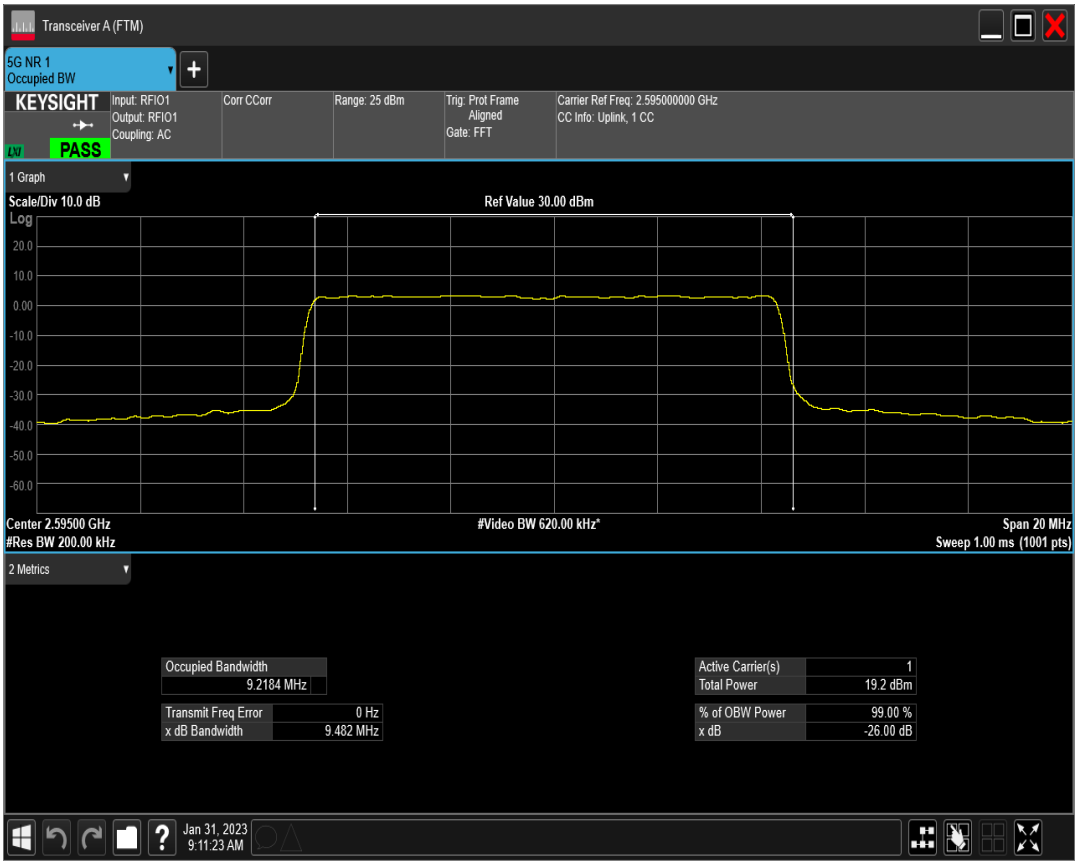
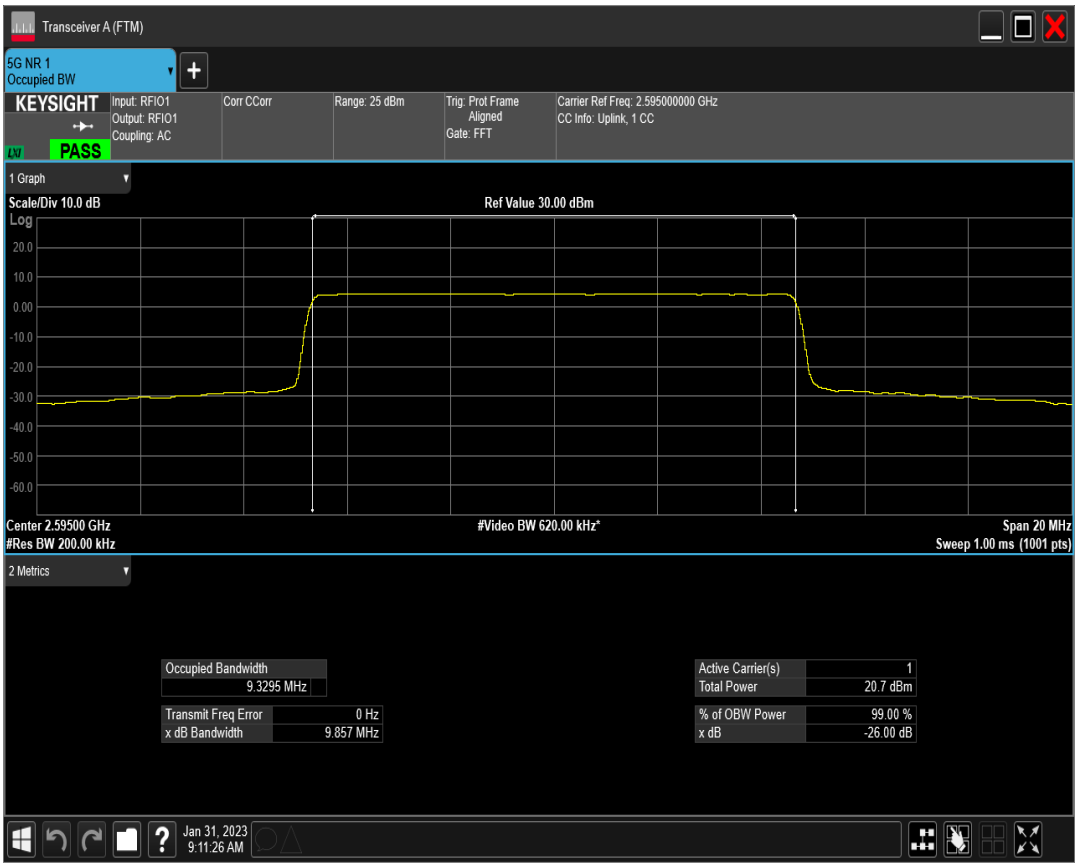
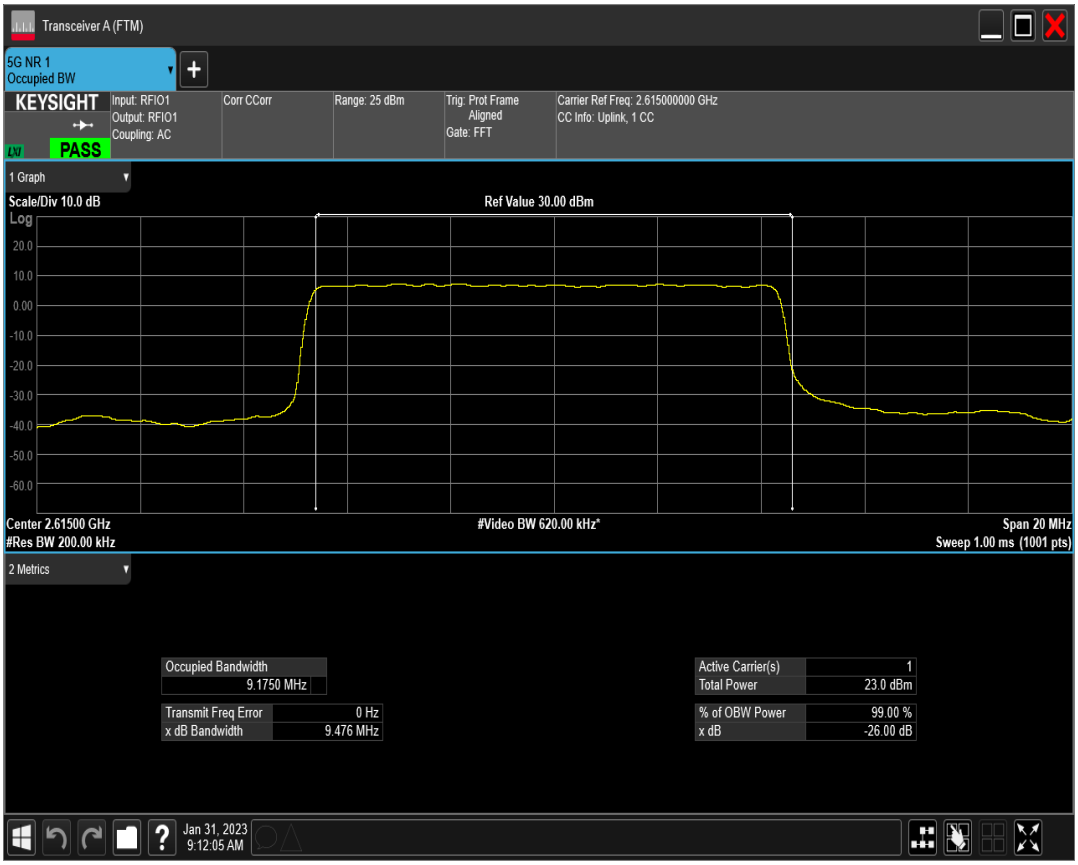
n38 SCS=15kHz DFT_QAM256 BW=10MHz Channel=519000 RB=50@0



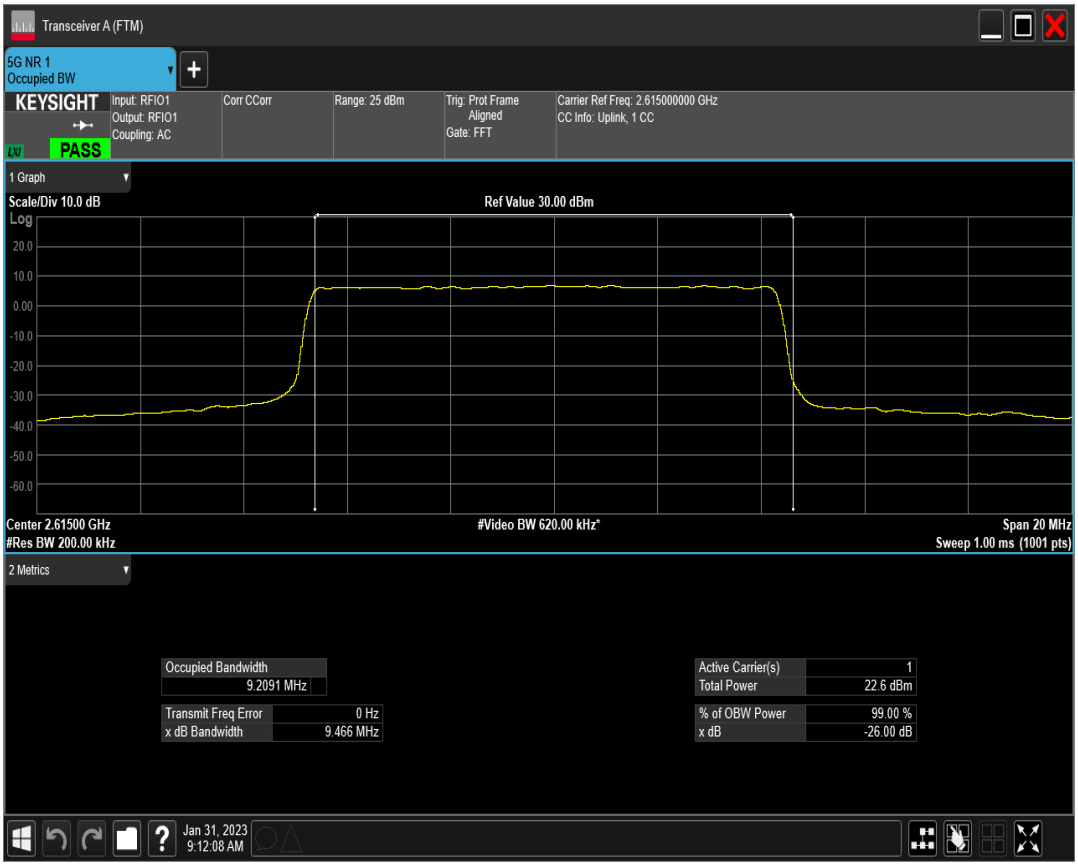
n38 SCS=15kHz CP_QPSK BW=10MHz Channel=519000 RB=52@0



n38 SCS=15kHz DFT_BPSK BW=10MHz Channel=523000 RB=50@0



n38 SCS=15kHz DFT_QPSK BW=10MHz Channel=523000 RB=50@0



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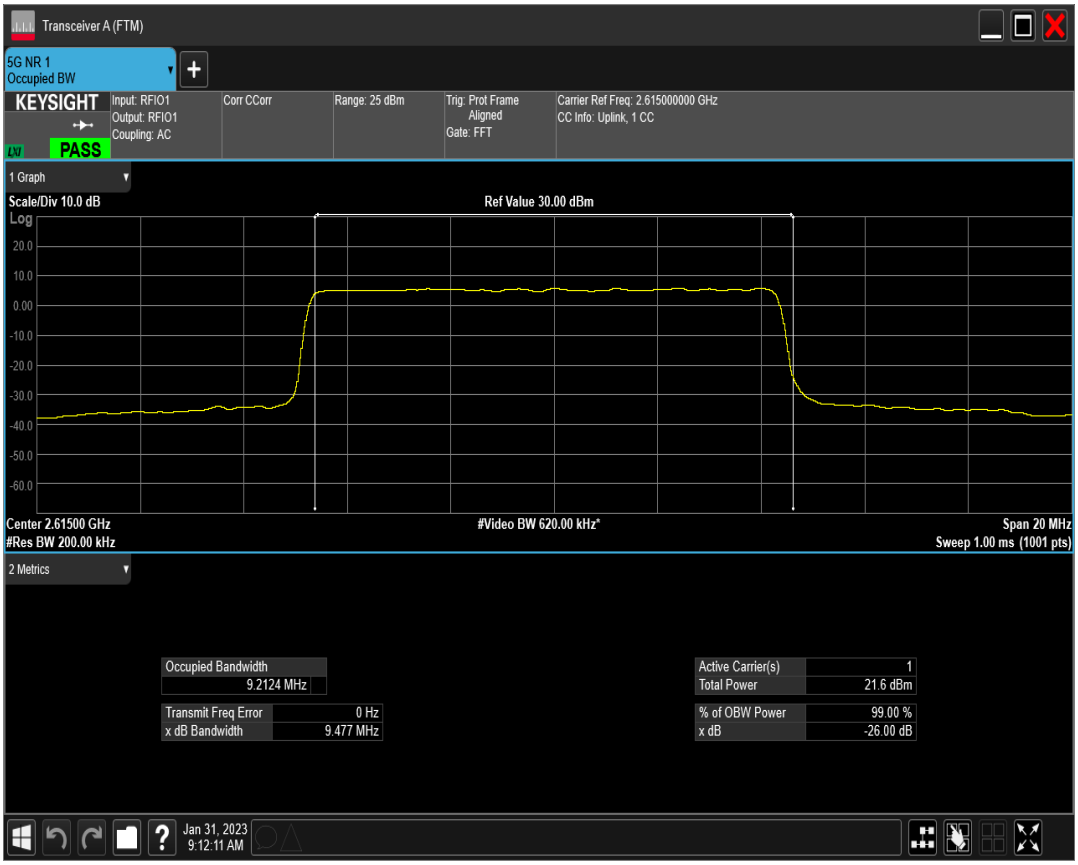

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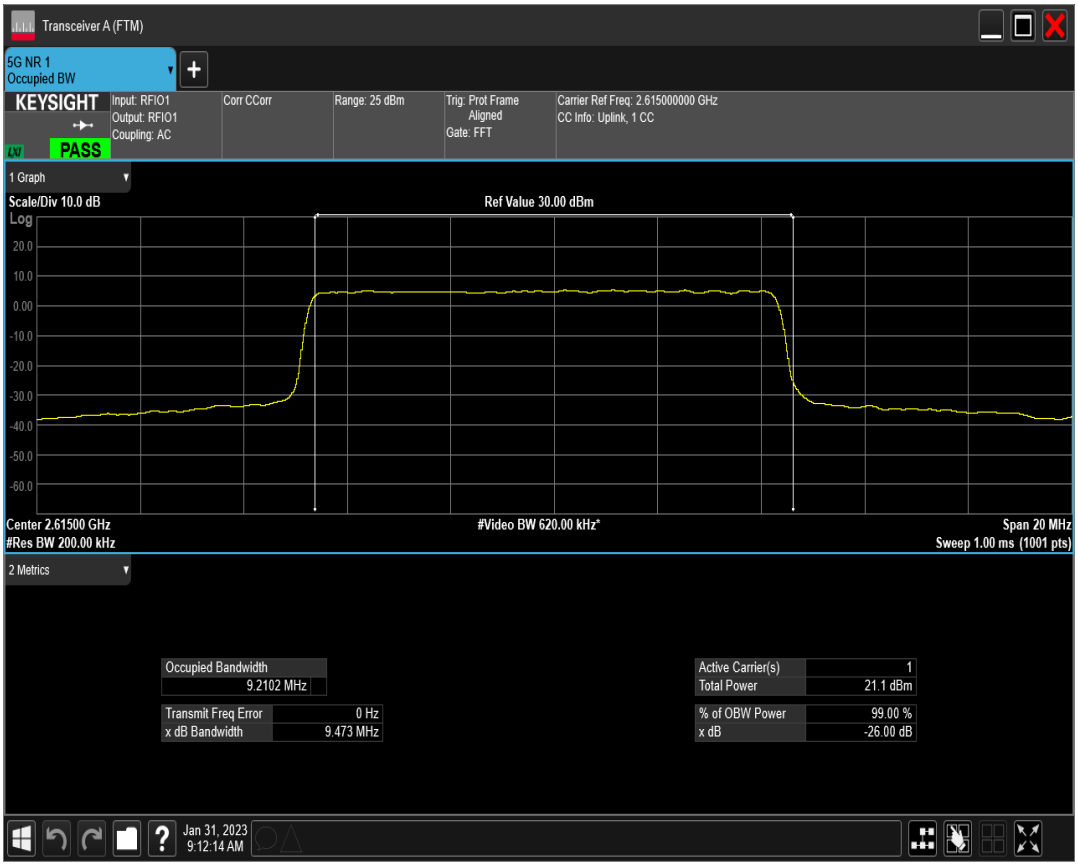

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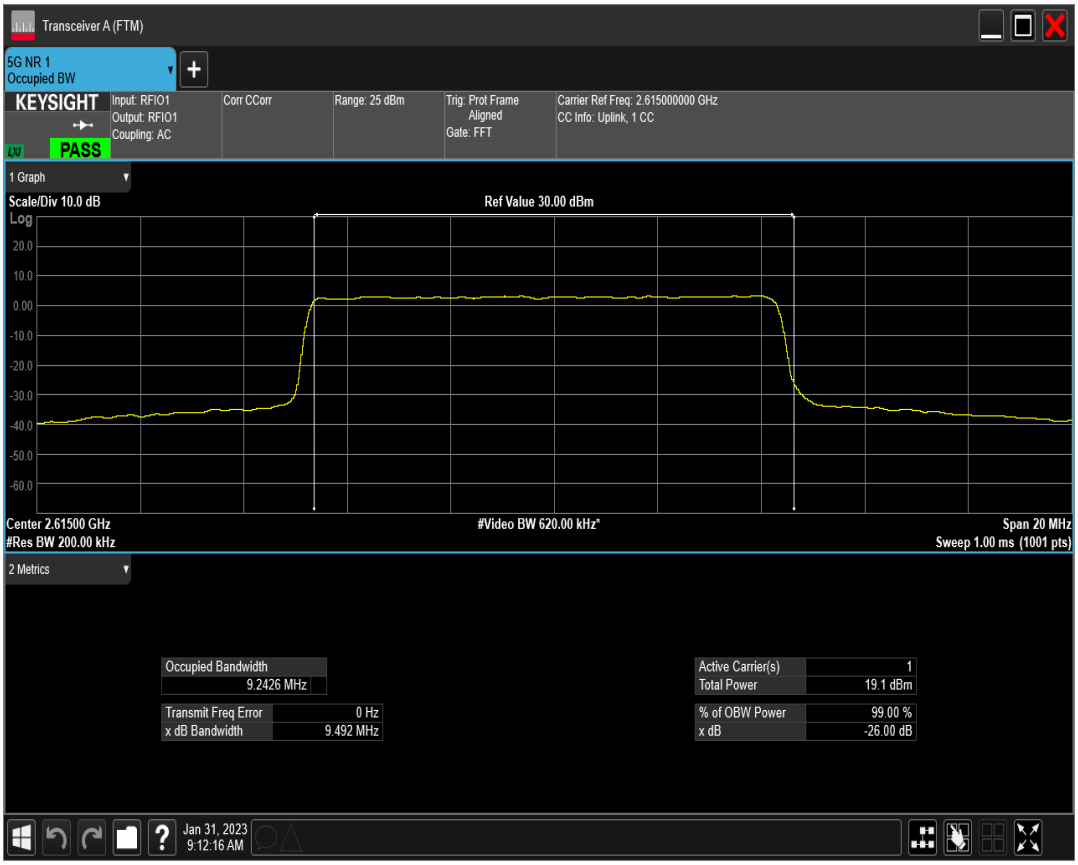

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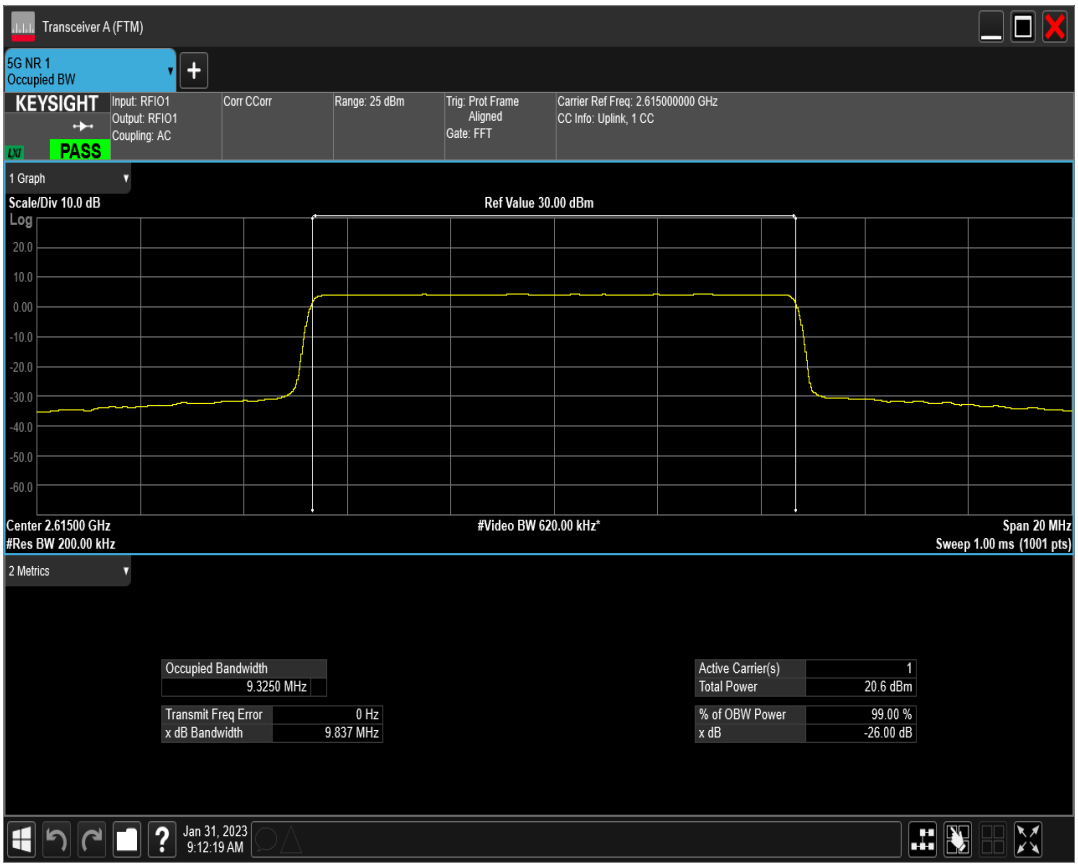

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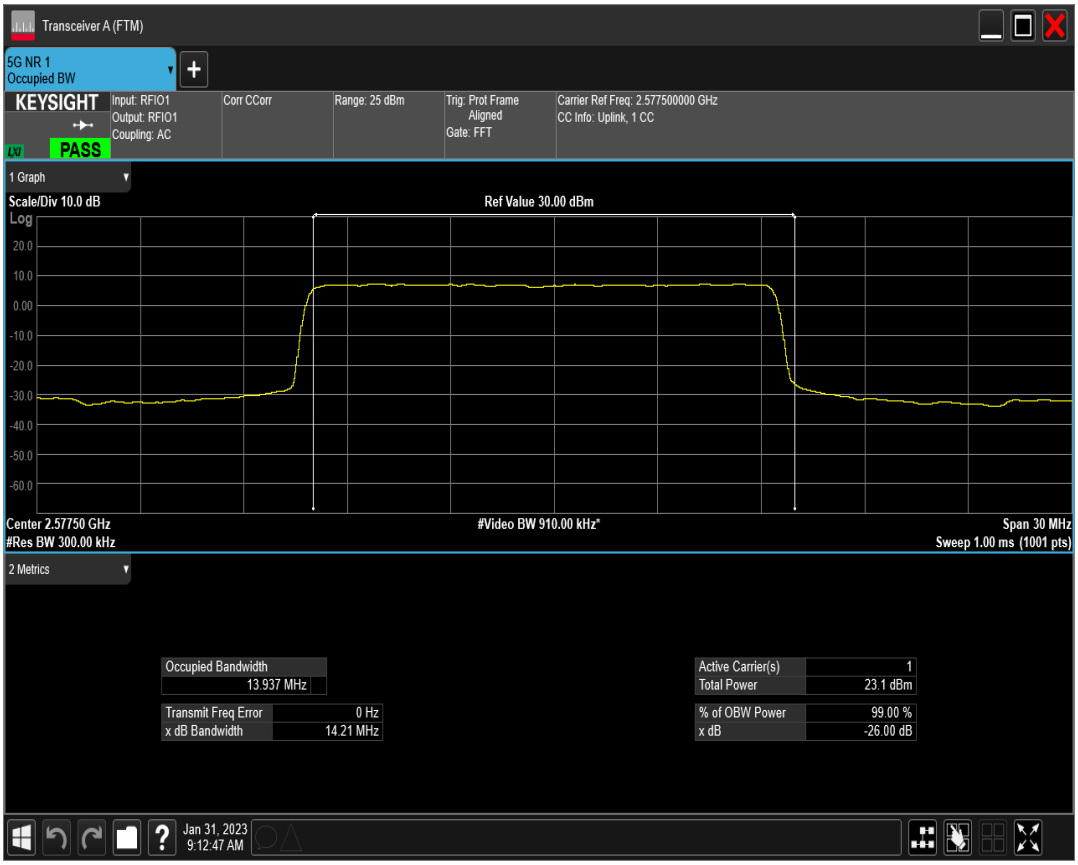

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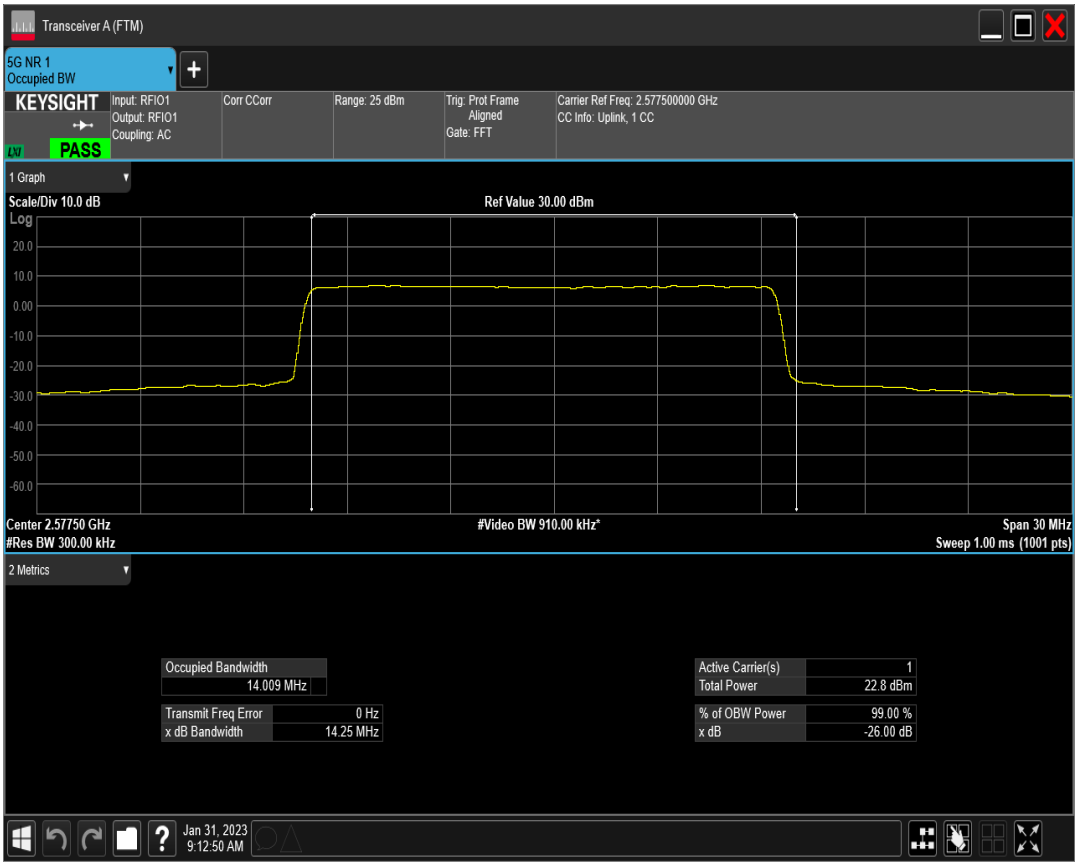

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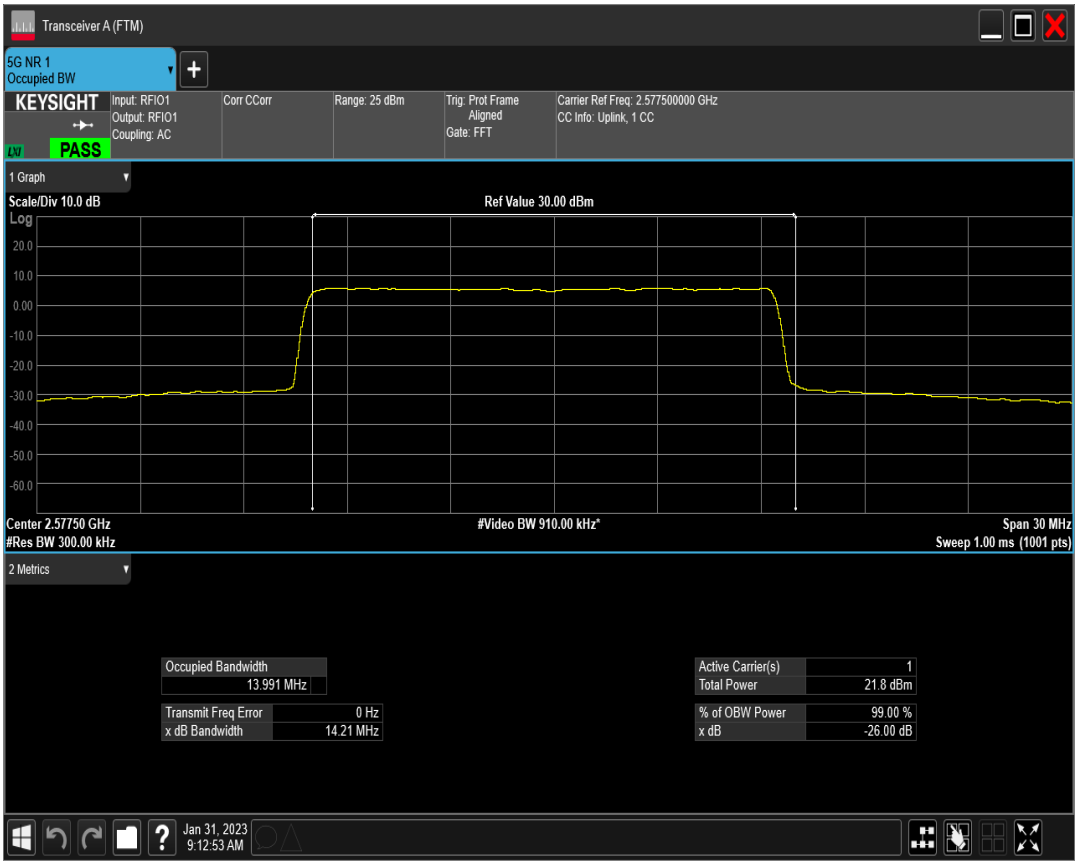

