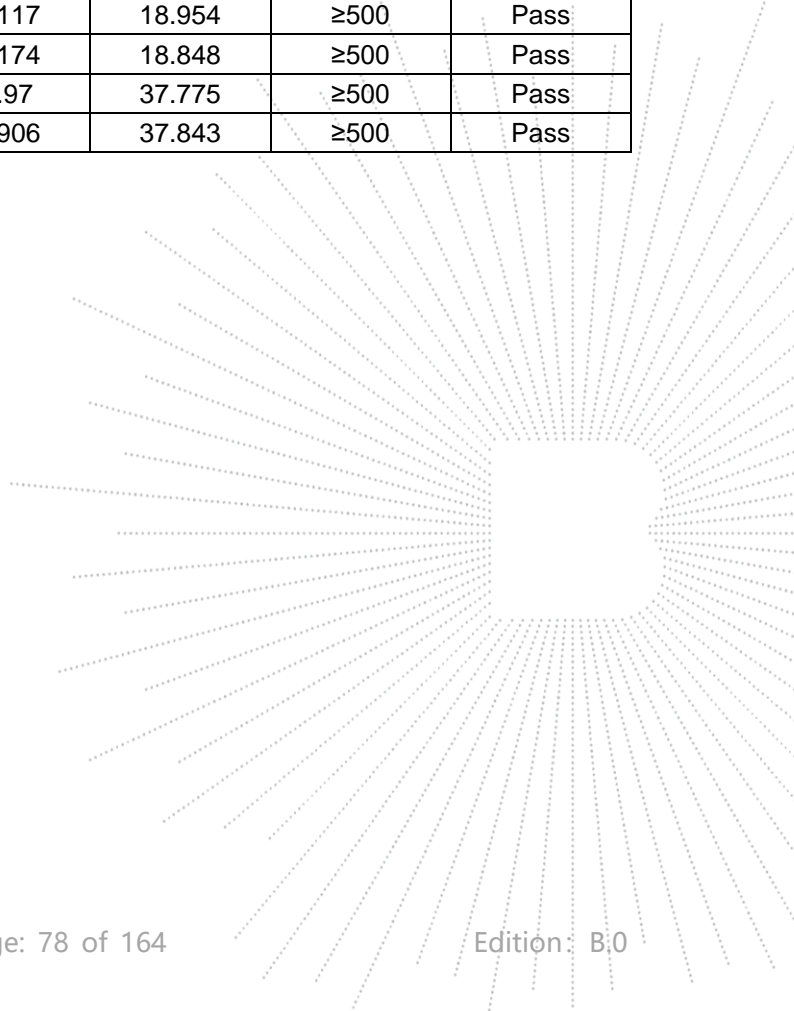
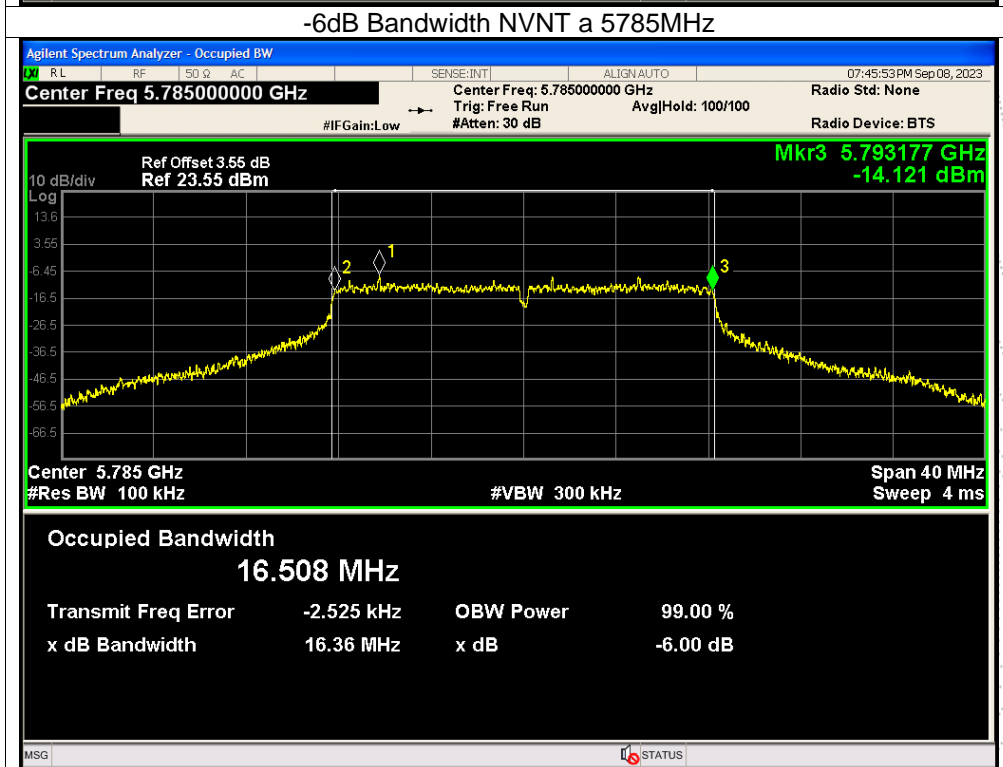
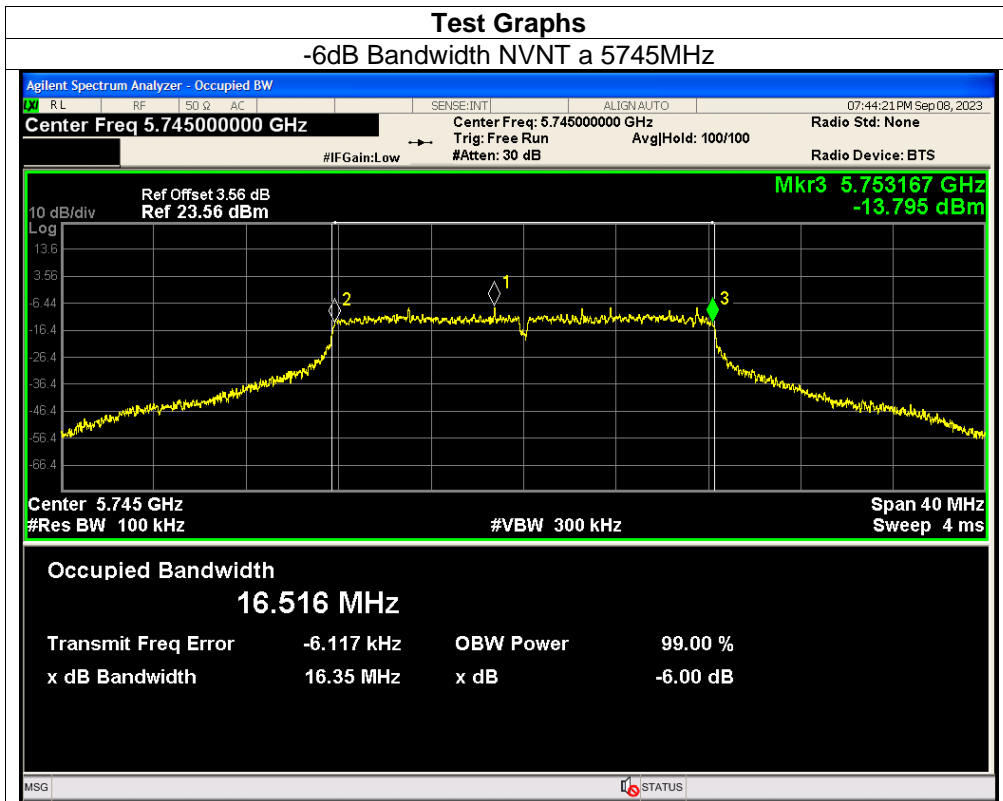
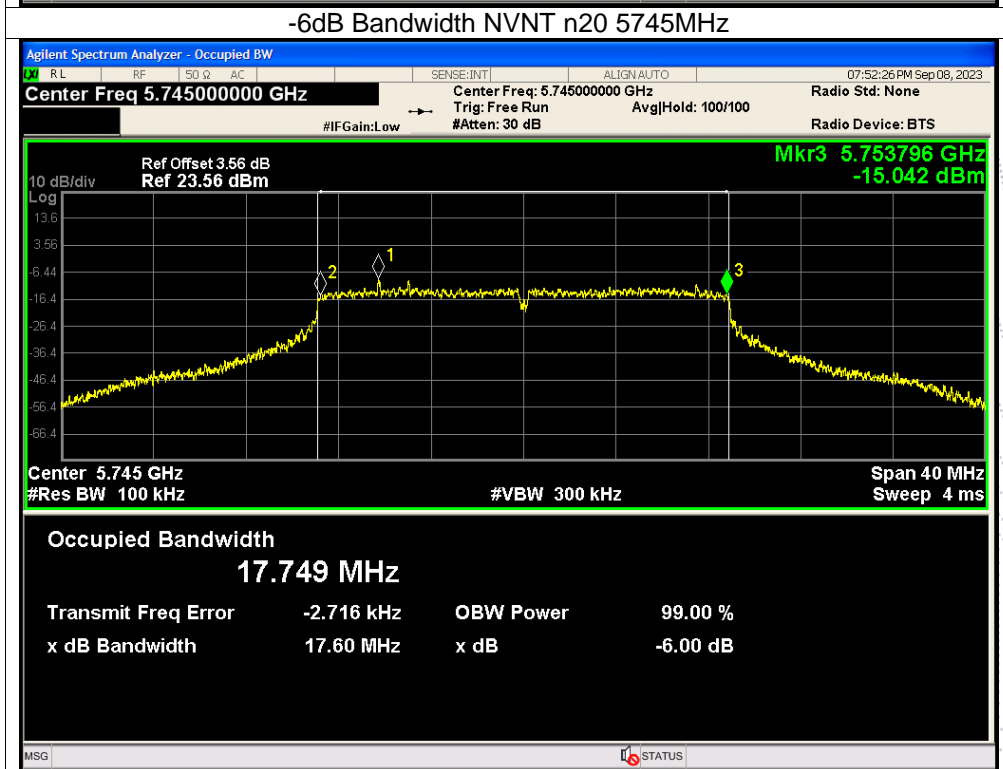
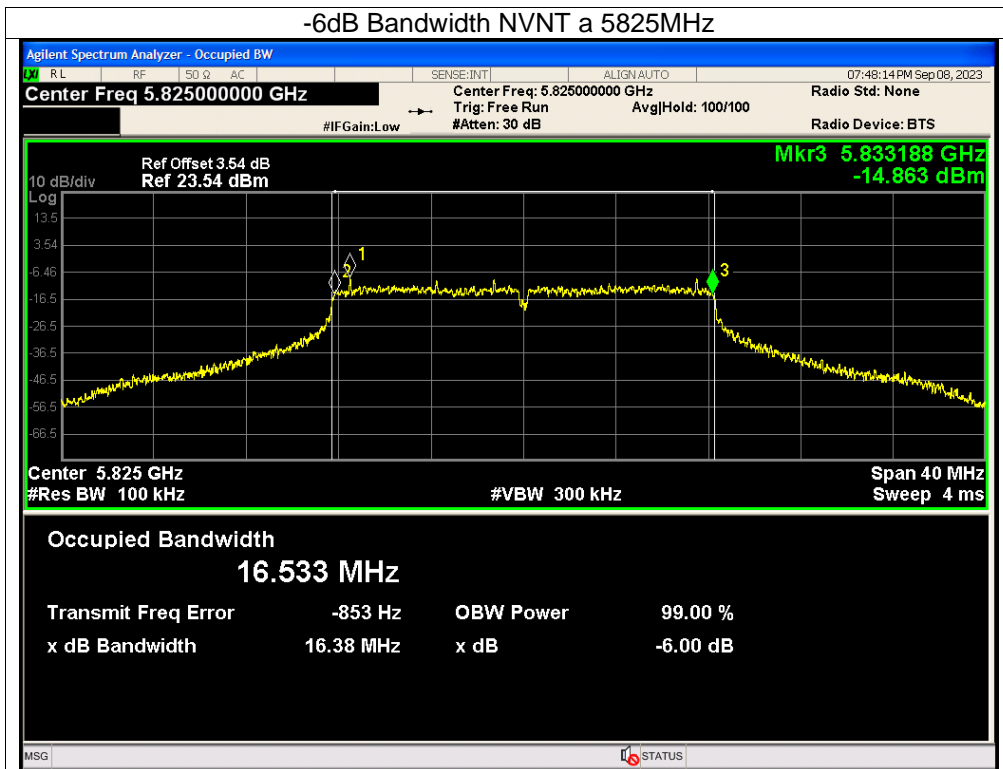


