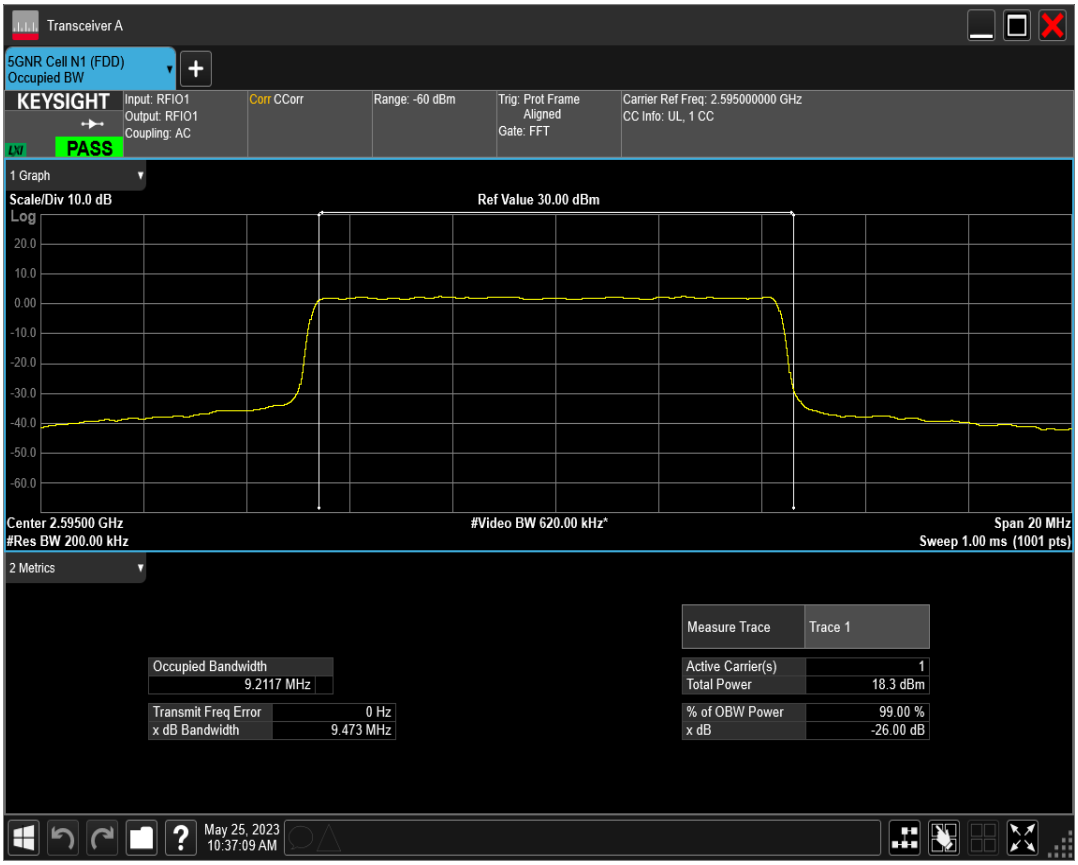
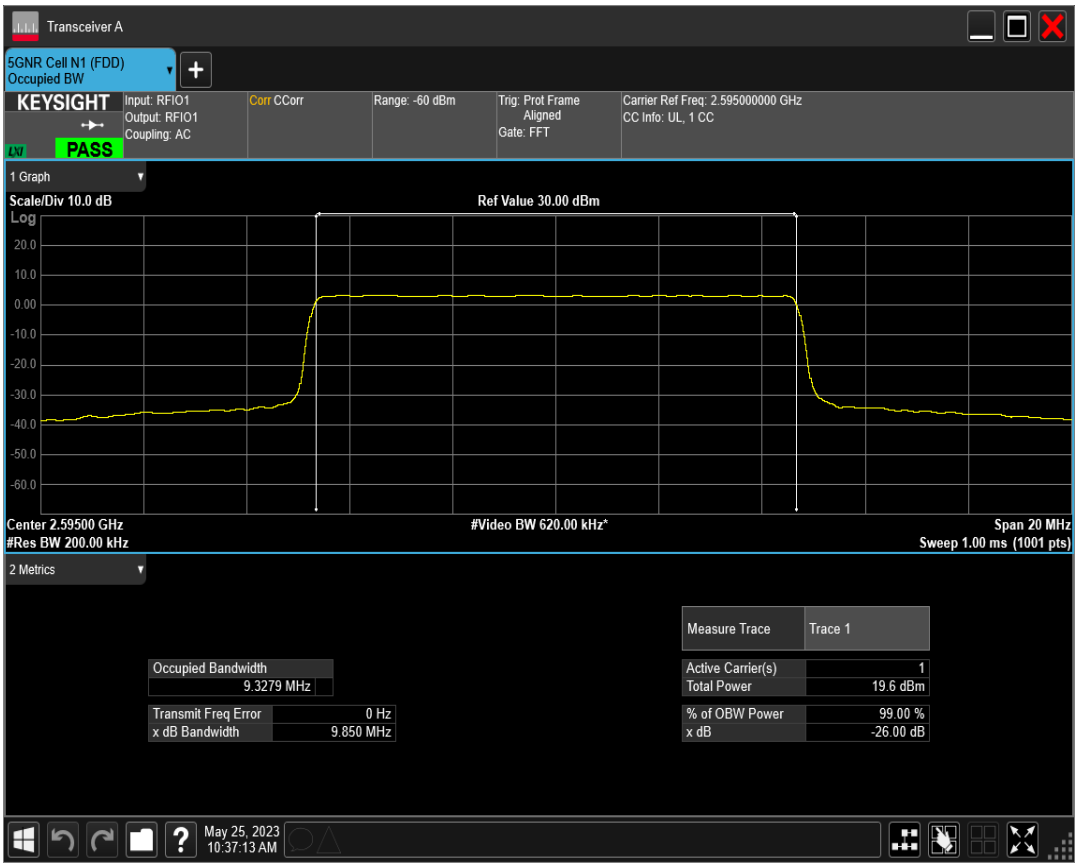
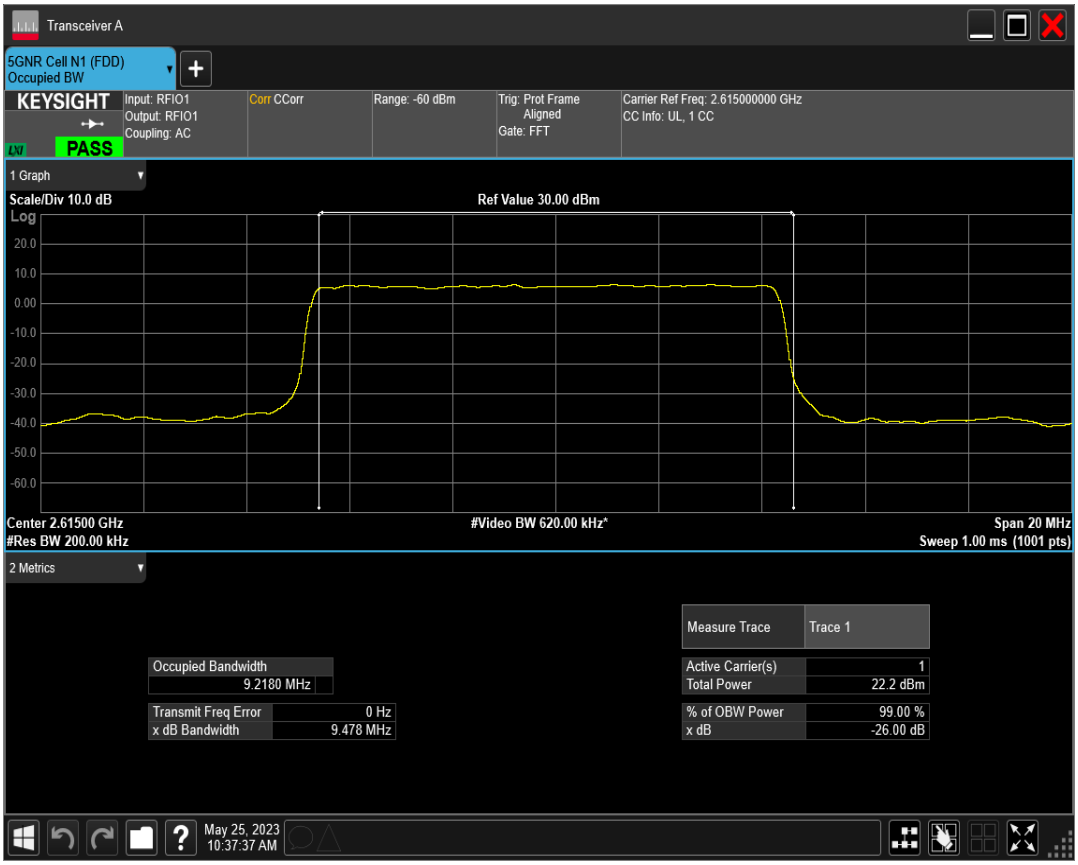
n38 SCS=15kHz DFT_QAM256 BW=10MHz Channel=519000 RB=50@0



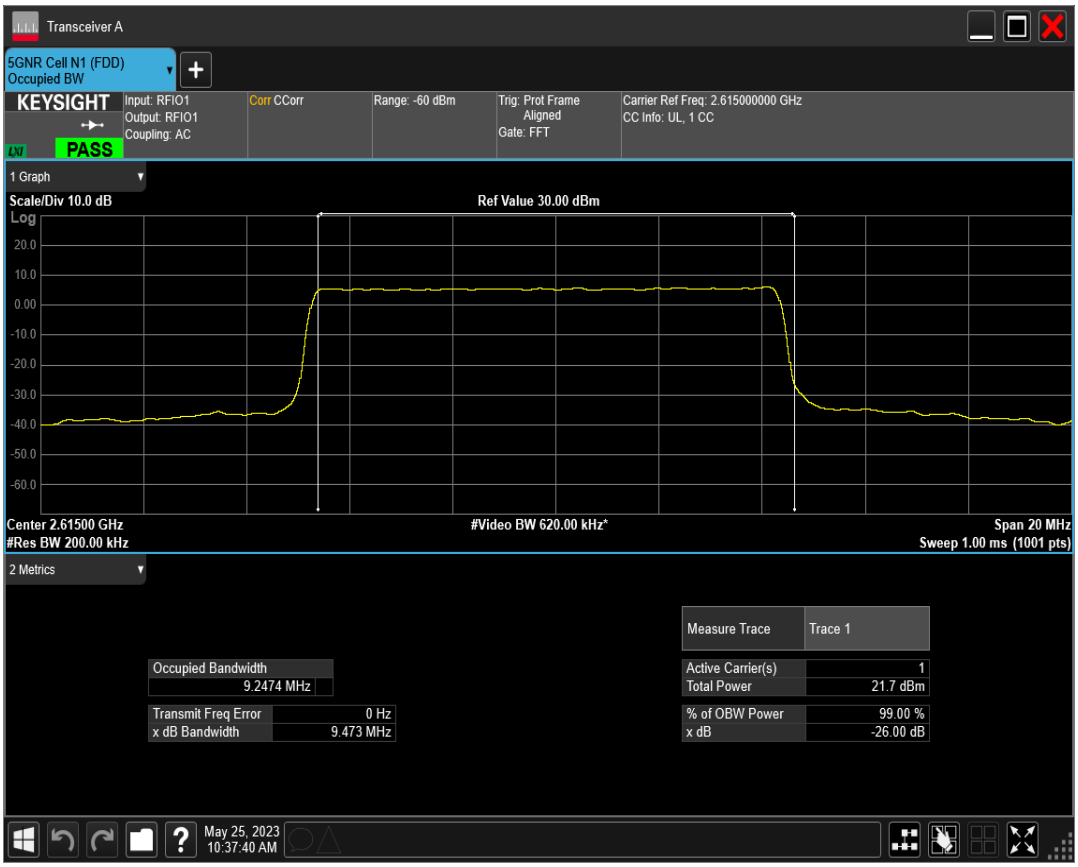
n38 SCS=15kHz CP_QPSK BW=10MHz Channel=519000 RB=52@0



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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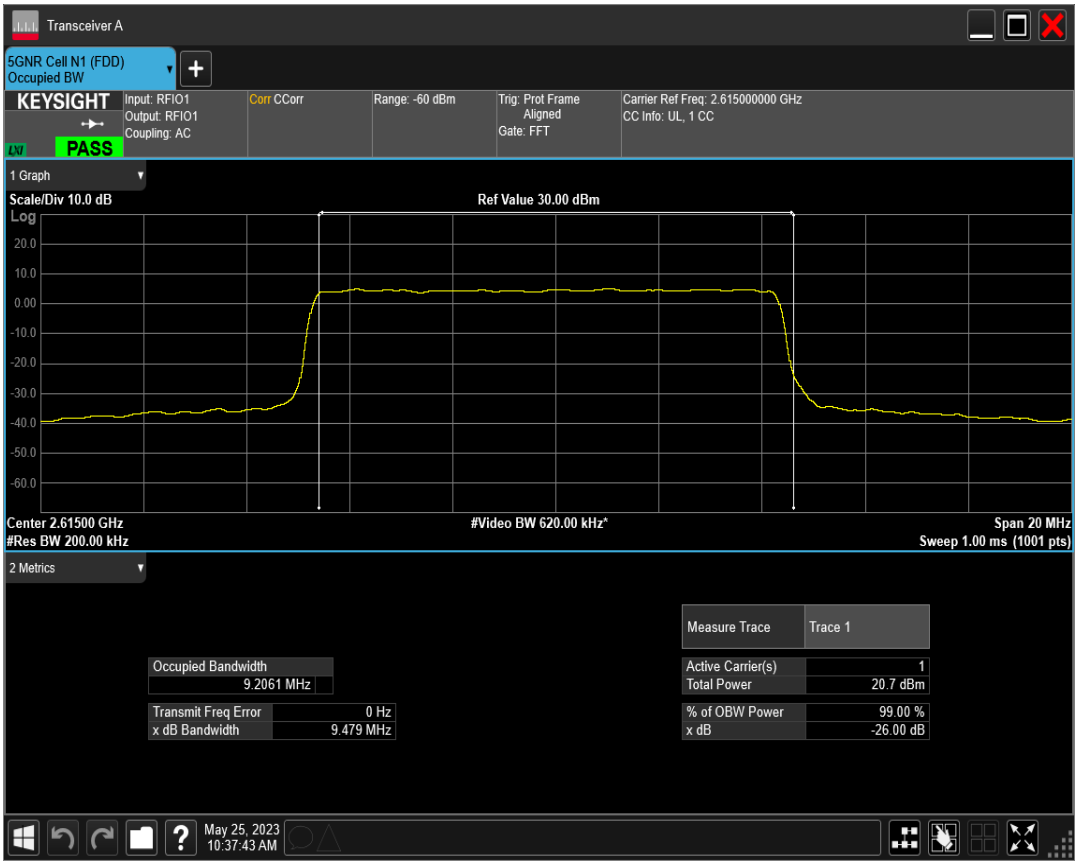

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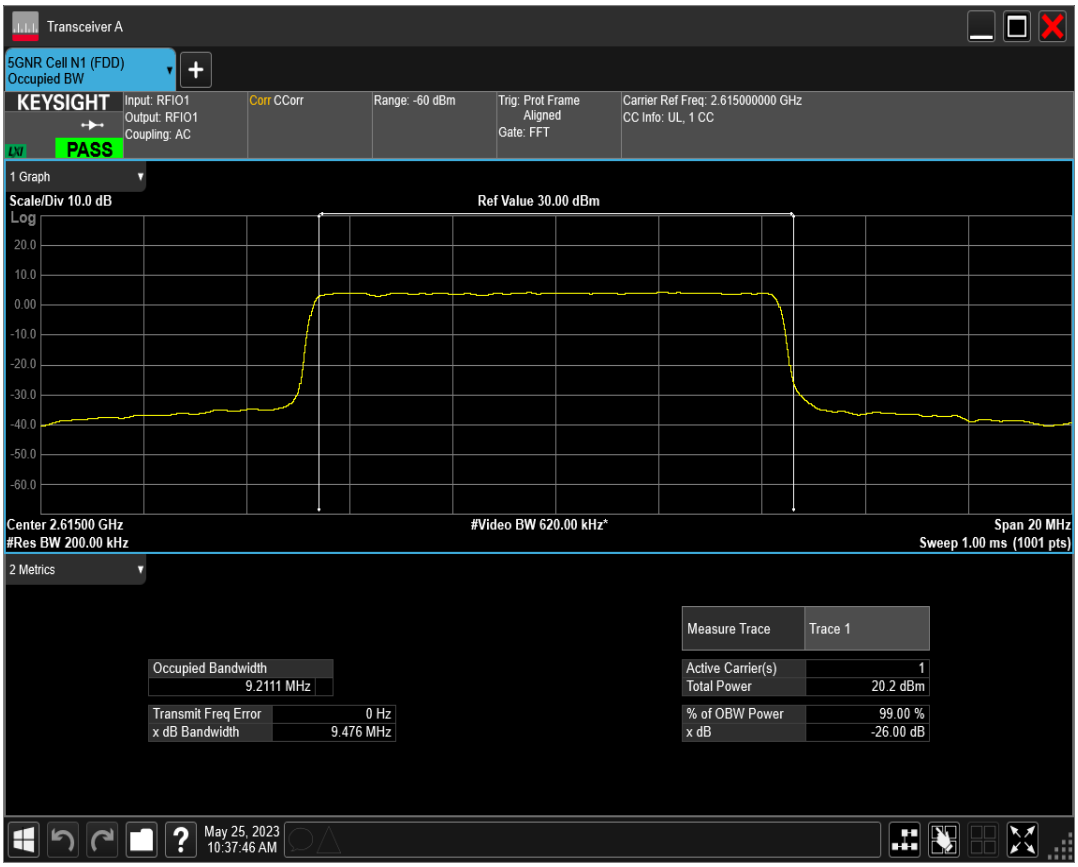

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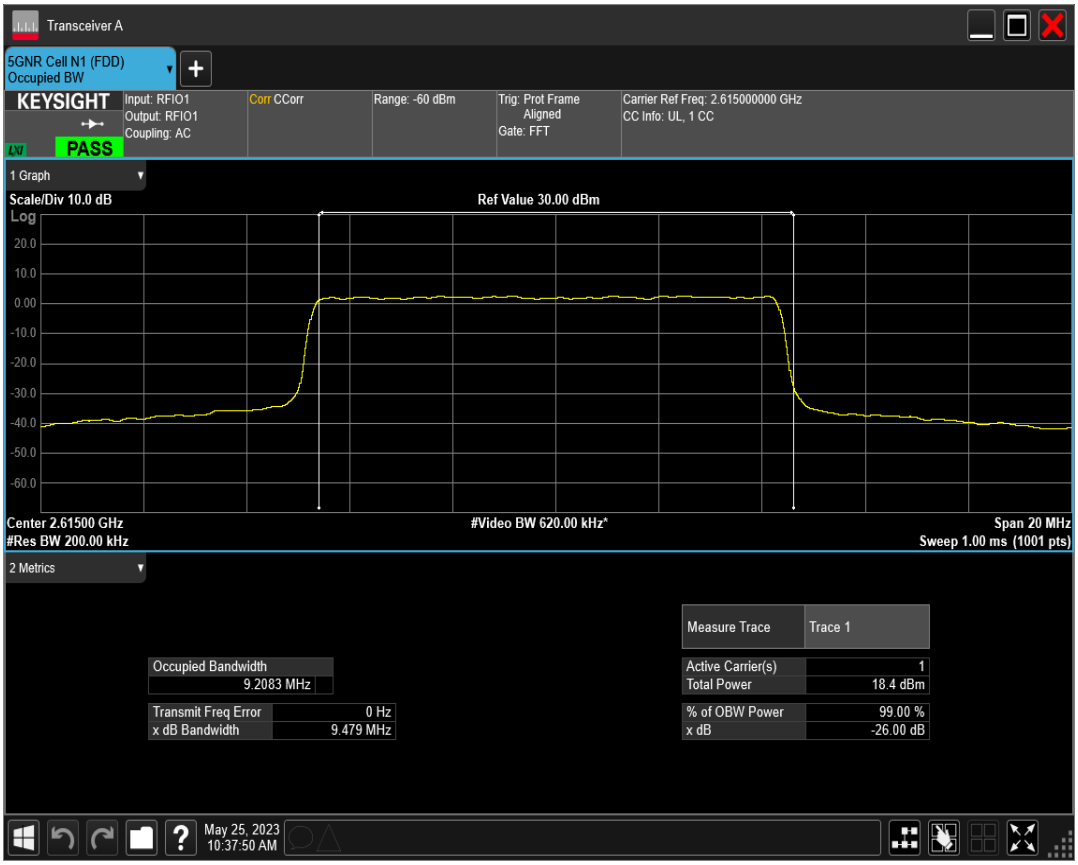

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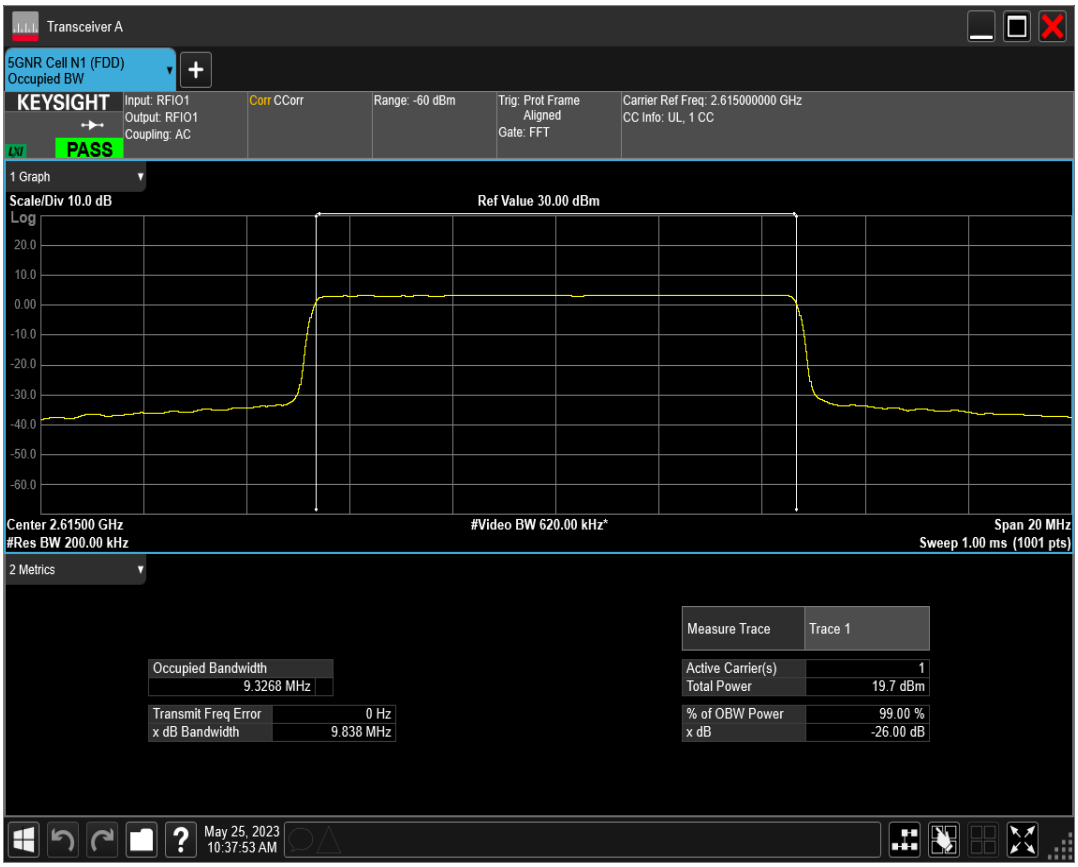
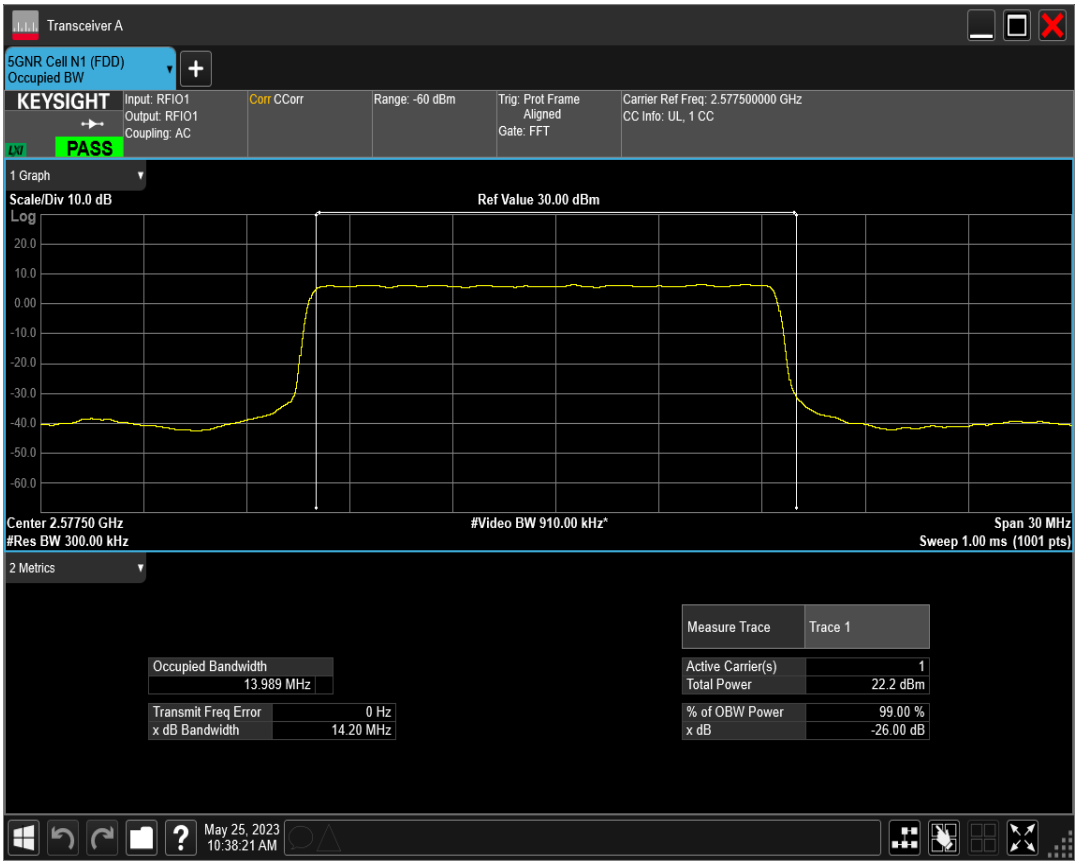


n38 SCS=15kHz DFT_BPSK BW=15MHz Channel=515500 RB=75@0



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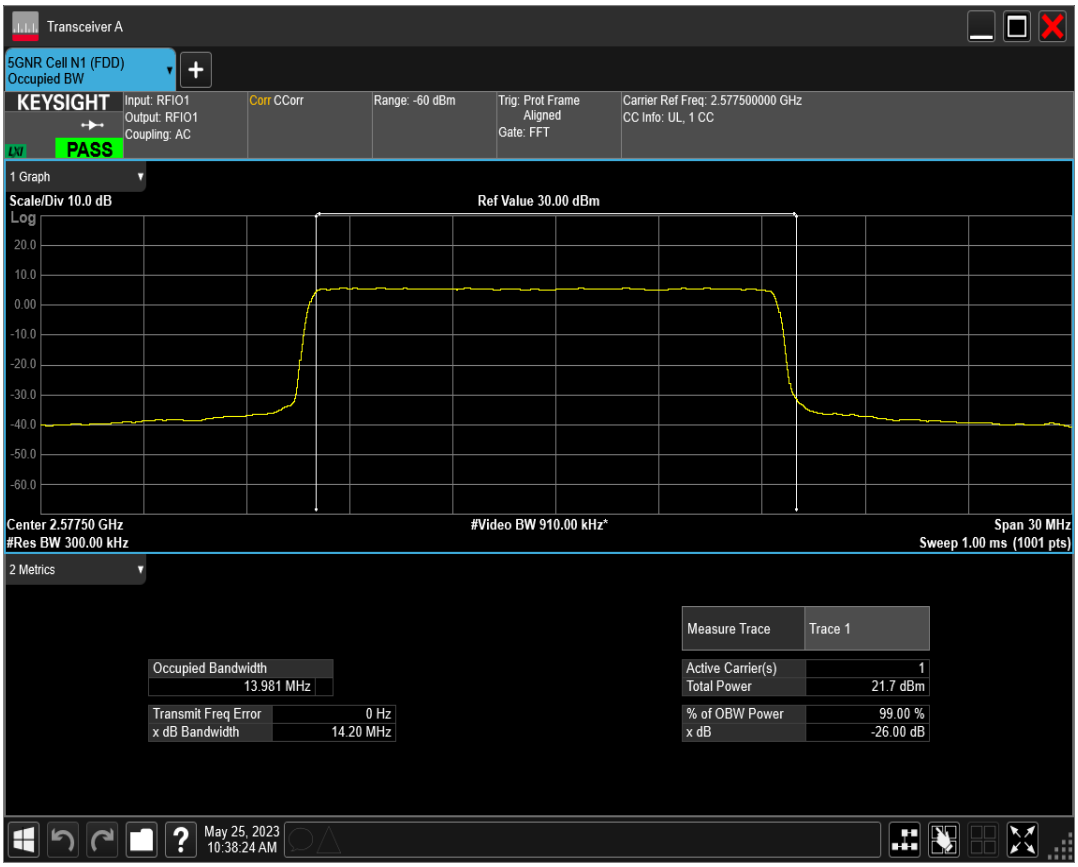