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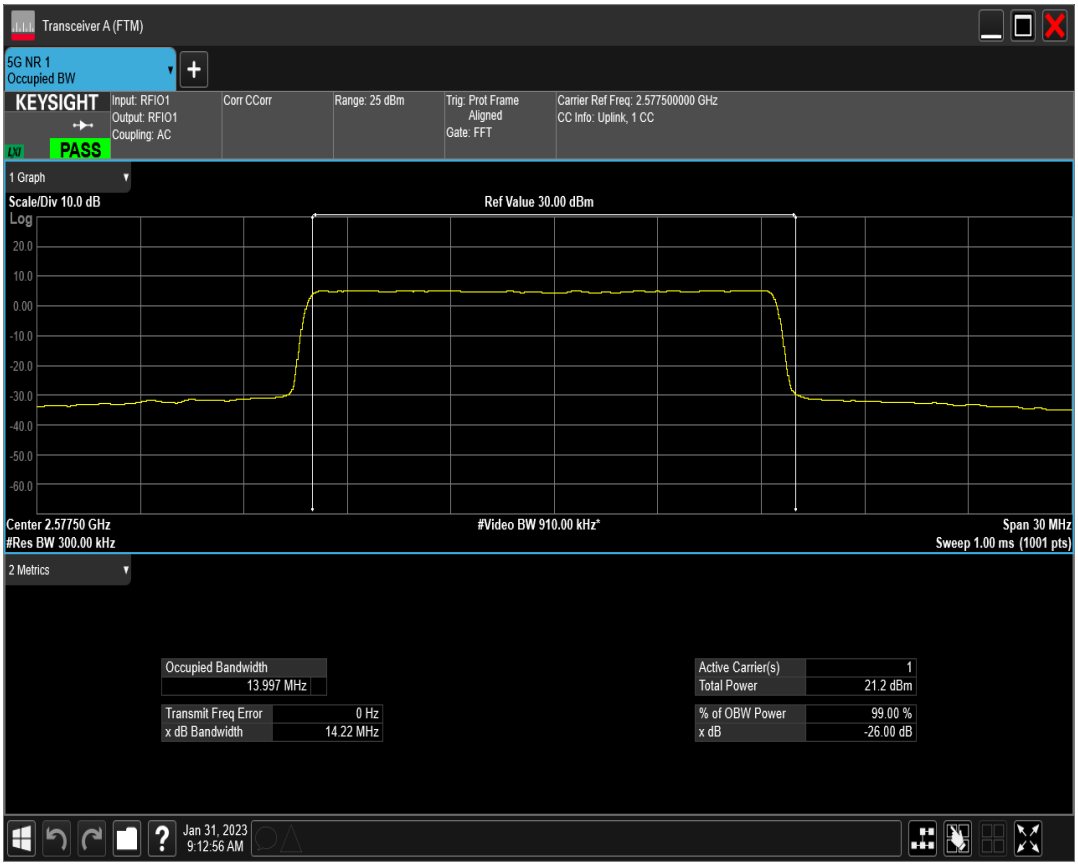

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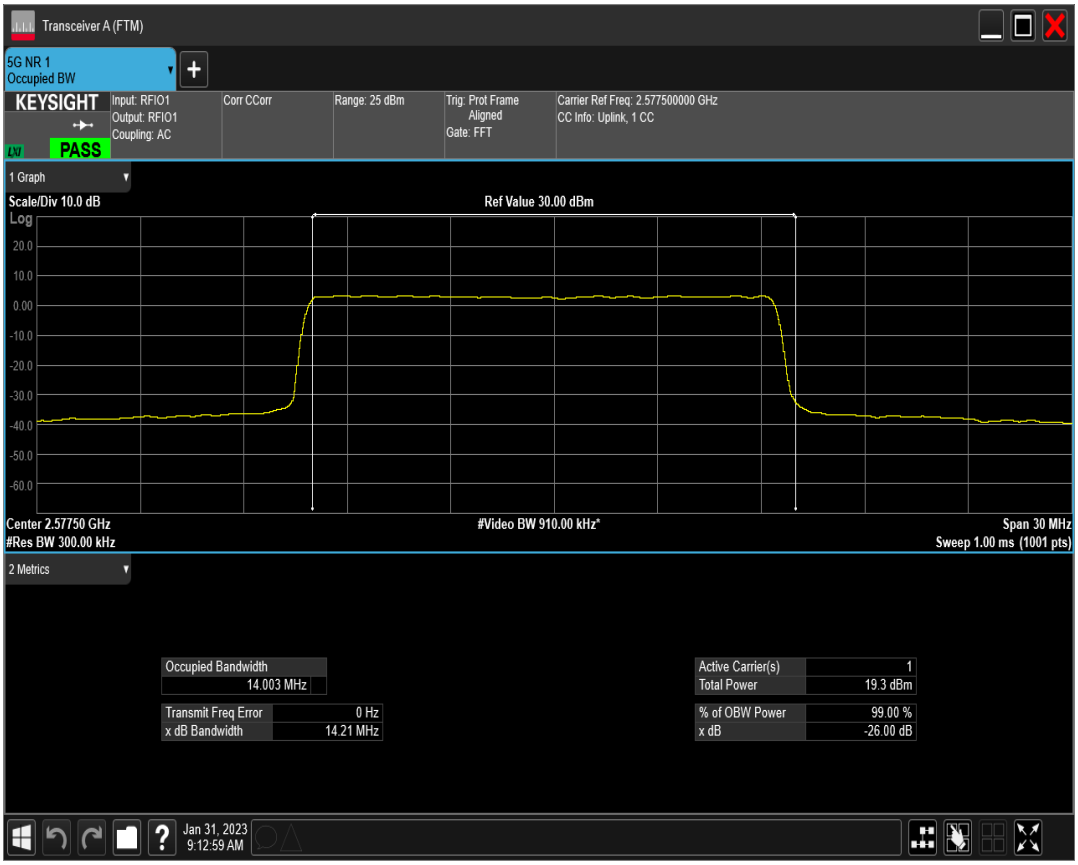

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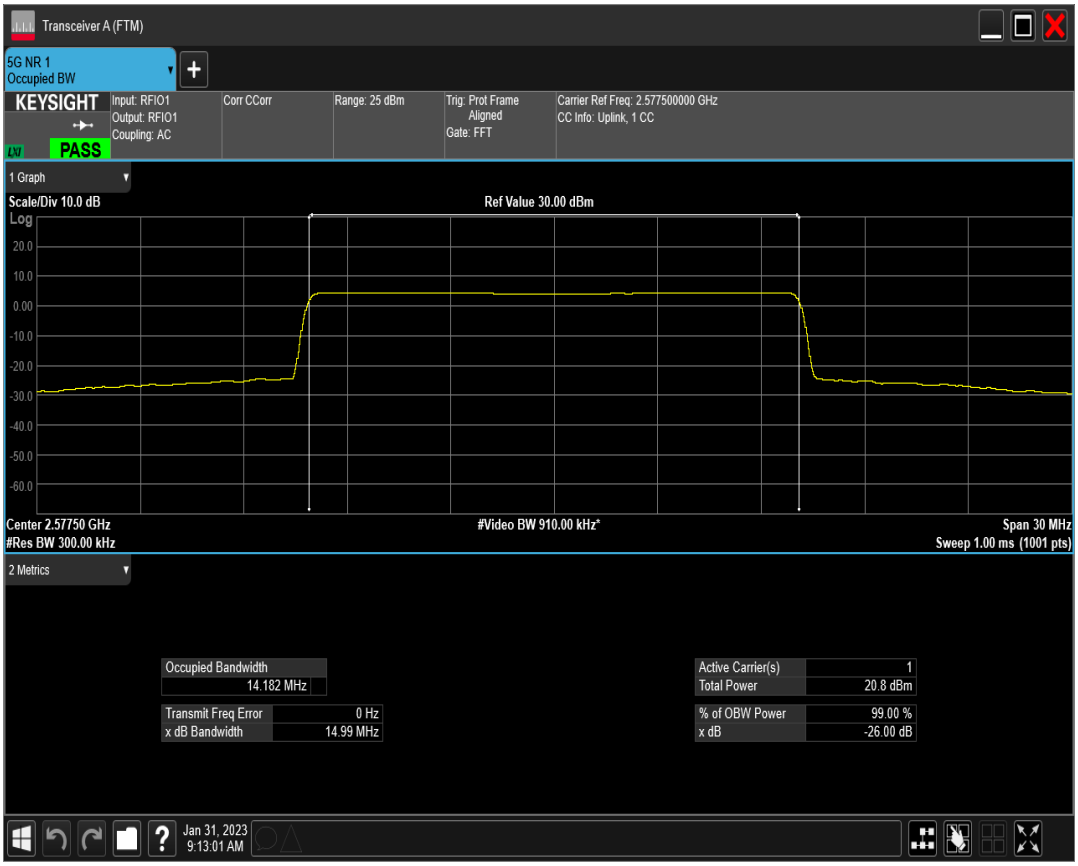
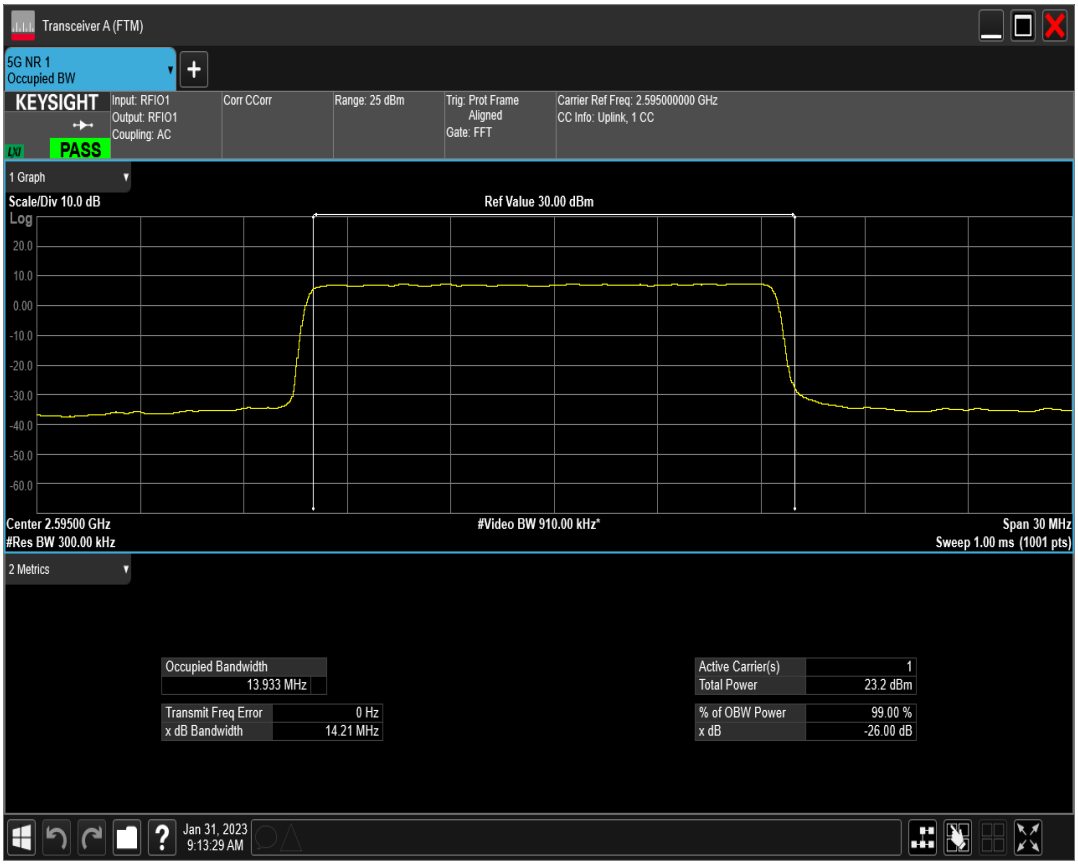
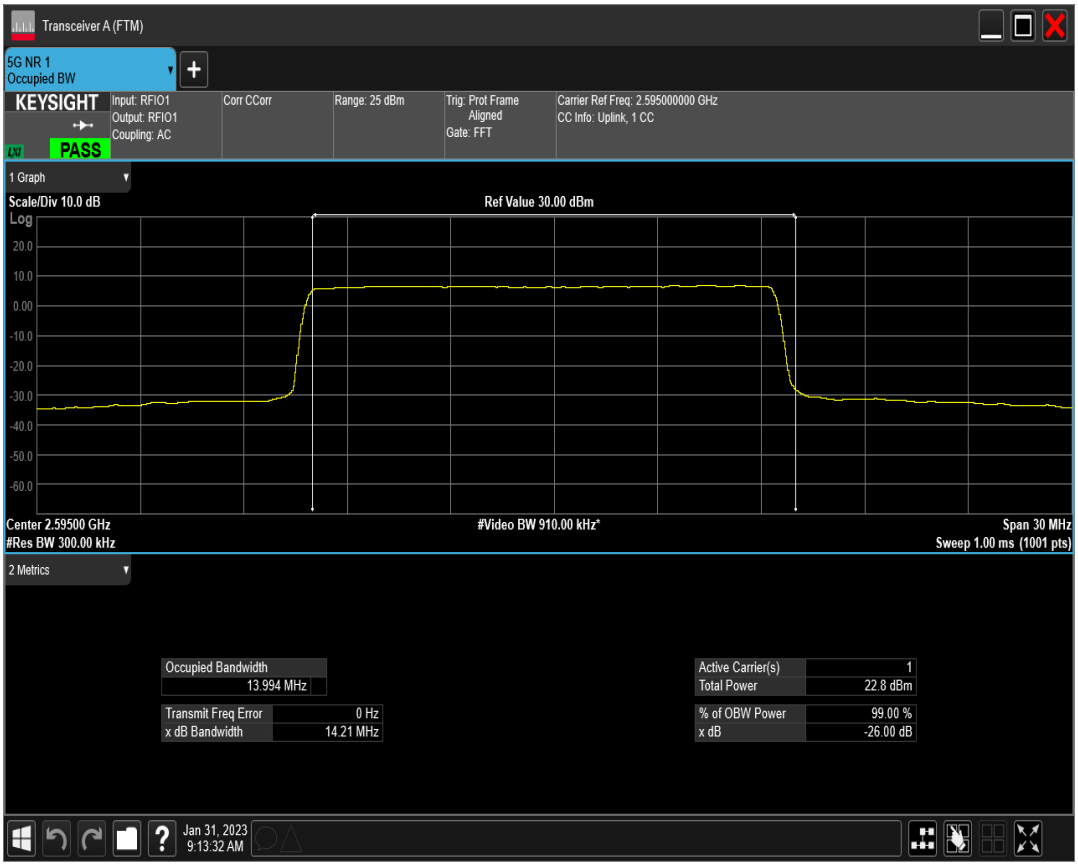


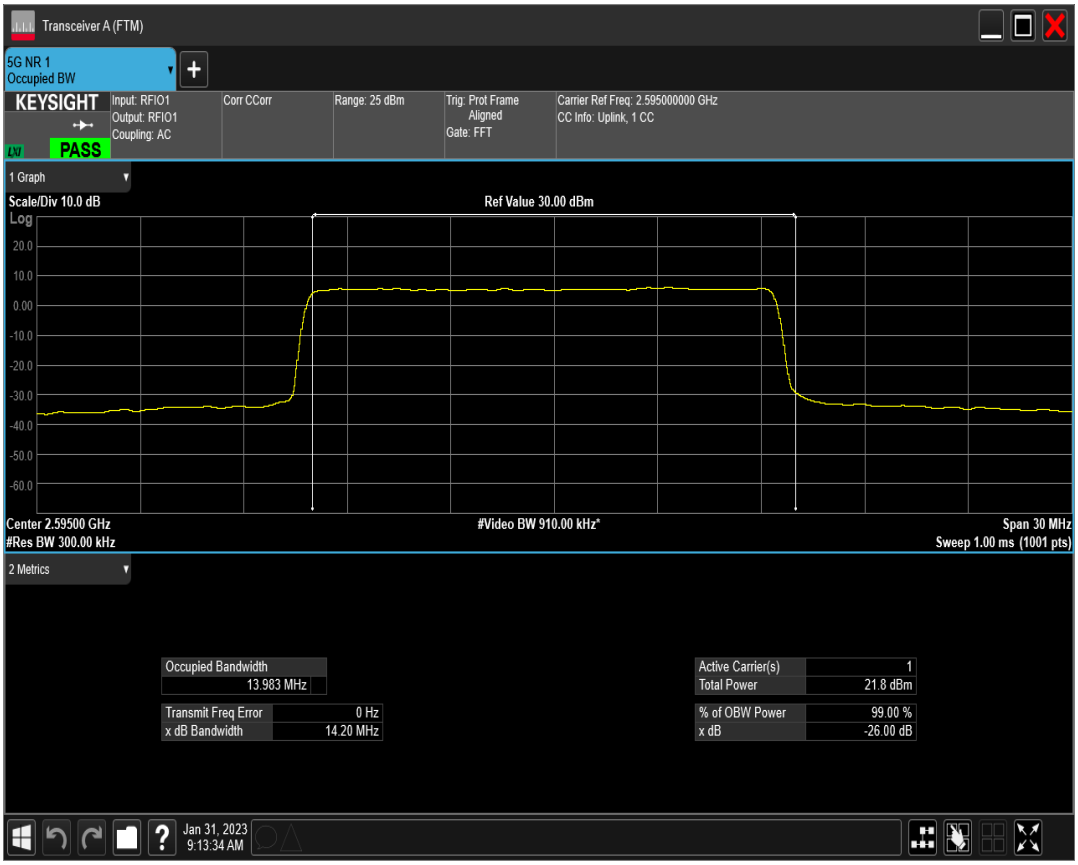
n38 SCS=15kHz DFT_BPSK BW=15MHz Channel=519000 RB=75@0



n38 SCS=15kHz DFT_QPSK BW=15MHz Channel=519000 RB=75@0



n38 SCS=15kHz DFT_QAM16 BW=15MHz Channel=519000 RB=75@0



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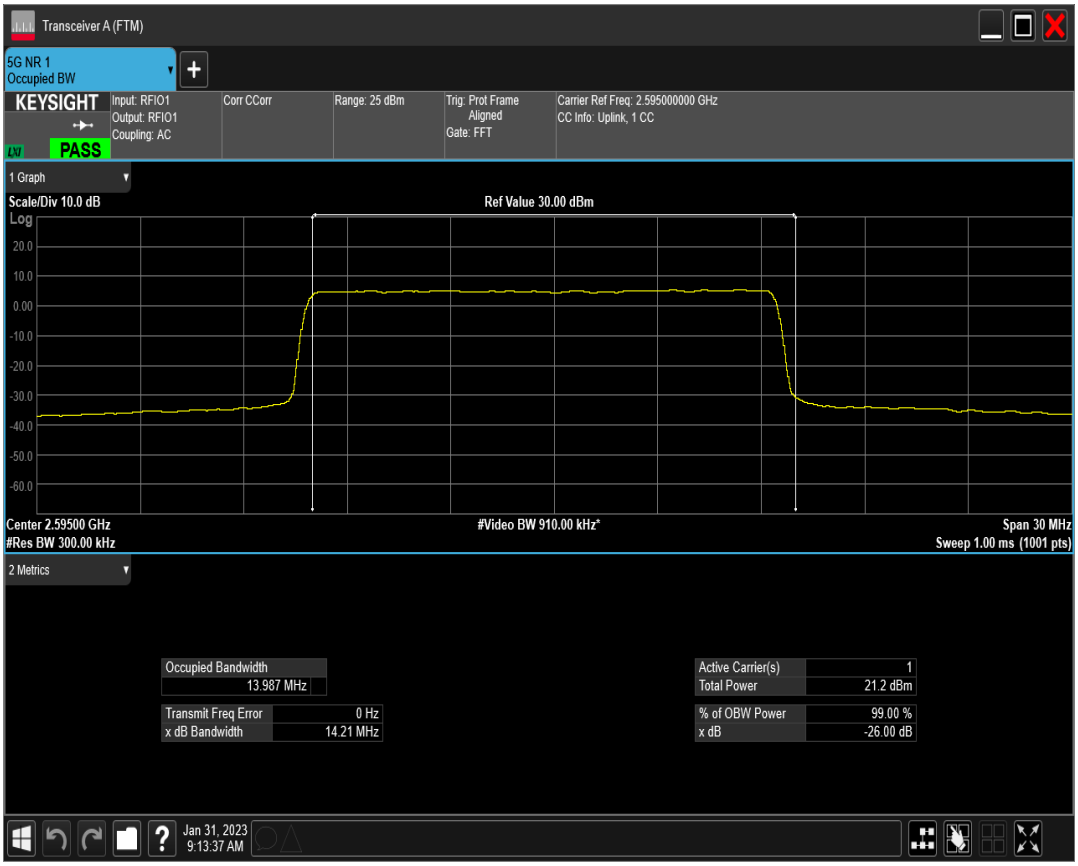

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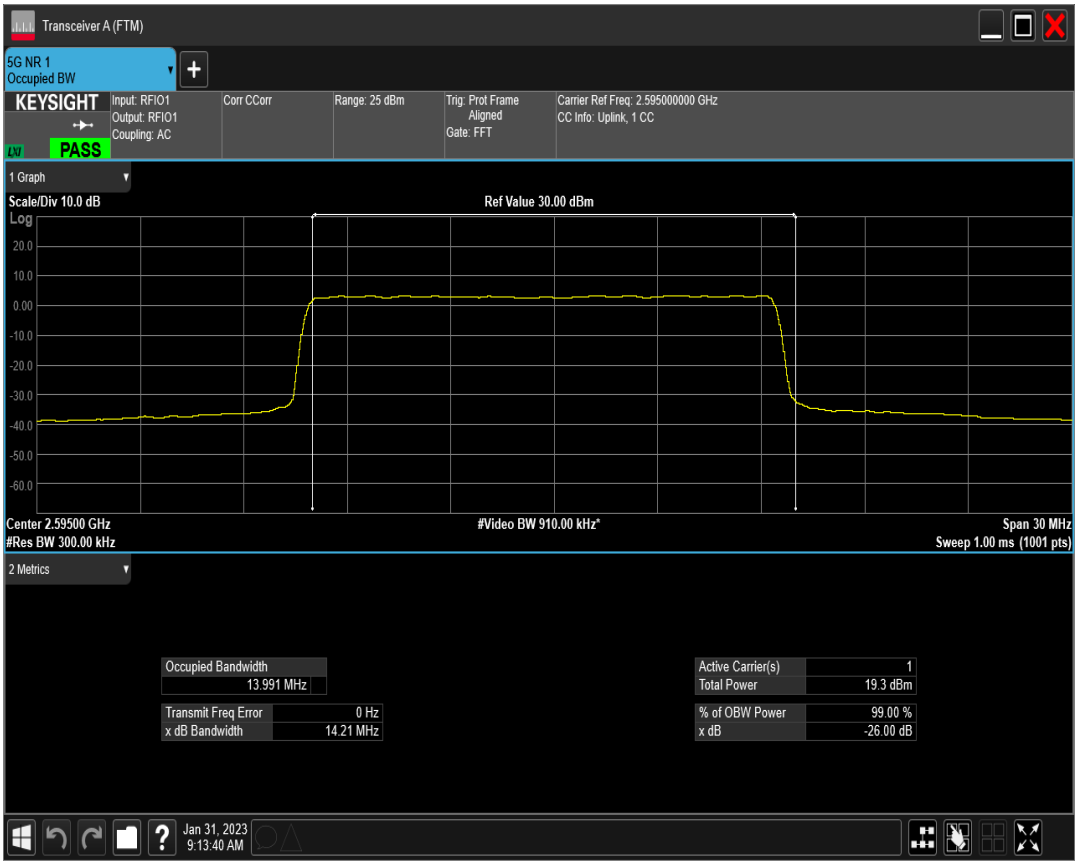
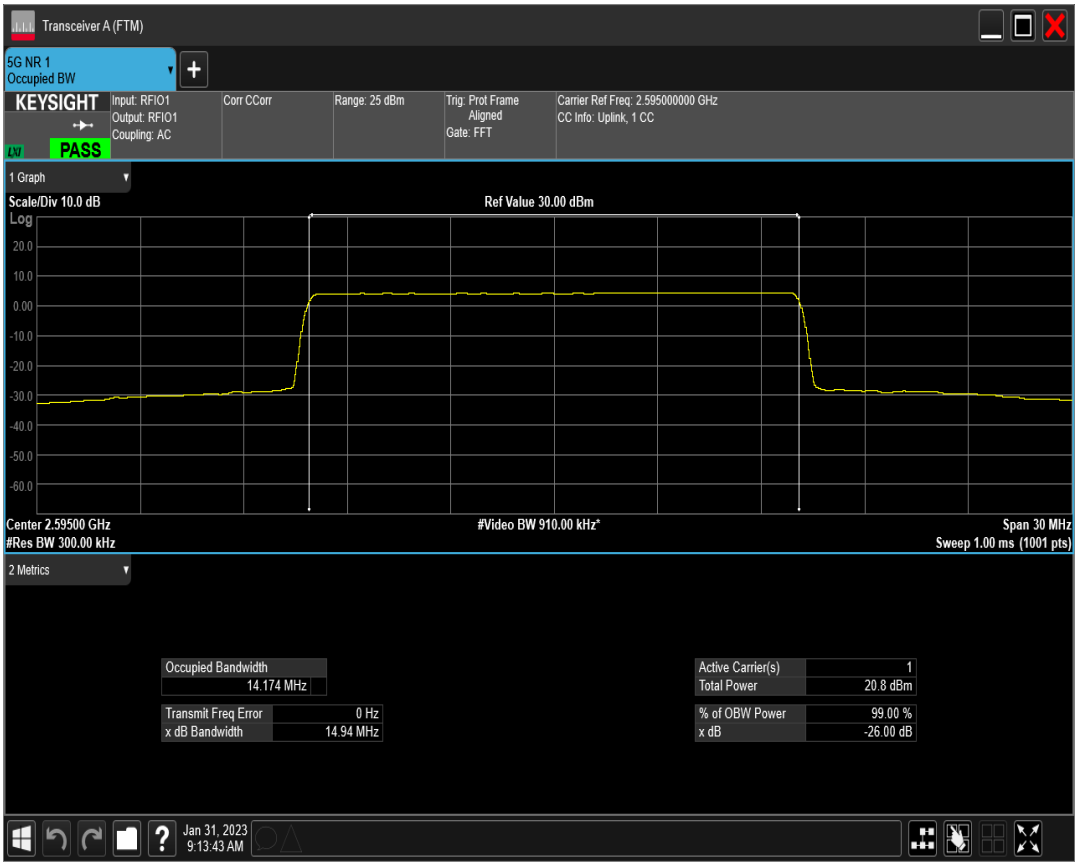
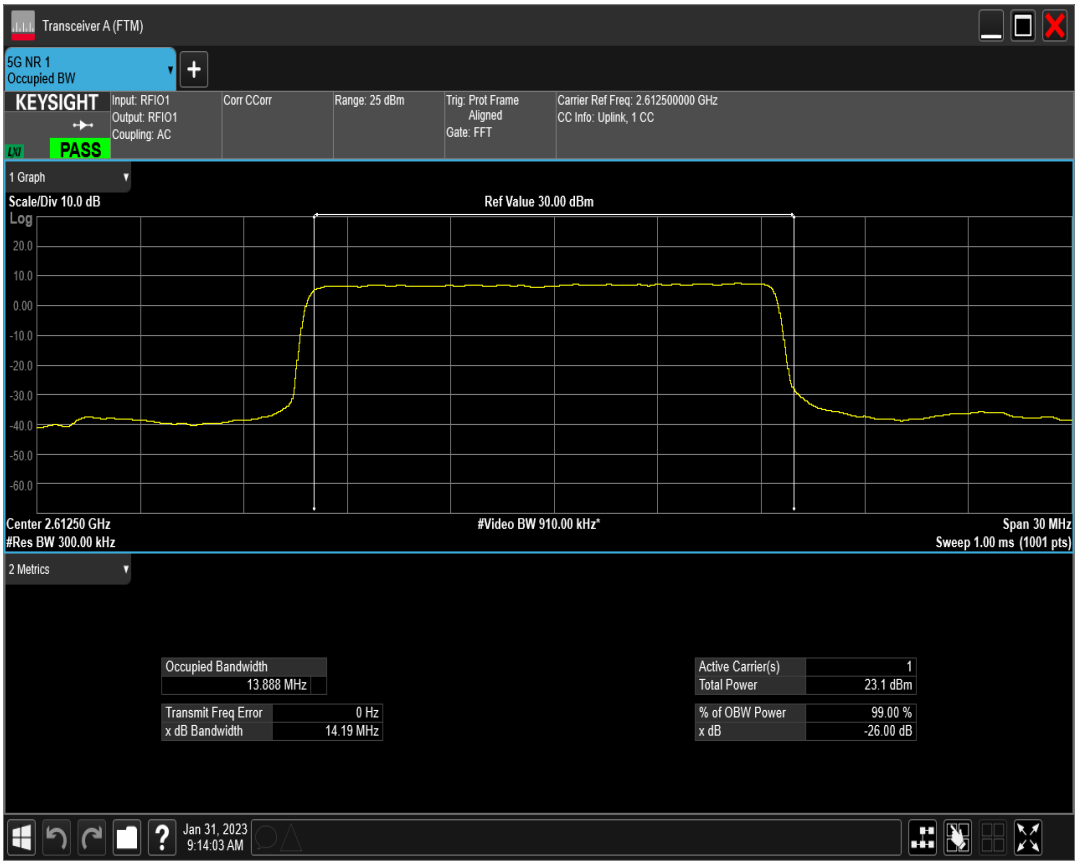


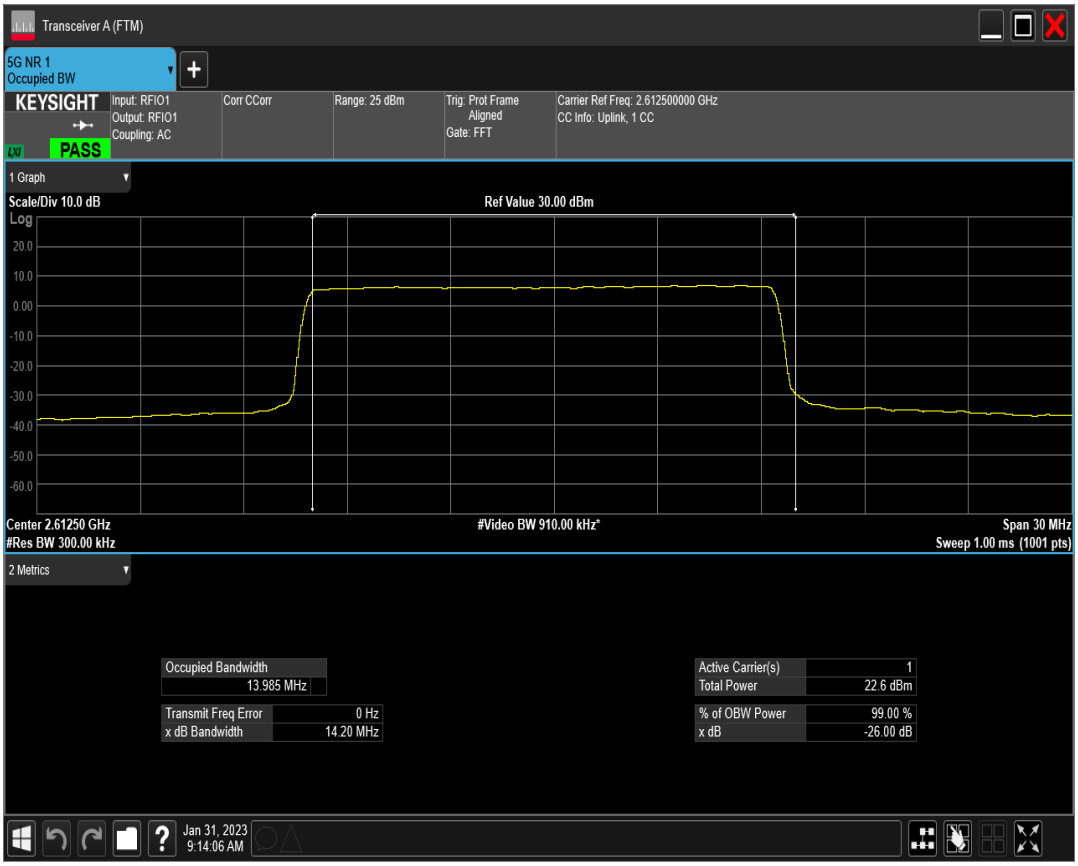
n38 SCS=15kHz CP_QPSK BW=15MHz Channel=519000 RB=79@0



