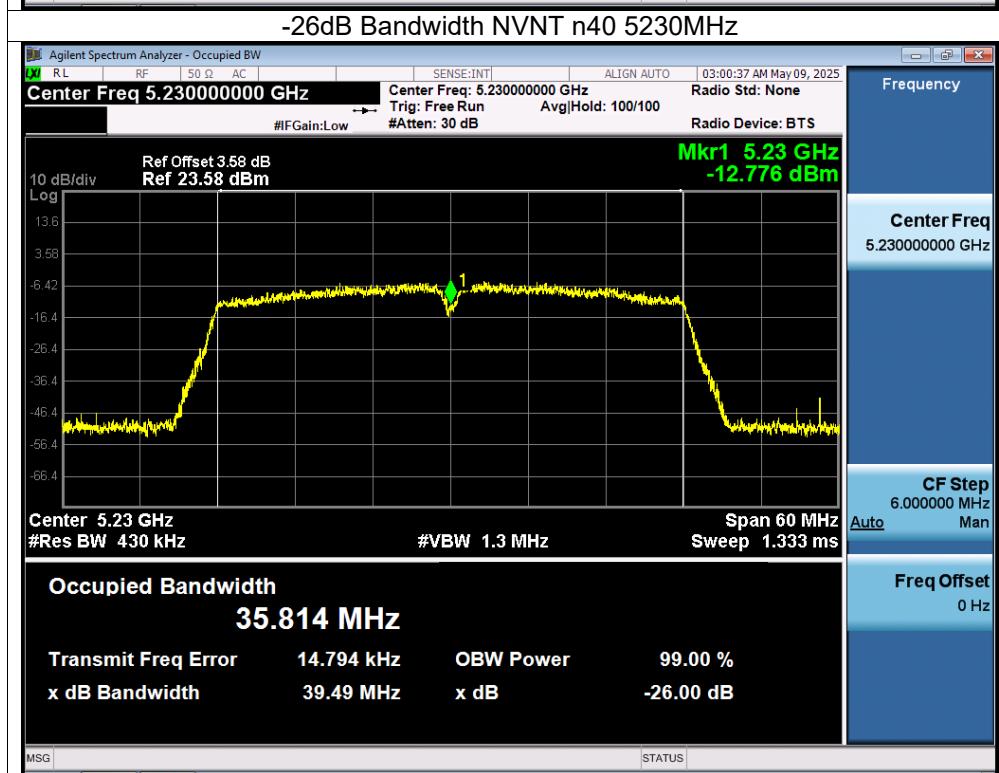
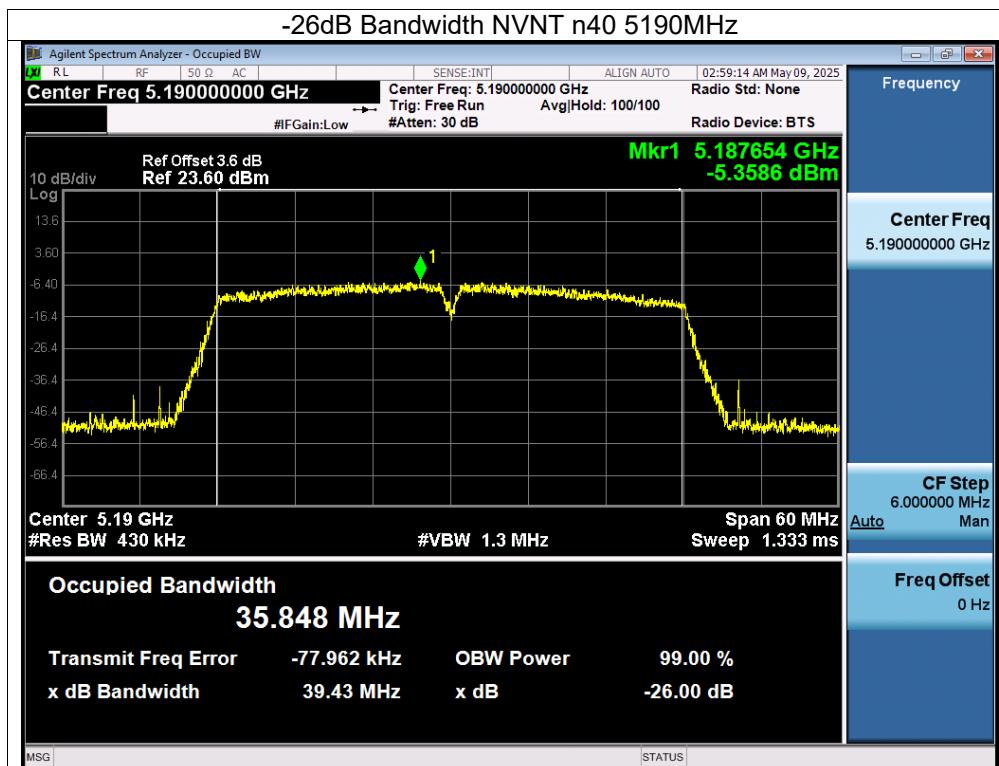
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

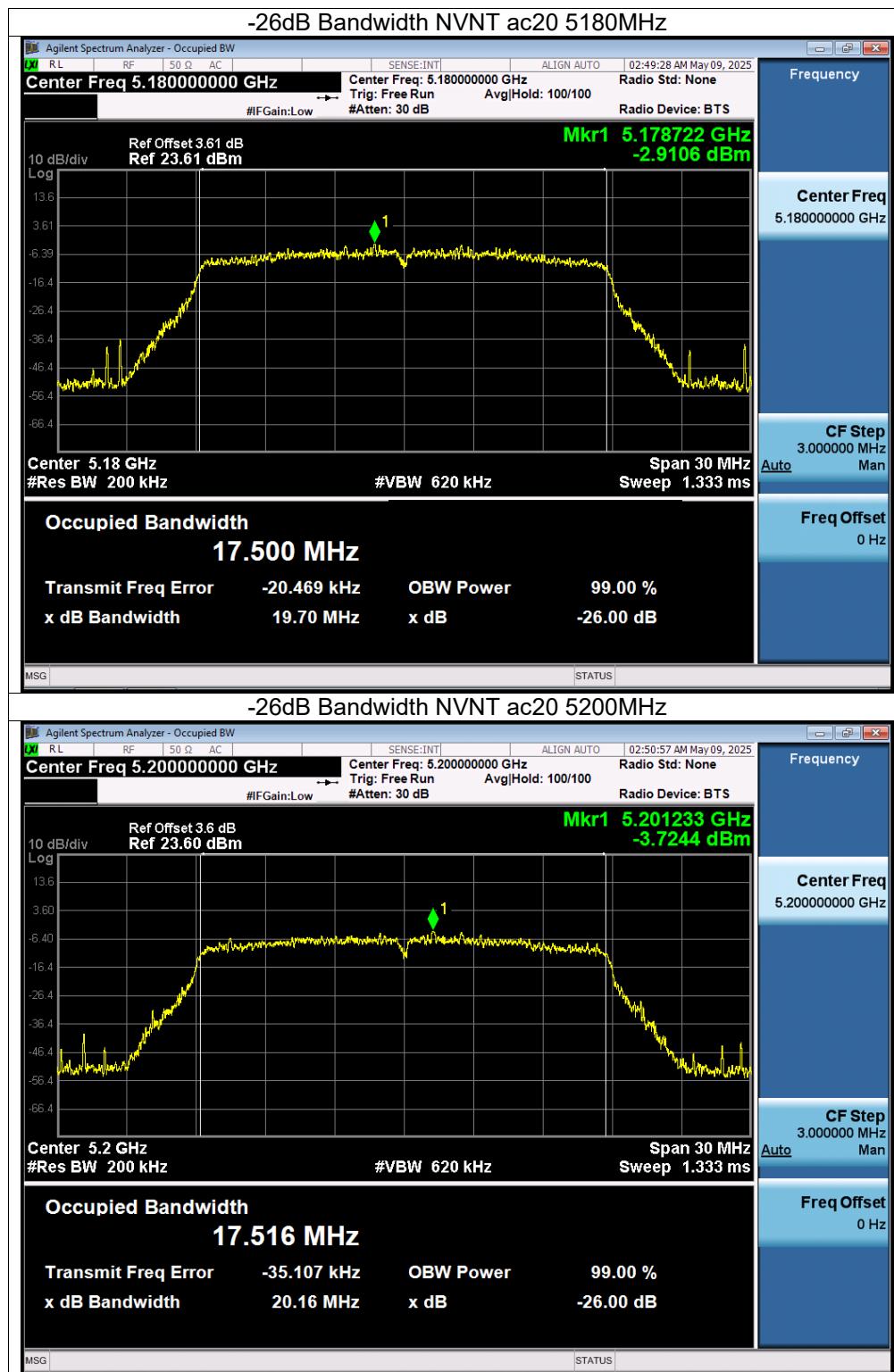
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5180	16.38	19.805	Pass
NVNT	a	5200	16.375	19.854	Pass
NVNT	a	5240	16.366	19.748	Pass
NVNT	n20	5180	17.499	20.314	Pass
NVNT	n20	5200	17.53	20.249	Pass
NVNT	n20	5240	17.529	19.973	Pass
NVNT	n40	5190	35.746	39.428	Pass
NVNT	n40	5230	35.803	39.491	Pass
NVNT	ac20	5180	17.504	19.697	Pass
NVNT	ac20	5200	17.508	20.162	Pass
NVNT	ac20	5240	17.519	19.964	Pass
NVNT	ac40	5190	35.794	39.456	Pass
NVNT	ac40	5230	35.841	39.666	Pass
NVNT	ax20	5180	18.71	20.653	Pass
NVNT	ax20	5200	18.709	20.724	Pass
NVNT	ax20	5240	18.716	20.498	Pass
NVNT	ax40	5190	37.119	39.517	Pass
NVNT	ax40	5230	37.238	39.908	Pass