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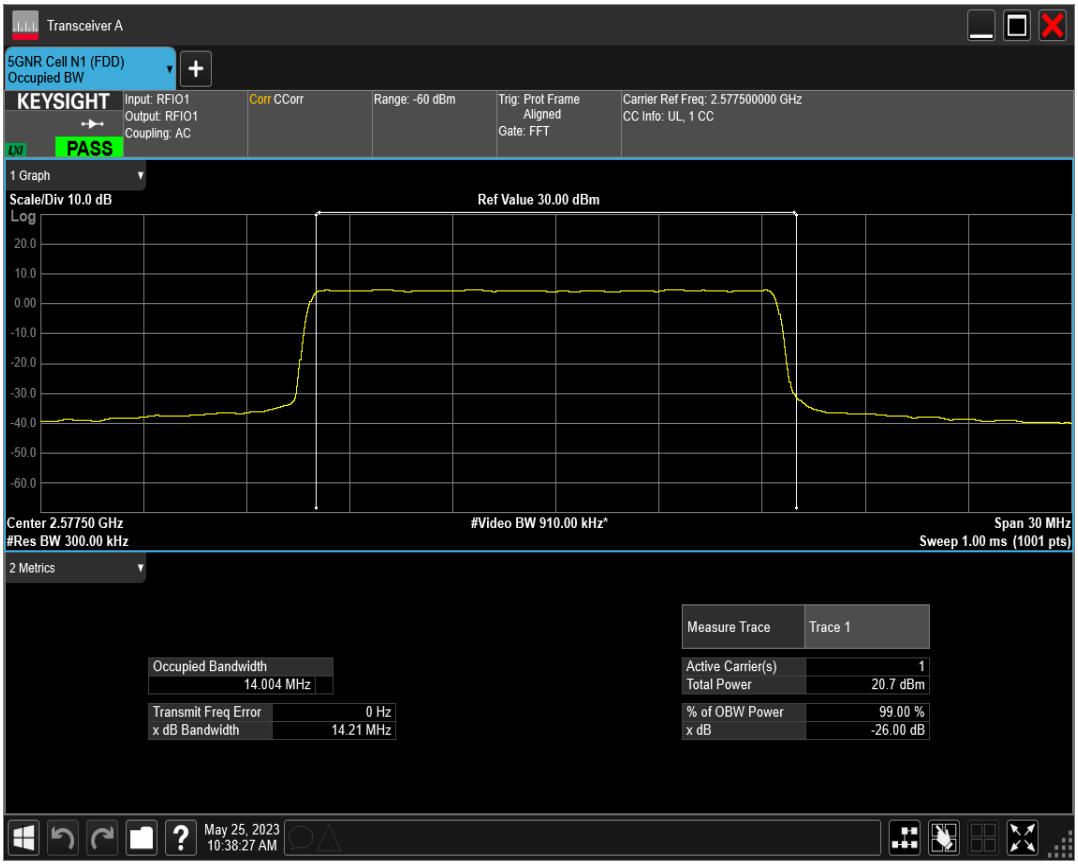

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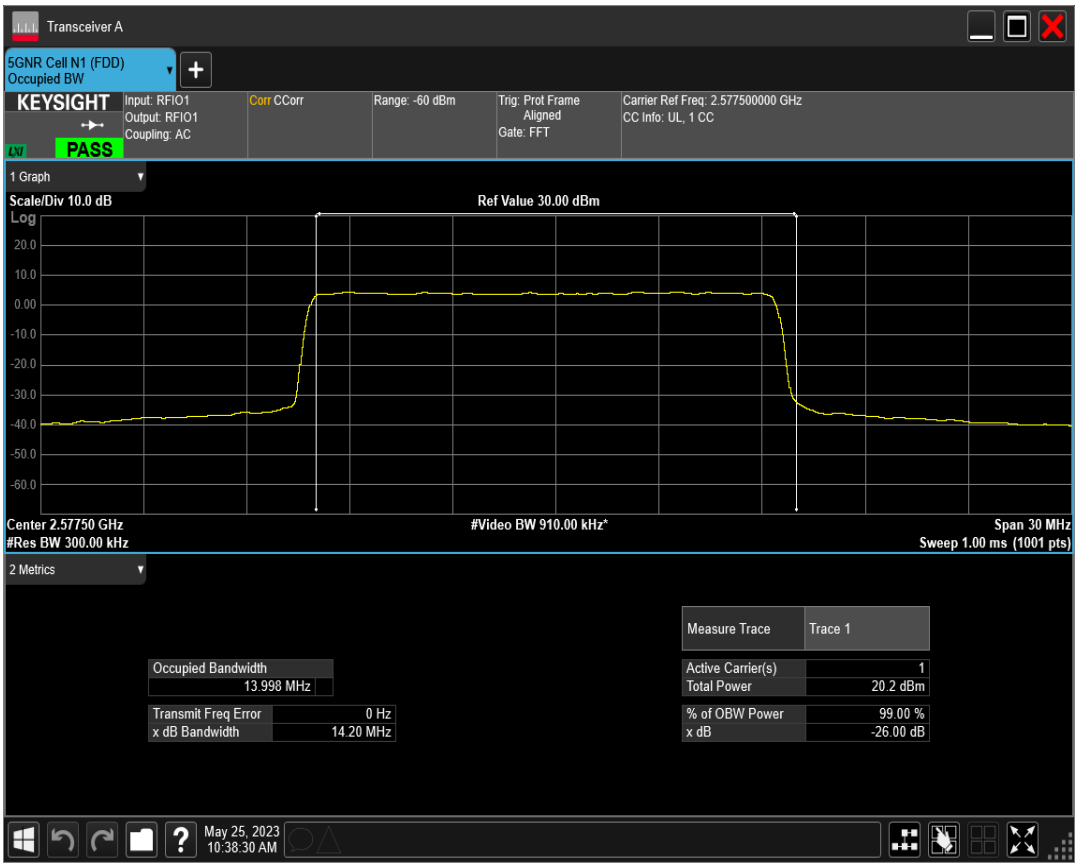

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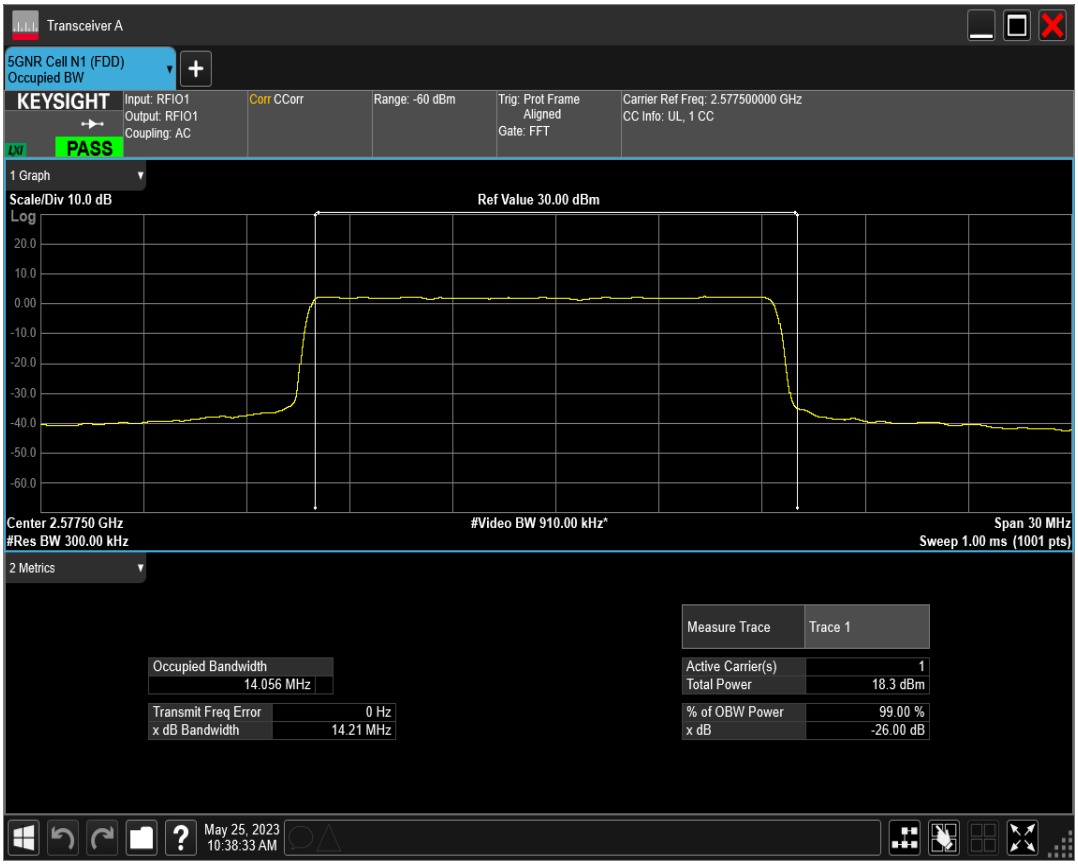

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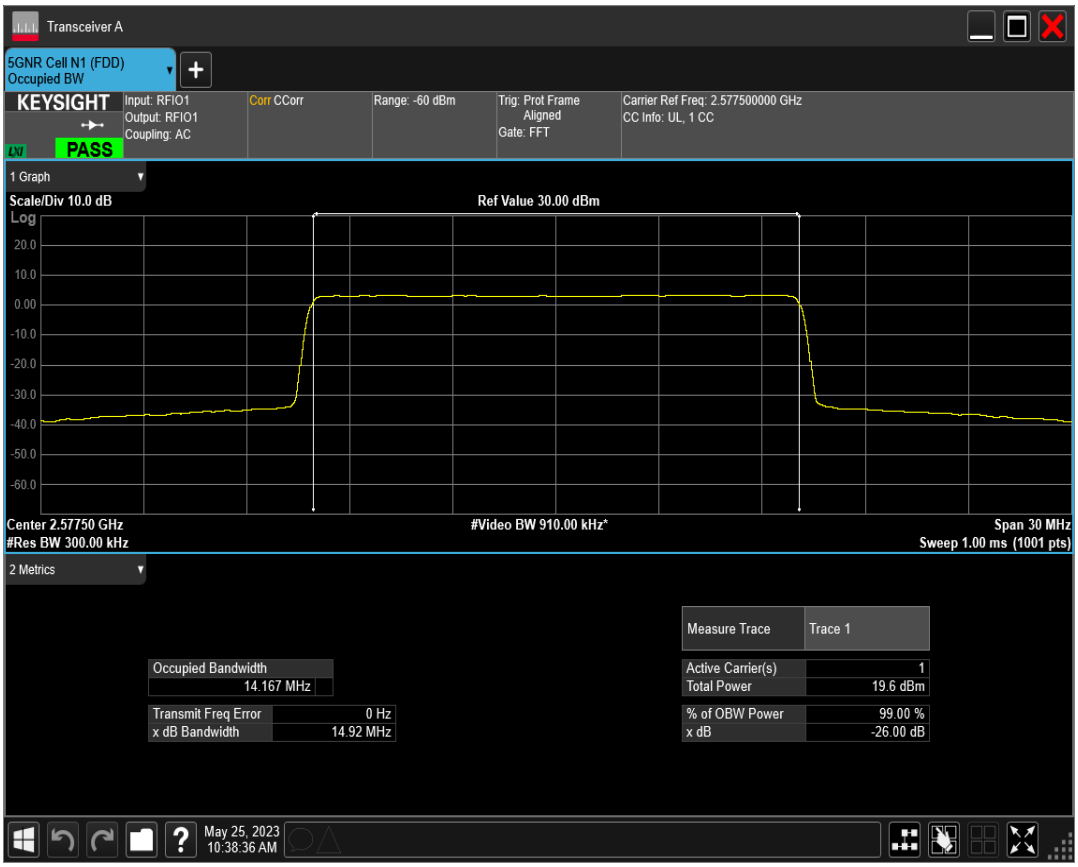
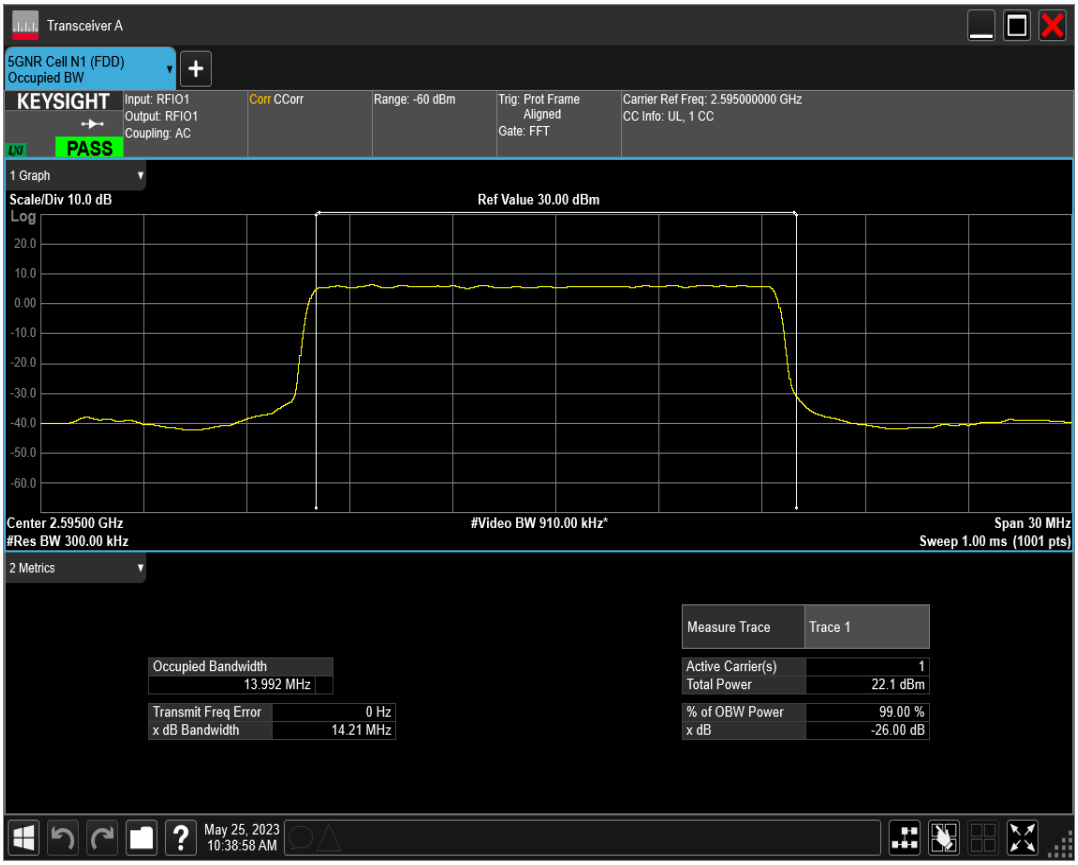
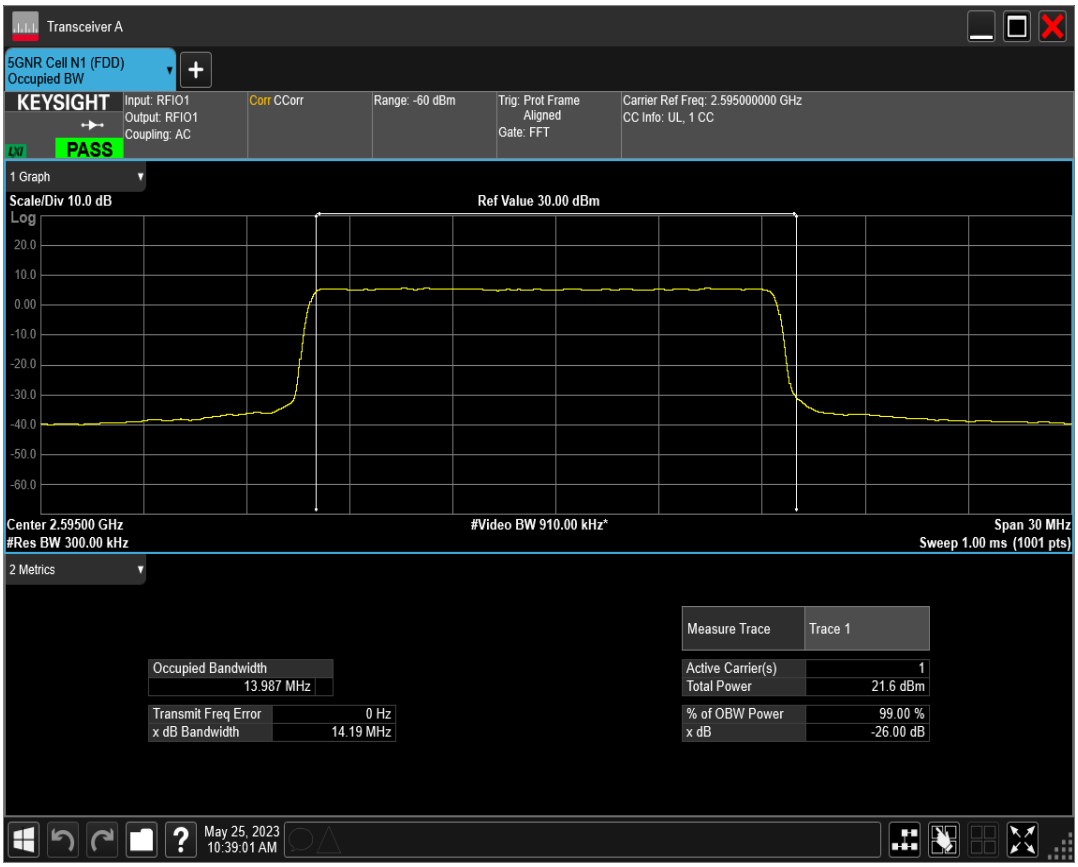


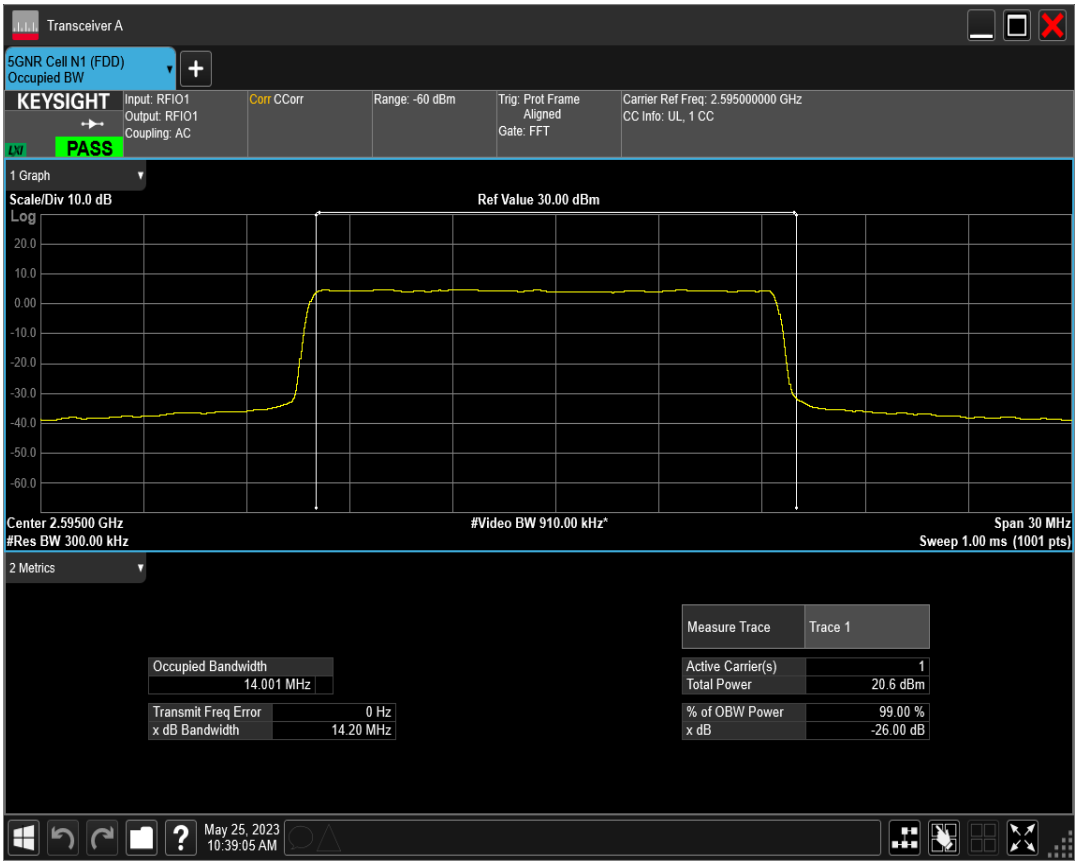
n38 SCS=15kHz DFT_BPSK BW=15MHz Channel=519000 RB=75@0



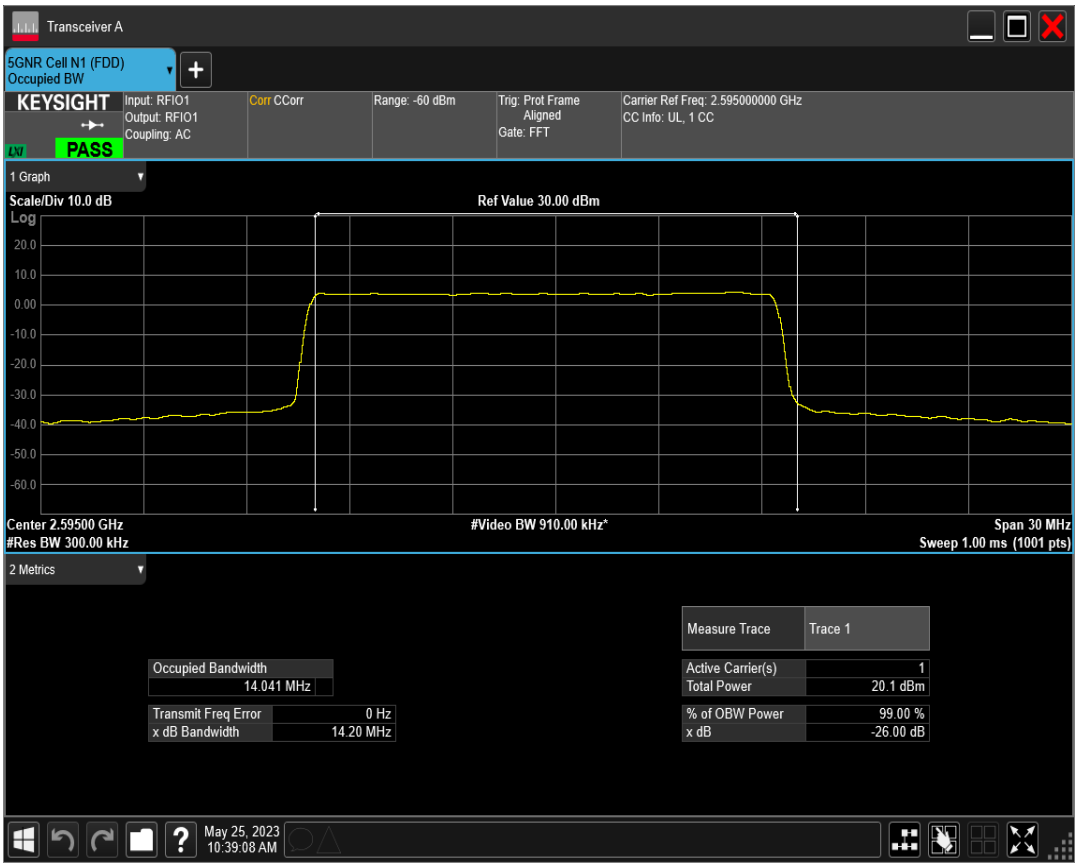
n38 SCS=15kHz DFT_QPSK BW=15MHz Channel=519000 RB=75@0



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



n38 SCS=15kHz DFT_QAM64 BW=15MHz Channel=519000 RB=75@0



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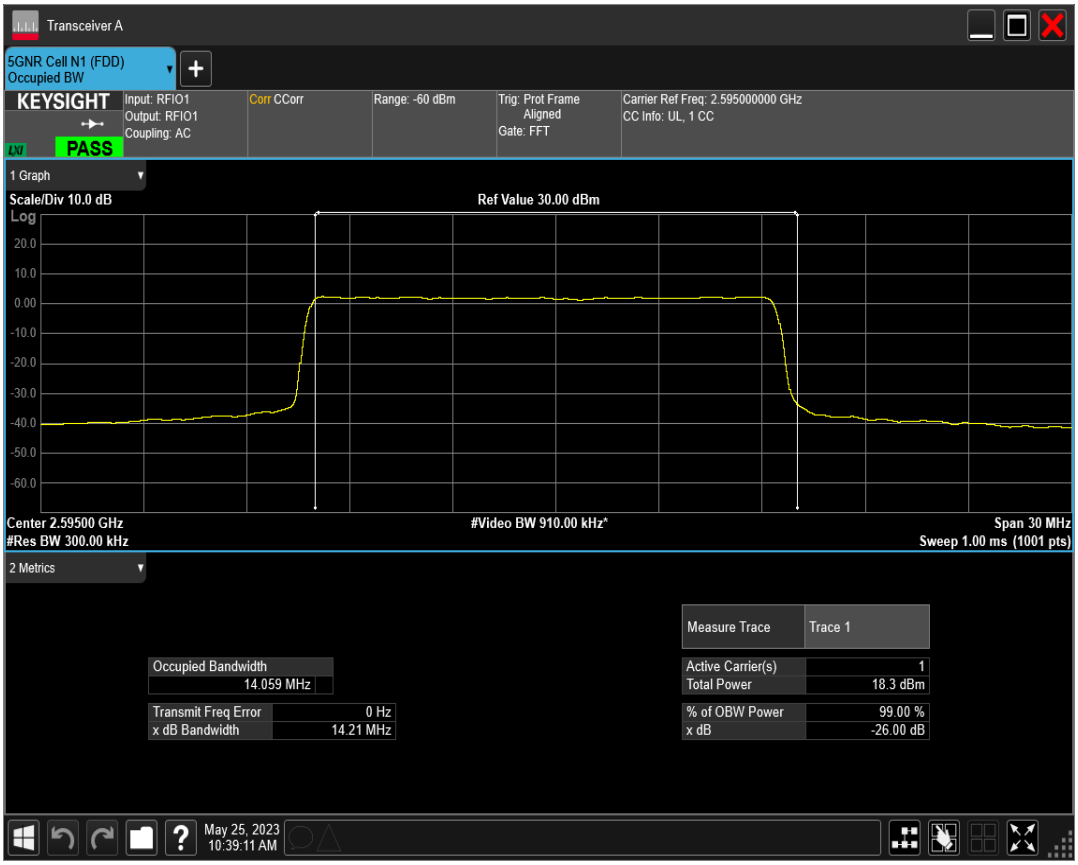
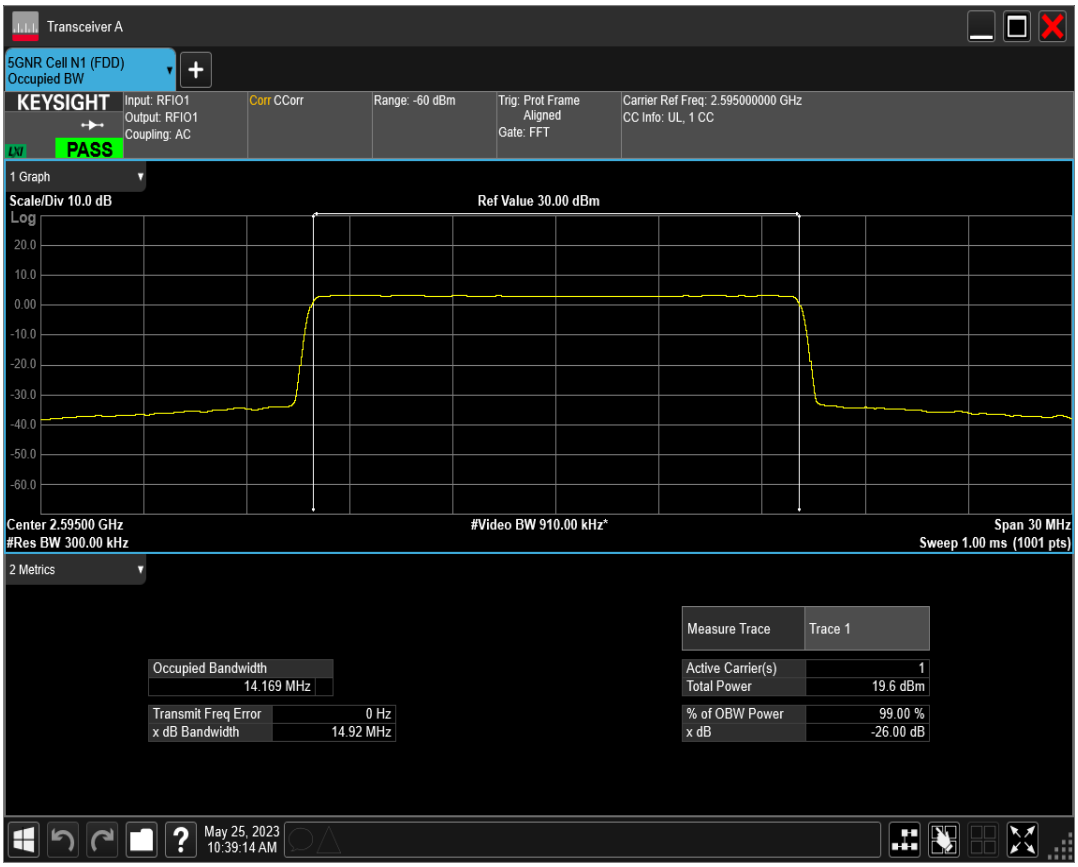


n38 SCS=15kHz CP_QPSK BW=15MHz Channel=519000 RB=79@0



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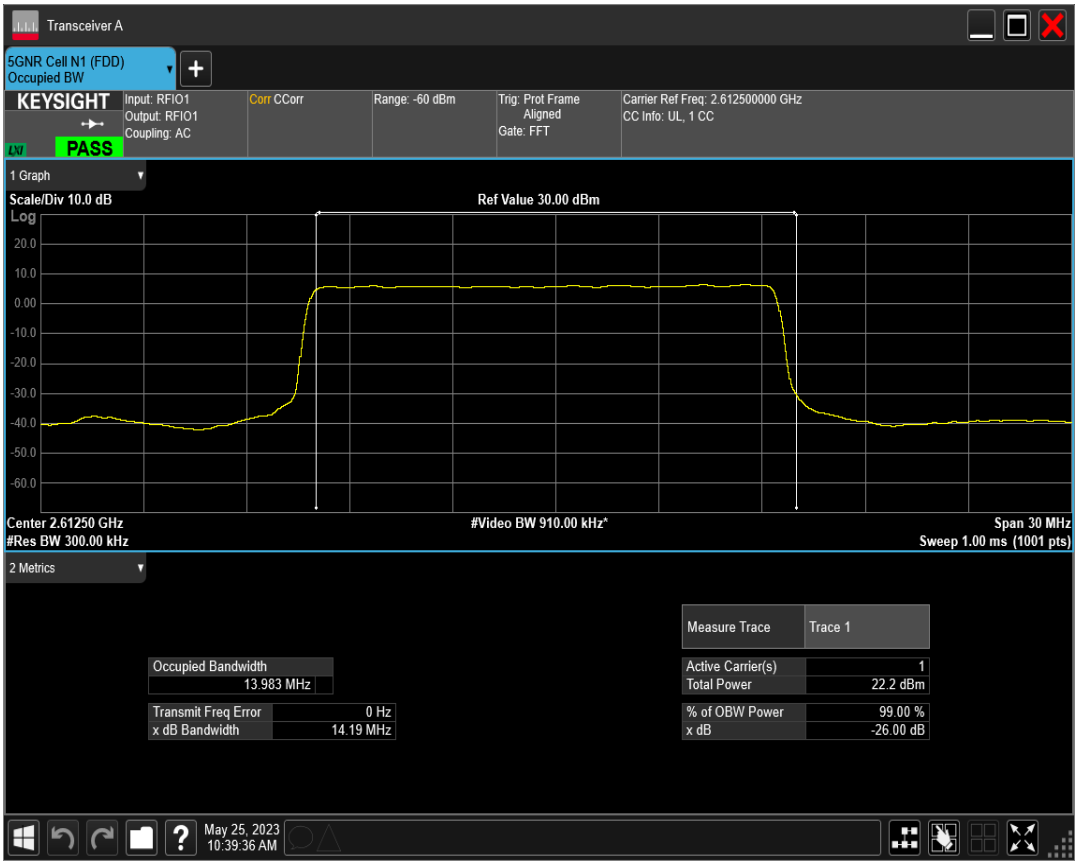