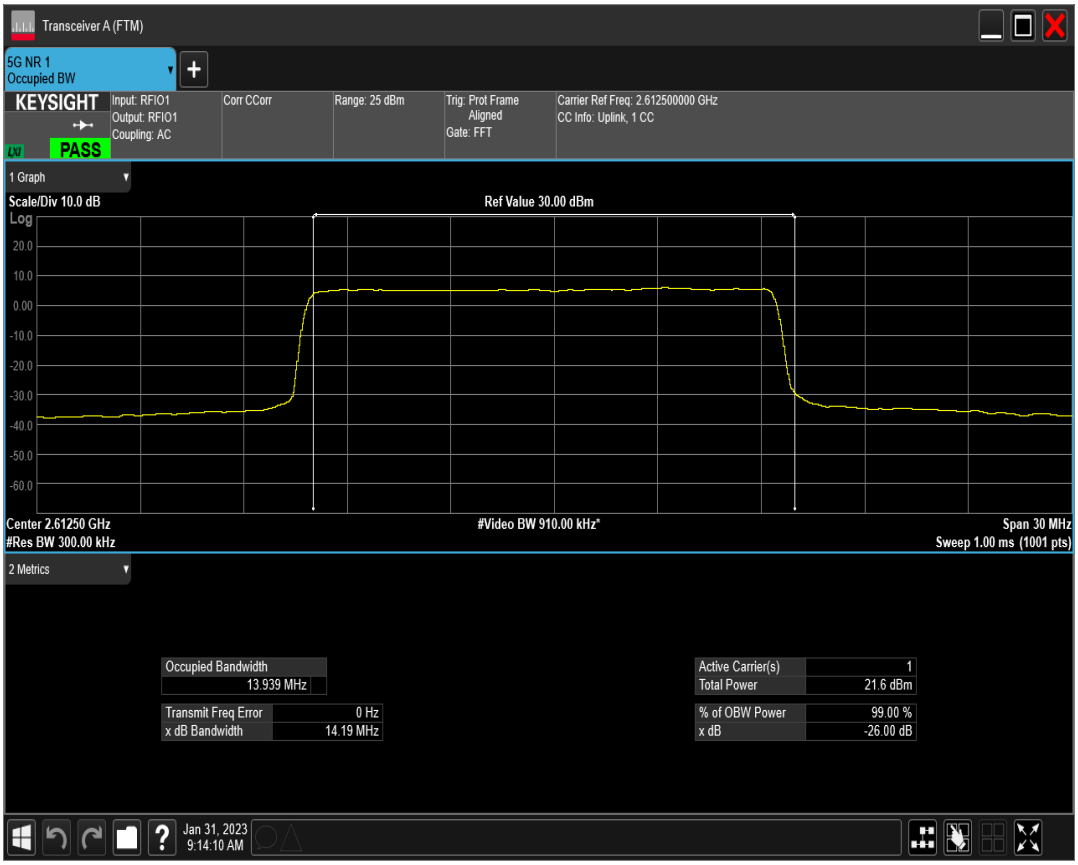
n38 SCS=15kHz DFT_BPSK BW=15MHz Channel=522500 RB=75@0



n38 SCS=15kHz DFT_QPSK BW=15MHz Channel=522500 RB=75@0



n38 SCS=15kHz DFT_QAM16 BW=15MHz Channel=522500 RB=75@0



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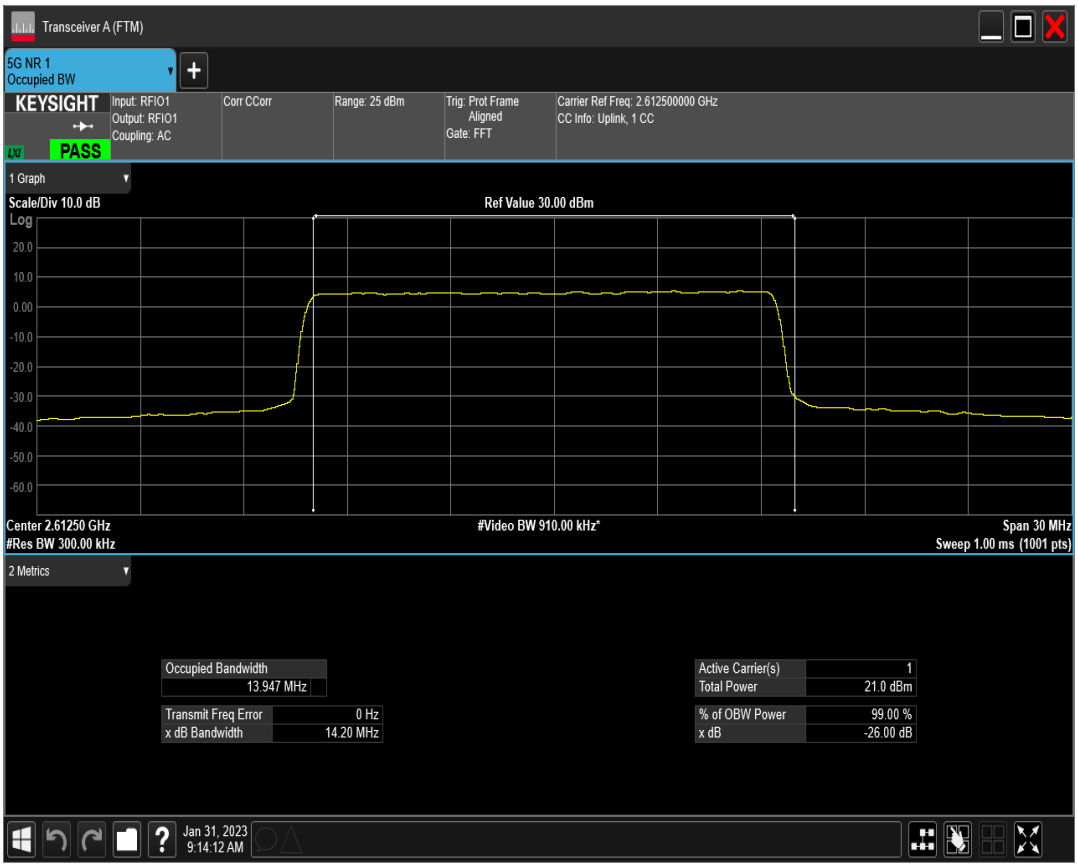

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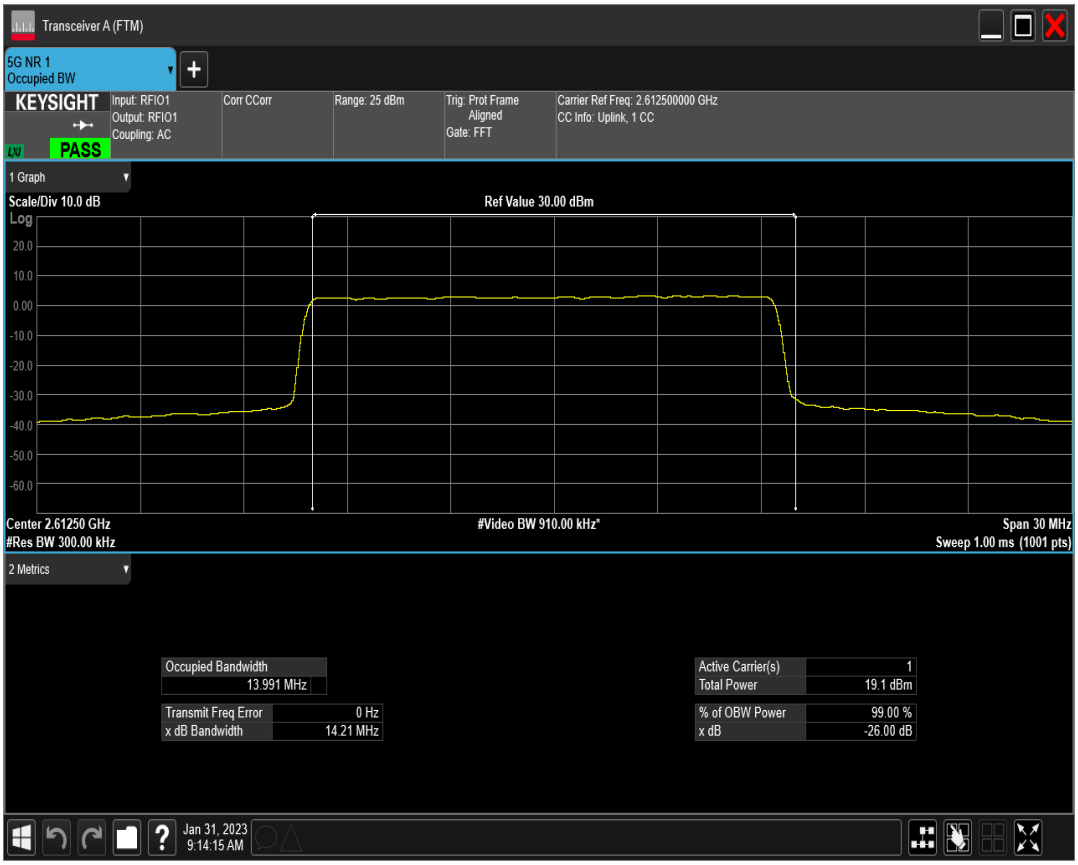
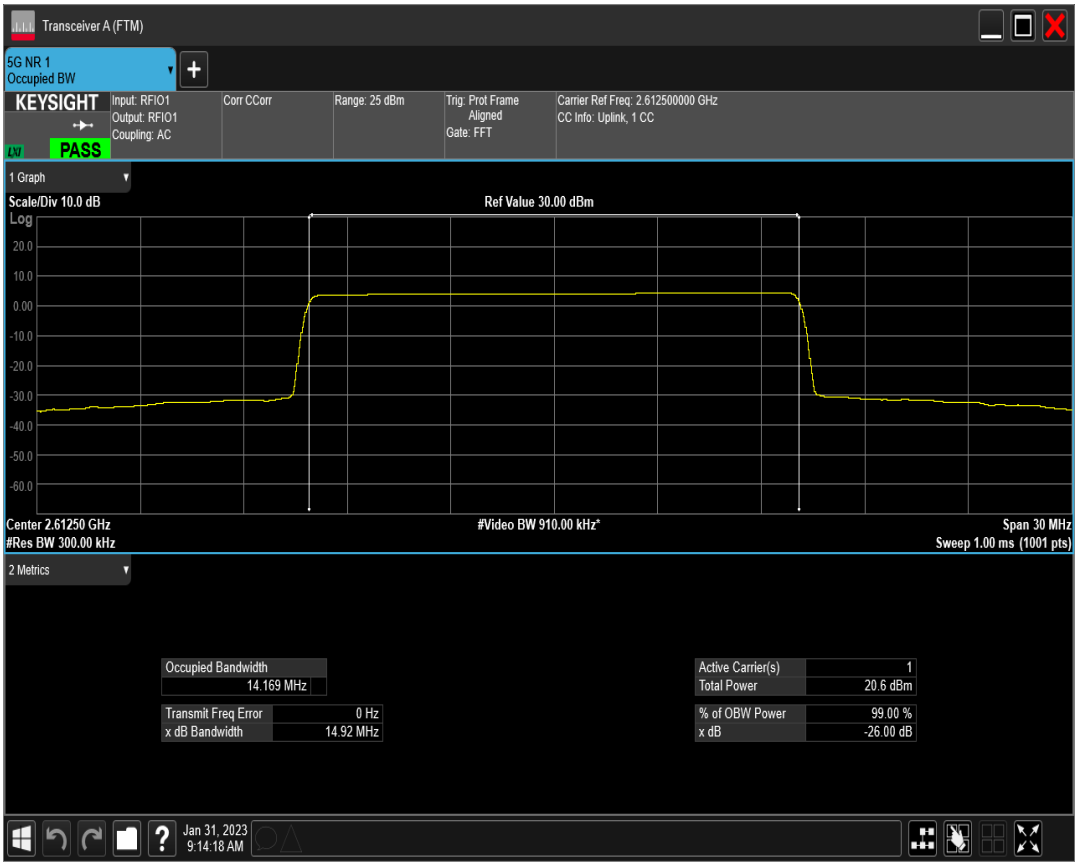
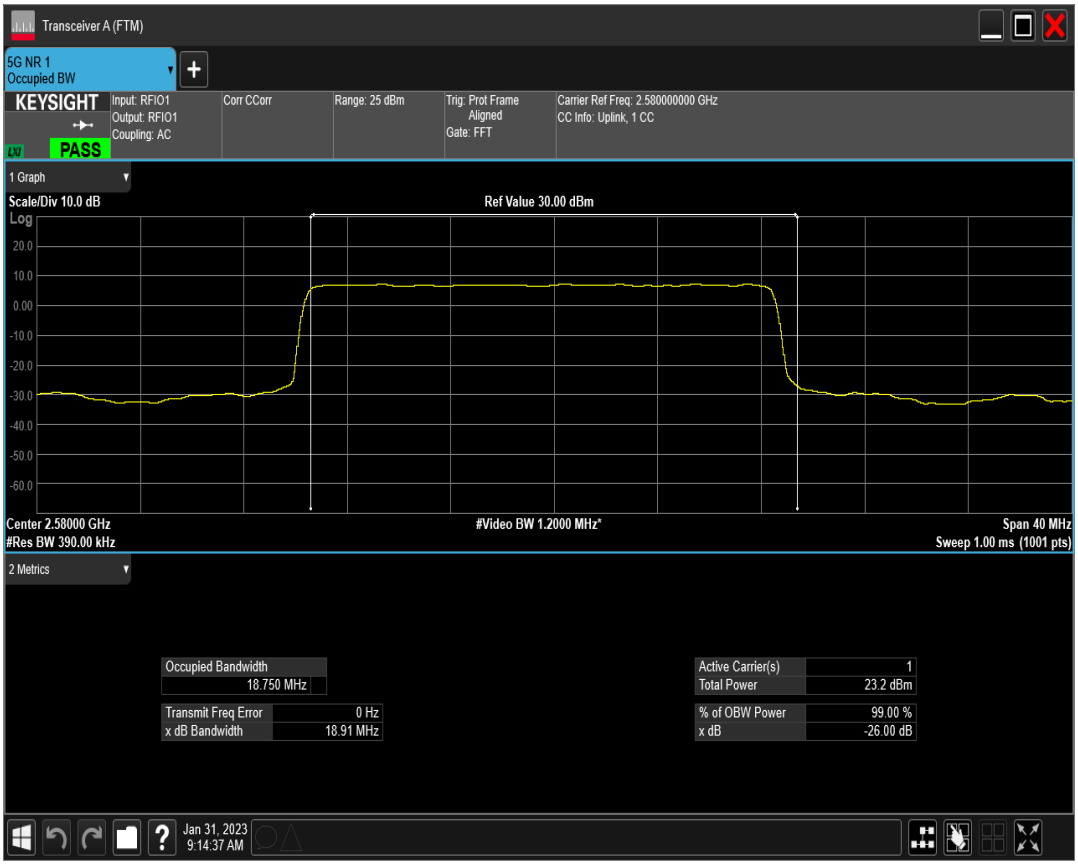


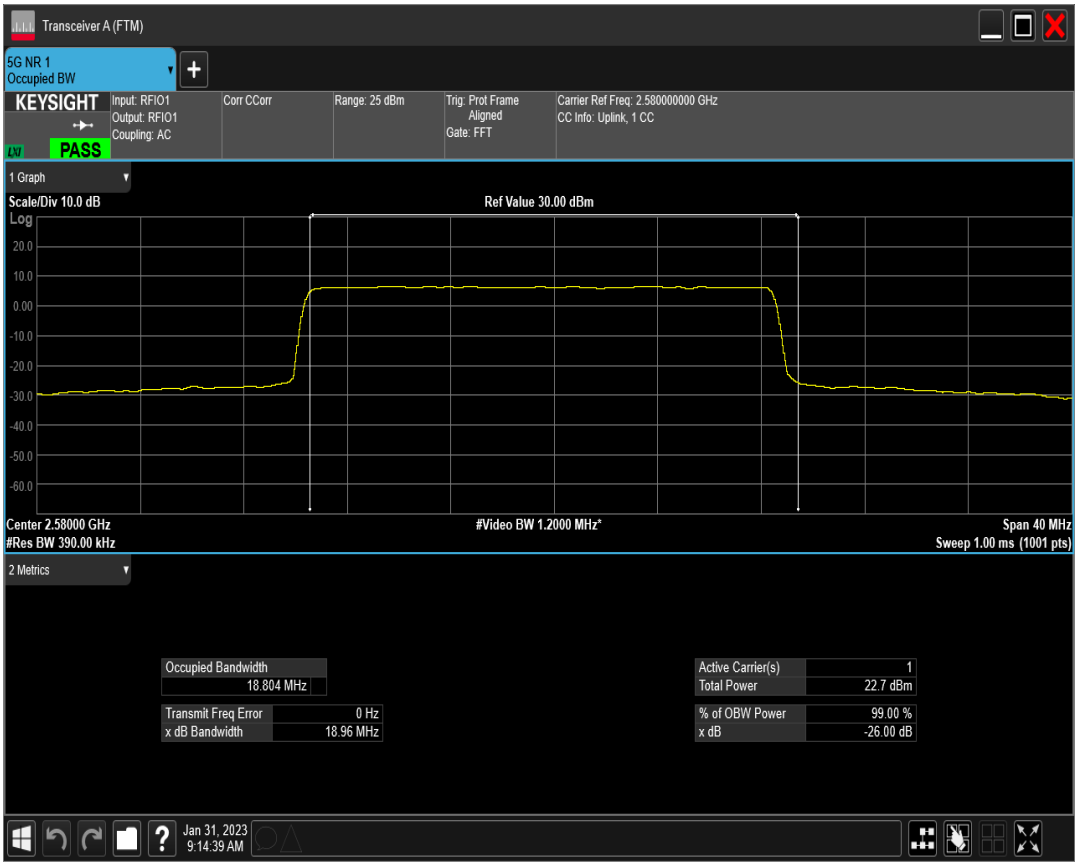
n38 SCS=15kHz CP_QPSK BW=15MHz Channel=522500 RB=79@0



n38 SCS=15kHz DFT_BPSK BW=20MHz Channel=516000 RB=100@0



n38 SCS=15kHz DFT_QPSK BW=20MHz Channel=516000 RB=100@0



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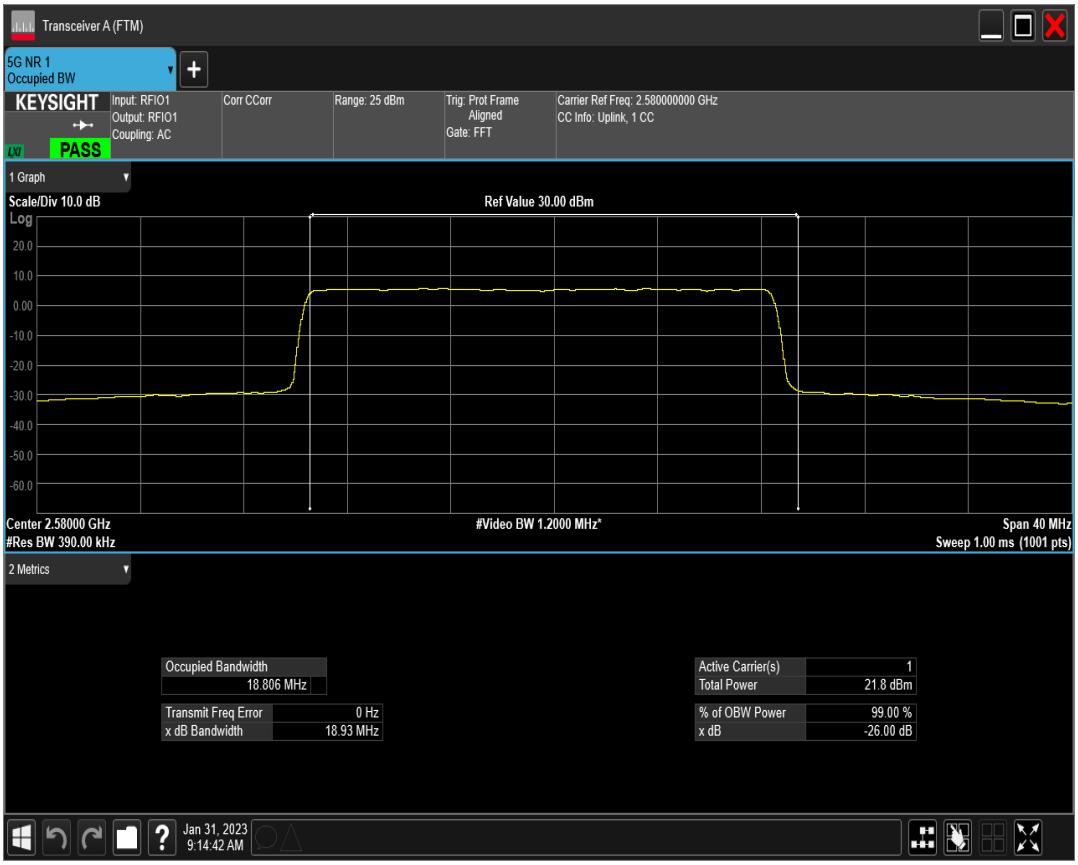

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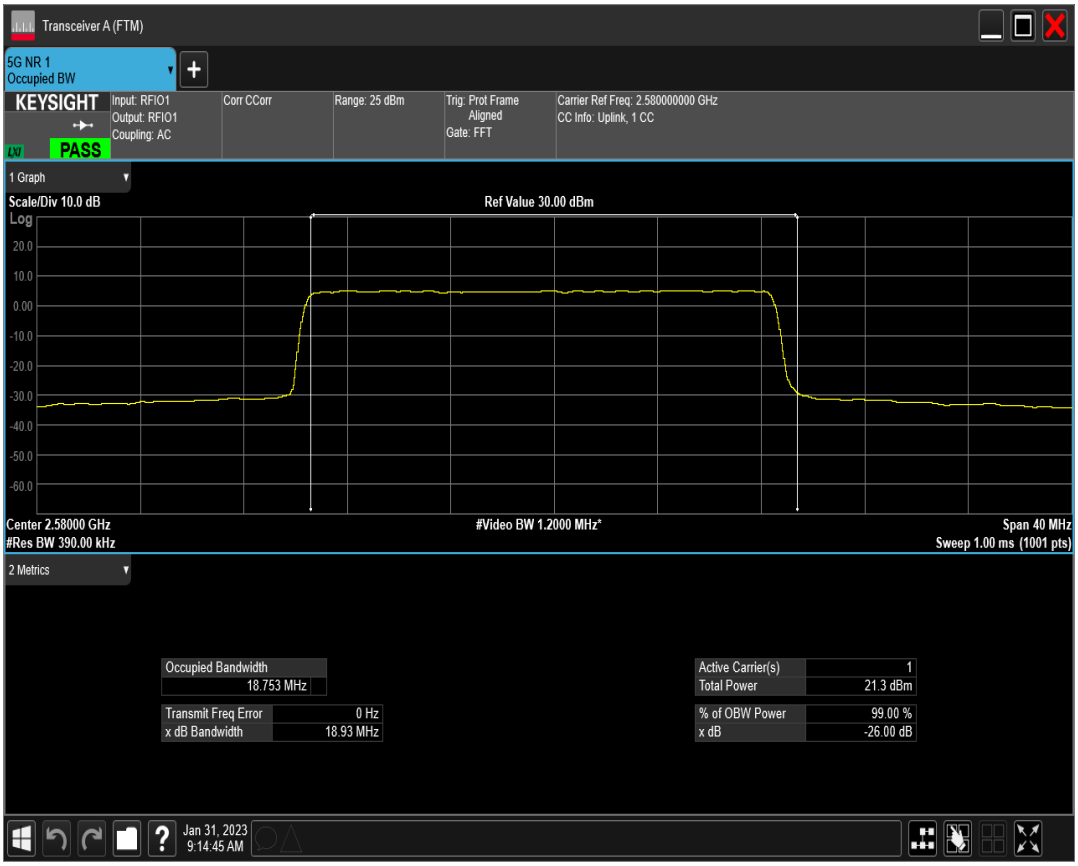

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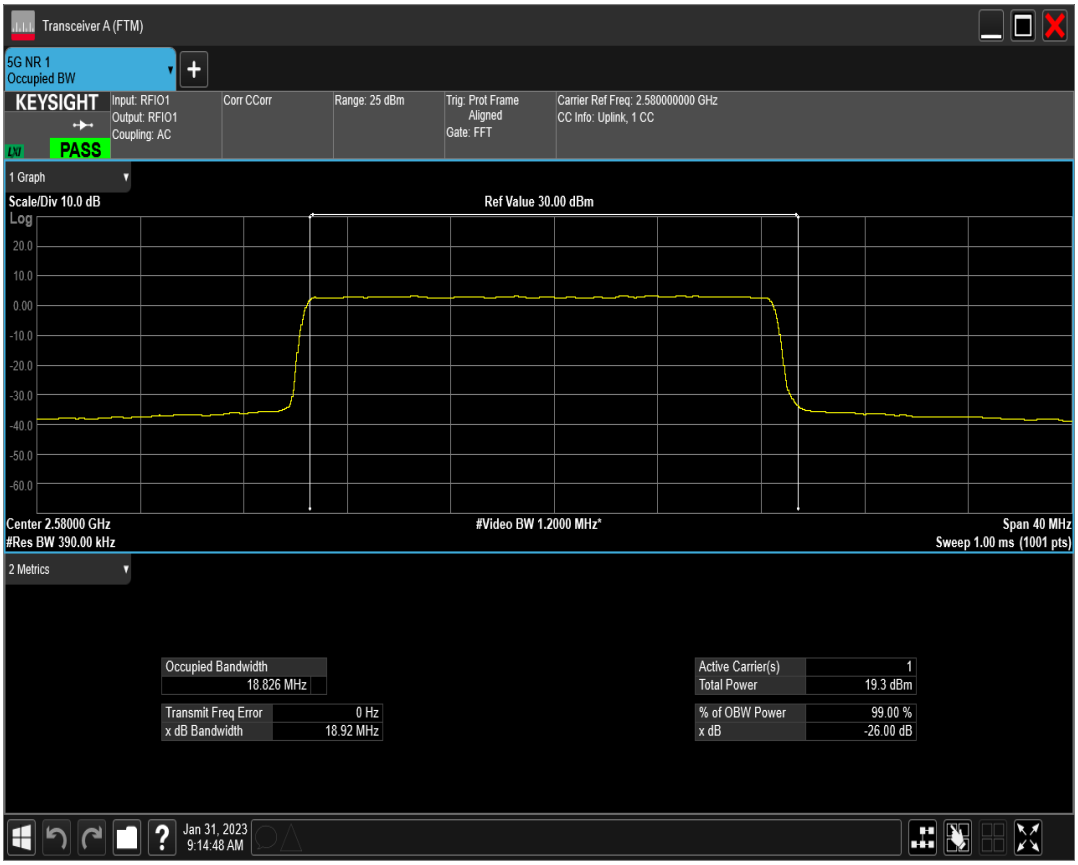
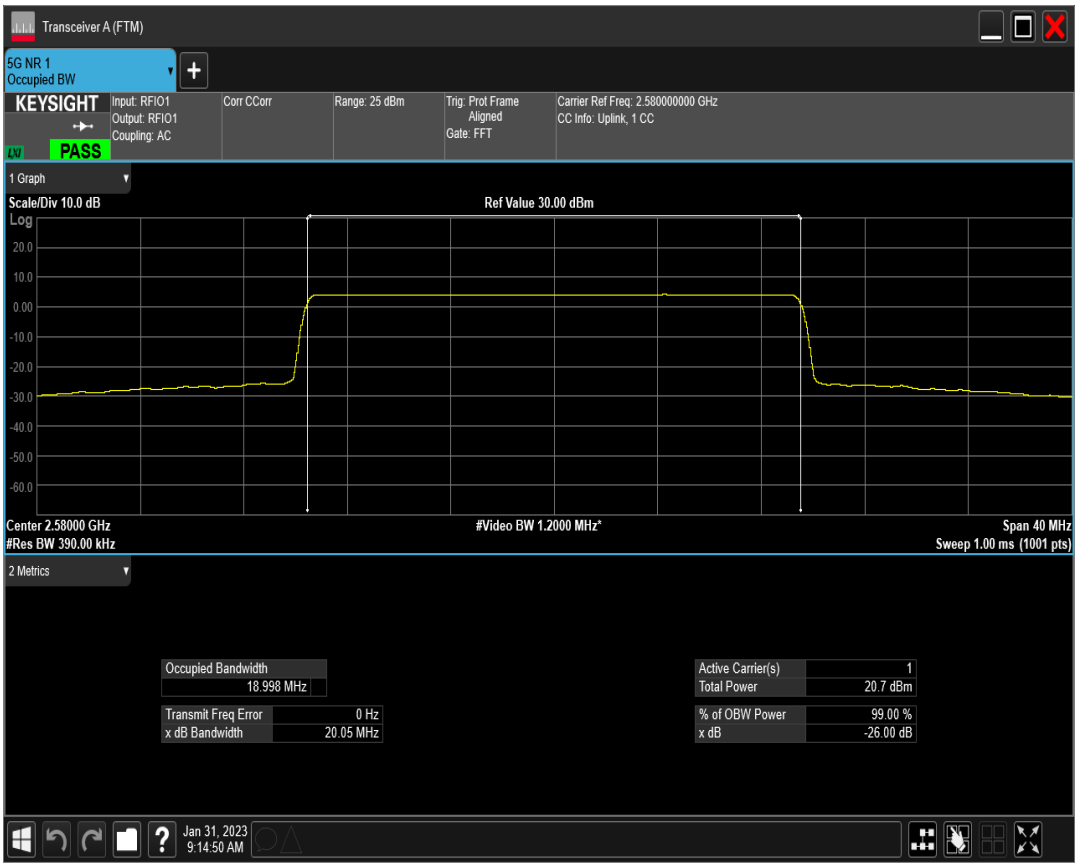
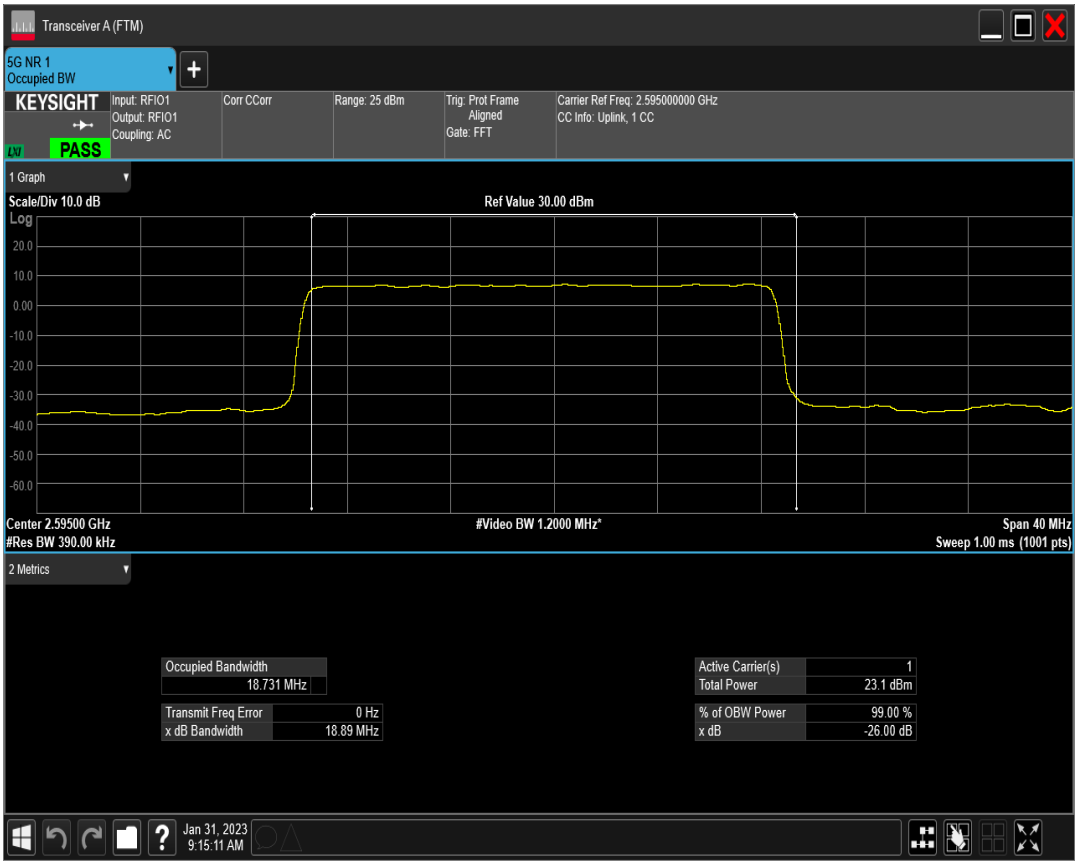


