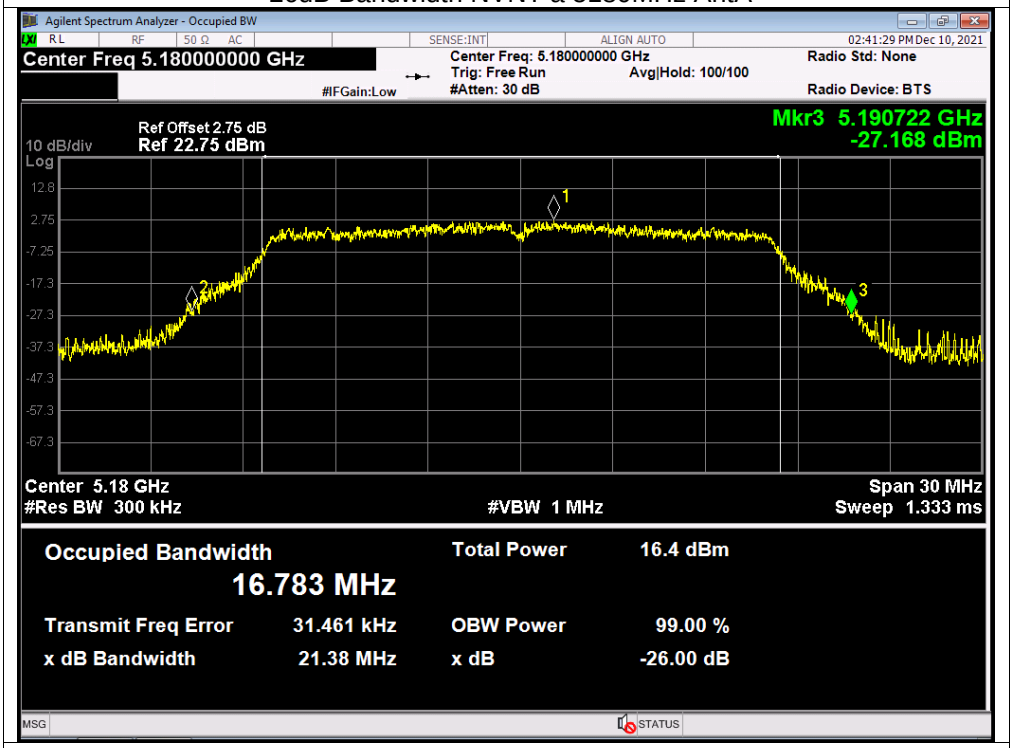
Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	26dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH36	5180	16.577	21.451	N/A	Pass
	CH40	5200	16.535	21.34	N/A	Pass
	CH48	5240	16.568	21.466	N/A	Pass
802.11 n20	CH36	5180	17.719	21.294	N/A	Pass
	CH40	5200	17.737	21.26	N/A	Pass
	CH48	5240	17.727	21.502	N/A	Pass
802.11 n40	CH 38	5190	36.276	39.523	N/A	Pass
	CH 46	5230	36.3	39.79	N/A	Pass
802.11 ac20	CH36	5180	17.708	21.231	N/A	Pass
	CH40	5200	17.731	21.667	N/A	Pass
	CH48	5240	17.722	21.45	N/A	Pass
802.11 ac40	CH 38	5190	36.313	39.575	N/A	Pass
	CH 46	5230	36.28	39.467	N/A	Pass
802.11 AC80	CH 42	5210	75.73	80.22	N/A	Pass