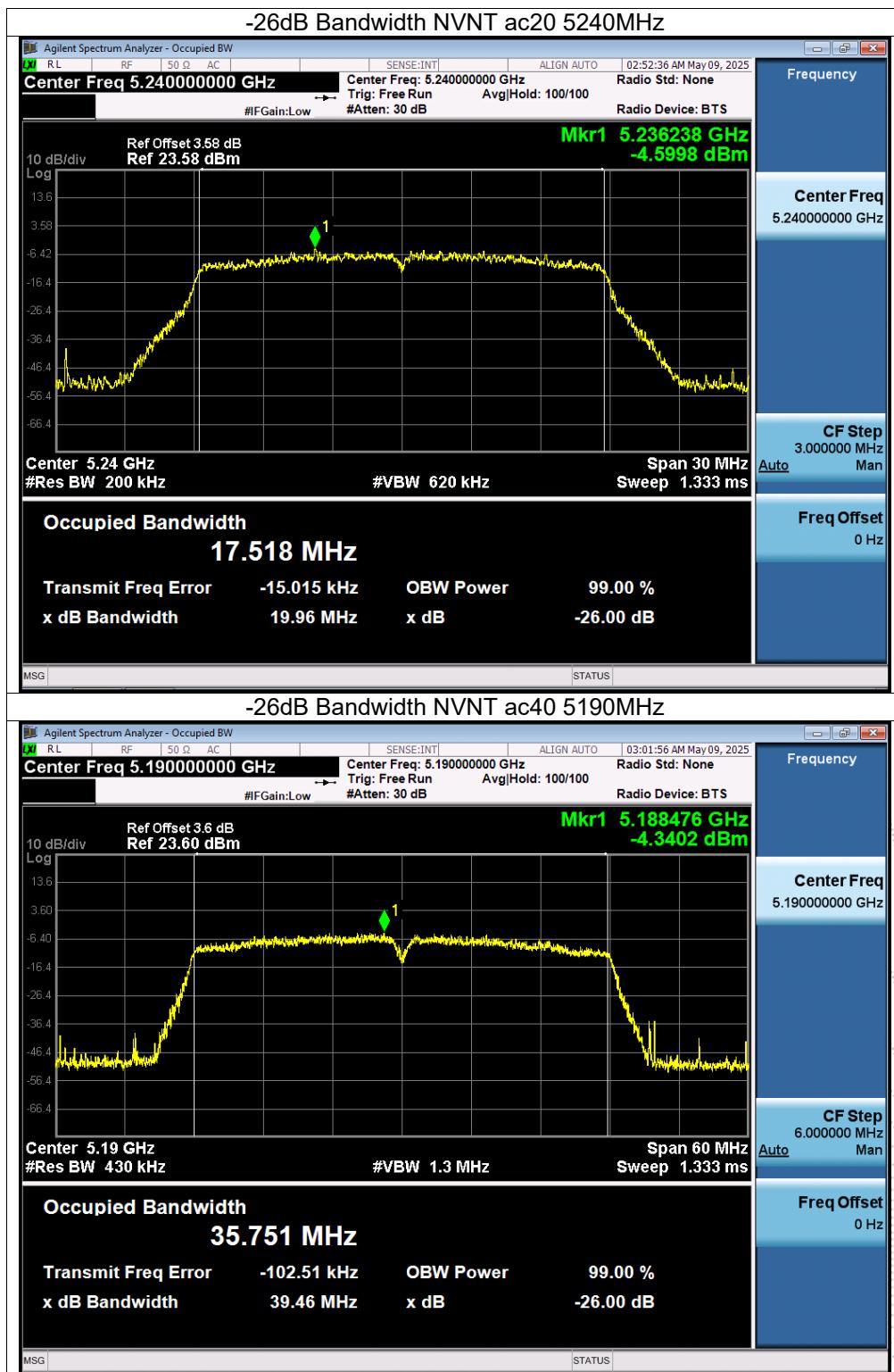


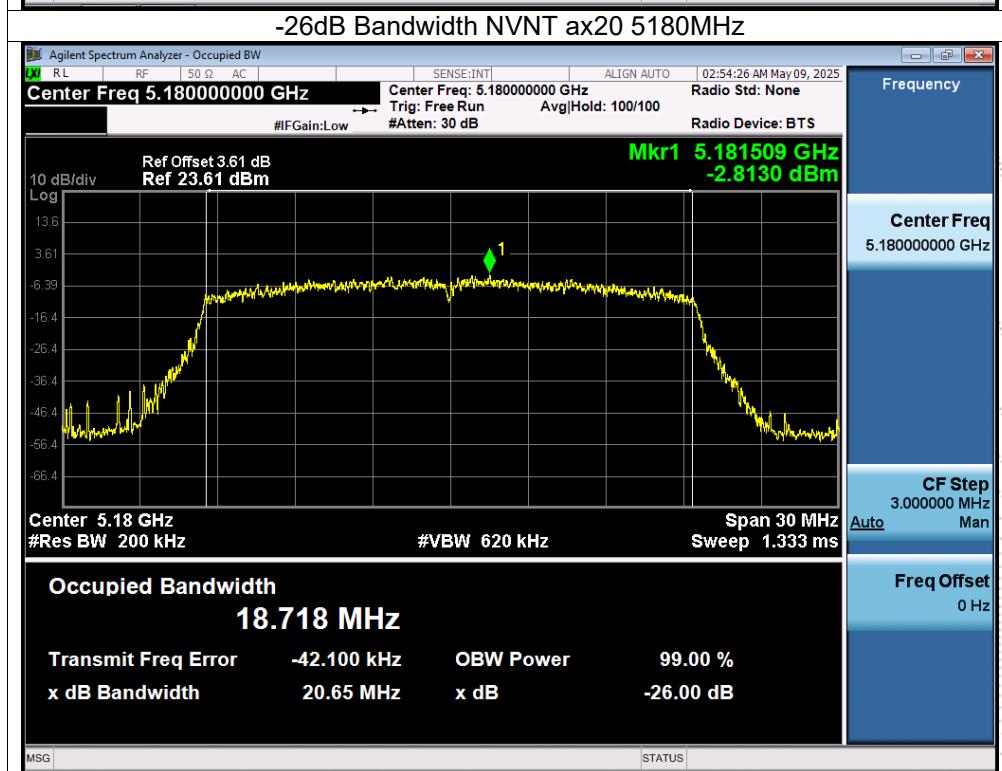
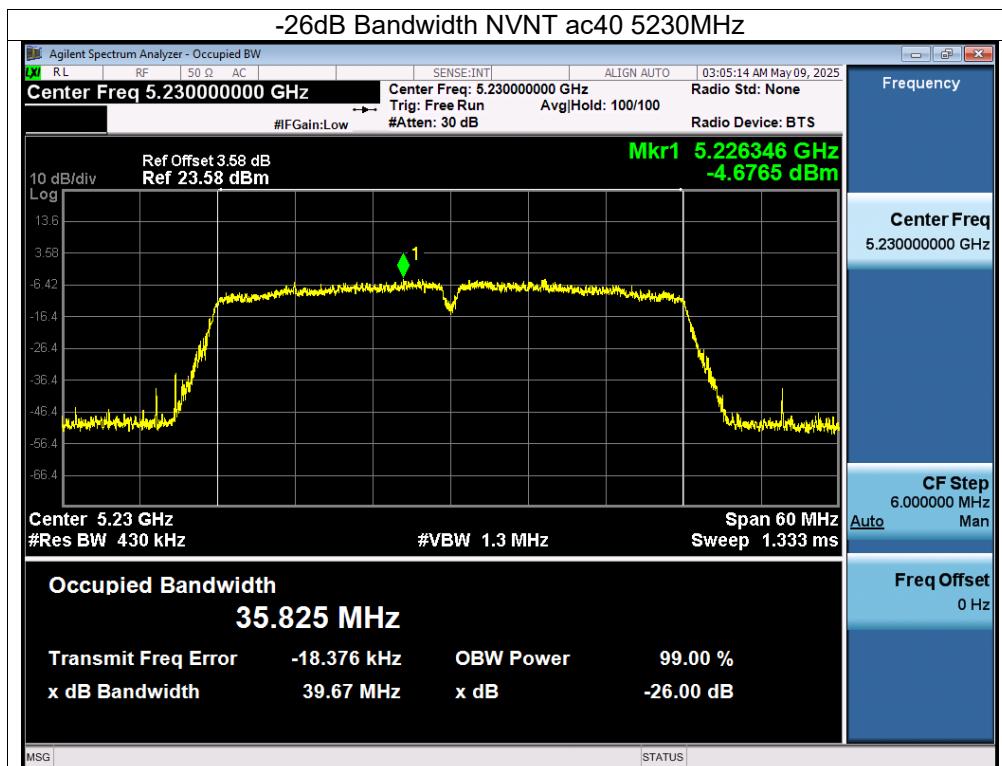