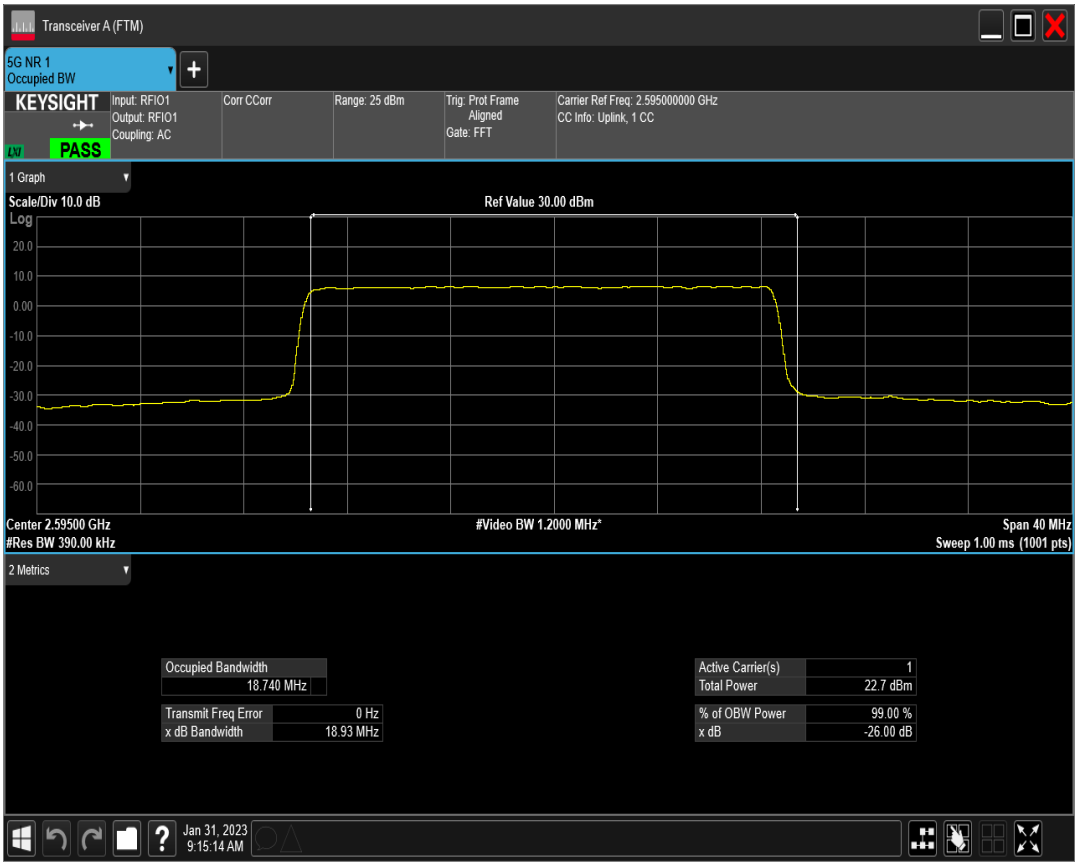
n38 SCS=15kHz CP_QPSK BW=20MHz Channel=516000 RB=106@0



n38 SCS=15kHz DFT_BPSK BW=20MHz Channel=519000 RB=100@0



n38 SCS=15kHz DFT_QPSK BW=20MHz Channel=519000 RB=100@0



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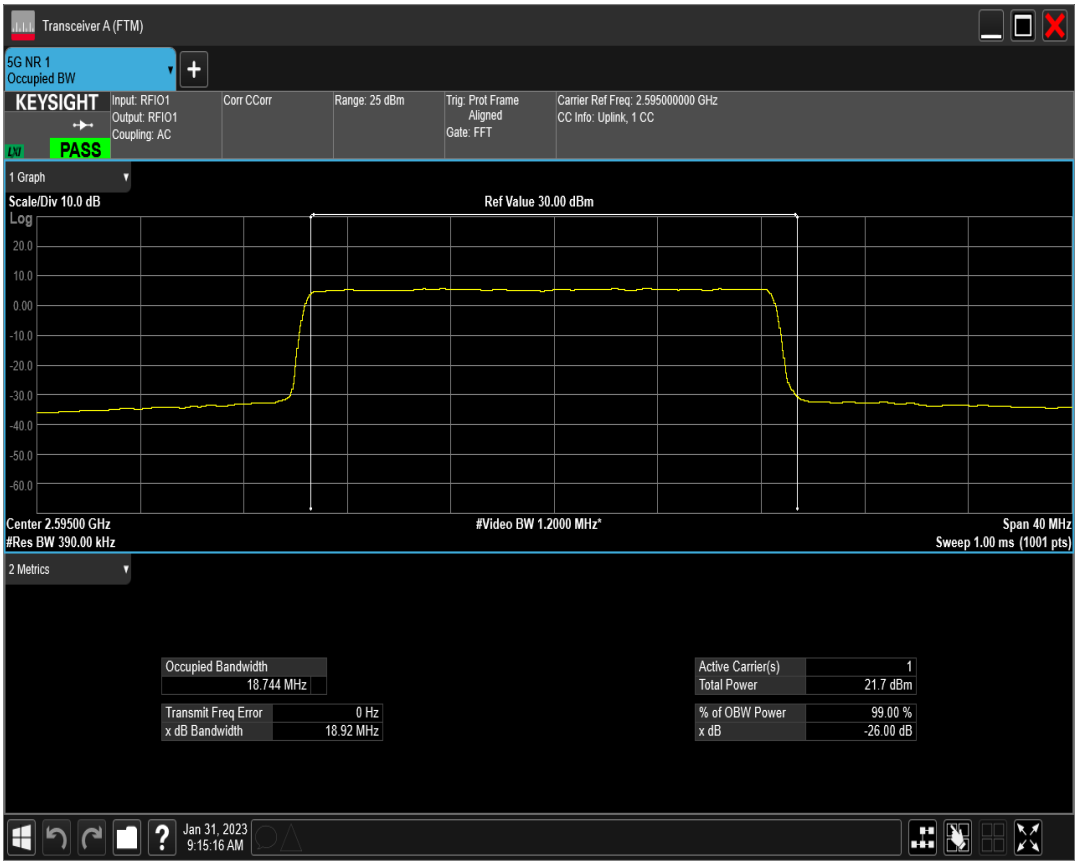

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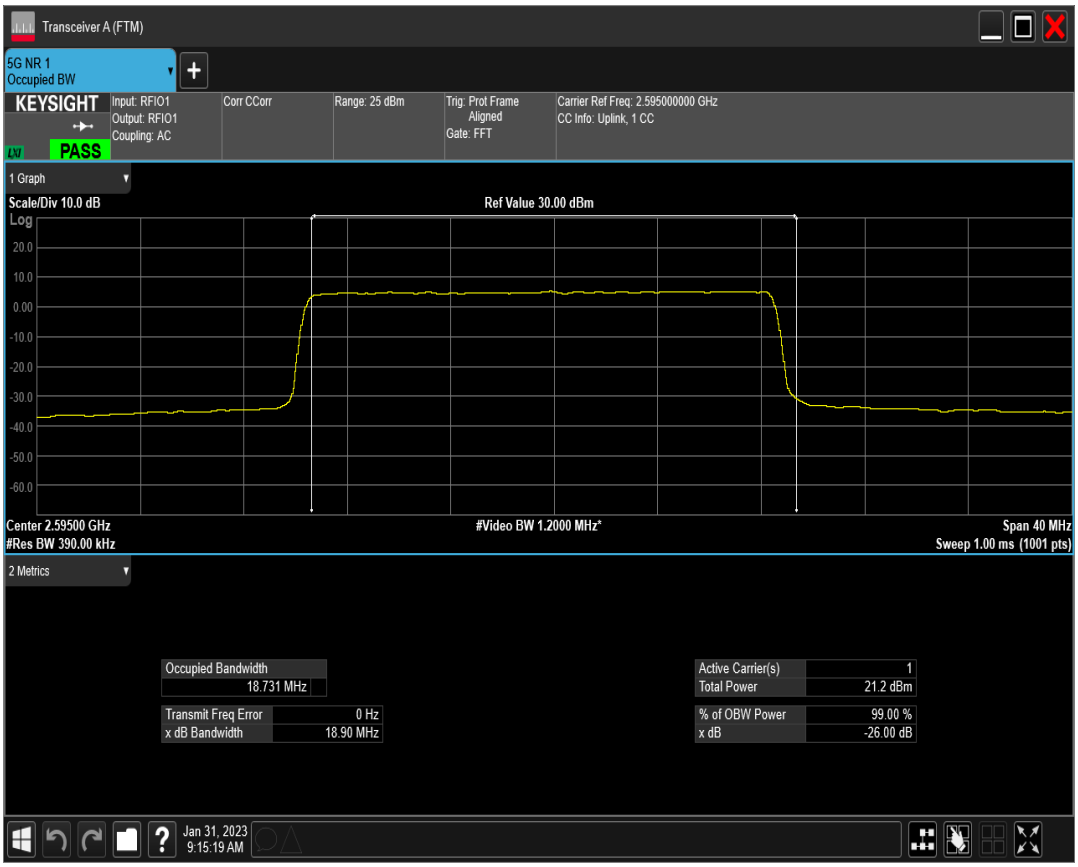

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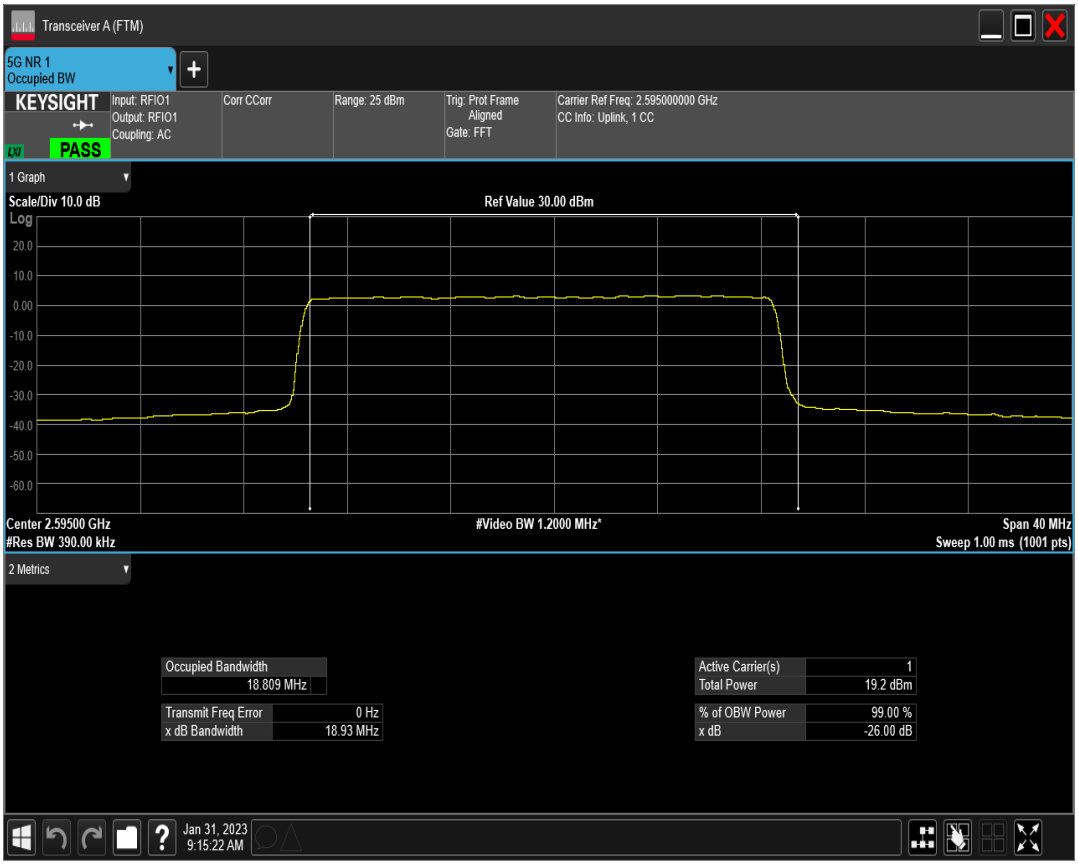

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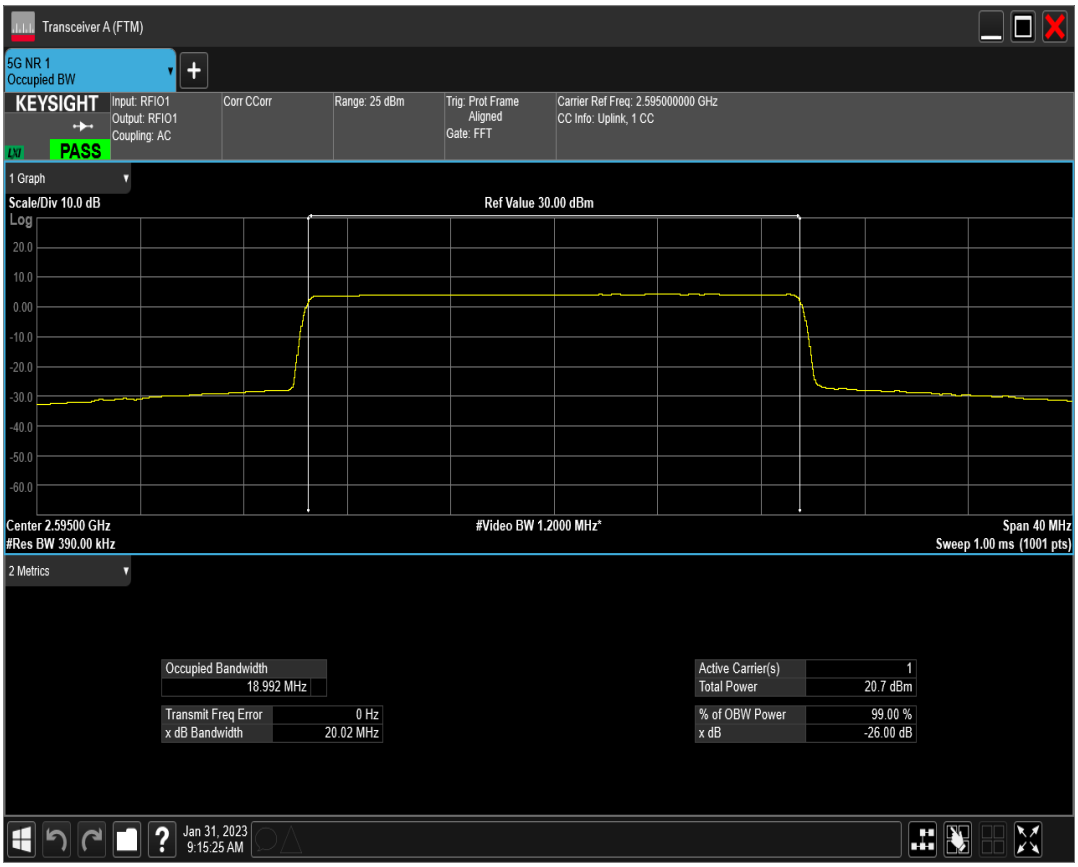
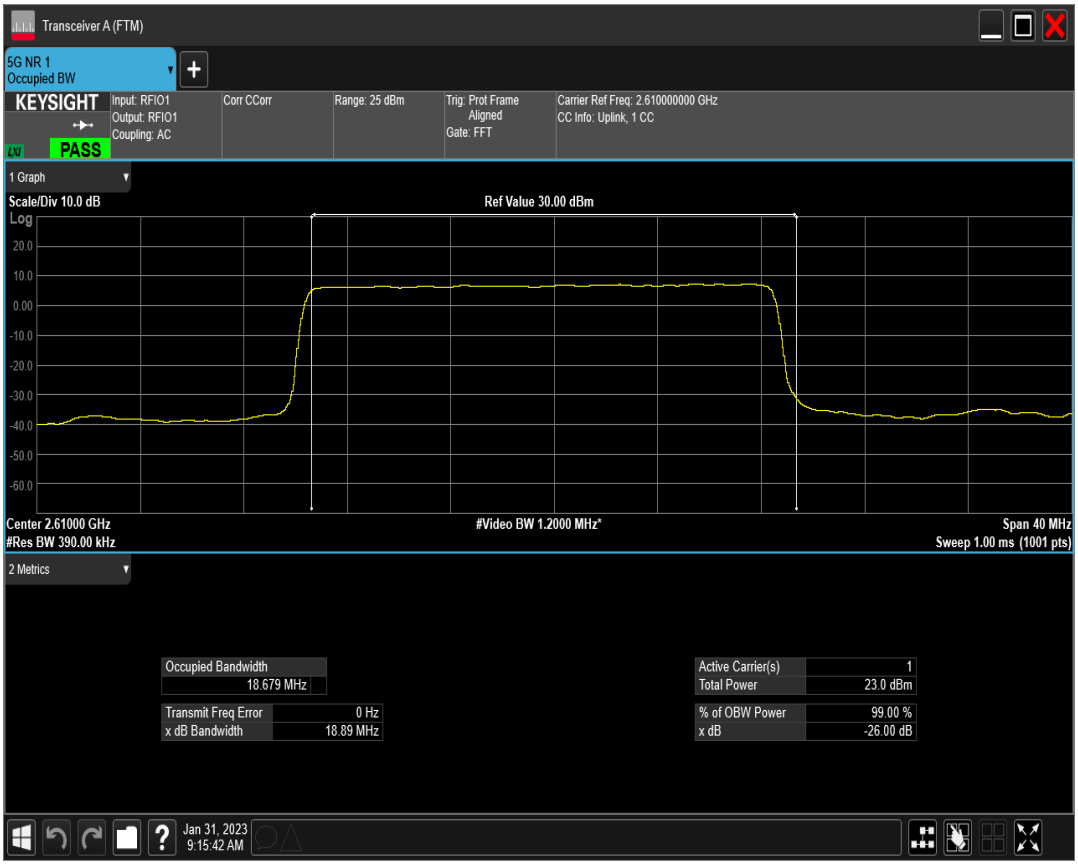
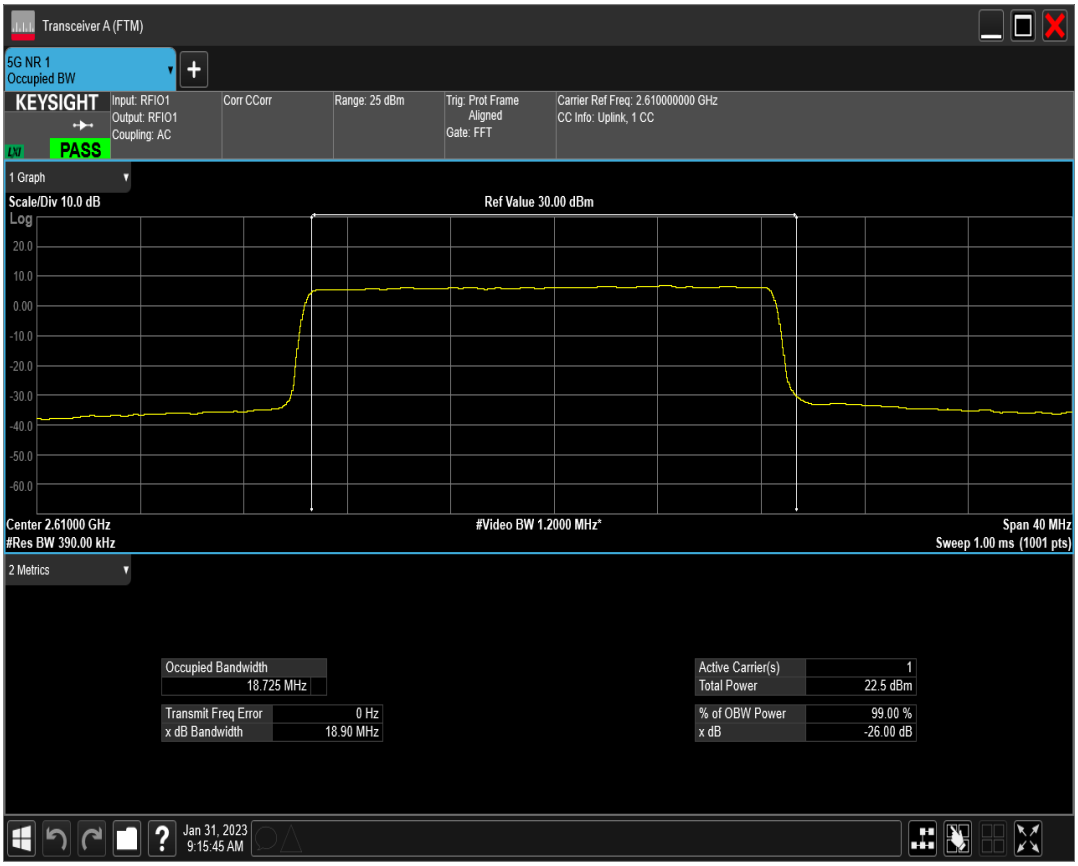


n38 SCS=15kHz DFT_BPSK BW=20MHz Channel=522000 RB=100@0



n38 SCS=15kHz DFT_QPSK BW=20MHz Channel=522000 RB=100@0



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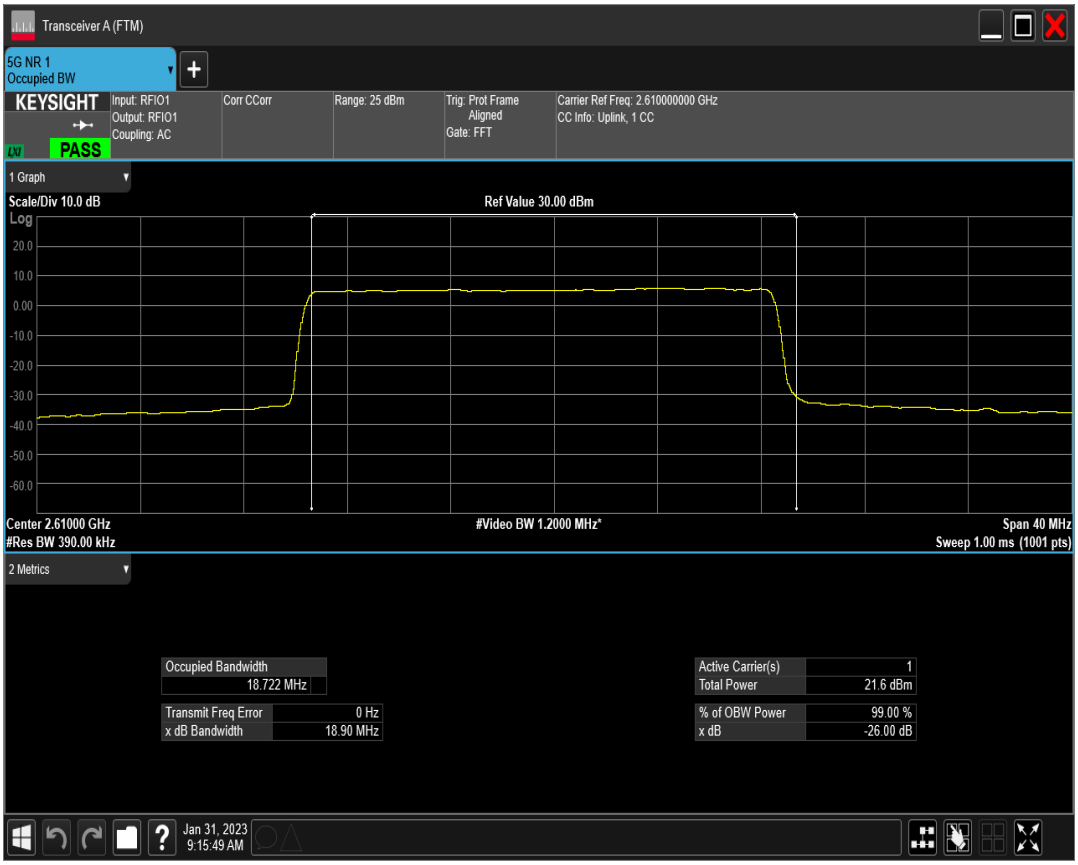

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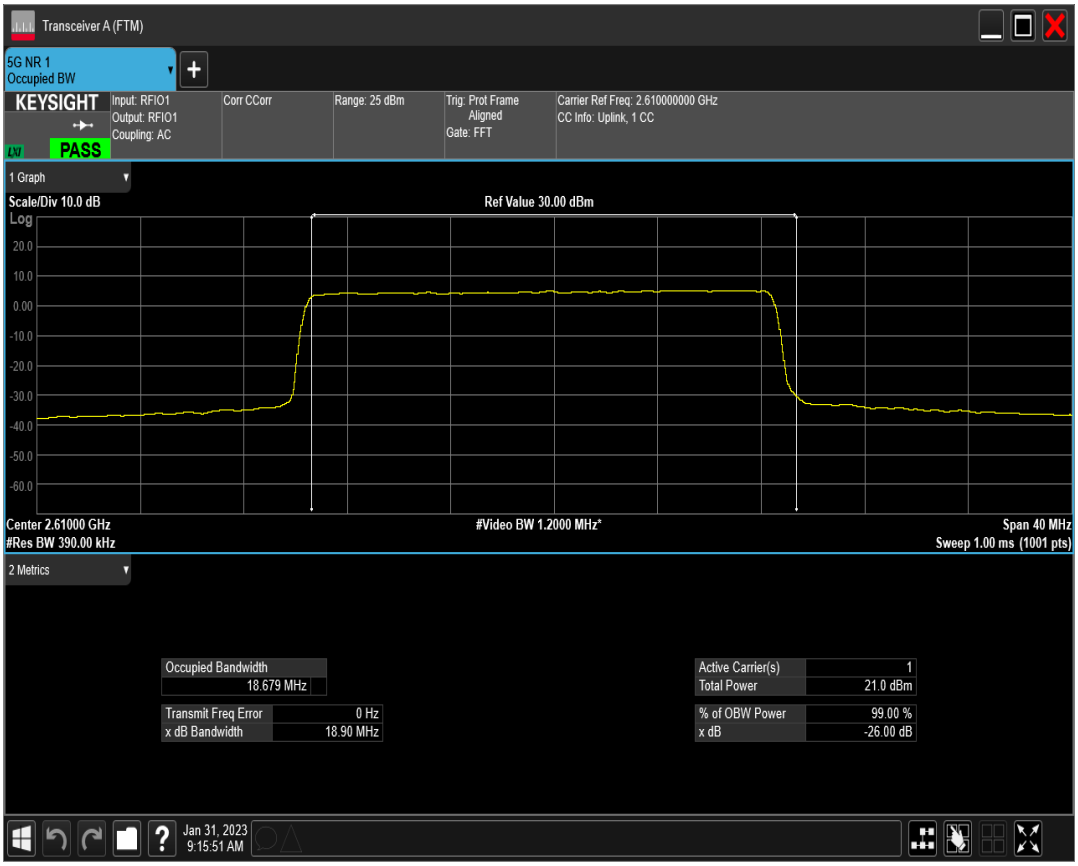

