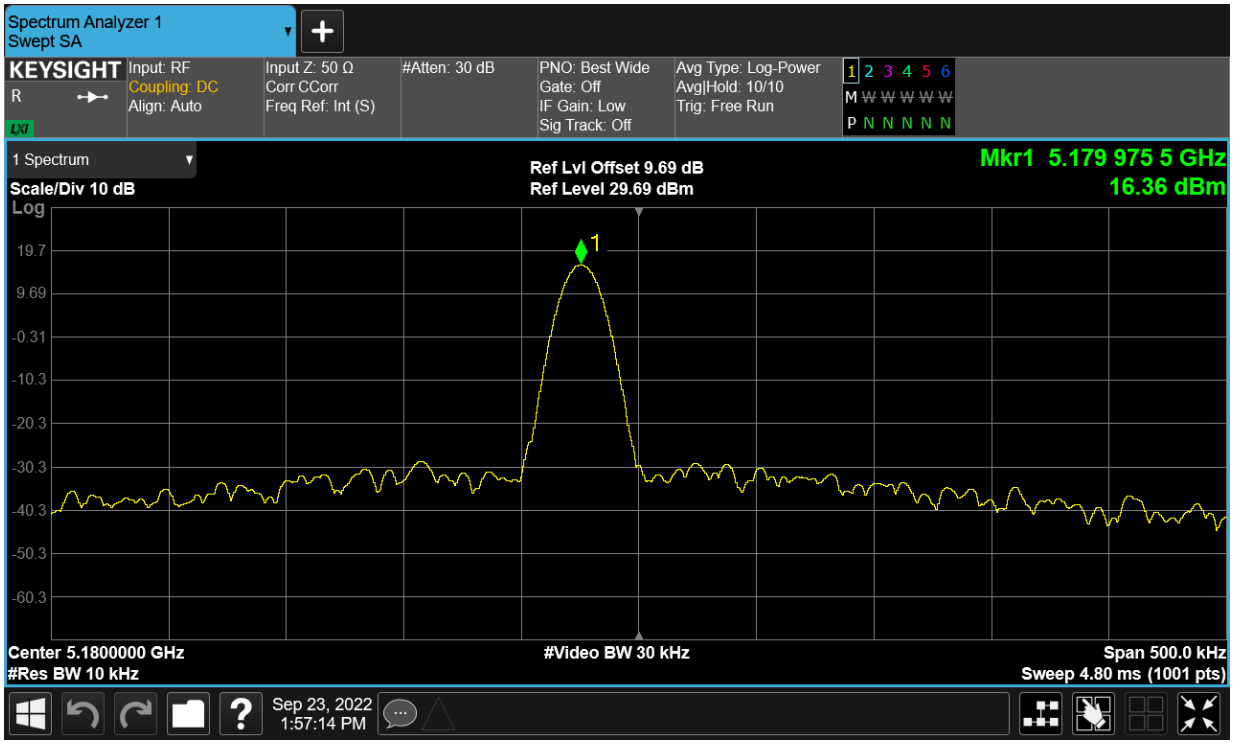
Test Data

Frequency Stability

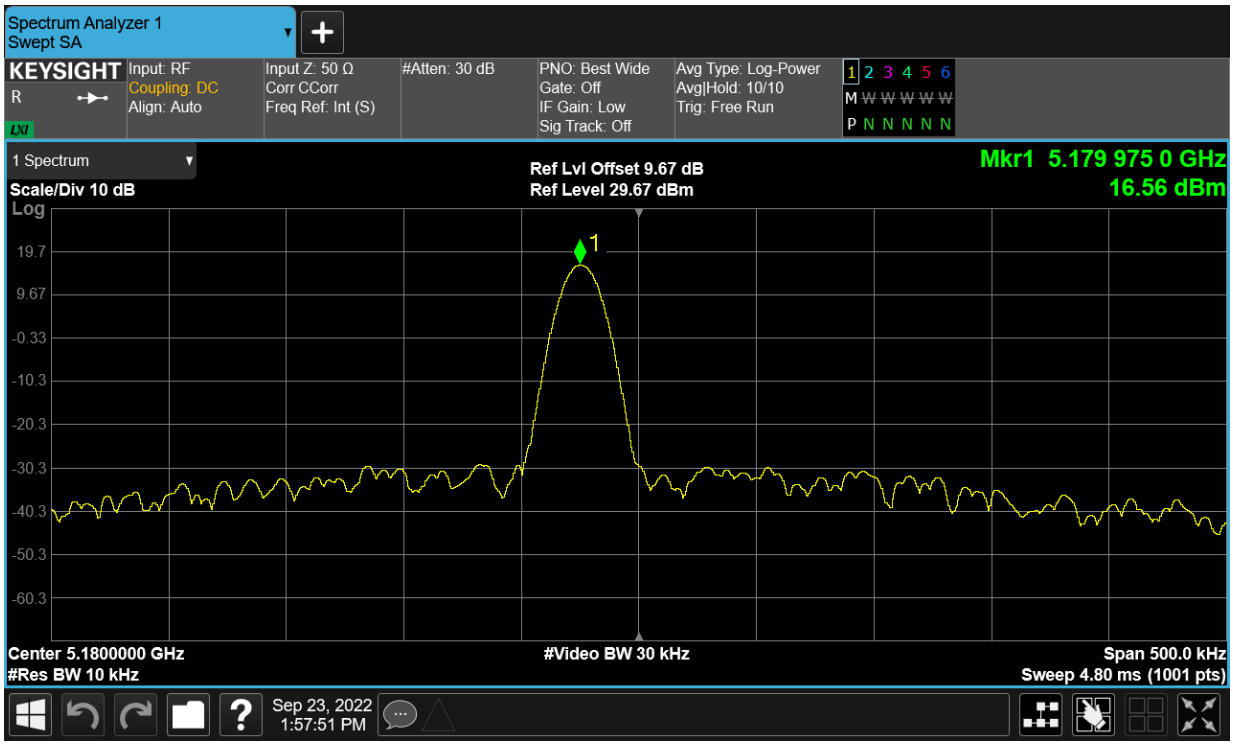
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
HVNT	a	5180	Ant1	5179.9755	-4.73		Pass
HVNT	a	5180	Ant2	5179.975	-4.83		Pass
LVNT	a	5180	Ant1	5179.9755	-4.73		Pass
LVNT	a	5180	Ant2	5179.9755	-4.73		Pass
NVHT	a	5180	Ant1	5179.9755	-4.73		Pass
NVHT	a	5180	Ant2	5179.9755	-4.73		Pass
NVLT	a	5180	Ant1	5179.9755	-4.73		Pass
NVLT	a	5180	Ant2	5179.9755	-4.73		Pass
NVNT	a	5180	Ant1	5179.977	-4.44		Pass
NVNT	a	5180	Ant2	5179.9755	-4.73		Pass
HVNT	ac20	5180	Sum	5179.978	-4.25		Pass
LVNT	ac20	5180	Sum	5179.978	-4.25		Pass
NVHT	ac20	5180	Sum	5179.9785	-4.15		Pass
NVLT	ac20	5180	Sum	5179.979	-4.05		Pass
NVNT	ac20	5180	Sum	5179.9815	-3.57		Pass
HVNT	ac40	5190	Sum	5189.978	-4.24		Pass
LVNT	ac40	5190	Sum	5189.978	-4.24		Pass
NVHT	ac40	5190	Sum	5189.9785	-4.14	Within authorized band	Pass
NVLT	ac40	5190	Sum	5189.9785	-4.14		Pass
NVNT	ac40	5190	Sum	5189.9785	-4.14		Pass
HVNT	ac80	5210	Sum	5209.9795	-3.93		Pass
LVNT	ac80	5210	Sum	5209.9795	-3.93		Pass
NVHT	ac80	5210	Sum	5209.9805	-3.74		Pass
NVLT	ac80	5210	Sum	5209.981	-3.65		Pass
NVNT	ac80	5210	Sum	5209.983	-3.26		Pass
HVNT	n20	5180	Sum	5179.9785	-4.15		Pass
LVNT	n20	5180	Sum	5179.979	-4.05		Pass
NVHT	n20	5180	Sum	5179.979	-4.05		Pass
NVLT	n20	5180	Sum	5179.98	-3.86		Pass
NVNT	n20	5180	Sum	5179.9805	-3.76		Pass
HVNT	n40	5190	Sum	5189.9795	-3.95		Pass
LVNT	n40	5190	Sum	5189.9795	-3.95		Pass
NVHT	n40	5190	Sum	5189.98	-3.85		Pass
NVLT	n40	5190	Sum	5189.9805	-3.76		Pass
NVNT	n40	5190	Sum	5189.982	-3.47		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