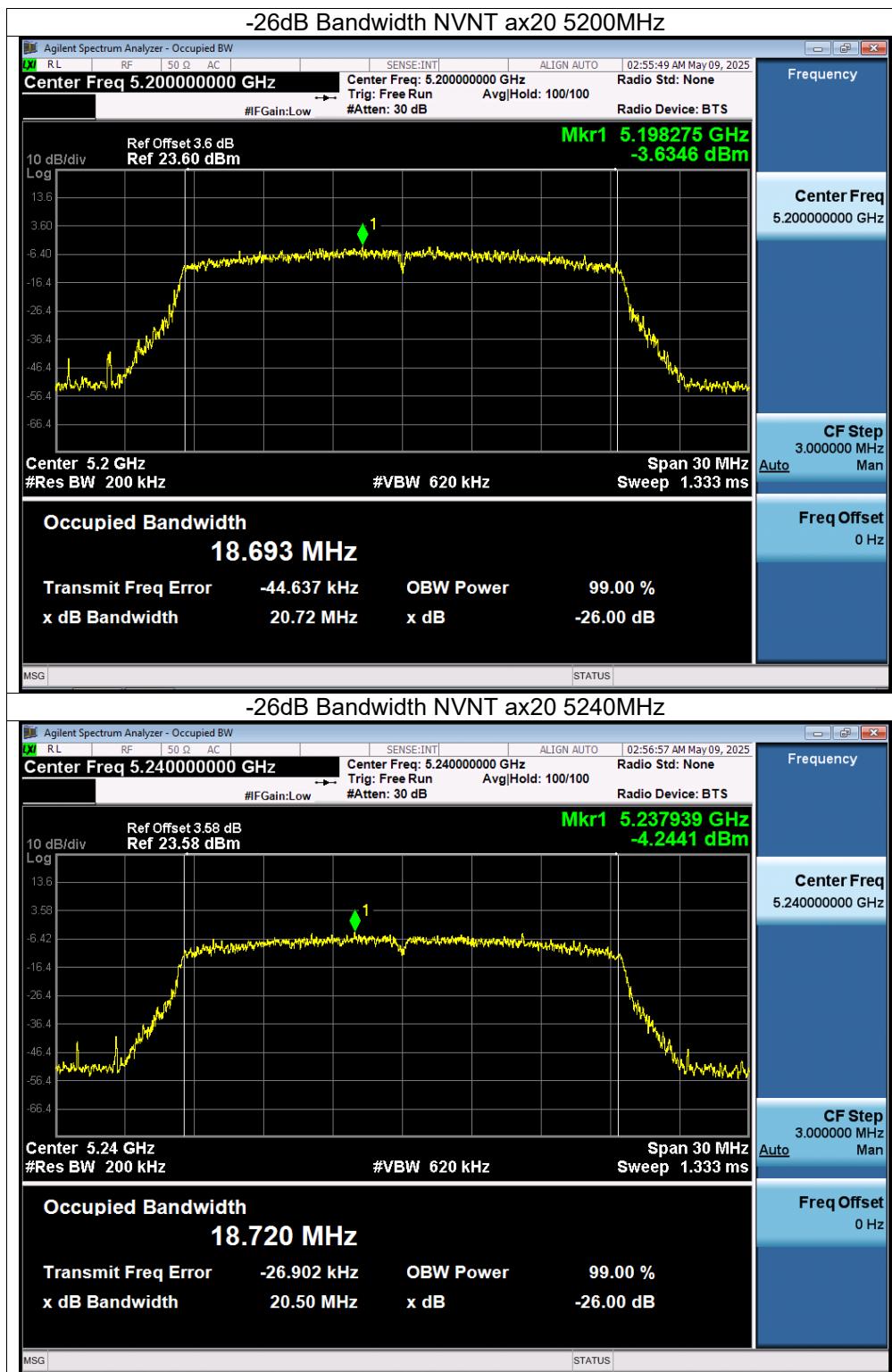


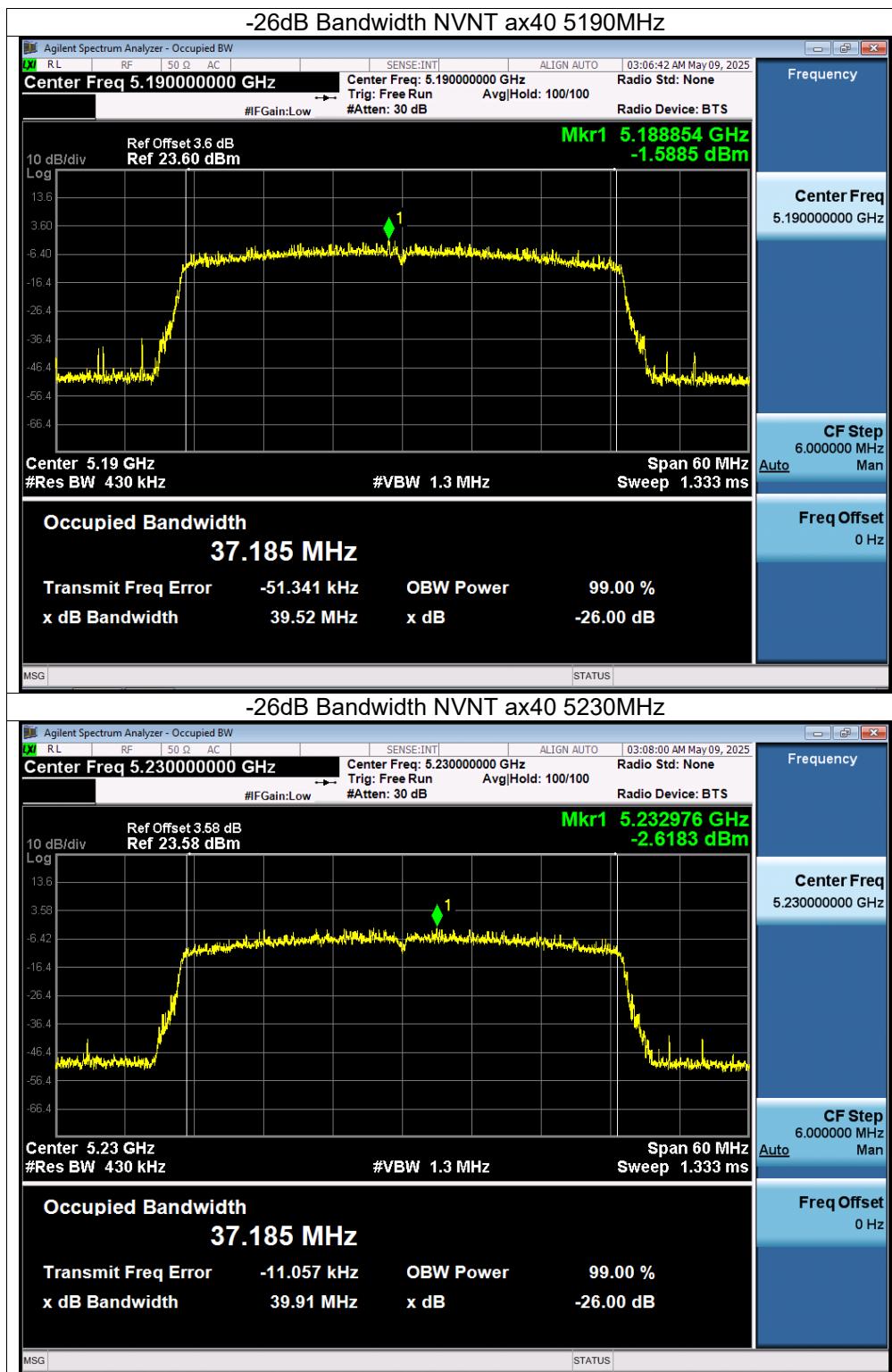


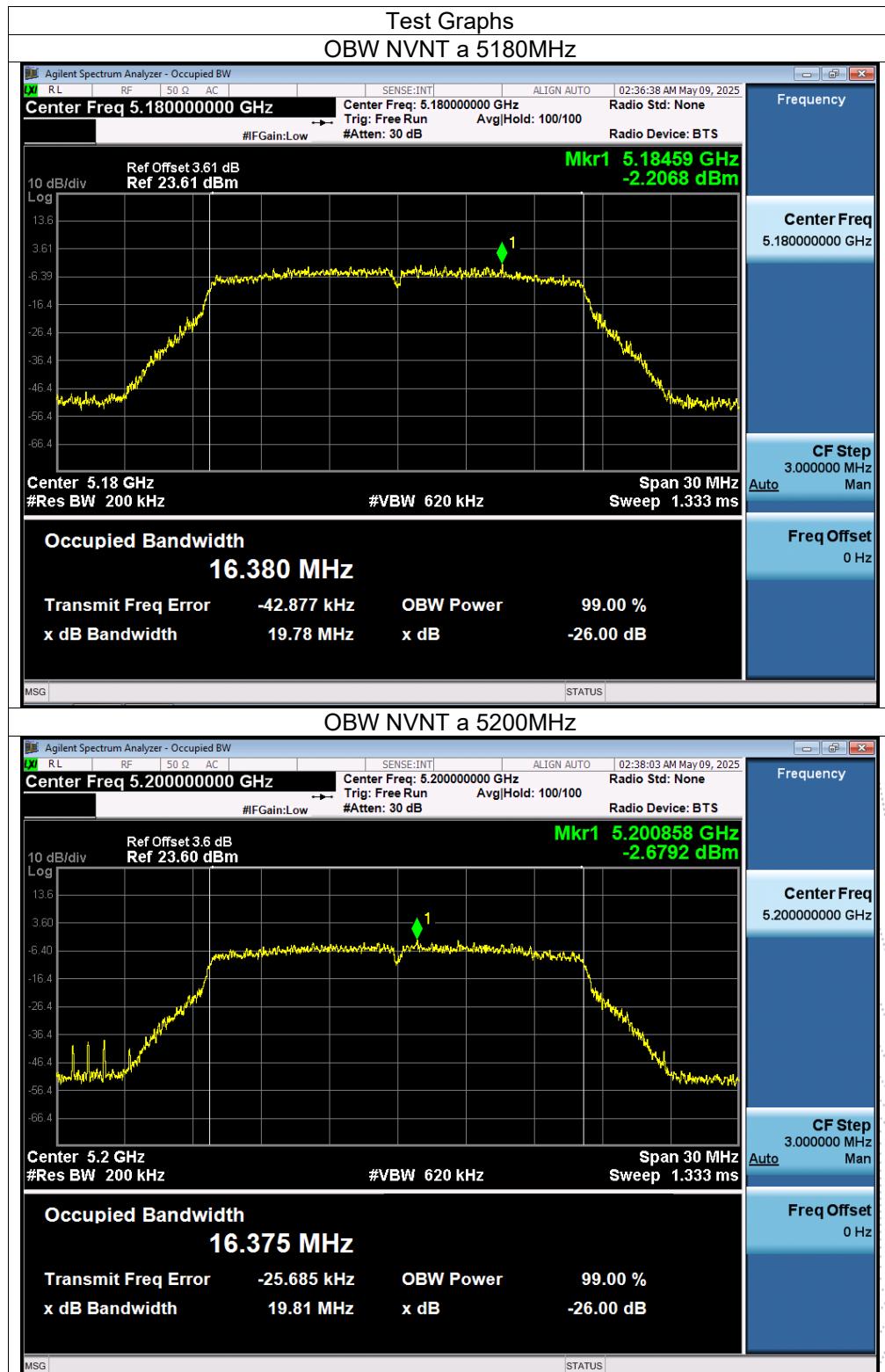


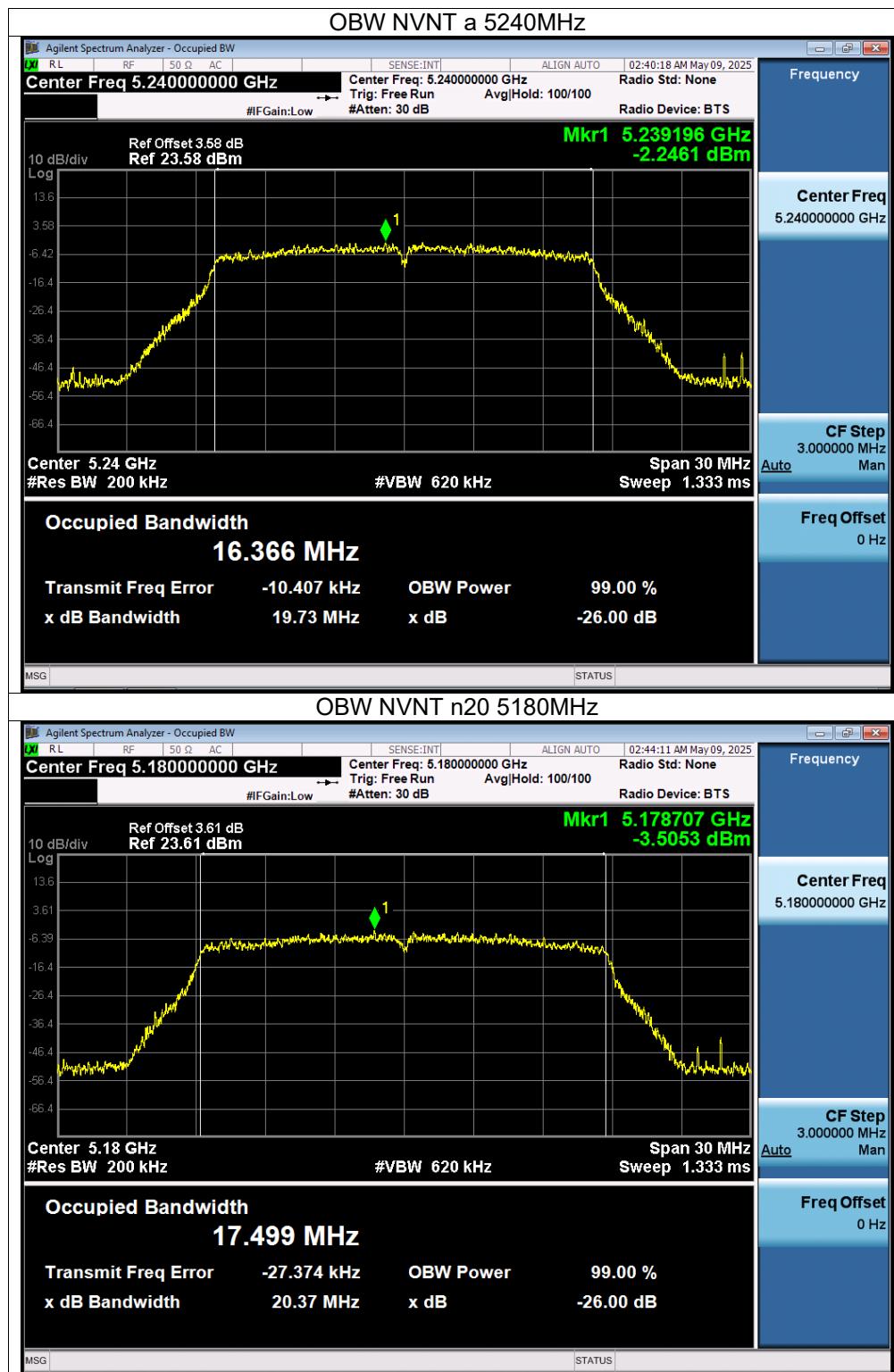


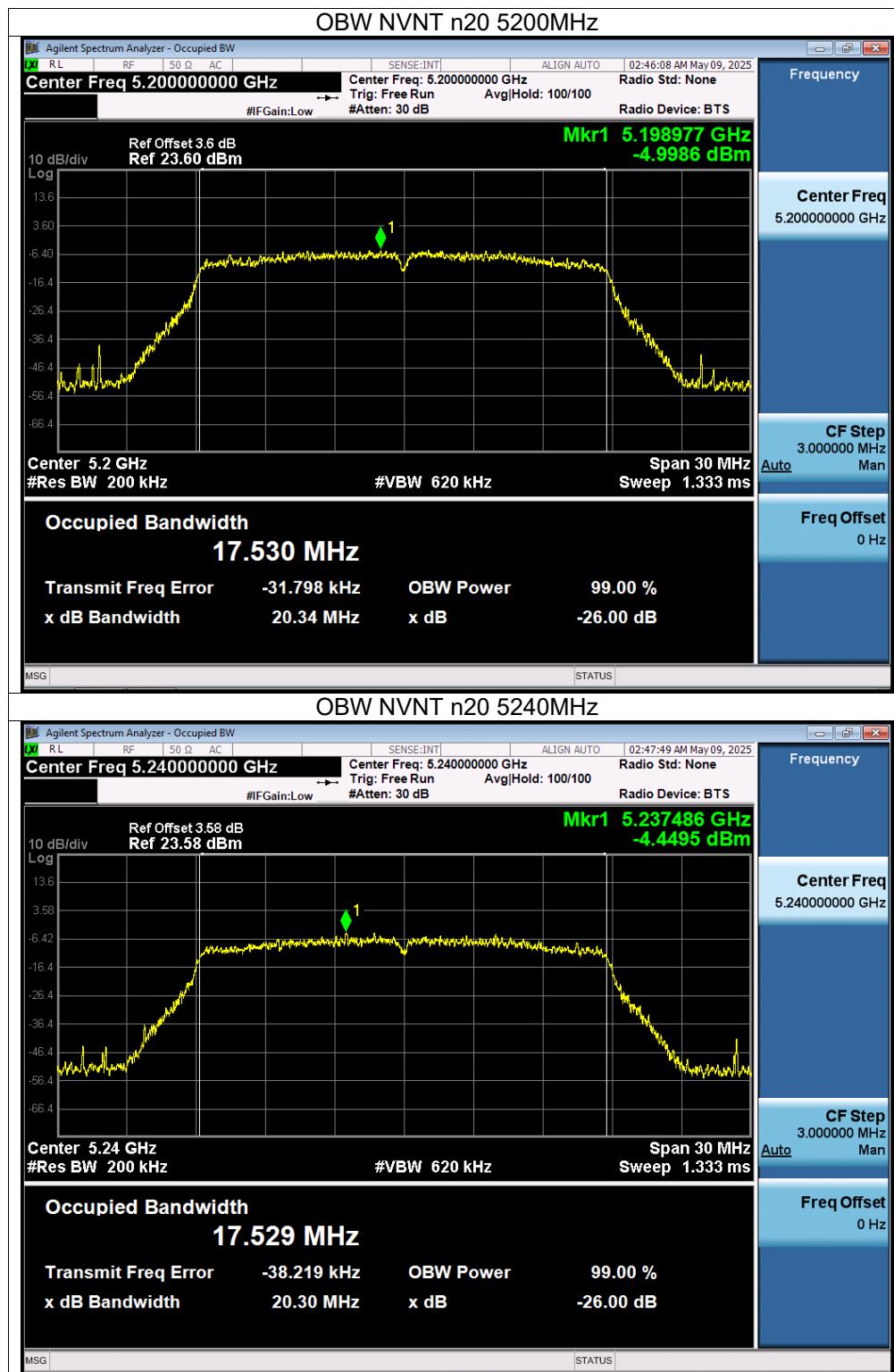