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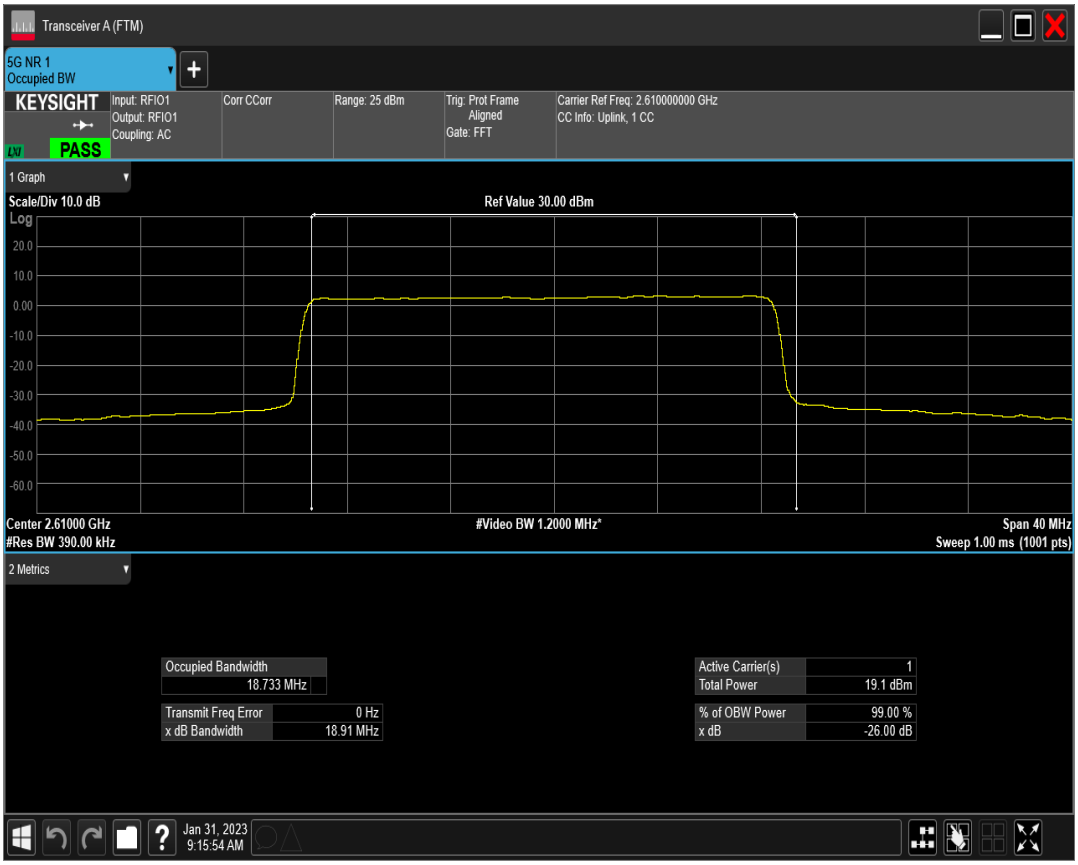
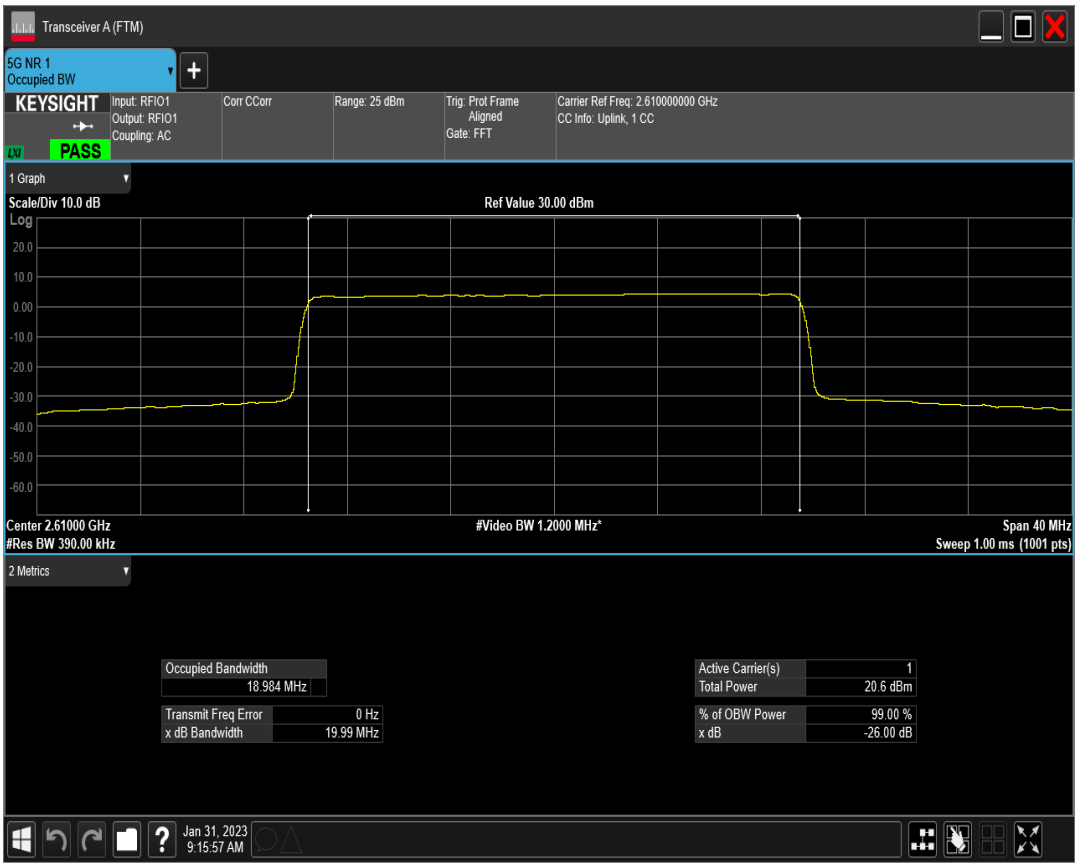
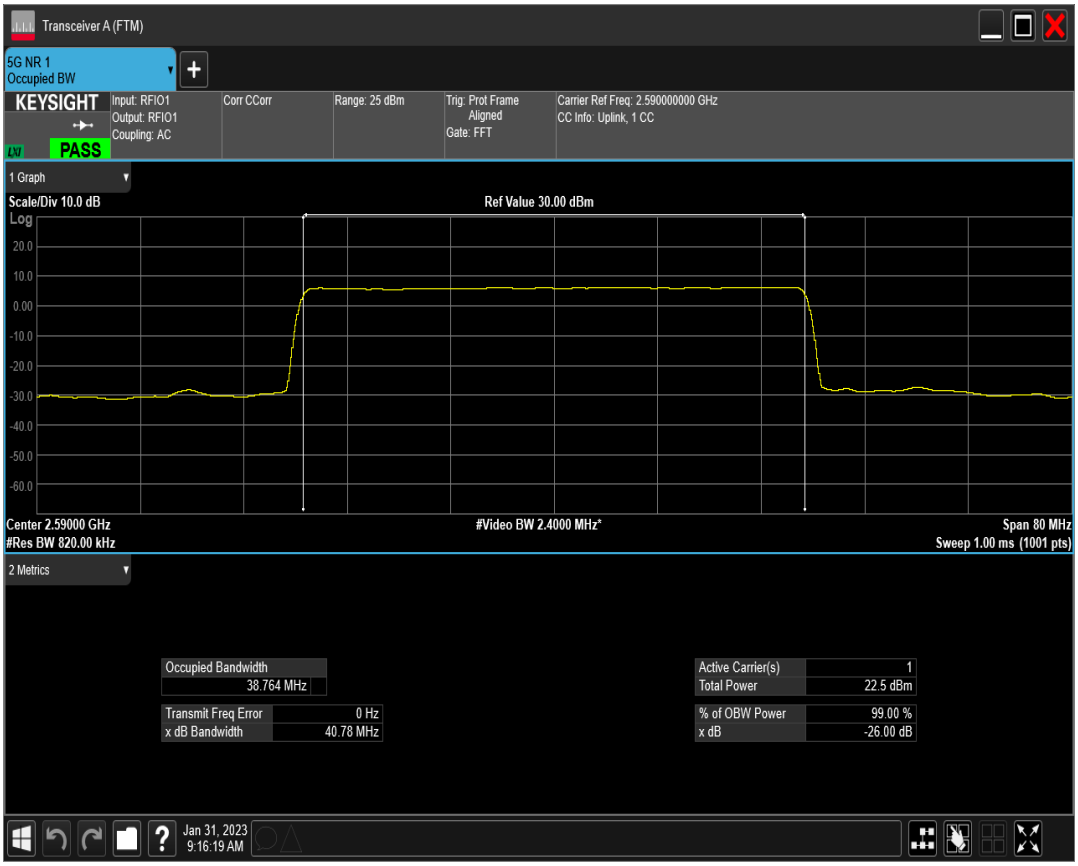


n38 SCS=15kHz CP_QPSK BW=20MHz Channel=522000 RB=106@0



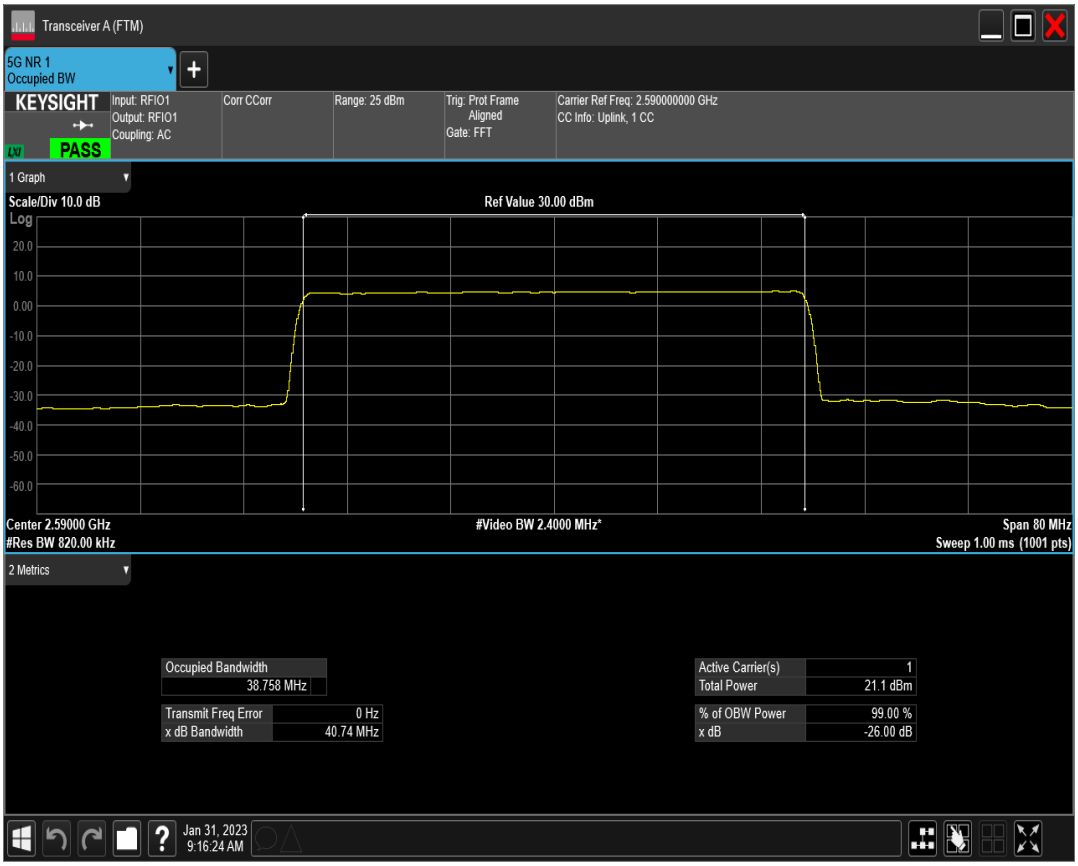
n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=518000 RB=216@0

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=518000 RB=216@0

n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=518000 RB=216@0



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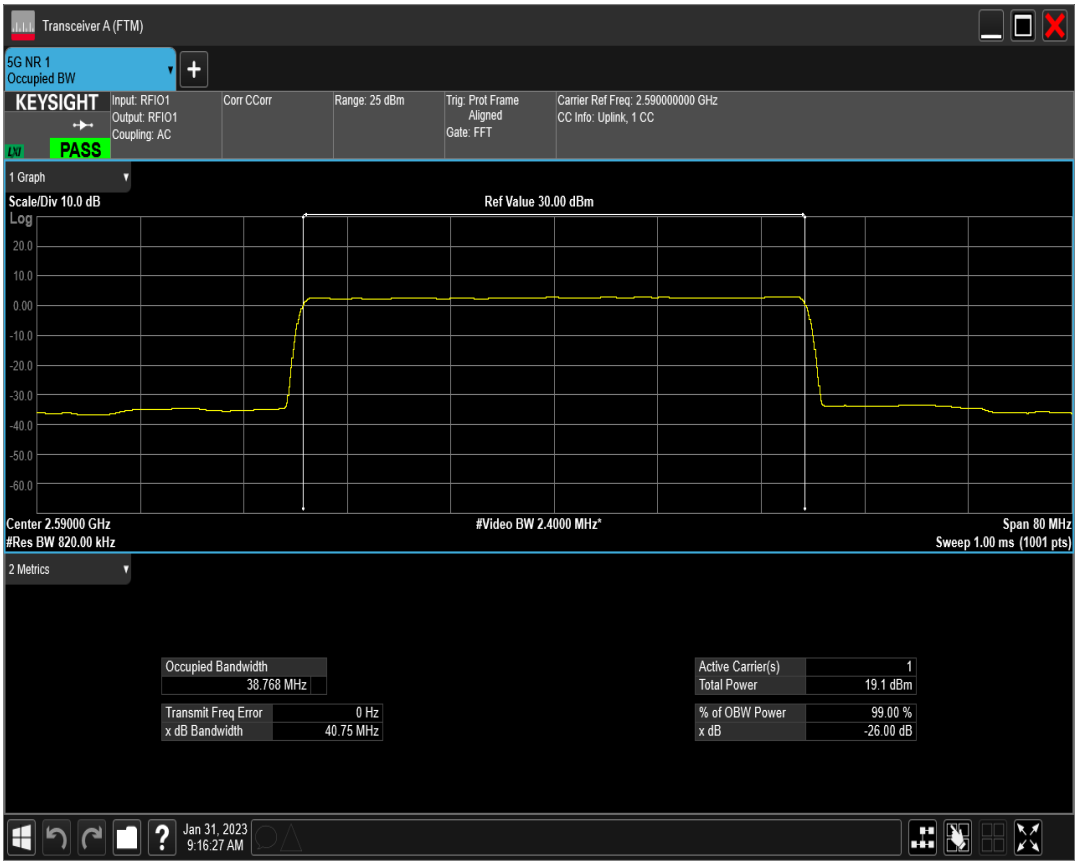
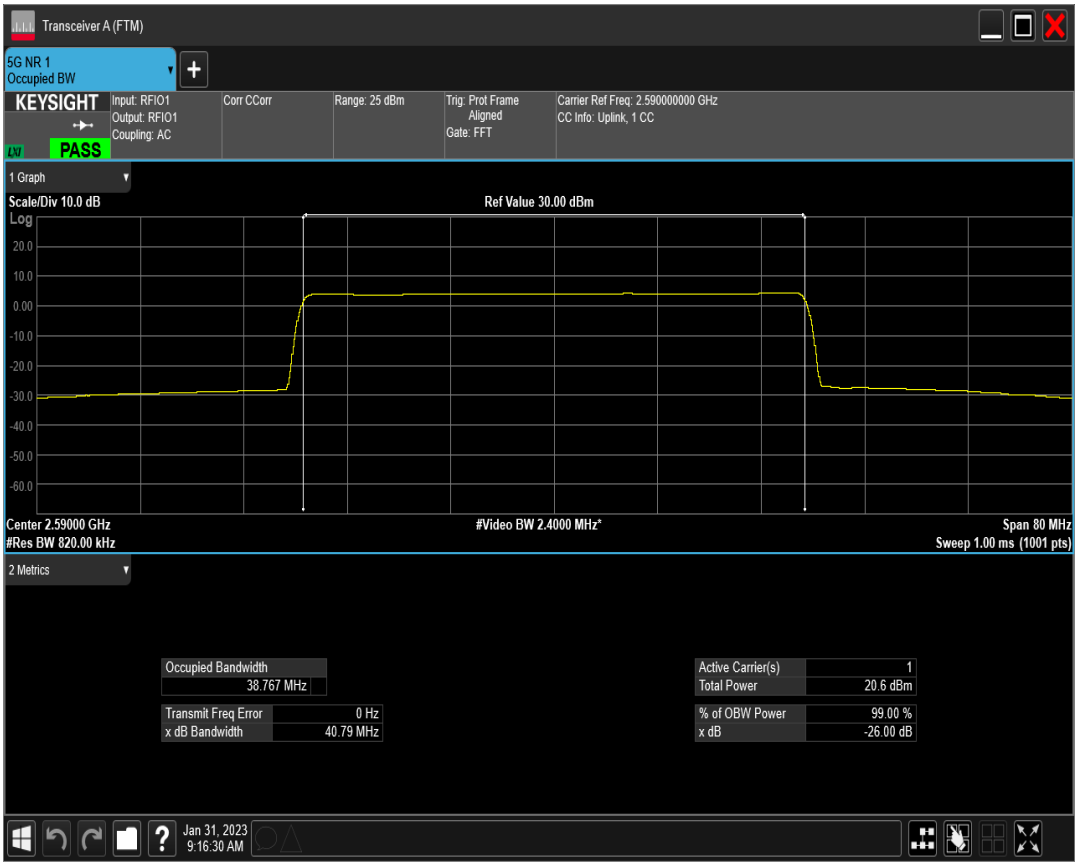
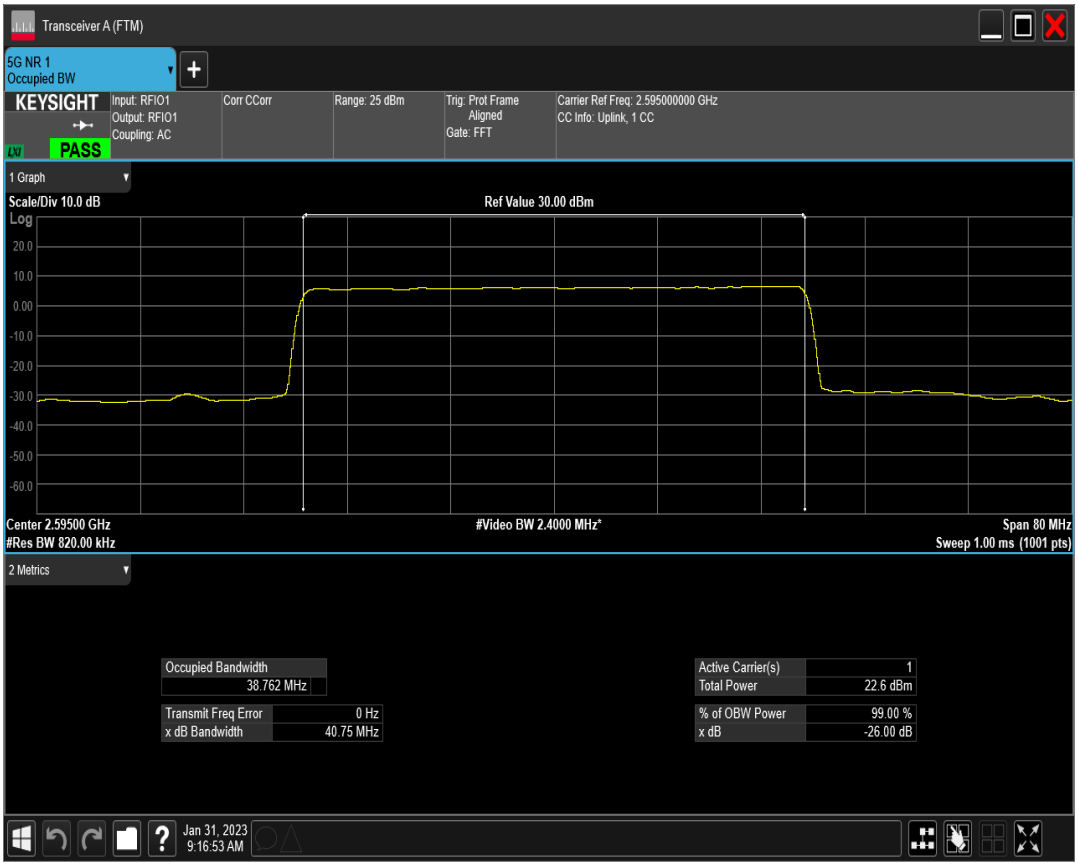


n38 SCS=15kHz CP_QPSK BW=40MHz Channel=518000 RB=216@0

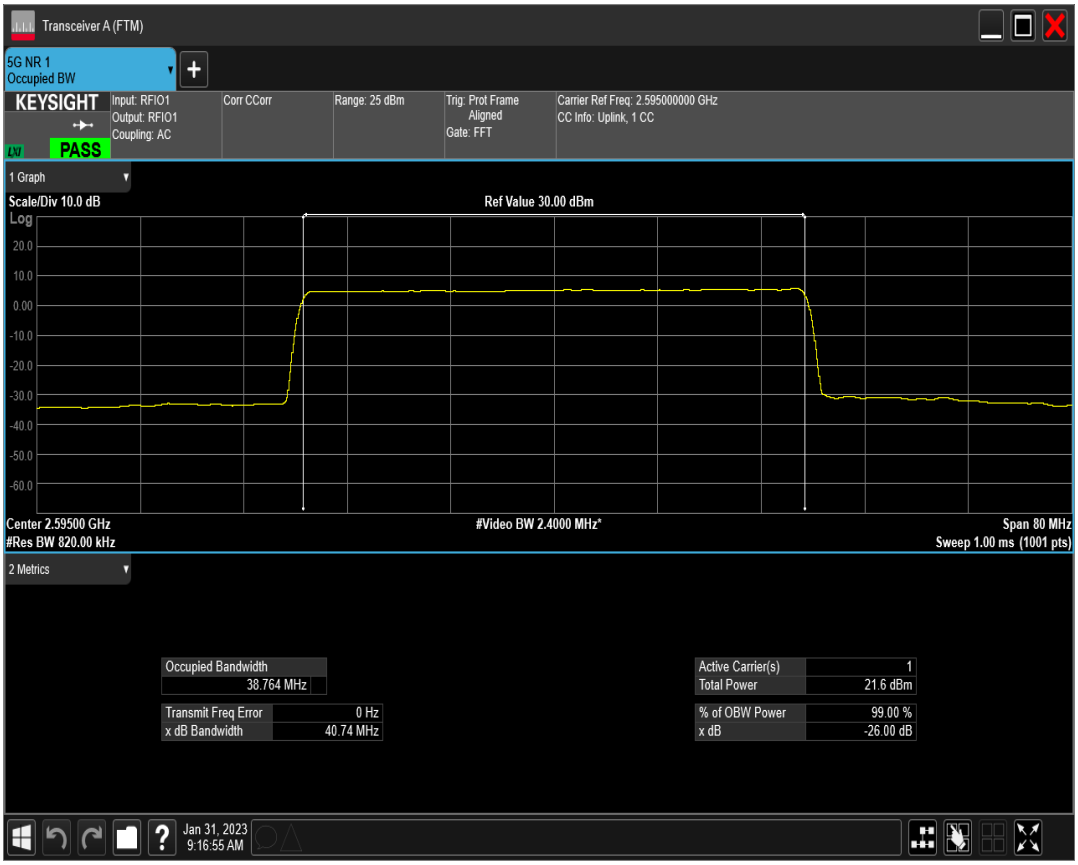


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=519000 RB=216@0

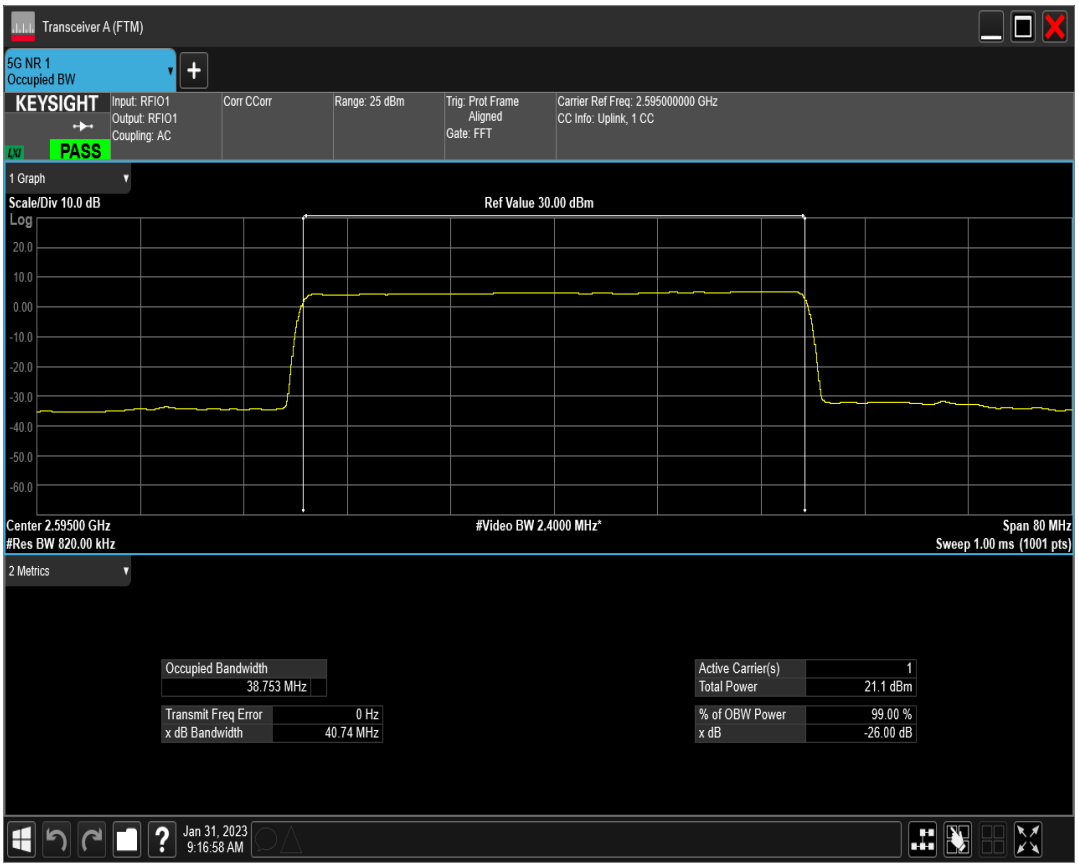
n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=216@0



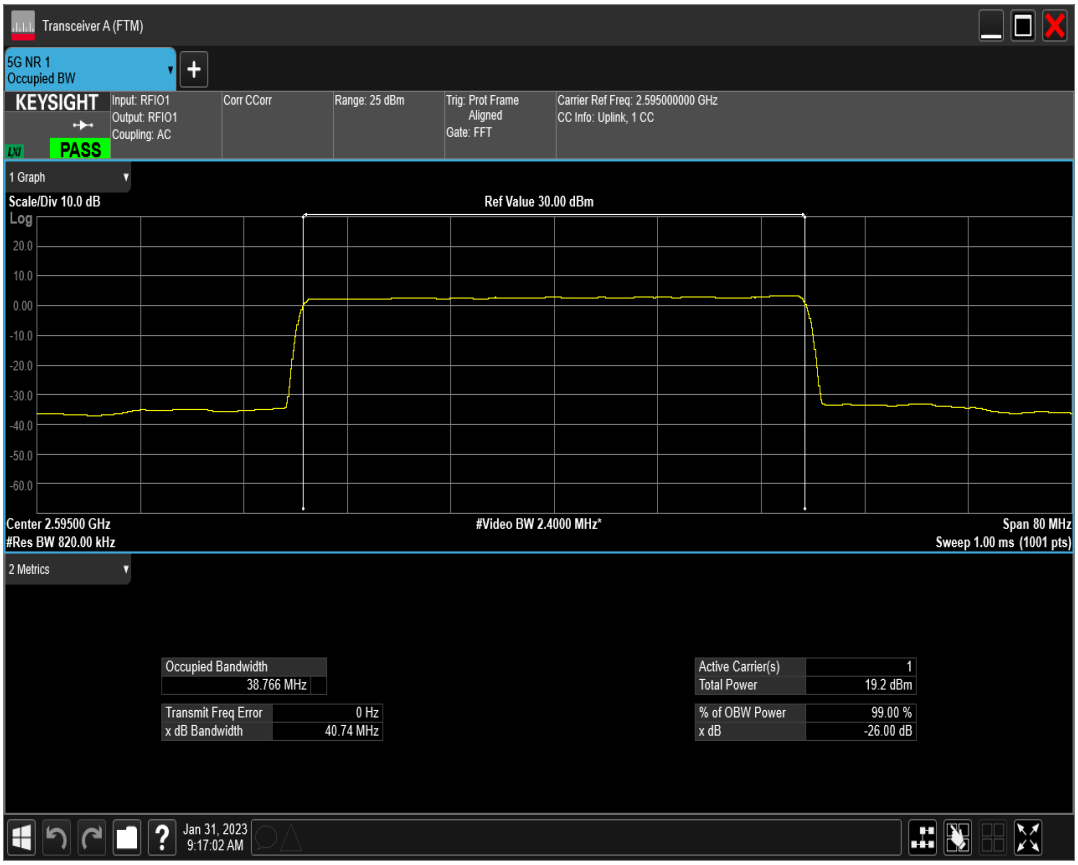
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=519000 RB=216@0



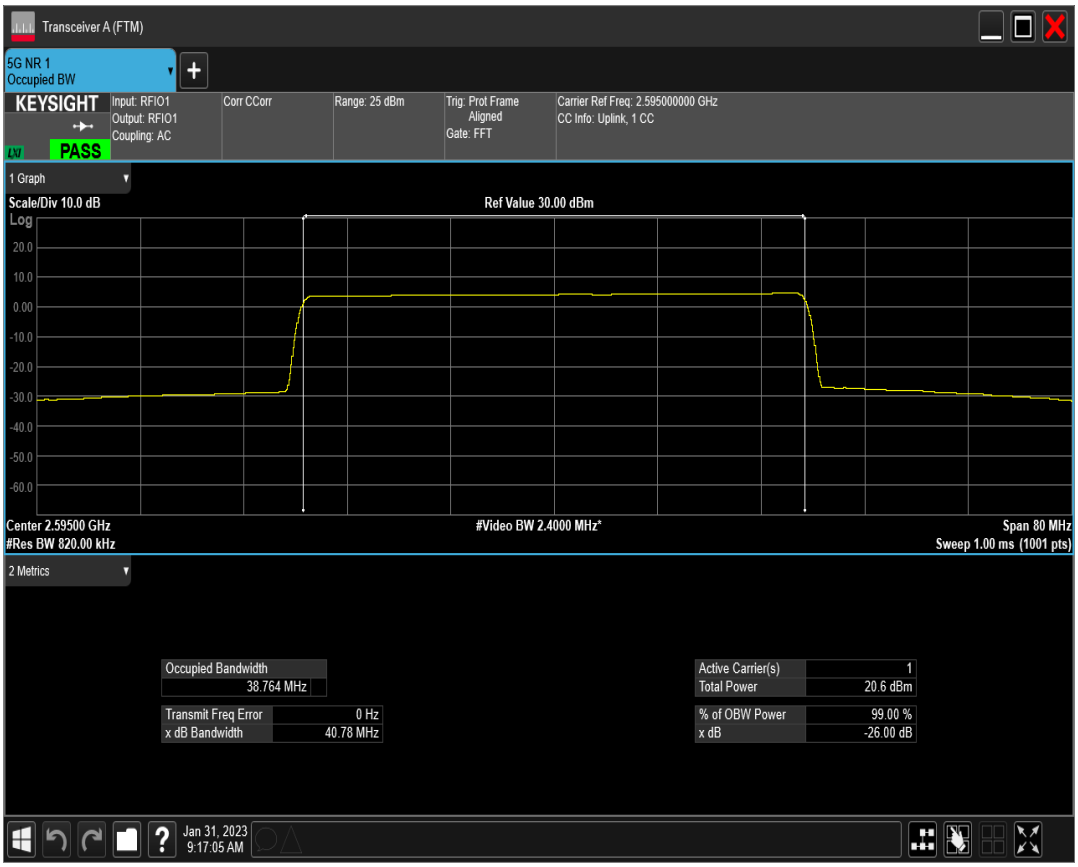
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=519000 RB=216@0