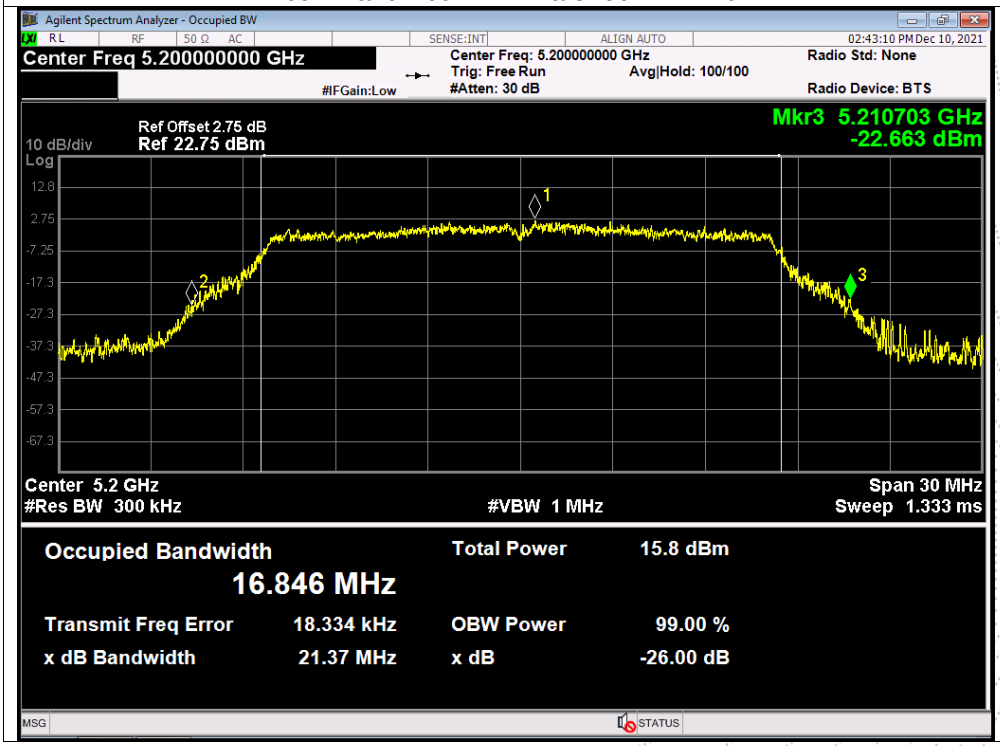
-26dB Bandwidth

Test Graphs

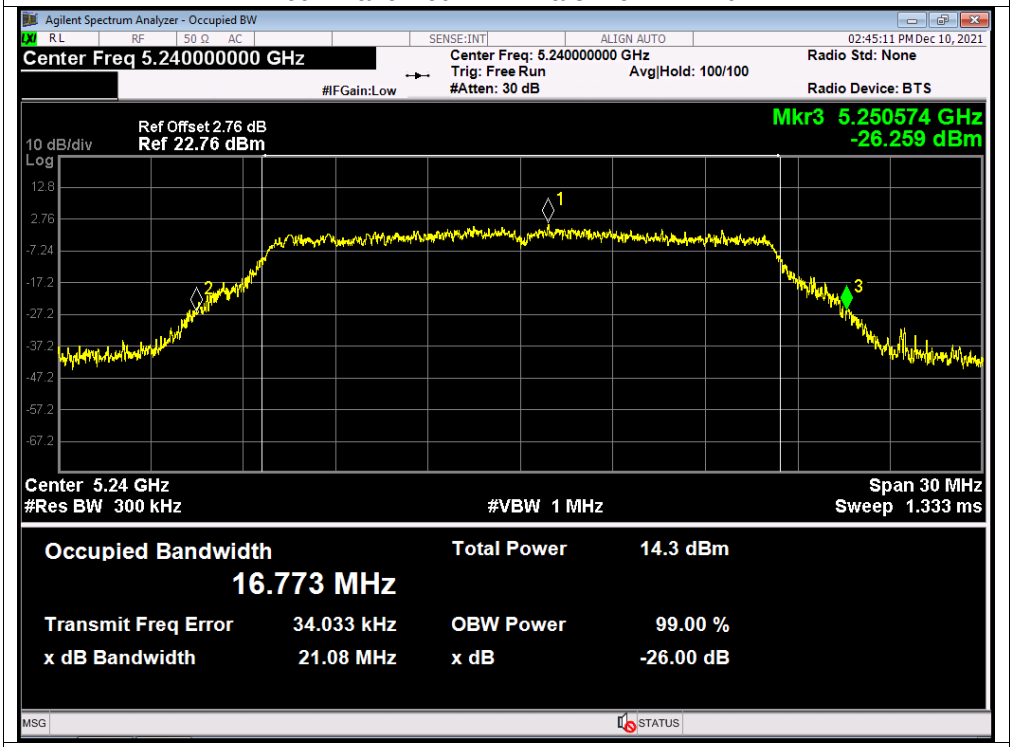
-26dB Bandwidth NVNT a 5180MHz AntA



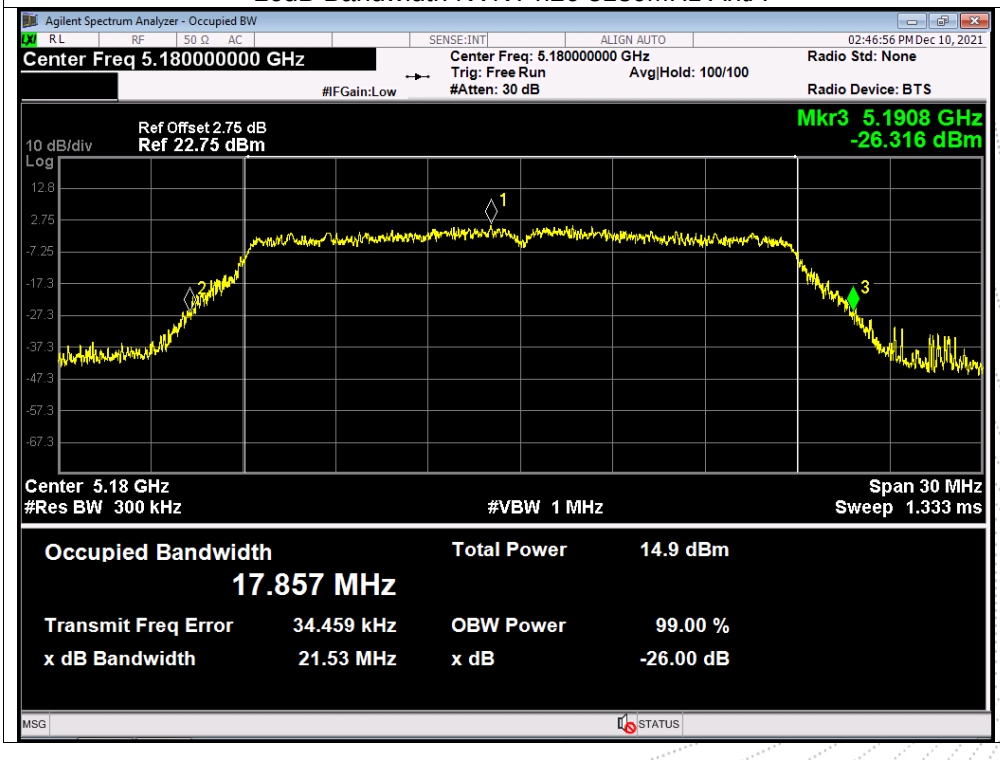
-26dB Bandwidth NVNT a 5200MHz AntA



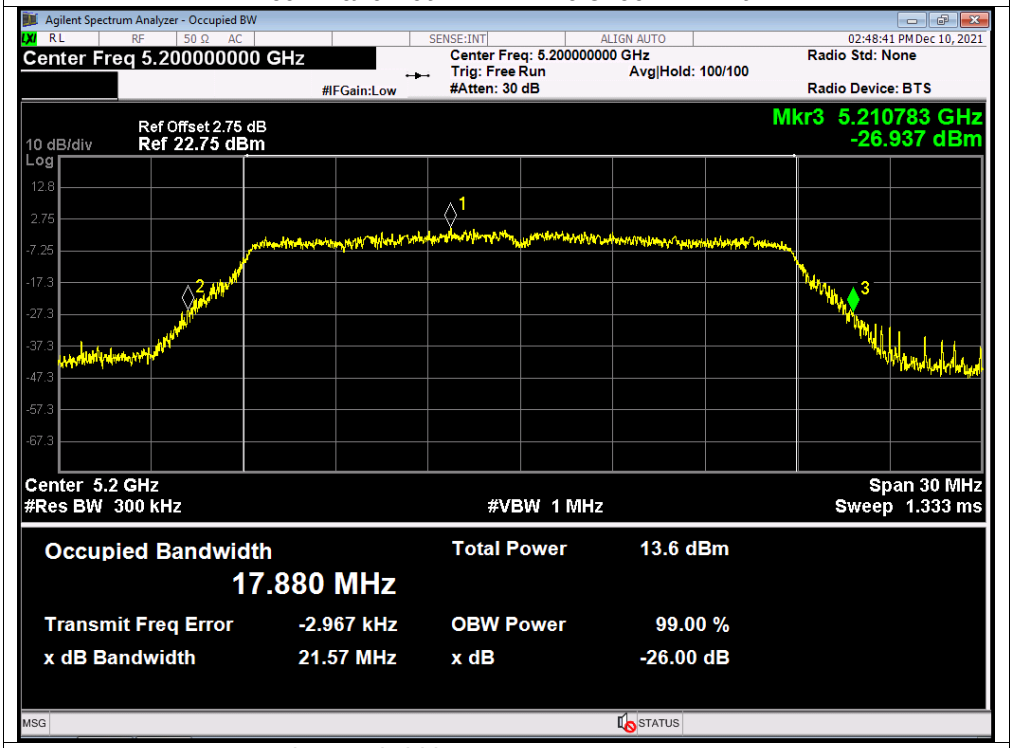
-26dB Bandwidth NVNT a 5240MHz AntA



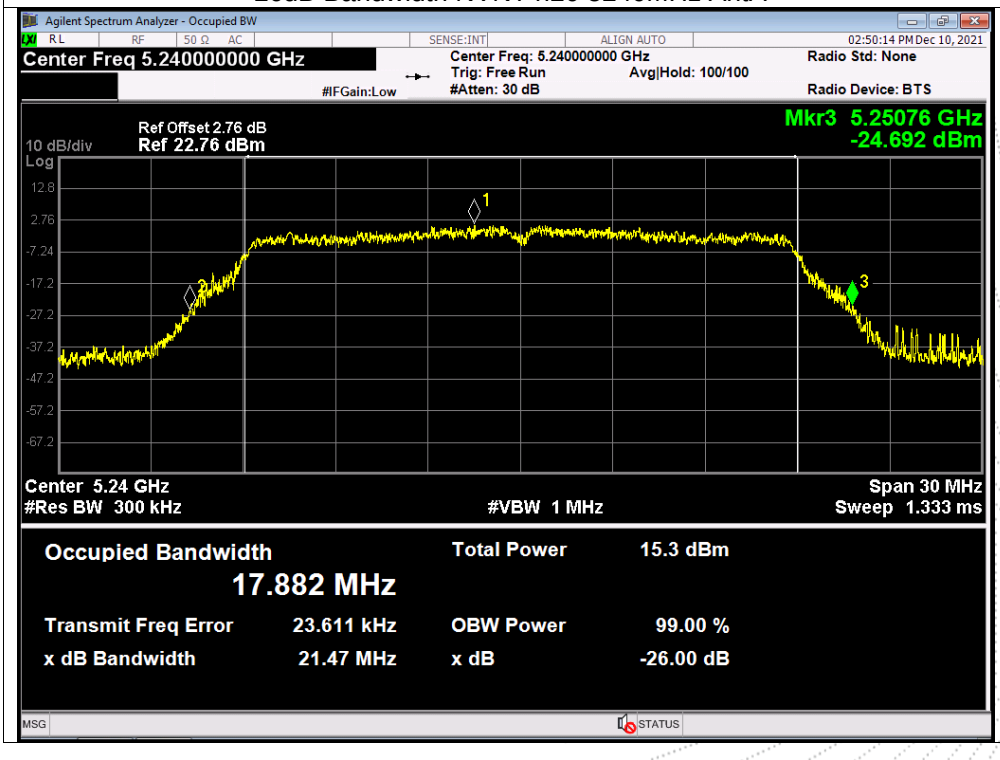
-26dB Bandwidth NVNT n20 5180MHz AntA



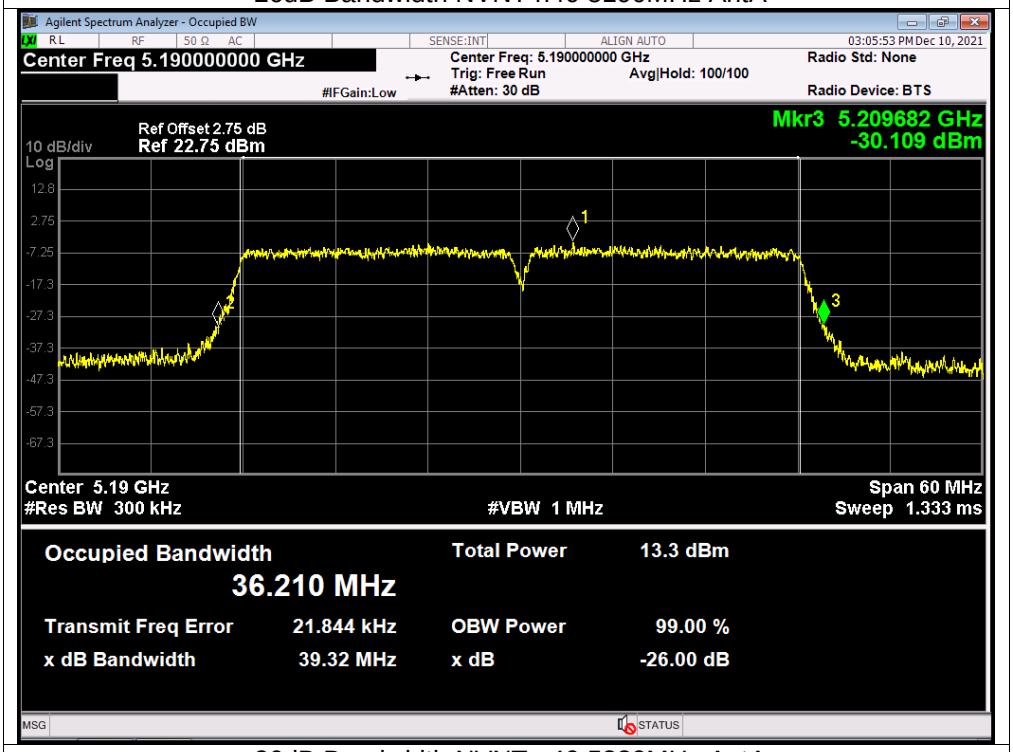
-26dB Bandwidth NVNT n20 5200MHz AntA



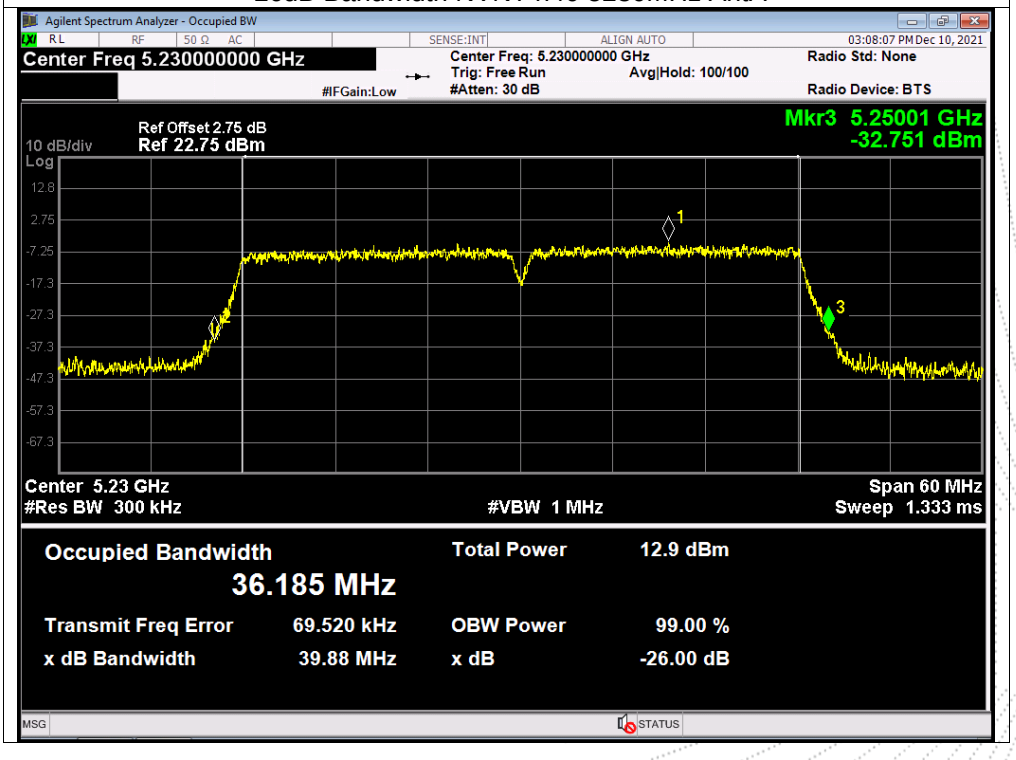
-26dB Bandwidth NVNT n20 5240MHz AntA



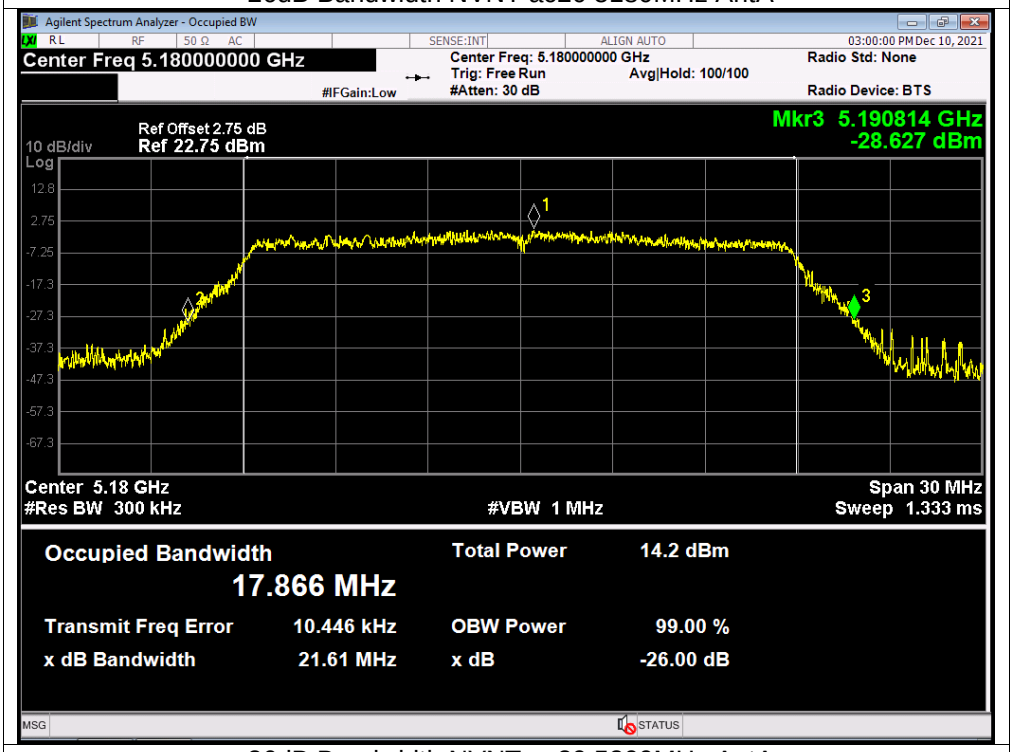
-26dB Bandwidth NVNT n40 5190MHz AntA



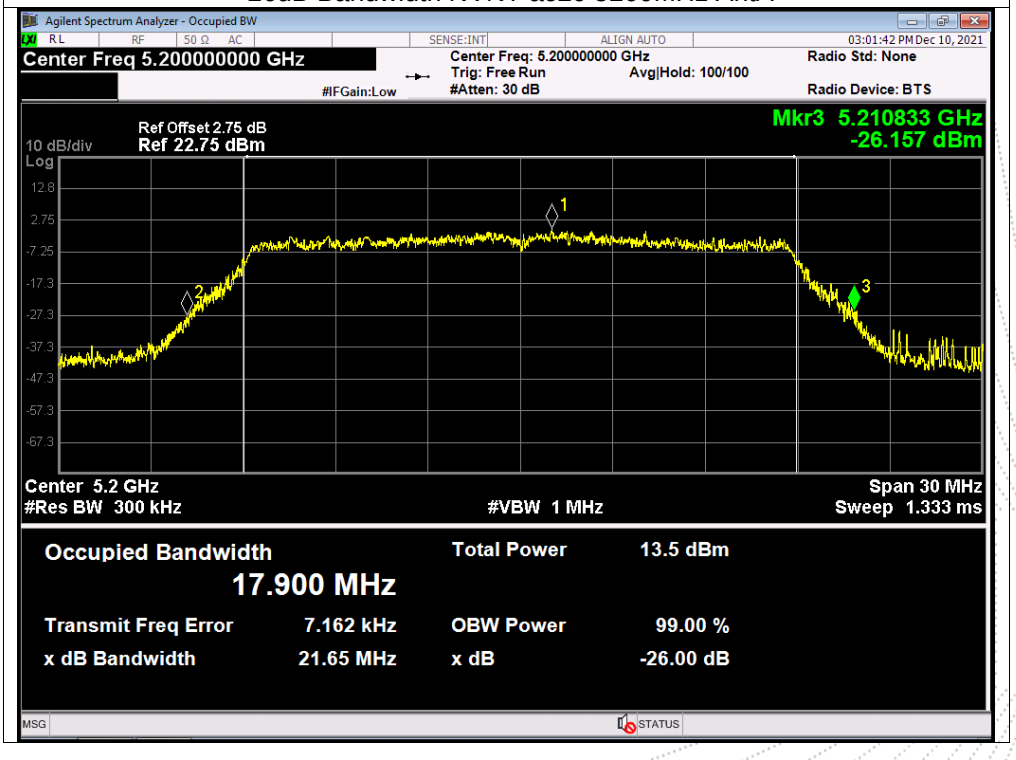
-26dB Bandwidth NVNT n40 5230MHz AntA



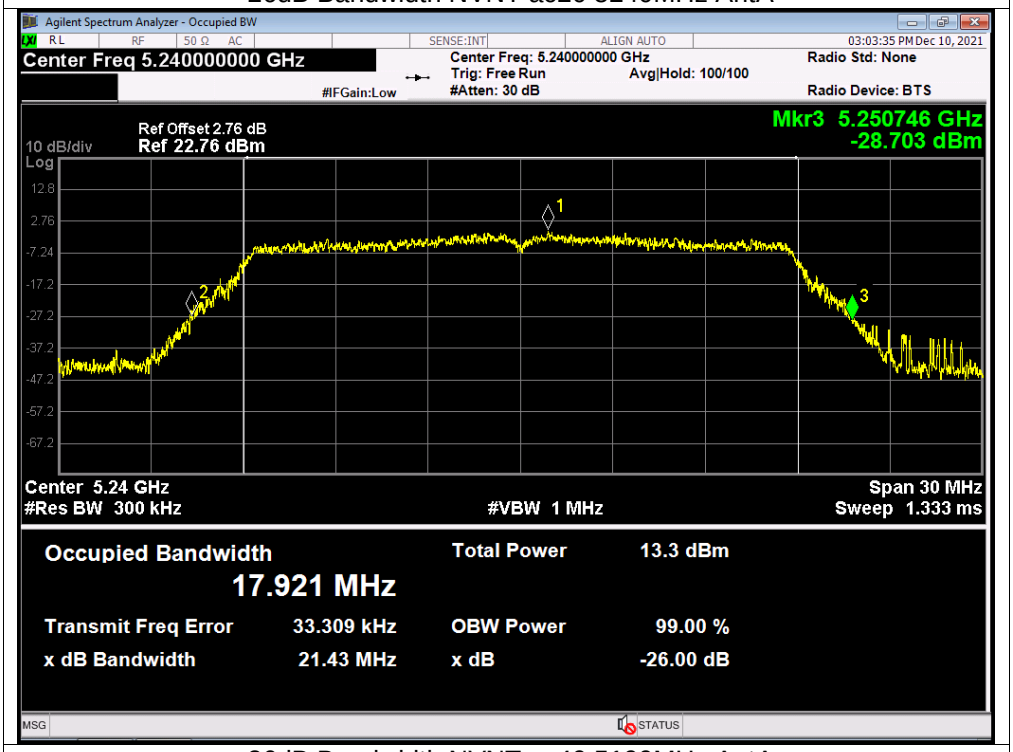
-26dB Bandwidth NVNT ac20 5180MHz AntA



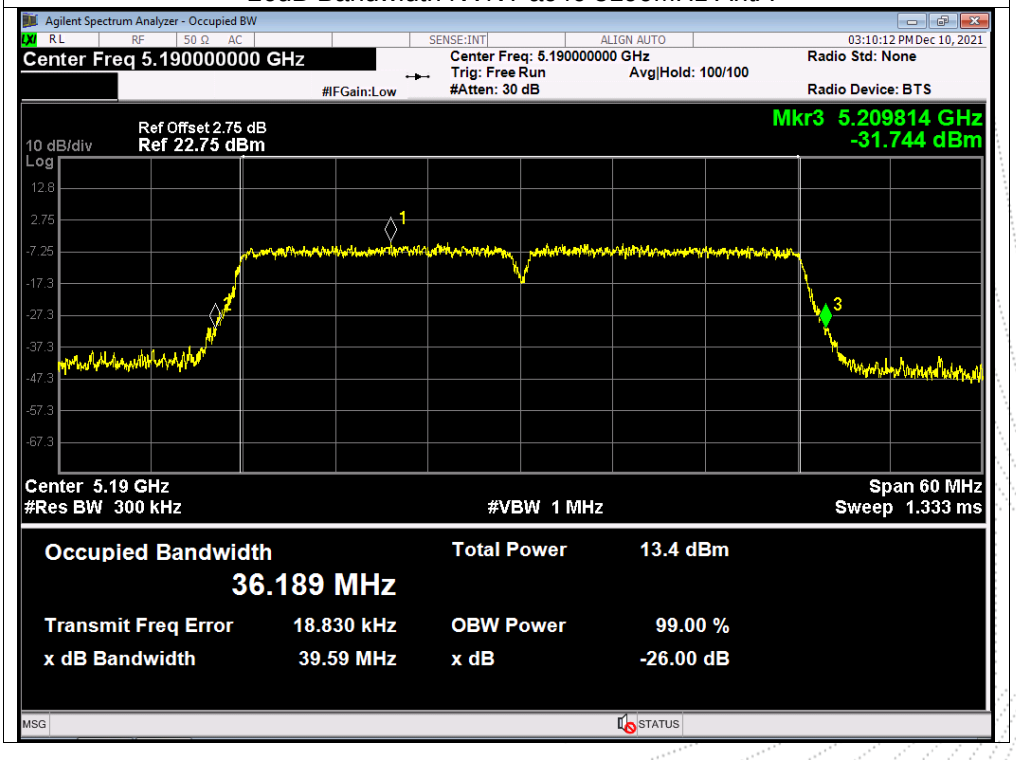
-26dB Bandwidth NVNT ac20 5200MHz AntA



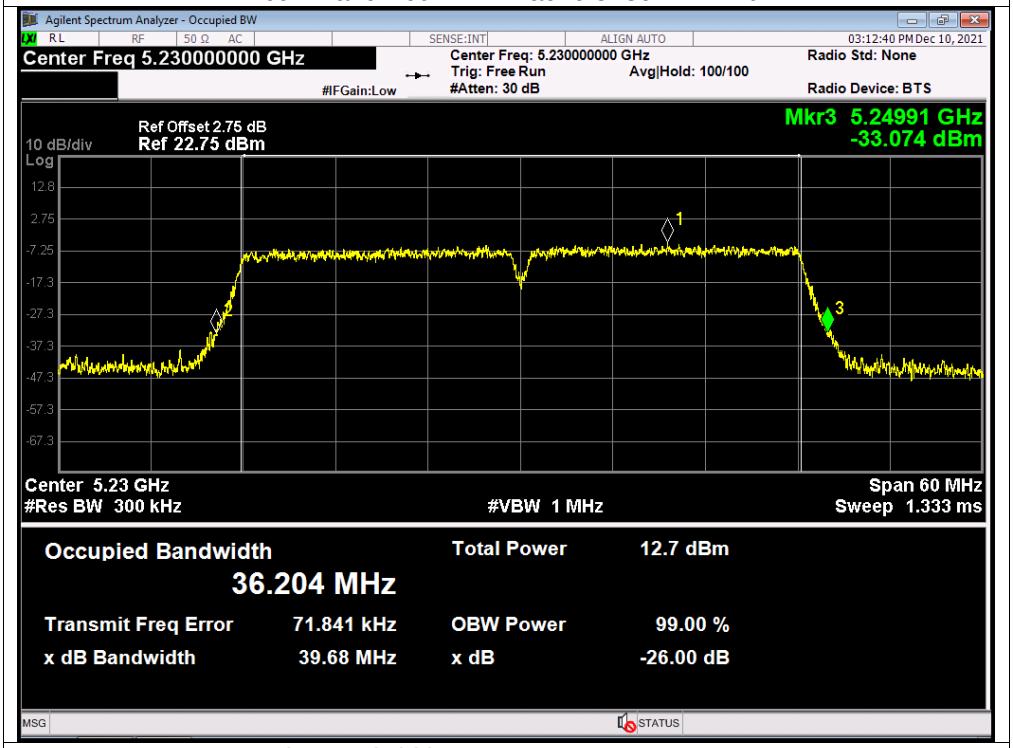
-26dB Bandwidth NVNT ac20 5240MHz AntA



