

2. Maximum Conducted Output Power

2.1 Power

2.1.1 Test Result

Band	Channel	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11a/n/ac/ax)-worst					
1	Low	5180	10.34	24	Pass
	High	5240	9.83	24	Pass
2	Low	5260	10.62	24	Pass
	High	5320	9.9	24	Pass
3	Low	5500	11.00	24	Pass
	High	5700	9.57	24	Pass
4	Low	5745	9.31	30	Pass
	High	5825	8.86	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	10.77	24	Pass
	High	5230	11.07	24	Pass
2	Low	5270	10.88	24	Pass
	High	5310	9.57	24	Pass
3	Low	5510	10.81	24	Pass
	High	5670	10.9	24	Pass
4	Low	5755	9.78	30	Pass
	High	5795	9.49	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	10.64	24	Pass
2	High	5290	9.07	24	Pass
3	Low	5530	11.05	24	Pass
	High	5610	12.25	24	Pass
4	High	5775	9.18	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	10.65	24	Pass
3	High	5570	10.68	24	Pass

AUX ATN2

Band	Channel	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11a/n/ac/ax)-worst					
1	Low	5180	7.79	24	Pass

	High	5240	7.45	24	Pass
2	Low	5260	9.64	24	Pass
	High	5320	7.43	24	Pass
3	Low	5500	6.54	24	Pass
	High	5700	7.64	24	Pass
4	Low	5745	9.88	30	Pass
	High	5825	9.14	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	5.36	24	Pass
	High	5230	9.65	24	Pass
2	Low	5270	9.25	24	Pass
	High	5310	6.96	24	Pass
3	Low	5510	6.45	24	Pass
	High	5670	9.13	24	Pass
4	Low	5755	9.09	30	Pass
	High	5795	8.97	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	7.56	24	Pass
2	High	5290	6.91	24	Pass
3	Low	5530	6.36	24	Pass
	High	5610	9	24	Pass
4	High	5775	9.23	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	8.68	24	Pass
3	High	5570	7.59	24	Pass

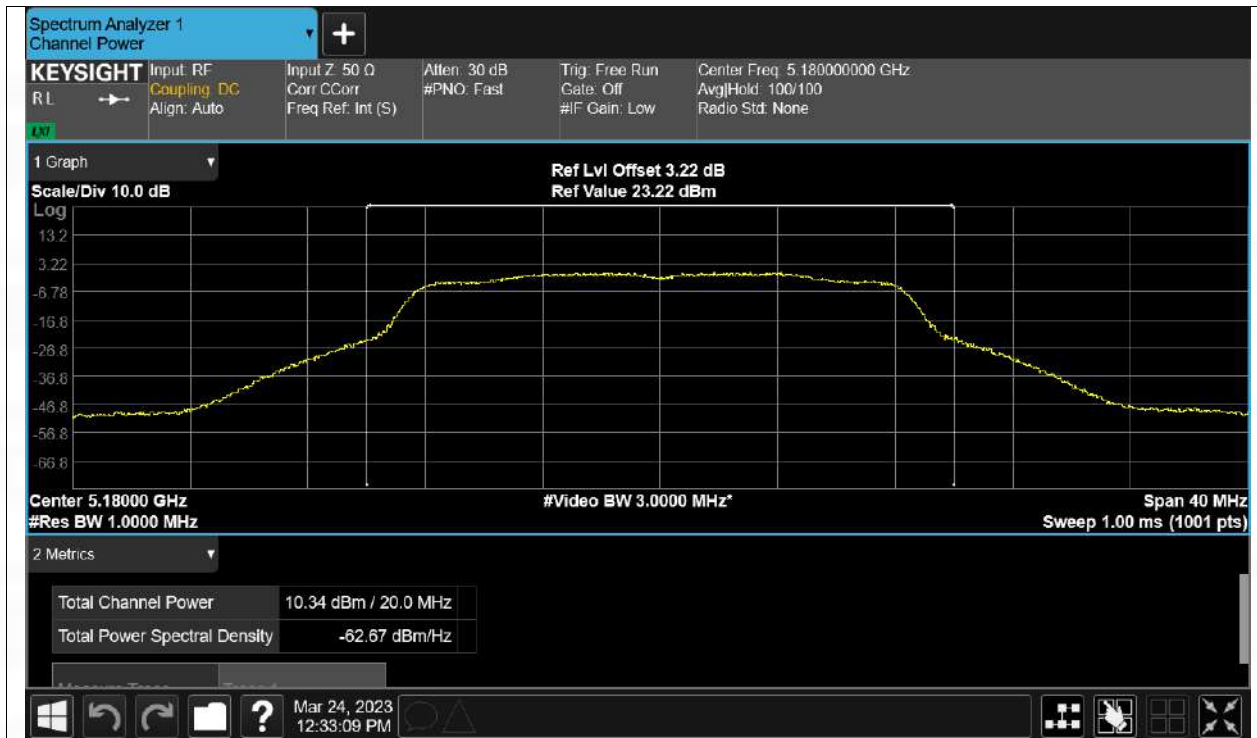
MiMO Mode

Band	Channel	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5180	12.26	24	Pass
	High	5240	11.81	24	Pass
2	Low	5260	13.17	24	Pass
	High	5320	11.85	24	Pass
3	Low	5500	12.33	24	Pass
	High	5700	11.72	24	Pass
4	Low	5745	12.61	30	Pass
	High	5825	12.01	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	11.87	24	Pass
	High	5230	13.43	24	Pass
2	Low	5270	13.15	24	Pass
	High	5310	11.47	24	Pass
3	Low	5510	12.17	24	Pass
	High	5670	13.11	24	Pass
4	Low	5755	12.46	30	Pass
	High	5795	12.25	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	12.38	24	Pass
2	High	5290	11.13	24	Pass
3	Low	5530	12.32	24	Pass
	High	5610	13.93	24	Pass
4	High	5775	12.22	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	12.79	24	Pass
3	High	5570	12.41	24	Pass

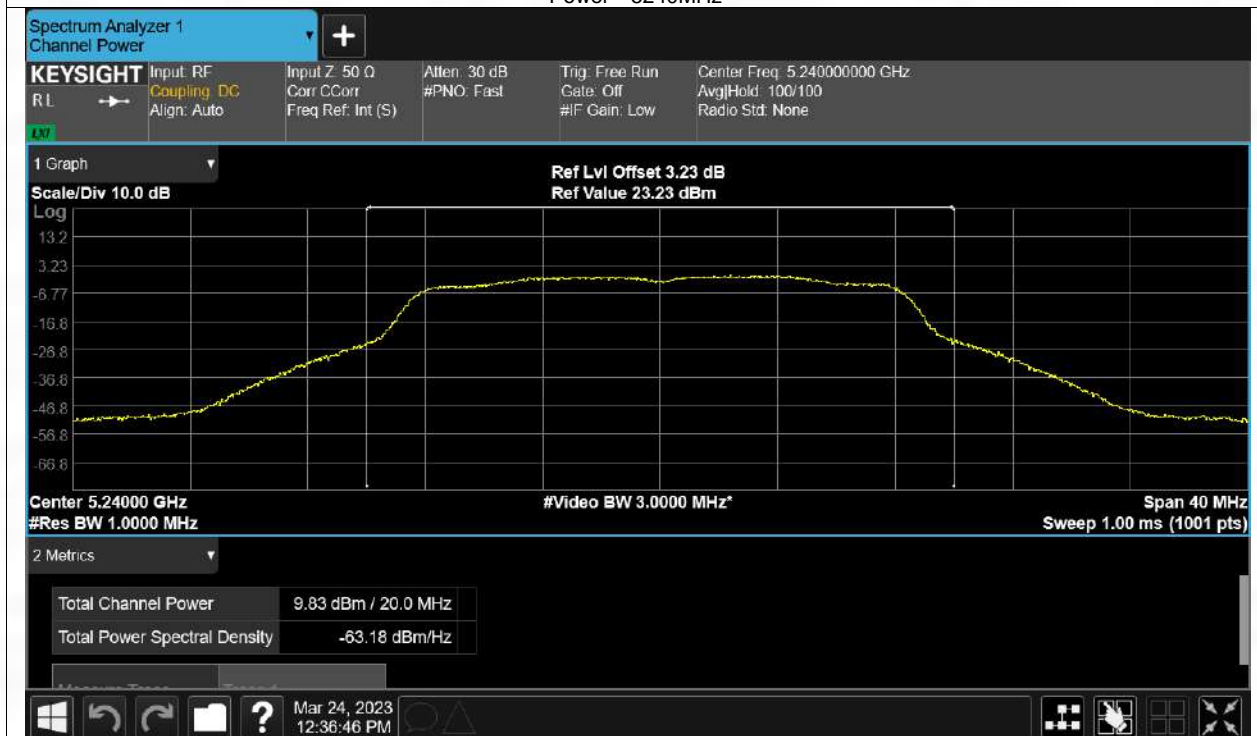
2.1.2 Test Graph

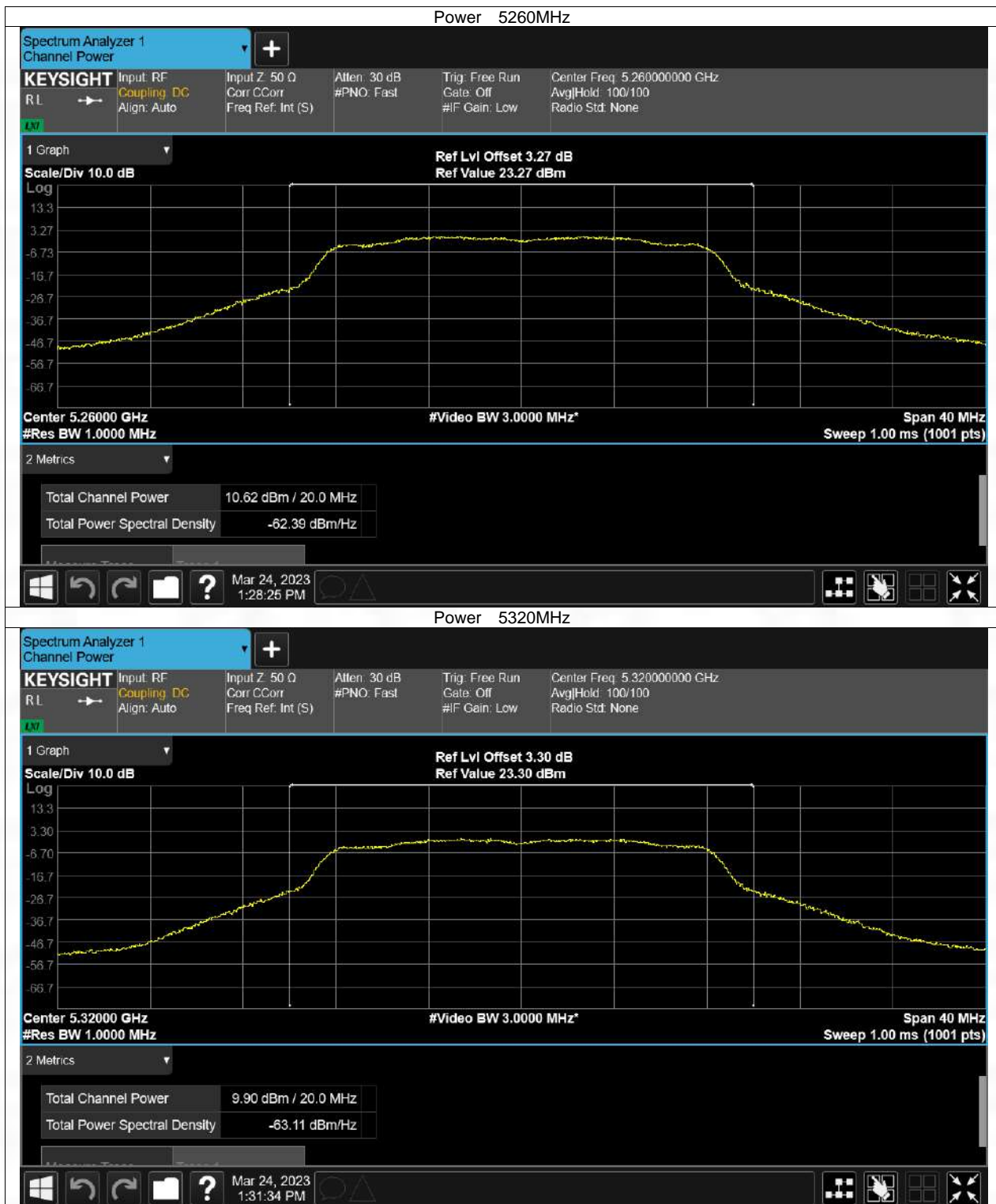
ANT1 20MHz(IEEE 802.11a/n/ac/ax)-worst

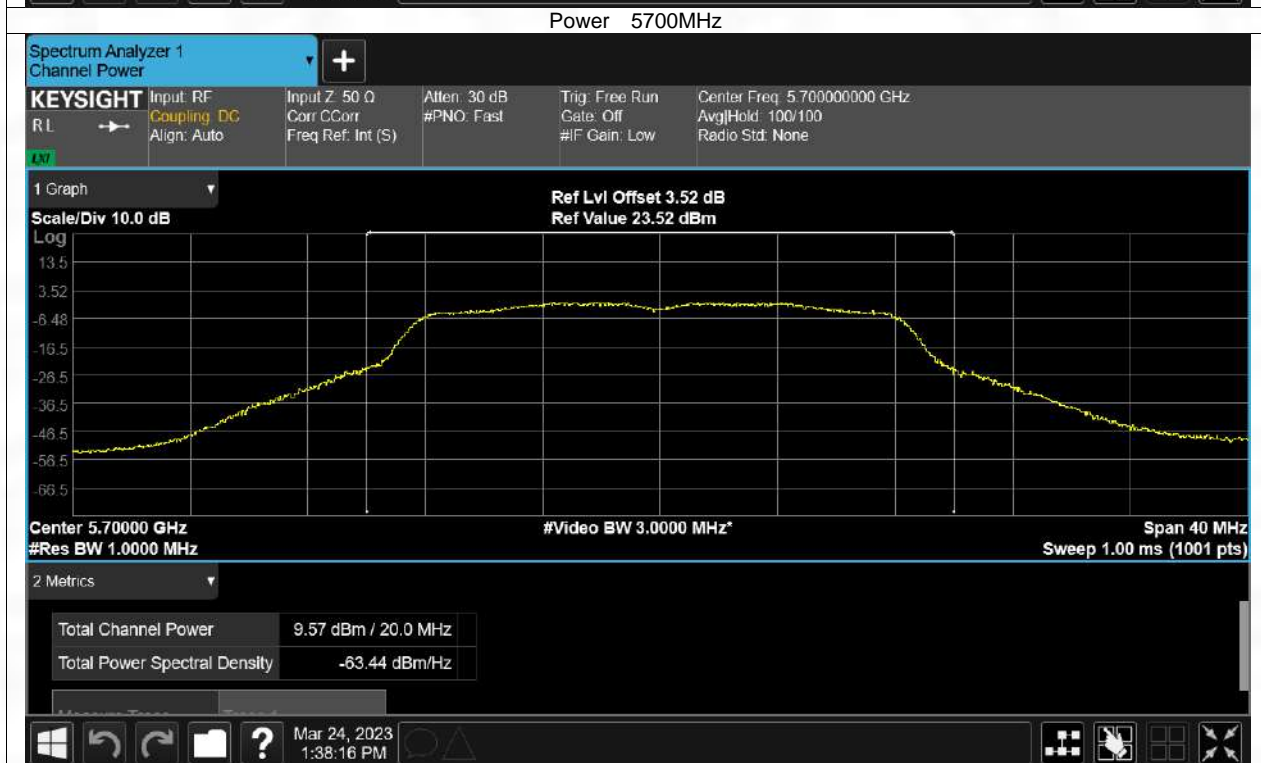
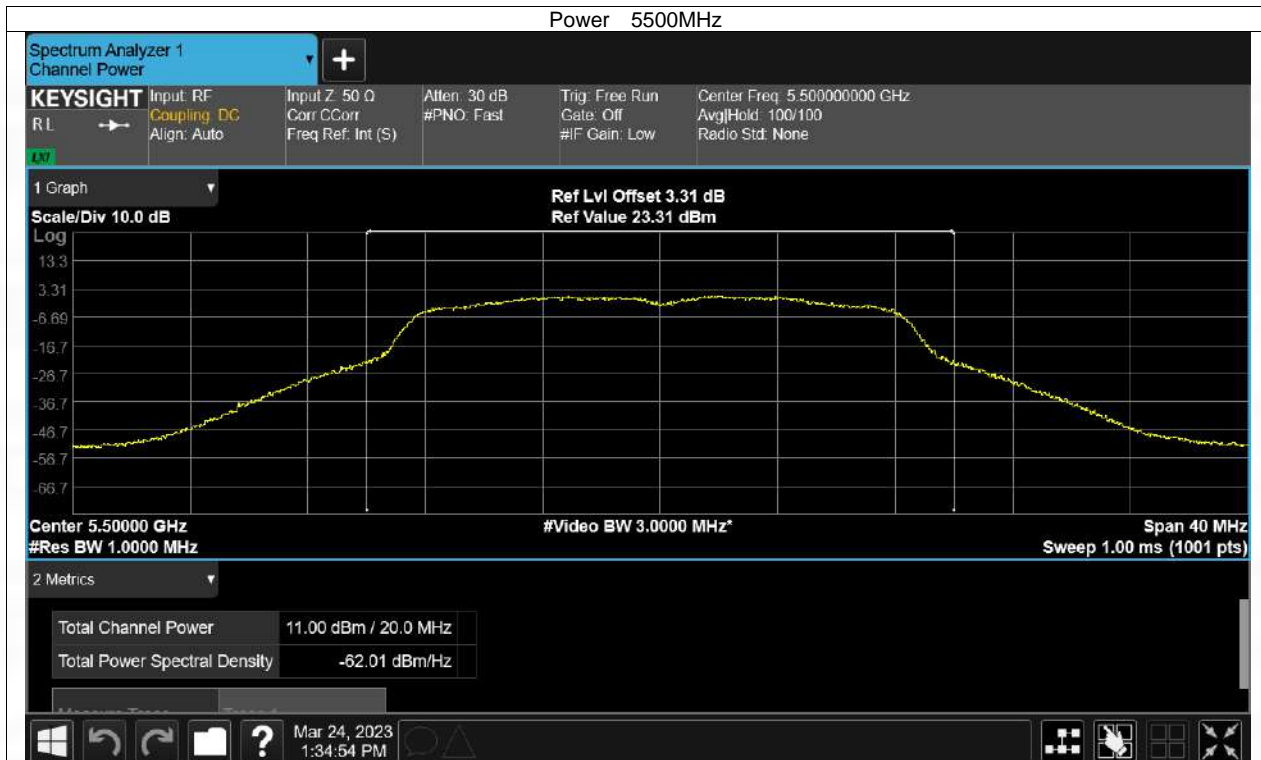
Test Graphs
Power 5180MHz

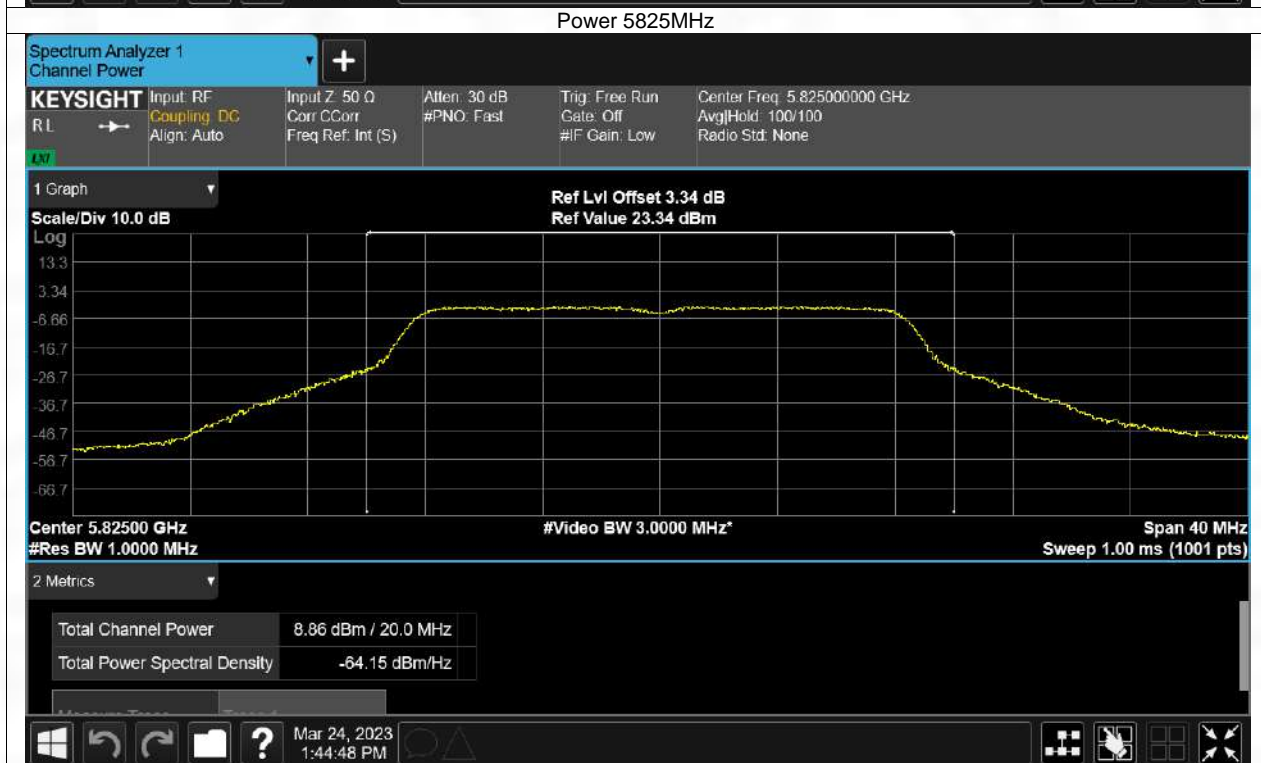
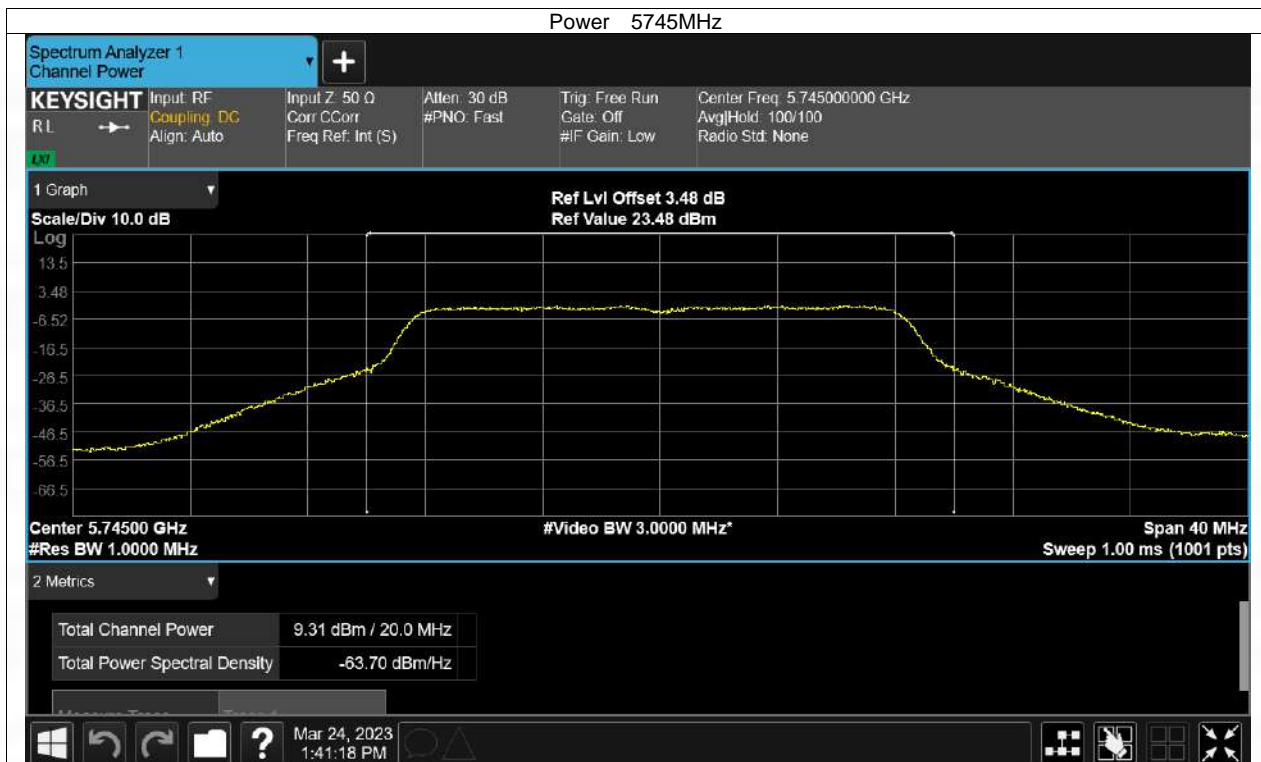


Power 5240MHz

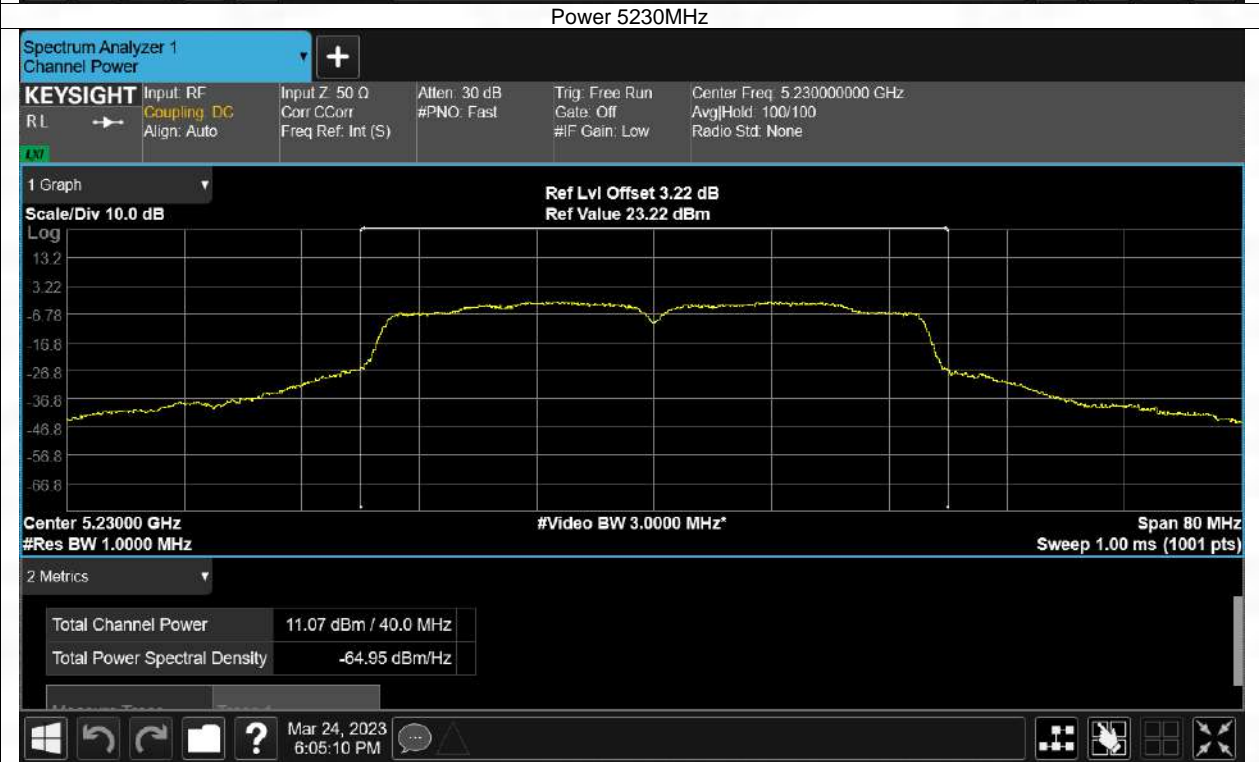
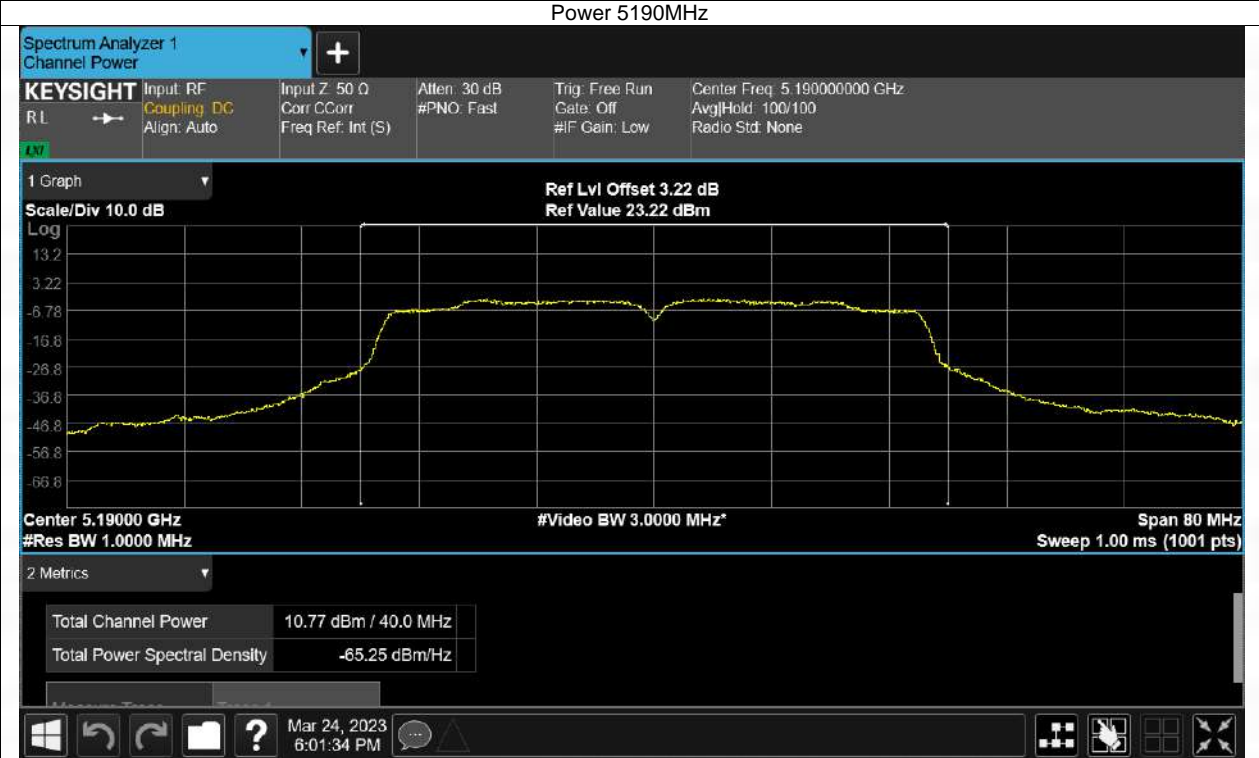