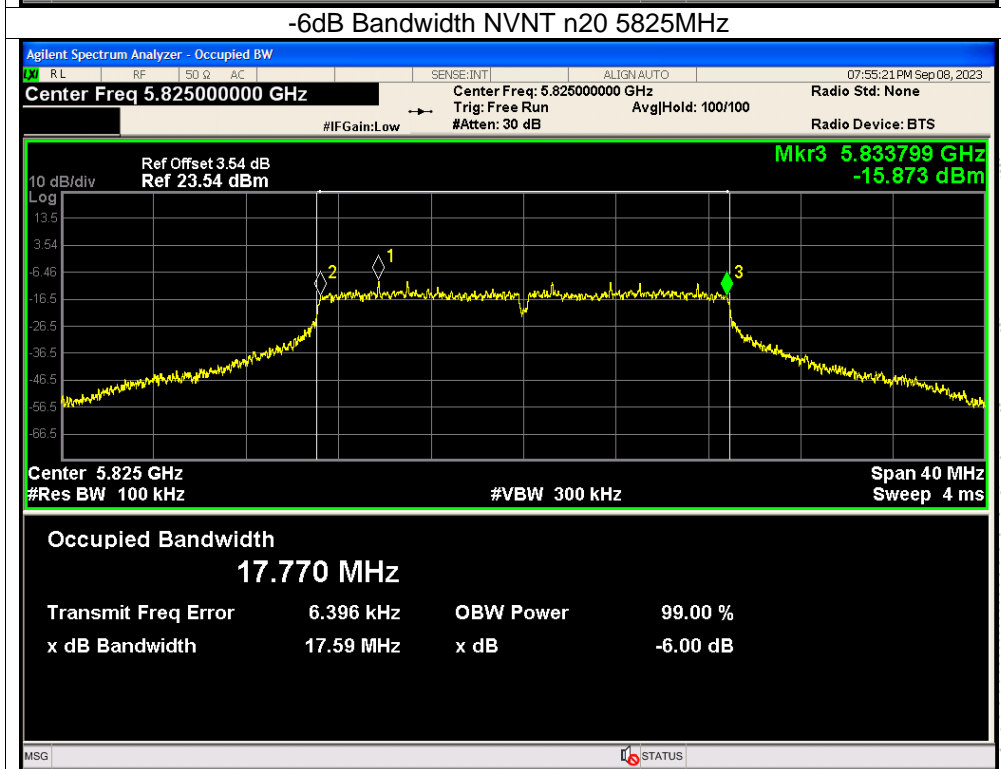
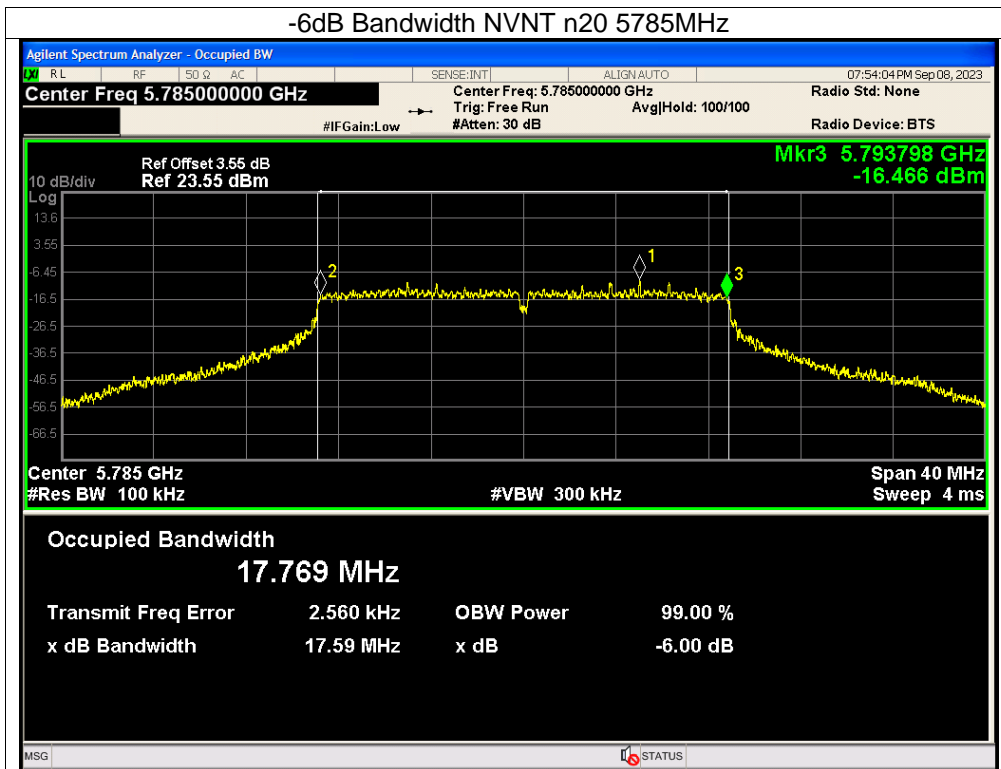
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3.8V
Test Mode :	TX Frequency U-NII-3(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-6dB bandwidth (MHz)	Limit -6dB bandwidth MHz	Result
NVNT	a	5745	16.706	16.347	≥500	Pass
NVNT	a	5785	16.756	16.358	≥500	Pass
NVNT	a	5825	16.733	16.378	≥500	Pass
NVNT	n20	5745	17.94	17.597	≥500	Pass
NVNT	n20	5785	17.955	17.59	≥500	Pass
NVNT	n20	5825	17.997	17.585	≥500	Pass
NVNT	n40	5755	36.505	36.319	≥500	Pass
NVNT	n40	5795	36.446	36.339	≥500	Pass
NVNT	ac20	5745	17.905	17.554	≥500	Pass
NVNT	ac20	5785	17.908	17.582	≥500	Pass
NVNT	ac20	5825	17.97	17.626	≥500	Pass
NVNT	ac40	5755	36.501	36.316	≥500	Pass
NVNT	ac40	5795	36.501	36.319	≥500	Pass
NVNT	ax20	5745	19.111	18.811	≥500	Pass
NVNT	ax20	5785	19.117	18.954	≥500	Pass
NVNT	ax20	5825	19.174	18.848	≥500	Pass
NVNT	ax40	5755	37.97	37.775	≥500	Pass
NVNT	ax40	5795	37.906	37.843	≥500	Pass

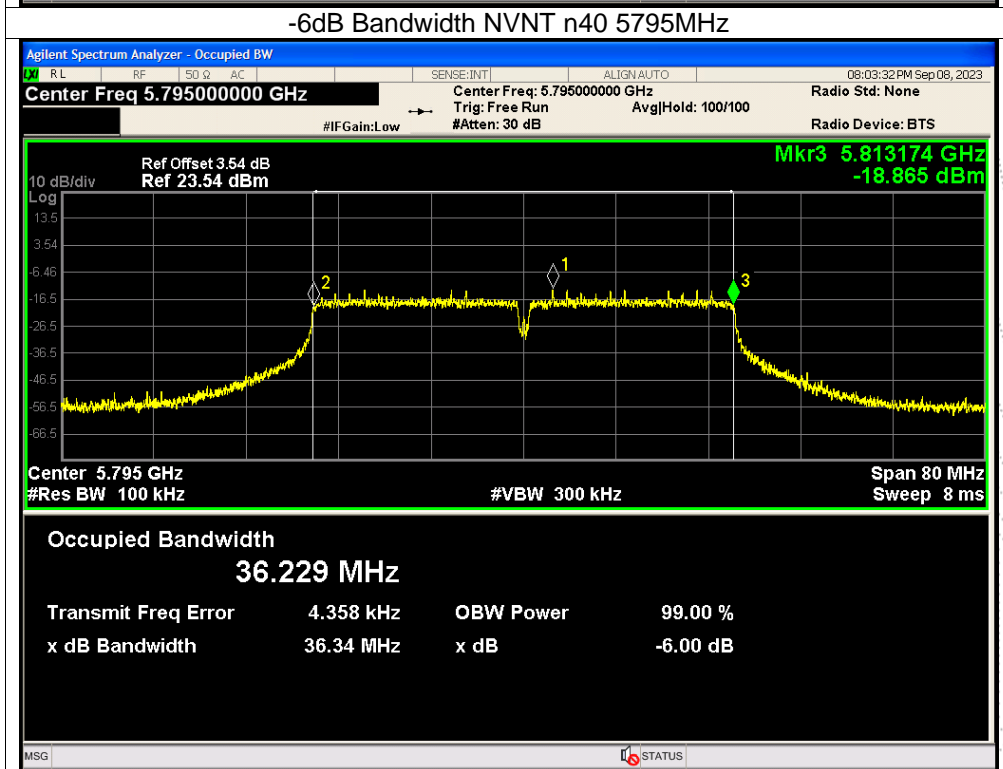
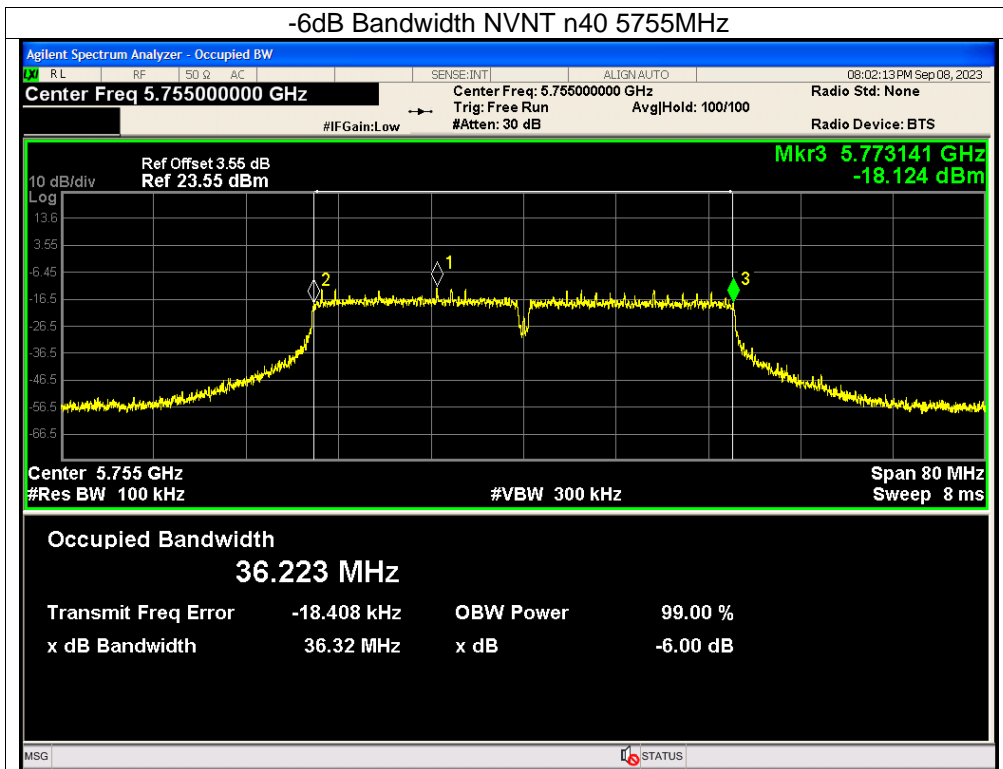