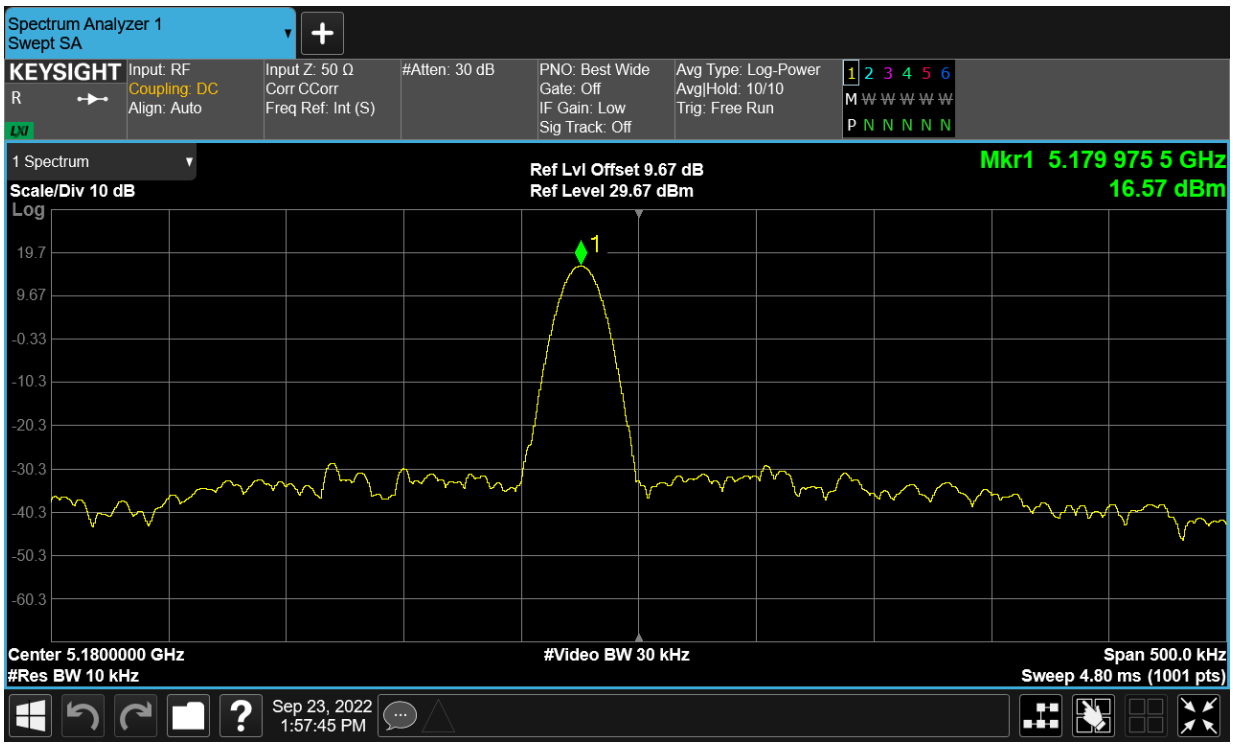


Freq. Stability HVNT a 5180MHz Ant2



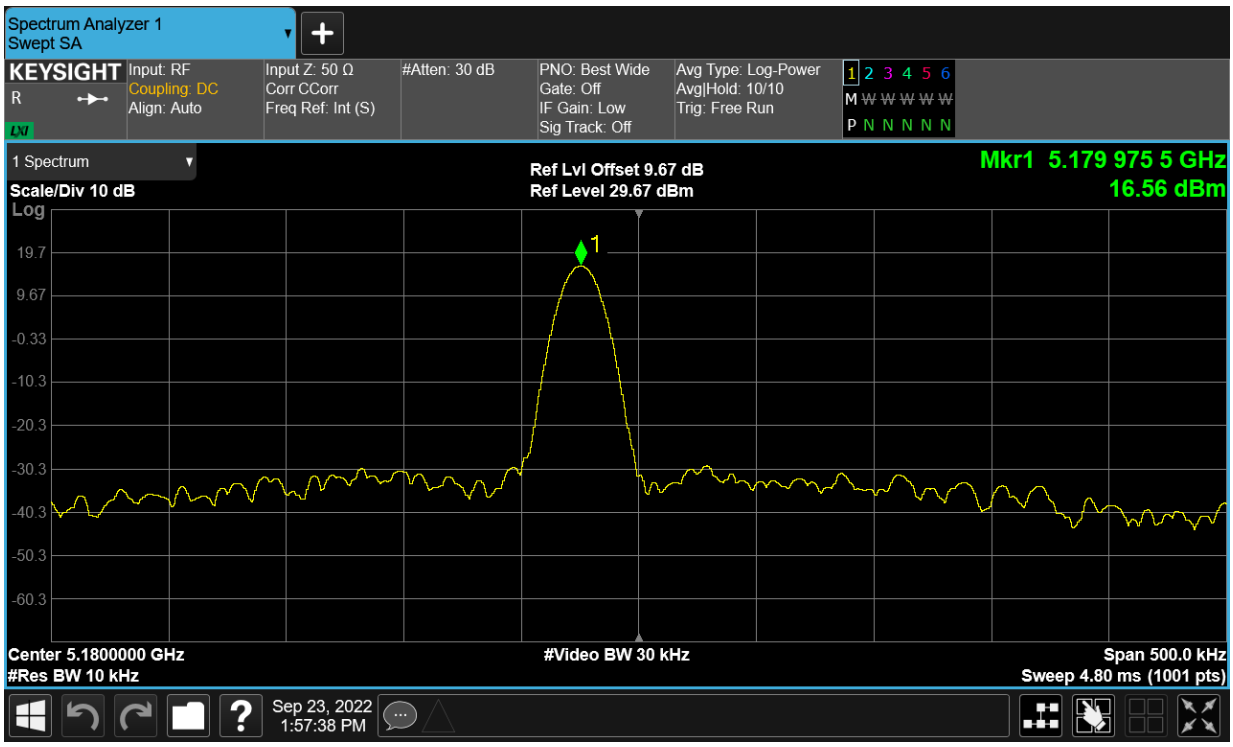
Freq. Stability LVNT a 5180MHz Ant1

Freq. Stability LVNT a 5180MHz Ant2

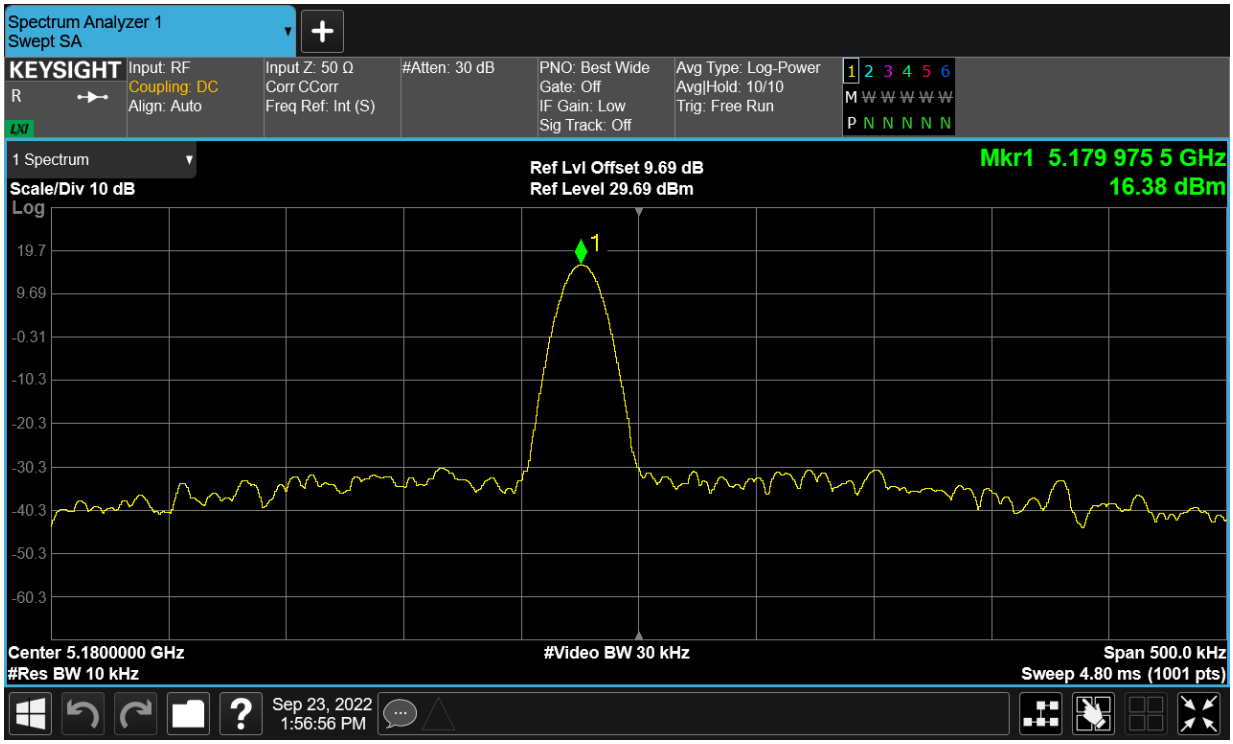


Freq. Stability NVHT a 5180MHz Ant1

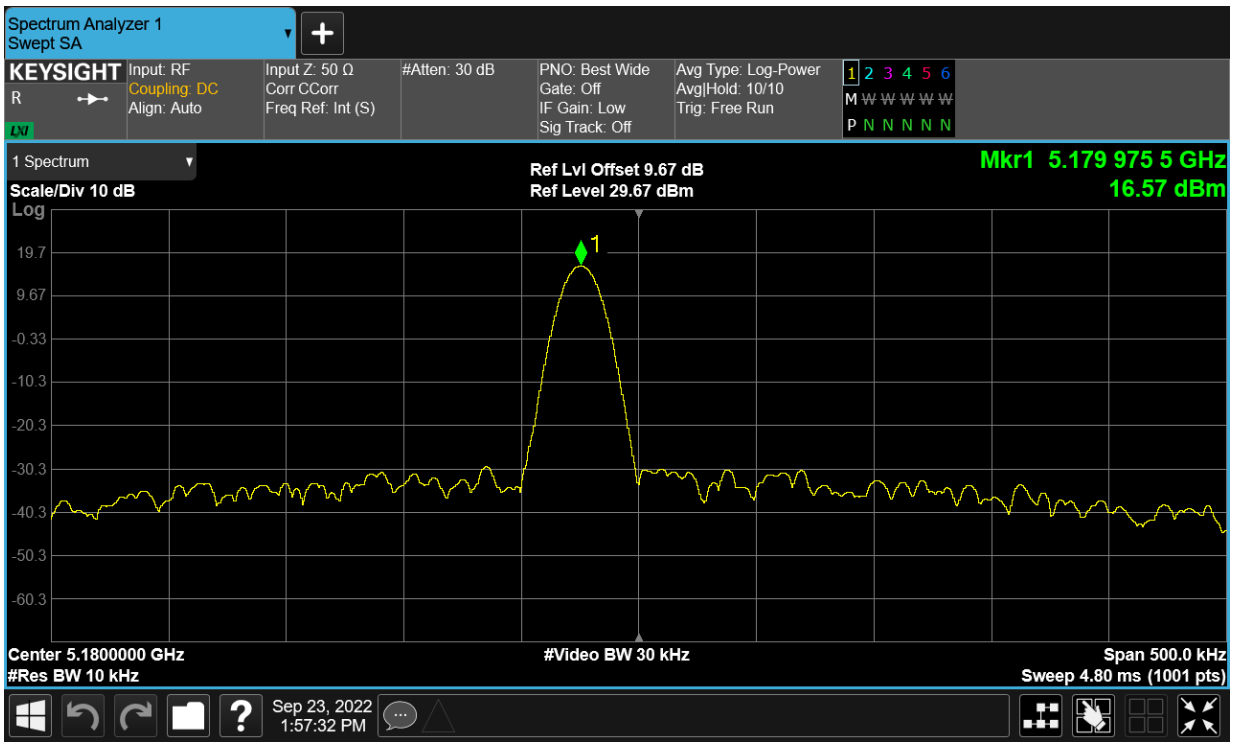
Freq. Stability NVHT a 5180MHz Ant2



Freq. Stability NVLT a 5180MHz Ant1

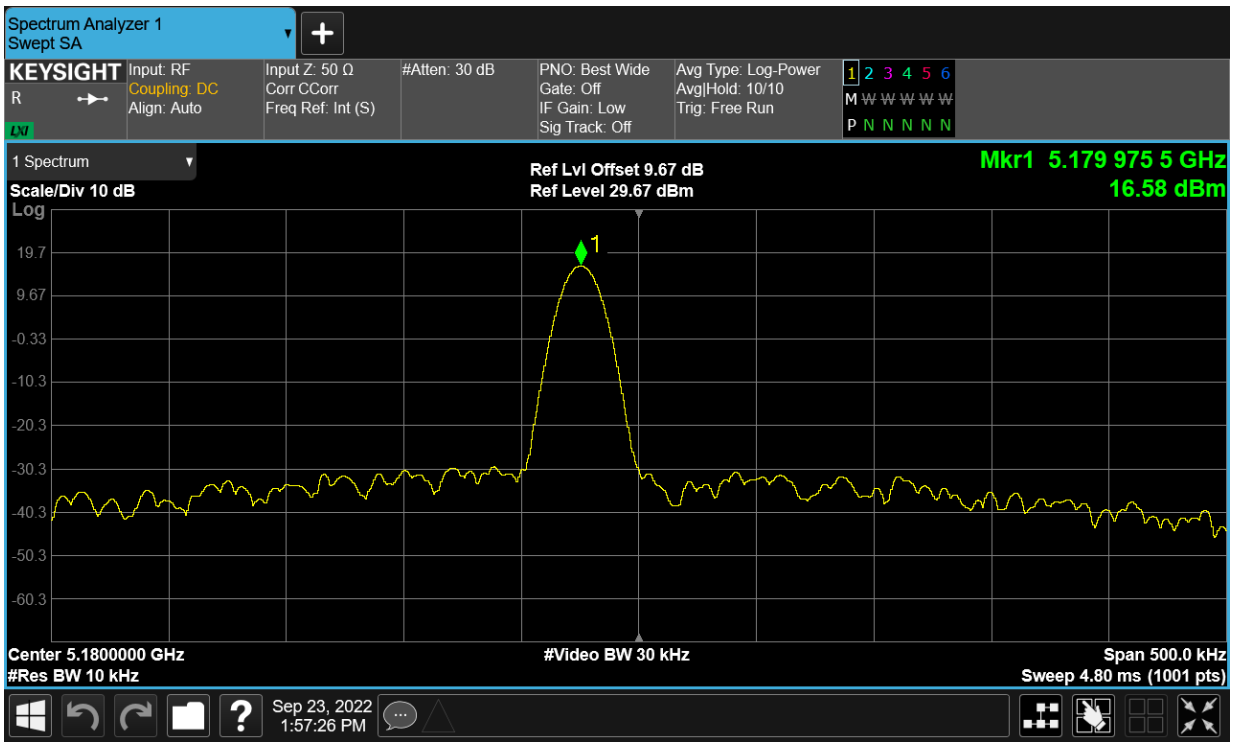


Freq. Stability NVLT a 5180MHz Ant2

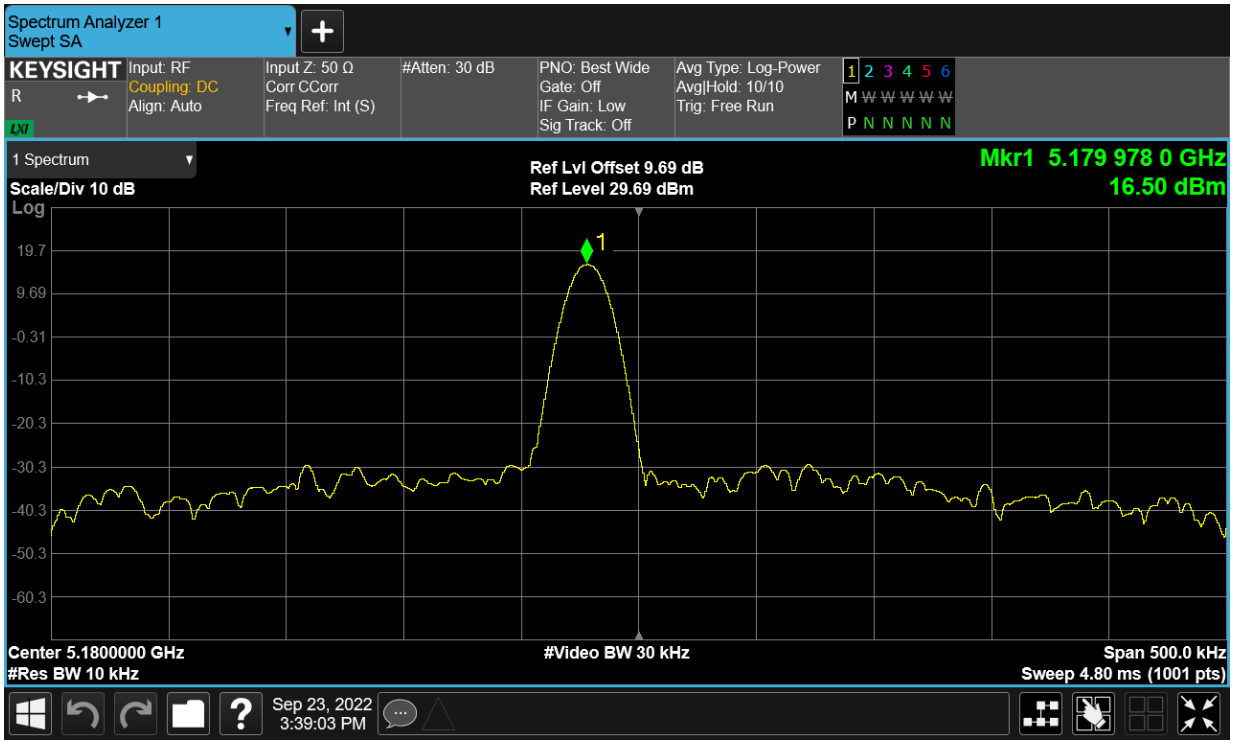


Freq. Stability NVNT a 5180MHz Ant1

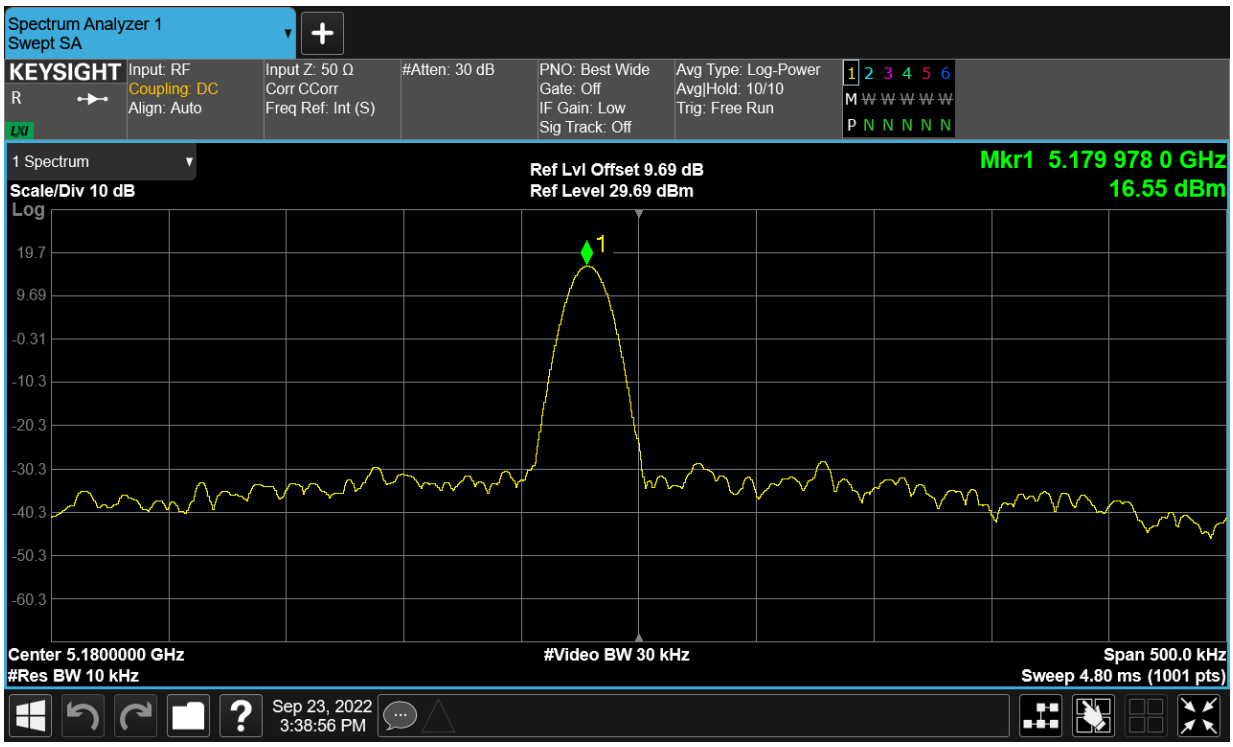
Freq. Stability NVNT a 5180MHz Ant2



Freq. Stability HVNT ac20 5180MHz Sum

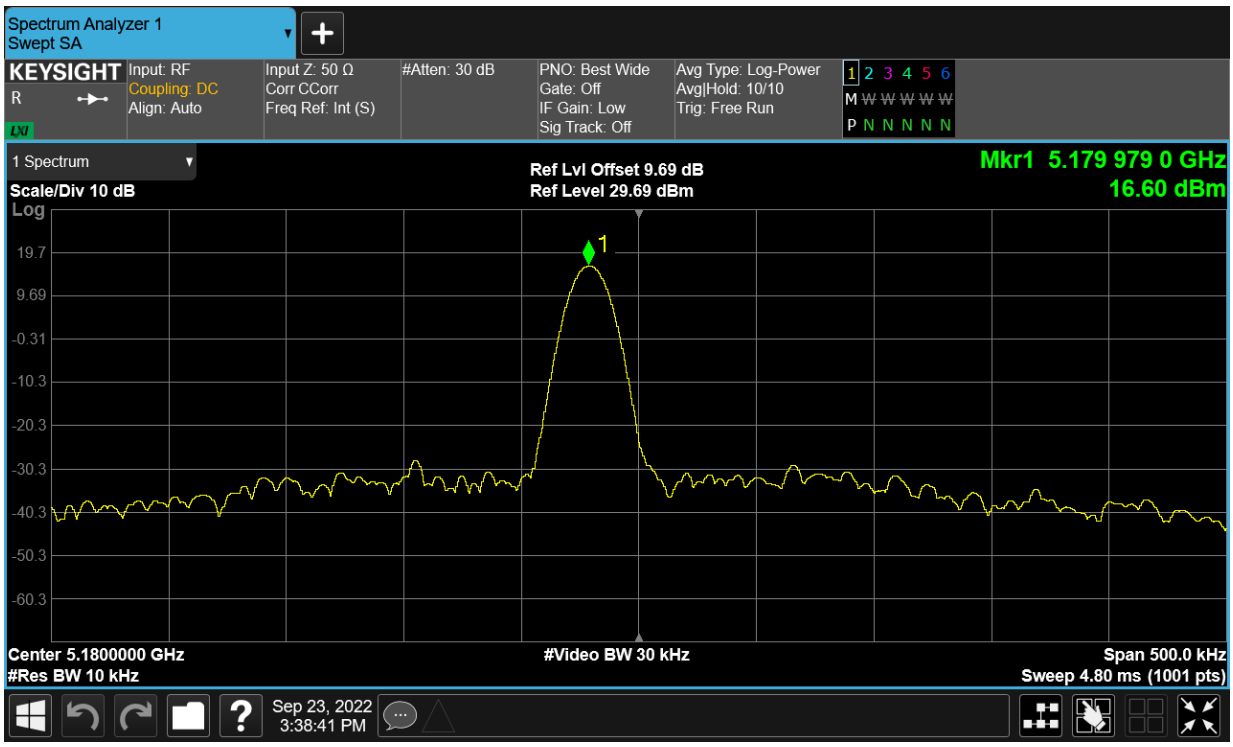