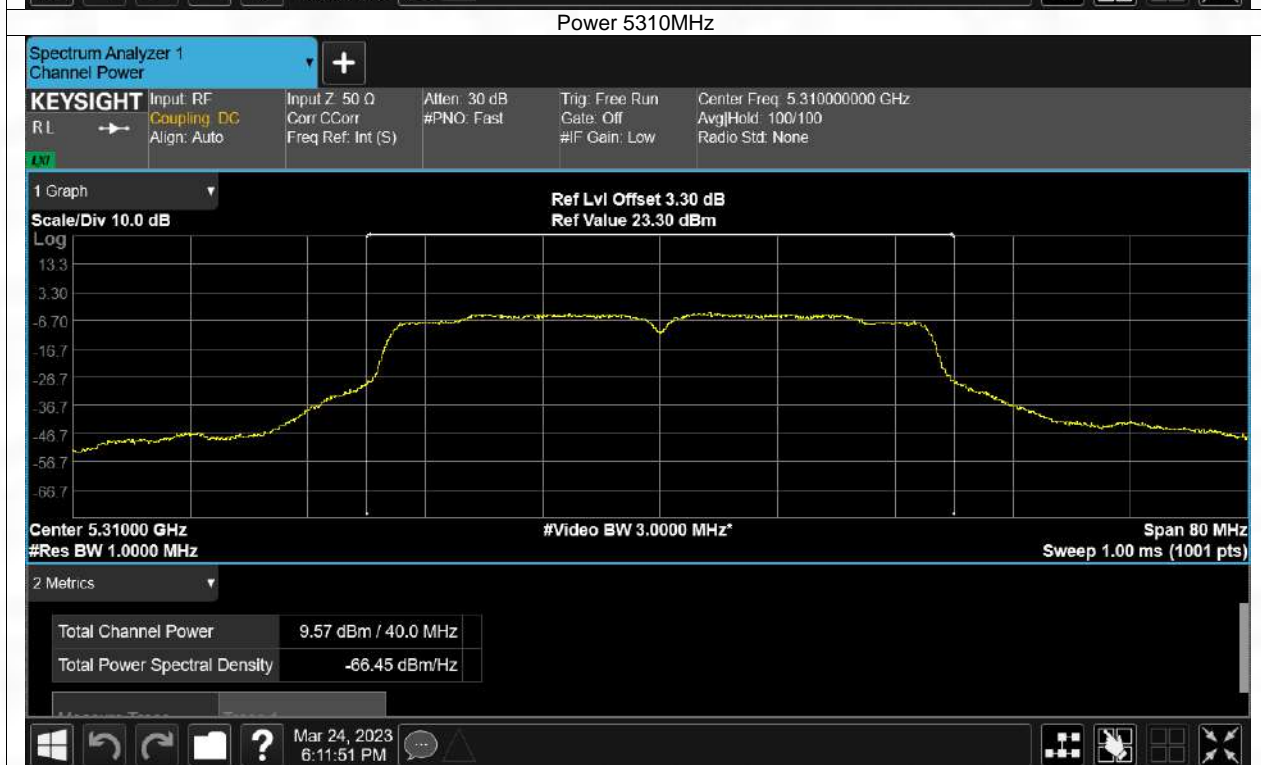


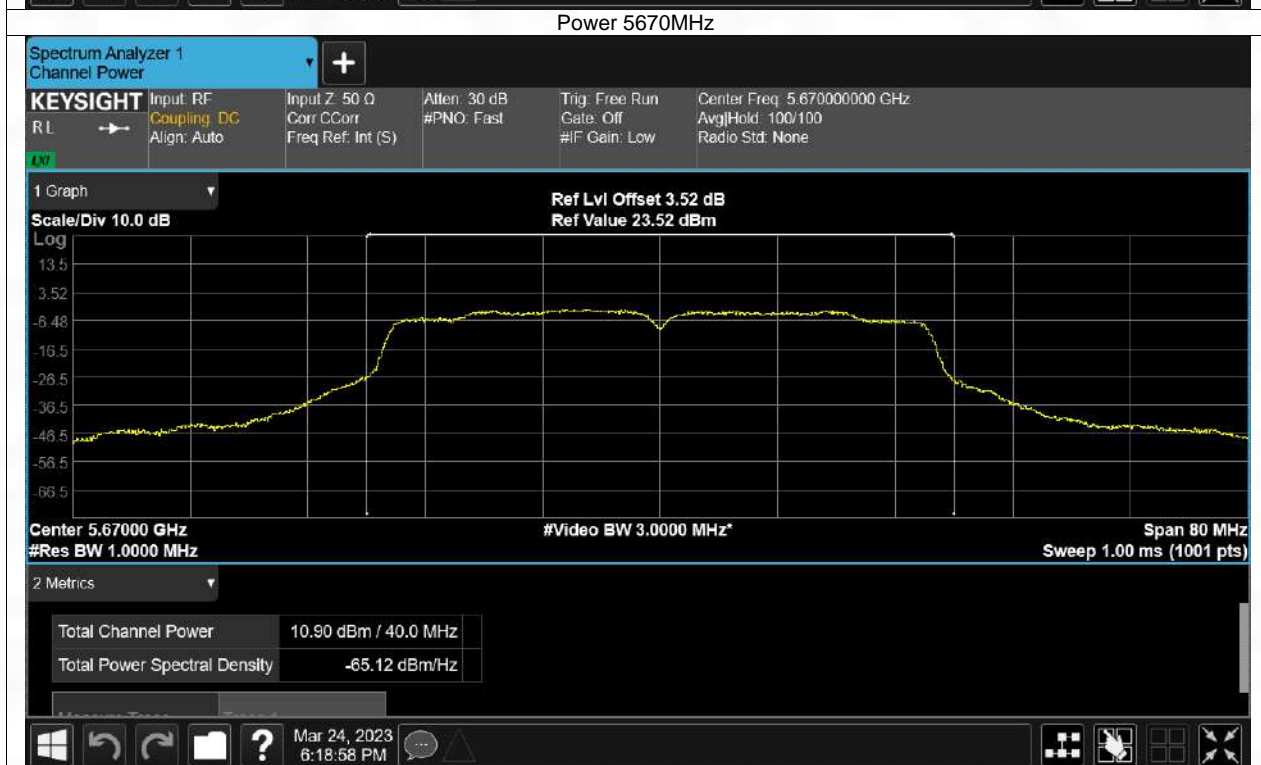
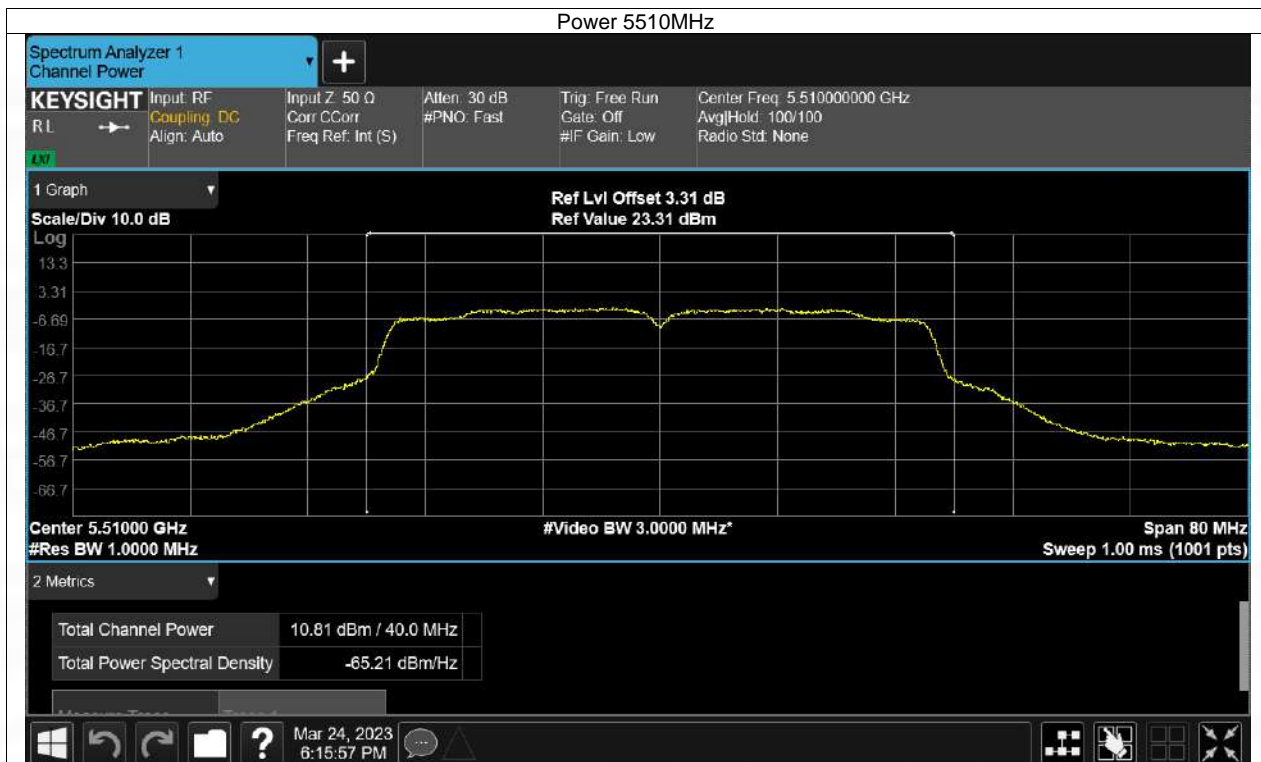


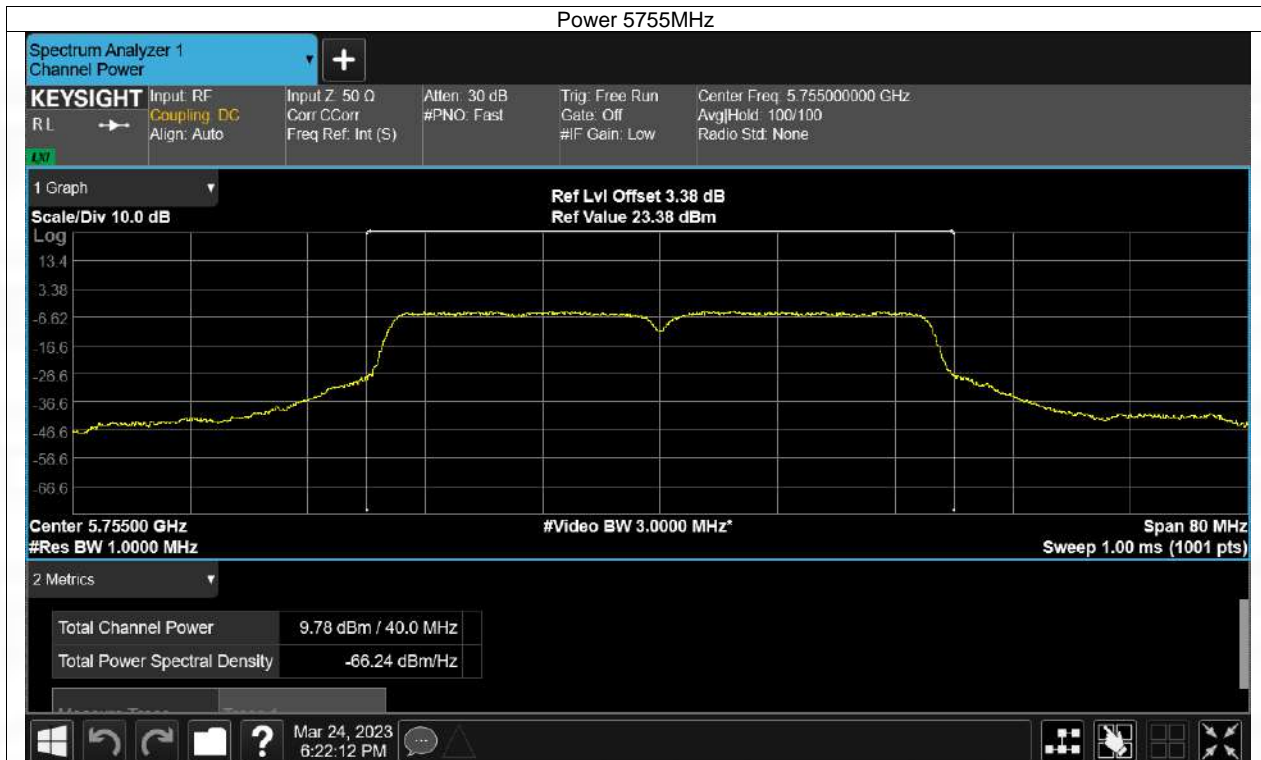


40MHz(IEEE 802.11n/ac/ax)-worst

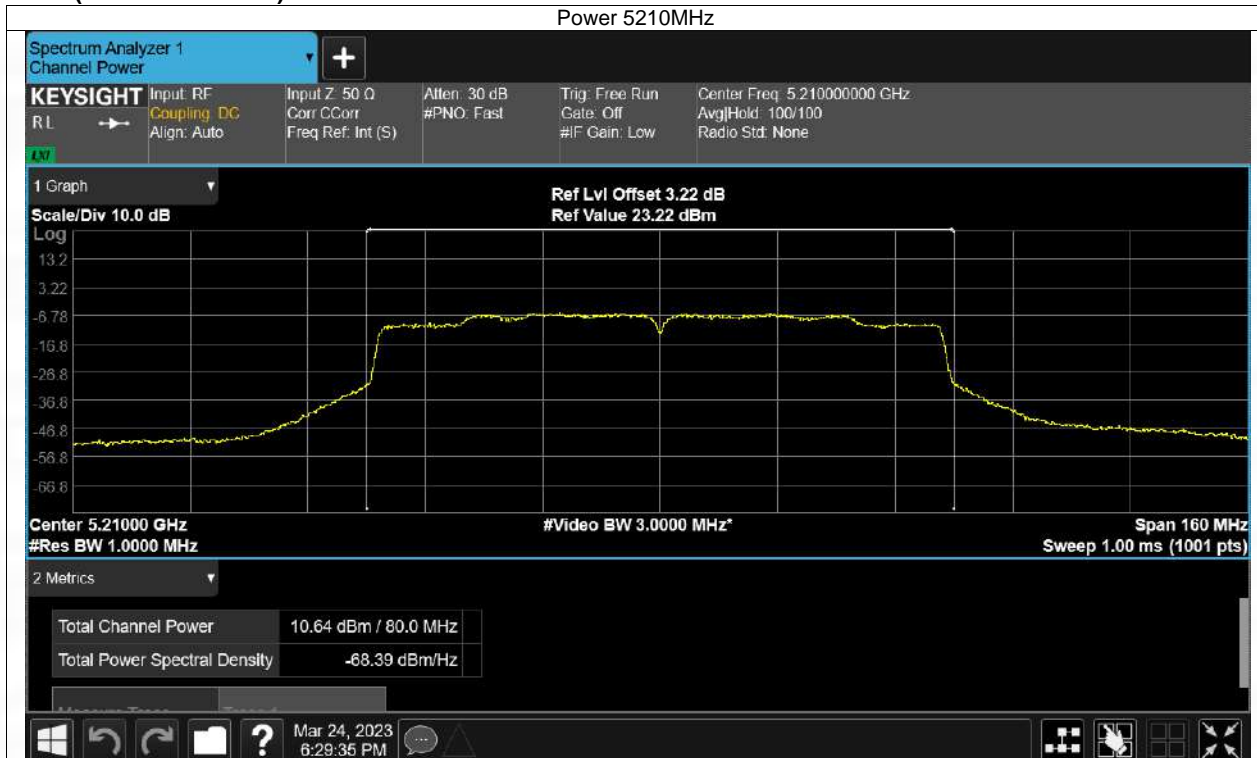


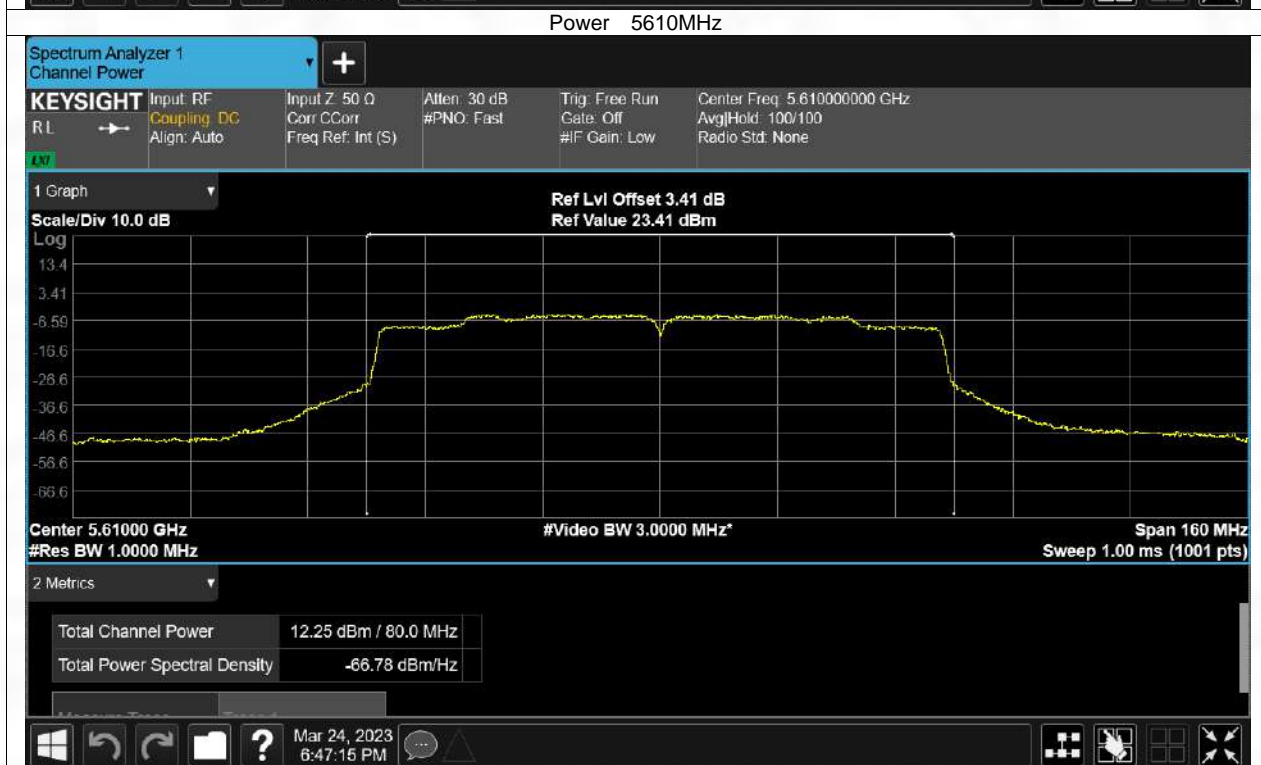
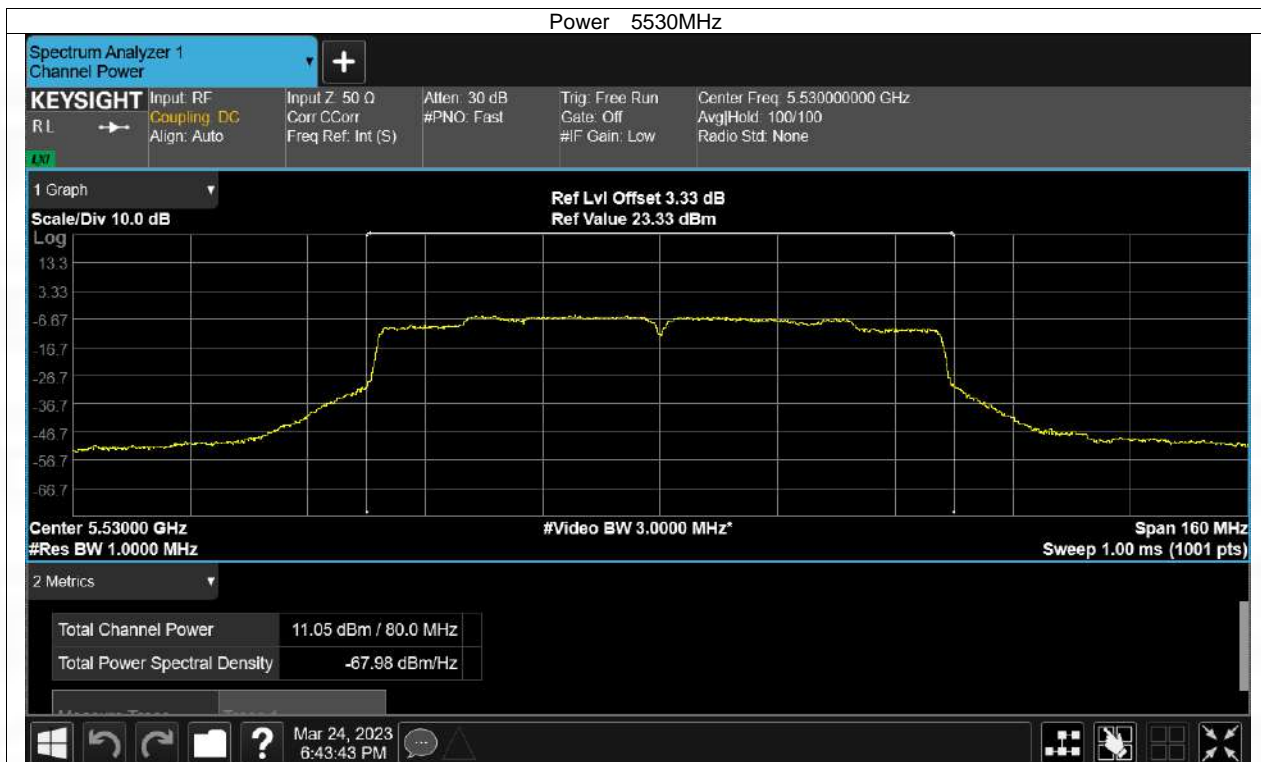