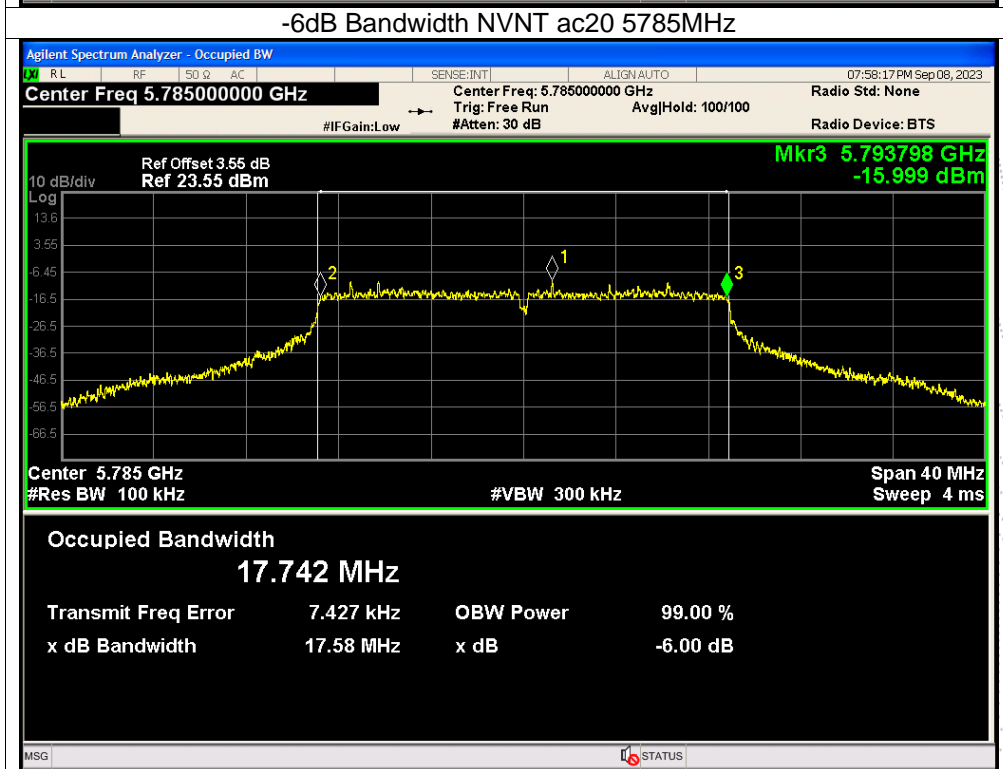
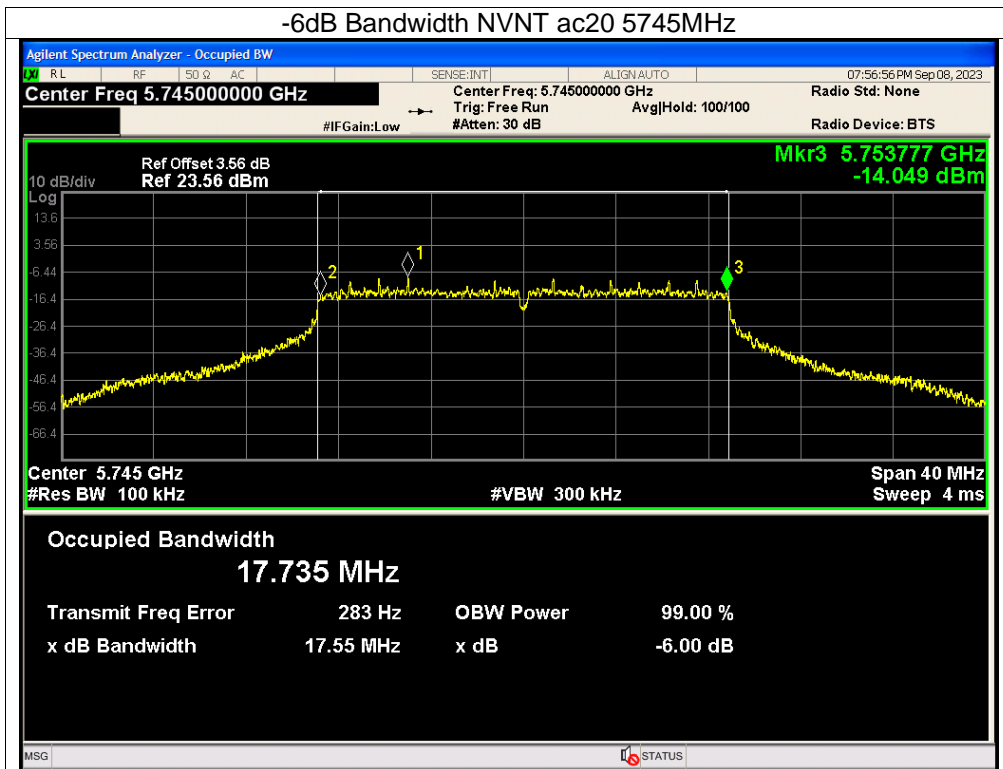


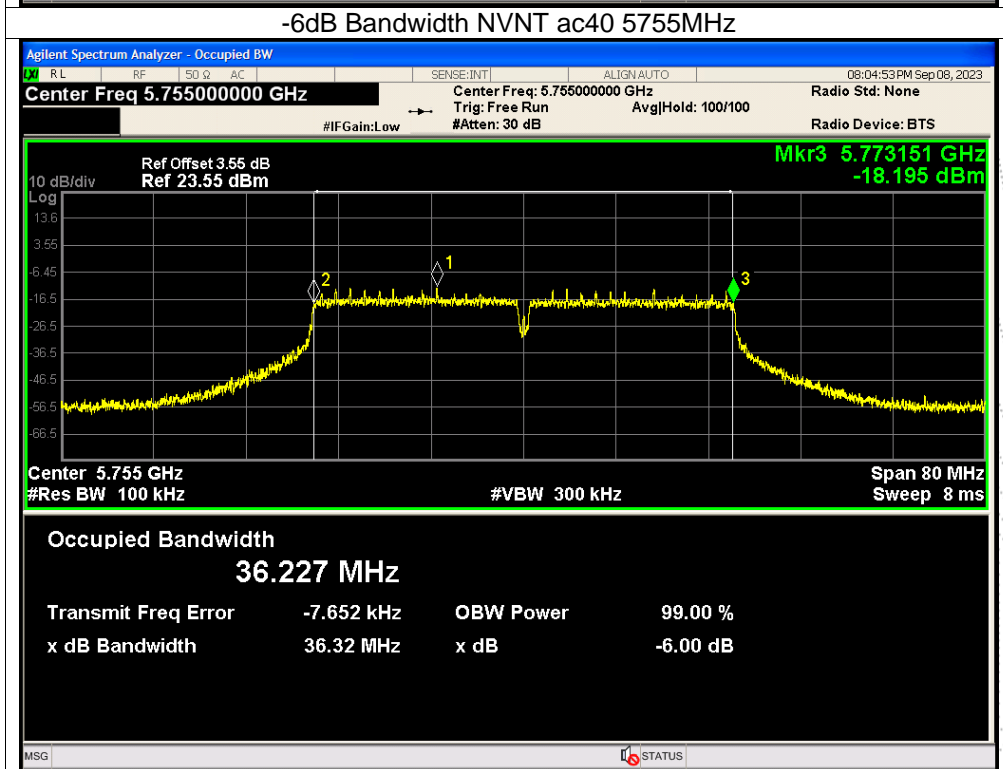
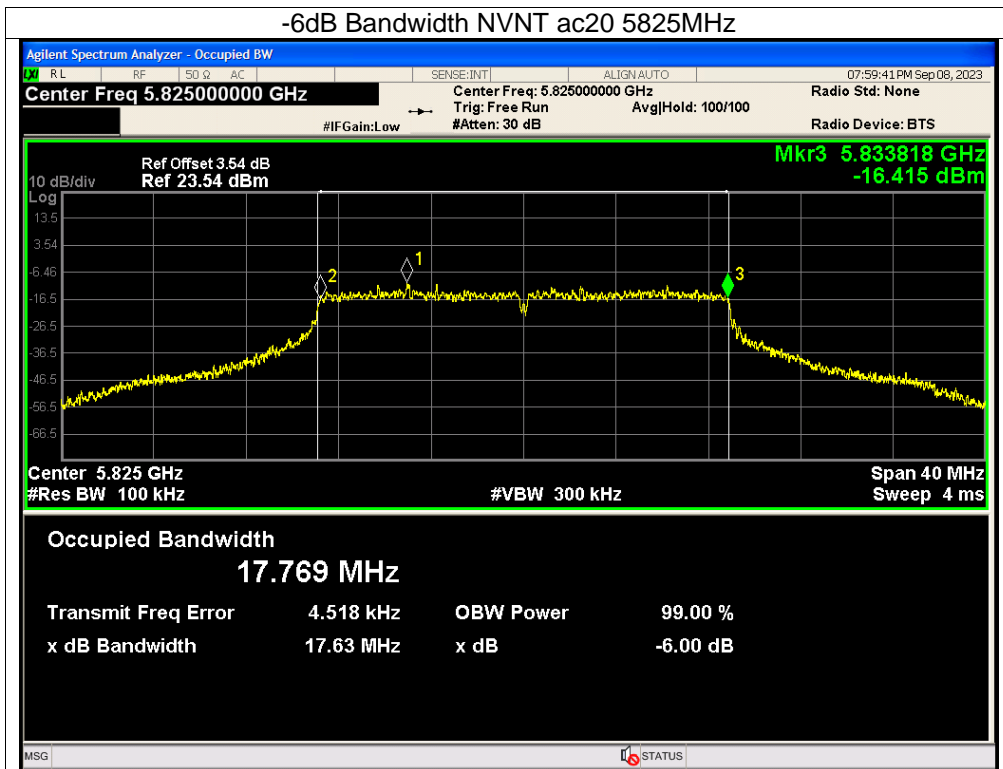


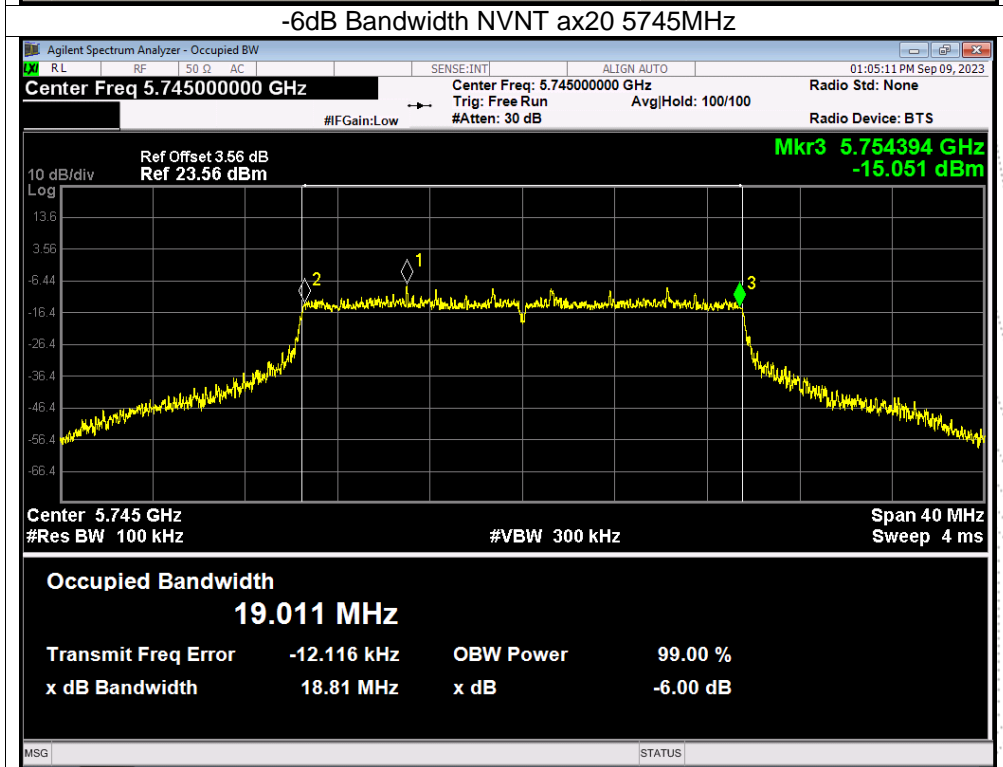
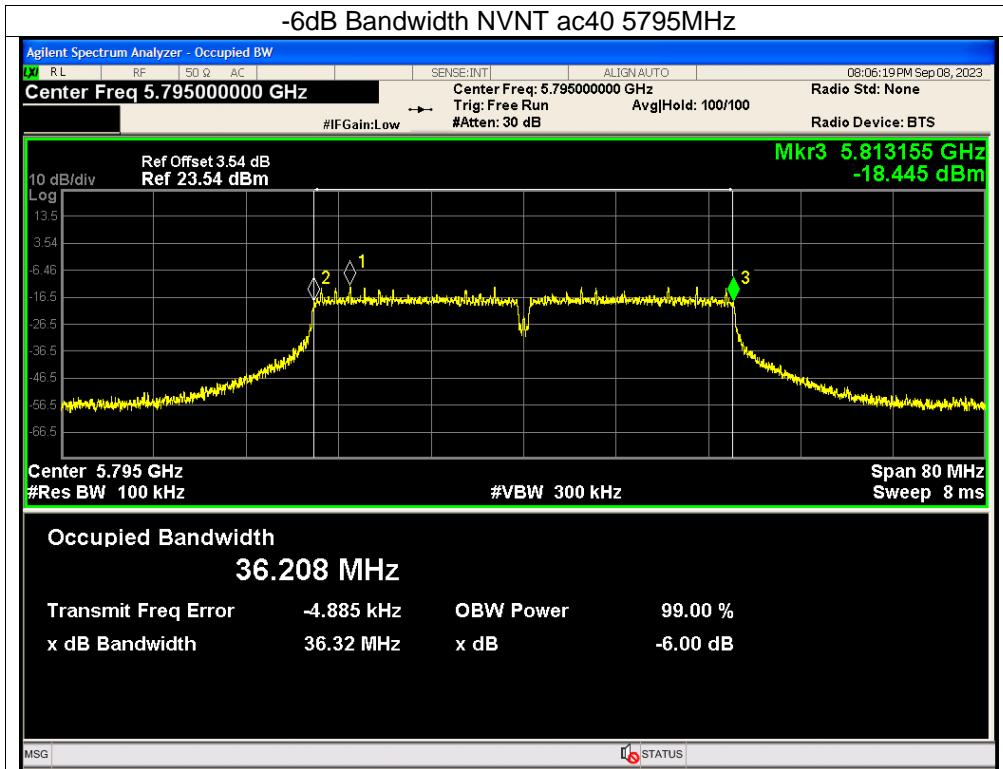


