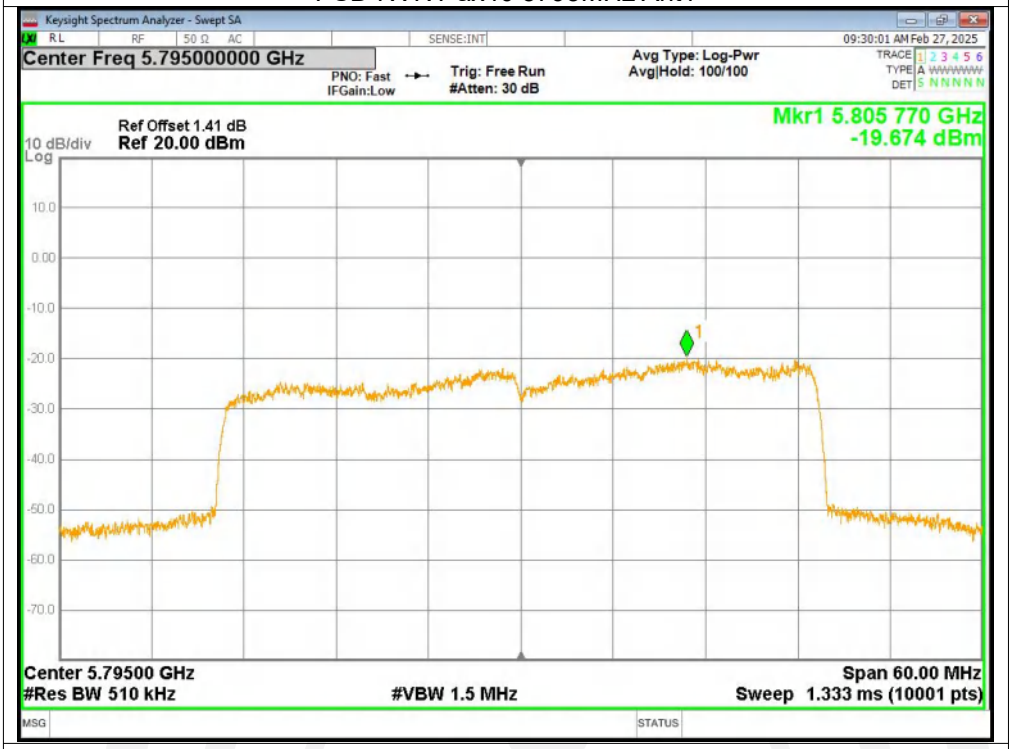
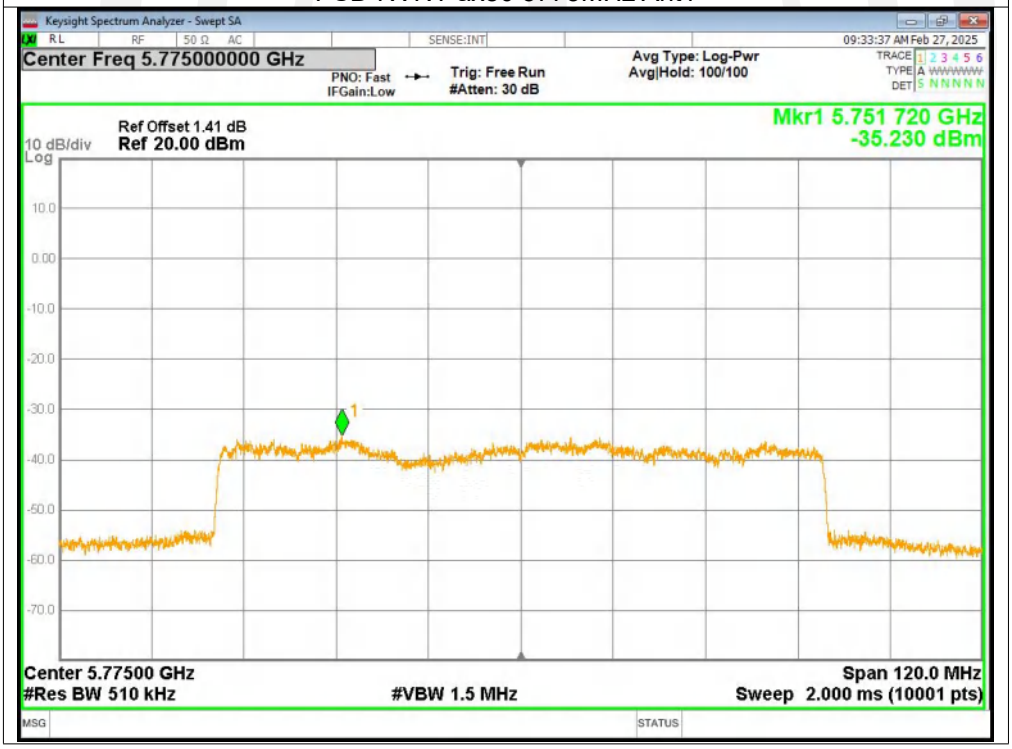
PSD NVNT ax40 5795MHz Ant1

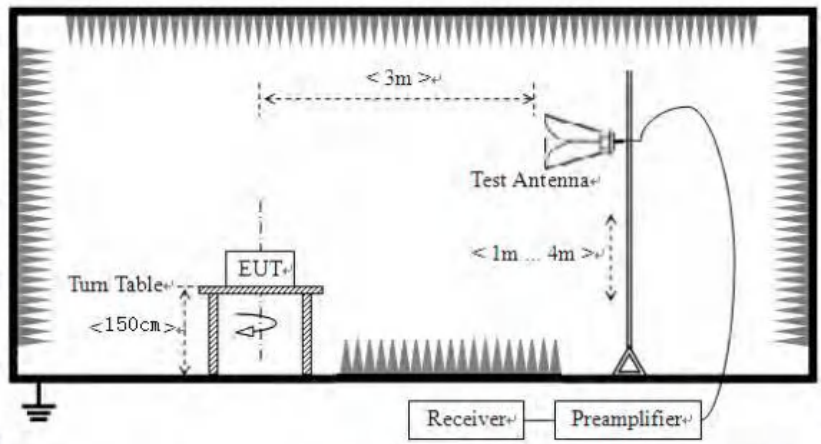


PSD NVNT ax80 5775MHz Ant1



4.5 Band Edge

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 E Section 15.407 and 15.205, RSS-Gen §8.9</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>68.2</td><td>Peak Value</td></tr>
</table>
Undesirable emission 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 EIRP of -27 dBm/MHz.
(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 EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.
(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 EIRP of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
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.
</td></tr>
<tr><td>Test Procedure:</td><td>
a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values
</td></tr>
</table>

	of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test setup:	Above 1GHz 
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remark:

According to KDB 789033 D02 v02r01 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

E[dBuV/m] = EIRP[dBm] + 95.2,

For example, if EIRP = -27dBm

E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.

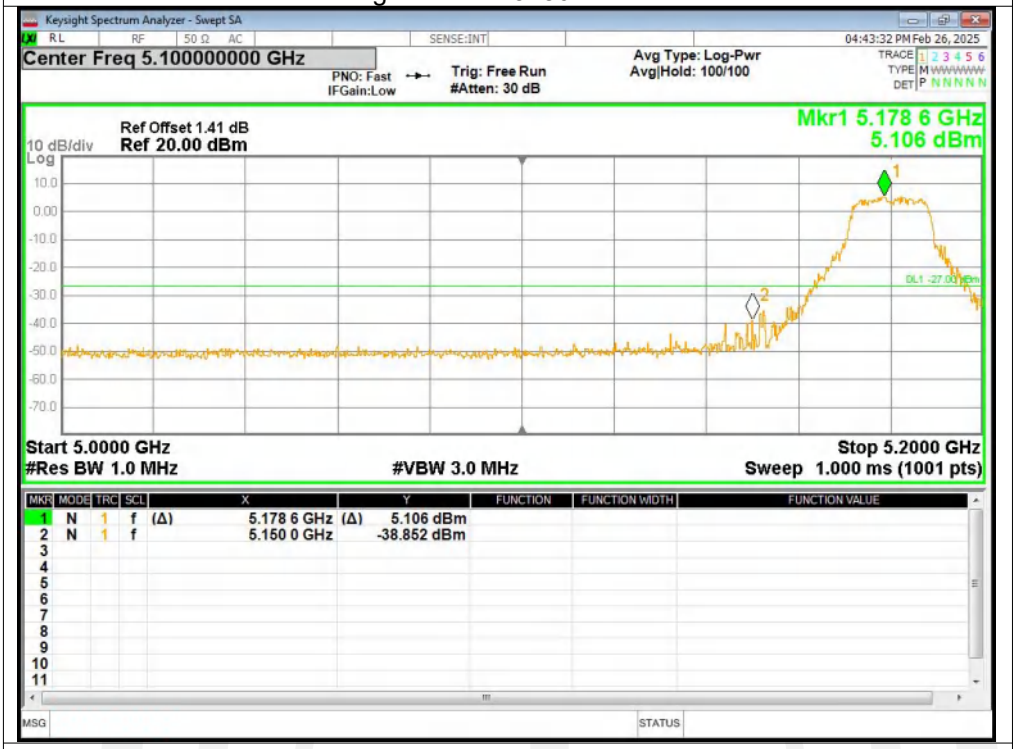
Measurement Data:

5.2GWIFI (5150-5250 MHz)

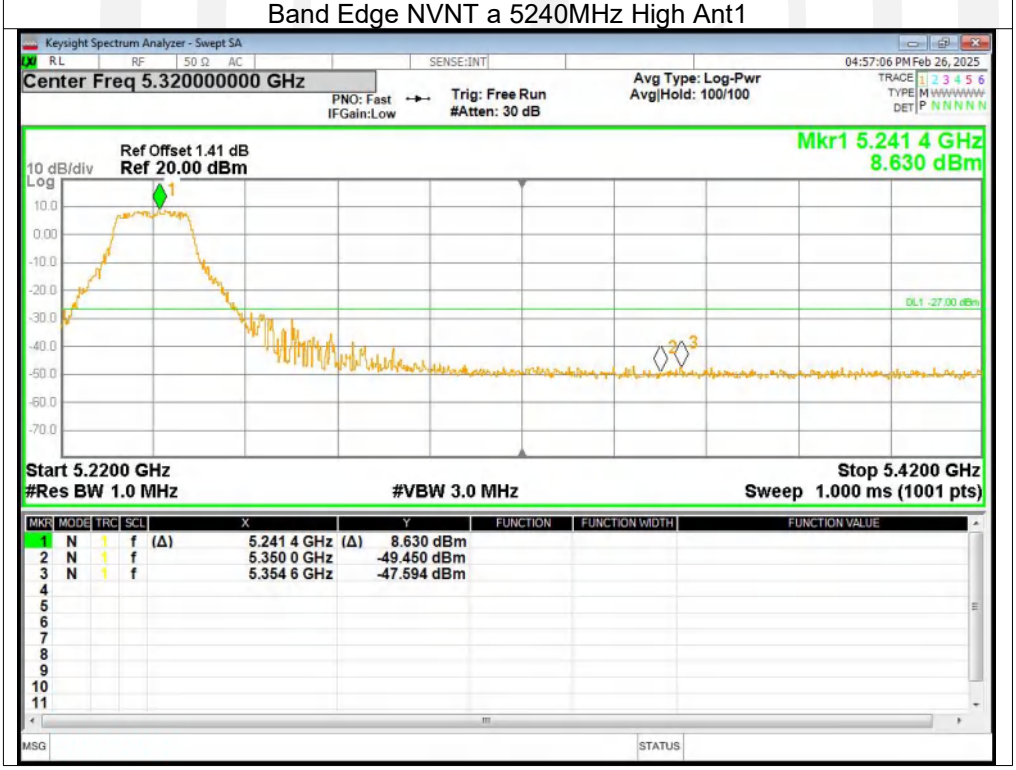
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5180	Ant1	-38.85	-27	Pass
NVNT	a	5240	Ant1	-47.59	-27	Pass
NVNT	n20	5180	Ant1	-35.82	-27	Pass
NVNT	n20	5240	Ant1	-47.23	-27	Pass
NVNT	n40	5190	Ant1	-33.2	-27	Pass
NVNT	n40	5230	Ant1	-47.07	-27	Pass
NVNT	ac20	5180	Ant1	-37.41	-27	Pass
NVNT	ac20	5240	Ant1	-47.46	-27	Pass
NVNT	ac40	5190	Ant1	-35.94	-27	Pass
NVNT	ac40	5230	Ant1	-42.7	-27	Pass
NVNT	ac80	5210	Ant1	-28.42	-27	Pass
NVNT	ax20	5180	Ant1	-32.25	-27	Pass
NVNT	ax20	5240	Ant1	-47.78	-27	Pass
NVNT	ax40	5190	Ant1	-30.82	-27	Pass
NVNT	ax40	5230	Ant1	-47.6	-27	Pass
NVNT	ax80	5210	Ant1	-33.47	-27	Pass