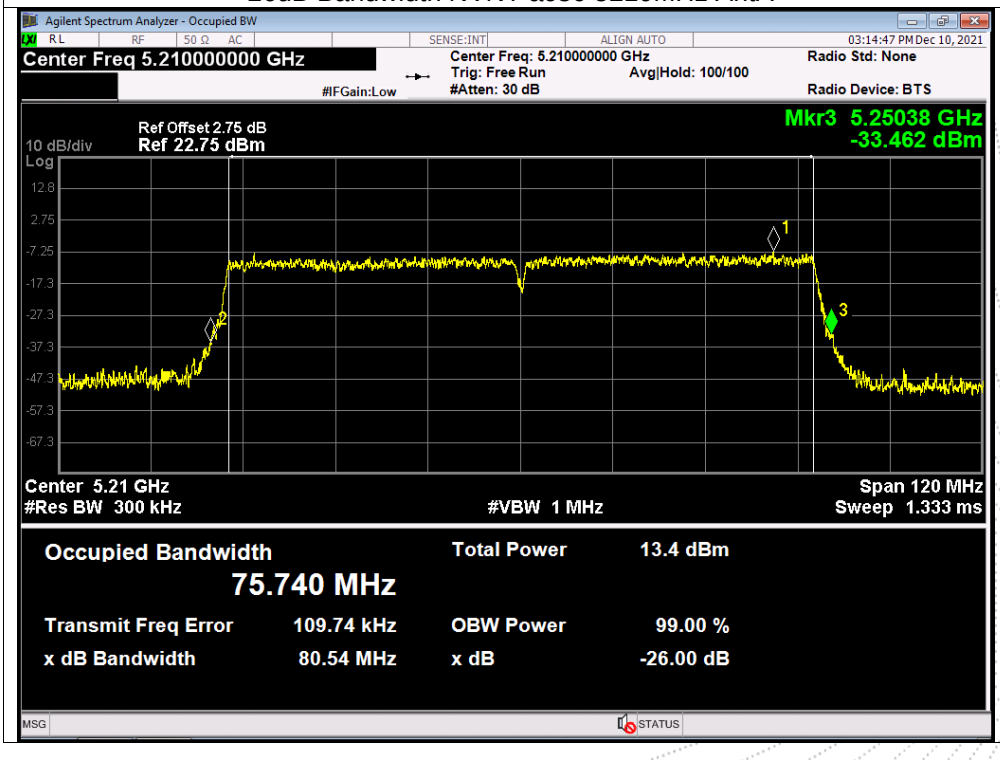
-26dB Bandwidth NVNT ac40 5190MHz AntA



-26dB Bandwidth NVNT ac40 5230MHz AntA



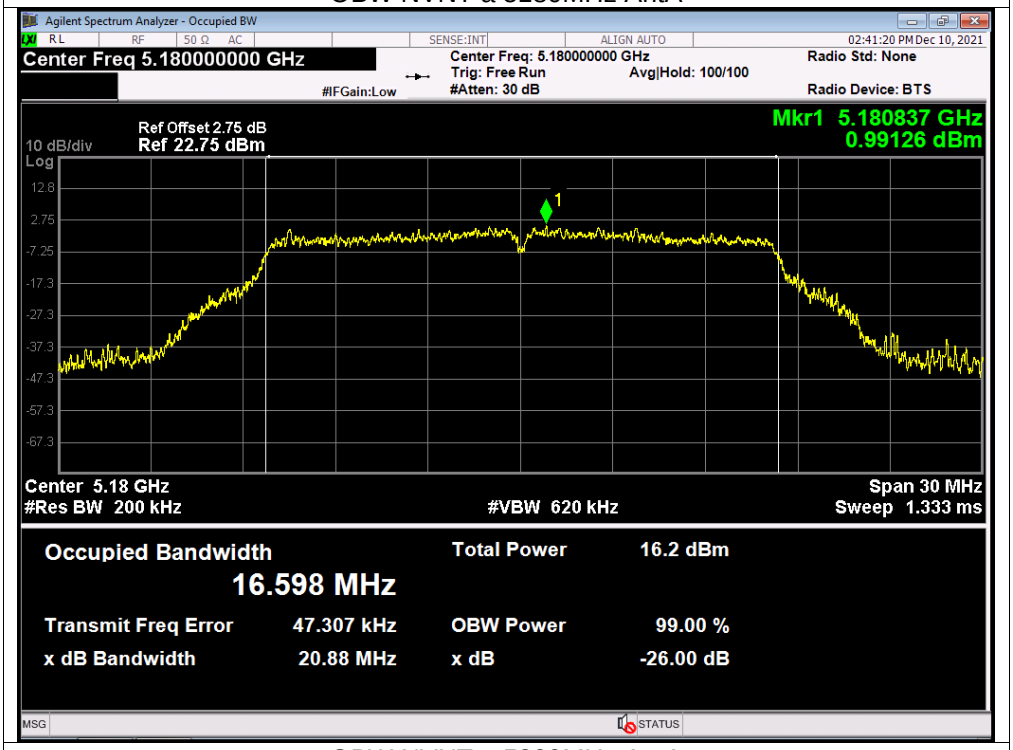
-26dB Bandwidth NVNT ac80 5210MHz AntA



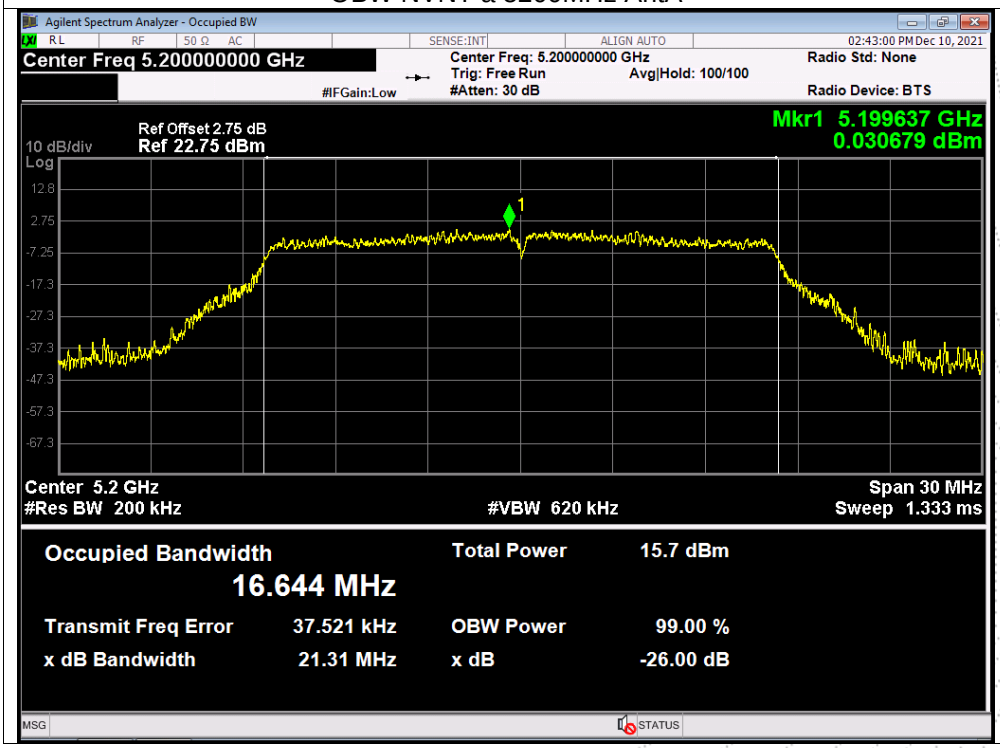
99% OBW

Test Graphs

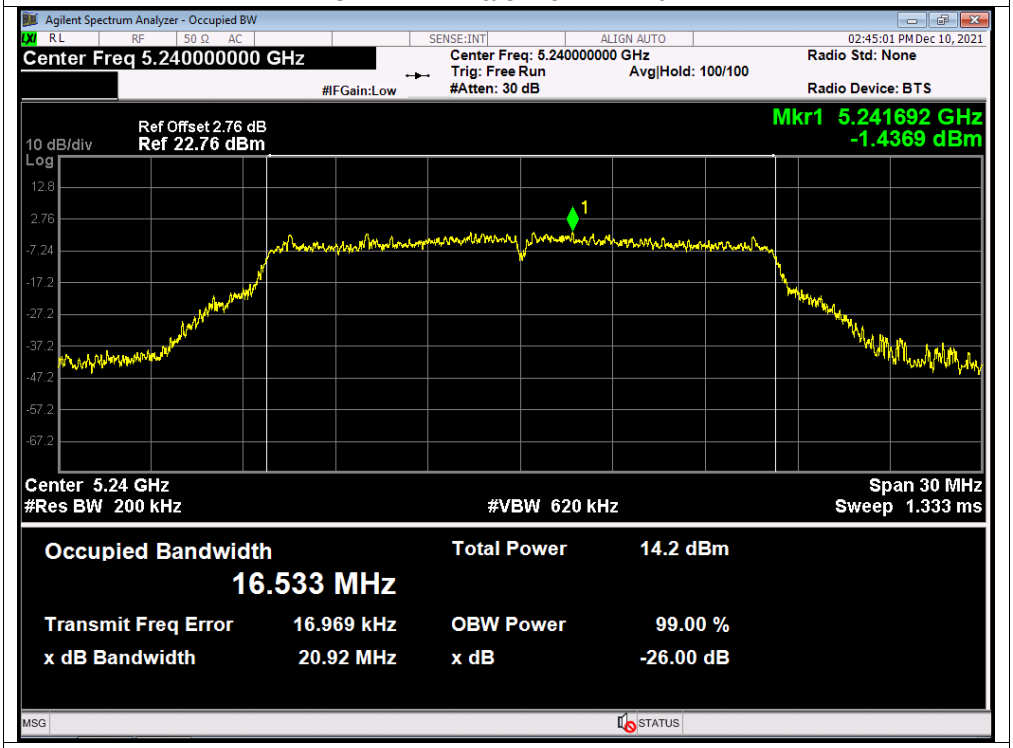
OBW NVNT a 5180MHz AntA



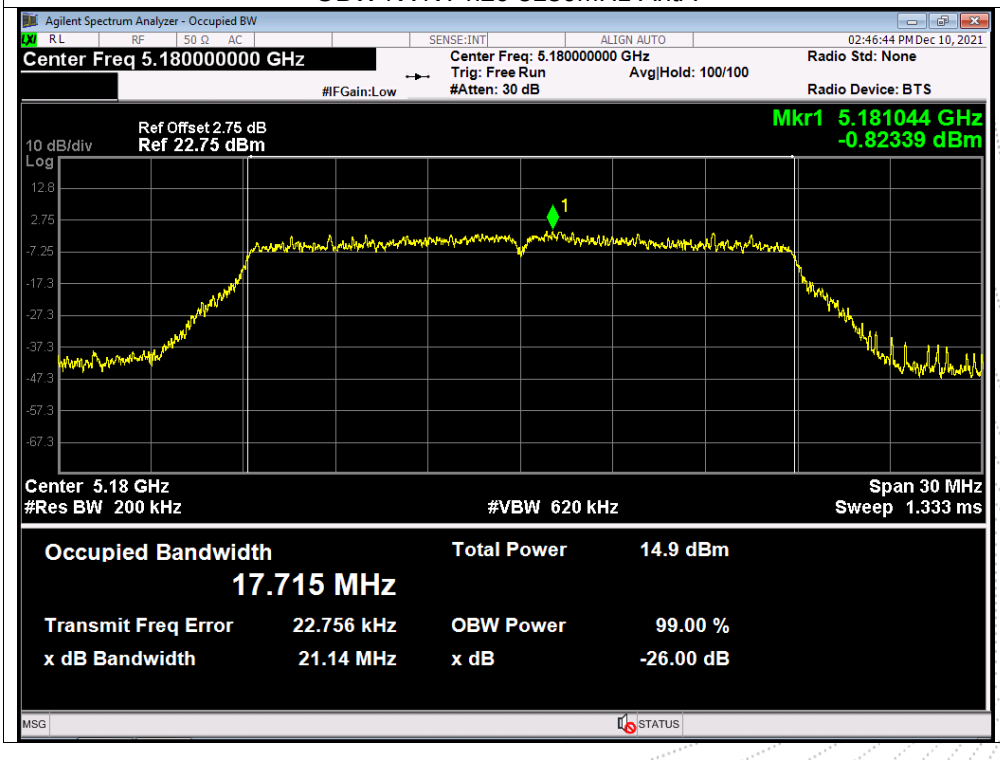
OBW NVNT a 5200MHz AntA



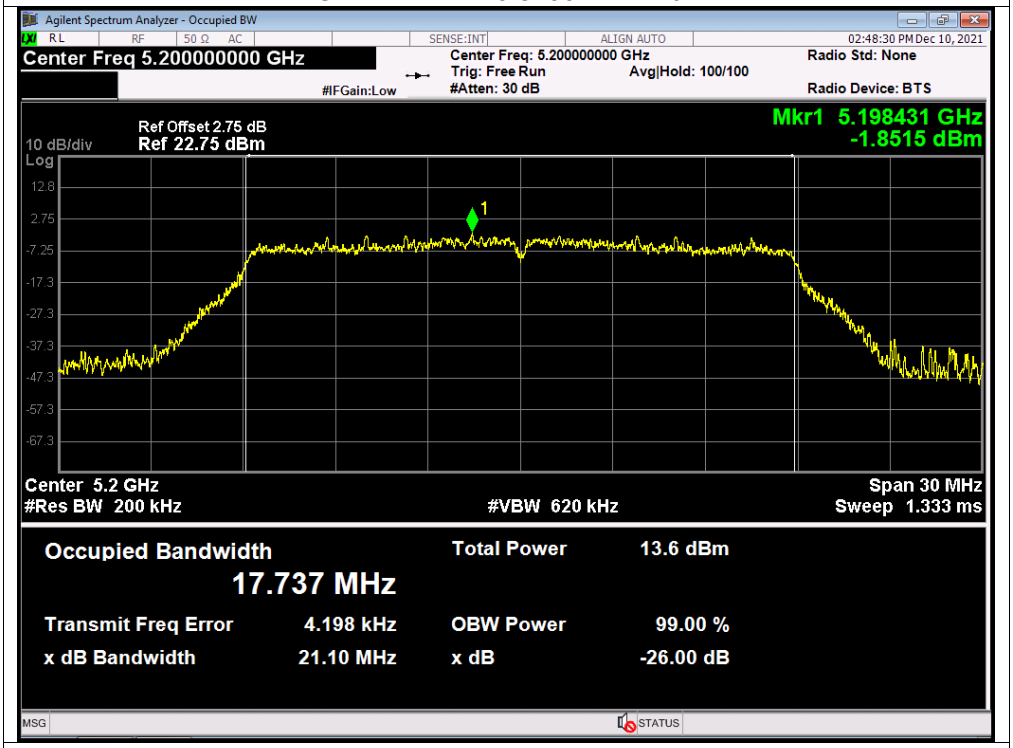
OBW NVNT a 5240MHz AntA



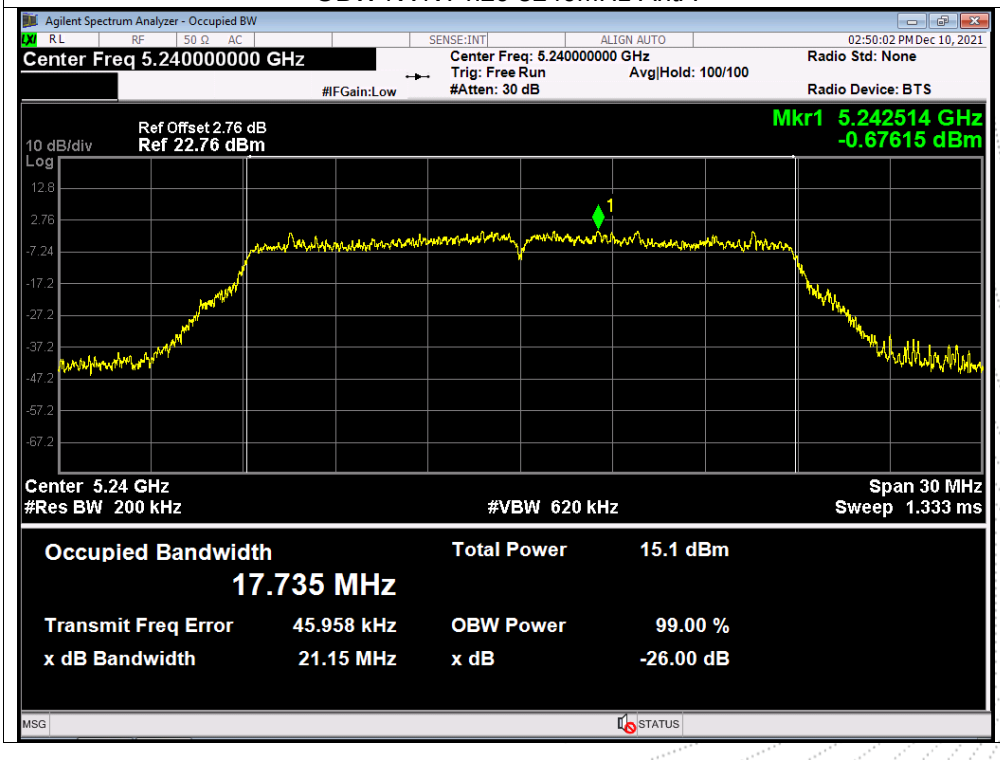
OBW NVNT n20 5180MHz AntA



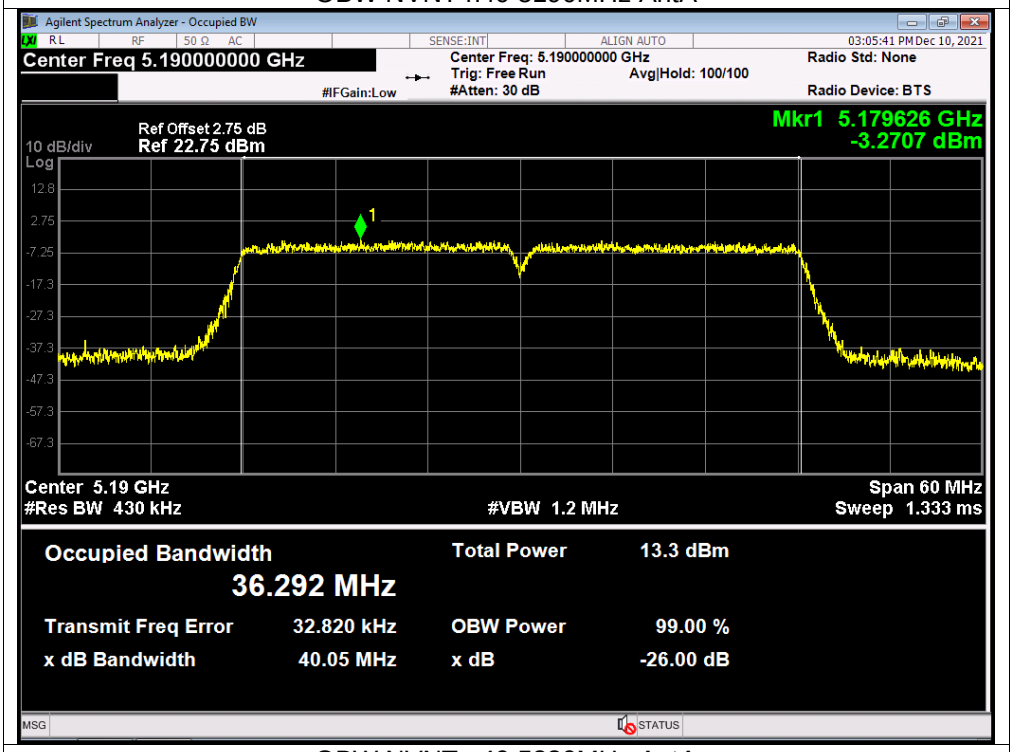
OBW NVNT n20 5200MHz AntA



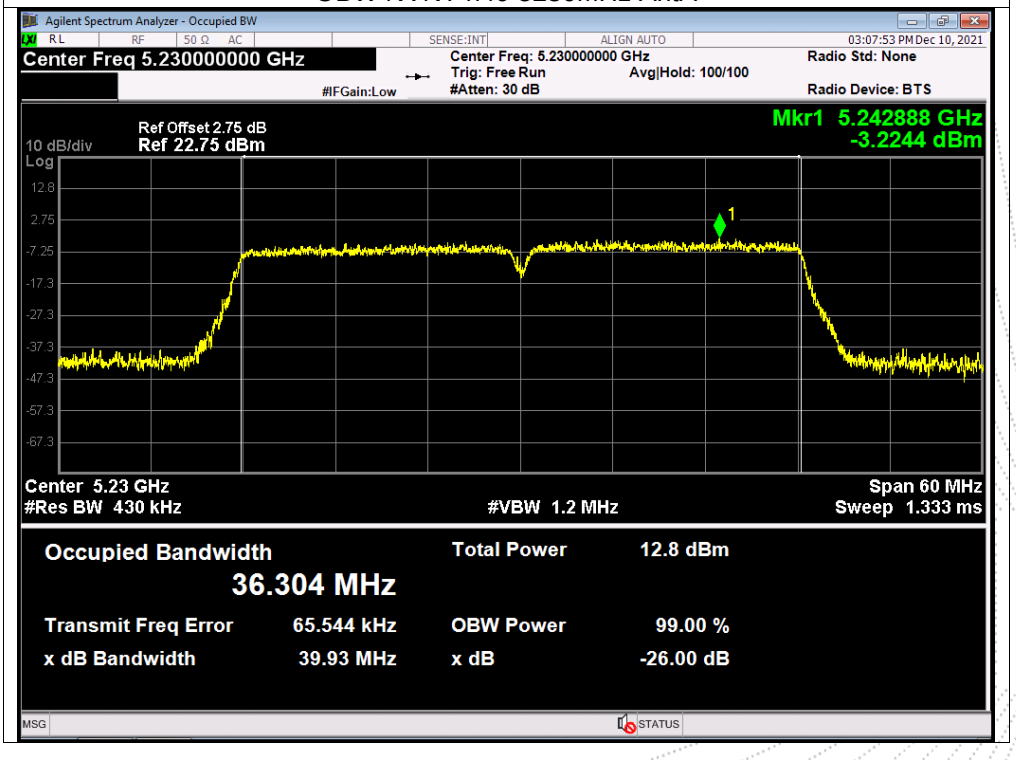
OBW NVNT n20 5240MHz AntA



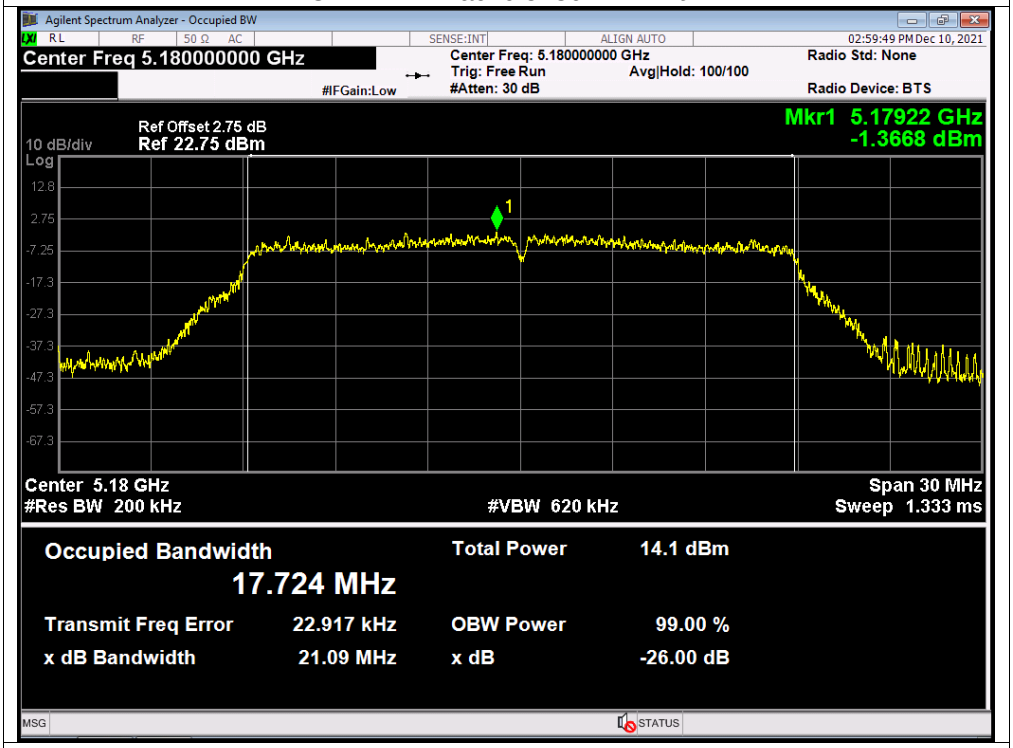
OBW NVNT n40 5190MHz AntA



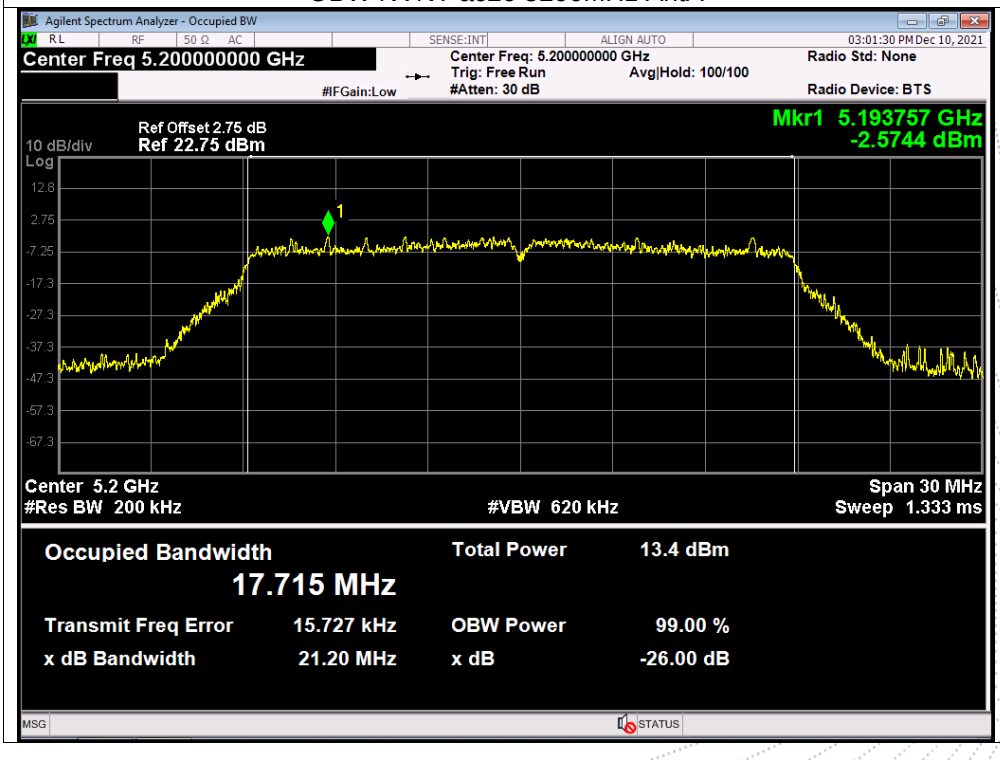
OBW NVNT n40 5230MHz AntA



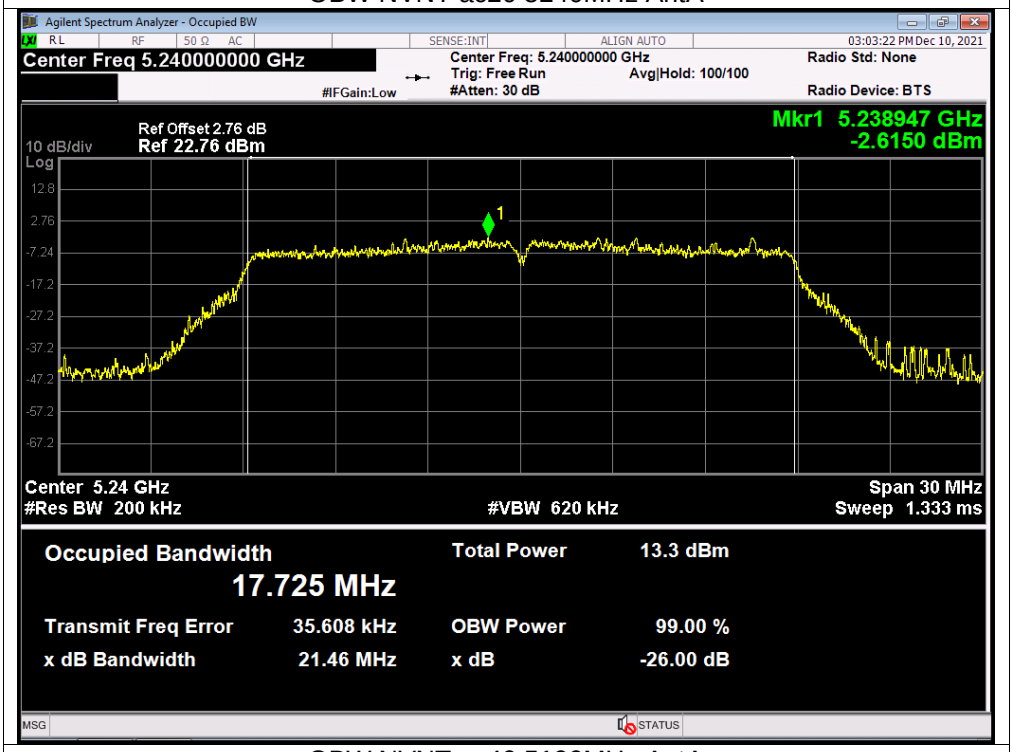
OBW NVNT ac20 5180MHz AntA



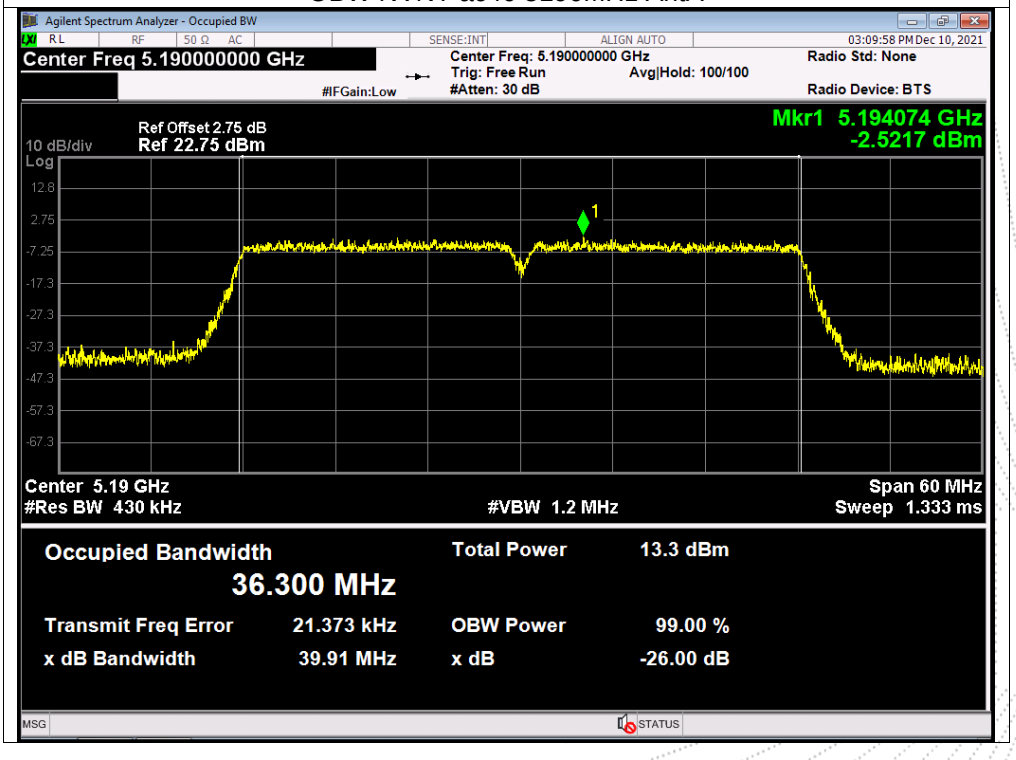
OBW NVNT ac20 5200MHz AntA



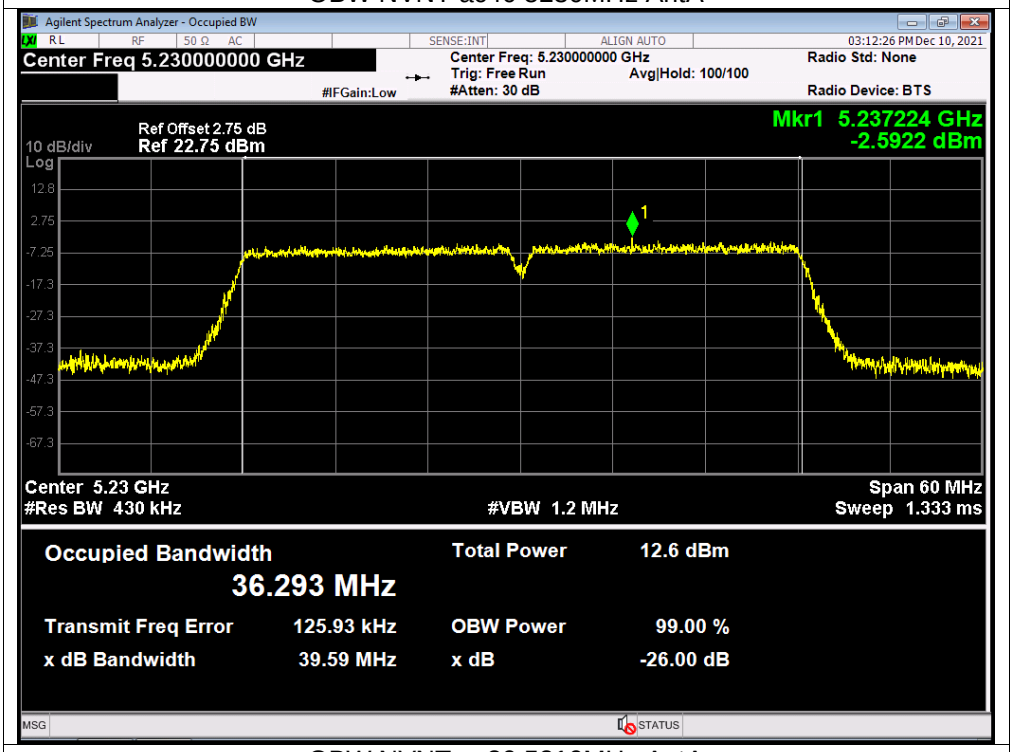
