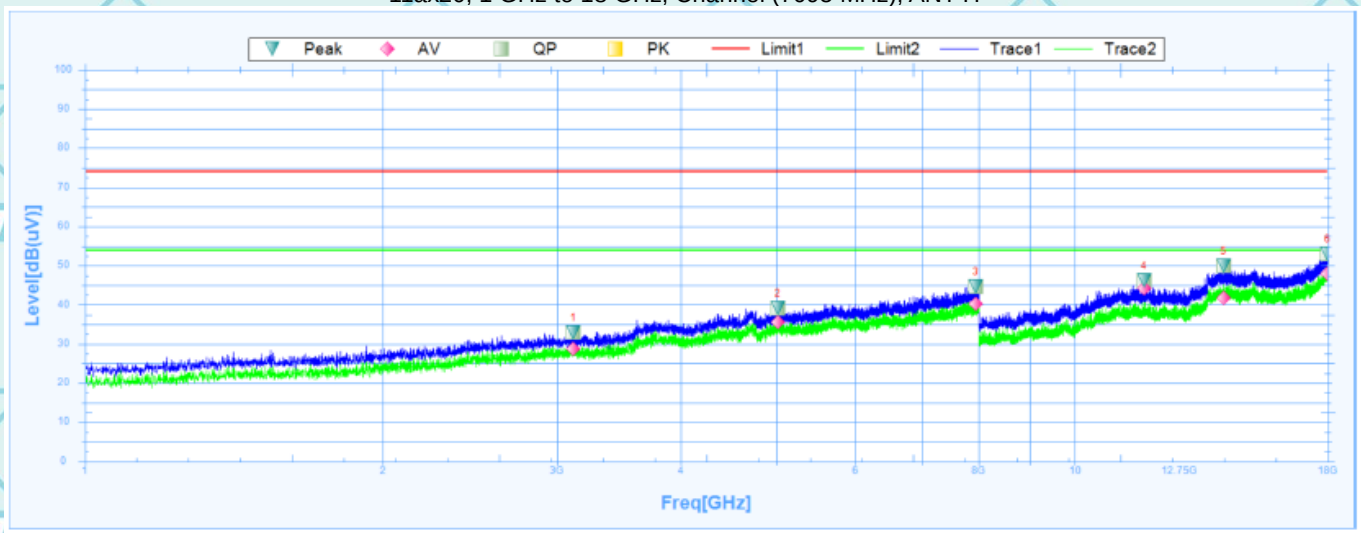
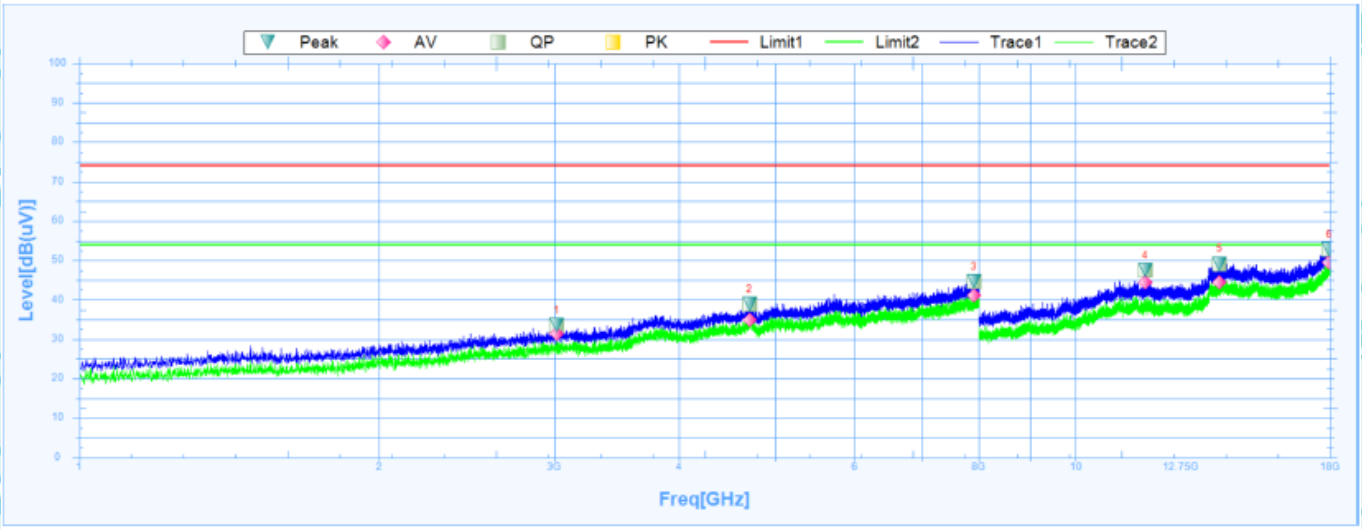
11ax20, 1 GHz to 18 GHz, Channel (7095 MHz), ANT H



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3113.1250	32.85	-6.24	39.09	74	-41.15	245.9	Horizontal	PK	Pass
1	3113.1250	28.72	-6.24	34.96	54	-25.28	245.9	Horizontal	AV	Pass
2	5011.0000	39.02	0.19	38.83	74	-34.98	357.6	Horizontal	PK	Pass
2	5011.0000	35.55	0.19	35.36	54	-18.45	357.6	Horizontal	AV	Pass
3	7944.8750	44.58	8.13	36.45	74	-29.42	193.4	Horizontal	PK	Pass
3	7944.8750	40.29	8.13	32.16	54	-13.71	193.4	Horizontal	AV	Pass
4	11745.0000	46.17	15.54	30.63	74	-27.83	288.6	Horizontal	PK	Pass
4	11745.0000	44.28	15.54	28.74	54	-9.72	288.6	Horizontal	AV	Pass
5	14130.0000	49.89	19	30.89	74	-24.11	15.7	Horizontal	PK	Pass
5	14130.0000	41.76	19	22.76	54	-12.24	15.7	Horizontal	AV	Pass
6	17996.2500	52.92	23.9	29.02	74	-21.08	313.8	Horizontal	PK	Pass
6	17996.2500	47.96	23.9	24.06	54	-6.04	313.8	Horizontal	AV	Pass

11ax20, 1 GHz to 18 GHz, Channel (7095 MHz), ANT V



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3014.2500	33.62	-6.48	40.1	74	-40.38	327.3	Vertical	PK	Pass
1	3014.2500	31.46	-6.48	37.94	54	-22.54	327.3	Vertical	AV	Pass
2	4704.7500	38.91	-0.8	39.71	74	-35.09	303.4	Vertical	PK	Pass
2	4704.7500	34.97	-0.8	35.77	54	-19.03	303.4	Vertical	AV	Pass
3	7909.8750	44.54	8.05	36.49	74	-29.46	82.2	Vertical	PK	Pass
3	7909.8750	41.12	8.05	33.07	54	-12.88	82.2	Vertical	AV	Pass
4	11745.0000	47.51	15.54	31.97	74	-26.49	80.6	Vertical	PK	Pass
4	11745.0000	44.52	15.54	28.98	54	-9.48	80.6	Vertical	AV	Pass
5	13951.2500	49.15	18.98	30.17	74	-24.85	90.2	Vertical	PK	Pass
5	13951.2500	44.37	18.98	25.39	54	-9.63	90.2	Vertical	AV	Pass
6	17970.0000	52.86	23.72	29.14	74	-21.14	1.1	Vertical	PK	Pass
6	17970.0000	49.42	23.72	25.7	54	-4.58	1.1	Vertical	AV	Pass

Note:
1. All emissions not reported were more than 20dB below the specified limit or in the noise floor.
2. Emission Level= Reading Level+ Probe Factor +Cable Loss.
3. Data of measurement within this frequency range shown “--” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

7.4 ANTENNA REQUIREMENTS

Standard Applicable
If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
Antenna Anti-Replacement Construction
An embedded-in antenna design is used.
Antenna Gain
<CDD Modes > FCC KDB 662911 D01 Multiple Transmitter Output v02r01 For CDD transmissions, directional gain is calculated as Directional gain = GANT + Array Gain, where Array Gain is as follows. For power spectral density (PSD) measurements on all devices, Array Gain = 10 log(NANT/NSS=1) dB. For power measurements on IEEE 802.11 devices, Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4. Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain; The EUT supports CDD mode. For power, the directional gain GANT is set equal to the antenna having the highest gain, i.e., F)2)f)i). For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01. The directional gain “DG” is calculated as following table.

<CDD Modes>	Ant1 (dBi)	Ant2 (dBi)	DG for power (dBi)	DG for PSD (dBi)
5925~7125MHz	2.81	2.62	2.81	5.73

Power limit reduction = Composite gain – 6dBi, (min = 0)
PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

7.5 26DB & 99% OCCUPIED BANDWIDTH MEASUREMENT

7.5.1 LIMIT OF 26DB & 99% OCCUPIED BANDWIDTH

<FCC 14-30 CFR 15.407>
(a)(10) The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

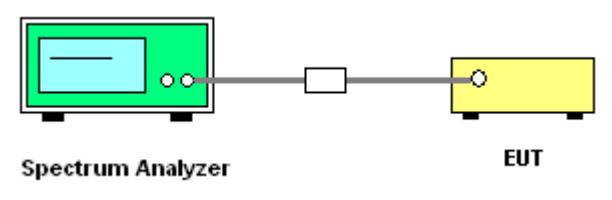
7.5.2 MEASURING INSTRUMENTS

See list of measuring equipment of this test report.

7.5.3 TEST PROCEDURES

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. 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 analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

7.5.4 TEST SETUP

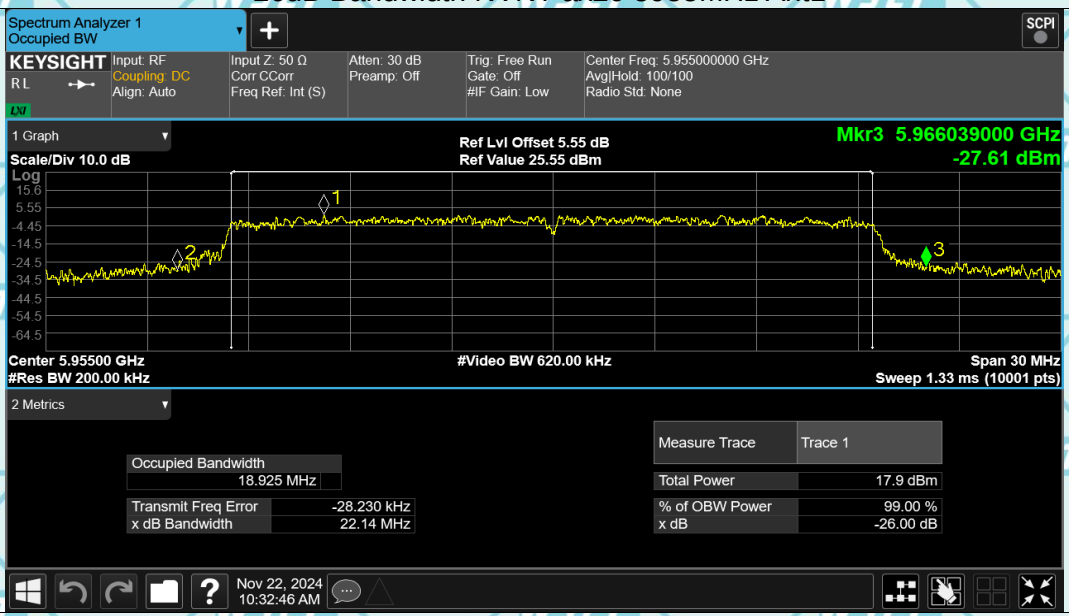


Test Result of 26dB & 99% Occupied Bandwidth

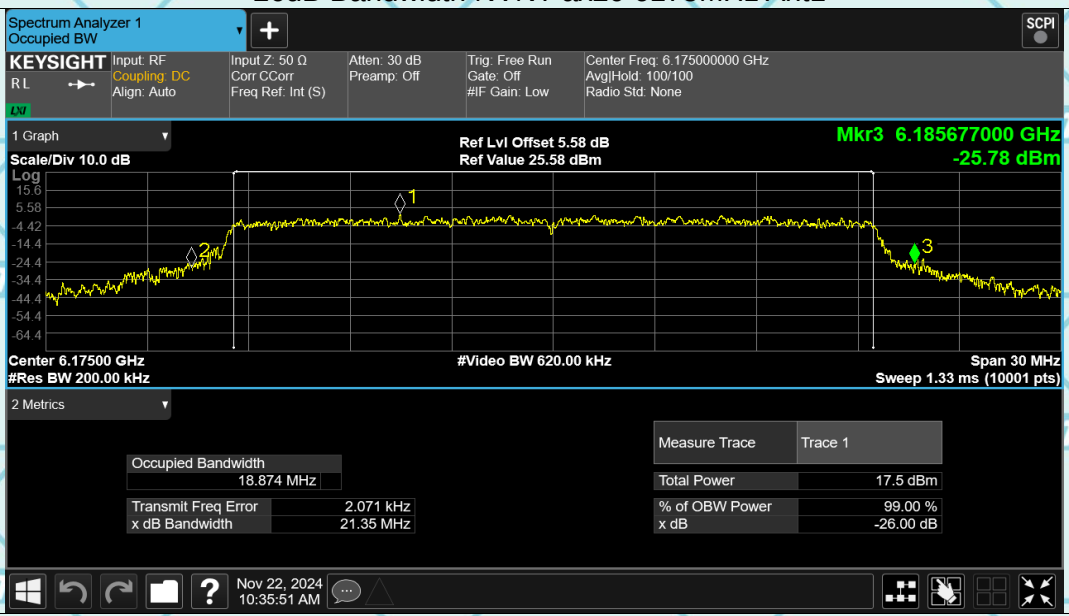
Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Verdict
ax20	5955	22.14	0.5	18.925	Pass
ax20	6175	21.35	0.5	18.874	Pass
ax20	6415	21.02	0.5	18.837	Pass
ax20	6435	21.35	0.5	18.910	Pass
ax20	6475	21.33	0.5	18.859	Pass
ax20	6515	22.07	0.5	18.854	Pass
ax20	6535	21.56	0.5	18.929	Pass
ax20	6695	21.45	0.5	18.922	Pass
ax20	6875	20.89	0.5	18.867	Pass
ax20	6895	21.73	0.5	18.946	Pass
ax20	6995	20.84	0.5	18.884	Pass
ax20	7095	21.36	0.5	18.835	Pass
ax40	5965	52.28	0.5	37.690	Pass
ax40	6165	39.40	0.5	37.560	Pass
ax40	6405	39.53	0.5	37.515	Pass
ax40	6445	51.76	0.5	37.565	Pass
ax40	6485	54.11	0.5	37. 680	Pass
ax40	6525	38.91	0.5	37.578	Pass
ax40	6565	52.27	0.5	37.695	Pass
ax40	6685	55.13	0.5	37.607	Pass
ax40	6845	51.88	0.5	37.555	Pass
ax40	6885	52.17	0.5	37.601	Pass
ax40	6965	51.89	0.5	37.622	Pass
ax40	7085	55.10	0.5	37.600	Pass
ax80	5985	79.77	0.5	76.864	Pass
ax80	6145	96.58	0.5	77.014	Pass
ax80	6385	79.98	0.5	77.095	Pass
ax80	6465	98.16	0.5	76.817	Pass
ax80	6545	96.33	0.5	76.772	Pass
ax80	6625	111.6	0.5	76.818	Pass
ax80	6705	103.5	0.5	77.008	Pass
ax80	6865	97.18	0.5	76.846	Pass
ax80	6945	90.21	0.5	77.040	Pass
ax80	7025	113.2	0.5	77.256	Pass
ax160	6025	232.5	0.5	155.50	Pass
ax160	6185	233.5	0.5	156.72	Pass
ax160	6345	232.6	0.5	155.42	Pass
ax160	6505	216.8	0.5	156.35	Pass
ax160	6665	160.6	0.5	155.23	Pass
ax160	6825	233.1	0.5	155.68	Pass
ax160	6985	235.3	0.5	157.03	Pass