Test Graphs

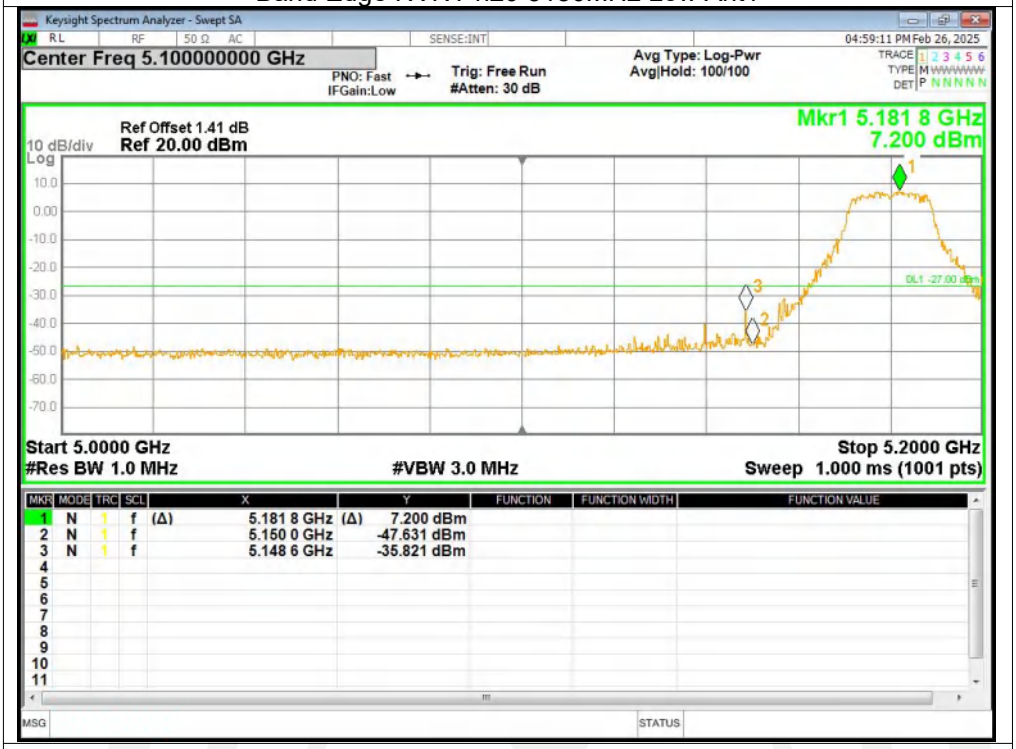
Band Edge NVNT a 5180MHz Low Ant1



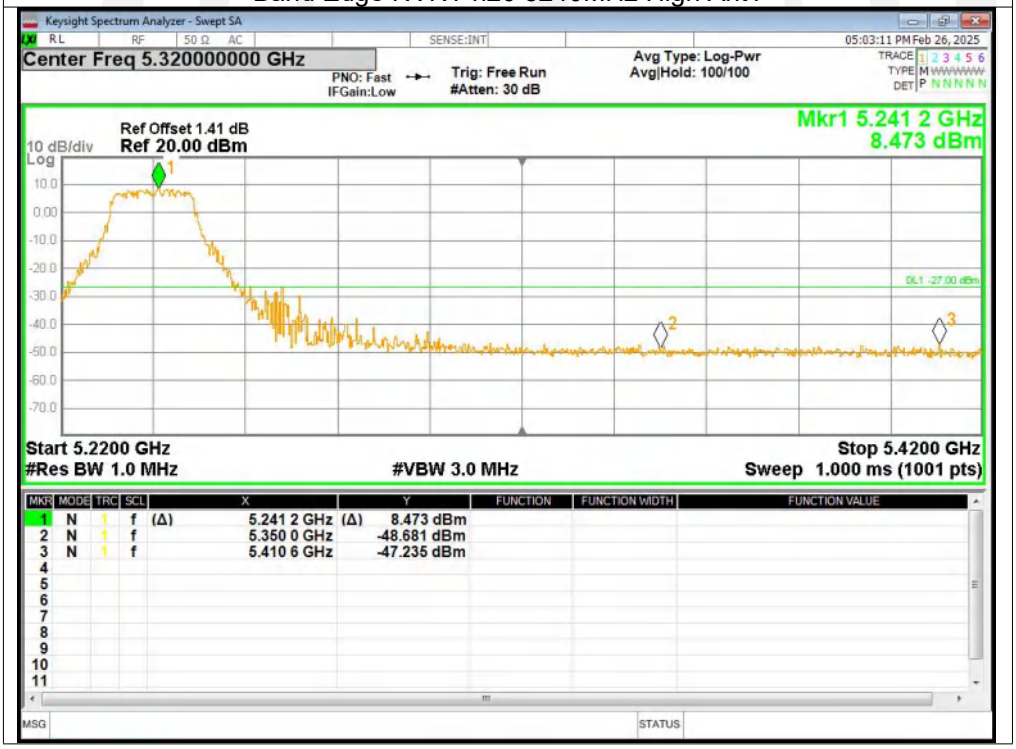
Band Edge NVNT a 5240MHz High Ant1



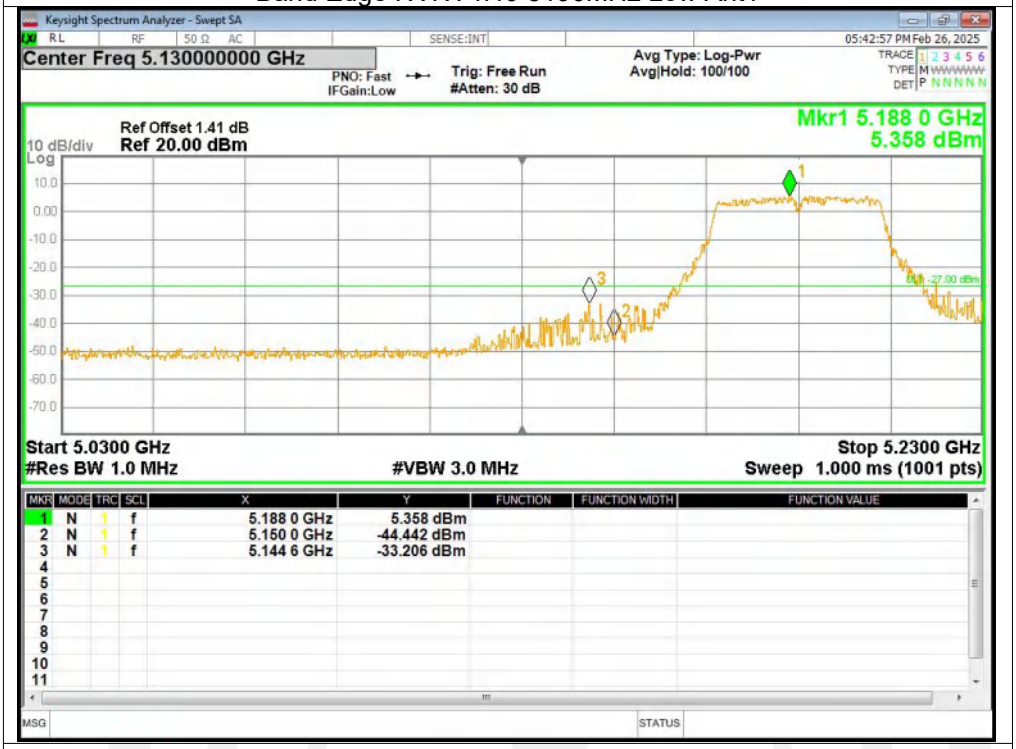
Band Edge NVNT n20 5180MHz Low Ant1



Band Edge NVNT n20 5240MHz High Ant1

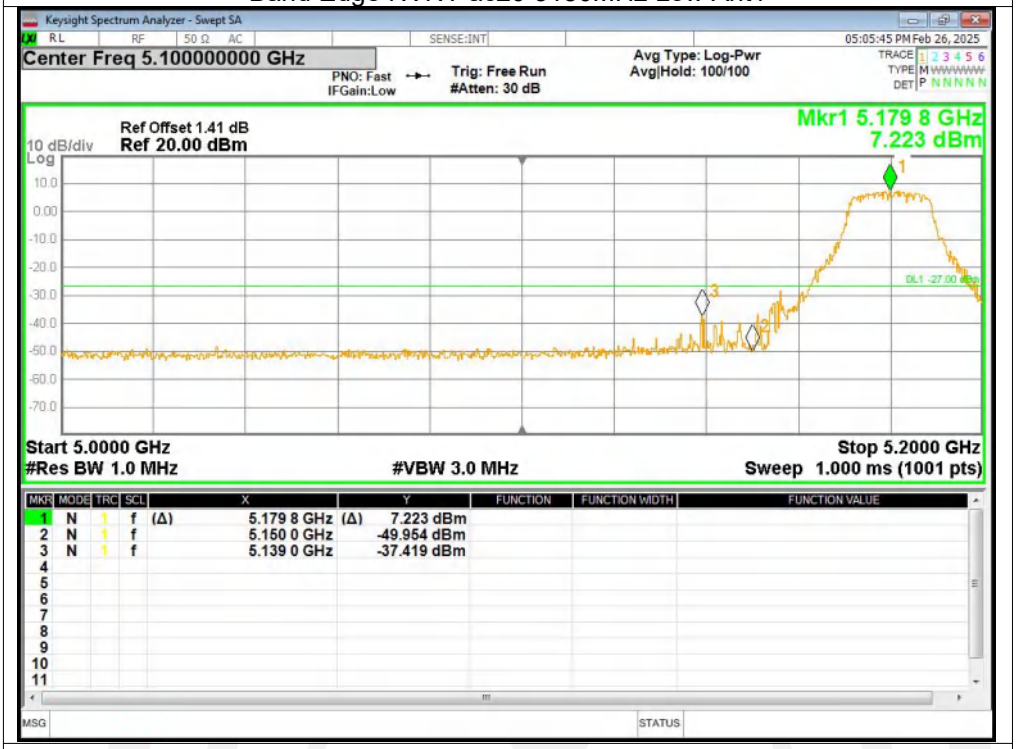


Band Edge NVNT n40 5190MHz Low Ant1



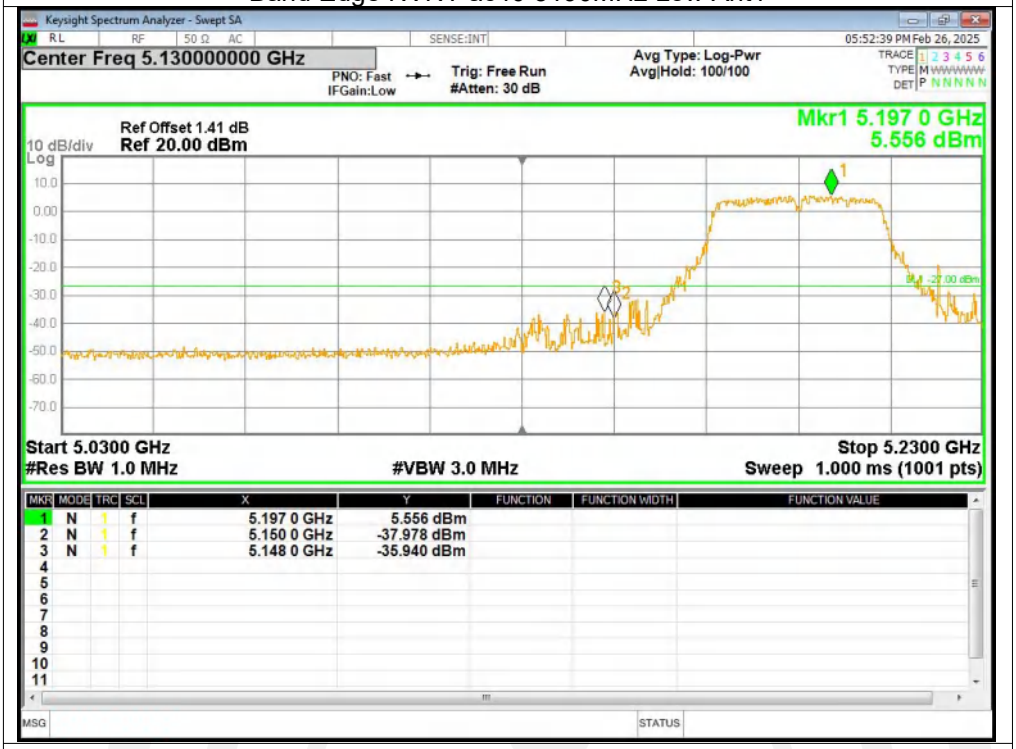
Band Edge NVNT n40 5230MHz High Ant1

Band Edge NVNT ac20 5180MHz Low Ant1

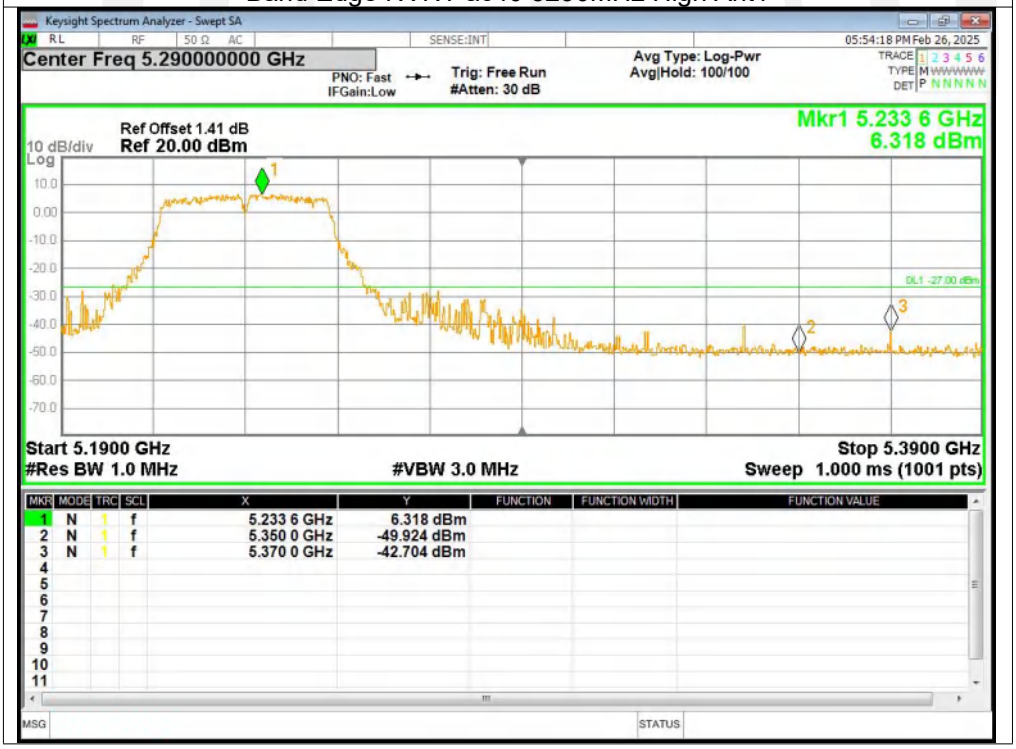


Band Edge NVNT ac20 5240MHz High Ant1

Band Edge NVNT ac40 5190MHz Low Ant1

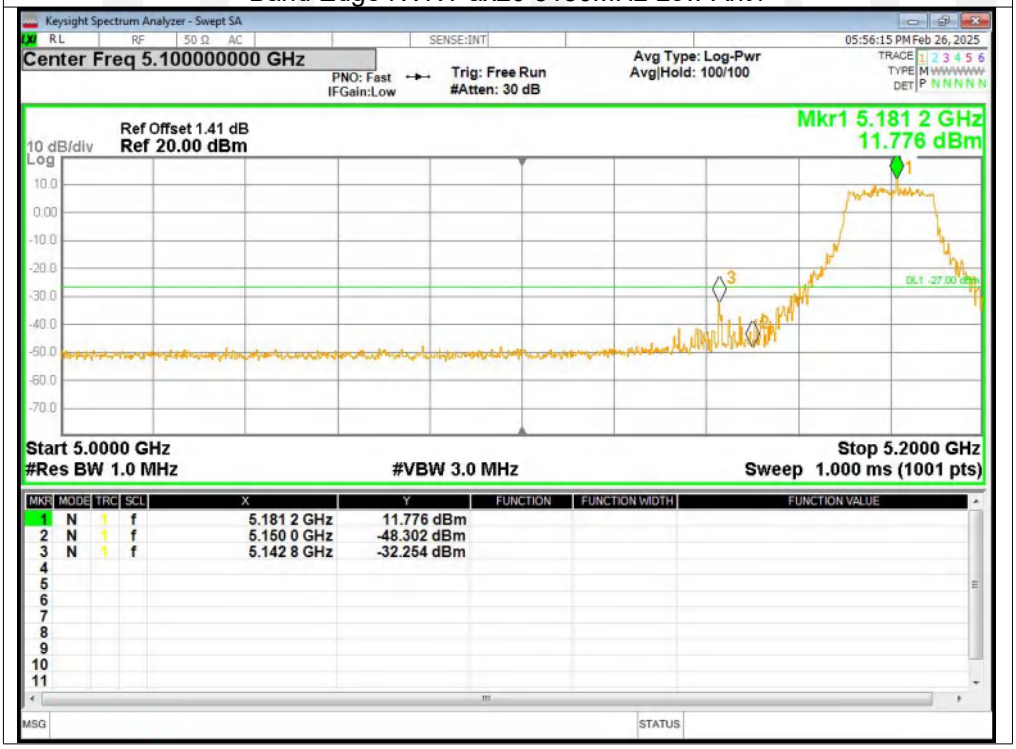


Band Edge NVNT ac40 5230MHz High Ant1

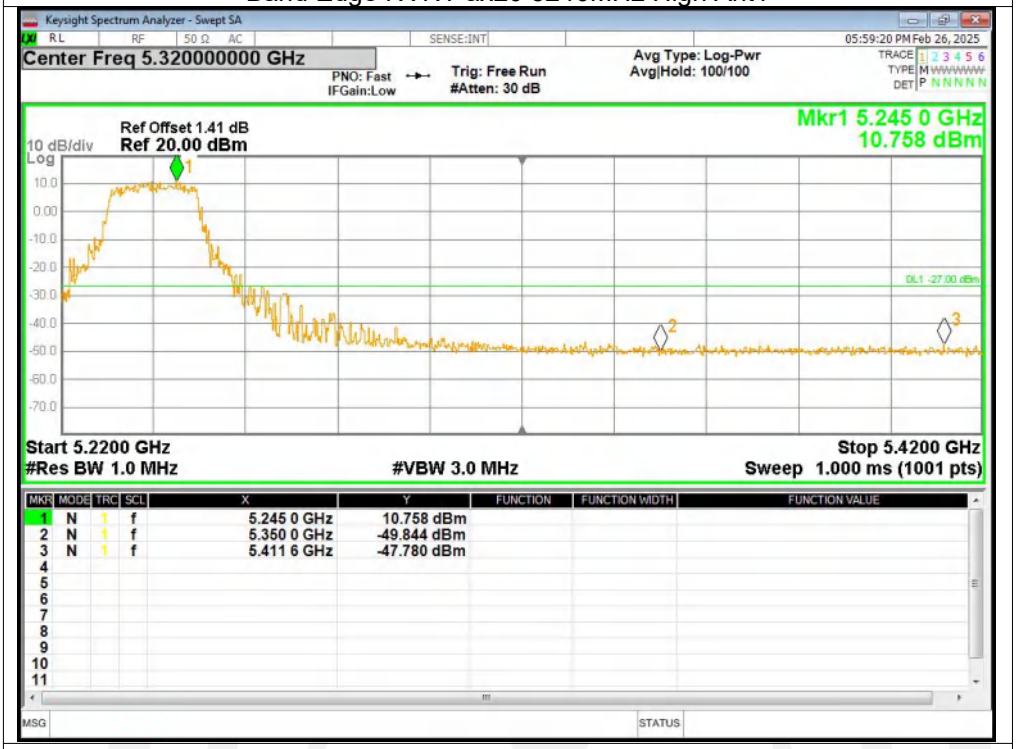


Band Edge NVNT ac80 5210MHz Low Ant1

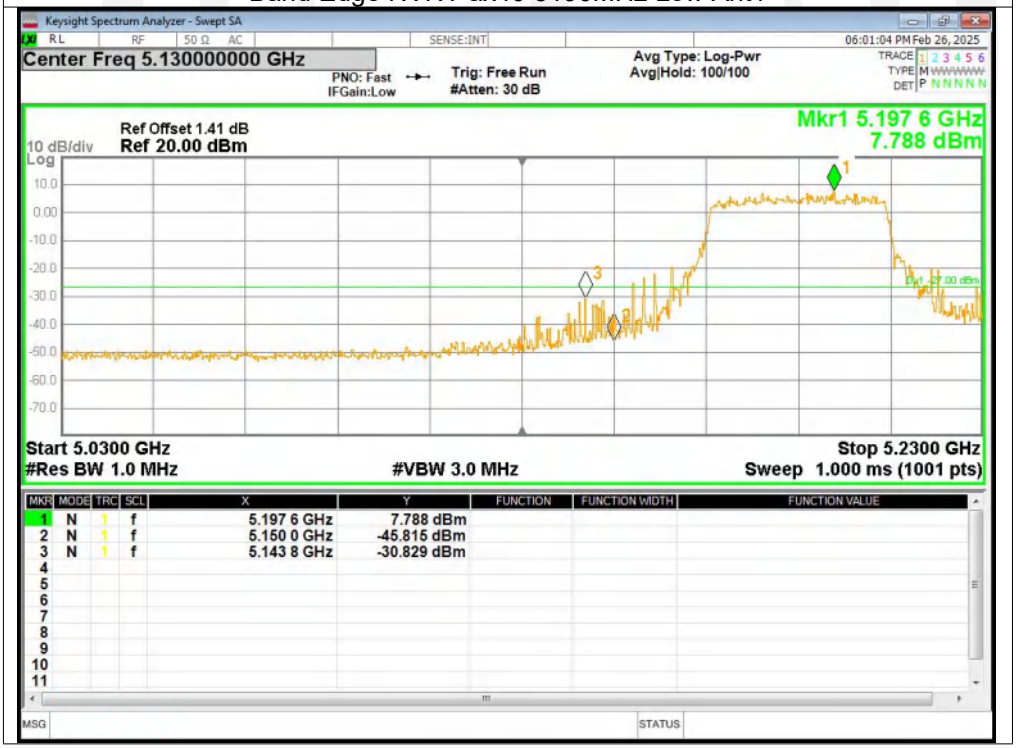
Band Edge NVNT ax20 5180MHz Low Ant1



Band Edge NVNT ax20 5240MHz High Ant1

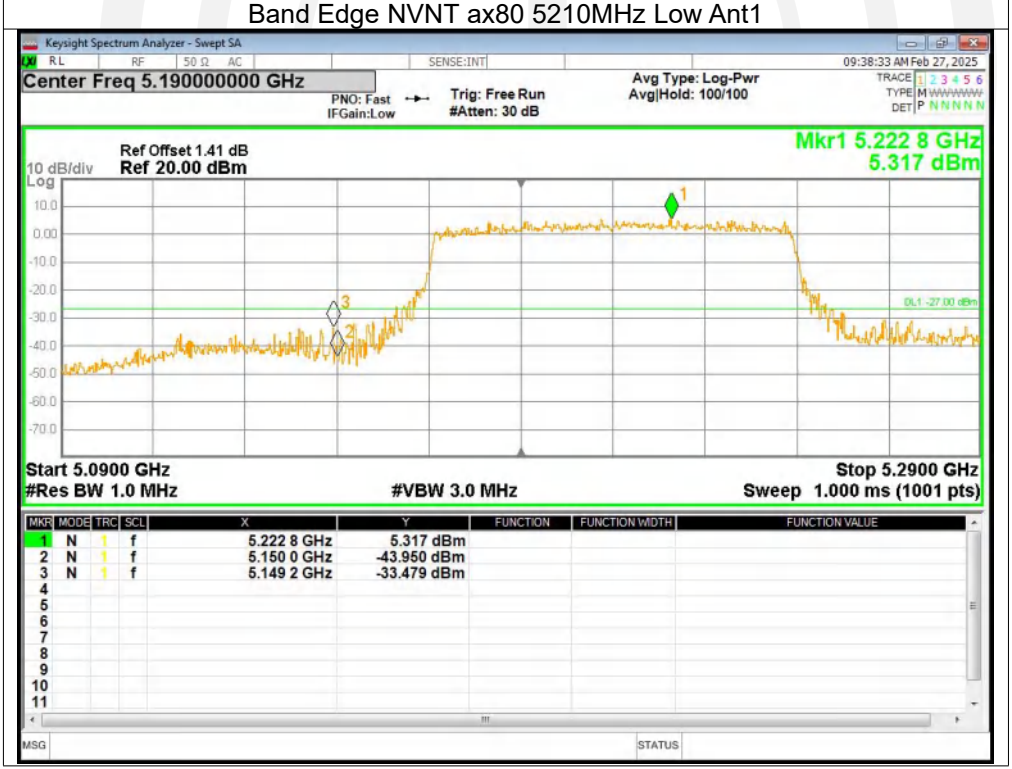


Band Edge NVNT ax40 5190MHz Low Ant1



Band Edge NVNT ax40 5230MHz High Ant1

Band Edge NVNT ax80 5210MHz Low Ant1

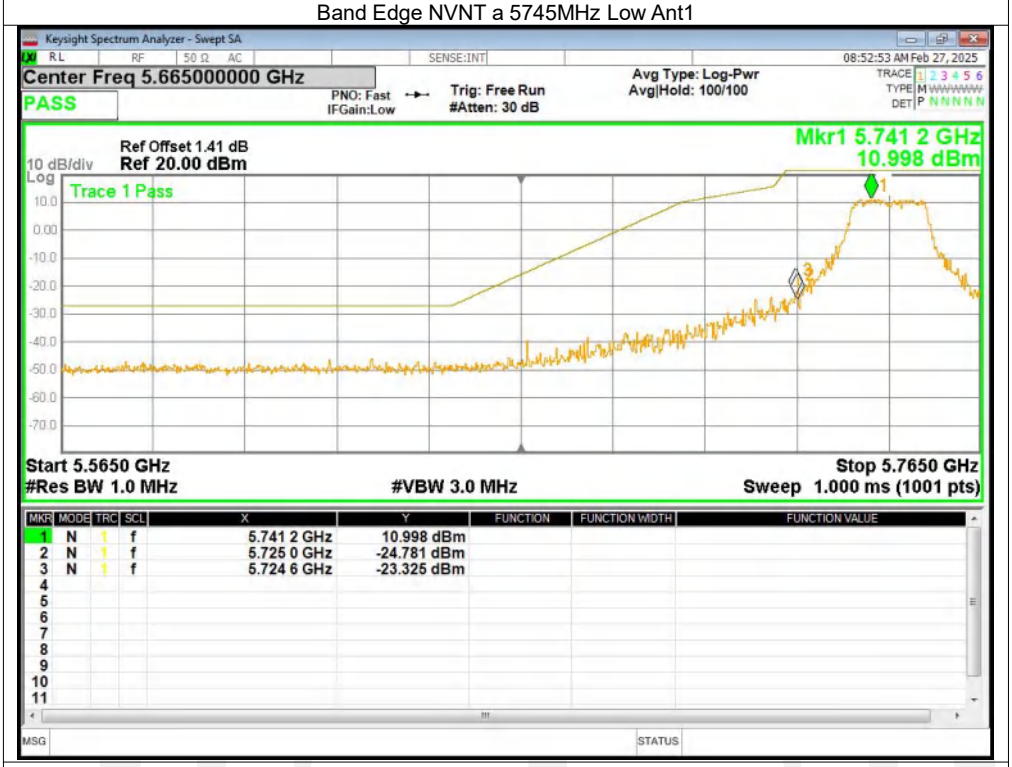


5.8GWIFI (5725MHz-5850 MHz)

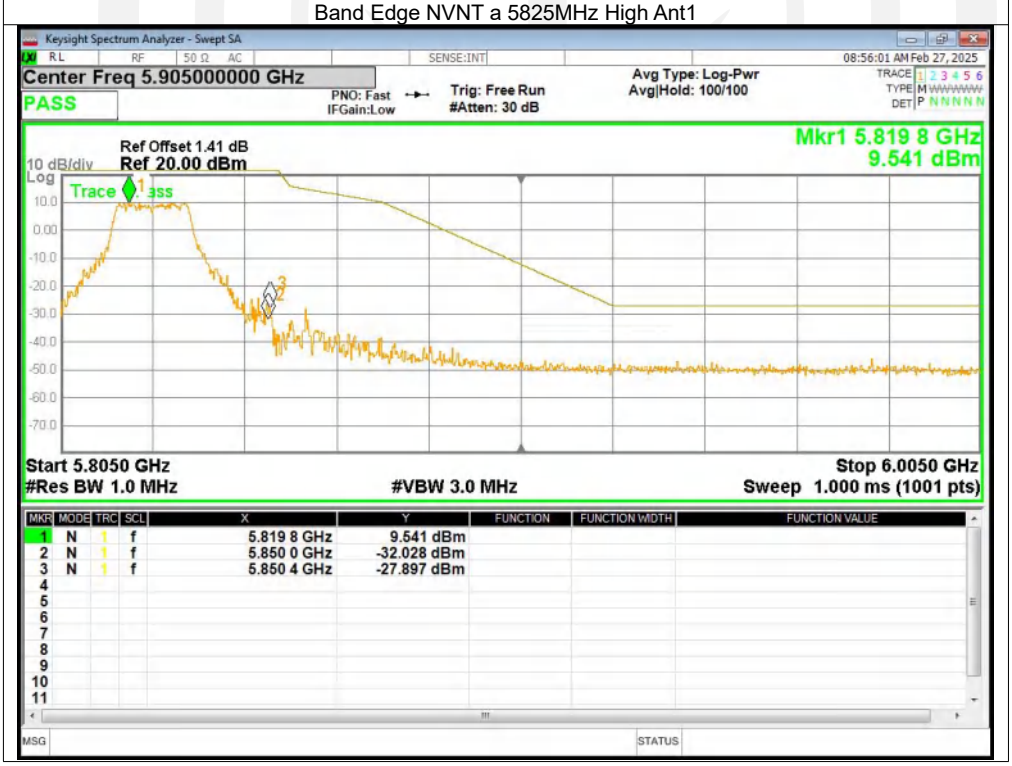
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Verdict
NVNT	a	5745	Ant1	-23.32	Pass
NVNT	a	5825	Ant1	-27.89	Pass
NVNT	n20	5745	Ant1	-21.44	Pass
NVNT	n20	5825	Ant1	-26.15	Pass
NVNT	n40	5755	Ant1	-21.08	Pass
NVNT	n40	5795	Ant1	-30.77	Pass
NVNT	ac20	5745	Ant1	-19.38	Pass
NVNT	ac20	5825	Ant1	-24.84	Pass
NVNT	ac40	5755	Ant1	-19.15	Pass
NVNT	ac40	5795	Ant1	-32.11	Pass
NVNT	ac80	5775	Ant1	-17.62	Pass
NVNT	ax20	5745	Ant1	-21.11	Pass
NVNT	ax20	5825	Ant1	-27.24	Pass
NVNT	ax40	5755	Ant1	-18.43	Pass
NVNT	ax40	5795	Ant1	-31.68	Pass
NVNT	ax80	5775	Ant1	-19.66	Pass