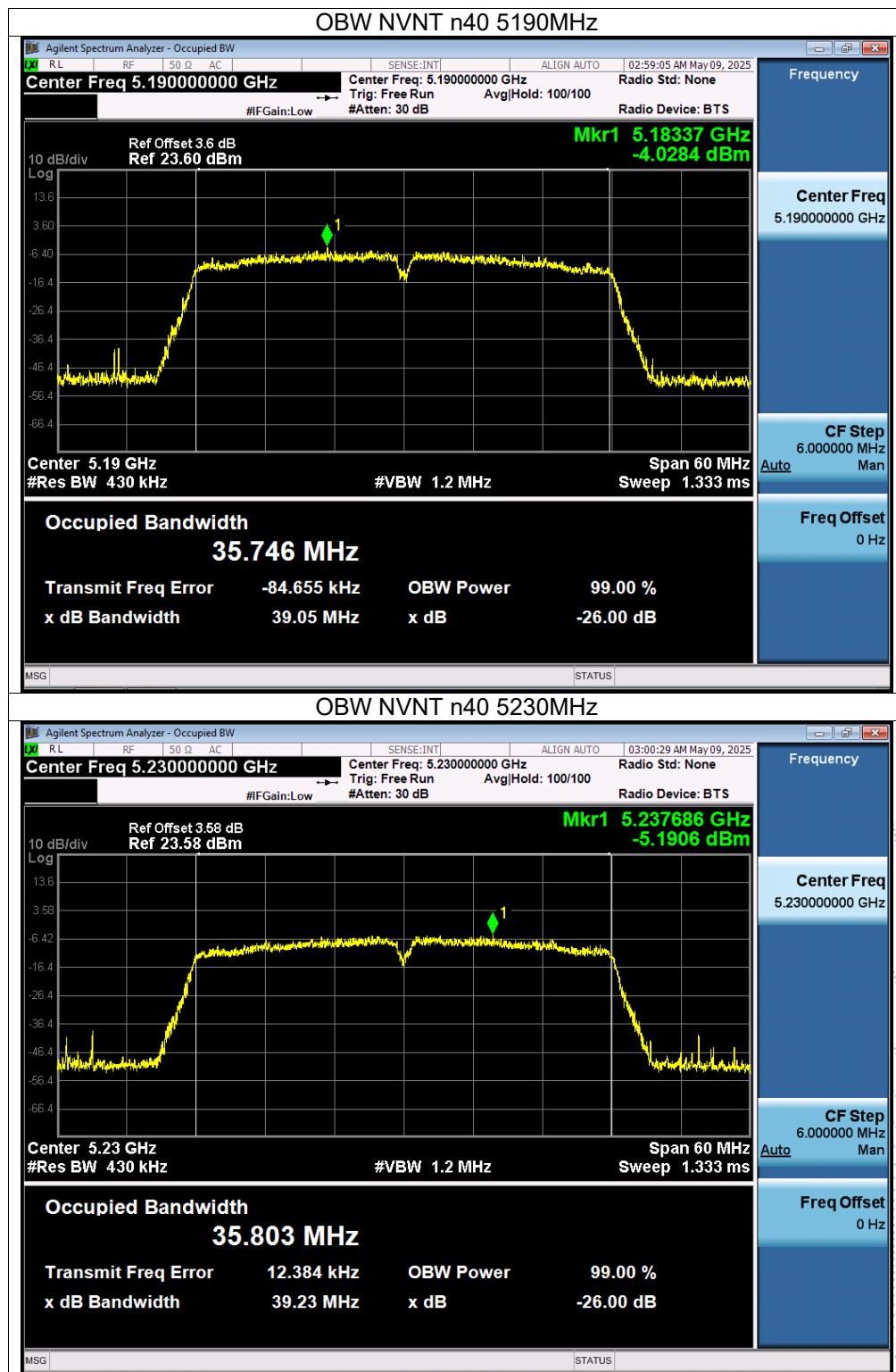


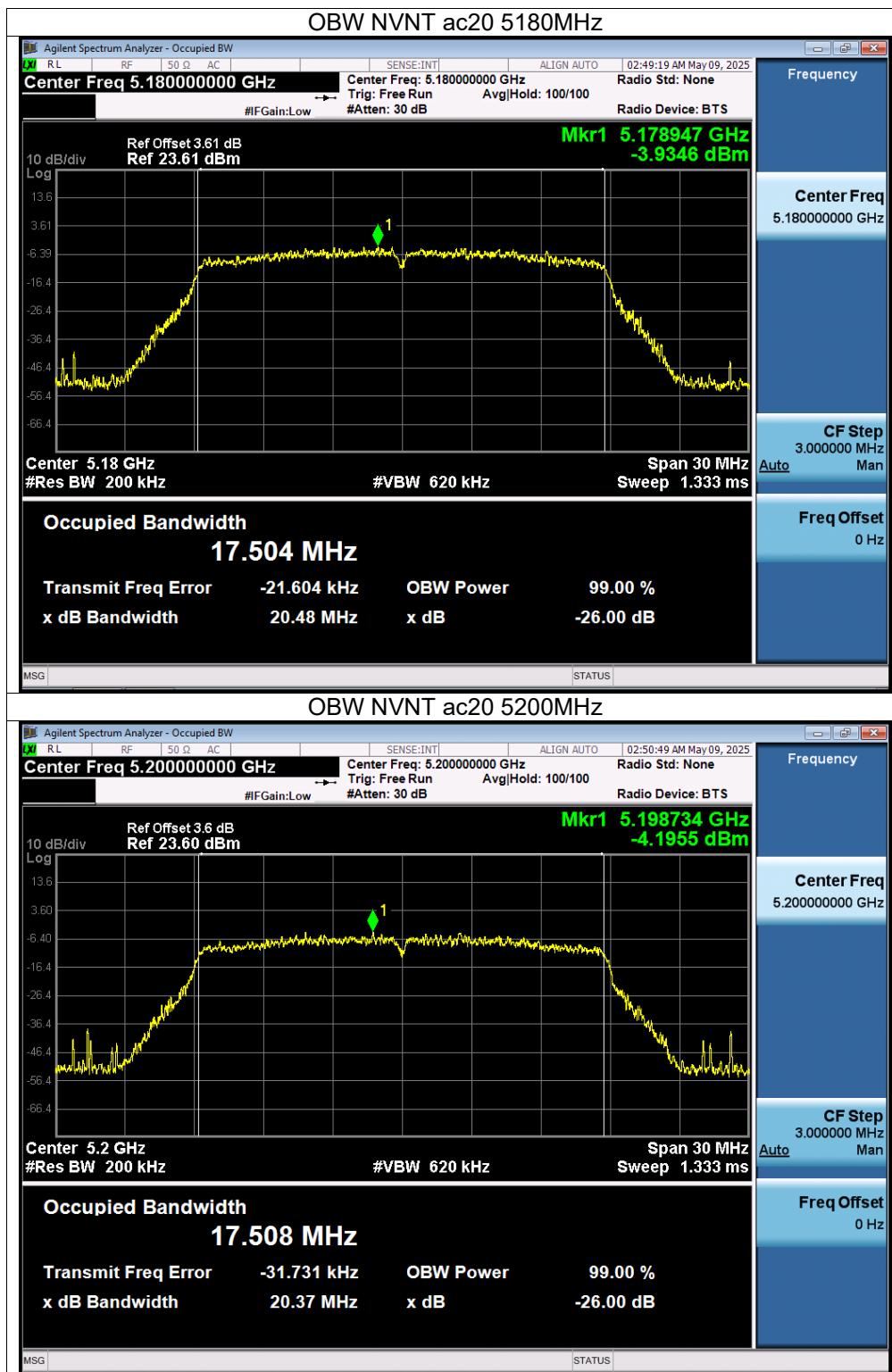


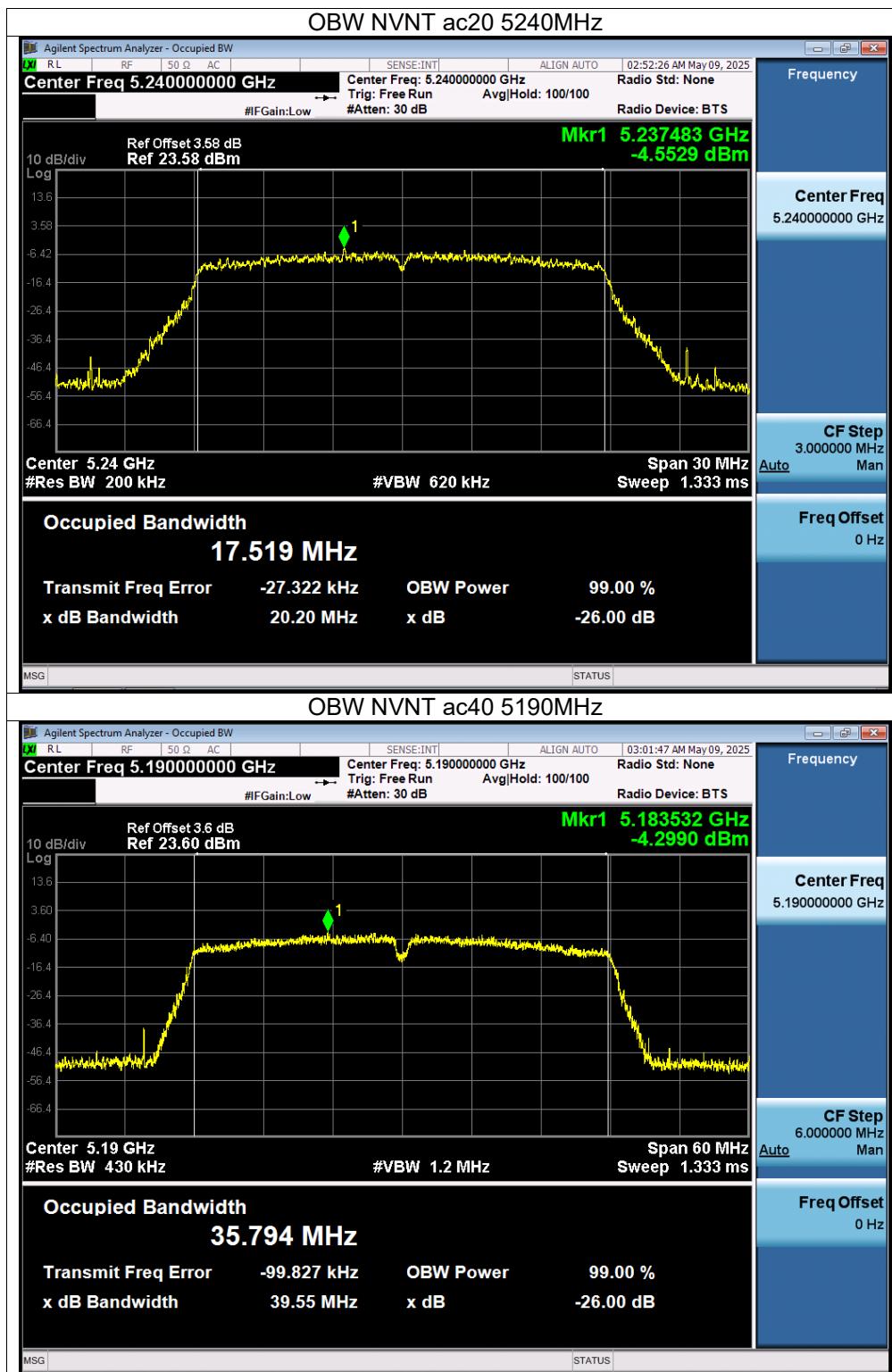


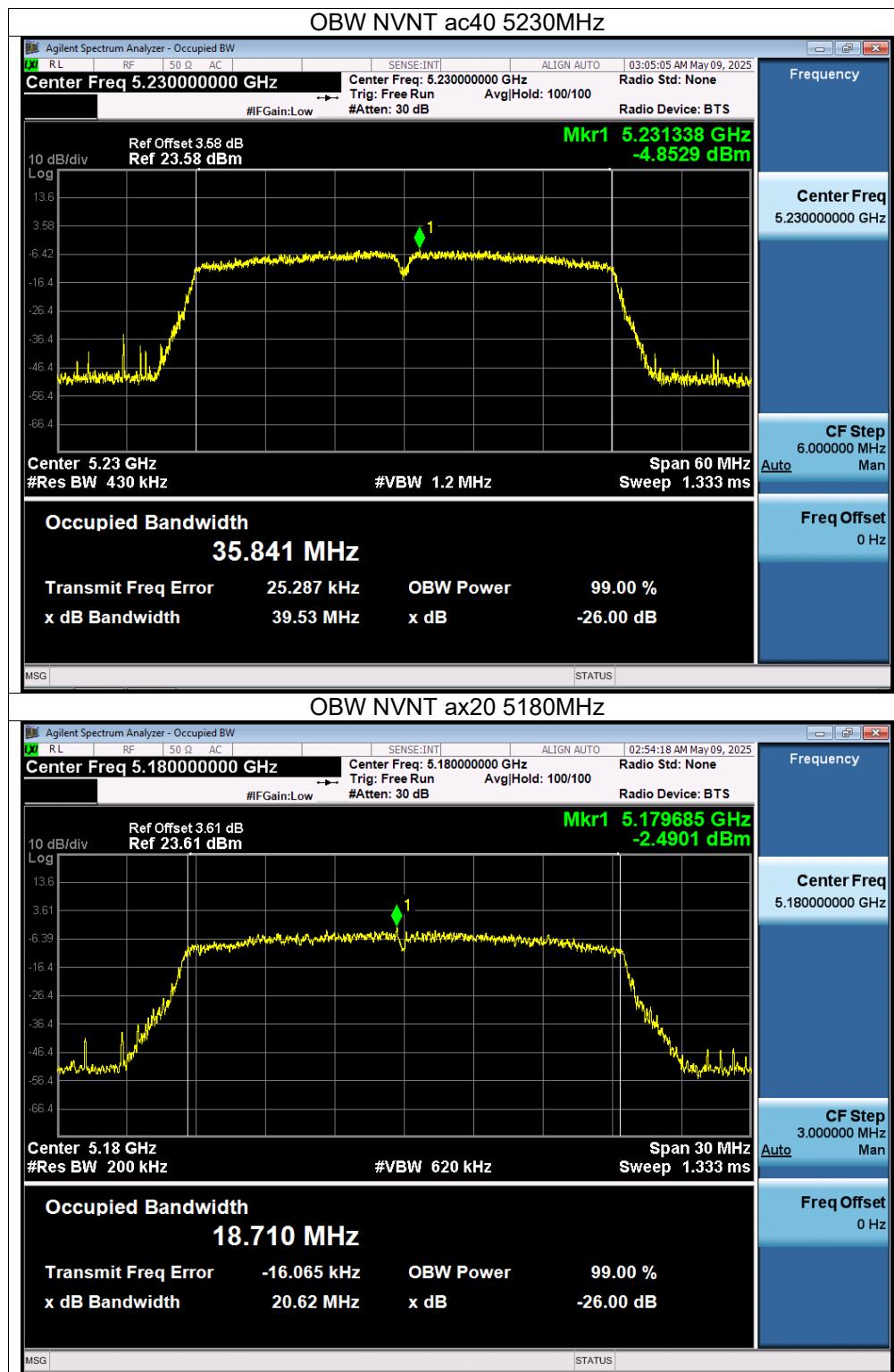


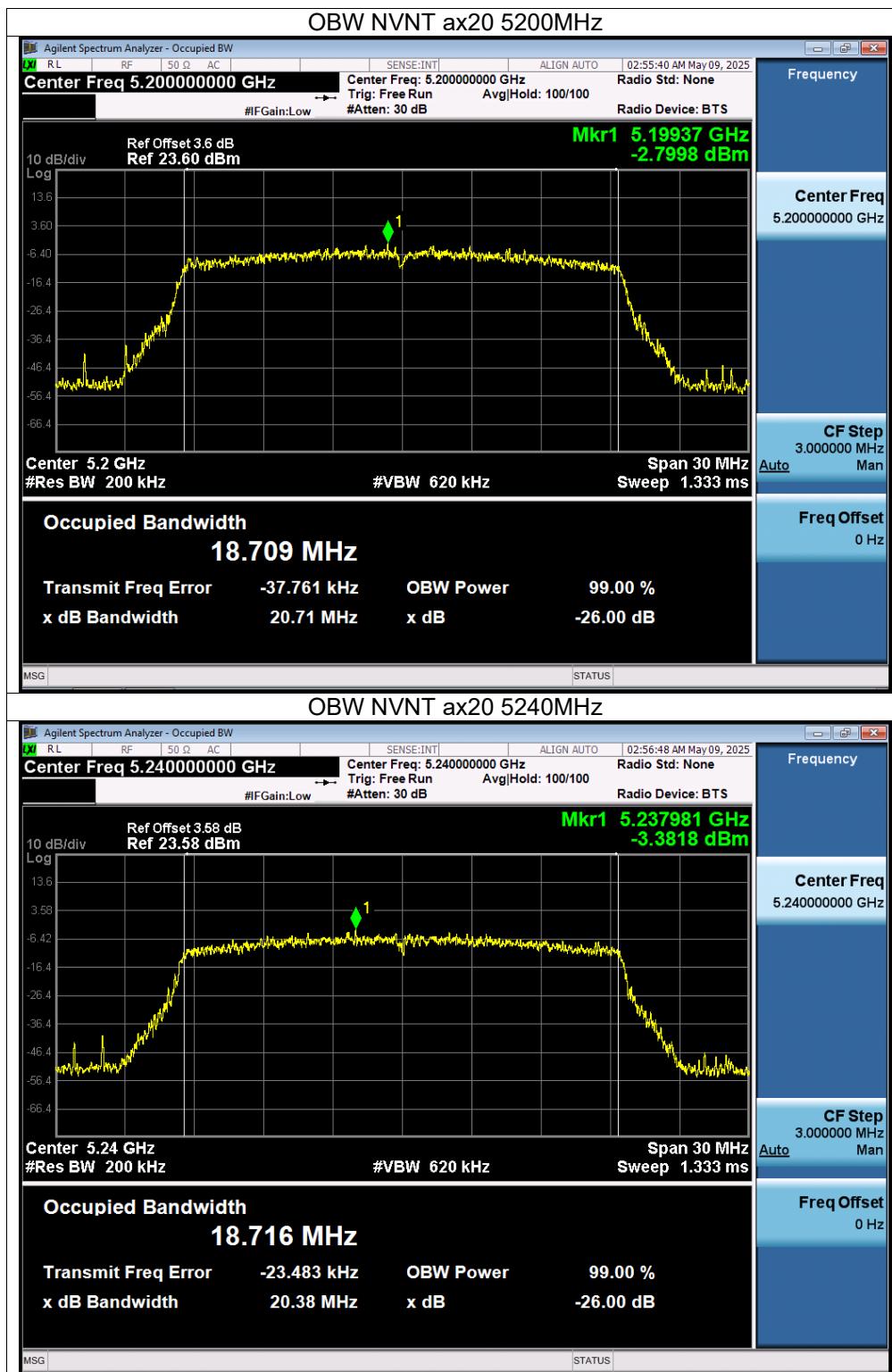