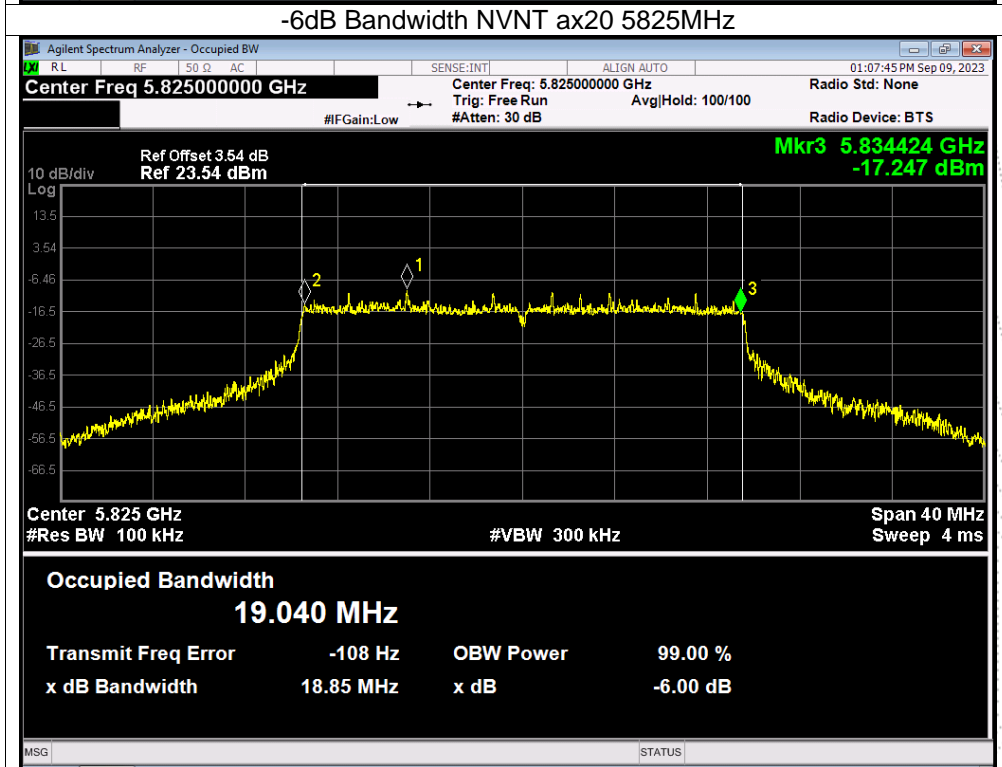
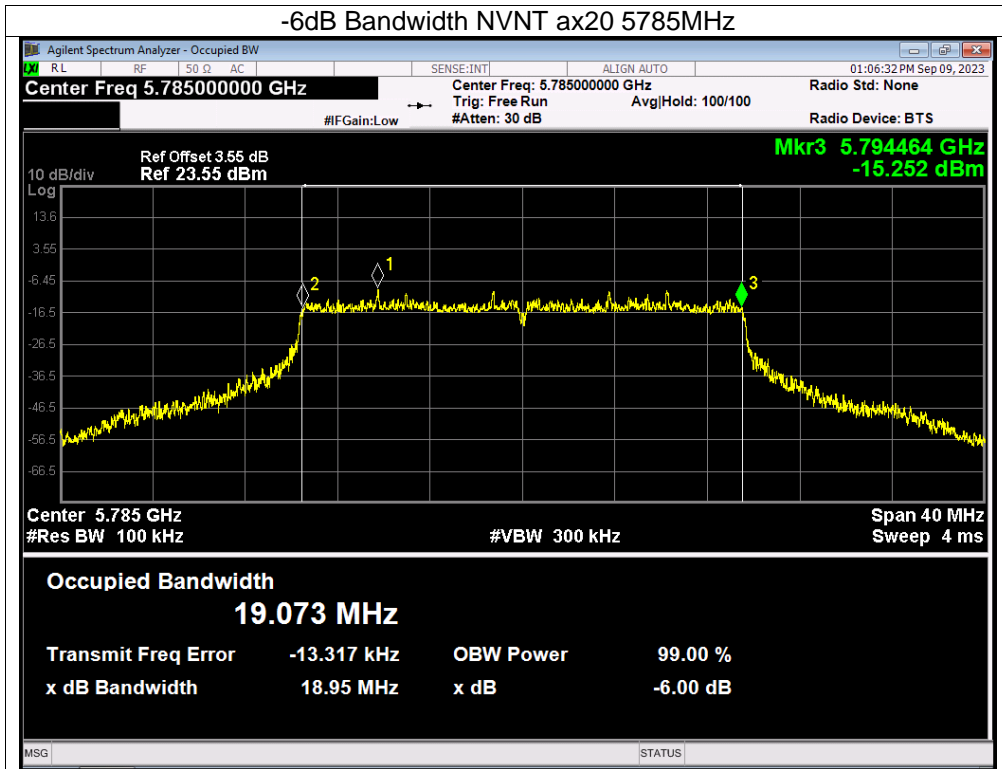


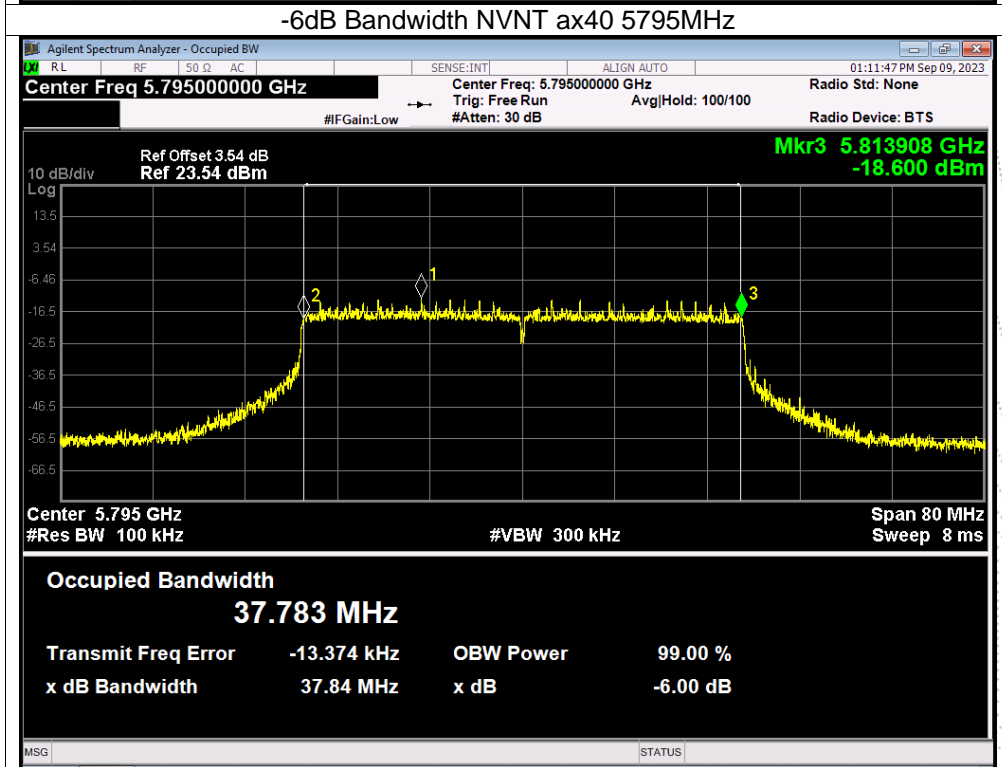
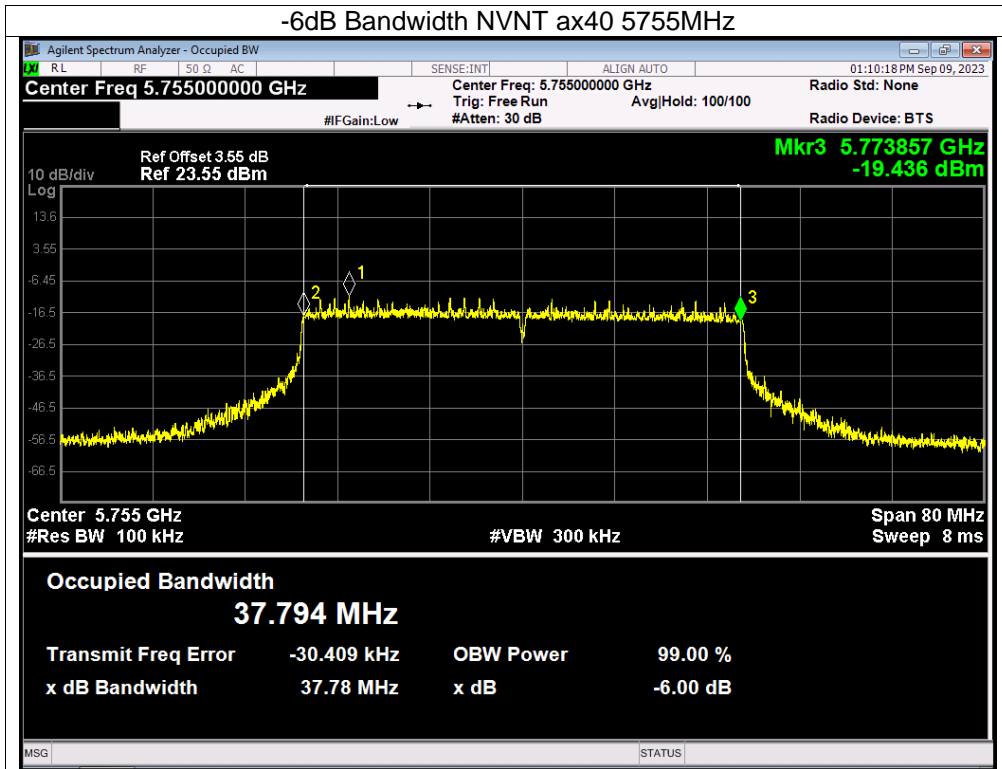