Test Graphs

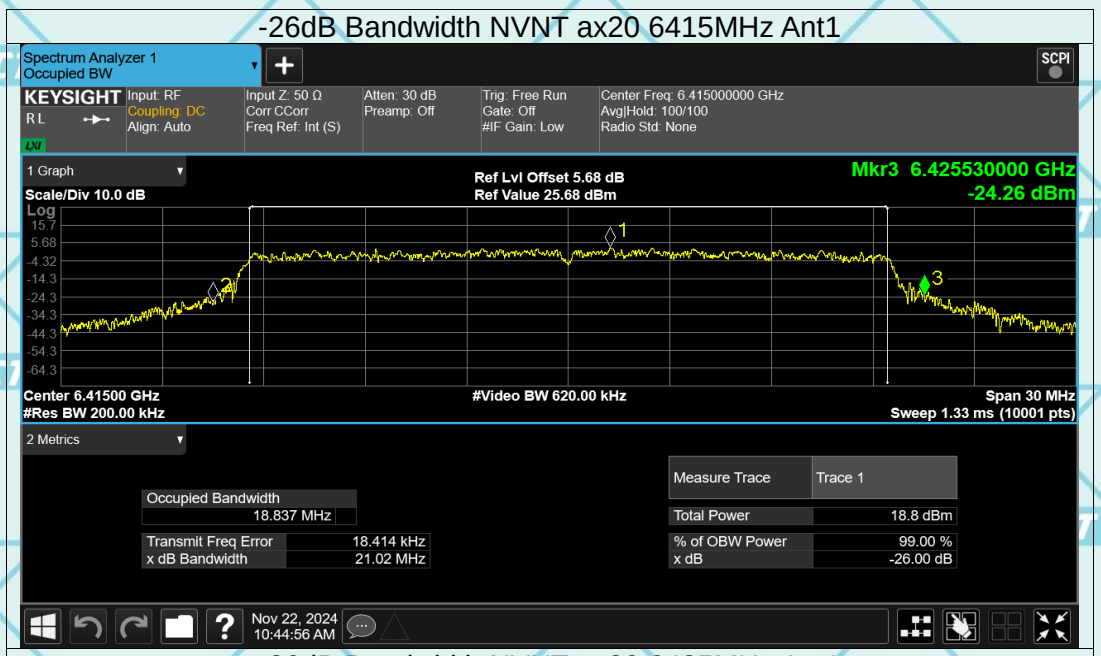
-26dB Bandwidth NVNT ax20 5955MHz Ant1



-26dB Bandwidth NVNT ax20 6175MHz Ant1

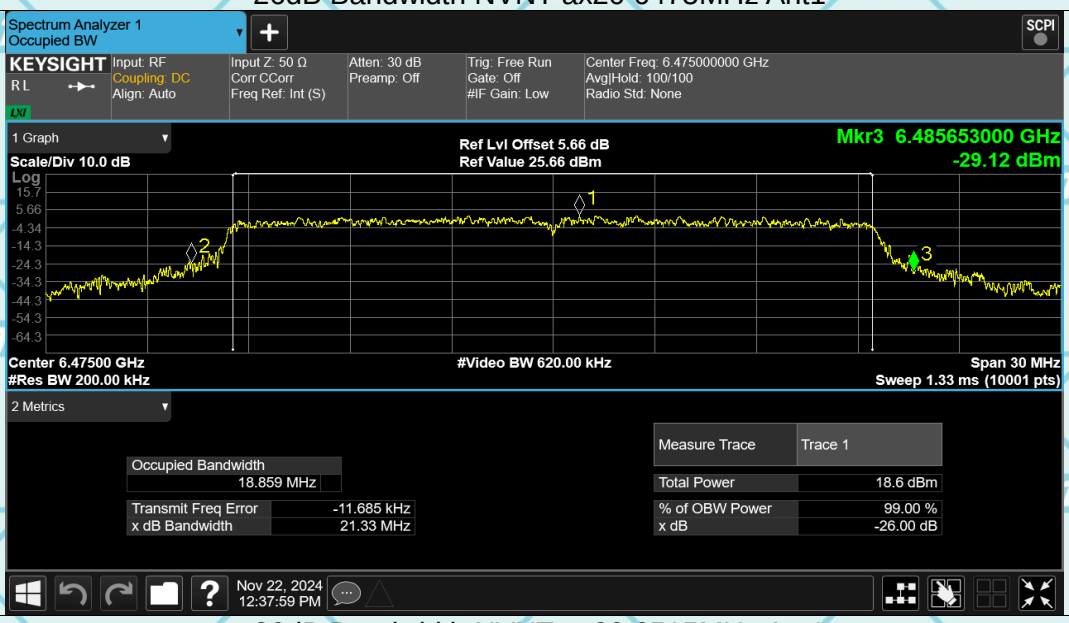


-26dB Bandwidth NVNT ax20 6415MHz Ant1

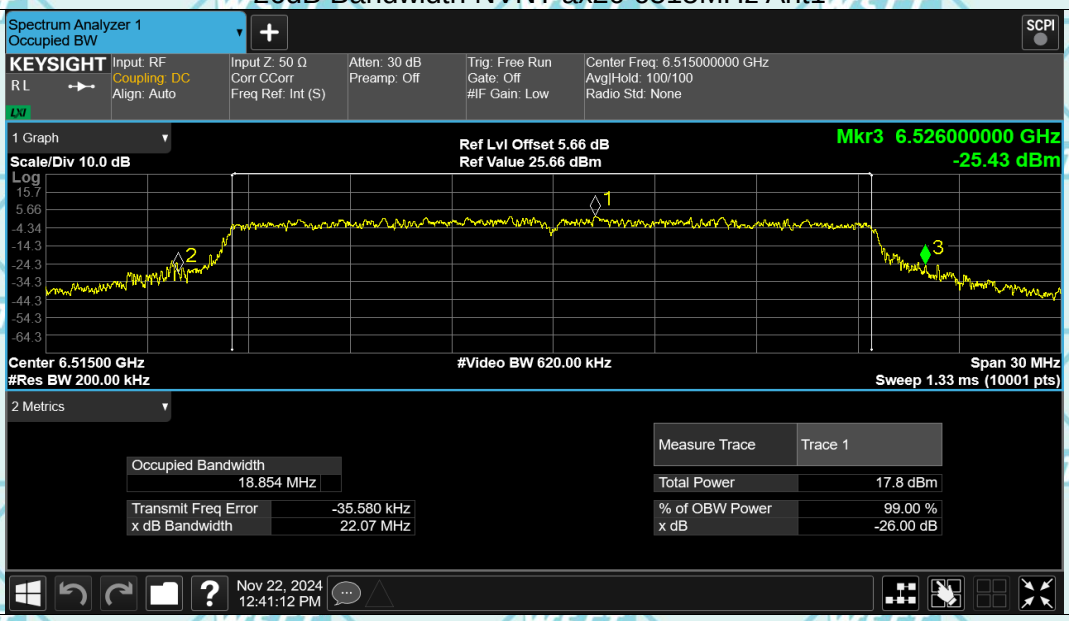


-26dB Bandwidth NVNT ax20 6435MHz Ant1

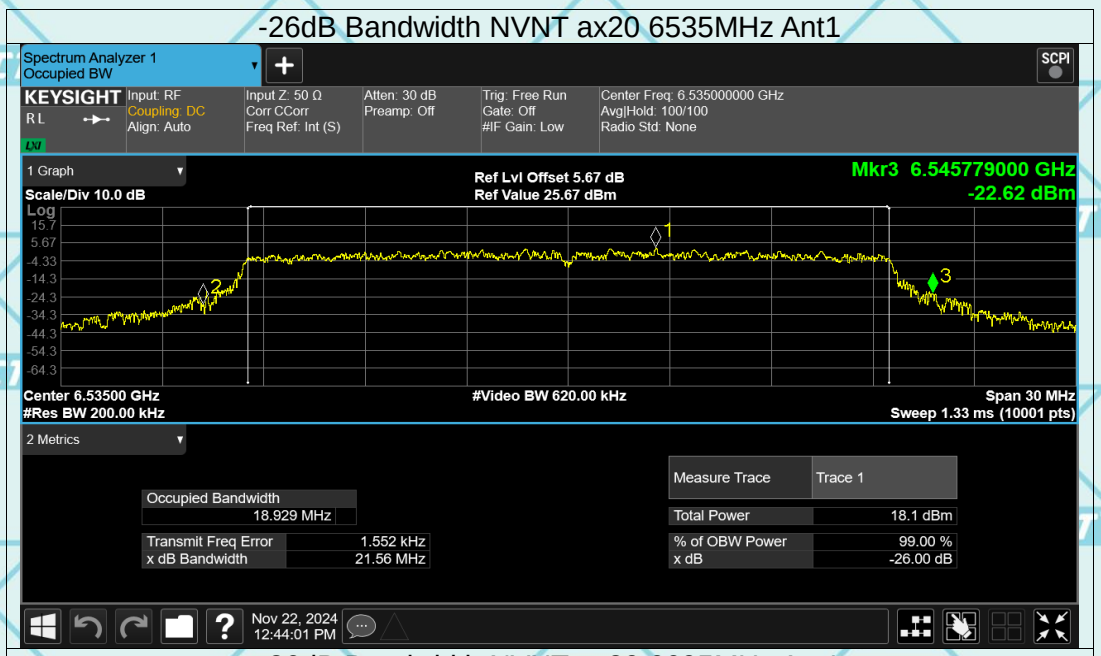
-26dB Bandwidth NVNT ax20 6475MHz Ant1



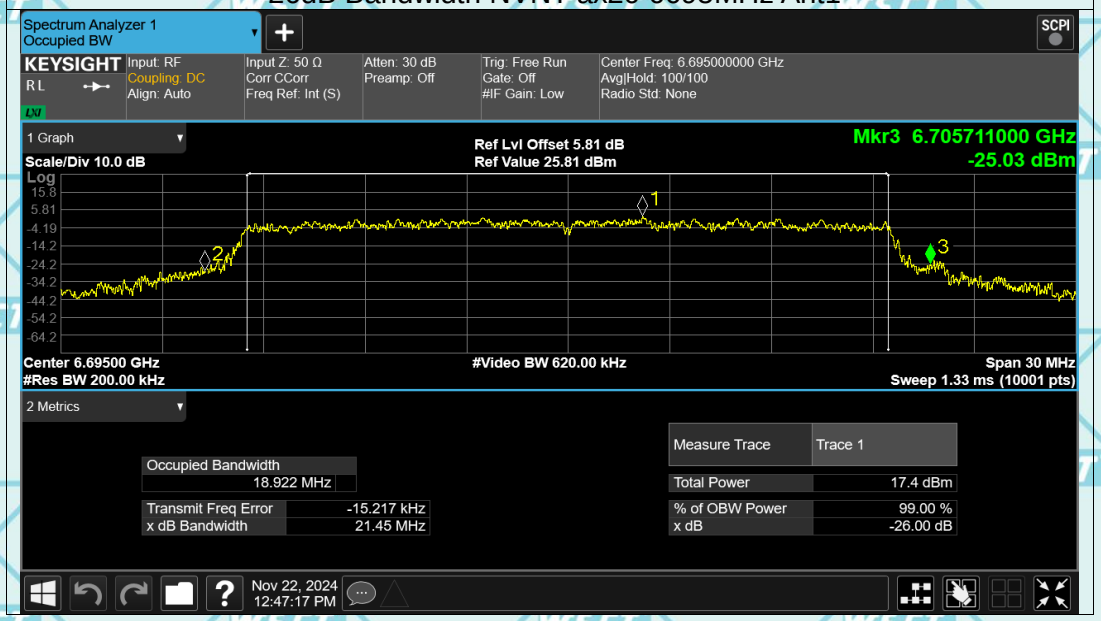
-26dB Bandwidth NVNT ax20 6515MHz Ant1



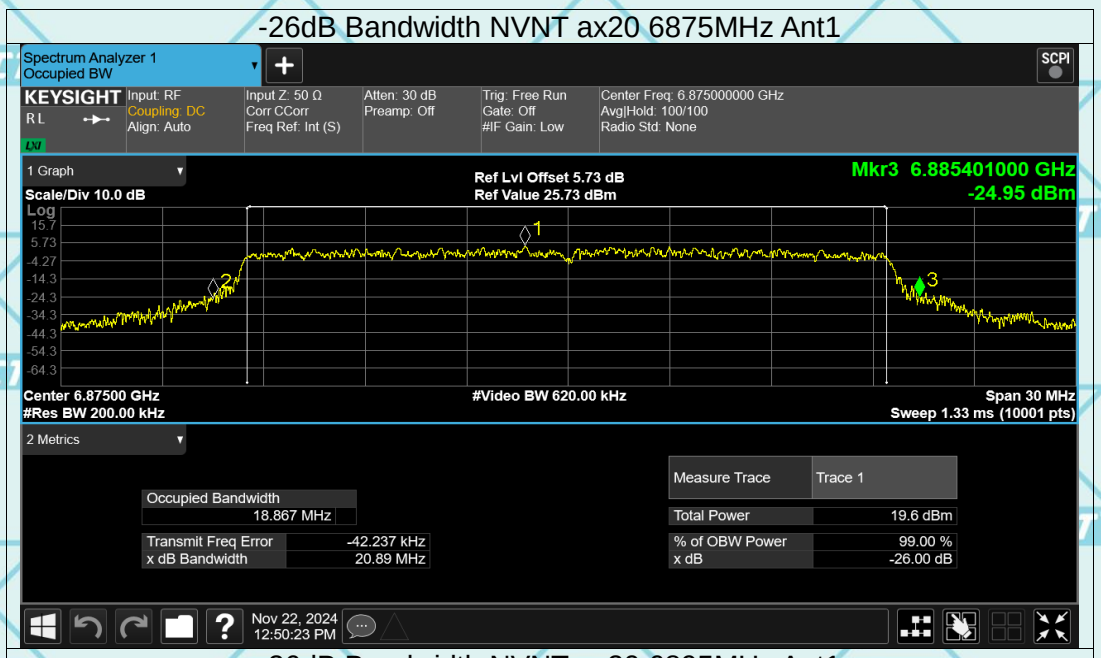
-26dB Bandwidth NVNT ax20 6535MHz Ant1



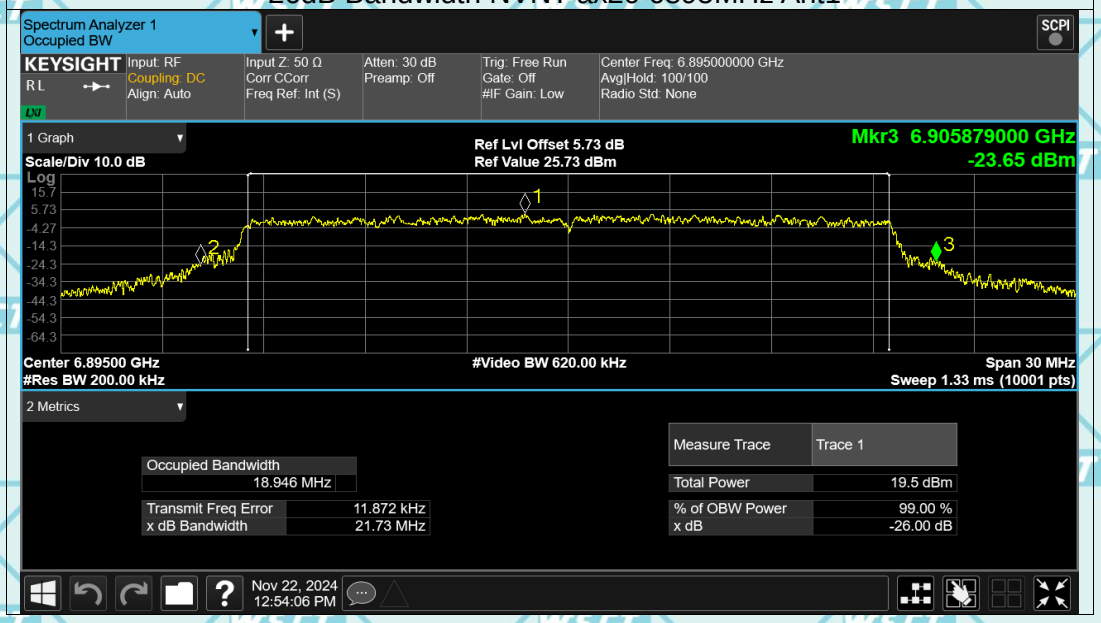
-26dB Bandwidth NVNT ax20 6695MHz Ant1



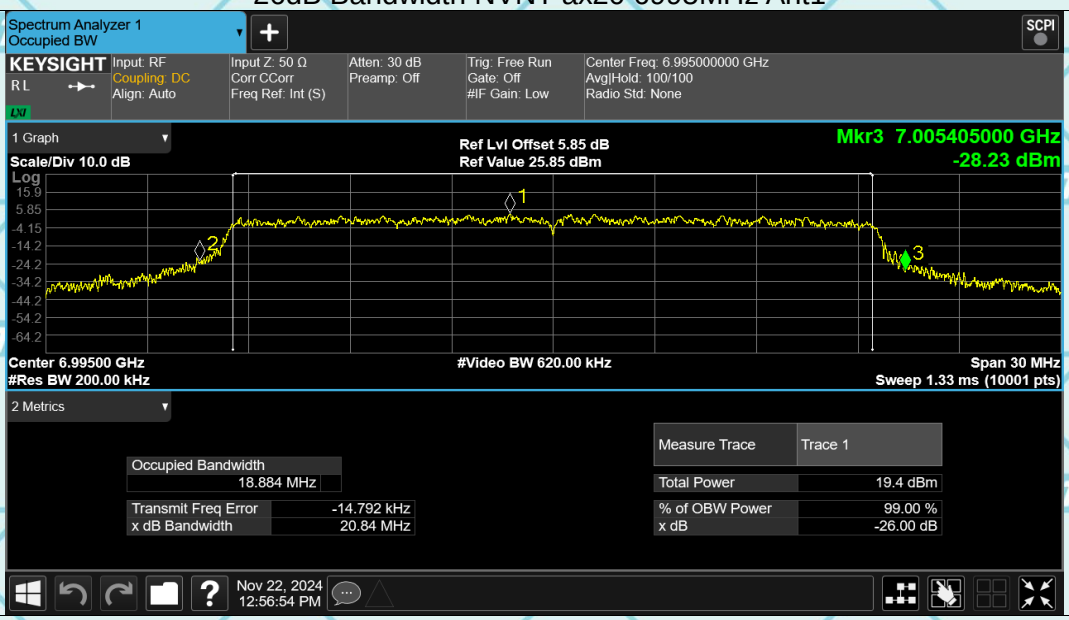
-26dB Bandwidth NVNT ax20 6875MHz Ant1