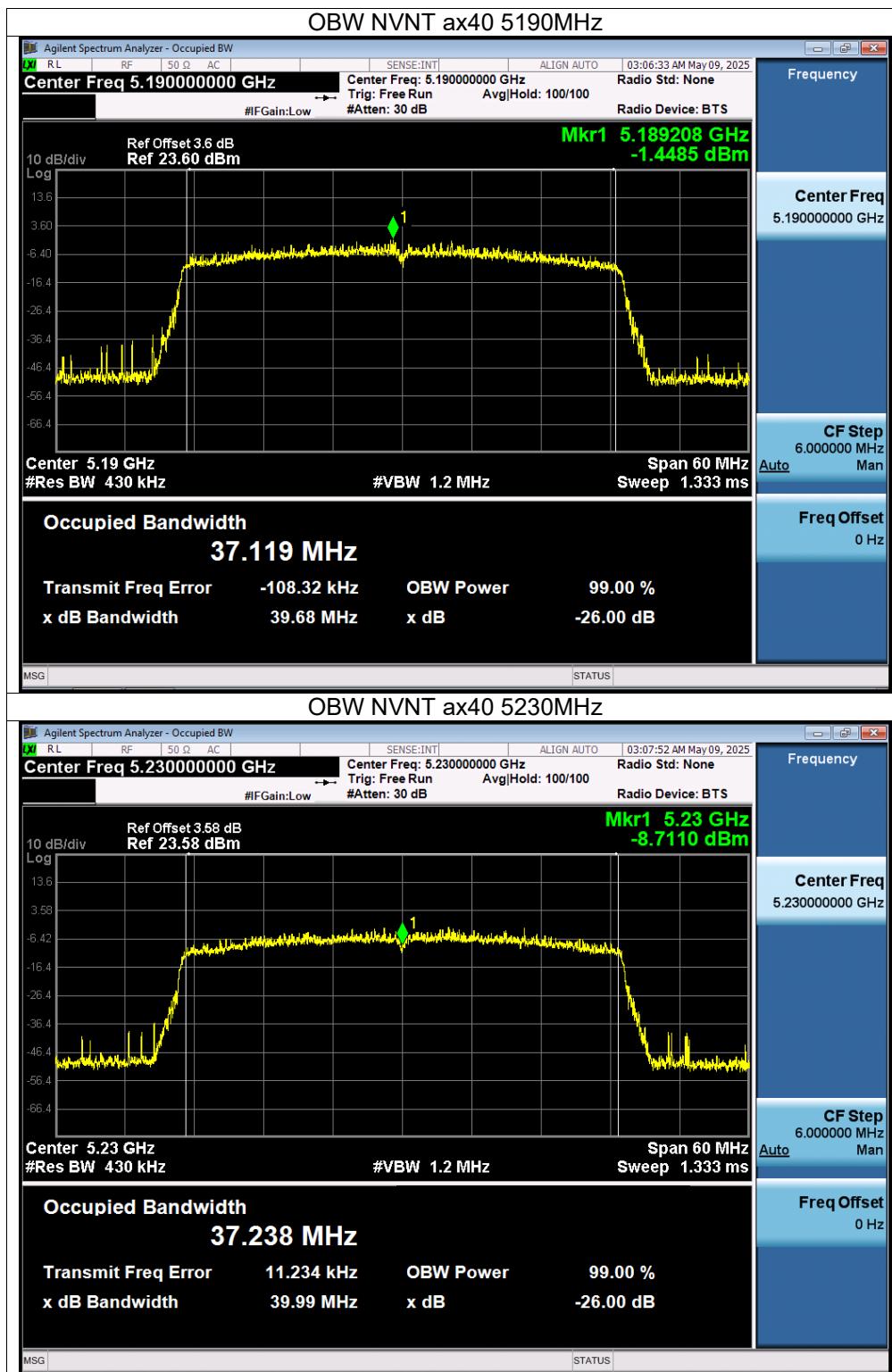












Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC 120V/60Hz
Test Mode :	TX Frequency U-NII-3(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-6dB bandwidth (MHz)	Limit -6dB bandwidth (MHz)	Result
NVNT	a	5745	16.346	13.819	0.5	Pass
NVNT	a	5785	16.385	14.386	0.5	Pass
NVNT	a	5825	16.366	15.801	0.5	Pass
NVNT	n20	5745	17.479	16.302	0.5	Pass
NVNT	n20	5785	17.487	16.497	0.5	Pass
NVNT	n20	5825	17.505	17.37	0.5	Pass
NVNT	n40	5755	35.803	35.072	0.5	Pass
NVNT	n40	5795	35.789	33.772	0.5	Pass
NVNT	ac20	5745	17.478	17.248	0.5	Pass
NVNT	ac20	5785	17.487	15.22	0.5	Pass
NVNT	ac20	5825	17.497	17.535	0.5	Pass
NVNT	ac40	5755	35.798	28.776	0.5	Pass
NVNT	ac40	5795	35.823	31.256	0.5	Pass
NVNT	ax20	5745	18.7	12.688	0.5	Pass
NVNT	ax20	5785	18.719	15.318	0.5	Pass
NVNT	ax20	5825	18.759	17.864	0.5	Pass
NVNT	ax40	5755	37.155	32.368	0.5	Pass
NVNT	ax40	5795	37.188	29.915	0.5	Pass