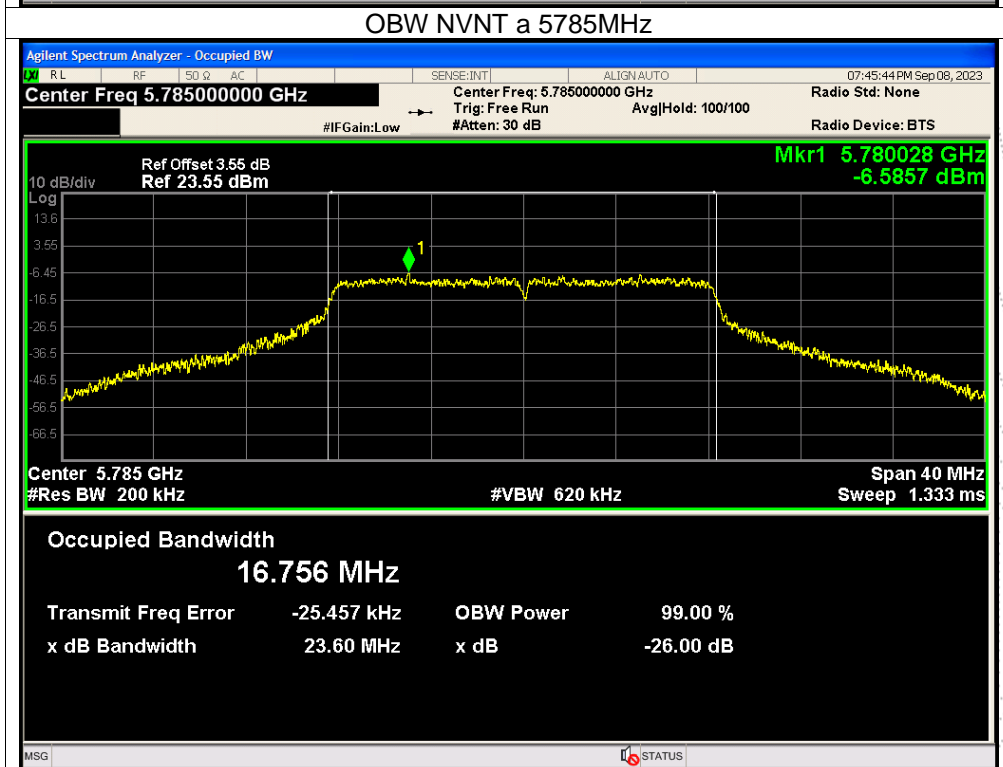
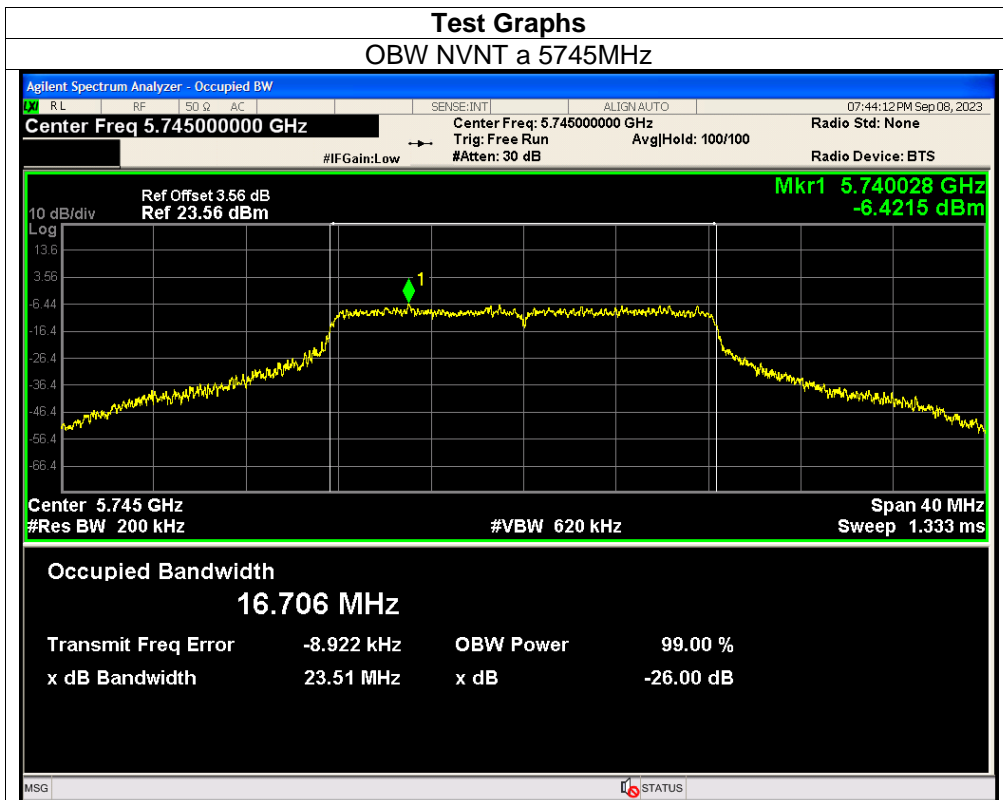


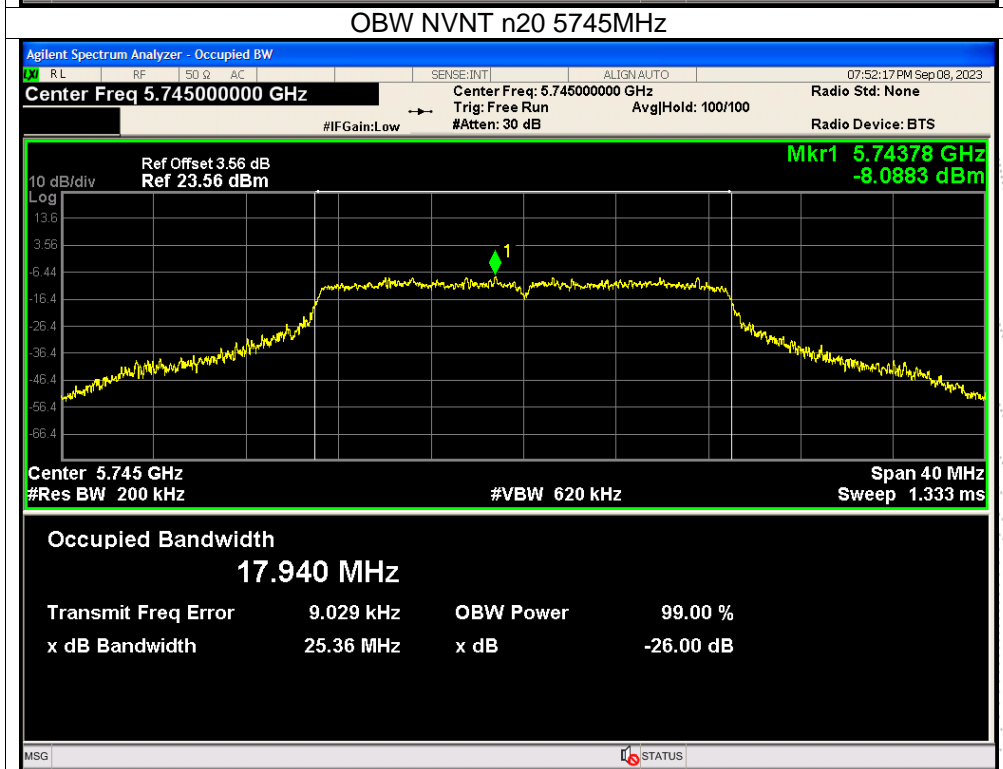
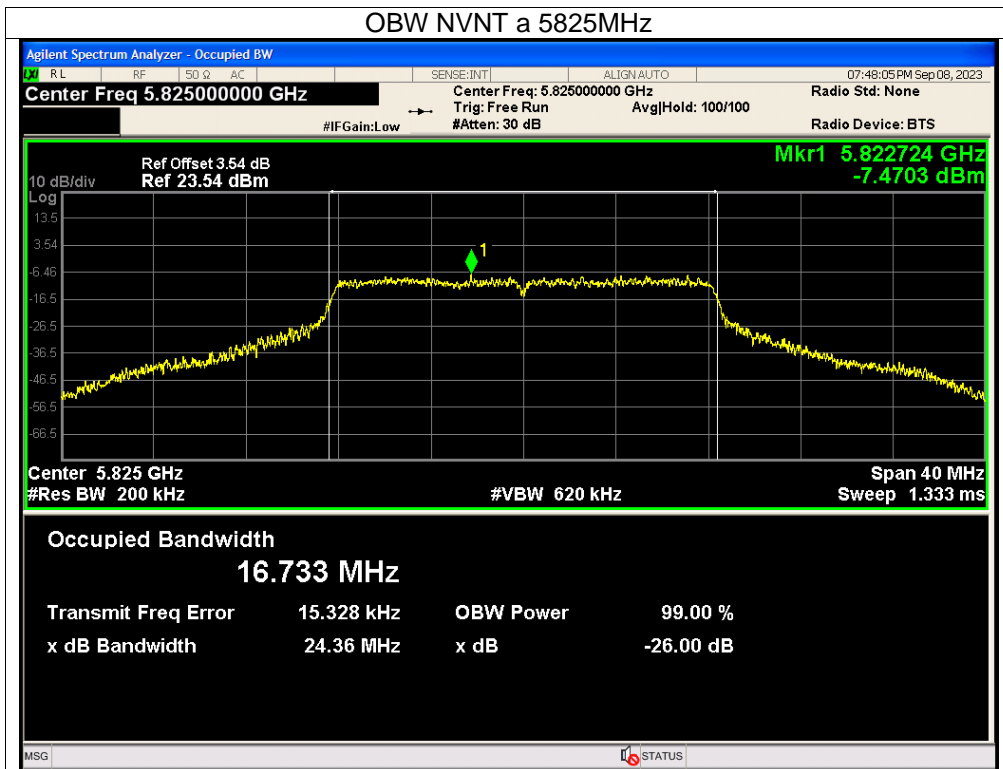




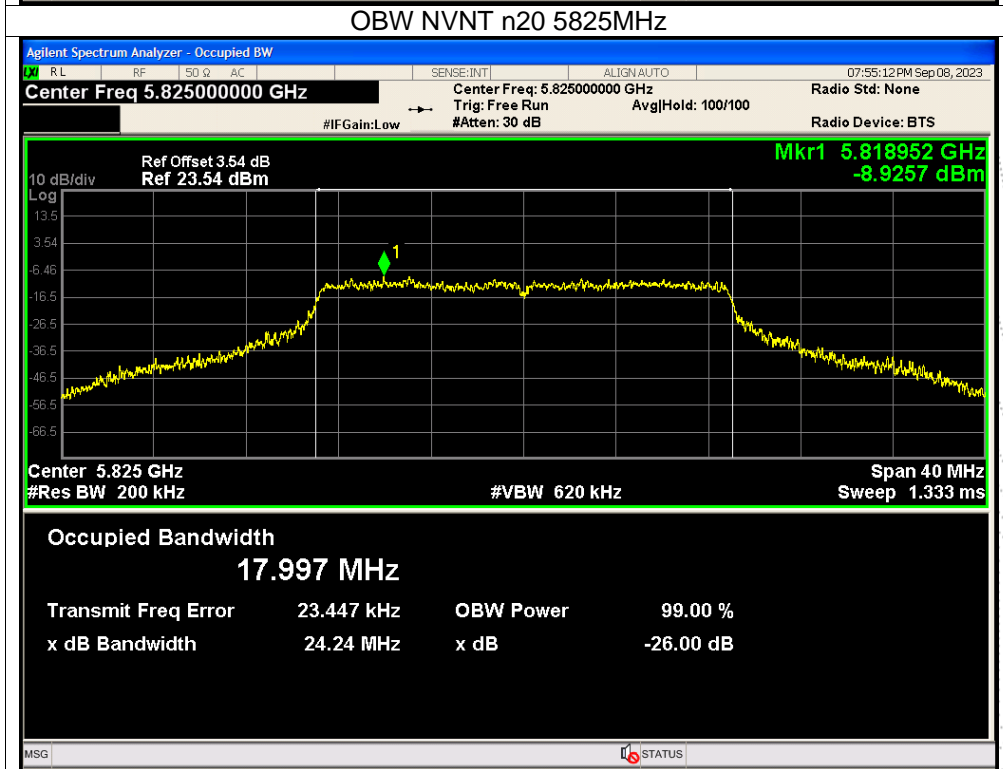
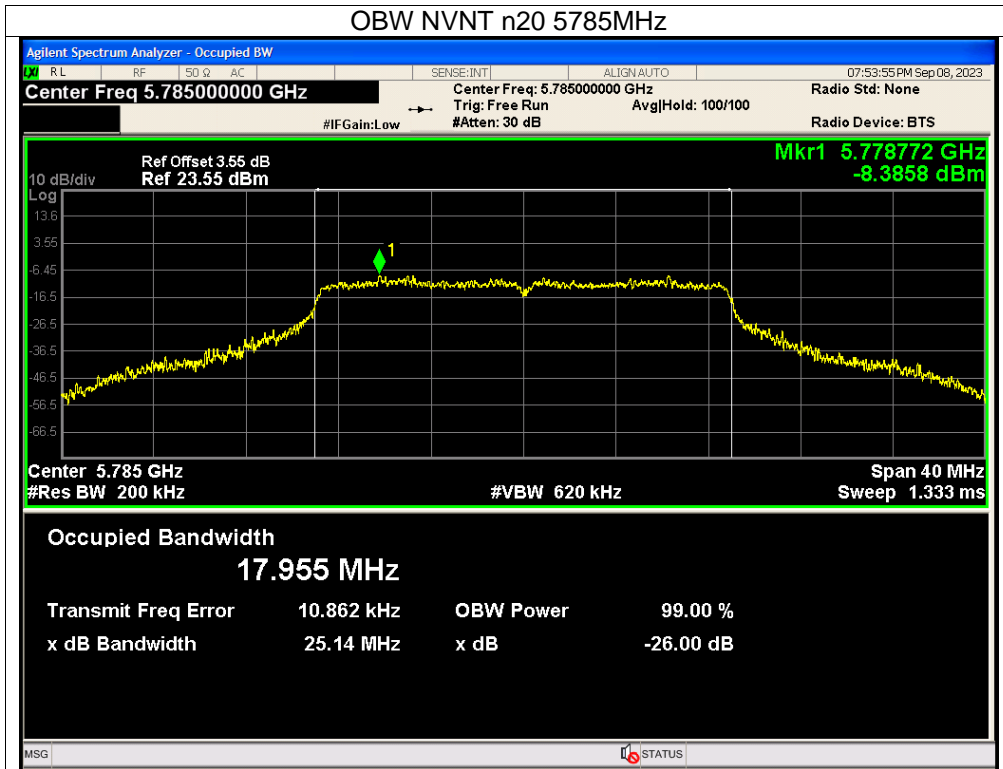


