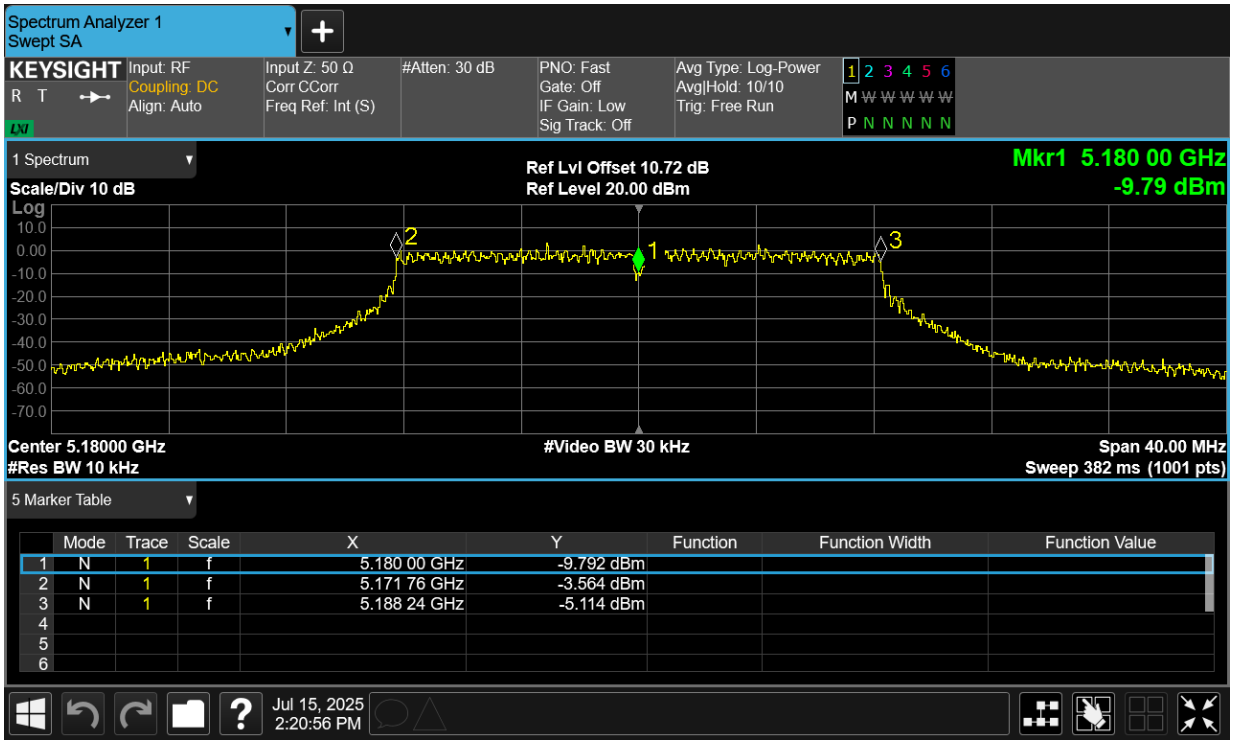
Test Data

Frequency Stability

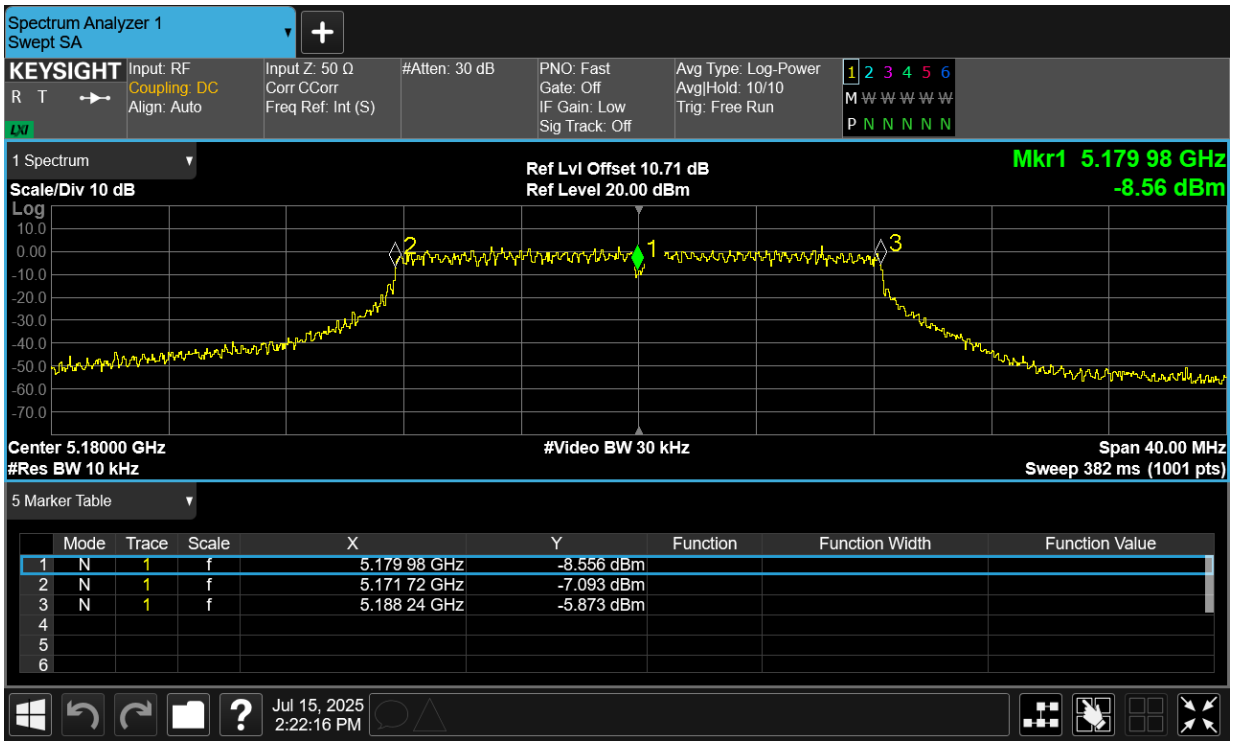
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
HVNT	a	5180	Ant1	5180	0	Within authorized band	Pass
HVNT	a	5180	Ant2	5179.98	-3.86		Pass
HVNT	a	5180	Ant3	5179.98	-3.86		Pass
HVNT	a	5180	Ant4	5180	0		Pass
LVNT	a	5180	Ant1	5180.02	3.86		Pass
LVNT	a	5180	Ant2	5180	0		Pass
LVNT	a	5180	Ant3	5180.02	3.86		Pass
LVNT	a	5180	Ant4	5180.02	3.86		Pass
NVHT	a	5180	Ant1	5180	0		Pass
NVHT	a	5180	Ant2	5180	0		Pass
NVHT	a	5180	Ant3	5179.98	-3.86		Pass
NVHT	a	5180	Ant4	5180	0		Pass
NVLT	a	5180	Ant1	5180	0		Pass
NVLT	a	5180	Ant2	5180.02	3.86		Pass
NVLT	a	5180	Ant3	5180	0		Pass
NVLT	a	5180	Ant4	5180	0		Pass
NVNT	a	5180	Ant1	5180.02	3.86		Pass
NVNT	a	5180	Ant2	5180	0		Pass
NVNT	a	5180	Ant3	5180	0		Pass
NVNT	a	5180	Ant4	5180.02	3.86		Pass
HVNT	ac80	5210	Sum	5210	0		Pass
LVNT	ac80	5210	Sum	5210	0		Pass
NVHT	ac80	5210	Sum	5210	0		Pass
NVLT	ac80	5210	Sum	5210	0		Pass
NVNT	ac80	5210	Sum	5210	0		Pass
HVNT	n20	5180	Sum	5179.98	-3.86		Pass
LVNT	n20	5180	Sum	5180	0		Pass
NVHT	n20	5180	Sum	5180	0		Pass
NVLT	n20	5180	Sum	5179.98	-3.86		Pass
NVNT	n20	5180	Sum	5180.02	3.86		Pass
HVNT	n40	5190	Sum	5190	0		Pass
LVNT	n40	5190	Sum	5190	0		Pass
NVHT	n40	5190	Sum	5190	0		Pass
NVLT	n40	5190	Sum	5190	0		Pass
NVNT	n40	5190	Sum	5190	0		Pass
Remark: “NTNV” means Normal Temperature Normal Voltage, “NVHT” means Normal Voltage High Temperature, “NVLT” means Normal Voltage Low Temperature, “LVNT” means Low Voltage Normal Temperature, “HVNT” means High Voltage Normal Temperature.							