Test Graphs

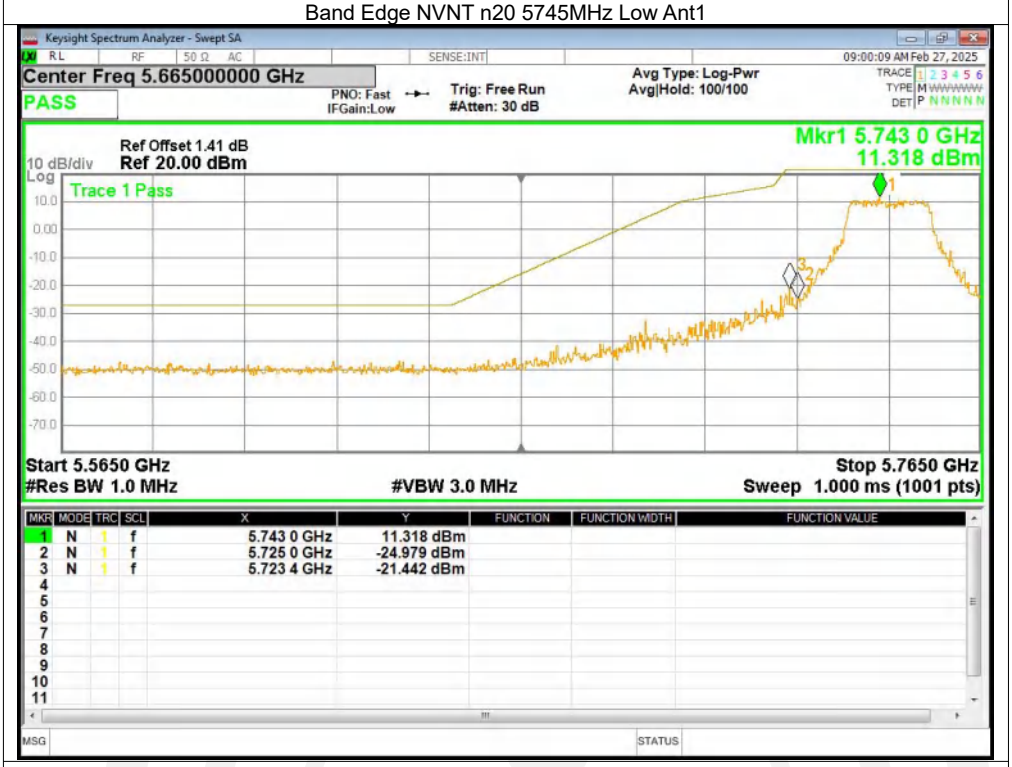
Band Edge NVNT a 5745MHz Low Ant1



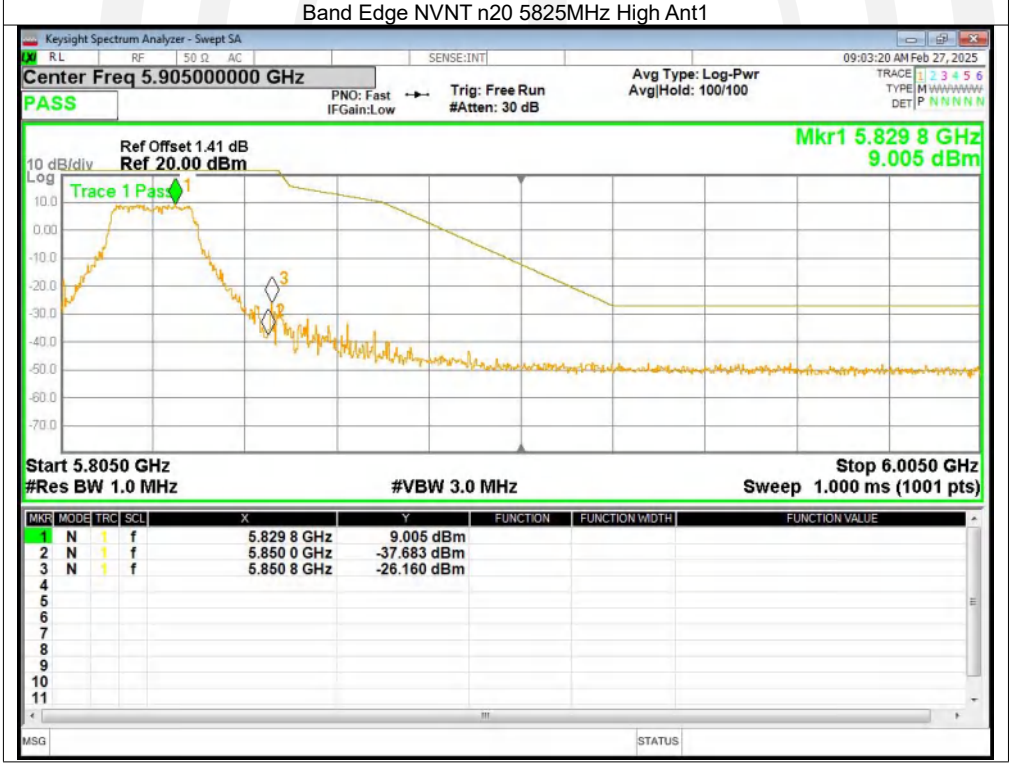
Band Edge NVNT a 5825MHz High Ant1



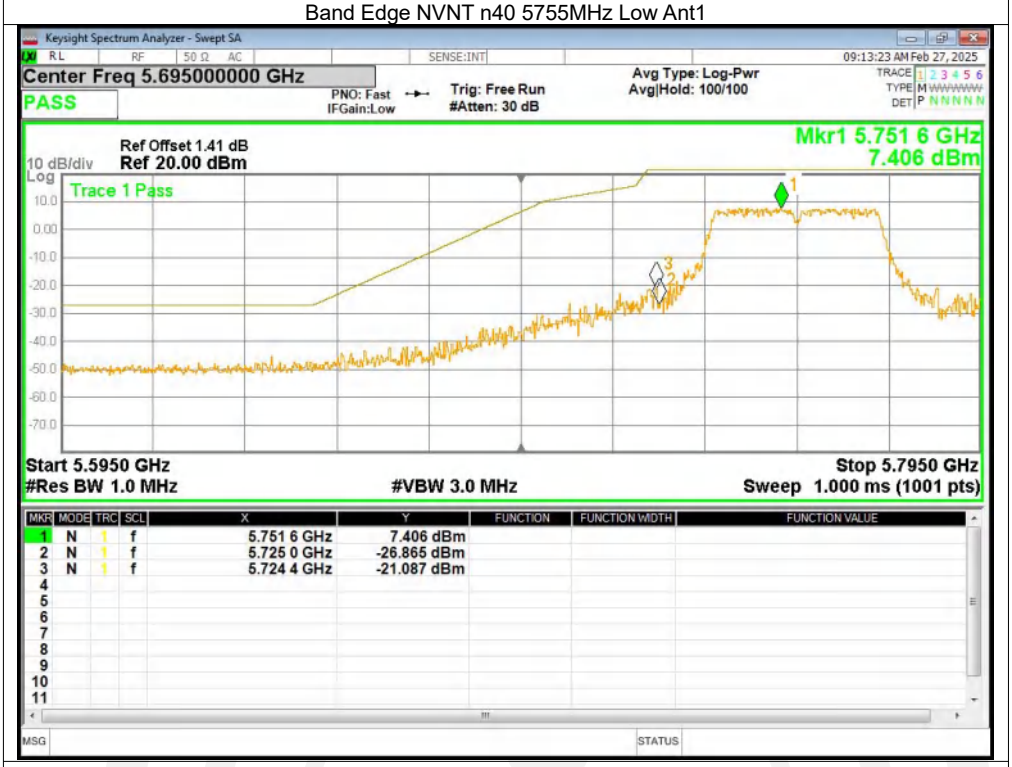
Band Edge NVNT n20 5745MHz Low Ant1



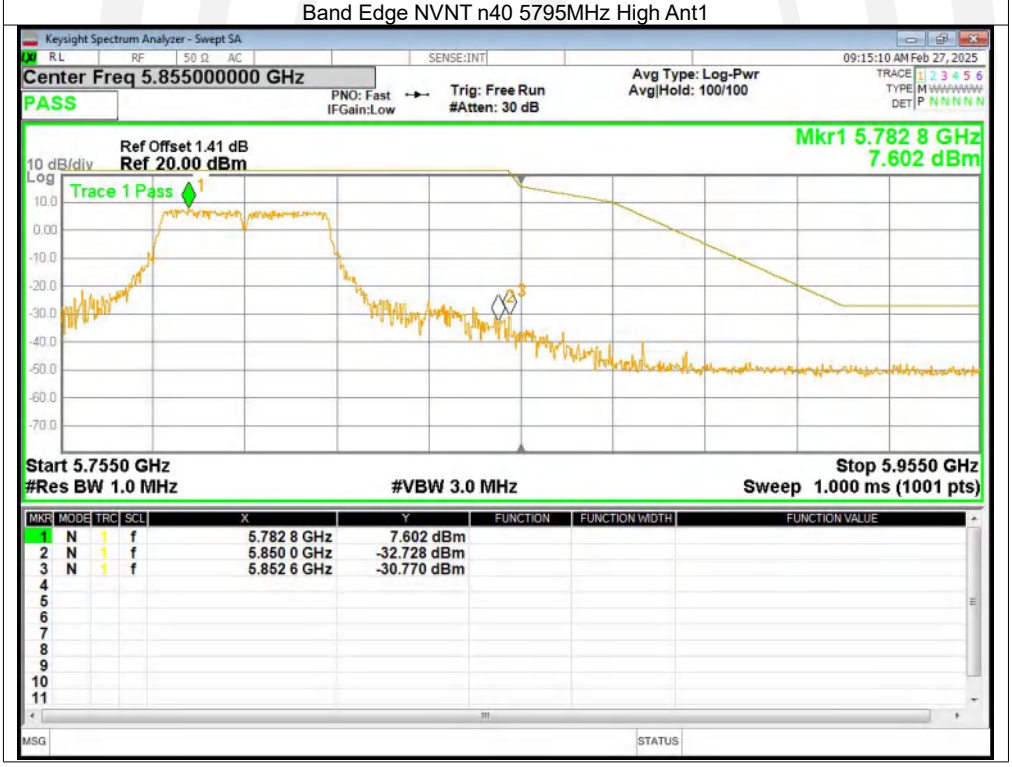
Band Edge NVNT n20 5825MHz High Ant1



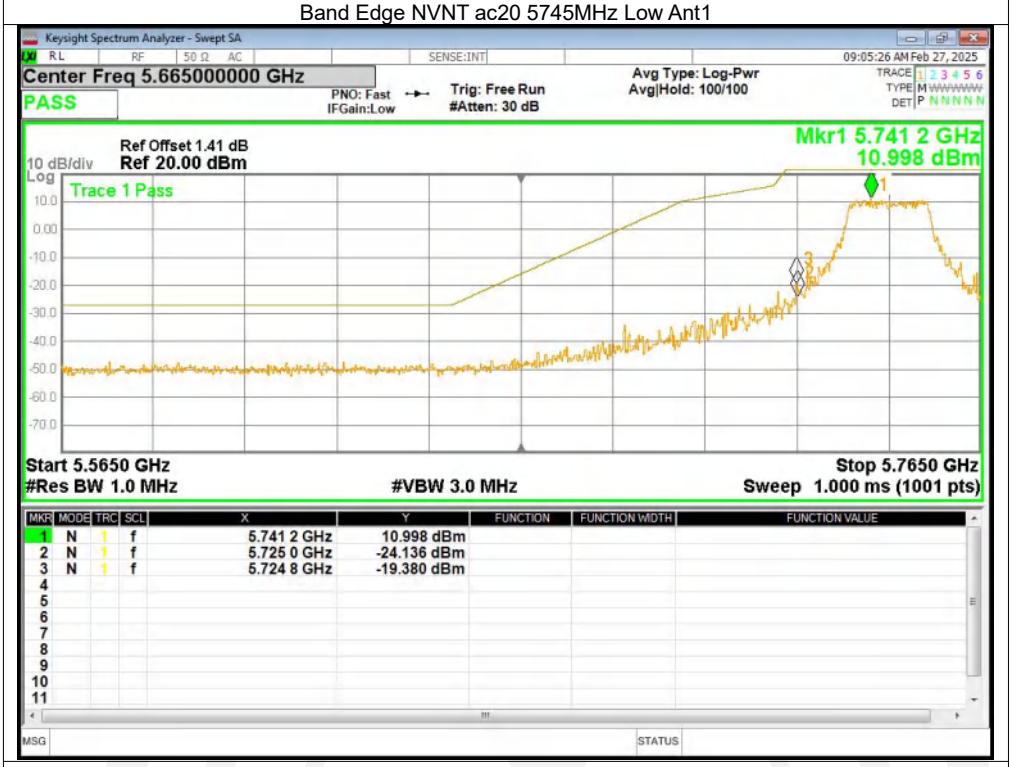
Band Edge NVNT n40 5755MHz Low Ant1



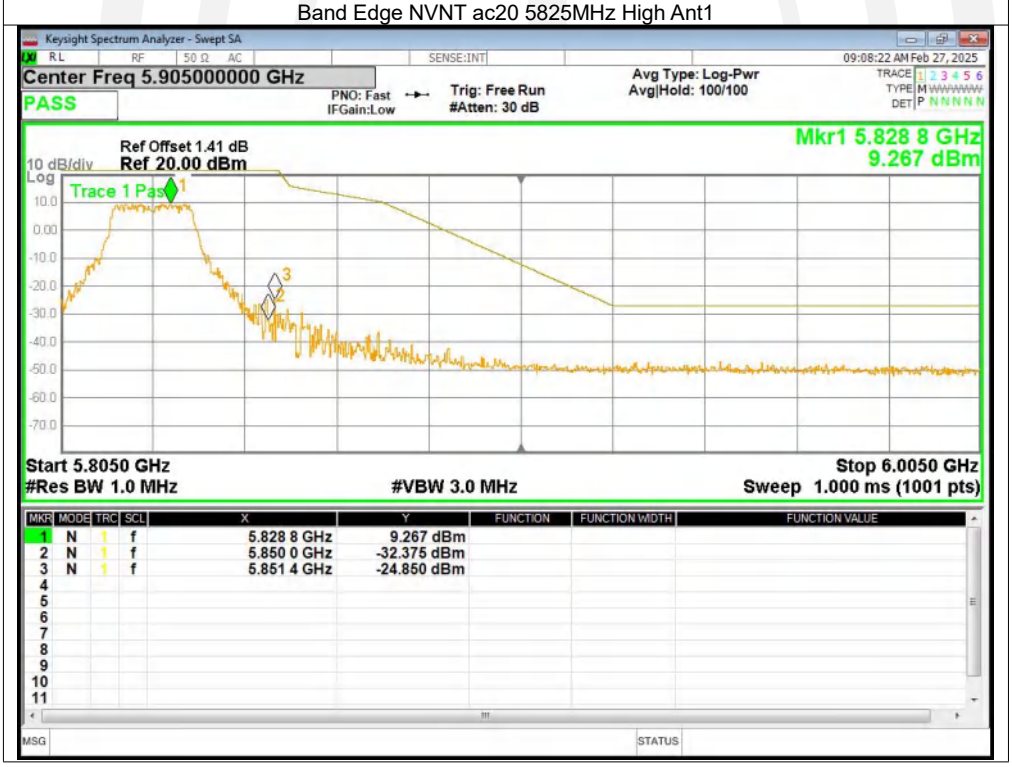
Band Edge NVNT n40 5795MHz High Ant1



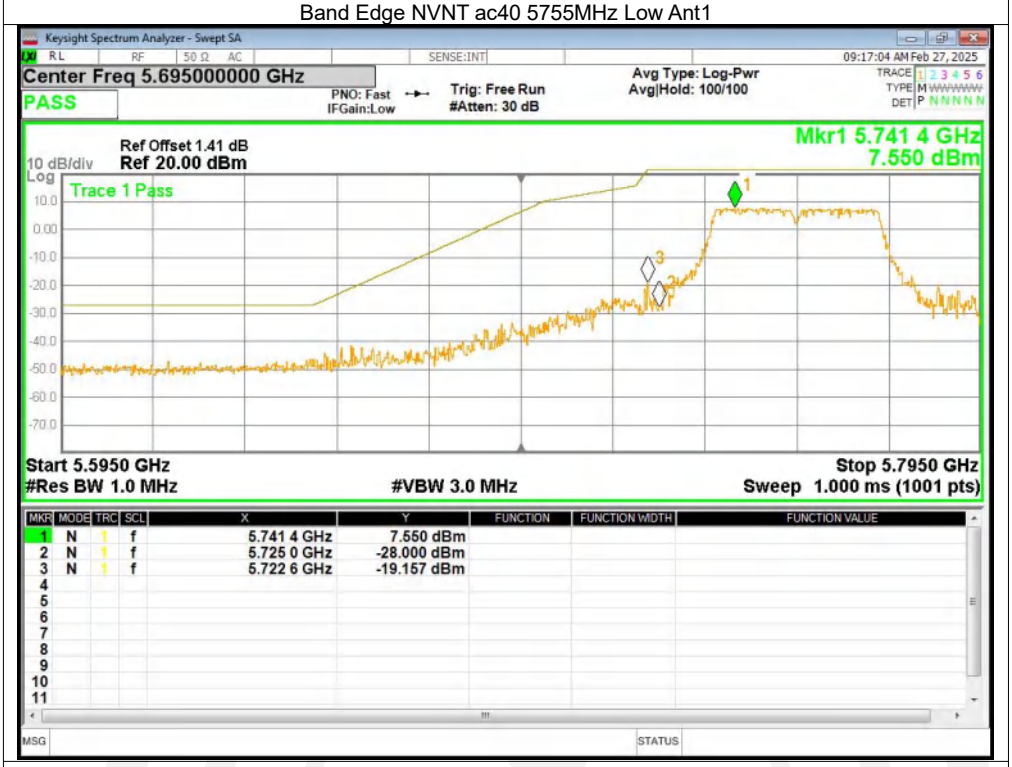
Band Edge NVNT ac20 5745MHz Low Ant1



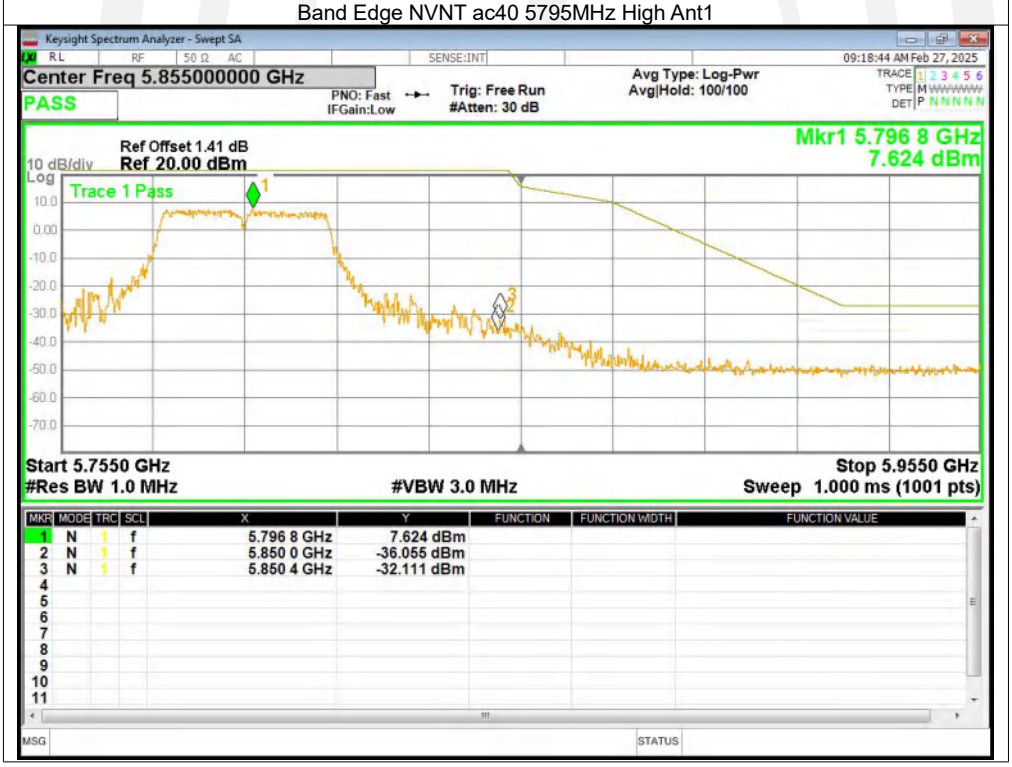
Band Edge NVNT ac20 5825MHz High Ant1



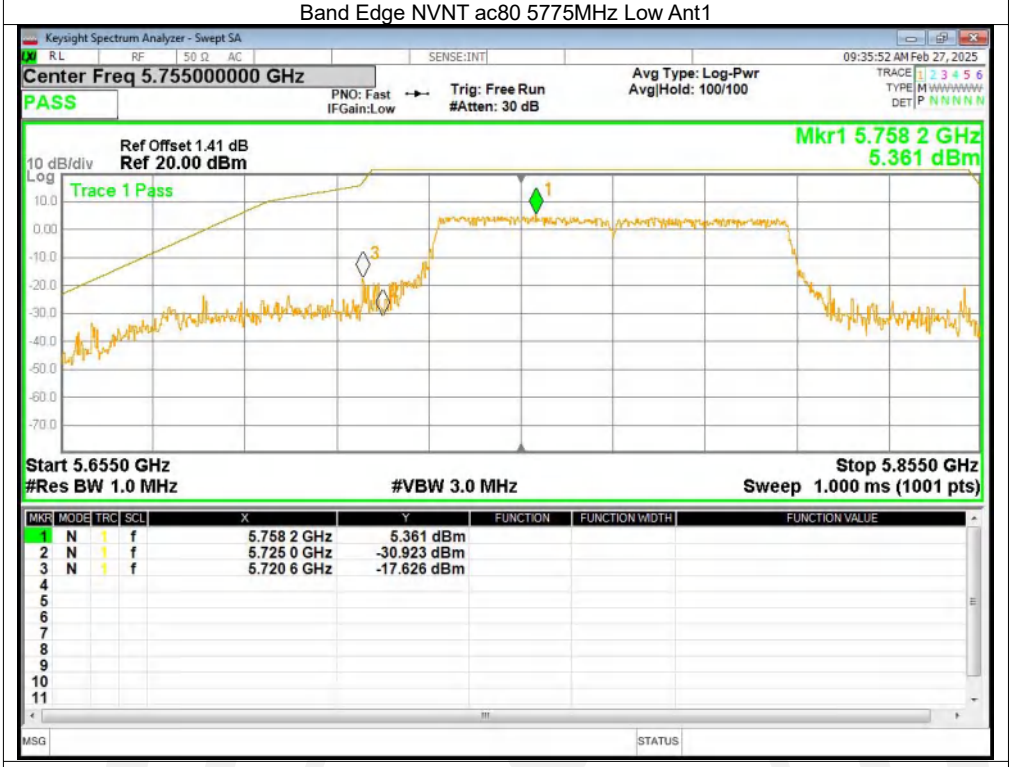
Band Edge NVNT ac40 5755MHz Low Ant1



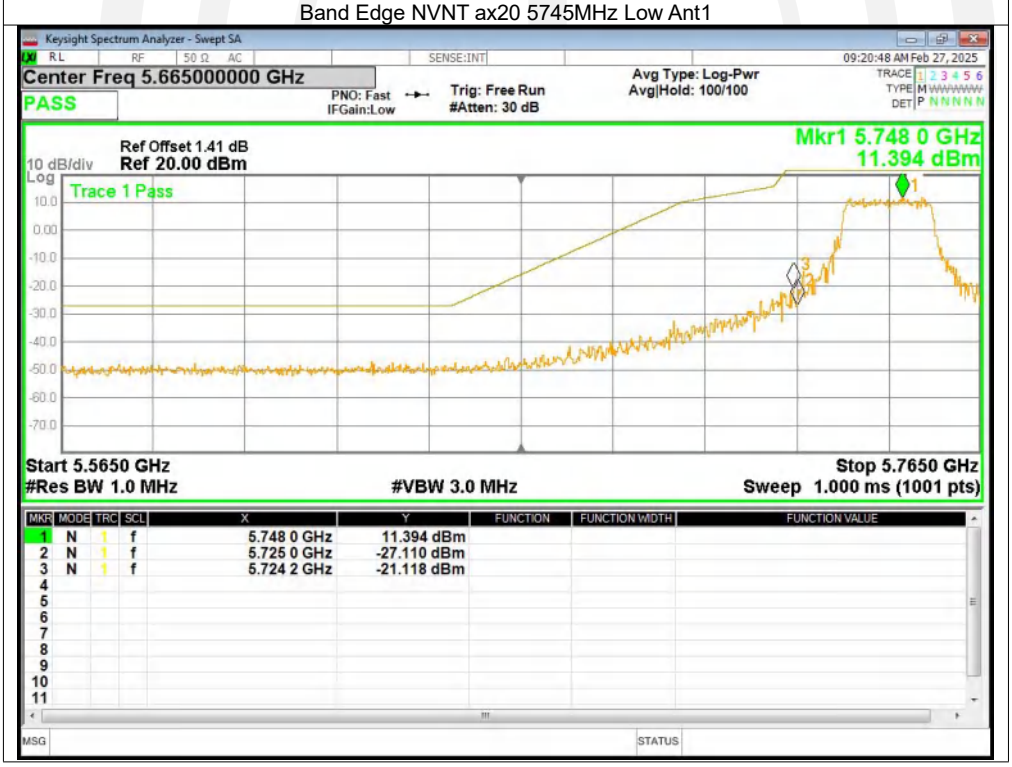
Band Edge NVNT ac40 5795MHz High Ant1



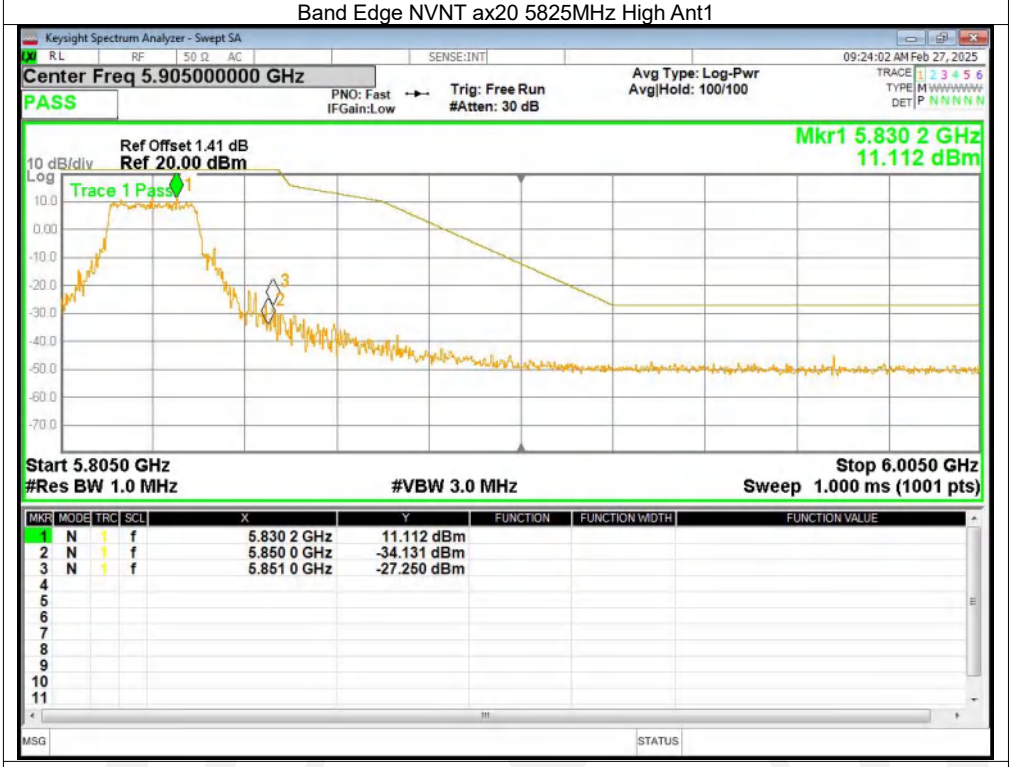
Band Edge NVNT ac80 5775MHz Low Ant1



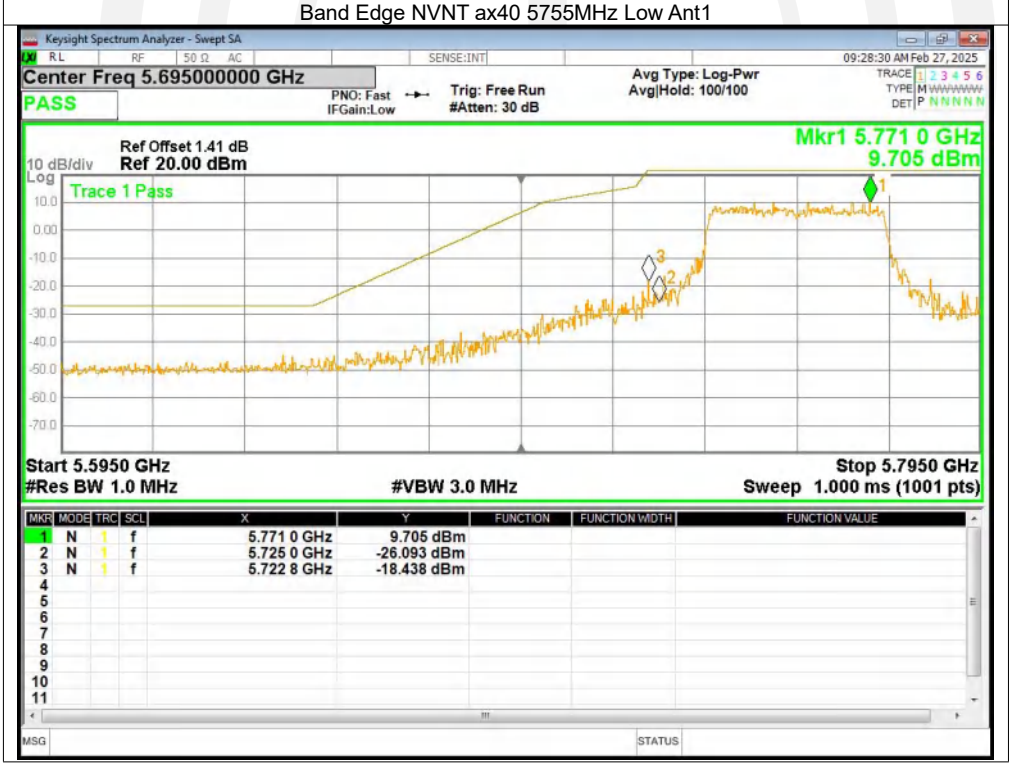
Band Edge NVNT ax20 5745MHz Low Ant1



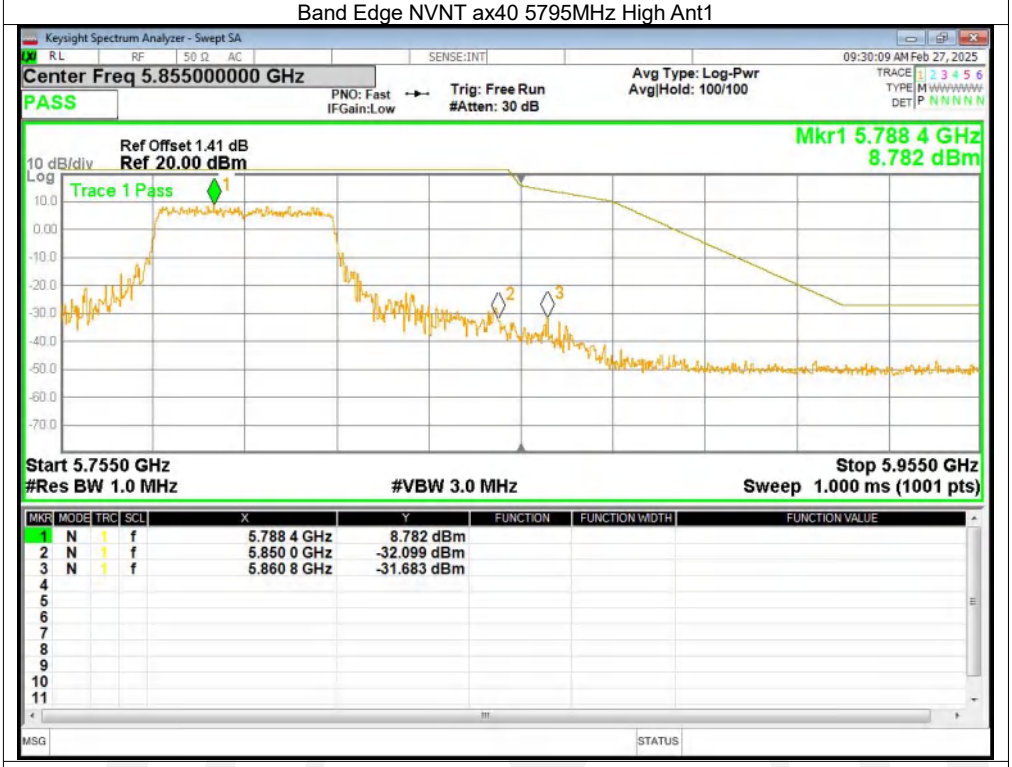
Band Edge NVNT ax20 5825MHz High Ant1



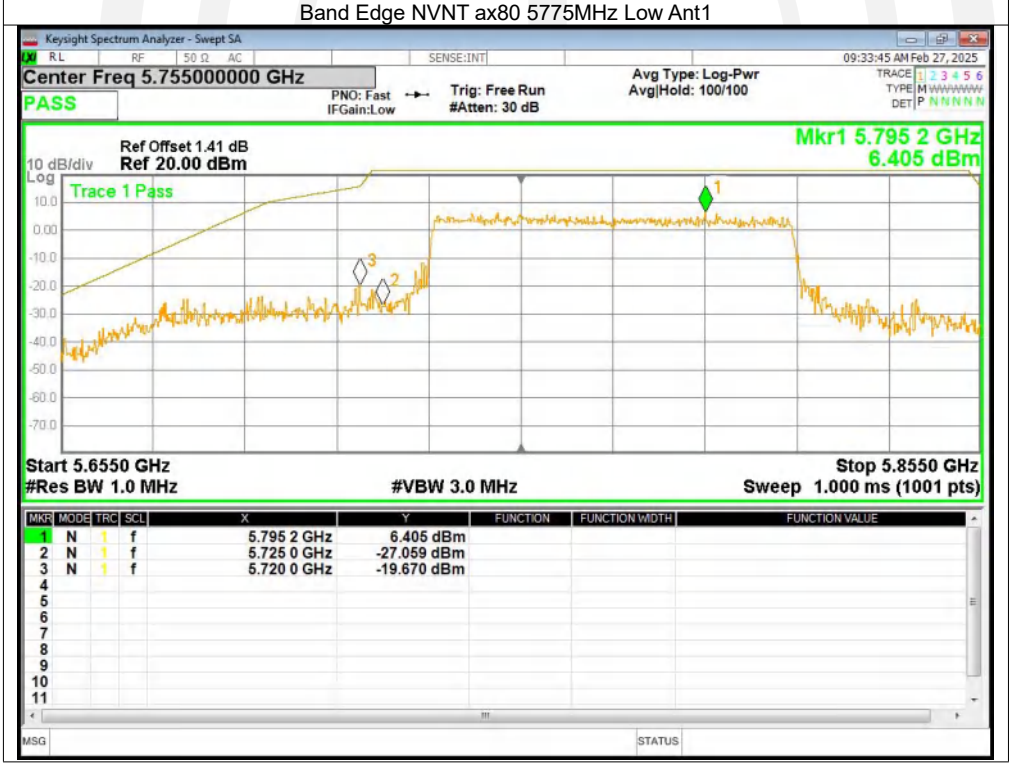
Band Edge NVNT ax40 5755MHz Low Ant1



Band Edge NVNT ax40 5795MHz High Ant1



Band Edge NVNT ax80 5775MHz Low Ant1



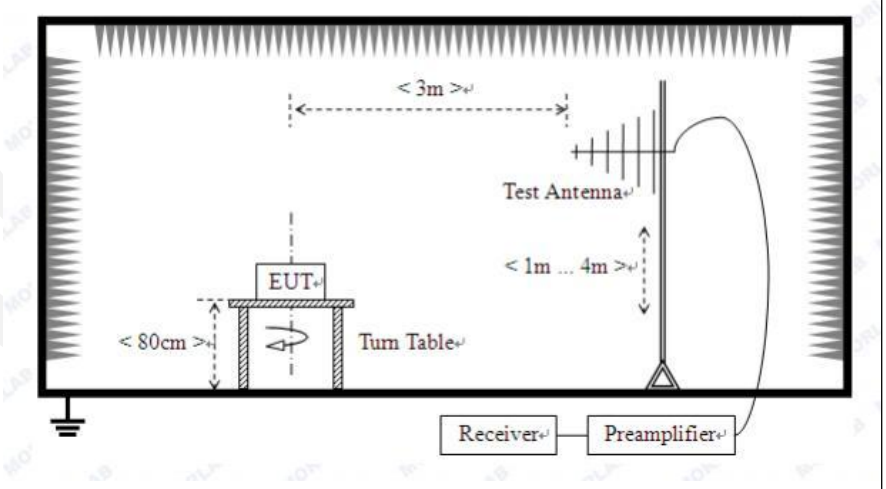
4.6 Radiated Emission

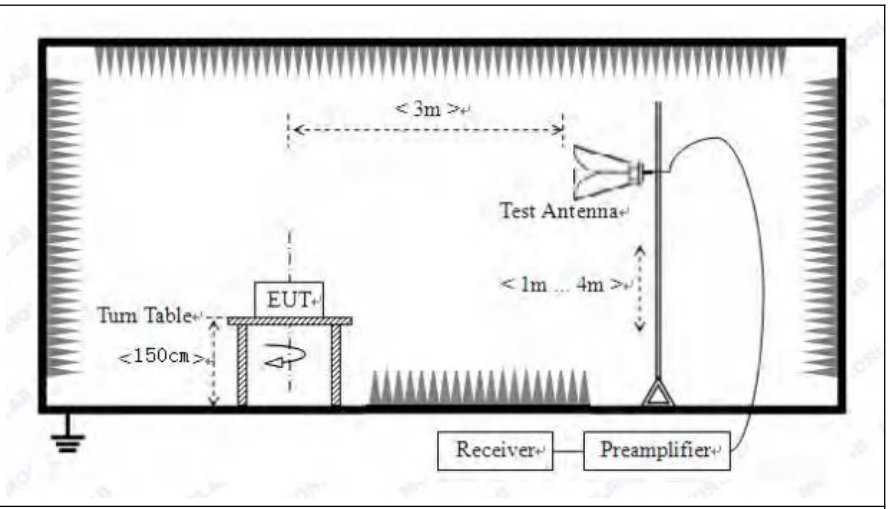
Test Requirement:	FCC Part15 C Section 15.209 and 15.205, RSS-Gen §8.9

<table>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 40GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Value</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>74.0</td><td>Peak Value</td></tr>
<tr><td>54.0</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>
Substitution method was performed to determine the actual ERP emission levels of the EUT.
The following test procedure as below:

1>.Below 1GHz test procedure:
1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

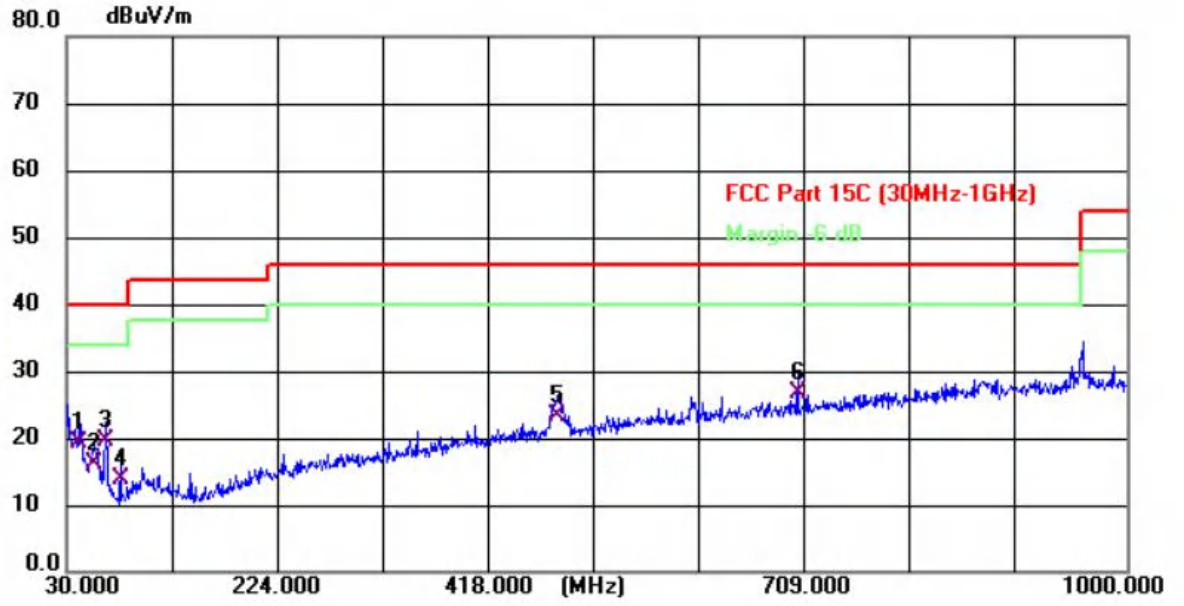
2>.Above 1GHz test procedure:
1. On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.The output of the test antenna shall be connected to the measuring receiver.
3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the transmitter under test.
4. The test antenna shall be raised and lowered from 1m to 4m until a maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until
</td></tr>
</table>

	the maximum signal level is detected by the measuring receiver. 5. Repeat step 4 for test frequency with the test antenna polarized horizontally. 6. Remove the transmitter and replace it with a substitution antenna 7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output. 8. Repeat step 7 with both antennas horizontally polarized for each test frequency. 9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula: EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi) where: Pg is the generator output power into the substitution antenna.
Test setup:	Below 1GHz  Above 1GHz

	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:
Below 1GHz

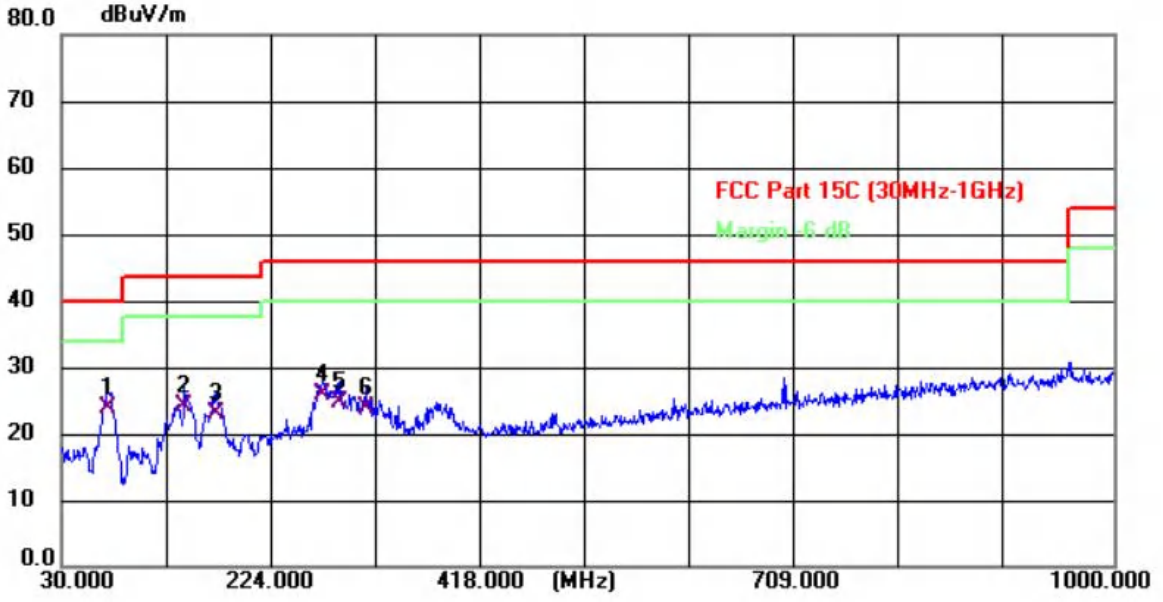
Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	73.650	37.69	-13.71	23.98	40.00	-16.02	QP
2	143.490	37.98	-13.88	24.10	43.50	-19.40	QP
3	172.590	35.91	-12.90	23.01	43.50	-20.49	QP
4	271.530	34.58	-8.82	25.76	46.00	-20.24	QP
5	286.080	33.28	-8.53	24.75	46.00	-21.25	QP
6	310.330	31.93	-8.01	23.92	46.00	-22.08	QP

Note: Level = Reading + Factor Margin = Level - Limit

Polarization: Horizontal



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5	286.080	33.28	-8.53	24.75	46.00	-21.25	QP
6	310.330	31.93	-8.01	23.92	46.00	-22.08	QP

Note: Level = Reading + Factor Margin = Level - Limit

All modes and channels have been tested and only the 5.2GWIFI n40 5190MHz mode with the worst data is listed.

Above 1GHz:

802.11a 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.94	50.81	11.54	14.97	32.78	44.54	68.2	-23.66	Vertical
15540.50	51.59	12.3	17.82	34.54	47.17	74	-26.83	Vertical
10360.68	52.43	9.47	14.71	33.04	43.57	68.2	-24.63	Horizontal
15540.86	52.74	8.98	18.14	34.61	45.25	74	-28.75	Horizontal