Freq. Stability LVNT ac20 5180MHz Sum

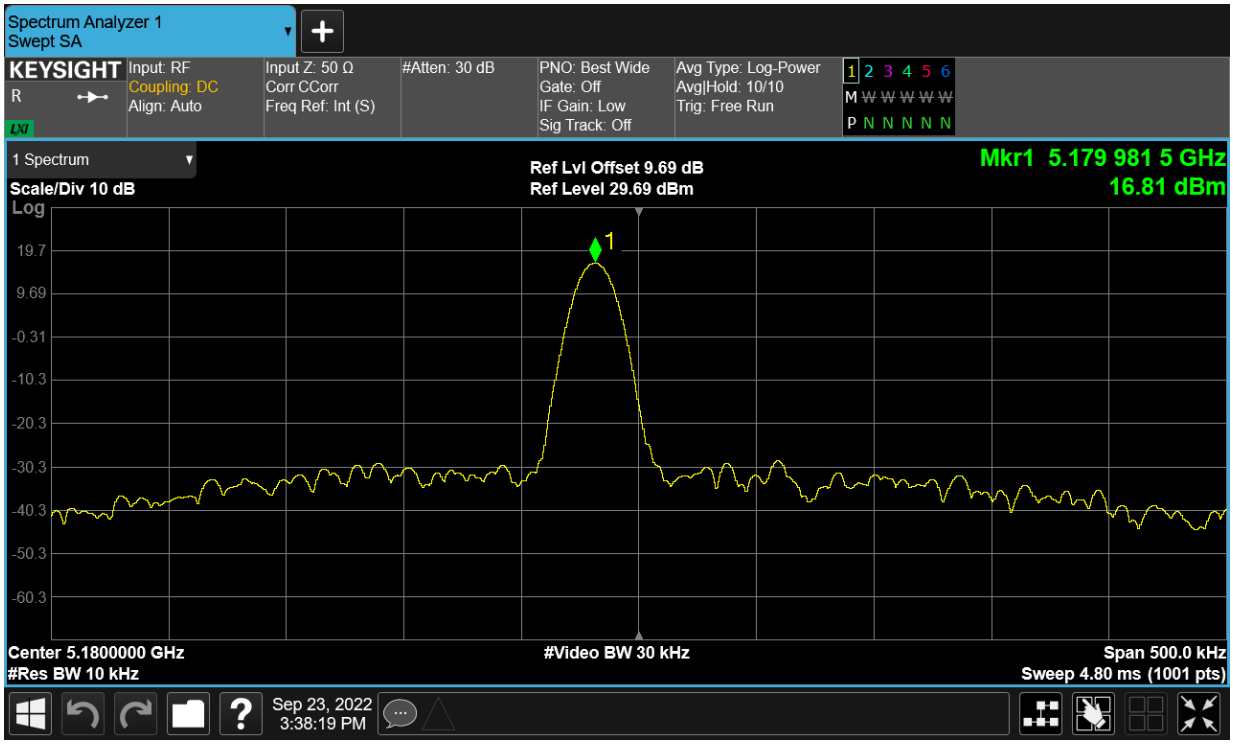


Freq. Stability NVHT ac20 5180MHz Sum

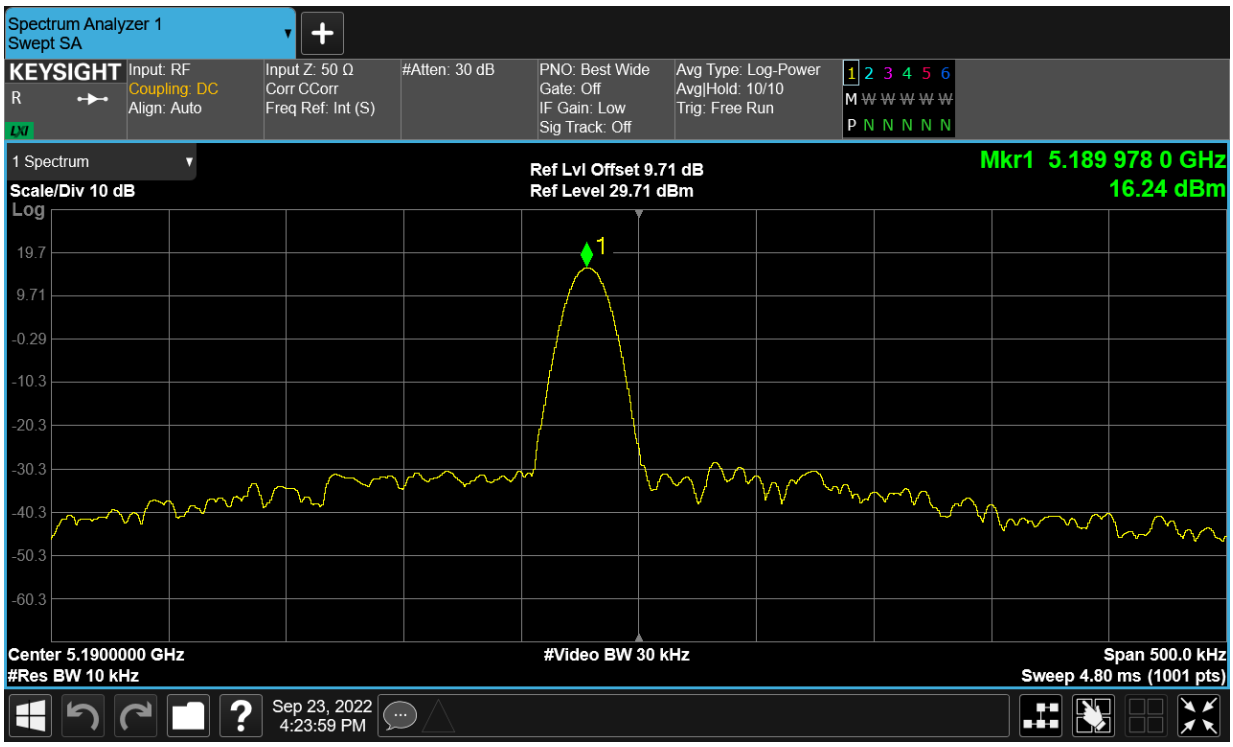
Freq. Stability NVLT ac20 5180MHz Sum



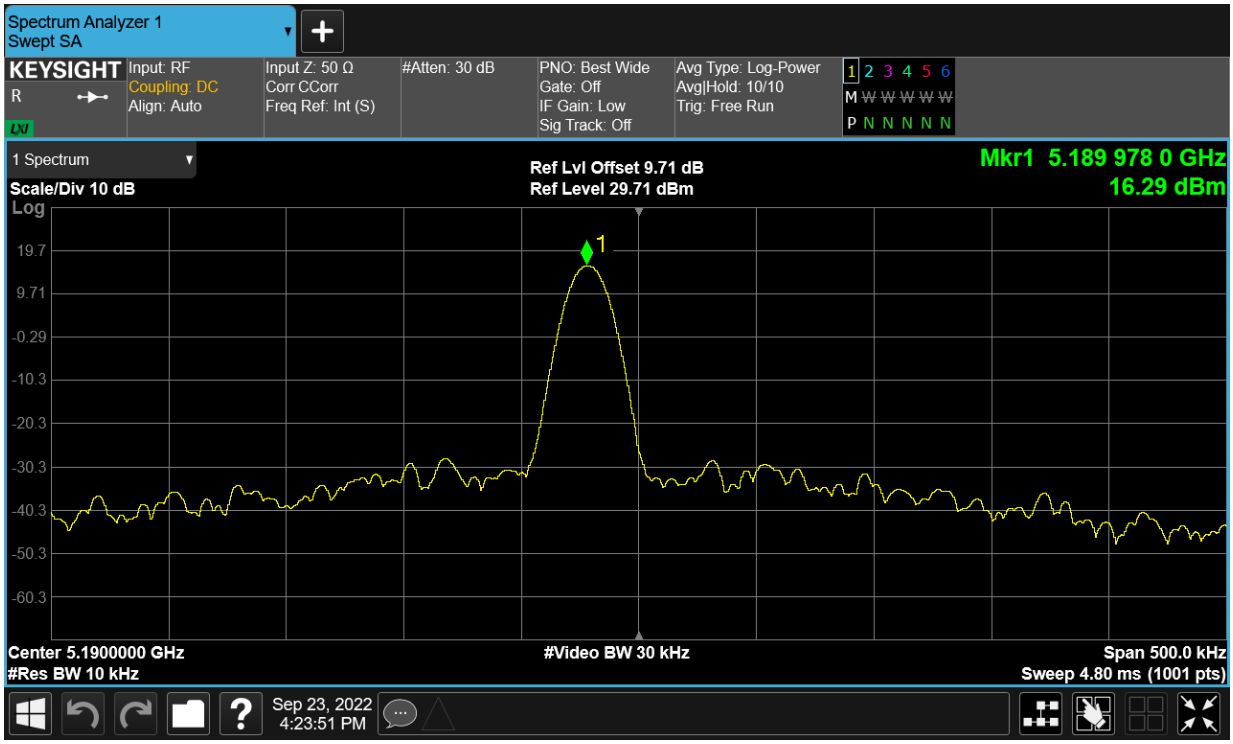
Freq. Stability NVNT ac20 5180MHz Sum



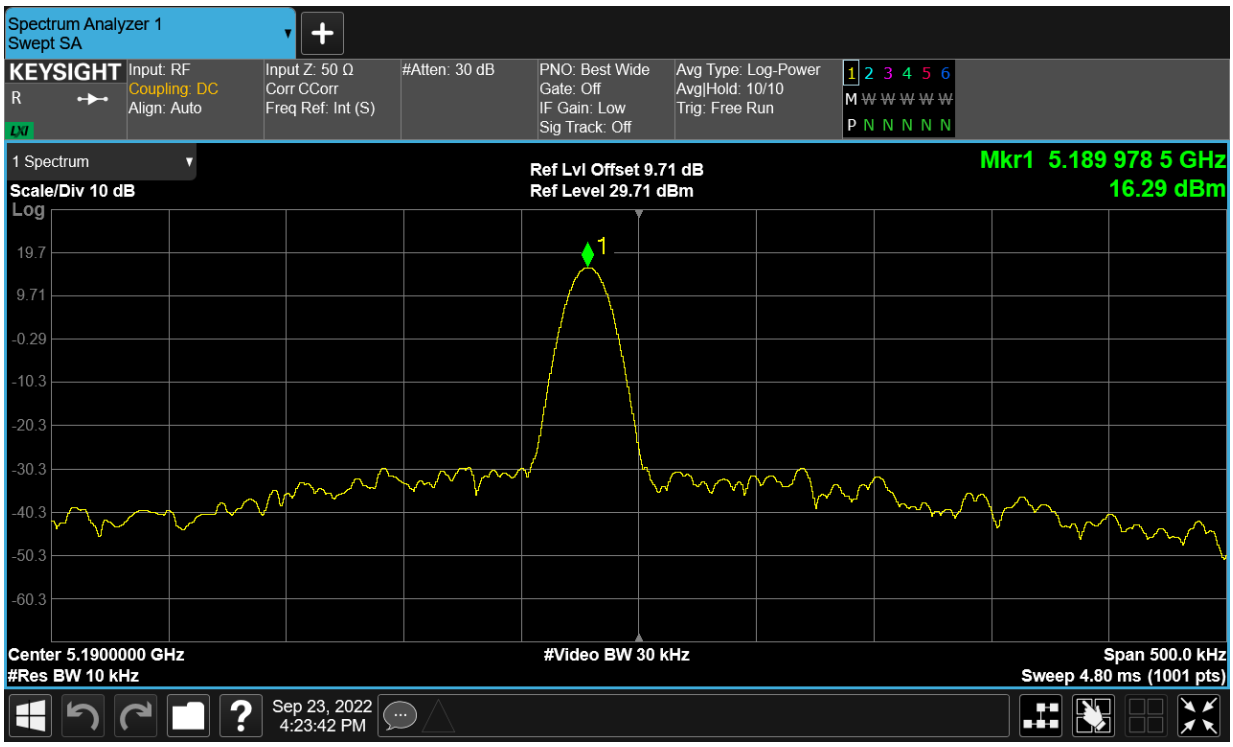
Freq. Stability HVNT ac40 5190MHz Sum



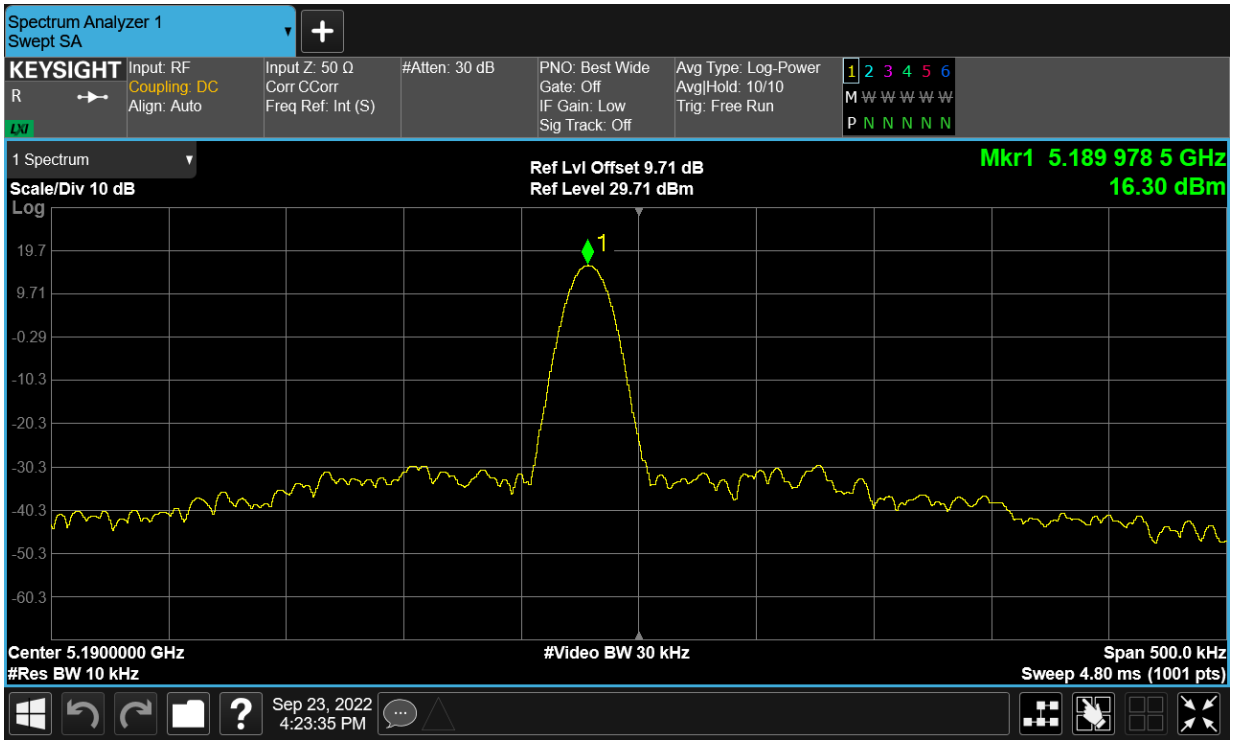
Freq. Stability LVNT ac40 5190MHz Sum



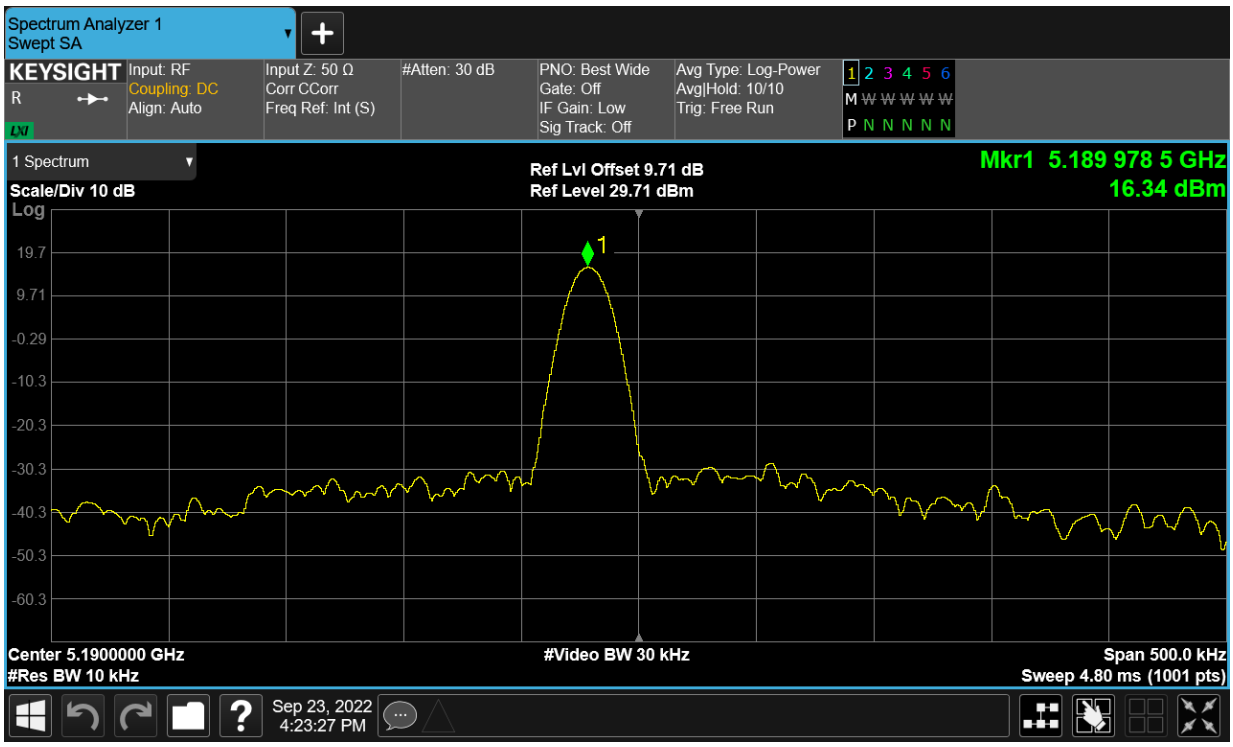
Freq. Stability NVHT ac40 5190MHz Sum



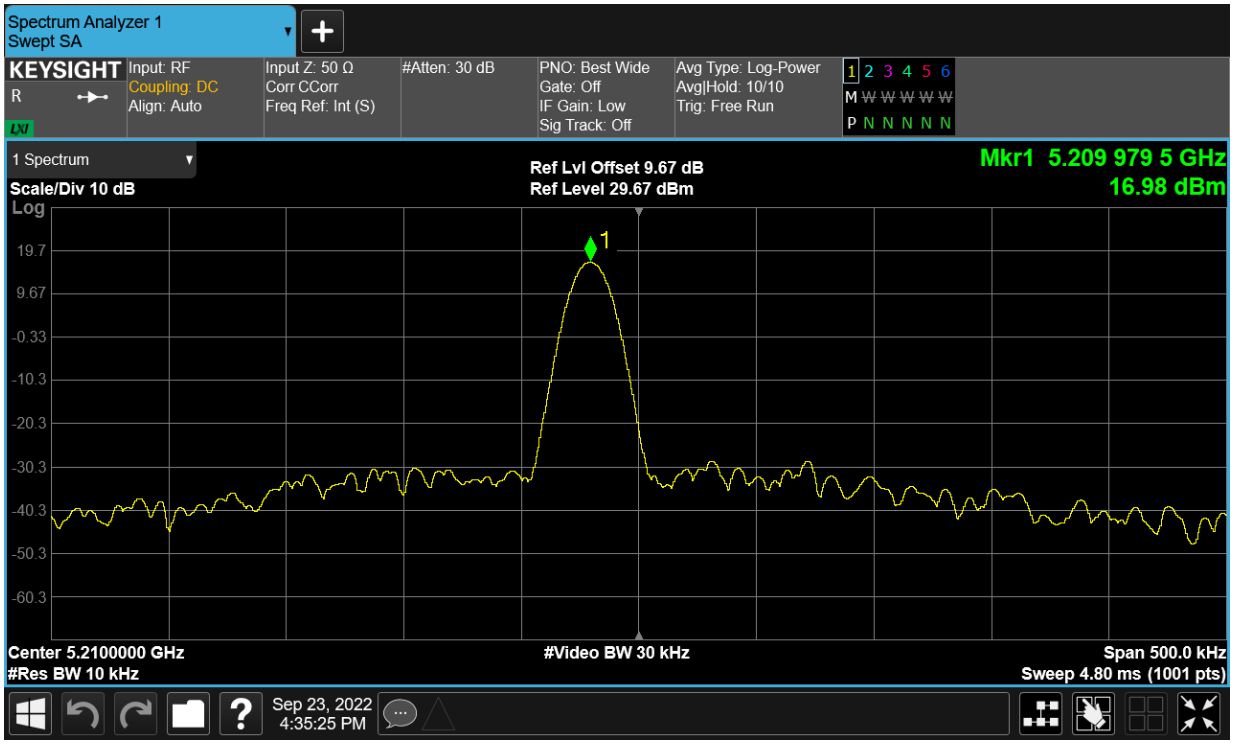
Freq. Stability NVLT ac40 5190MHz Sum



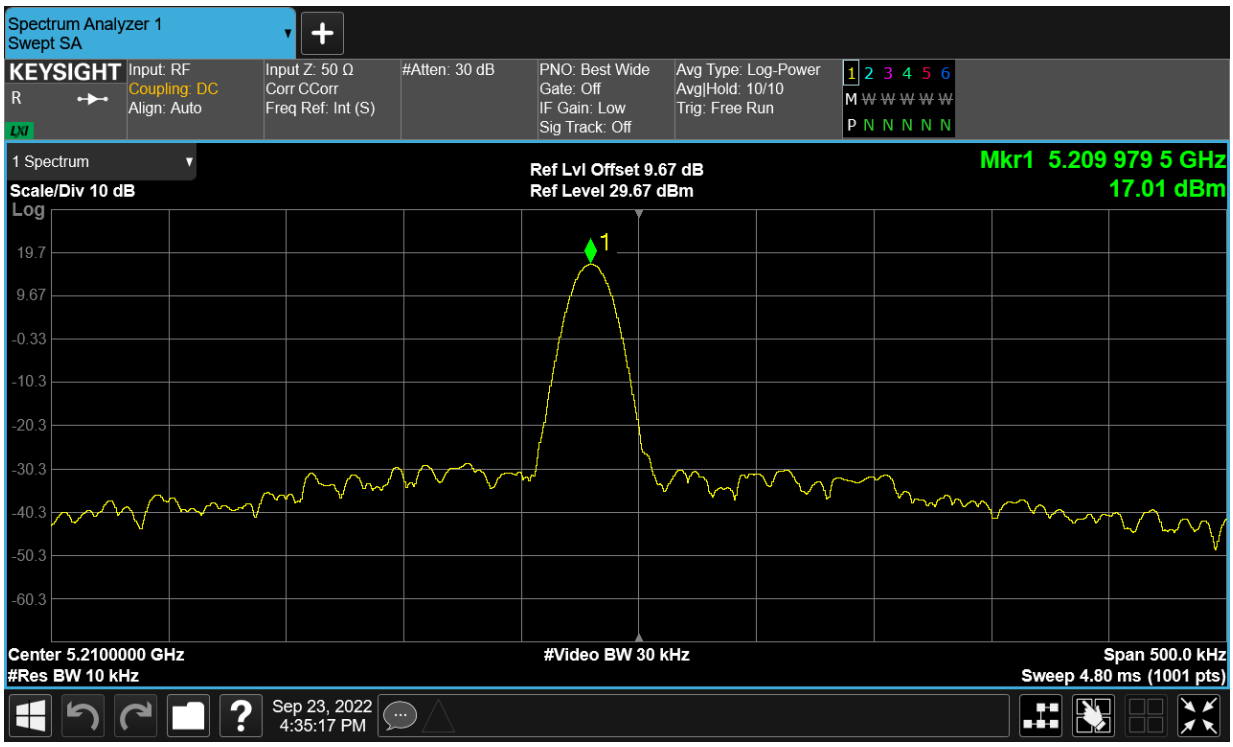
Freq. Stability NVNT ac40 5190MHz Sum