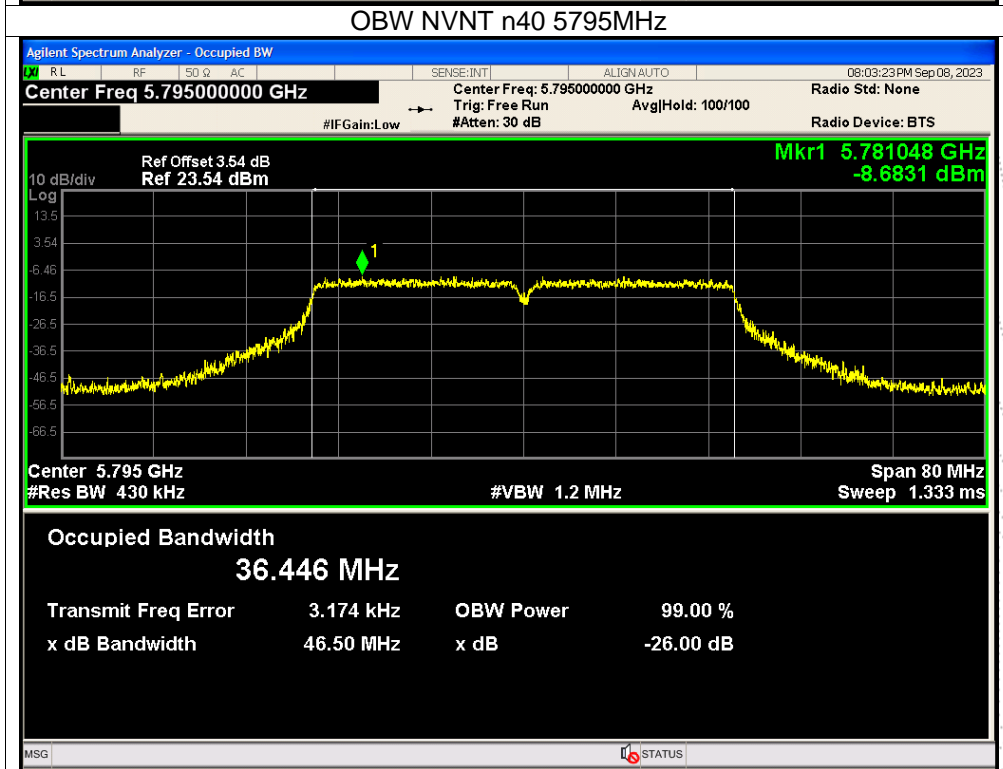
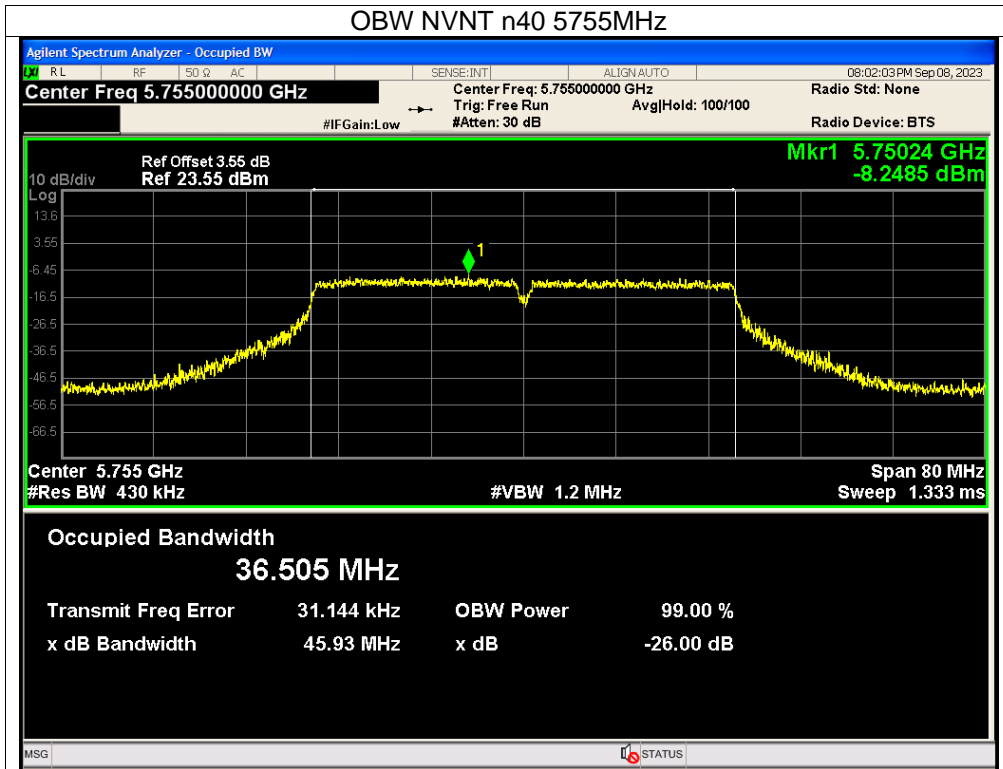


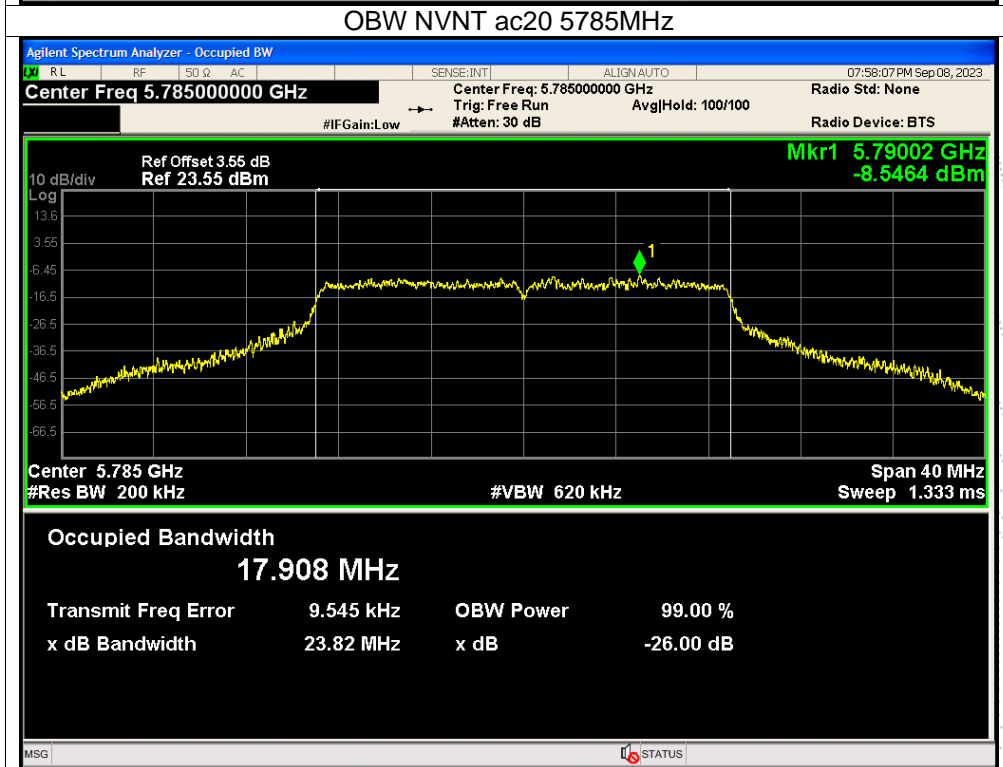
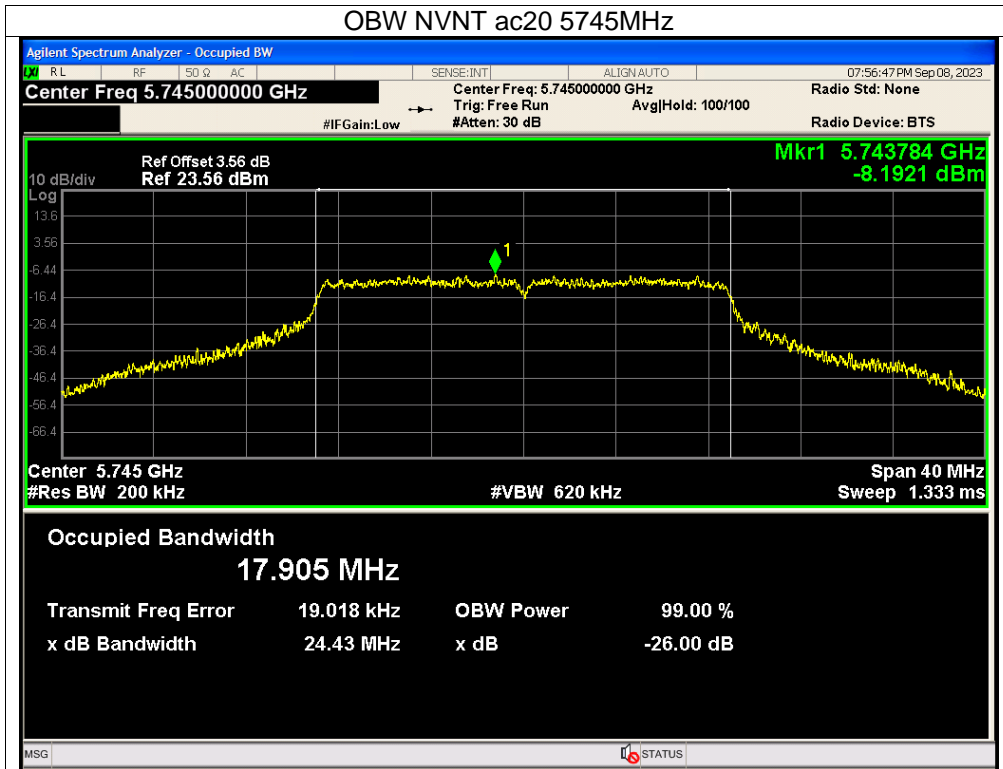


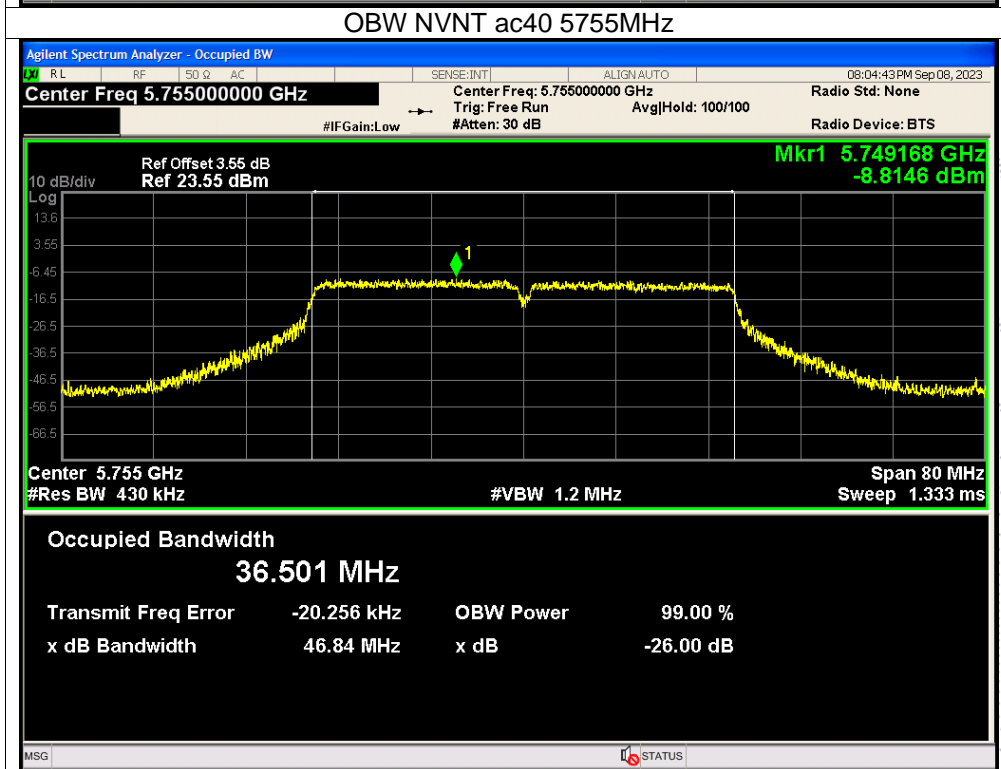
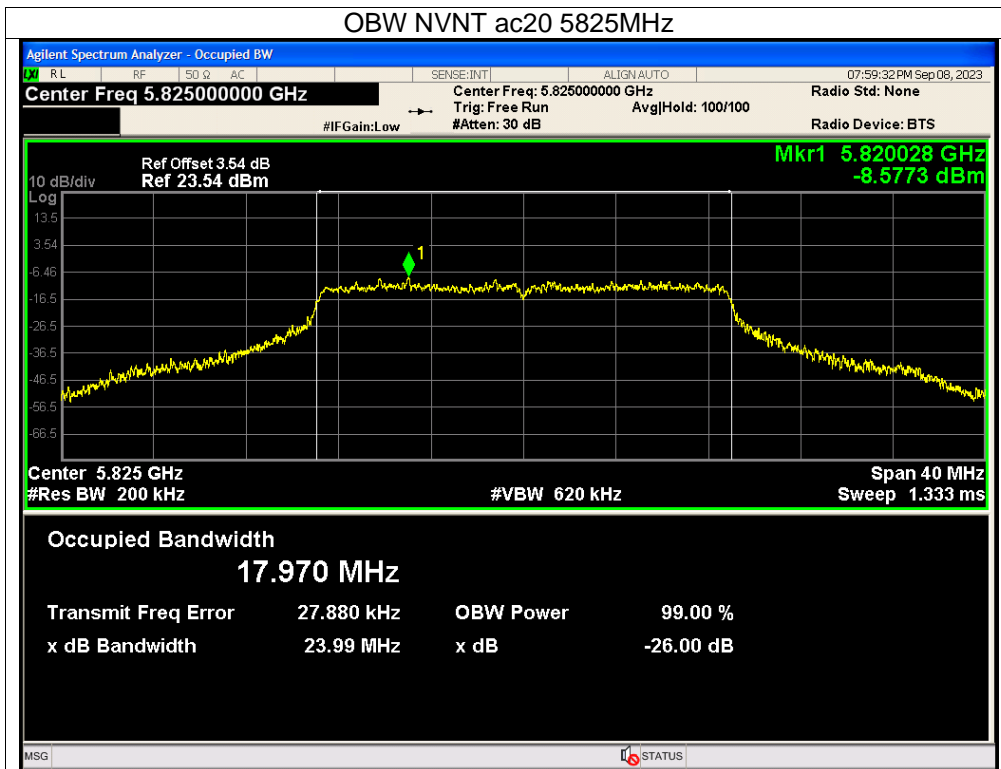