802.11a 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.91	50.79	11.7	14.83	33.03	44.29	68.2	-23.91	Vertical
15540.58	51.85	12.28	17.89	34.89	47.13	74	-26.87	Vertical
10360.04	52.74	9.64	14.79	32.82	44.35	68.2	-23.85	Horizontal
15540.90	52.68	8.57	18.11	34.57	44.79	74	-29.21	Horizontal

802.11a 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.54	50.1	11.43	14.99	33.15	43.37	68.2	-24.83	Vertical
15540.06	51.29	12.17	18.04	34.93	46.57	74	-27.43	Vertical
10360.16	52.3	9.51	14.72	32.95	43.58	68.2	-24.62	Horizontal
15540.89	52.98	8.55	17.93	34.47	44.99	74	-29.01	Horizontal

802.11n(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.81	50.69	11.52	14.81	33.06	43.96	68.2	-24.24	Vertical
15540.69	51.4	12.17	17.83	34.58	46.82	74	-27.18	Vertical
10360.74	52.86	9.41	14.91	32.92	44.26	68.2	-23.94	Horizontal
15540.02	52.48	8.82	17.99	34.69	44.6	74	-29.4	Horizontal

802.11n(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.32	50.69	11.69	15.05	32.93	44.5	68.2	-23.7	Vertical
15540.15	51.45	11.98	17.71	34.78	46.36	74	-27.64	Vertical
10360.86	52.31	9.68	14.73	32.87	43.85	68.2	-24.35	Horizontal
15540.34	53.14	8.59	17.71	34.9	44.54	74	-29.46	Horizontal

802.11n(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.32	50.71	11.72	15.08	32.98	44.53	68.2	-23.67	Vertical
15540.73	51.65	12.12	17.88	34.67	46.98	74	-27.02	Vertical
10360.46	52.84	9.63	14.84	32.78	44.53	68.2	-23.67	Horizontal
15540.15	52.61	8.6	17.99	34.75	44.45	74	-29.55	Horizontal

802.11ac(HT20) 5180MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.69	50.11	11.63	14.87	33.08	43.53	68.2	-24.67	Vertical
15540.83	51.53	12.37	17.66	34.95	46.61	74	-27.39	Vertical
10360.11	52.13	9.88	14.77	33.05	43.73	68.2	-24.47	Horizontal
15540.74	52.16	8.6	18.14	34.72	44.18	74	-29.82	Horizontal

802.11ac(HT20) 5200MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.12	50.32	11.52	14.86	32.86	43.84	68.2	-24.36	Vertical
15540.73	51.97	12.13	17.81	34.8	47.11	74	-26.89	Vertical
10360.04	52.01	9.67	15.12	33.09	43.71	68.2	-24.49	Horizontal
15540.80	53.23	8.8	18.03	34.96	45.1	74	-28.9	Horizontal

802.11ac(HT20) 5240MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.62	50.8	11.42	14.92	33.01	44.13	68.2	-24.07	Vertical
15540.86	51.34	12.19	18.09	34.67	46.95	74	-27.05	Vertical
10360.70	52.03	9.51	15.08	32.97	43.65	68.2	-24.55	Horizontal
15540.13	52.47	8.53	17.81	34.59	44.22	74	-29.78	Horizontal

802.11n(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.77	50.65	11.52	15	32.75	44.42	68.2	-23.78	Vertical
15540.62	51	11.97	17.84	34.91	45.9	74	-28.1	Vertical
10360.65	52.96	9.62	14.65	32.68	44.55	68.2	-23.65	Horizontal
15540.98	52.03	8.56	18.15	34.88	43.86	74	-30.14	Horizontal

802.11n(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.38	50.56	11.36	14.78	33.08	43.62	68.2	-24.58	Vertical
15540.58	51.11	12.03	18.06	34.9	46.3	74	-27.7	Vertical
10360.11	52.26	9.61	15.09	32.73	44.23	68.2	-23.97	Horizontal
15540.61	52.68	8.57	18.08	34.94	44.39	74	-29.61	Horizontal

802.11ac(HT40) 5190MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.08	50.47	11.52	15.04	33.1	43.93	68.2	-24.27	Vertical
15540.22	51.22	12.09	17.89	34.82	46.81	74	-27.19	Vertical
10360.38	52.09	9.71	14.65	32.82	43.55	68.2	-24.65	Horizontal
15540.38	52.98	8.73	17.71	34.74	44.95	74	-29.05	Horizontal

802.11ac(HT40) 5230MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.88	50.31	11.73	14.77	32.92	43.89	68.2	-24.31	Vertical
15540.08	51.1	12.29	17.99	34.78	46.6	74	-27.4	Vertical
10360.84	52.11	9.83	15.08	33.15	43.87	68.2	-24.33	Horizontal
15540.44	52.54	8.76	17.67	34.68	44.29	74	-29.71	Horizontal

802.11ac(HT80) 5210MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.55	50	11.5	15.04	32.98	43.56	68.2	-24.64	Vertical
15540.08	51.09	12.36	17.89	34.75	46.59	74	-27.41	Vertical
10360.54	52.74	9.88	14.95	32.96	44.61	68.2	-23.59	Horizontal
15540.57	53.31	8.66	17.76	34.48	45.25	74	-28.75	Horizontal

Note:

1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.
2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. This Report only show the test data of the worst case (5.2GWIFI n40 5190MHz).