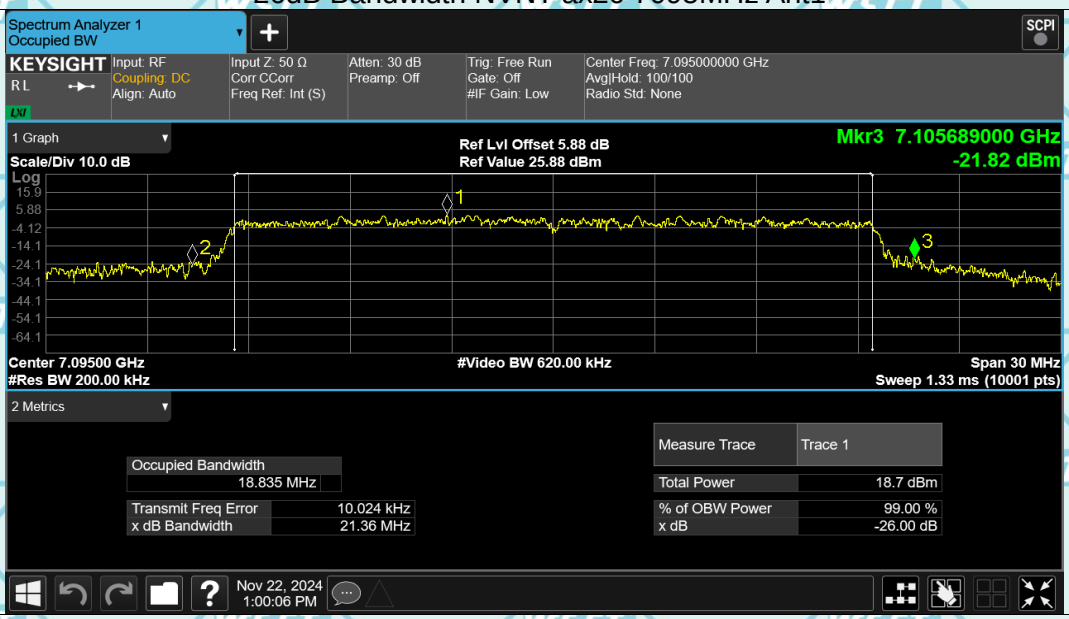
-26dB Bandwidth NVNT ax20 6895MHz Ant1



-26dB Bandwidth NVNT ax20 6995MHz Ant1

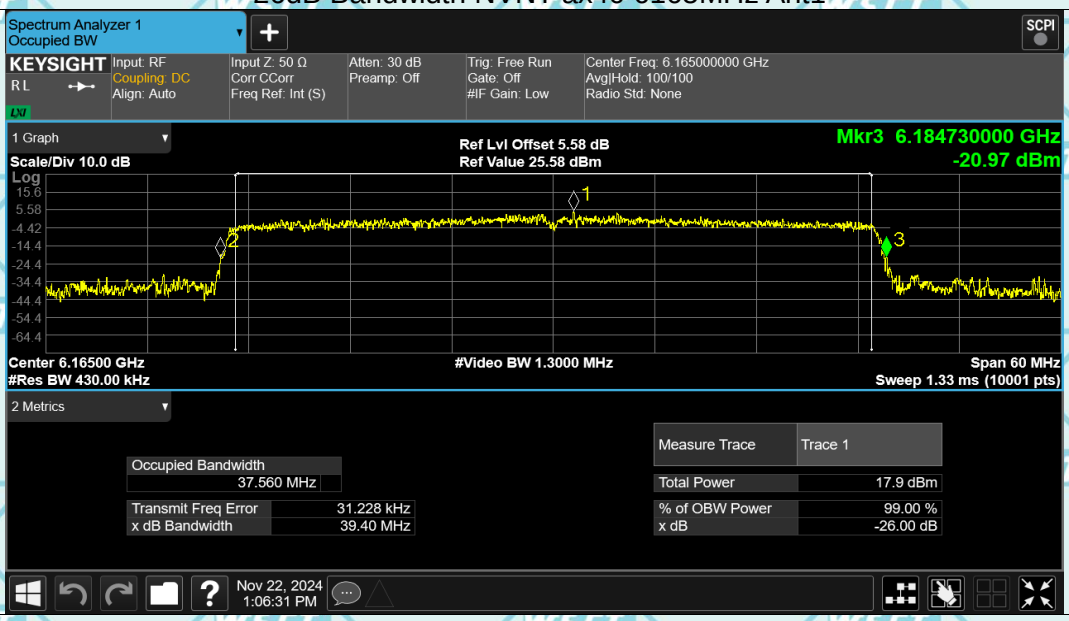


-26dB Bandwidth NVNT ax20 7095MHz Ant1



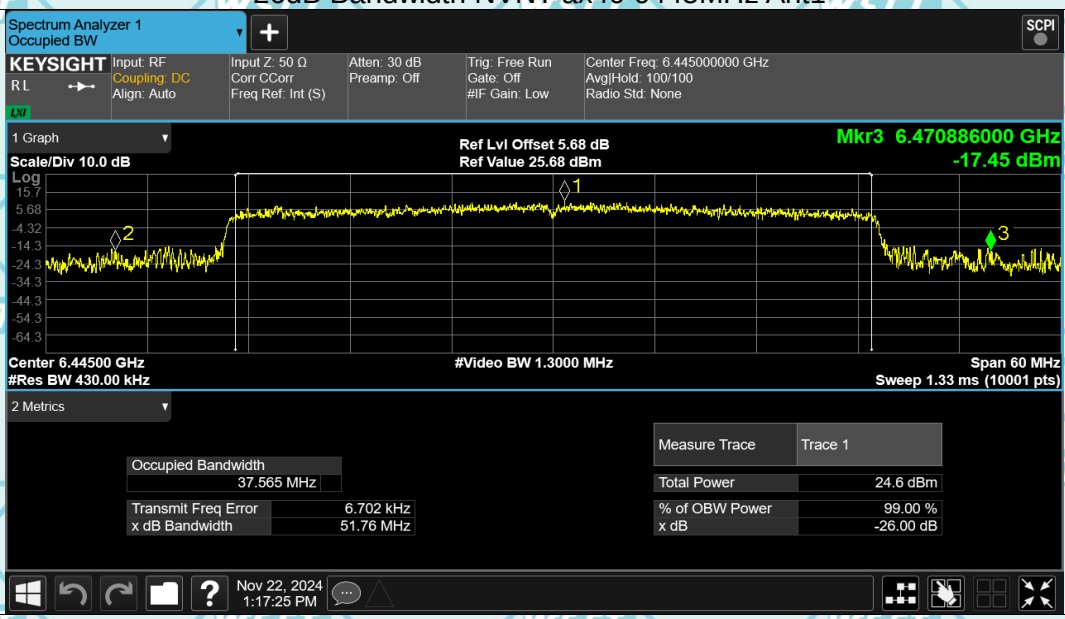
-26dB Bandwidth NVNT ax40 5965MHz Ant1

-26dB Bandwidth NVNT ax40 6165MHz Ant1

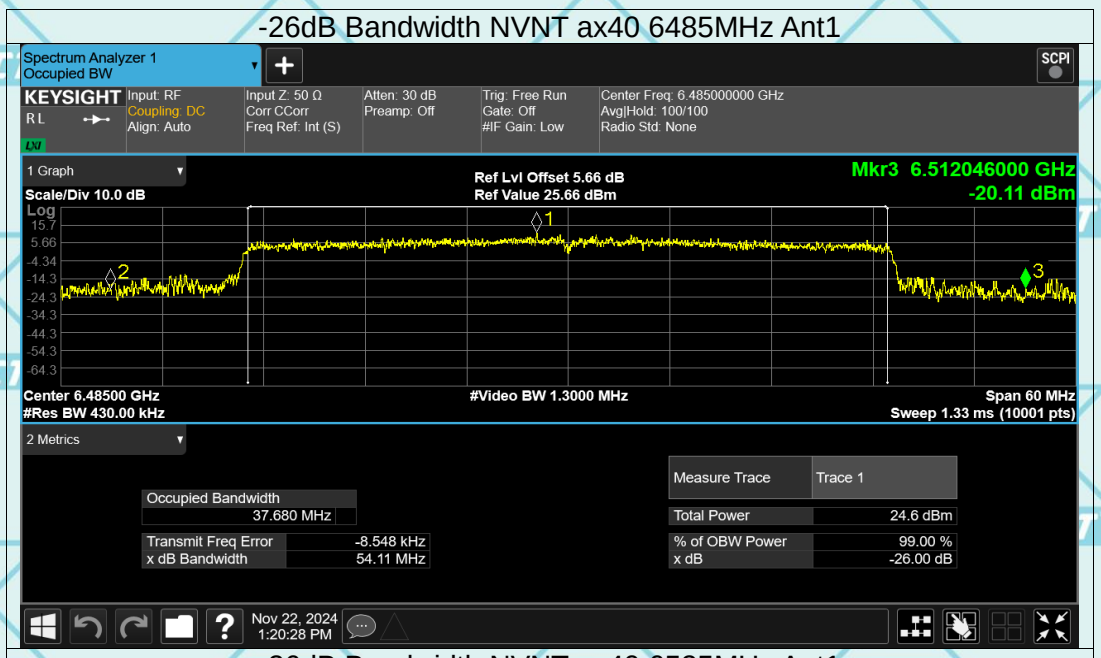


-26dB Bandwidth NVNT ax40 6405MHz Ant1

-26dB Bandwidth NVNT ax40 6445MHz Ant1



-26dB Bandwidth NVNT ax40 6485MHz Ant1



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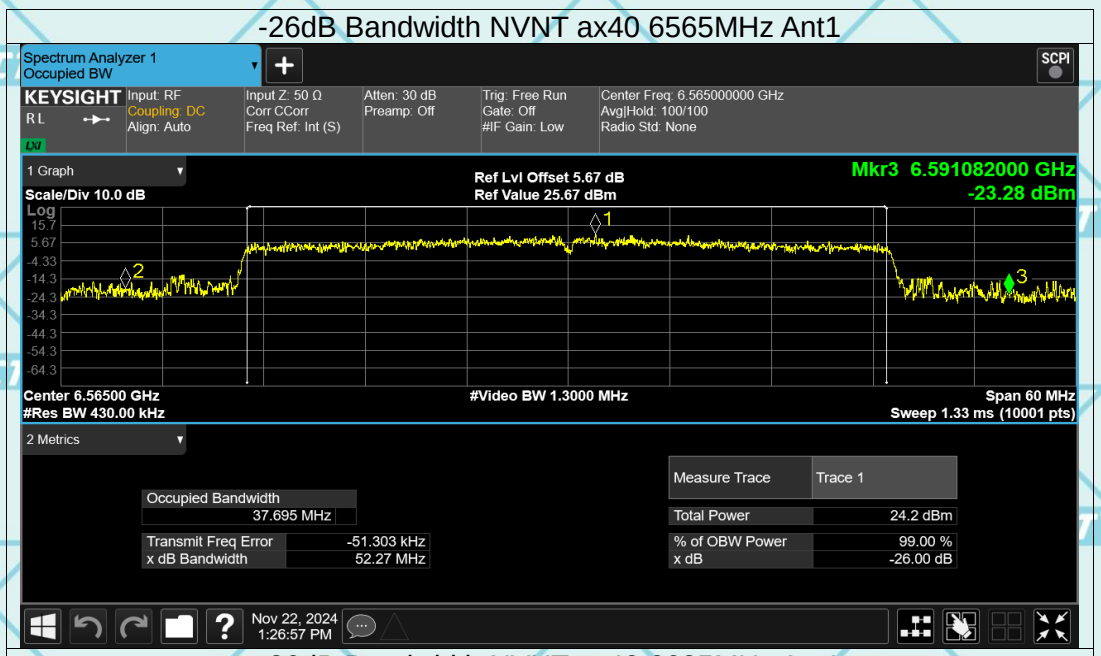
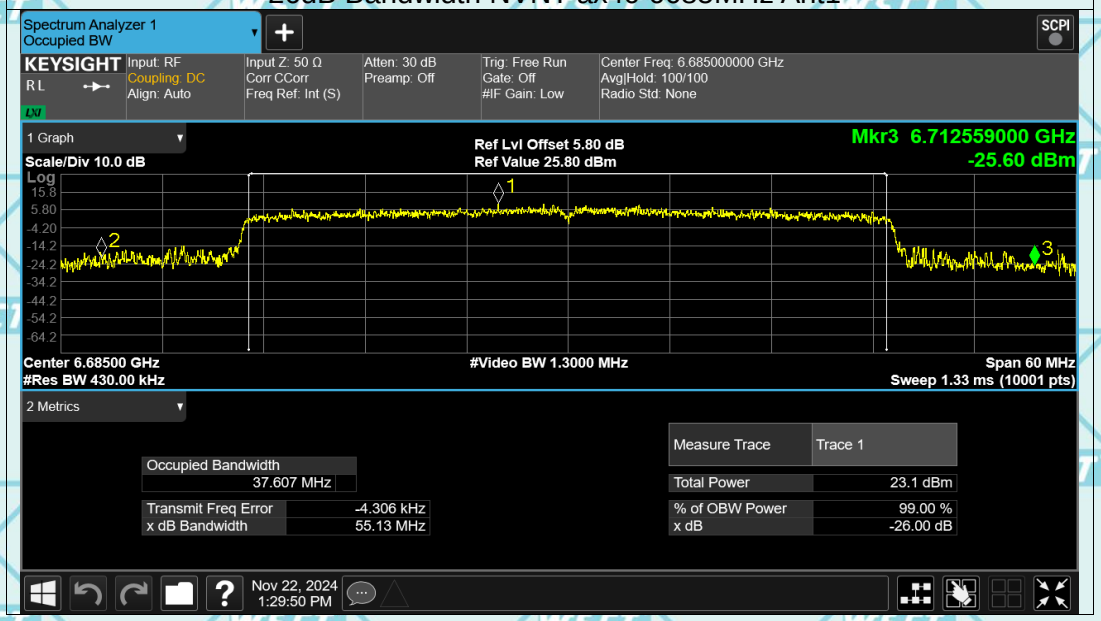
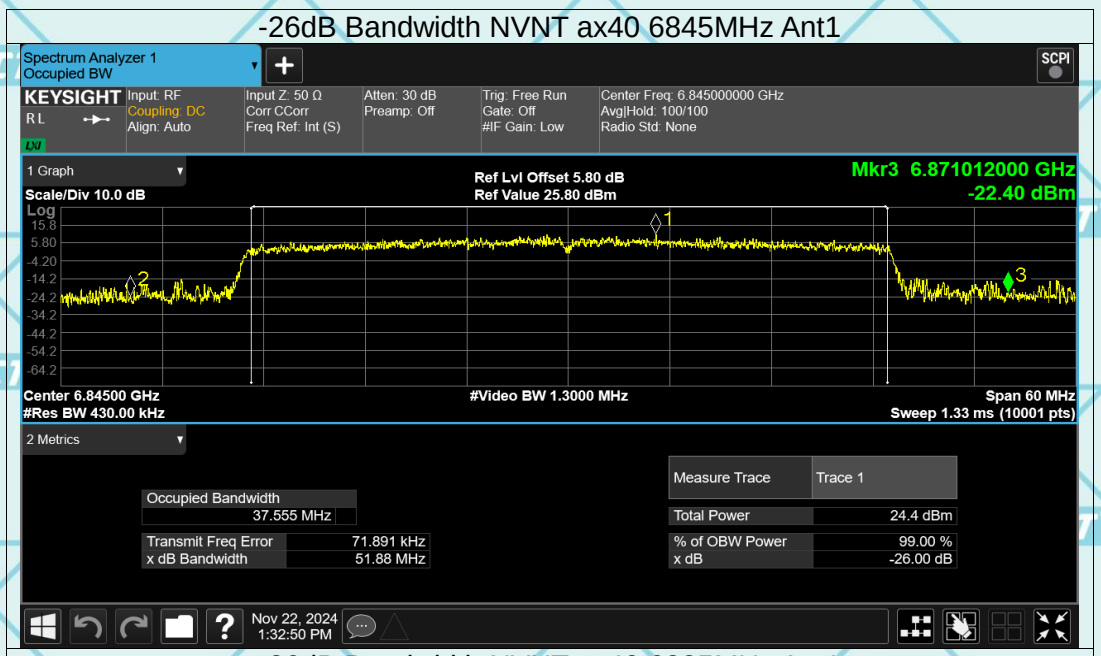
-26dB Bandwidth NVNT ax40 6565MHz Ant1