n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=519000 RB=216@0

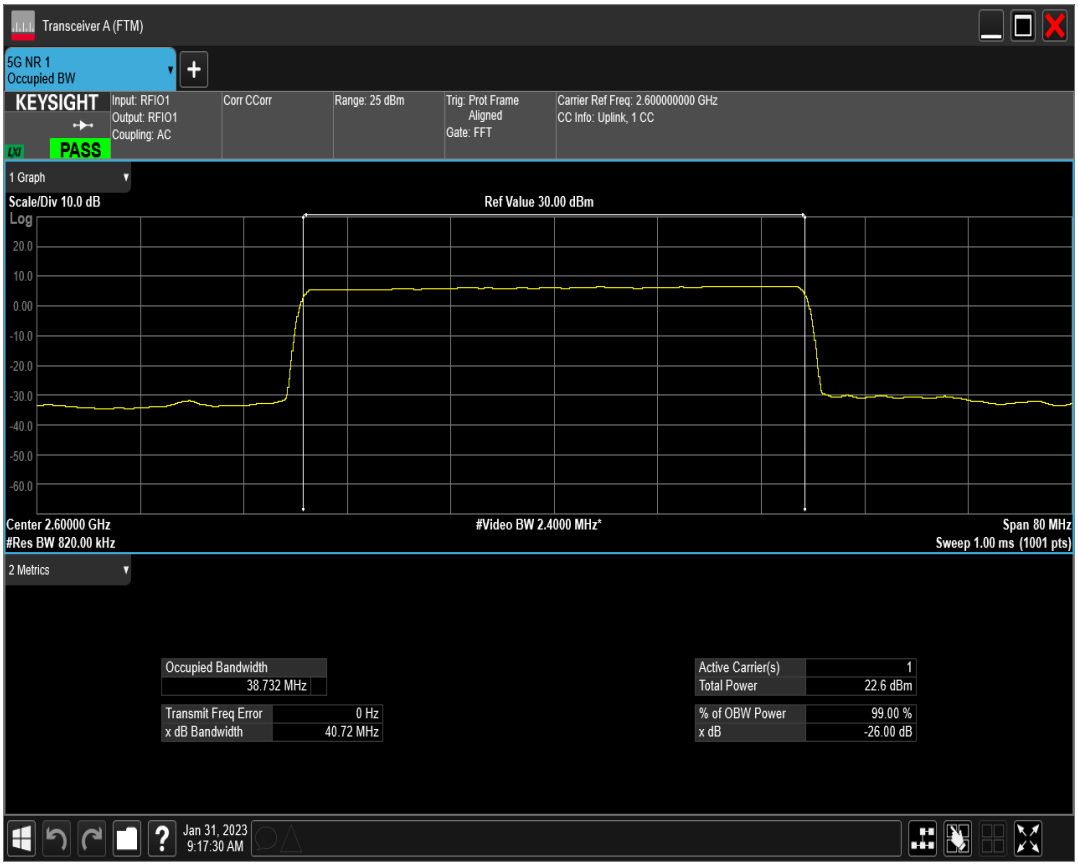


n38 SCS=15kHz CP_QPSK BW=40MHz Channel=519000 RB=216@0

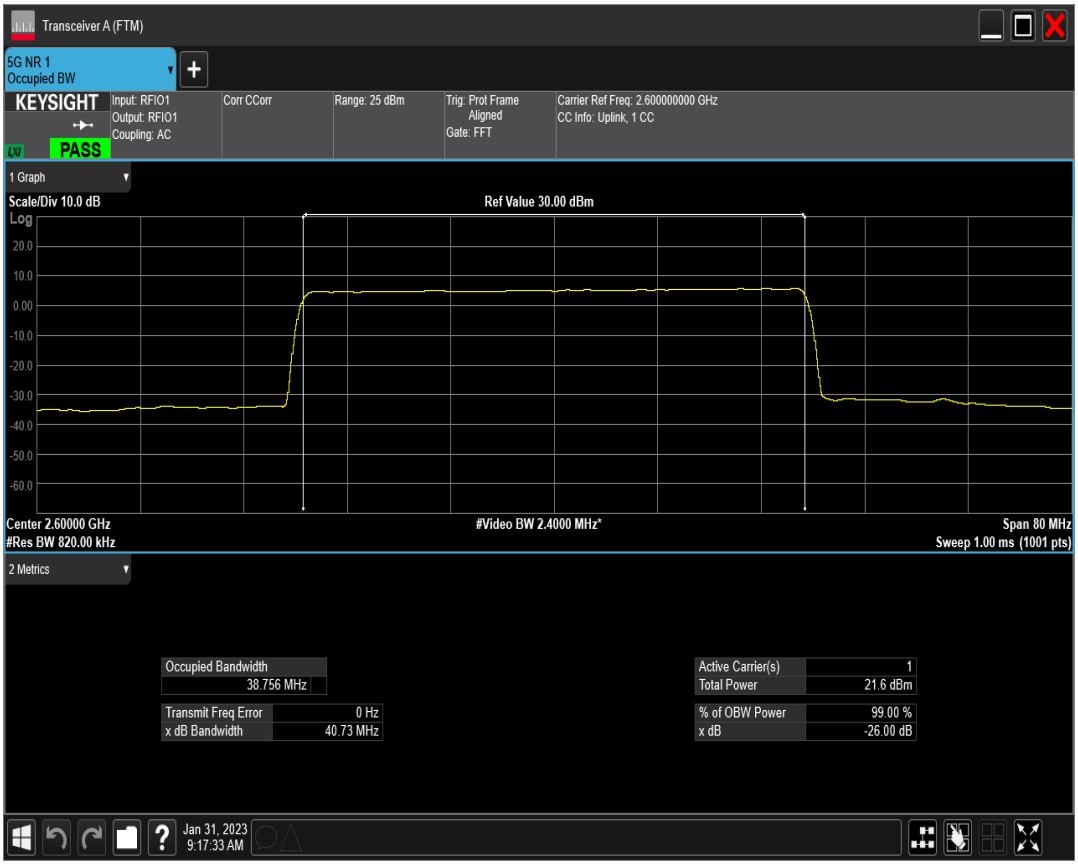


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=520000 RB=216@0

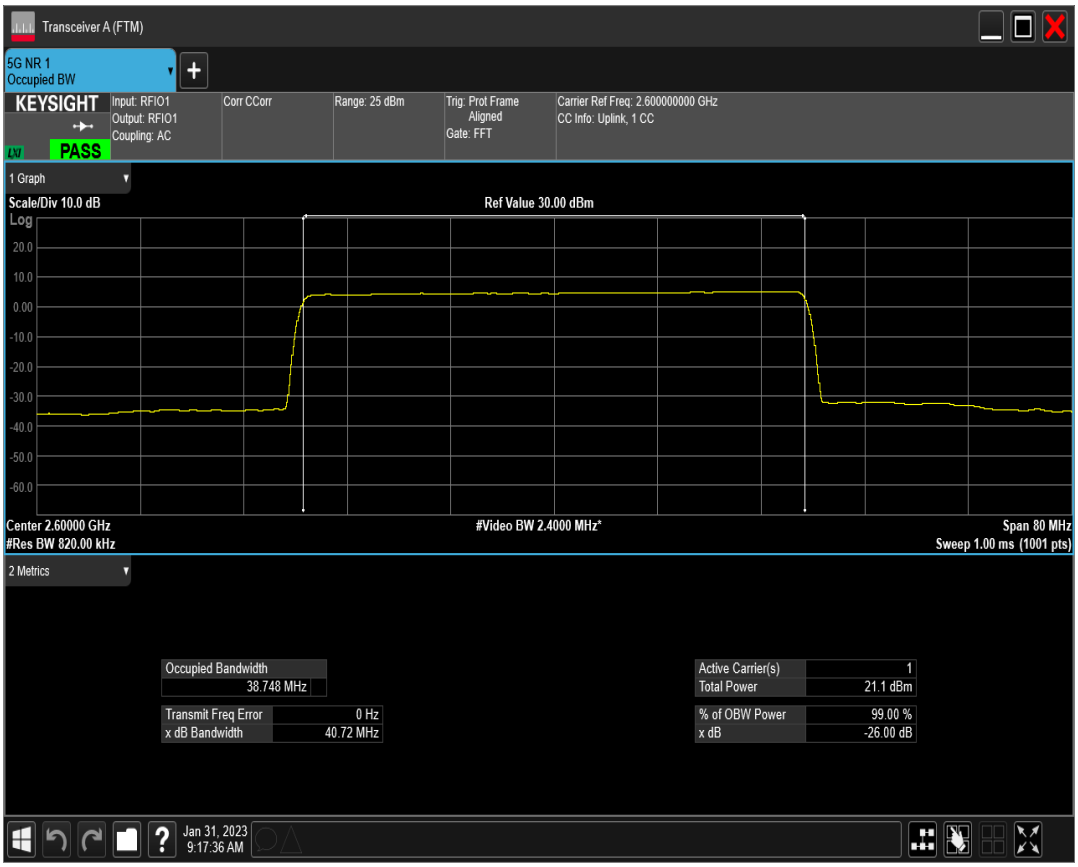
n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



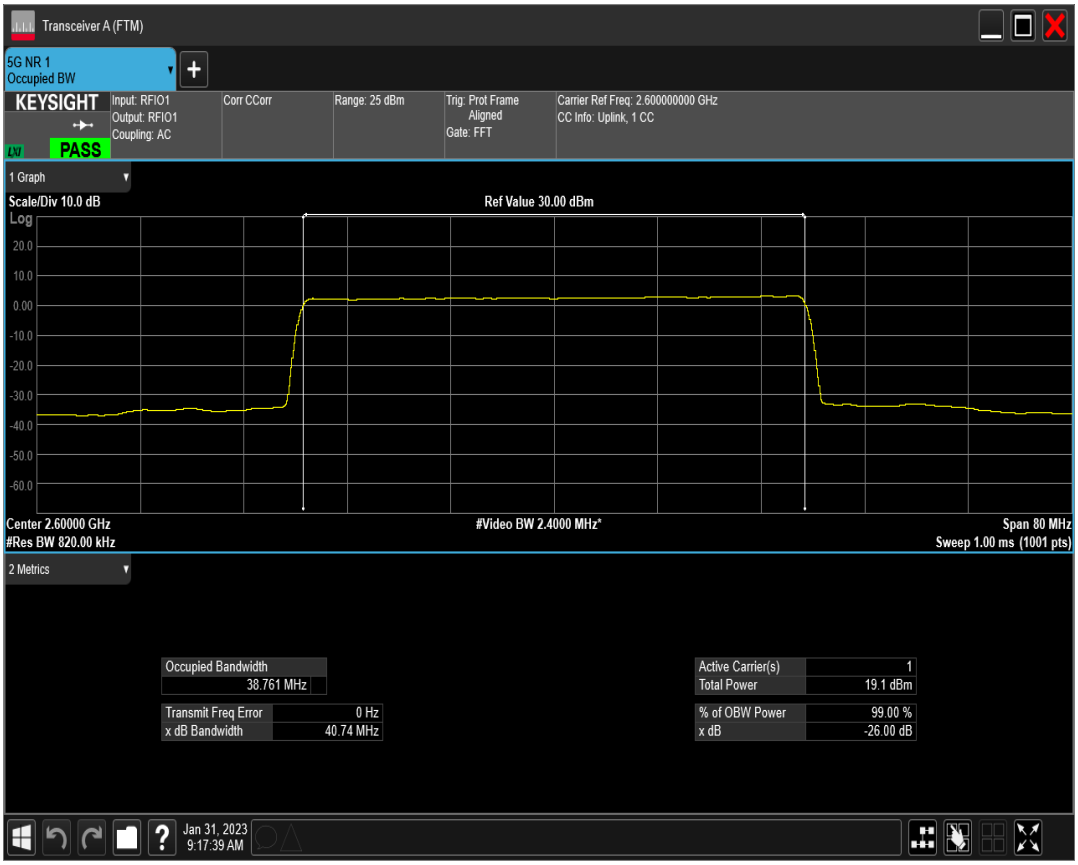
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=520000 RB=216@0



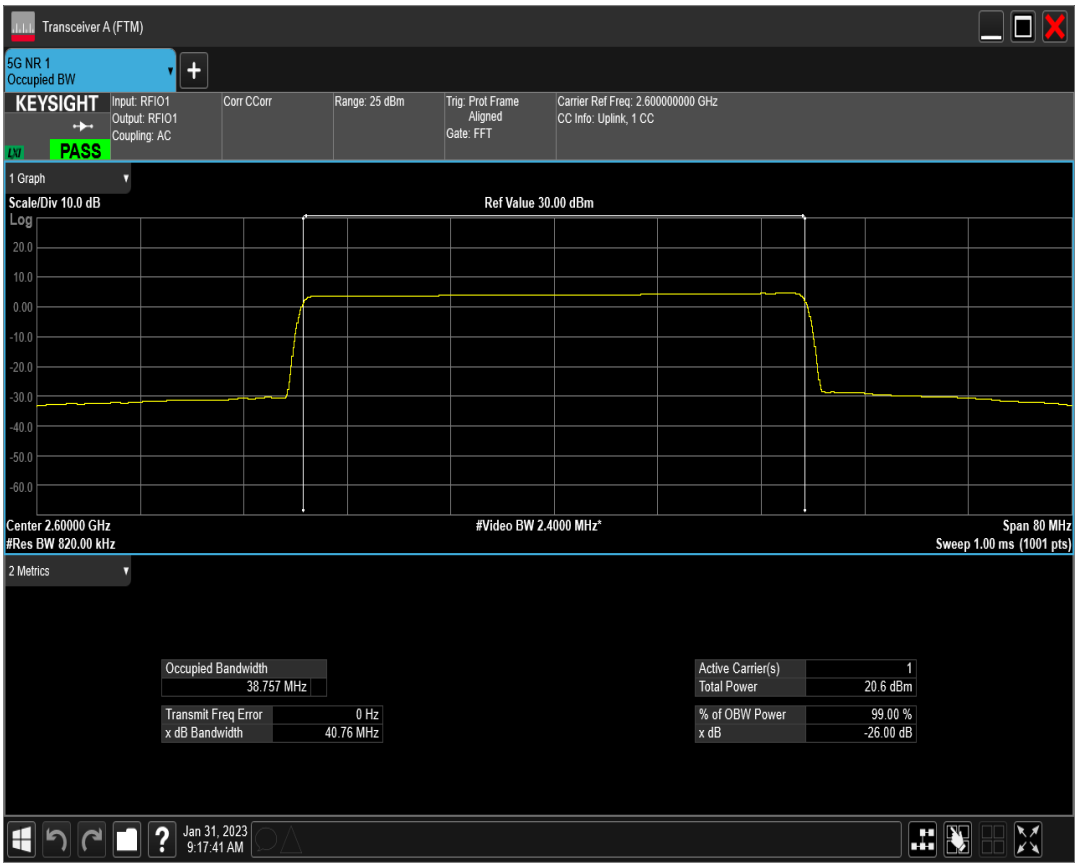
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=520000 RB=216@0



n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=520000 RB=216@0



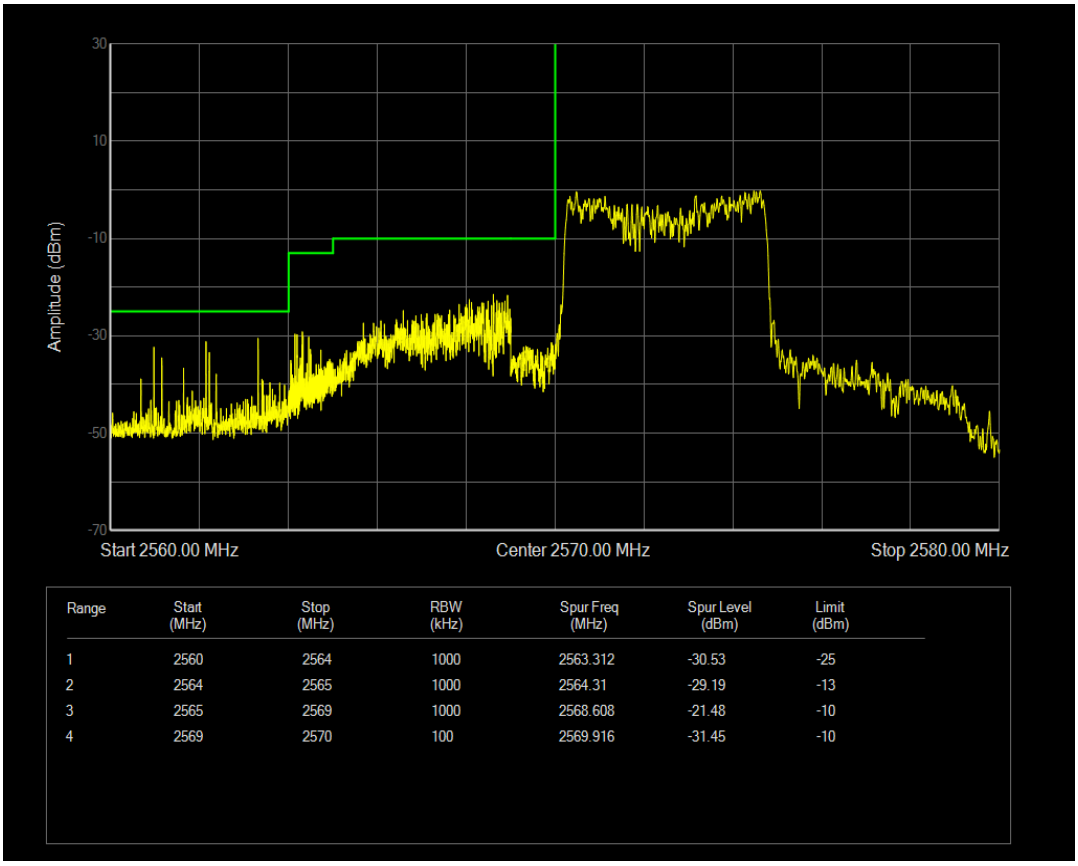
n38 SCS=15kHz CP_QPSK BW=40MHz Channel=520000 RB=216@0



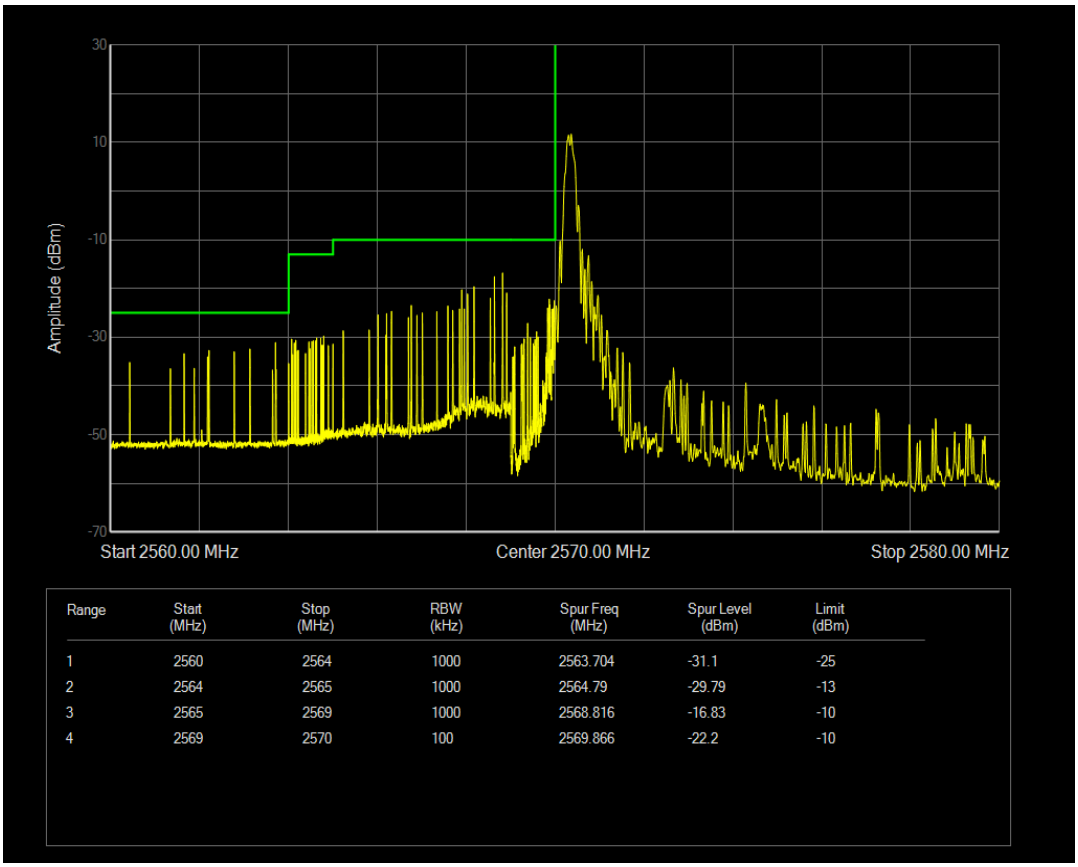
5 Band edge for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n38	15	5	514500	25@0	DFT_QPSK	2563.31	-30.53	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2563.70	-31.10	-25	PASS
n38	15	5	523500	25@0	DFT_QPSK	2627.09	-31.89	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	2621.14	-17.22	-10	PASS
n38	15	40	518000	216@0	DFT_QPSK	2570.00	-16.12	-10	PASS
n38	15	40	518000	1@0	DFT_QPSK	2568.56	-22.98	-10	PASS
n38	15	40	520000	216@0	DFT_QPSK	2620.02	-15.05	-10	PASS
n38	15	40	520000	1@215	DFT_QPSK	2621.29	-19.96	-10	PASS

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=25@0

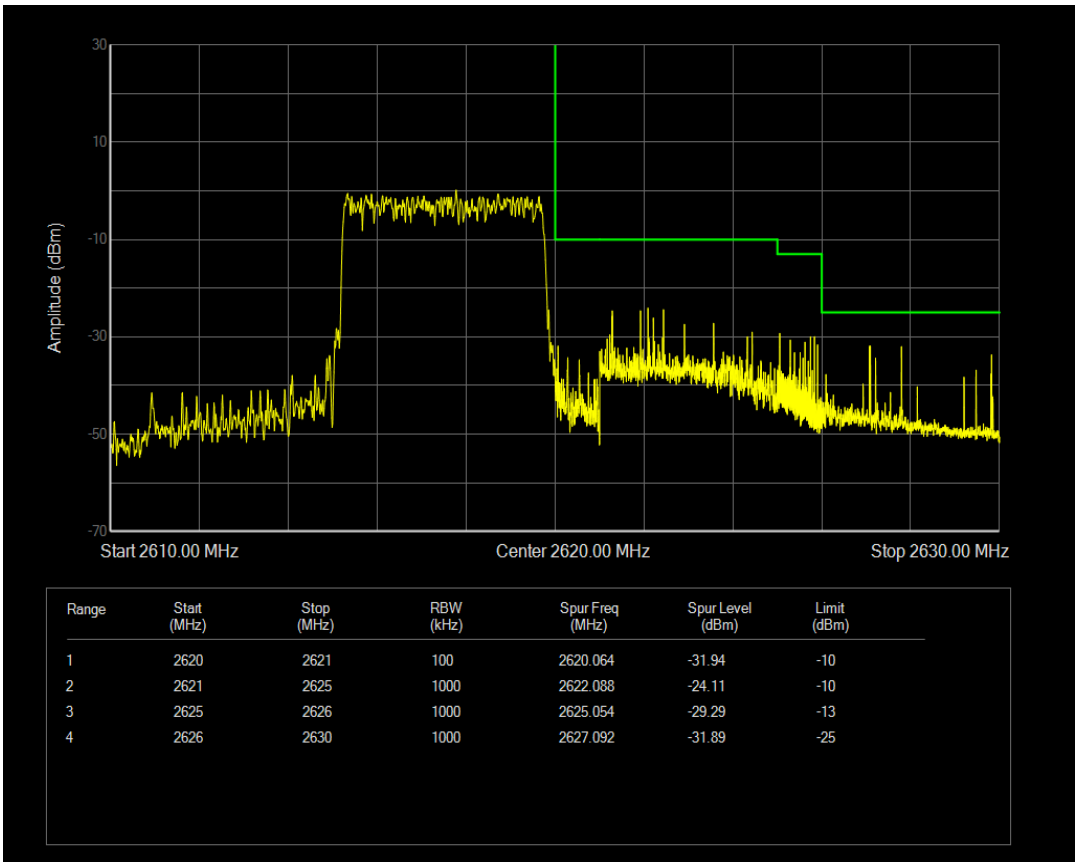


n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@0



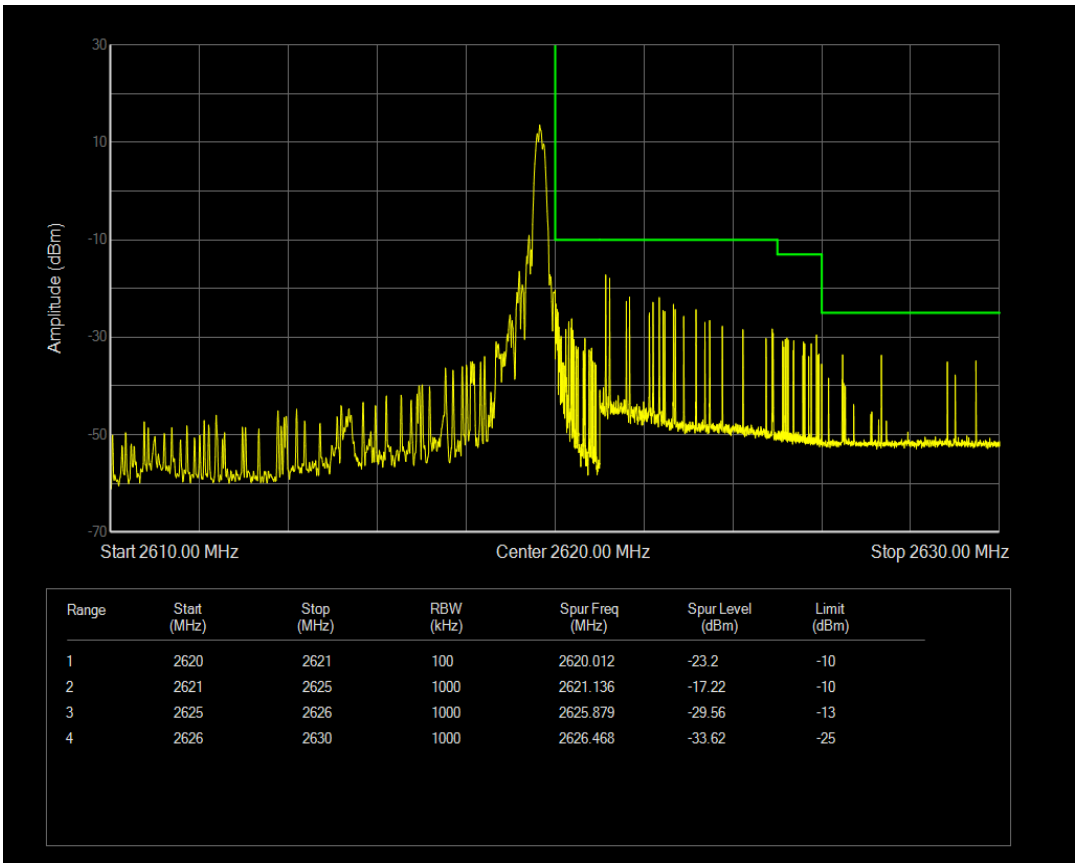
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2560	2564	1000	2563.704	-31.1	-25
2	2564	2565	1000	2564.79	-29.79	-13
3	2565	2569	1000	2568.816	-16.83	-10
4	2569	2570	100	2569.866	-22.2	-10

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=25@0



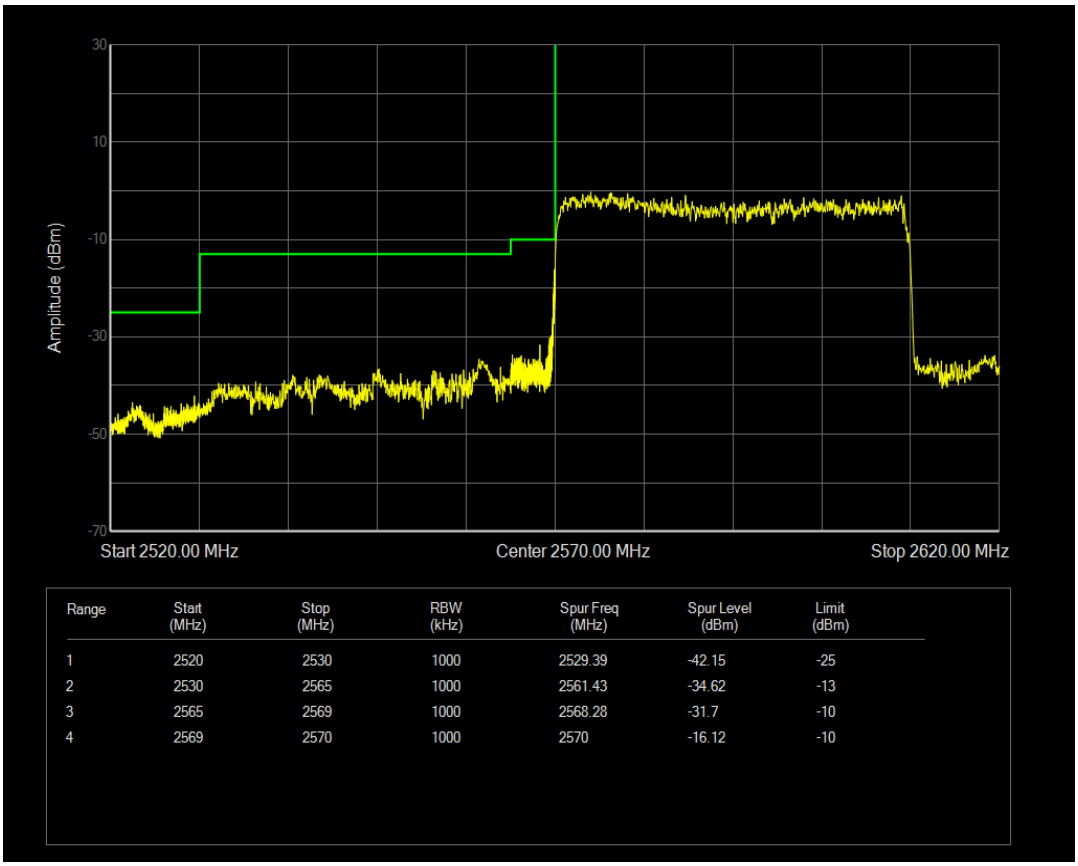
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.064	-31.94	-10
2	2621	2625	1000	2622.088	-24.11	-10
3	2625	2626	1000	2625.054	-29.29	-13
4	2626	2630	1000	2627.092	-31.89	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@24



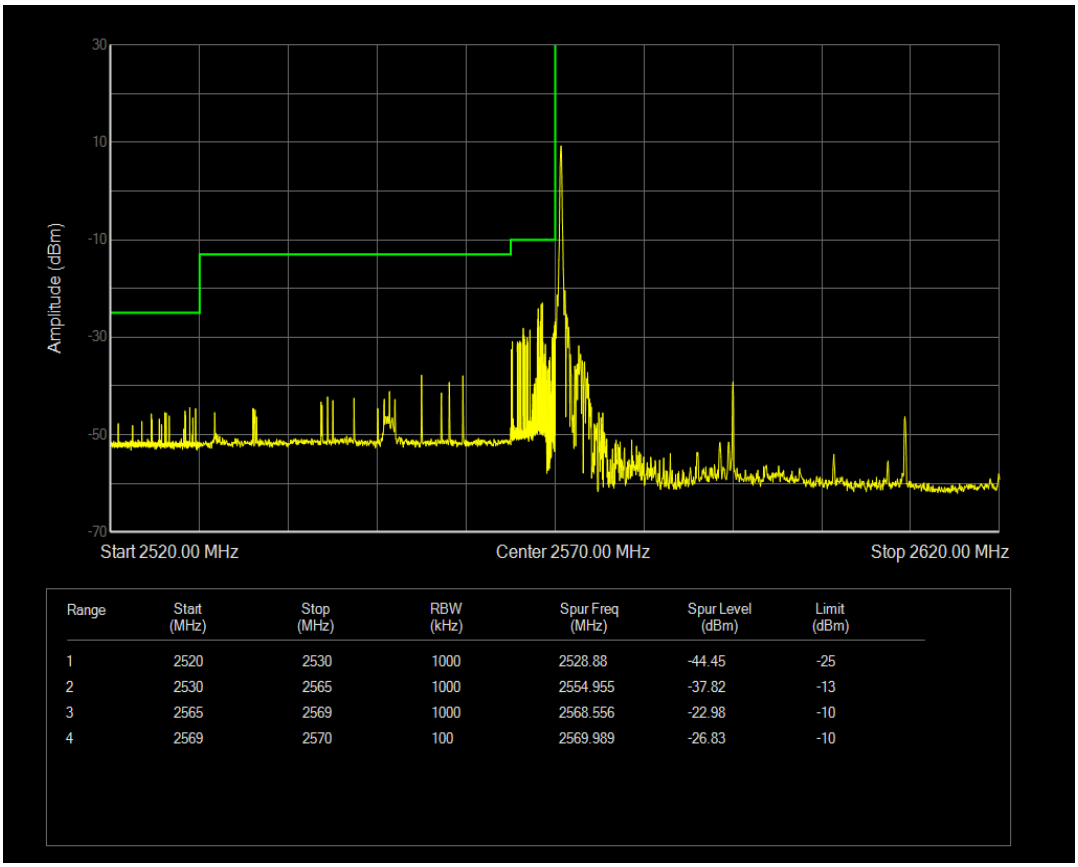
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.012	-23.2	-10
2	2621	2625	1000	2621.136	-17.22	-10
3	2625	2626	1000	2625.879	-29.56	-13
4	2626	2630	1000	2626.468	-33.62	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