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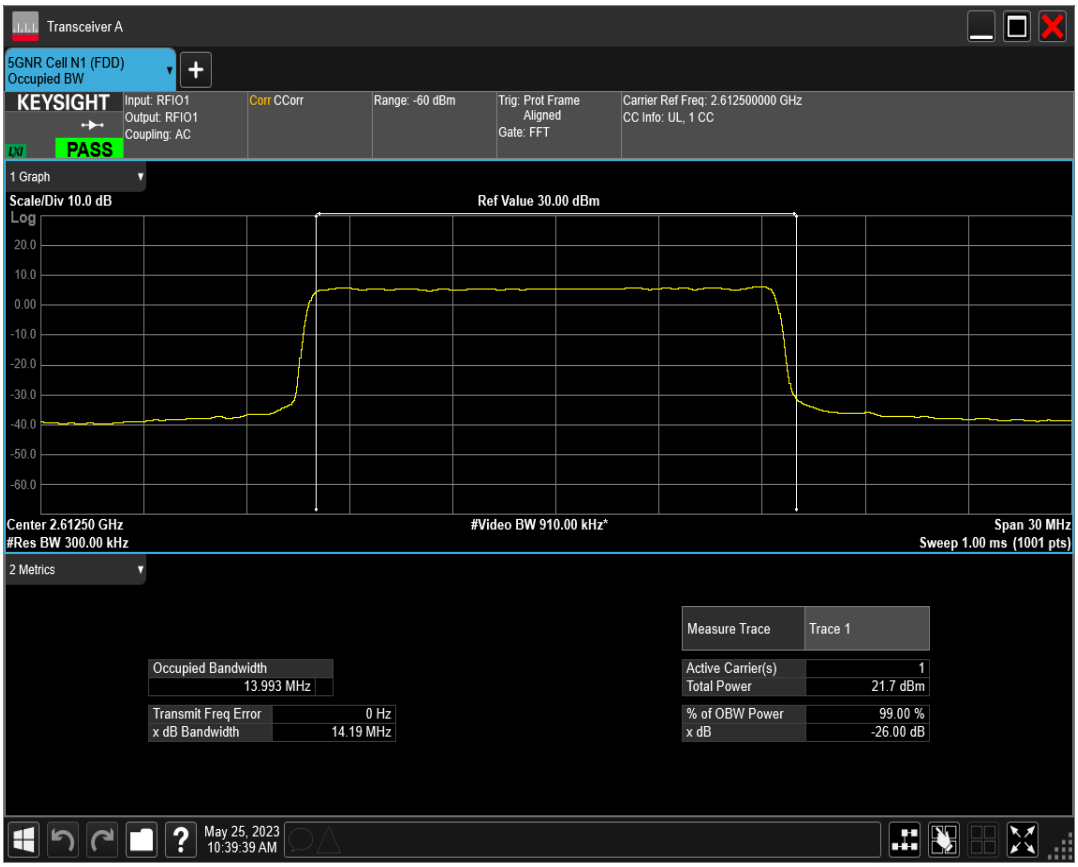

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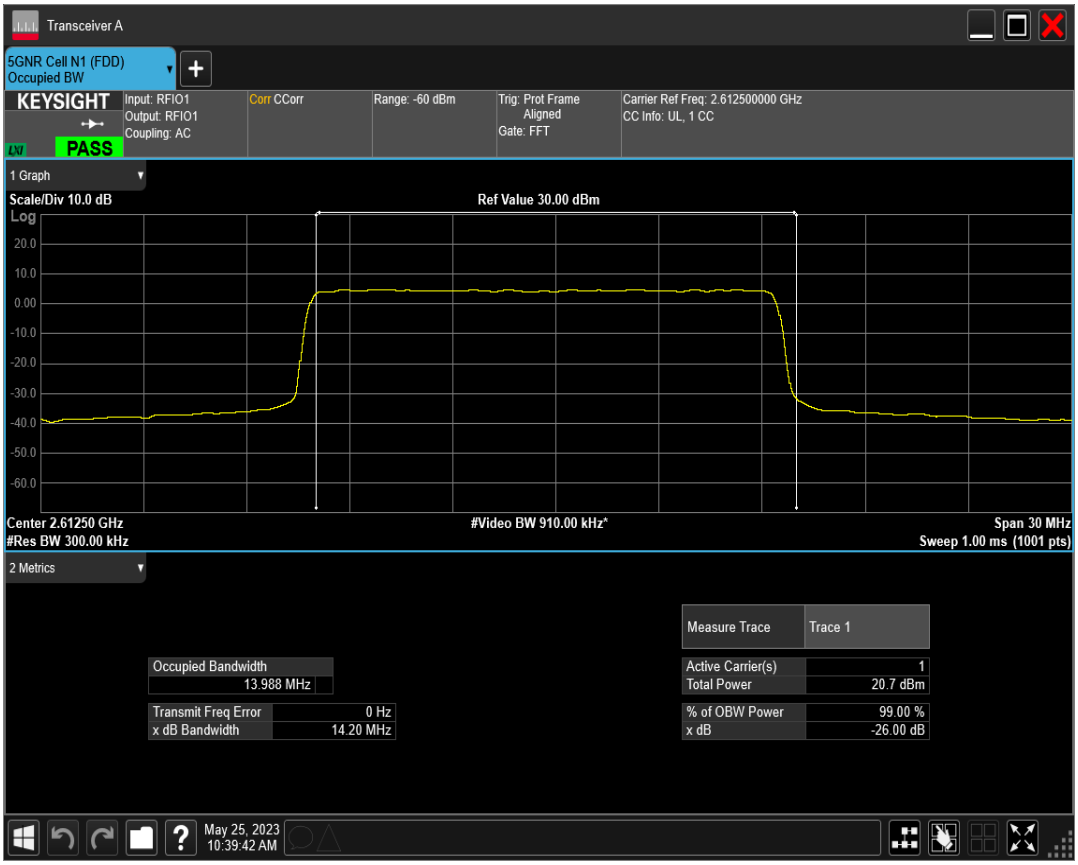
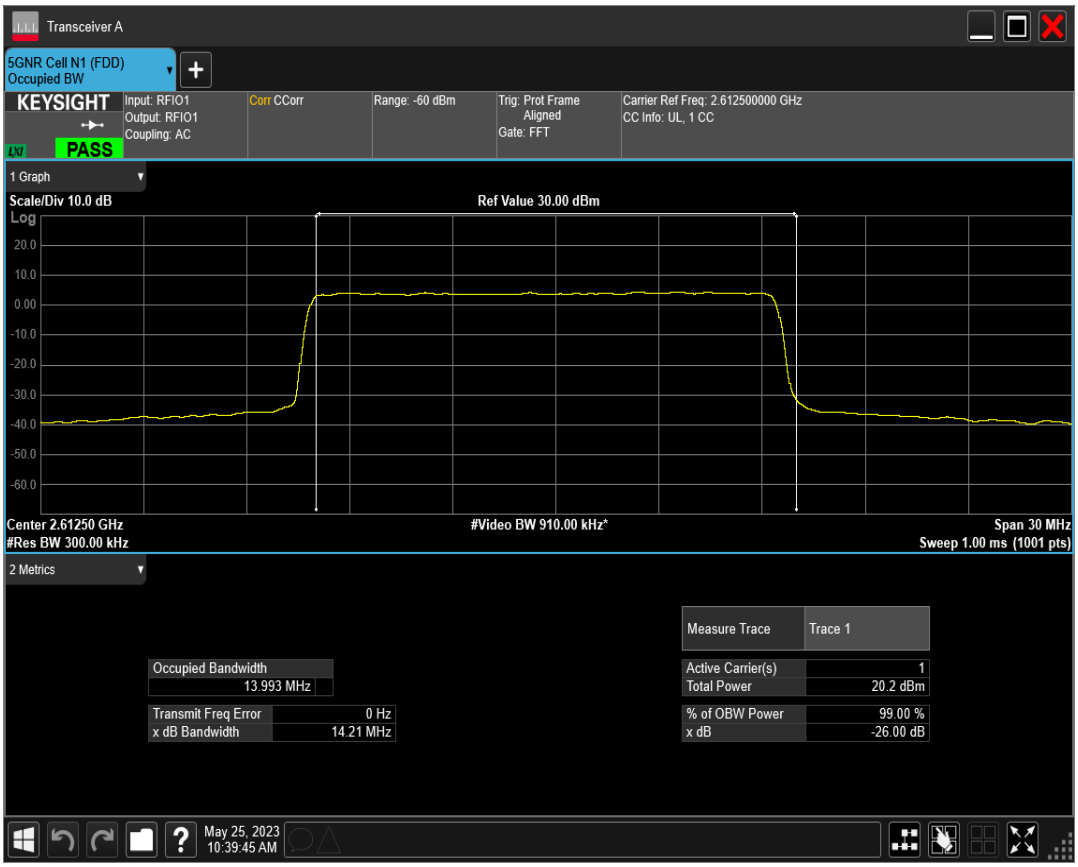


n38 SCS=15kHz DFT_QAM64 BW=15MHz Channel=522500 RB=75@0



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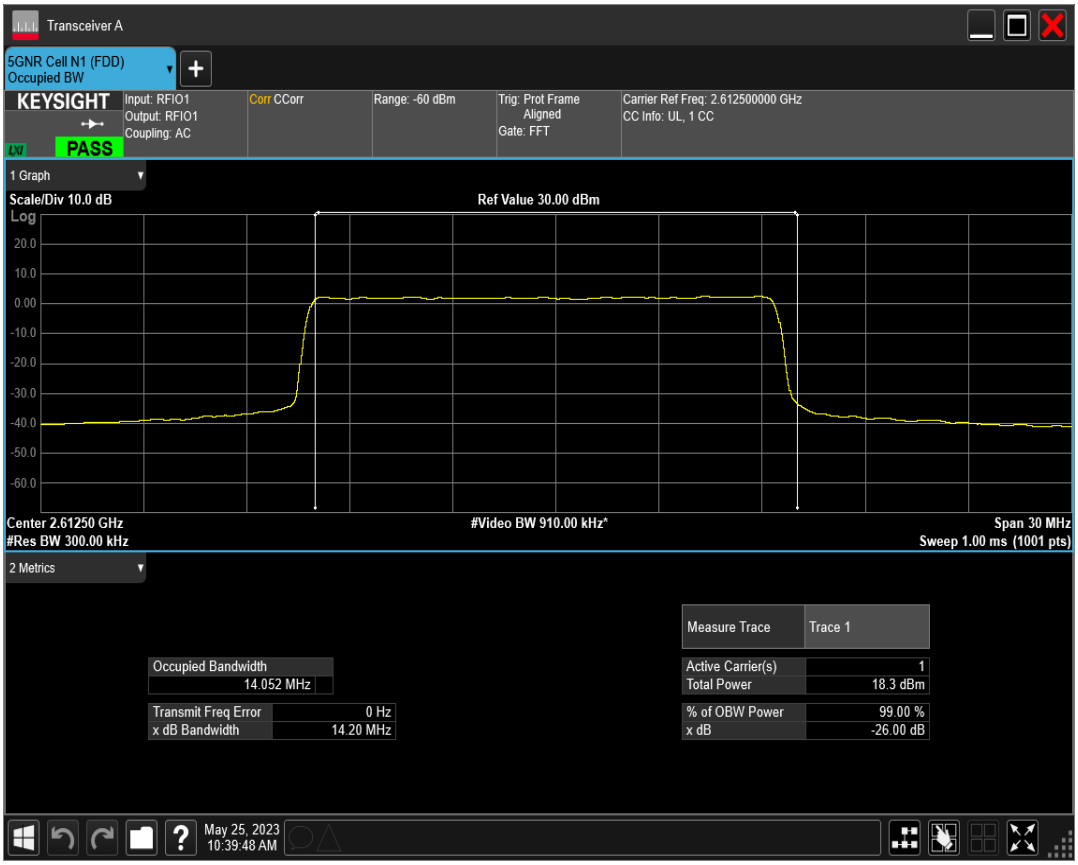
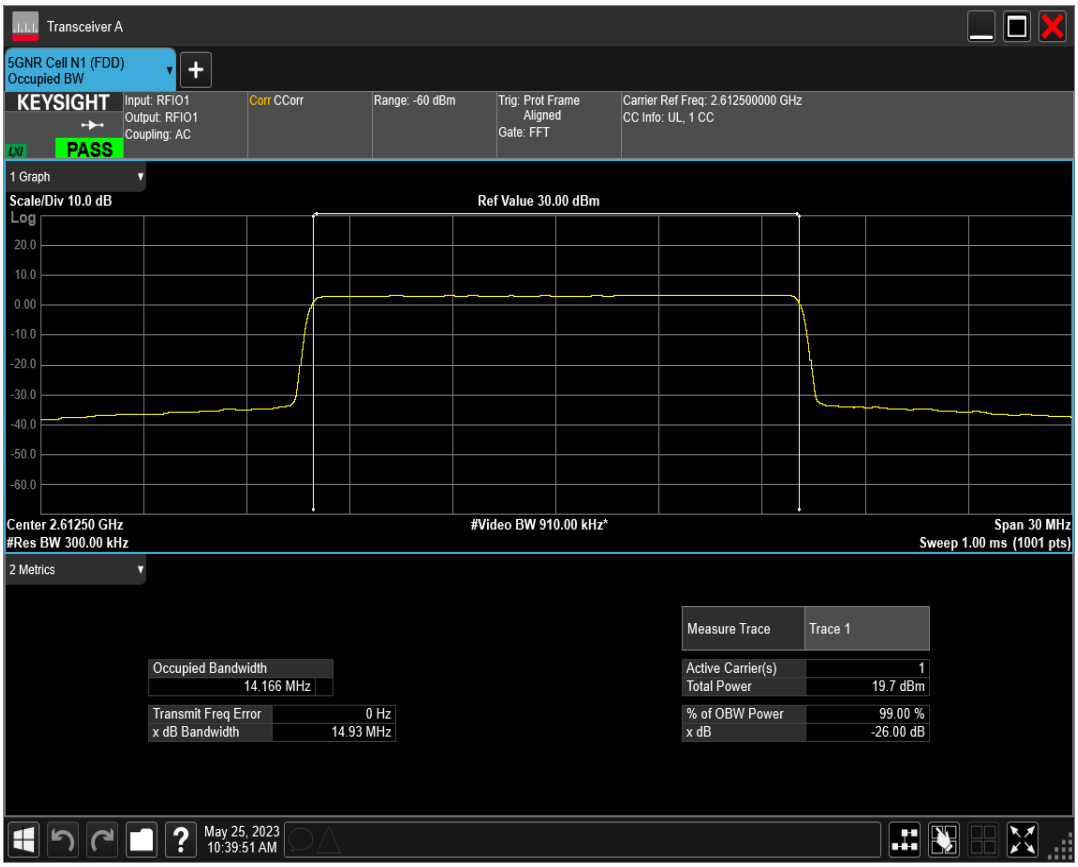
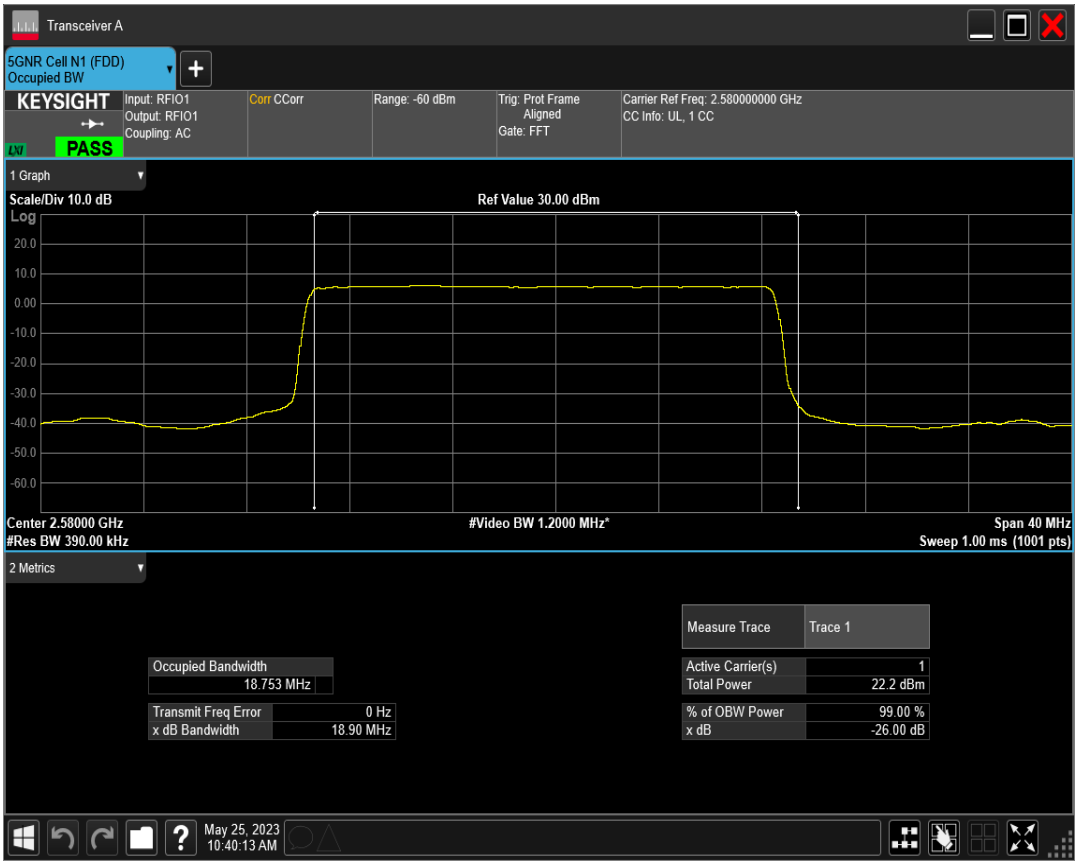


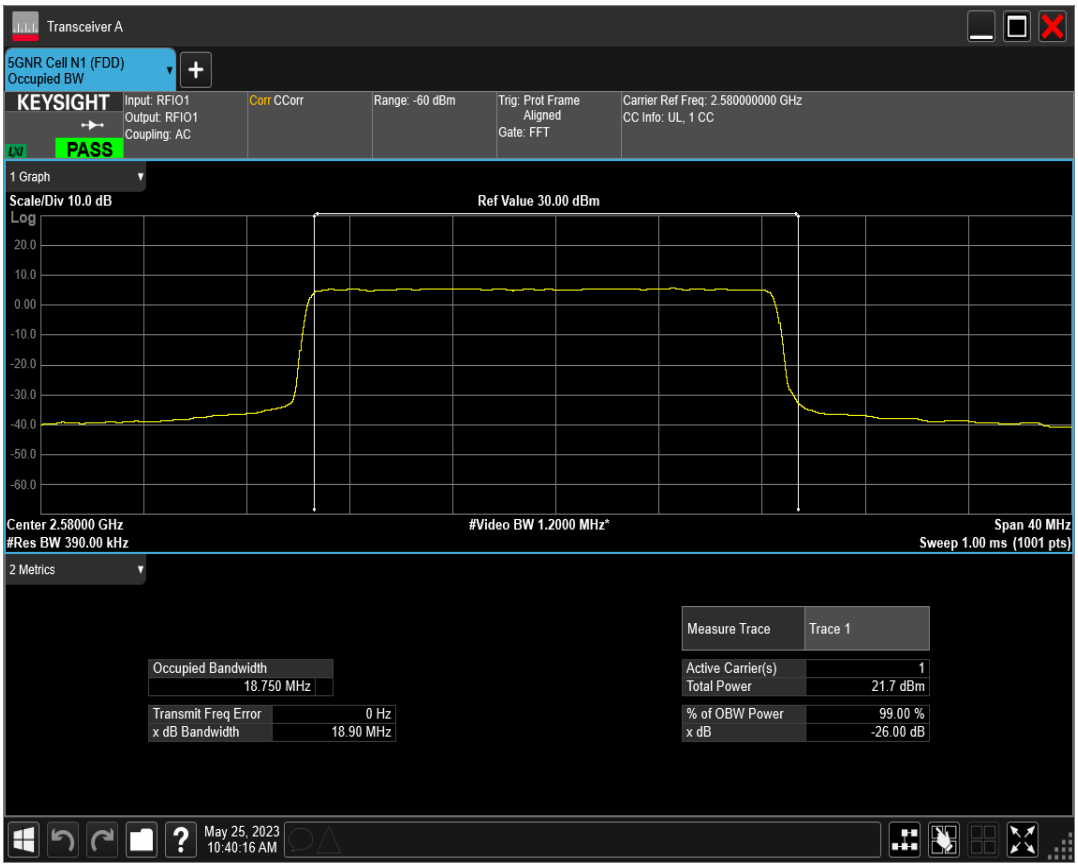
n38 SCS=15kHz CP_QPSK BW=15MHz Channel=522500 RB=79@0



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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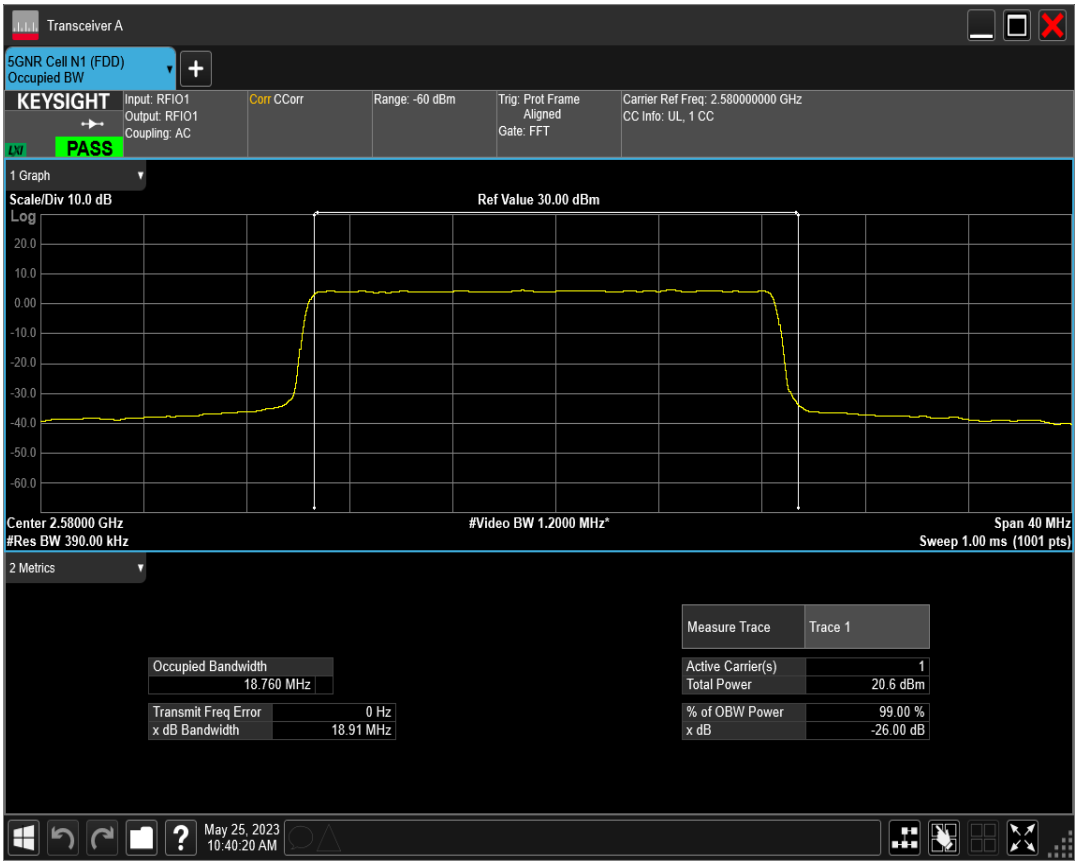

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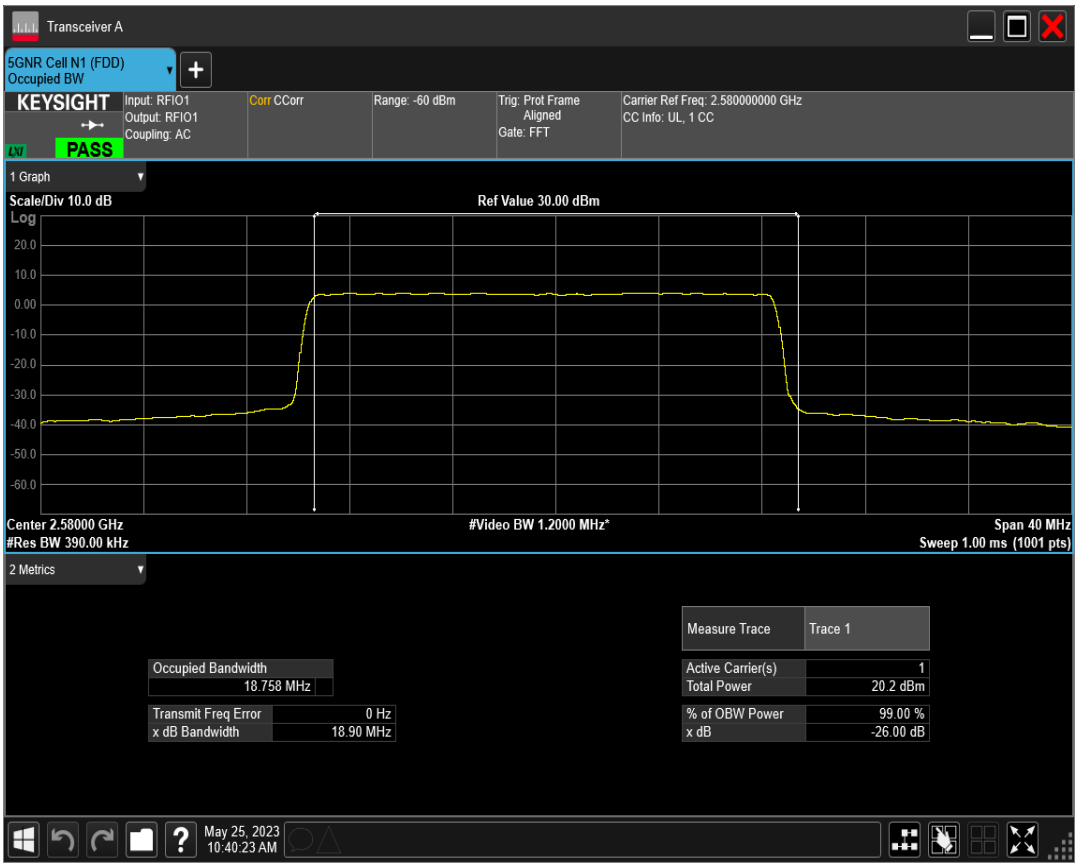