-26dB Bandwidth NVNT ax40 6685MHz Ant1



-26dB Bandwidth NVNT ax40 6845MHz Ant1



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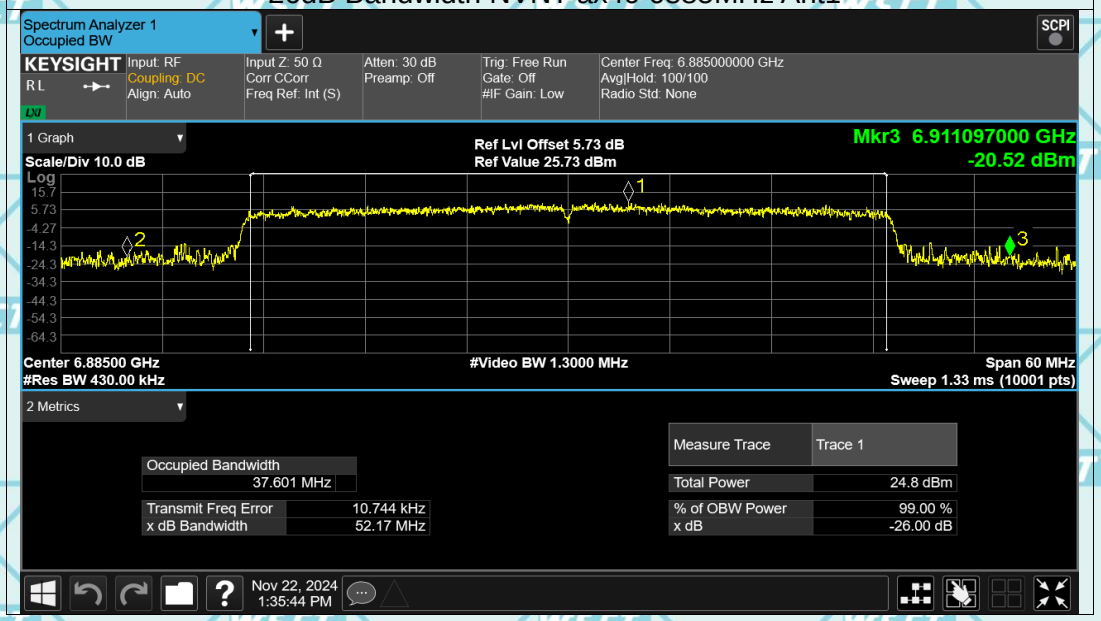
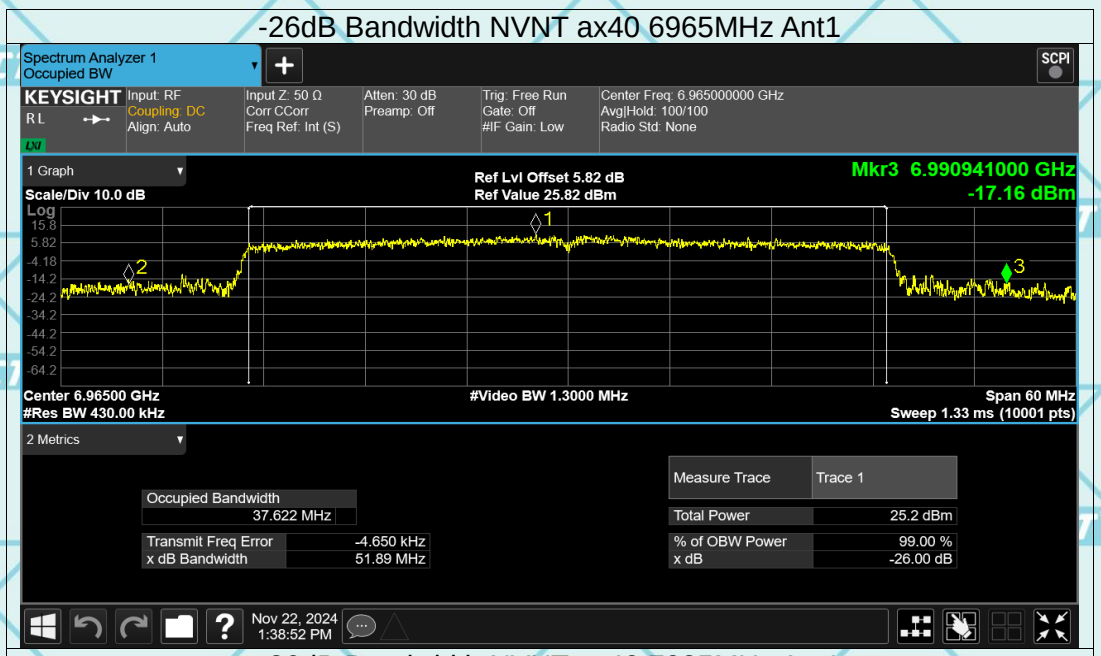
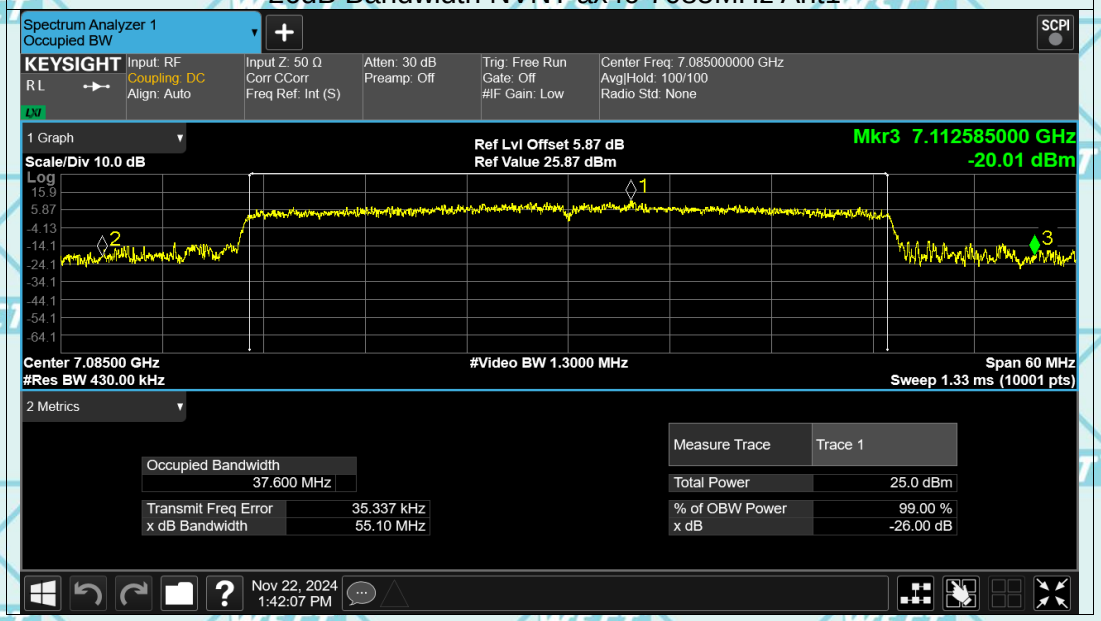