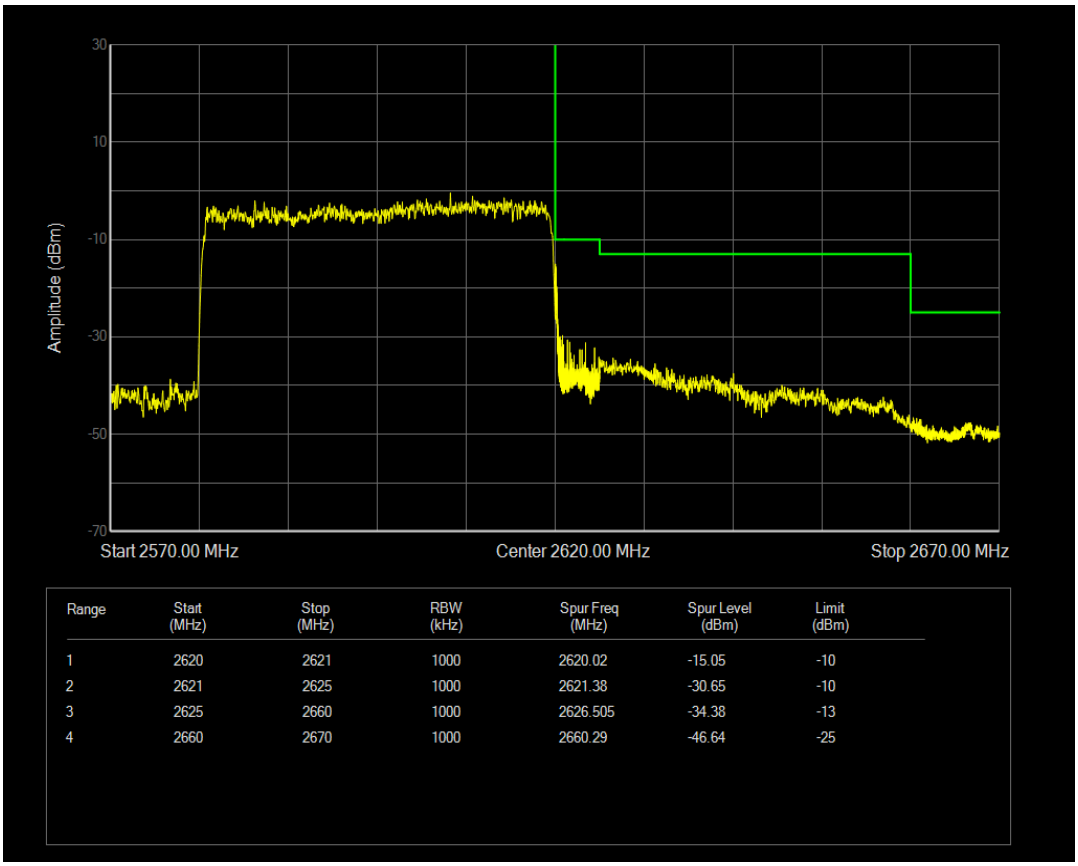
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2529.39	-42.15	-25
2	2530	2565	1000	2561.43	-34.62	-13
3	2565	2569	1000	2568.28	-31.7	-10
4	2569	2570	1000	2570	-16.12	-10

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@0



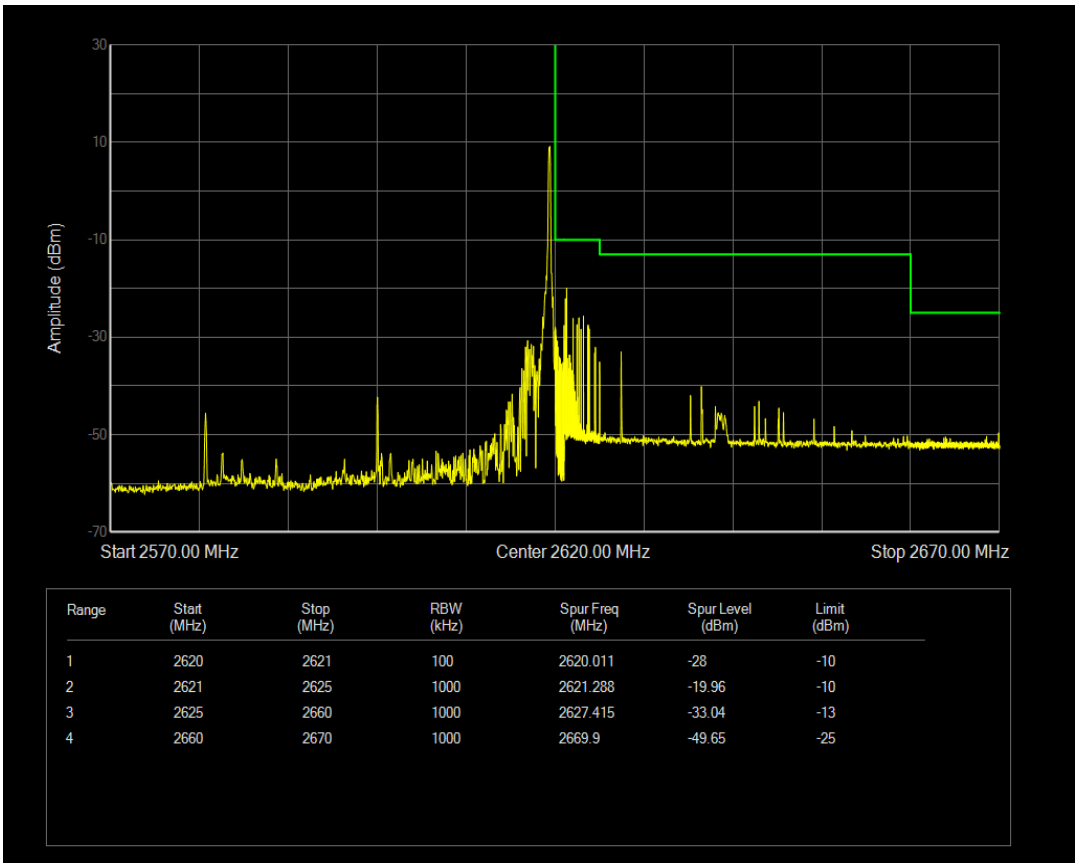
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2528.88	-44.45	-25
2	2530	2565	1000	2554.955	-37.82	-13
3	2565	2569	1000	2568.556	-22.98	-10
4	2569	2570	100	2569.989	-26.83	-10

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	1000	2620.02	-15.05	-10
2	2621	2625	1000	2621.38	-30.65	-10
3	2625	2660	1000	2626.505	-34.38	-13
4	2660	2670	1000	2660.29	-46.64	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@215

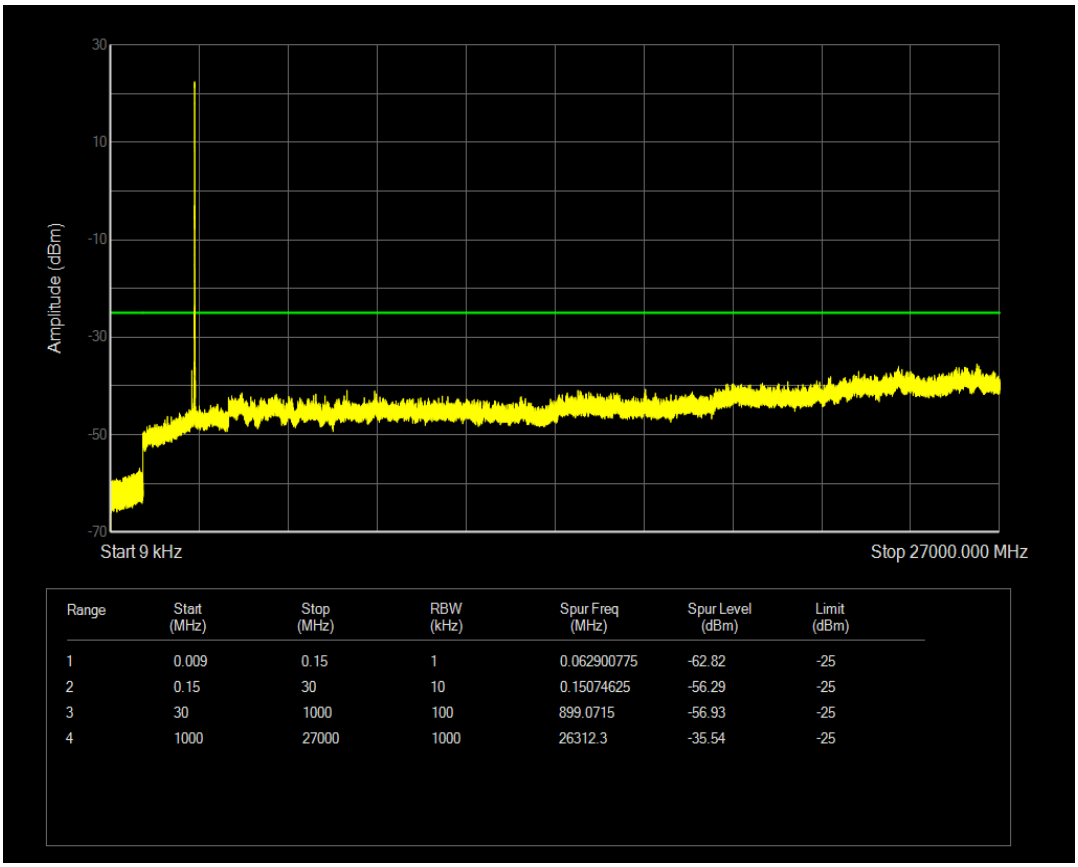


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.011	-28	-10
2	2621	2625	1000	2621.288	-19.96	-10
3	2625	2660	1000	2627.415	-33.04	-13
4	2660	2670	1000	2669.9	-49.65	-25

6 Out-of-band emissions for NR FR1

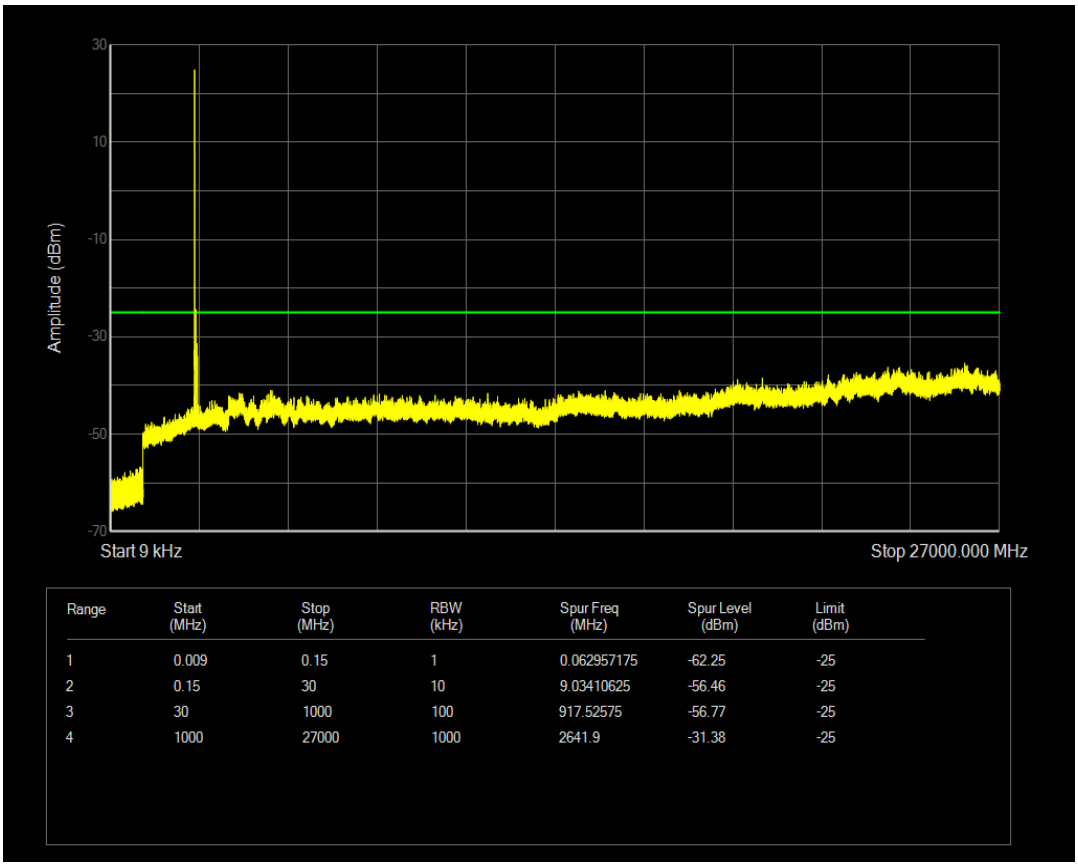
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n38	15	5	514500	25@0	DFT_QPSK	26312.30	-35.54	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2641.90	-31.38	-25	PASS
n38	15	5	514500	1@24	DFT_QPSK	2658.15	-33.37	-25	PASS
n38	15	5	518500	25@0	DFT_QPSK	2526.85	-31.35	-25	PASS
n38	15	5	518500	1@0	DFT_QPSK	2659.45	-29.40	-25	PASS
n38	15	5	518500	1@24	DFT_QPSK	2648.40	-27.29	-25	PASS
n38	15	5	523500	25@0	DFT_QPSK	2641.25	-26.88	-25	PASS
n38	15	5	523500	1@0	DFT_QPSK	2547.65	-25.80	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	2690.65	-32.43	-25	PASS
n38	15	40	518000	216@0	DFT_QPSK	26329.85	-34.66	-25	PASS
n38	15	40	518000	1@0	DFT_QPSK	23921.60	-35.86	-25	PASS
n38	15	40	518000	1@215	DFT_QPSK	26370.80	-35.69	-25	PASS
n38	15	40	519000	216@0	DFT_QPSK	26380.55	-35.79	-25	PASS
n38	15	40	519000	1@0	DFT_QPSK	23936.55	-35.02	-25	PASS
n38	15	40	519000	1@215	DFT_QPSK	25917.75	-35.72	-25	PASS
n38	15	40	520000	216@0	DFT_QPSK	25734.45	-35.30	-25	PASS
n38	15	40	520000	1@0	DFT_QPSK	25721.45	-35.46	-25	PASS
n38	15	40	520000	1@215	DFT_QPSK	25984.05	-35.61	-25	PASS

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=25@0



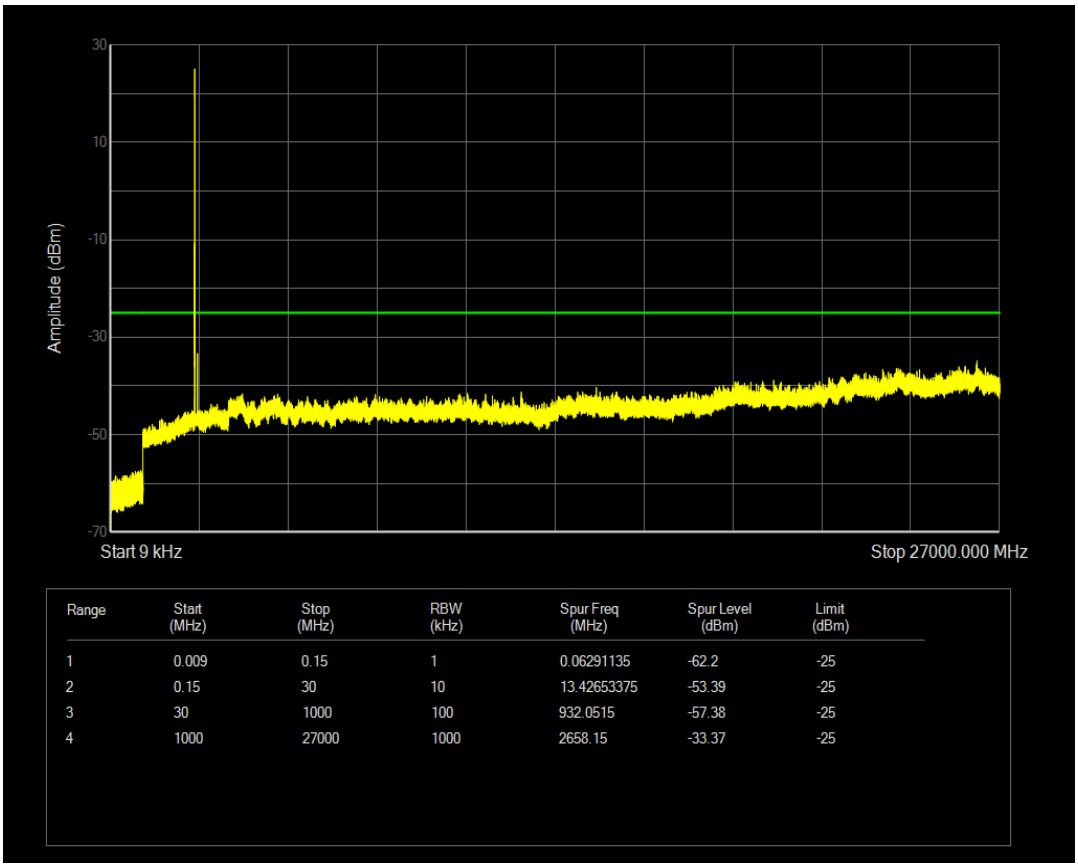
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.062900775	-62.82	-25
2	0.15	30	10	0.15074625	-56.29	-25
3	30	1000	100	899.0715	-56.93	-25
4	1000	27000	1000	26312.3	-35.54	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@0



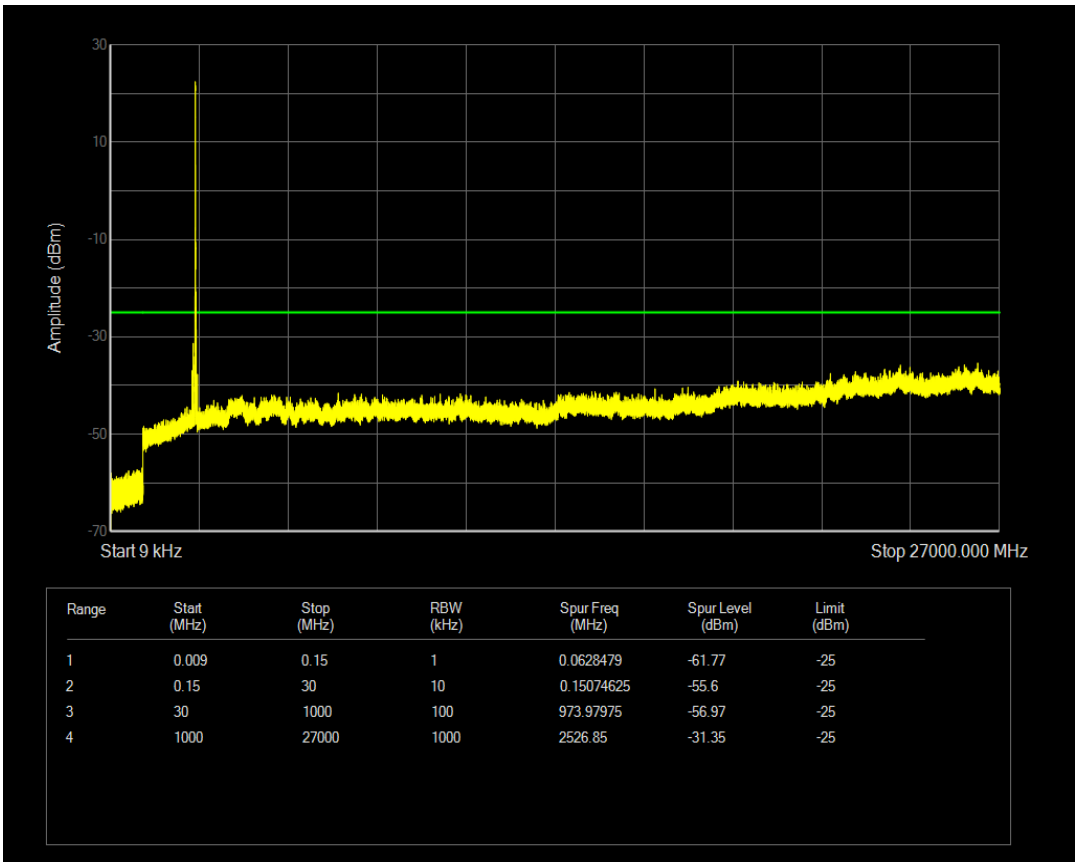
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.062957175	-62.25	-25
2	0.15	30	10	9.03410625	-56.46	-25
3	30	1000	100	917.52575	-56.77	-25
4	1000	27000	1000	2641.9	-31.38	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@24



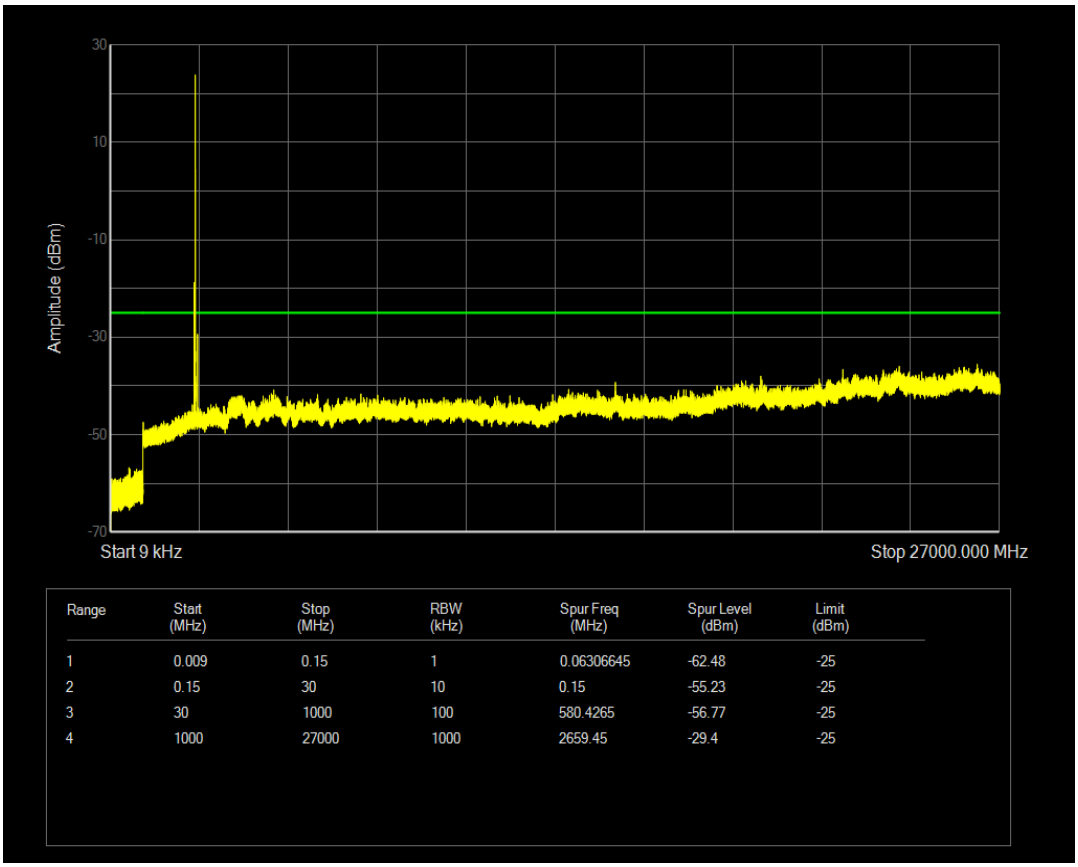
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06291135	-62.2	-25
2	0.15	30	10	13.42653375	-53.39	-25
3	30	1000	100	932.0515	-57.38	-25
4	1000	27000	1000	2658.15	-33.37	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=25@0



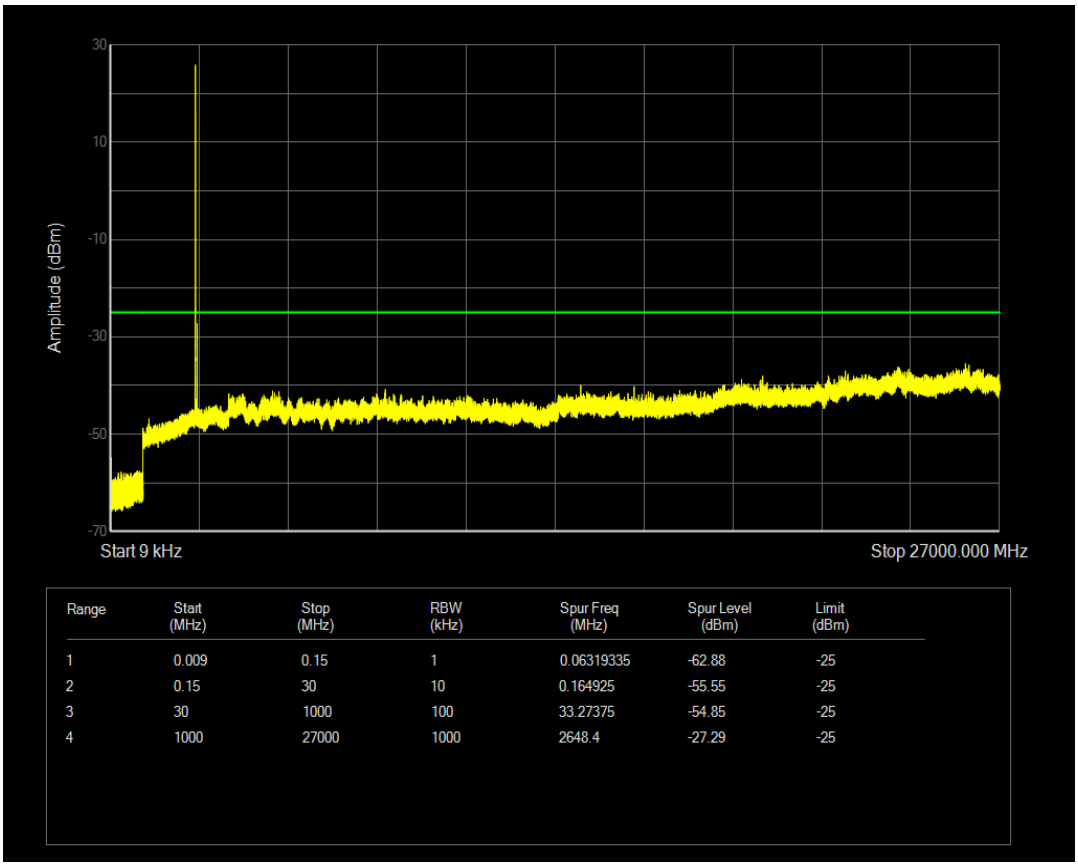
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0628479	-61.77	-25
2	0.15	30	10	0.15074625	-55.6	-25
3	30	1000	100	973.97975	-56.97	-25
4	1000	27000	1000	2526.85	-31.35	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=1@0



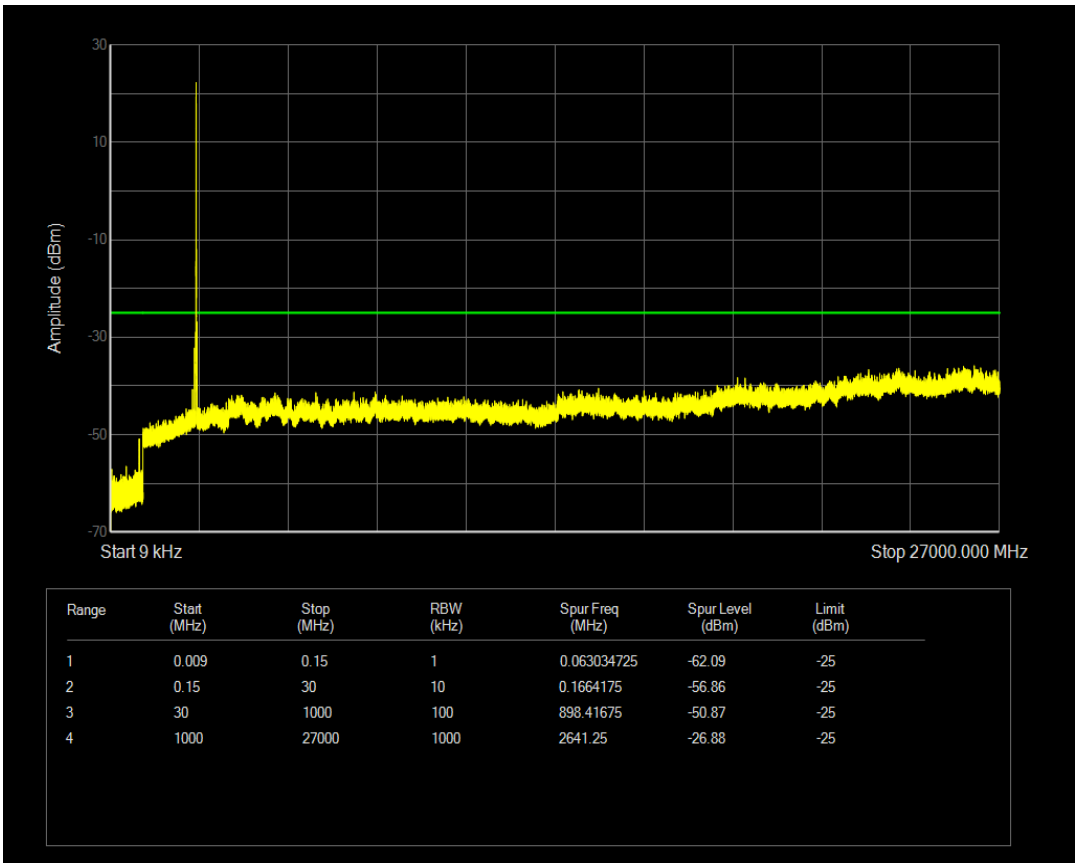
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06306645	-62.48	-25
2	0.15	30	10	0.15	-55.23	-25
3	30	1000	100	580.4265	-56.77	-25
4	1000	27000	1000	2659.45	-29.4	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=518500 RB=1@24



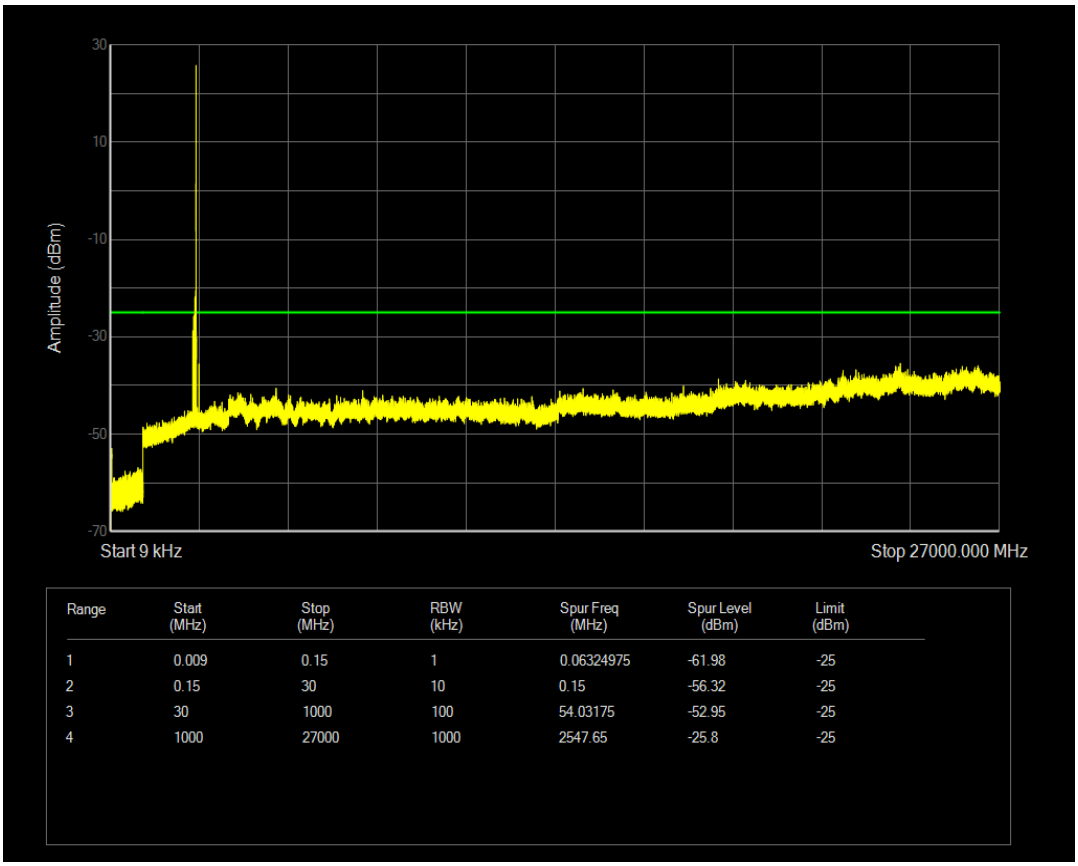
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06319335	-62.88	-25
2	0.15	30	10	0.164925	-55.55	-25
3	30	1000	100	33.27375	-54.85	-25
4	1000	27000	1000	2648.4	-27.29	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=25@0