Freq. Stability HVNT ac80 5210MHz Sum

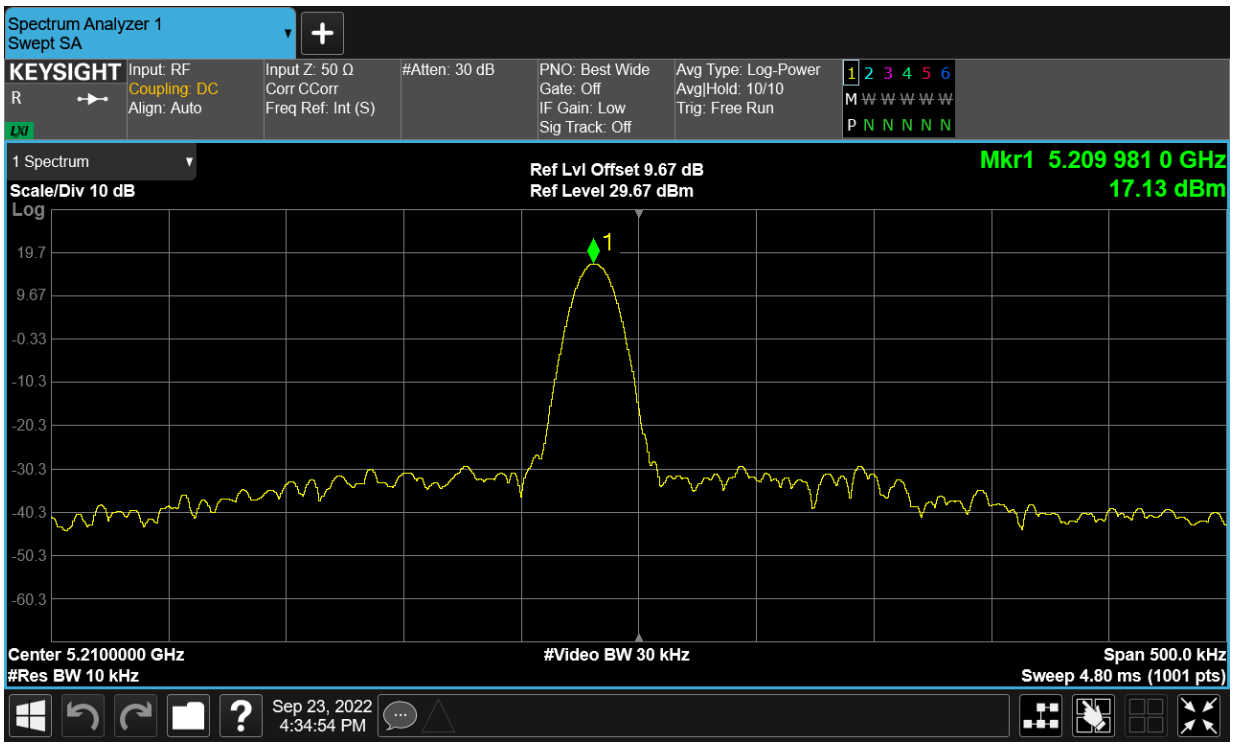


Freq. Stability LVNT ac80 5210MHz Sum

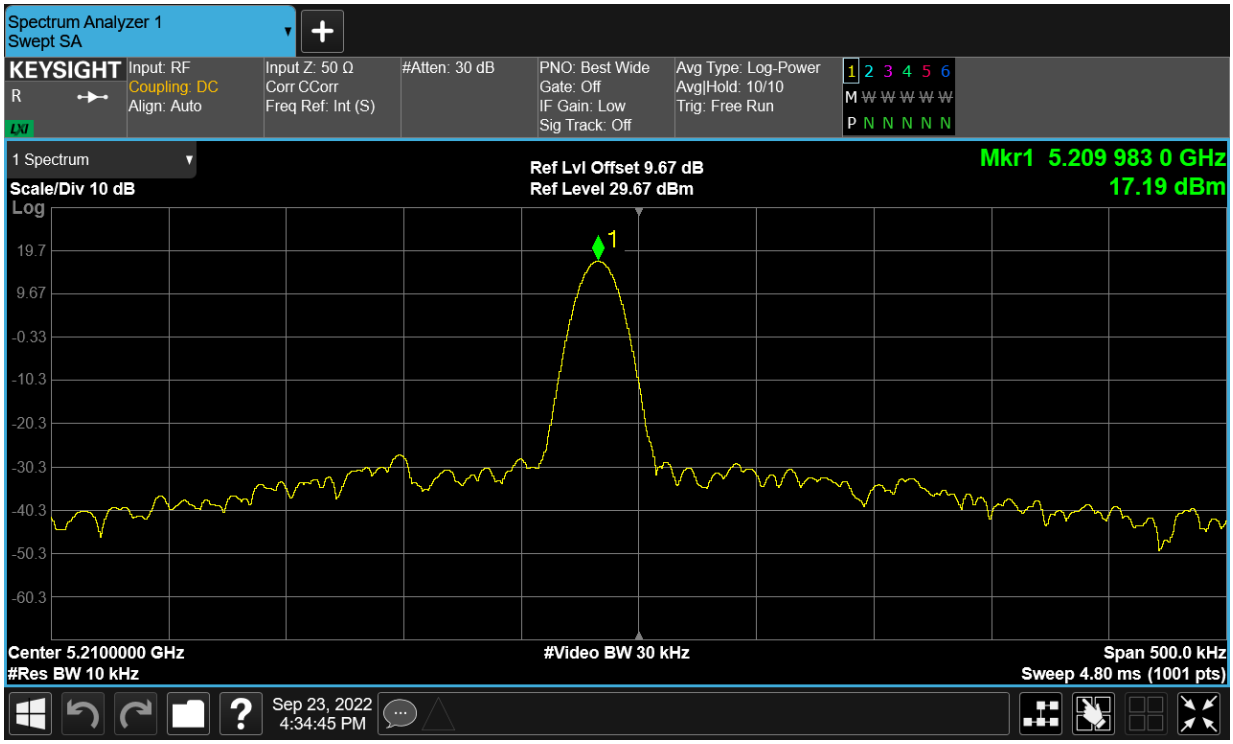


Freq. Stability NVHT ac80 5210MHz Sum

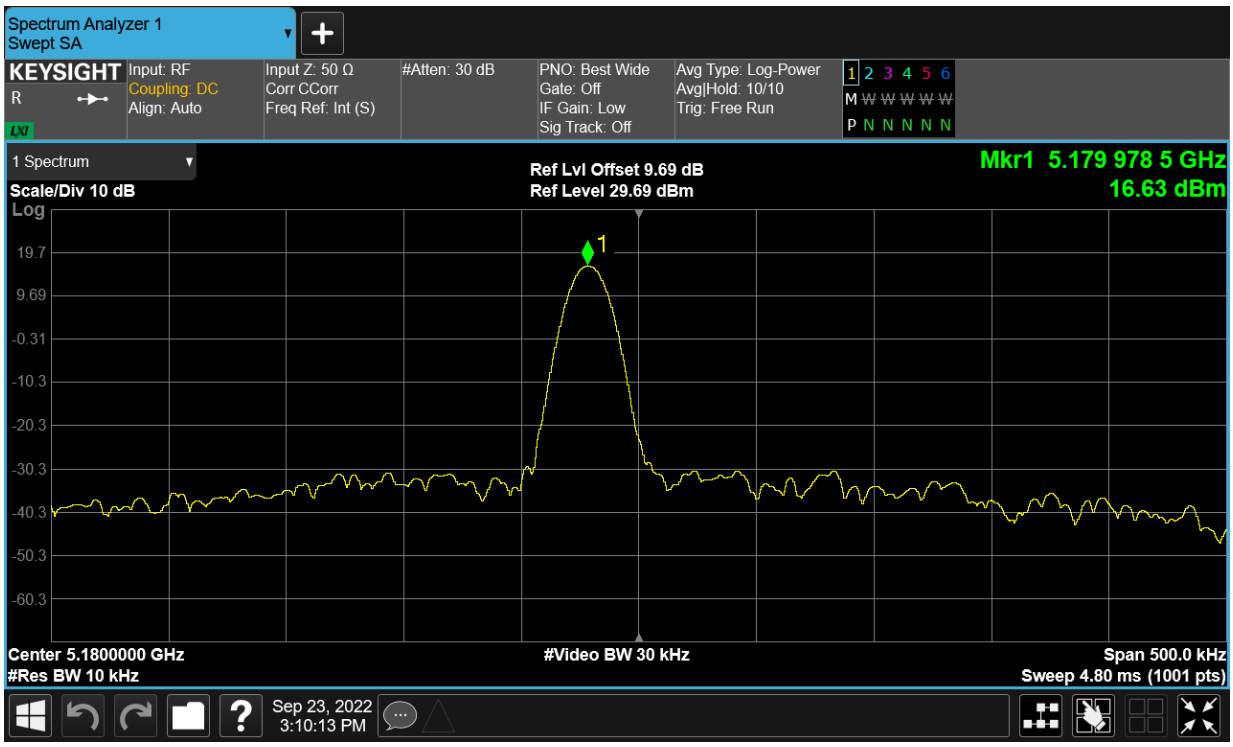
Freq. Stability NVLT ac80 5210MHz Sum



Freq. Stability NVNT ac80 5210MHz Sum

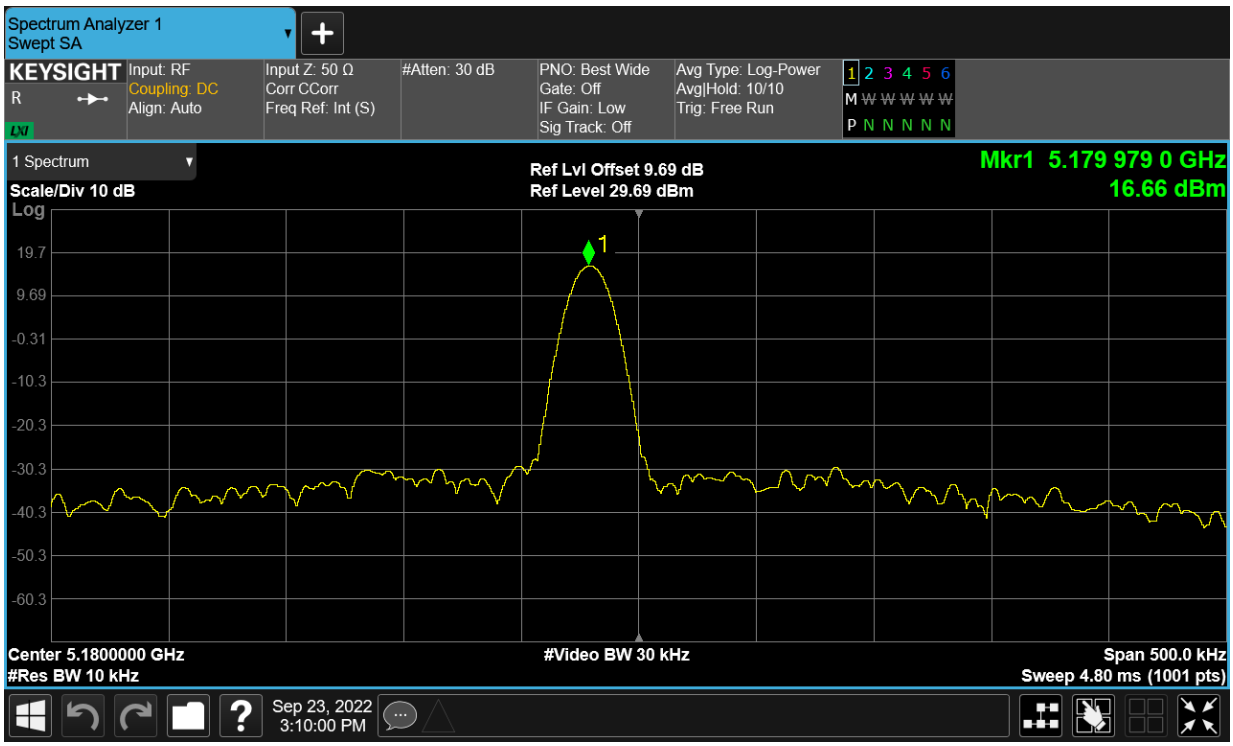


Freq. Stability HVNT n20 5180MHz Sum

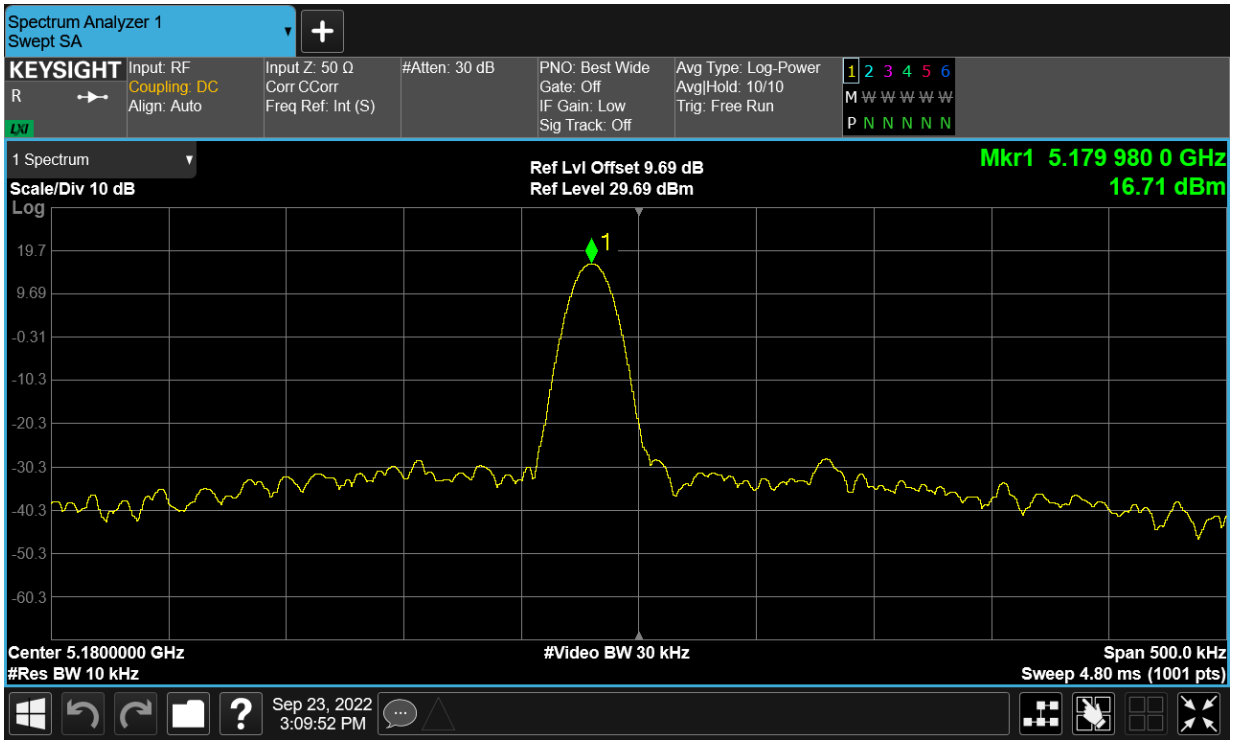


Freq. Stability LVNT n20 5180MHz Sum

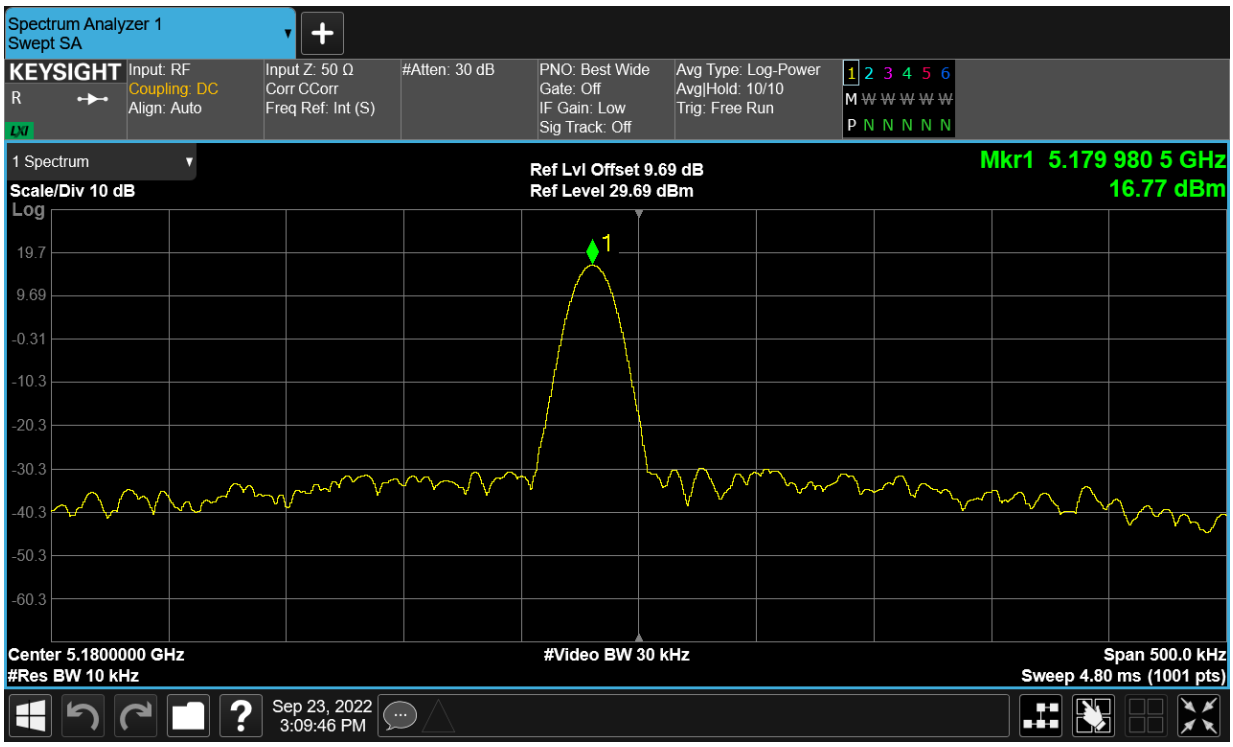
Freq. Stability NVHT n20 5180MHz Sum



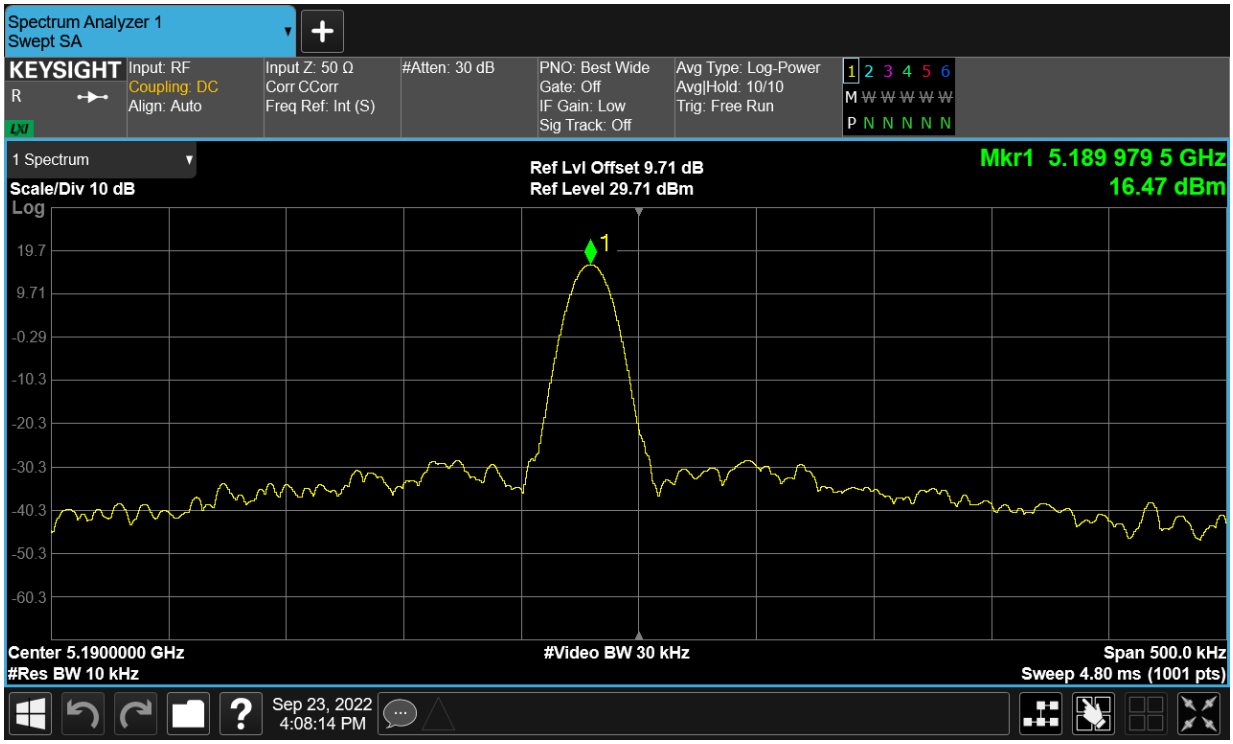
Freq. Stability NVLT n20 5180MHz Sum



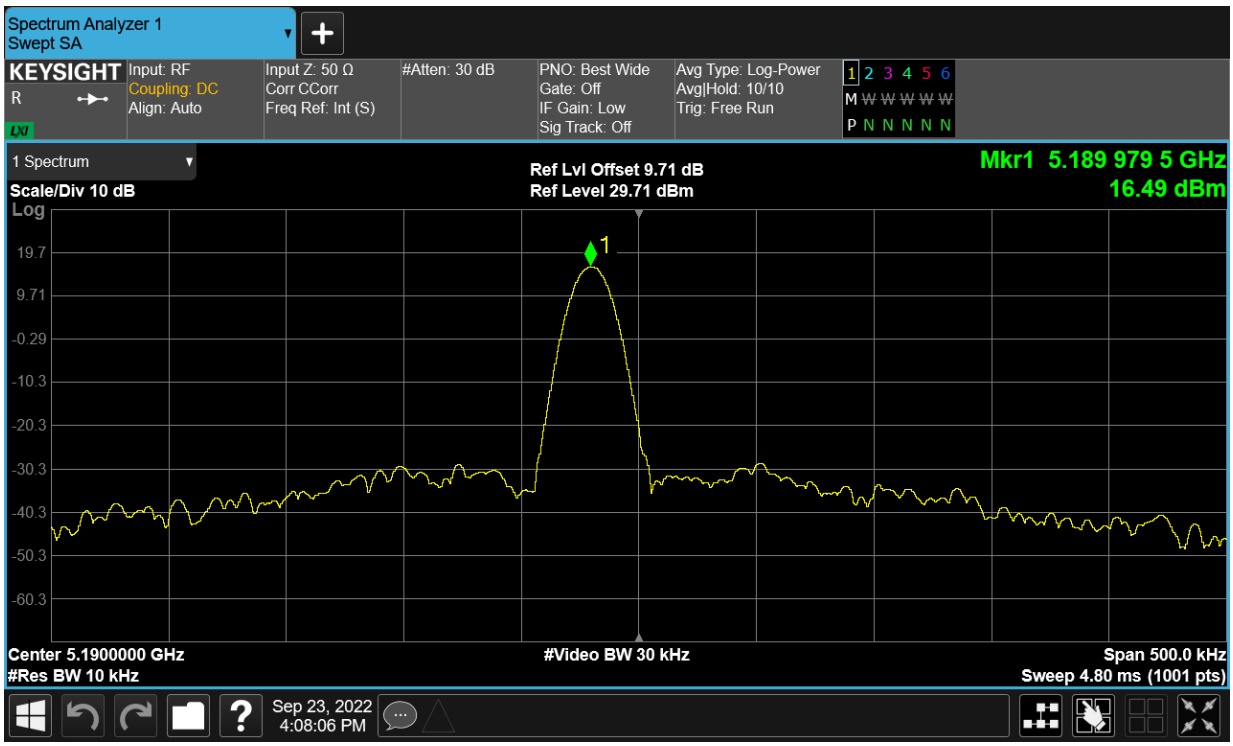