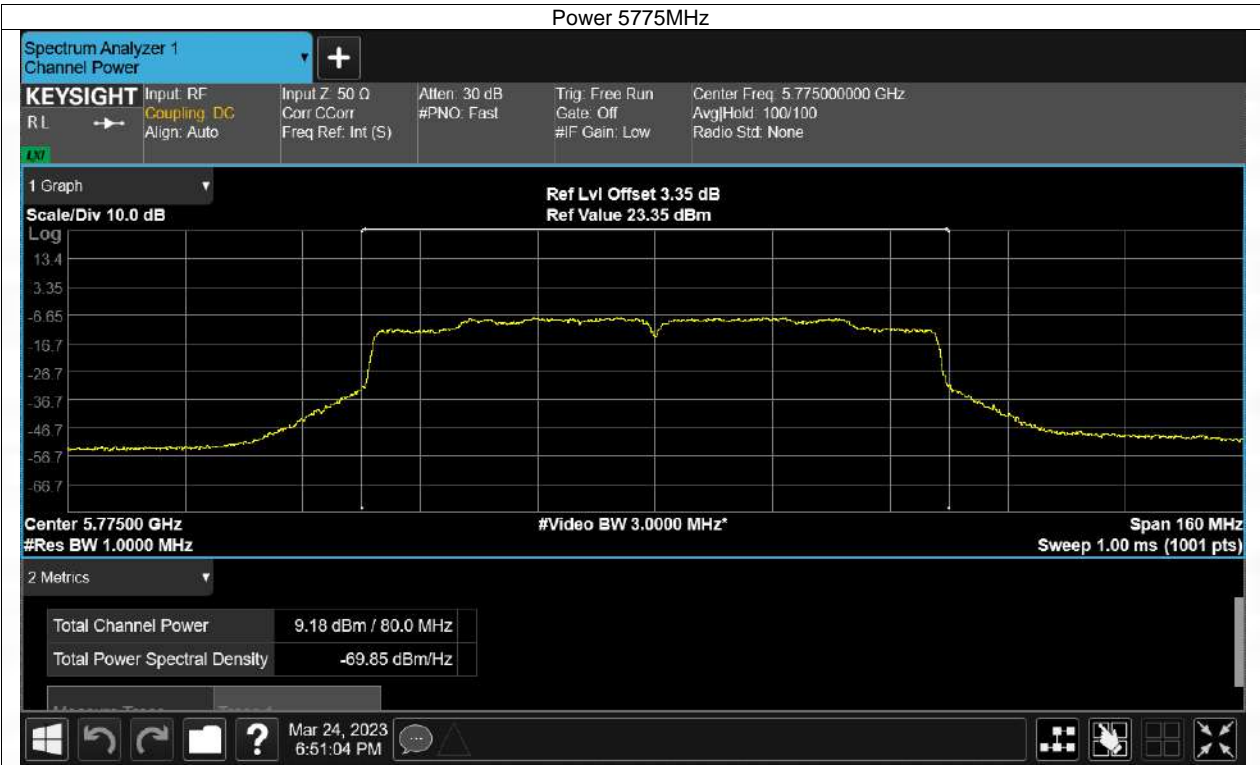




80MHz(IEEE 802.11ac/ax)-worst







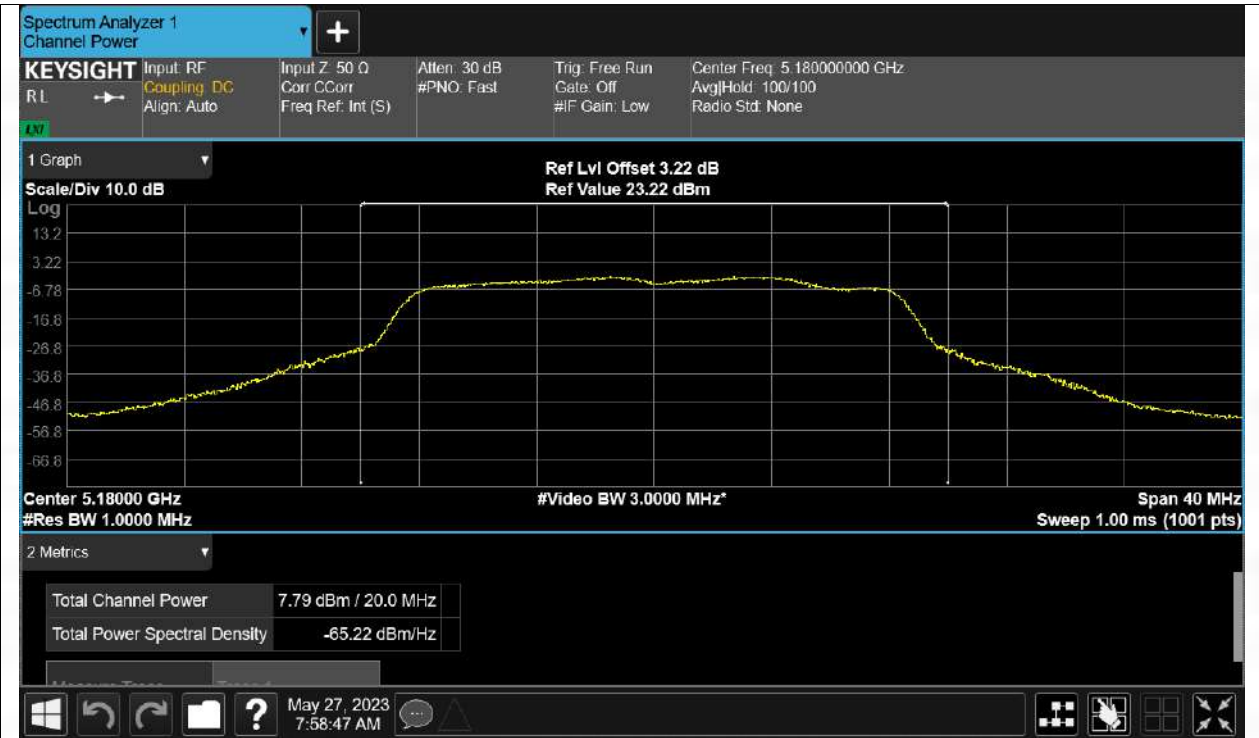
160MMHz(IEEE 802.11ax)-worst

Power 5250MHz

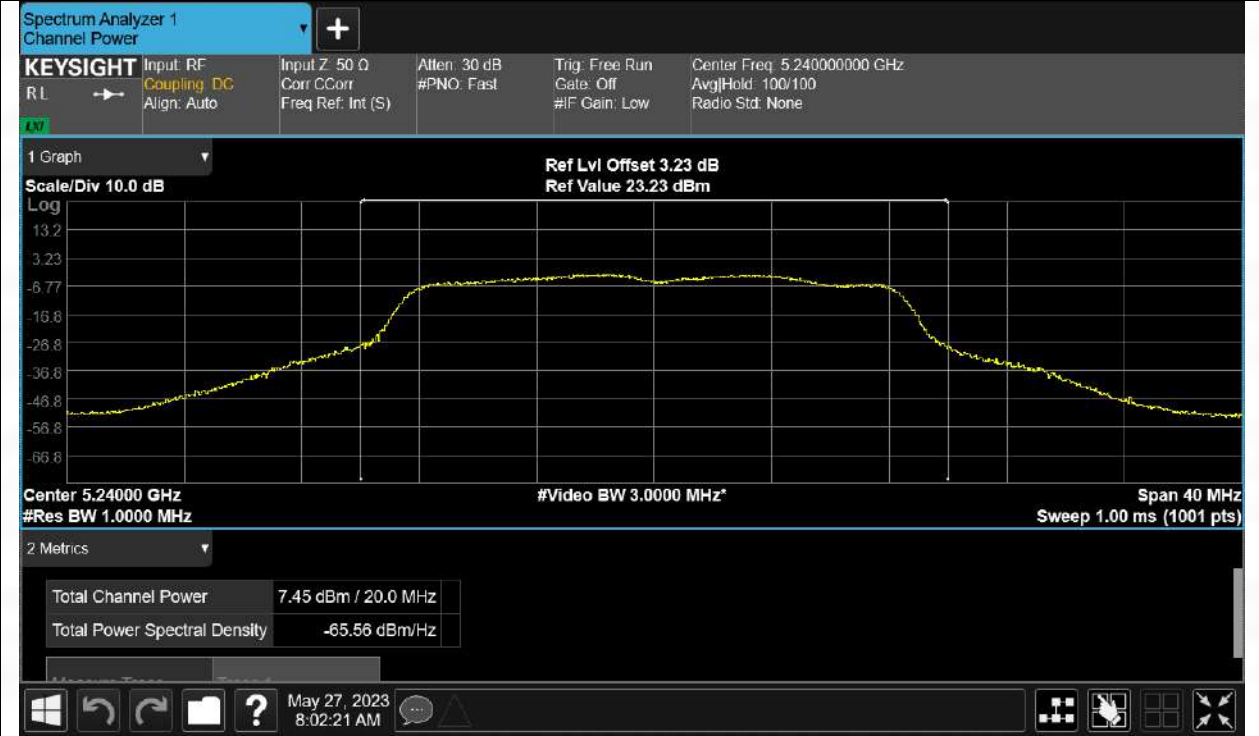


ANT2 20MMHz(IEEE 802.11a/n/ac/ax)-worst

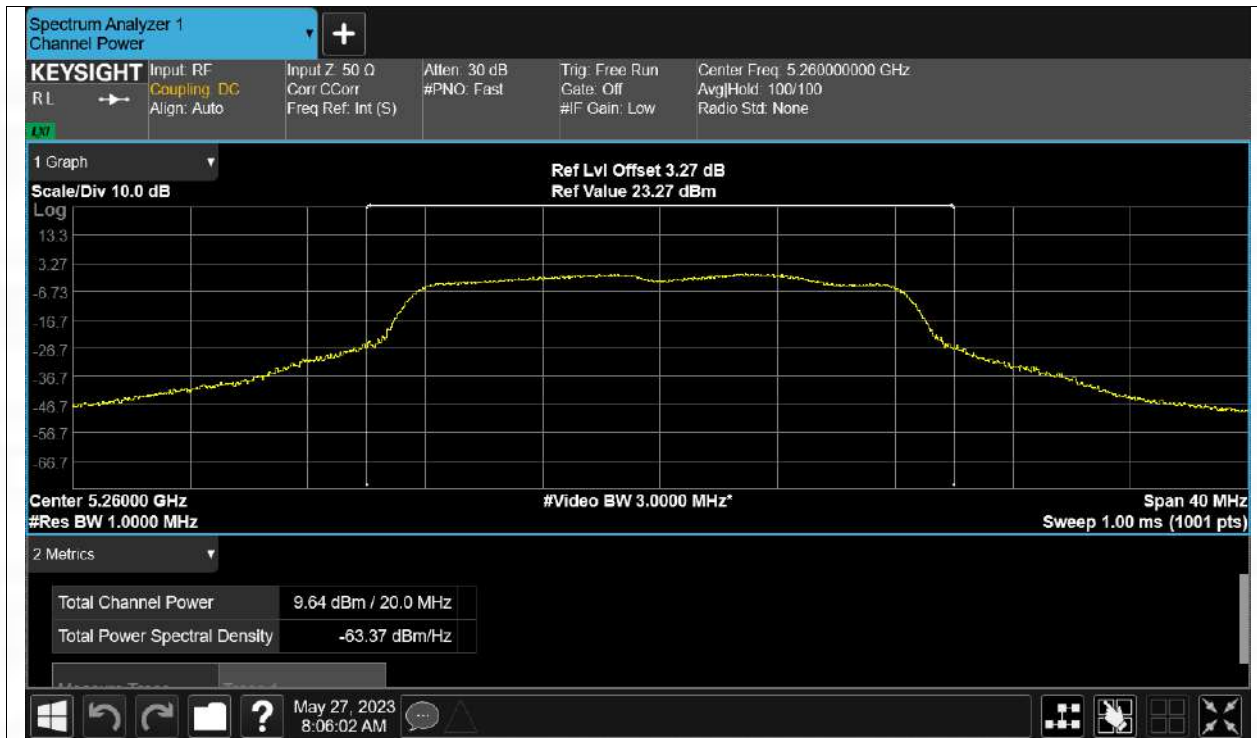
Test Graphs
Power 5180MHz



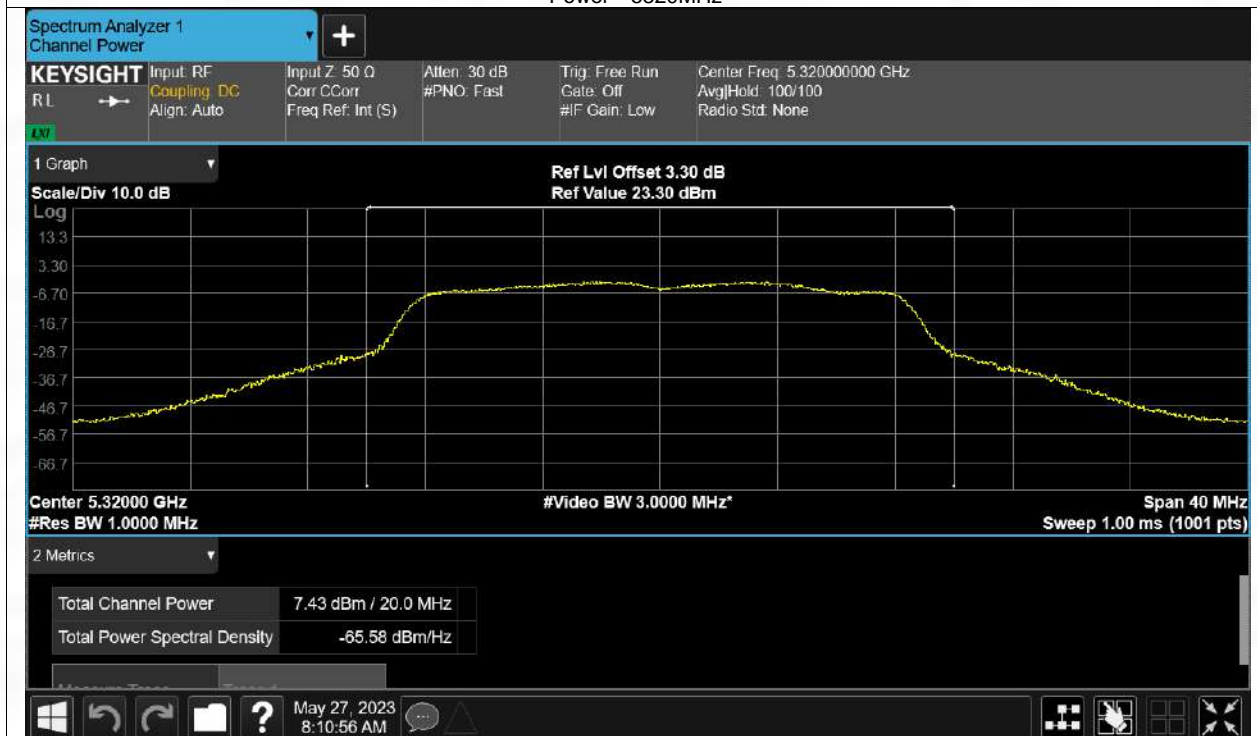
Power 5240MHz

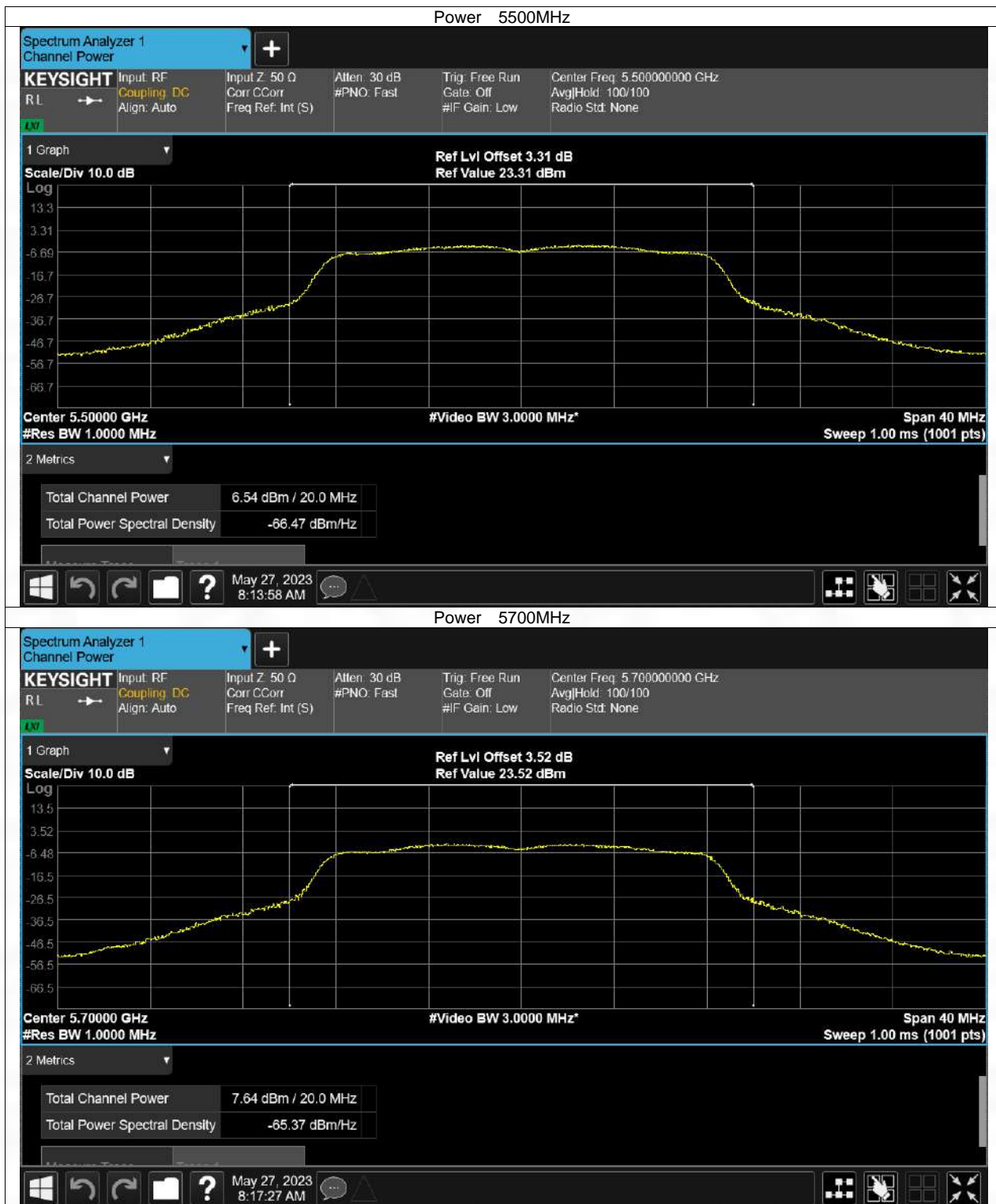


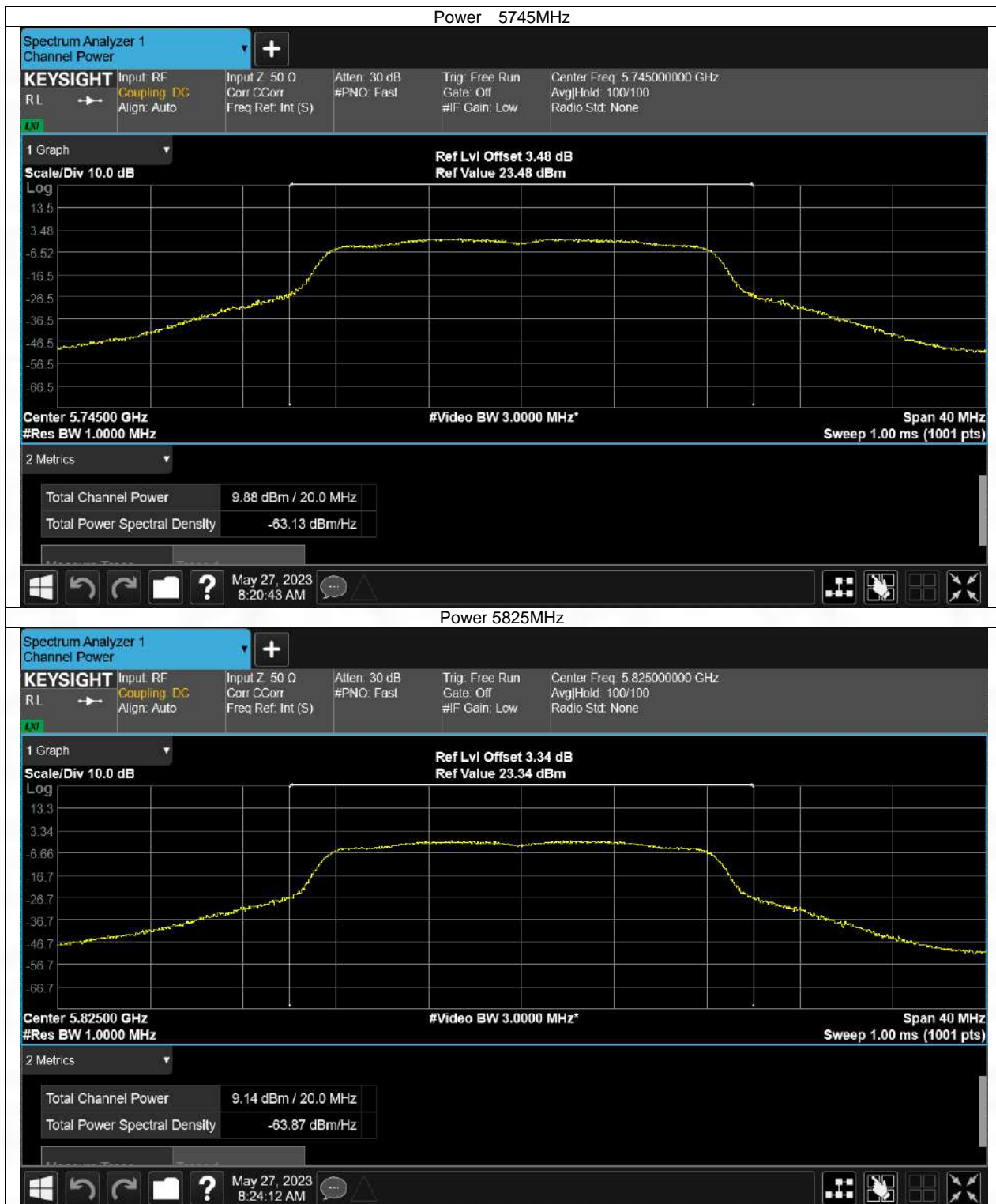
Power 5260MHz



Power 5320MHz

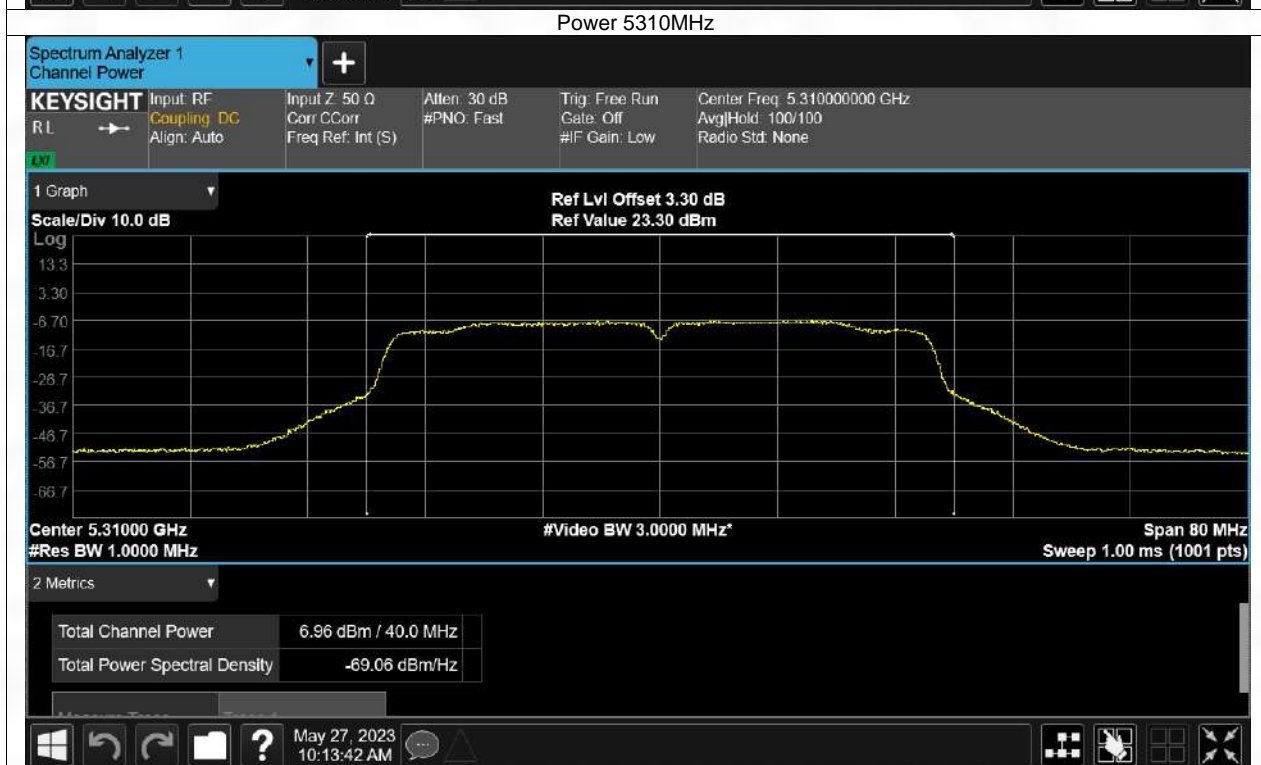


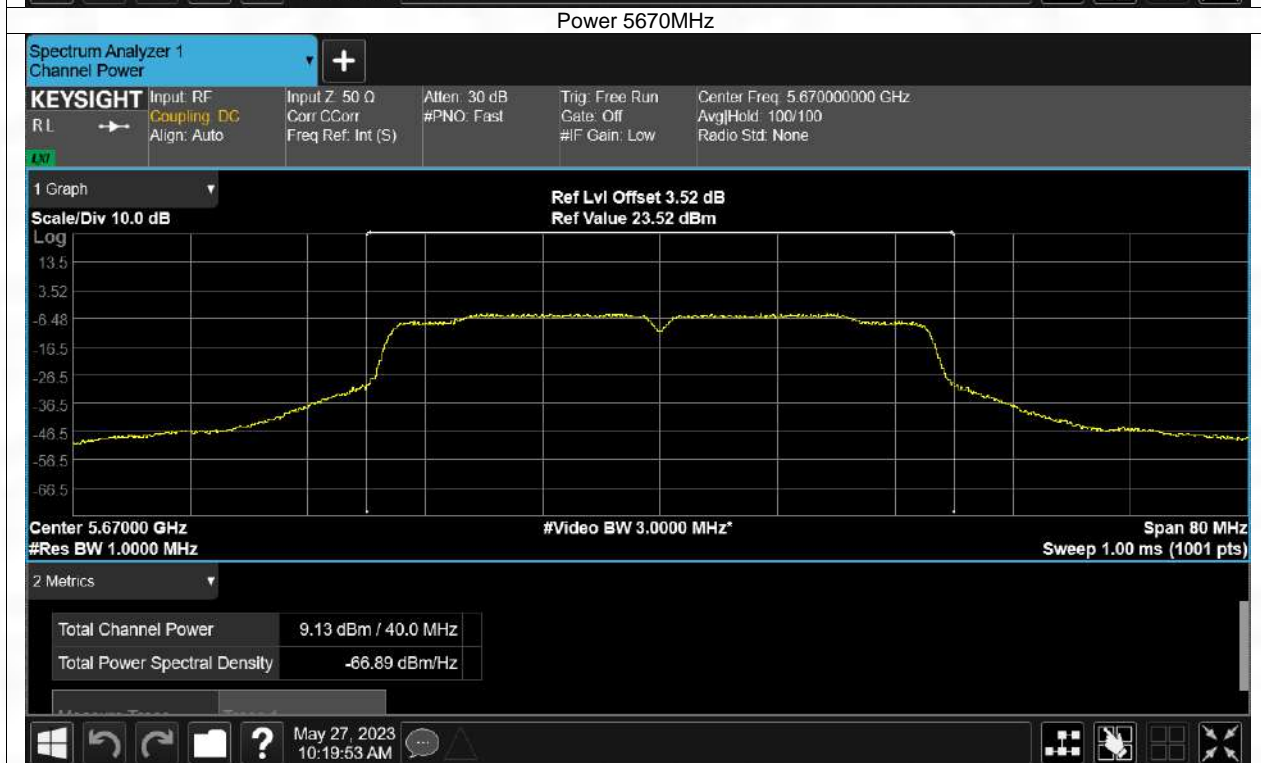
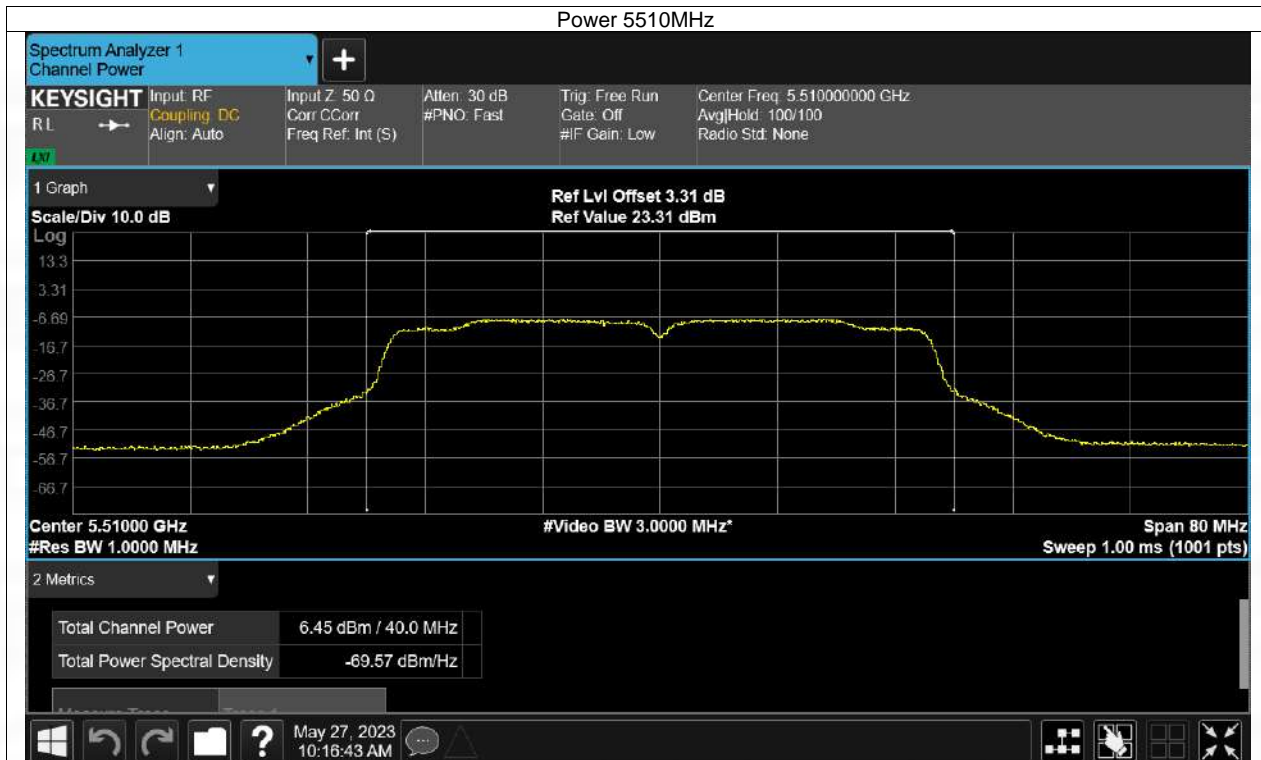