Test Graphs

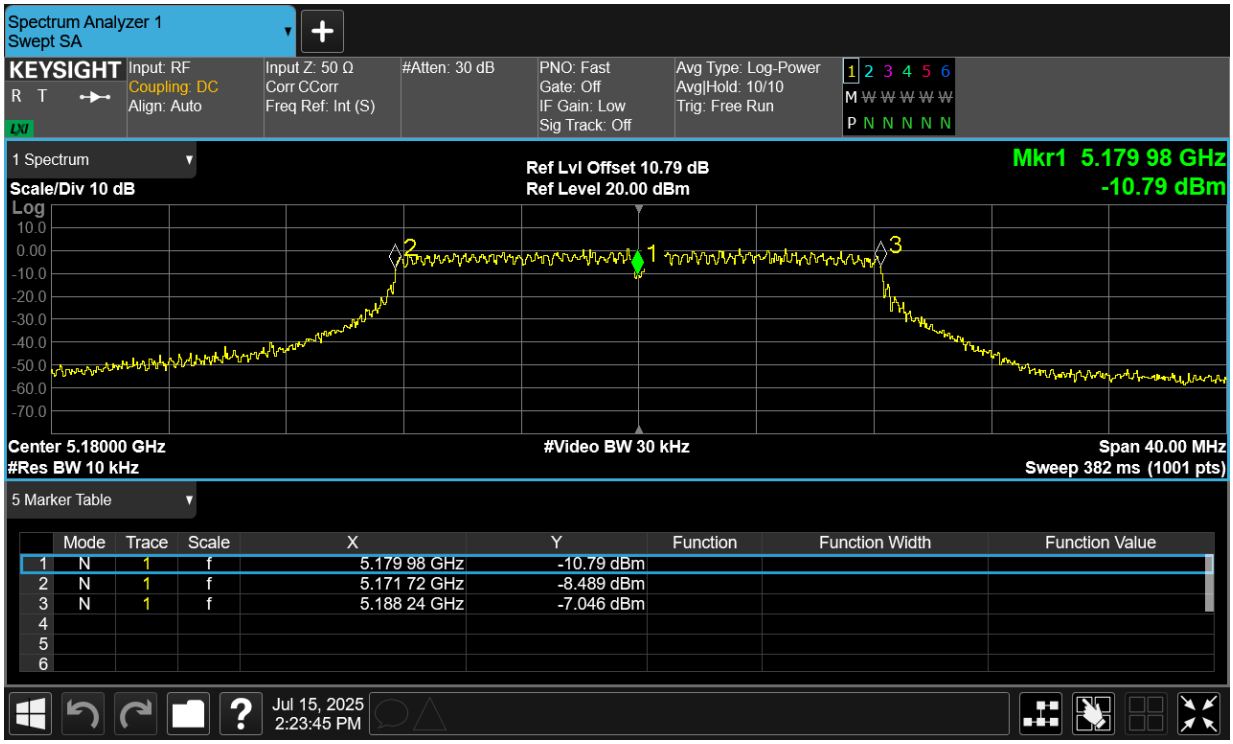
Freq. Stability HVNT a 5180MHz Ant1



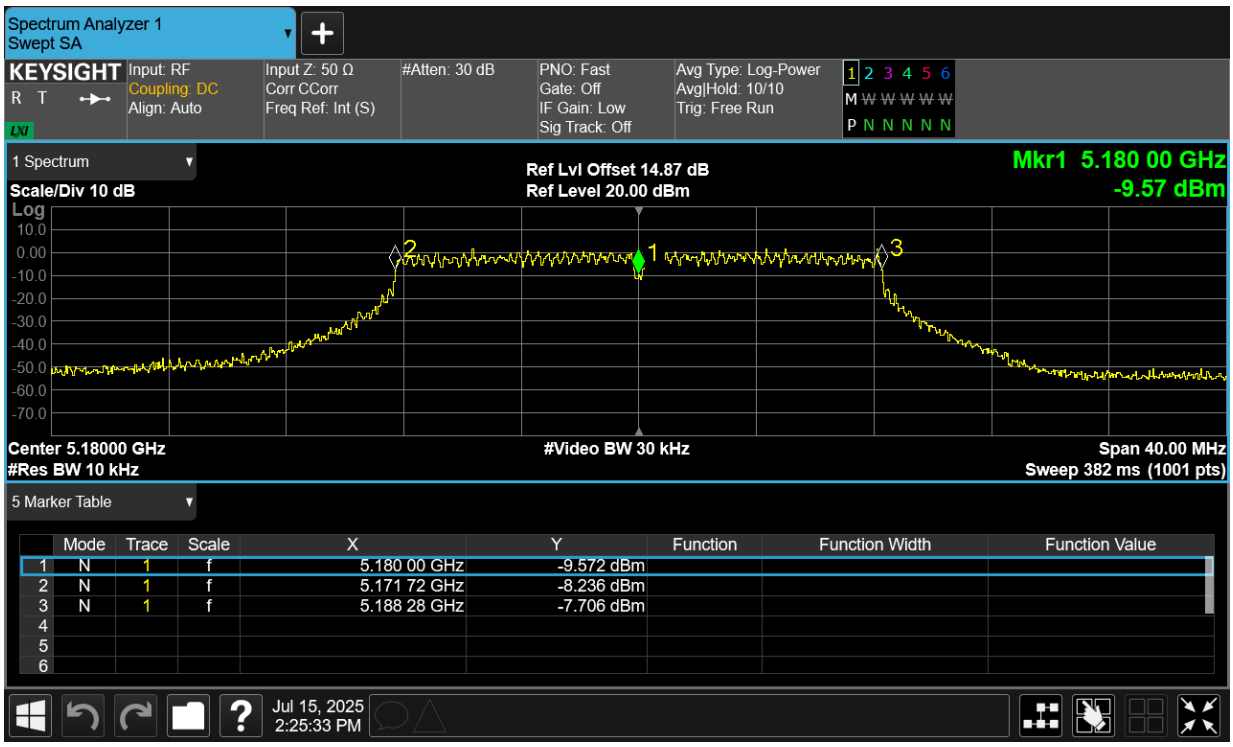
Freq. Stability HVNT a 5180MHz Ant2



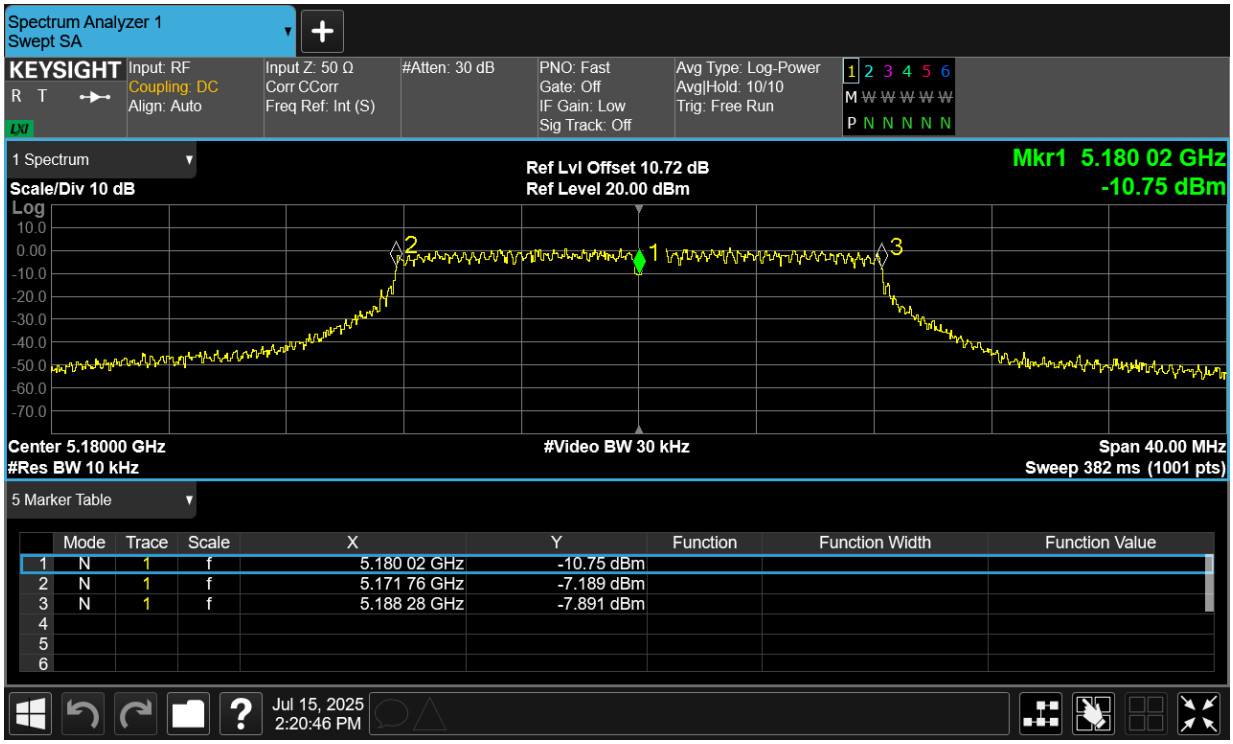
Freq. Stability HVNT a 5180MHz Ant3



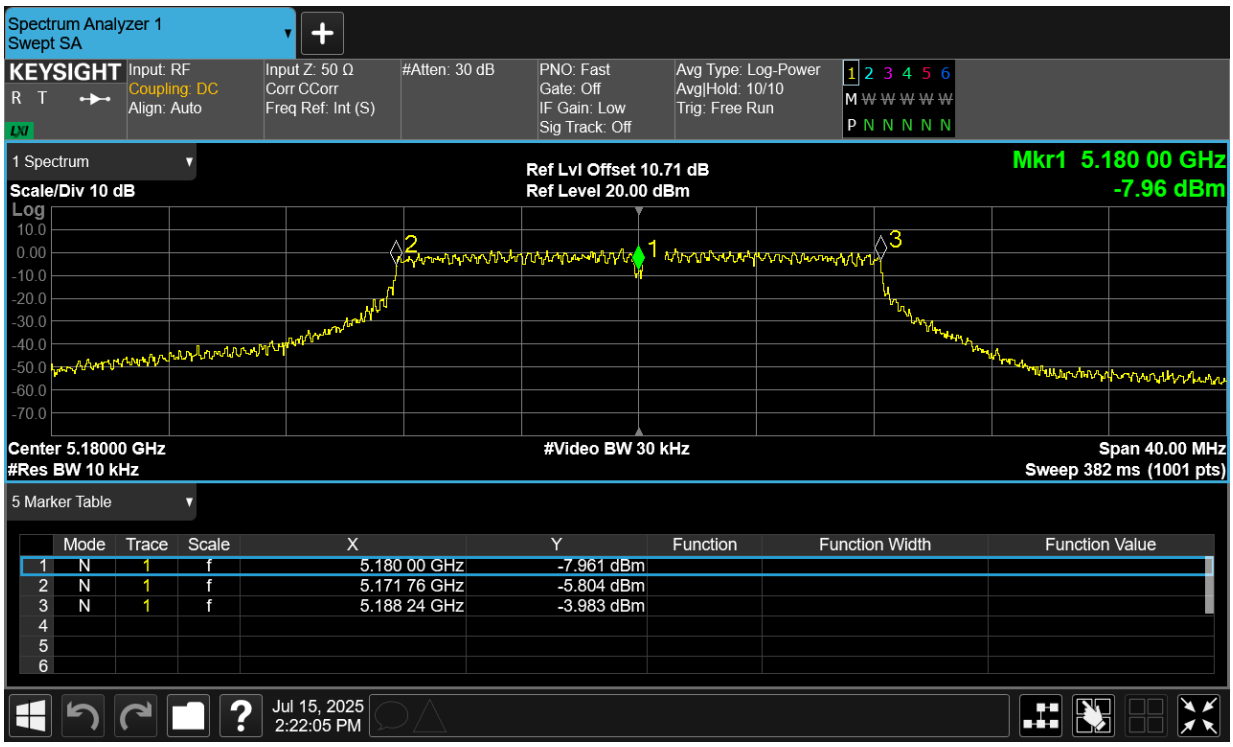
Freq. Stability HVNT a 5180MHz Ant4



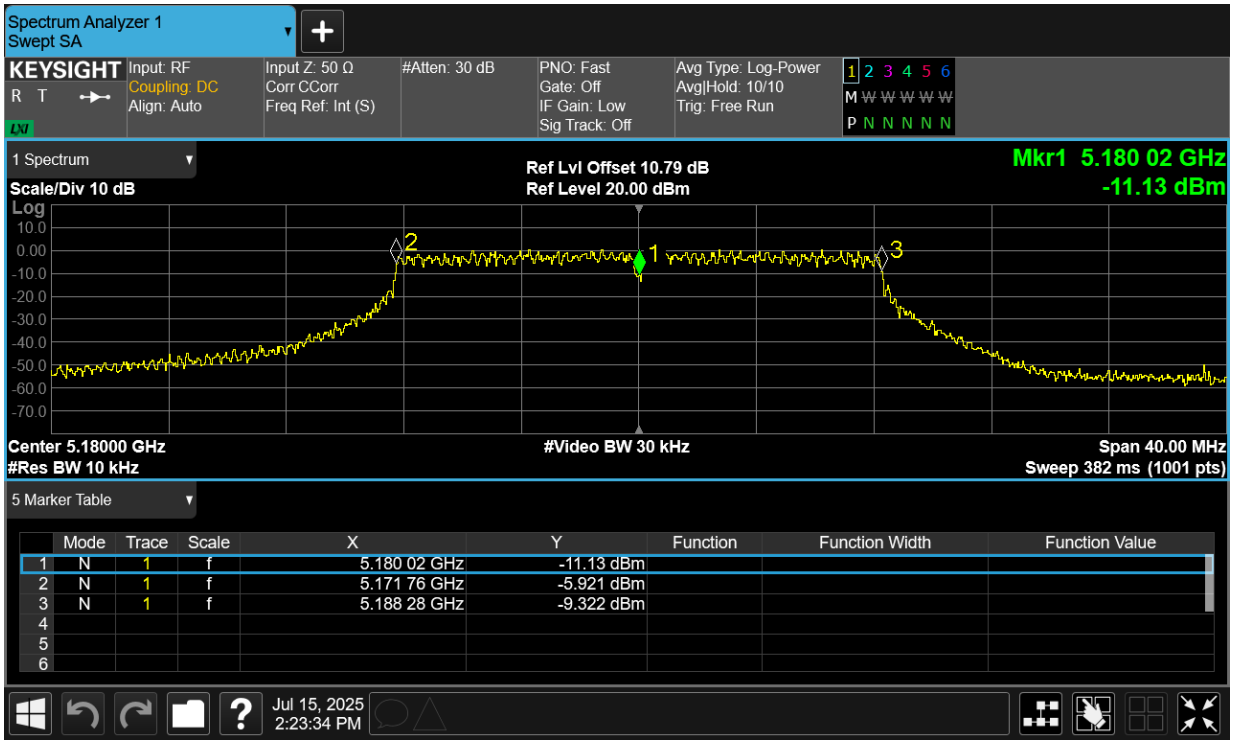
Freq. Stability LVNT a 5180MHz Ant1



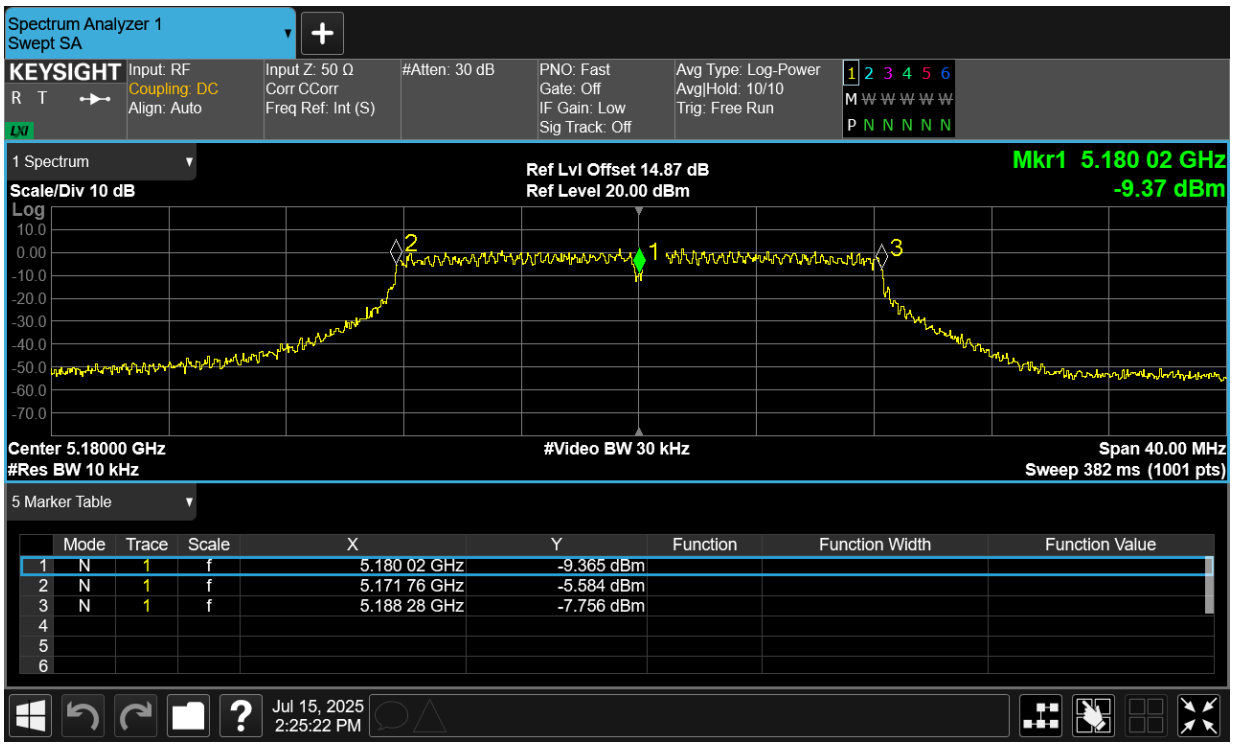
Freq. Stability LVNT a 5180MHz Ant2



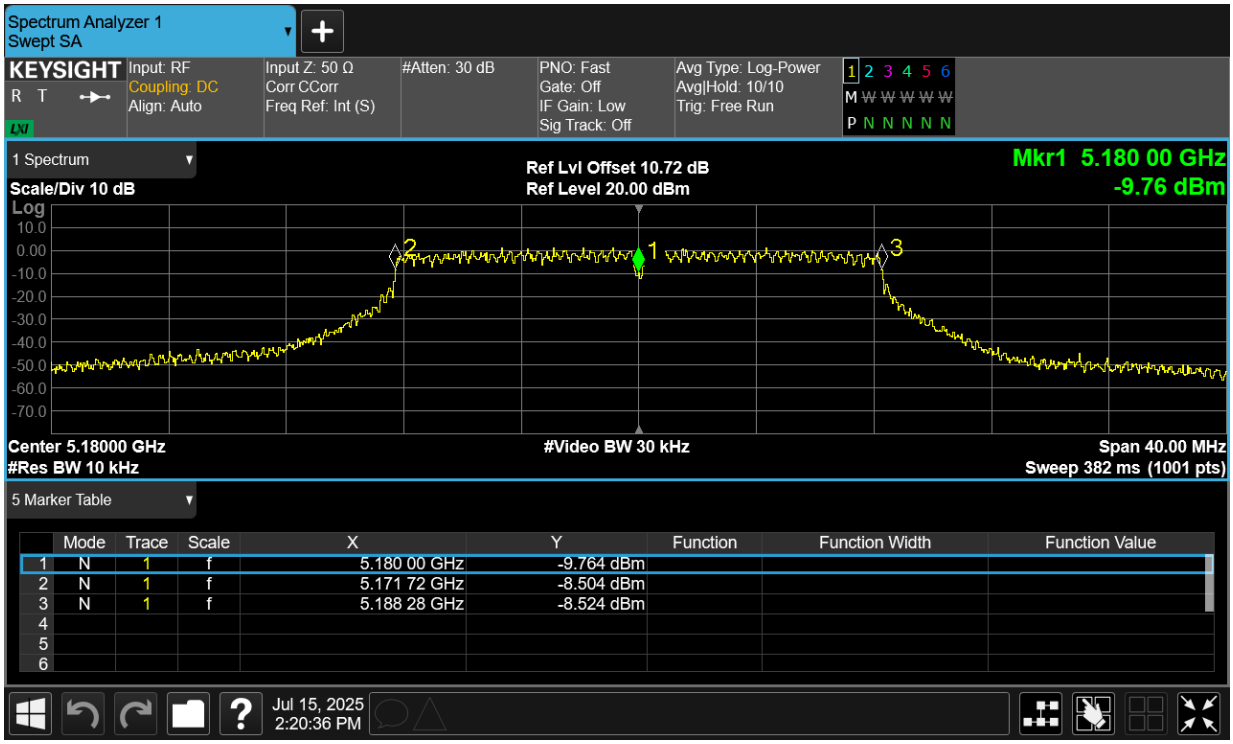
Freq. Stability LVNT a 5180MHz Ant3



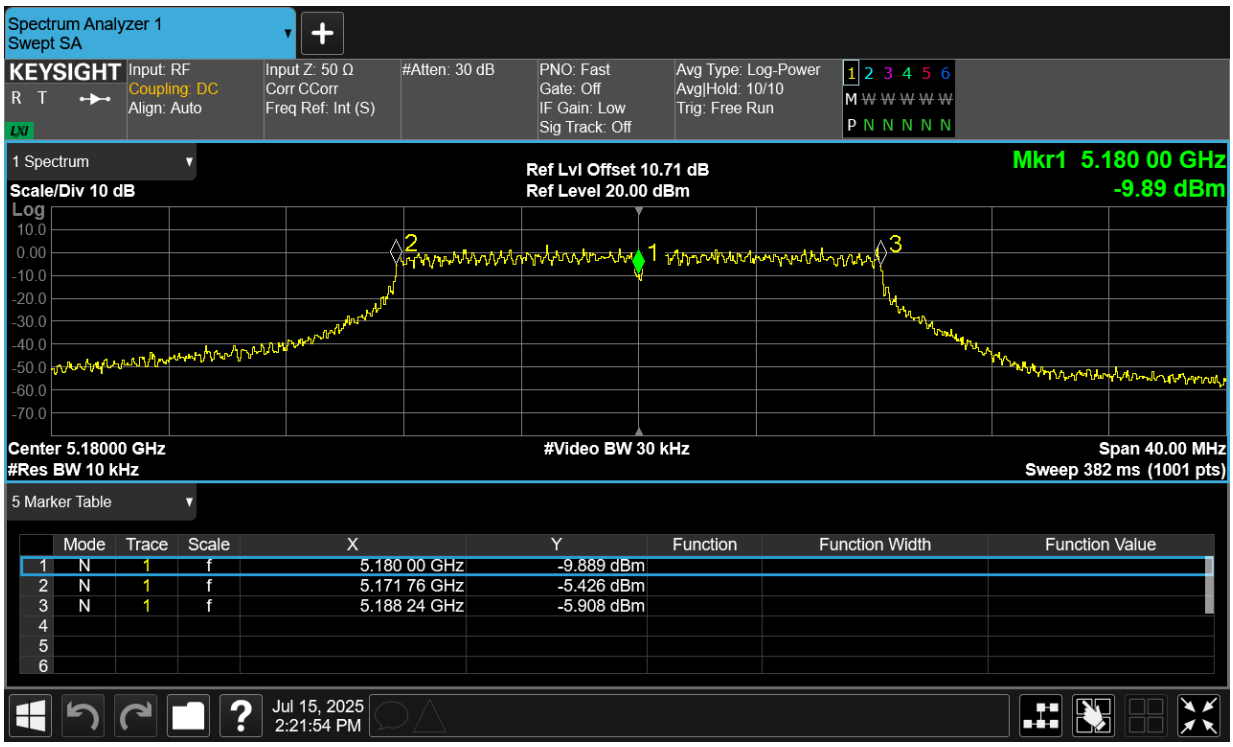
Freq. Stability LVNT a 5180MHz Ant4



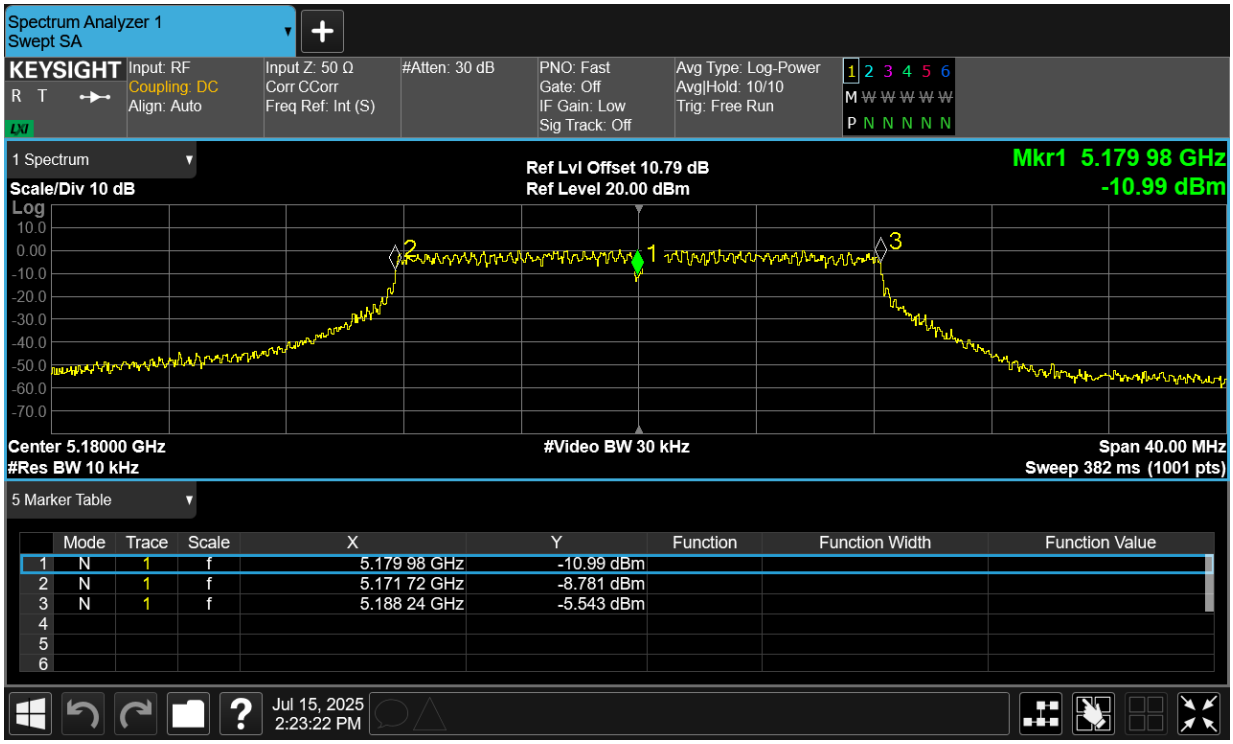
Freq. Stability NVHT a 5180MHz Ant1



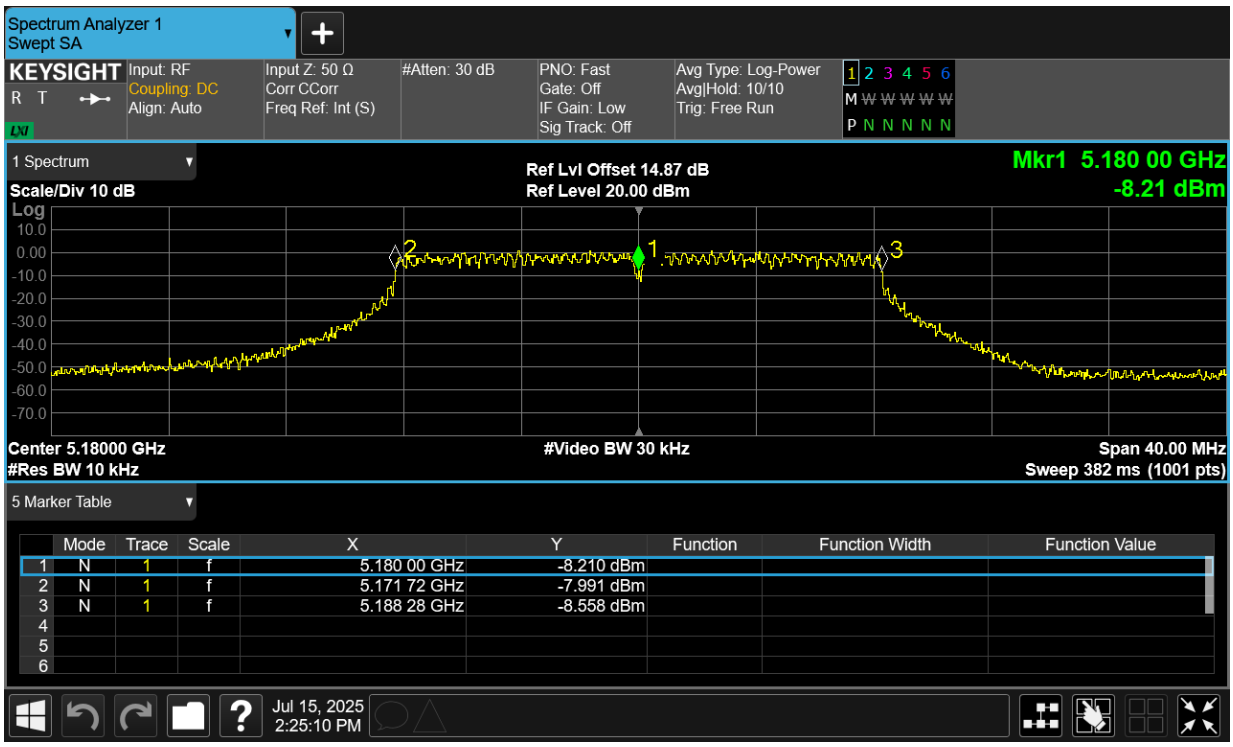
Freq. Stability NVHT a 5180MHz Ant2



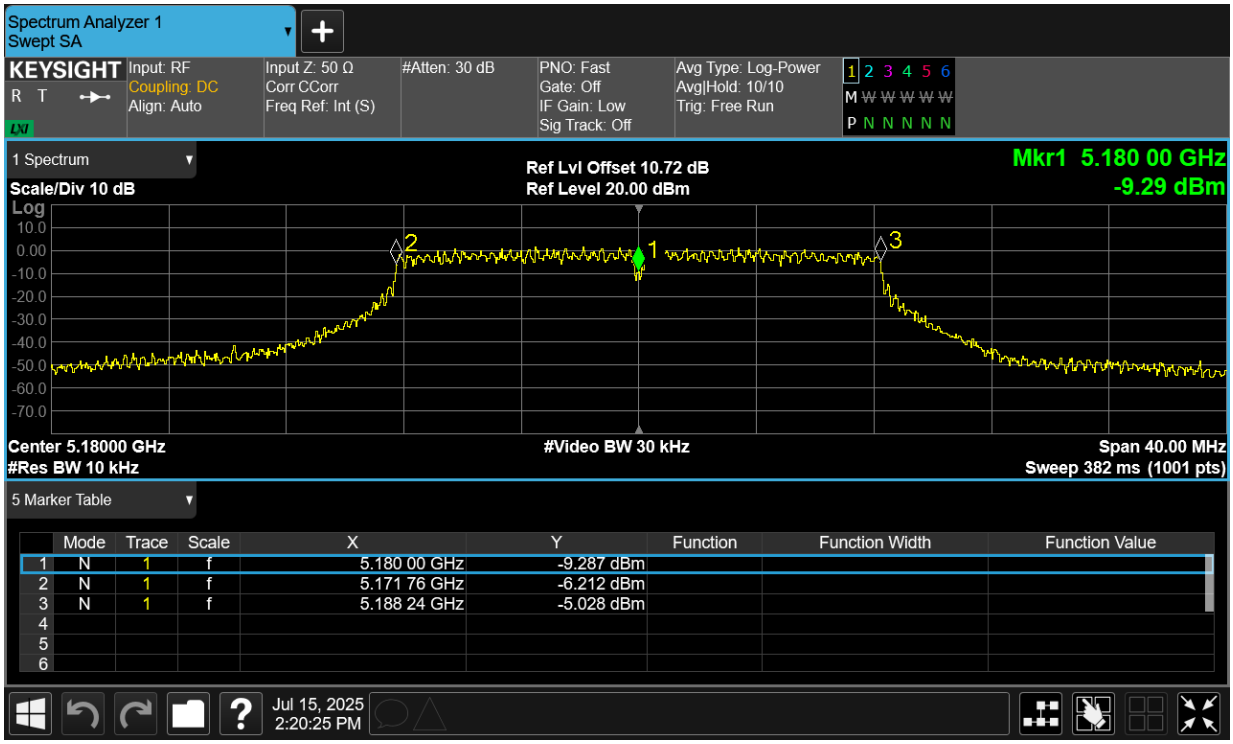
Freq. Stability NVHT a 5180MHz Ant3



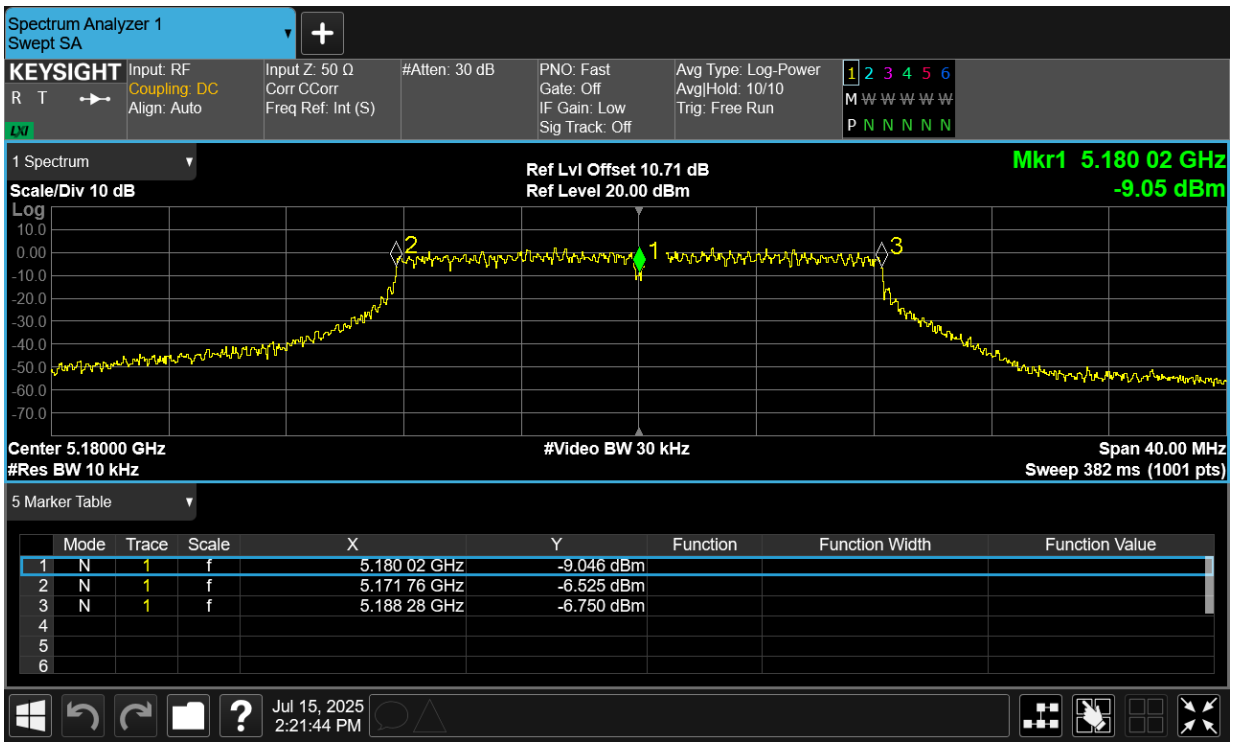
Freq. Stability NVHT a 5180MHz Ant4



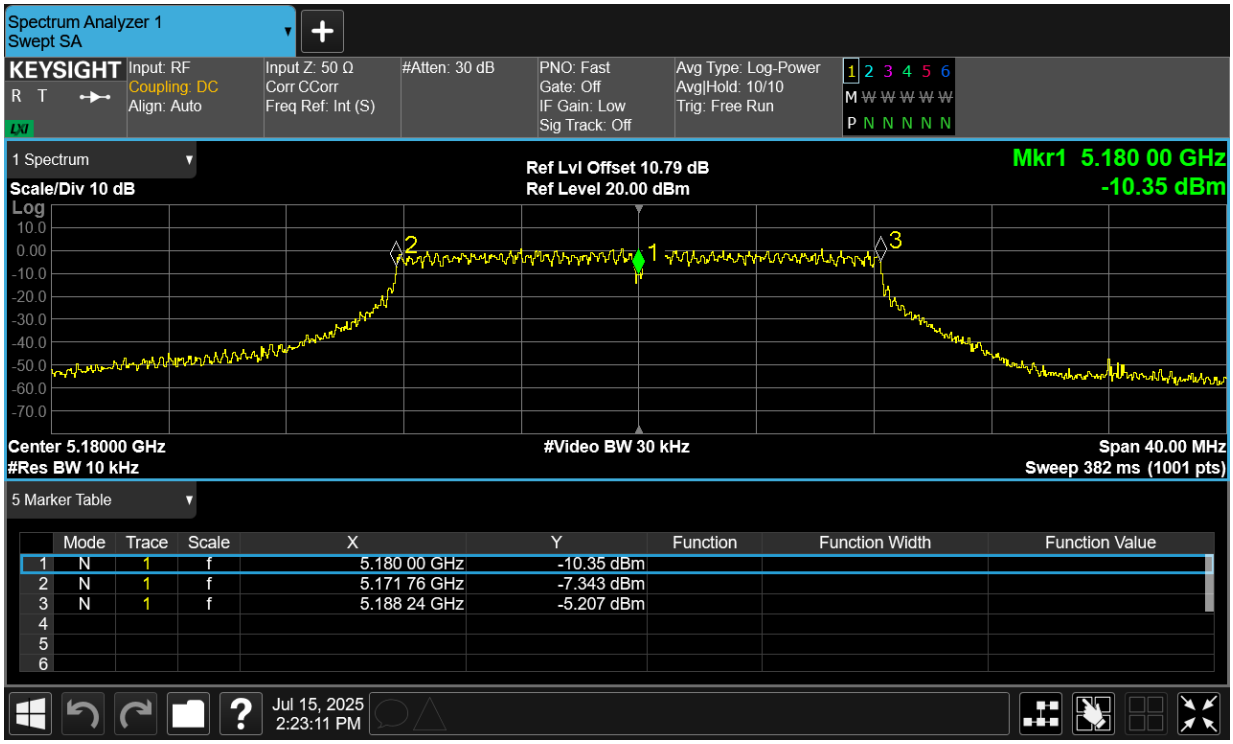
Freq. Stability NVLT a 5180MHz Ant1



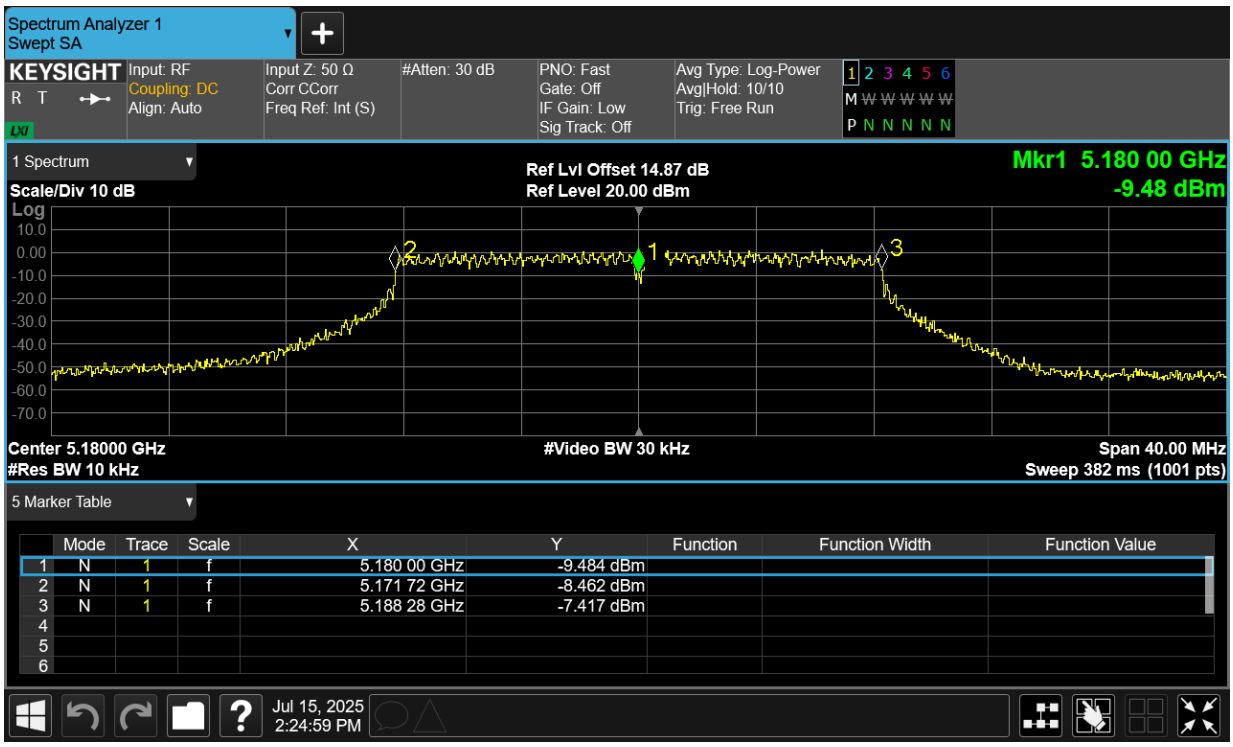
Freq. Stability NVLT a 5180MHz Ant2



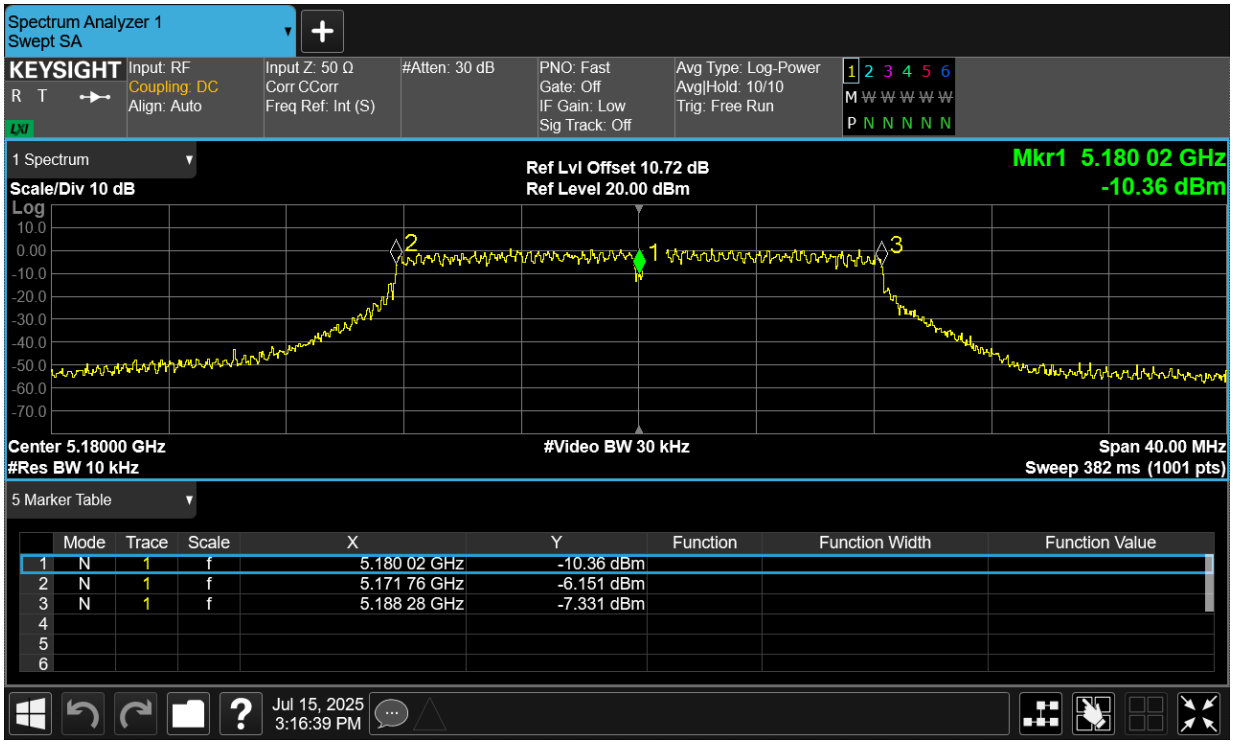
Freq. Stability NVLT a 5180MHz Ant3



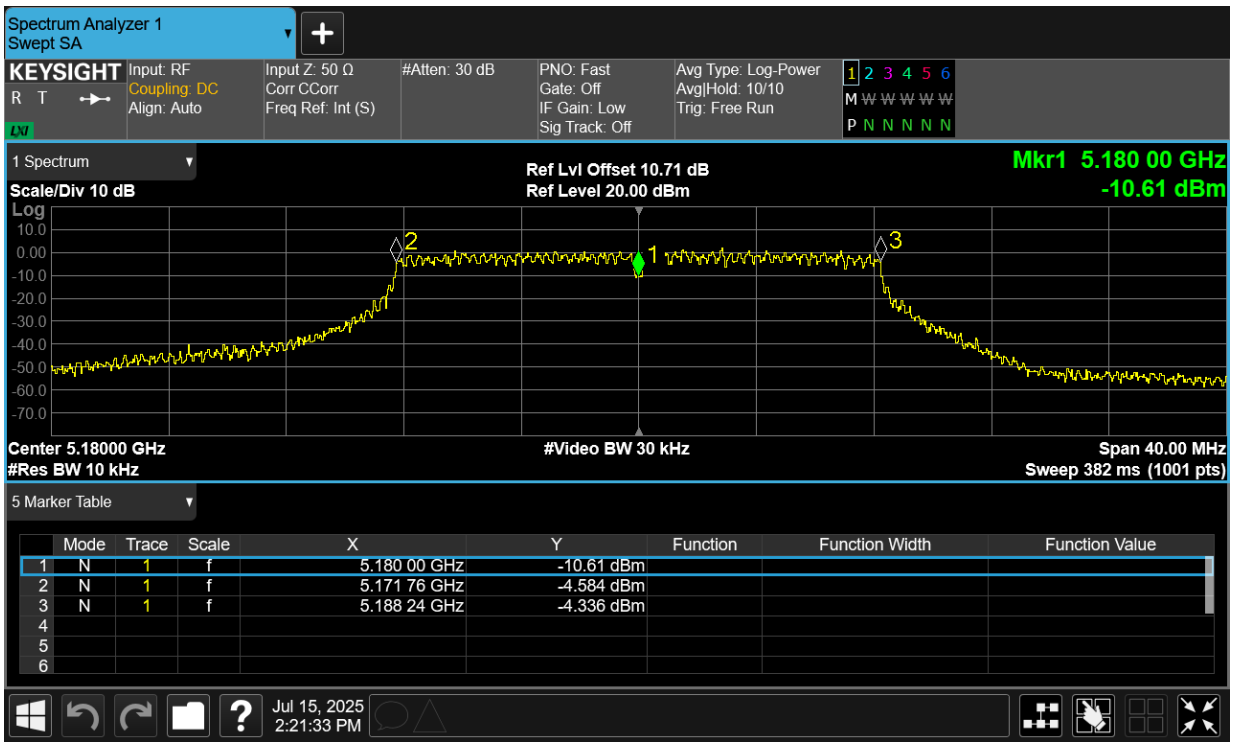
Freq. Stability NVLT a 5180MHz Ant4



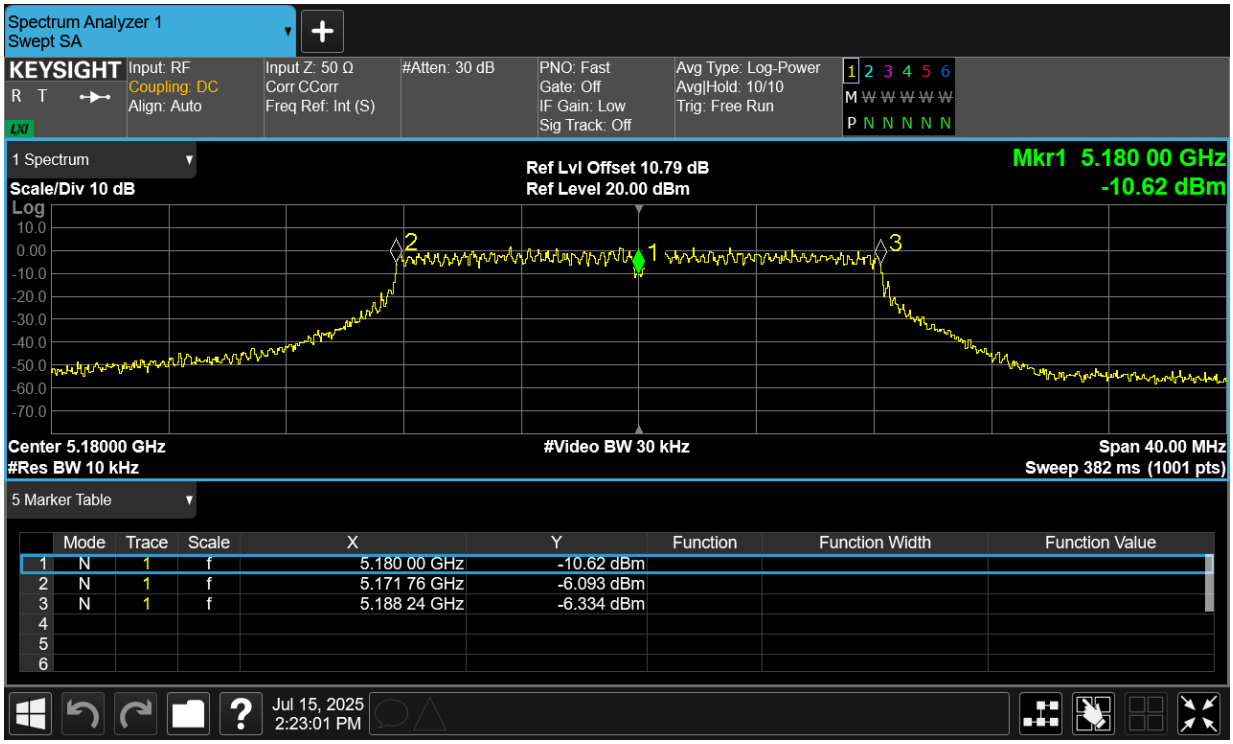
Freq. Stability NVNT a 5180MHz Ant1



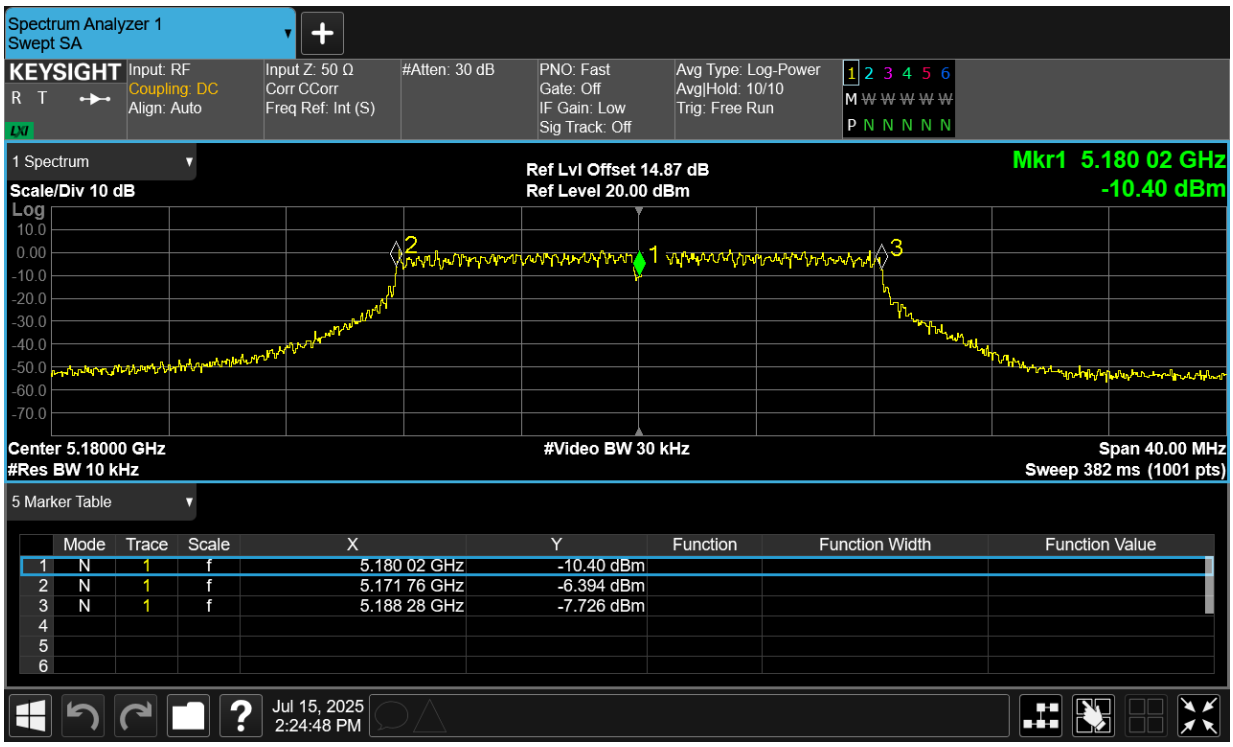
Freq. Stability NVNT a 5180MHz Ant2



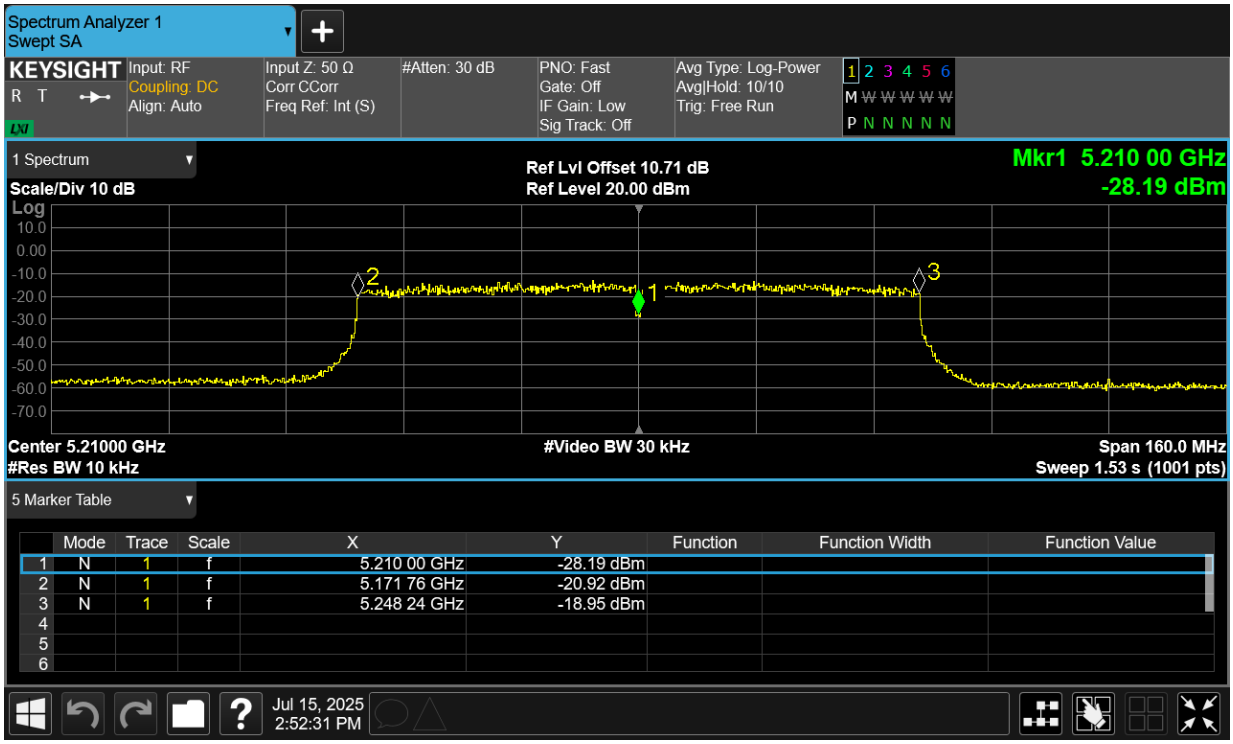
Freq. Stability NVNT a 5180MHz Ant3



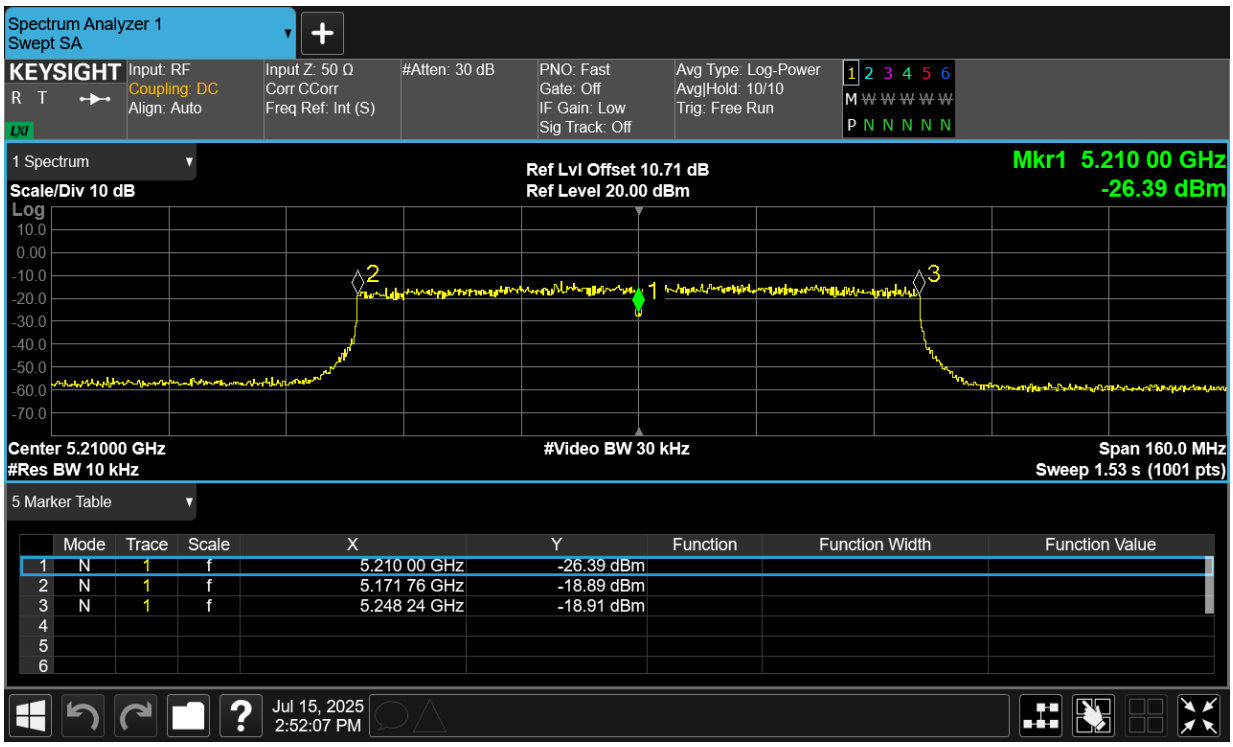
Freq. Stability NVNT a 5180MHz Ant4