Freq. Stability NVNT n20 5180MHz Sum



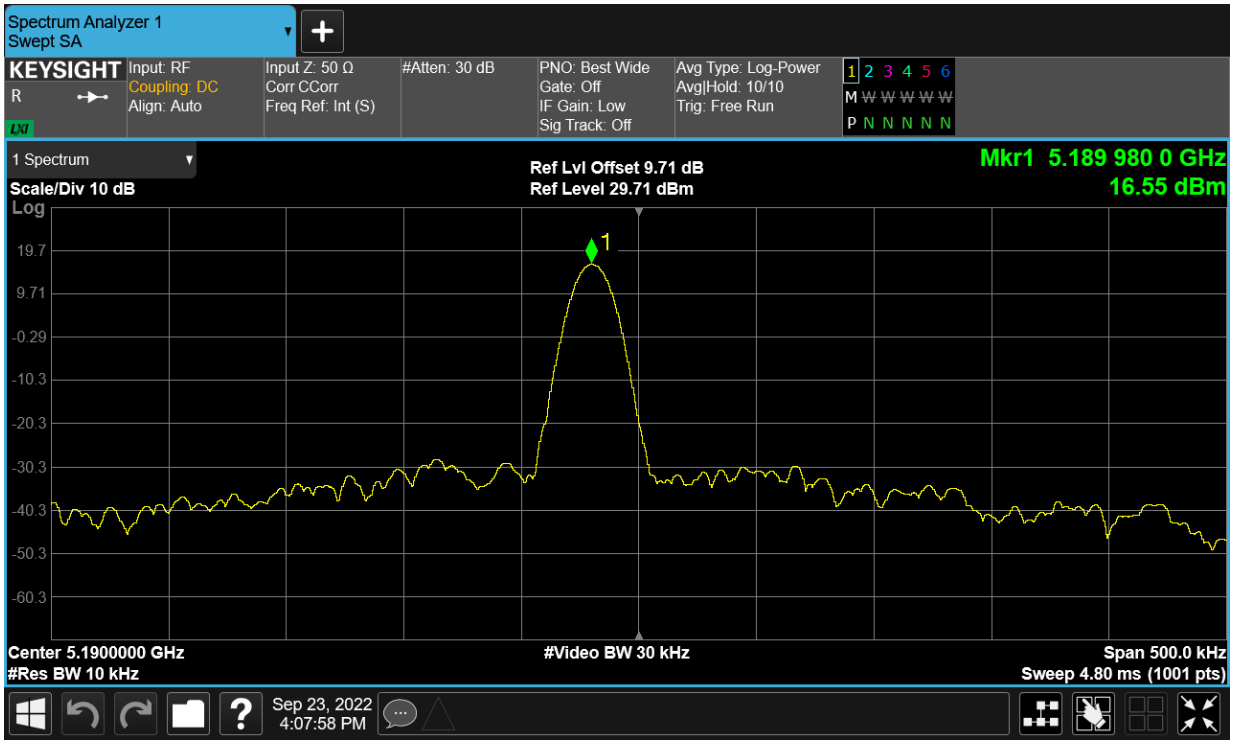
Freq. Stability HVNT n40 5190MHz Sum



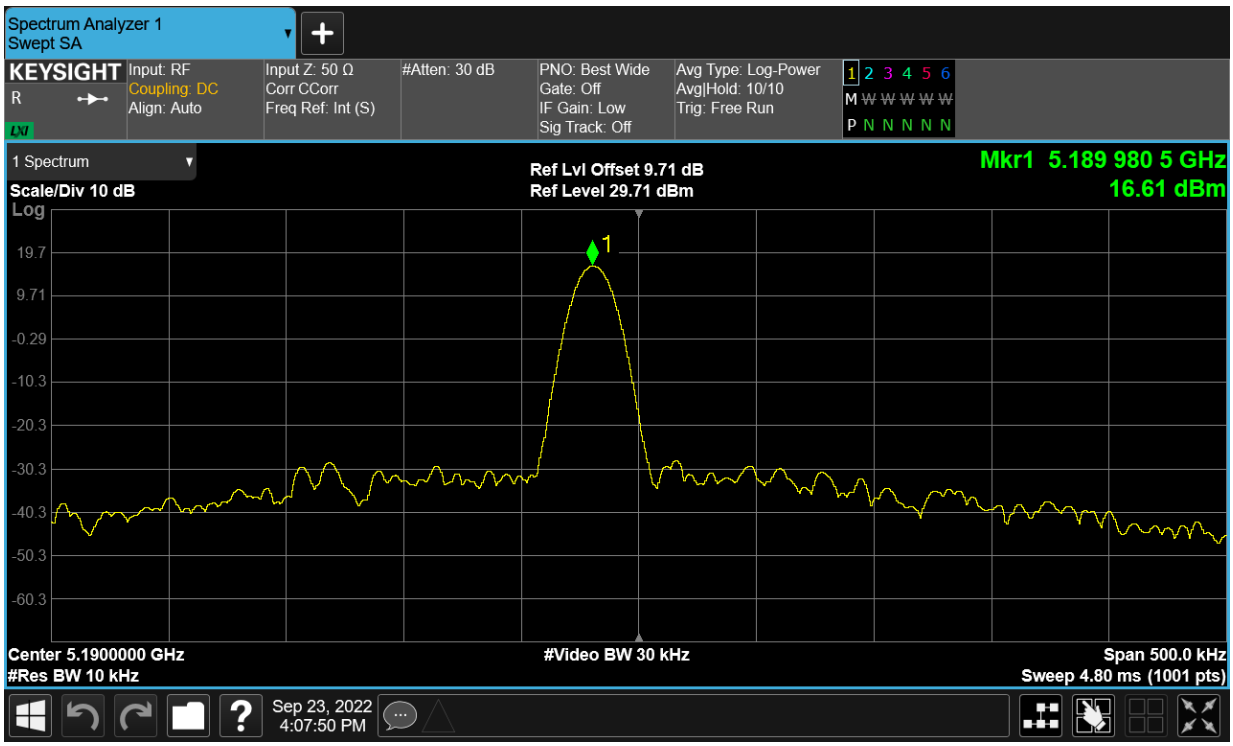
Freq. Stability LVNT n40 5190MHz Sum



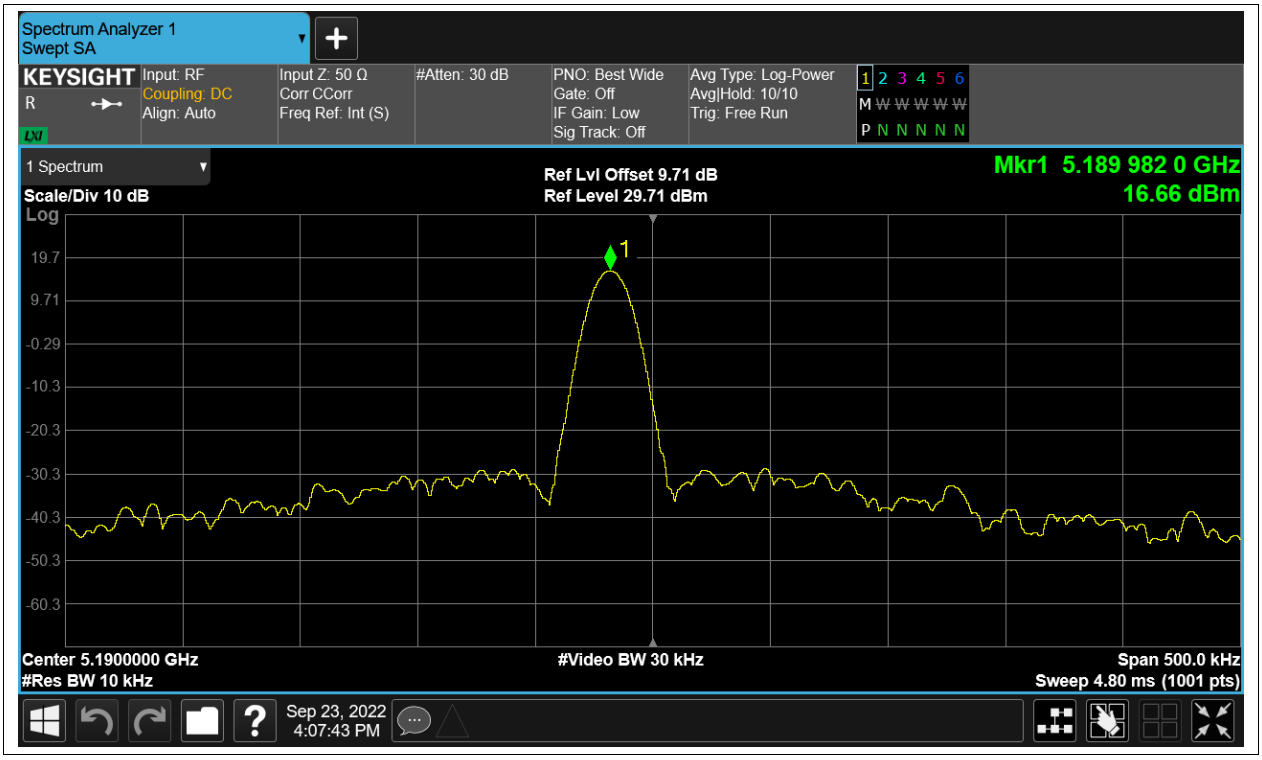
Freq. Stability NVHT n40 5190MHz Sum



Freq. Stability NVLT n40 5190MHz Sum



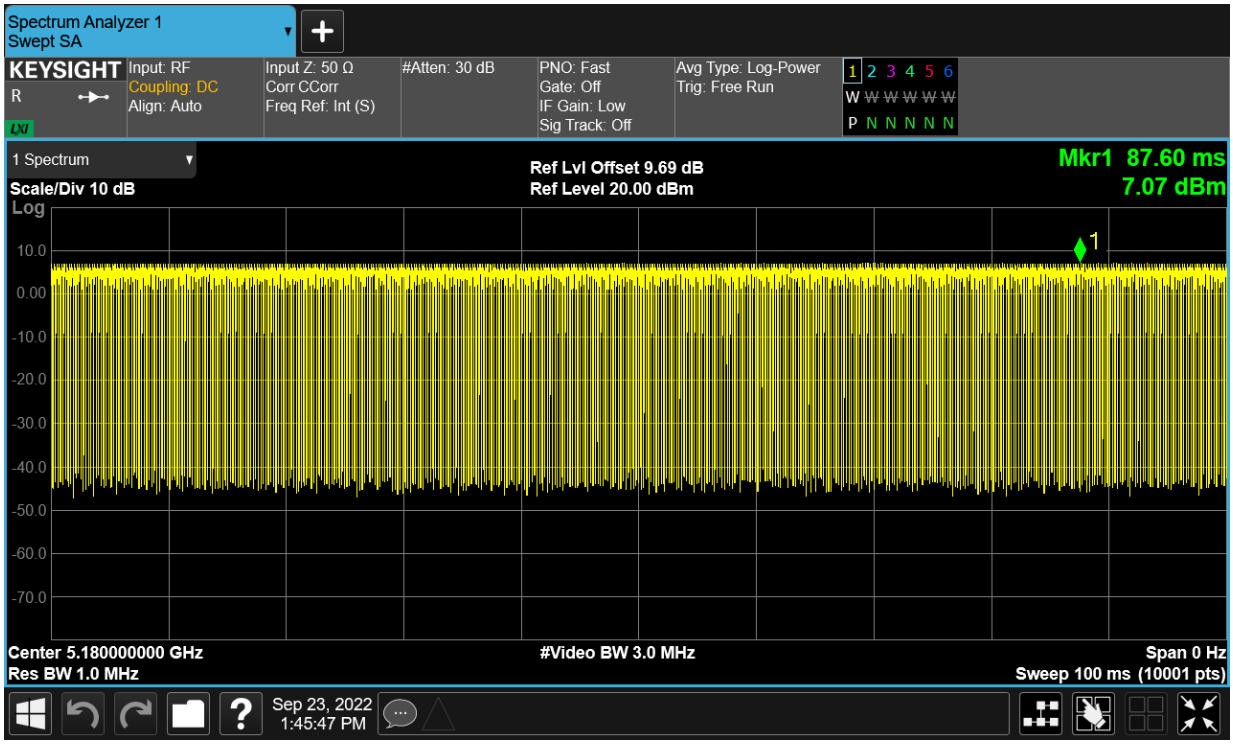
Freq. Stability NVNT n40 5190MHz Sum


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: Best Wide
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 9.71 dB
Ref Level 29.71 dBm
Mkr1 5.189 982 0 GHz
16.66 dBm
Log
19.7
9.71
-0.29
-10.3
-20.3
-30.3
-40.3
-50.3
-60.3
Center 5.1900000 GHz
#Res BW 10 kHz
#Video BW 30 kHz
Span 500.0 kHz