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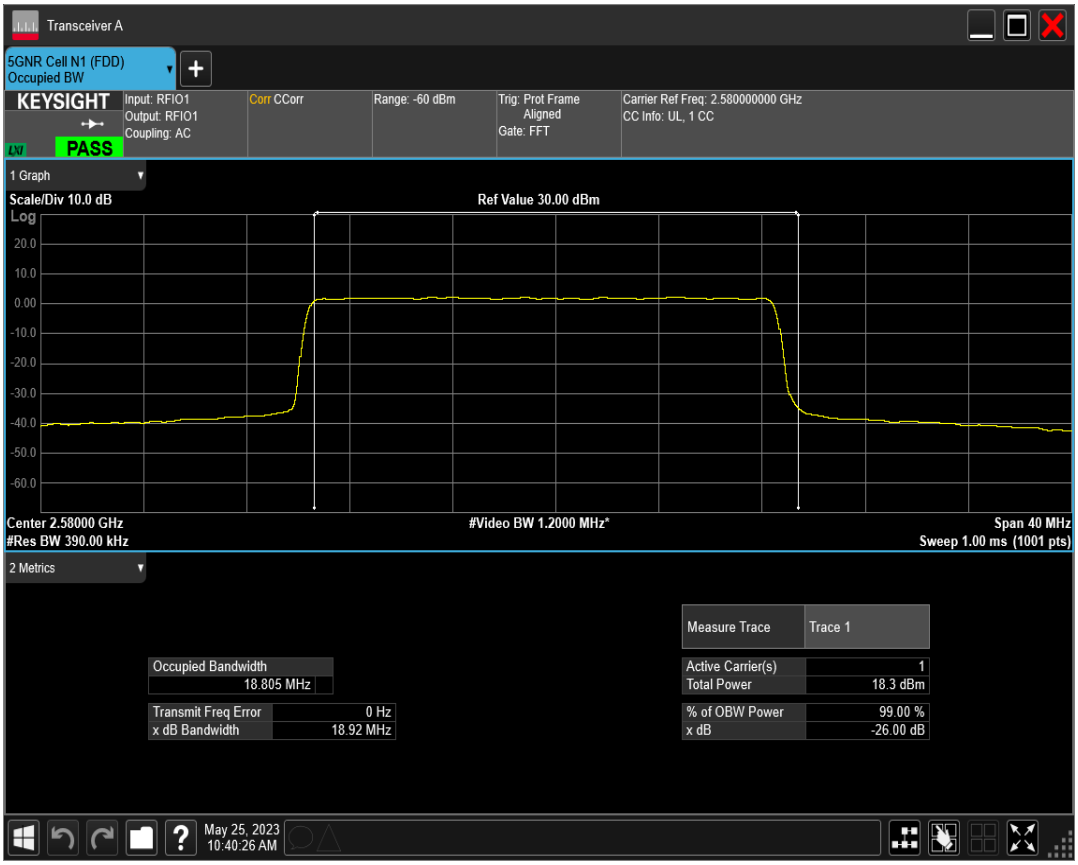
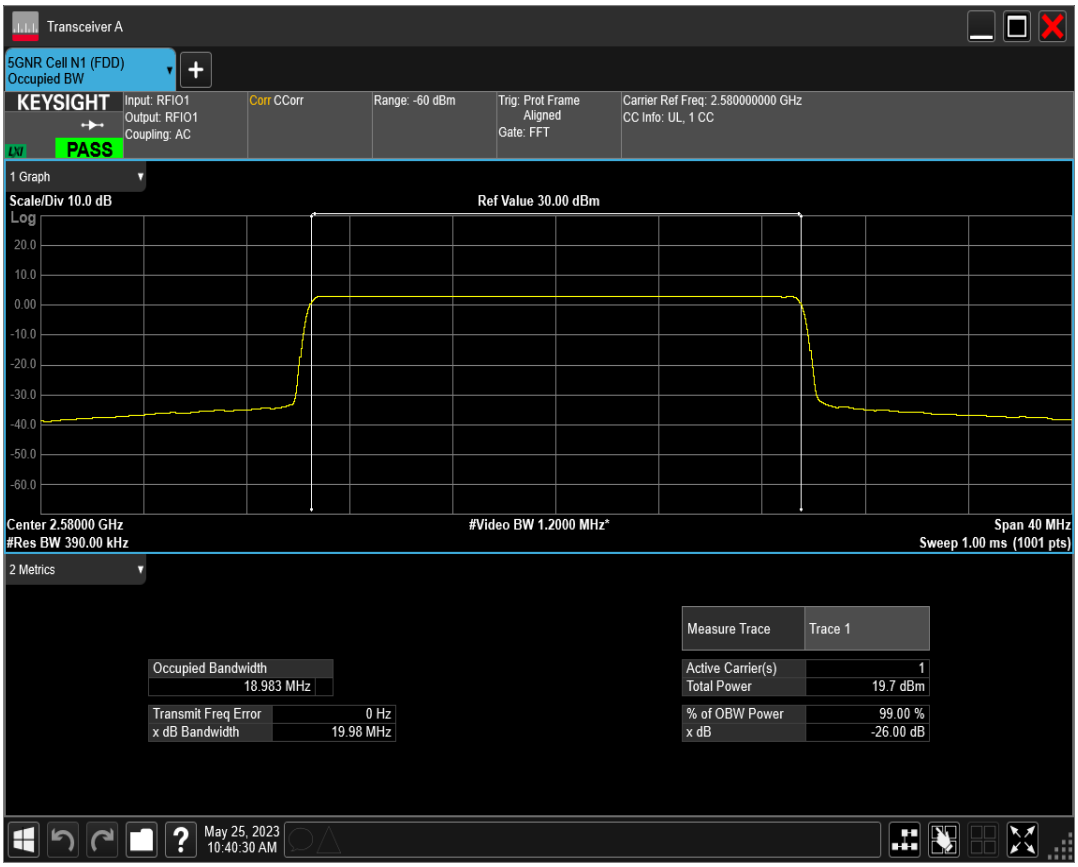
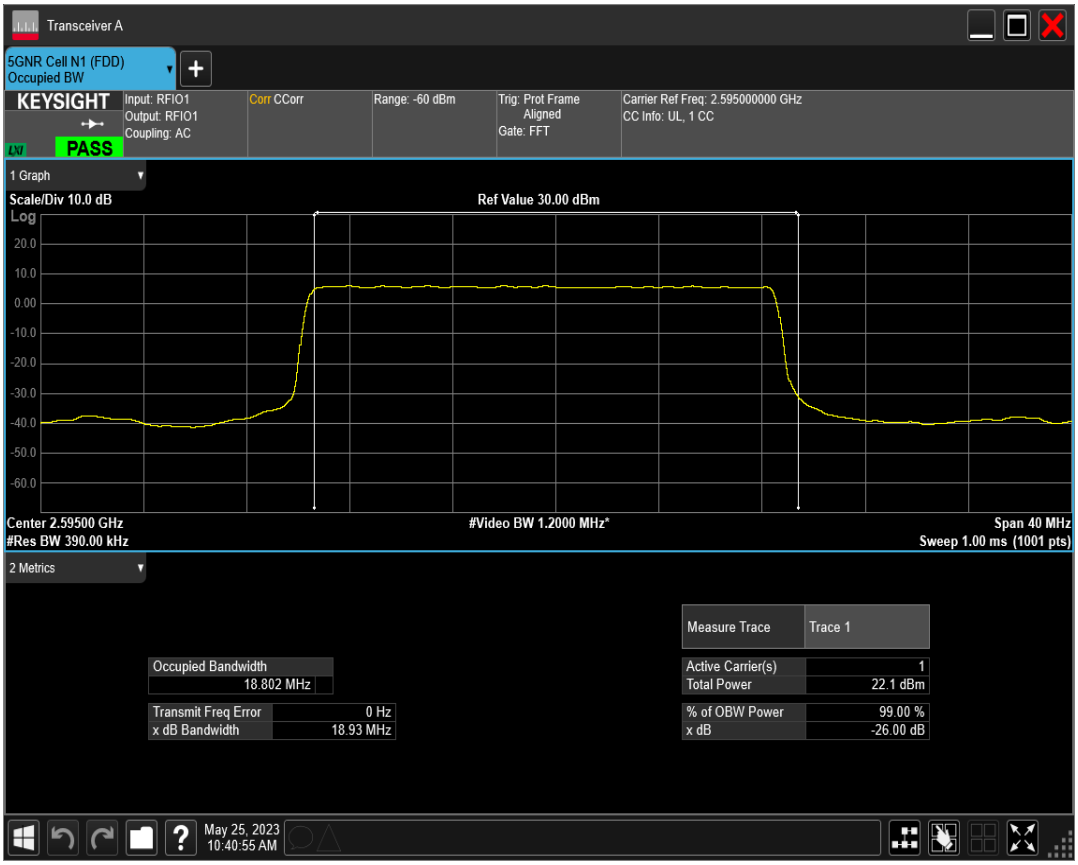


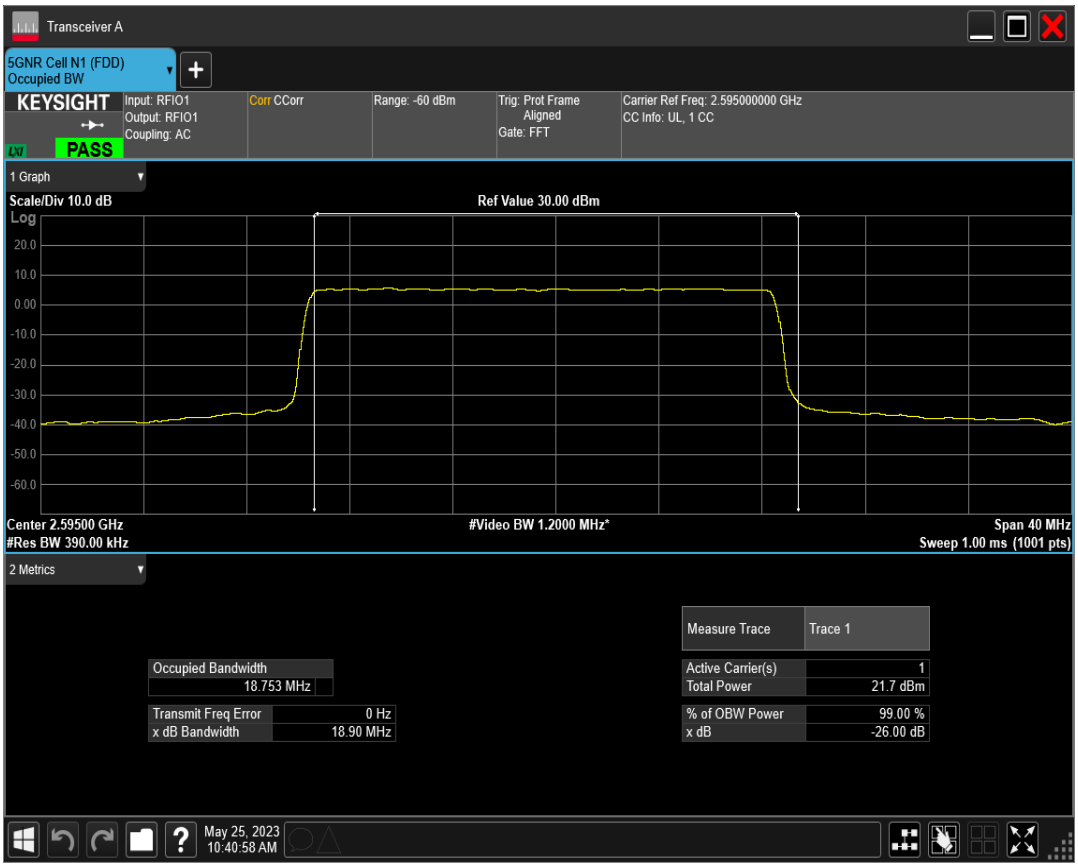
n38 SCS=15kHz CP_QPSK BW=20MHz Channel=516000 RB=106@0



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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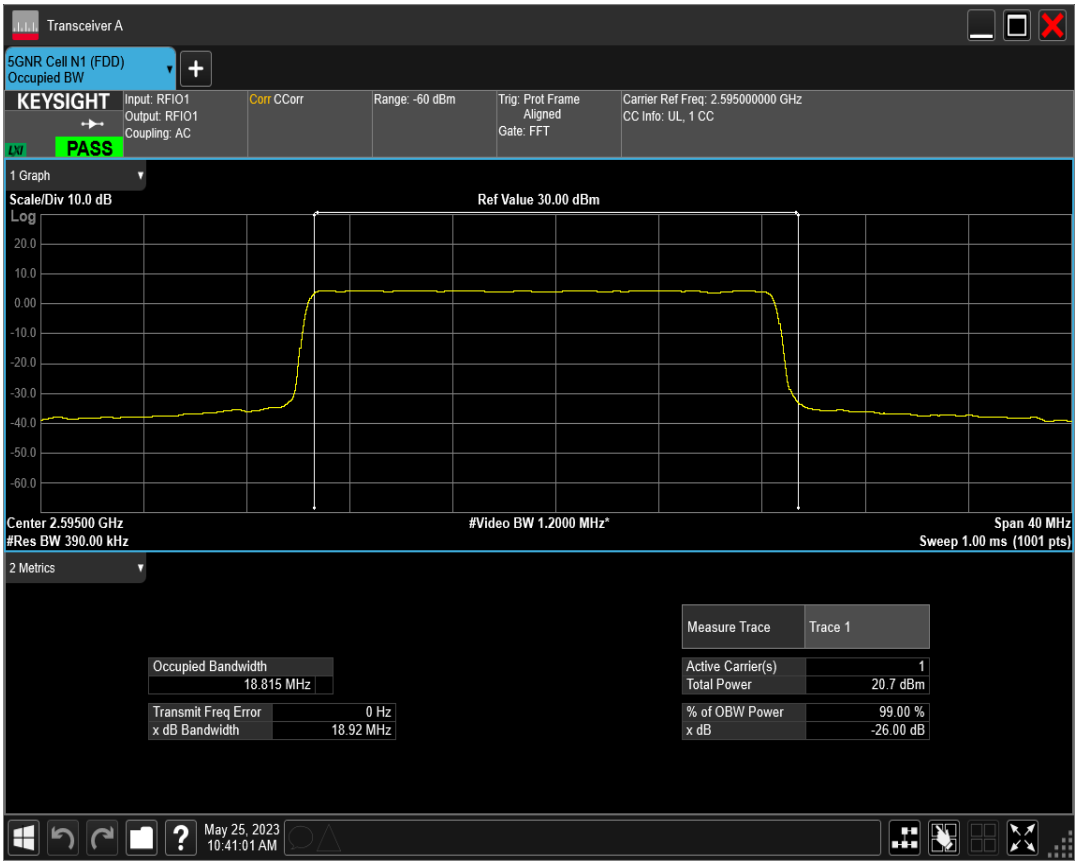

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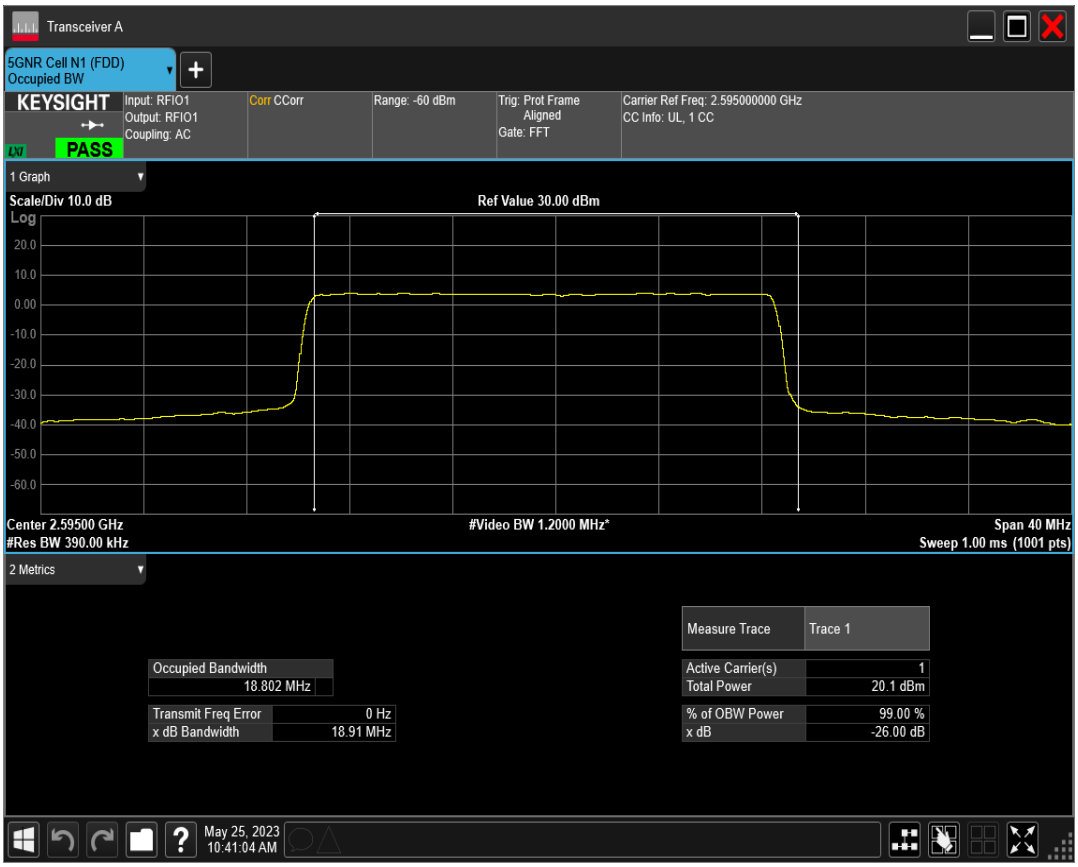

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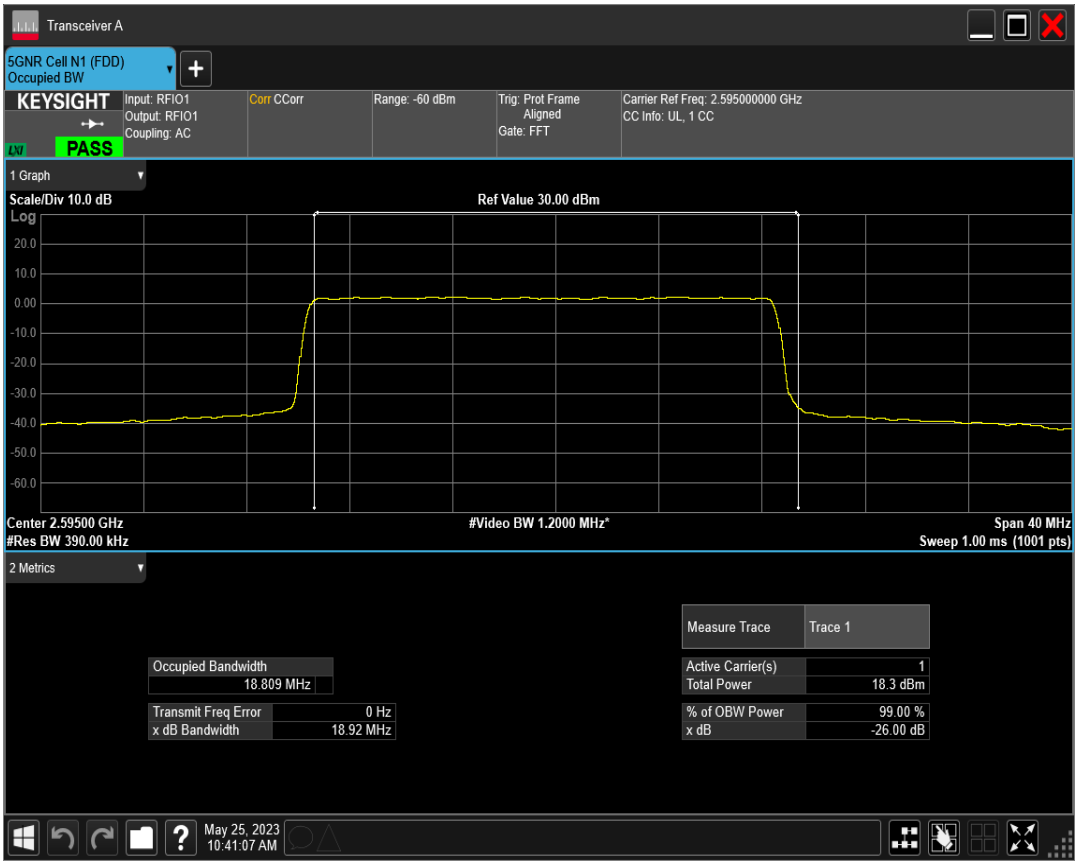

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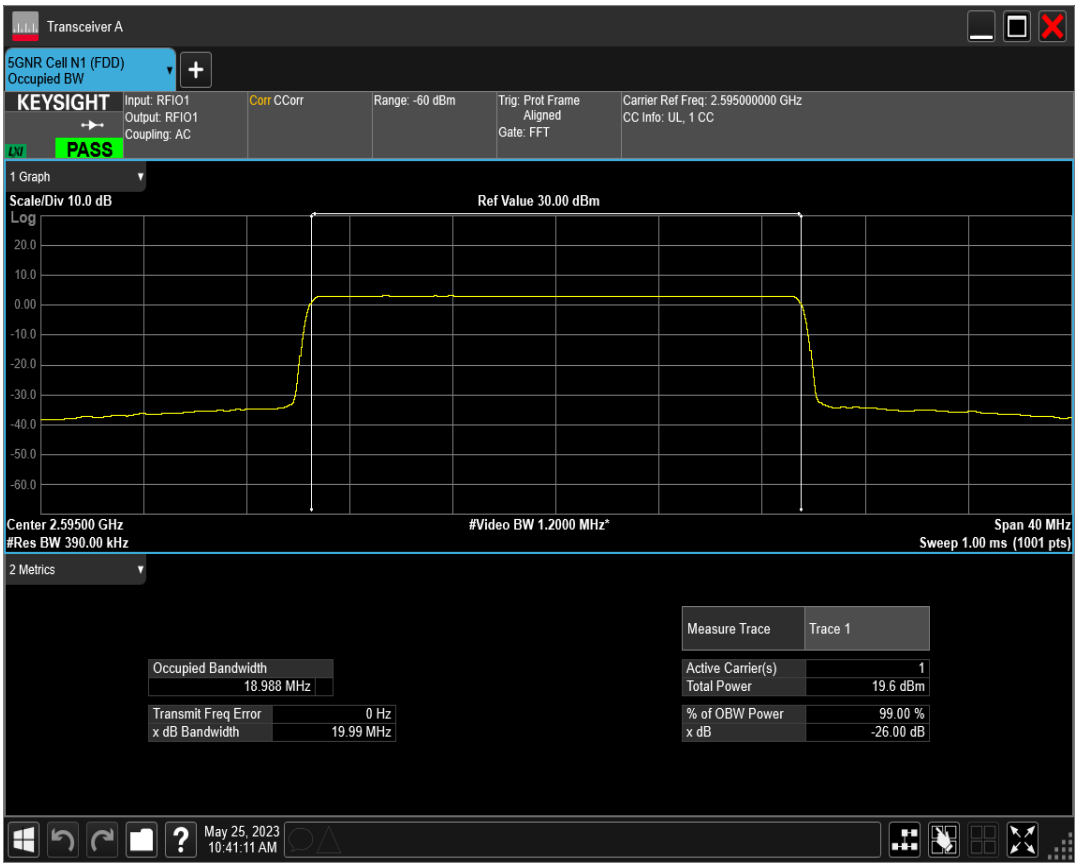
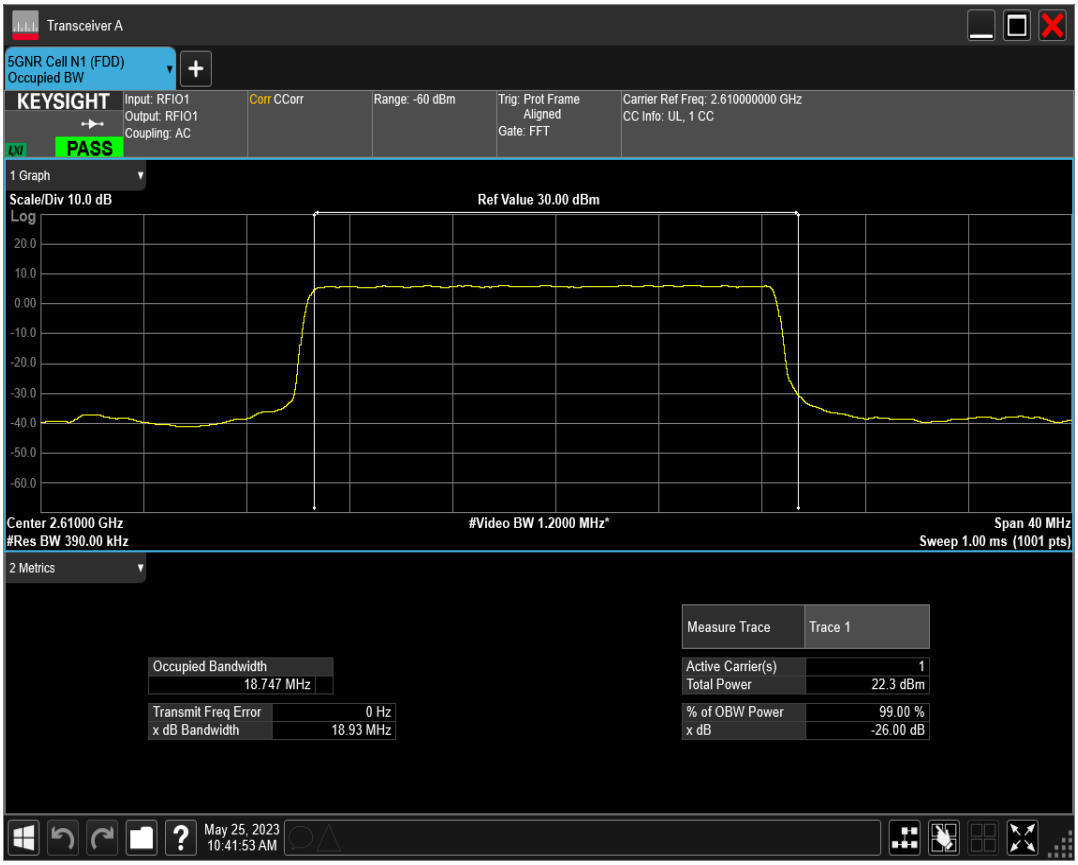
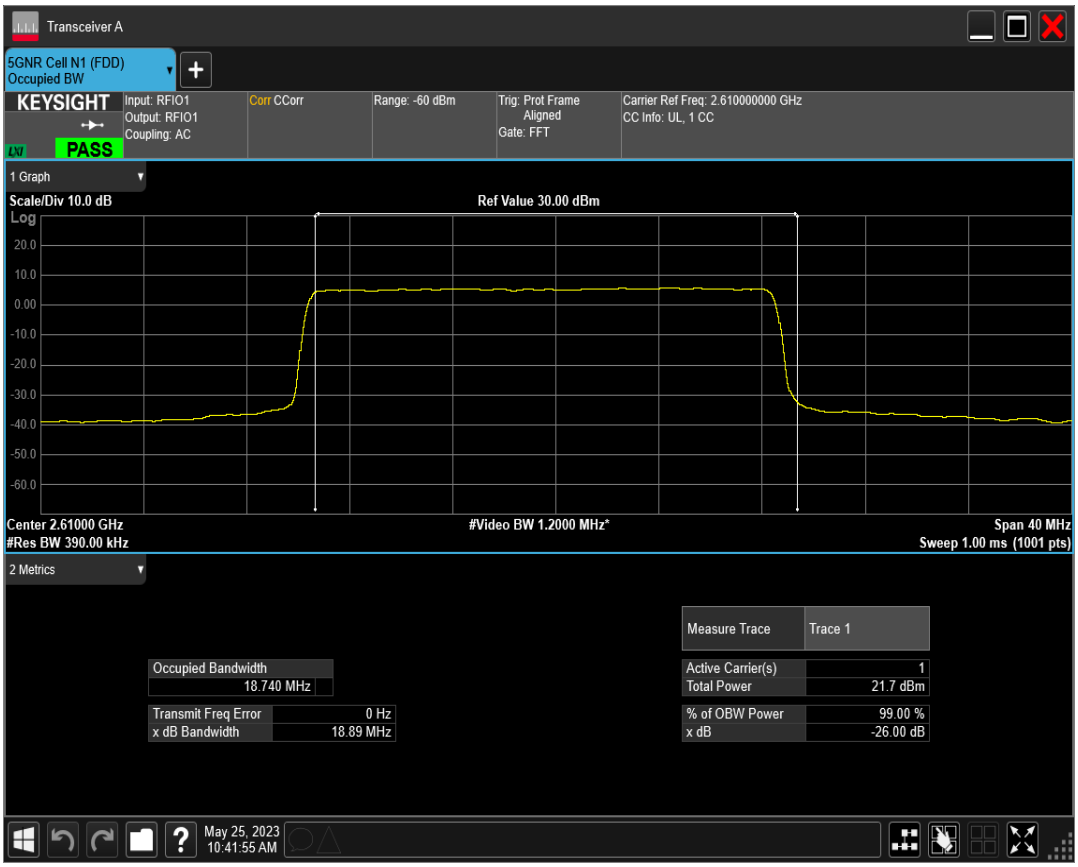