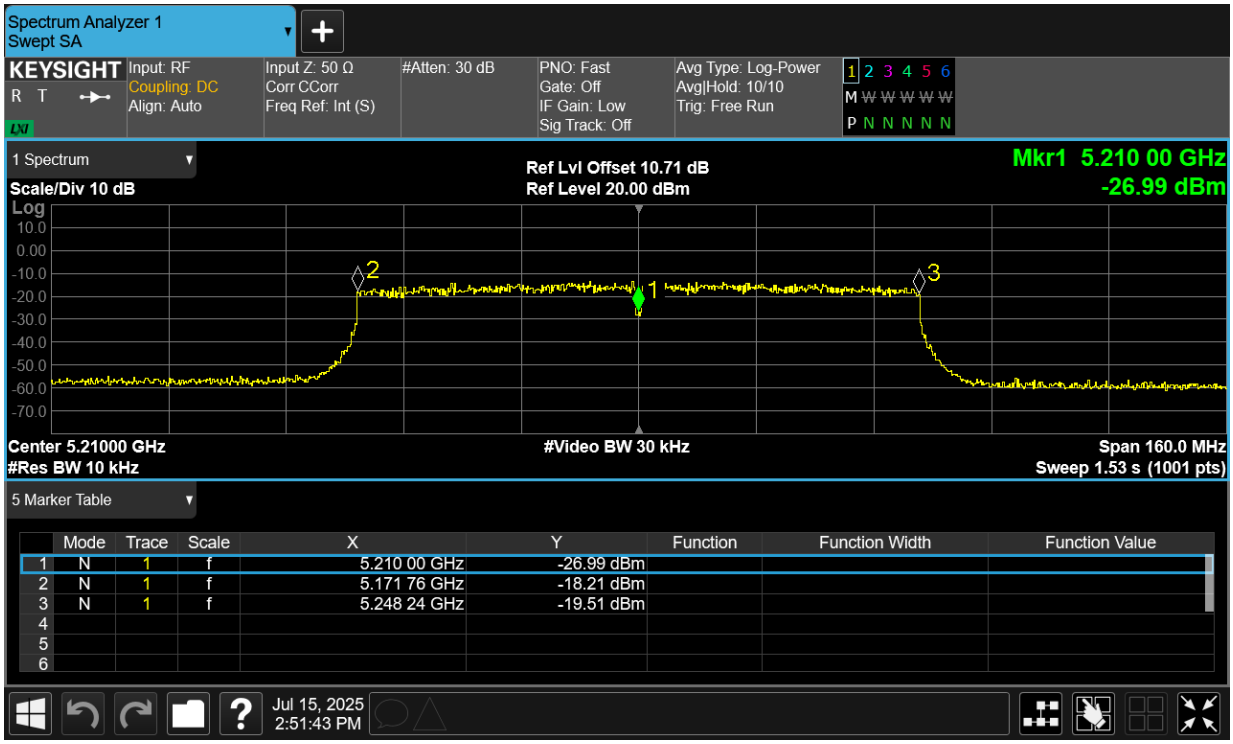
Freq. Stability HVNT ac80 5210MHz Sum



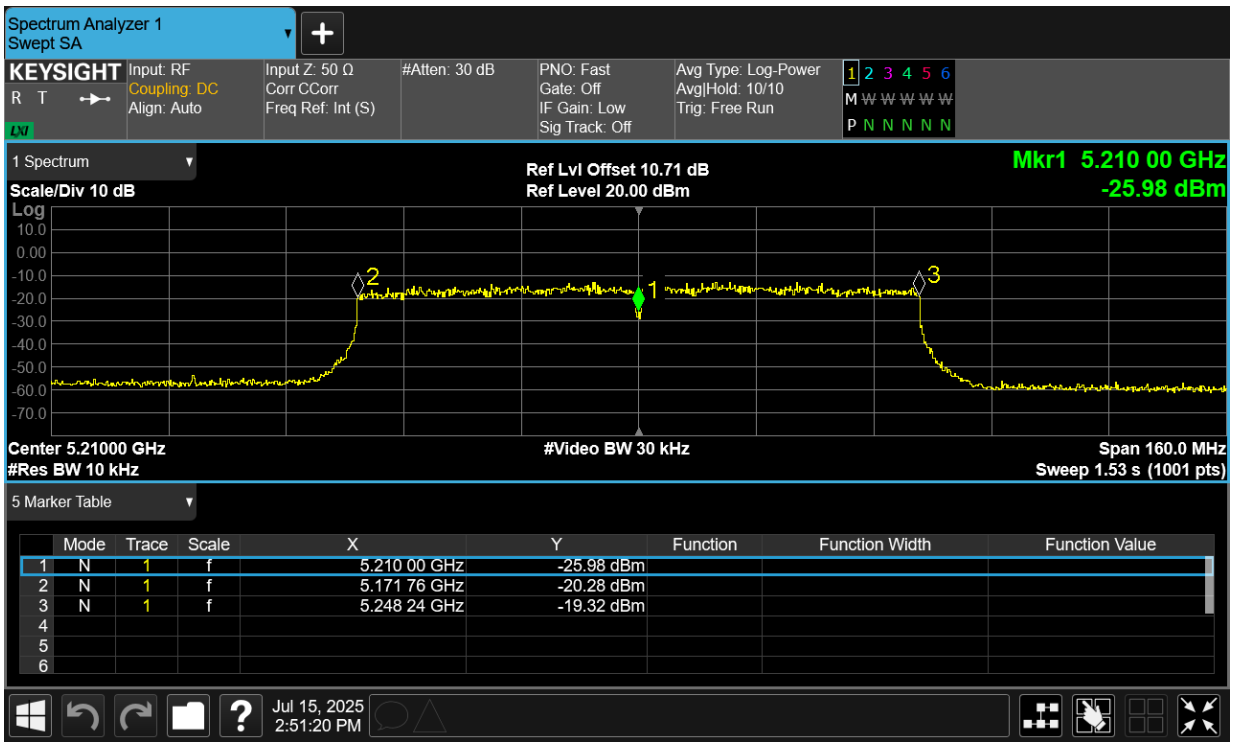
Freq. Stability LVNT ac80 5210MHz Sum



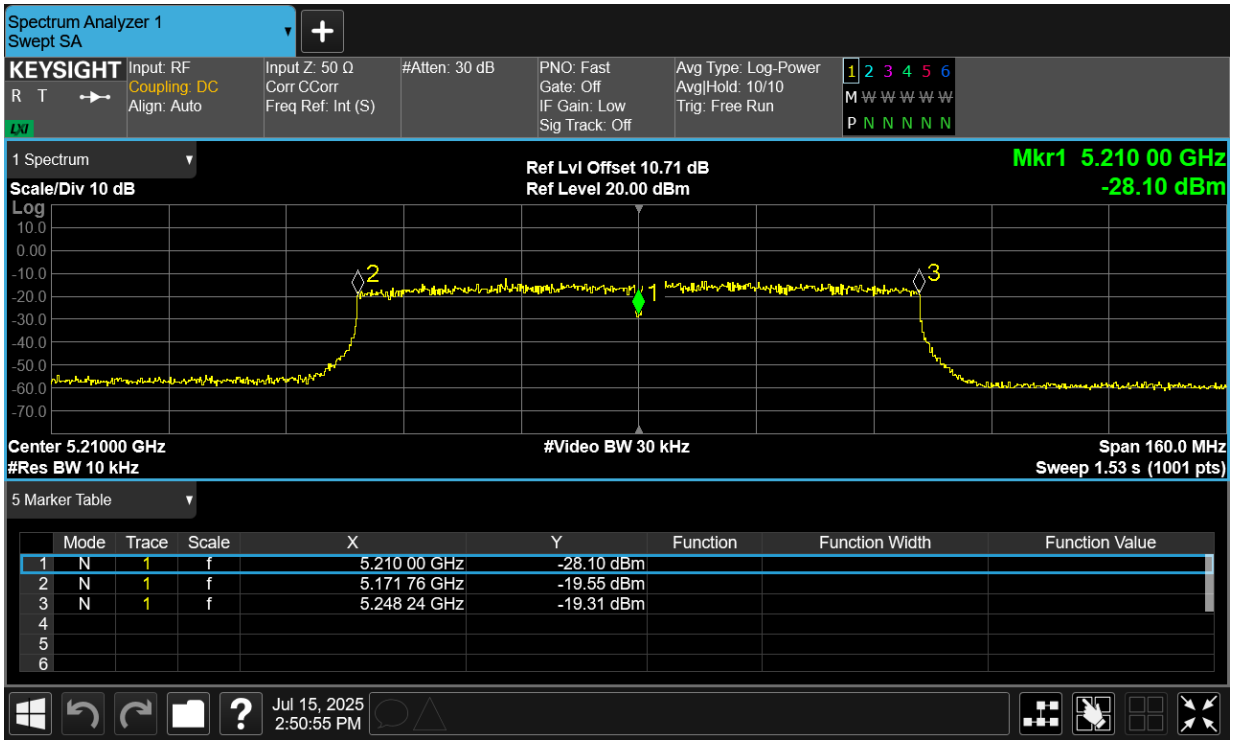
Freq. Stability NVHT ac80 5210MHz Sum



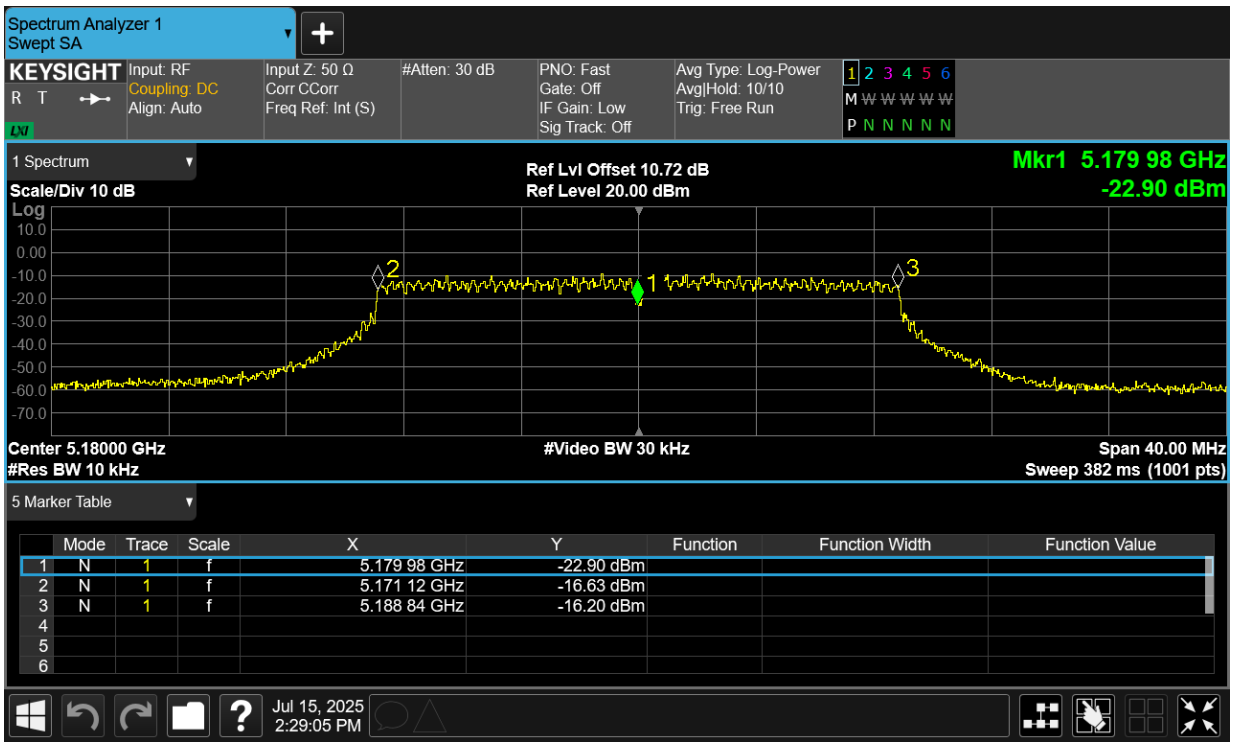
Freq. Stability NVLT ac80 5210MHz Sum



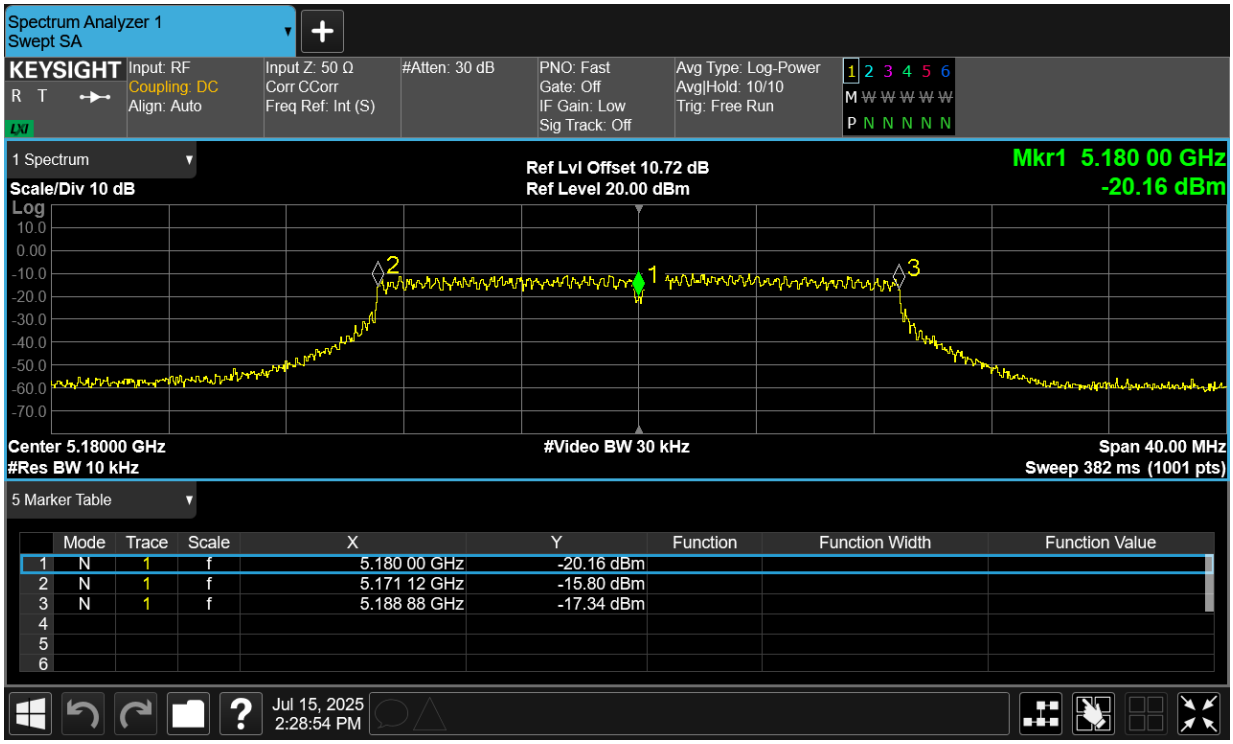
Freq. Stability NVNT ac80 5210MHz Sum



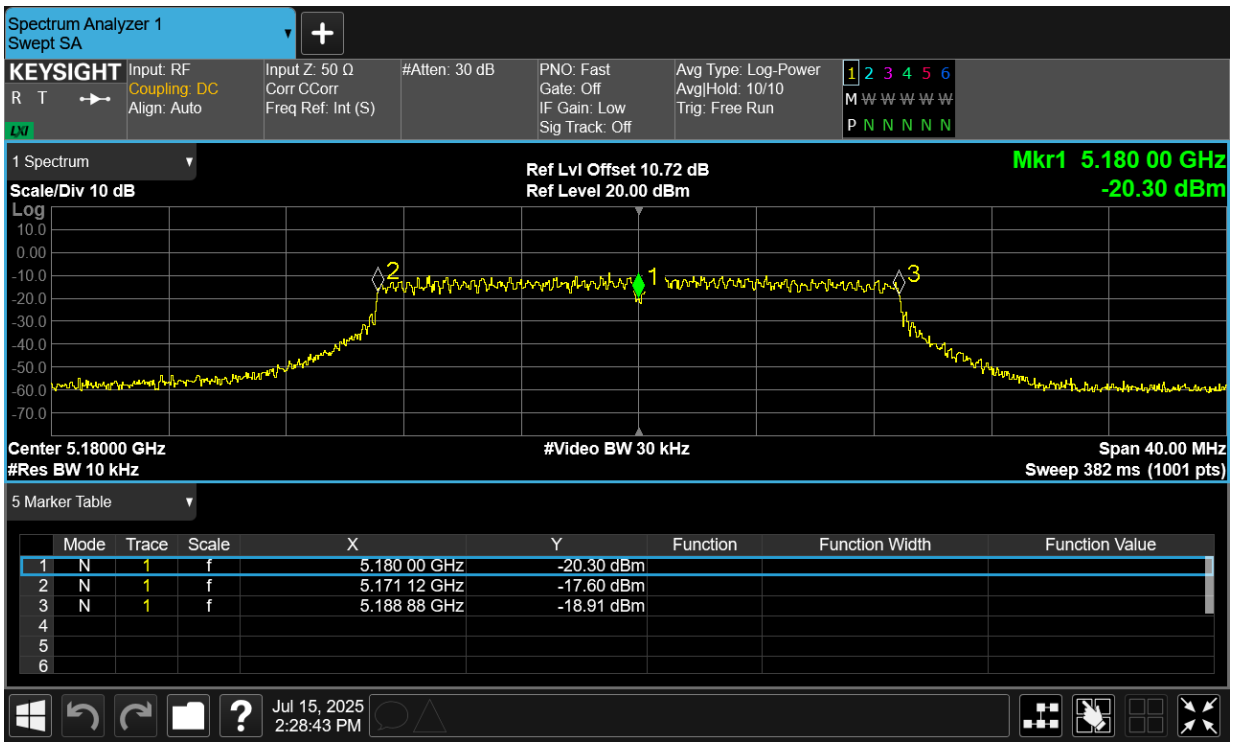
Freq. Stability HVNT n20 5180MHz Sum



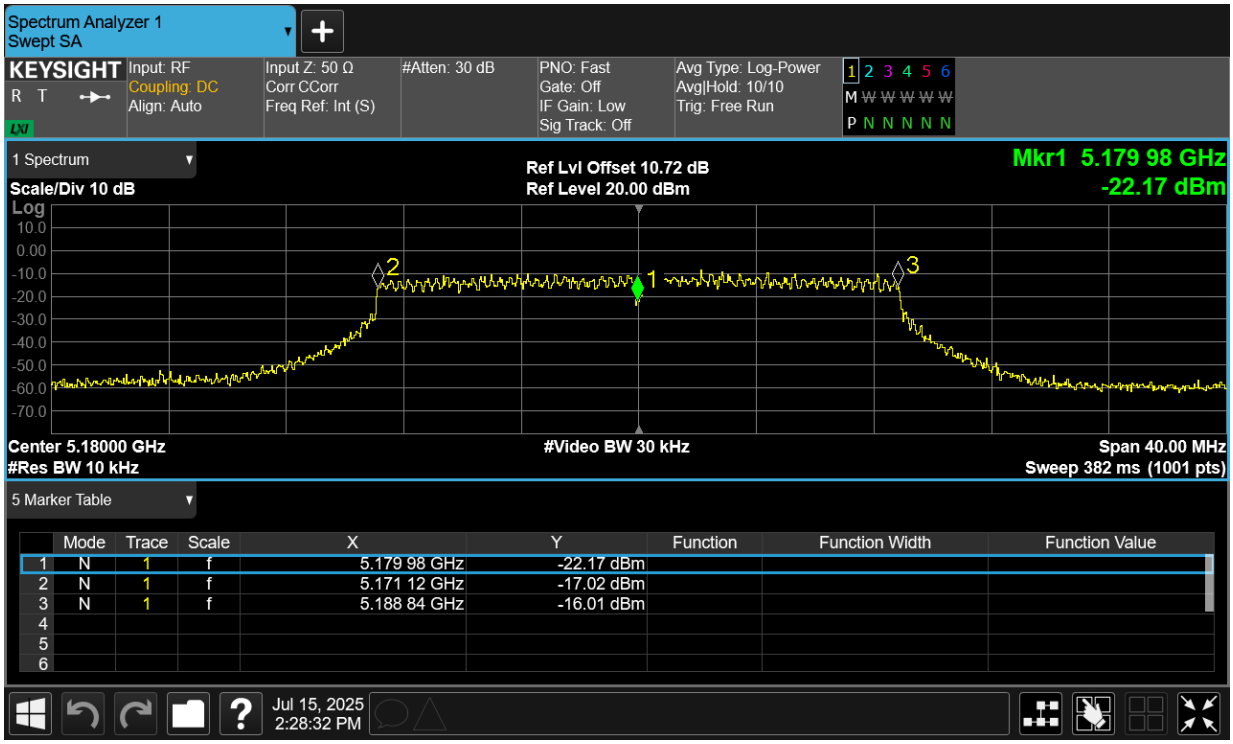
Freq. Stability LVNT n20 5180MHz Sum



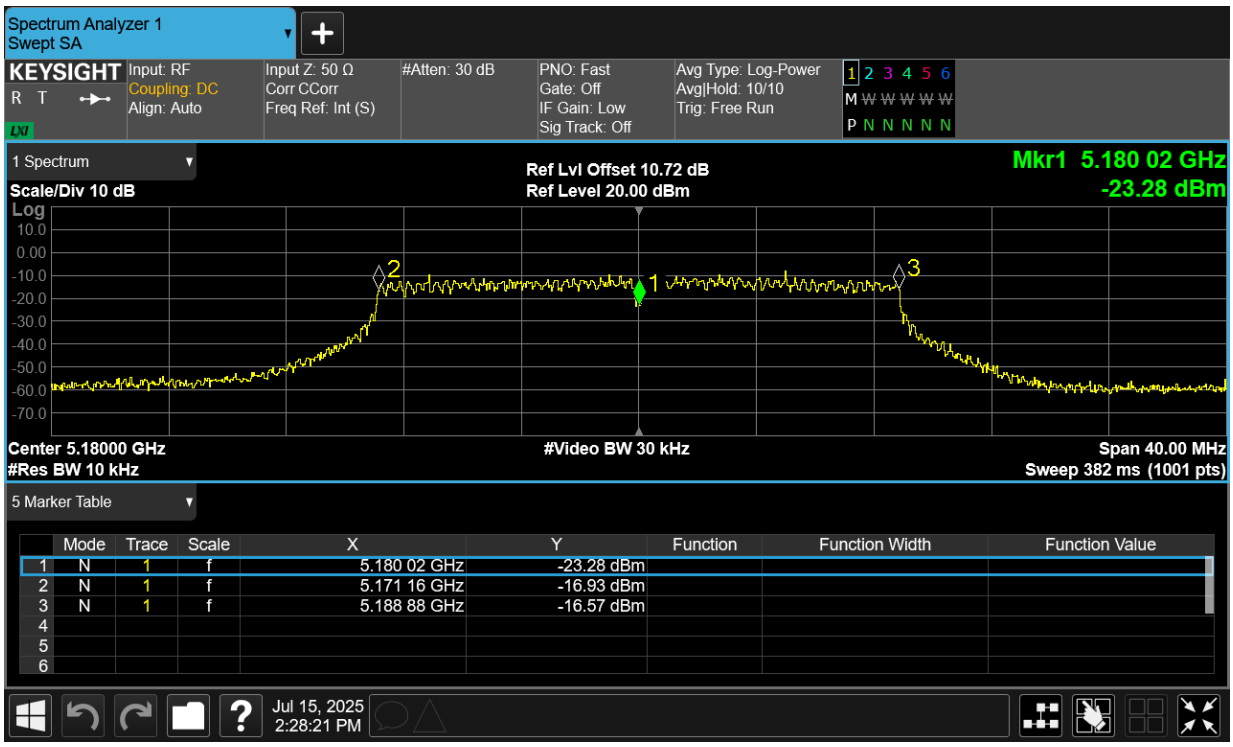
Freq. Stability NVHT n20 5180MHz Sum



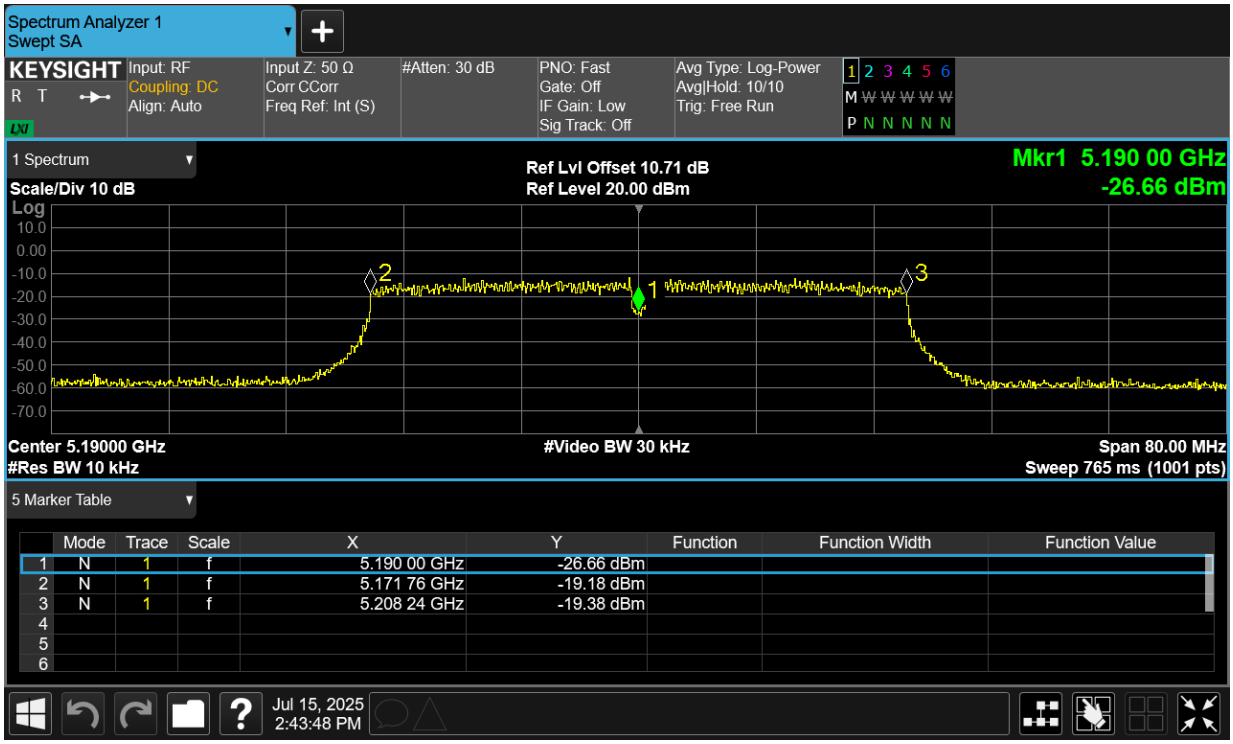
Freq. Stability NVLT n20 5180MHz Sum



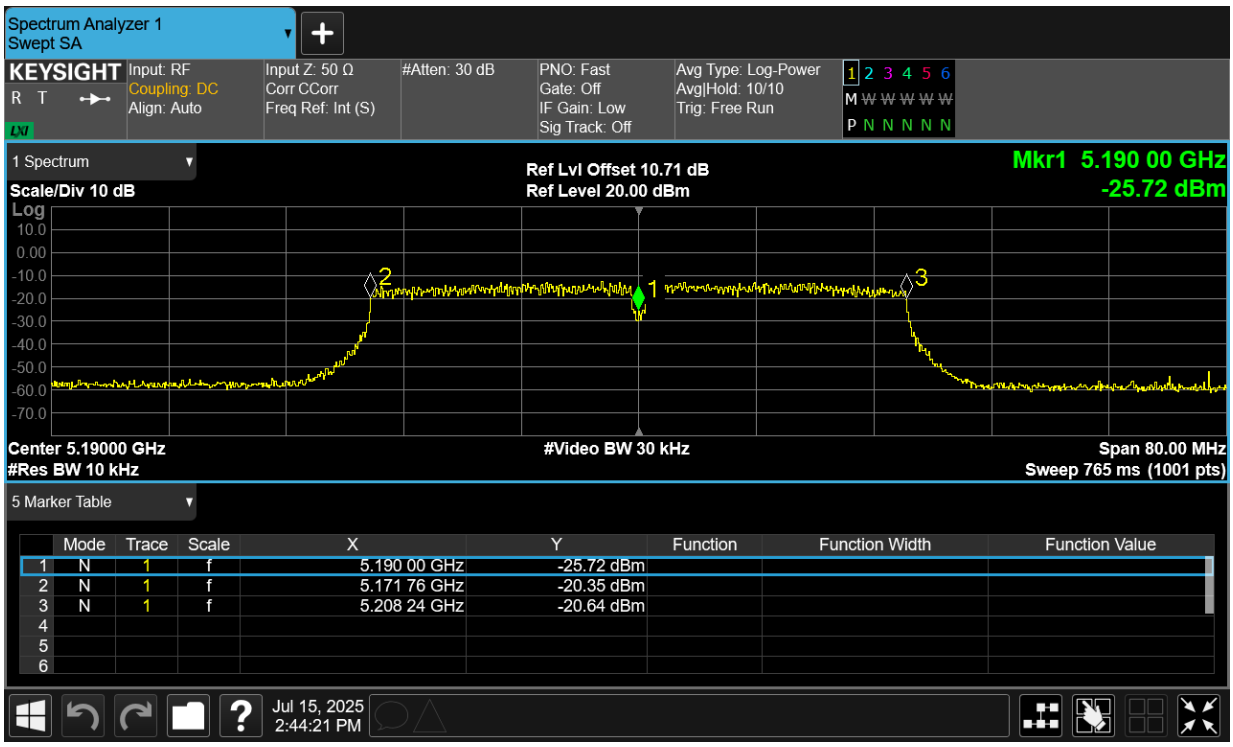
Freq. Stability NVNT n20 5180MHz Sum



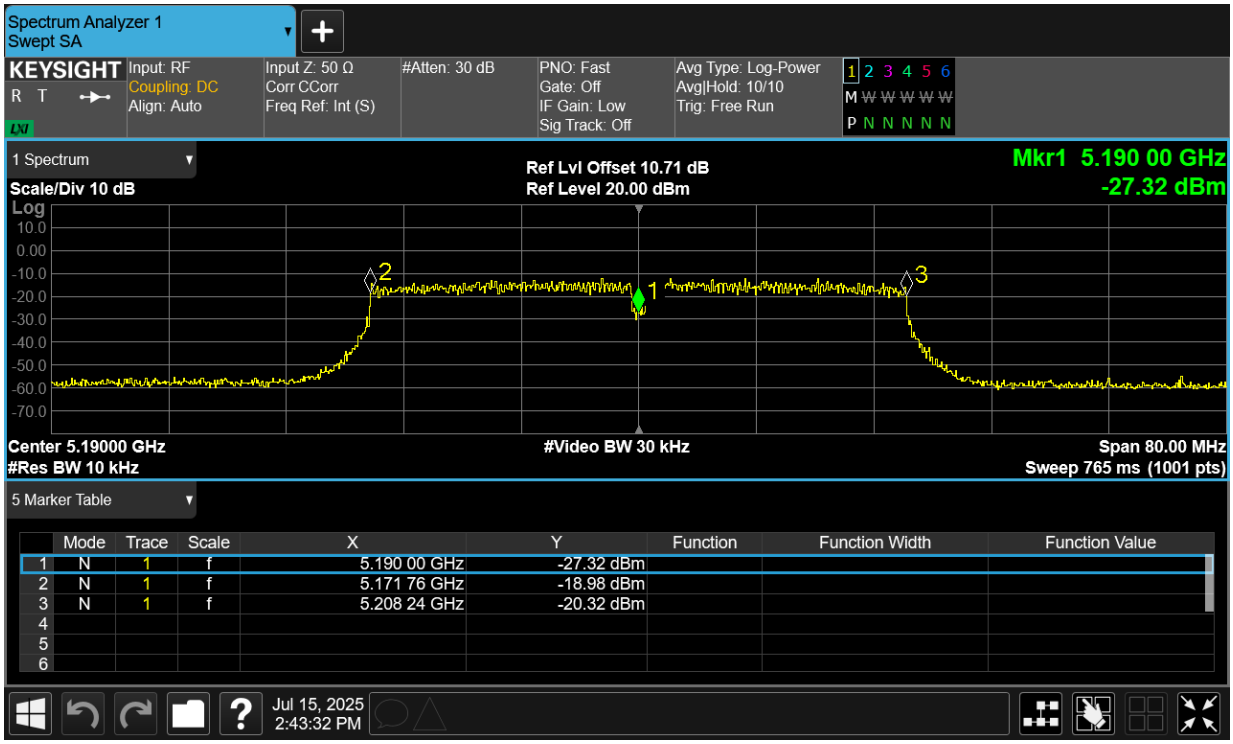
Freq. Stability HVNT n40 5190MHz Sum



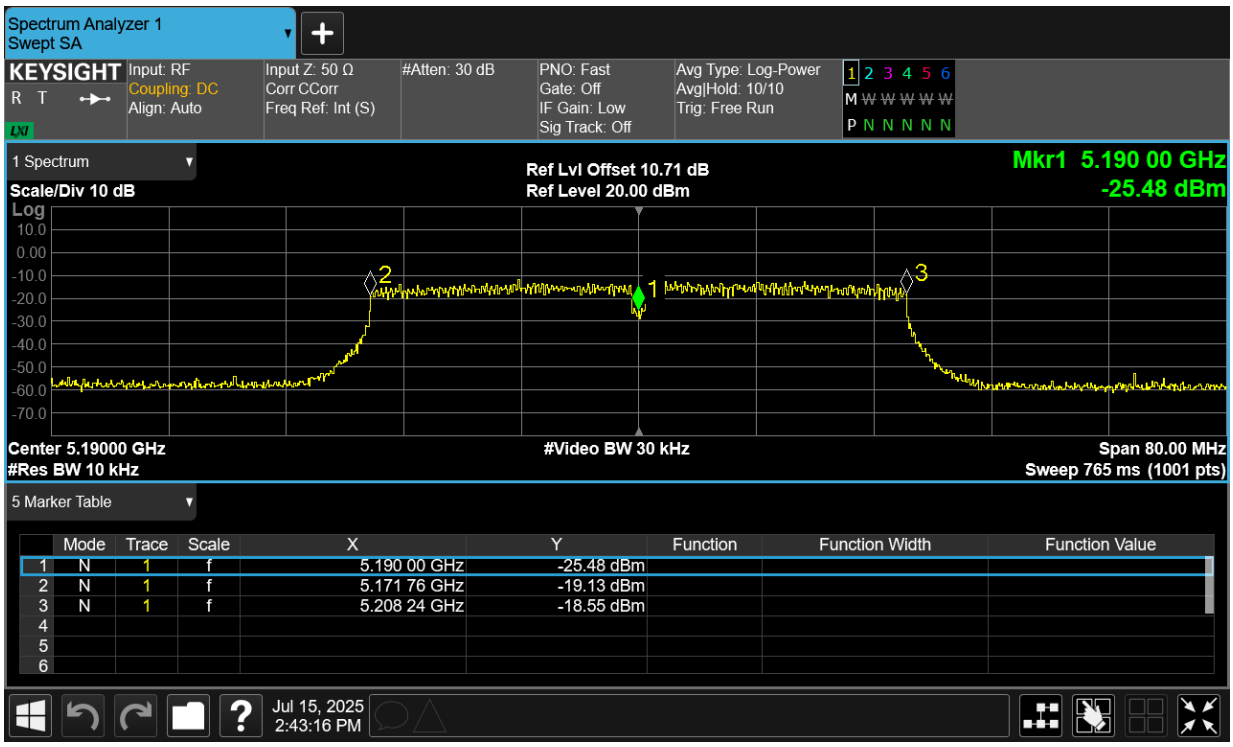
Freq. Stability LVNT n40 5190MHz Sum



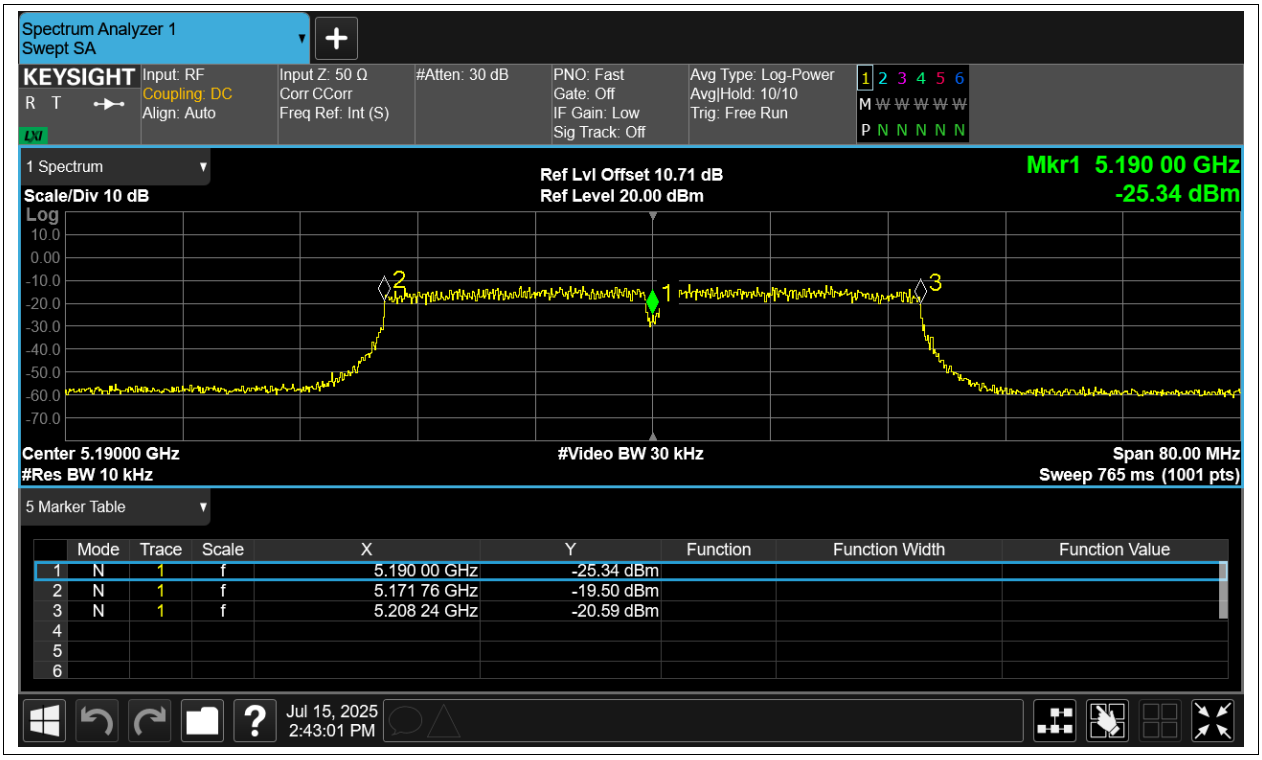
Freq. Stability NVHT n40 5190MHz Sum



Freq. Stability NVLT n40 5190MHz Sum



Freq. Stability NVNT n40 5190MHz Sum

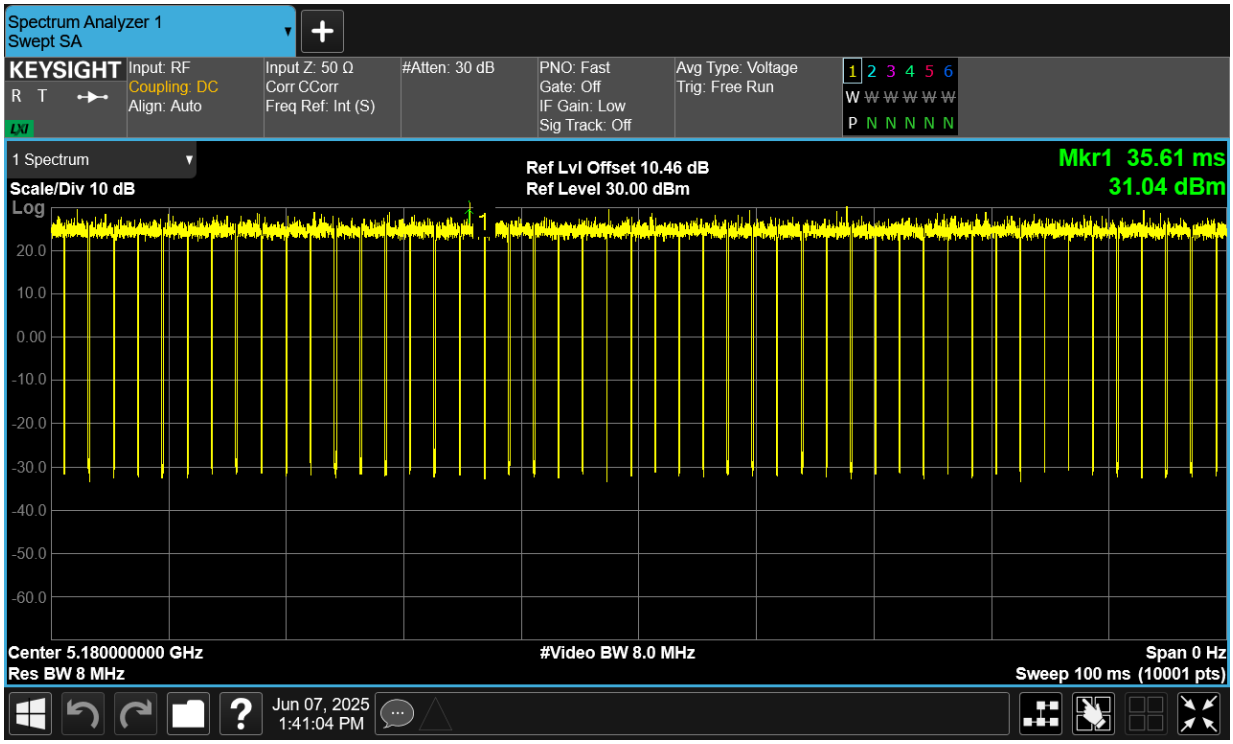

Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold: 10/10
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 10.71 dB
Ref Level 20.00 dBm
Mkr1 5.190 00 GHz
-25.34 dBm
Center 5.19000 GHz
#Res BW 10 kHz
#Video BW 30 kHz
Span 80.00 MHz
Sweep 765 ms (1001 pts)
5 Marker Table
Mode Trace Scale X Y Function Function Width Function Value
1 N 1 f 5.190 00 GHz -25.34 dBm
2 N 1 f 5.171 76 GHz -19.50 dBm
3 N 1 f 5.208 24 GHz -20.59 dBm
Jul 15, 2025
2:43:01 PM