Sweep 4.80 ms (1001 pts)
Sep 23, 2022
4:07:43 PM

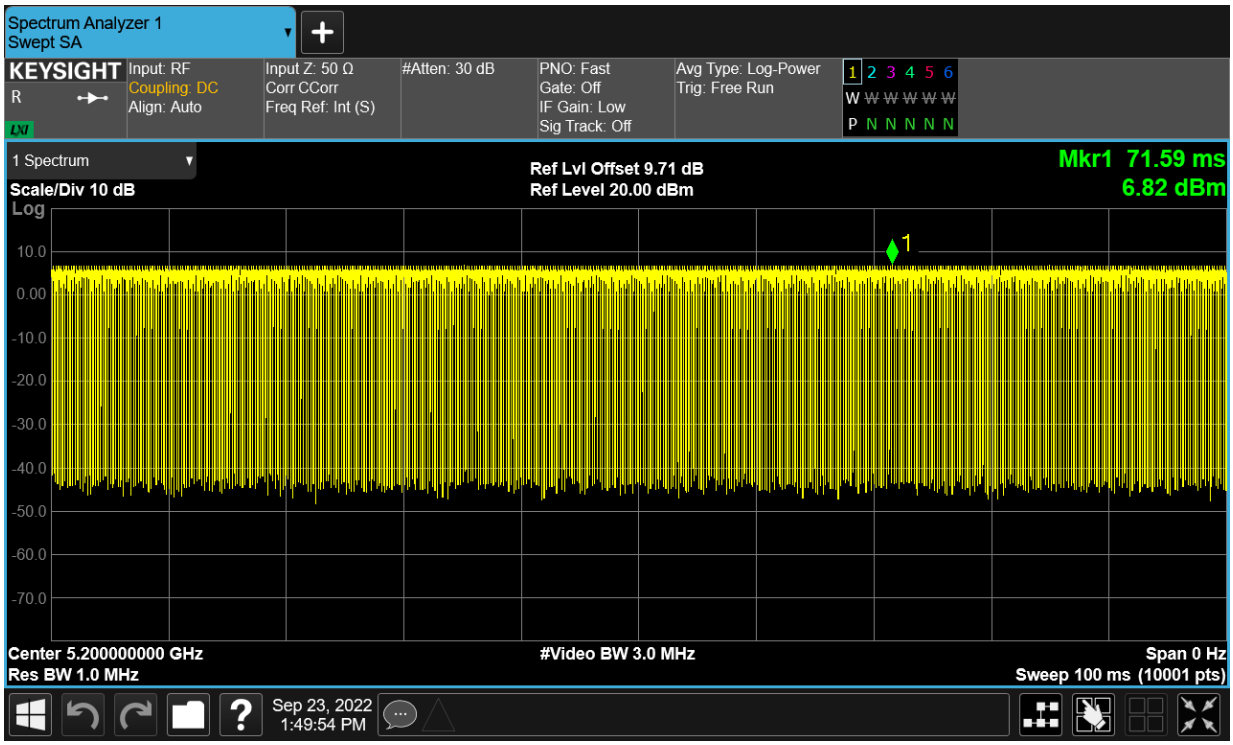
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5180	Ant1	88.15	0.55
NVNT	a	5200	Ant1	87.9	0.56
NVNT	a	5240	Ant1	87.76	0.57
NVNT	a	5180	Ant2	87.72	0.57
NVNT	a	5200	Ant2	87.13	0.6
NVNT	a	5240	Ant2	87.4	0.58
NVNT	ac20	5180	Sum	86.51	0.63
NVNT	ac20	5200	Sum	86.23	0.64
NVNT	ac20	5240	Sum	85.92	0.66
NVNT	ac40	5190	Sum	100	0
NVNT	ac40	5230	Sum	79.62	0.99
NVNT	ac80	5210	Sum	75.13	1.24
NVNT	n20	5180	Sum	87.45	0.58
NVNT	n20	5200	Sum	87.31	0.59
NVNT	n20	5240	Sum	87.06	0.6
NVNT	n40	5190	Sum	81.6	0.88
NVNT	n40	5230	Sum	81.07	0.91

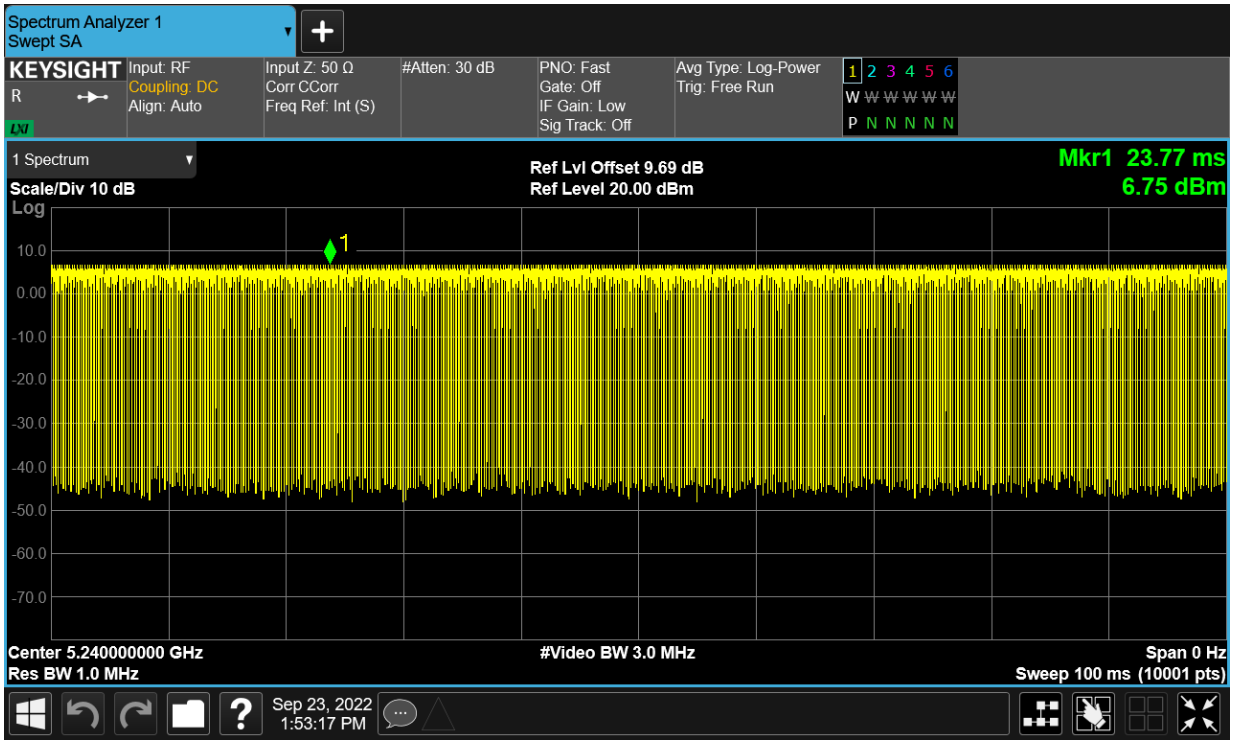
Test Graphs
Duty Cycle NVNT a 5180MHz Ant1