OBW NVNT ac20 5240MHz AntA



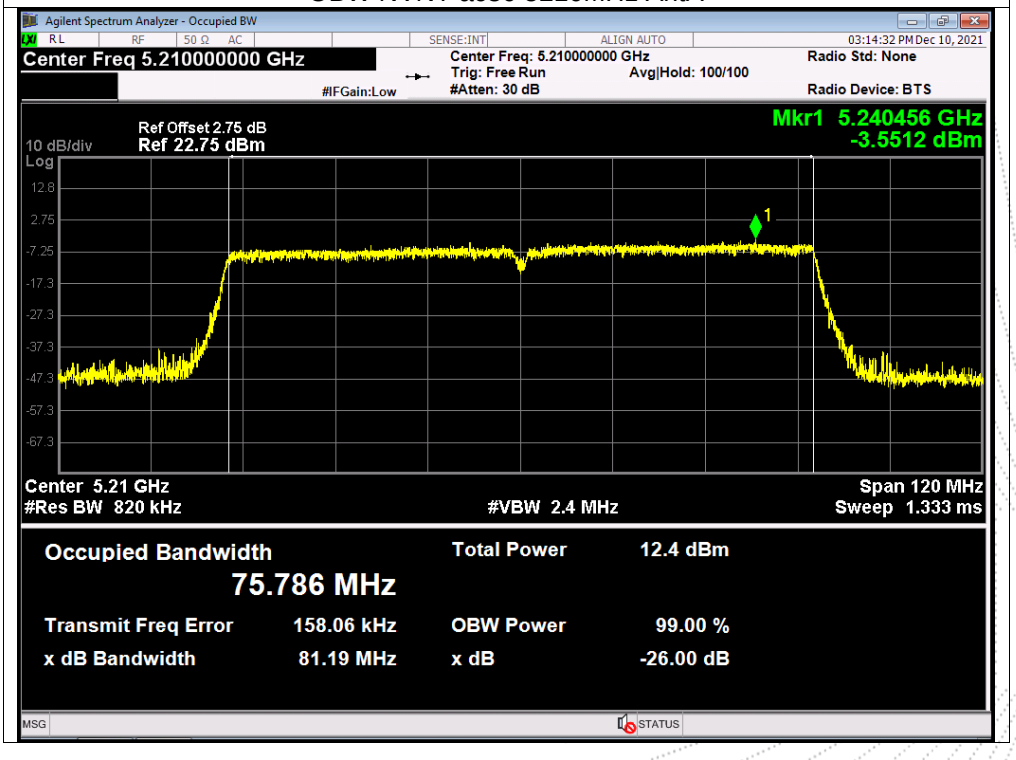
OBW NVNT ac40 5190MHz AntA



OBW NVNT ac40 5230MHz AntA



OBW NVNT ac80 5210MHz AntA



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

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

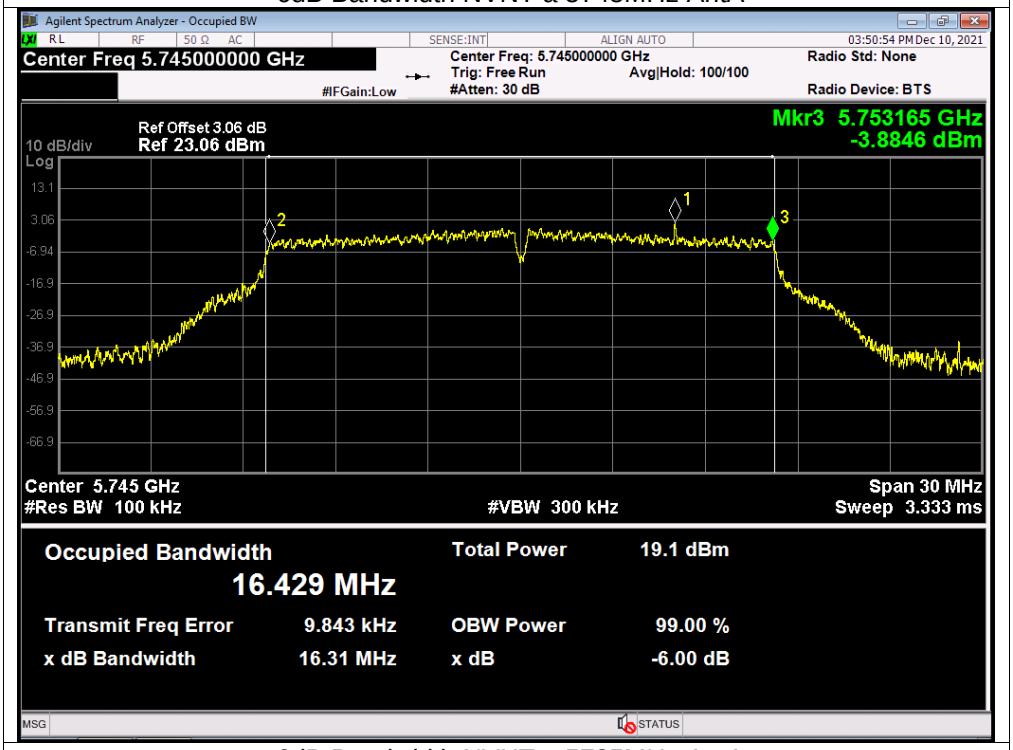
Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	6dB bandwidth (MHz)	Limit MHz	Result
			ANT A	ANT A		
802.11a	CH149	5745	16.565	16.31	≥500	Pass
	CH157	5785	16.523	16.299	≥500	Pass
	CH165	5825	16.597	16.305	≥500	Pass
802.11 n20	CH149	5745	17.718	17.518	≥500	Pass
	CH157	5785	17.703	17.269	≥500	Pass
	CH165	5825	17.724	17.211	≥500	Pass
802.11 n40	CH151	5755	36.299	36.327	≥500	Pass
	CH159	5795	36.27	36.009	≥500	Pass
802.11 ac20	CH149	5745	17.737	17.299	≥500	Pass
	CH157	5785	17.717	17.529	≥500	Pass
	CH165	5825	17.744	17.52	≥500	Pass
802.11 ac40	CH151	5755	36.314	36.33	≥500	Pass
	CH159	5795	36.218	36.079	≥500	Pass
802.11 AC80	CH155	5775	75.742	**76.117**	≥500	Pass