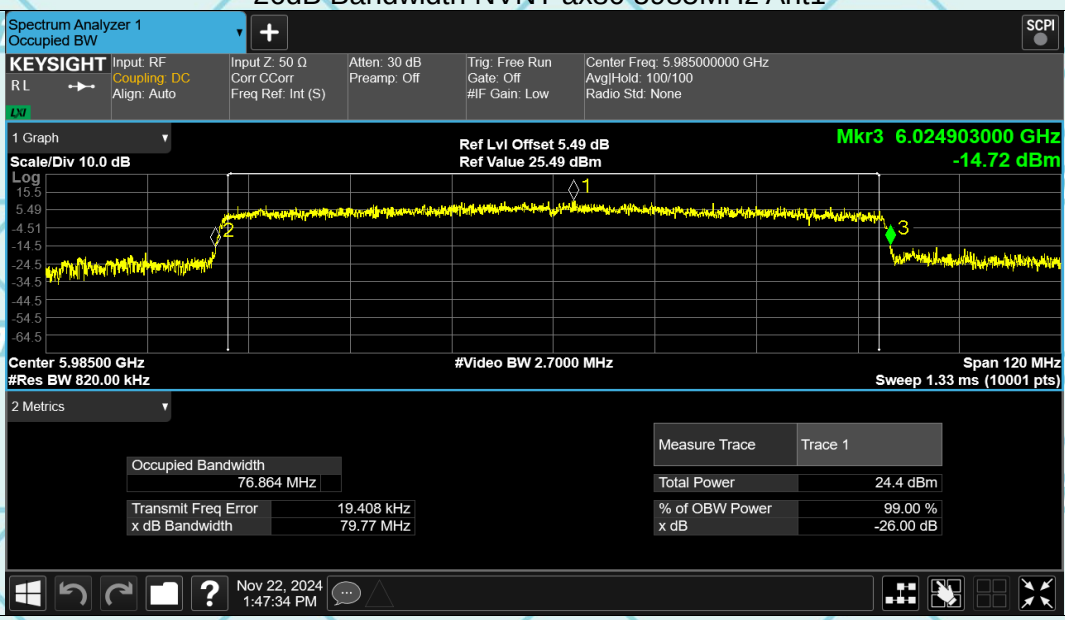
-26dB Bandwidth NVNT ax40 6965MHz Ant1



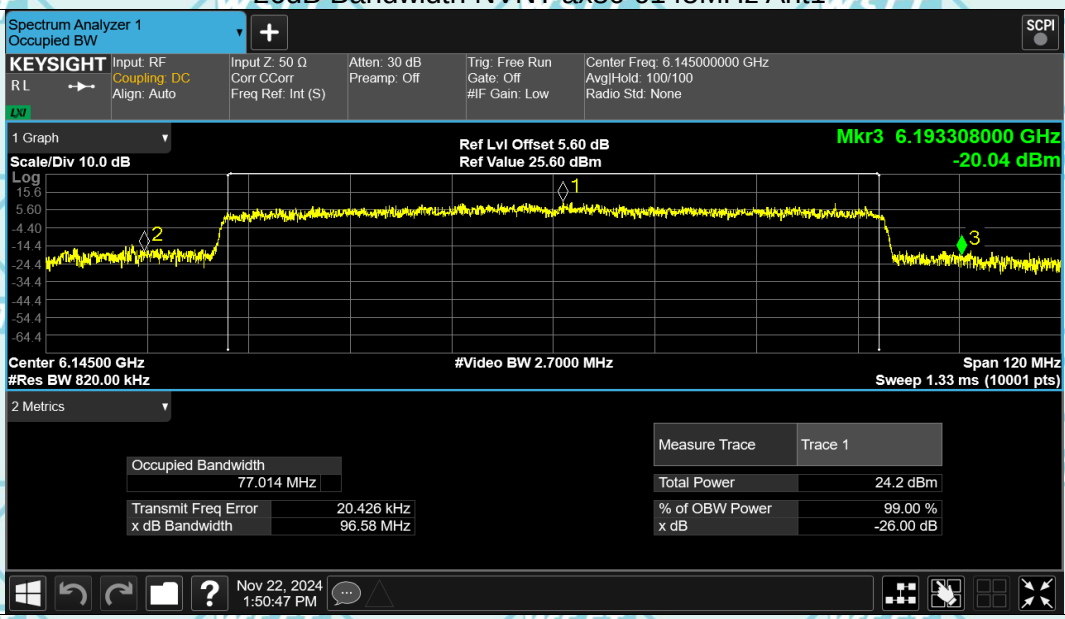
-26dB Bandwidth NVNT ax40 7085MHz Ant1



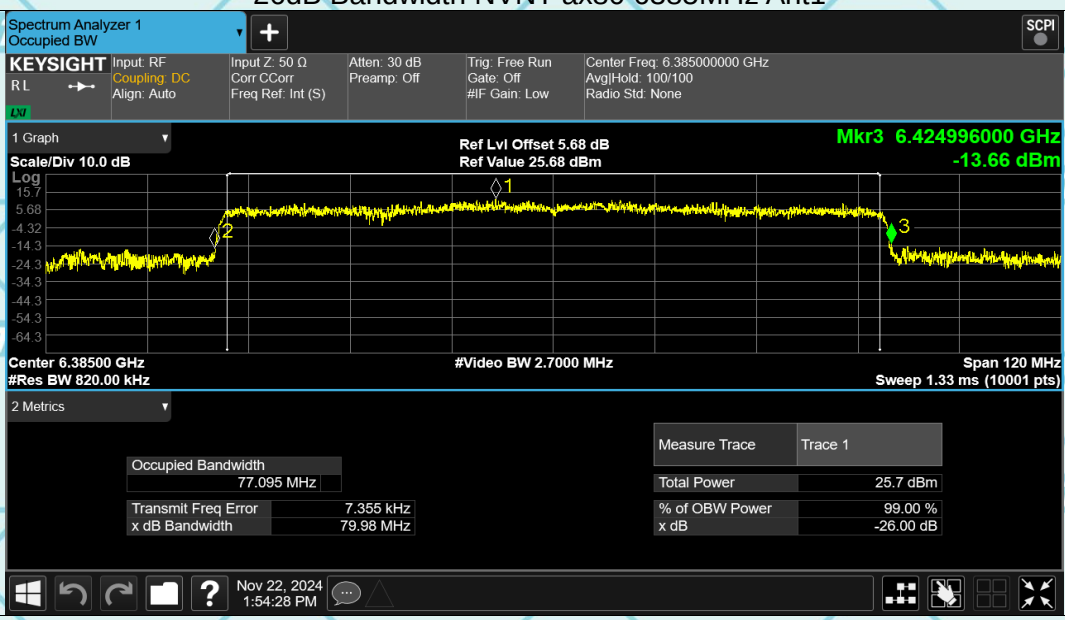
-26dB Bandwidth NVNT ax80 5985MHz Ant1



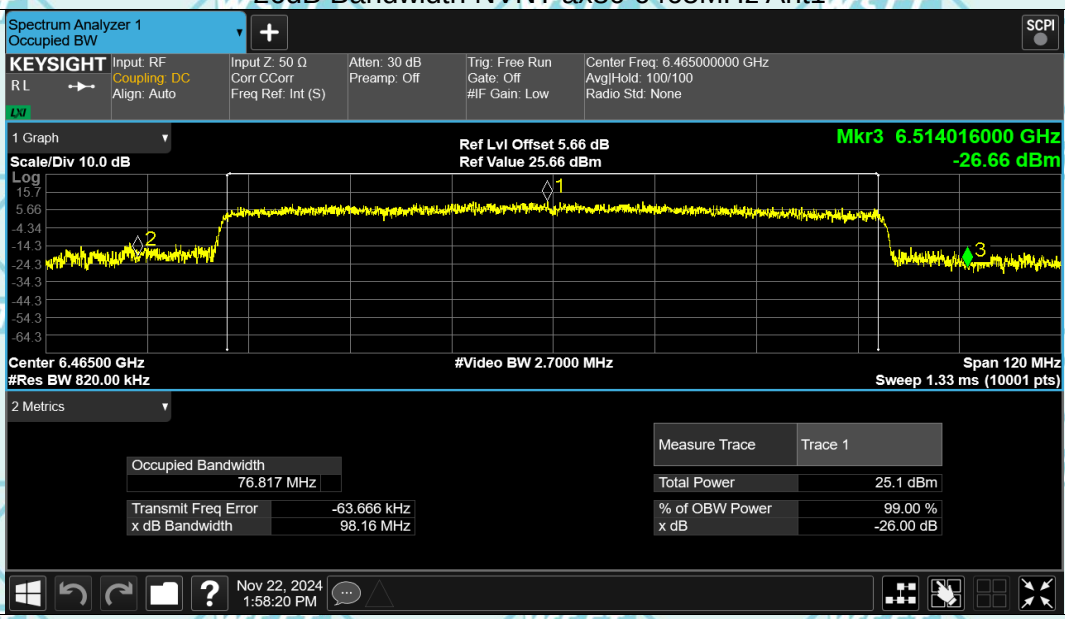
-26dB Bandwidth NVNT ax80 6145MHz Ant1



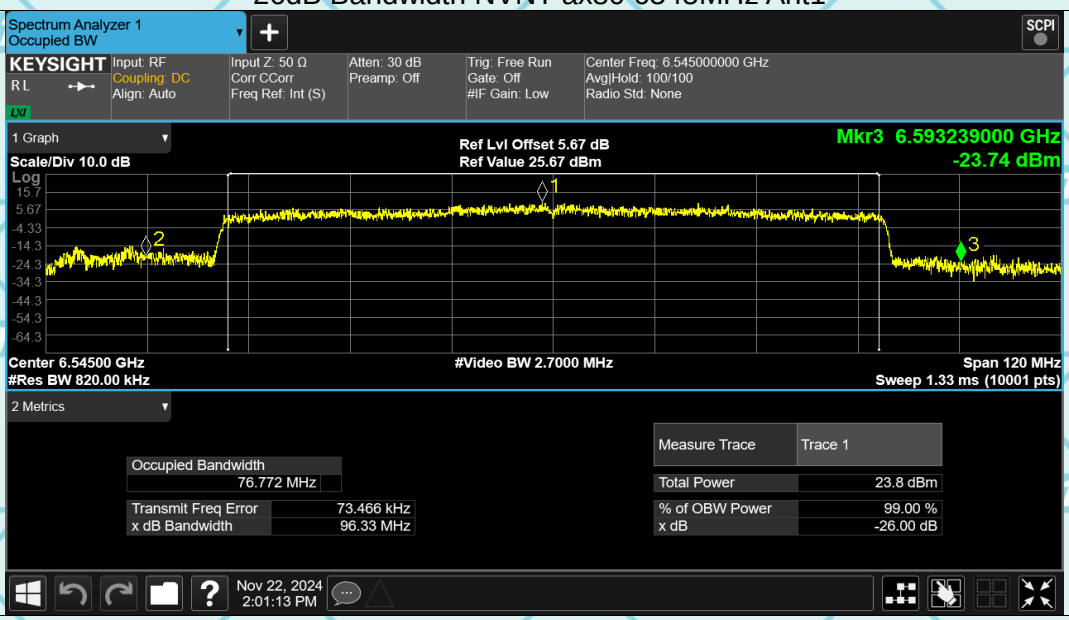
-26dB Bandwidth NVNT ax80 6385MHz Ant1



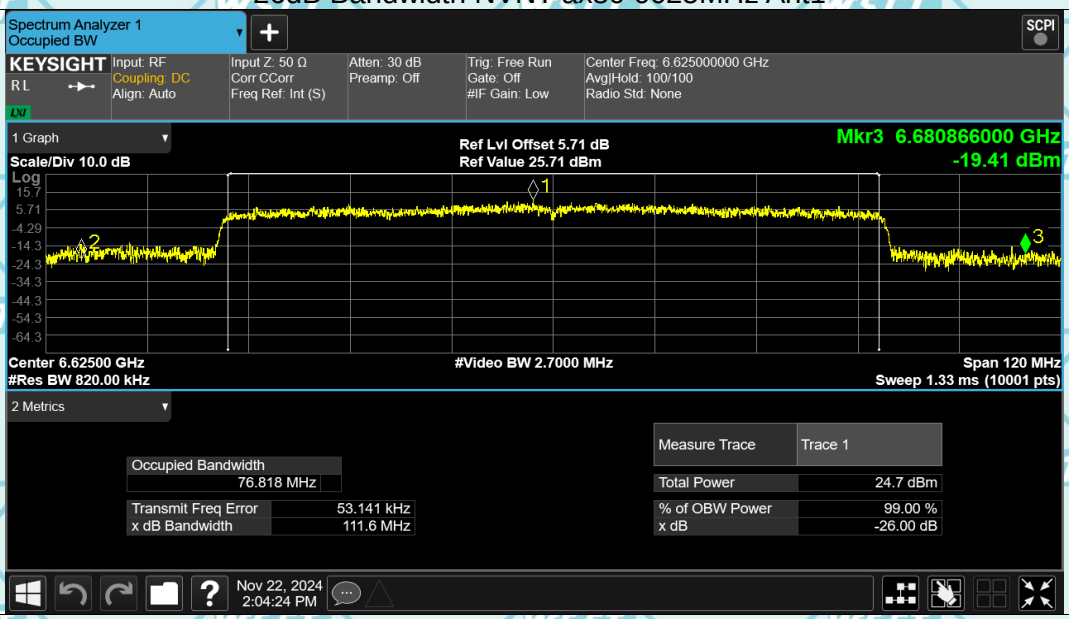
-26dB Bandwidth NVNT ax80 6465MHz Ant1



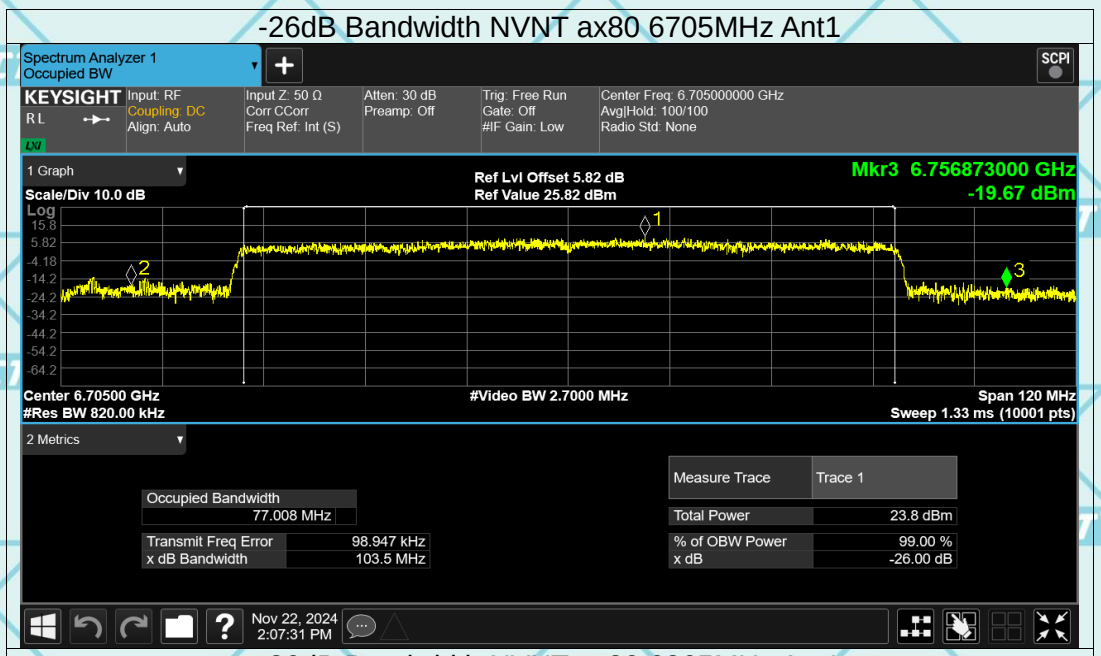
-26dB Bandwidth NVNT ax80 6545MHz Ant1



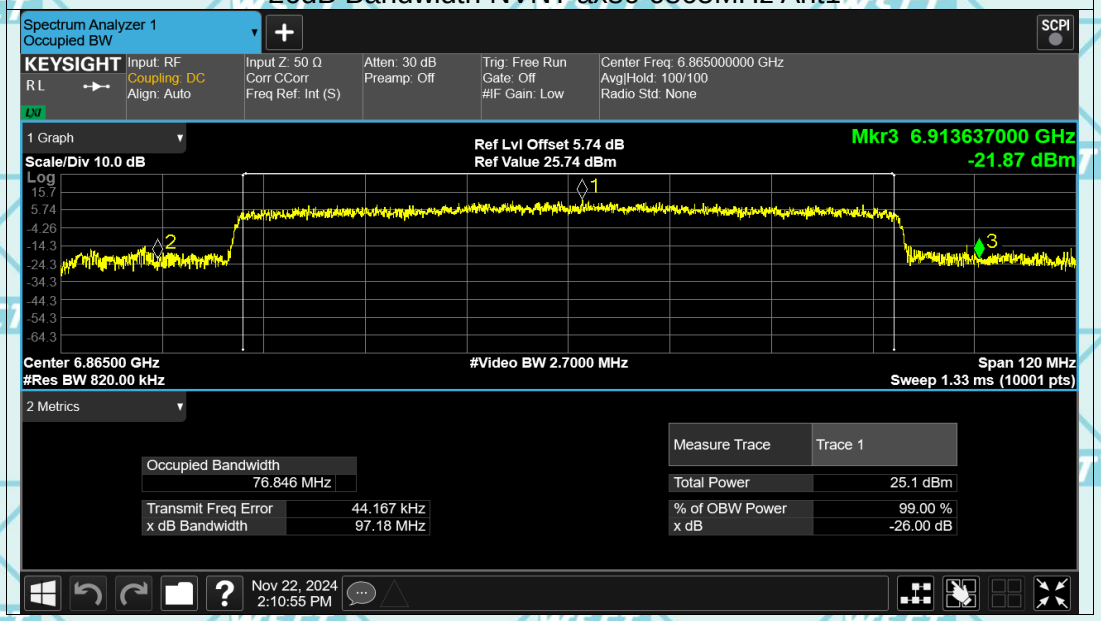