4.7 Frequency stability

Test Standard	15.407(g), RSS-Gen §6.11
Test limit	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
Test results:	Pass

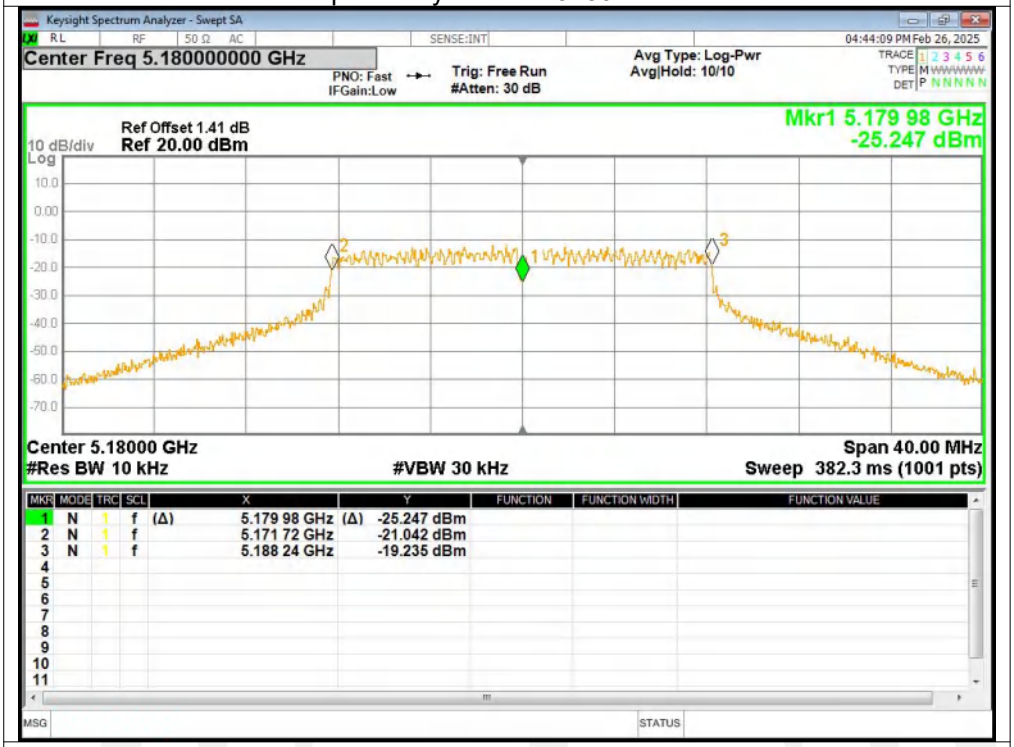
Measurement Data:

5.2GWIFI (5150-5250 MHz)

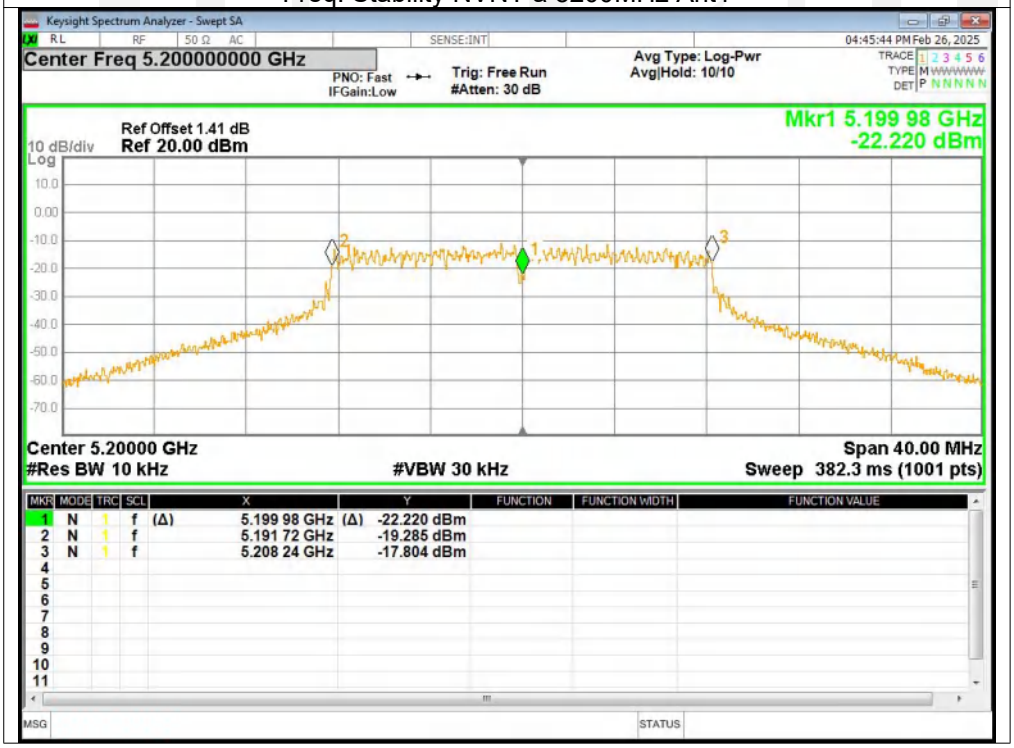
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	a	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	n20	5180	Ant1	5180	0	0	25	Pass
NVNT	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
NVNT	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	n40	5190	Ant1	5190	0	0	25	Pass
NVNT	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
NVNT	ac20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	ac20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	ac40	5190	Ant1	5190	0	0	25	Pass
NVNT	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
NVNT	ac80	5210	Ant1	5210	0	0	25	Pass
NVNT	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
NVNT	ax40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
NVNT	ax40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
NVNT	ax80	5210	Ant1	5210	0	0	25	Pass