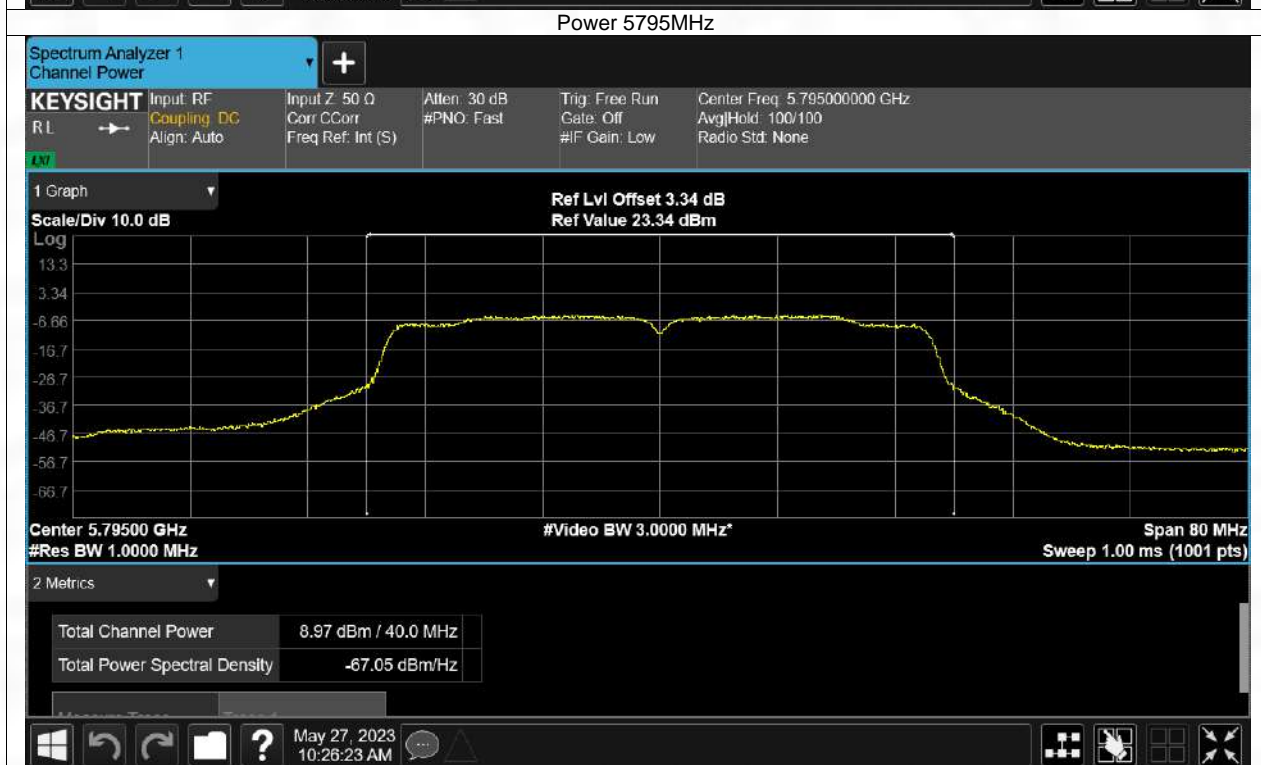


40MHz(IEEE 802.11n/ac/ax)-worst

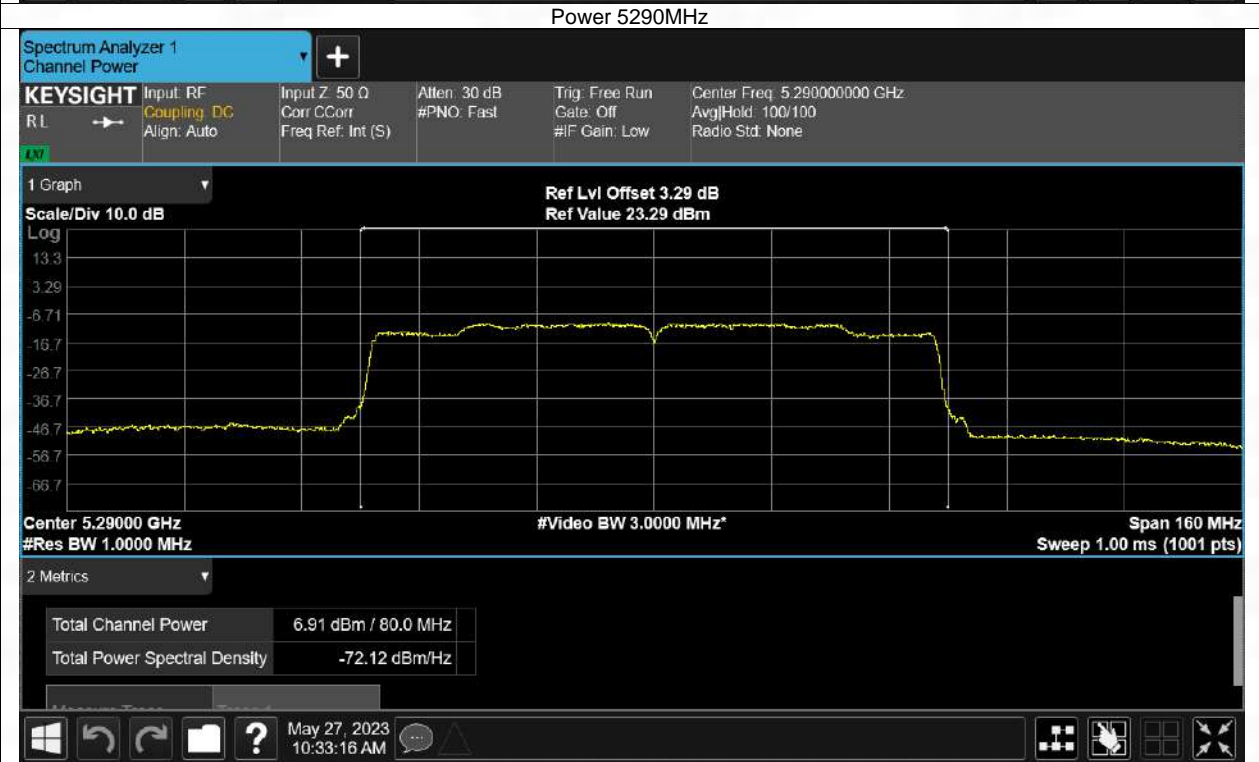
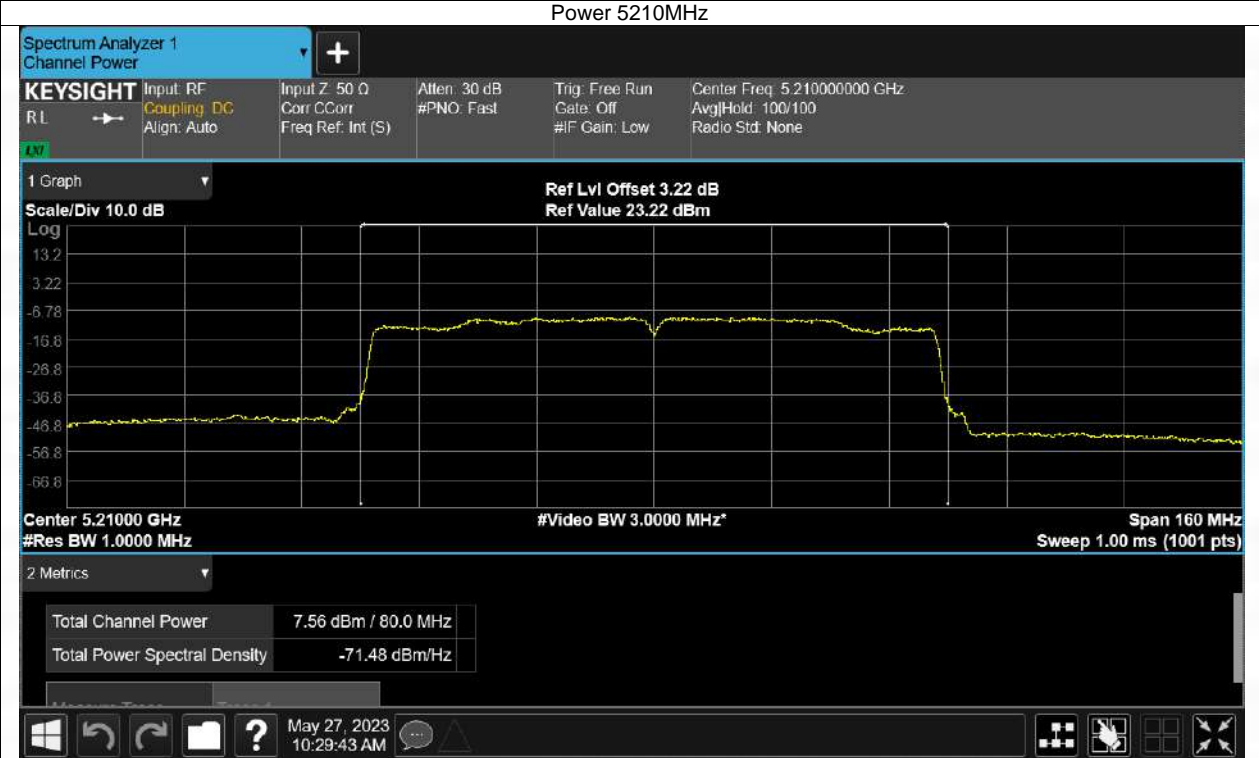


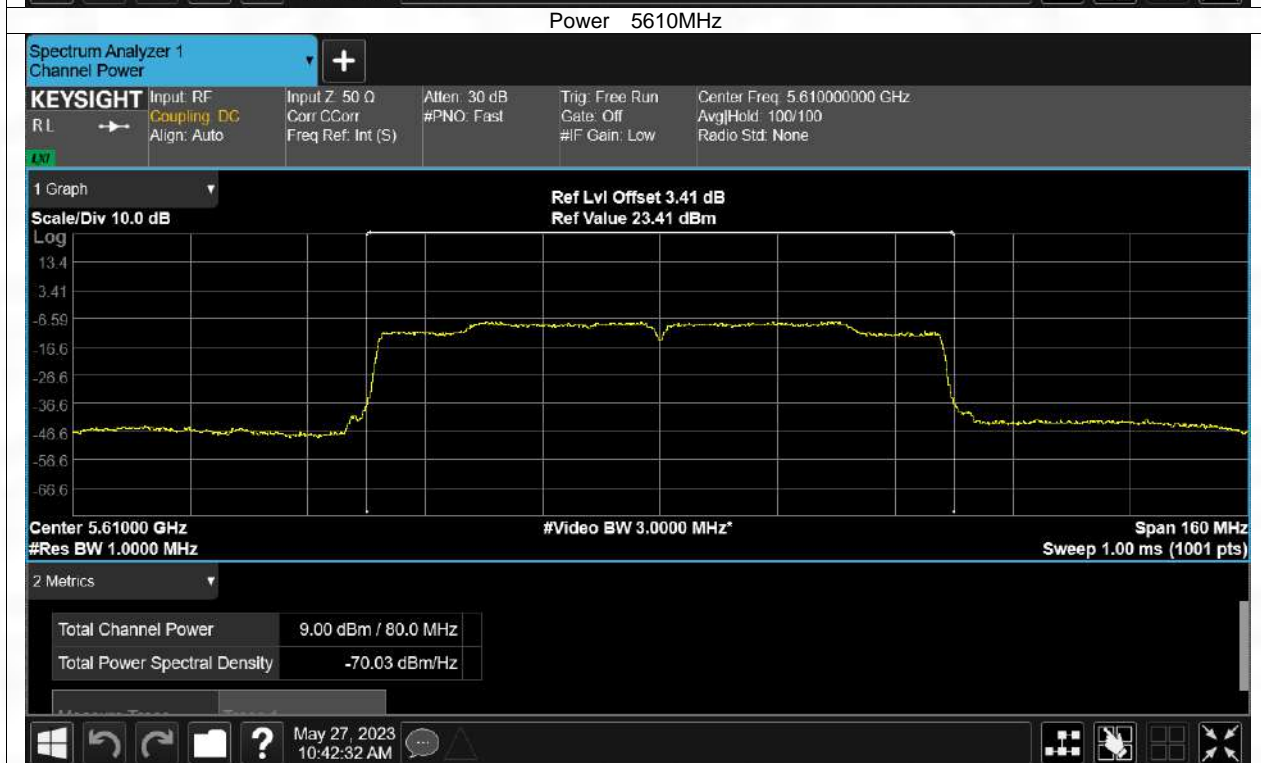
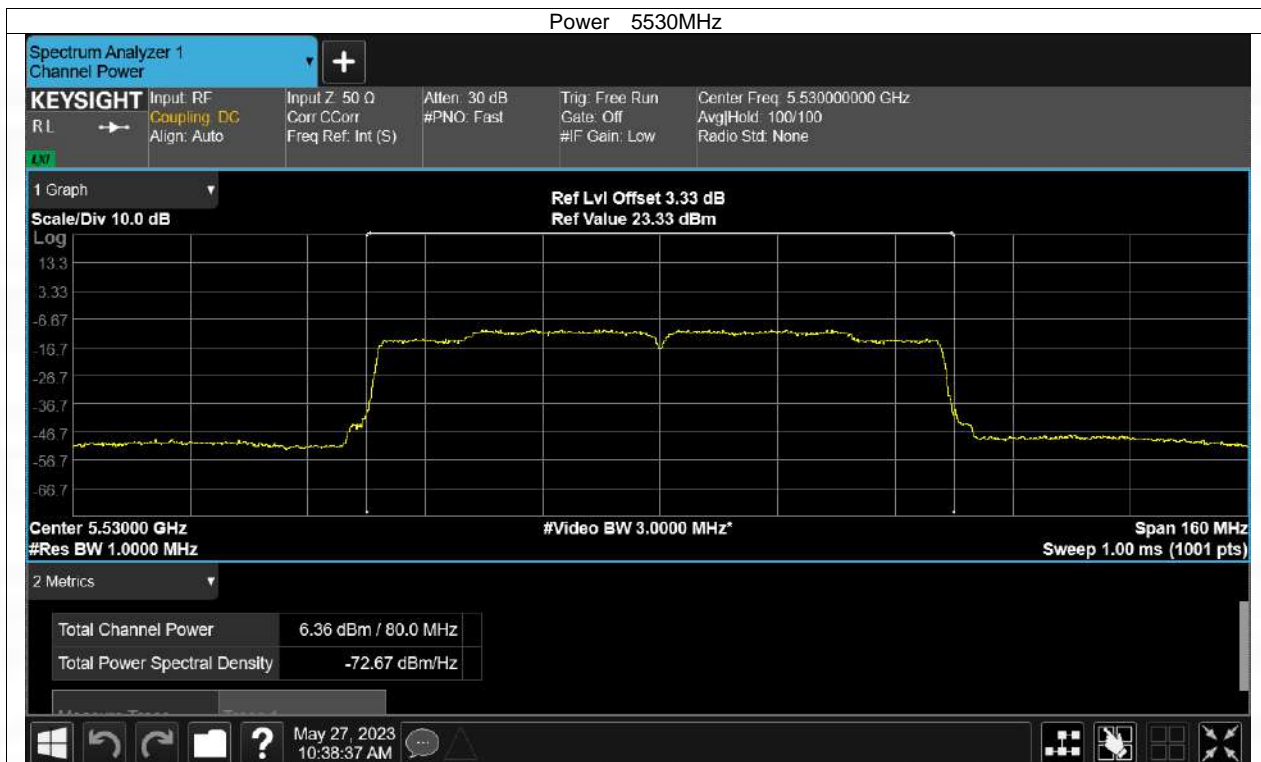




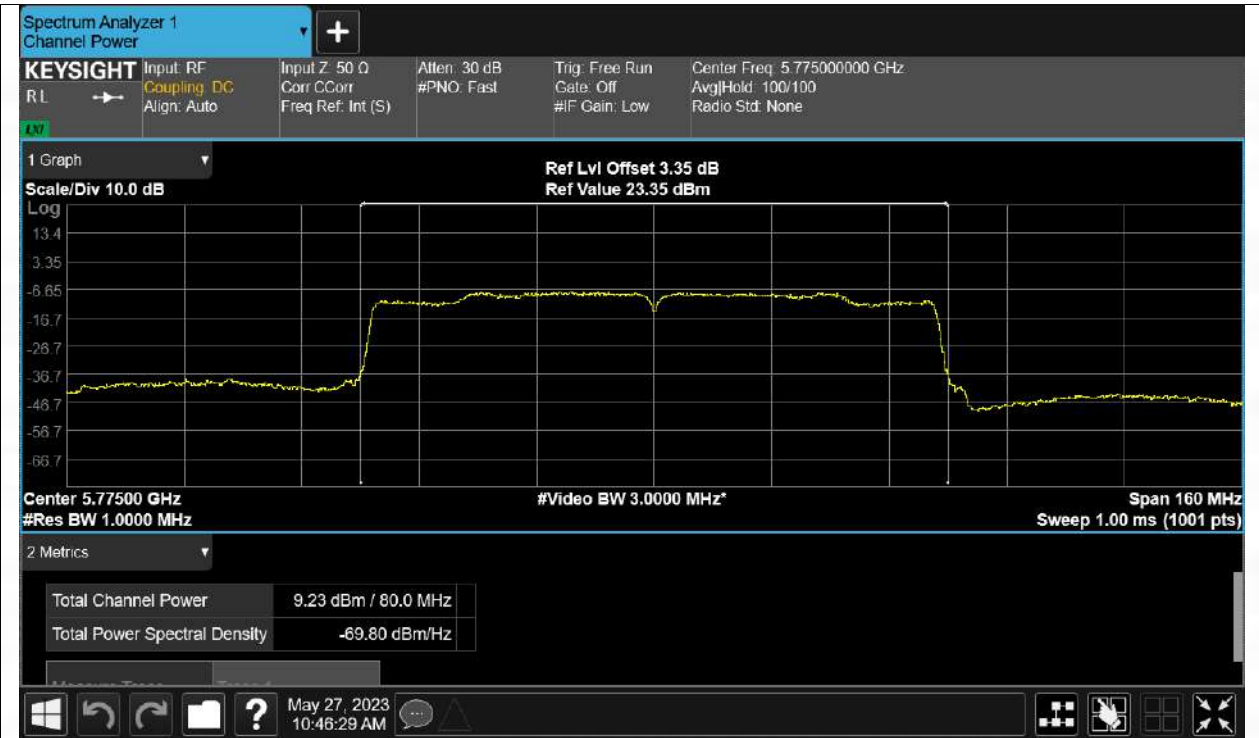


80MHz(IEEE 802.11ac/ax)-worst





Power 5775MHz



3. Maximum Power Spectral Density

3.1 PSD

3.1.1 Test Result

MAIN ANT1

Band	Channel	Frequency (MHz)	Total PSD (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11a/n/ac/ax)-worst					
1	Low	5180	-2.25	11	Pass
	High	5240	-2.29	11	Pass
2	Low	5260	-9.45	11	Pass
	High	5320	-11.78	11	Pass
3	Low	5500	-7.92	11	Pass
	High	5700	-10.34	11	Pass
4	Low	5745	-14.97	30	Pass
	High	5825	-15.26	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	-11.85	11	Pass
	High	5230	-12.26	11	Pass
2	Low	5270	-12.92	11	Pass
	High	5310	-12.21	11	Pass
3	Low	5510	-12.62	11	Pass
	High	5670	-12.58	11	Pass
4	Low	5755	-13.99	30	Pass
	High	5795	-16.74	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	-13.99	11	Pass
2	High	5290	-14.55	11	Pass
3	Low	5530	-14.34	11	Pass
	High	5610	-13.2	11	Pass
4	High	5775	-17.56	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	-17.31	11	Pass
3	High	5570	-17.16	11	Pass

AUX ANT2

Band	Channel	Frequency (MHz)	Total PSD (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11a/n/ac/ax)-worst					
1	Low	5180	-3.94	11	Pass

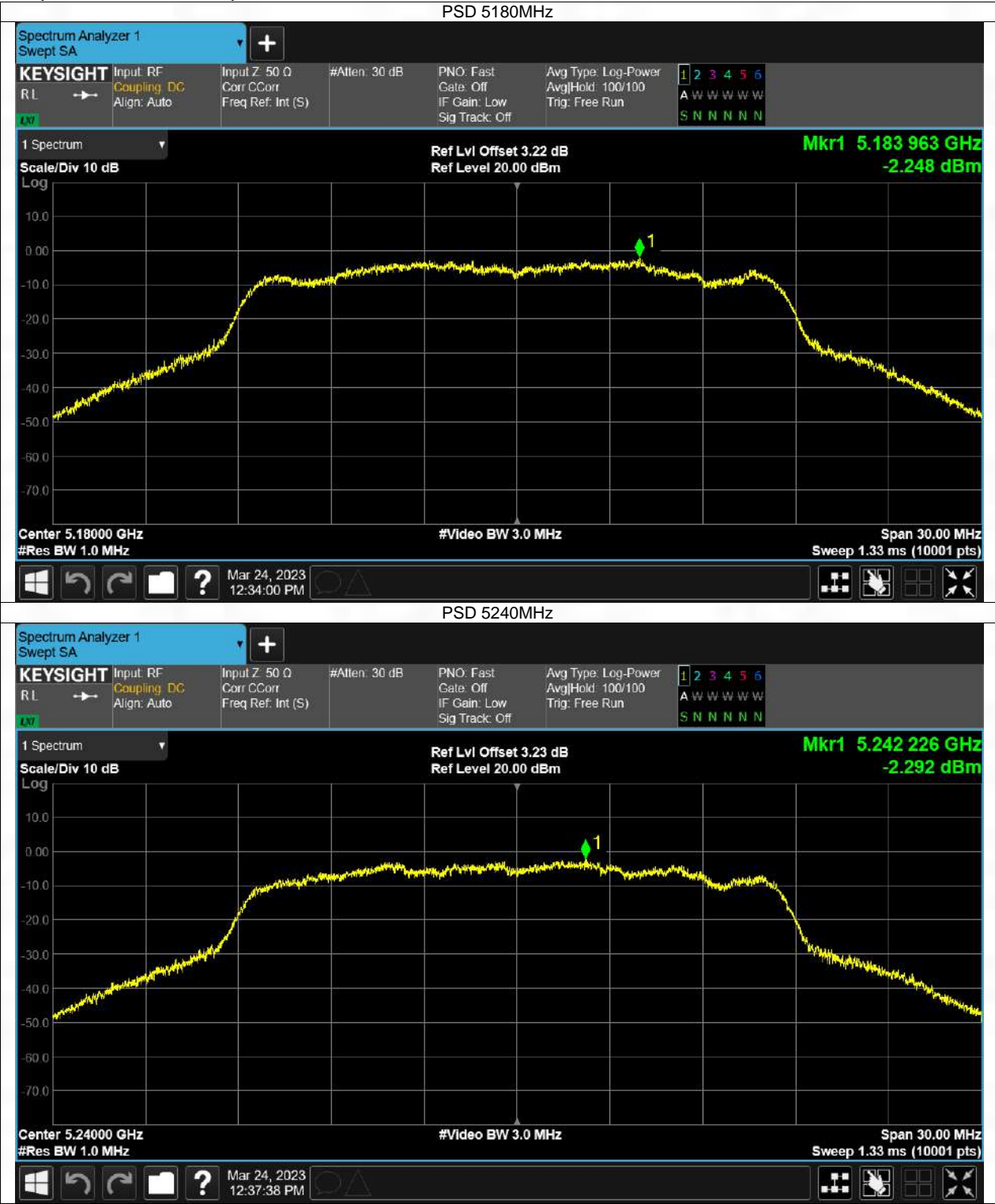
	High	5240	-5.96	11	Pass
2	Low	5260	-3.75	11	Pass
	High	5320	-6.22	11	Pass
3	Low	5500	-5.79	11	Pass
	High	5700	-7.29	11	Pass
4	Low	5745	-6.49	30	Pass
	High	5825	-7.10	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	-14.04	11	Pass
	High	5230	-9.12	11	Pass
2	Low	5270	-9.9	11	Pass
	High	5310	-11.97	11	Pass
3	Low	5510	-12.81	11	Pass
	High	5670	-11.64	11	Pass
4	Low	5755	-13.19	30	Pass
	High	5795	-14.92	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	-15.46	11	Pass
2	High	5290	-15.09	11	Pass
3	Low	5530	-16.41	11	Pass
	High	5610	-13.12	11	Pass
4	High	5775	-16.26	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	-13.53	11	Pass
3	High	5570	-14.58	11	Pass

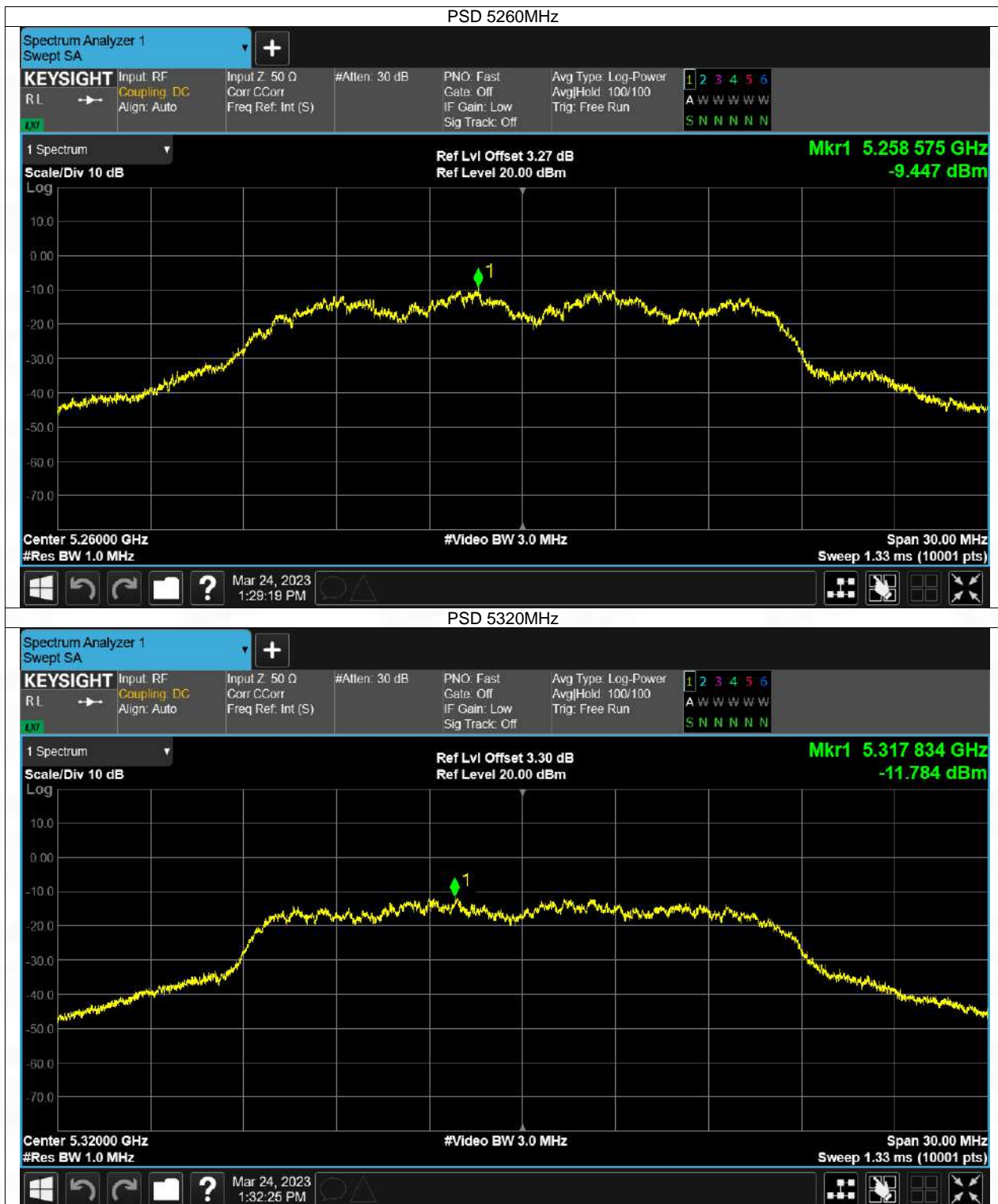
MIMO Mode

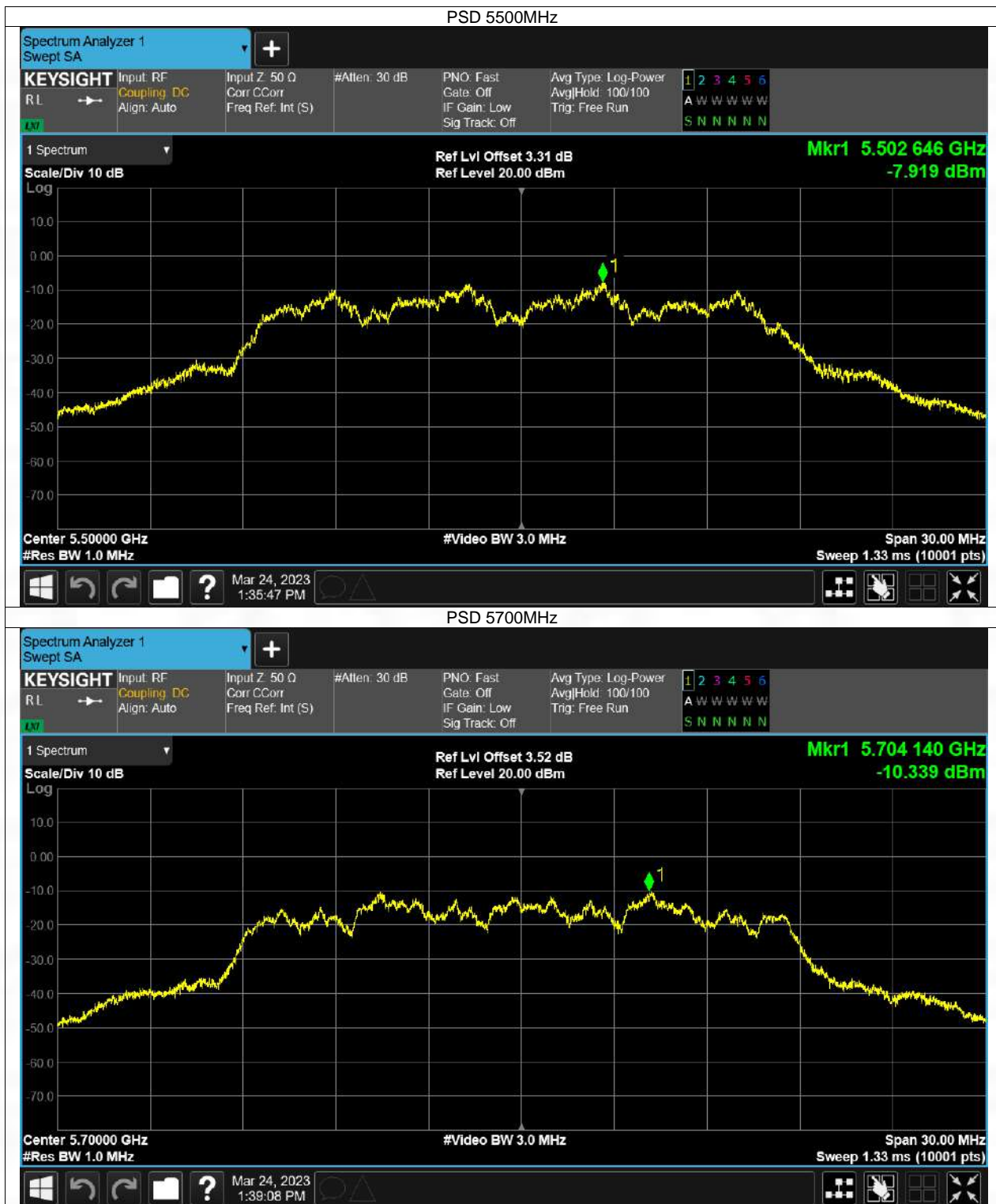
Band	Channel	Frequency (MHz)	Total PSD (dBm)	Limit (dBm)	Verdict
20MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5180	0.00	11	Pass
	High	5240	-0.74	11	Pass
2	Low	5260	-2.71	11	Pass
	High	5320	-5.15	11	Pass
3	Low	5500	-3.72	11	Pass
	High	5700	-5.54	11	Pass
4	Low	5745	-5.91	30	Pass
	High	5825	-6.48	30	Pass
40MHz(IEEE 802.11n/ac/ax)-worst					
1	Low	5190	-9.80	11	Pass
	High	5230	-7.40	11	Pass
2	Low	5270	-8.14	11	Pass
	High	5310	-9.08	11	Pass
3	Low	5510	-9.70	11	Pass
	High	5670	-9.07	11	Pass
4	Low	5755	-10.56	30	Pass
	High	5795	-12.73	30	Pass
80MHz(IEEE 802.11ac/ax)-worst					
1	Low	5210	-11.65	11	Pass
2	High	5290	-11.80	11	Pass
3	Low	5530	-12.24	11	Pass
	High	5610	-10.15	11	Pass
4	High	5775	-13.85	30	Pass
160MHz(IEEE 802.11ax)-worst					
1	Low	5250	-12.01	11	Pass
3	High	5570	-12.67	11	Pass