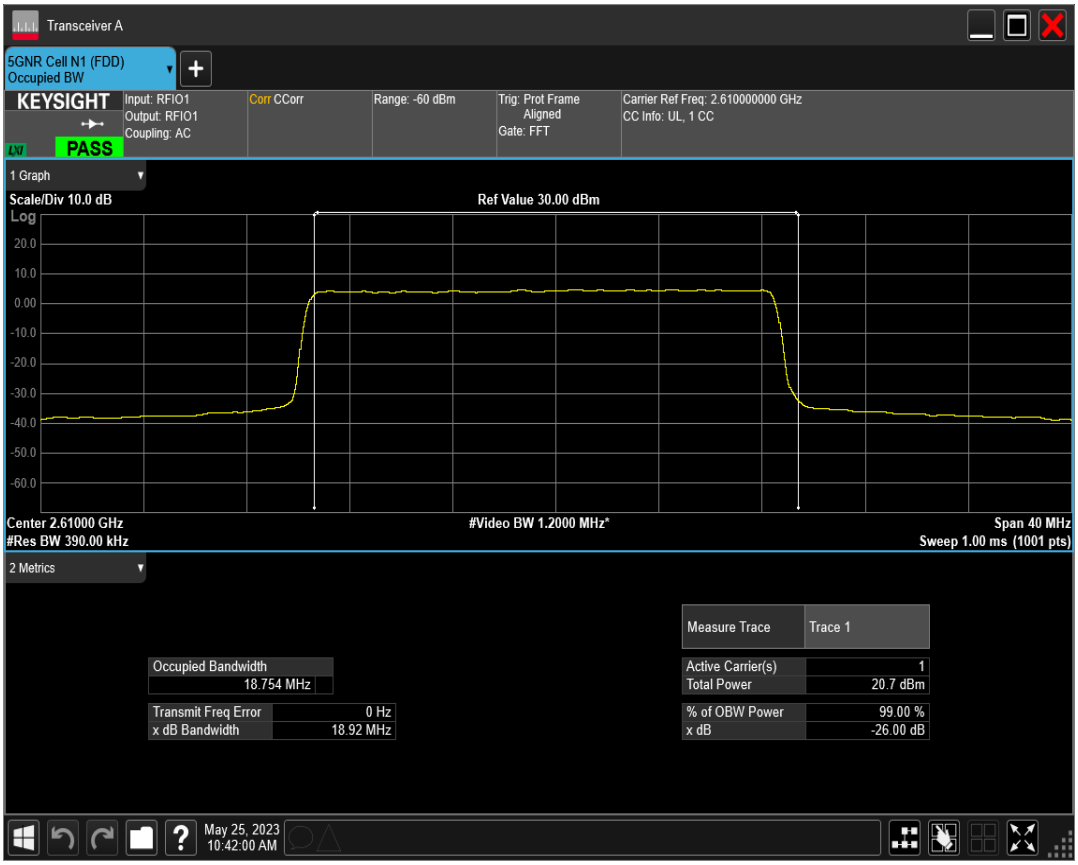
n38 SCS=15kHz DFT_BPSK BW=20MHz Channel=522000 RB=100@0



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



n38 SCS=15kHz DFT_QAM16 BW=20MHz Channel=522000 RB=100@0



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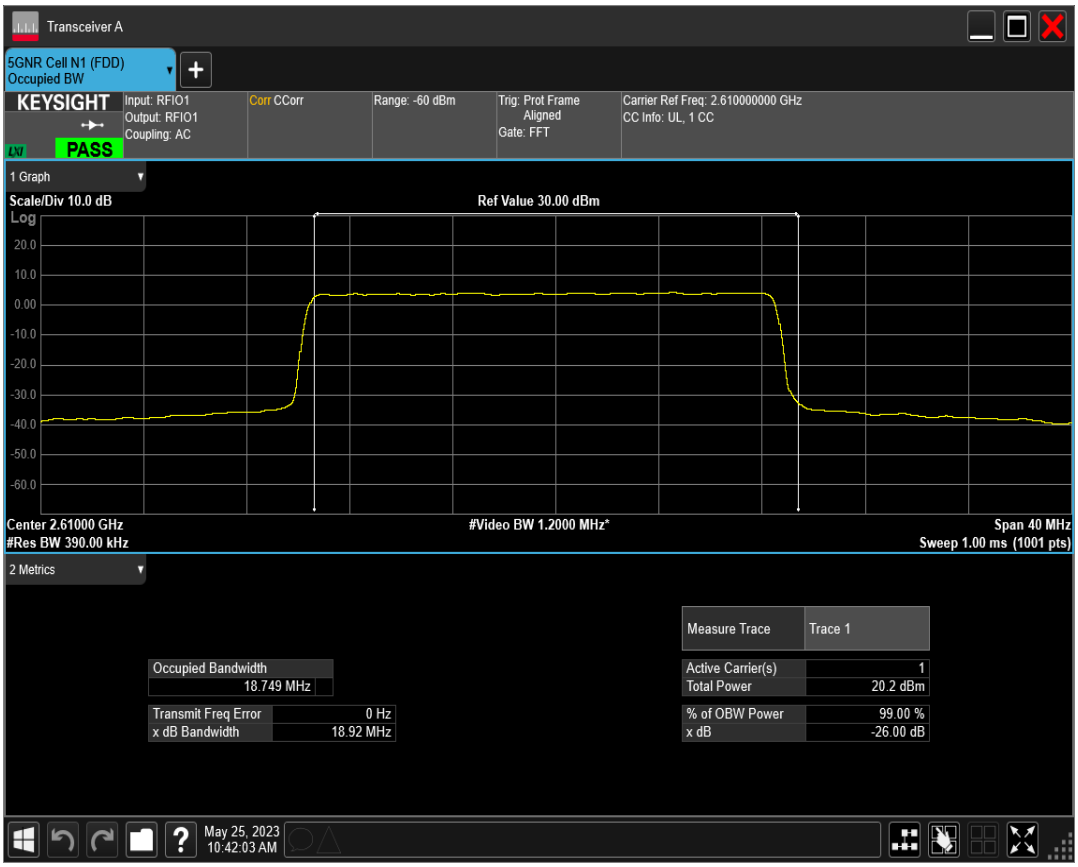

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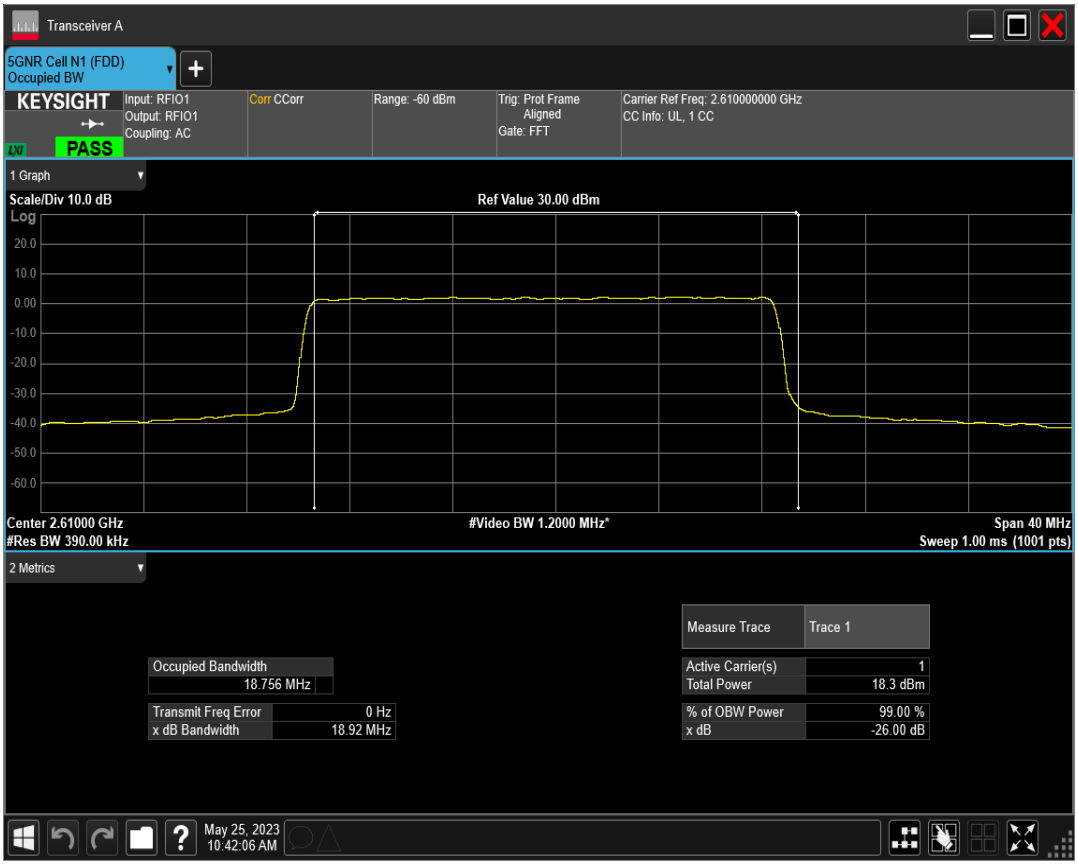
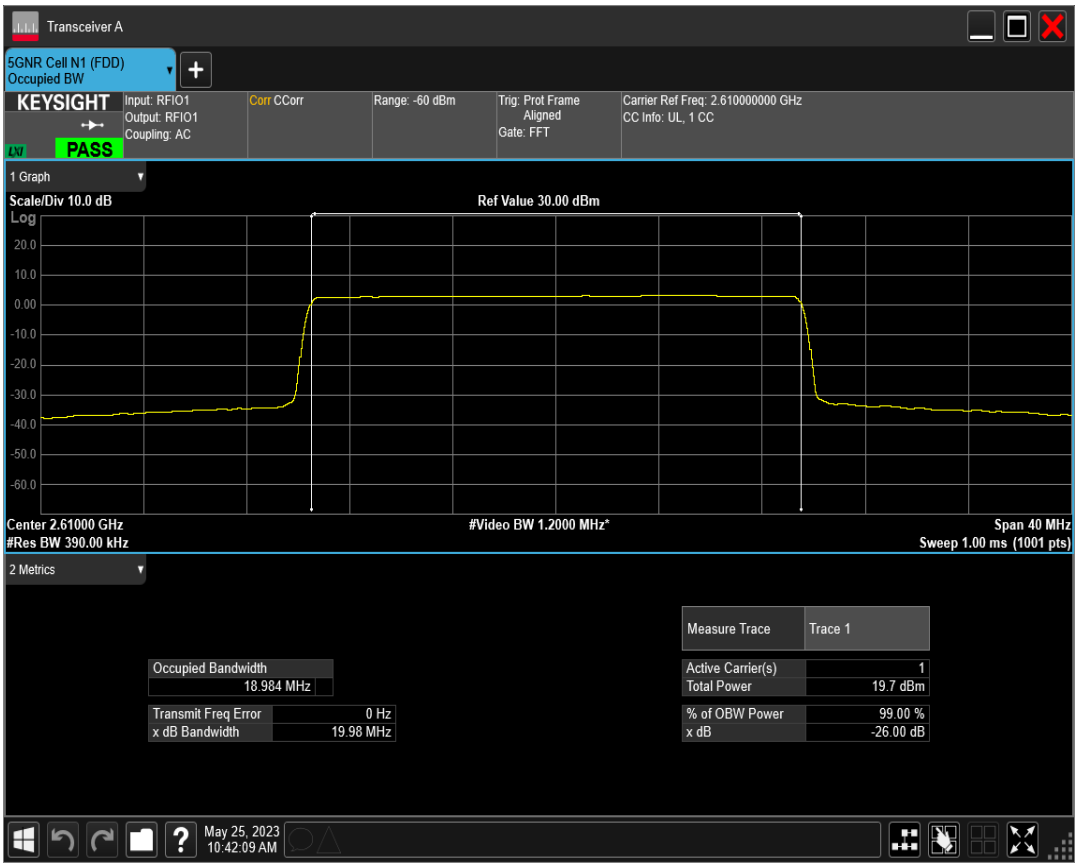
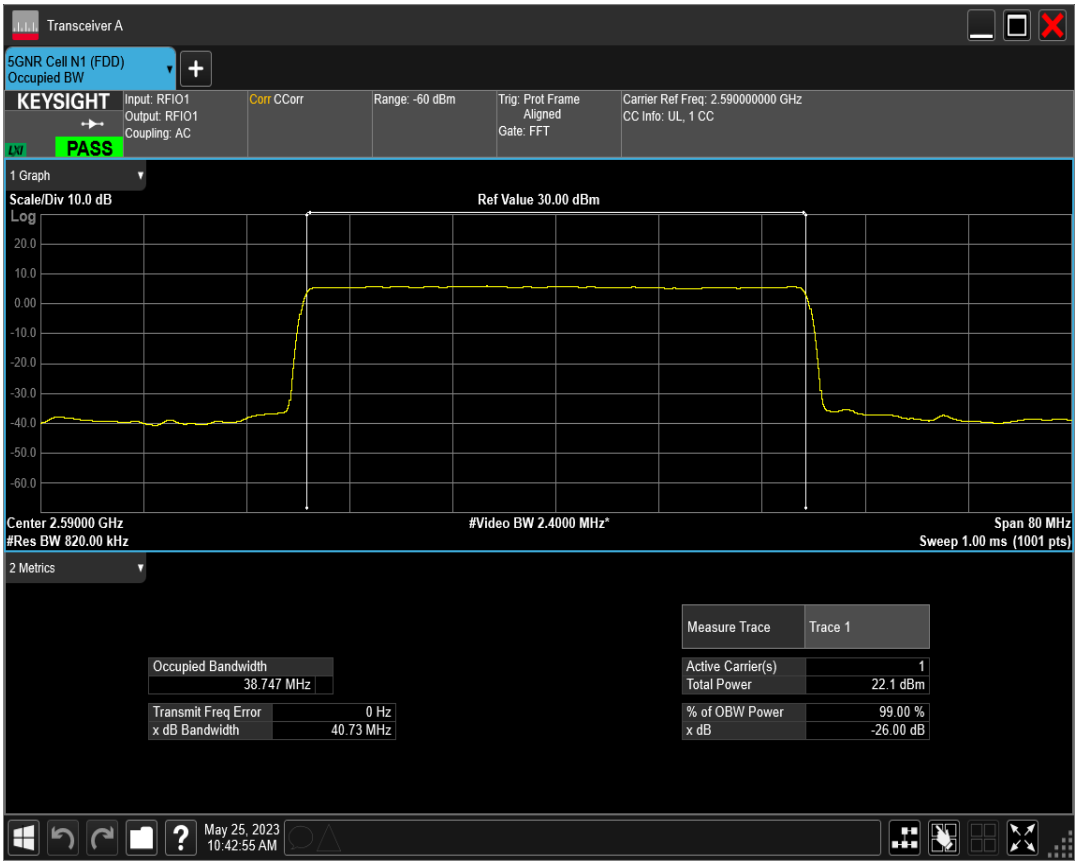


n38 SCS=15kHz CP_QPSK BW=20MHz Channel=522000 RB=106@0

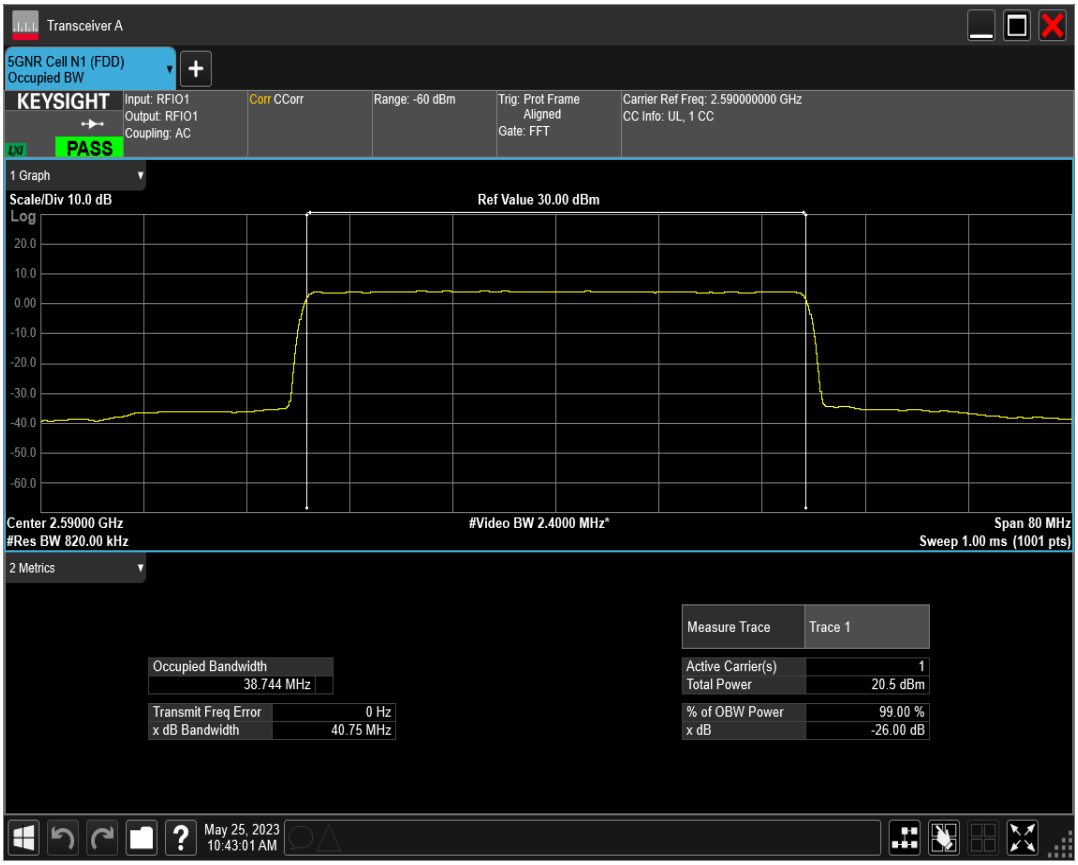


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=518000 RB=216@0

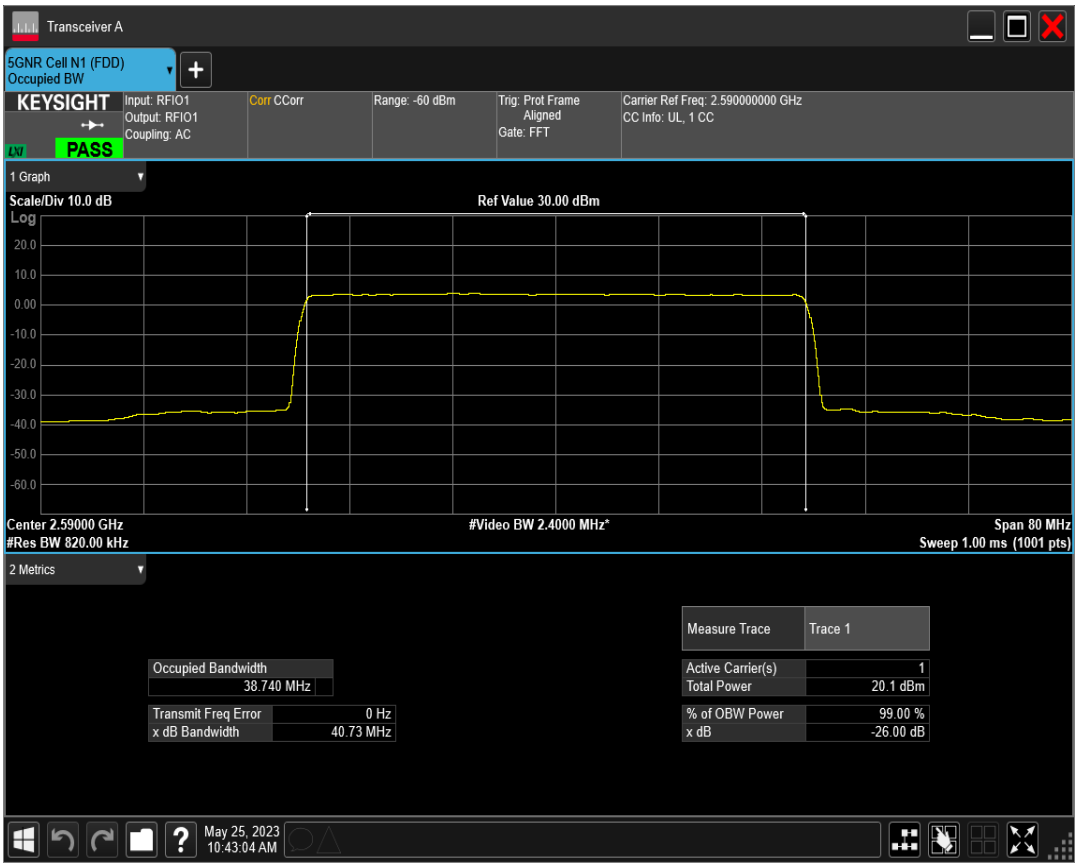


n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=518000 RB=216@0

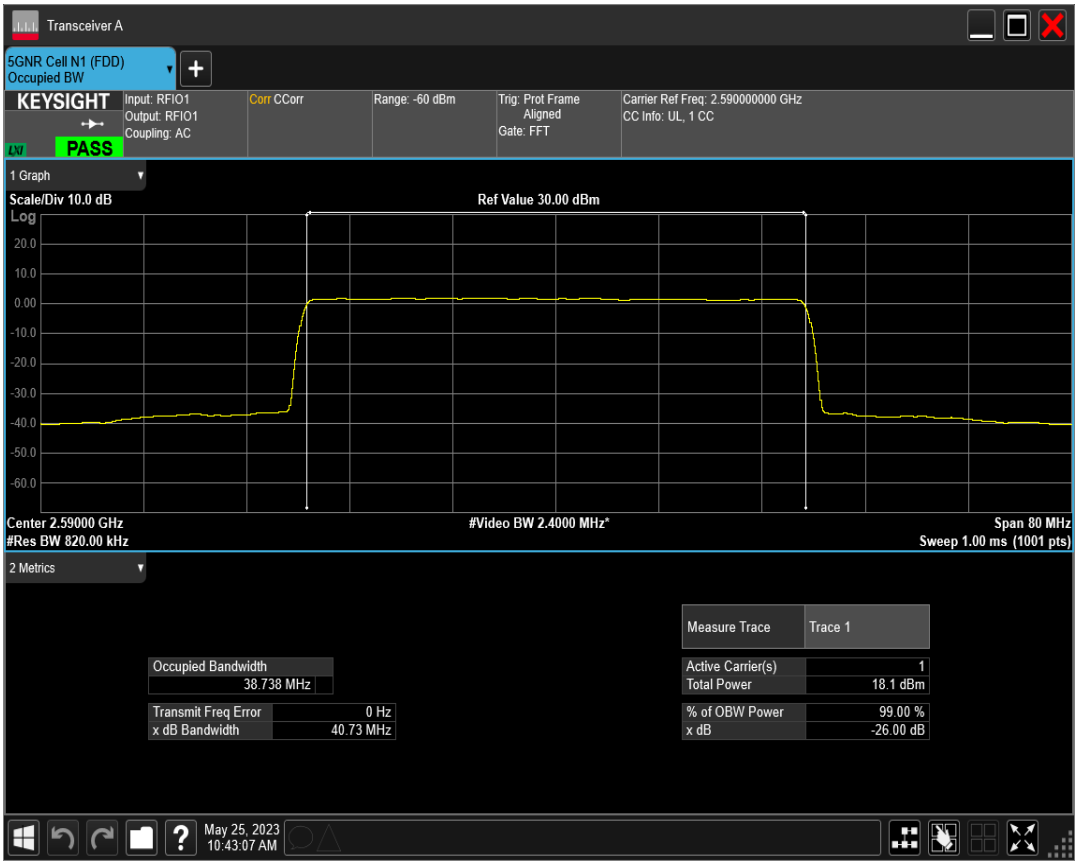
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=518000 RB=216@0



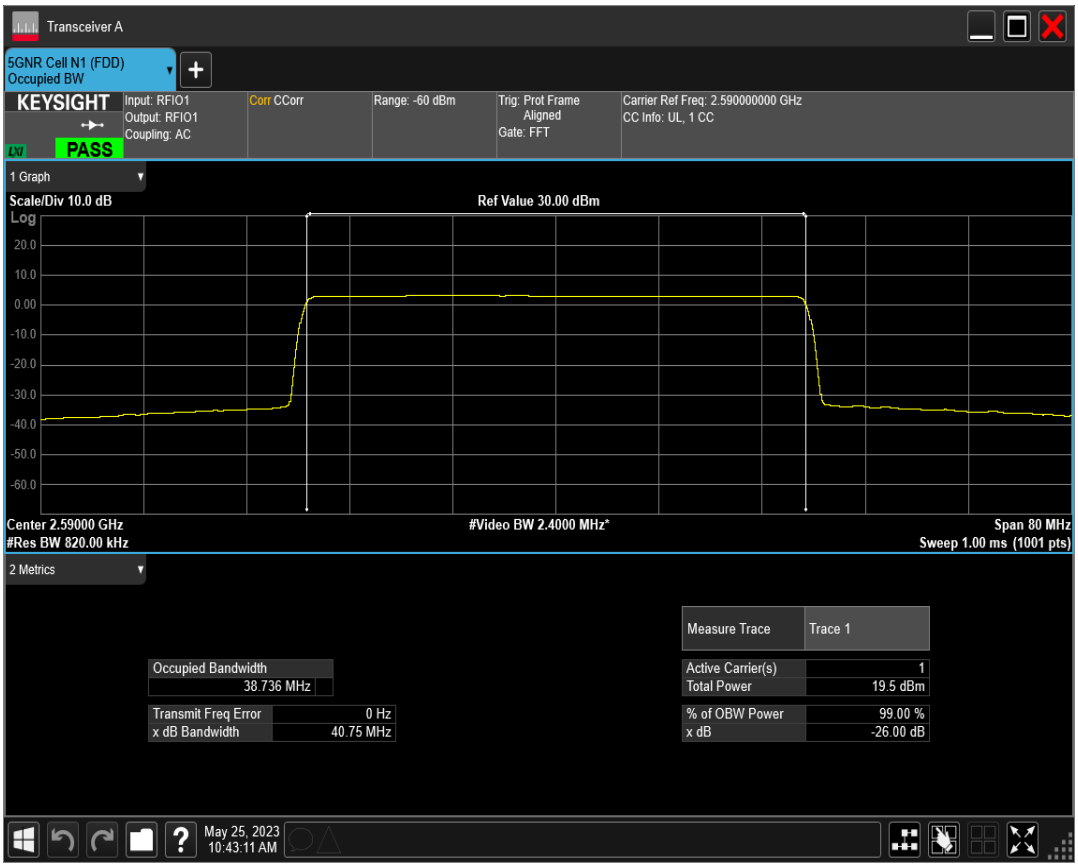
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=518000 RB=216@0