Duty Cycle

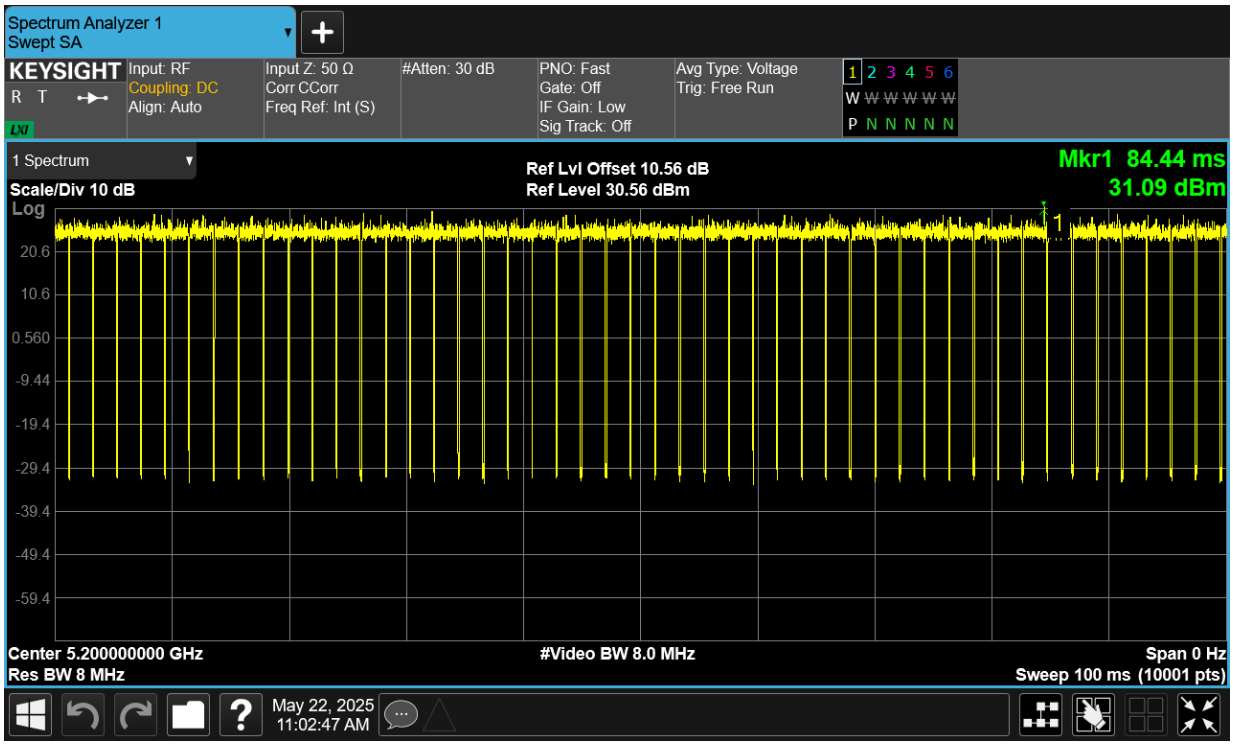
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5180	Ant1	95.3	0.21
NVNT	a	5200	Ant1	94.88	0.23
NVNT	a	5240	Ant1	95.52	0.2
NVNT	a	5180	Ant2	94.79	0.23
NVNT	a	5200	Ant2	94.7	0.24
NVNT	a	5240	Ant2	95.46	0.2
NVNT	a	5180	Ant3	95.2	0.21
NVNT	a	5200	Ant3	94.8	0.23
NVNT	a	5240	Ant3	95.06	0.22
NVNT	a	5180	Ant4	95.19	0.21
NVNT	a	5200	Ant4	95.06	0.22
NVNT	a	5240	Ant4	94.93	0.23
NVNT	ac20	5180	Sum	98.14	0.08
NVNT	ac20	5200	Sum	95.06	0.22
NVNT	ac20	5240	Sum	98.14	0.08
NVNT	ac40	5190	Sum	95.24	0.21
NVNT	ac40	5230	Sum	95.03	0.22
NVNT	ac80	5210	Sum	97.17	0.12
NVNT	ax20	5180	Sum	97.66	0.1
NVNT	ax20	5200	Sum	97.66	0.1
NVNT	ax20	5240	Sum	97.22	0.12
NVNT	ax40	5190	Sum	97.6	0.11
NVNT	ax40	5230	Sum	96.86	0.14
NVNT	ax80	5210	Sum	95.49	0.2
NVNT	n20	5180	Sum	98.05	0.09
NVNT	n20	5200	Sum	98.25	0.08
NVNT	n20	5240	Sum	97.82	0.1
NVNT	n40	5190	Sum	95.28	0.21
NVNT	n40	5230	Sum	95.06	0.22