3.1.2 Test Graph

ANT1
20MHz(IEEE 802.11a/n/ac/ax)

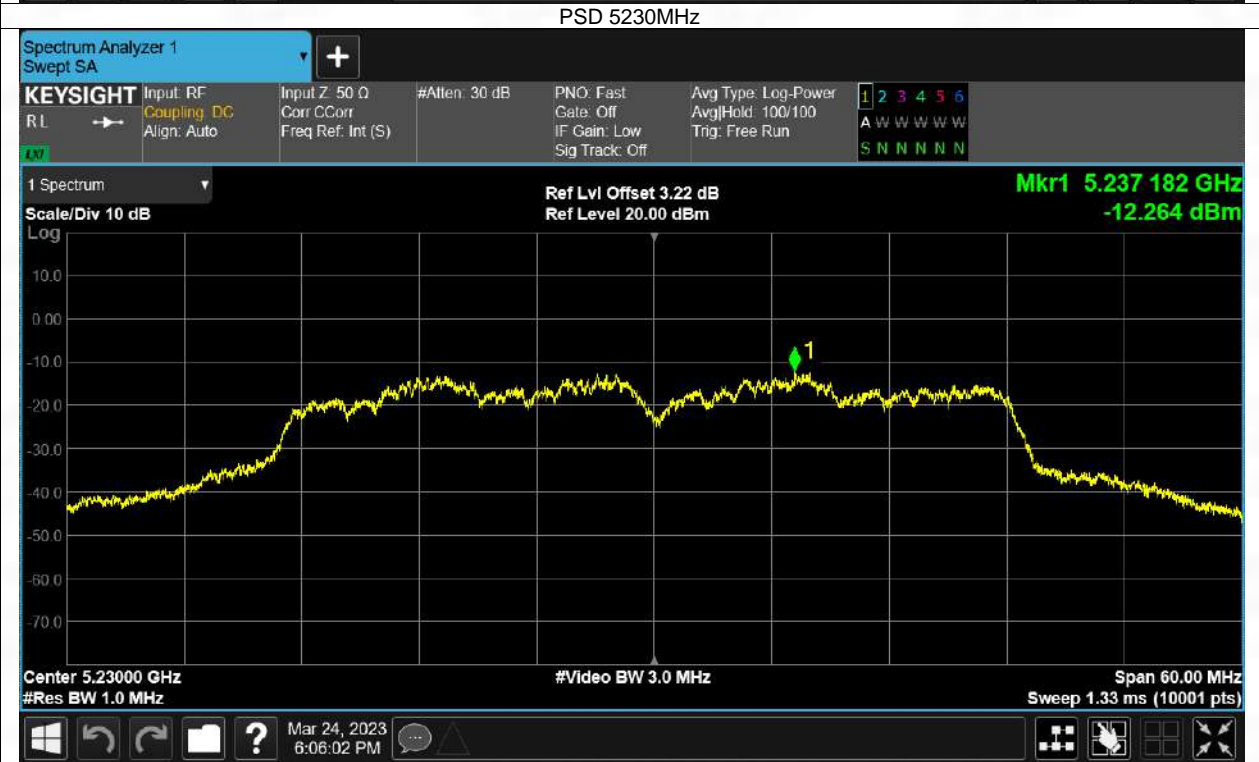
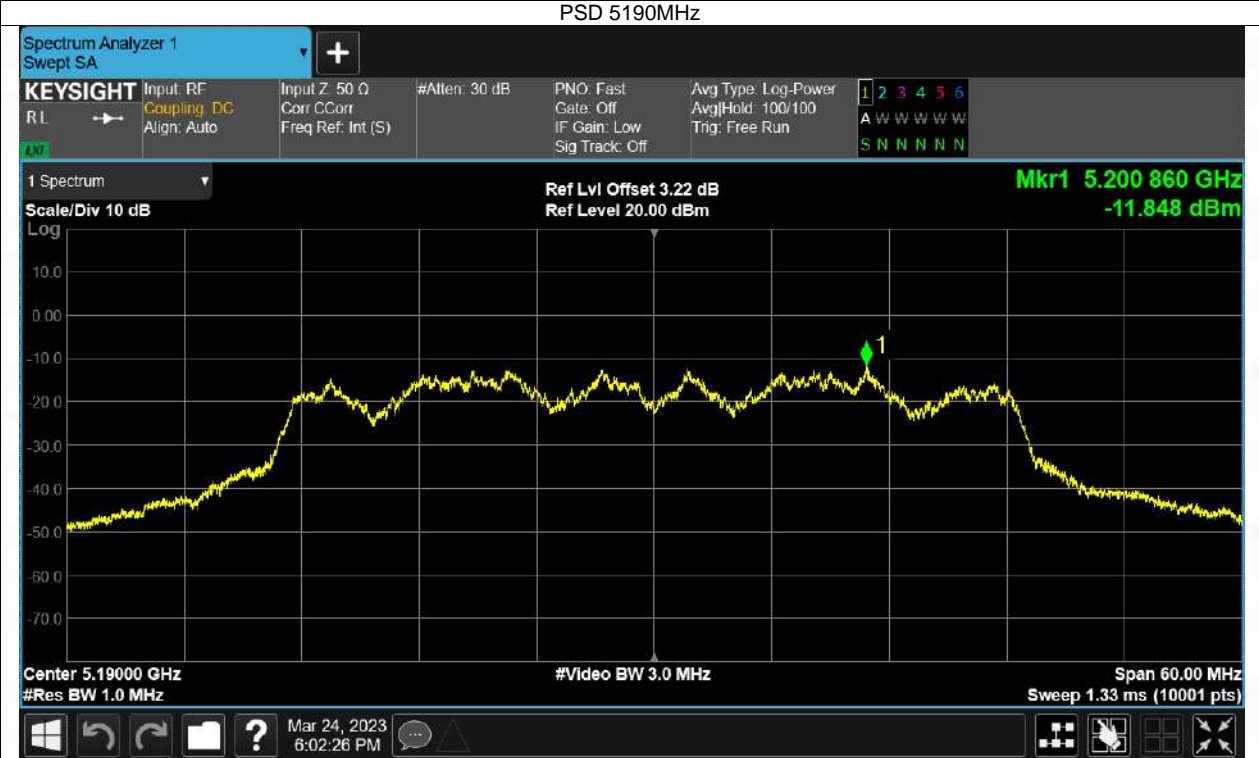


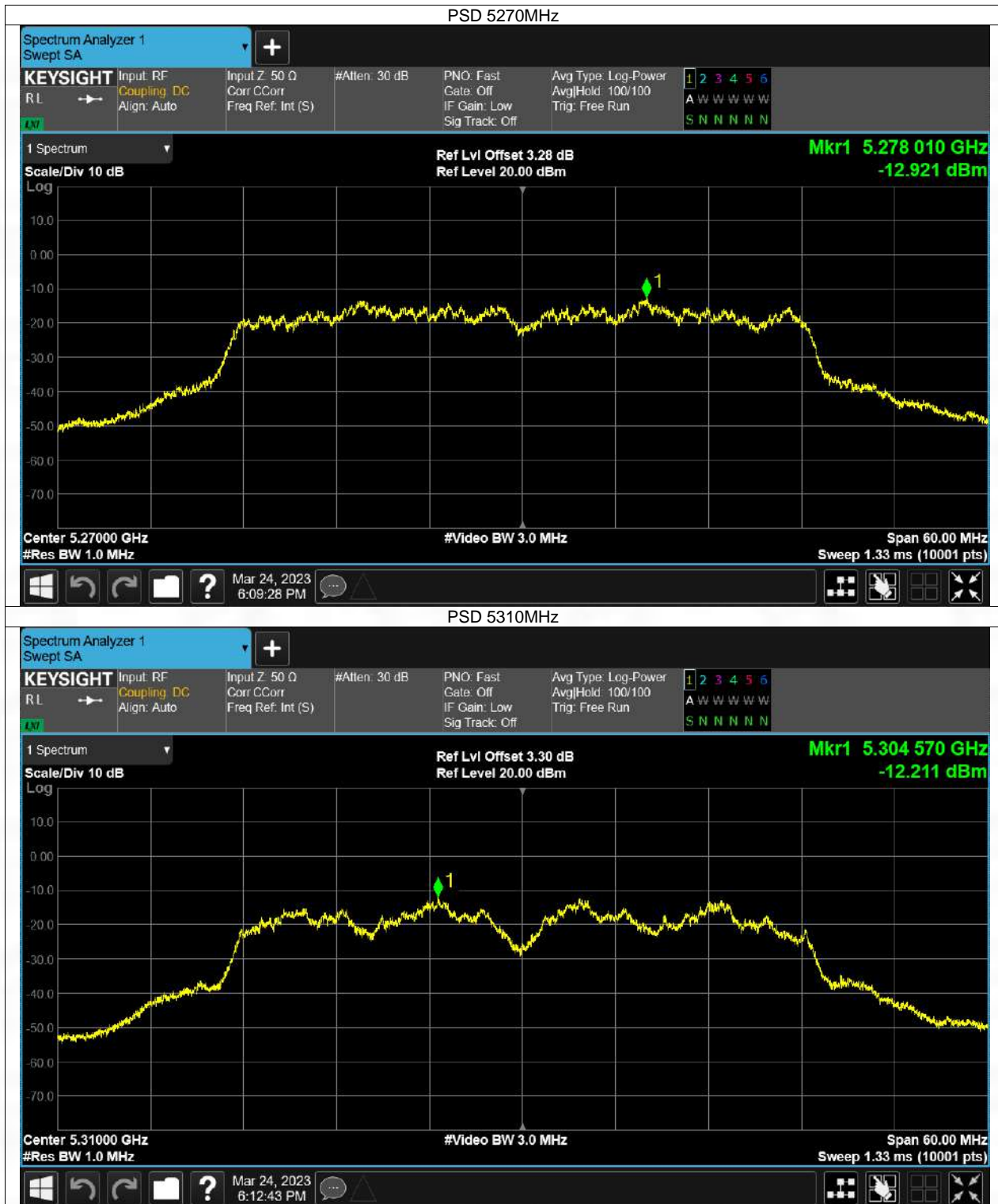


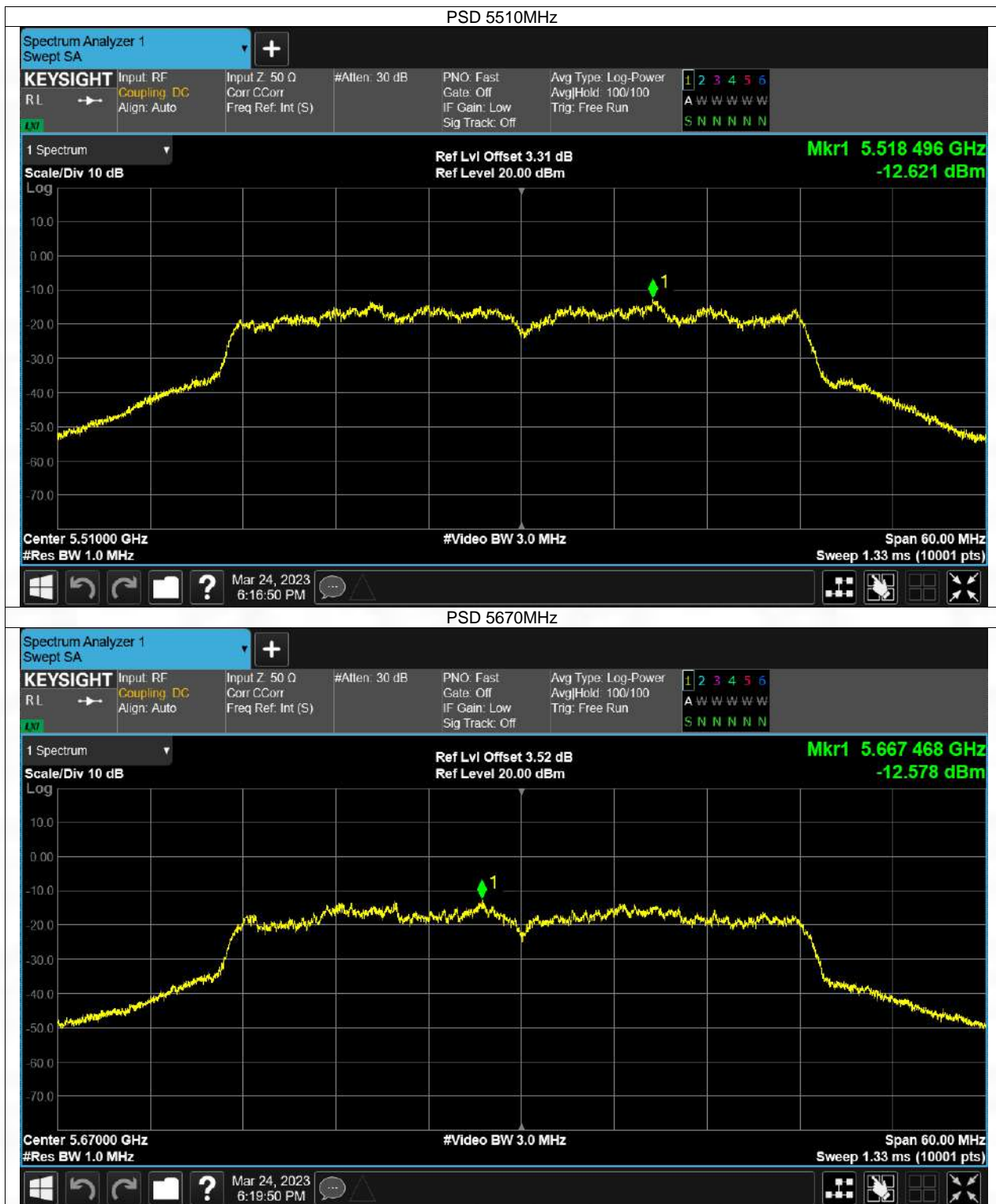




40MHz(IEEE 802.11n/ac/ax)

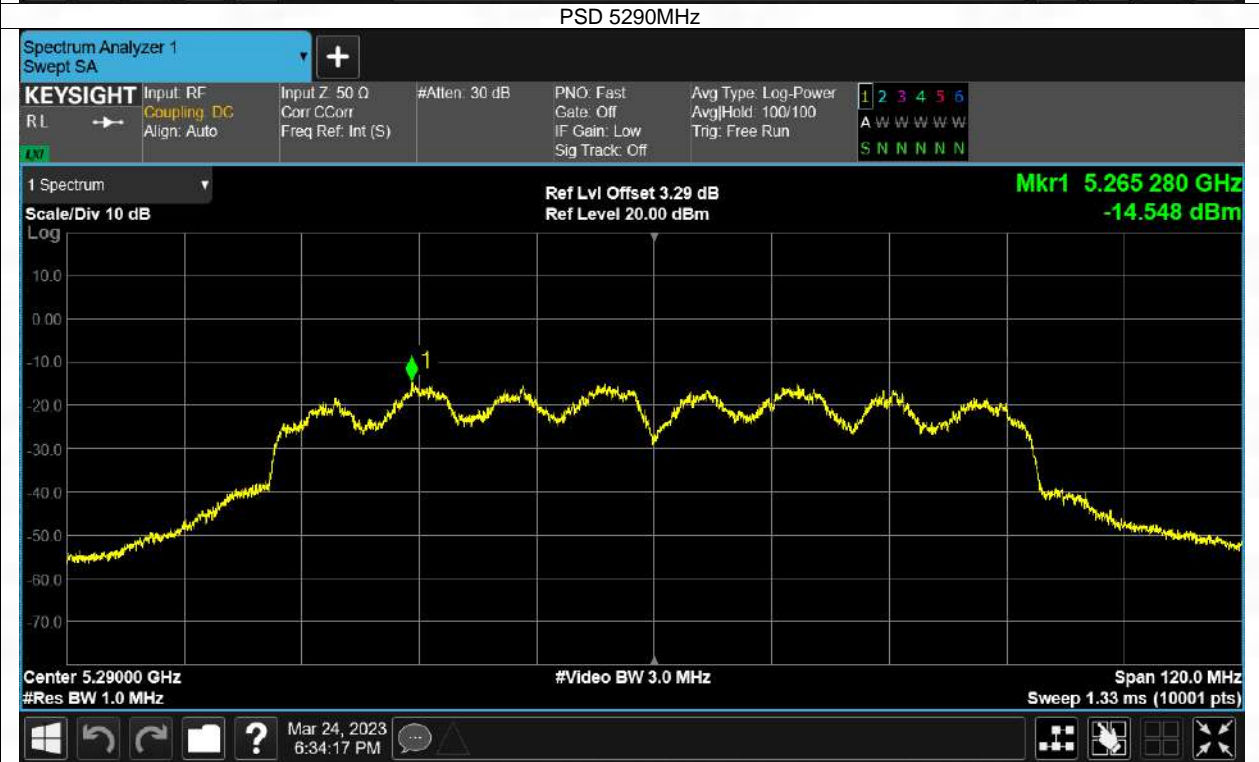




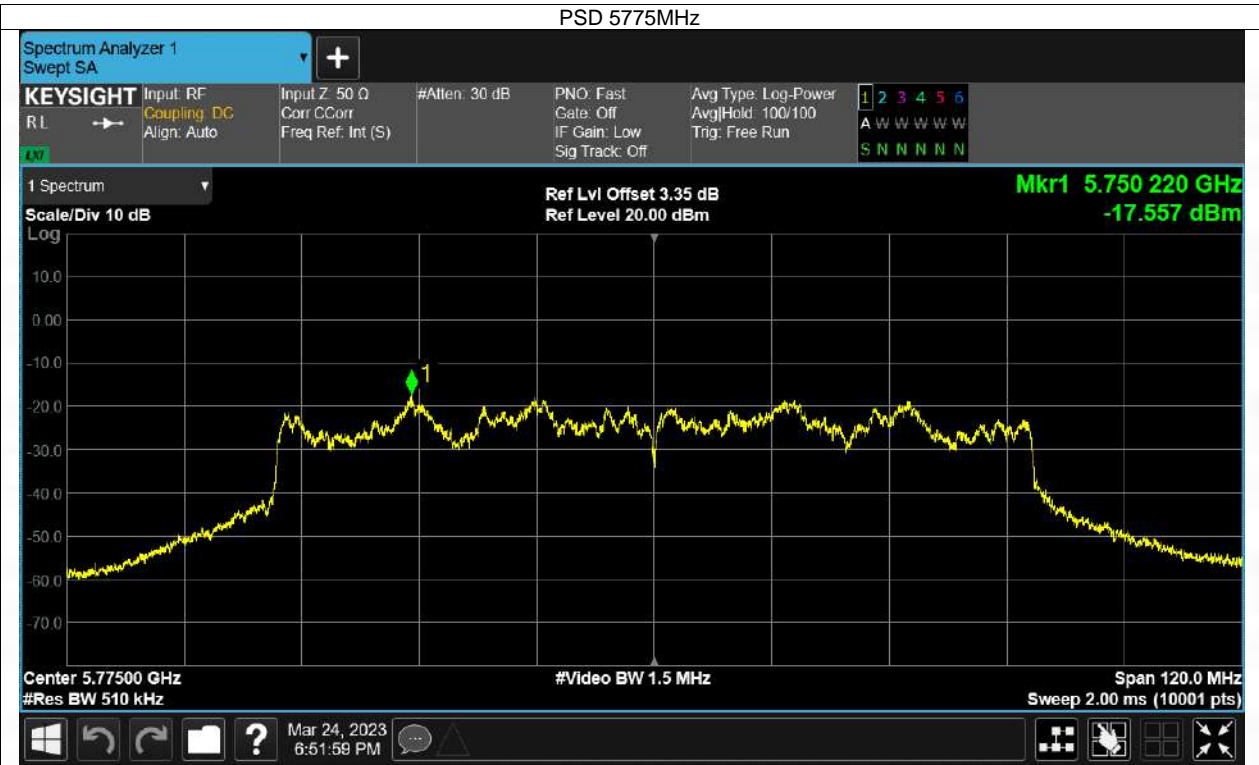




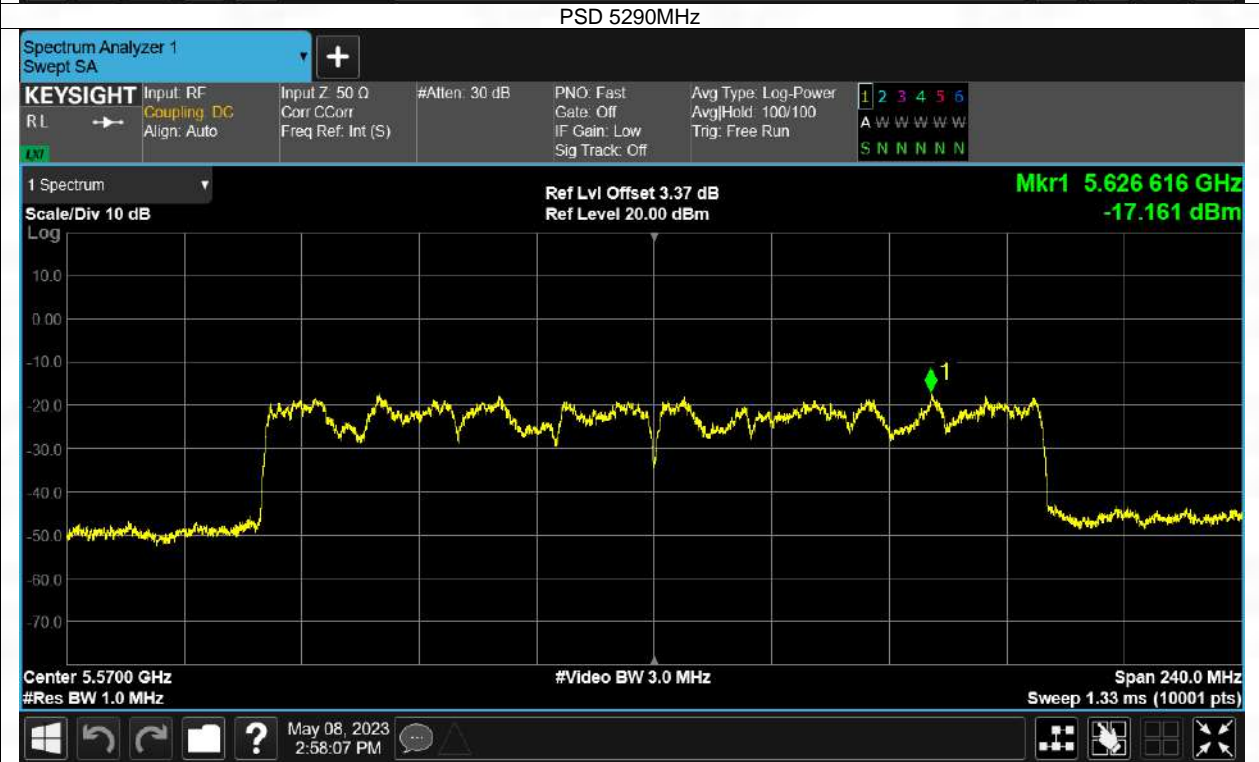
80MHz(IEEE 802.11ac/ax)



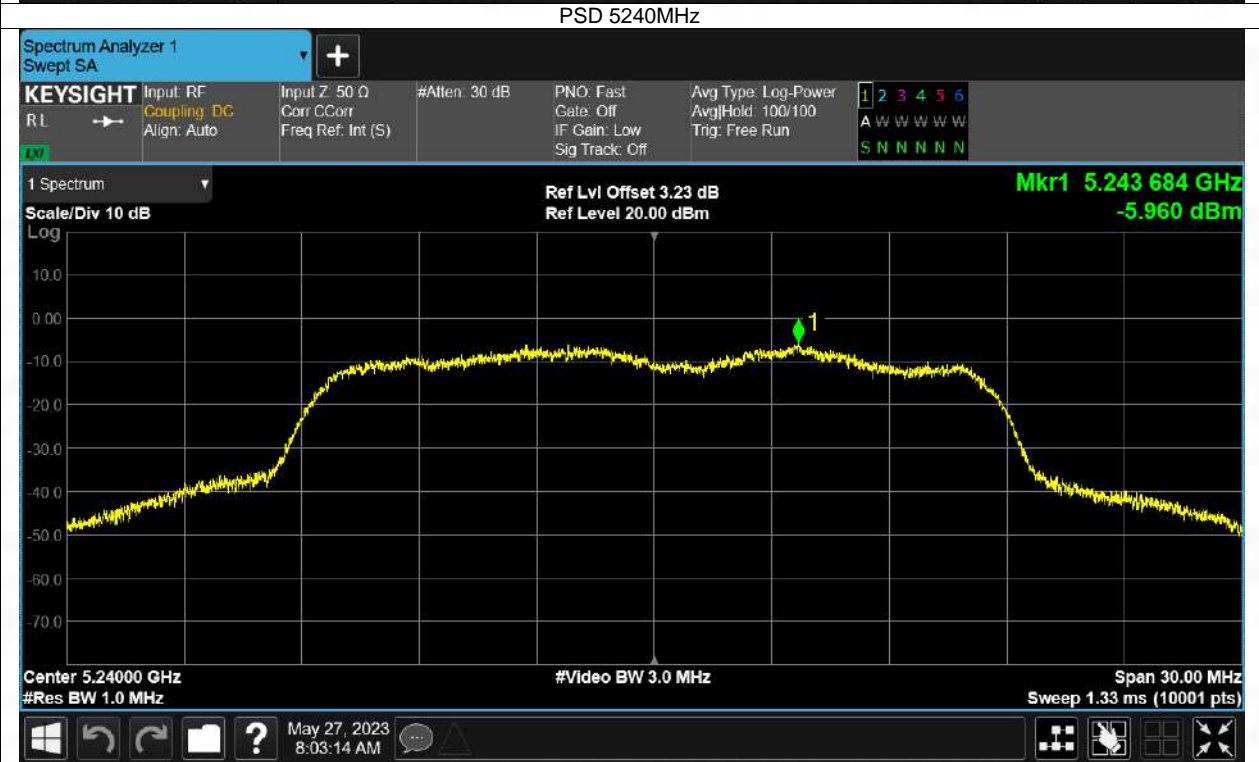
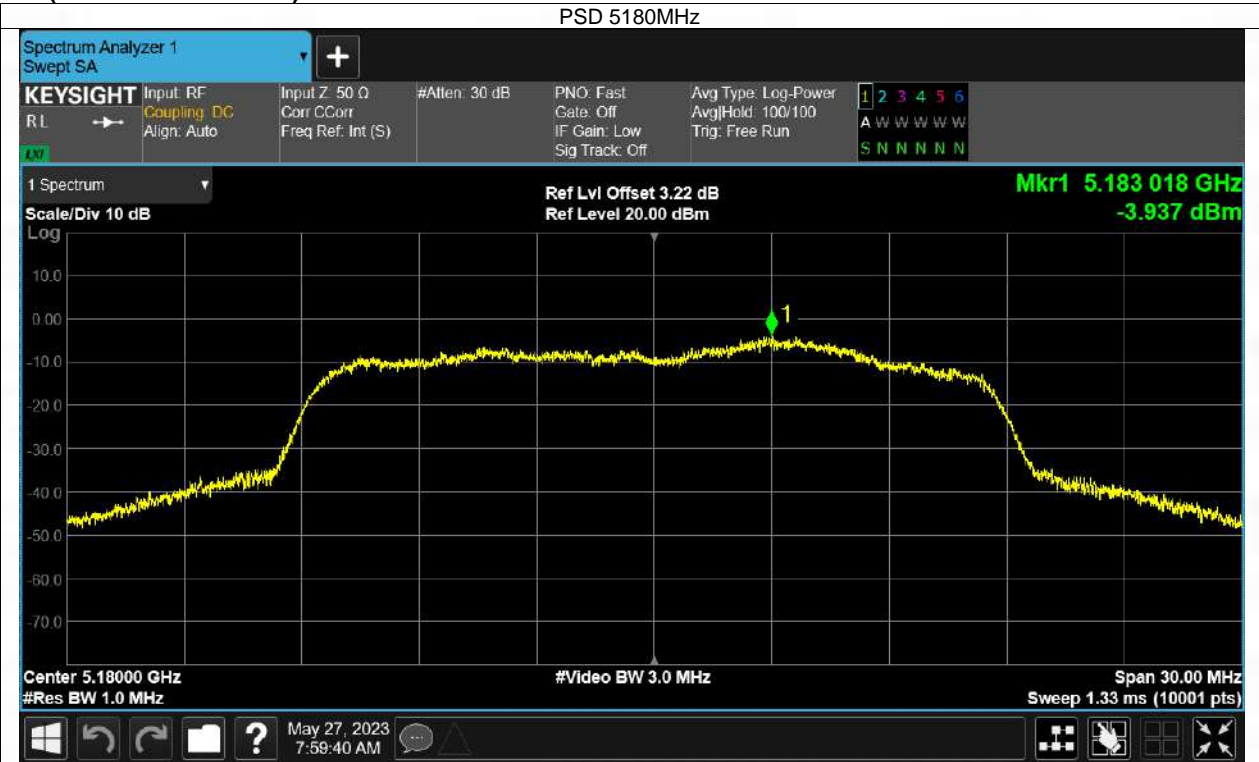