Test Graphs

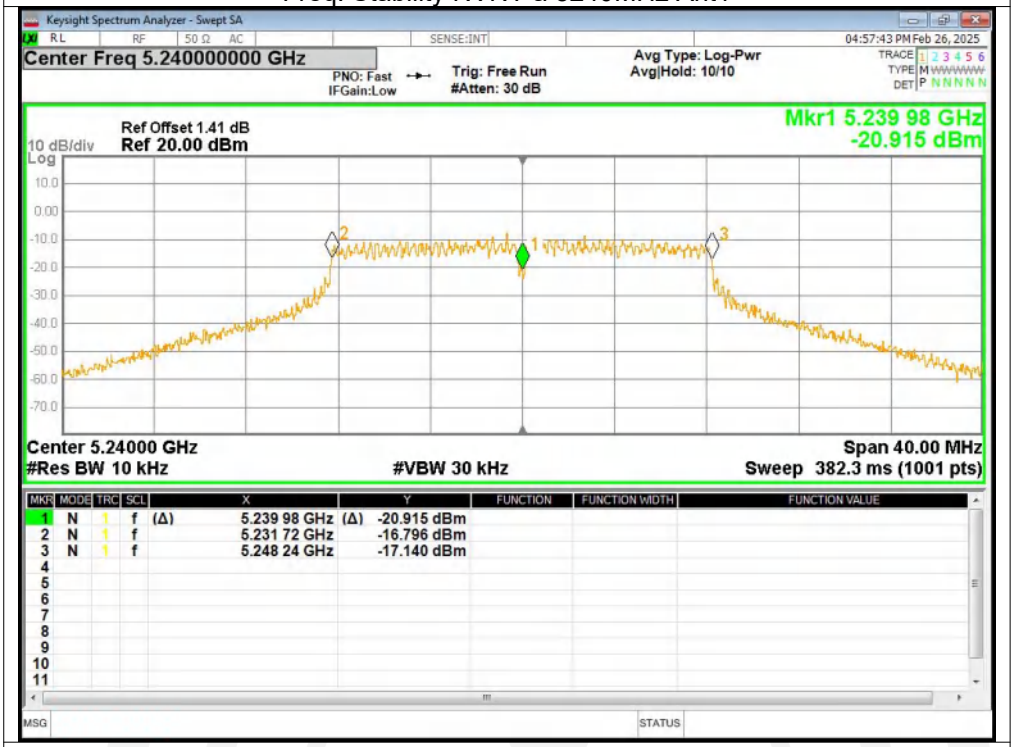
Freq. Stability NVNT a 5180MHz Ant1



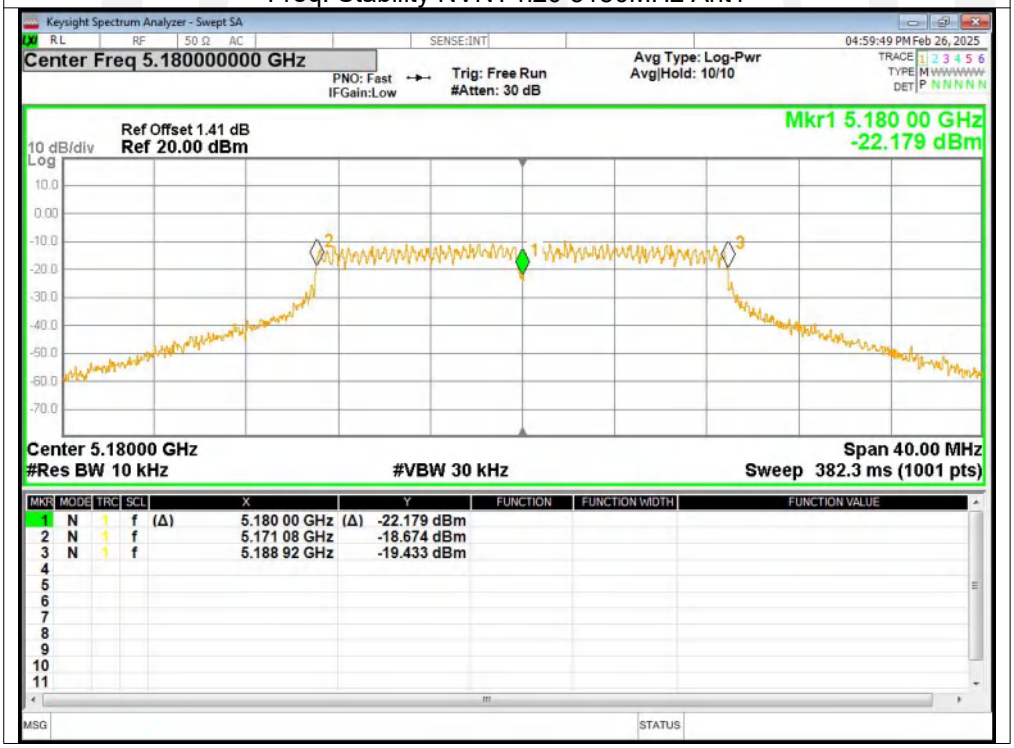
Freq. Stability NVNT a 5200MHz Ant1



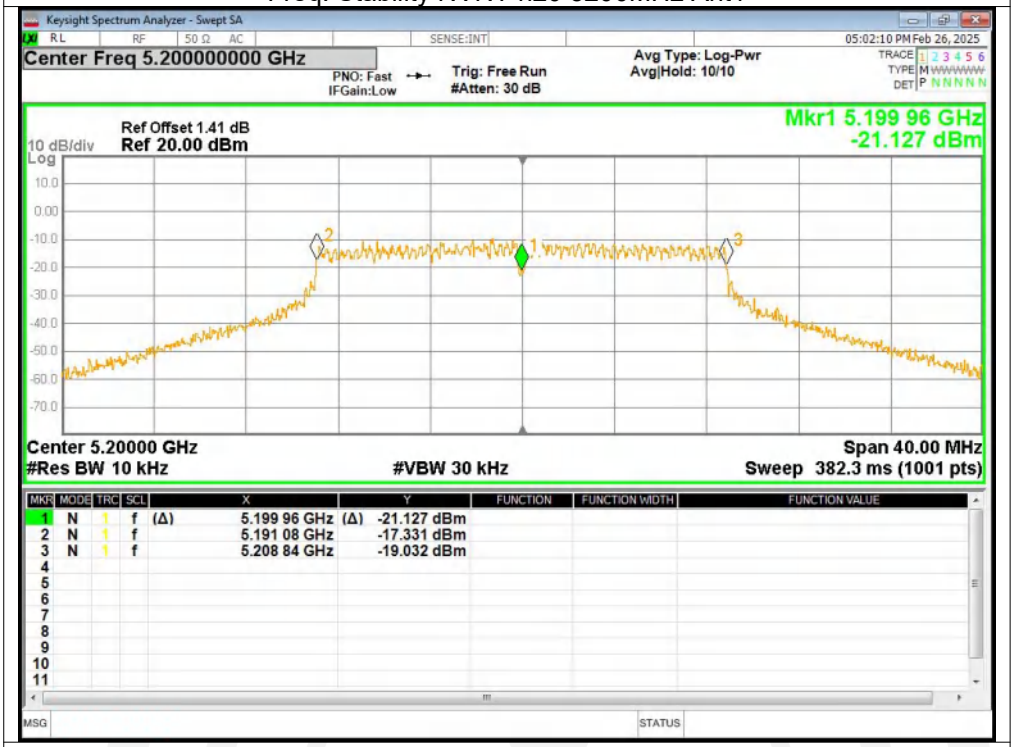
Freq. Stability NVNT a 5240MHz Ant1



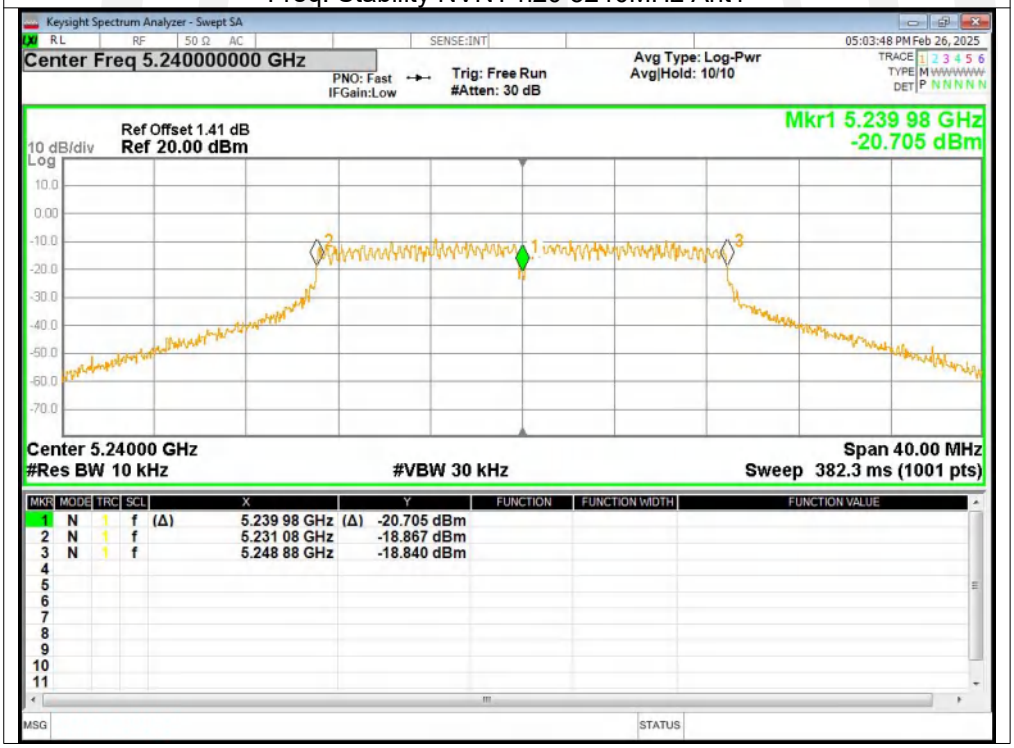
Freq. Stability NVNT n20 5180MHz Ant1



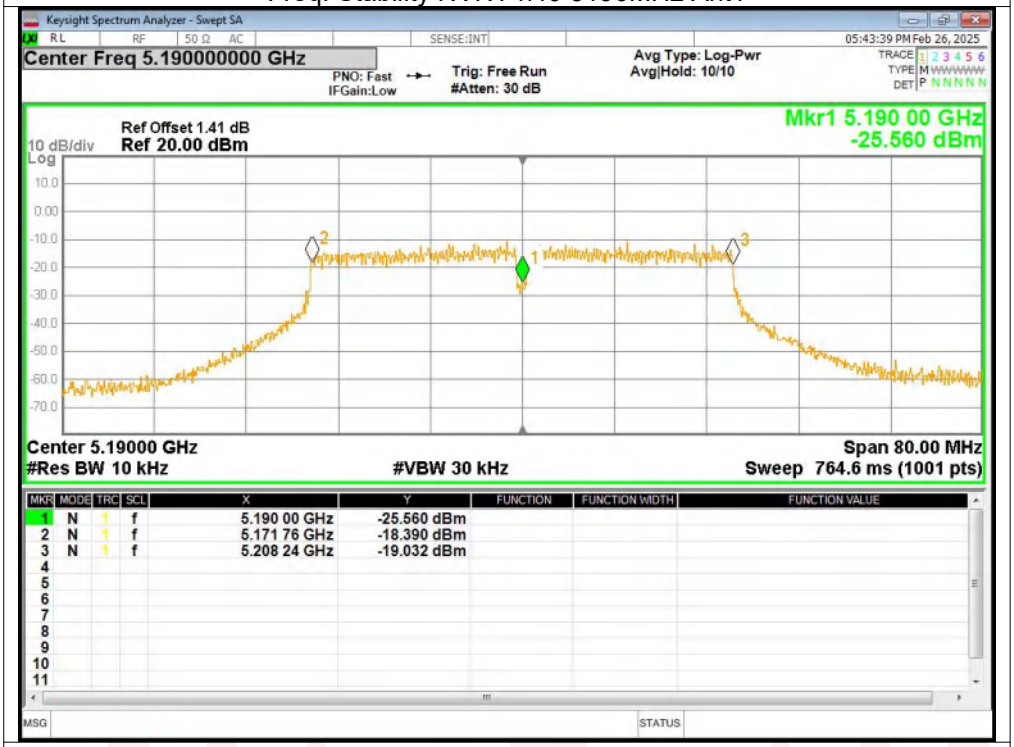
Freq. Stability NVNT n20 5200MHz Ant1



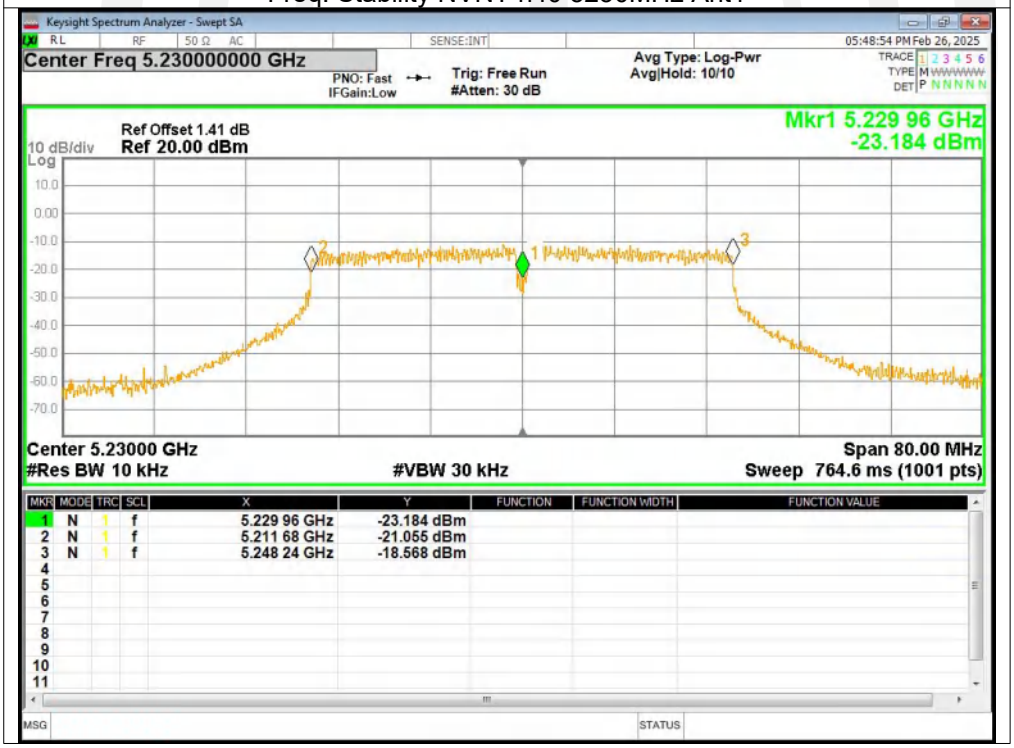
Freq. Stability NVNT n20 5240MHz Ant1



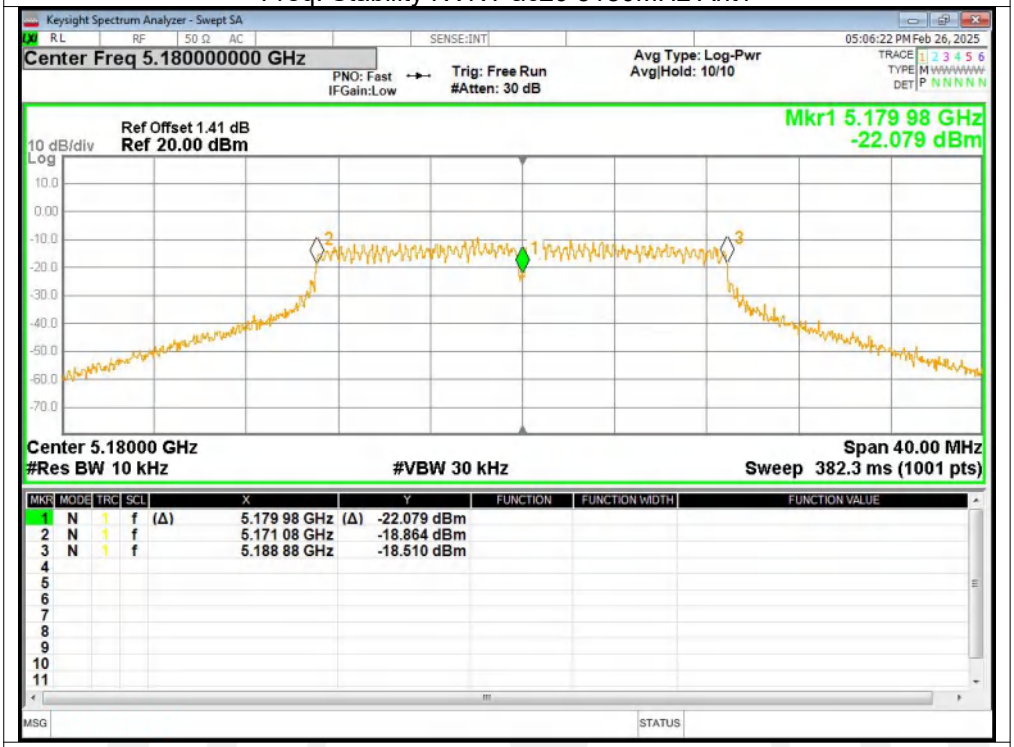
Freq. Stability NVNT n40 5190MHz Ant1



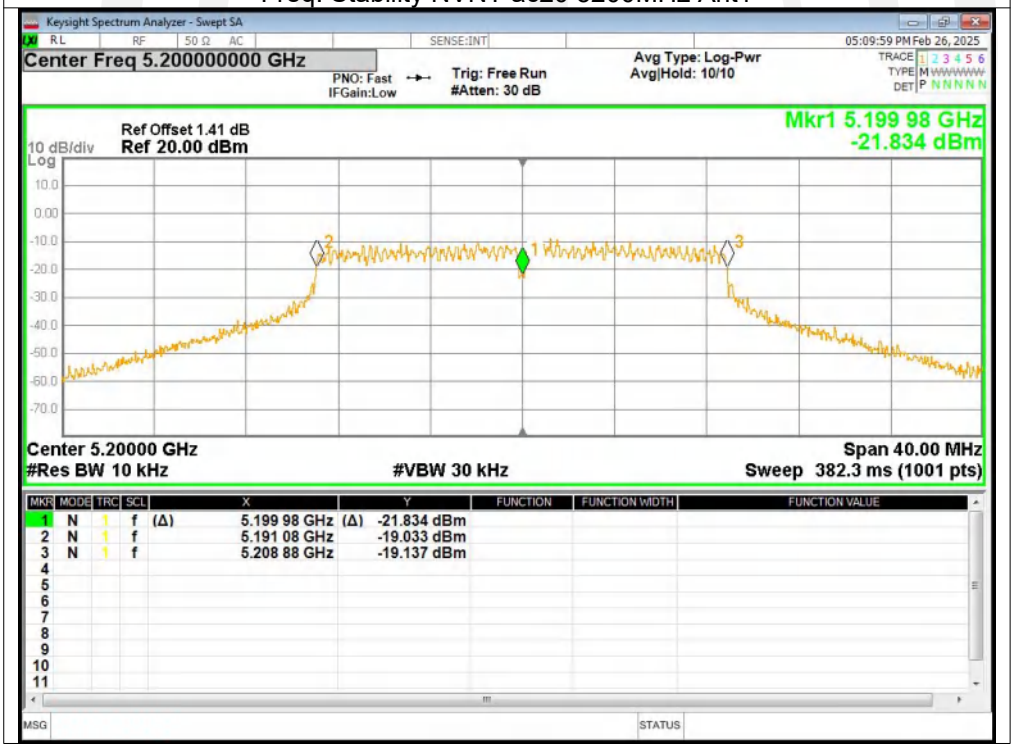
Freq. Stability NVNT n40 5230MHz Ant1



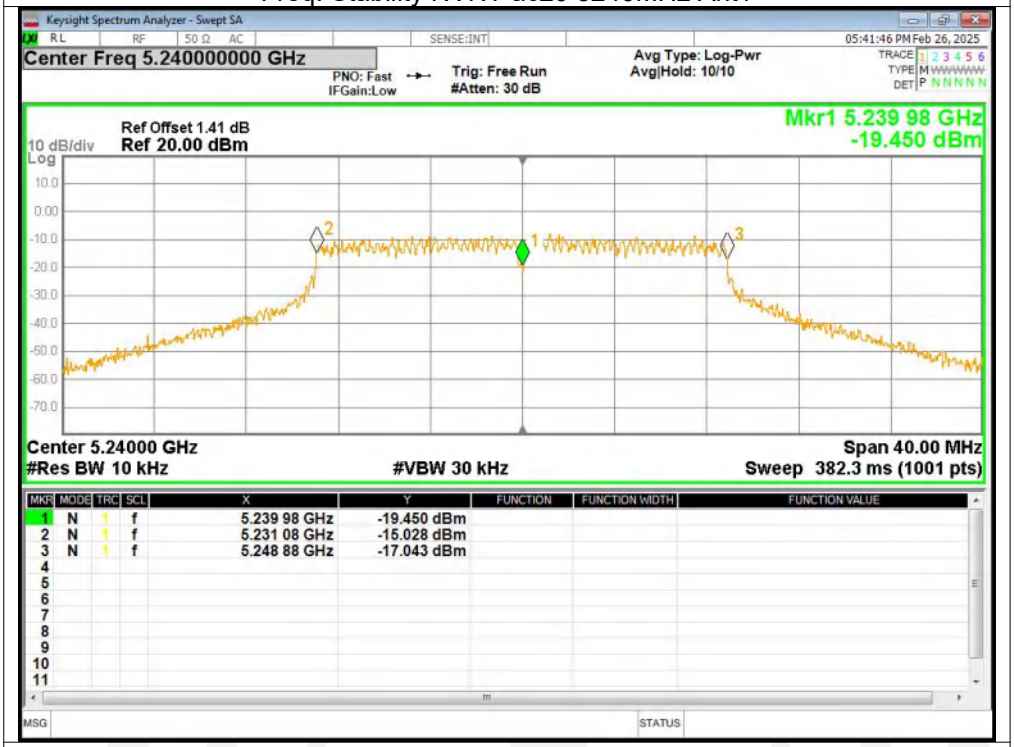
Freq. Stability NVNT ac20 5180MHz Ant1



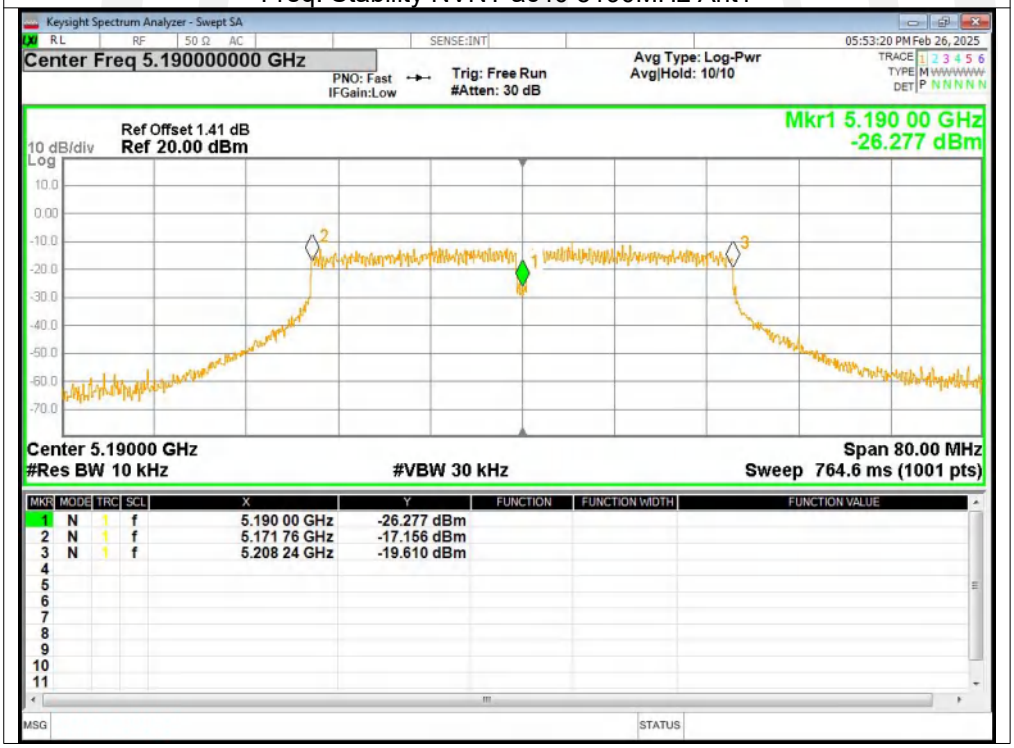
Freq. Stability NVNT ac20 5200MHz Ant1



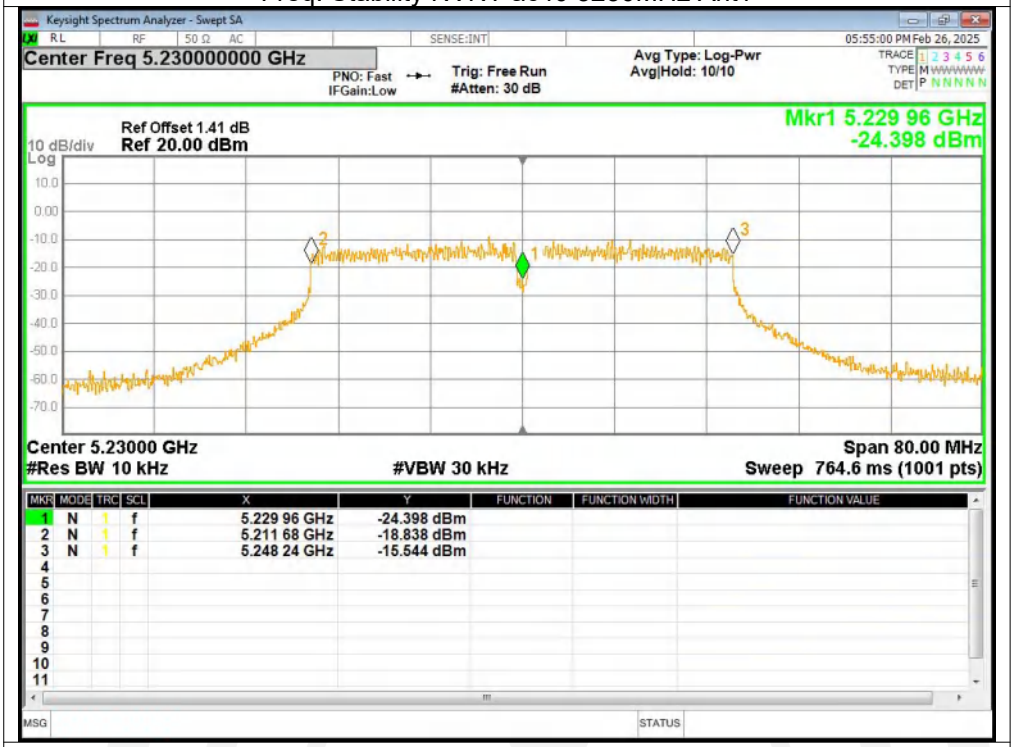
Freq. Stability NVNT ac20 5240MHz Ant1



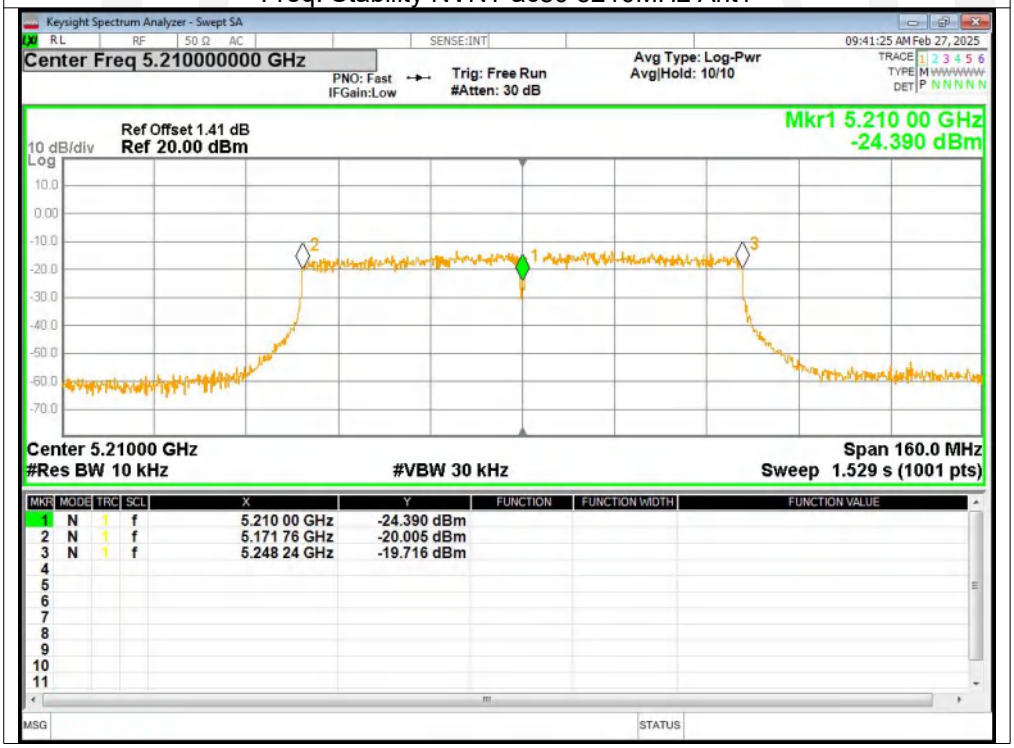
Freq. Stability NVNT ac40 5190MHz Ant1



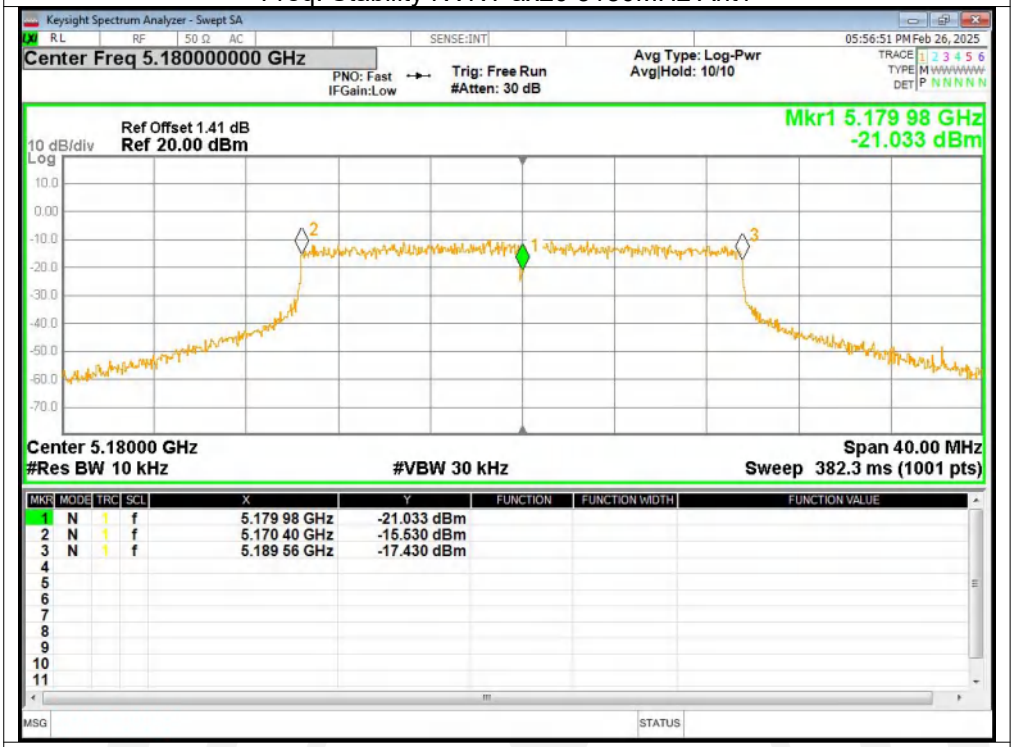
Freq. Stability NVNT ac40 5230MHz Ant1



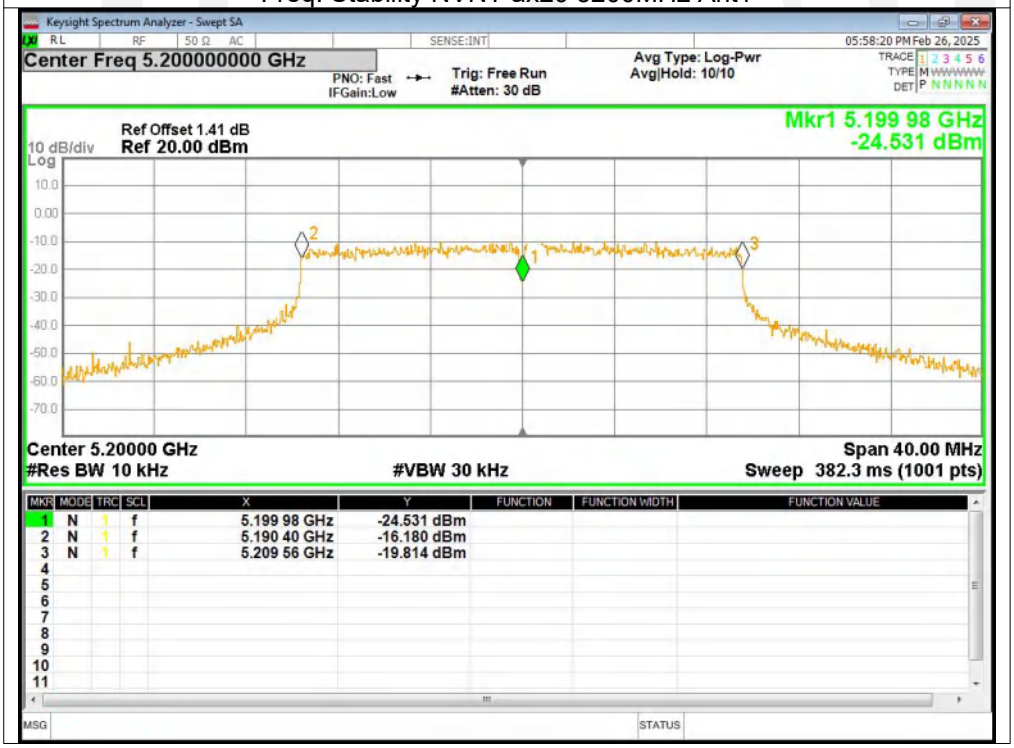
Freq. Stability NVNT ac80 5210MHz Ant1



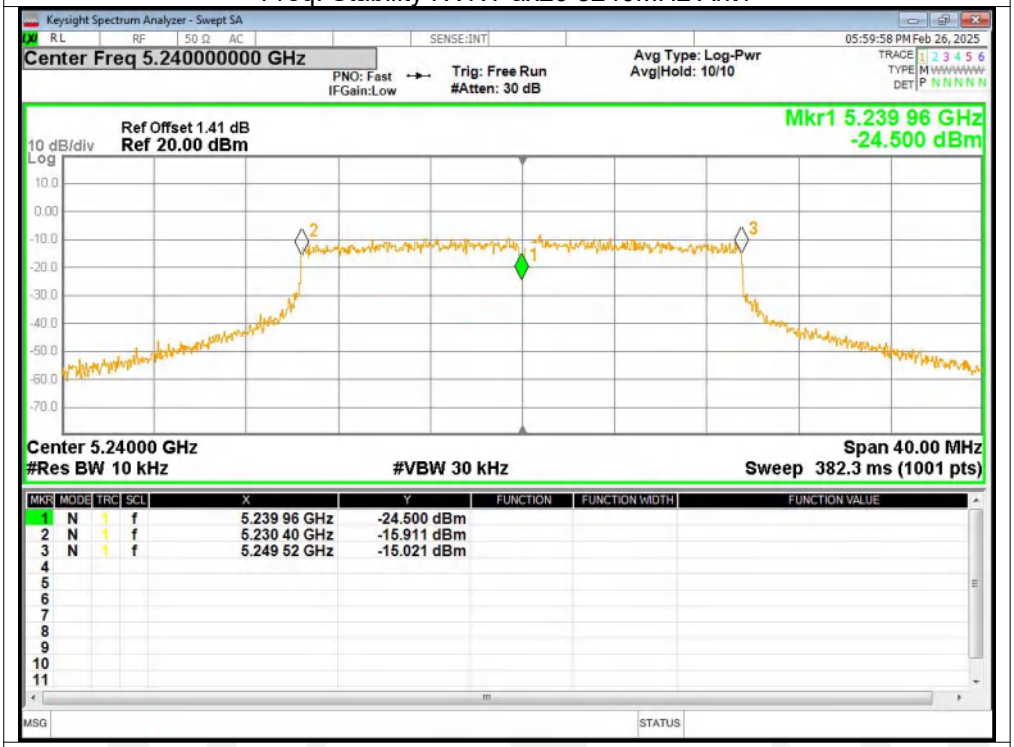
Freq. Stability NVNT ax20 5180MHz Ant1



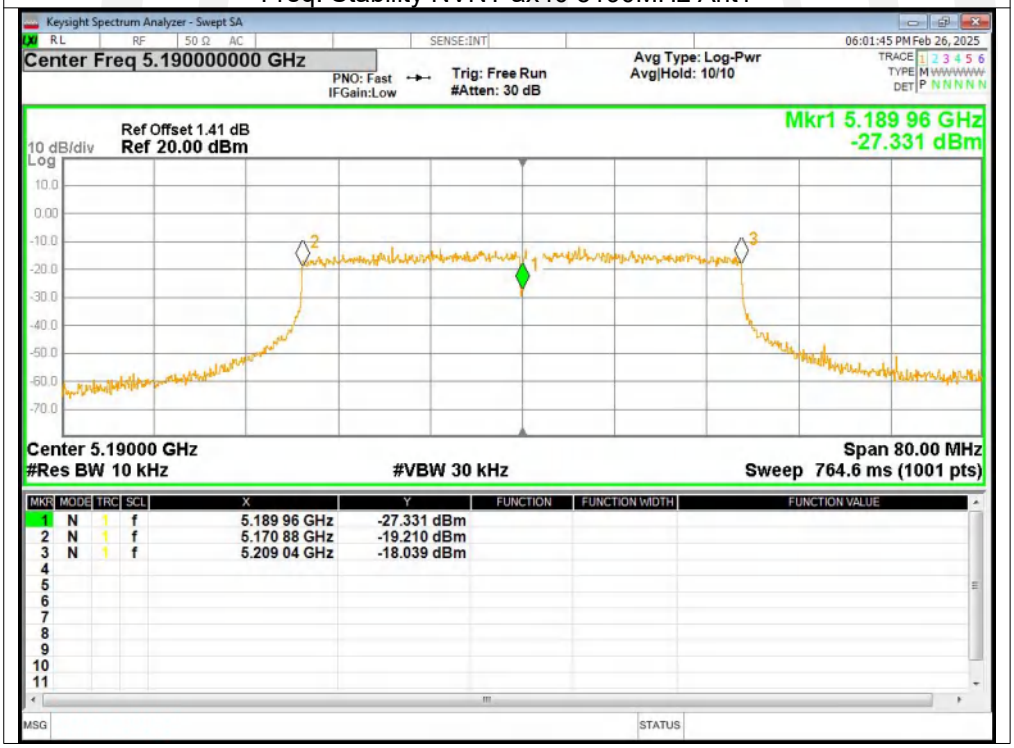
Freq. Stability NVNT ax20 5200MHz Ant1



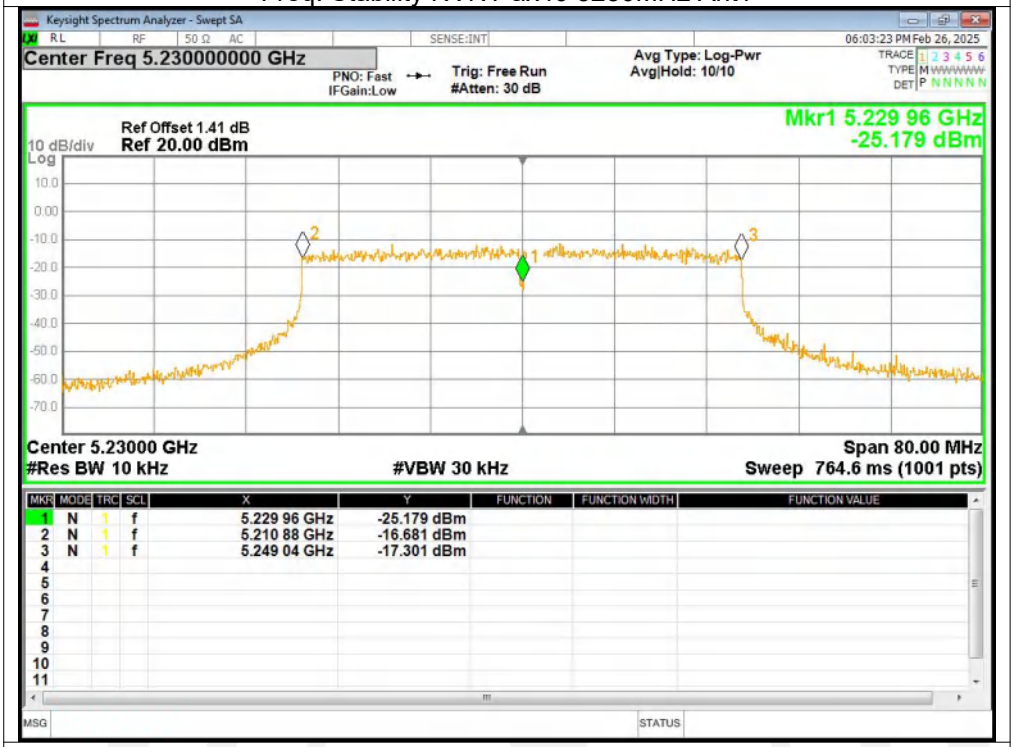
Freq. Stability NVNT ax20 5240MHz Ant1



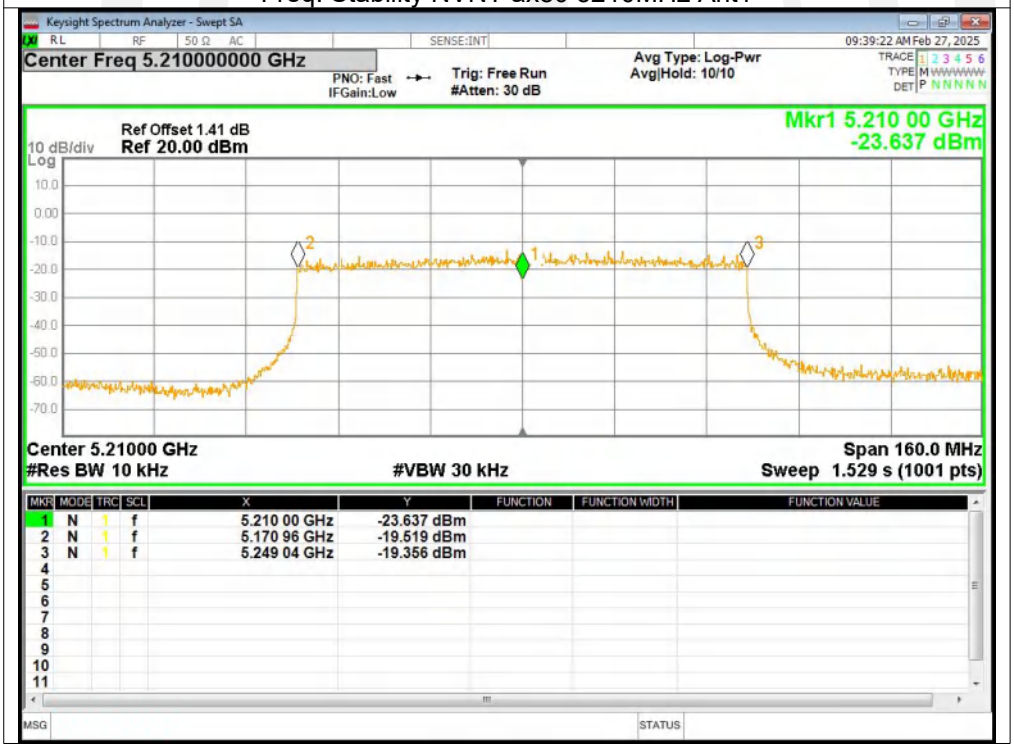
Freq. Stability NVNT ax40 5190MHz Ant1



Freq. Stability NVNT ax40 5230MHz Ant1



Freq. Stability NVNT ax80 5210MHz Ant1

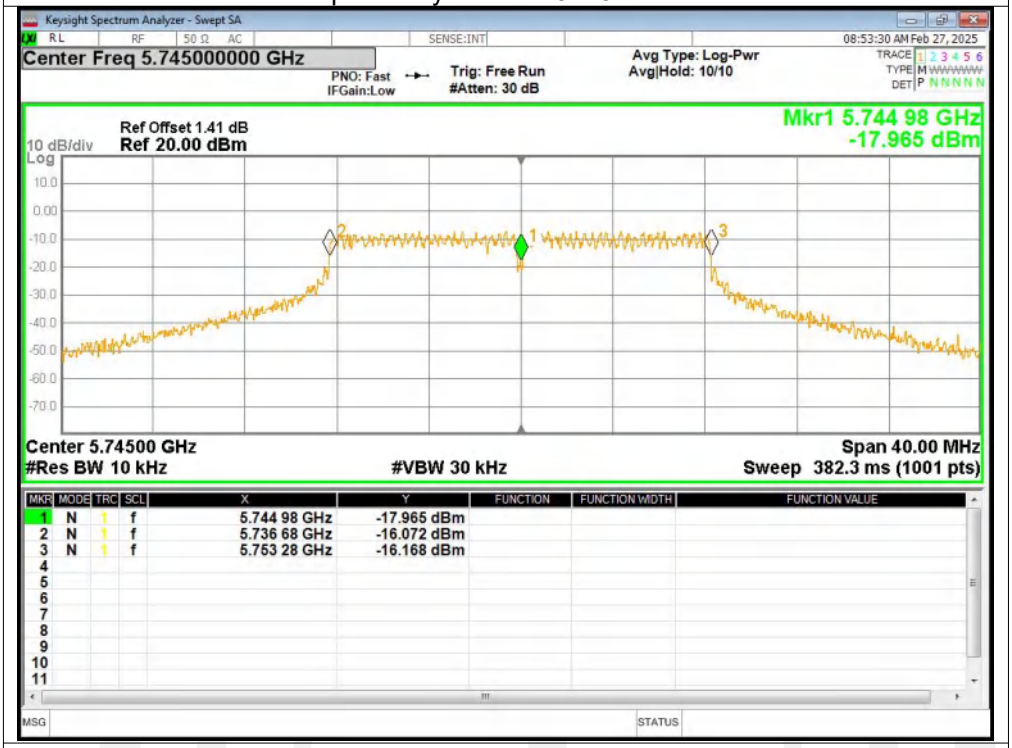


5.8GWIFI (5725MHz-5850 MHz)