-26dB Bandwidth NVNT ax80 6625MHz Ant1



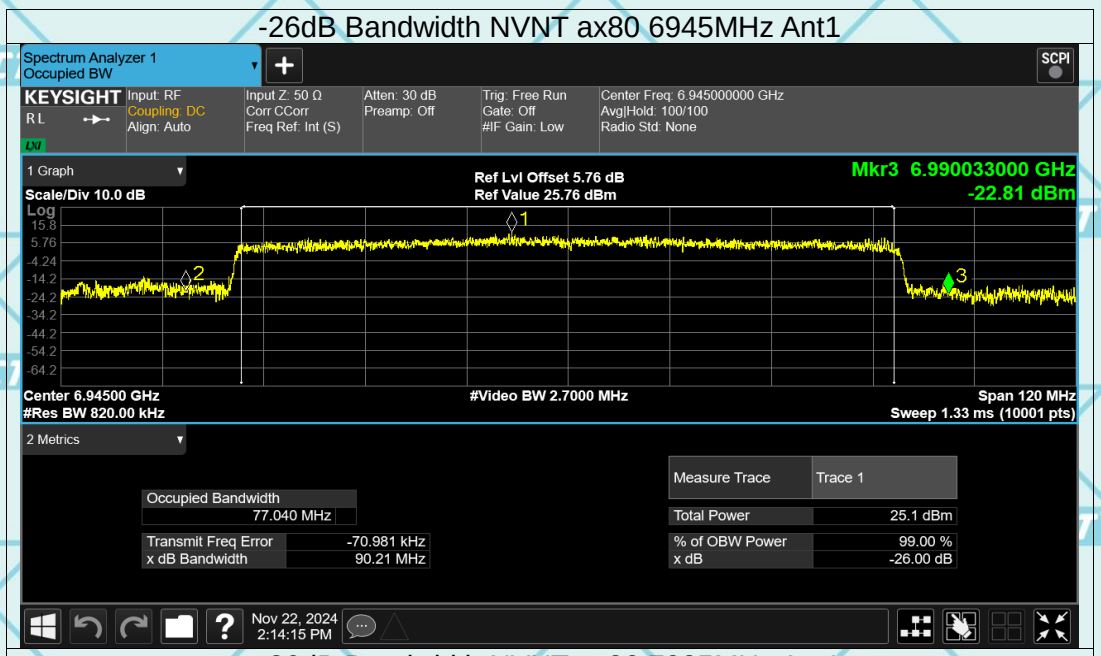
-26dB Bandwidth NVNT ax80 6705MHz Ant1



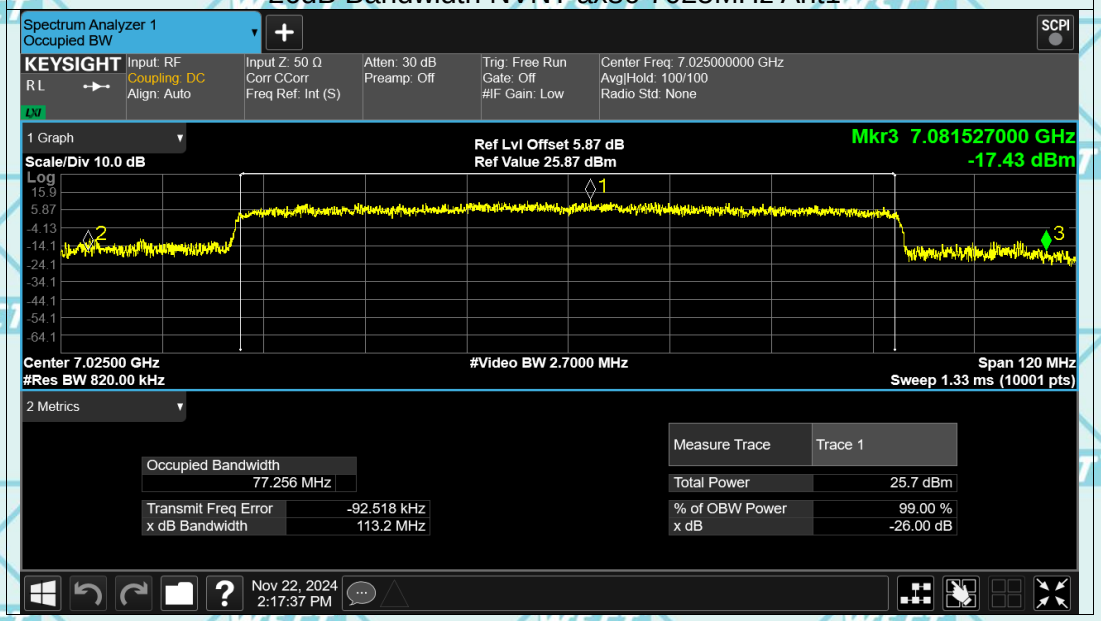
-26dB Bandwidth NVNT ax80 6865MHz Ant1



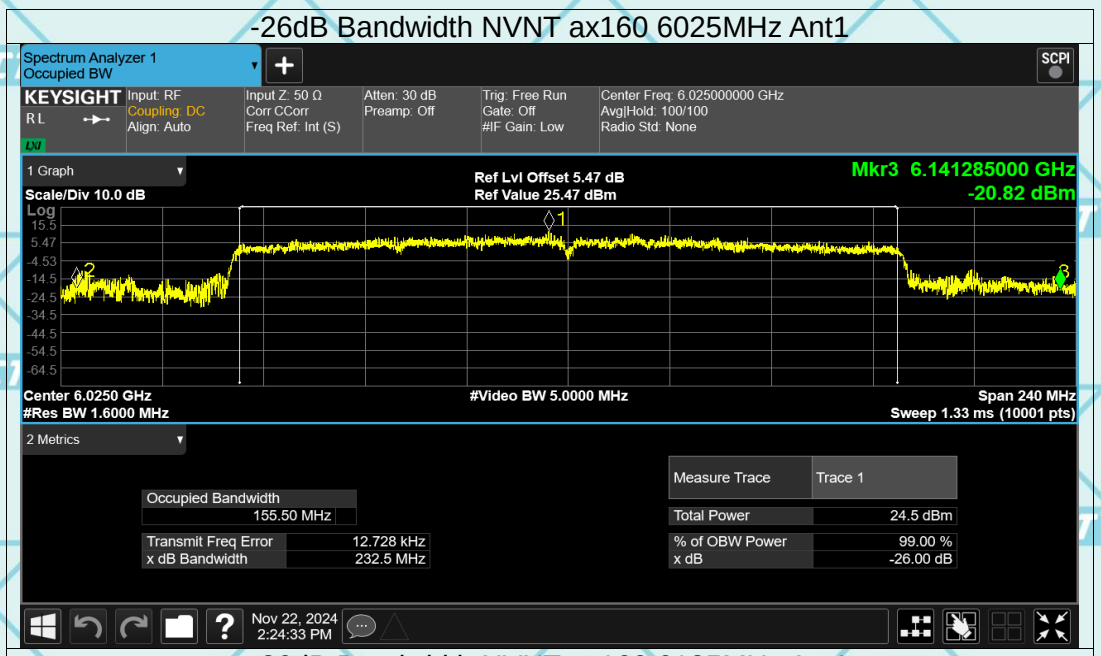
-26dB Bandwidth NVNT ax80 6945MHz Ant1



-26dB Bandwidth NVNT ax80 7025MHz Ant1



-26dB Bandwidth NVNT ax160 6025MHz Ant1



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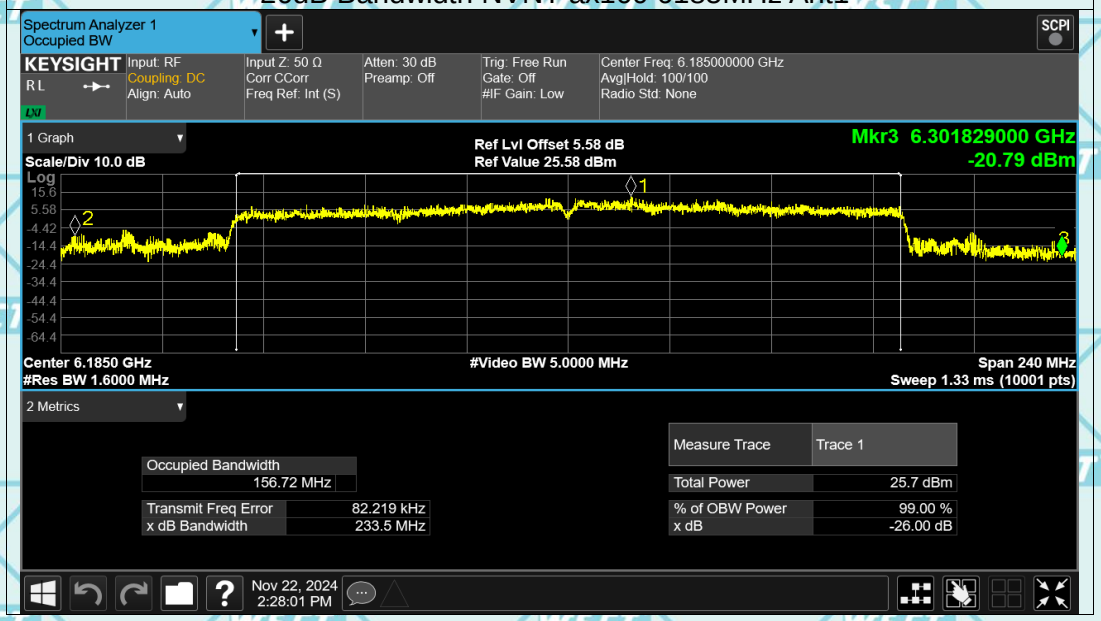

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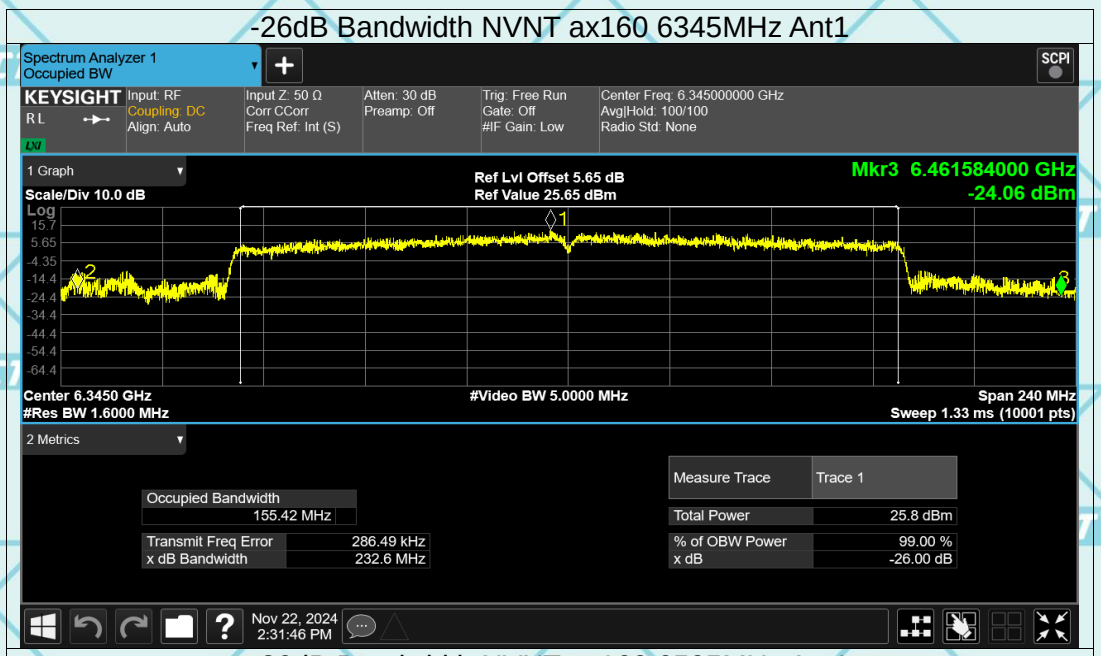
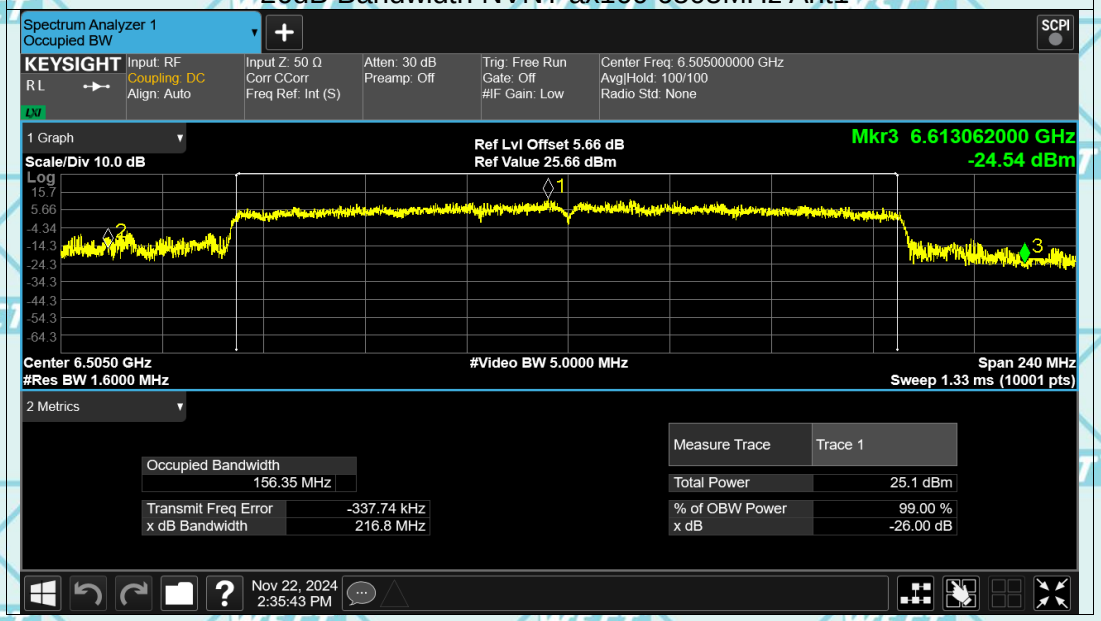
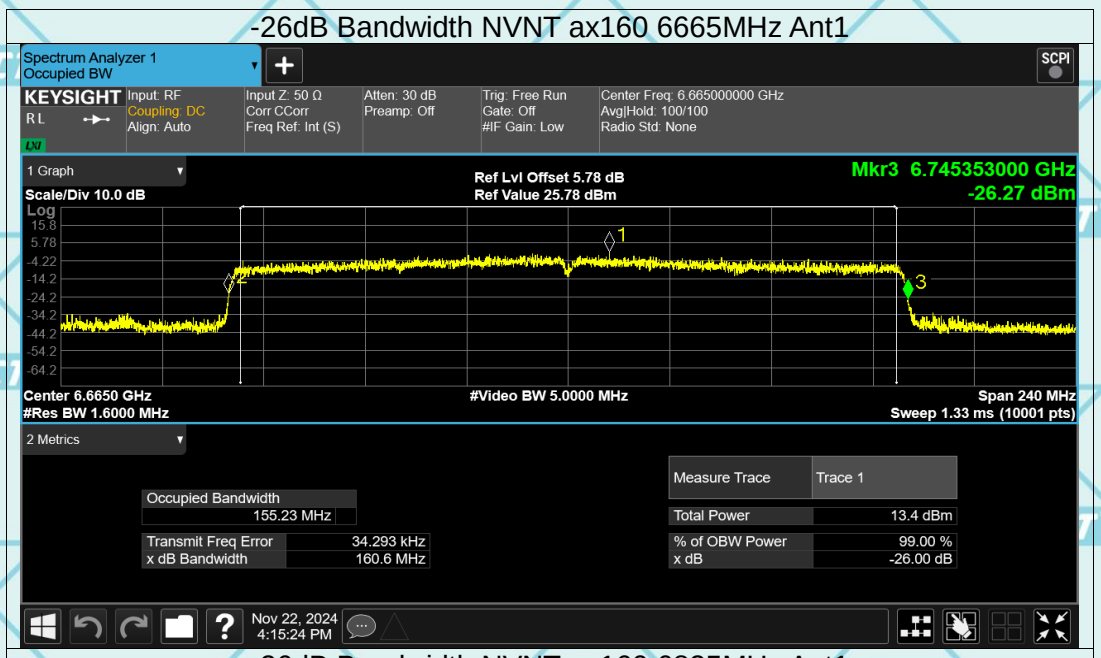