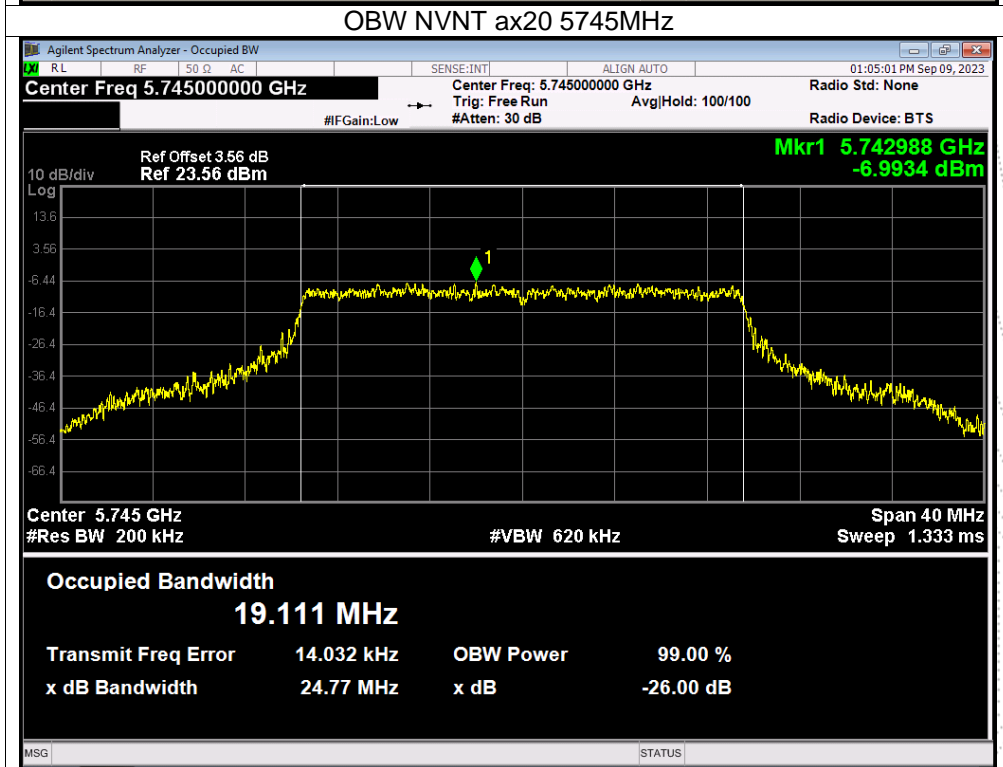
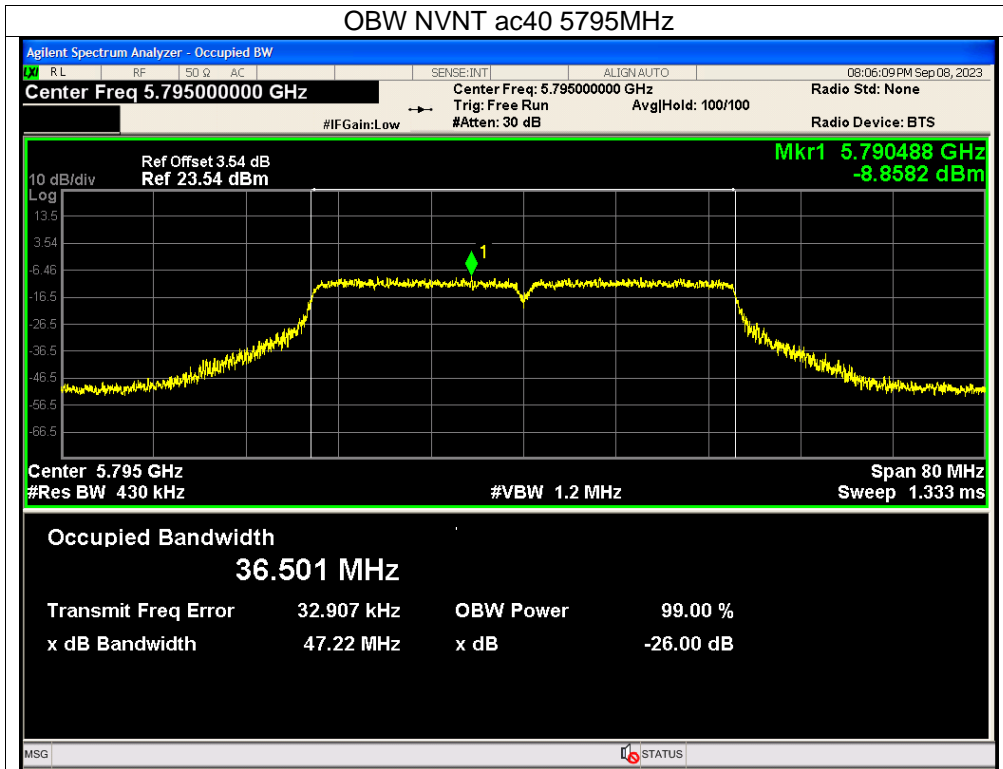


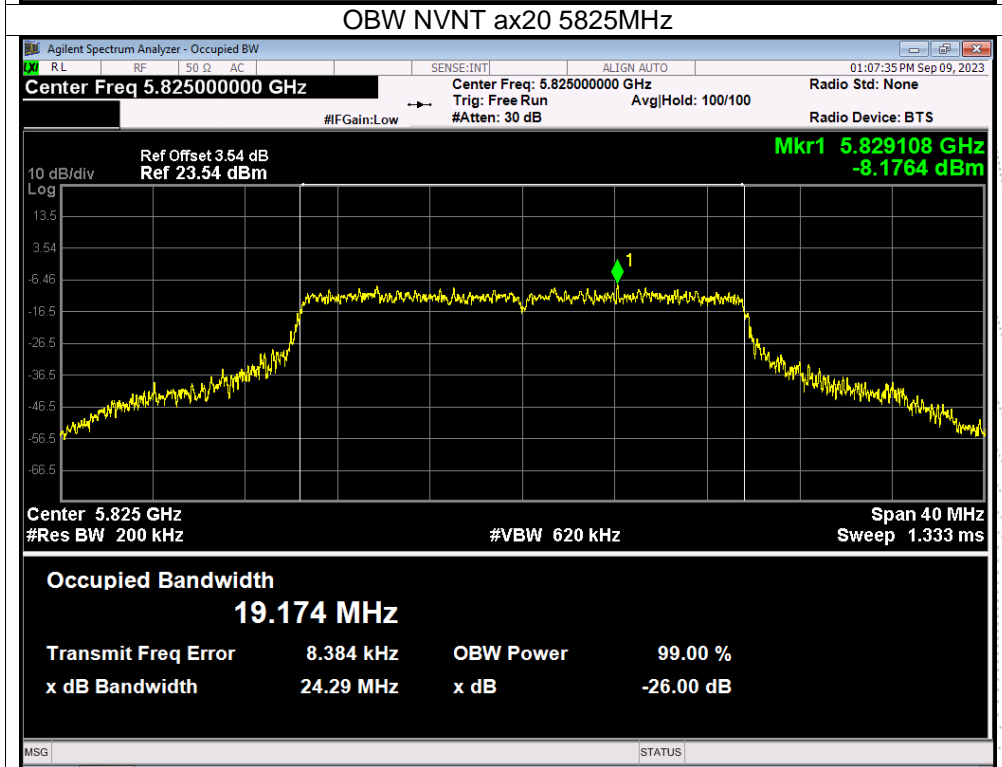
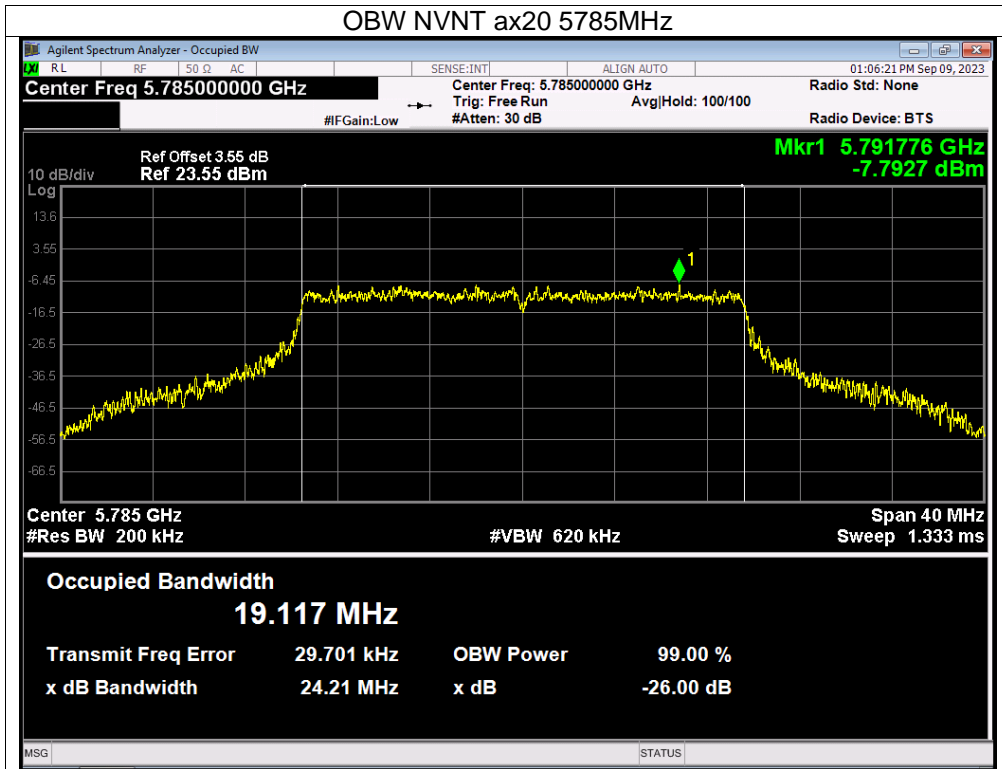