Test Graphs

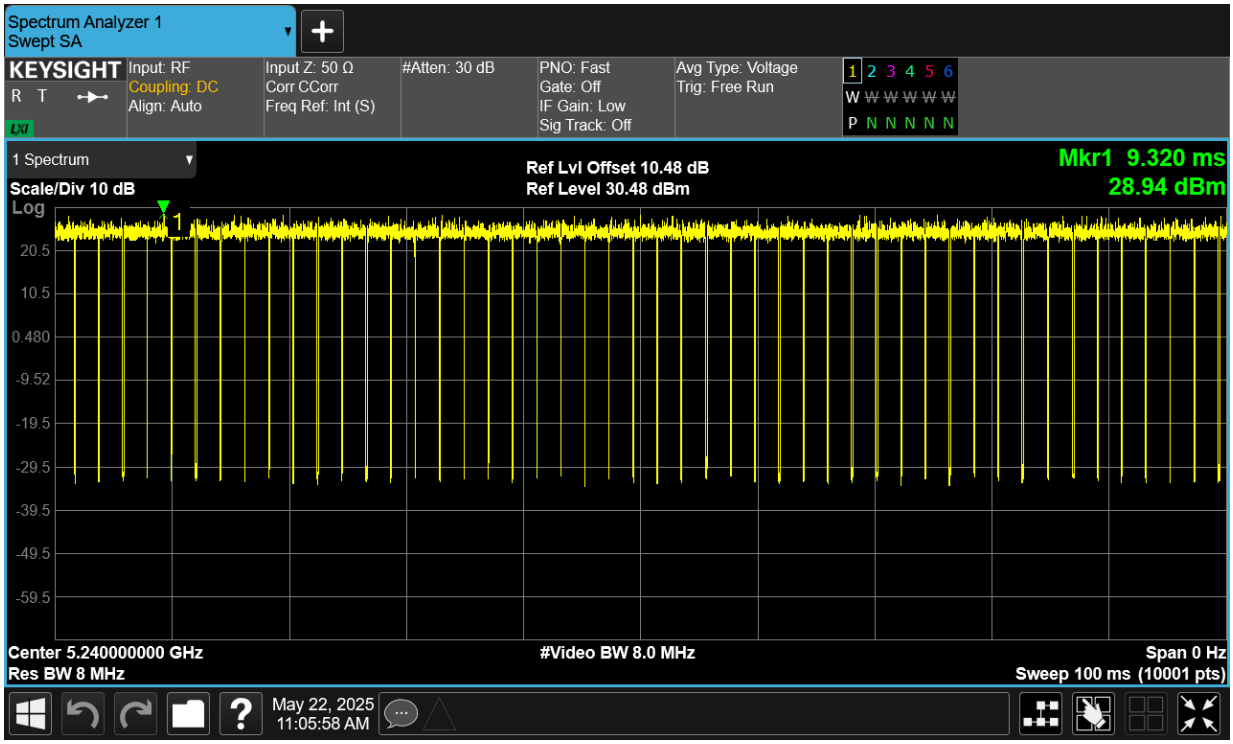
Duty Cycle NVNT a 5180MHz Ant1



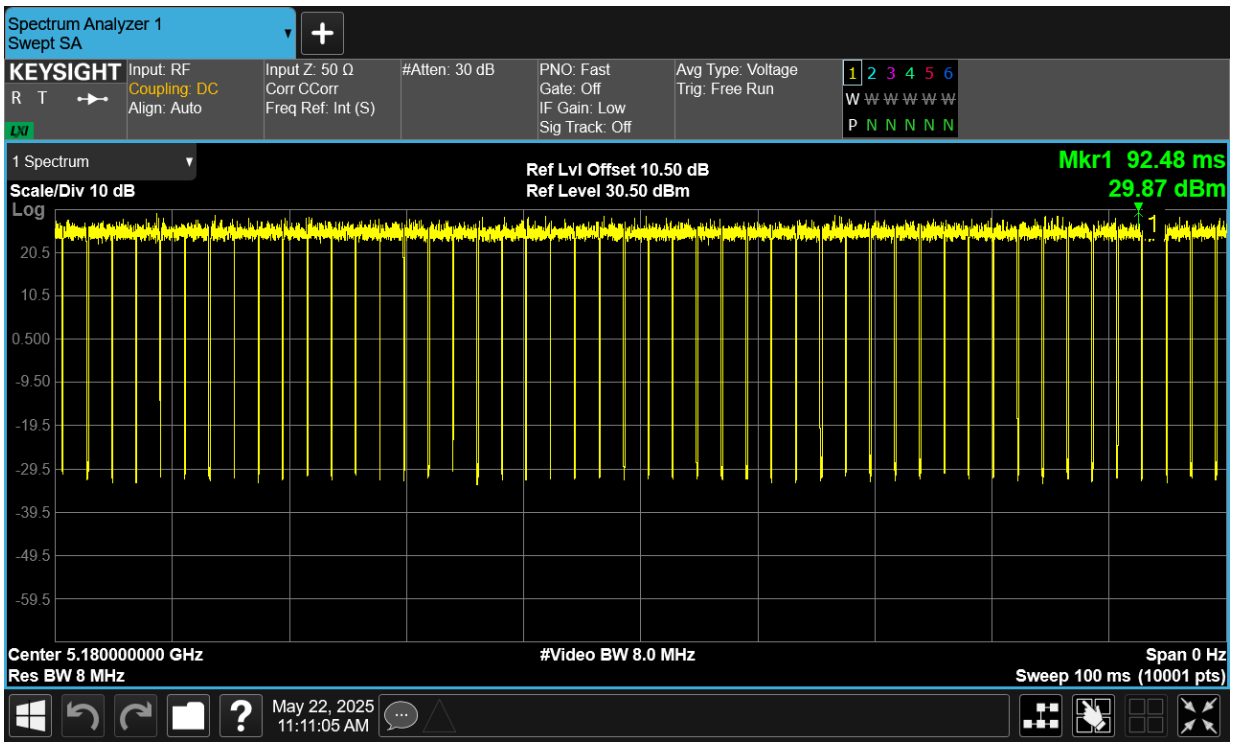
Duty Cycle NVNT a 5200MHz Ant1



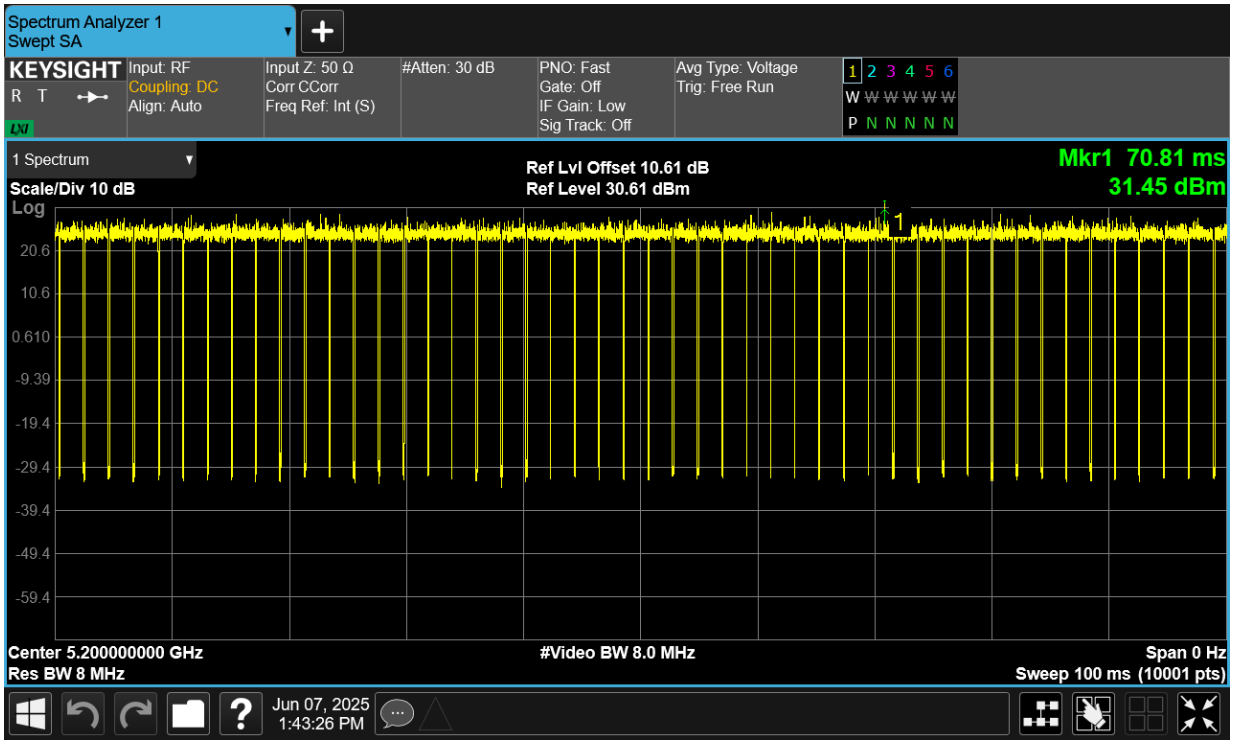
Duty Cycle NVNT a 5240MHz Ant1



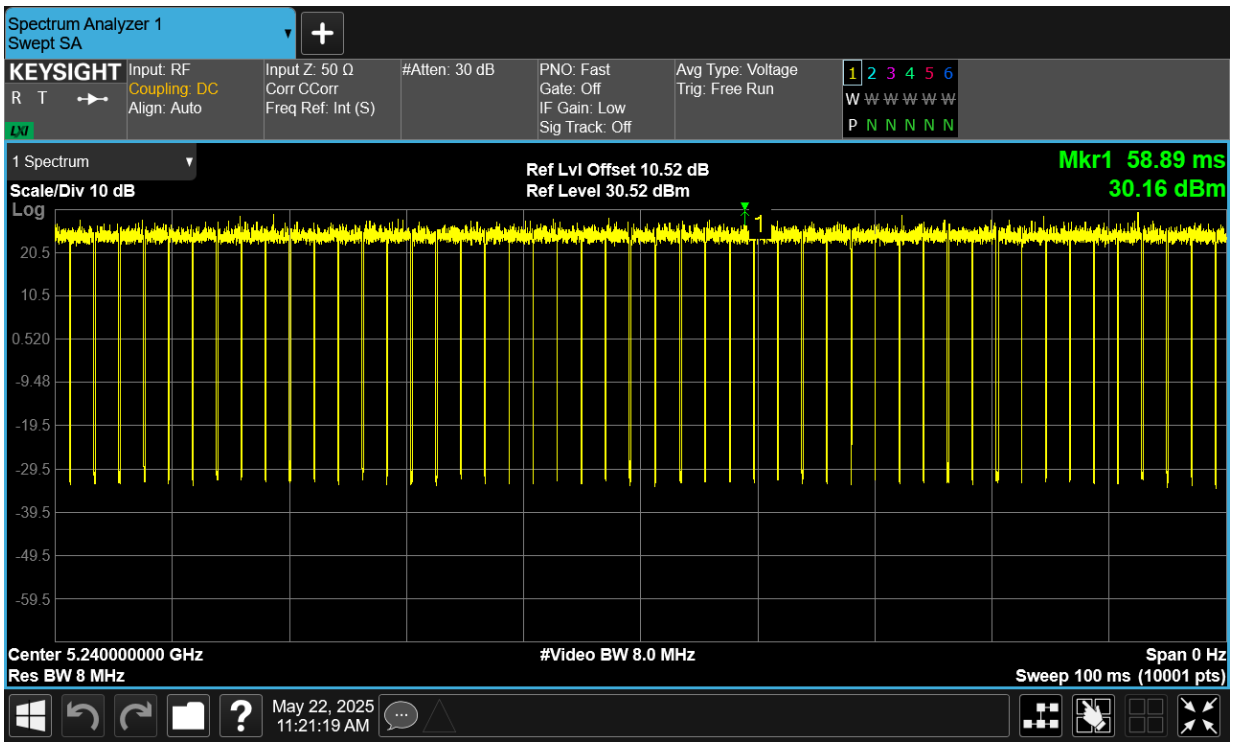
Duty Cycle NVNT a 5180MHz Ant2



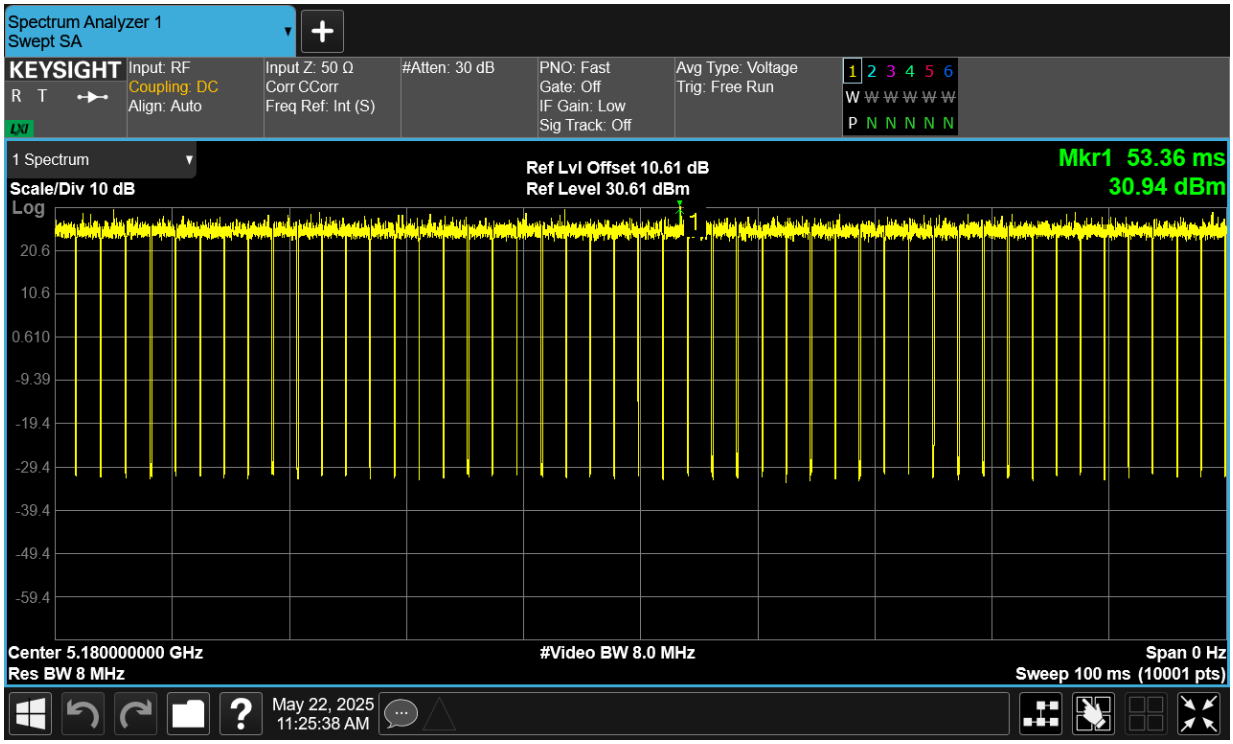
Duty Cycle NVNT a 5200MHz Ant2



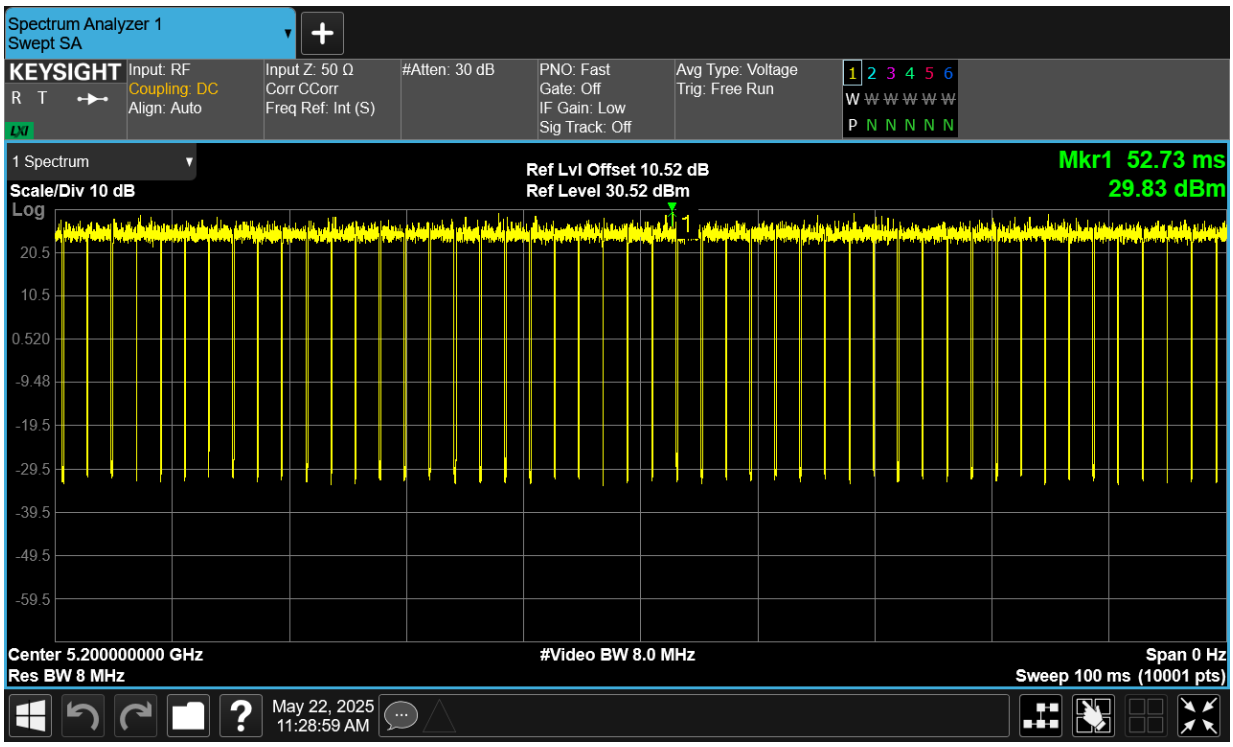
Duty Cycle NVNT a 5240MHz Ant2



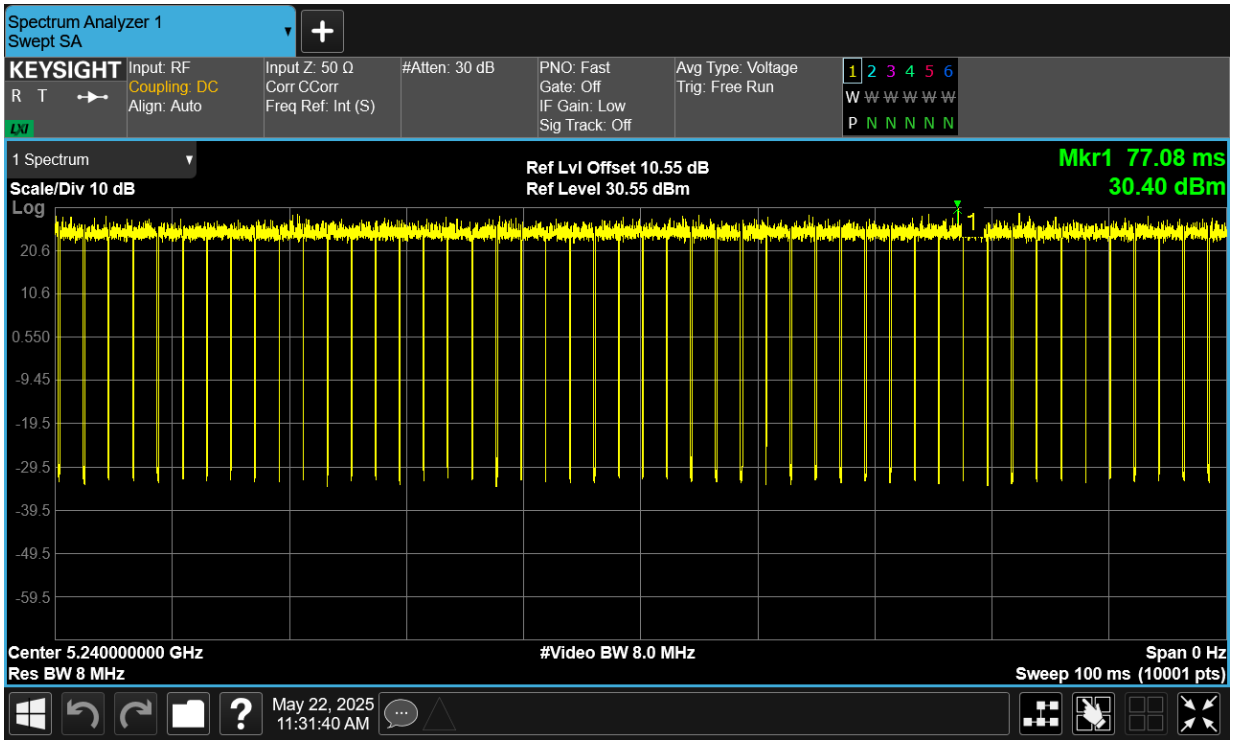
Duty Cycle NVNT a 5180MHz Ant3



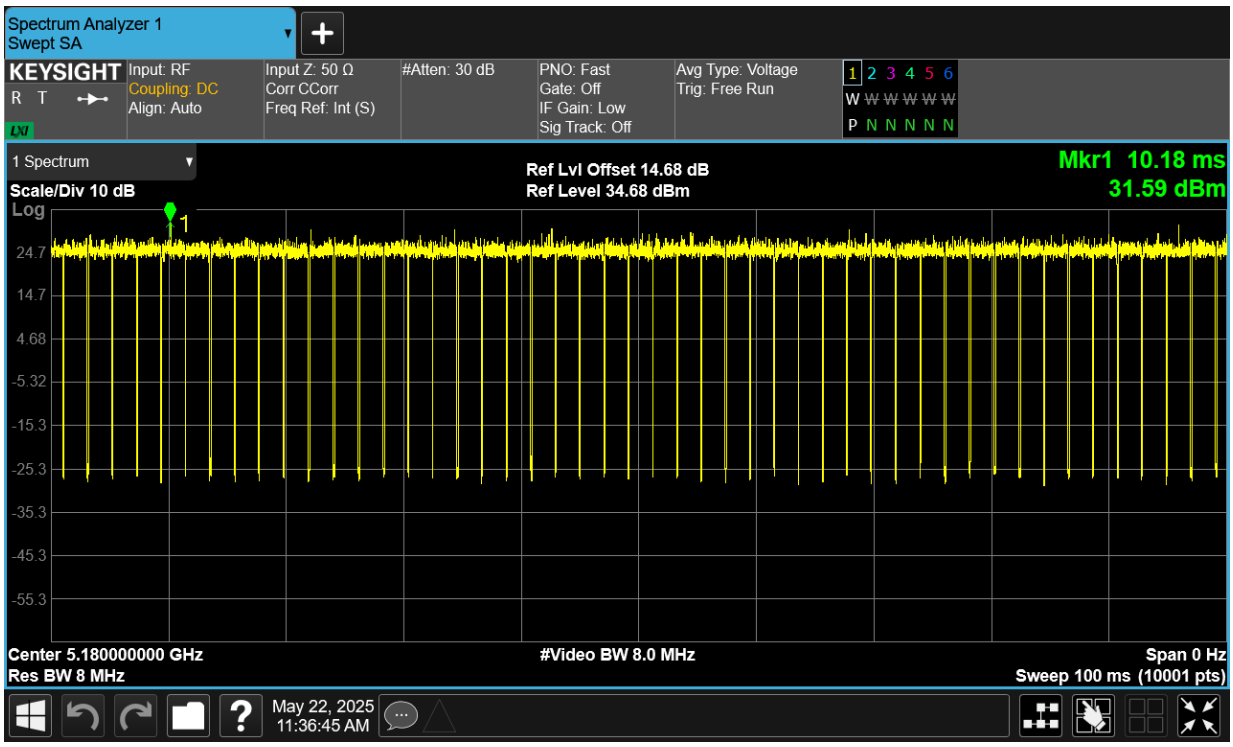
Duty Cycle NVNT a 5200MHz Ant3



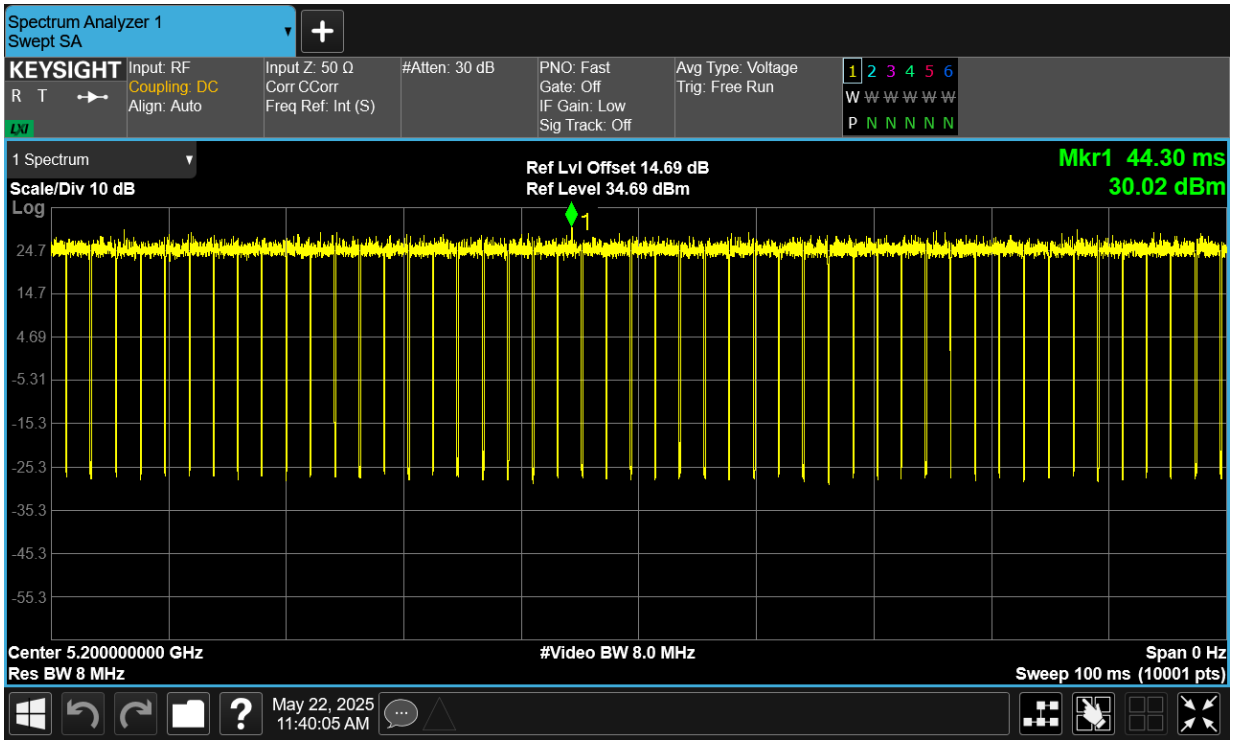
Duty Cycle NVNT a 5240MHz Ant3



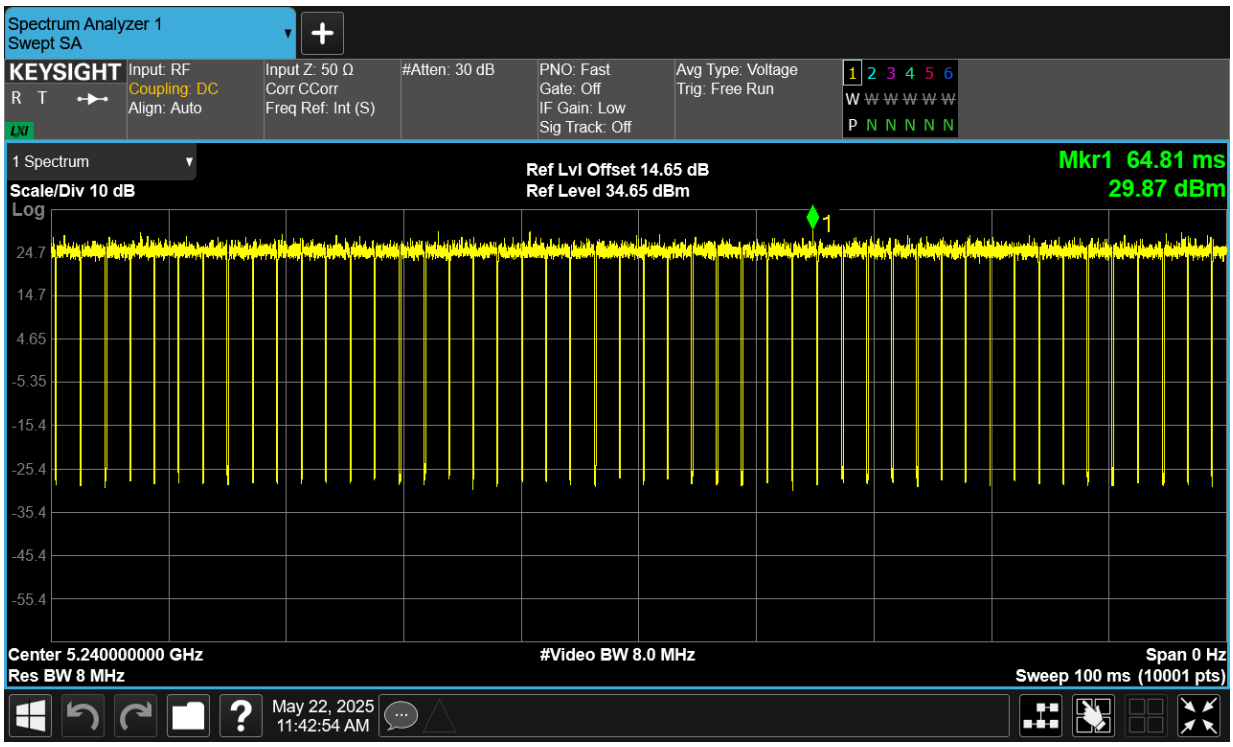
Duty Cycle NVNT a 5180MHz Ant4



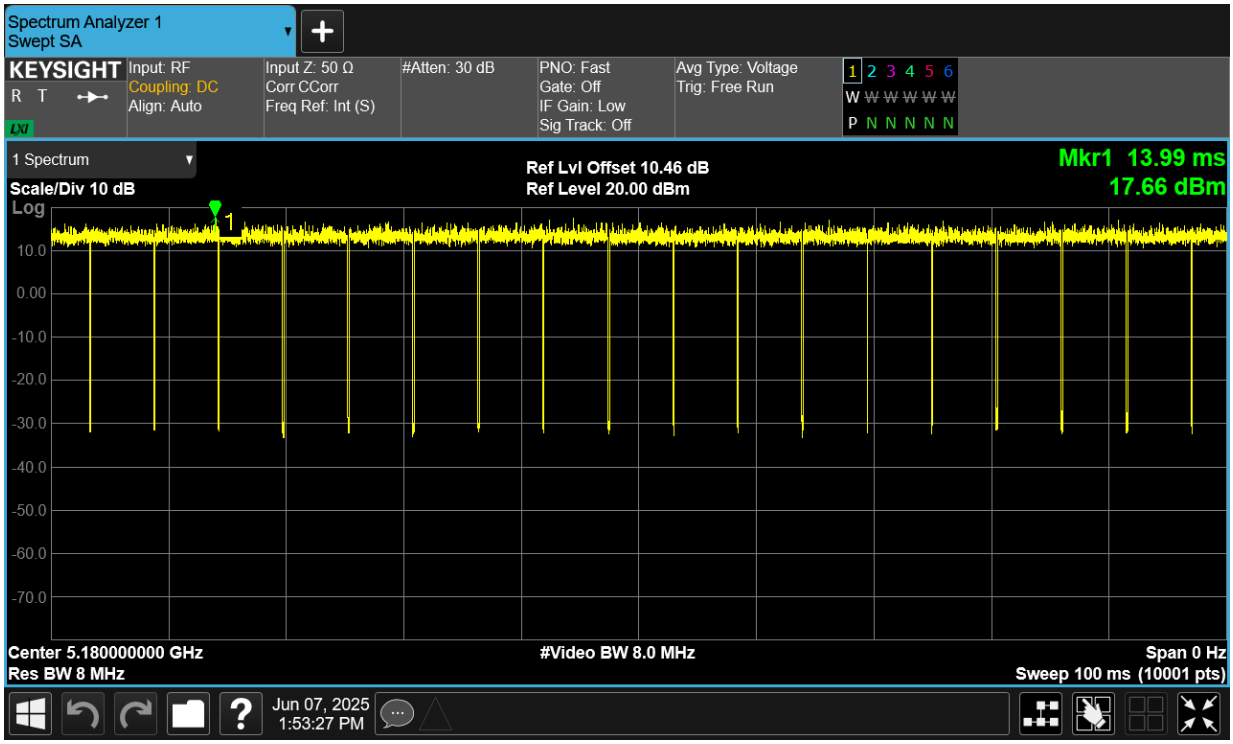
Duty Cycle NVNT a 5200MHz Ant4



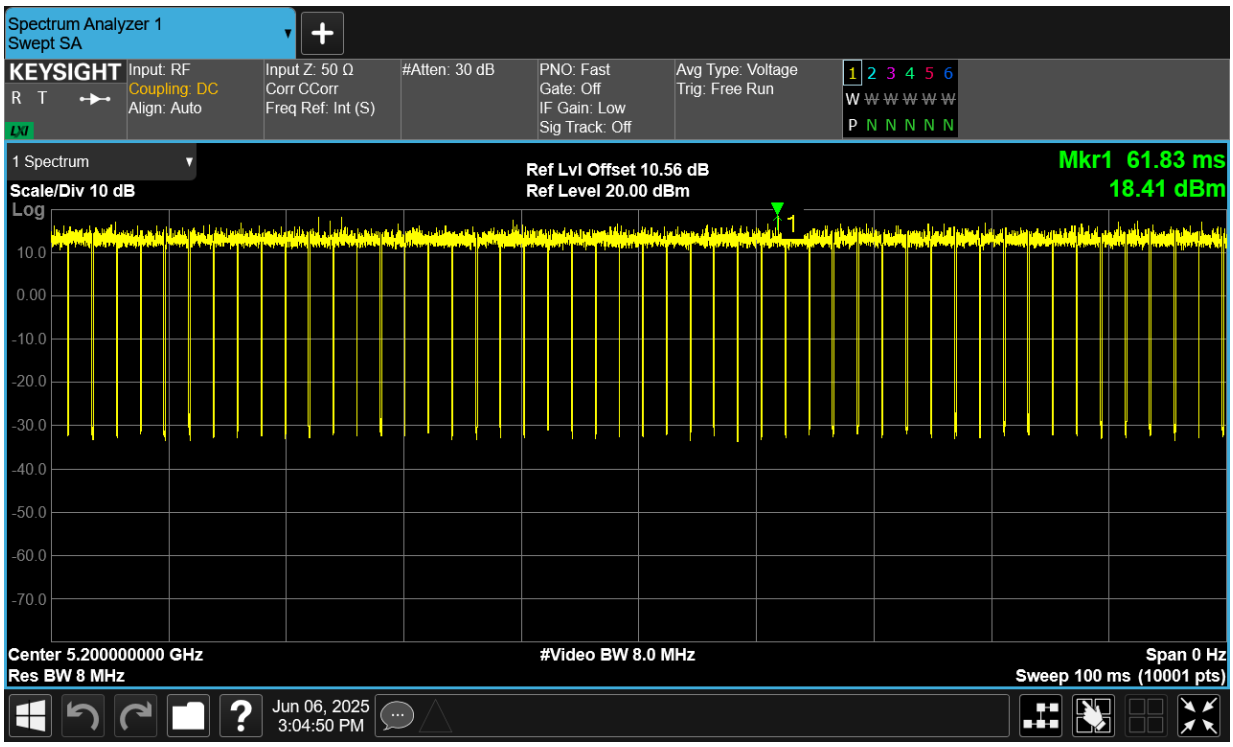
Duty Cycle NVNT a 5240MHz Ant4



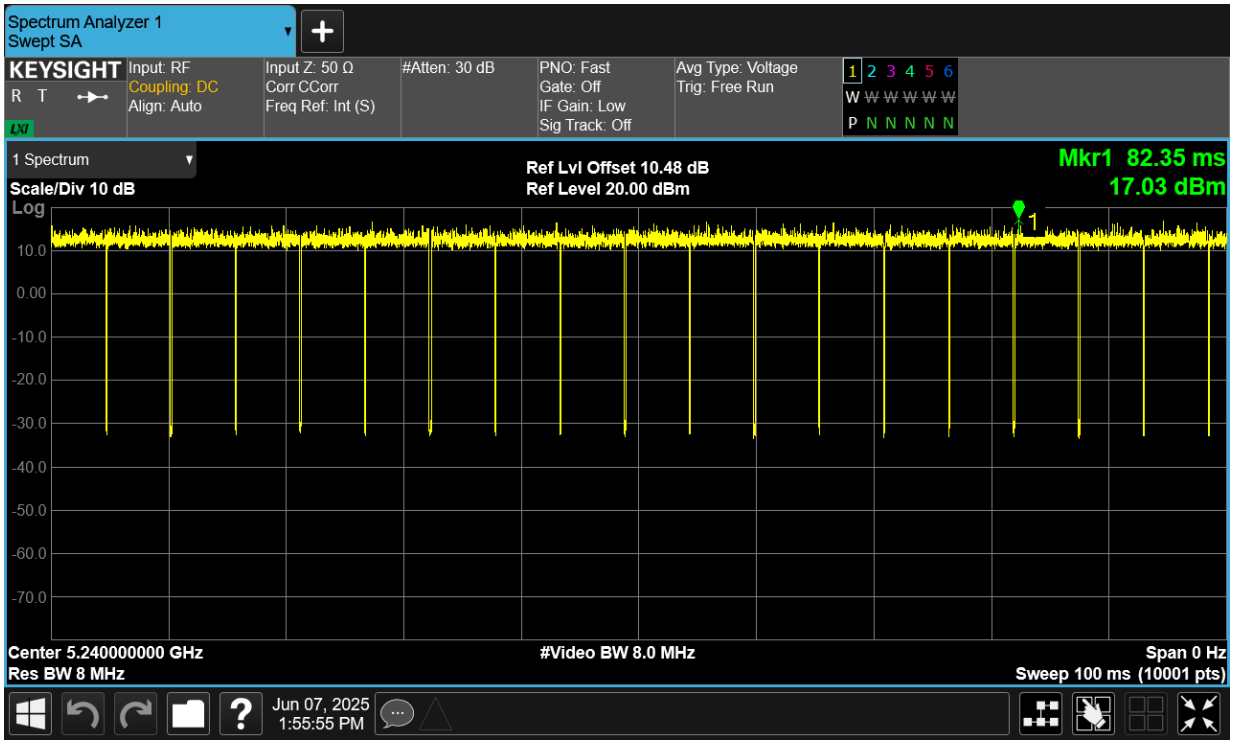
Duty Cycle NVNT ac20 5180MHz Sum



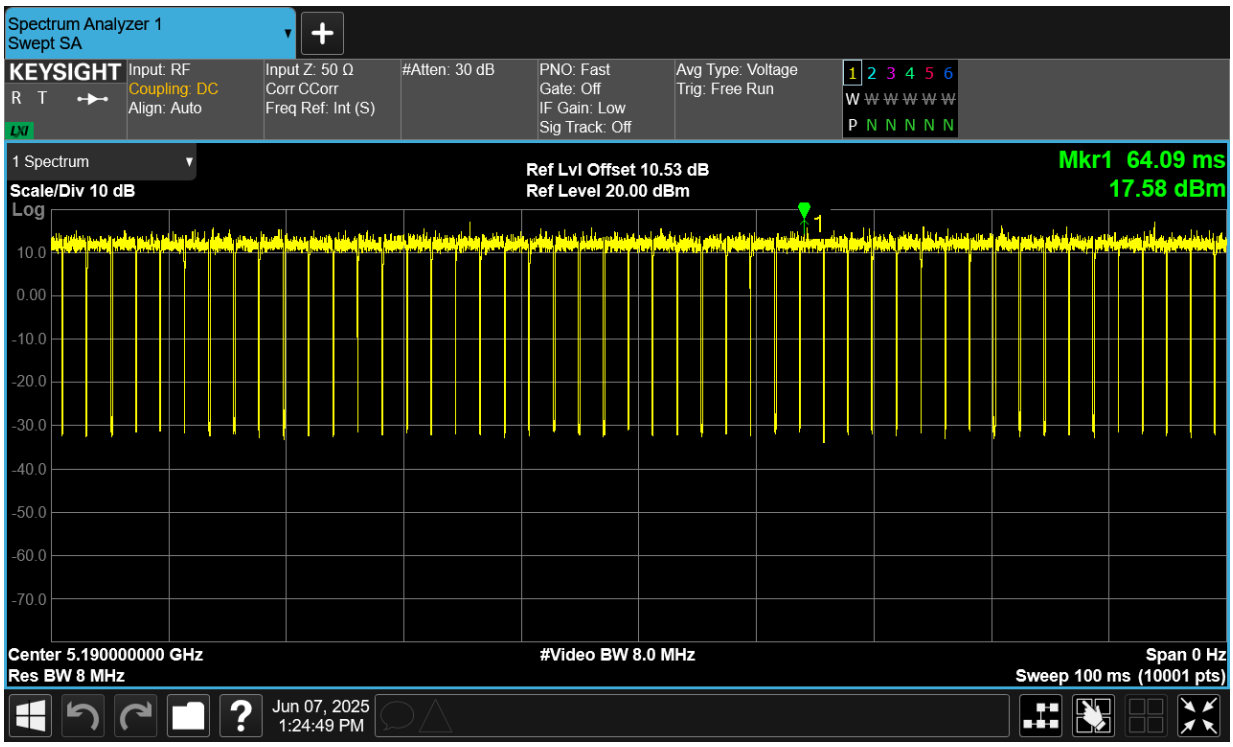
Duty Cycle NVNT ac20 5200MHz Sum



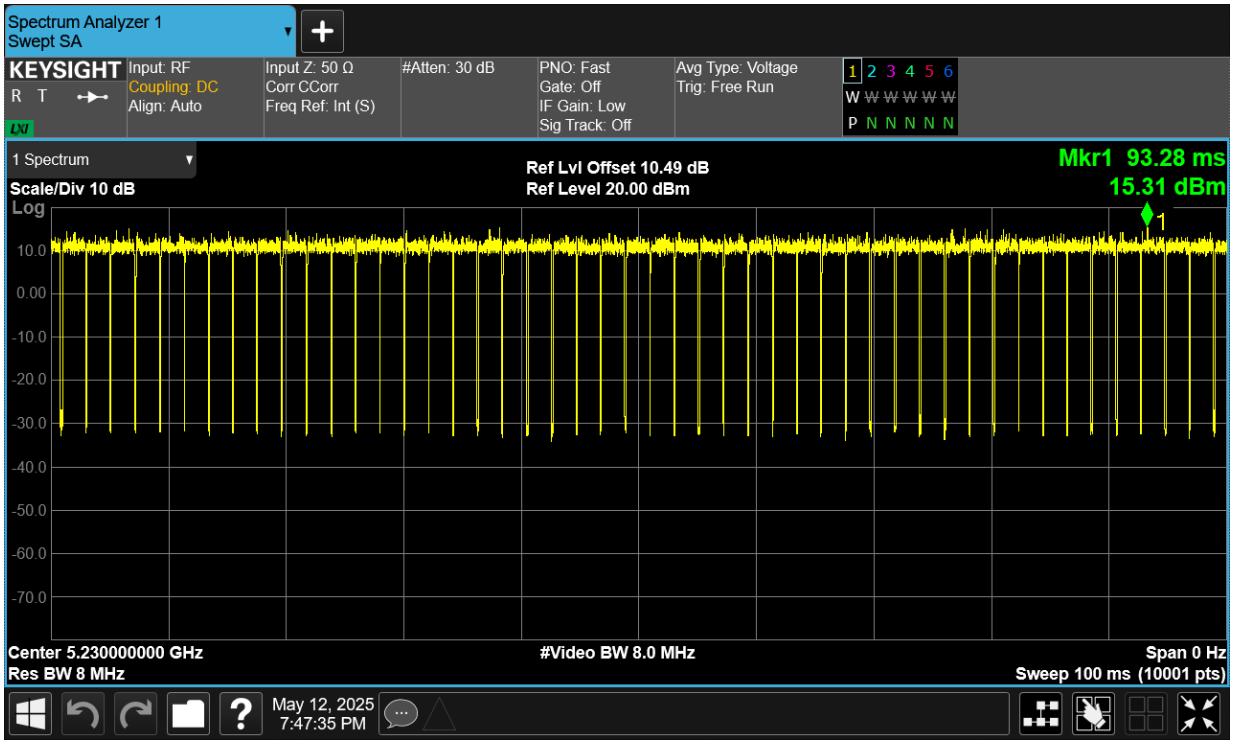
Duty Cycle NVNT ac20 5240MHz Sum



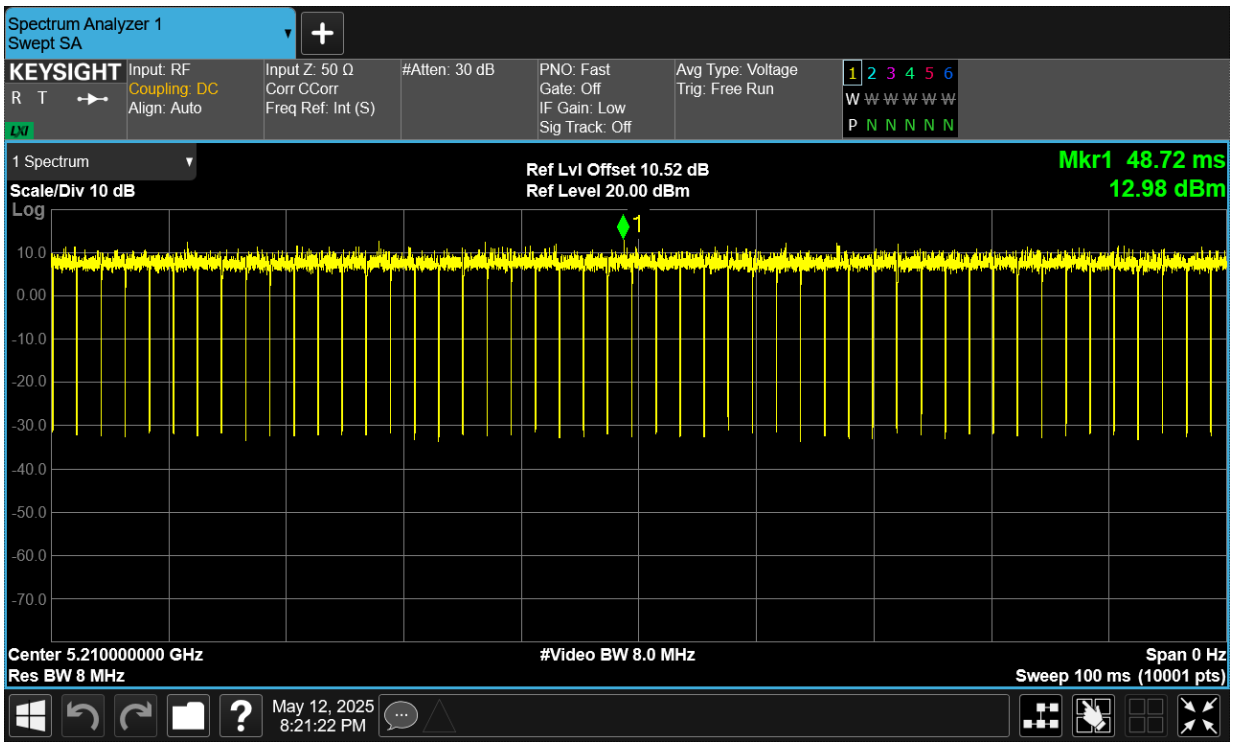
Duty Cycle NVNT ac40 5190MHz Sum

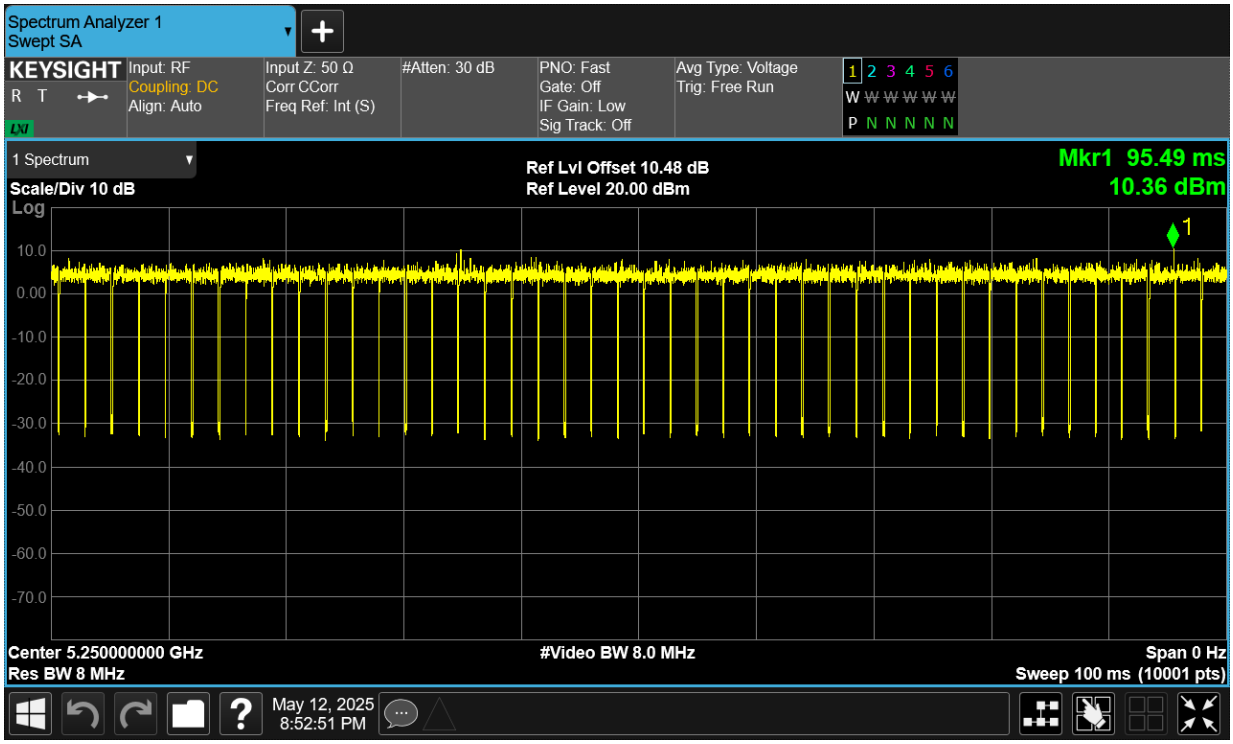


Duty Cycle NVNT ac40 5230MHz Sum

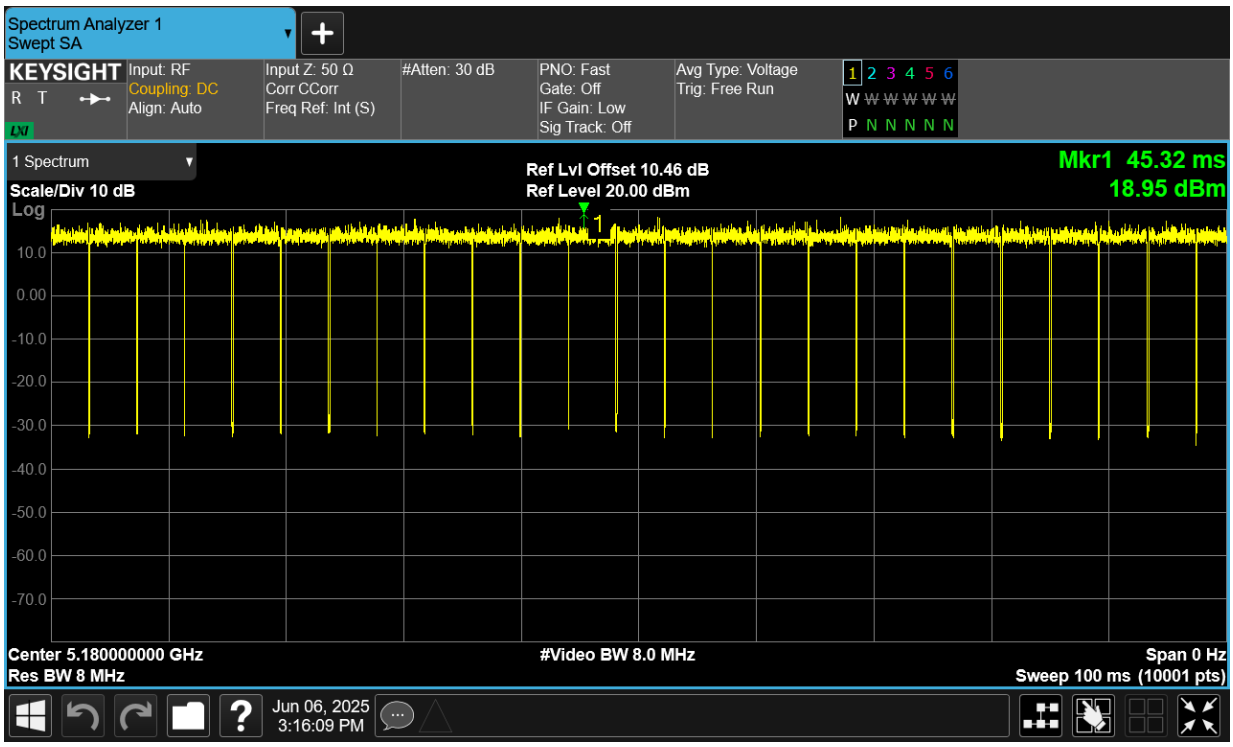


Duty Cycle NVNT ac80 5210MHz Sum

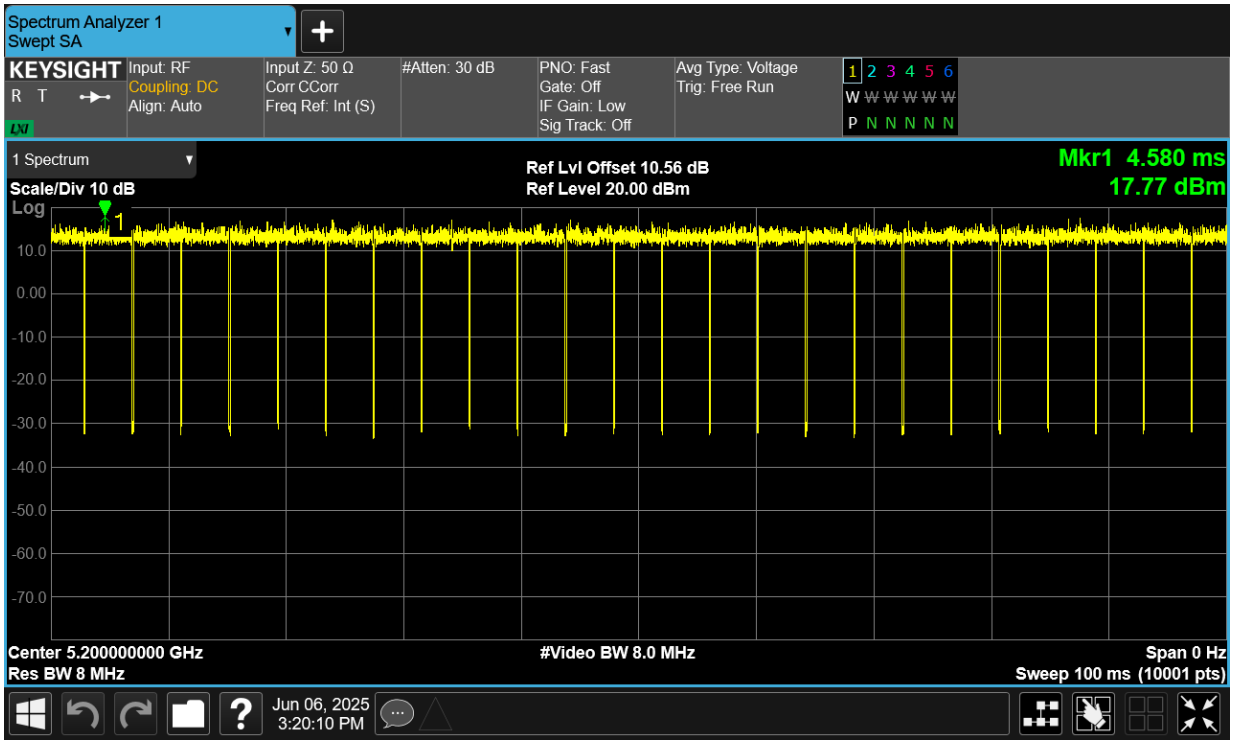




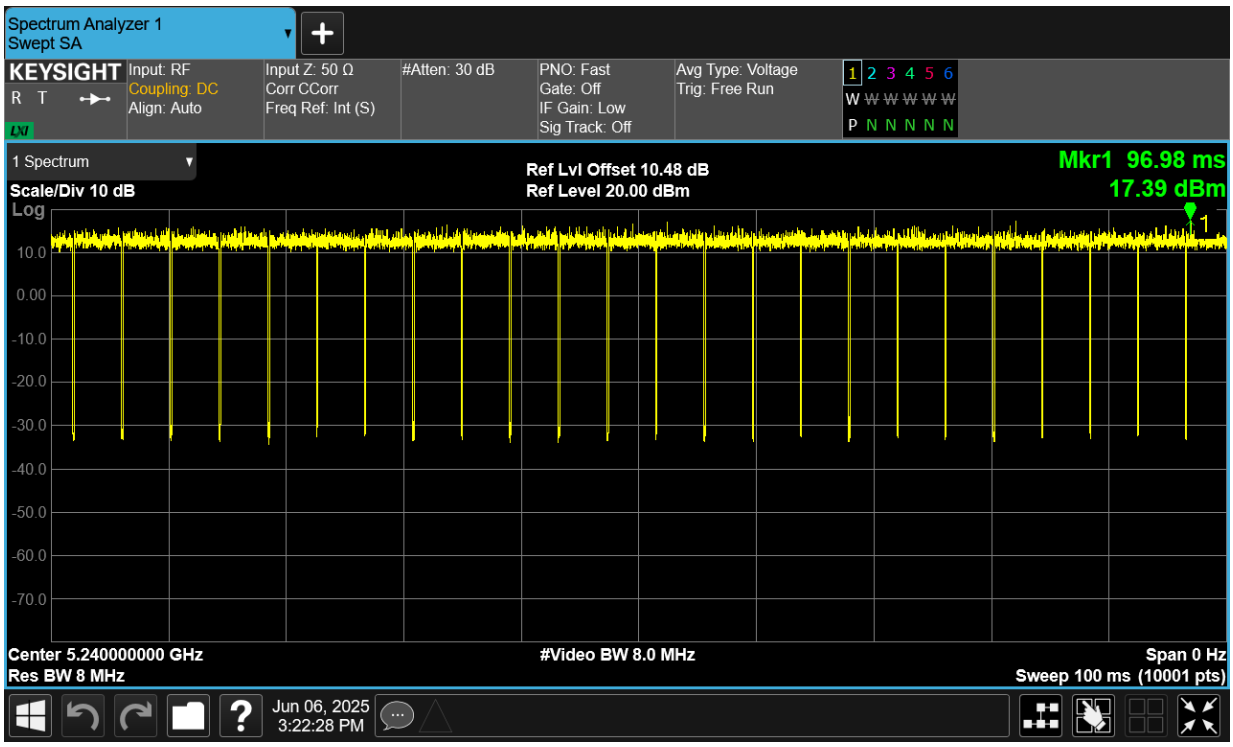
Duty Cycle NVNT ax20 5180MHz Sum



Duty Cycle NVNT ax20 5200MHz Sum

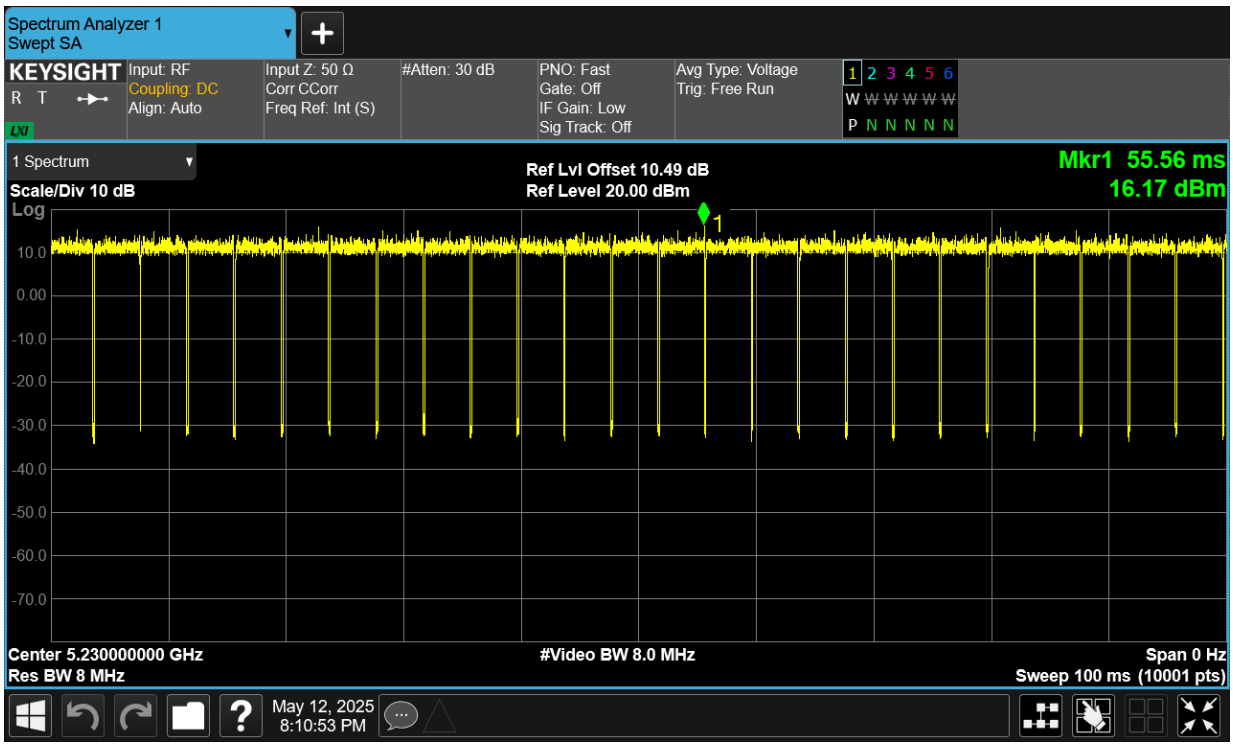


Duty Cycle NVNT ax20 5240MHz Sum

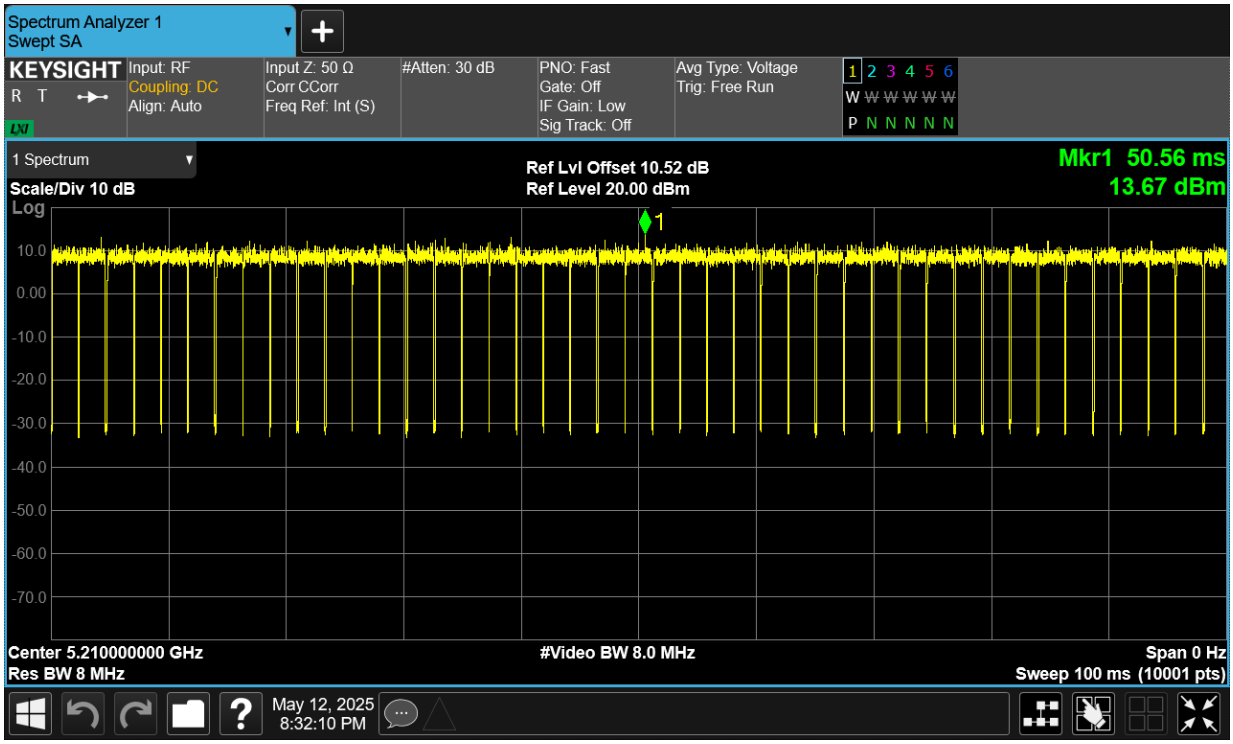


Duty Cycle NVNT ax40 5190MHz Sum

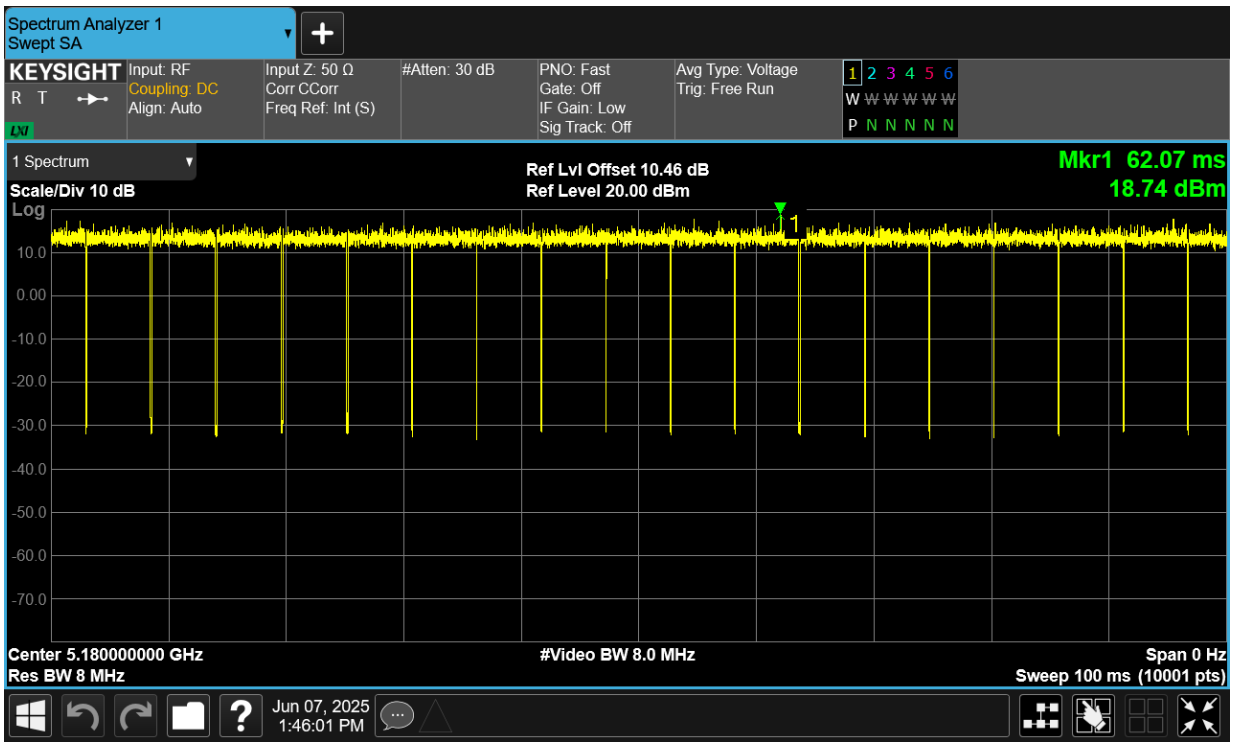
Duty Cycle NVNT ax40 5230MHz Sum



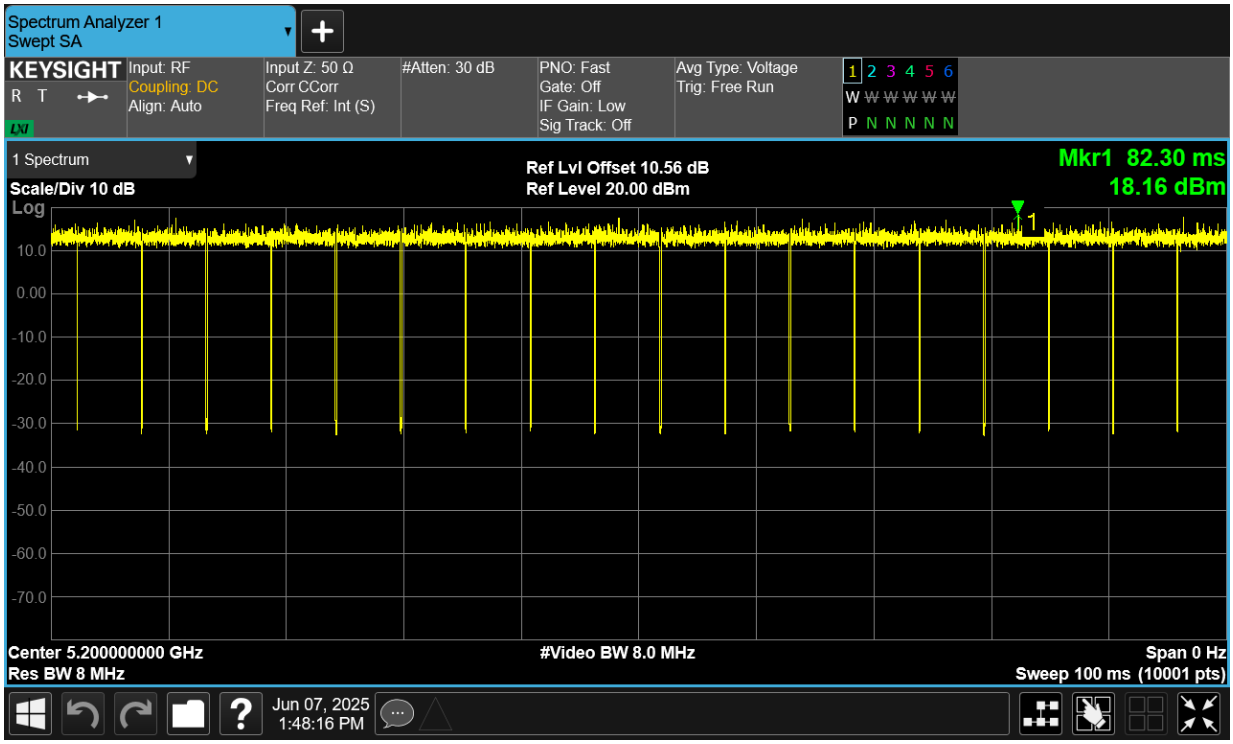
Duty Cycle NVNT ax80 5210MHz Sum



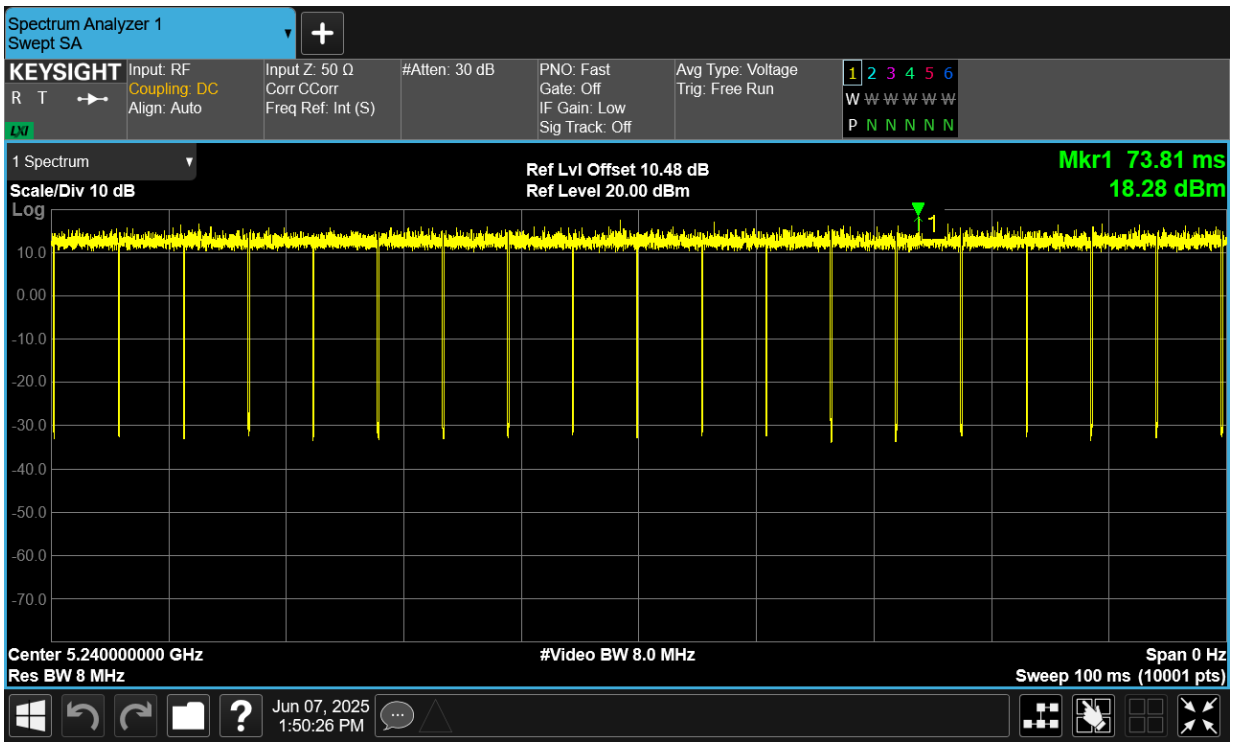
Duty Cycle NVNT n20 5180MHz Sum



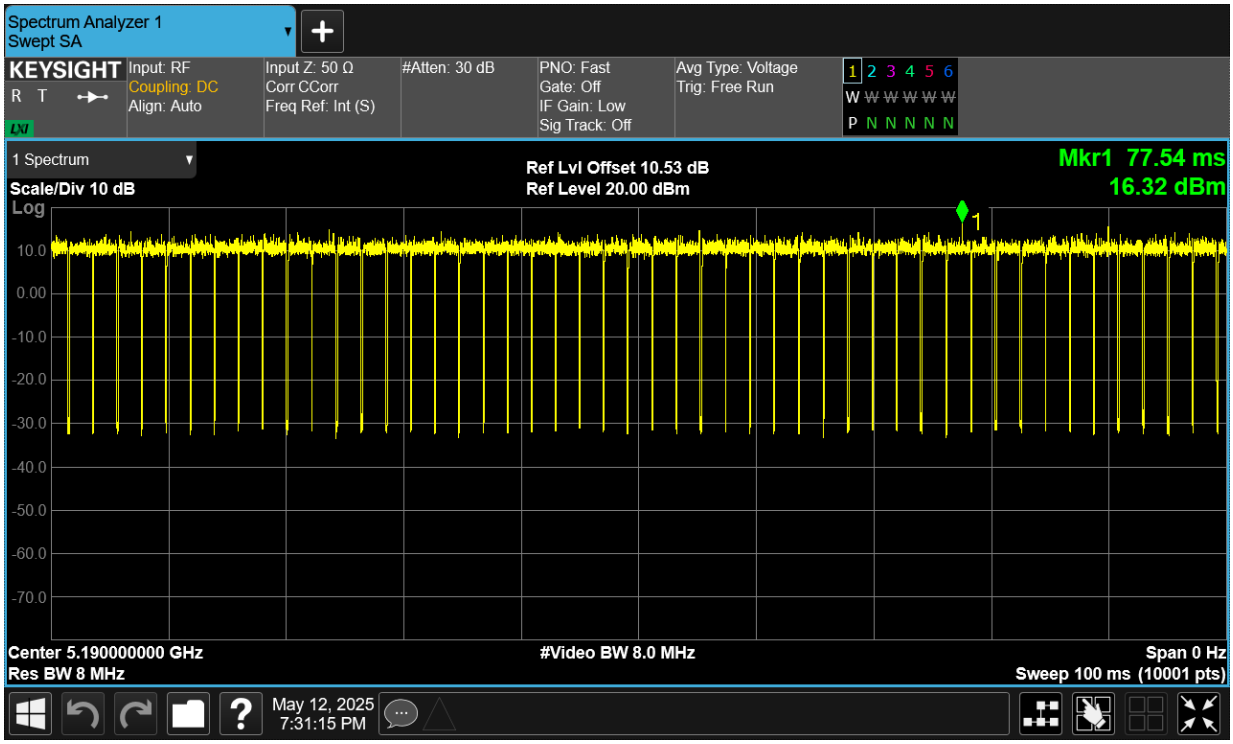
Duty Cycle NVNT n20 5200MHz Sum



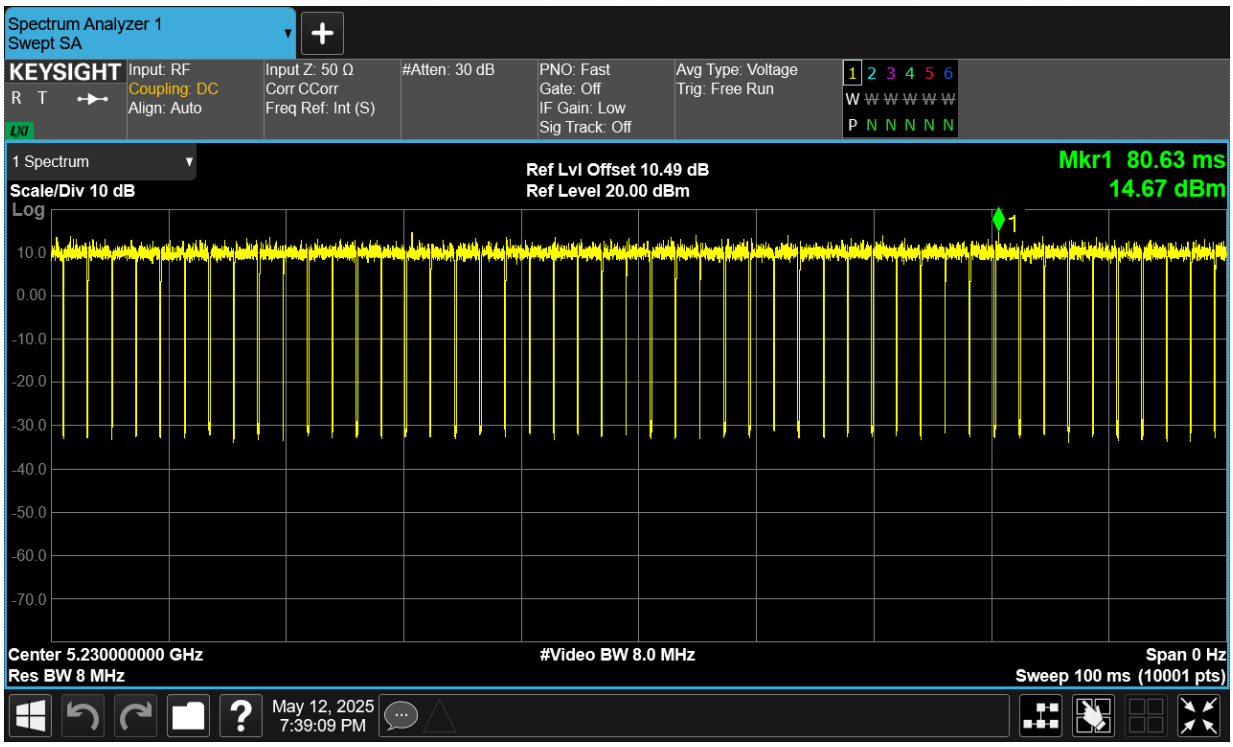
Duty Cycle NVNT n20 5240MHz Sum



Duty Cycle NVNT n40 5190MHz Sum



Duty Cycle NVNT n40 5230MHz Sum



Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	20.57	0.21	20.78	24	Pass
NVNT	a	5200	Ant1	20.81	0.23	21.04	24	Pass
NVNT	a	5240	Ant1	20.54	0.2	20.74	24	Pass
NVNT	a	5180	Ant2	21.09	0.23	21.32	24	Pass
NVNT	a	5200	Ant2	20.24	0.24	20.48	24	Pass
NVNT	a	5240	Ant2	20.27	0.2	20.47	24	Pass
NVNT	a	5180	Ant3	20.91	0.21	21.12	24	Pass
NVNT	a	5200	Ant3	20.48	0.23	20.71	24	Pass
NVNT	a	5240	Ant3	20.74	0.22	20.96	24	Pass
NVNT	a	5180	Ant4	21.17	0.21	21.38	24	Pass
NVNT	a	5200	Ant4	20.97	0.22	21.19	24	Pass
NVNT	a	5240	Ant4	21.08	0.23	21.31	24	Pass
NVNT	ac20	5180	Ant1	9.74	0.08	9.82	18.98	Pass
NVNT	ac20	5180	Ant2	9.46	0.08	9.54	18.98	Pass
NVNT	ac20	5180	Ant3	10.27	0.08	10.35	18.98	Pass
NVNT	ac20	5180	Ant4	10.75	0.08	10.83	18.98	Pass
NVNT	ac20	5180	Sum	16.104	0.08	16.184	18.98	Pass
NVNT	ac20	5200	Ant1	9.94	0.22	10.16	18.98	Pass
NVNT	ac20	5200	Ant2	9.58	0.22	9.8	18.98	Pass
NVNT	ac20	5200	Ant3	10.66	0.22	10.88	18.98	Pass
NVNT	ac20	5200	Ant4	11.47	0.22	11.69	18.98	Pass
NVNT	ac20	5200	Sum	16.494	0.22	16.714	18.98	Pass
NVNT	ac20	5240	Ant1	9.33	0.08	9.41	18.98	Pass
NVNT	ac20	5240	Ant2	9.01	0.08	9.09	18.98	Pass
NVNT	ac20	5240	Ant3	9.97	0.08	10.05	18.98	Pass
NVNT	ac20	5240	Ant4	10.76	0.08	10.84	18.98	Pass
NVNT	ac20	5240	Sum	15.841	0.08	15.921	18.98	Pass
NVNT	ac40	5190	Ant1	11.55	0.21	11.76	18.98	Pass
NVNT	ac40	5190	Ant2	11.55	0.21	11.76	18.98	Pass
NVNT	ac40	5190	Ant3	12.31	0.21	12.52	18.98	Pass
NVNT	ac40	5190	Ant4	12.8	0.21	13.01	18.98	Pass
NVNT	ac40	5190	Sum	18.106	0.21	18.316	18.98	Pass
NVNT	ac40	5230	Ant1	10.5	0.22	10.72	18.98	Pass
NVNT	ac40	5230	Ant2	11.12	0.22	11.34	18.98	Pass
NVNT	ac40	5230	Ant3	12.08	0.22	12.3	18.98	Pass
NVNT	ac40	5230	Ant4	13.4	0.22	13.62	18.98	Pass
NVNT	ac40	5230	Sum	17.937	0.22	18.157	18.98	Pass
NVNT	ac80	5210	Ant1	10.25	0.12	10.37	18.98	Pass
NVNT	ac80	5210	Ant2	10.59	0.12	10.71	18.98	Pass
NVNT	ac80	5210	Ant3	11.81	0.12	11.93	18.98	Pass

NVNT	ac80	5210	Ant4	13.11	0.12	13.23	18.98	Pass
NVNT	ac80	5210	Sum	17.61	0.12	17.73	18.98	Pass
NVNT	ax20	5180	Ant1	10.28	0.1	10.38	18.98	Pass
NVNT	ax20	5180	Ant2	10.55	0.1	10.65	18.98	Pass
NVNT	ax20	5180	Ant3	10.7	0.1	10.8	18.98	Pass
NVNT	ax20	5180	Ant4	11.06	0.1	11.16	18.98	Pass
NVNT	ax20	5180	Sum	16.677	0.1	16.777	18.98	Pass
NVNT	ax20	5200	Ant1	9.93	0.1	10.03	18.98	Pass
NVNT	ax20	5200	Ant2	9.98	0.1	10.08	18.98	Pass
NVNT	ax20	5200	Ant3	10.41	0.1	10.51	18.98	Pass
NVNT	ax20	5200	Ant4	10.86	0.1	10.96	18.98	Pass