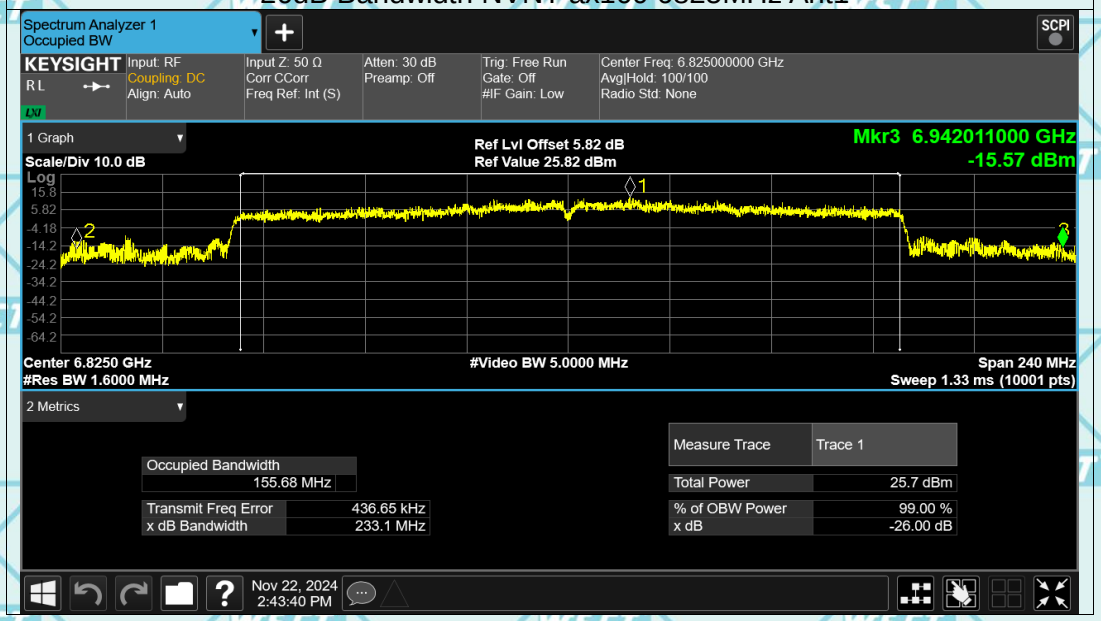
-26dB Bandwidth NVNT ax160 6505MHz Ant1



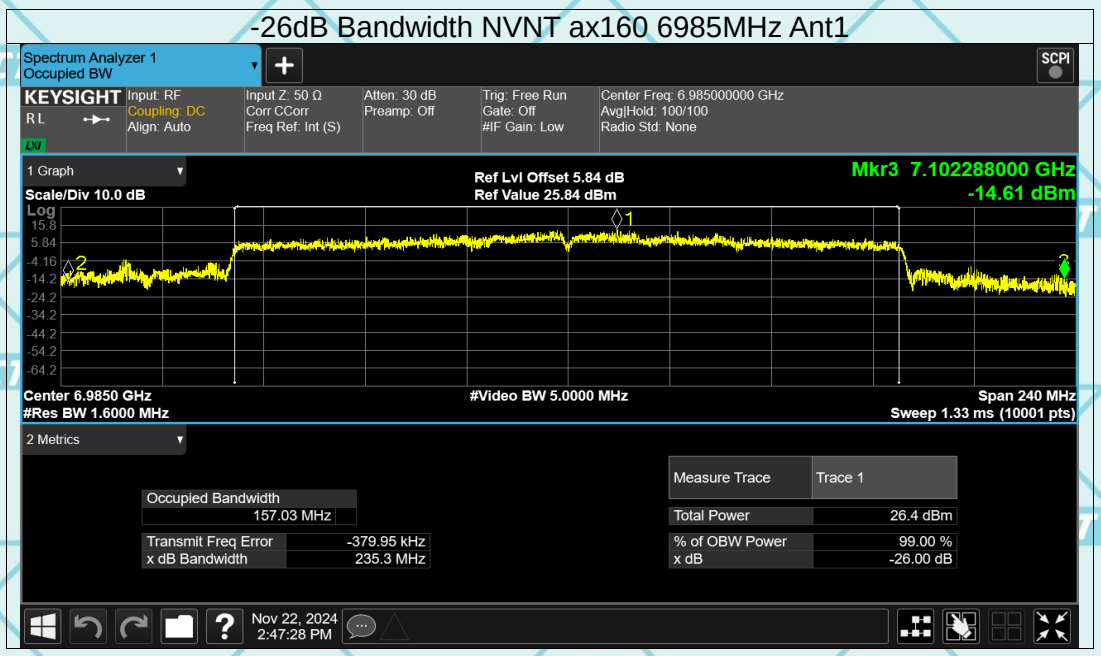
-26dB Bandwidth NVNT ax160 6665MHz Ant1



-26dB Bandwidth NVNT ax160 6825MHz Ant1



-26dB Bandwidth NVNT ax160 6985MHz Ant1



7.6 MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

7.6.1 LIMIT OF FUNDAMENTAL MAXIMUM EIRP

<FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

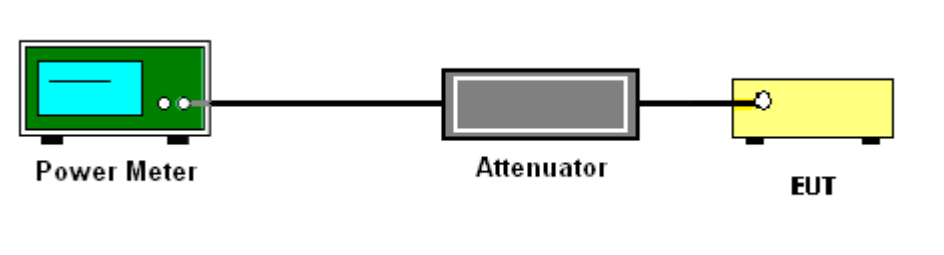
7.6.2 TEST PROCEDURES

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

7.6.3 TEST PROCEDURES



Test Result of Fundamental Maximum EIRP

ANT1

Mode	Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	eirp Power	Limit (dBm)	Verdict
ax20	5955	7.30	2.81	15.43	24	Pass
ax20	6175	6.95	2.81	15.11	24	Pass
ax20	6415	8.57	2.81	16.68	24	Pass
ax20	6435	8.35	2.81	16.44	24	Pass
ax20	6475	8.50	2.81	16.61	24	Pass
ax20	6515	7.40	2.81	15.58	24	Pass
ax20	6535	7.79	2.81	10.60	24	Pass
ax20	6695	6.58	2.81	14.74	24	Pass
ax20	6875	8.85	2.81	16.94	24	Pass
ax20	6895	9.03	2.81	17.19	24	Pass
ax20	6995	8.76	2.81	16.92	24	Pass
ax20	7095	8.14	2.81	16.32	24	Pass
ax40	5965	7.82	2.81	10.86	24	Pass
ax40	6165	6.86	2.81	9.87	24	Pass
ax40	6405	13.58	2.81	22.77	24	Pass
ax40	6445	13.68	2.81	21.26	24	Pass
ax40	6485	13.64	2.81	21.95	24	Pass
ax40	6525	13.38	2.81	16.39	24	Pass
ax40	6565	13.07	2.81	16.07	24	Pass
ax40	6685	12.02	2.81	20.38	24	Pass
ax40	6845	13.18	2.81	21.55	24	Pass
ax40	6885	13.64	2.81	21.94	24	Pass
ax40	6965	13.49	2.81	21.79	24	Pass
ax40	7085	13.71	2.81	16.66	24	Pass
ax80	5985	12.16	2.81	24.00	24	Pass
ax80	6145	12.20	2.81	15.10	24	Pass
ax80	6385	12.83	2.81	**26.54**	24	Pass
ax80	6465	12.73	2.81	20.31	24	Pass
ax80	6545	11.76	2.81	23.60	24	Pass
ax80	6625	12.42	2.81	15.23	24	Pass
ax80	6705	11.70	2.81	21.27	24	Pass
ax80	6865	13.05	2.81	22.62	24	Pass
ax80	6945	13.03	2.81	15.94	24	Pass
ax80	7025	13.48	2.81	23.05	24	Pass
ax160	6025	12.06	2.81	15.08	24	Pass
ax160	6185	13.12	2.81	23.12	24	Pass
ax160	6345	13.18	2.81	23.18	24	Pass
ax160	6505	12.36	2.81	22.36	24	Pass
ax160	6665	13.03	2.81	23.62	24	Pass
ax160	6825	13.13	2.81	23.21	24	Pass
ax160	6985	14.47	2.81	24.52	24	Pass

ANT2

Mode	Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	eirp Power	Limit (dBm)	Verdict
ax20	5955	8.12	2.62	10.93	24	Pass
ax20	6175	8.82	2.62	11.63	24	Pass
ax20	6415	9.42	2.62	12.23	24	Pass
ax20	6435	9.41	2.62	12.22	24	Pass
ax20	6475	8.99	2.62	11.80	24	Pass
ax20	6515	7.97	2.62	10.78	24	Pass
ax20	6535	7.74	2.62	10.55	24	Pass
ax20	6695	6.79	2.62	9.60	24	Pass
ax20	6875	8.75	2.62	11.56	24	Pass
ax20	6895	8.86	2.62	11.67	24	Pass
ax20	6995	8.31	2.62	11.12	24	Pass
ax20	7095	7.34	2.62	10.15	24	Pass
ax40	5965	8.42	2.62	11.23	24	Pass
ax40	6165	8.84	2.62	11.65	24	Pass
ax40	6405	9.16	2.62	11.97	24	Pass
ax40	6445	9.56	2.62	**12.37**	24	Pass
ax40	6485	8.77	2.62	11.58	24	Pass
ax40	6525	7.79	2.62	10.60	24	Pass
ax40	6565	8.31	2.62	11.12	24	Pass
ax40	6685	7.45	2.62	10.26	24	Pass
ax40	6845	8.38	2.62	11.19	24	Pass
ax40	6885	9.26	2.62	12.07	24	Pass
ax40	6965	8.44	2.62	11.25	24	Pass
ax40	7085	7.21	2.62	10.02	24	Pass
ax80	5985	7.70	2.62	10.51	24	Pass
ax80	6145	7.92	2.62	10.73	24	Pass
ax80	6385	9.21	2.62	12.02	24	Pass
ax80	6465	8.52	2.62	11.33	24	Pass
ax80	6545	7.04	2.62	9.85	24	Pass
ax80	6625	7.41	2.62	10.22	24	Pass
ax80	6705	6.75	2.62	9.56	24	Pass
ax80	6865	8.08	2.62	10.89	24	Pass
ax80	6945	8.33	2.62	11.14	24	Pass
ax80	7025	7.76	2.62	10.57	24	Pass
ax160	6025	4.48	2.62	7.29	24	Pass
ax160	6185	6.06	2.62	8.87	24	Pass
ax160	6345	6.85	2.62	9.66	24	Pass
ax160	6505	5.45	2.62	8.26	24	Pass
ax160	6665	5.68	2.62	8.49	24	Pass
ax160	6825	6.32	2.62	9.13	24	Pass
ax160	6985	5.53	2.62	8.34	24	Pass

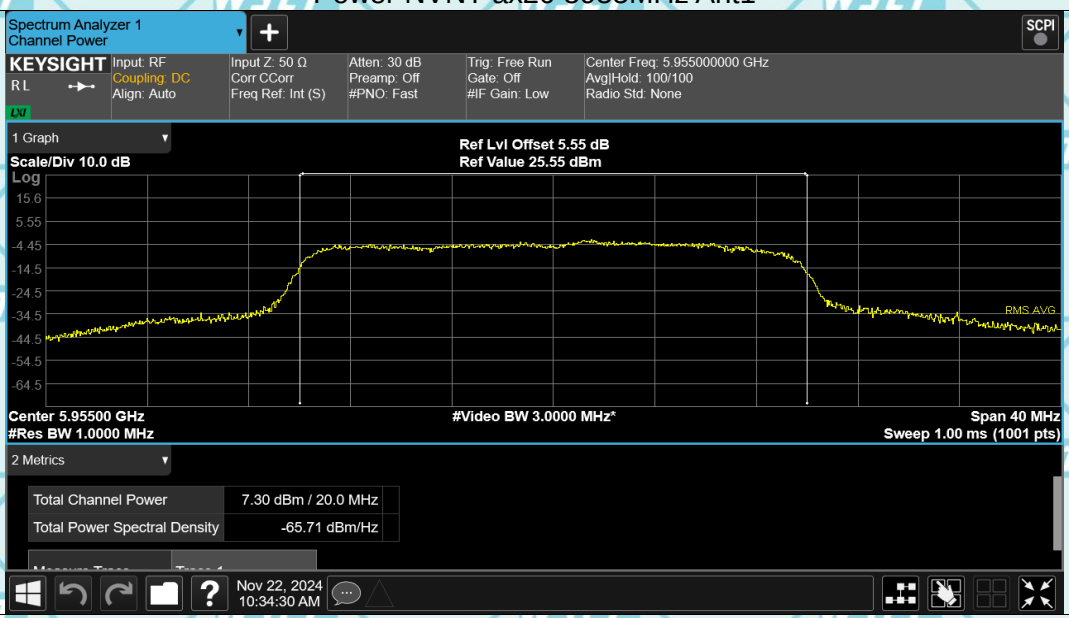
MIMO mode

Mode	Frequency (MHz)	Conducted Power (dBm)	eirp Power	Limit (dBm)	Verdict
ax20	5955	10.74	16.75	24	Pass
ax20	6175	11.00	16.72	24	Pass
ax20	6415	12.03	18.01	24	Pass
ax20	6435	11.92	17.83	24	Pass
ax20	6475	11.76	17.85	24	Pass
ax20	6515	10.70	16.82	24	Pass
ax20	6535	10.78	13.59	24	Pass
ax20	6695	9.70	15.90	24	Pass
ax20	6875	11.81	18.05	24	Pass
ax20	6895	11.96	18.26	24	Pass
ax20	6995	11.55	17.93	24	Pass
ax20	7095	10.77	17.26	24	Pass
ax40	5965	11.14	14.06	24	Pass
ax40	6165	10.97	13.86	24	Pass
ax40	6405	14.92	23.12	24	Pass
ax40	6445	15.10	21.79	24	Pass
ax40	6485	14.86	22.33	24	Pass
ax40	6525	14.44	17.41	24	Pass
ax40	6565	14.32	17.28	24	Pass
ax40	6685	13.32	20.78	24	Pass
ax40	6845	14.42	21.93	24	Pass
ax40	6885	14.99	22.37	24	Pass
ax40	6965	14.67	22.16	24	Pass
ax40	7085	14.59	17.51	24	Pass
ax80	5985	13.49	24.19	24	Pass
ax80	6145	13.58	16.45	24	Pass
ax80	6385	14.40	**26.69**	24	Pass
ax80	6465	14.13	20.83	24	Pass
ax80	6545	13.02	23.78	24	Pass
ax80	6625	13.61	16.42	24	Pass
ax80	6705	12.91	21.55	24	Pass
ax80	6865	14.25	22.90	24	Pass
ax80	6945	14.30	17.18	24	Pass
ax80	7025	14.51	23.29	24	Pass
ax160	6025	12.76	15.75	24	Pass
ax160	6185	13.90	23.28	24	Pass
ax160	6345	14.09	23.37	24	Pass
ax160	6505	13.17	22.53	24	Pass
ax160	6665	13.76	23.75	24	Pass
ax160	6825	13.95	23.38	24	Pass
ax160	6985	14.99	24.62	24	Pass