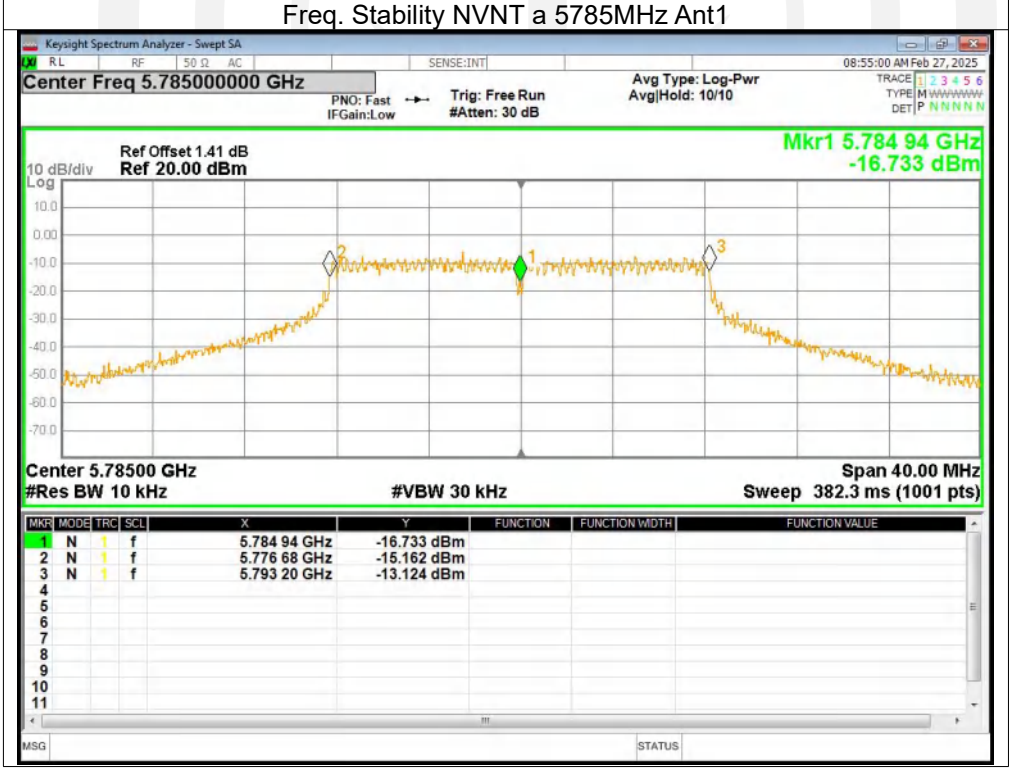
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	a	5785	Ant1	5784.94	-60000	-10.37	25	Pass
NVNT	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
NVNT	n20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	n20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
NVNT	n20	5825	Ant1	5824.96	-40000	-6.87	25	Pass
NVNT	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	n40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ac20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	ac20	5785	Ant1	5784.94	-60000	-10.37	25	Pass
NVNT	ac20	5825	Ant1	5824.96	-40000	-6.87	25	Pass
NVNT	ac40	5755	Ant1	5755	0	0	25	Pass
NVNT	ac40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ac80	5775	Ant1	5775	0	0	25	Pass
NVNT	ax20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	ax20	5785	Ant1	5784.98	-20000	-3.46	25	Pass
NVNT	ax20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
NVNT	ax40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	ax40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ax80	5775	Ant1	5775	0	0	25	Pass