NVNT	ax20	5200	Sum	16.332	0.1	16.432	18.98	Pass
NVNT	ax20	5240	Ant1	9.52	0.12	9.64	18.98	Pass
NVNT	ax20	5240	Ant2	10.02	0.12	10.14	18.98	Pass
NVNT	ax20	5240	Ant3	10.15	0.12	10.27	18.98	Pass
NVNT	ax20	5240	Ant4	10.68	0.12	10.8	18.98	Pass
NVNT	ax20	5240	Sum	16.133	0.12	16.253	18.98	Pass
NVNT	ax40	5190	Ant1	11.64	0.11	11.75	18.98	Pass
NVNT	ax40	5190	Ant2	11.86	0.11	11.97	18.98	Pass
NVNT	ax40	5190	Ant3	12.42	0.11	12.53	18.98	Pass
NVNT	ax40	5190	Ant4	12.82	0.11	12.93	18.98	Pass
NVNT	ax40	5190	Sum	18.231	0.11	18.341	18.98	Pass
NVNT	ax40	5230	Ant1	10.55	0.14	10.69	18.98	Pass
NVNT	ax40	5230	Ant2	11.25	0.14	11.39	18.98	Pass
NVNT	ax40	5230	Ant3	12.33	0.14	12.47	18.98	Pass
NVNT	ax40	5230	Ant4	13.47	0.14	13.61	18.98	Pass
NVNT	ax40	5230	Sum	18.063	0.14	18.203	18.98	Pass
NVNT	ax80	5210	Ant1	10.57	0.2	10.77	18.98	Pass
NVNT	ax80	5210	Ant2	11.04	0.2	11.24	18.98	Pass
NVNT	ax80	5210	Ant3	12.24	0.2	12.44	18.98	Pass
NVNT	ax80	5210	Ant4	13.38	0.2	13.58	18.98	Pass
NVNT	ax80	5210	Sum	17.968	0.2	18.168	18.98	Pass
NVNT	n20	5180	Ant1	9.8	0.09	9.89	18.98	Pass
NVNT	n20	5180	Ant2	9.42	0.09	9.51	18.98	Pass
NVNT	n20	5180	Ant3	10.18	0.09	10.27	18.98	Pass
NVNT	n20	5180	Ant4	10.92	0.09	11.01	18.98	Pass
NVNT	n20	5180	Sum	16.137	0.09	16.227	18.98	Pass
NVNT	n20	5200	Ant1	9.55	0.08	9.63	18.98	Pass
NVNT	n20	5200	Ant2	8.96	0.08	9.04	18.98	Pass
NVNT	n20	5200	Ant3	10.03	0.08	10.11	18.98	Pass
NVNT	n20	5200	Ant4	10.81	0.08	10.89	18.98	Pass
NVNT	n20	5200	Sum	15.911	0.08	15.991	18.98	Pass
NVNT	n20	5240	Ant1	9.38	0.1	9.48	18.98	Pass
NVNT	n20	5240	Ant2	9.06	0.1	9.16	18.98	Pass

NVNT	n20	5240	Ant3	9.9	0.1	10	18.98	Pass
NVNT	n20	5240	Ant4	10.8	0.1	10.9	18.98	Pass
NVNT	n20	5240	Sum	15.857	0.1	15.957	18.98	Pass
NVNT	n40	5190	Ant1	10.26	0.21	10.47	18.98	Pass
NVNT	n40	5190	Ant2	10.53	0.21	10.74	18.98	Pass
NVNT	n40	5190	Ant3	11.56	0.21	11.77	18.98	Pass
NVNT	n40	5190	Ant4	12.83	0.21	13.04	18.98	Pass
NVNT	n40	5190	Sum	17.437	0.21	17.647	18.98	Pass
NVNT	n40	5230	Ant1	9.62	0.22	9.84	18.98	Pass
NVNT	n40	5230	Ant2	10.18	0.22	10.4	18.98	Pass
NVNT	n40	5230	Ant3	11.03	0.22	11.25	18.98	Pass
NVNT	n40	5230	Ant4	12.46	0.22	12.68	18.98	Pass
NVNT	n40	5230	Sum	16.979	0.22	17.199	18.98	Pass

Note: The limits need reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For MIMO mode: ant gain is 5+10*log10(4)=5+6.02=11.02 dBi, the limit is 24-(11.02-6)=18.98dbm.

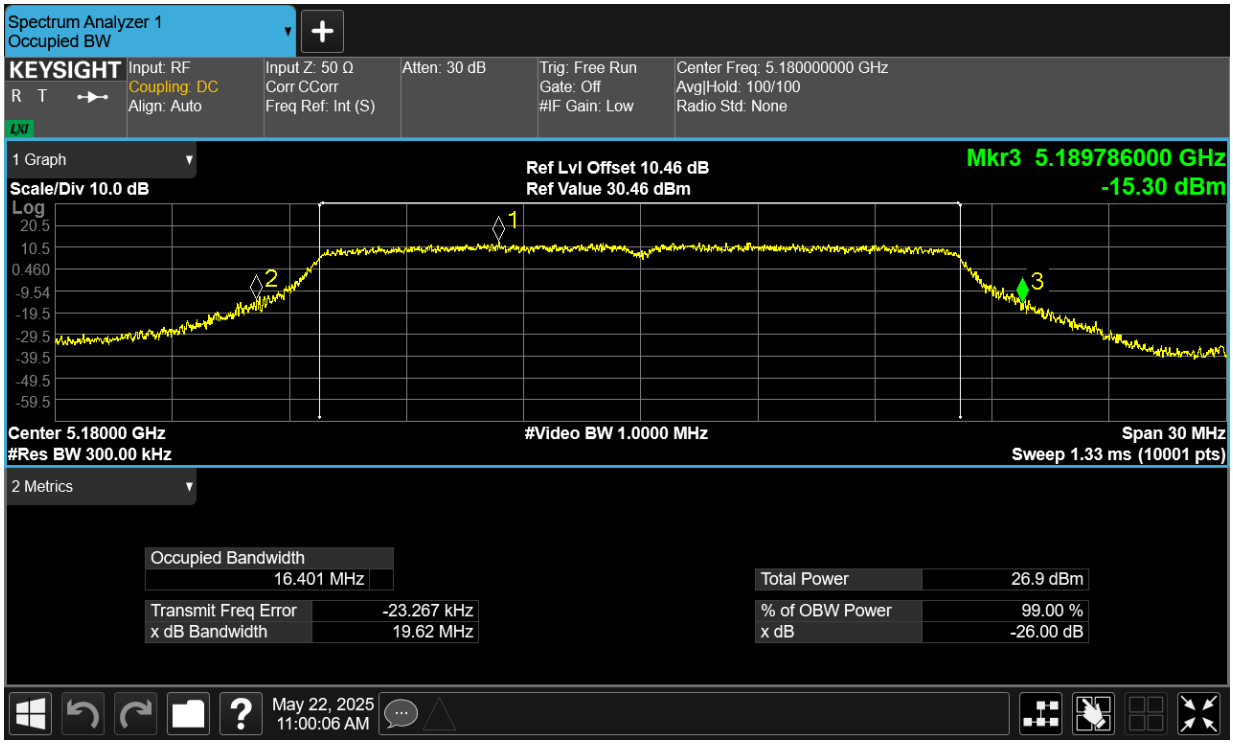
-26dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)
NVNT	a	5180	Ant1	19.619
NVNT	a	5200	Ant1	18.977
NVNT	a	5240	Ant1	19.363
NVNT	a	5180	Ant2	19.223
NVNT	a	5200	Ant2	19.113
NVNT	a	5240	Ant2	19.214
NVNT	a	5180	Ant3	19.525
NVNT	a	5200	Ant3	19.503
NVNT	a	5240	Ant3	19.389
NVNT	a	5180	Ant4	19.653
NVNT	a	5200	Ant4	19.414
NVNT	a	5240	Ant4	19.111
NVNT	ac20	5180	Ant1	20.387
NVNT	ac20	5180	Ant2	20.109
NVNT	ac20	5180	Ant3	20.182
NVNT	ac20	5180	Ant4	20.436
NVNT	ac20	5200	Ant1	20.321
NVNT	ac20	5200	Ant2	20.459
NVNT	ac20	5200	Ant3	20.248
NVNT	ac20	5200	Ant4	20.343
NVNT	ac20	5240	Ant1	20.473
NVNT	ac20	5240	Ant2	20.117
NVNT	ac20	5240	Ant3	20.354
NVNT	ac20	5240	Ant4	20.174
NVNT	ac40	5190	Ant1	39.411
NVNT	ac40	5190	Ant2	39.033
NVNT	ac40	5190	Ant3	39.317
NVNT	ac40	5190	Ant4	38.778
NVNT	ac40	5230	Ant1	39.357
NVNT	ac40	5230	Ant2	39.27
NVNT	ac40	5230	Ant3	39.305
NVNT	ac40	5230	Ant4	38.915
NVNT	ac80	5210	Ant1	81.063
NVNT	ac80	5210	Ant2	80.79
NVNT	ac80	5210	Ant3	80.666
NVNT	ac80	5210	Ant4	80.665
NVNT	ax20	5180	Ant1	20.794
NVNT	ax20	5180	Ant2	21.067
NVNT	ax20	5180	Ant3	20.771
NVNT	ax20	5180	Ant4	21.021
NVNT	ax20	5200	Ant1	21.206

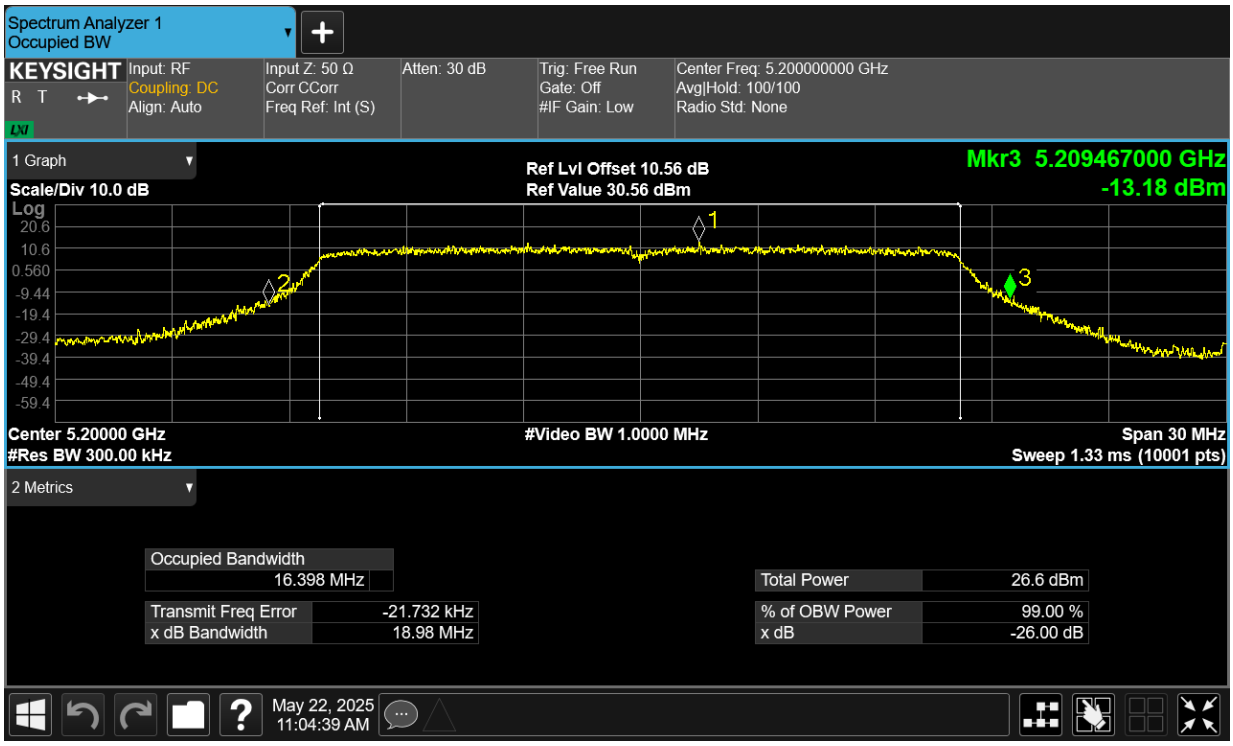
NVNT	ax20	5200	Ant2	21.061
NVNT	ax20	5200	Ant3	20.716
NVNT	ax20	5200	Ant4	20.941
NVNT	ax20	5240	Ant1	20.85
NVNT	ax20	5240	Ant2	21.019
NVNT	ax20	5240	Ant3	20.489
NVNT	ax20	5240	Ant4	20.935
NVNT	ax40	5190	Ant1	40.04
NVNT	ax40	5190	Ant2	40.068
NVNT	ax40	5190	Ant3	40.341
NVNT	ax40	5190	Ant4	39.863
NVNT	ax40	5230	Ant1	40.057
NVNT	ax40	5230	Ant2	39.789
NVNT	ax40	5230	Ant3	39.968
NVNT	ax40	5230	Ant4	40.032
NVNT	ax80	5210	Ant1	81.007
NVNT	ax80	5210	Ant2	81.627
NVNT	ax80	5210	Ant3	81.449
NVNT	ax80	5210	Ant4	81.237
NVNT	n20	5180	Ant1	20.454
NVNT	n20	5180	Ant2	20.869
NVNT	n20	5180	Ant3	20.008
NVNT	n20	5180	Ant4	20.103
NVNT	n20	5200	Ant1	20.775
NVNT	n20	5200	Ant2	20.52
NVNT	n20	5200	Ant3	20.148
NVNT	n20	5200	Ant4	20.08
NVNT	n20	5240	Ant1	20.468
NVNT	n20	5240	Ant2	20.101
NVNT	n20	5240	Ant3	19.974
NVNT	n20	5240	Ant4	20.315
NVNT	n40	5190	Ant1	39.452
NVNT	n40	5190	Ant2	38.893
NVNT	n40	5190	Ant3	39.118
NVNT	n40	5190	Ant4	38.86
NVNT	n40	5230	Ant1	39.021
NVNT	n40	5230	Ant2	39.04
NVNT	n40	5230	Ant3	39.273
NVNT	n40	5230	Ant4	38.924