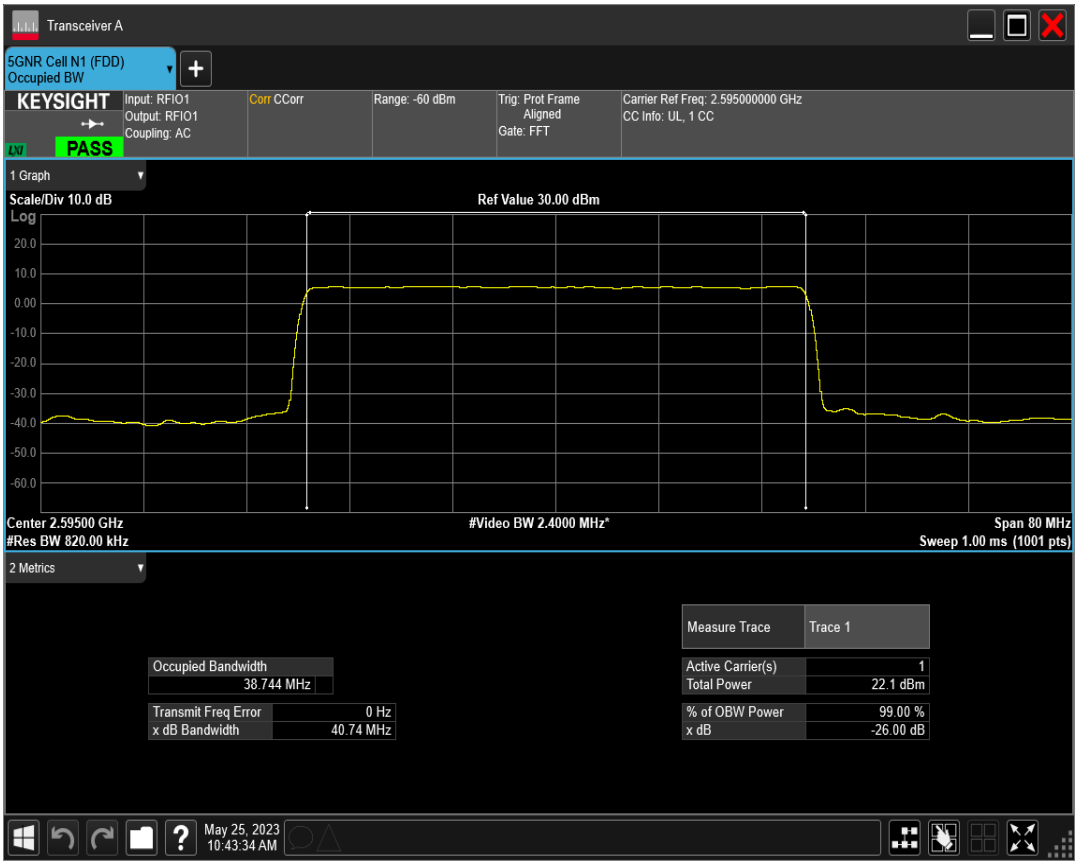
n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=518000 RB=216@0



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

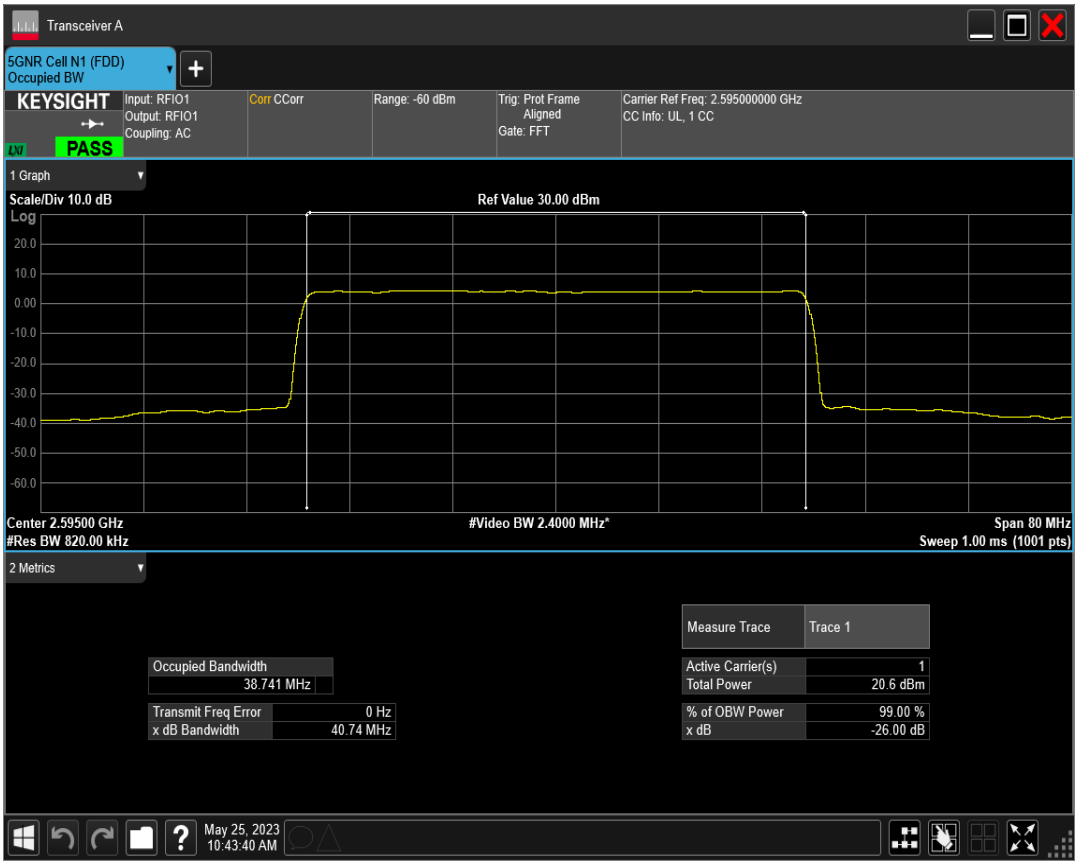


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=519000 RB=216@0

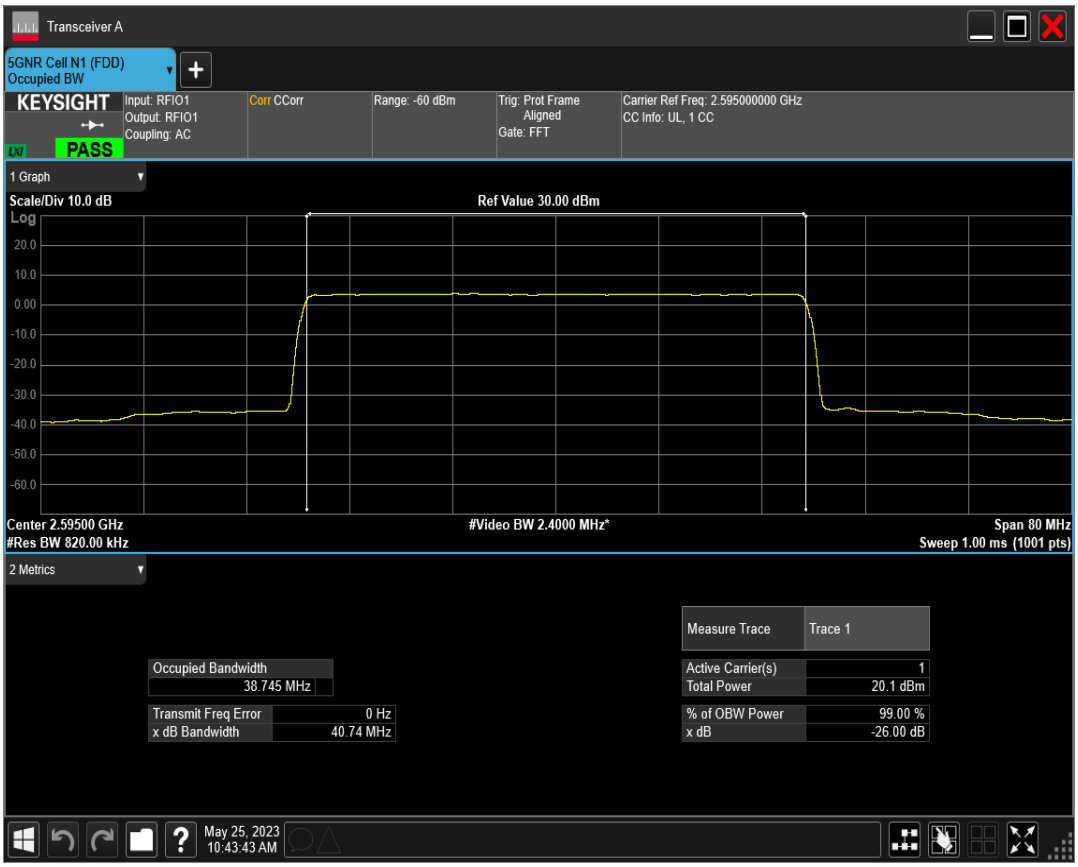


n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=519000 RB=216@0

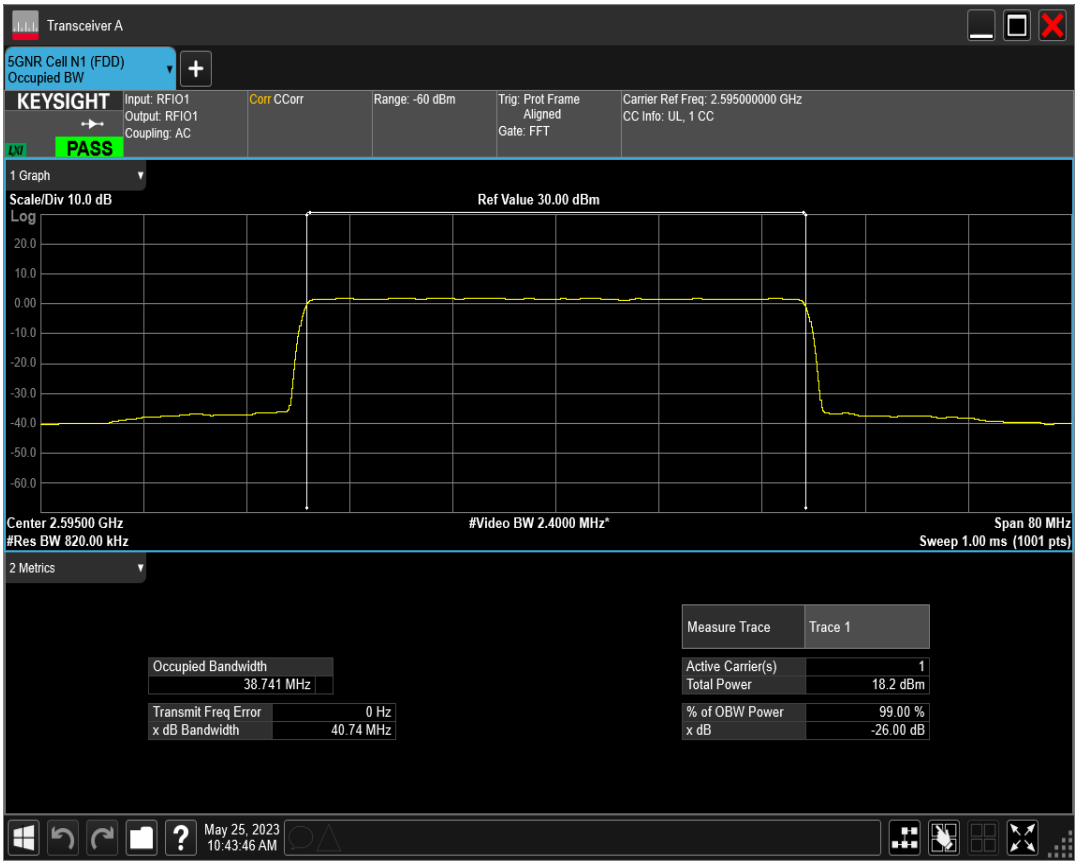
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=519000 RB=216@0



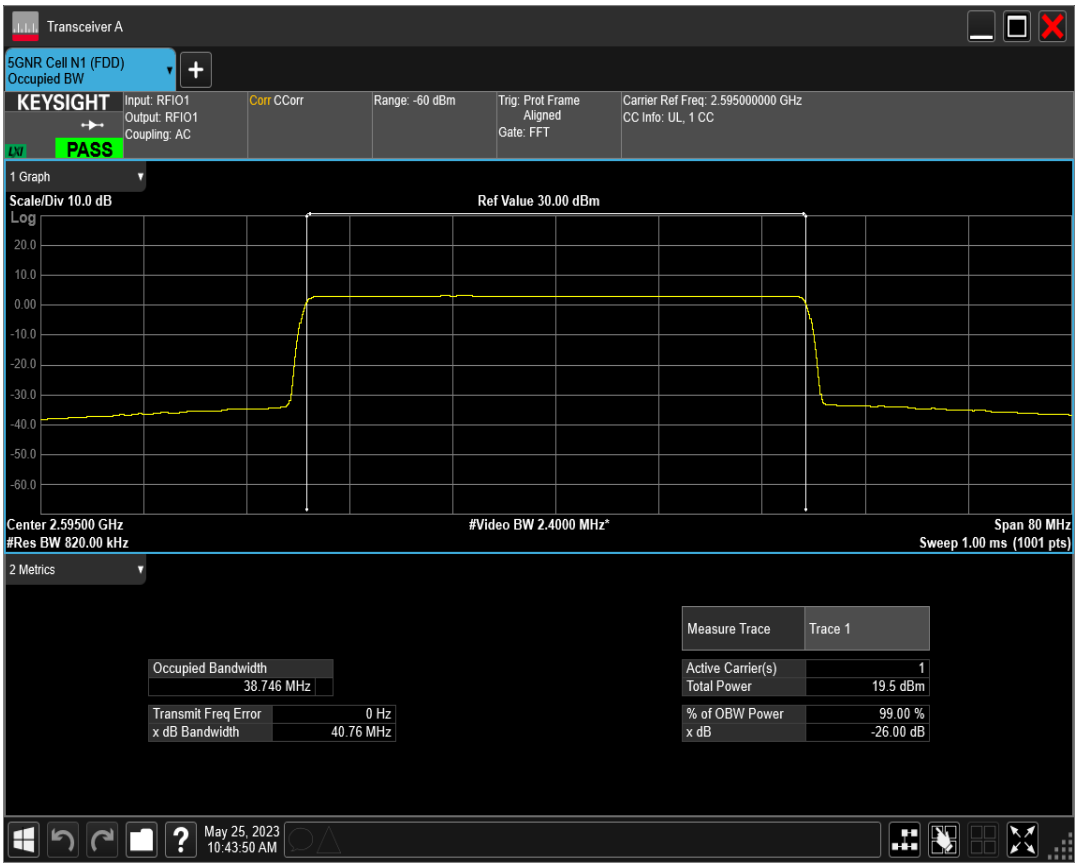
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=519000 RB=216@0



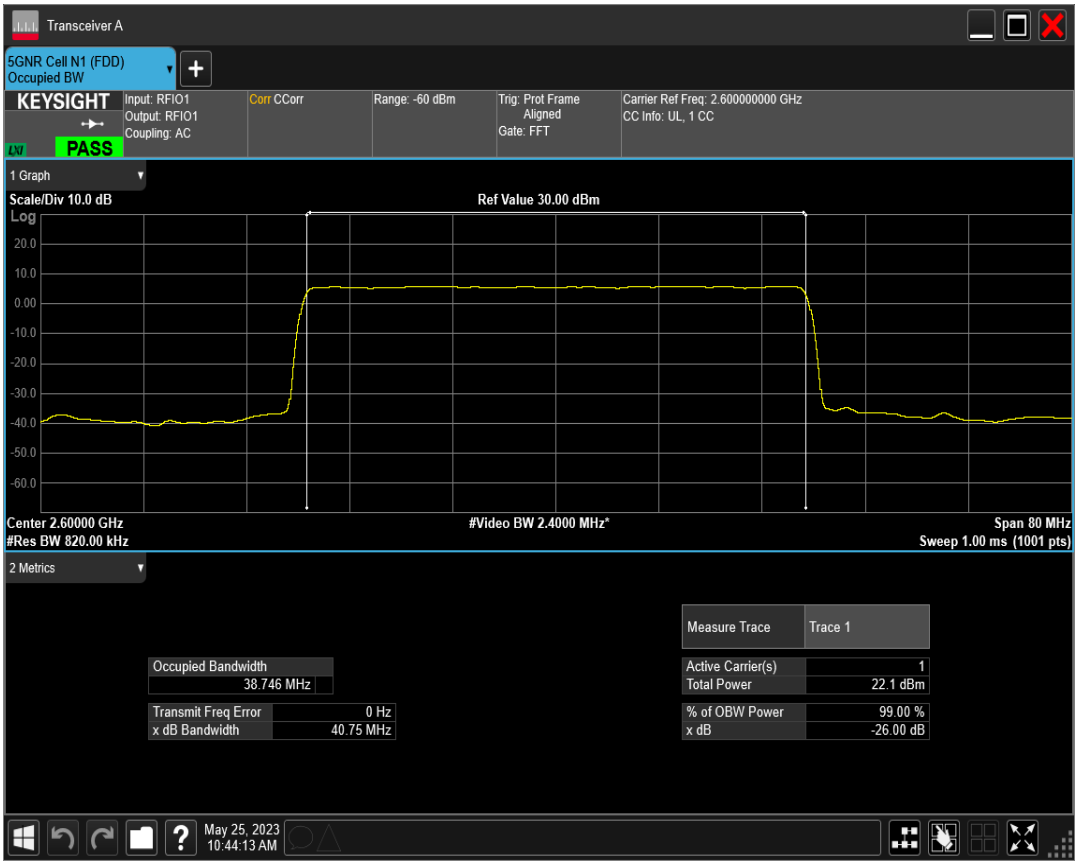
n38 SCS=15kHz DFT_QAM256 BW=40MHz Channel=519000 RB=216@0



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

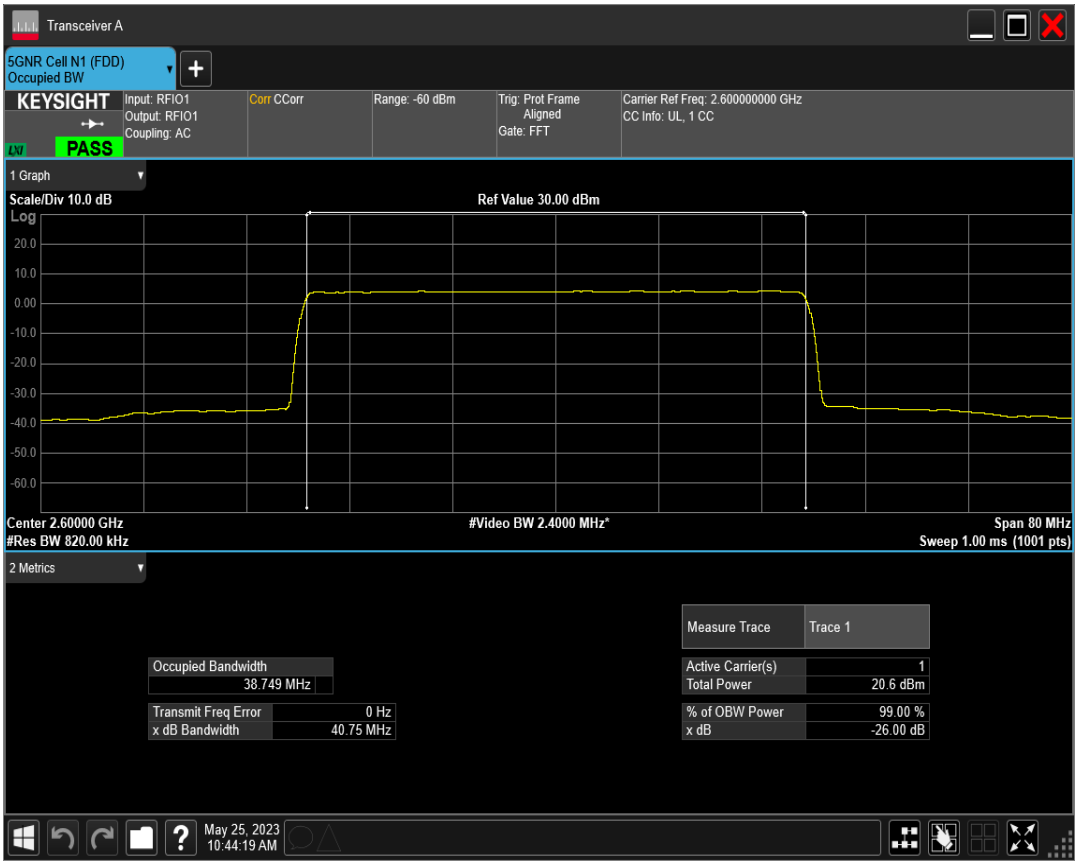


n38 SCS=15kHz DFT_BPSK BW=40MHz Channel=520000 RB=216@0

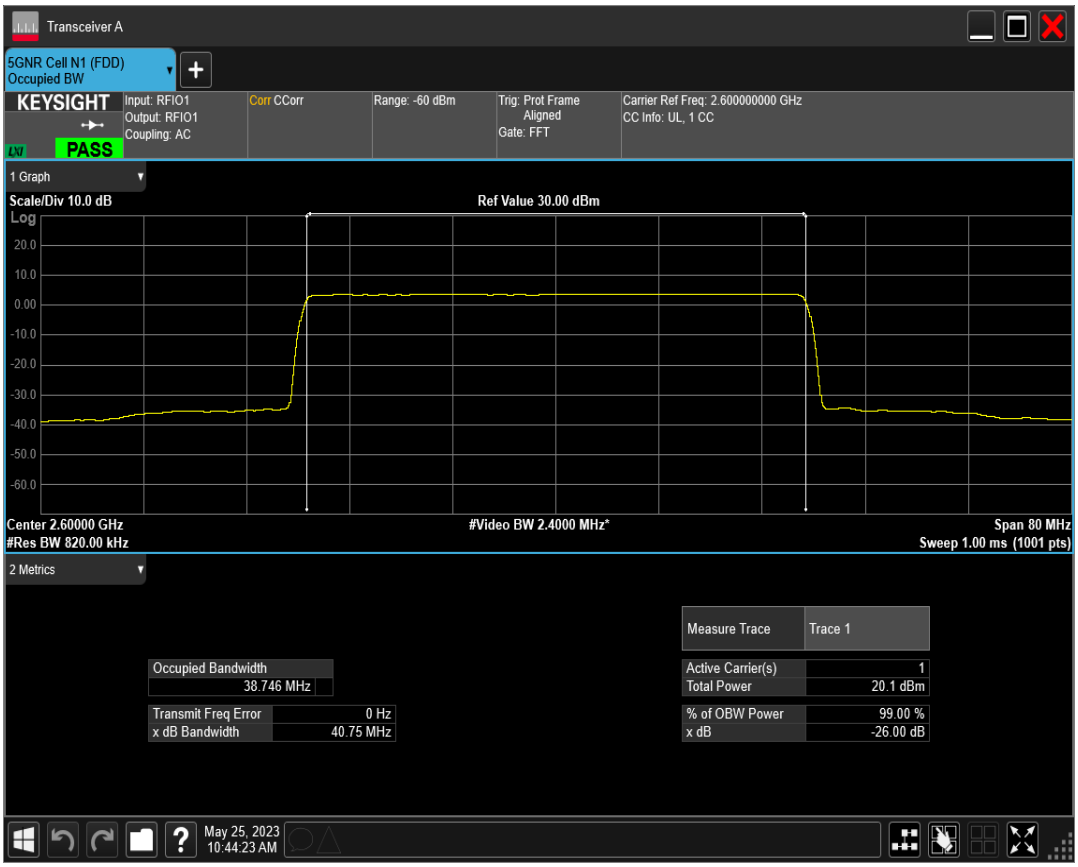


n38 SCS=15kHz DFT_QPSK BW=40MHz Channel=520000 RB=216@0

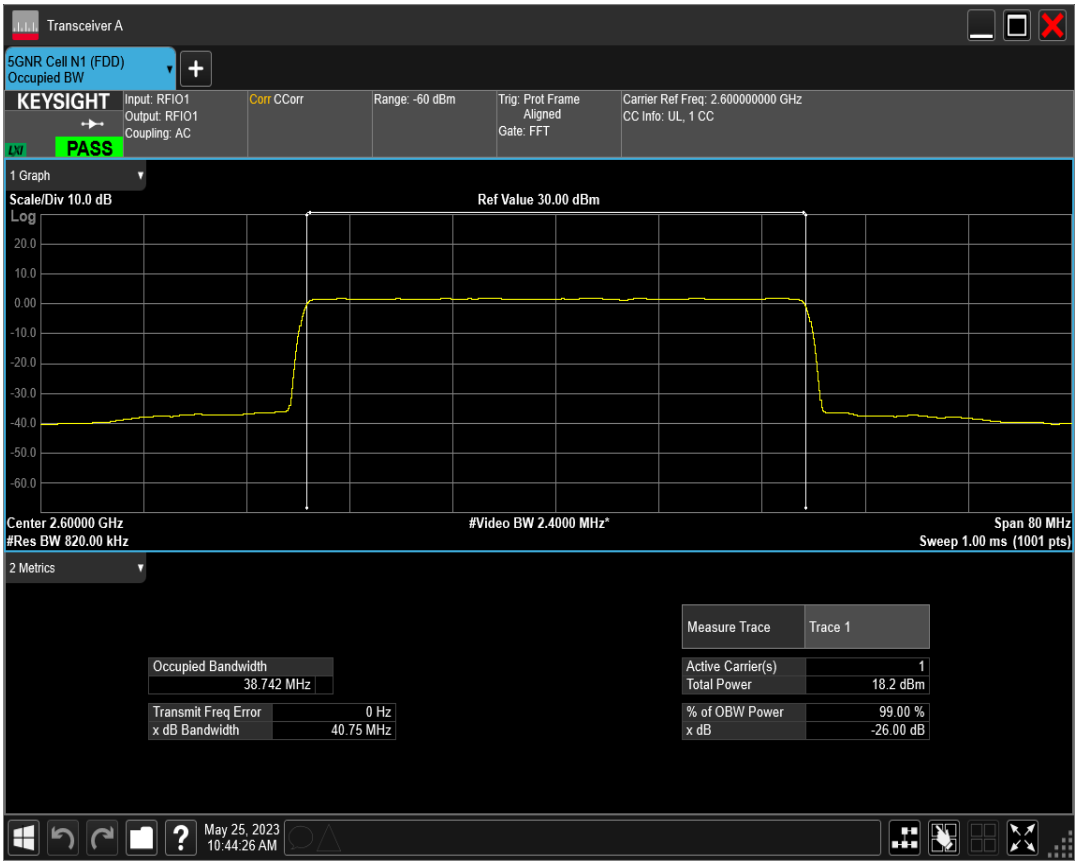
n38 SCS=15kHz DFT_QAM16 BW=40MHz Channel=520000 RB=216@0



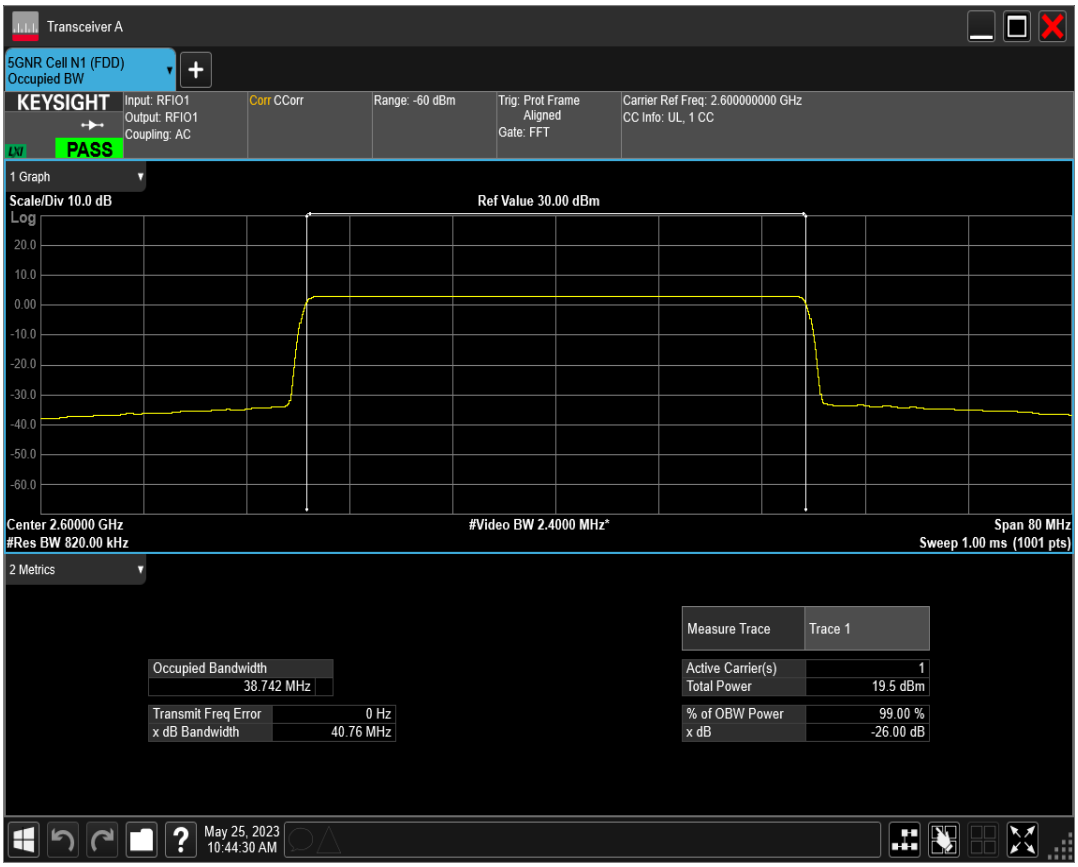
n38 SCS=15kHz DFT_QAM64 BW=40MHz Channel=520000 RB=216@0