Mode	Channel	Frequency (MHz)	99% bandwidth(MHz)	6dB bandwidth (MHz)	Limit MHz	Result
			ANT B	ANT B		
802.11a	CH149	5745	16.607	16.287	≥500	Pass
	CH157	5785	16.63	16.313	≥500	Pass
	CH165	5825	16.559	16.294	≥500	Pass
802.11 n20	CH149	5745	17.741	17.551	≥500	Pass
	CH157	5785	17.754	17.53	≥500	Pass
	CH165	5825	17.701	17.156	≥500	Pass
802.11 n40	CH151	5755	36.327	36.327	≥500	Pass
	CH159	5795	36.246	36.057	≥500	Pass
802.11 ac20	CH149	5745	17.744	17.271	≥500	Pass
	CH157	5785	17.771	17.533	≥500	Pass
	CH165	5825	17.715	17.527	≥500	Pass
802.11 ac40	CH151	5755	36.311	36.337	≥500	Pass
	CH159	5795	36.245	36.063	≥500	Pass
802.11 AC80	CH155	5775	75.762	75.911	≥500	Pass

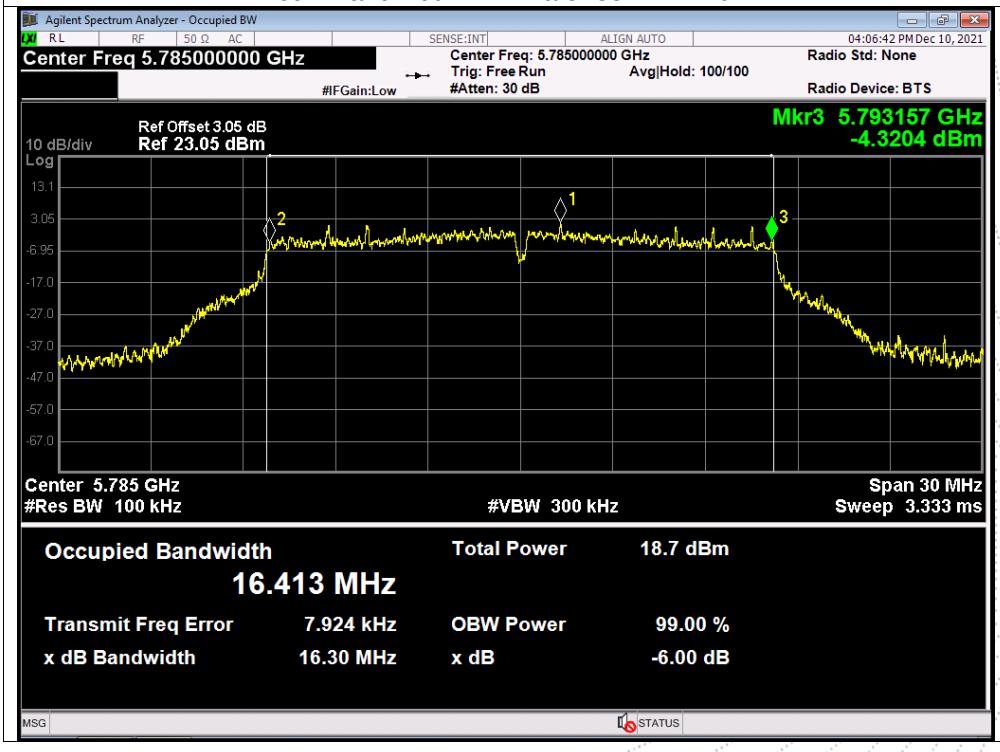
-6dB Bandwidth

Test Graphs

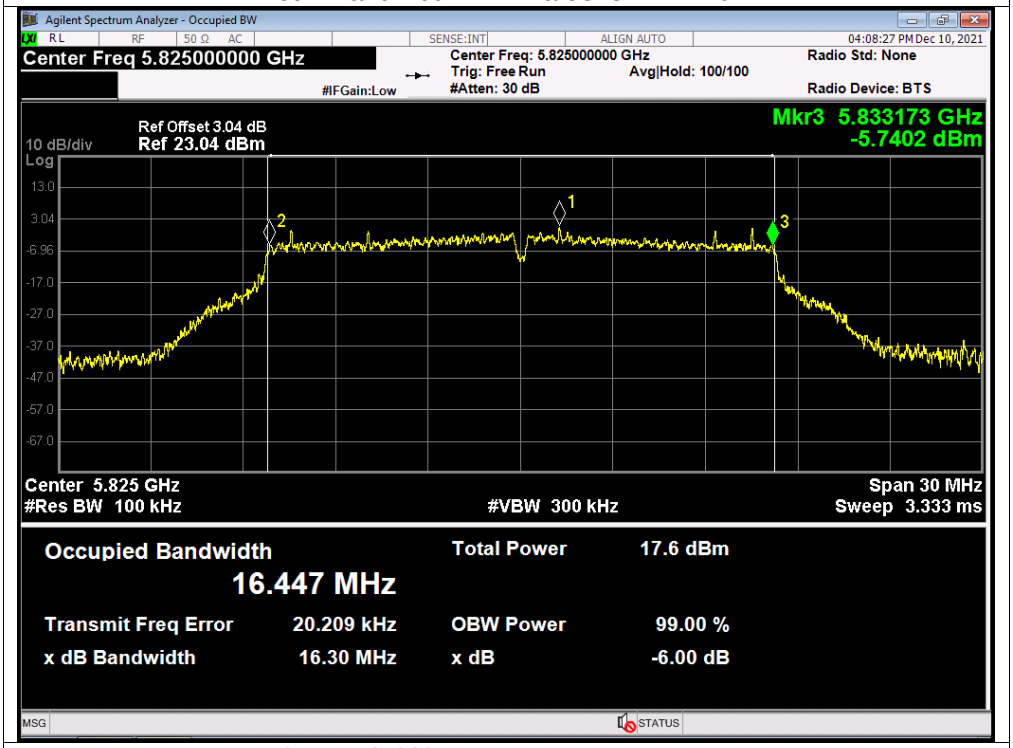
-6dB Bandwidth NVNT a 5745MHz AntA