Test Graphs

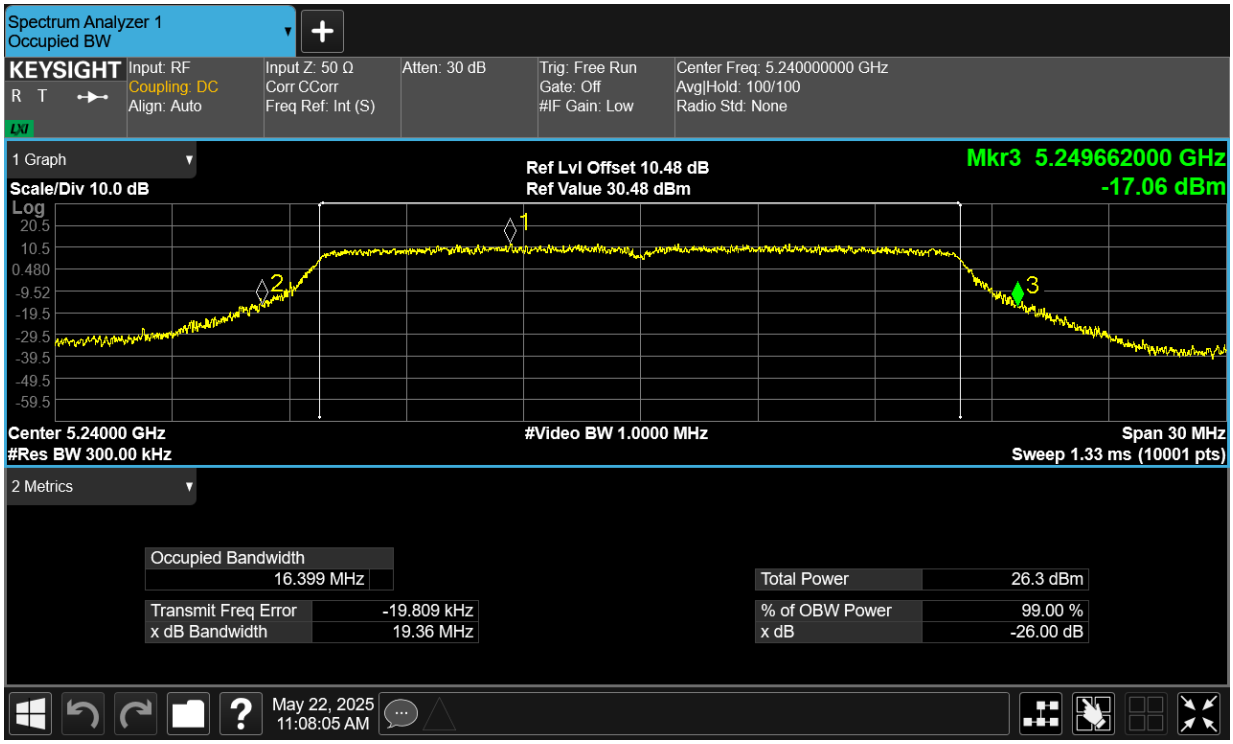
-26dB Bandwidth NVNT a 5180MHz Ant1



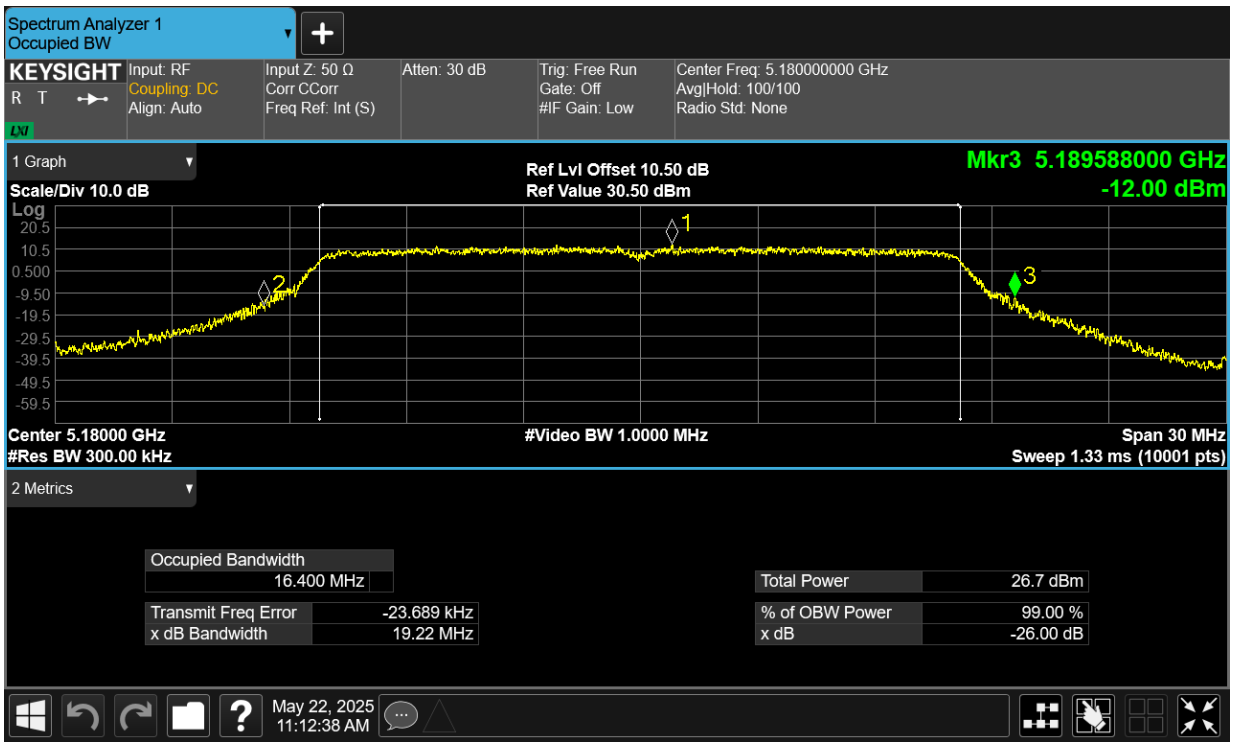
-26dB Bandwidth NVNT a 5200MHz Ant1



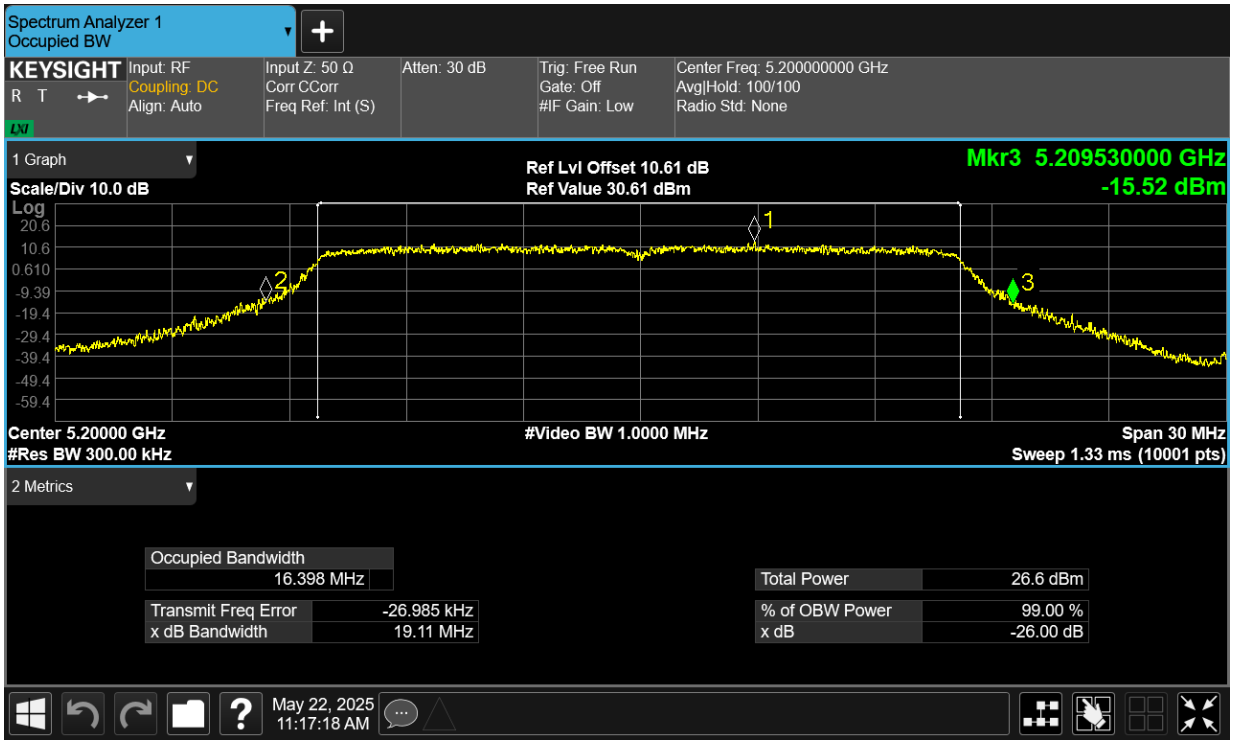
-26dB Bandwidth NVNT a 5240MHz Ant1



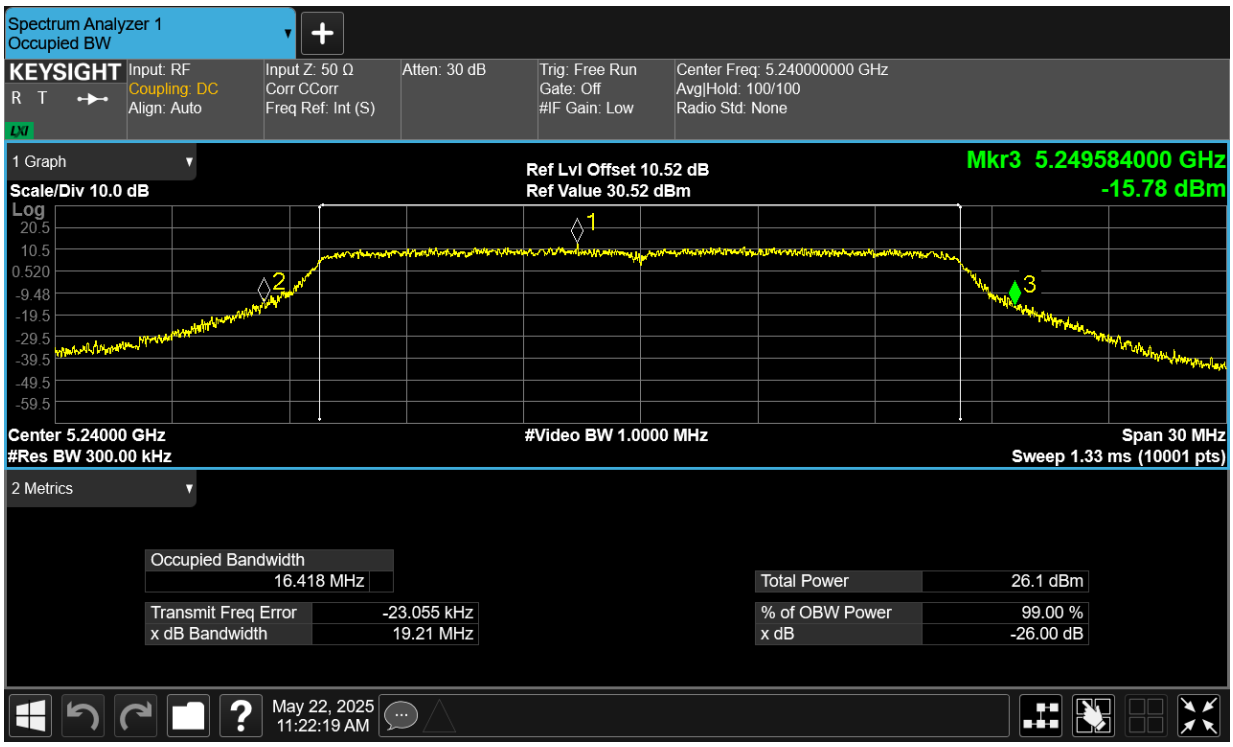
-26dB Bandwidth NVNT a 5180MHz Ant2



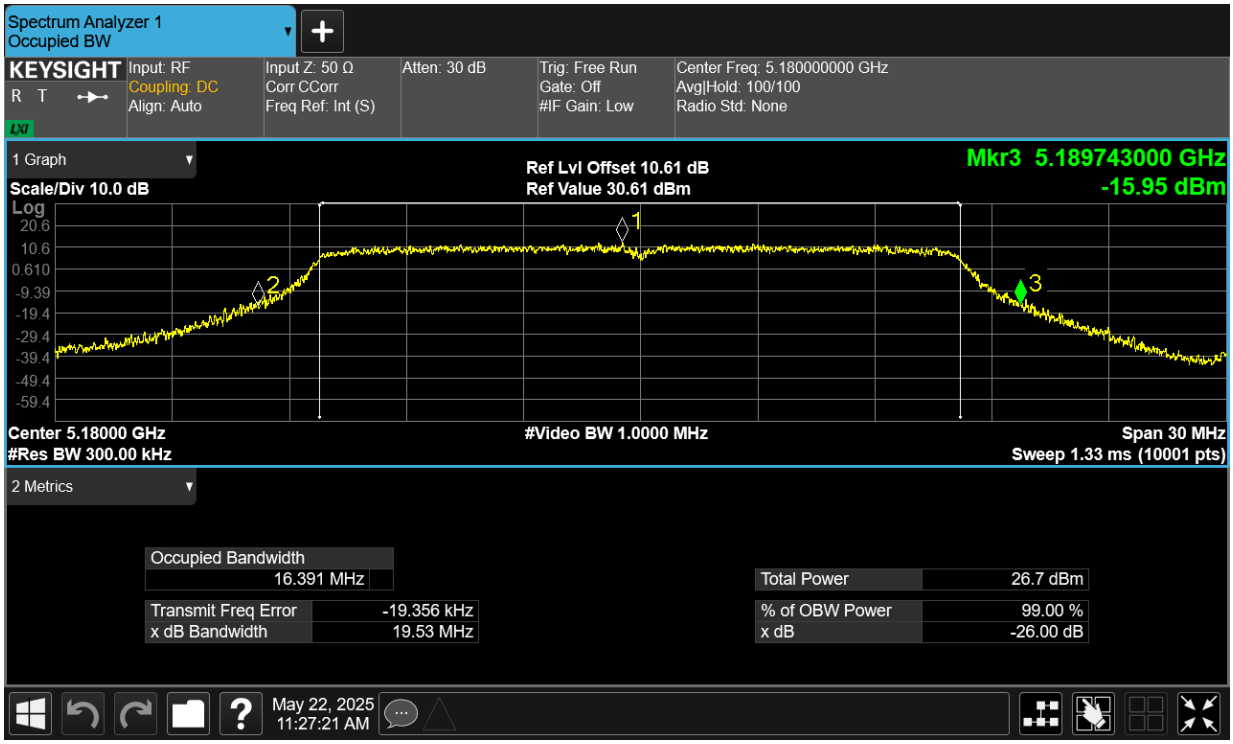
-26dB Bandwidth NVNT a 5200MHz Ant2



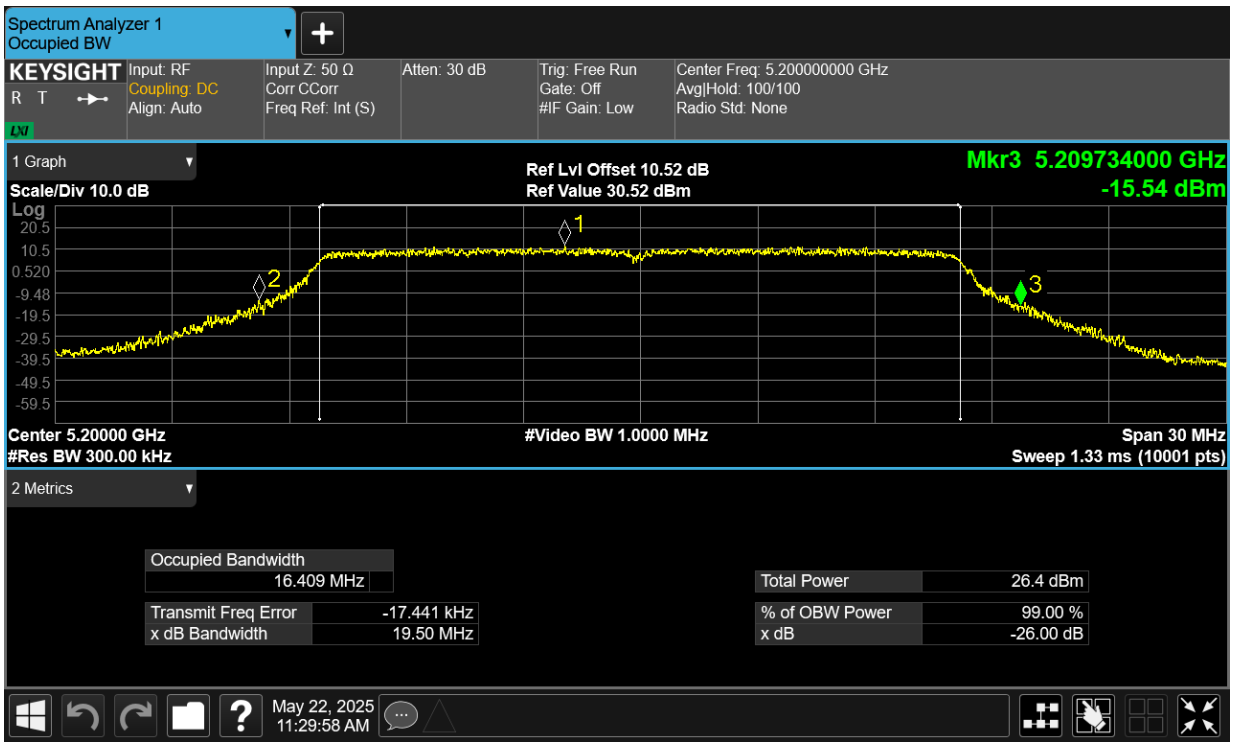
-26dB Bandwidth NVNT a 5240MHz Ant2



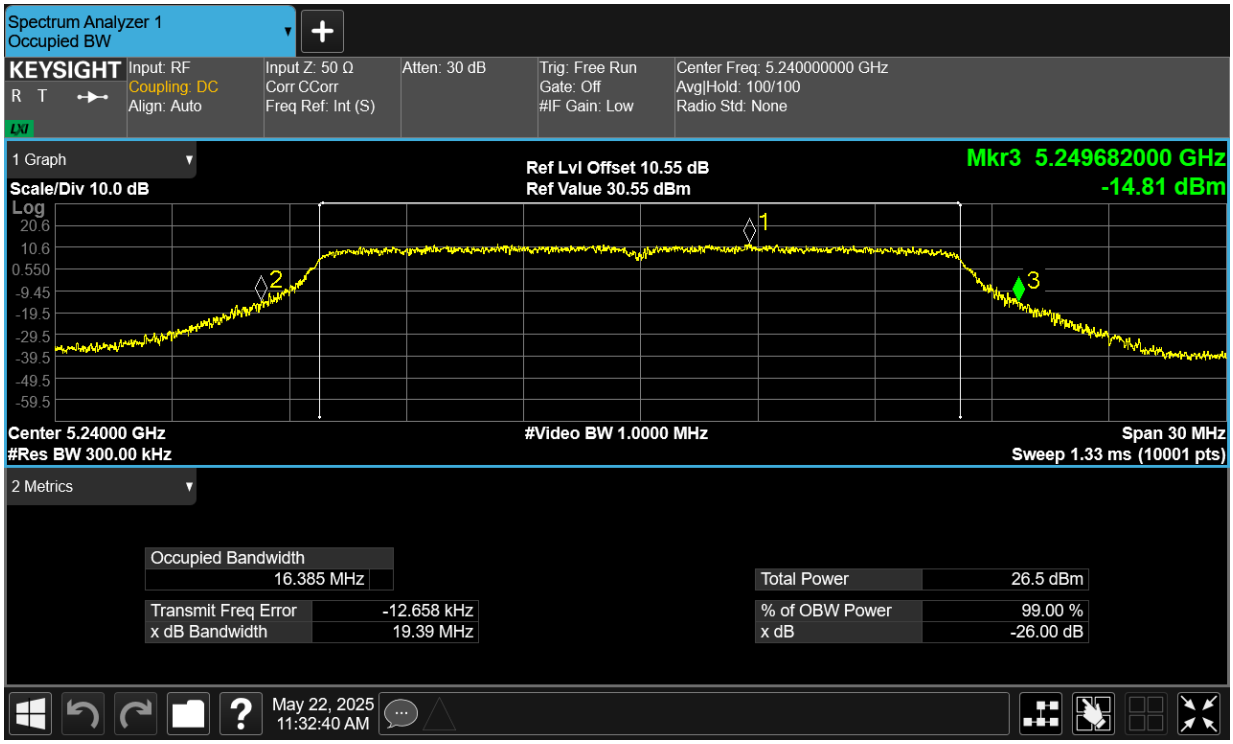
-26dB Bandwidth NVNT a 5180MHz Ant3



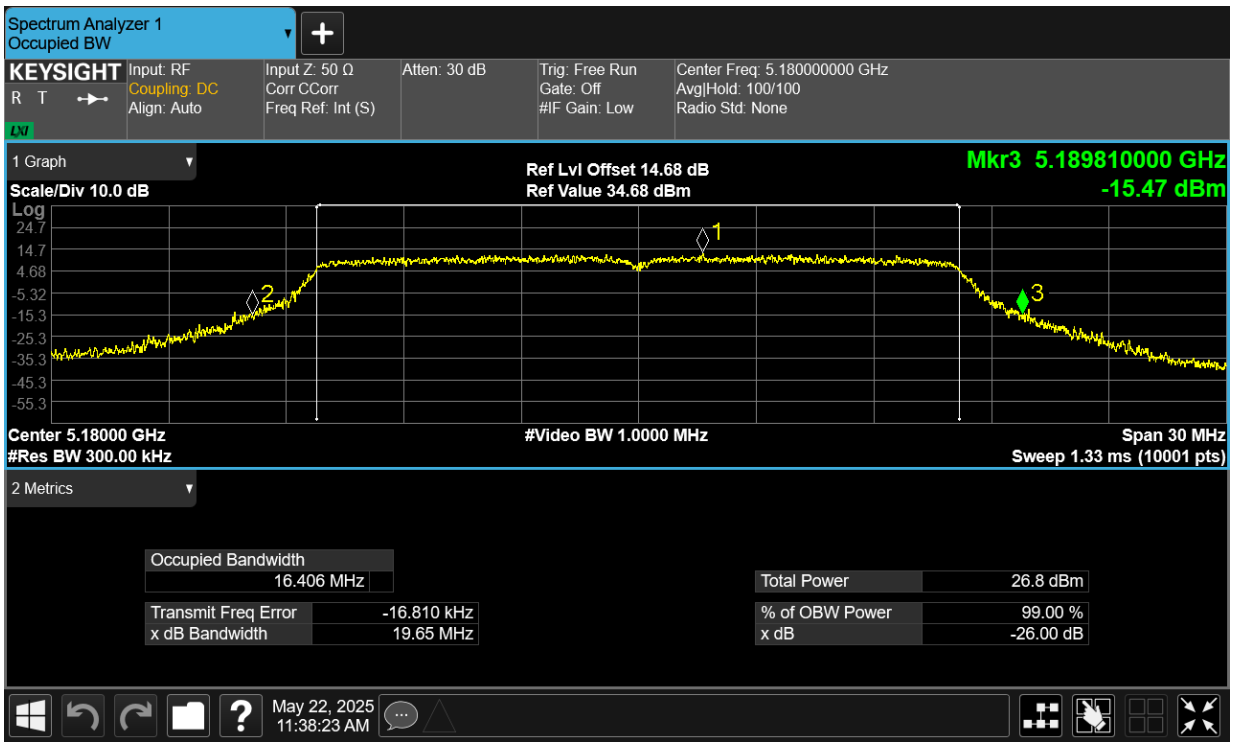
-26dB Bandwidth NVNT a 5200MHz Ant3



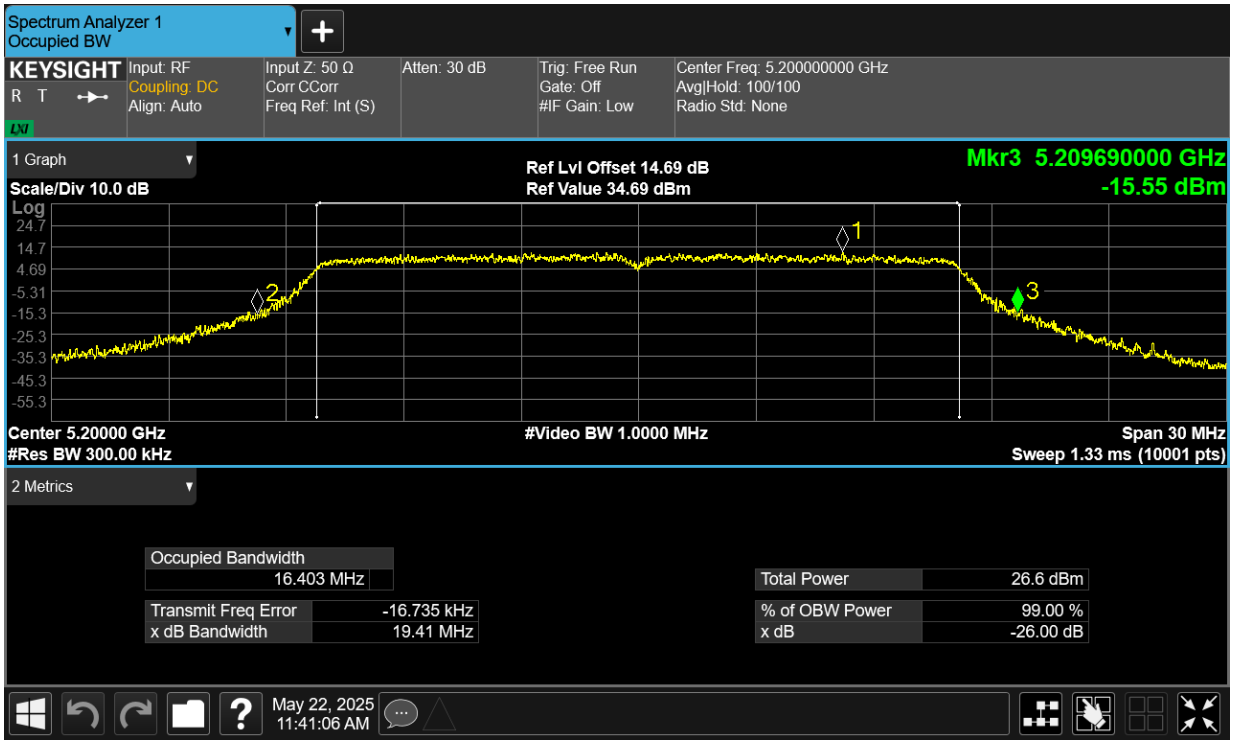
-26dB Bandwidth NVNT a 5240MHz Ant3



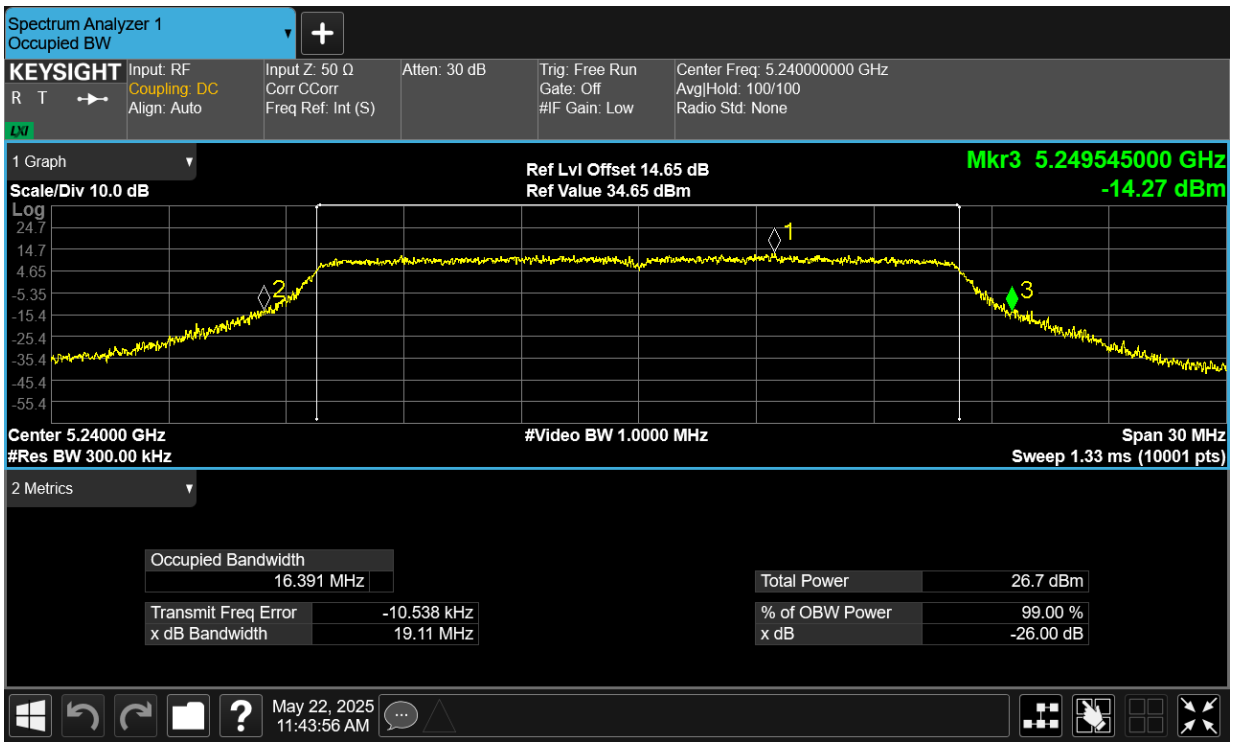
-26dB Bandwidth NVNT a 5180MHz Ant4



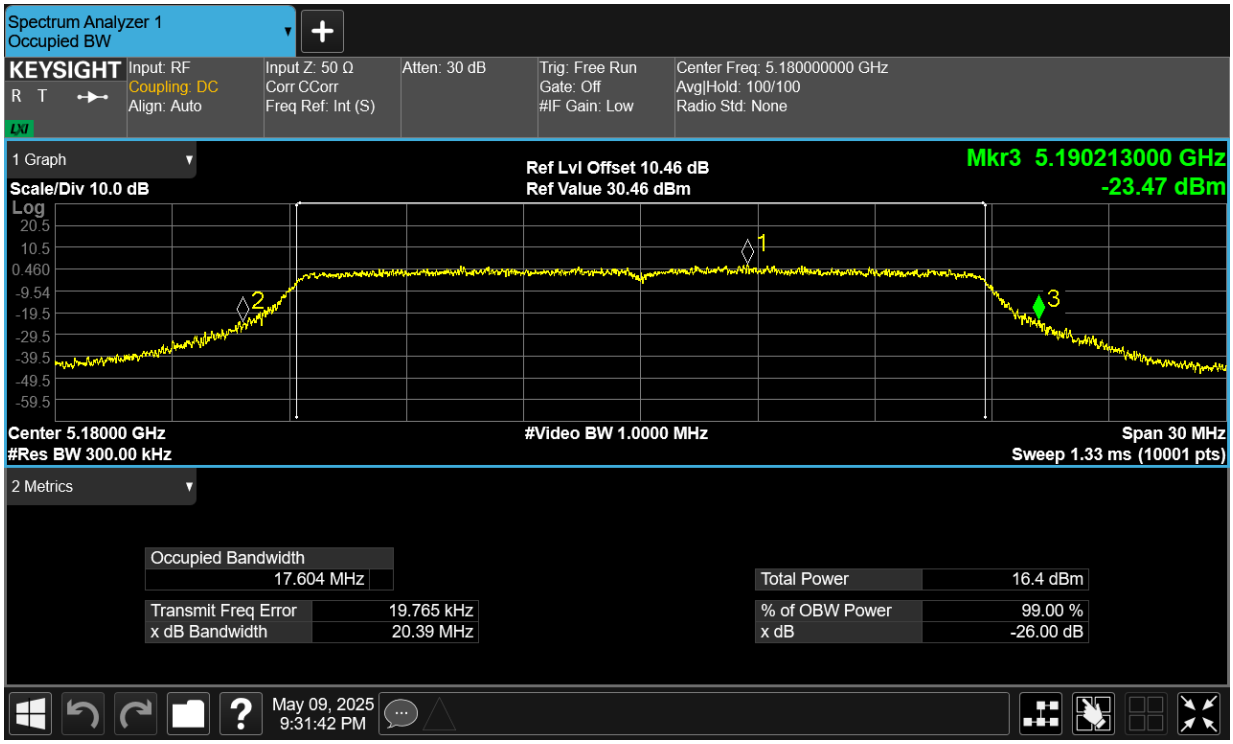
-26dB Bandwidth NVNT a 5200MHz Ant4



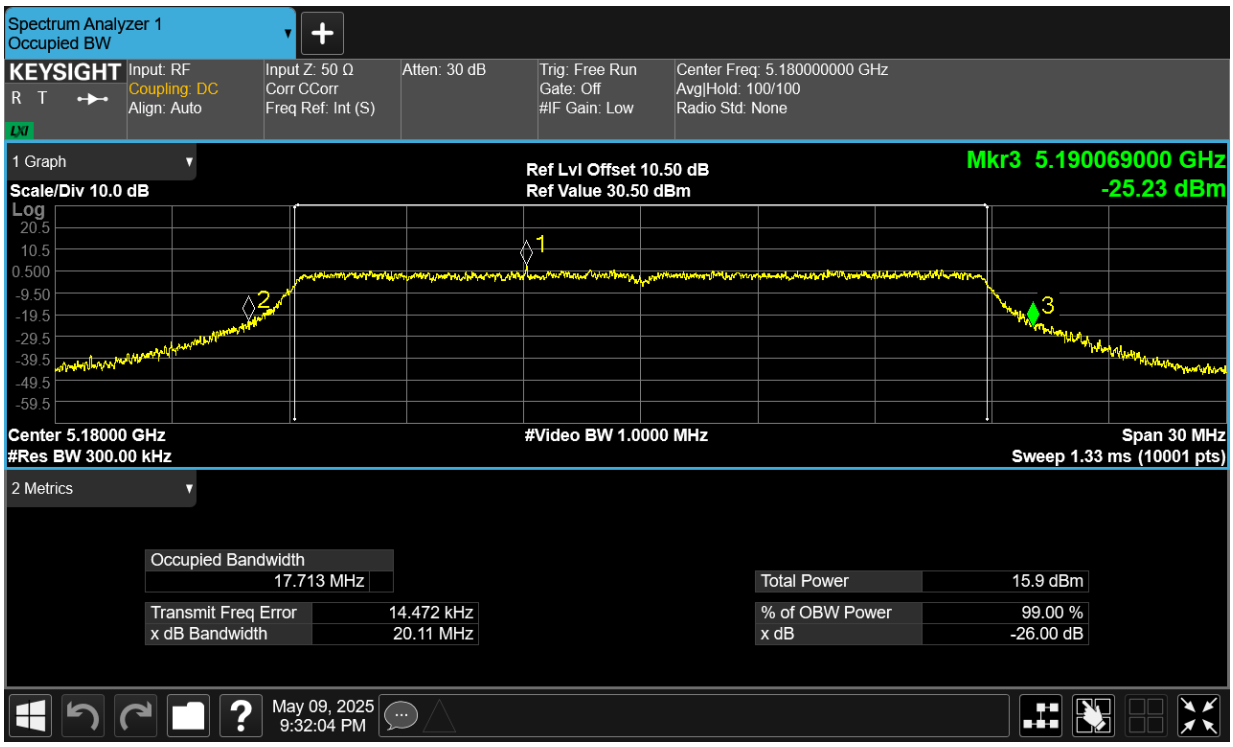
-26dB Bandwidth NVNT a 5240MHz Ant4



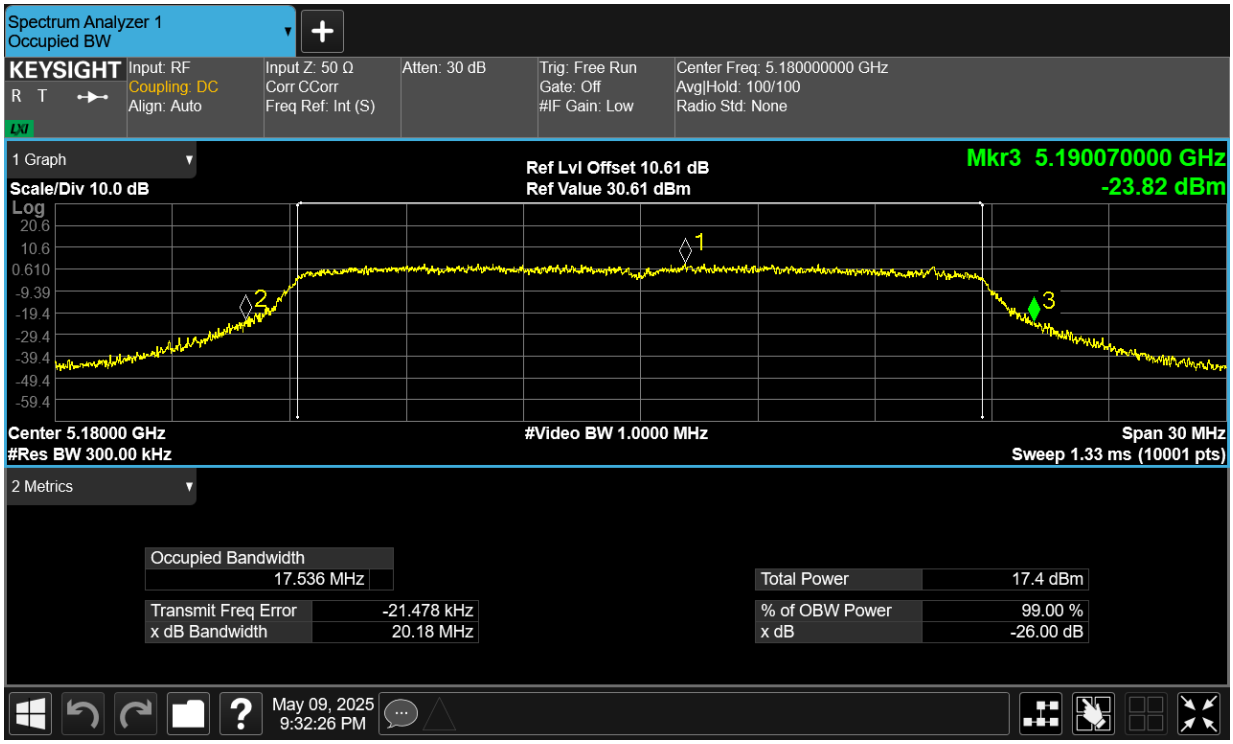
-26dB Bandwidth NVNT ac20 5180MHz Ant1



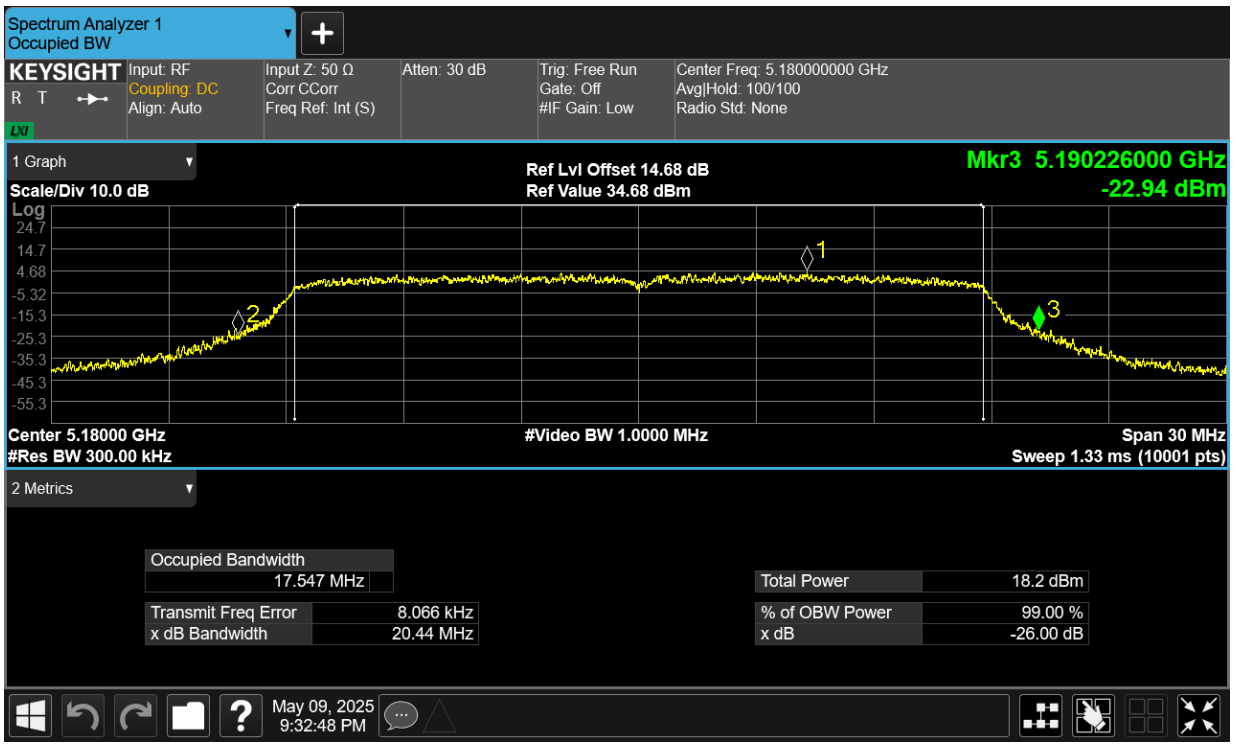
-26dB Bandwidth NVNT ac20 5180MHz Ant2