Test Graphs

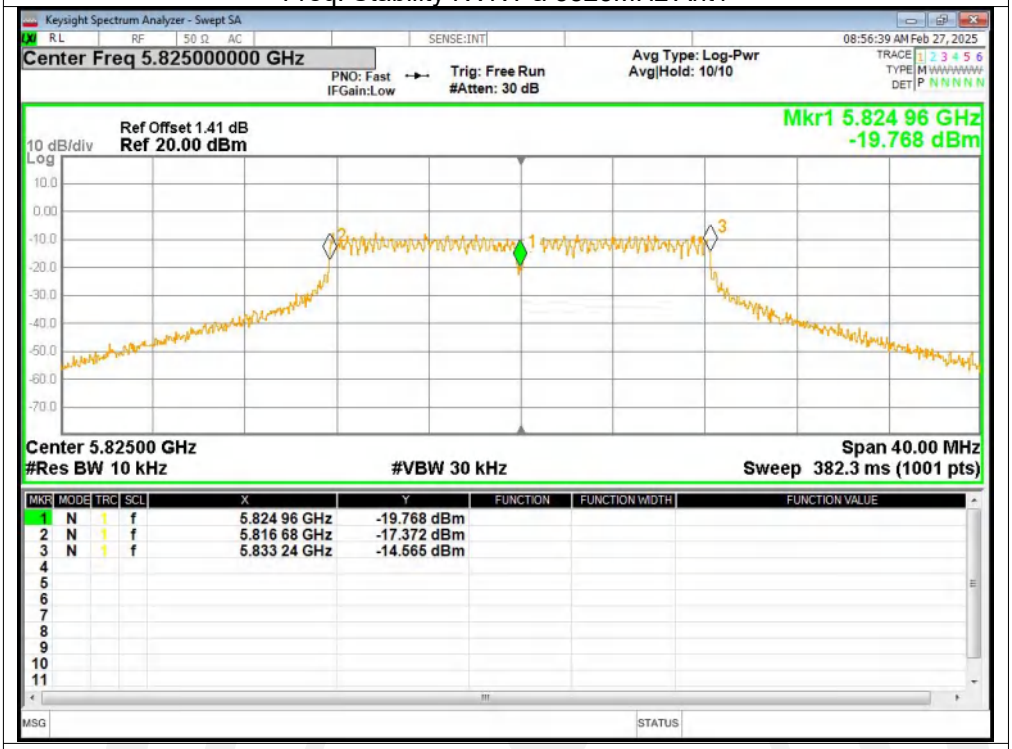
Freq. Stability NVNT a 5745MHz Ant1



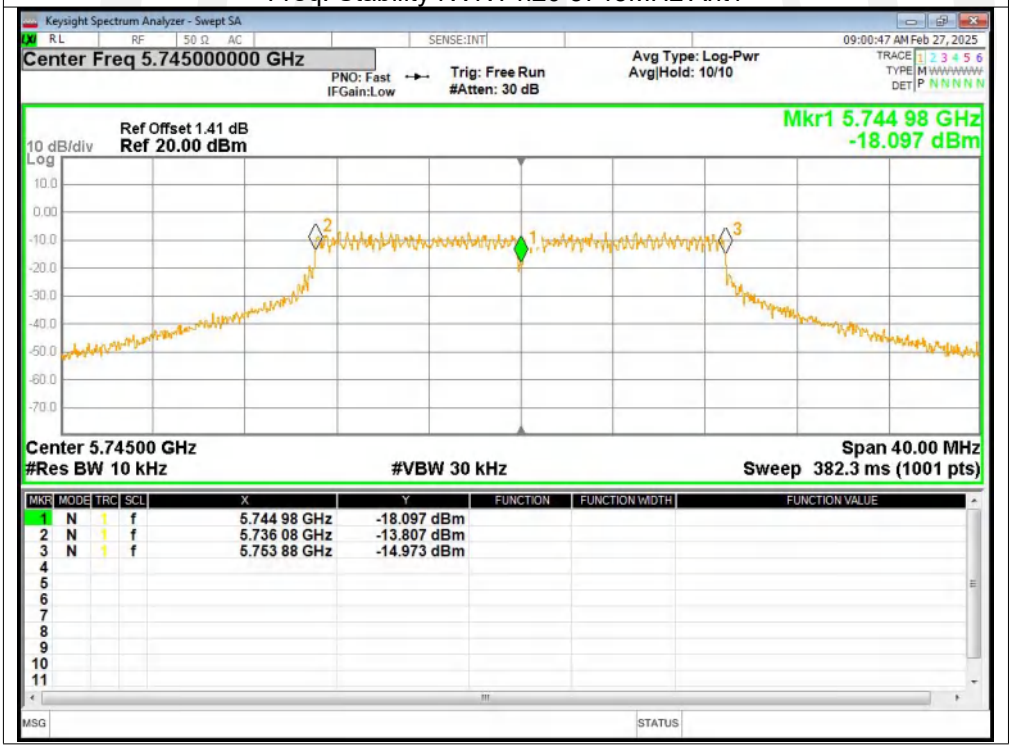
Freq. Stability NVNT a 5785MHz Ant1



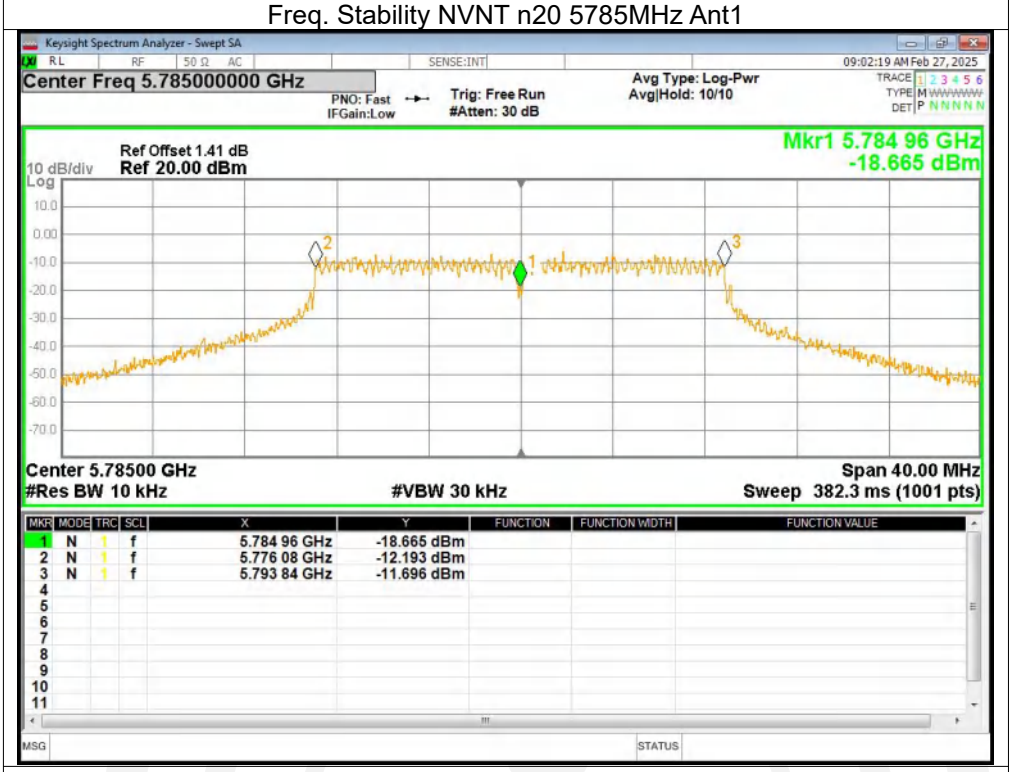
Freq. Stability NVNT a 5825MHz Ant1



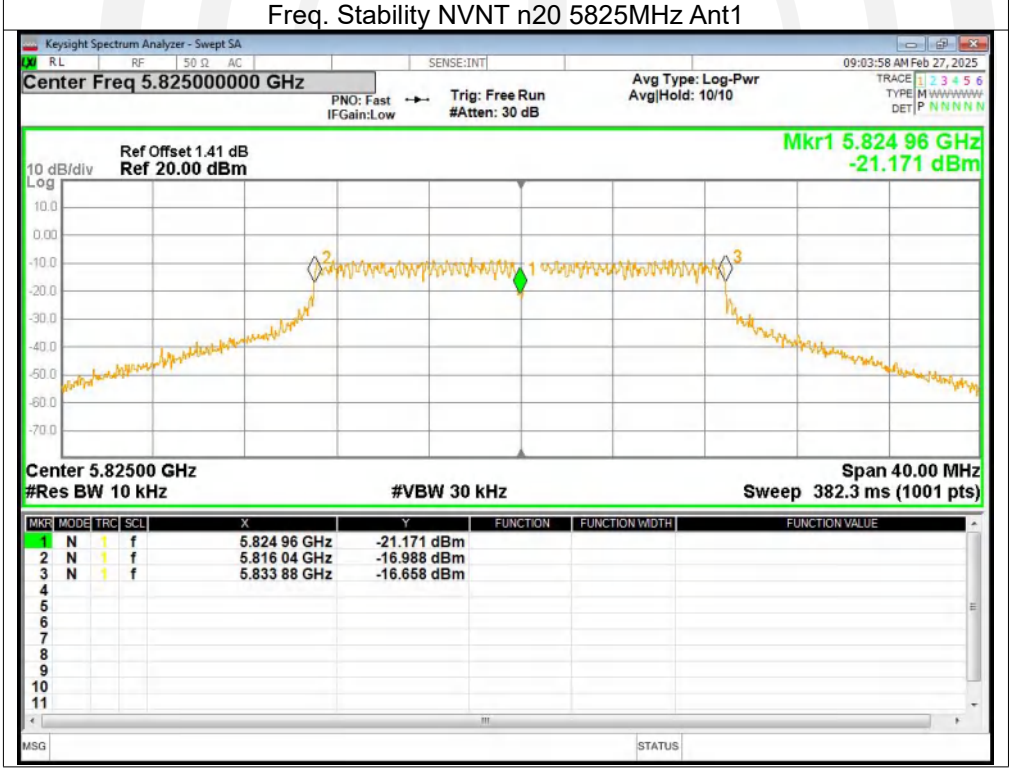
Freq. Stability NVNT n20 5745MHz Ant1



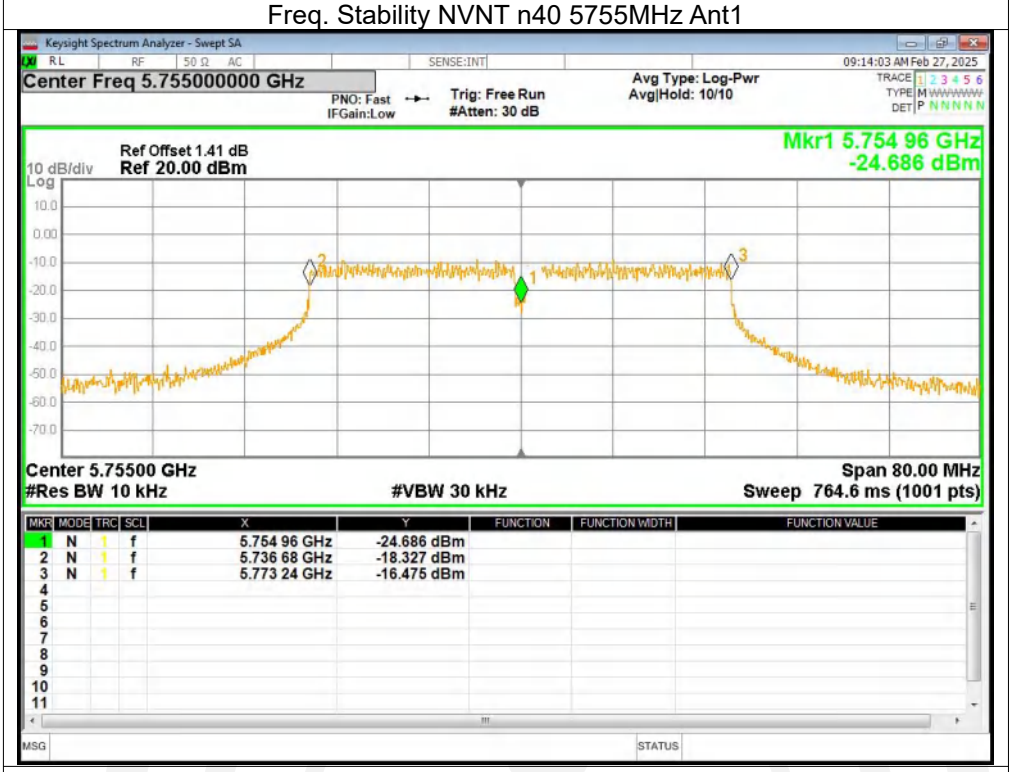
Freq. Stability NVNT n20 5785MHz Ant1



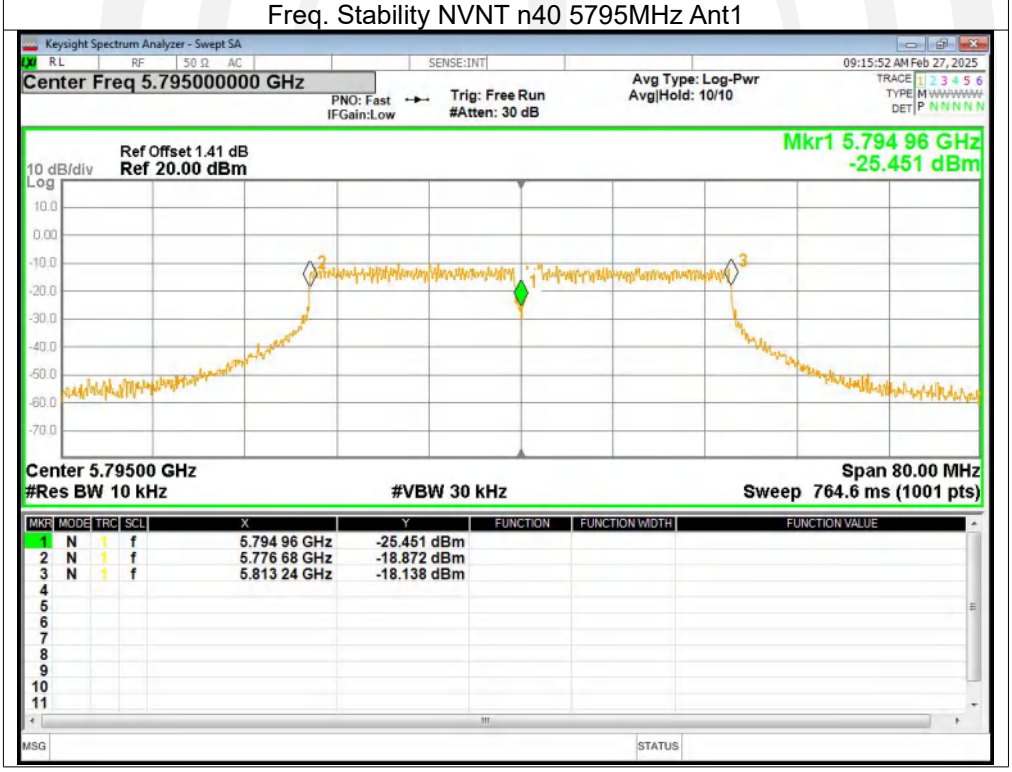
Freq. Stability NVNT n20 5825MHz Ant1



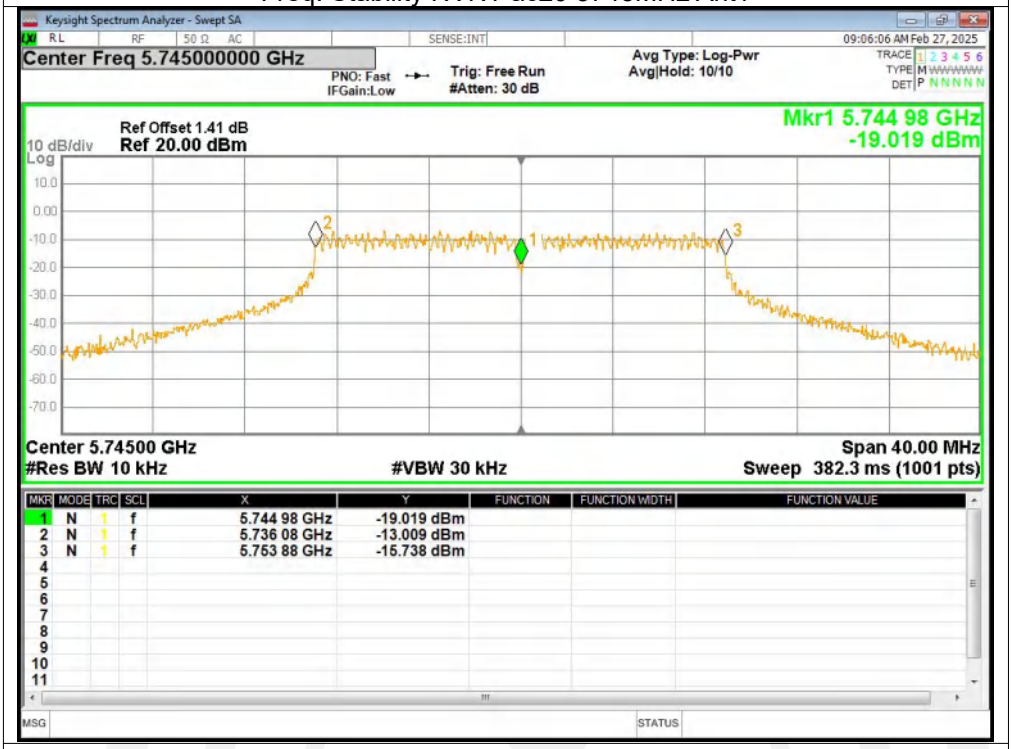
Freq. Stability NVNT n40 5755MHz Ant1



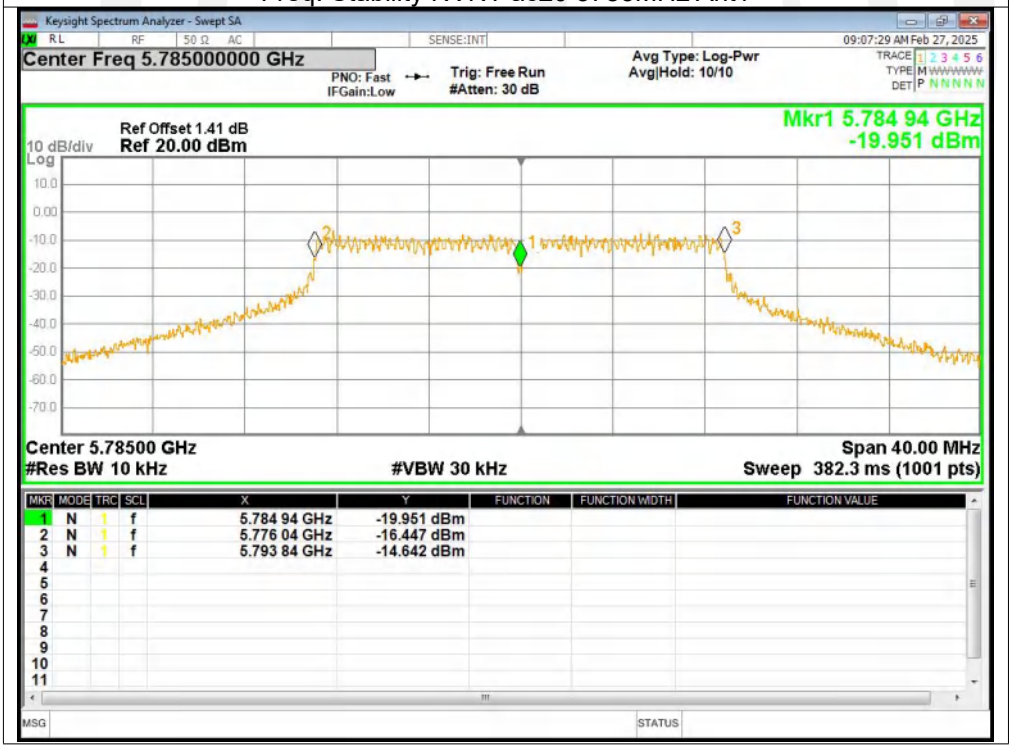
Freq. Stability NVNT n40 5795MHz Ant1



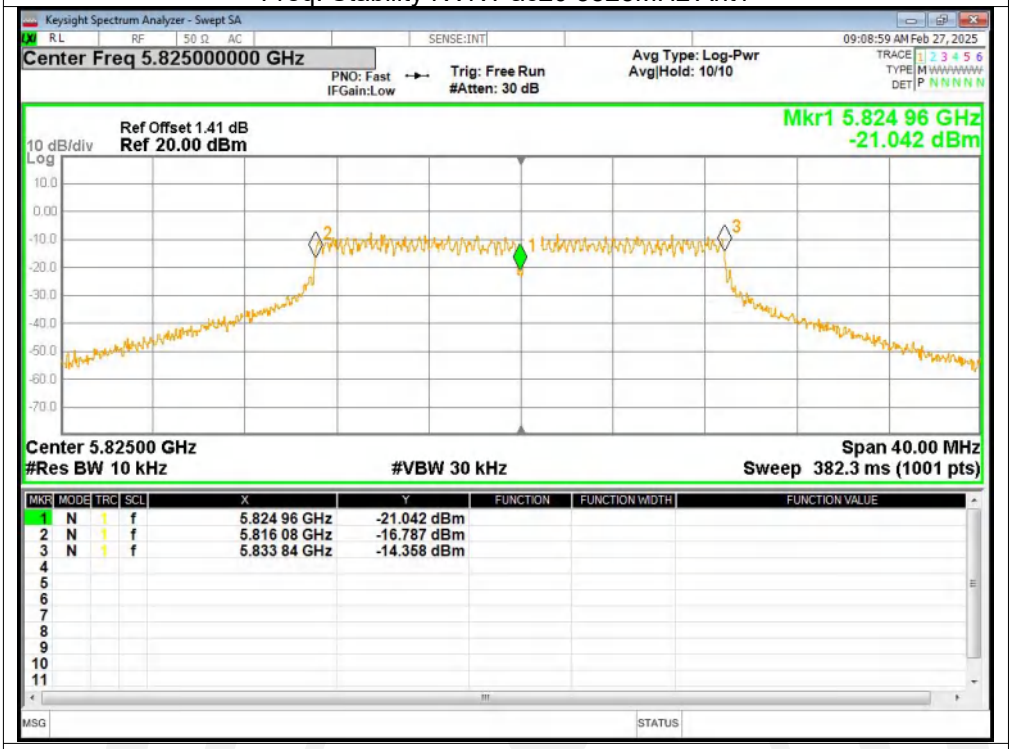
Freq. Stability NVNT ac20 5745MHz Ant1



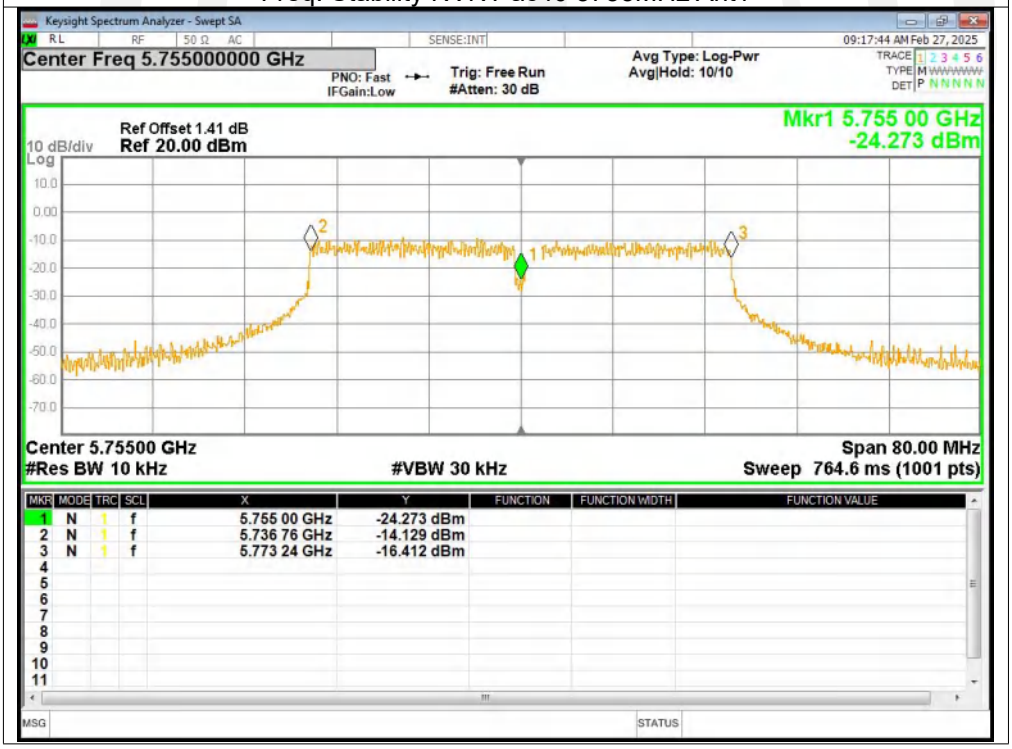
Freq. Stability NVNT ac20 5785MHz Ant1



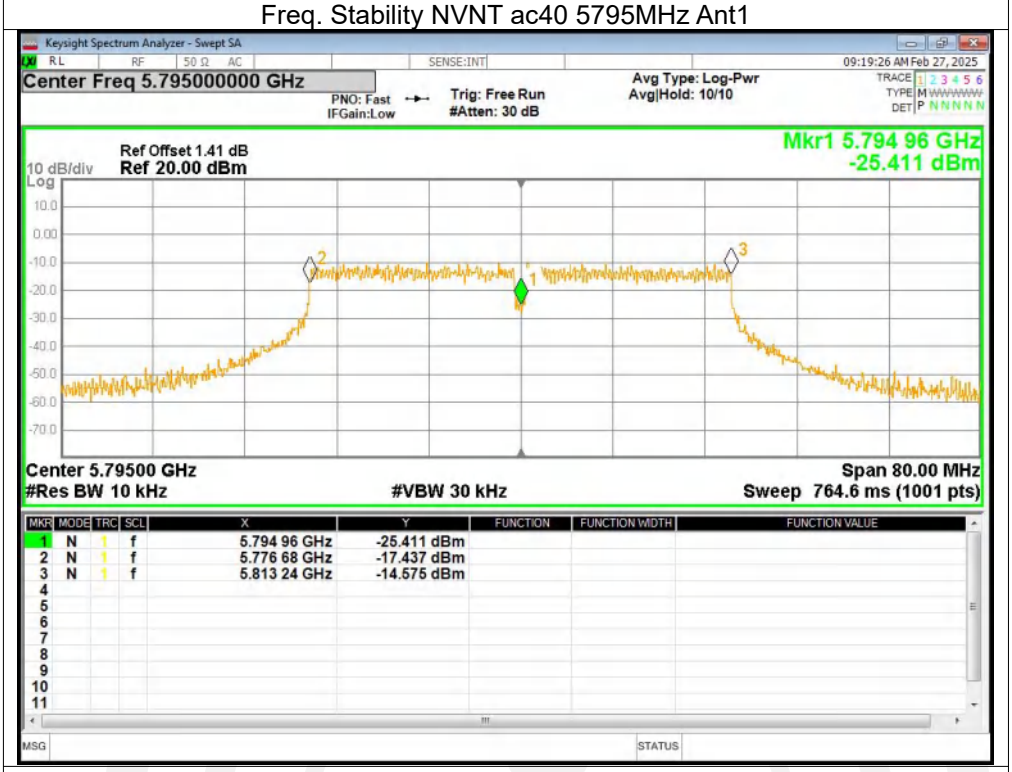
Freq. Stability NVNT ac20 5825MHz Ant1



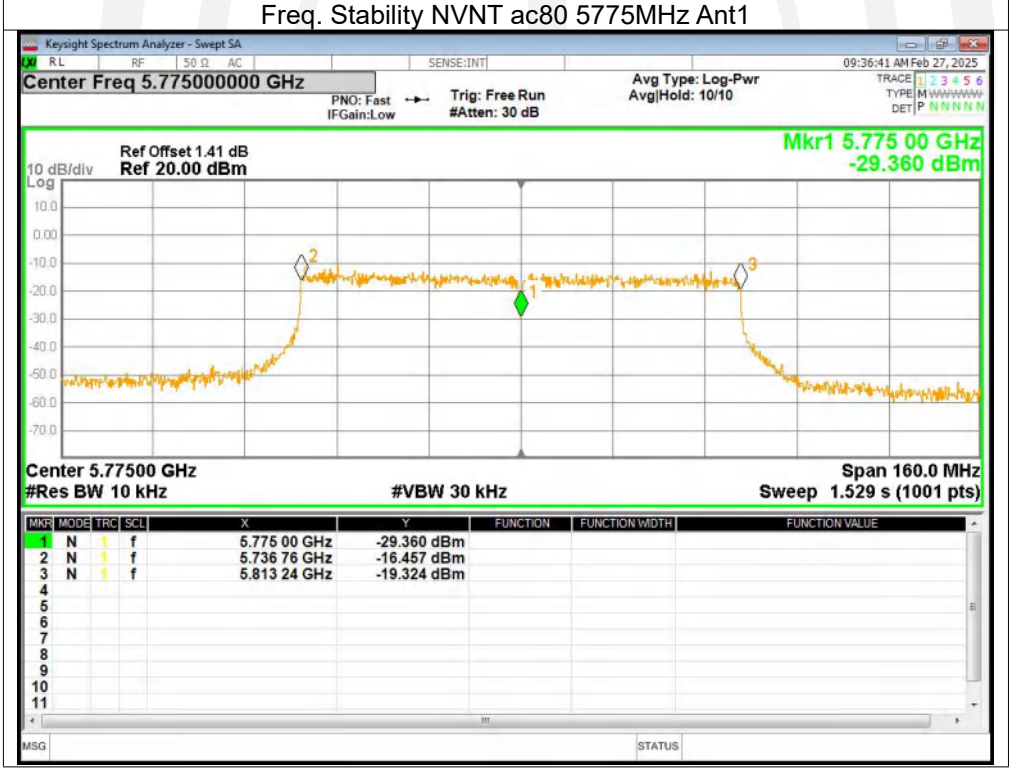
Freq. Stability NVNT ac40 5755MHz Ant1



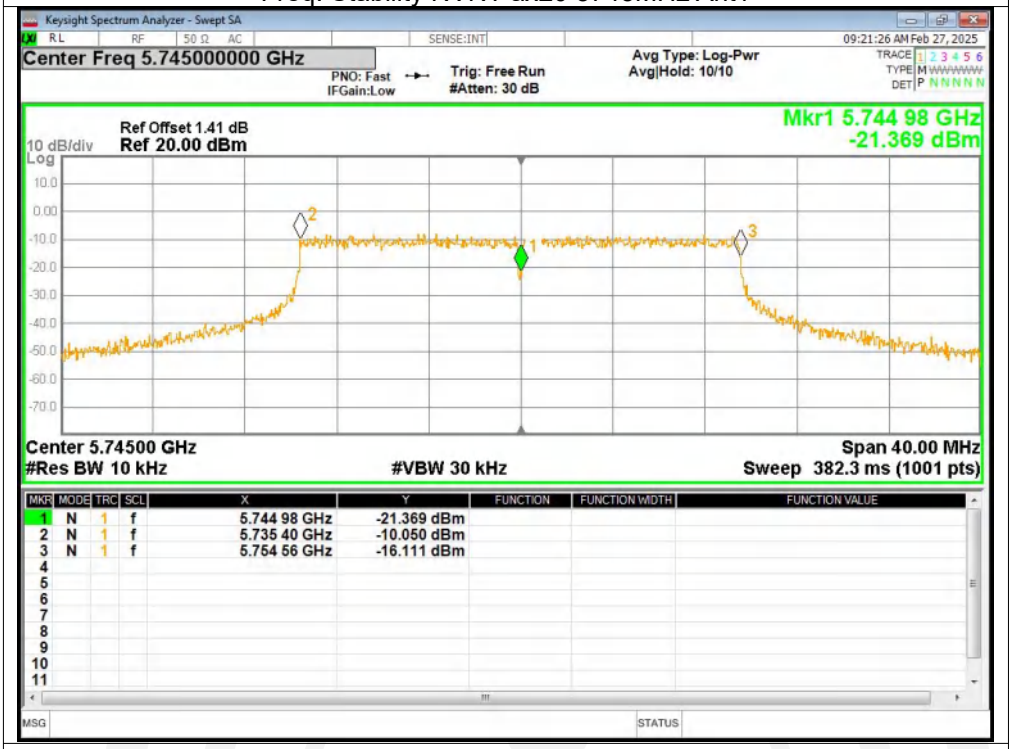
Freq. Stability NVNT ac40 5795MHz Ant1



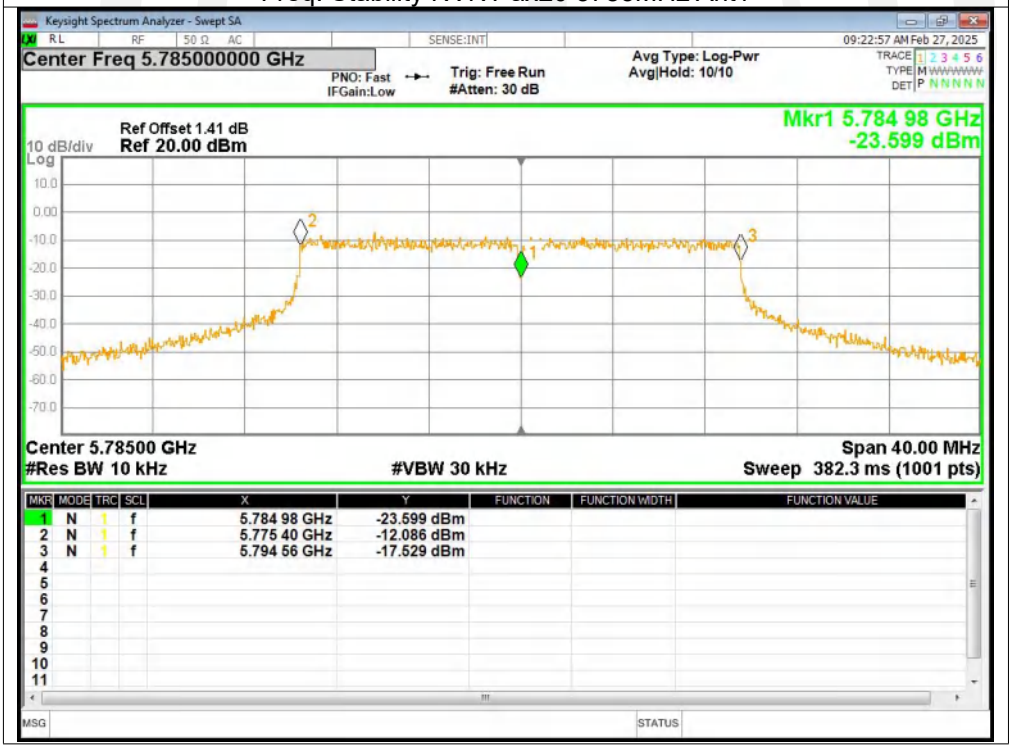
Freq. Stability NVNT ac80 5775MHz Ant1



Freq. Stability NVNT ax20 5745MHz Ant1

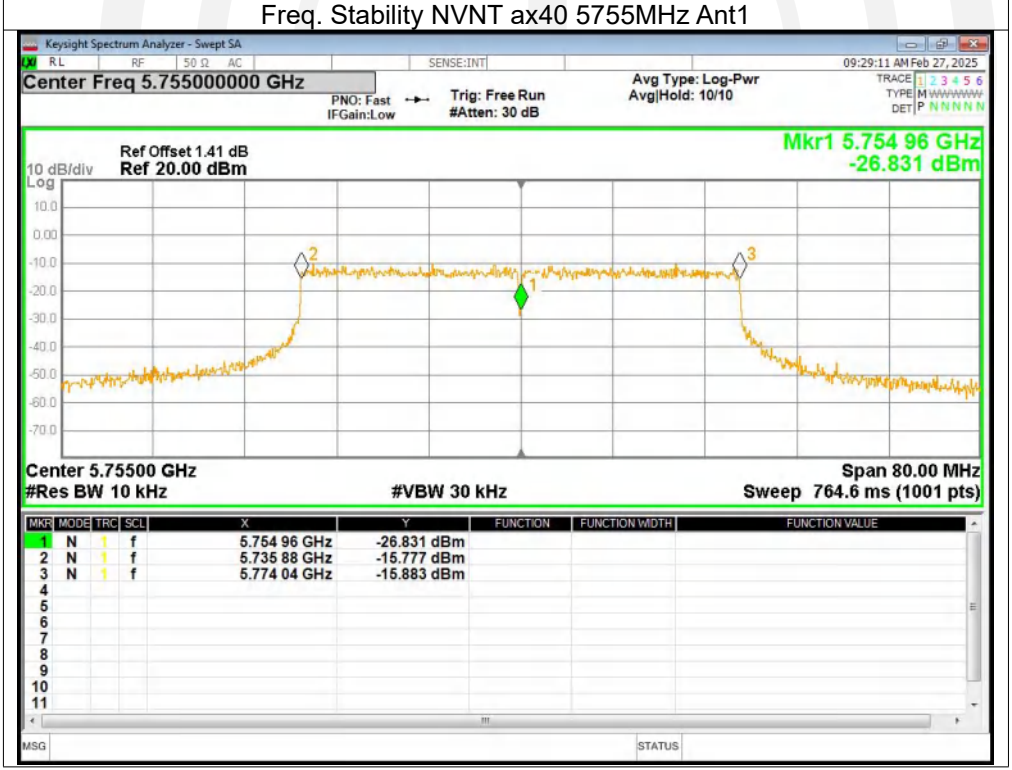


Freq. Stability NVNT ax20 5785MHz Ant1

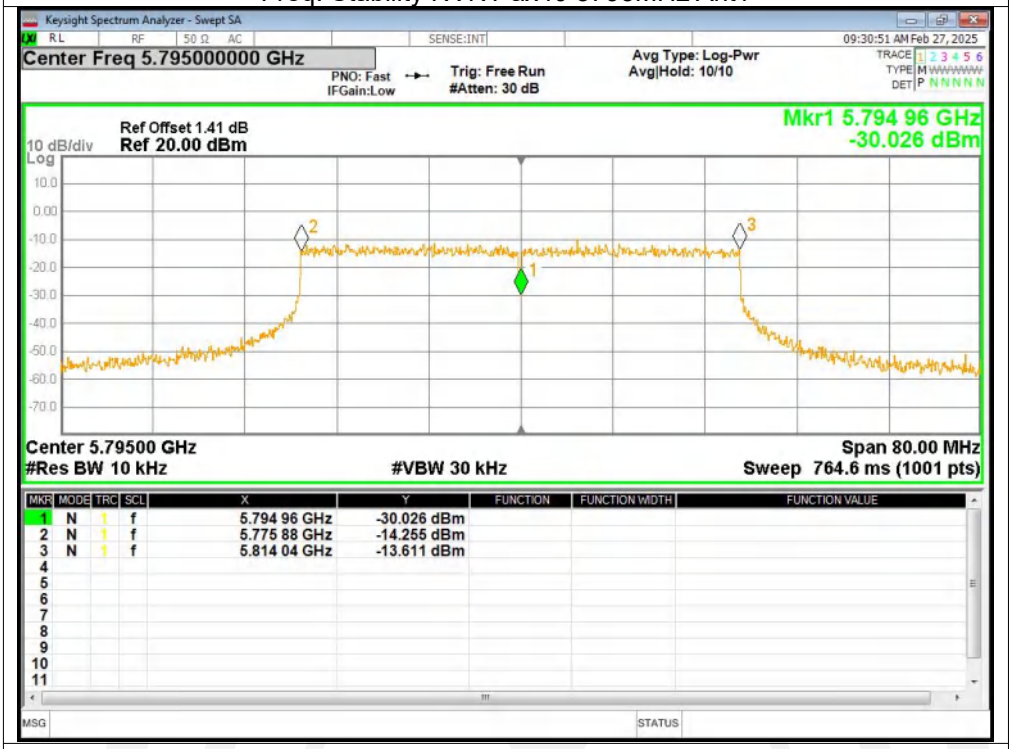


Freq. Stability NVNT ax20 5825MHz Ant1

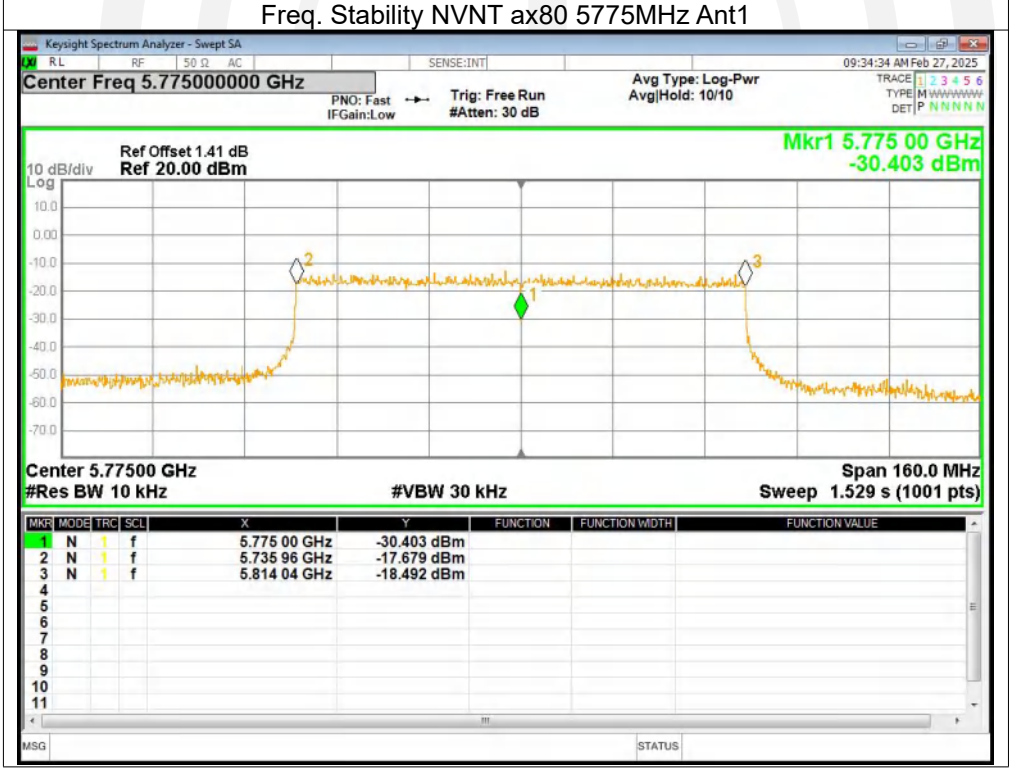
Freq. Stability NVNT ax40 5755MHz Ant1



Freq. Stability NVNT ax40 5795MHz Ant1



Freq. Stability NVNT ax80 5775MHz Ant1



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