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



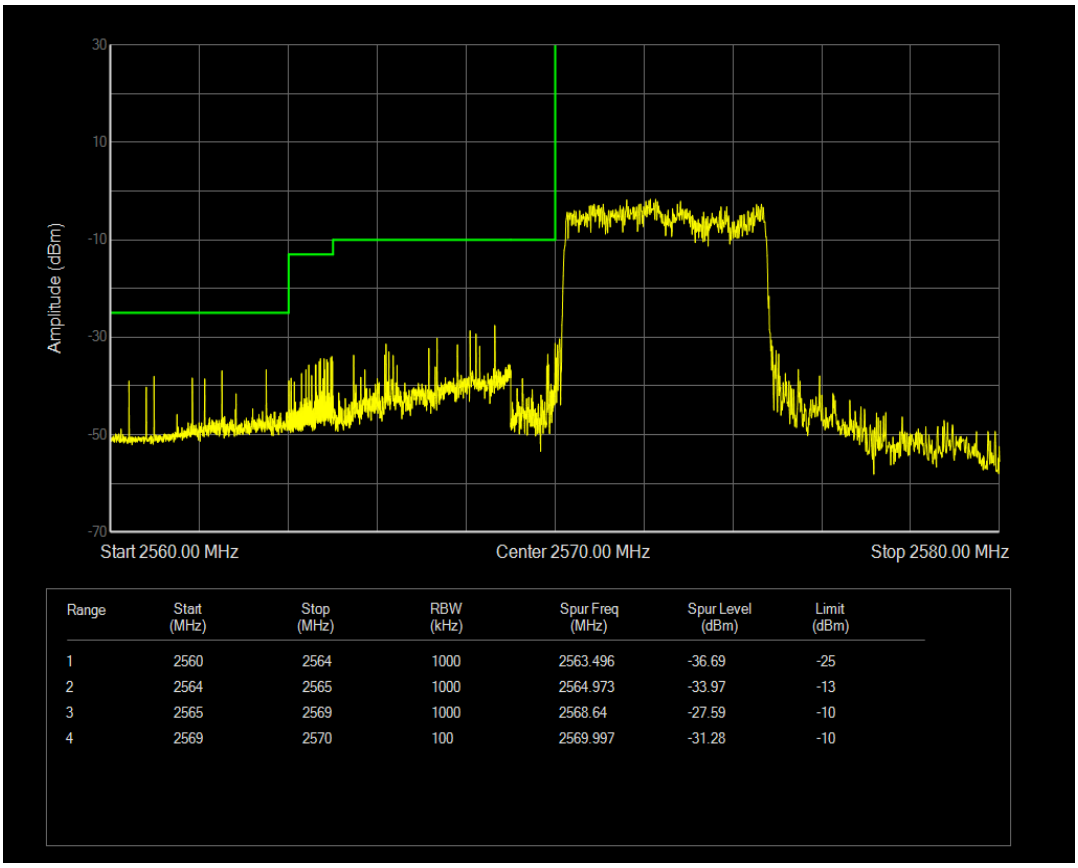
n38 SCS=15kHz CP_QPSK BW=40MHz Channel=520000 RB=216@0



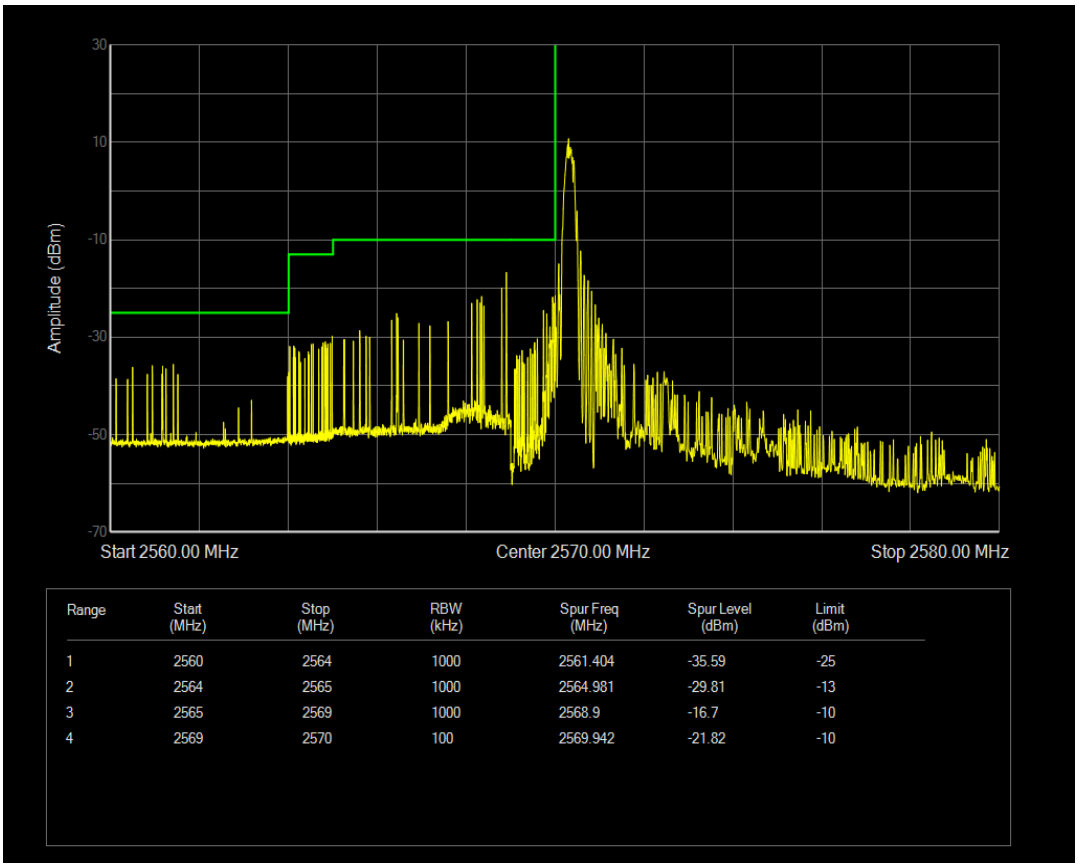
5 Band edge for NR FR1

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	2563.50	-36.69	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2568.90	-16.70	-10	PASS
n38	15	5	523500	25@0	DFT_QPSK	2627.20	-33.68	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	2626.88	-34.79	-25	PASS
n38	15	40	518000	216@0	DFT_QPSK	2569.99	-15.46	-10	PASS
n38	15	40	518000	1@0	DFT_QPSK	2568.90	-21.91	-10	PASS
n38	15	40	520000	216@0	DFT_QPSK	2620.00	-18.07	-10	PASS
n38	15	40	520000	1@215	DFT_QPSK	2621.23	-23.43	-10	PASS

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

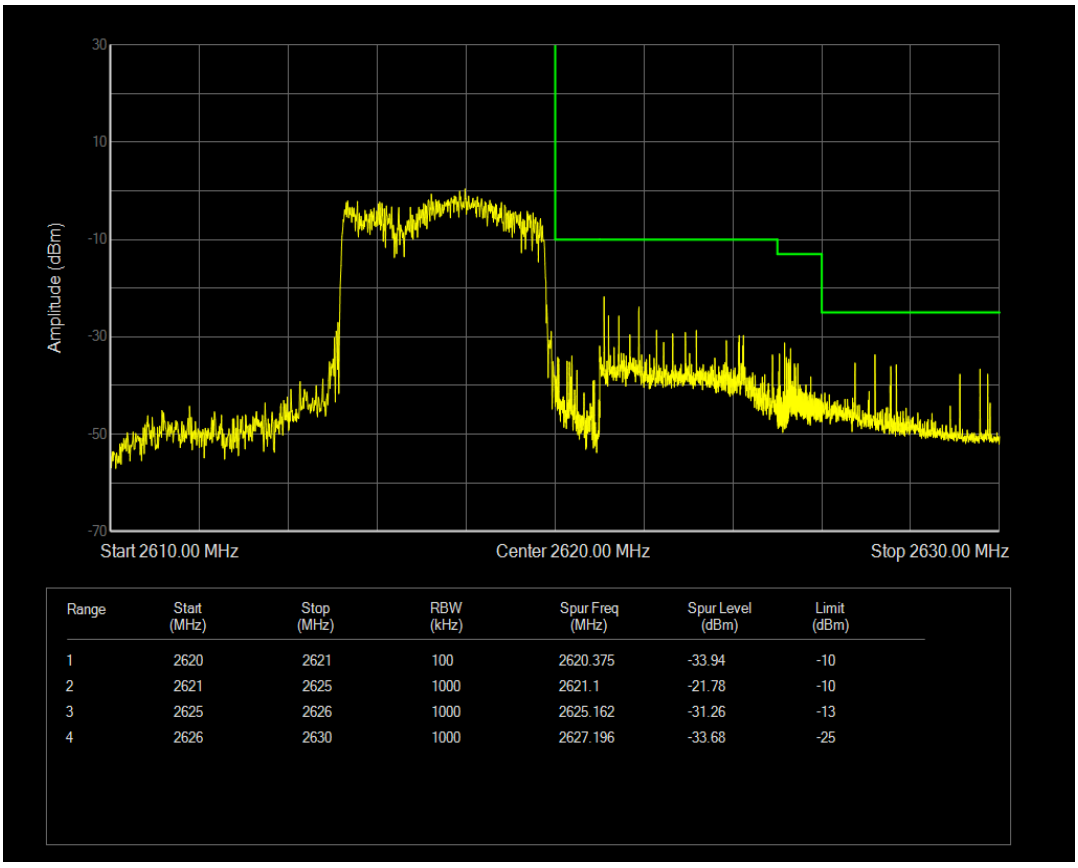


n38 SCS=15kHz DFT_QPSK BW=5MHz Channel=514500 RB=1@0



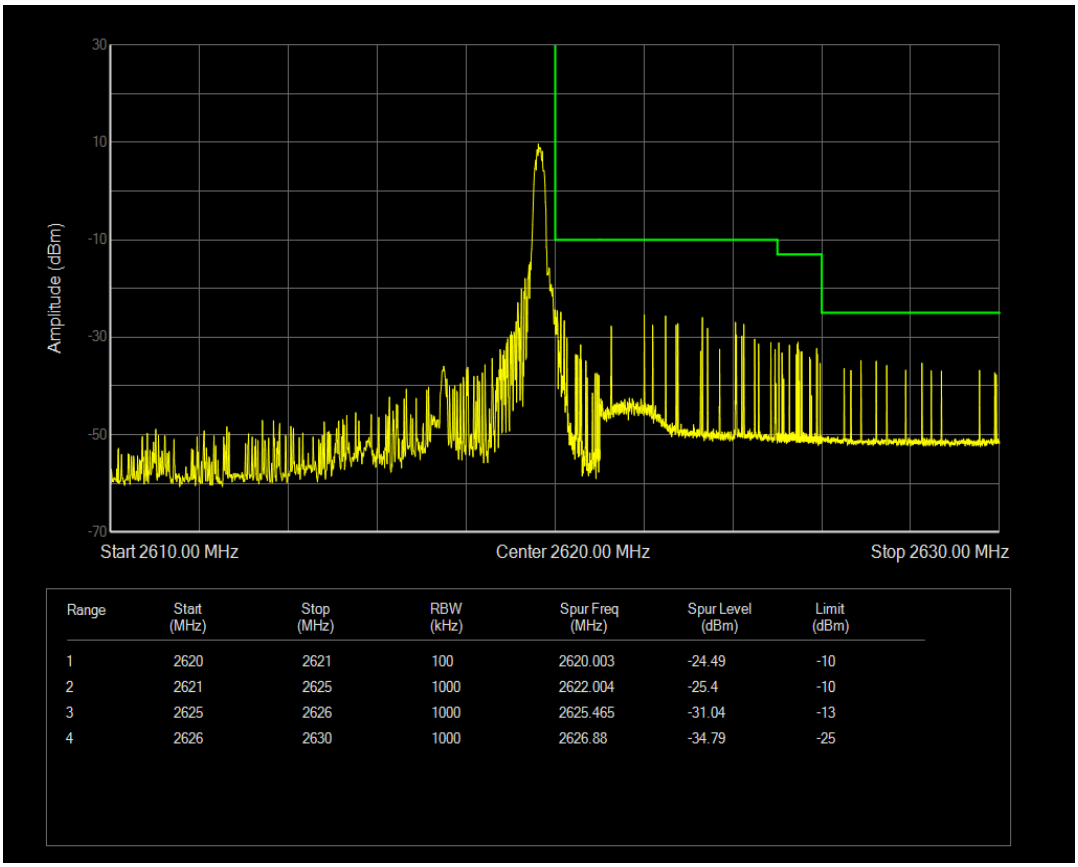
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2560	2564	1000	2561.404	-35.59	-25
2	2564	2565	1000	2564.981	-29.81	-13
3	2565	2569	1000	2568.9	-16.7	-10
4	2569	2570	100	2569.942	-21.82	-10

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



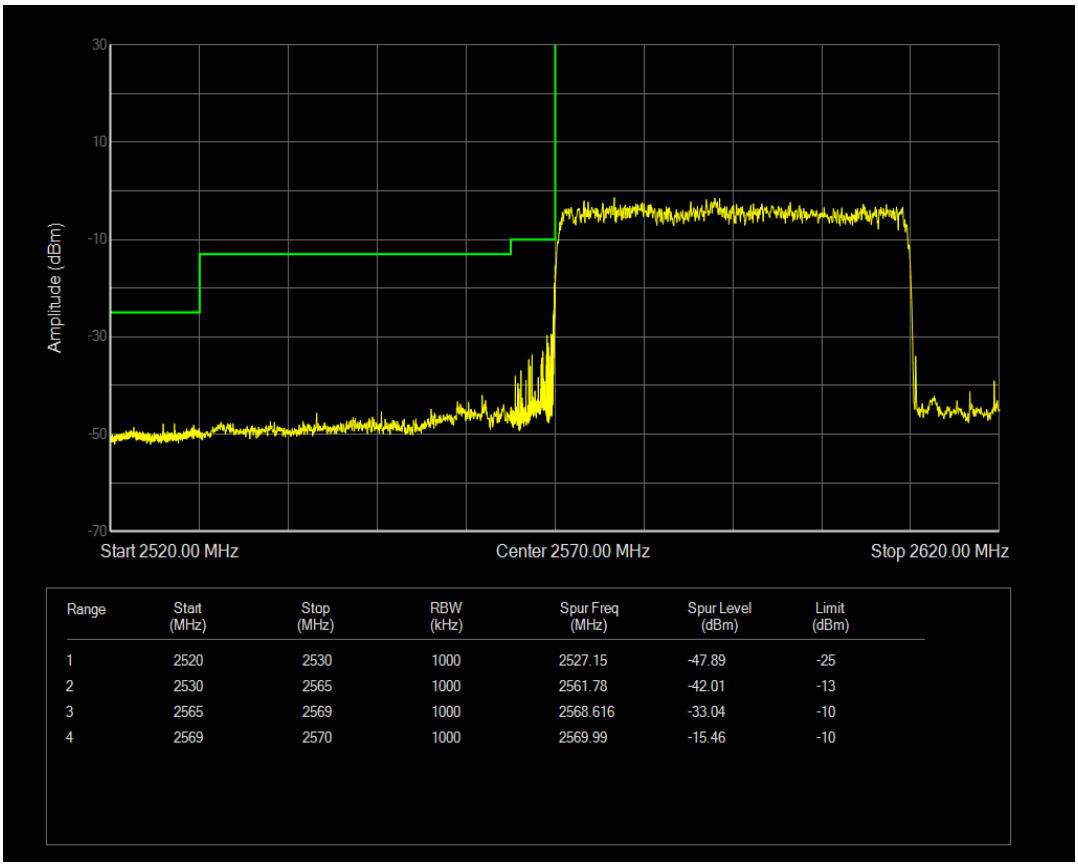
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.375	-33.94	-10
2	2621	2625	1000	2621.1	-21.78	-10
3	2625	2626	1000	2625.162	-31.26	-13
4	2626	2630	1000	2627.196	-33.68	-25

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



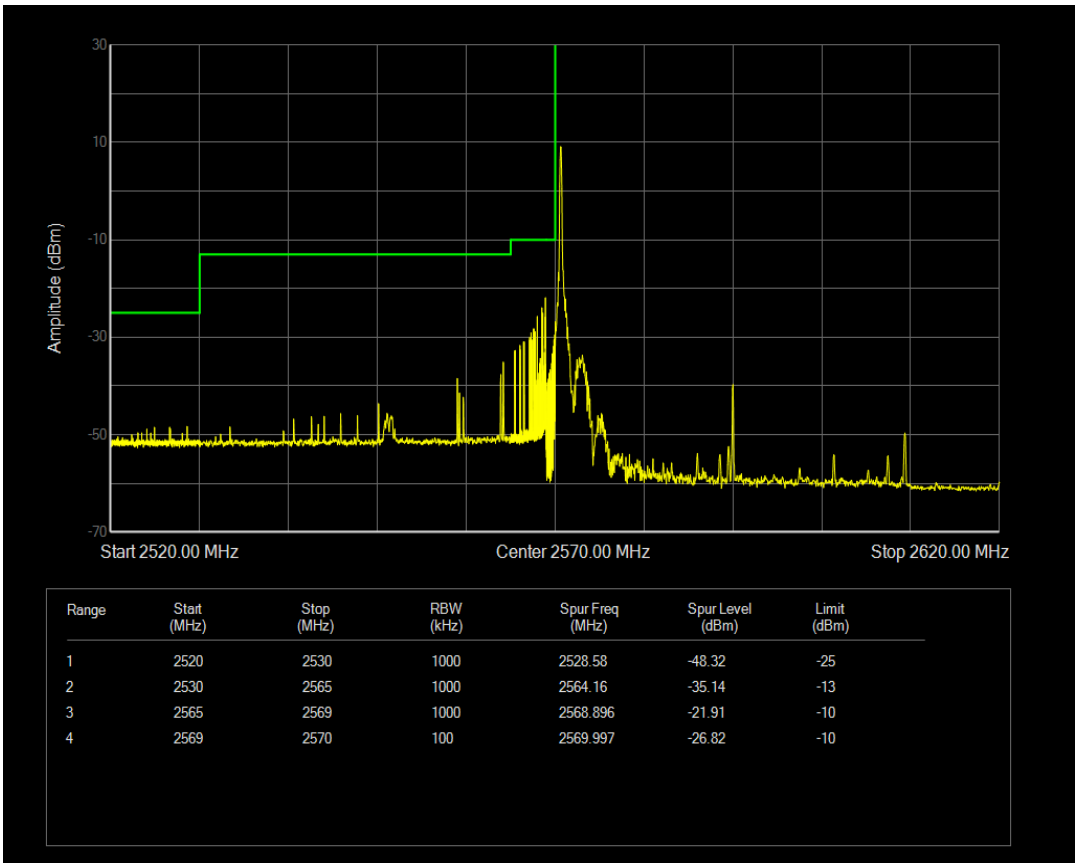
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.003	-24.49	-10
2	2621	2625	1000	2622.004	-25.4	-10
3	2625	2626	1000	2625.465	-31.04	-13
4	2626	2630	1000	2626.88	-34.79	-25

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



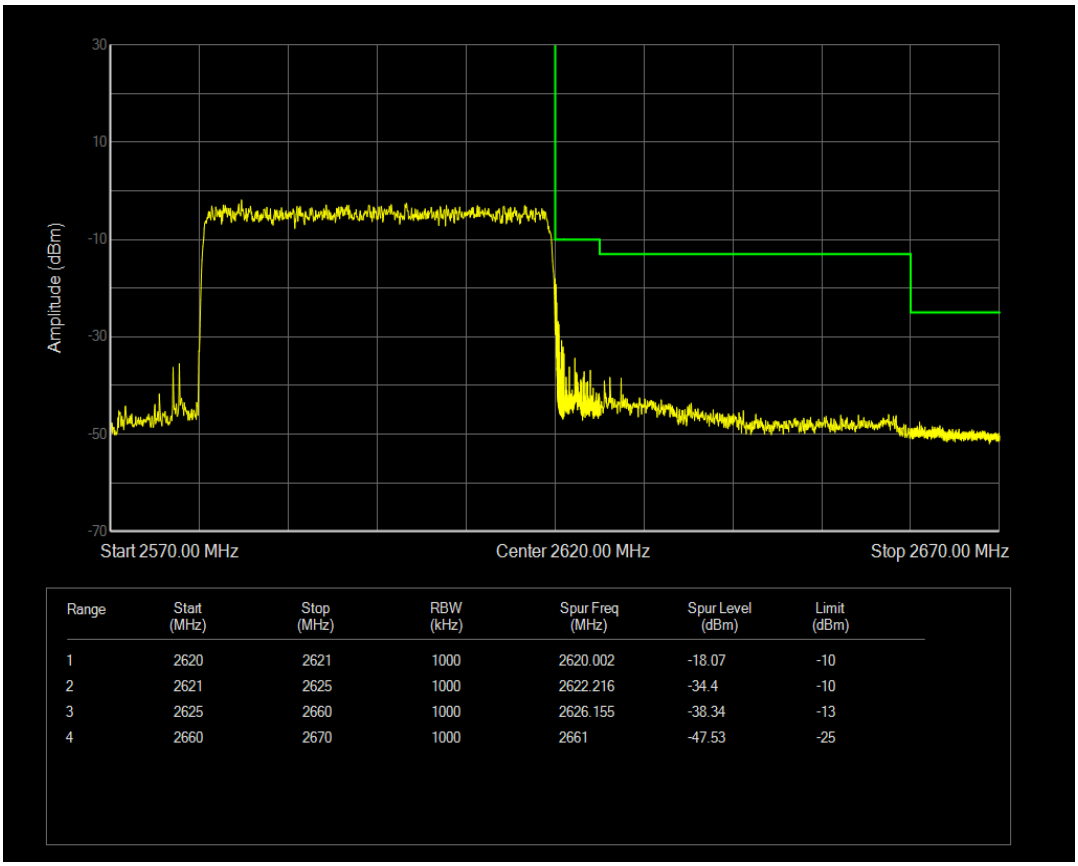
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2527.15	-47.89	-25
2	2530	2565	1000	2561.78	-42.01	-13
3	2565	2569	1000	2568.616	-33.04	-10
4	2569	2570	1000	2569.99	-15.46	-10

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



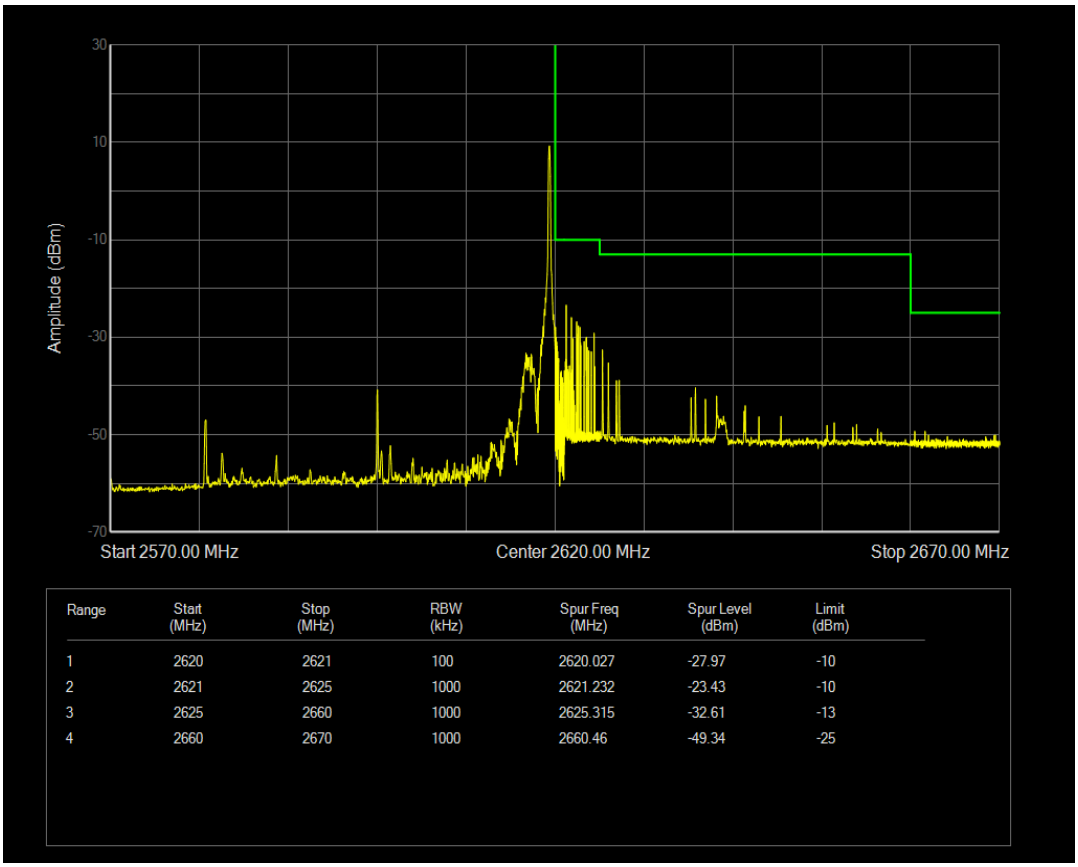
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2520	2530	1000	2528.58	-48.32	-25
2	2530	2565	1000	2564.16	-35.14	-13
3	2565	2569	1000	2568.896	-21.91	-10
4	2569	2570	100	2569.997	-26.82	-10

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	2620.002	-18.07	-10
2	2621	2625	1000	2622.216	-34.4	-10
3	2625	2660	1000	2626.155	-38.34	-13
4	2660	2670	1000	2661	-47.53	-25

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

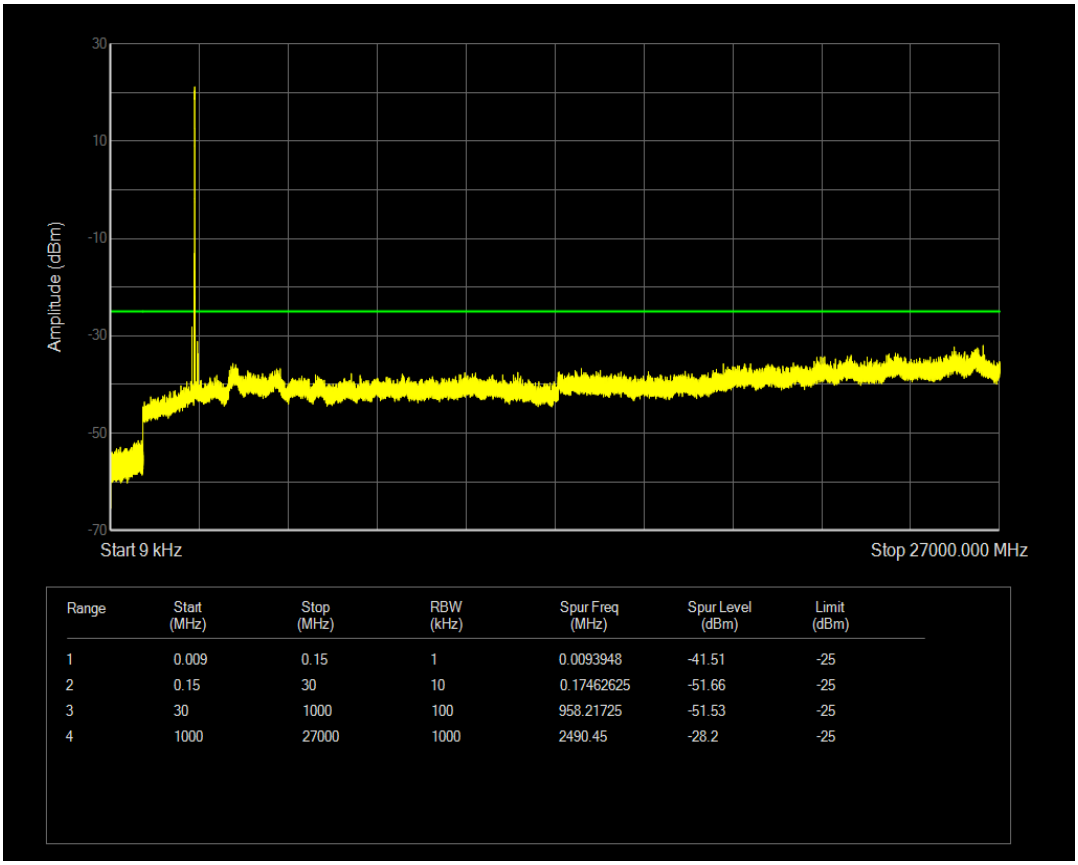


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2620	2621	100	2620.027	-27.97	-10
2	2621	2625	1000	2621.232	-23.43	-10
3	2625	2660	1000	2625.315	-32.61	-13
4	2660	2670	1000	2660.46	-49.34	-25