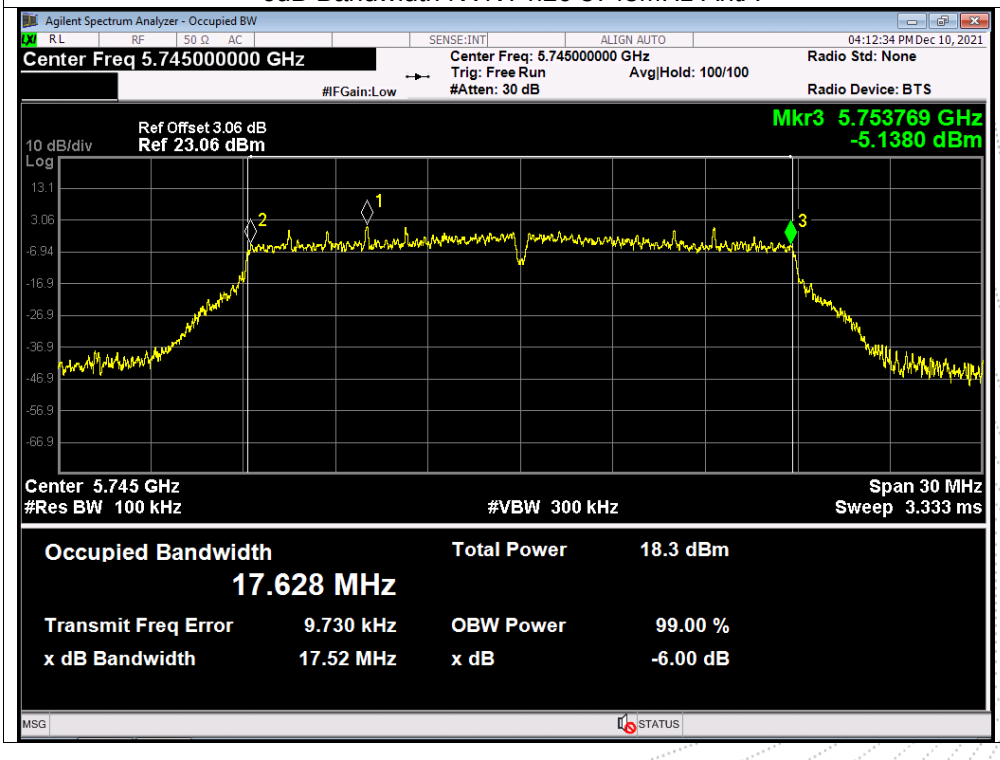
-6dB Bandwidth NVNT a 5785MHz AntA



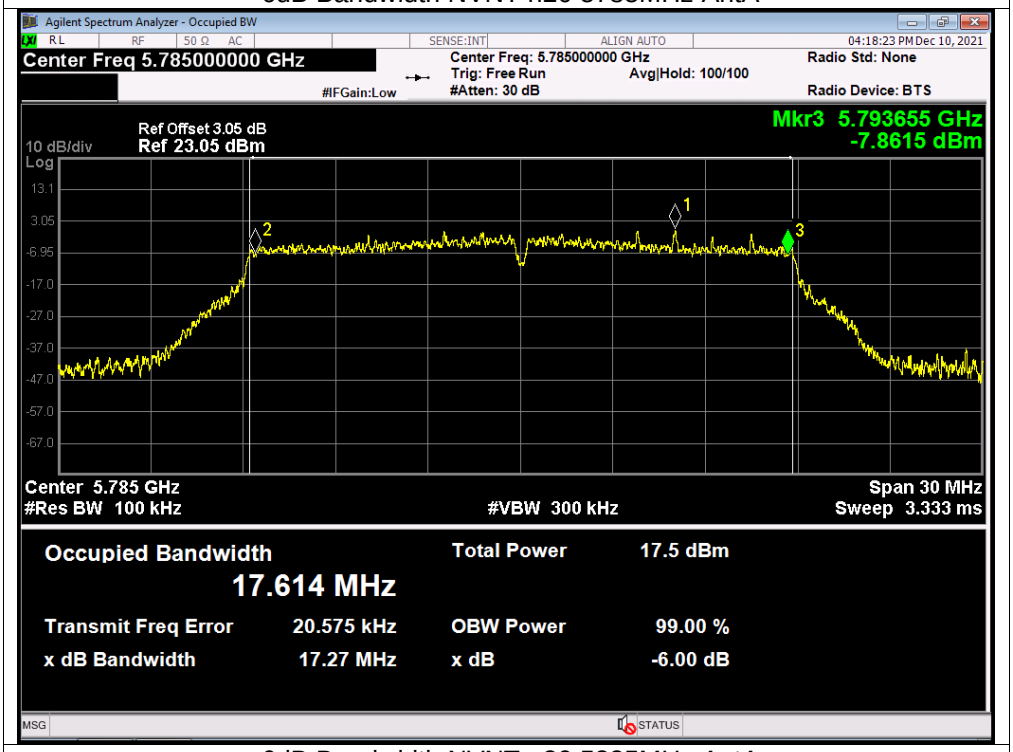
-6dB Bandwidth NVNT a 5825MHz AntA



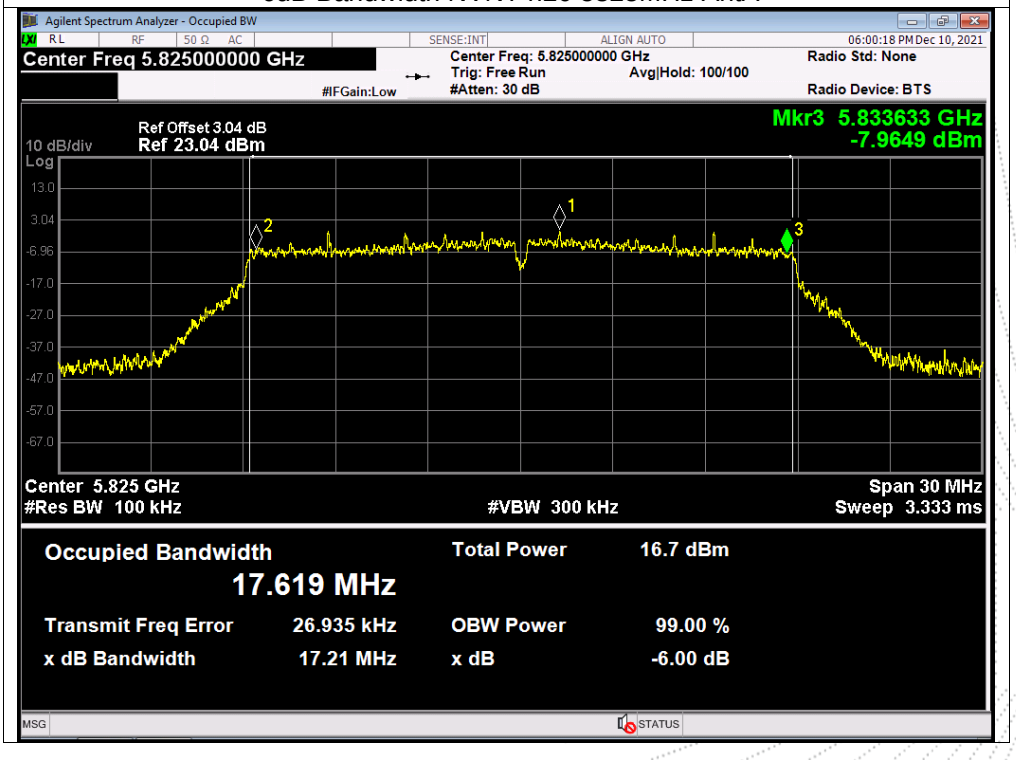
-6dB Bandwidth NVNT n20 5745MHz AntA



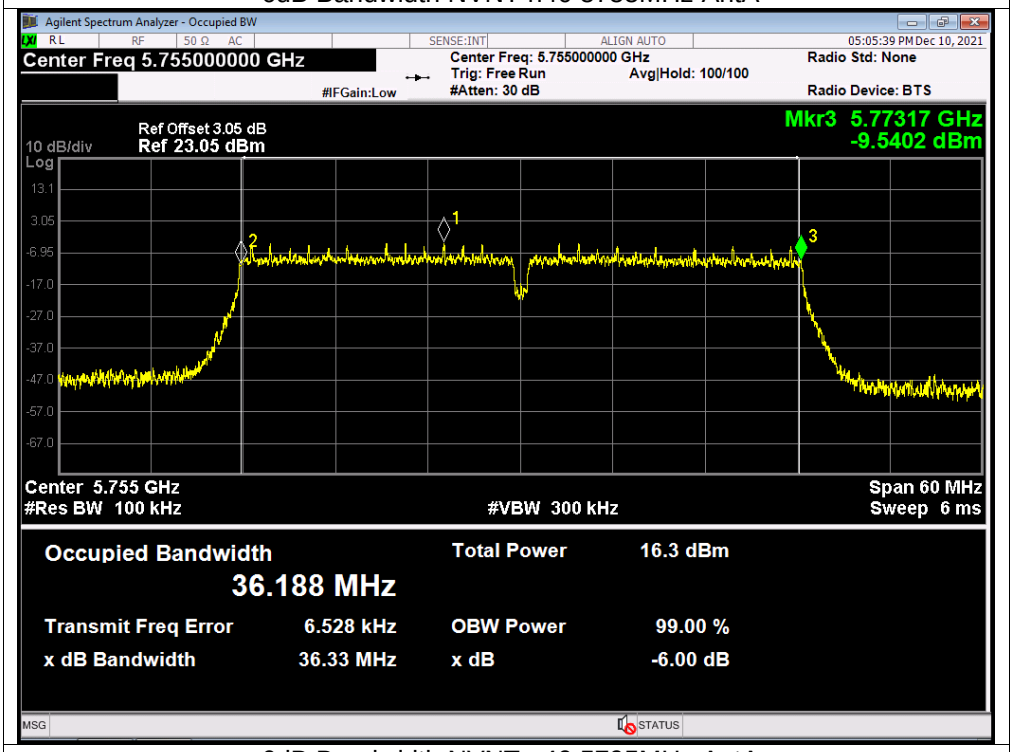
-6dB Bandwidth NVNT n20 5785MHz AntA



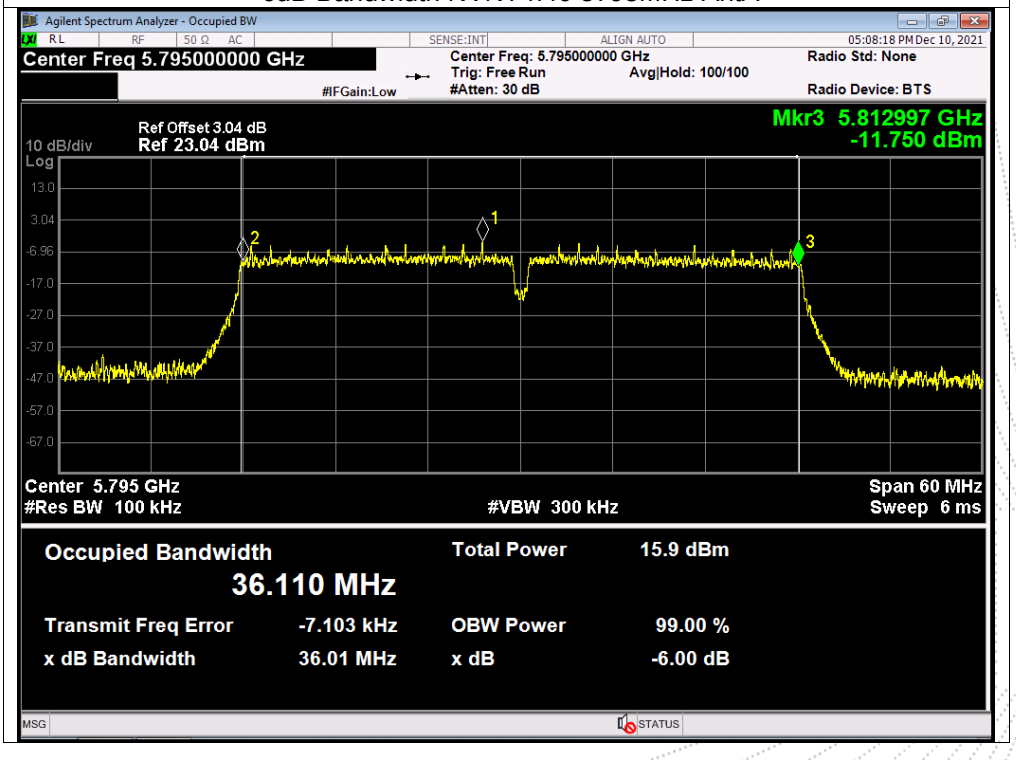
-6dB Bandwidth NVNT n20 5825MHz AntA



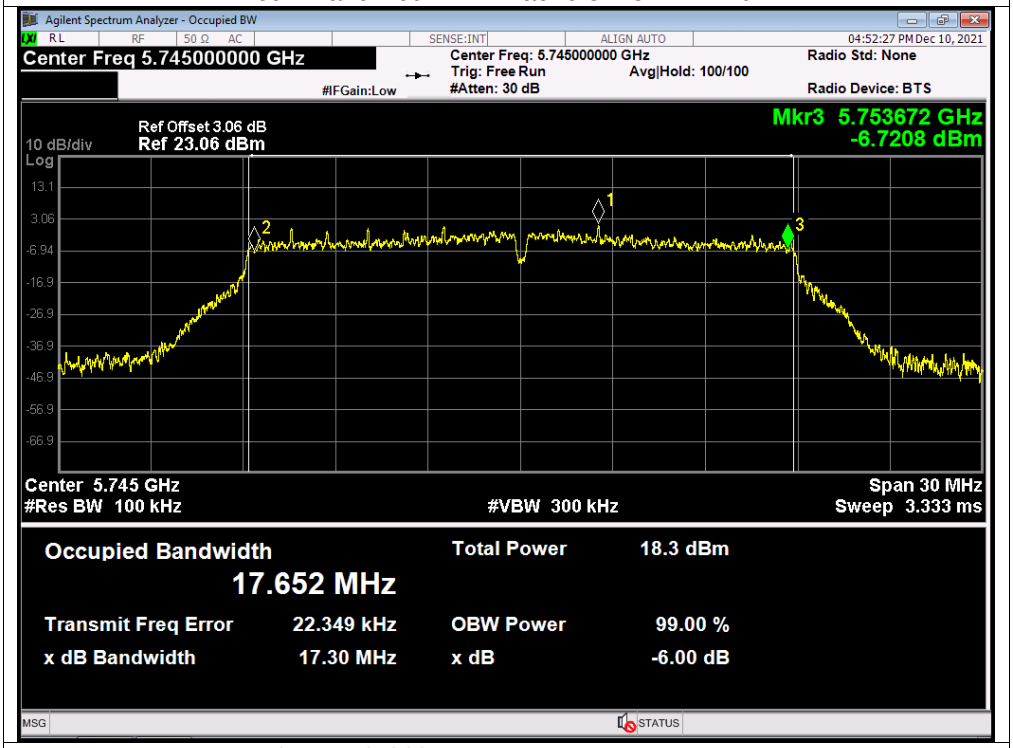
-6dB Bandwidth NVNT n40 5755MHz AntA



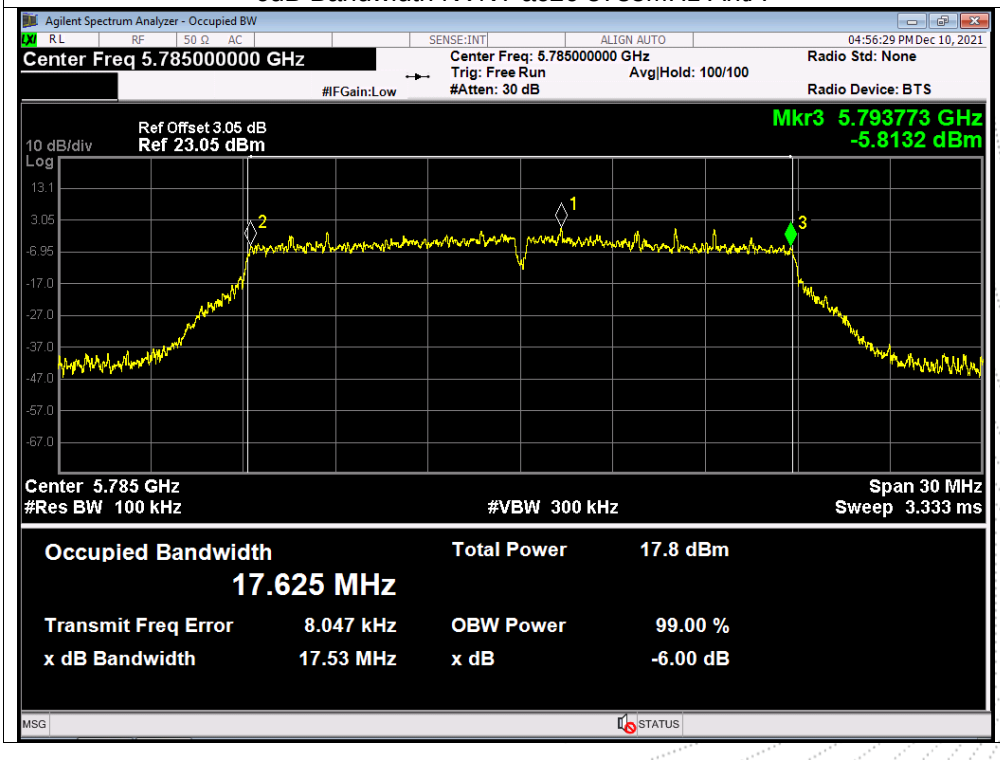
-6dB Bandwidth NVNT n40 5795MHz AntA



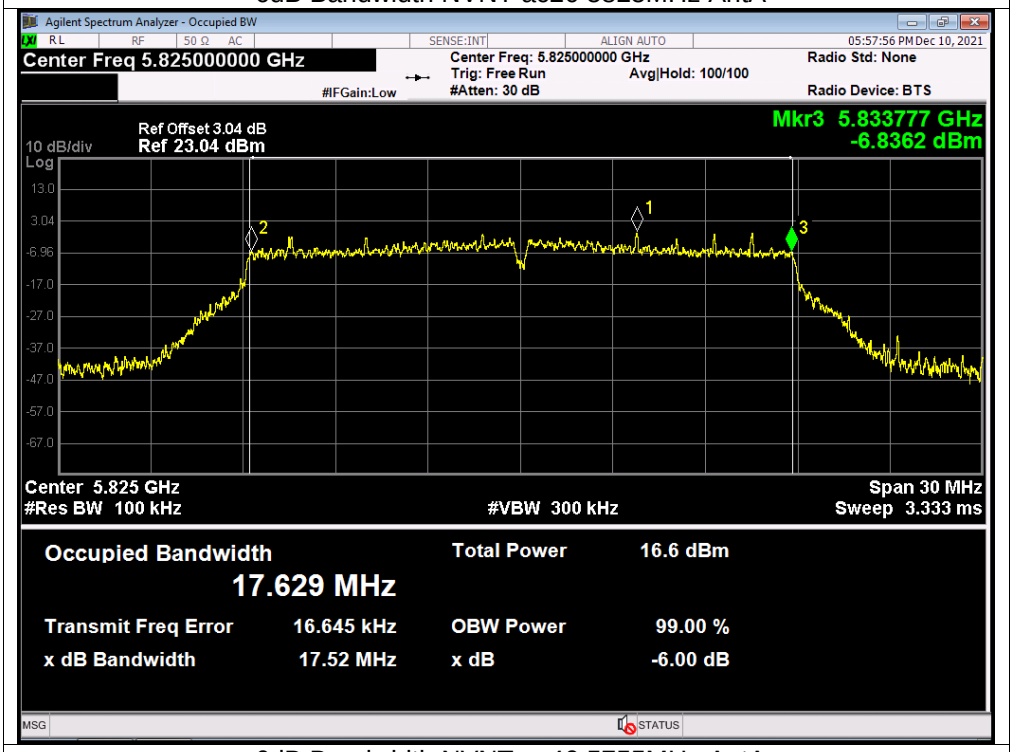
-6dB Bandwidth NVNT ac20 5745MHz AntA



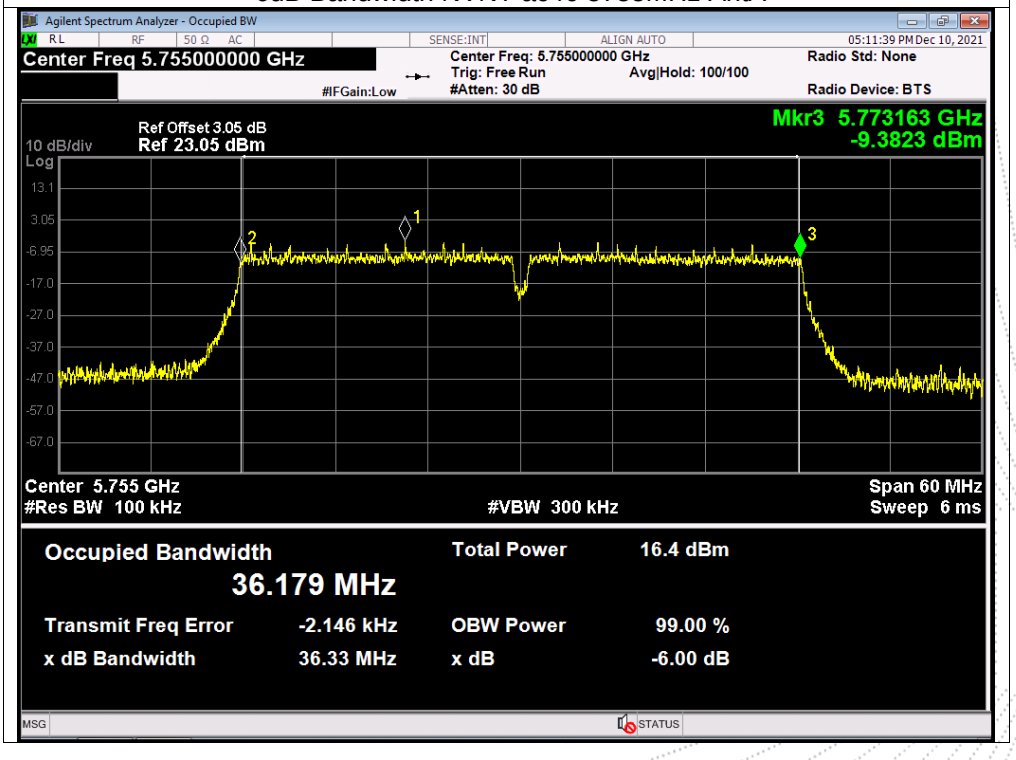
-6dB Bandwidth NVNT ac20 5785MHz AntA



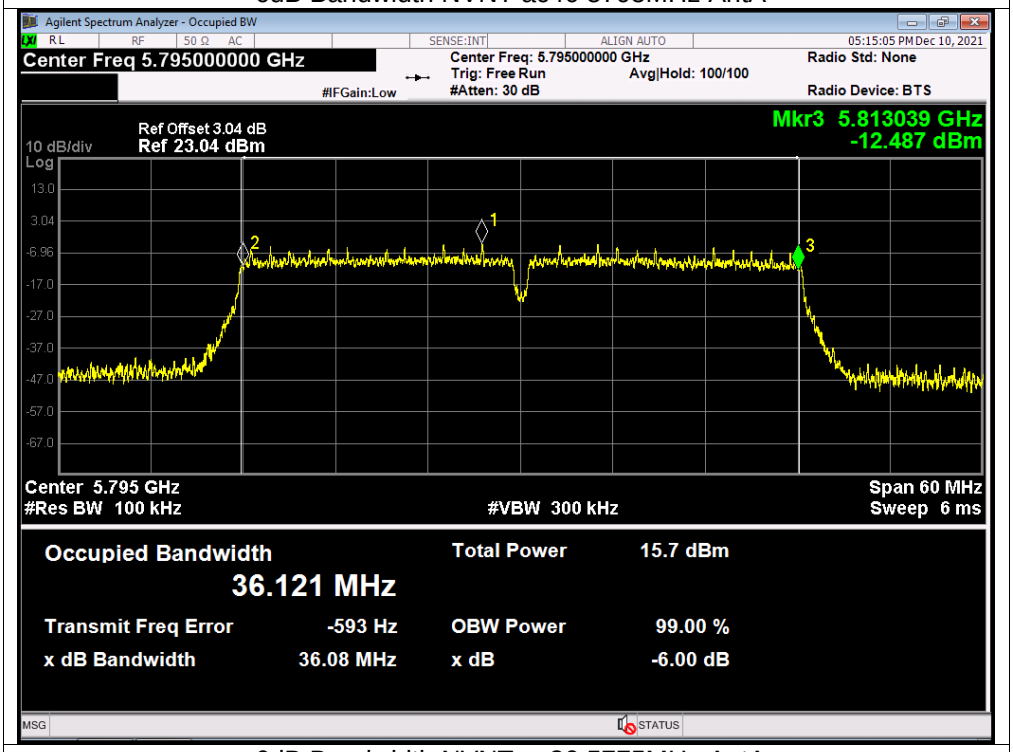