160MHz(IEEE 802.11ax)



ANT2
20MHz(IEEE 802.11a/n/ac/ax)

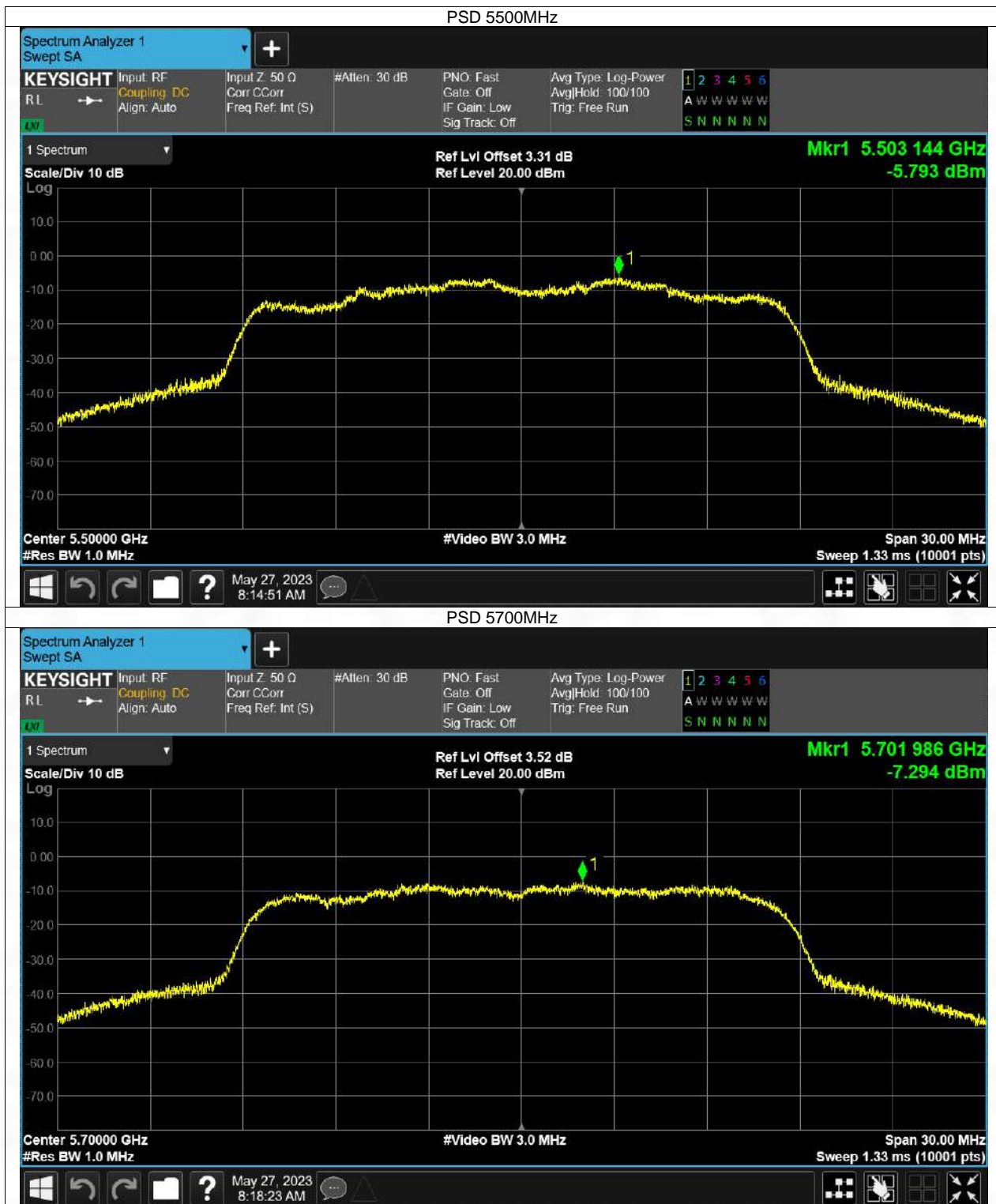


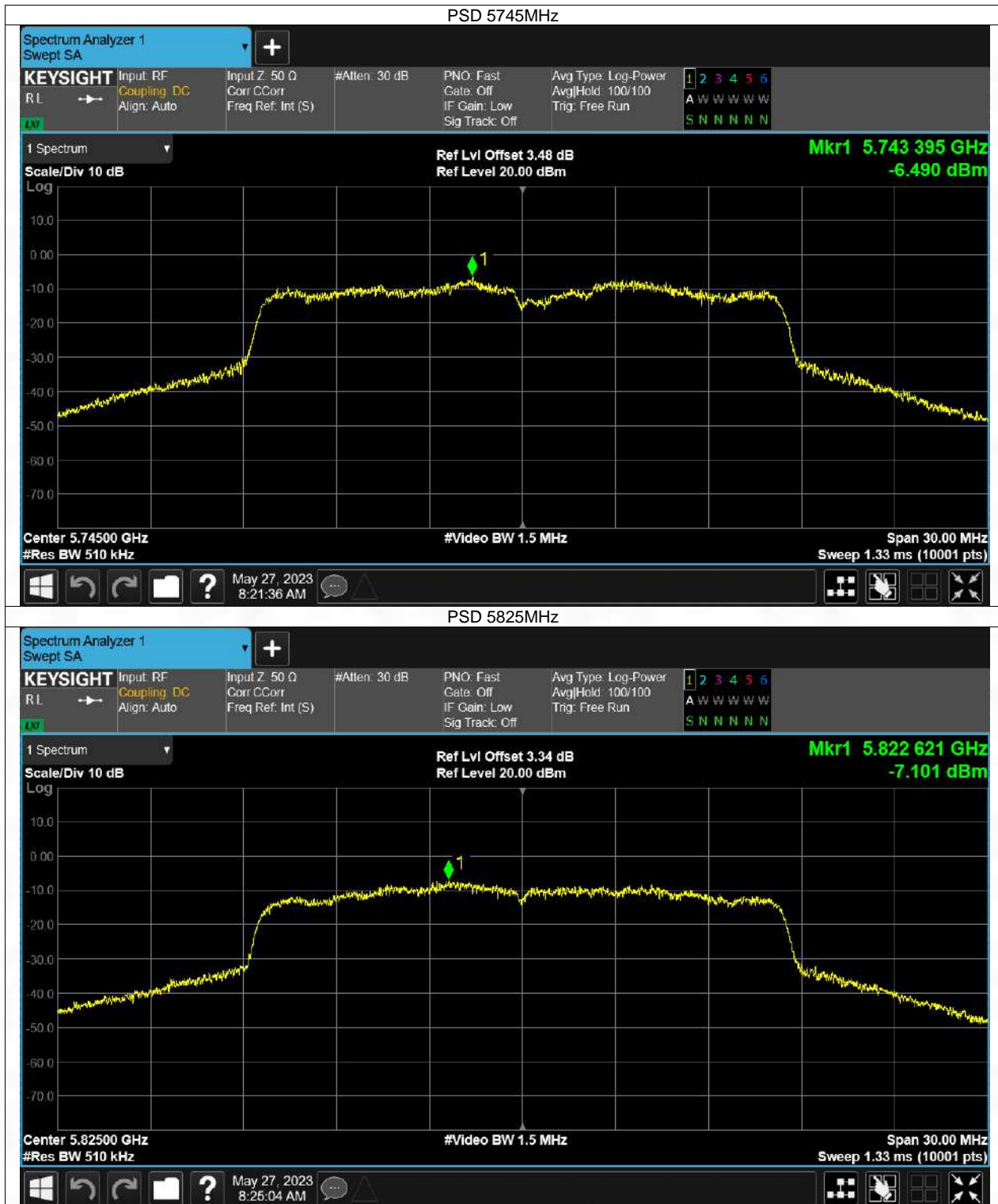
PSD 5260MHz



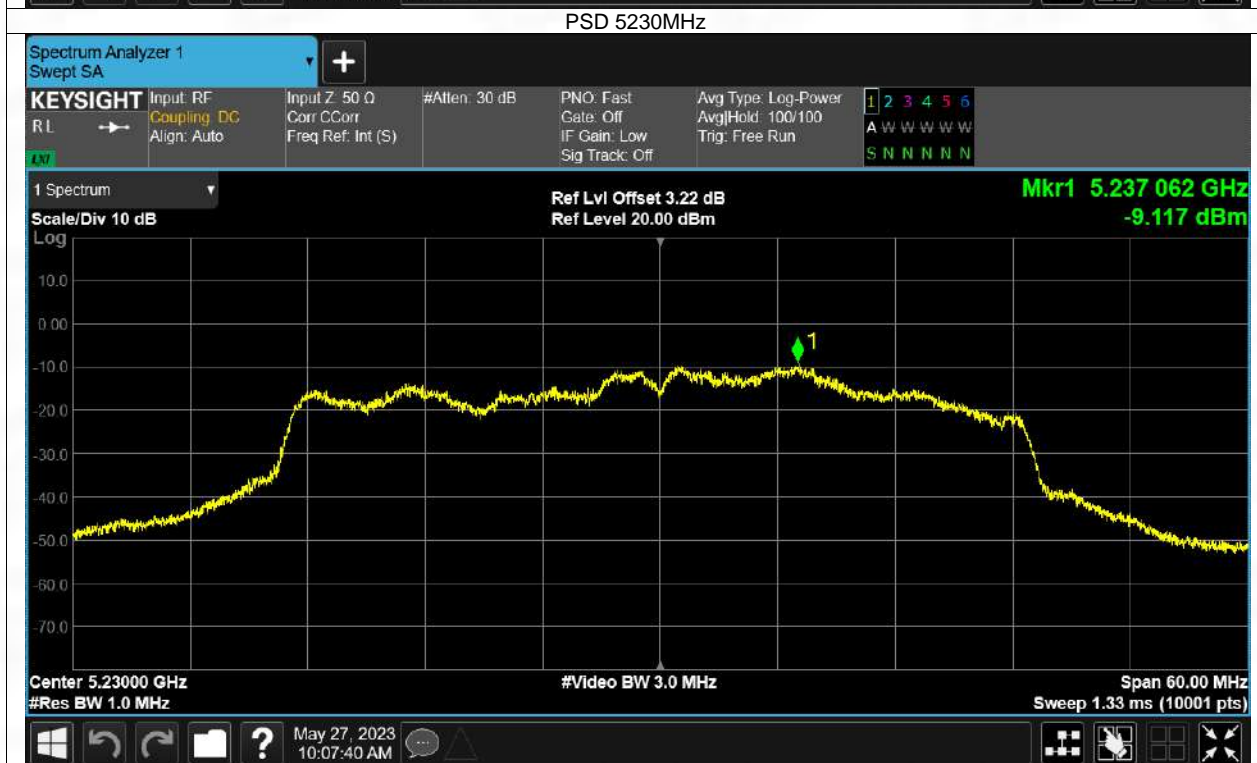
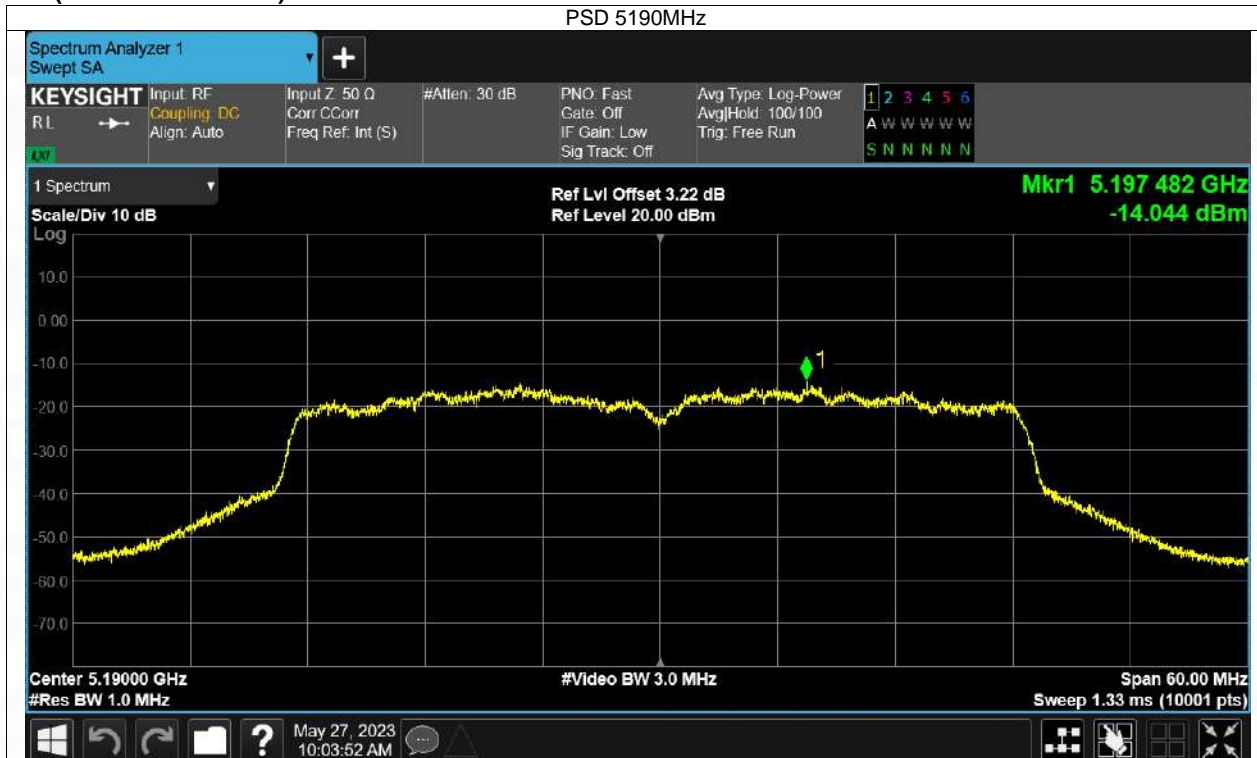
PSD 5320MHz

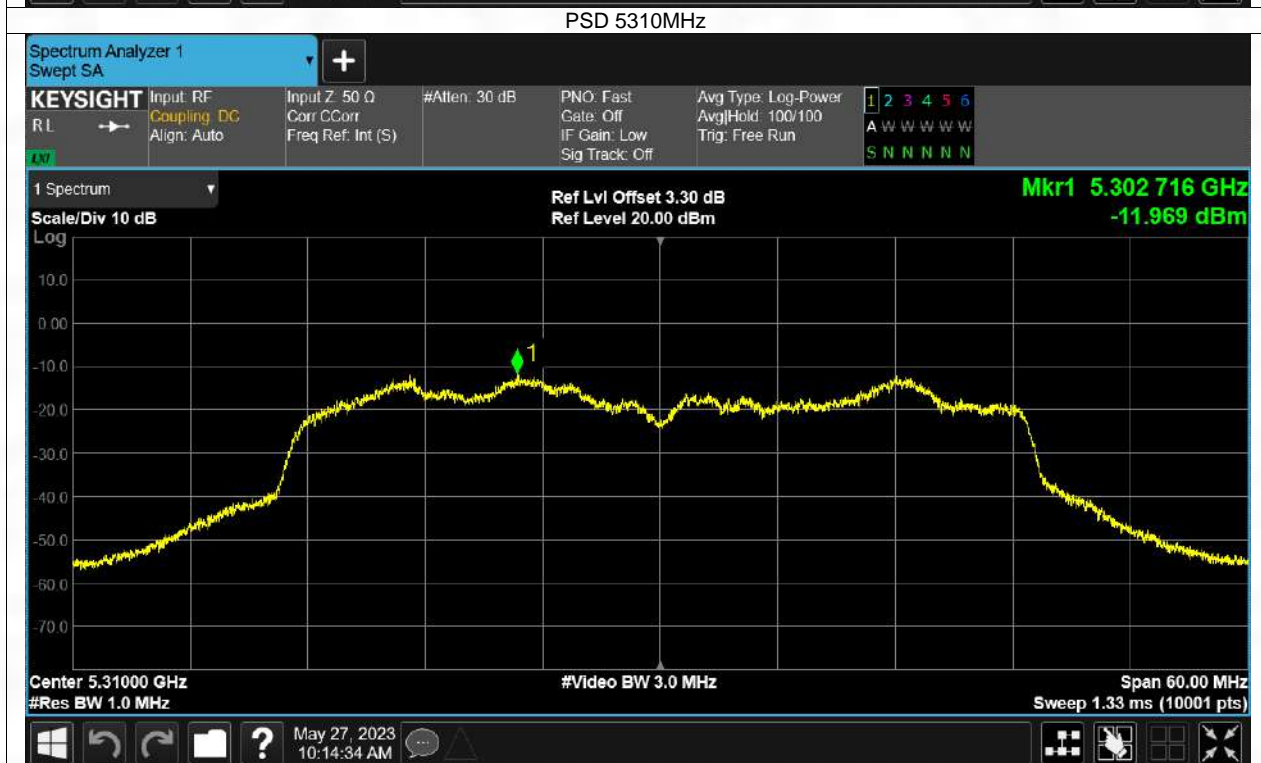
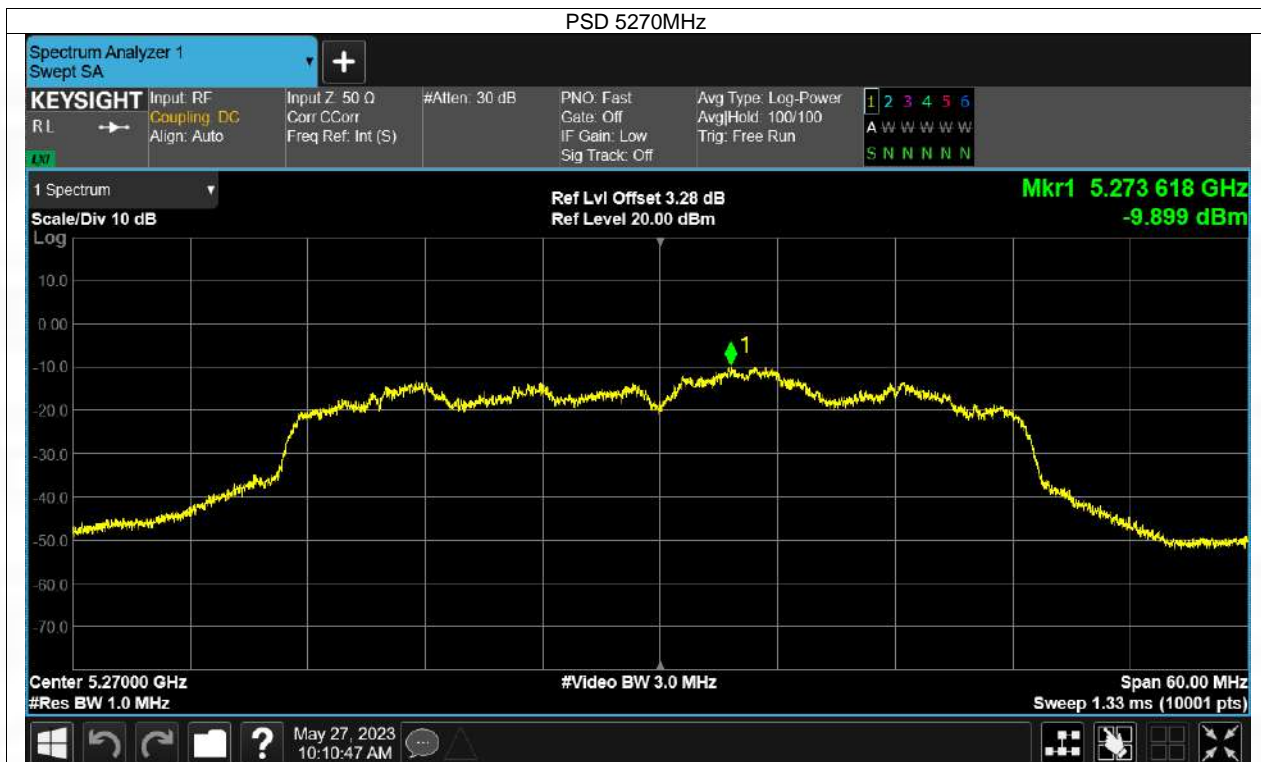




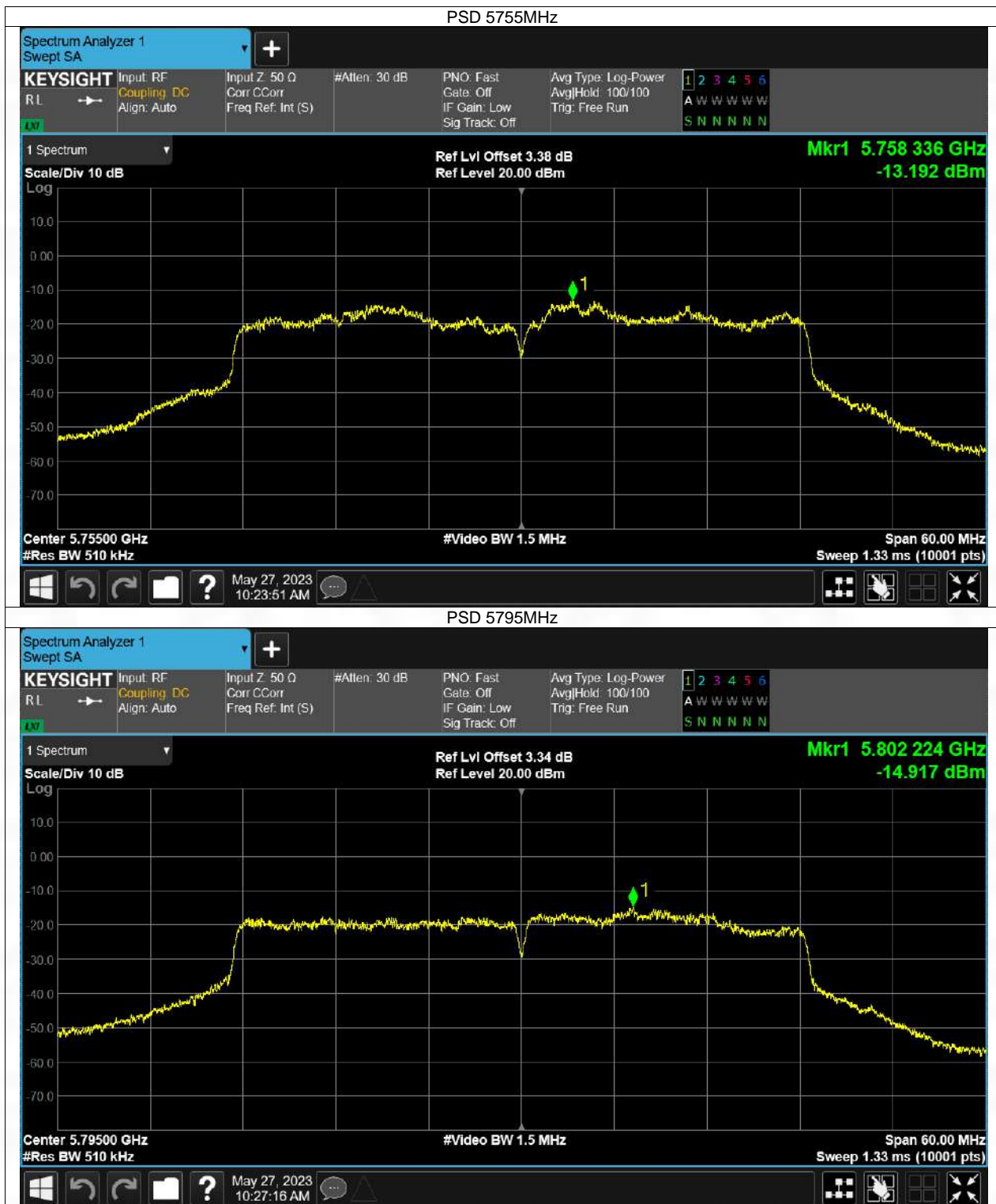


40MHz(IEEE 802.11n/ac/ax)

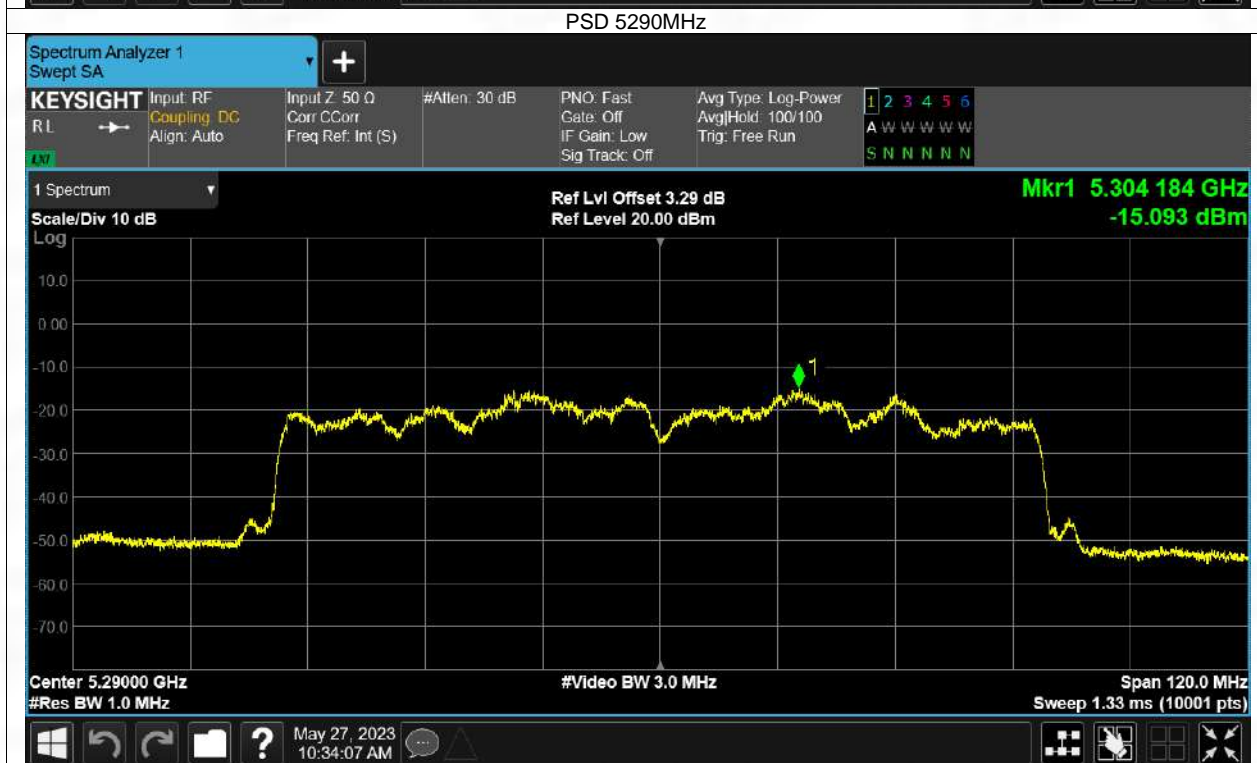
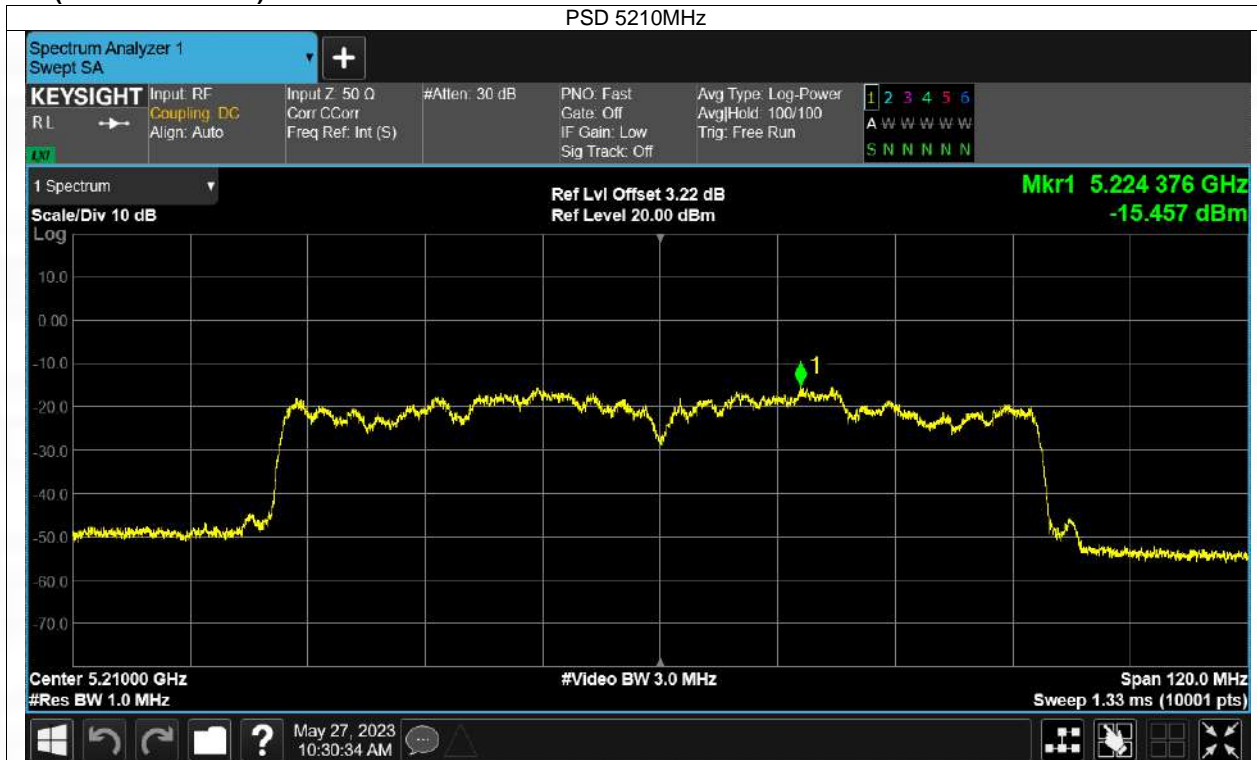