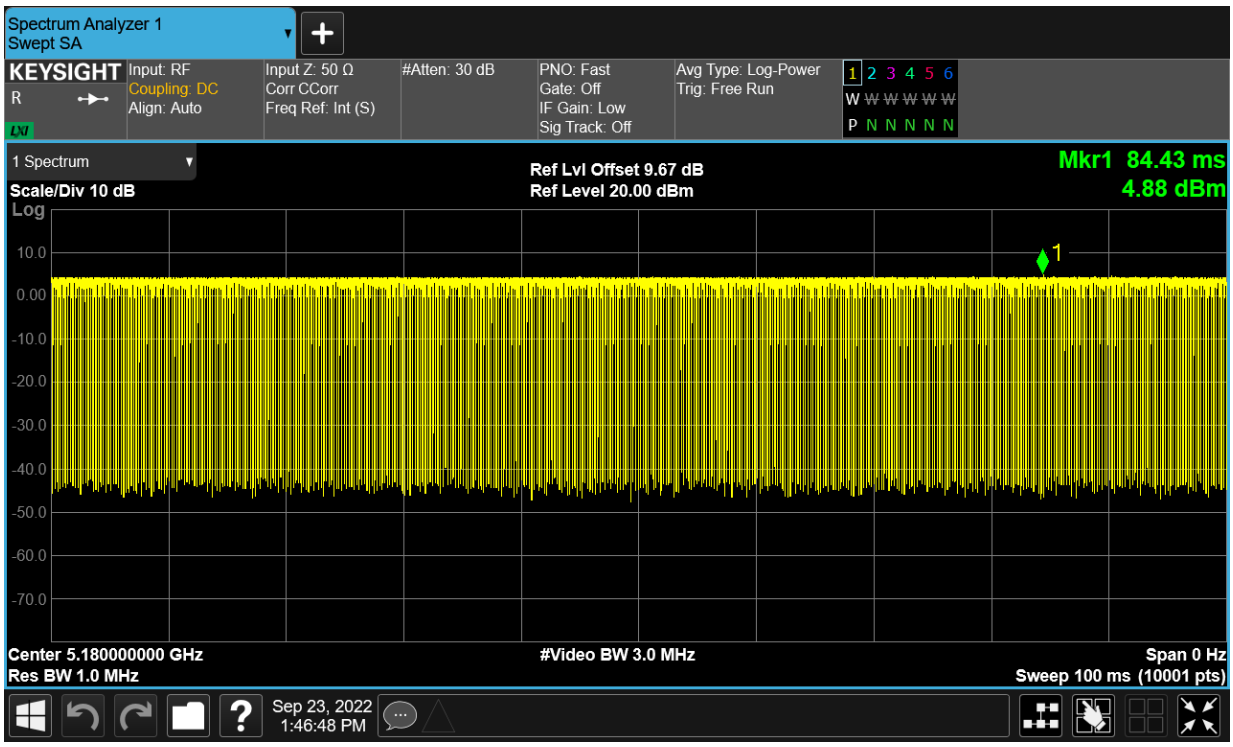
Duty Cycle NVNT a 5200MHz Ant1



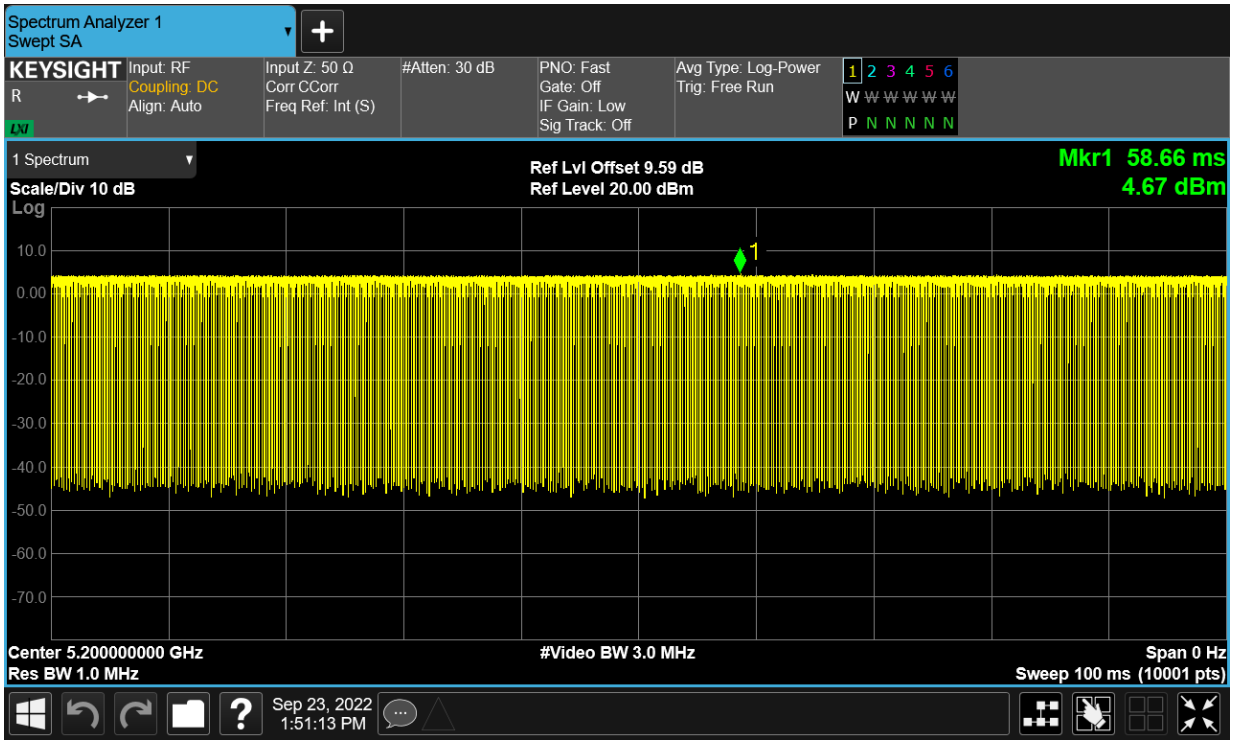
Duty Cycle NVNT a 5240MHz Ant1



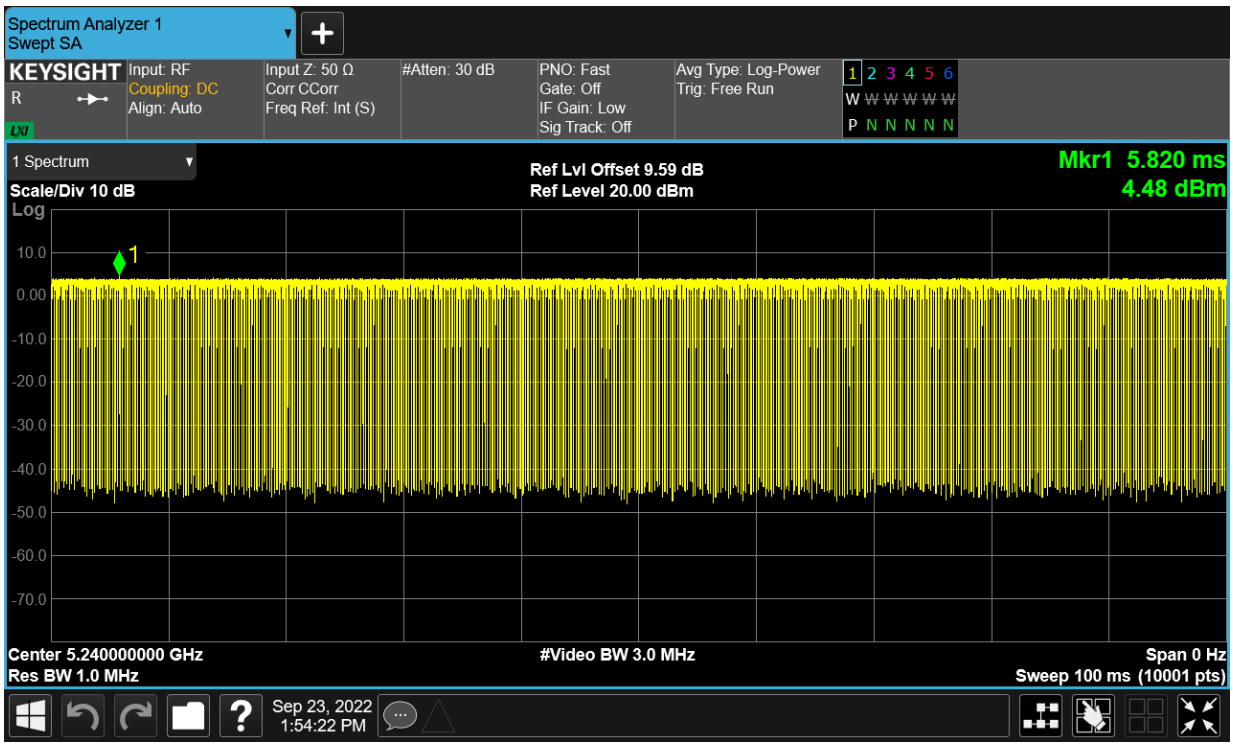
Duty Cycle NVNT a 5180MHz Ant2



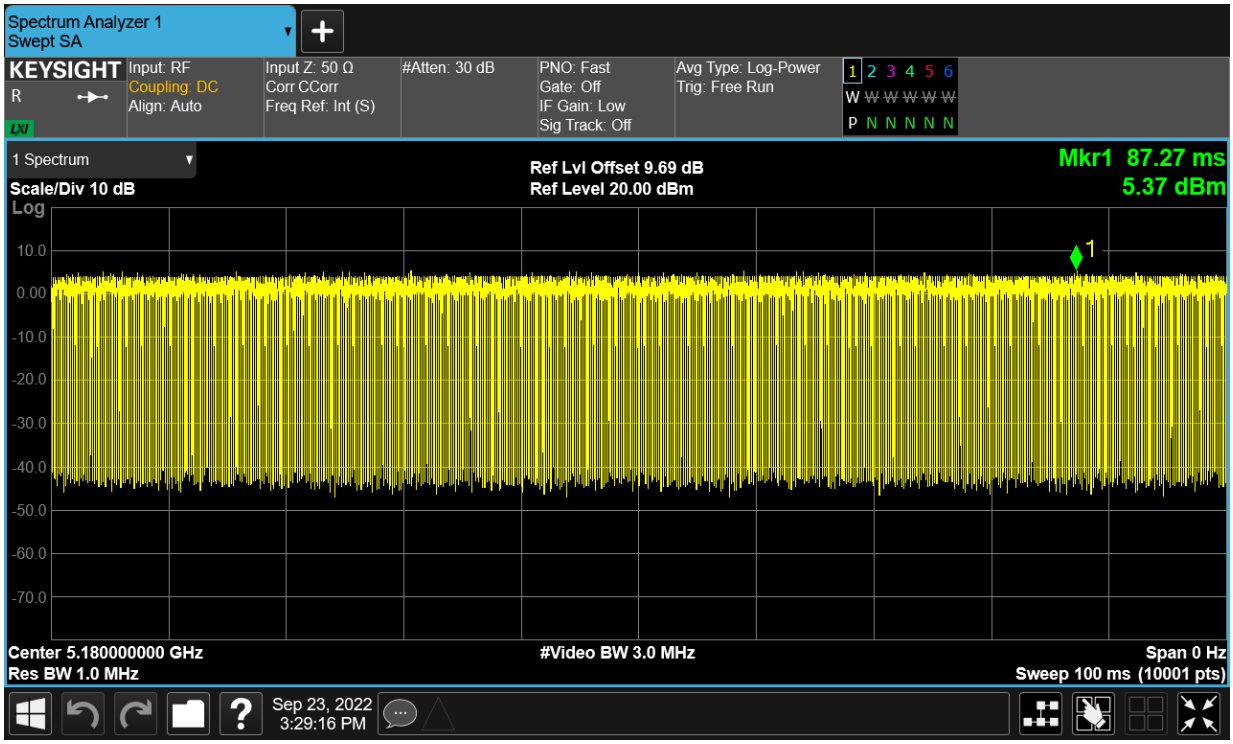
Duty Cycle NVNT a 5200MHz Ant2



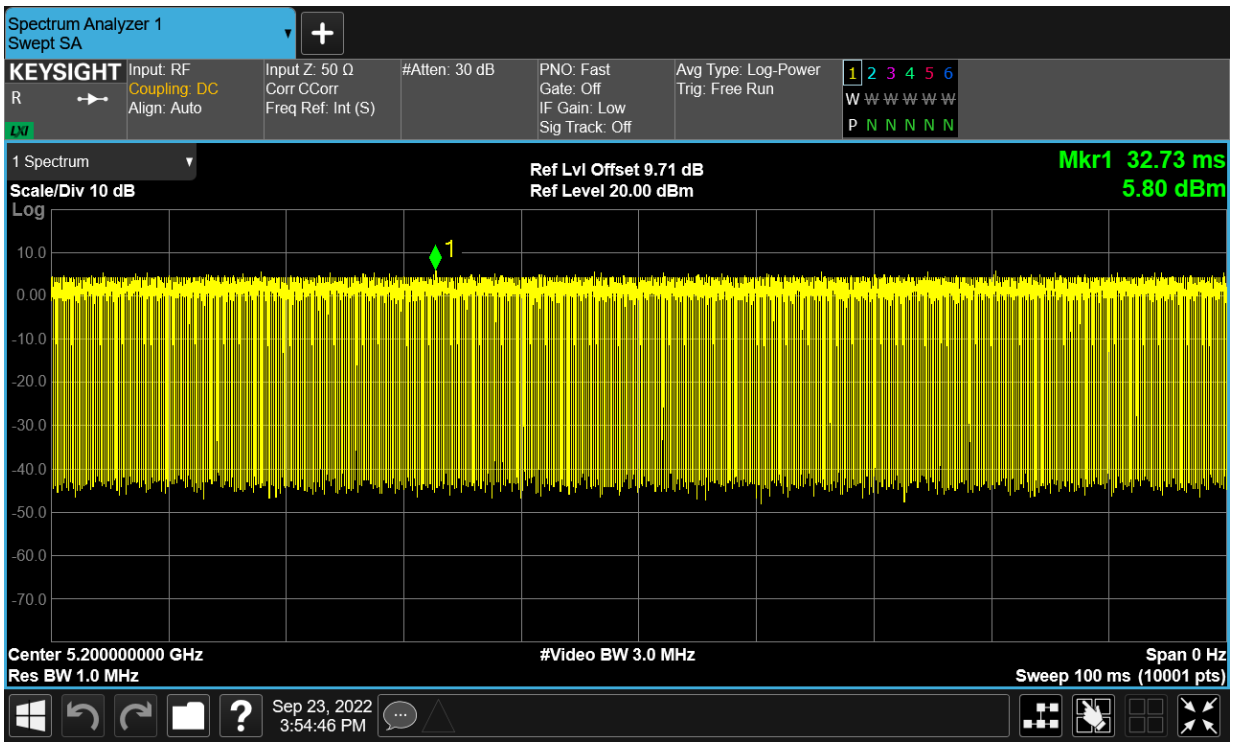
Duty Cycle NVNT a 5240MHz Ant2



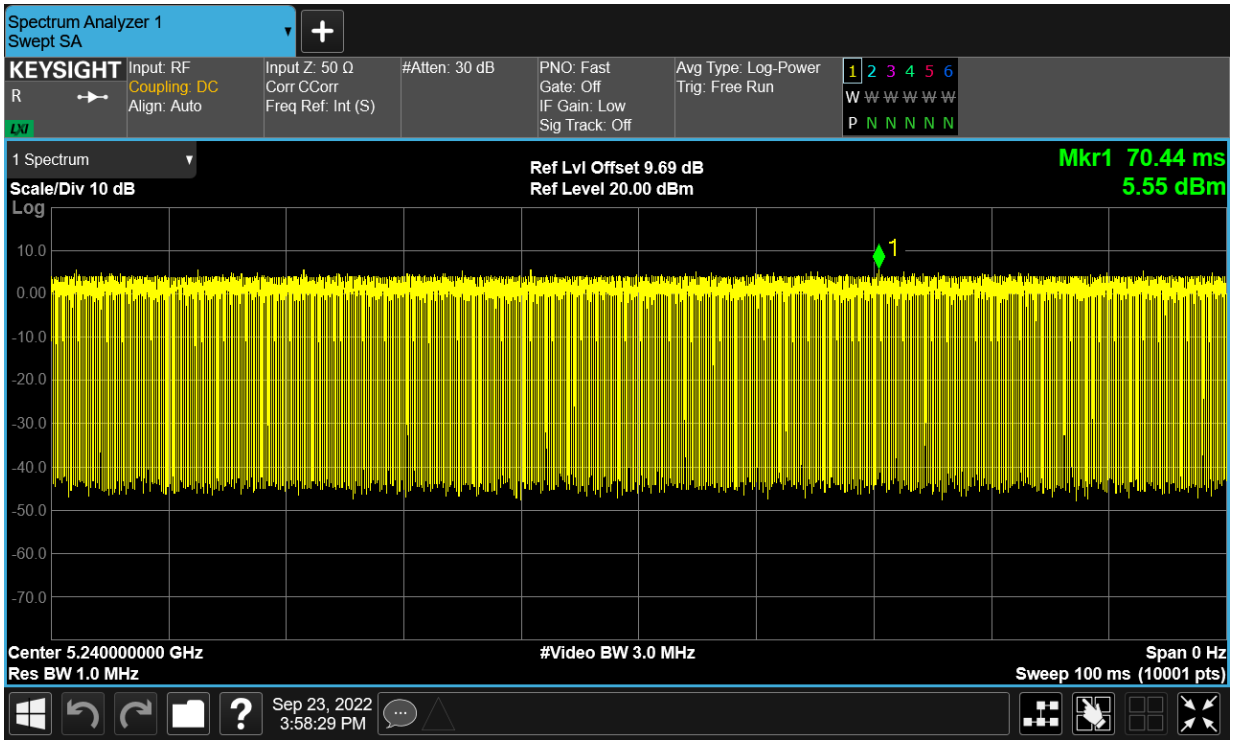
Duty Cycle NVNT ac20 5180MHz Sum



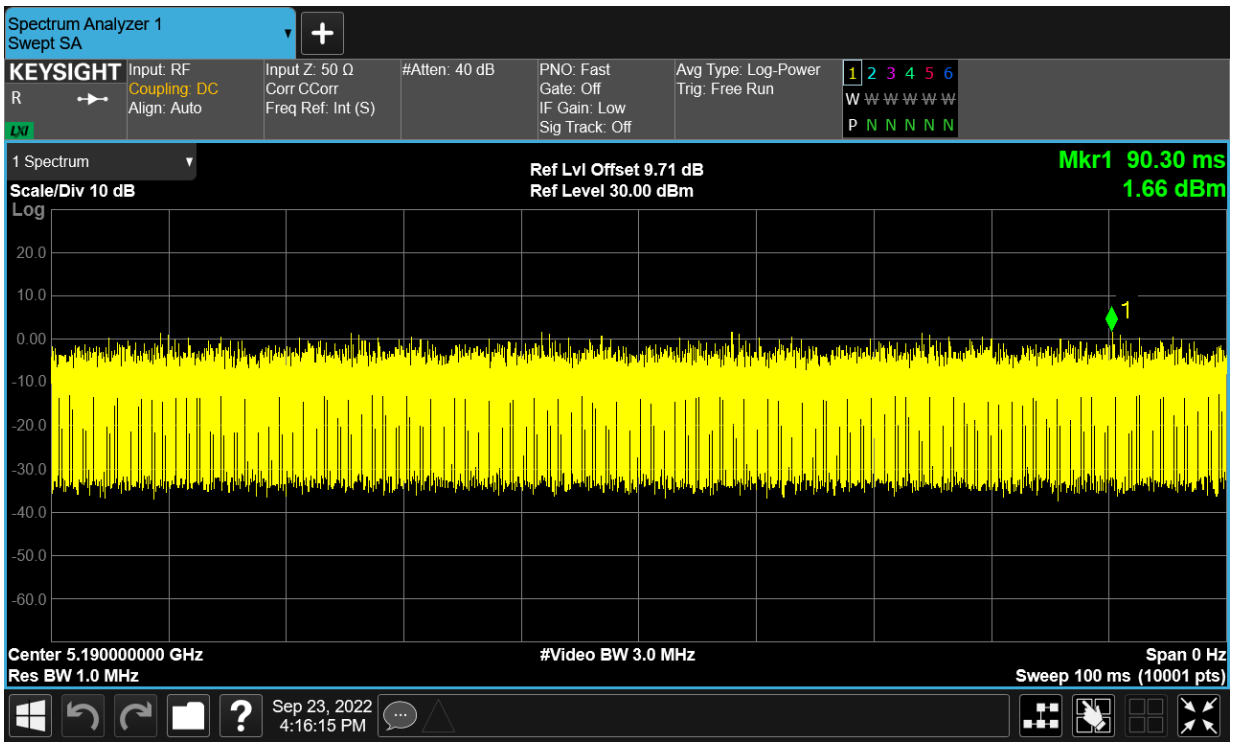
Duty Cycle NVNT ac20 5200MHz Sum



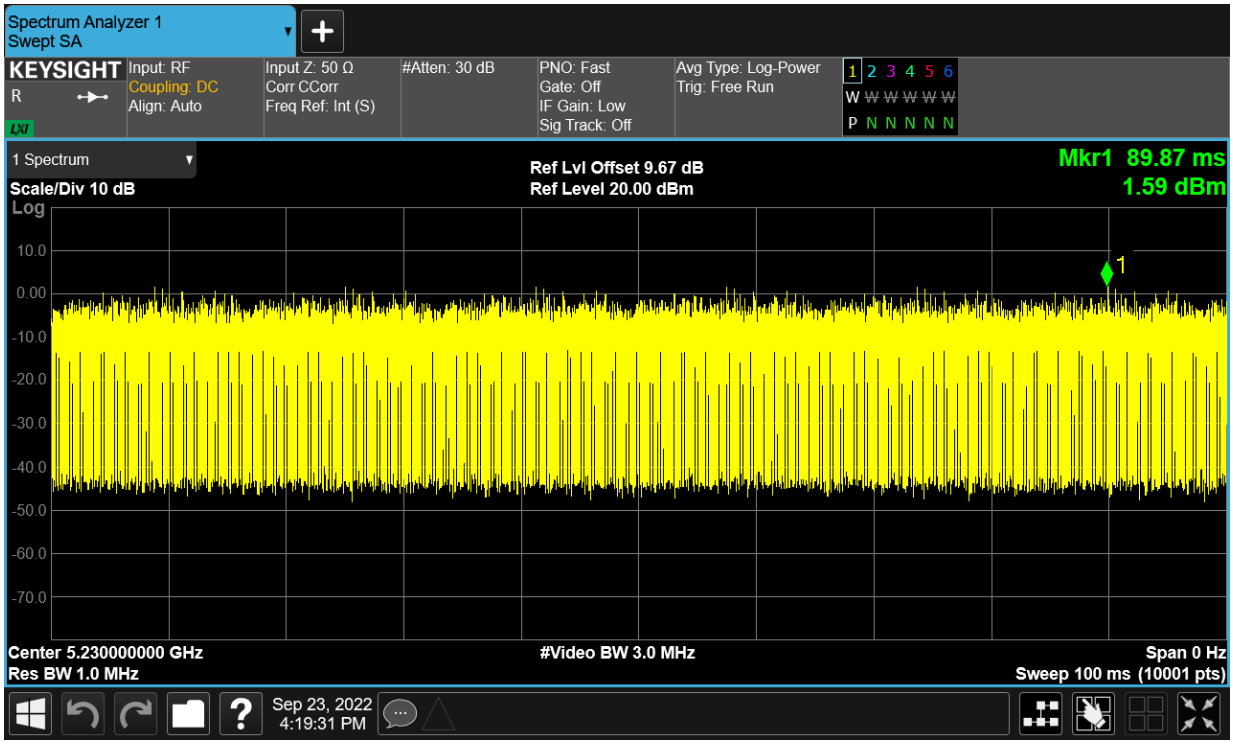
Duty Cycle NVNT ac20 5240MHz Sum



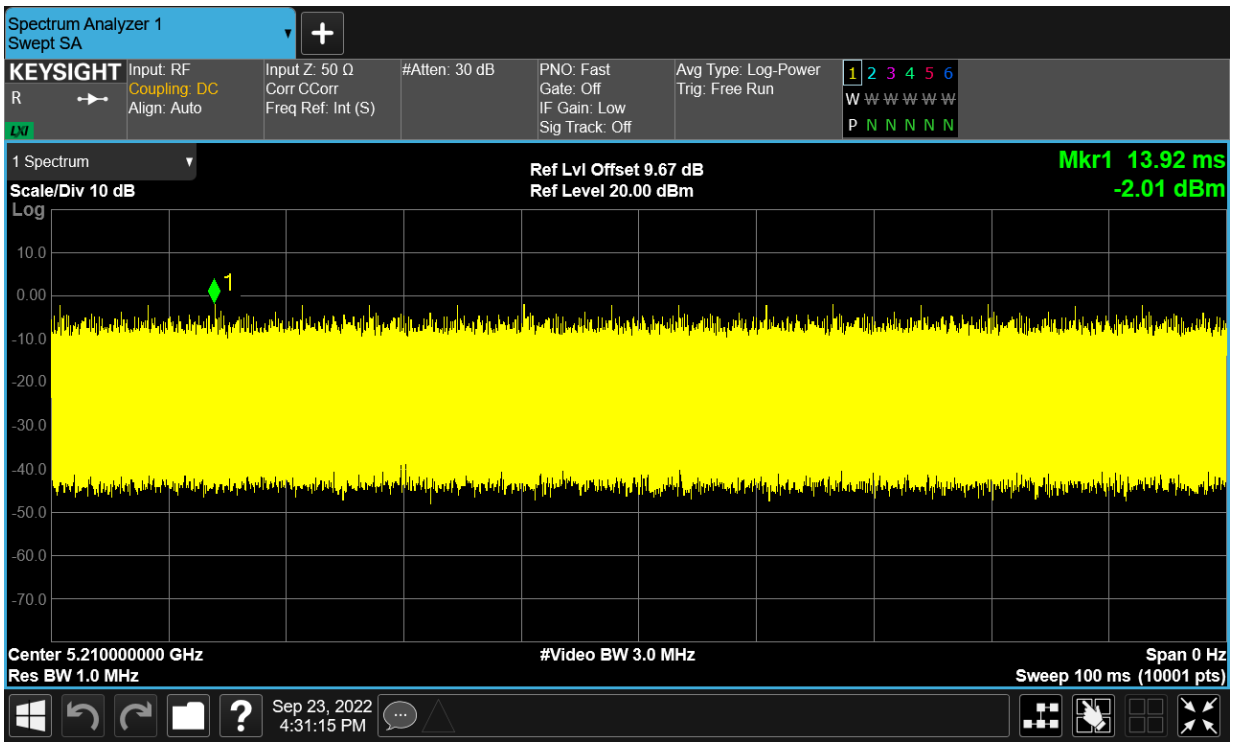
Duty Cycle NVNT ac40 5190MHz Sum



Duty Cycle NVNT ac40 5230MHz Sum



Duty Cycle NVNT ac80 5210MHz Sum

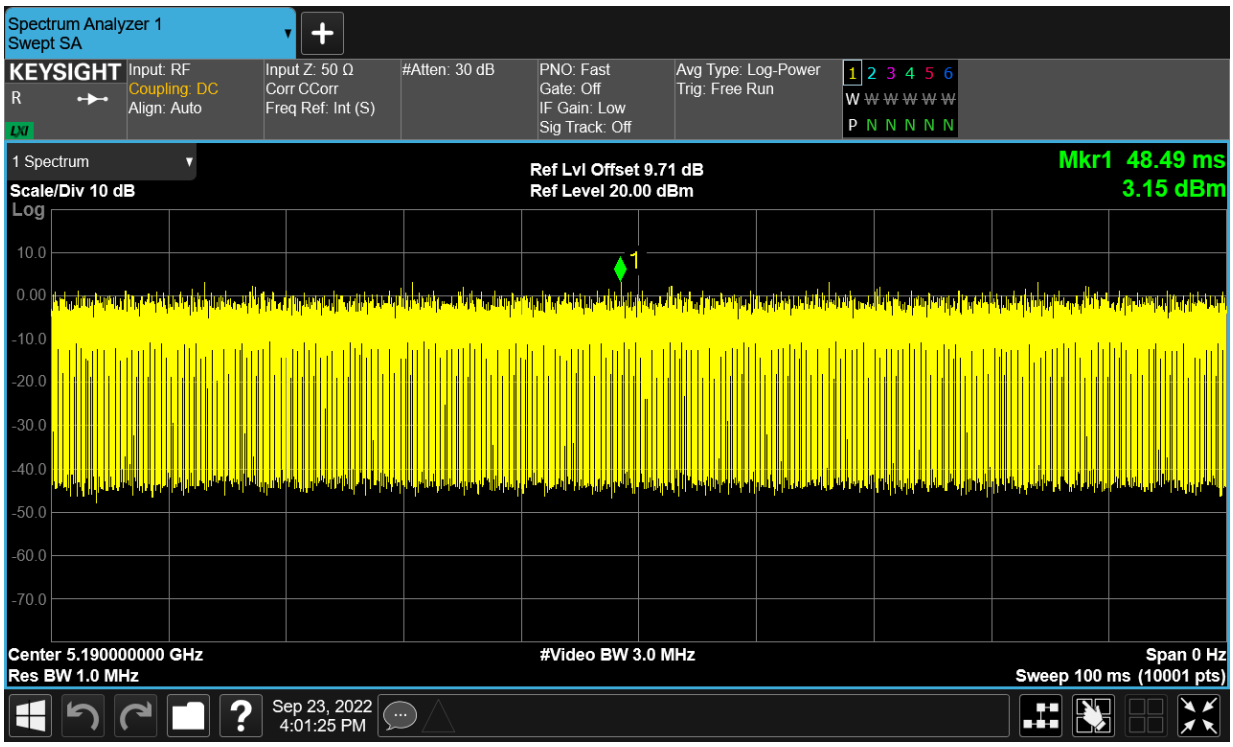


Duty Cycle NVNT n20 5180MHz Sum

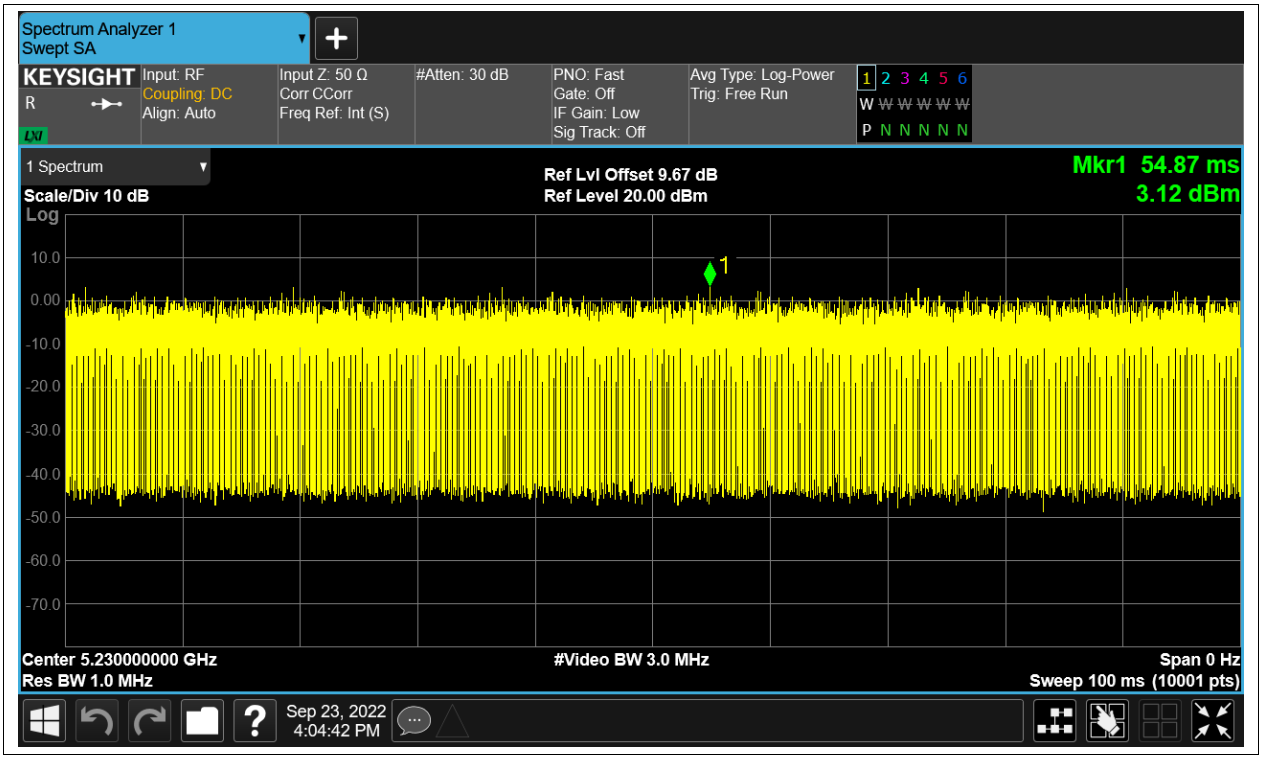
Duty Cycle NVNT n20 5200MHz Sum

Duty Cycle NVNT n20 5240MHz Sum

Duty Cycle NVNT n40 5190MHz Sum



Duty Cycle NVNT n40 5230MHz Sum


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
Trig: Free Run
1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 9.67 dB
Ref Level 20.00 dBm
Mkr1 54.87 ms
3.12 dBm
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.230000000 GHz
Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 100 ms (10001 pts)
Sep 23, 2022
4:04:42 PM

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	12.87	0.55	13.42	24	Pass
NVNT	a	5200	Ant1	12.84	0.56	13.4	24	Pass
NVNT	a	5240	Ant1	12.82	0.57	13.39	24	Pass
NVNT	a	5180	Ant2	11.08	0.57	11.65	24	Pass