-6dB Bandwidth NVNT ac20 5825MHz AntA



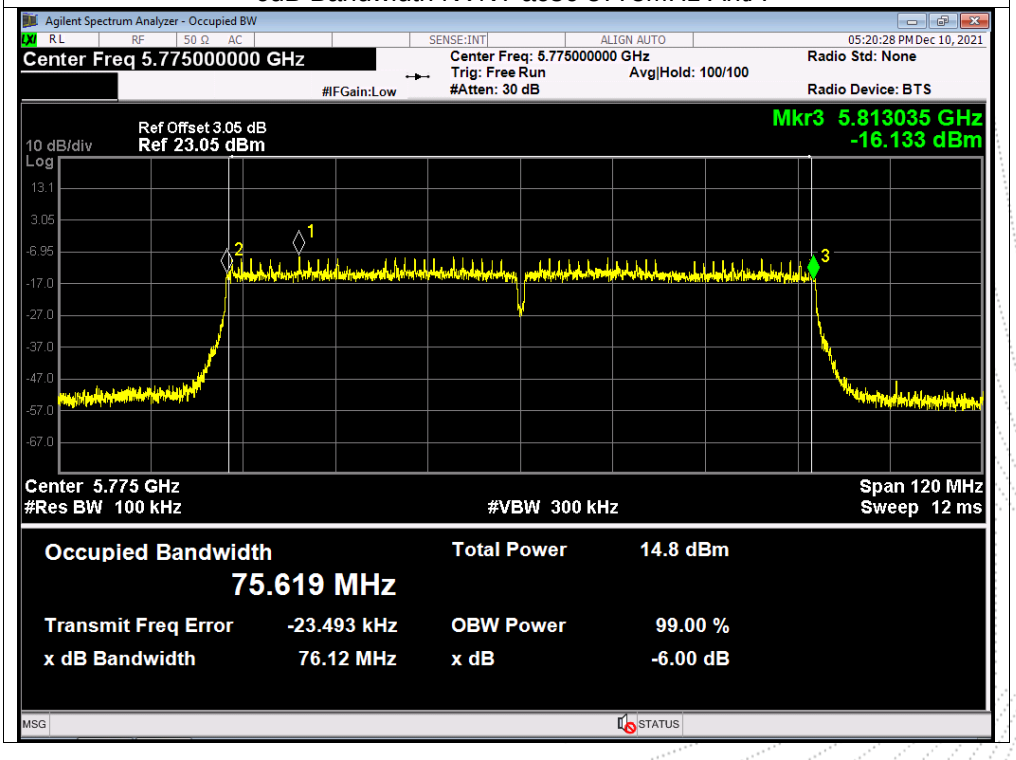
-6dB Bandwidth NVNT ac40 5755MHz AntA



-6dB Bandwidth NVNT ac40 5795MHz AntA



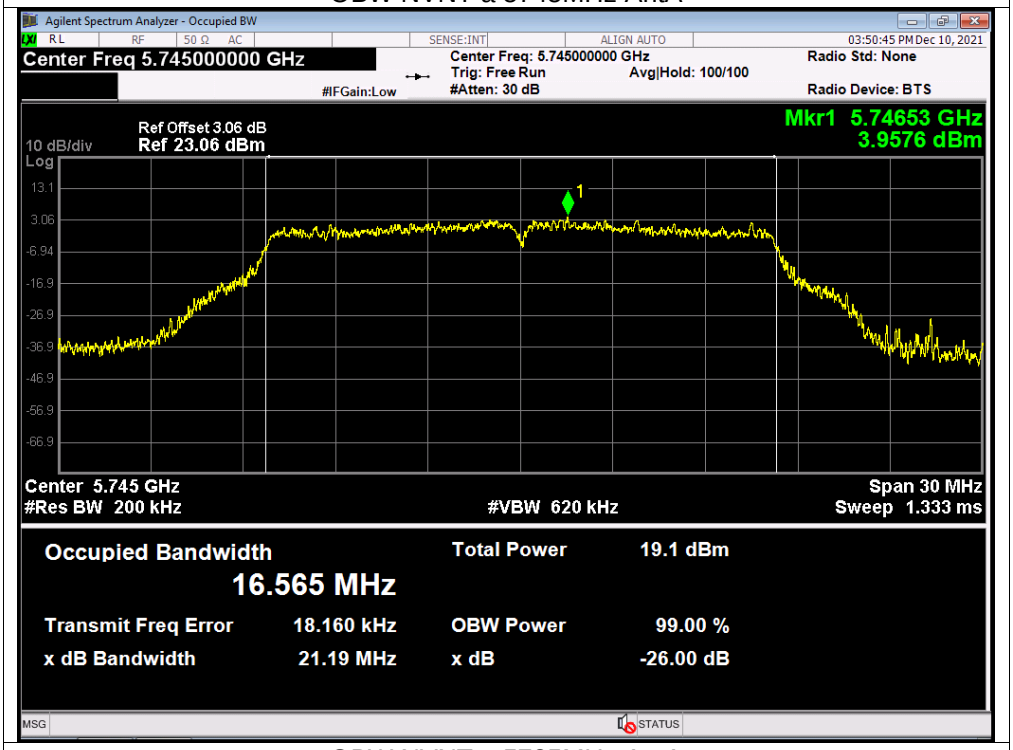
-6dB Bandwidth NVNT ac80 5775MHz AntA



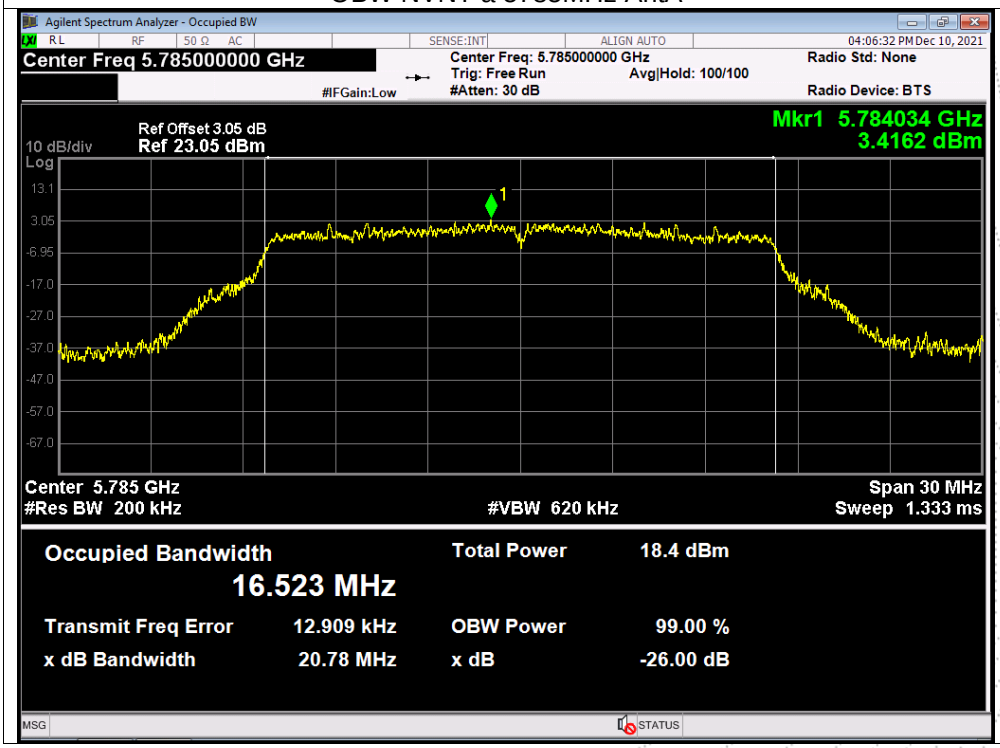
99% OBW

Test Graphs

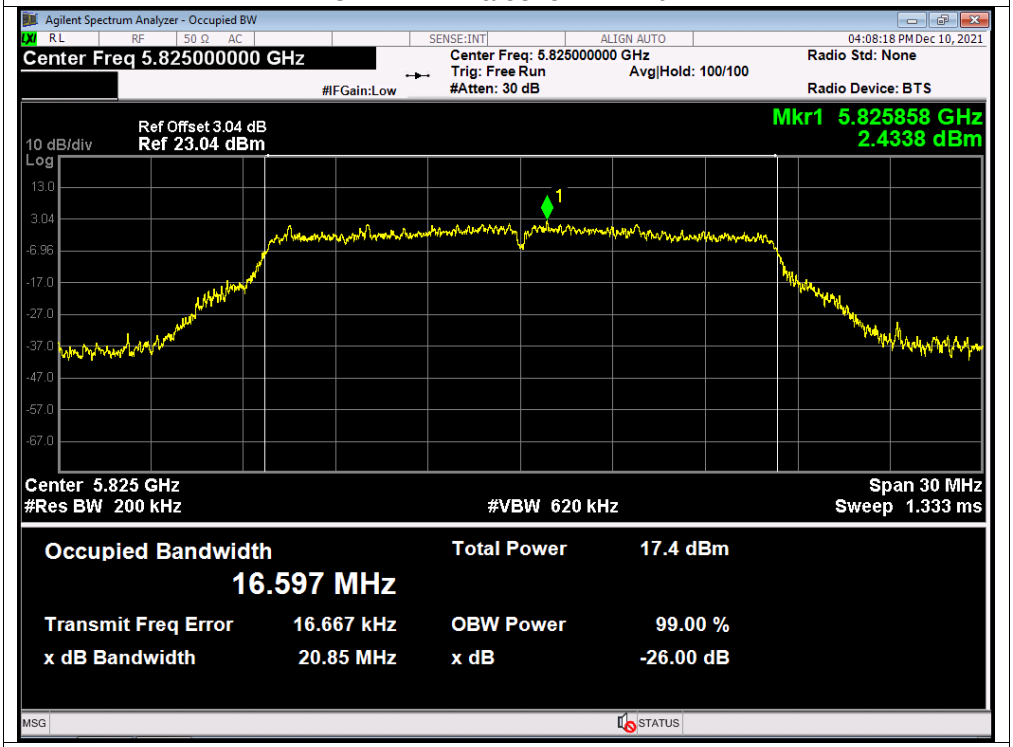
OBW NVNT a 5745MHz AntA



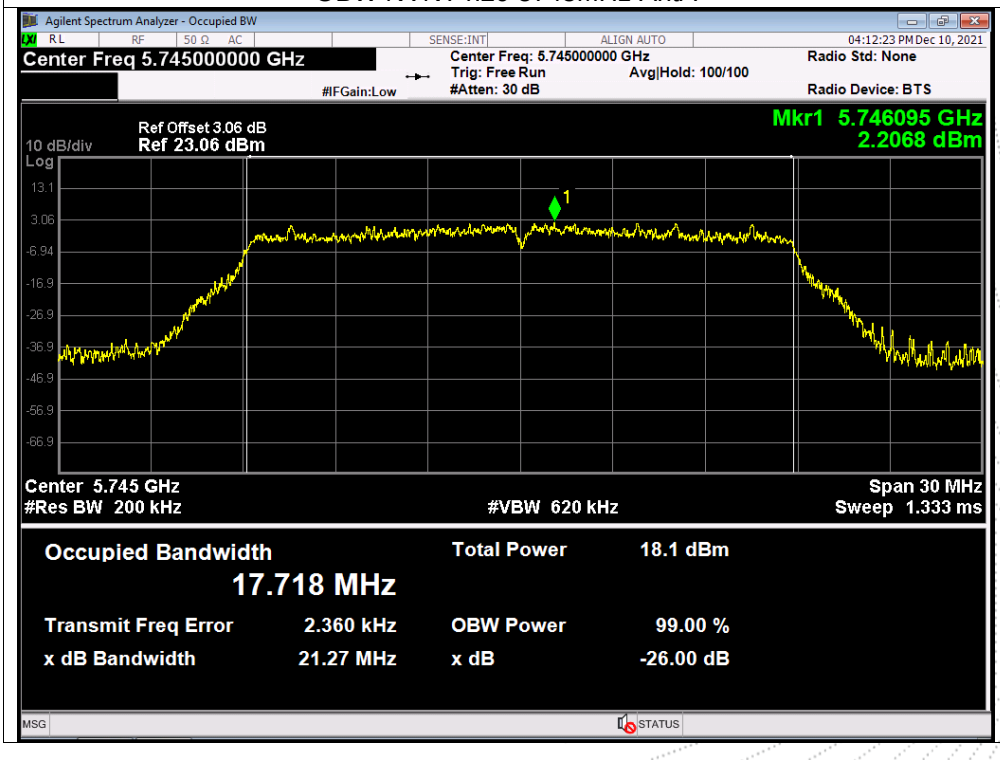
OBW NVNT a 5785MHz AntA



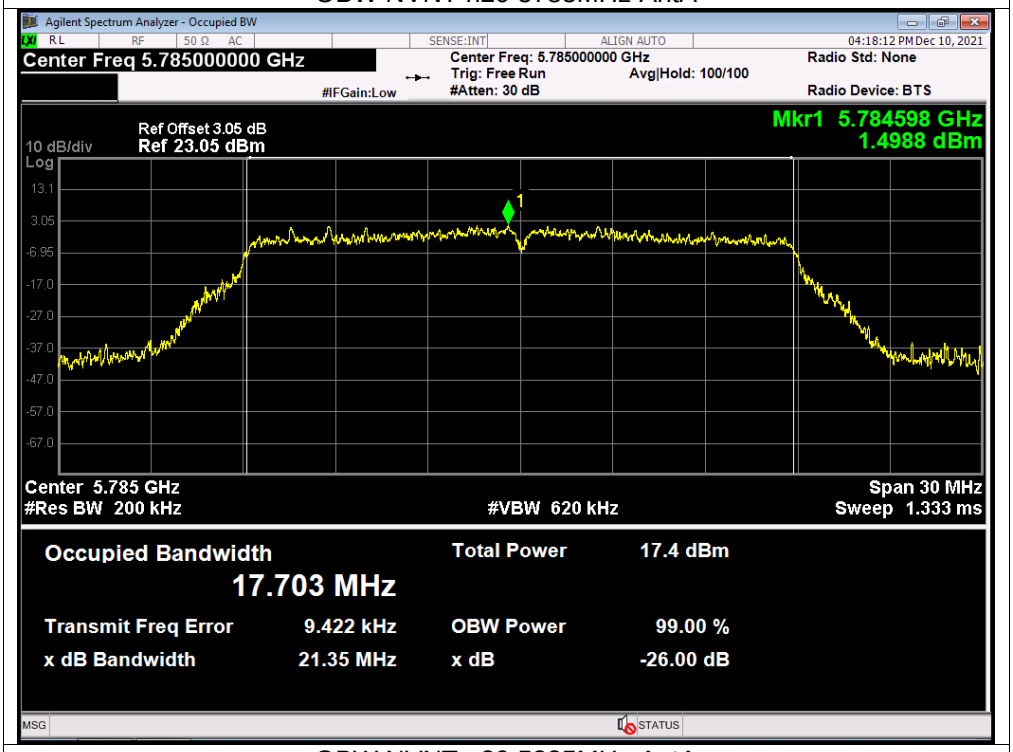
OBW NVNT a 5825MHz AntA



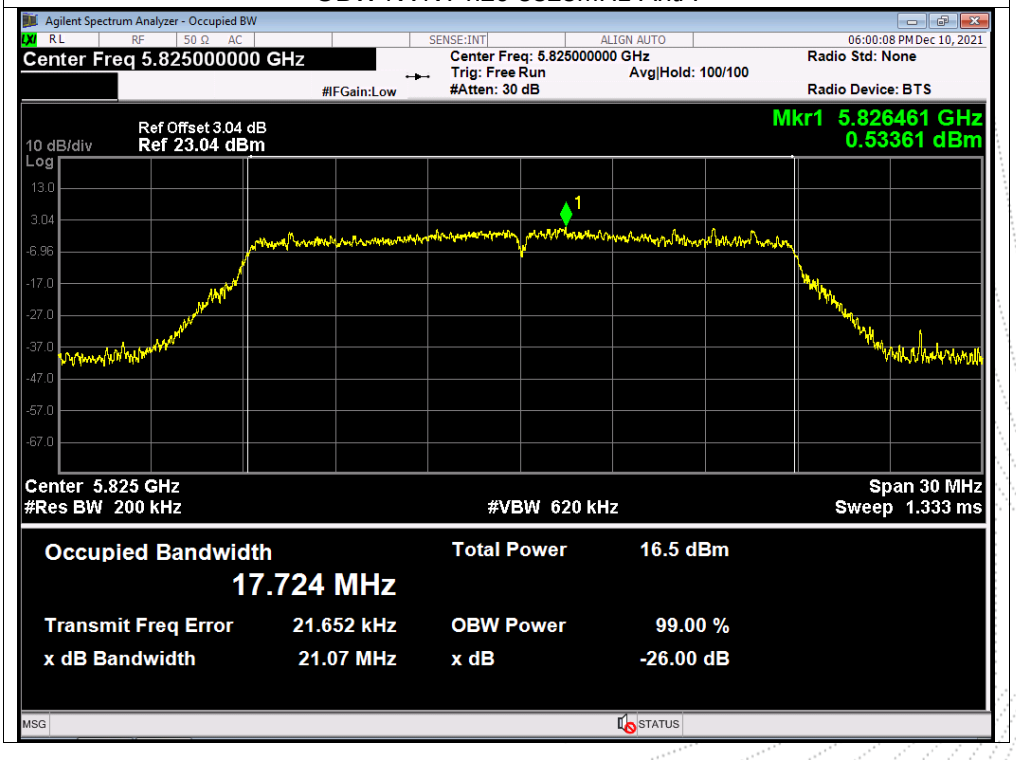
OBW NVNT n20 5745MHz AntA



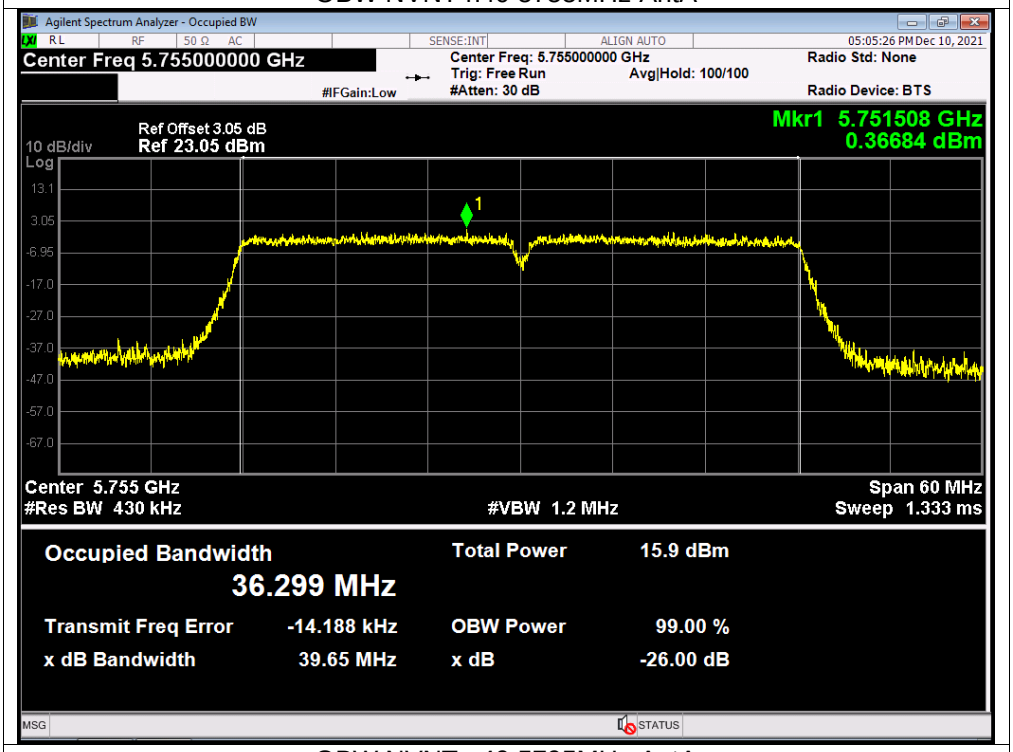
OBW NVNT n20 5785MHz AntA



OBW NVNT n20 5825MHz AntA



OBW NVNT n40 5755MHz AntA



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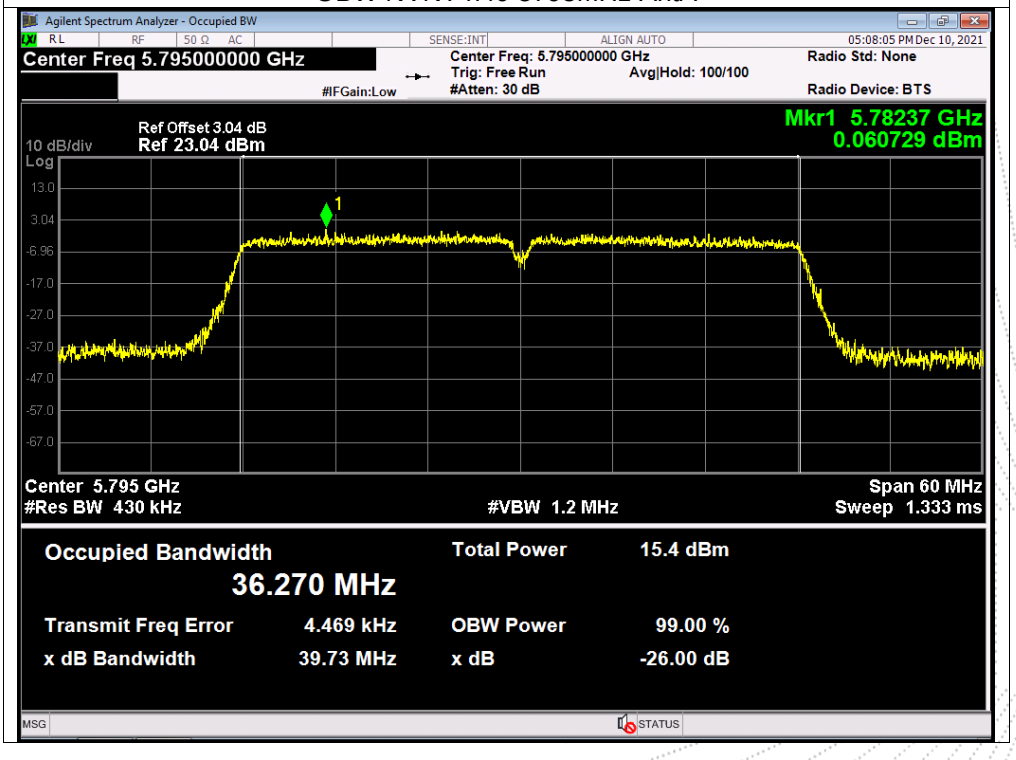