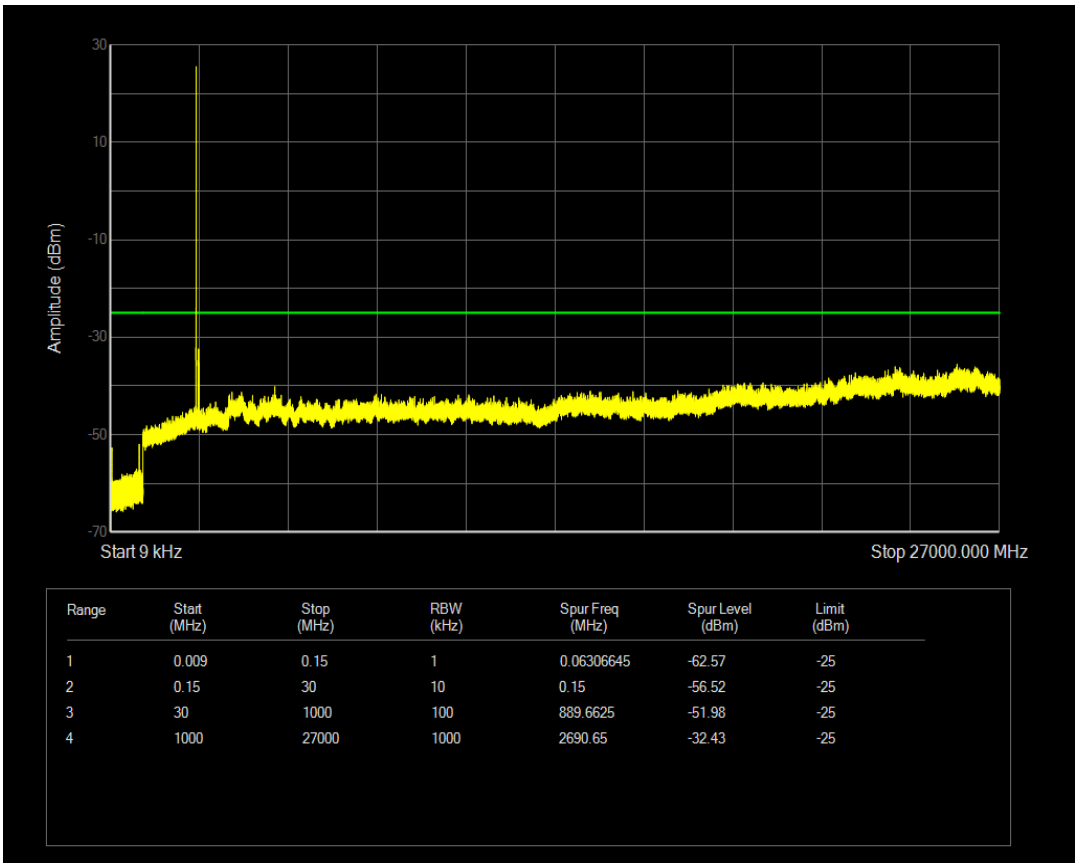
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.063034725	-62.09	-25
2	0.15	30	10	0.1664175	-56.86	-25
3	30	1000	100	898.41675	-50.87	-25
4	1000	27000	1000	2641.25	-26.88	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@0



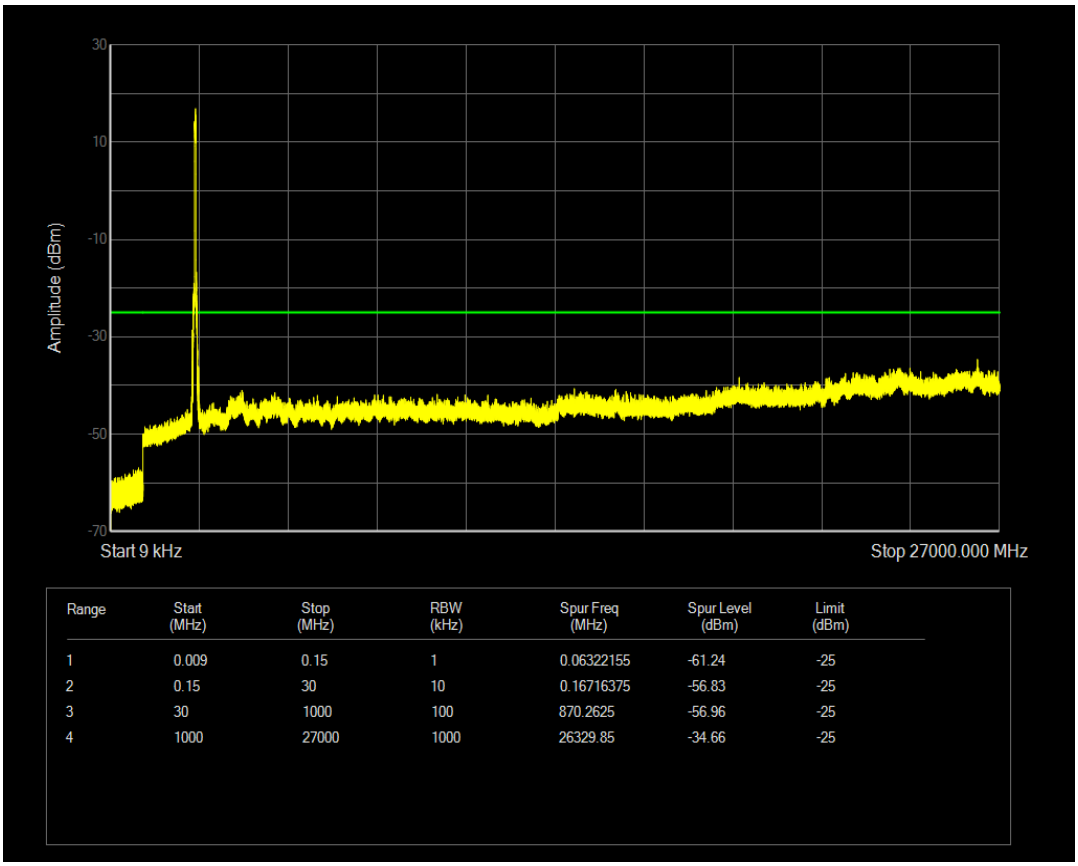
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06324975	-61.98	-25
2	0.15	30	10	0.15	-56.32	-25
3	30	1000	100	54.03175	-52.95	-25
4	1000	27000	1000	2547.65	-25.8	-25

n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=523500 RB=1@24



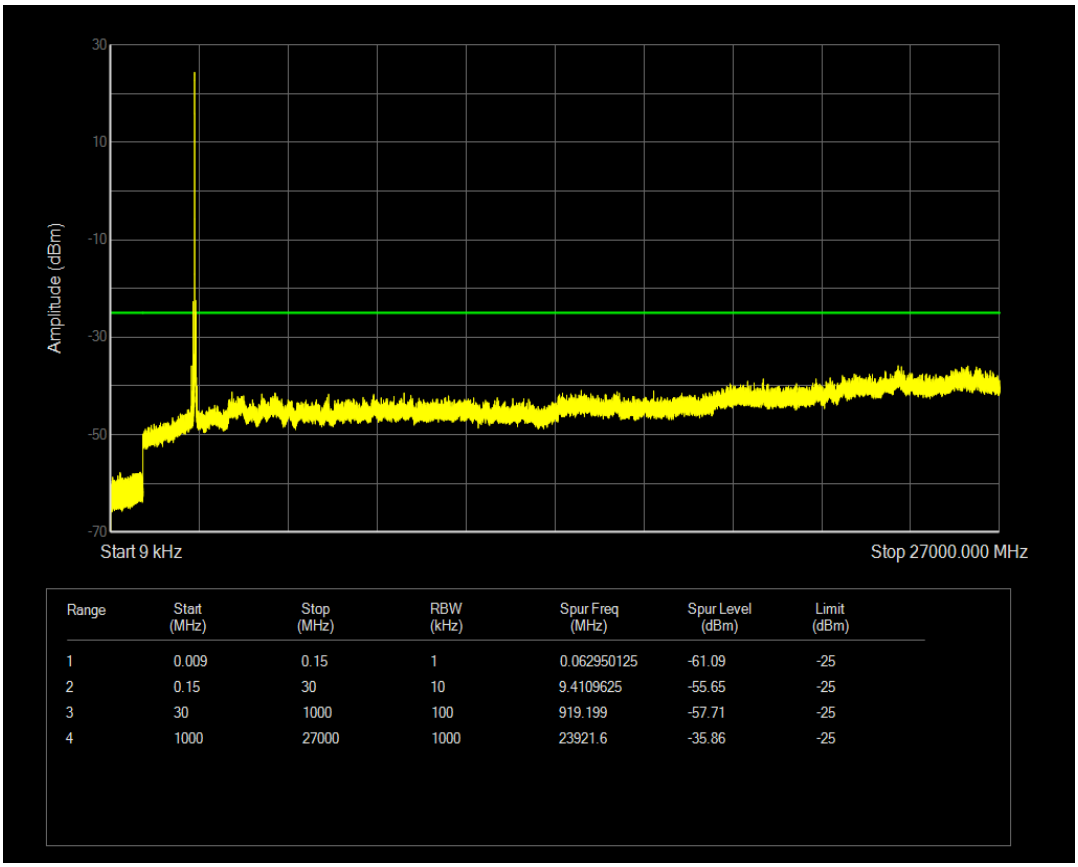
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06306645	-62.57	-25
2	0.15	30	10	0.15	-56.52	-25
3	30	1000	100	889.6625	-51.98	-25
4	1000	27000	1000	2690.65	-32.43	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0



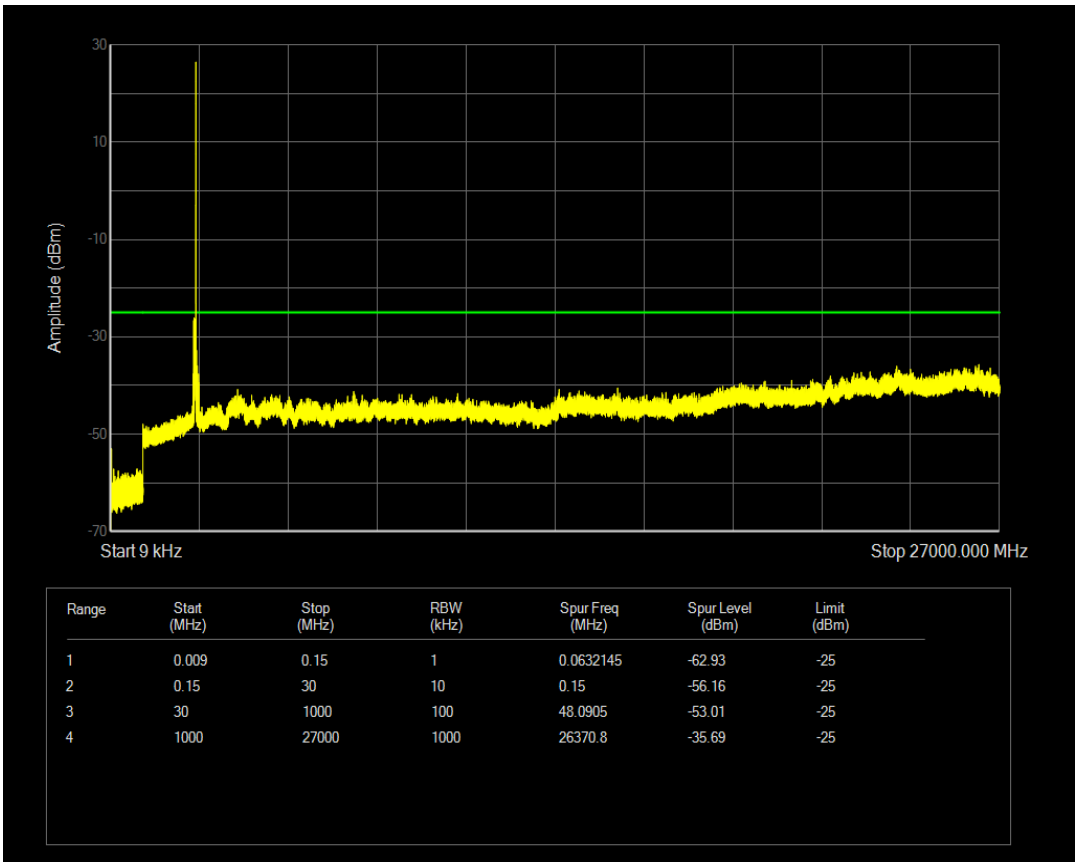
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06322155	-61.24	-25
2	0.15	30	10	0.16716375	-56.83	-25
3	30	1000	100	870.2625	-56.96	-25
4	1000	27000	1000	26329.85	-34.66	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@0



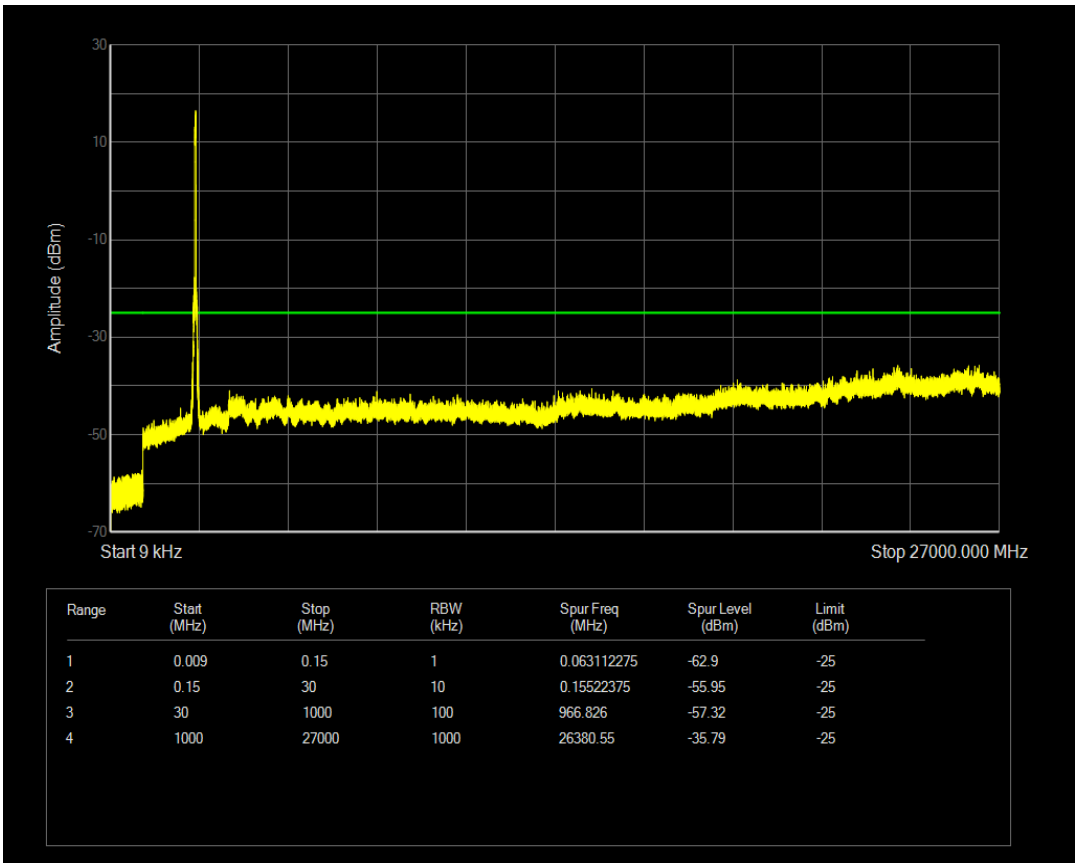
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.062950125	-61.09	-25
2	0.15	30	10	9.4109625	-55.65	-25
3	30	1000	100	919.199	-57.71	-25
4	1000	27000	1000	23921.6	-35.86	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=1@215



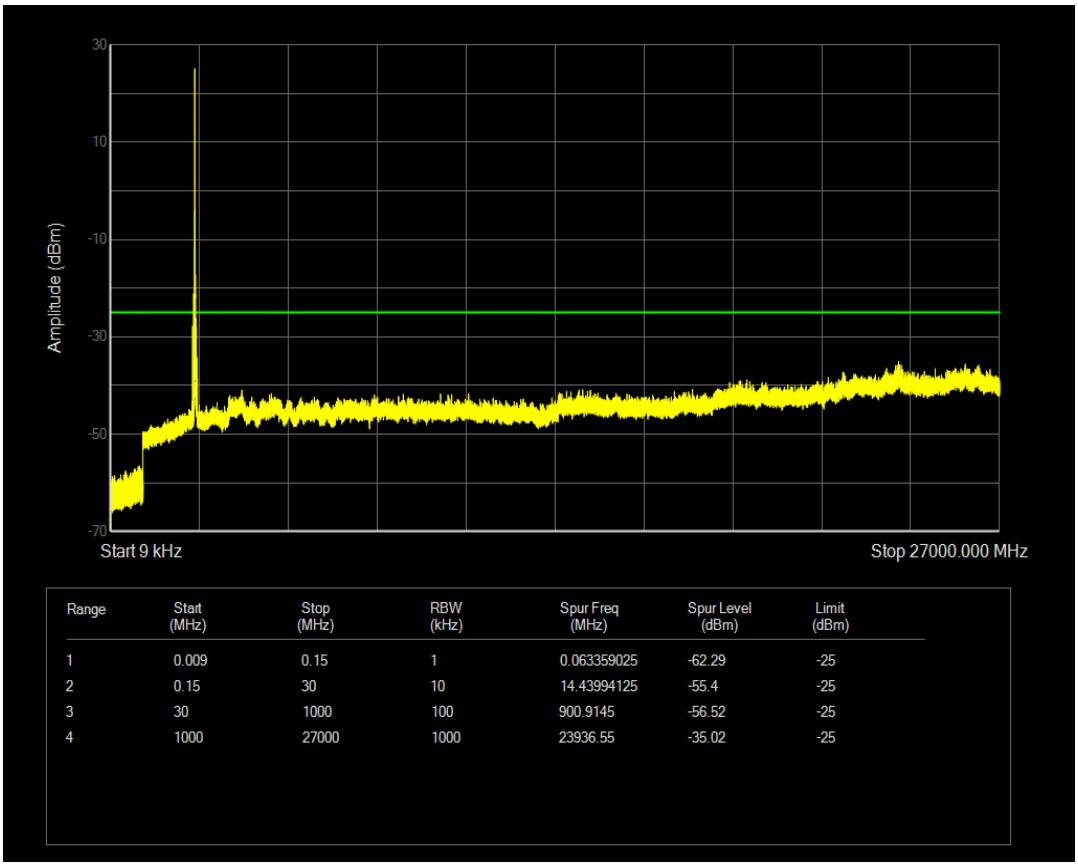
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0632145	-62.93	-25
2	0.15	30	10	0.15	-56.16	-25
3	30	1000	100	48.0905	-53.01	-25
4	1000	27000	1000	26370.8	-35.69	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=216@0



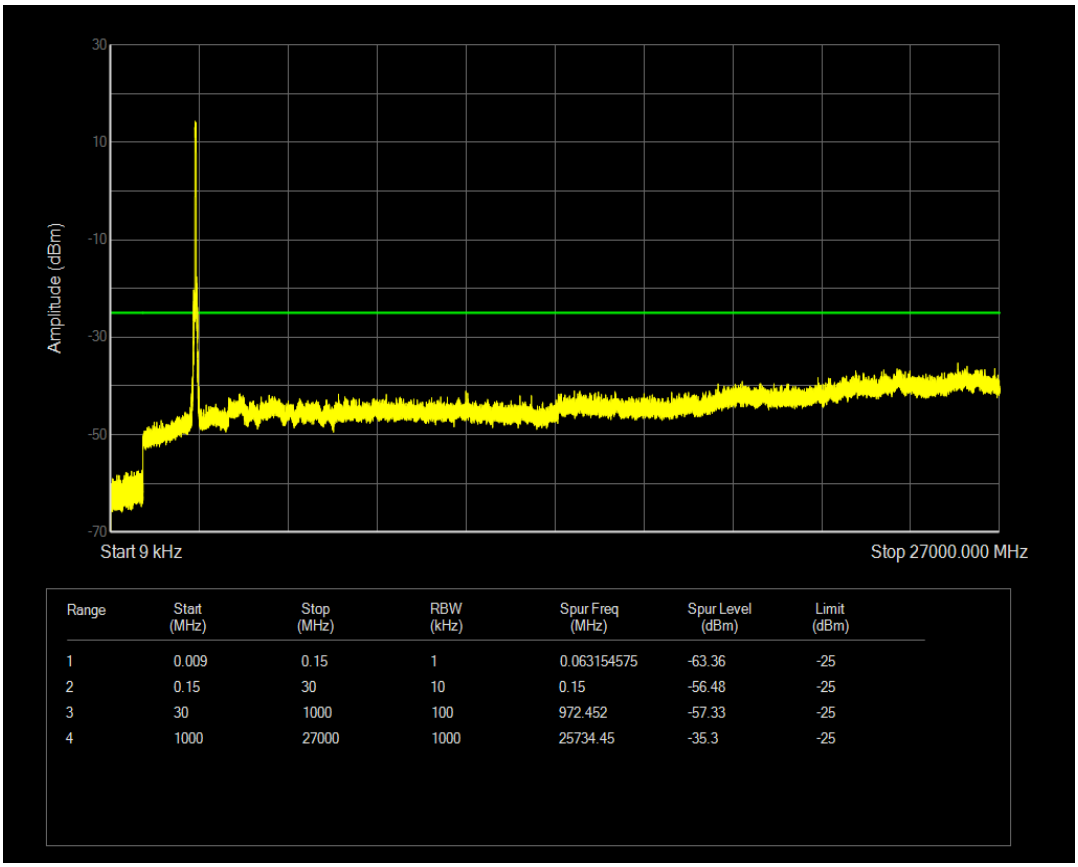
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.063112275	-62.9	-25
2	0.15	30	10	0.15522375	-55.95	-25
3	30	1000	100	966.826	-57.32	-25
4	1000	27000	1000	26380.55	-35.79	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=1@0



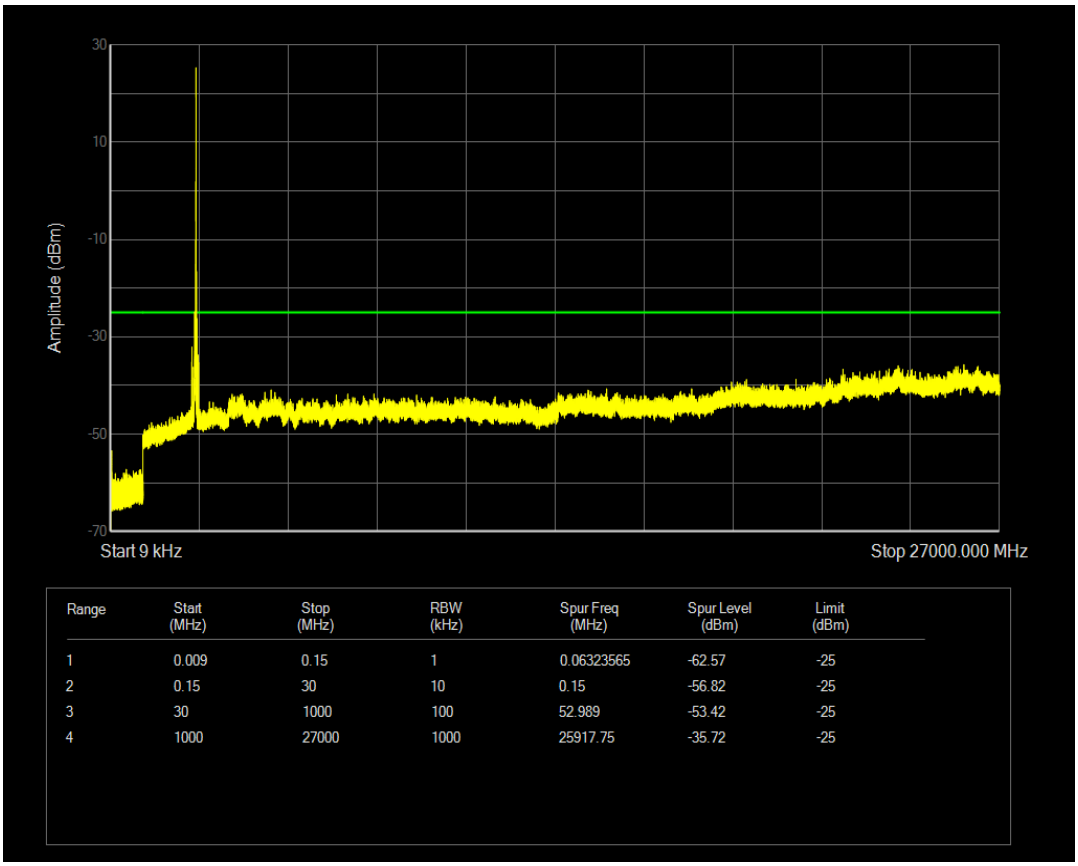
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.063359025	-62.29	-25
2	0.15	30	10	14.43994125	-55.4	-25
3	30	1000	100	900.9145	-56.52	-25
4	1000	27000	1000	23936.55	-35.02	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0



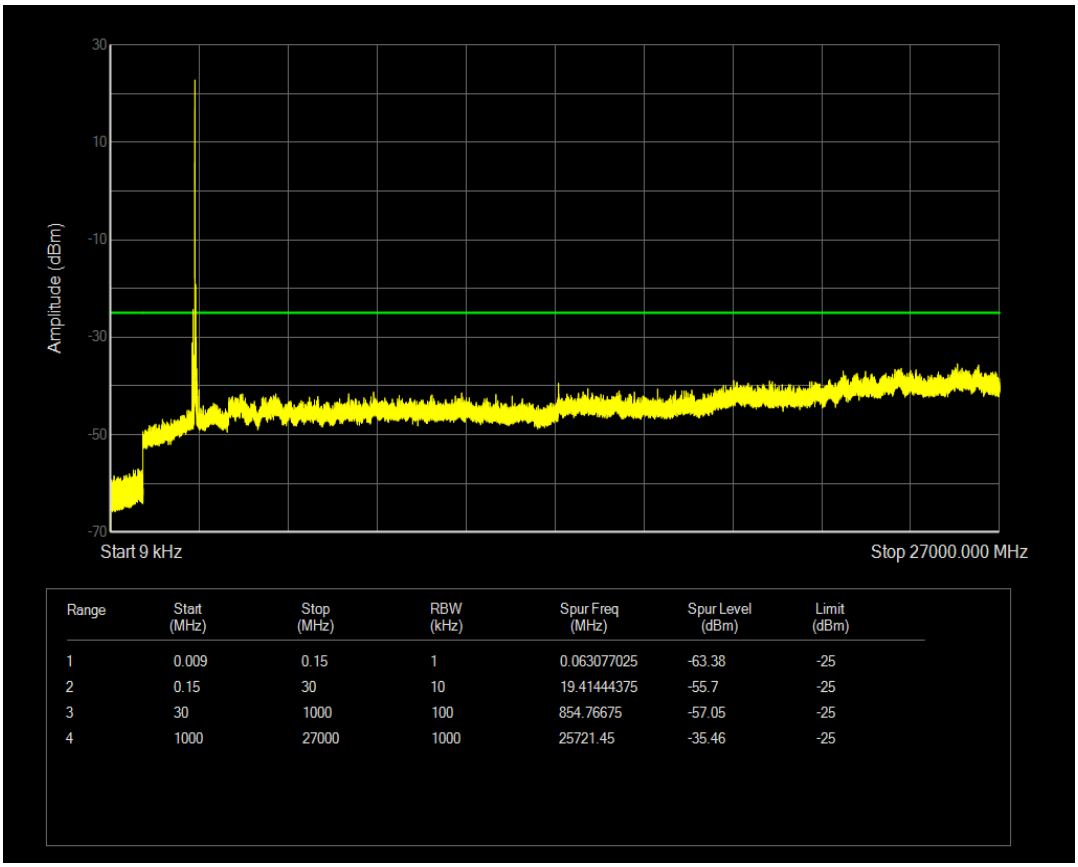
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.063154575	-63.36	-25
2	0.15	30	10	0.15	-56.48	-25
3	30	1000	100	972.452	-57.33	-25
4	1000	27000	1000	25734.45	-35.3	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=1@215



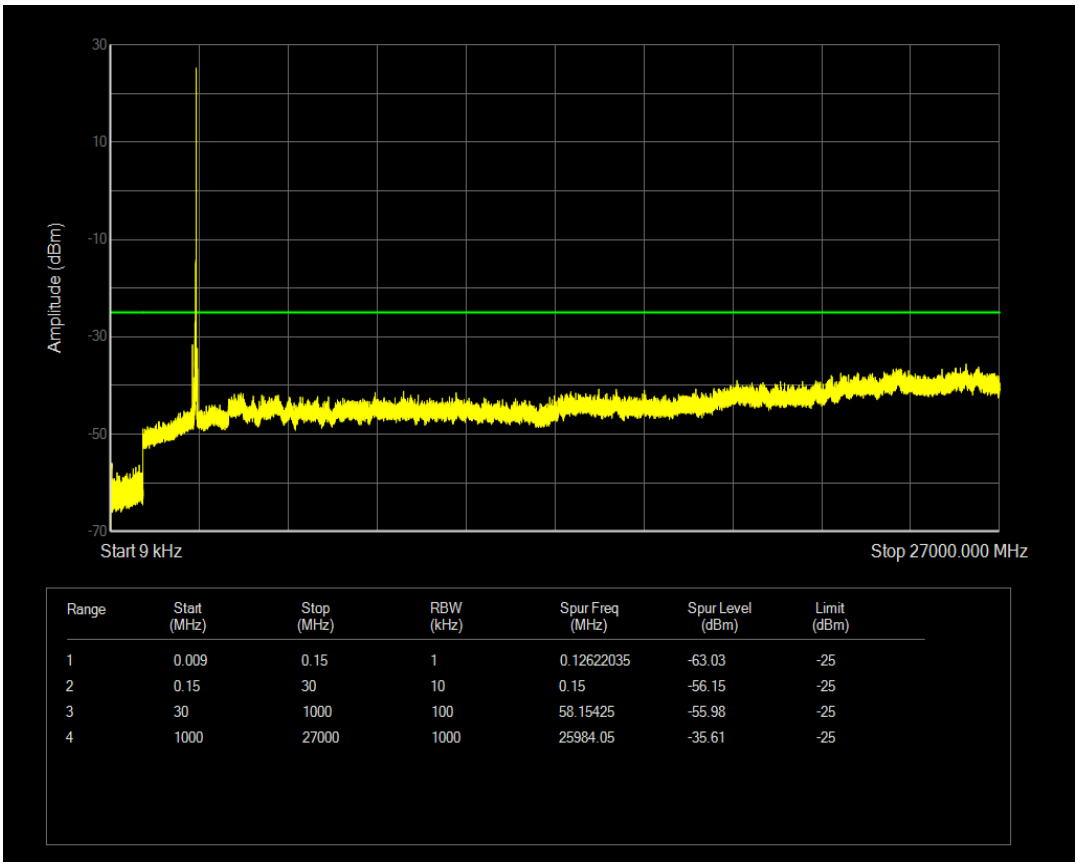
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.06323565	-62.57	-25
2	0.15	30	10	0.15	-56.82	-25
3	30	1000	100	52.989	-53.42	-25
4	1000	27000	1000	25917.75	-35.72	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.063077025	-63.38	-25
2	0.15	30	10	19.41444375	-55.7	-25
3	30	1000	100	854.76675	-57.05	-25
4	1000	27000	1000	25721.45	-35.46	-25

n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=1@215



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.12622035	-63.03	-25
2	0.15	30	10	0.15	-56.15	-25
3	30	1000	100	58.15425	-55.98	-25
4	1000	27000	1000	25984.05	-35.61	-25