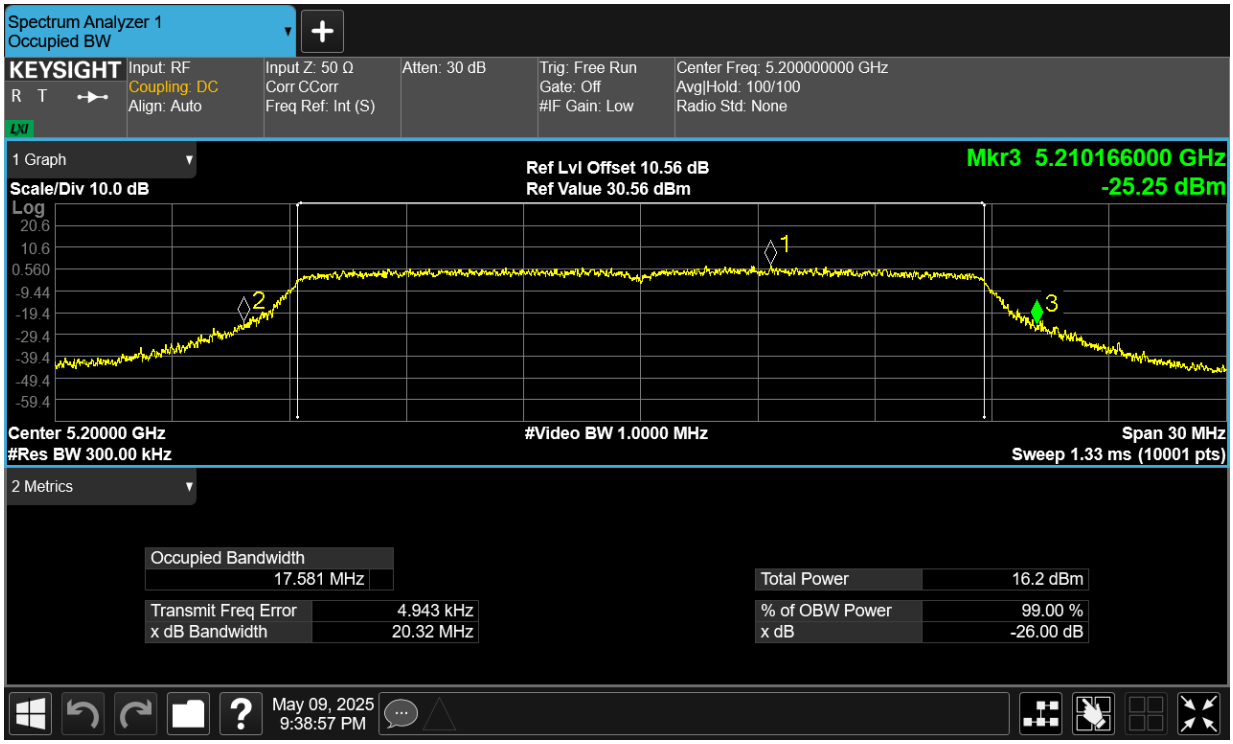
-26dB Bandwidth NVNT ac20 5180MHz Ant3



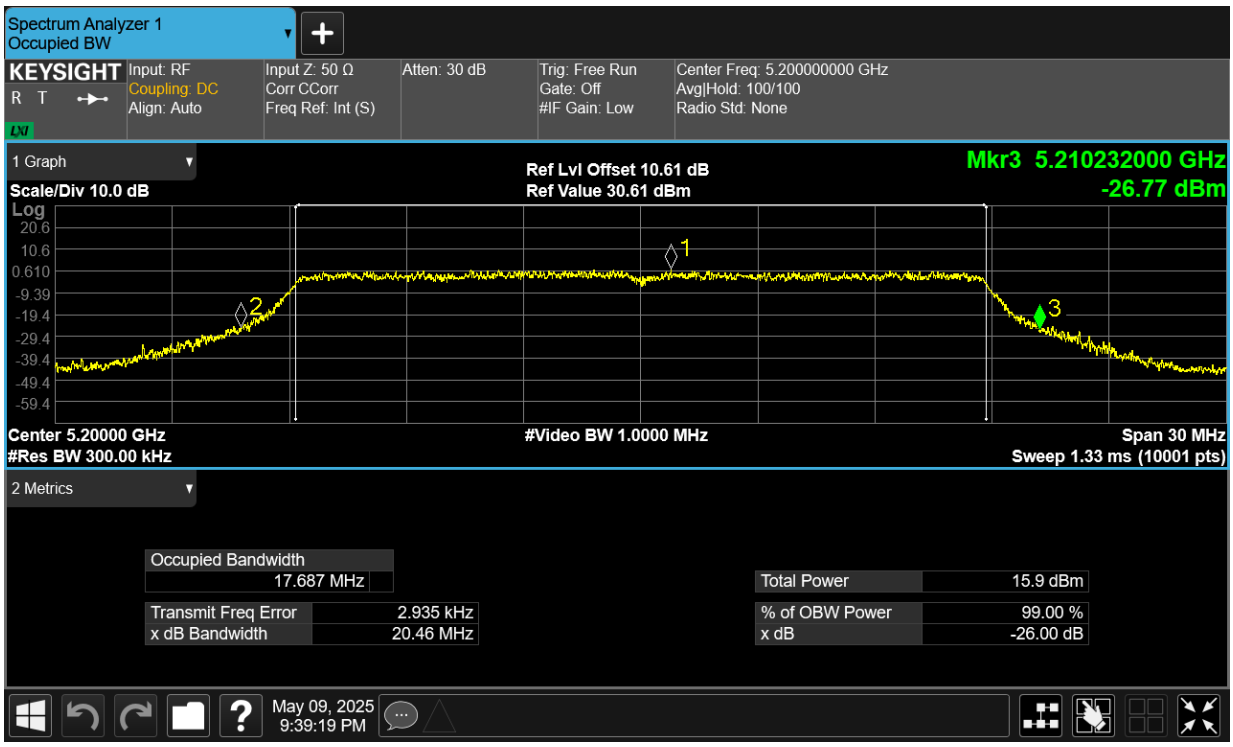
-26dB Bandwidth NVNT ac20 5180MHz Ant4



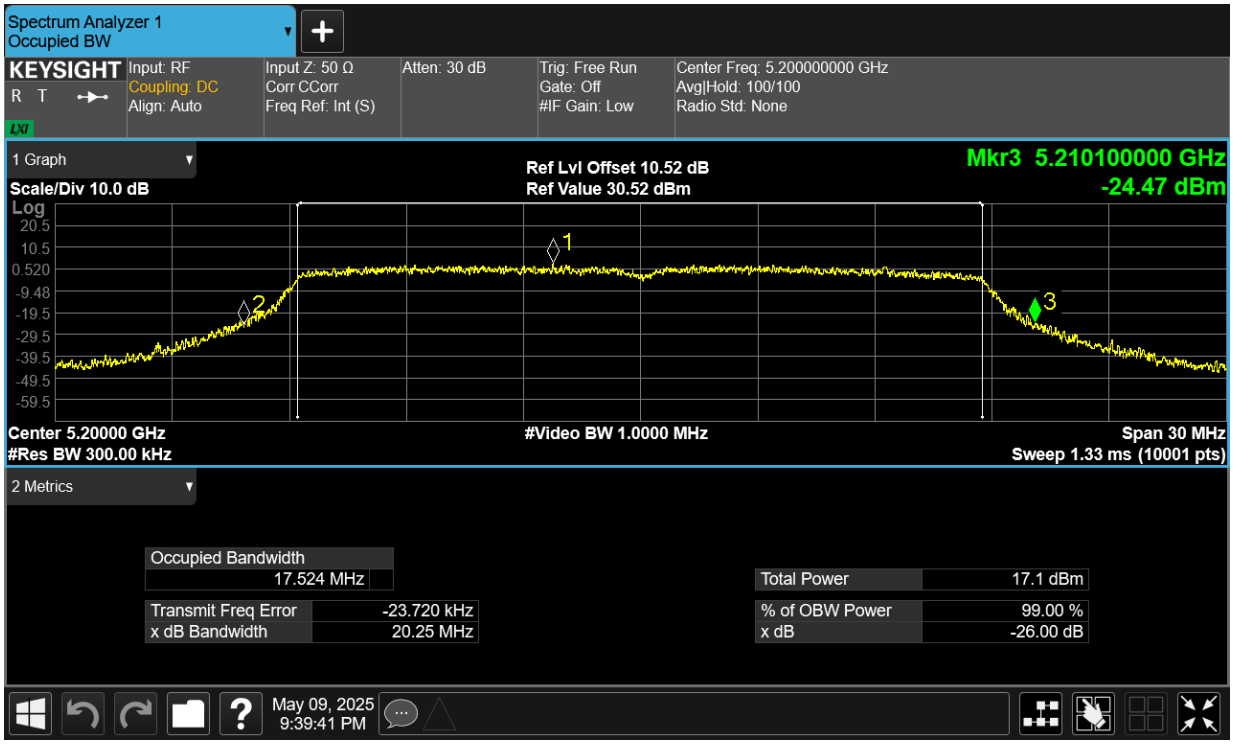
-26dB Bandwidth NVNT ac20 5200MHz Ant1



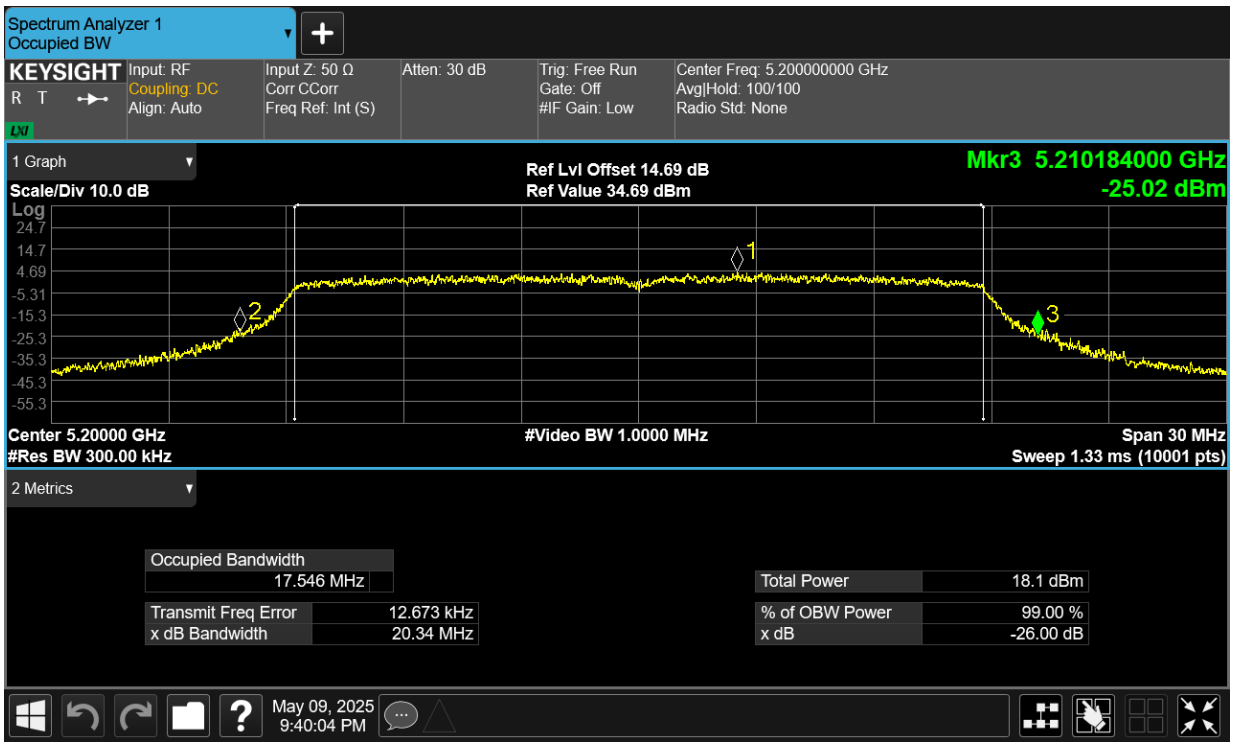
-26dB Bandwidth NVNT ac20 5200MHz Ant2



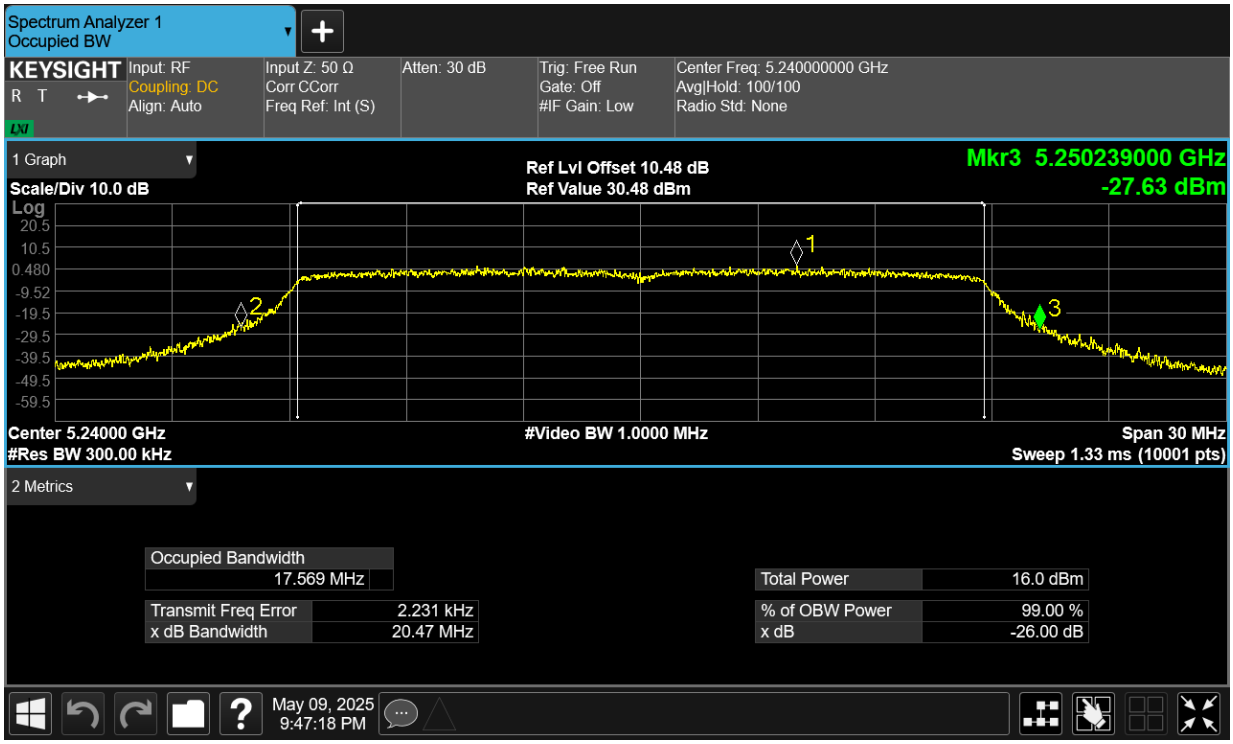
-26dB Bandwidth NVNT ac20 5200MHz Ant3



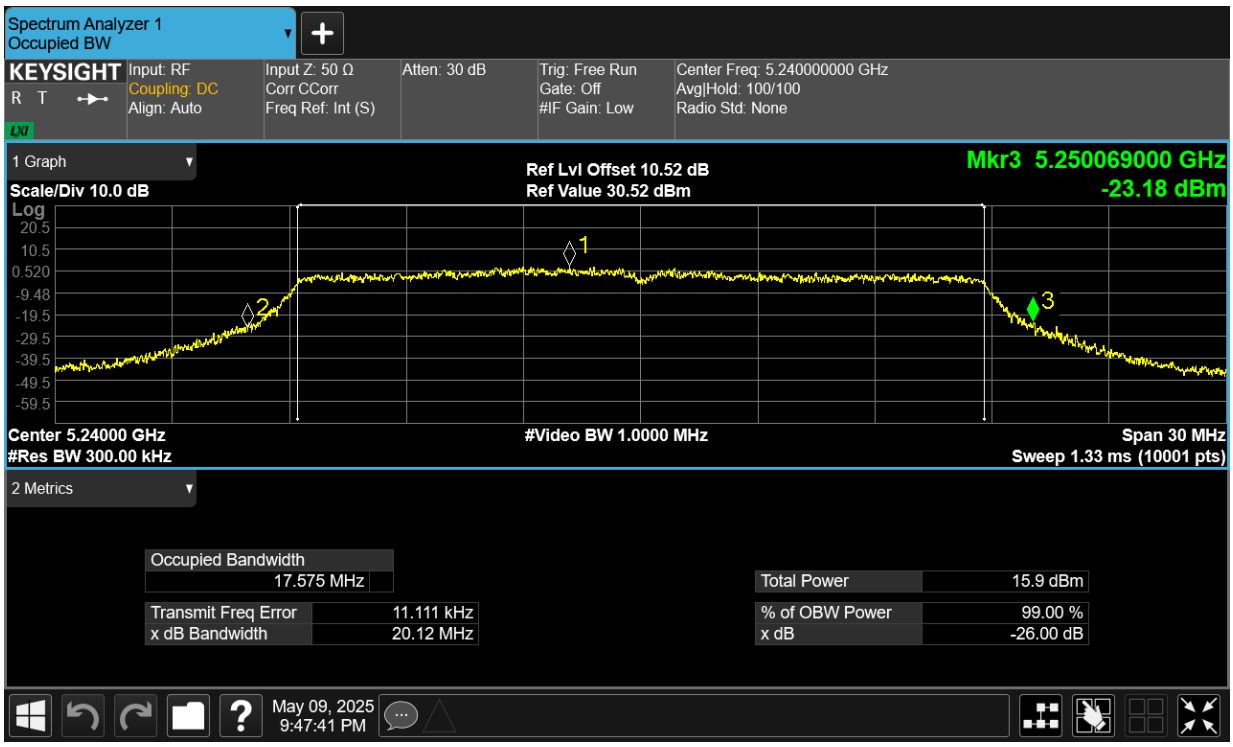
-26dB Bandwidth NVNT ac20 5200MHz Ant4



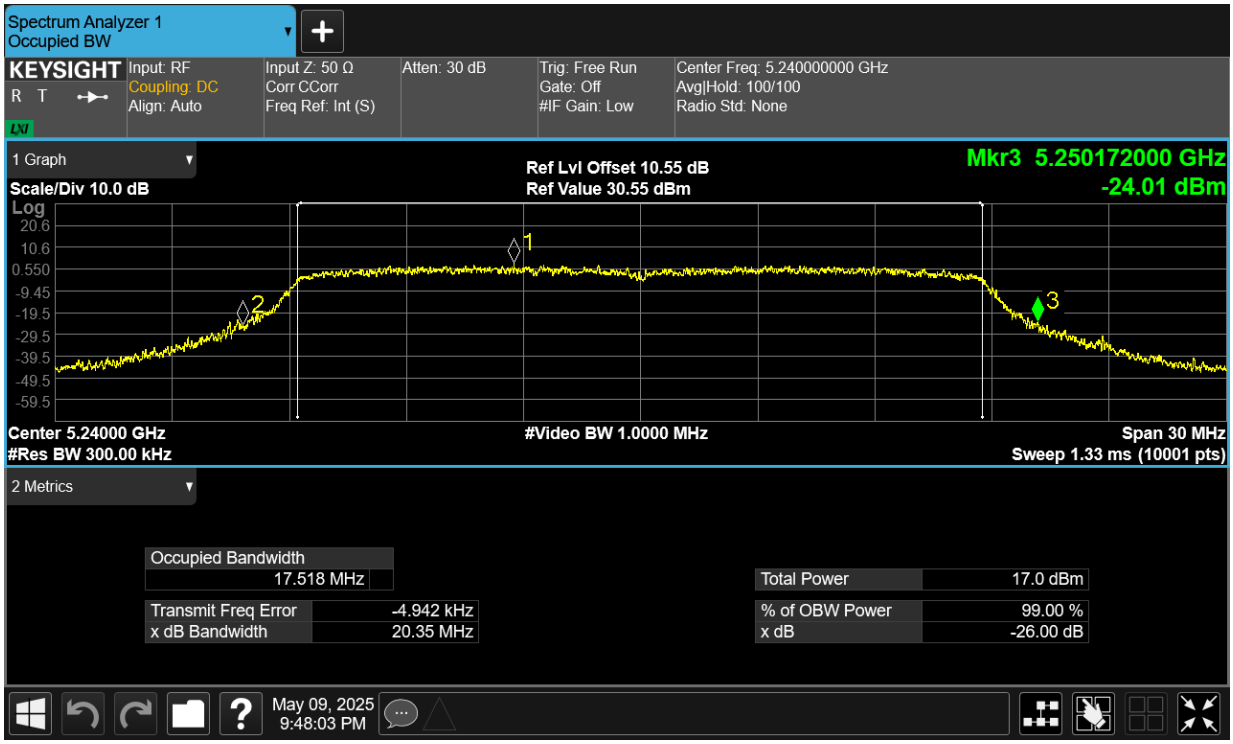
-26dB Bandwidth NVNT ac20 5240MHz Ant1



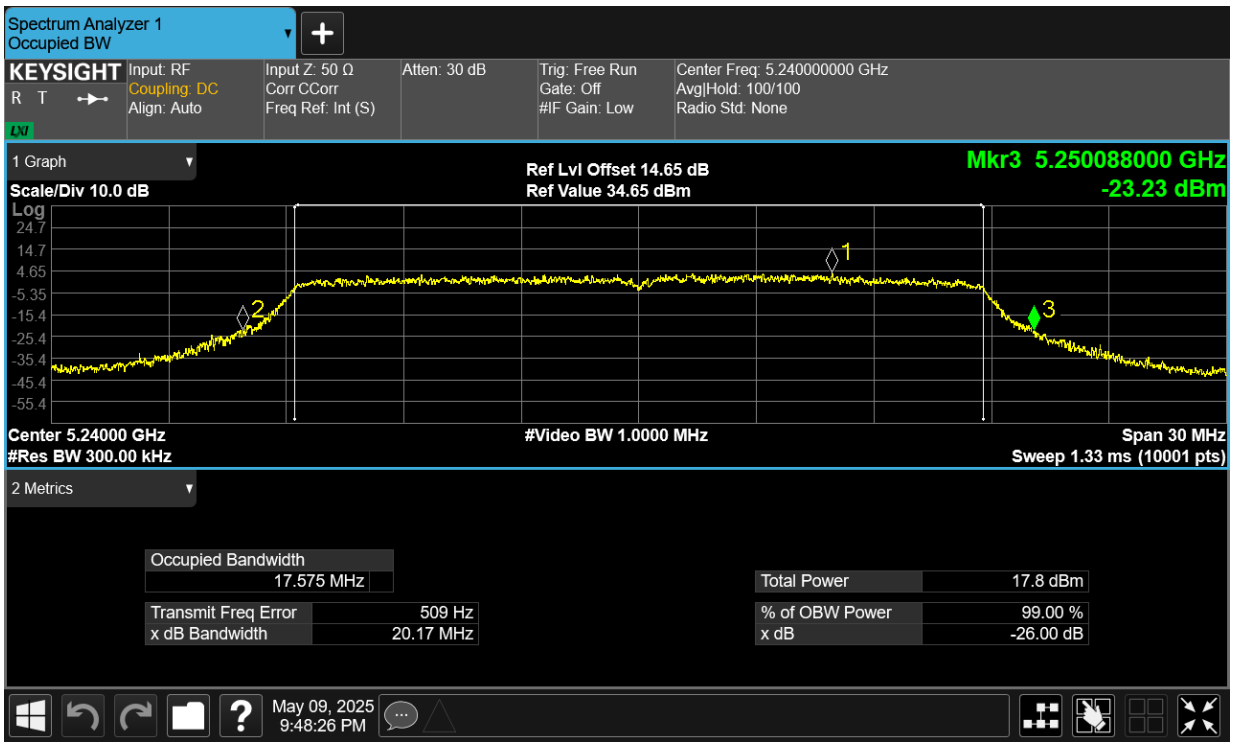
-26dB Bandwidth NVNT ac20 5240MHz Ant2



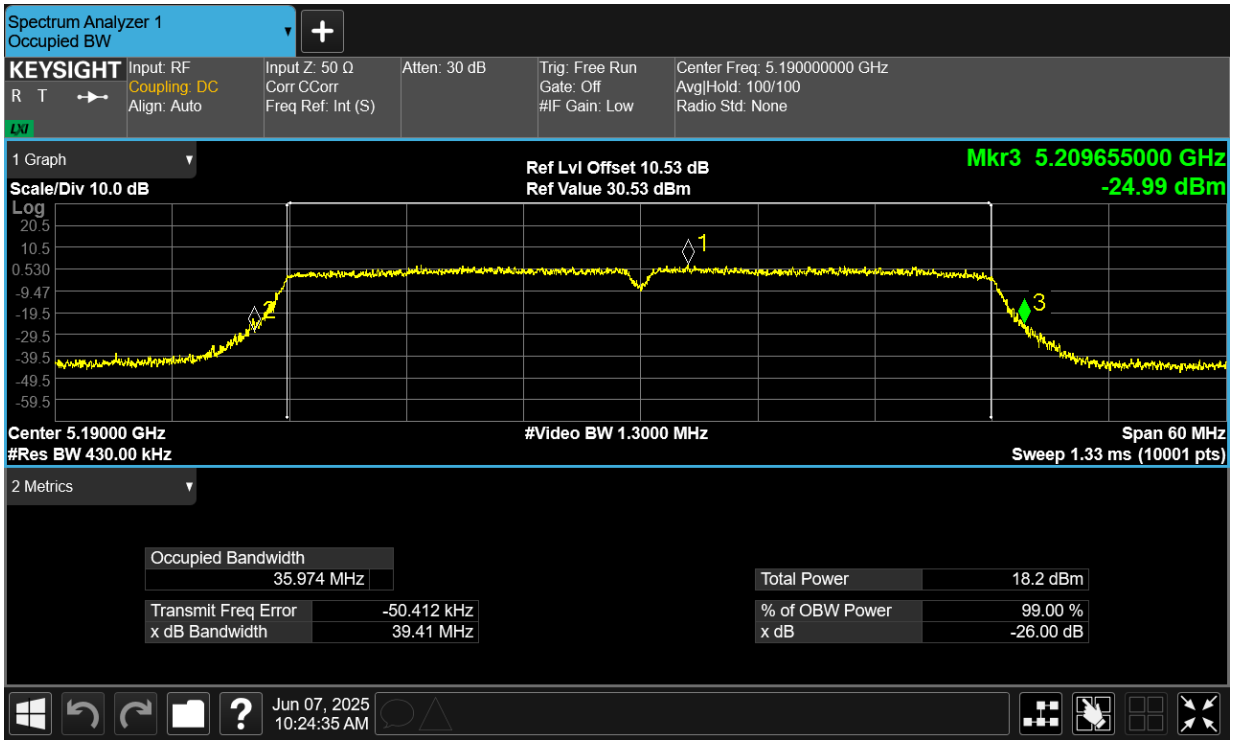
-26dB Bandwidth NVNT ac20 5240MHz Ant3



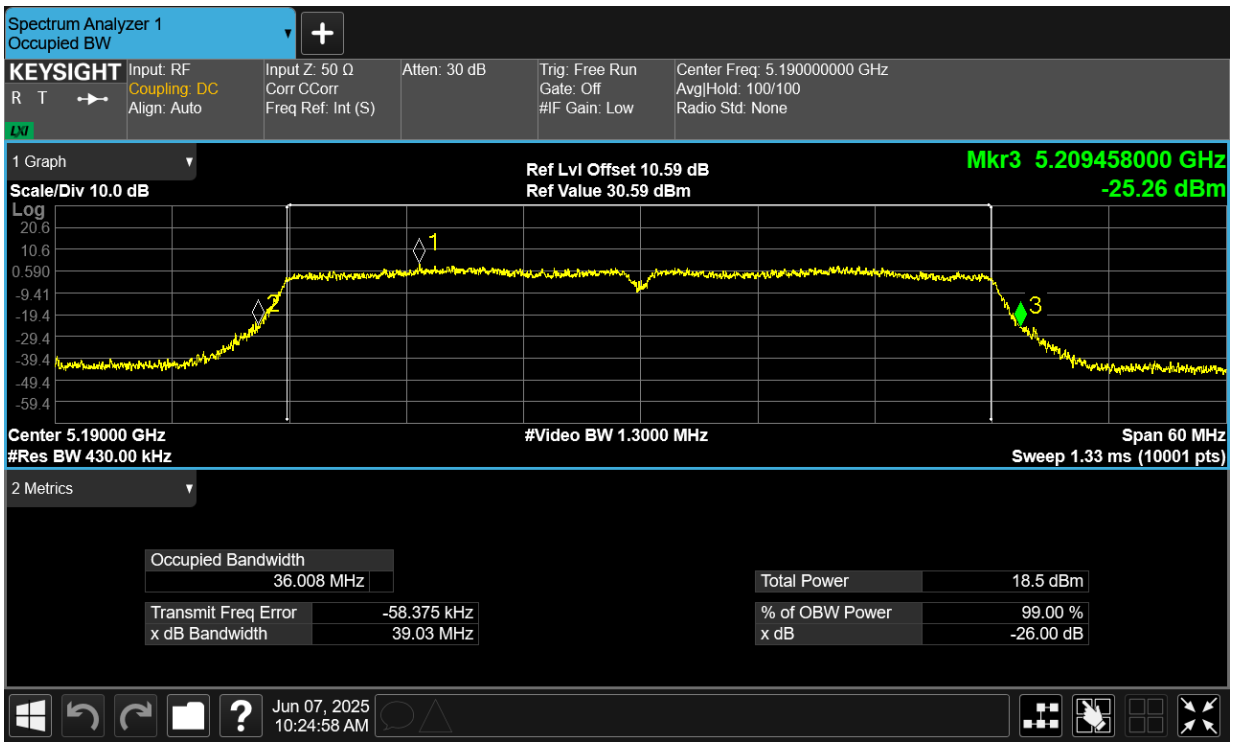
-26dB Bandwidth NVNT ac20 5240MHz Ant4



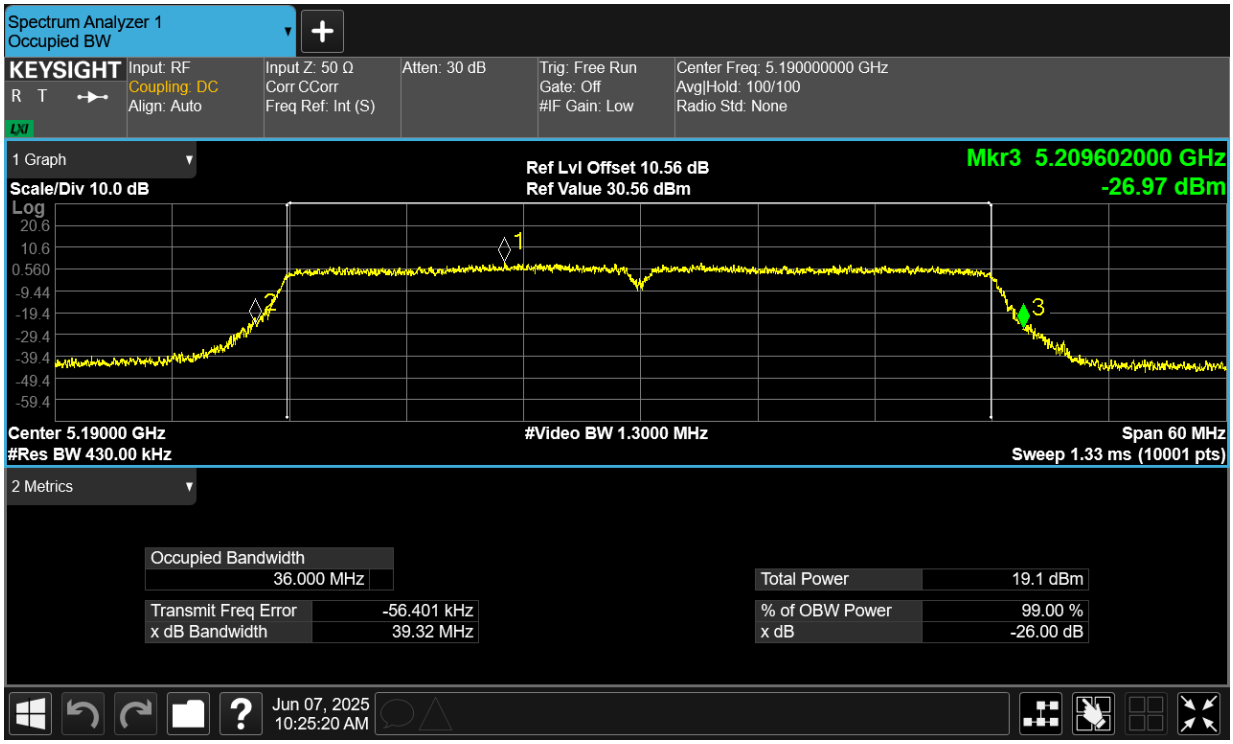
-26dB Bandwidth NVNT ac40 5190MHz Ant1



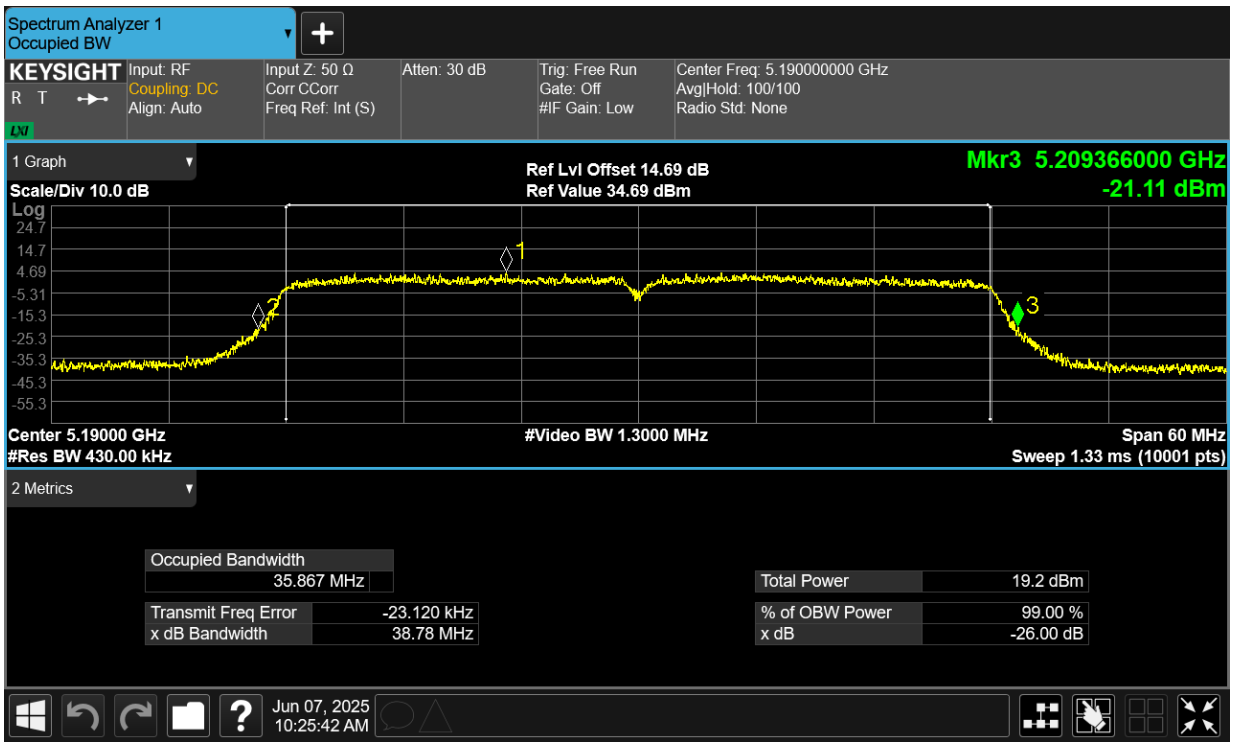
-26dB Bandwidth NVNT ac40 5190MHz Ant2



-26dB Bandwidth NVNT ac40 5190MHz Ant3



-26dB Bandwidth NVNT ac40 5190MHz Ant4



-26dB Bandwidth NVNT ac40 5230MHz Ant1