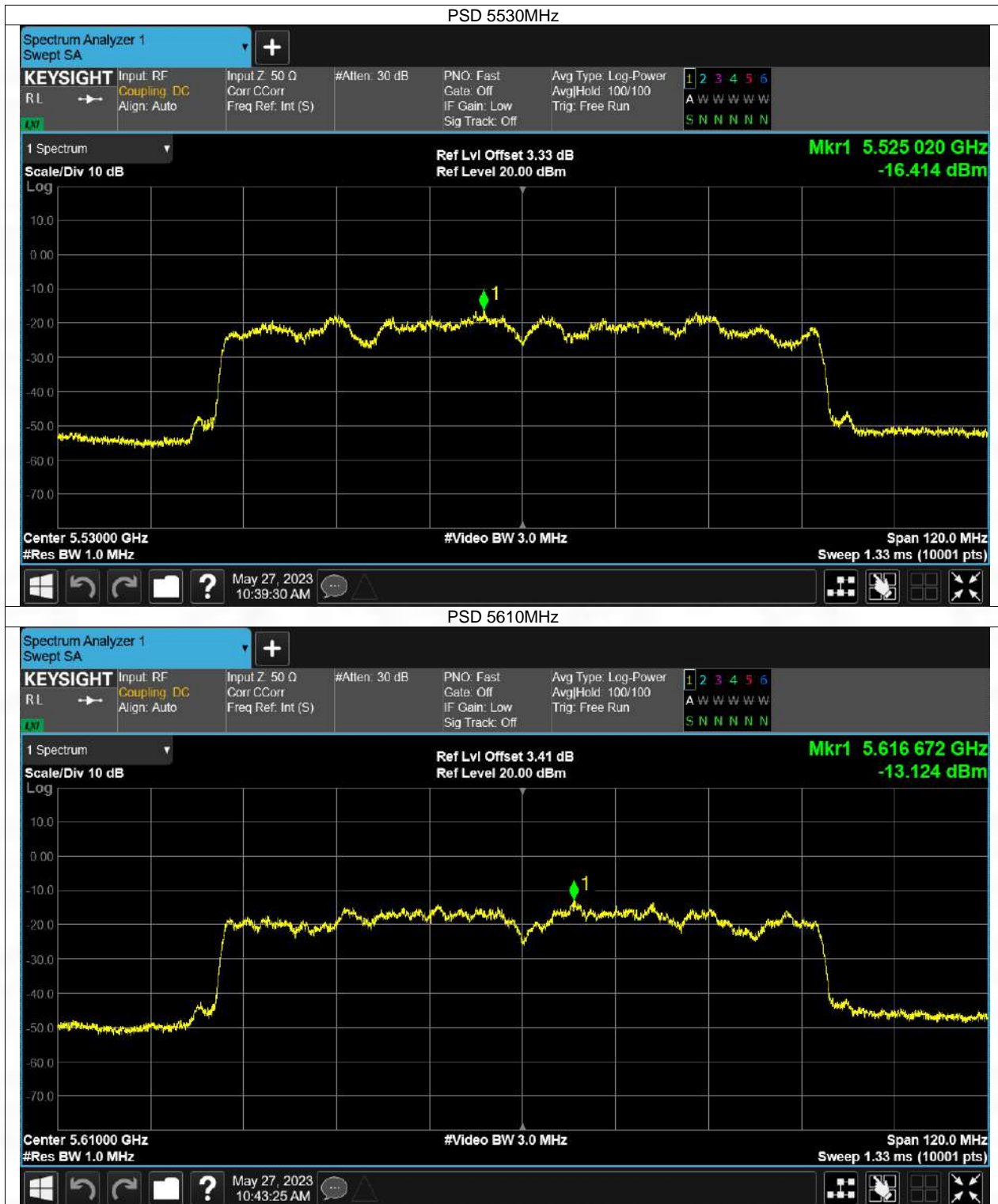


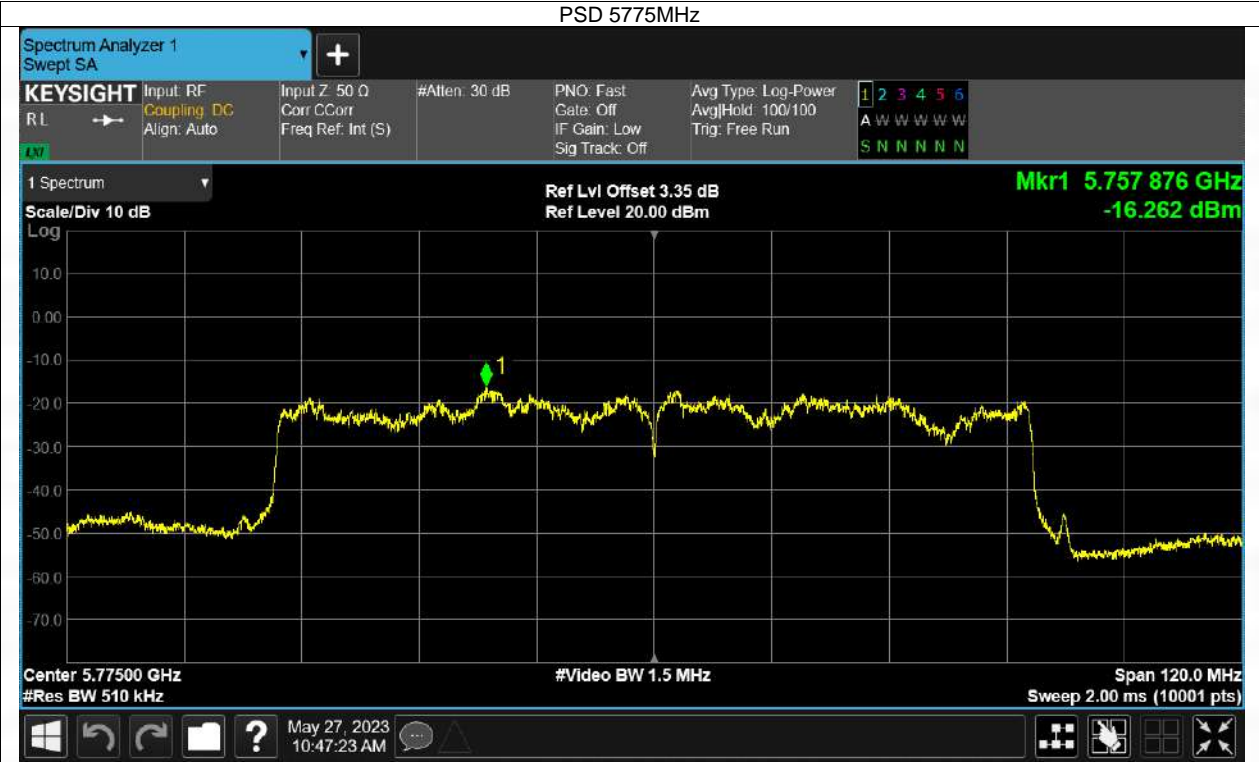




80MHz(IEEE 802.11ac/ax)







4. Frequency Stability

4.1 Ant1

4.1.1 Test Result

Band	Frequency (MHz)	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
20MHz(IEEE 802.11a/n/ac/ax)						
1	5180	5179.98	-20000	-3.86	25	Pass
	5240	5239.96	-40000	-7.63	25	Pass
2	5260	5260	0	0	25	Pass
	5320	5320	0	0	25	Pass
3	5500	5499.98	-20000	-3.64	25	Pass
	5700	5700	0	0	25	Pass
4	5745	5745	0	0	25	Pass
	5825	5824.98	-20000	-3.43	25	Pass
400MHz(IEEE 802.11n/ac/ax)						
1	5190	5190	0	0	25	Pass
	5230	5229.96	-40000	-7.65	25	Pass
2	5270	5269.96	-40000	-7.59	25	Pass
	5310	5309.96	-40000	-7.53	25	Pass
3	5510	5509.96	-40000	-7.26	25	Pass
	5670	5669.96	-40000	-7.05	25	Pass
4	5755	5755	0	0	25	Pass
	5795	5795	0	0	25	Pass
80MHz(IEEE 802.11ac/ax)						
1	5210	5209.92	-80000	-15.36	25	Pass
2	5290	5289.92	-80000	-15.12	25	Pass
3	5530	5529.92	-80000	-14.47	25	Pass
	5610	5609.92	-80000	-14.26	25	Pass
4	5775	5774.92	-80000	-13.85	25	Pass
160MHz(IEEE 802.11ax)						
1	5250	5250	0	0	25	Pass
3	5570	5570	0	0	25	Pass

4.1.2 Test Graph

20MHz(IEEE 802.11a/n/ac/ax)
Band1

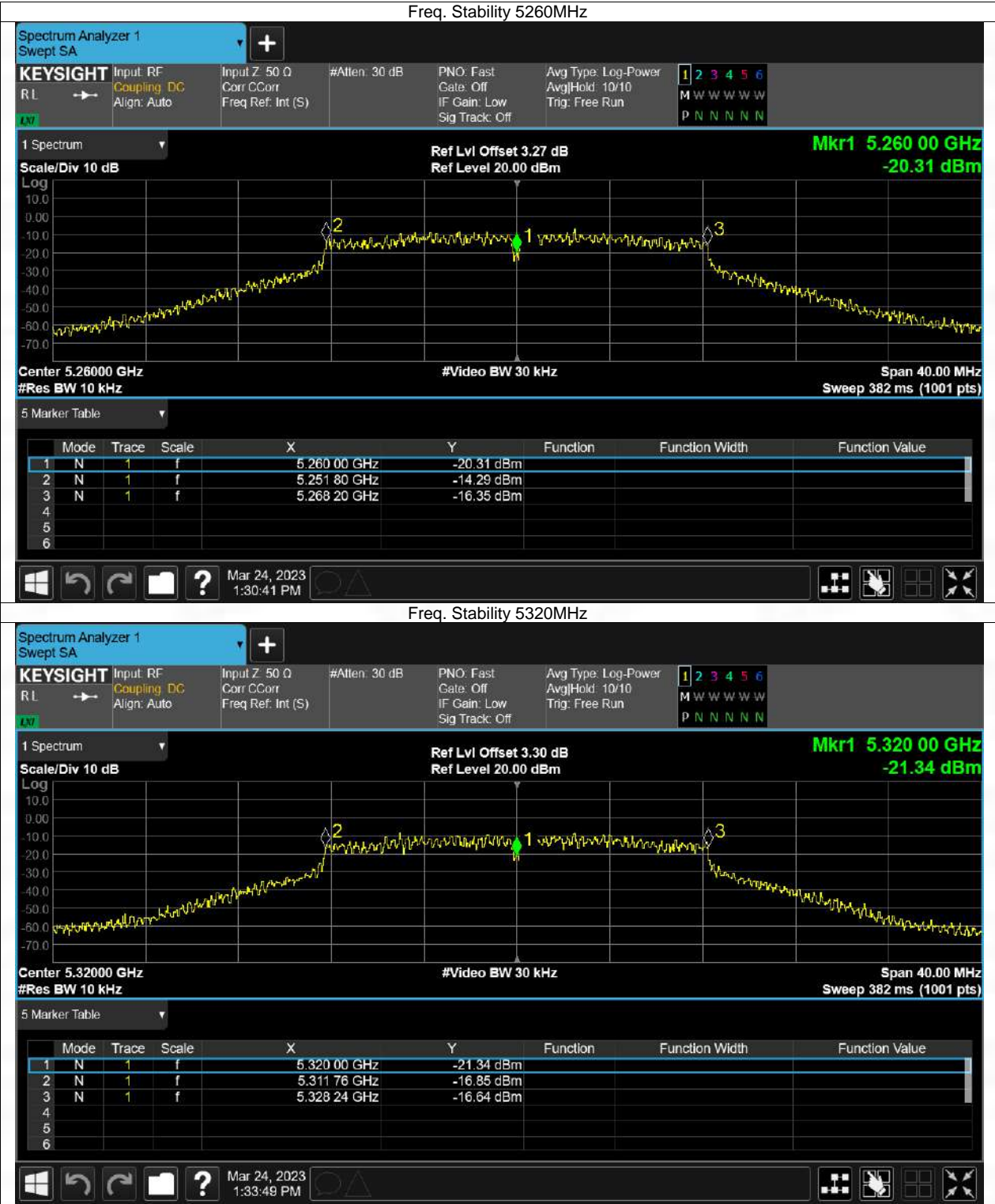
Freq. Stability 5180MHz



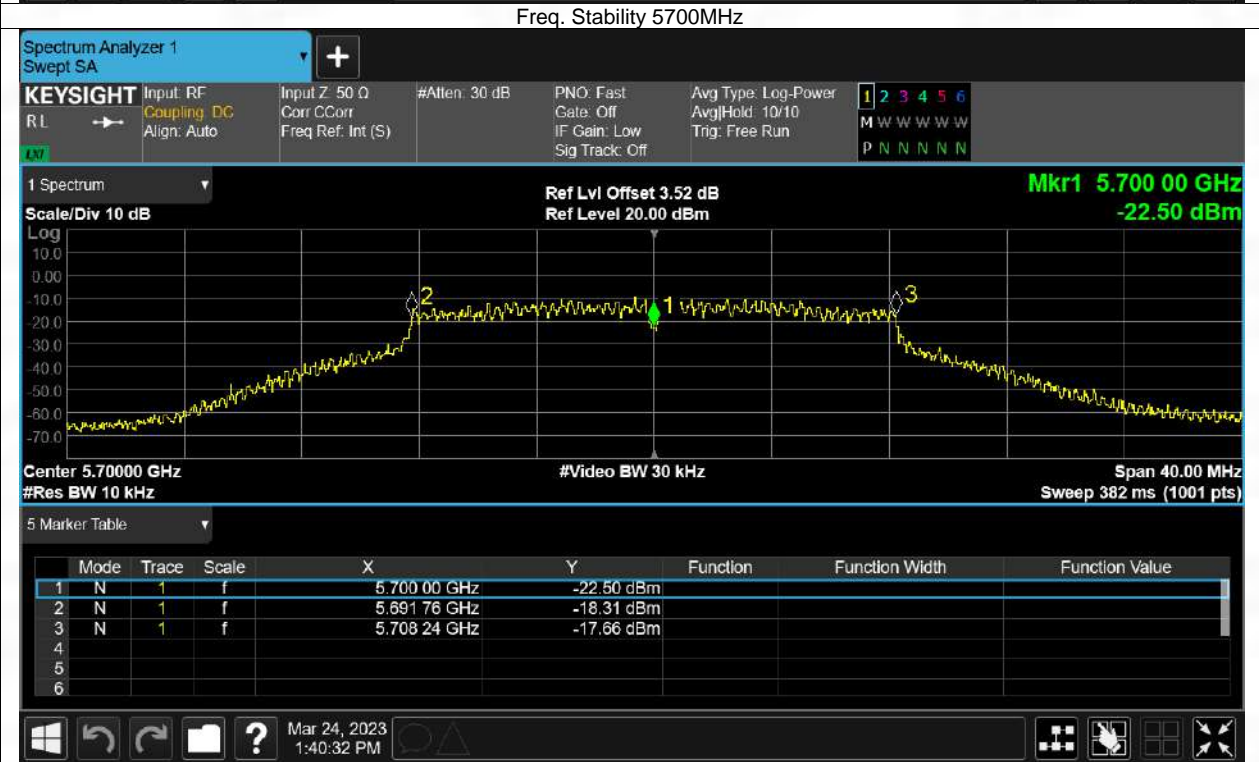
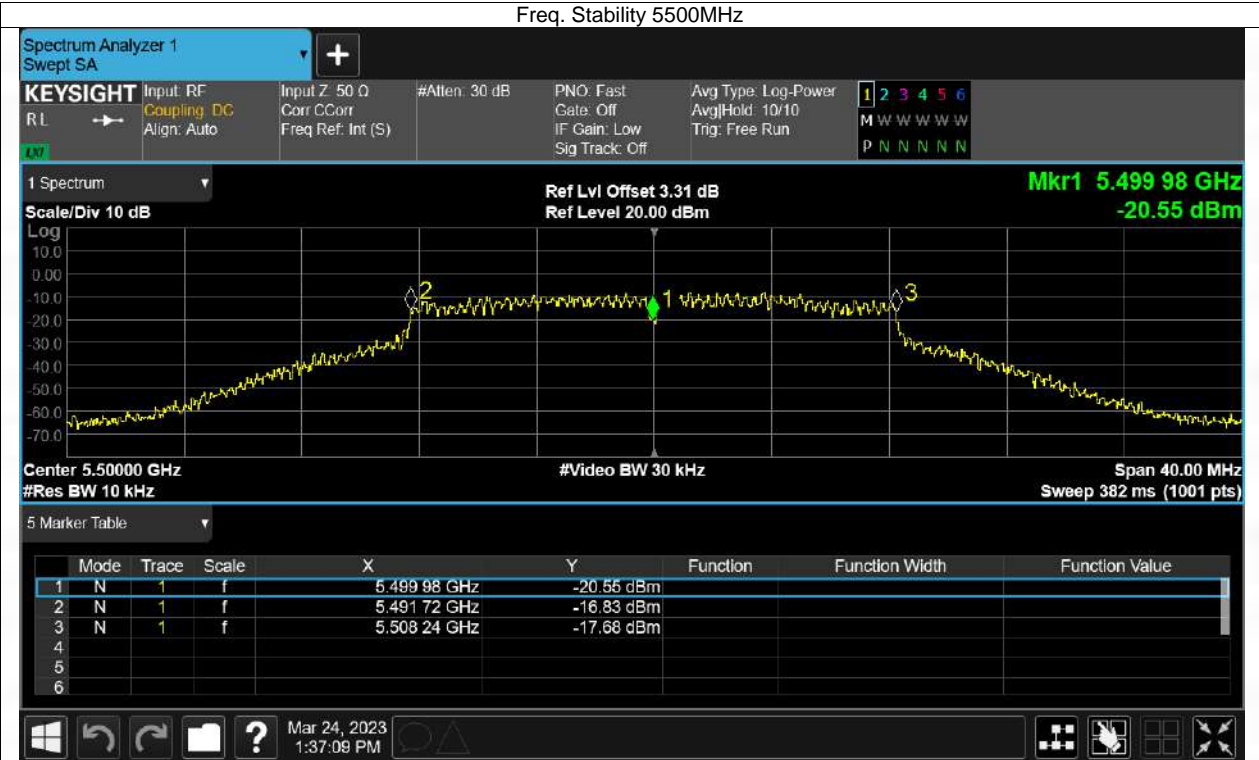
Freq. Stability 5240MHz



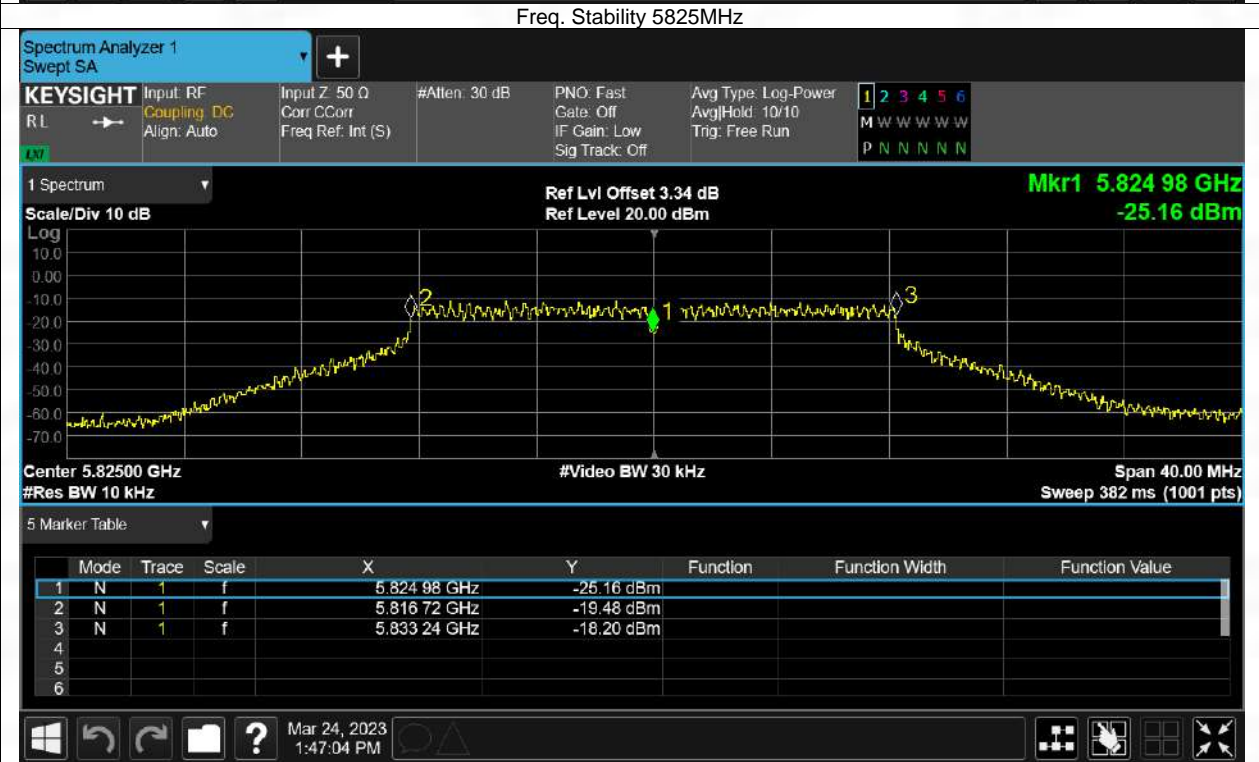
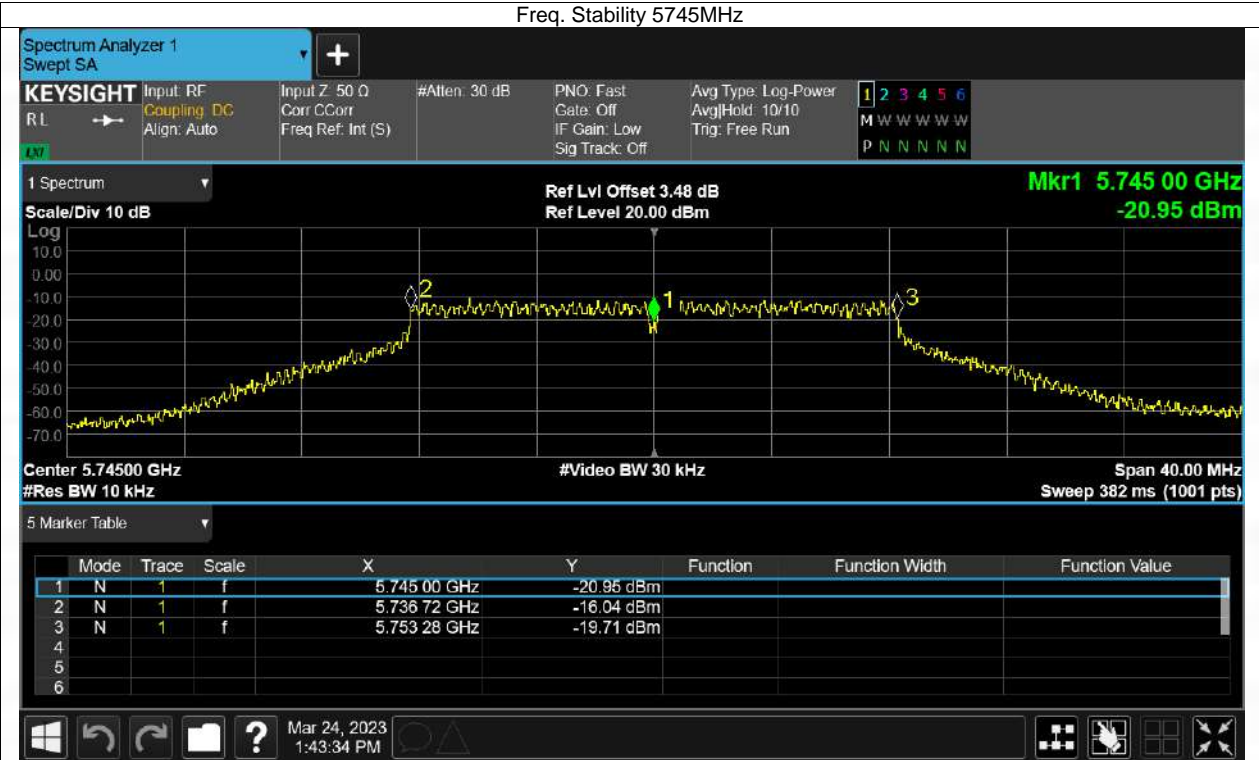
Band2