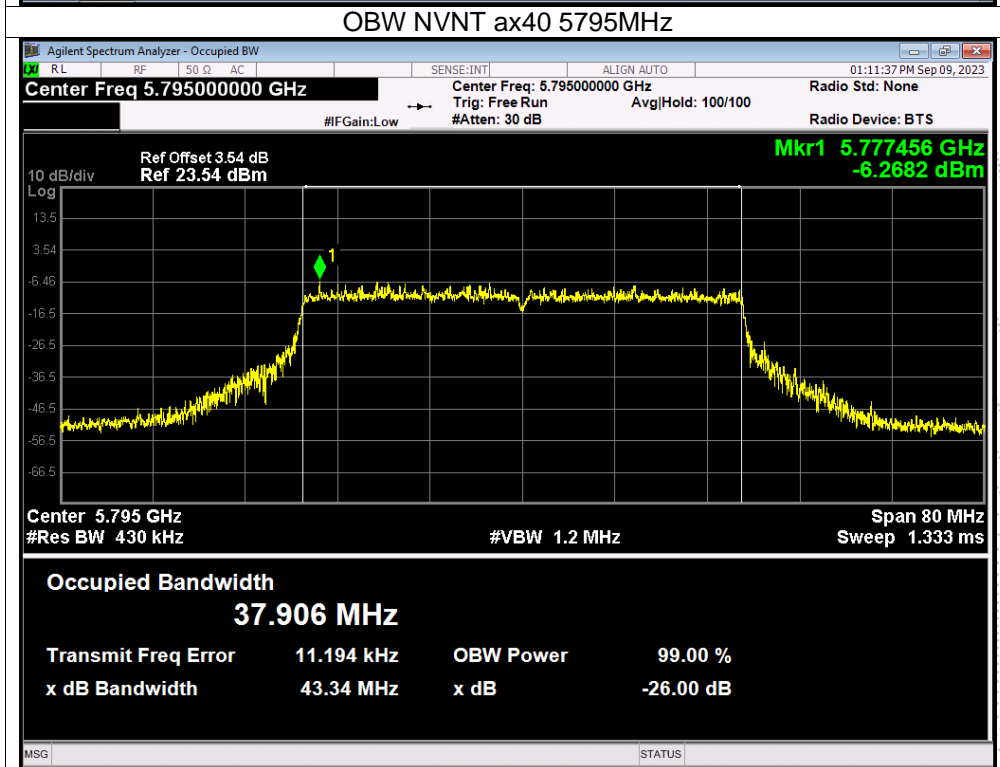
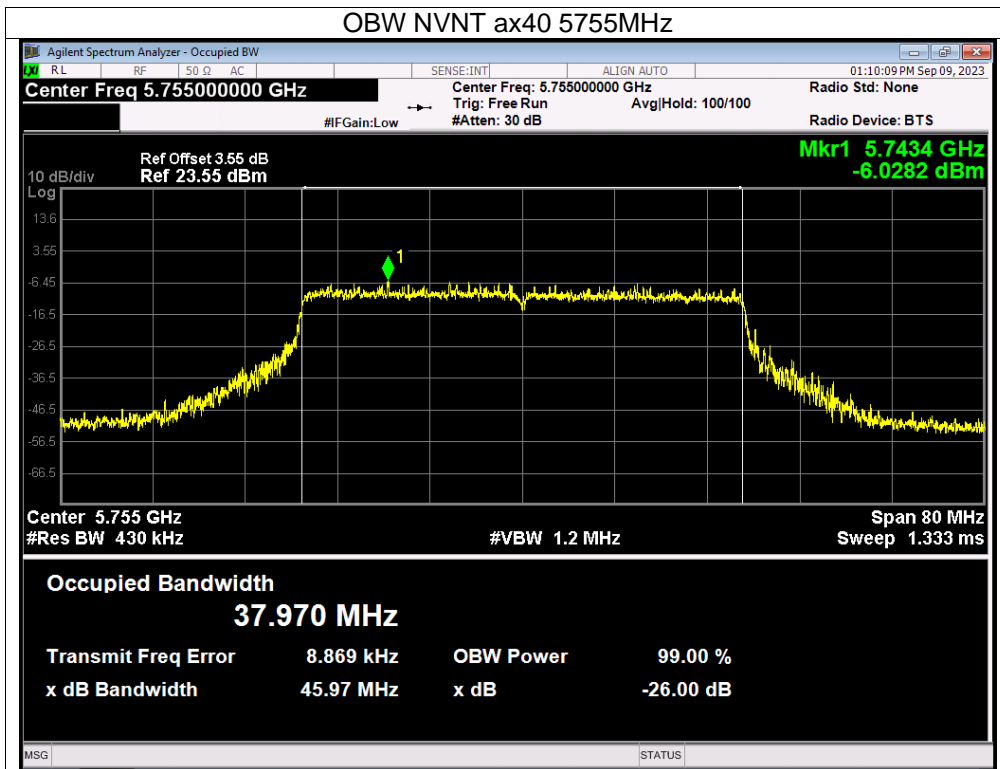














## 10. Maximum Conducted Output Power

### 10.1 Block Diagram Of Test Setup



### 10.2 Limit

#### According to FCC §15.407

The maximum conducted output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5725~5850	1W

### 10.3 Test Procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

#### 1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

#### 2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.<sup>1</sup> However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

- The EUT transmits continuously (or with a duty cycle  $\geq$  98 percent).
- Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) 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 percent.



(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW  $\geq$  3 MHz.

(iv) Number of points in sweep  $\geq$  2 Span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

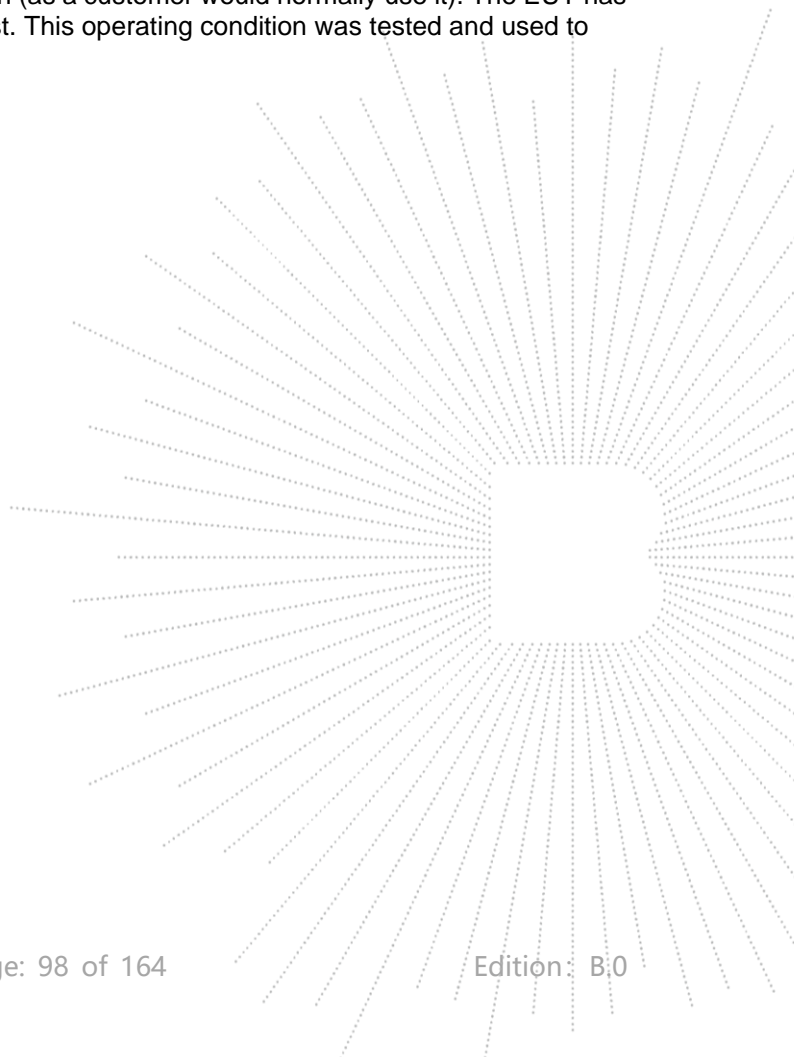
(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle  $\geq$  98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

## 10.4 EUT Operating Conditions

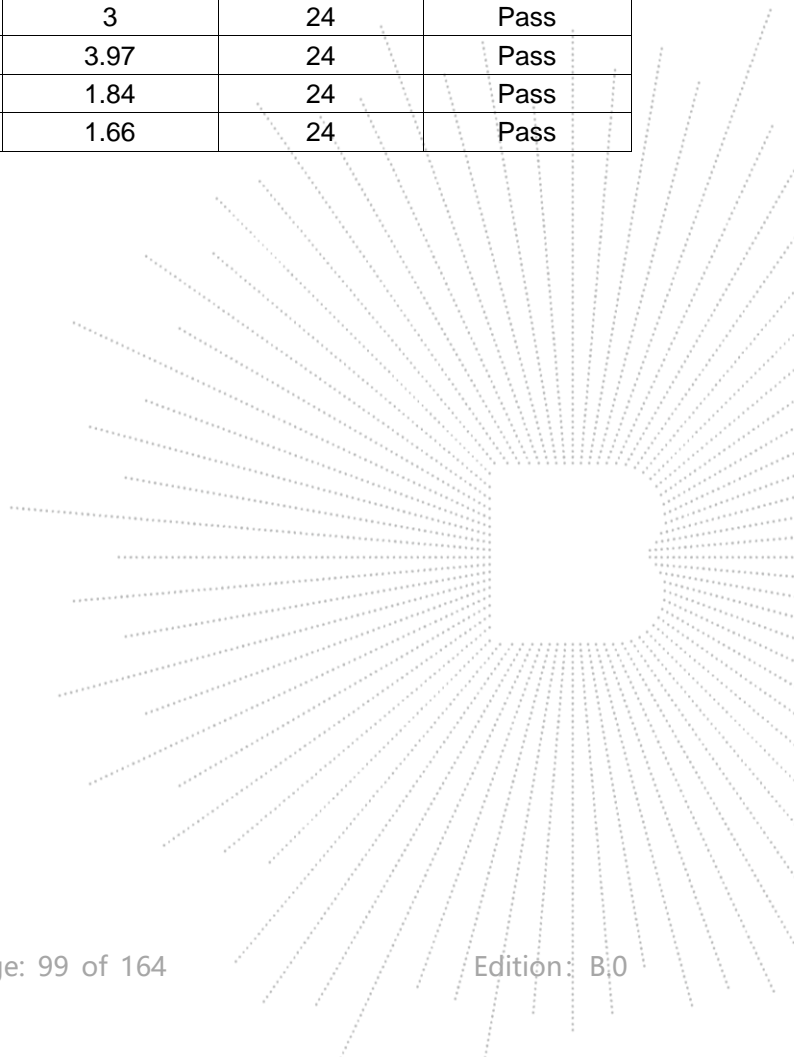
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



## 10.5 Test Result

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3.8V
Test Mode :	TX (5.1G) Mode Frequency U-NII-1 (5180-5240MHz)		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	4.16	24	Pass
NVNT	a	5200	2.87	24	Pass
NVNT	a	5240	3.18	24	Pass
NVNT	n20	5180	3.01	24	Pass
NVNT	n20	5200	2.75	24	Pass
NVNT	n20	5240	3.47	24	Pass
NVNT	n40	5190	2.25	24	Pass
NVNT	n40	5230	2.46	24	Pass
NVNT	ac20	5180	3.22	24	Pass
NVNT	ac20	5200	3.14	24	Pass
NVNT	ac20	5240	3.58	24	Pass
NVNT	ac40	5190	2.56	24	Pass
NVNT	ac40	5230	2.29	24	Pass
NVNT	ax20	5180	3.28	24	Pass
NVNT	ax20	5200	3	24	Pass
NVNT	ax20	5240	3.97	24	Pass
NVNT	ax40	5190	1.84	24	Pass
NVNT	ax40	5230	1.66	24	Pass



Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 3.8V
Test Mode :	TX (5.8G) Mode Frequency U-NII-3 (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	3.89	30	Pass
NVNT	a	5785	3.46	30	Pass
NVNT	a	5825	2.68	30	Pass
NVNT	n20	5745	2.96	30	Pass
NVNT	n20	5785	1.98	30	Pass
NVNT	n20	5825	1.58	30	Pass
NVNT	n40	5755	1.79	30	Pass
NVNT	n40	5795	1.52	30	Pass
NVNT	ac20	5745	2.55	30	Pass
NVNT	ac20	5785	1.83	30	Pass
NVNT	ac20	5825	1.53	30	Pass
NVNT	ac40	5755	1.73	30	Pass
NVNT	ac40	5795	1.62	30	Pass
NVNT	ax20	5745	2.79	30	Pass
NVNT	ax20	5785	1.84	30	Pass
NVNT	ax20	5825	0.93	30	Pass
NVNT	ax40	5755	2.1	30	Pass
NVNT	ax40	5795	1.31	30	Pass