NVNT	a	5200	Ant2	10.87	0.6	11.47	24	Pass
NVNT	a	5240	Ant2	10.75	0.58	11.33	24	Pass
NVNT	ac20	5180	Ant1	9.71	0.63	10.34	24	Pass
NVNT	ac20	5180	Ant2	7.96	0.63	8.59	24	Pass
NVNT	ac20	5180	Sum	11.933	0.63	12.563	24	Pass
NVNT	ac20	5200	Ant1	9.51	0.64	10.15	24	Pass
NVNT	ac20	5200	Ant2	7.97	0.64	8.61	24	Pass
NVNT	ac20	5200	Sum	11.818	0.64	12.458	24	Pass
NVNT	ac20	5240	Ant1	9.57	0.66	10.23	24	Pass
NVNT	ac20	5240	Ant2	7.6	0.66	8.26	24	Pass
NVNT	ac20	5240	Sum	11.706	0.66	12.366	24	Pass
NVNT	ac40	5190	Ant1	9.71	0	9.71	24	Pass
NVNT	ac40	5190	Ant2	8.04	0	8.04	24	Pass
NVNT	ac40	5190	Sum	11.965	0	11.965	24	Pass
NVNT	ac40	5230	Ant1	9.52	0.99	10.51	24	Pass
NVNT	ac40	5230	Ant2	7.75	0.99	8.74	24	Pass
NVNT	ac40	5230	Sum	11.735	0.99	12.725	24	Pass
NVNT	ac80	5210	Ant1	9.4	1.24	10.64	24	Pass
NVNT	ac80	5210	Ant2	7.66	1.24	8.9	24	Pass
NVNT	ac80	5210	Sum	11.627	1.24	12.867	24	Pass
NVNT	n20	5180	Ant1	11.71	0.58	12.29	24	Pass
NVNT	n20	5180	Ant2	10.18	0.58	10.76	24	Pass
NVNT	n20	5180	Sum	14.022	0.58	14.602	24	Pass
NVNT	n20	5200	Ant1	11.62	0.59	12.21	24	Pass
NVNT	n20	5200	Ant2	10.02	0.59	10.61	24	Pass
NVNT	n20	5200	Sum	13.904	0.59	14.494	24	Pass
NVNT	n20	5240	Ant1	11.49	0.6	12.09	24	Pass
NVNT	n20	5240	Ant2	9.84	0.6	10.44	24	Pass
NVNT	n20	5240	Sum	13.753	0.6	14.353	24	Pass
NVNT	n40	5190	Ant1	11.35	0.88	12.23	24	Pass
NVNT	n40	5190	Ant2	9.7	0.88	10.58	24	Pass
NVNT	n40	5190	Sum	13.613	0.88	14.493	24	Pass
NVNT	n40	5230	Ant1	11.03	0.91	11.94	24	Pass
NVNT	n40	5230	Ant2	9.52	0.91	10.43	24	Pass
NVNT	n40	5230	Sum	13.351	0.91	14.261	24	Pass