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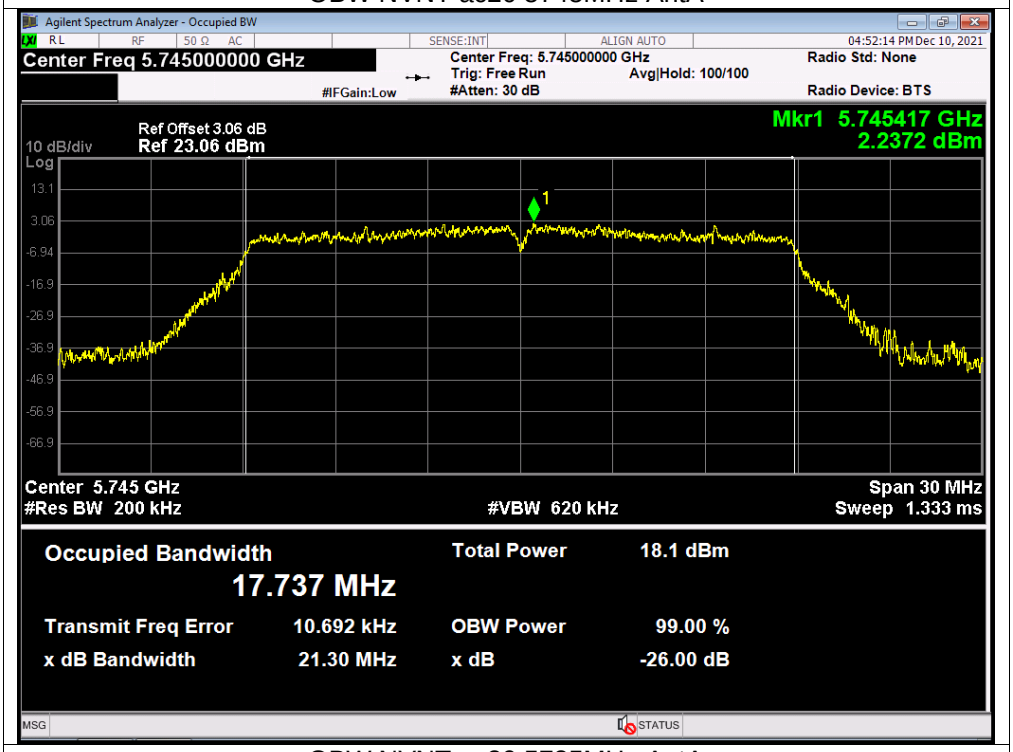

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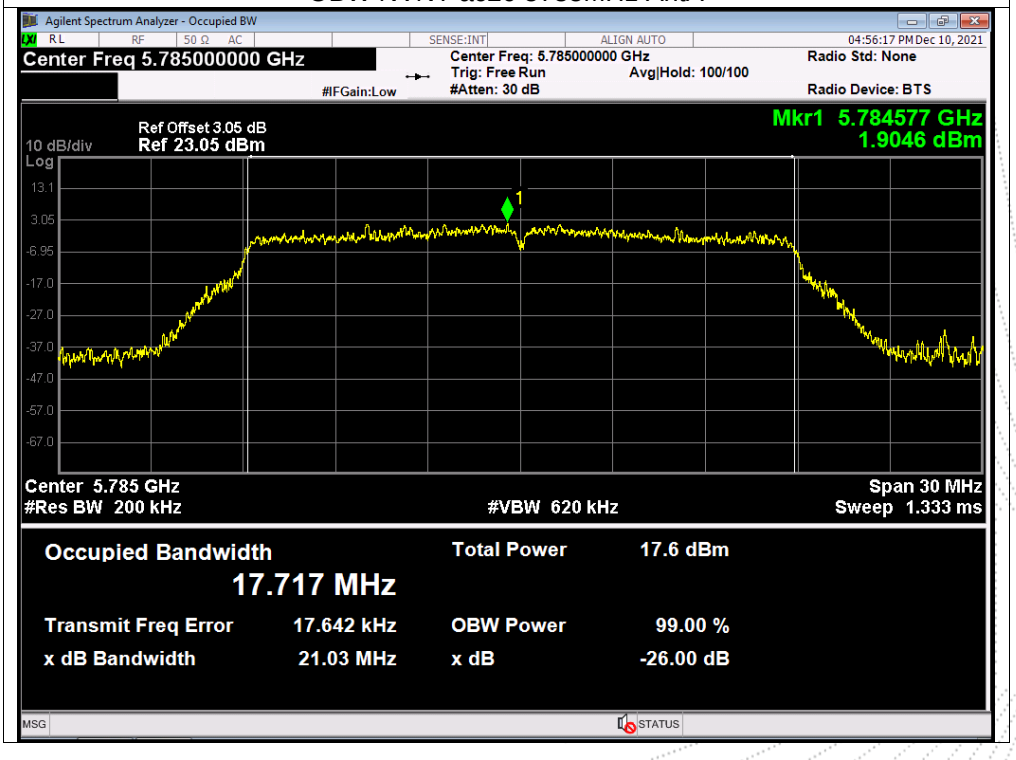
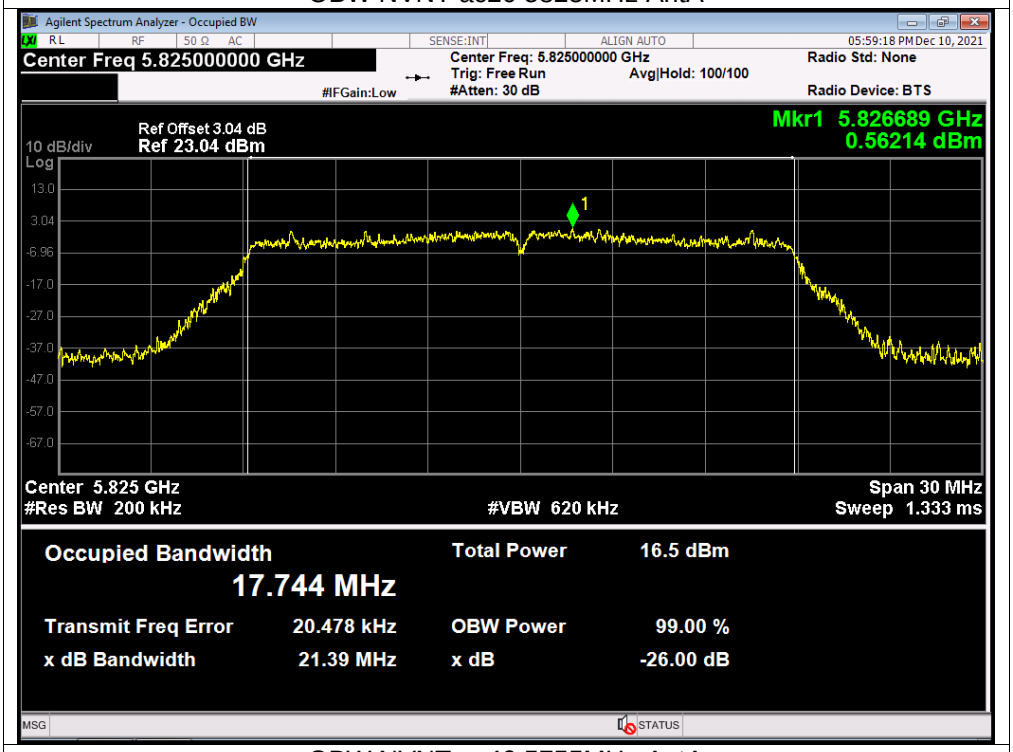


OBW NVNT ac20 5825MHz AntA



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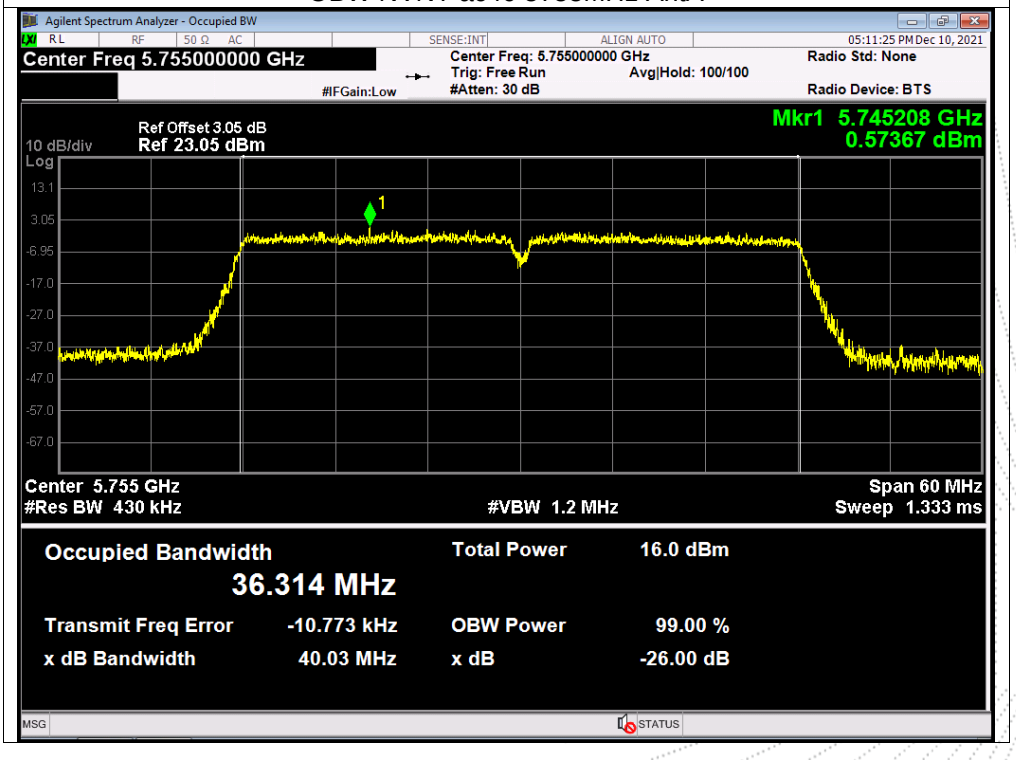

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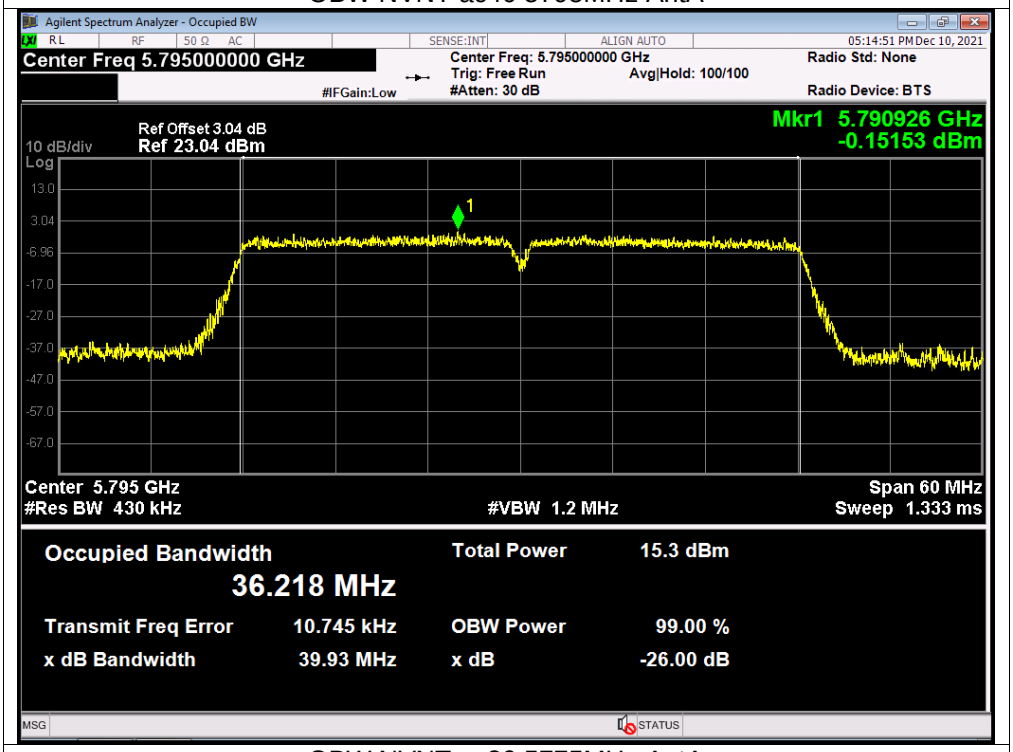

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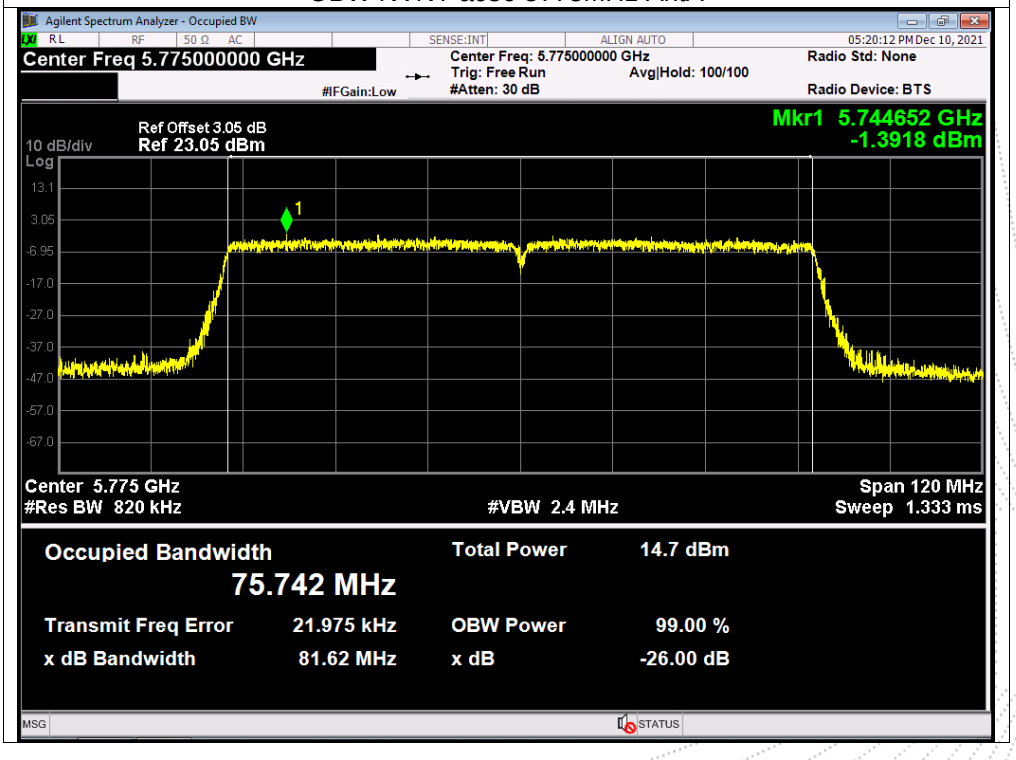
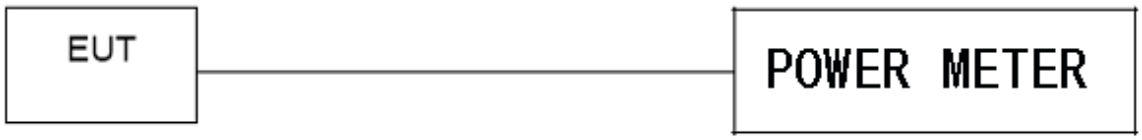


10. Maximum Conducted Output Power

10.1 Block Diagram Of Test Setup



10.2 Limit

According to FCC §15.407
The maximum conduced output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	1W
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.1 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 ≥ 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 ± 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 ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ 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 ≥ 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 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX (5G) Mode Frequency U-NII-1 (5180-5240MHz)		

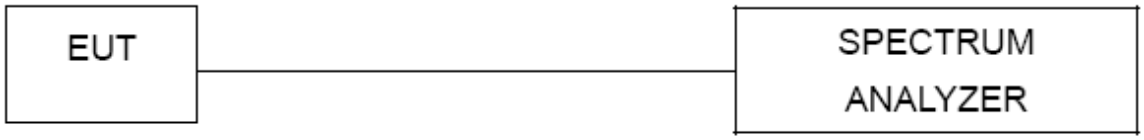
Test Mode	Test Channel	Frequency	Maximum output power. Antenna port (AV)			LIMIT	Result
		(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode	CH36	5180	10.54	**11.37**	/	30	Pass
	CH40	5200	10.12	11.15	/	30	Pass
	CH48	5240	8.41	10.55	/	30	Pass
TX 802.11 n20M Mode	CH36	5180	9.08	10.12	12.64	30	Pass
	CH40	5200	7.84	10.11	12.13	30	Pass
	CH48	5240	7.05	9.28	11.32	30	Pass
TX 802.11 n40M Mode	CH38	5190	6.95	9.24	11.25	30	Pass
	CH46	5230	6.89	9.61	11.47	30	Pass
TX 802.11 AC20M Mode	CH36	5180	7.77	9.89	11.97	30	Pass
	CH40	5200	7.58	9.14	11.44	30	Pass
	CH48	5240	7.26	10.05	11.89	30	Pass
TX 802.11 AC40M Mode	CH38	5190	6.8	8.08	10.50	30	Pass
	CH46	5230	6.64	8.86	10.90	30	Pass
TX 802.11 AC80M Mode	CH42	5210	5.68	8.23	10.15	30	Pass

Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX (5G) Mode Frequency U-NII-3 (5745-5825MHz)		

Test Mode	Test Channel	Frequency	Maximum output power. Antenna port (AV)			LIMIT	Result
		(MHz)	ANT A(dBm)	ANT B(dBm)	Total(dBm)	dBm	
TX 802.11a Mode	CH 149	5745	**13.3**	10.14	/	30	Pass
	CH 157	5785	12.55	8.5	/	30	Pass
	CH 165	5825	11.65	8.01	/	30	Pass
TX 802.11 n20M Mode	CH 149	5745	12.29	9.07	13.98	30	Pass
	CH 157	5785	11.61	7.84	13.13	30	Pass
	CH 165	5825	10.61	6.87	12.14	30	Pass
TX 802.11 n40M Mode	CH 151	5755	9.89	7.54	11.88	30	Pass
	CH 159	5795	9.43	6.46	11.20	30	Pass
TX 802.11 AC20M Mode	CH 151	5755	12.17	9.24	13.96	30	Pass
	CH 159	5795	11.74	8.05	13.29	30	Pass
	CH 151	5755	10.6	6.93	12.15	30	Pass
TX 802.11 AC40M Mode	CH 151	5755	9.92	7.5	11.89	30	Pass
	CH 159	5795	9.25	6.56	11.12	30	Pass
TX 802.11 AC80M Mode	CH 155	5775	7.71	6.82	10.30	30	Pass

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)(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) 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：	26 ℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC 120V/60Hz