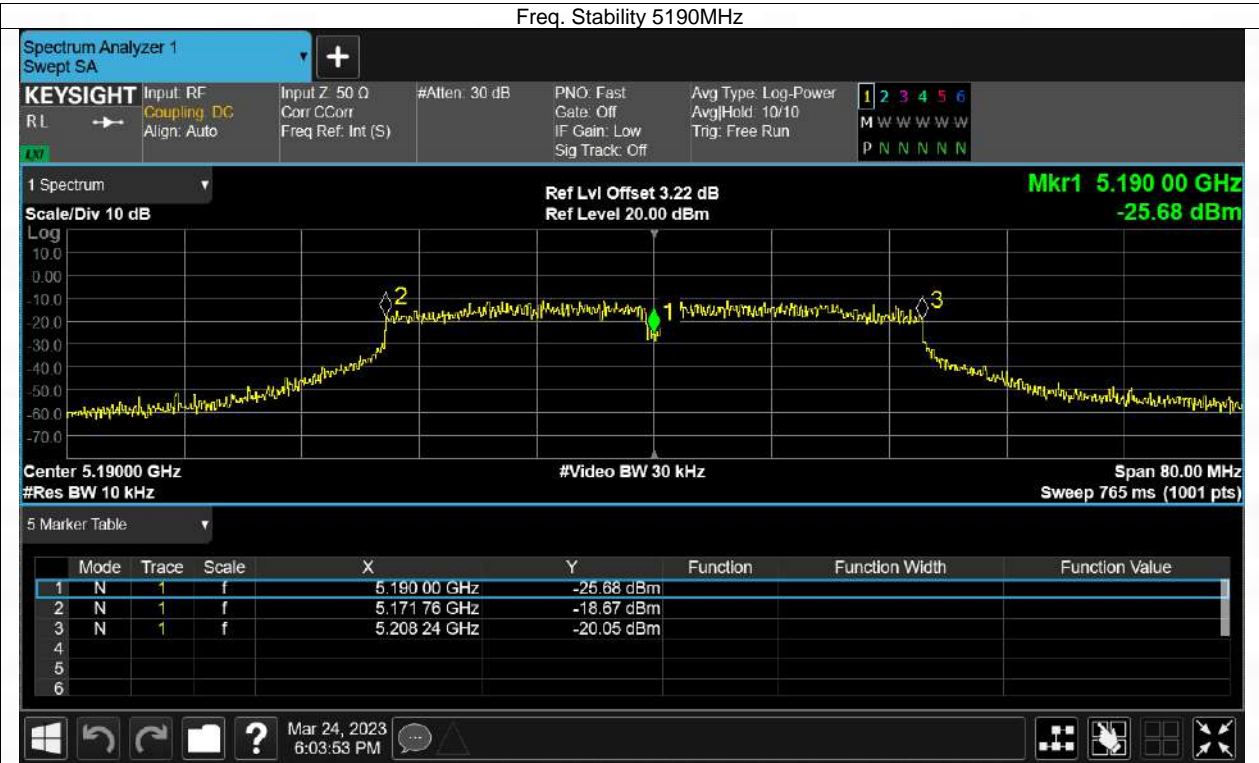
Band3



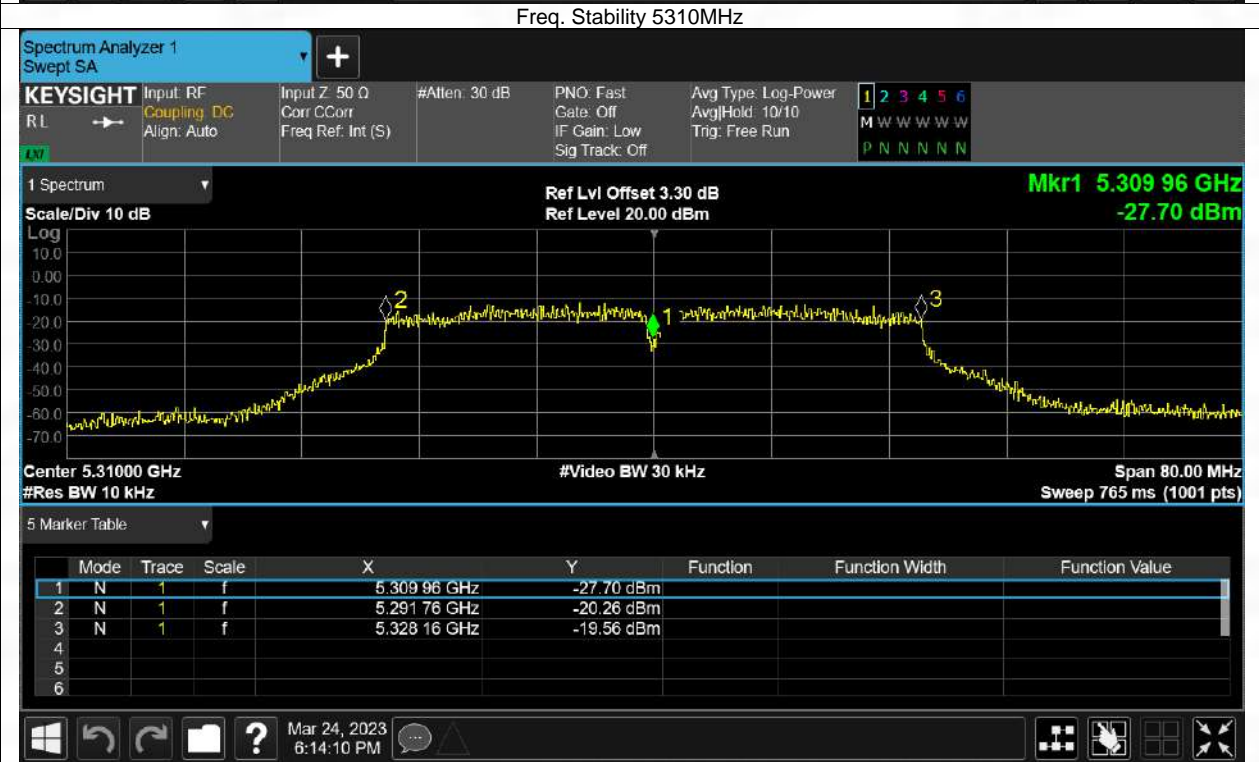
Band4



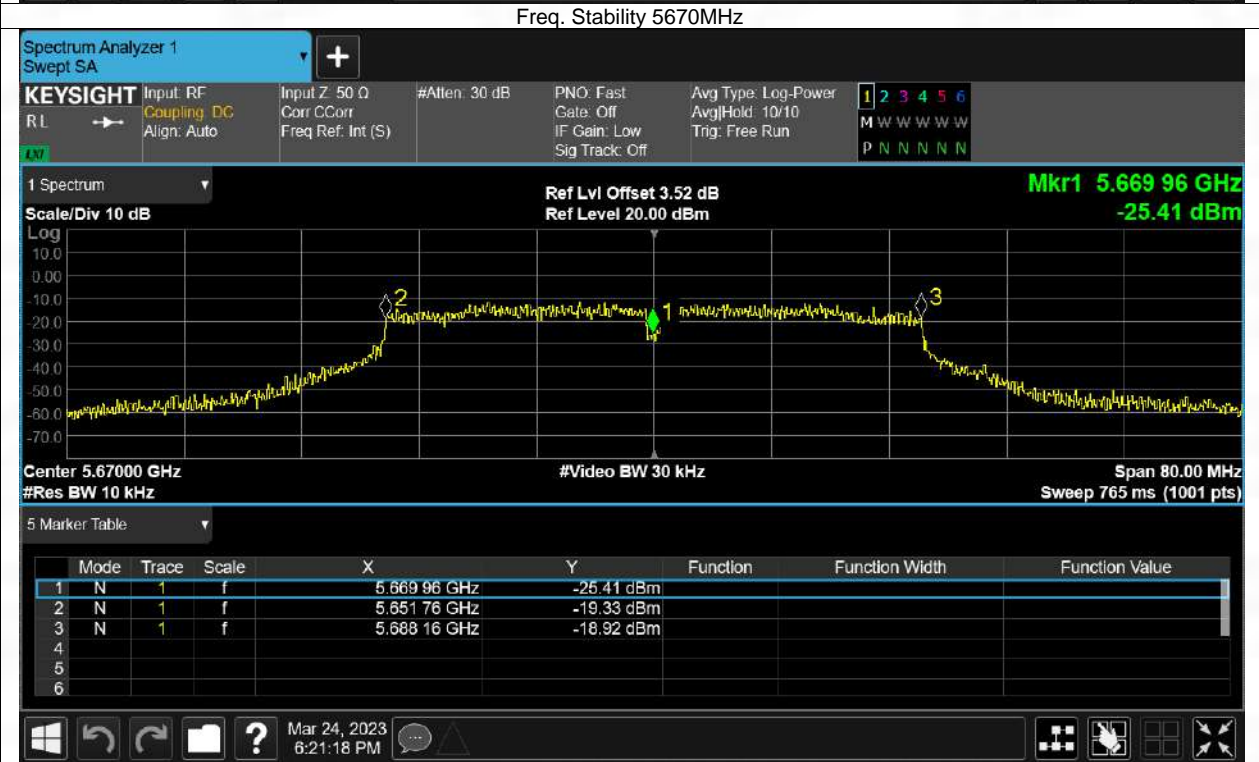
40MHz(IEEE 802.11n/ac/ax)
Band1



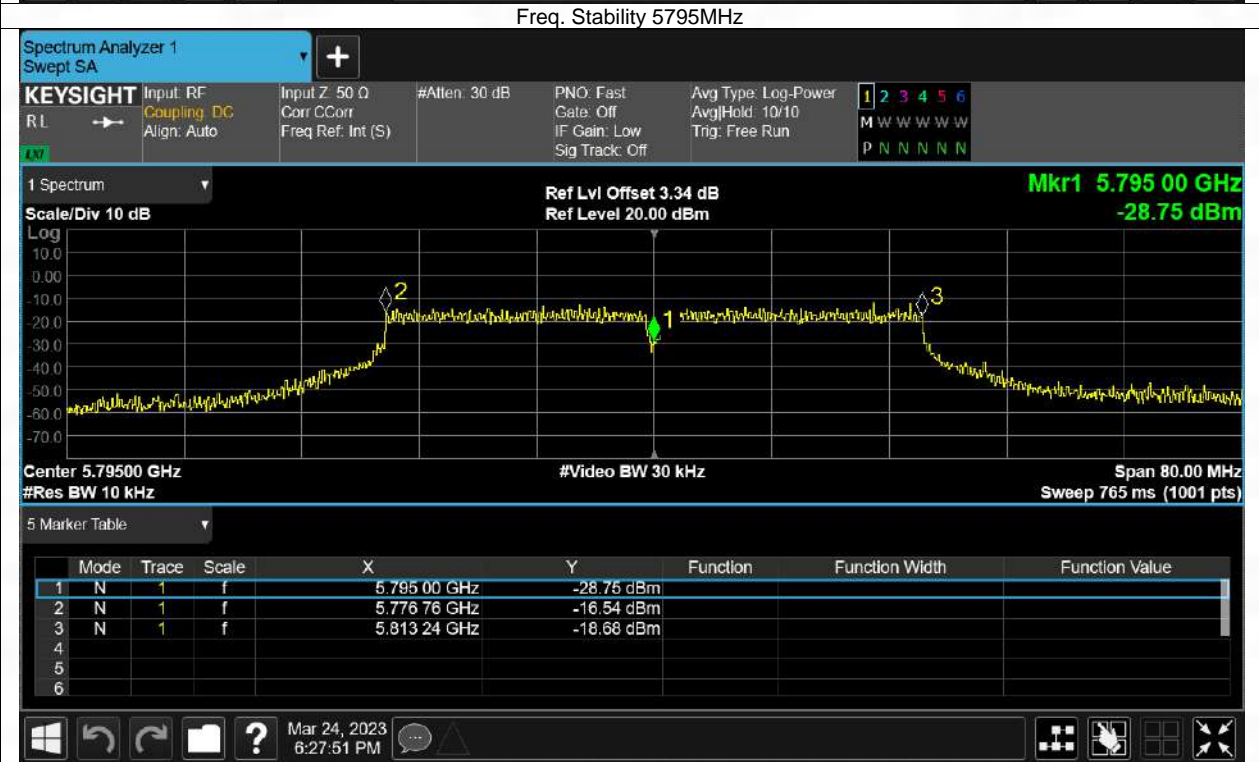
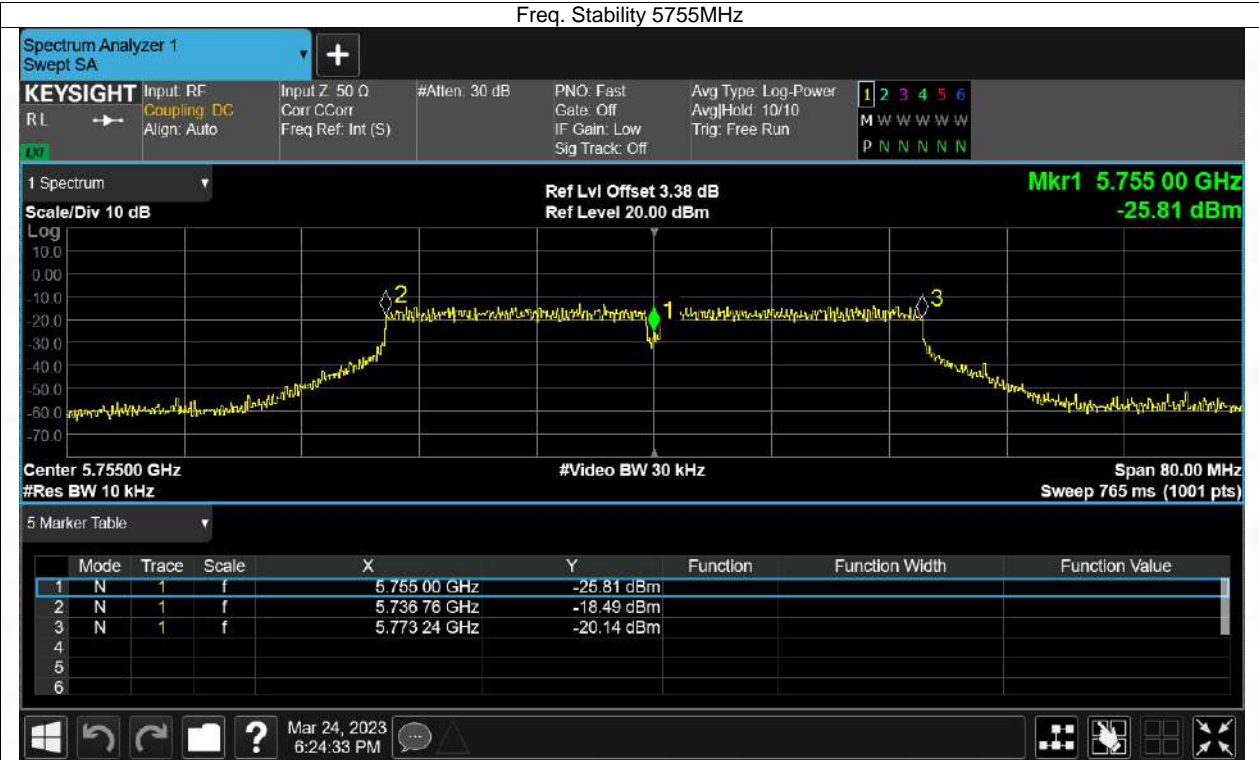
Band2



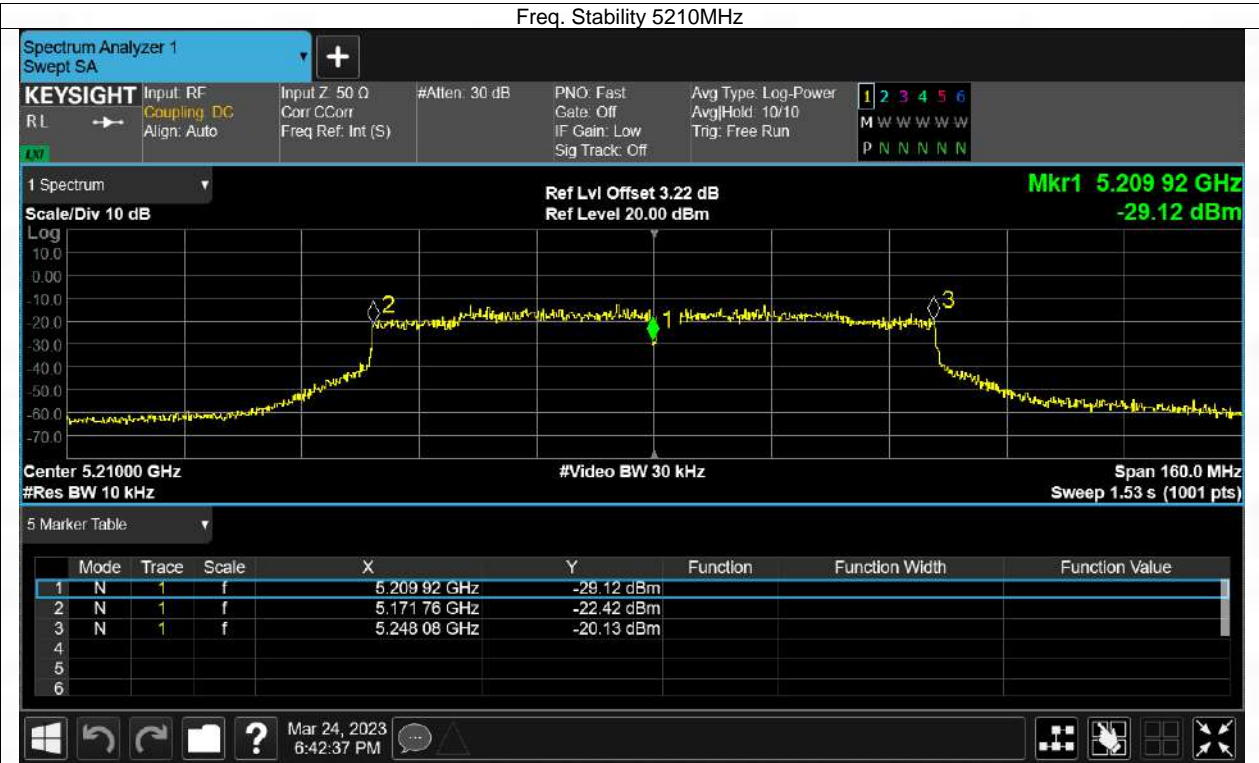
Band3



Band4



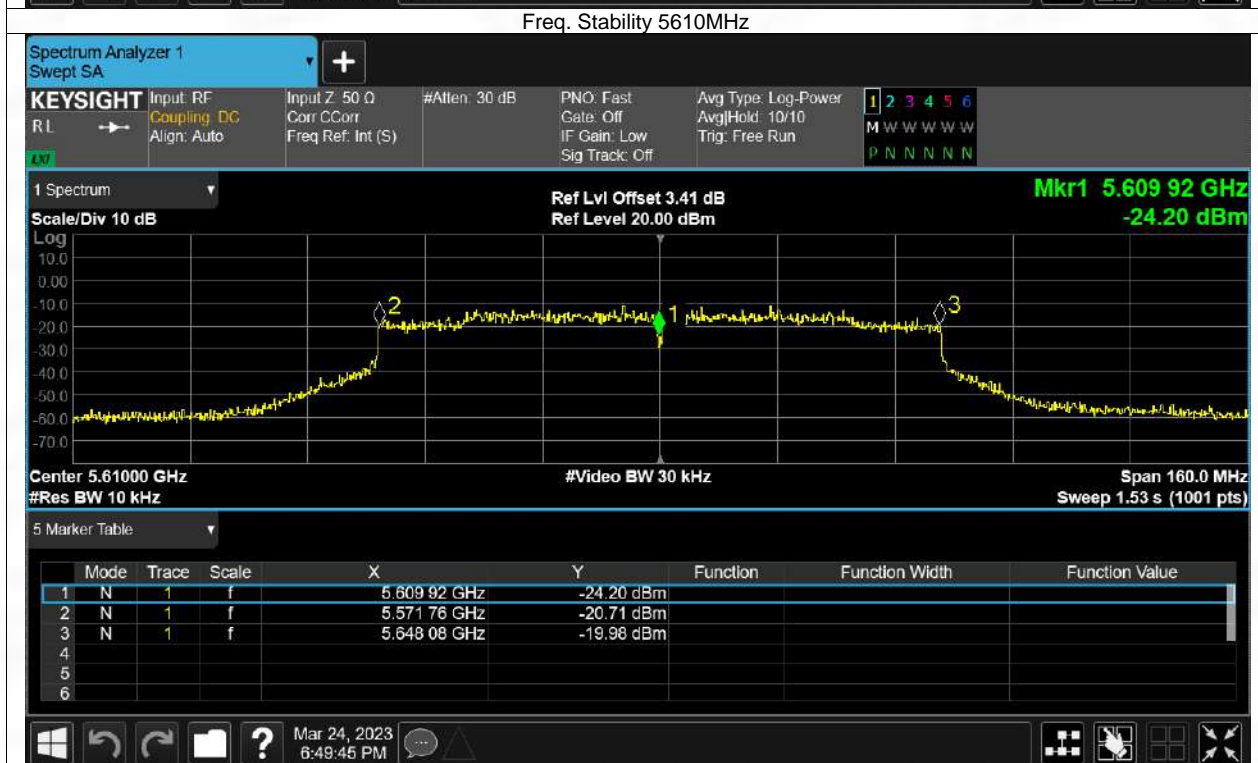
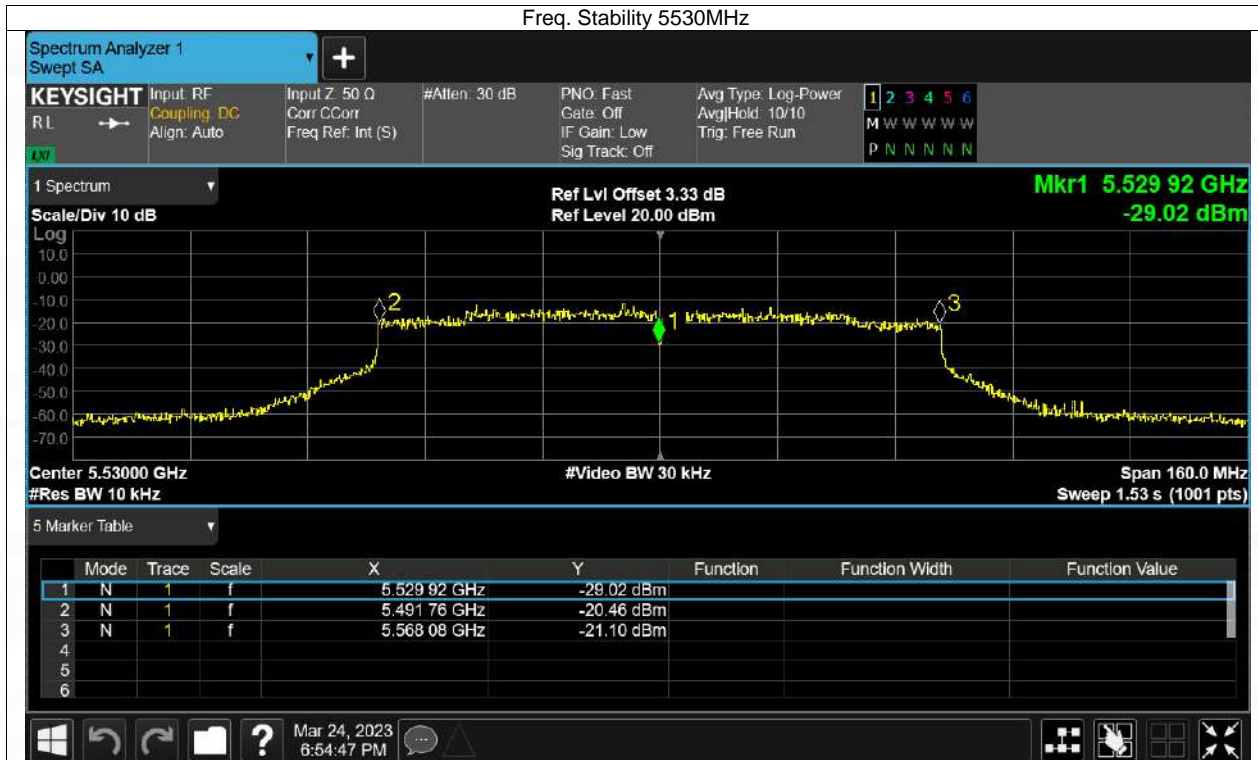
80MHz(IEEE 802.11ac/ax)
Band1



Band2



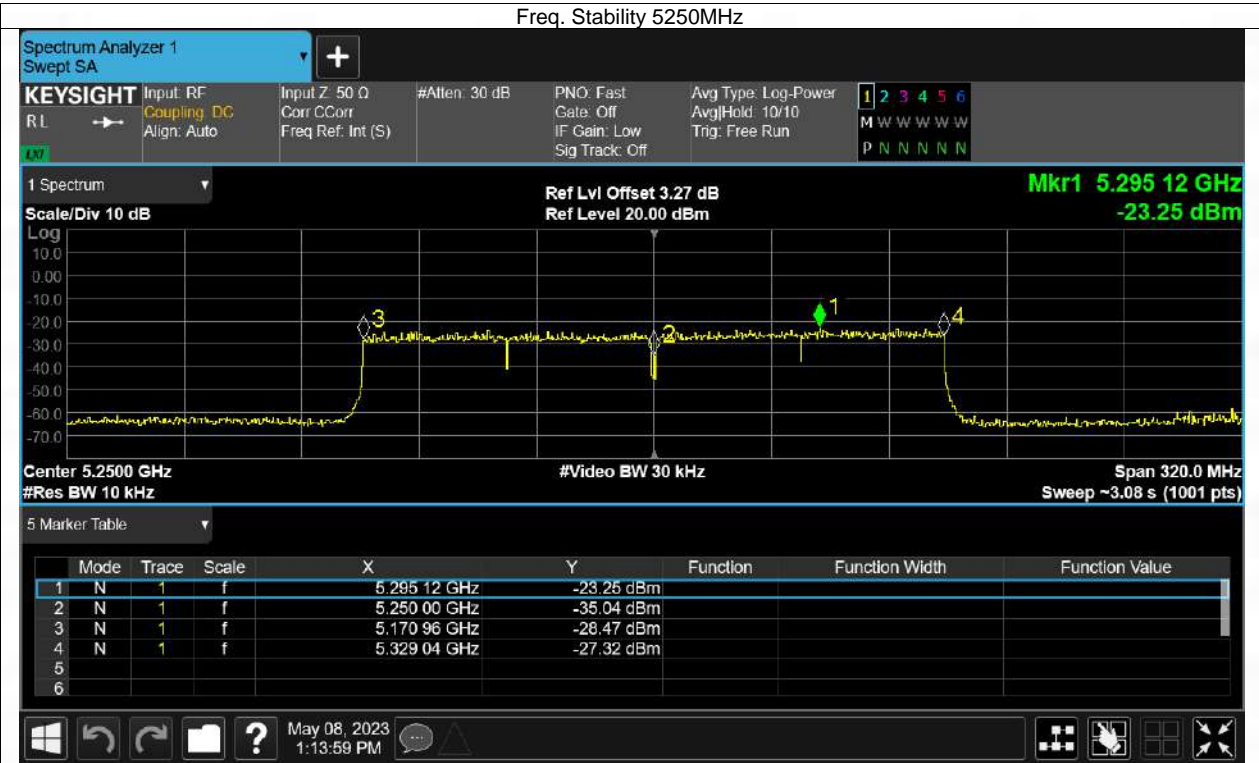
Band3



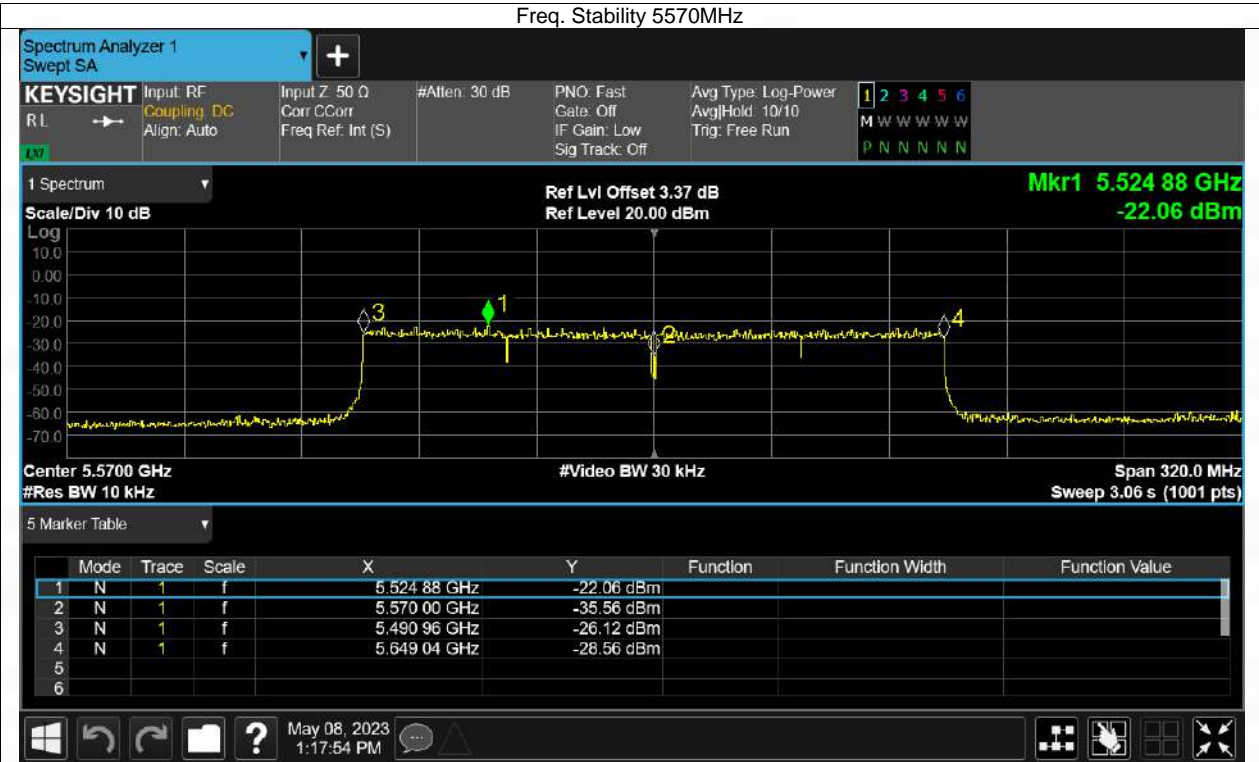
Band4



160MHz(IEEE 802.11ax)
Band1



Band3





BTF Testing Lab (Shenzhen) Co., Ltd.

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street,
Bao'an District, Shenzhen, China

www.btf-lab.com

-- END OF REPORT --