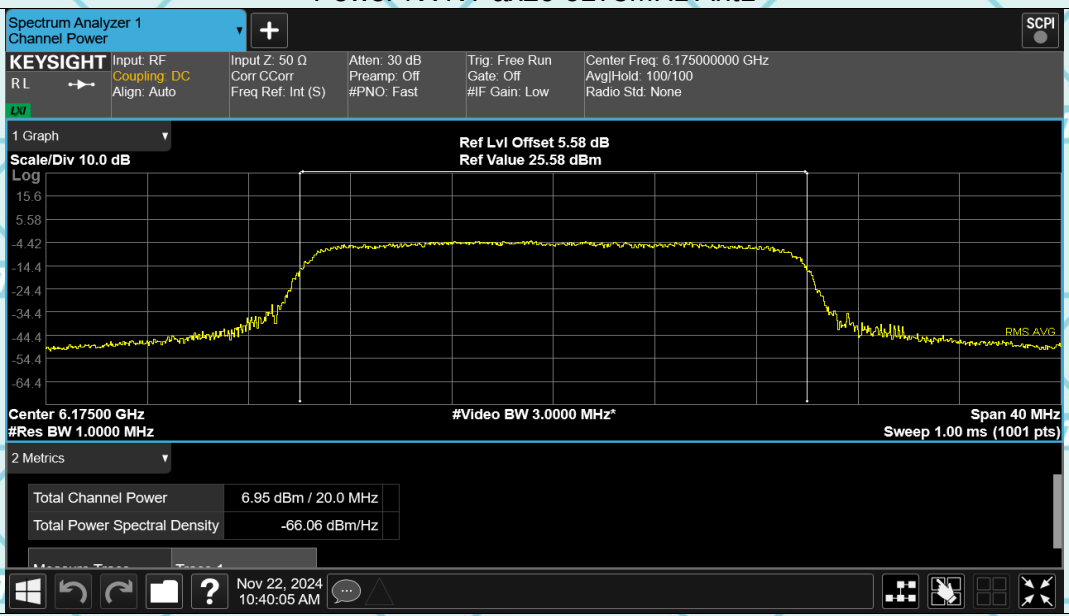
ANT1

Test Graphs

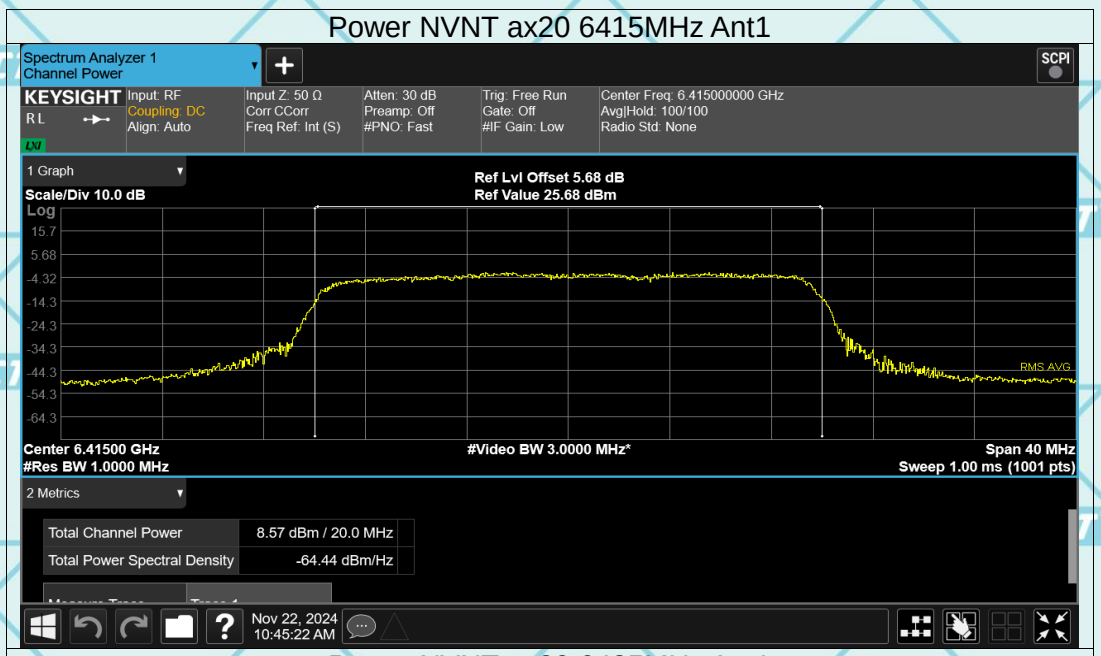
Power NVNT ax20 5955MHz Ant1



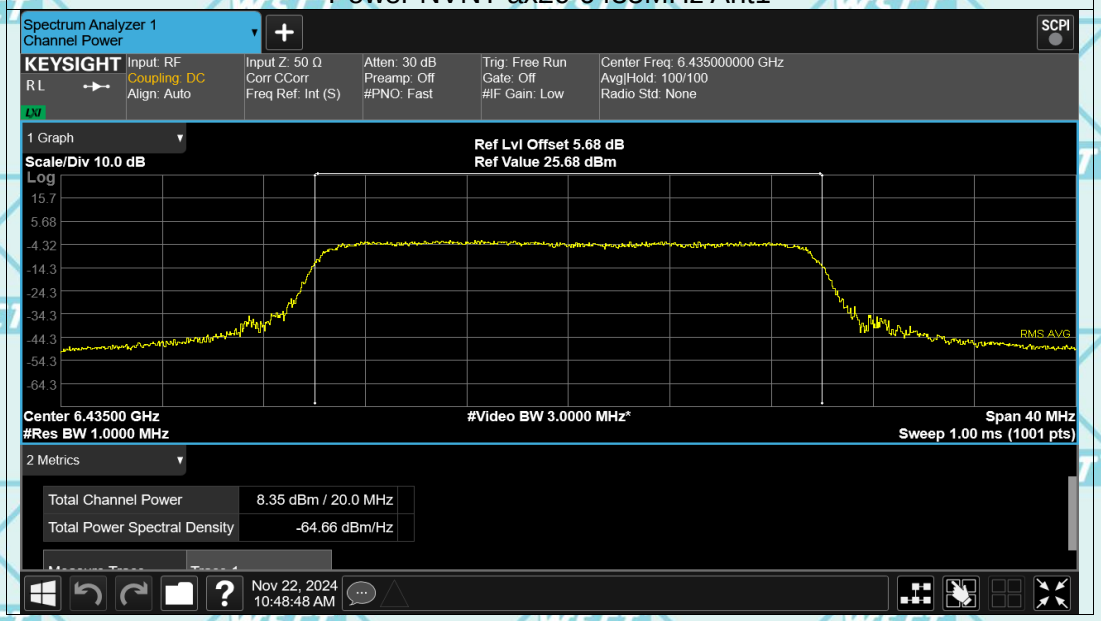
Power NVNT ax20 6175MHz Ant1



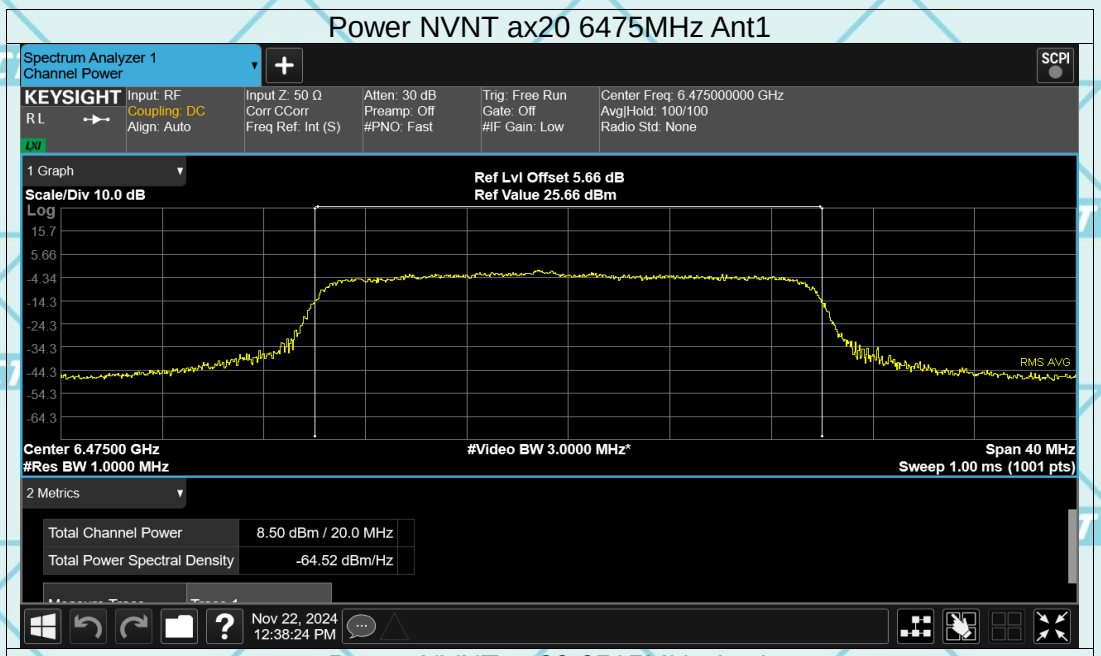
Power NVNT ax20 6415MHz Ant1



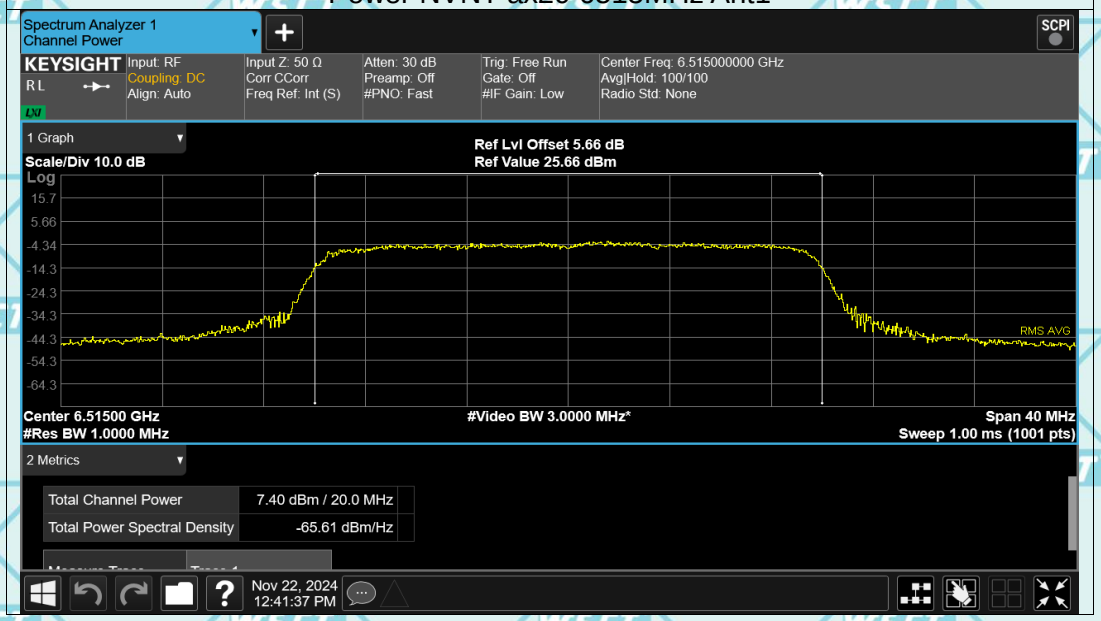
Power NVNT ax20 6435MHz Ant1



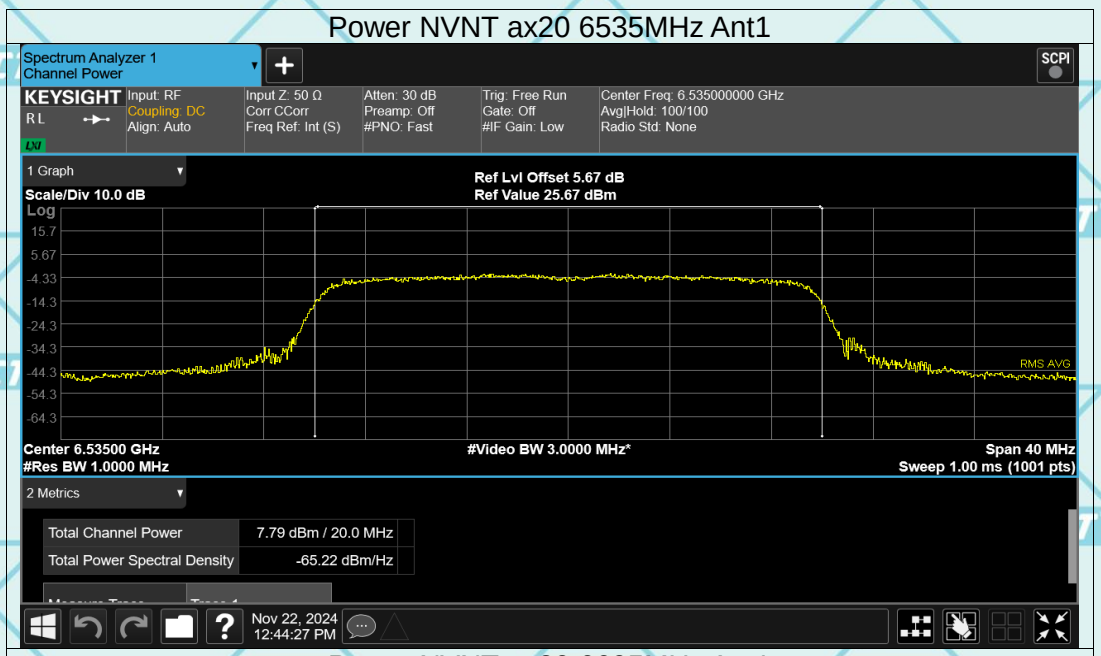
Power NVNT ax20 6475MHz Ant1



Power NVNT ax20 6515MHz Ant1



Power NVNT ax20 6535MHz Ant1



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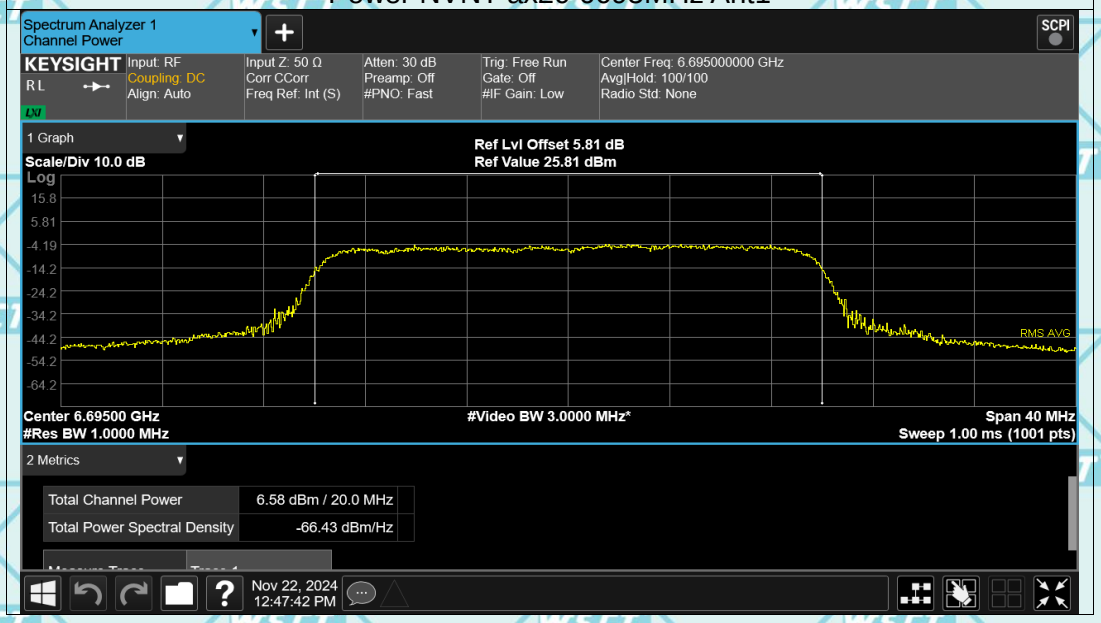
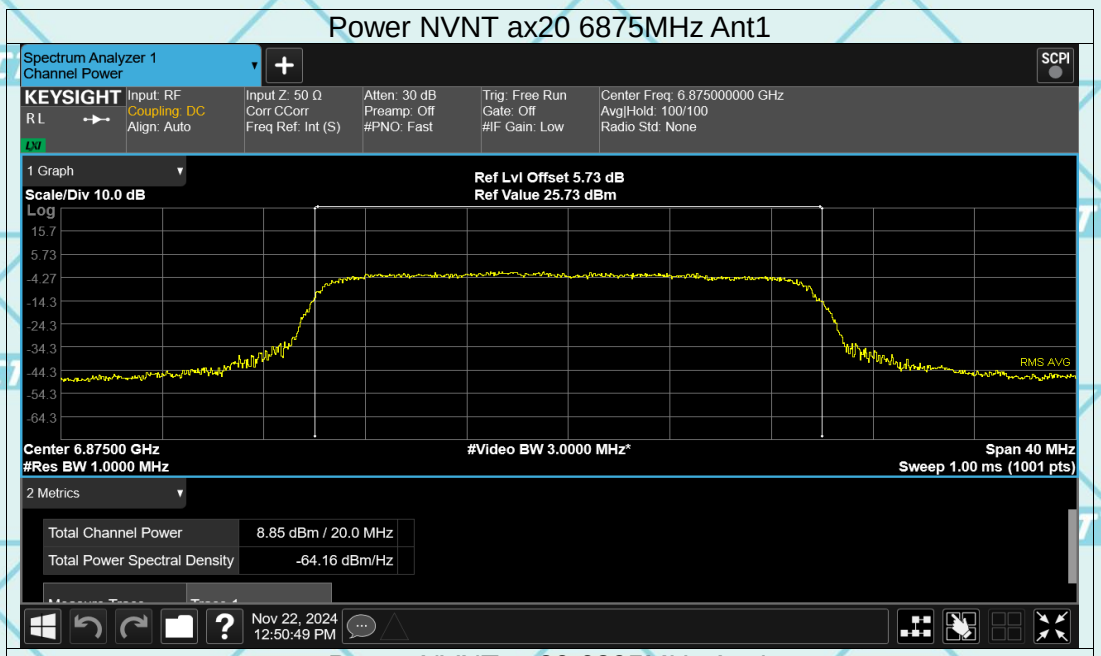
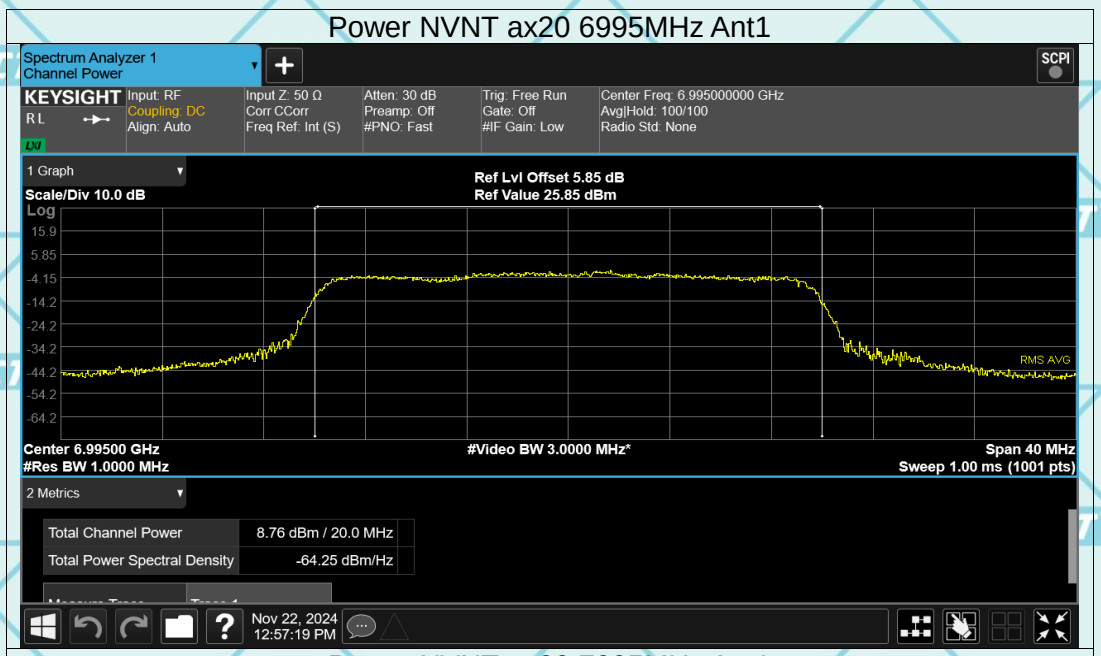


Power NVNT ax20 6875MHz Ant1



Power NVNT ax20 6895MHz Ant1

Power NVNT ax20 6995MHz Ant1



Power NVNT ax20 7095MHz Ant1