6 Out-of-band emissions for NR FR1

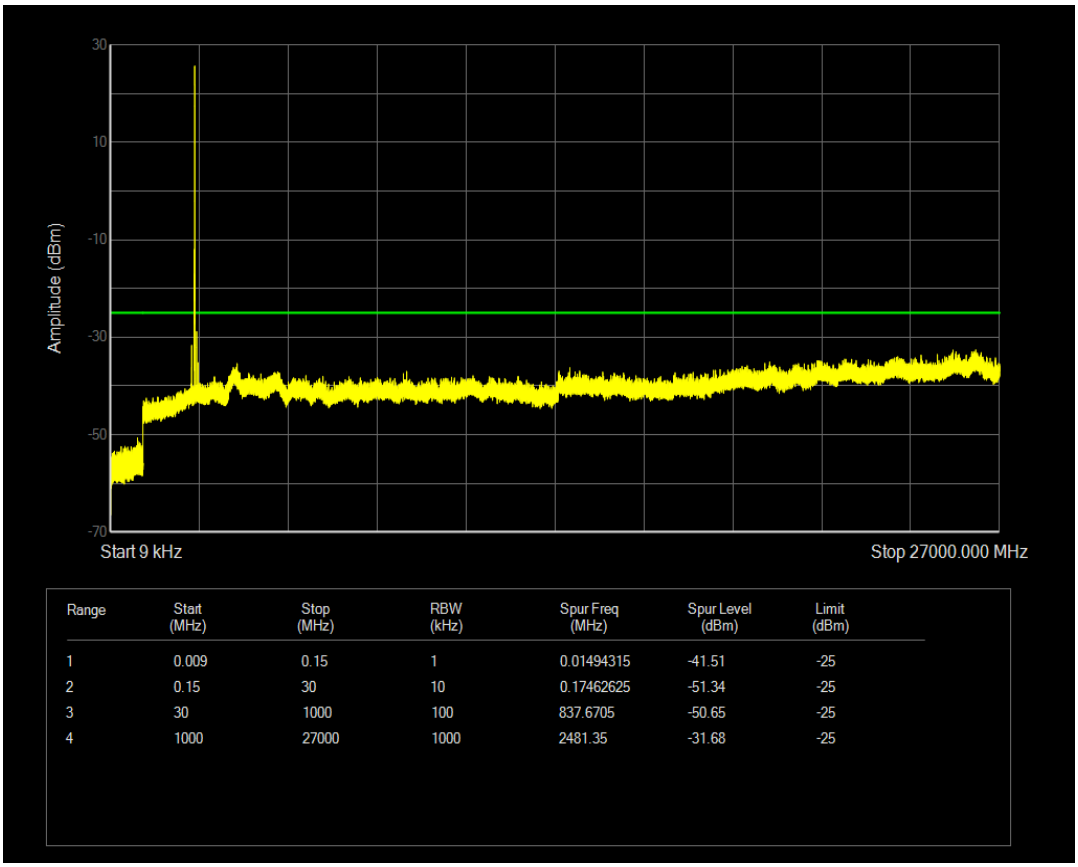
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n38	15	5	514500	25@0	DFT_QPSK	2490.45	-28.20	-25	PASS
n38	15	5	514500	1@0	DFT_QPSK	2491.75	-31.26	-25	PASS
n38	15	5	514500	1@24	DFT_QPSK	2481.35	-31.68	-25	PASS
n38	15	5	518500	25@0	DFT_QPSK	25689.60	-32.71	-25	PASS
n38	15	5	518500	1@0	DFT_QPSK	25544.00	-32.90	-25	PASS
n38	15	5	518500	1@24	DFT_QPSK	26264.20	-32.81	-25	PASS
n38	15	5	523500	25@0	DFT_QPSK	2673.75	-25.80	-25	PASS
n38	15	5	523500	1@0	DFT_QPSK	2669.20	-28.84	-25	PASS
n38	15	5	523500	1@24	DFT_QPSK	26192.70	-32.37	-25	PASS
n38	15	40	518000	216@0	DFT_QPSK	25766.30	-32.73	-25	PASS
n38	15	40	518000	1@0	DFT_QPSK	26318.80	-32.49	-25	PASS
n38	15	40	518000	1@215	DFT_QPSK	25780.60	-32.73	-25	PASS
n38	15	40	519000	216@0	DFT_QPSK	25678.55	-32.51	-25	PASS
n38	15	40	519000	1@0	DFT_QPSK	26254.45	-32.34	-25	PASS
n38	15	40	519000	1@215	DFT_QPSK	25066.25	-32.69	-25	PASS
n38	15	40	520000	216@0	DFT_QPSK	26123.80	-32.65	-25	PASS
n38	15	40	520000	1@0	DFT_QPSK	26294.75	-31.85	-25	PASS
n38	15	40	520000	1@215	DFT_QPSK	26225.85	-32.43	-25	PASS

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



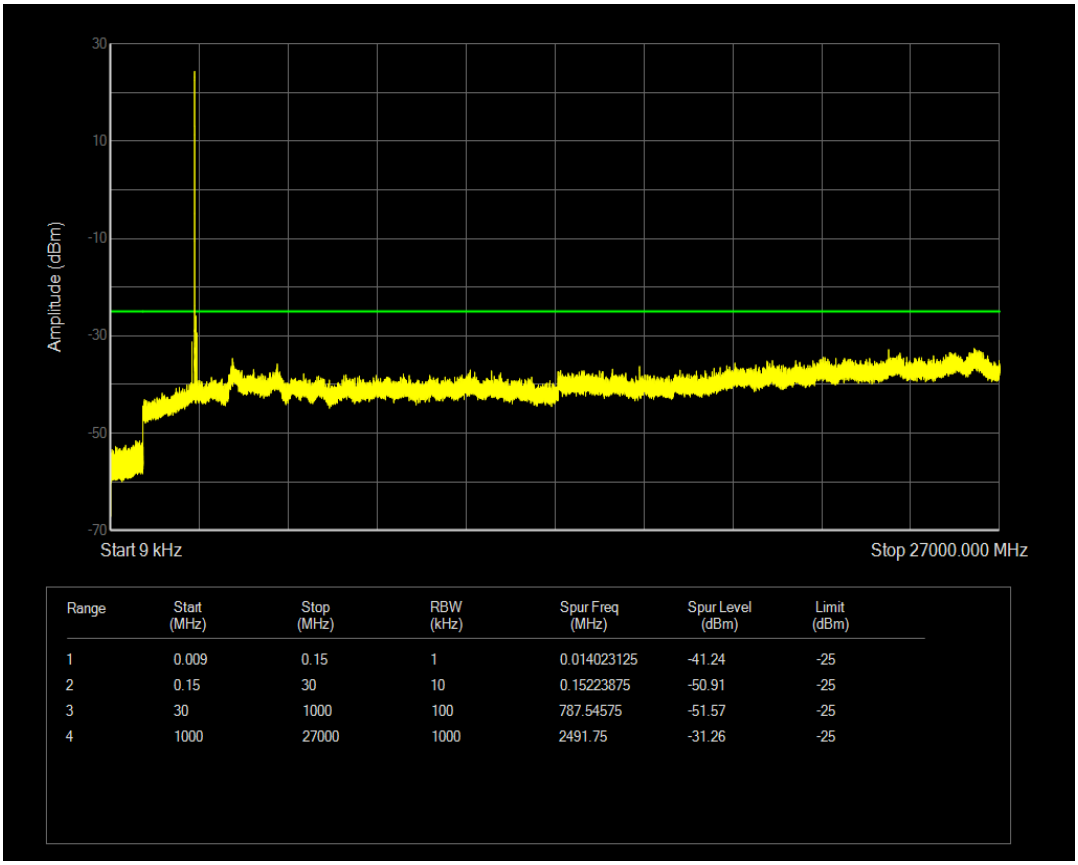
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0093948	-41.51	-25
2	0.15	30	10	0.17462625	-51.66	-25
3	30	1000	100	958.21725	-51.53	-25
4	1000	27000	1000	2490.45	-28.2	-25

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



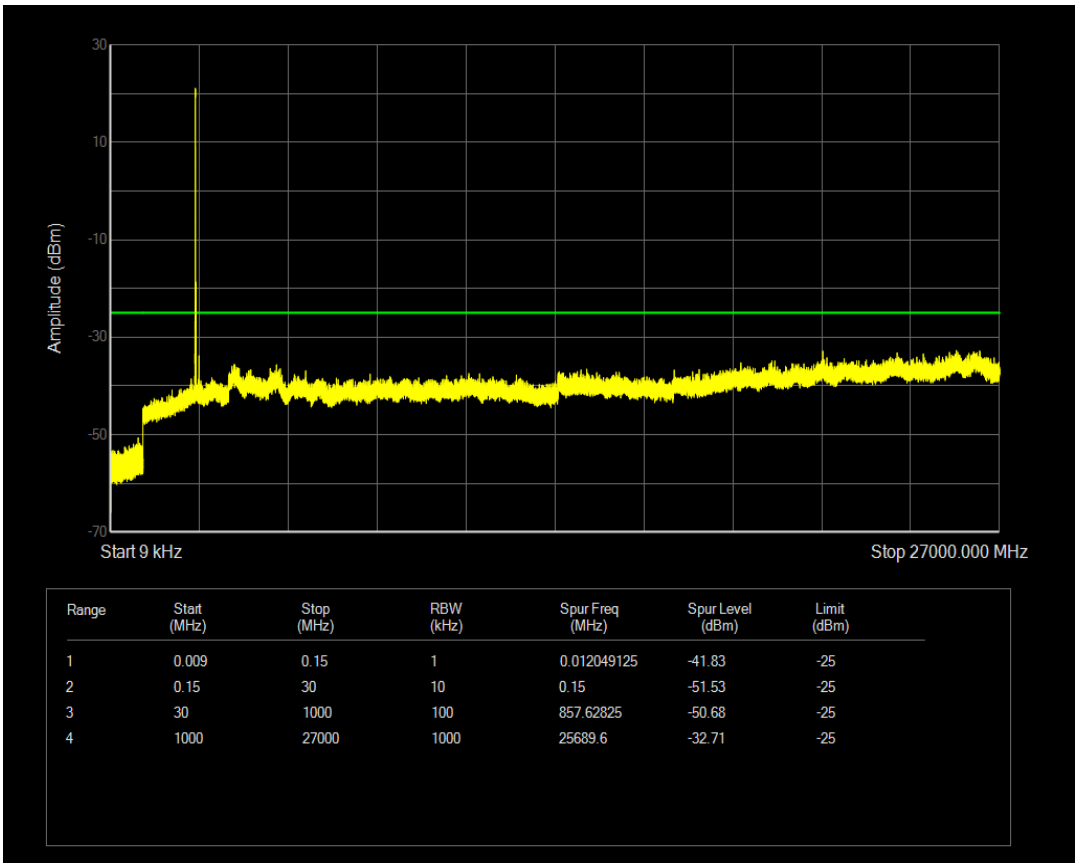
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01494315	-41.51	-25
2	0.15	30	10	0.17462625	-51.34	-25
3	30	1000	100	837.6705	-50.65	-25
4	1000	27000	1000	2481.35	-31.68	-25

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



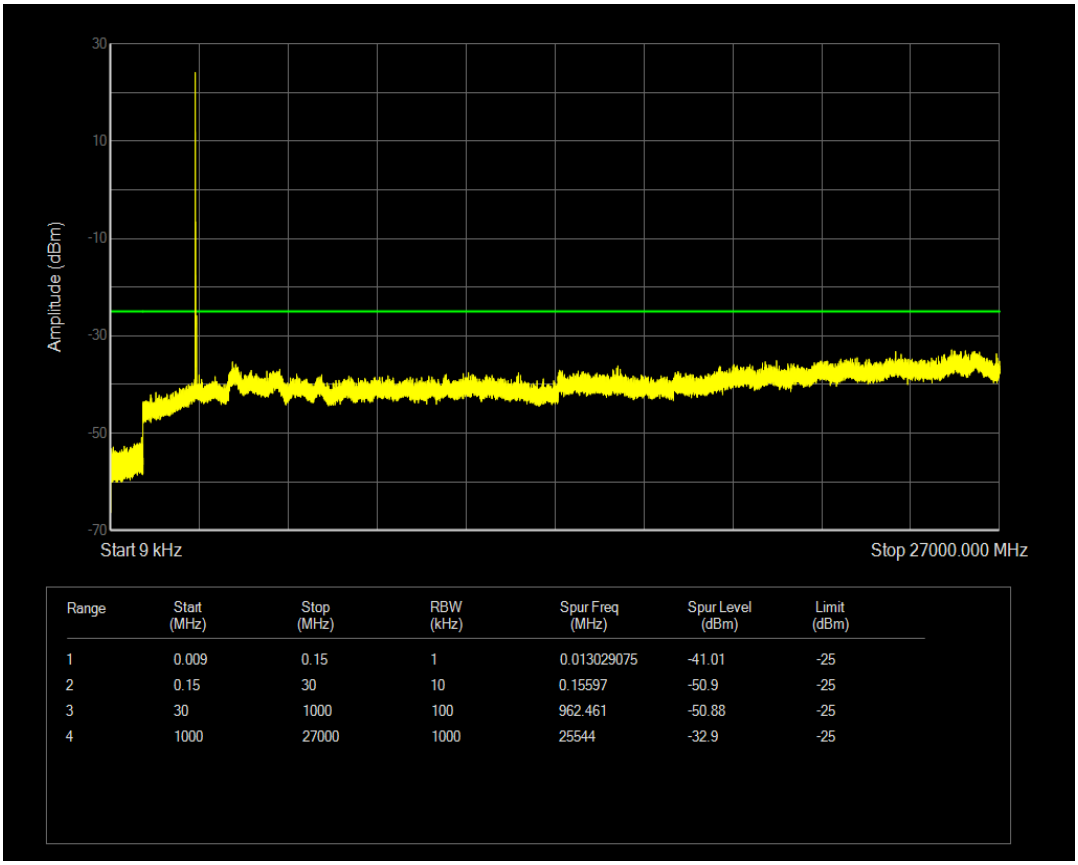
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.014023125	-41.24	-25
2	0.15	30	10	0.15223875	-50.91	-25
3	30	1000	100	787.54575	-51.57	-25
4	1000	27000	1000	2491.75	-31.26	-25

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



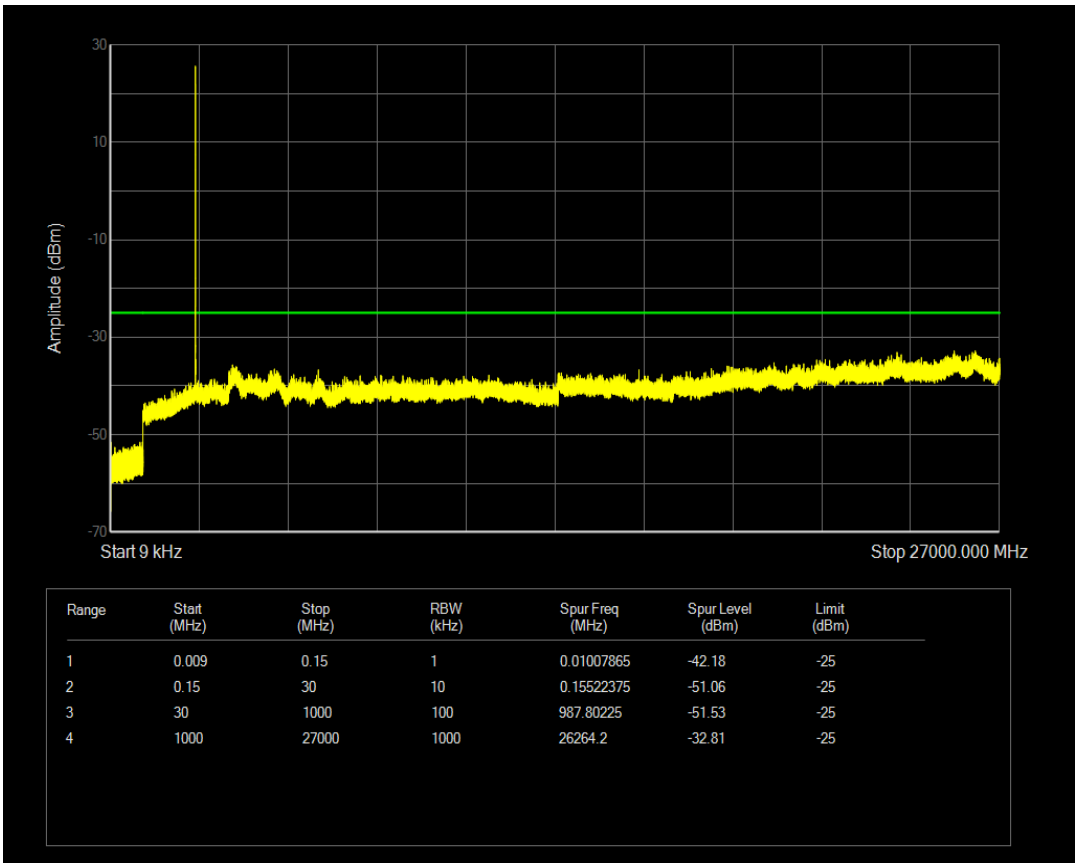
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012049125	-41.83	-25
2	0.15	30	10	0.15	-51.53	-25
3	30	1000	100	857.62825	-50.68	-25
4	1000	27000	1000	25689.6	-32.71	-25

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



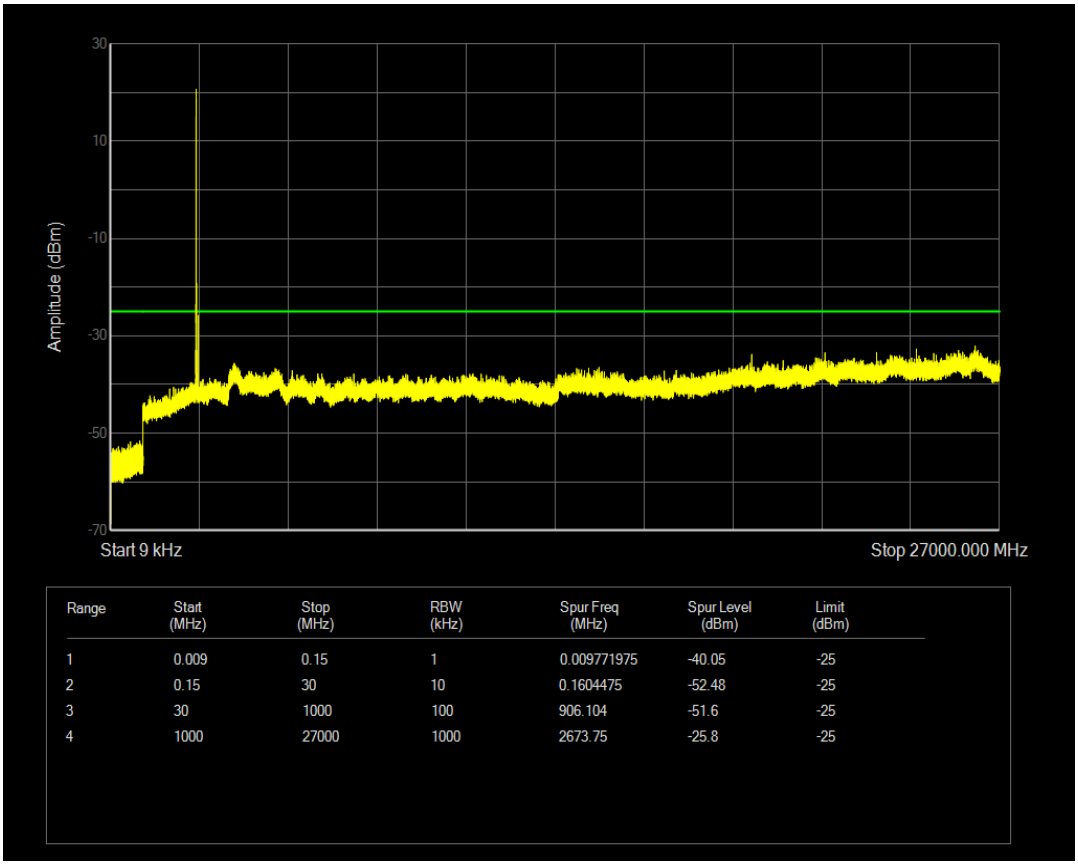
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013029075	-41.01	-25
2	0.15	30	10	0.15597	-50.9	-25
3	30	1000	100	962.461	-50.88	-25
4	1000	27000	1000	25544	-32.9	-25

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



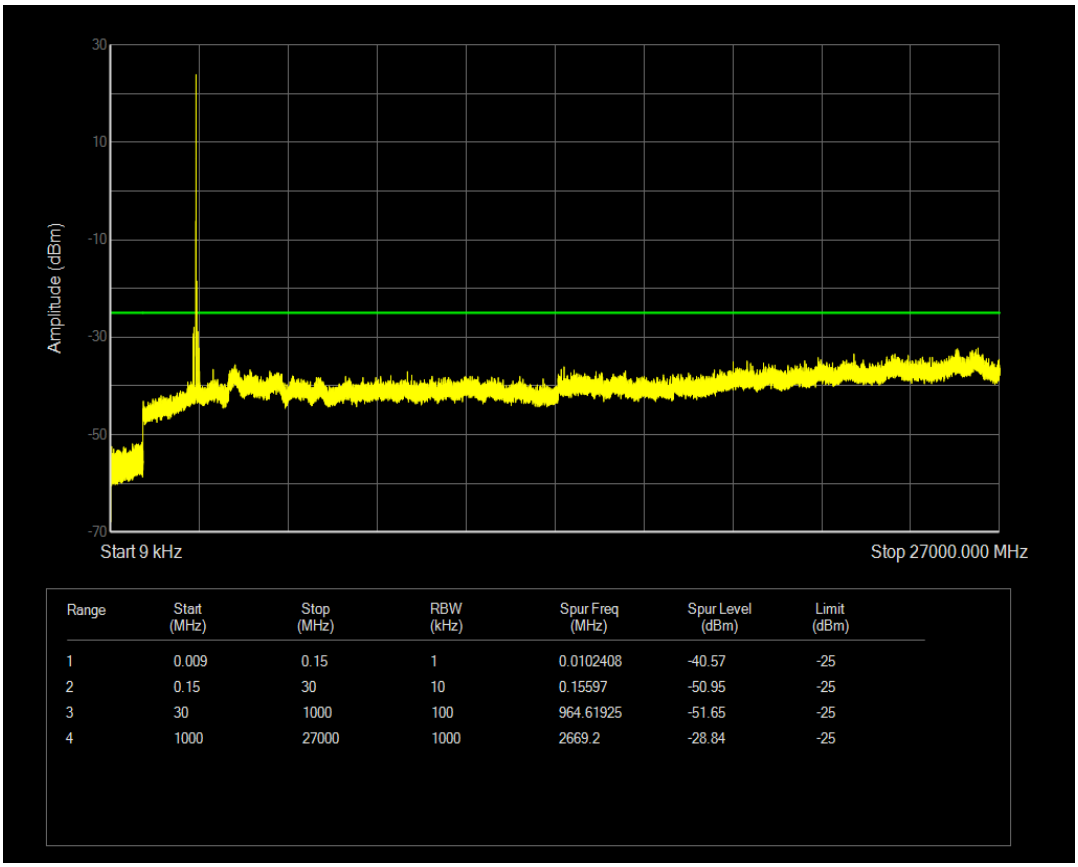
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01007865	-42.18	-25
2	0.15	30	10	0.15522375	-51.06	-25
3	30	1000	100	987.80225	-51.53	-25
4	1000	27000	1000	26264.2	-32.81	-25

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



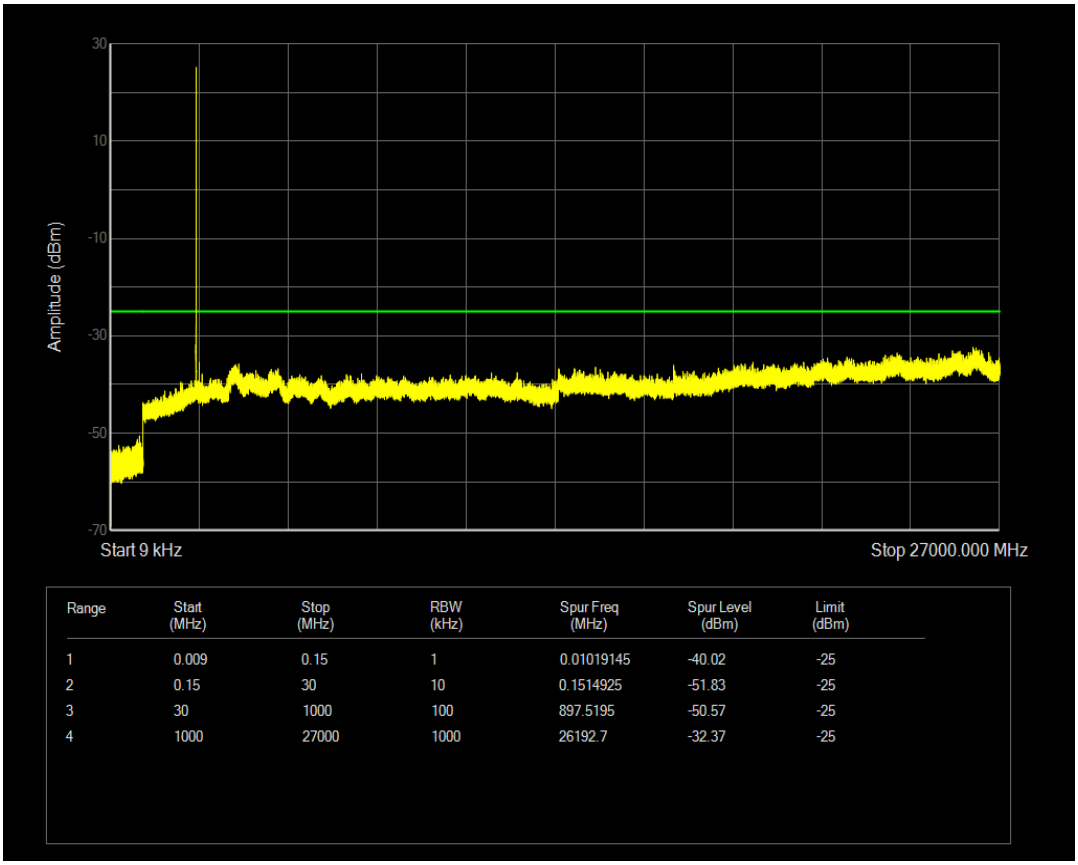
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009771975	-40.05	-25
2	0.15	30	10	0.1604475	-52.48	-25
3	30	1000	100	906.104	-51.6	-25
4	1000	27000	1000	2673.75	-25.8	-25

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



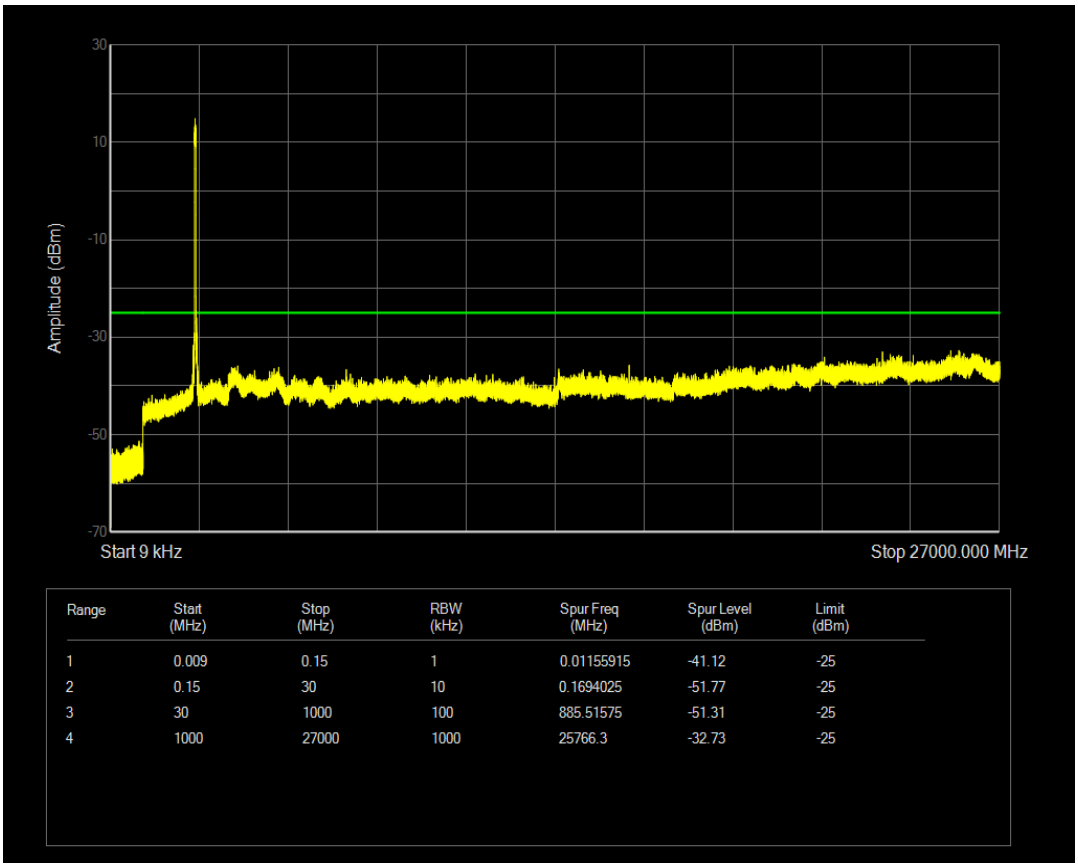
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0102408	-40.57	-25
2	0.15	30	10	0.15597	-50.95	-25
3	30	1000	100	964.61925	-51.65	-25
4	1000	27000	1000	2669.2	-28.84	-25

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



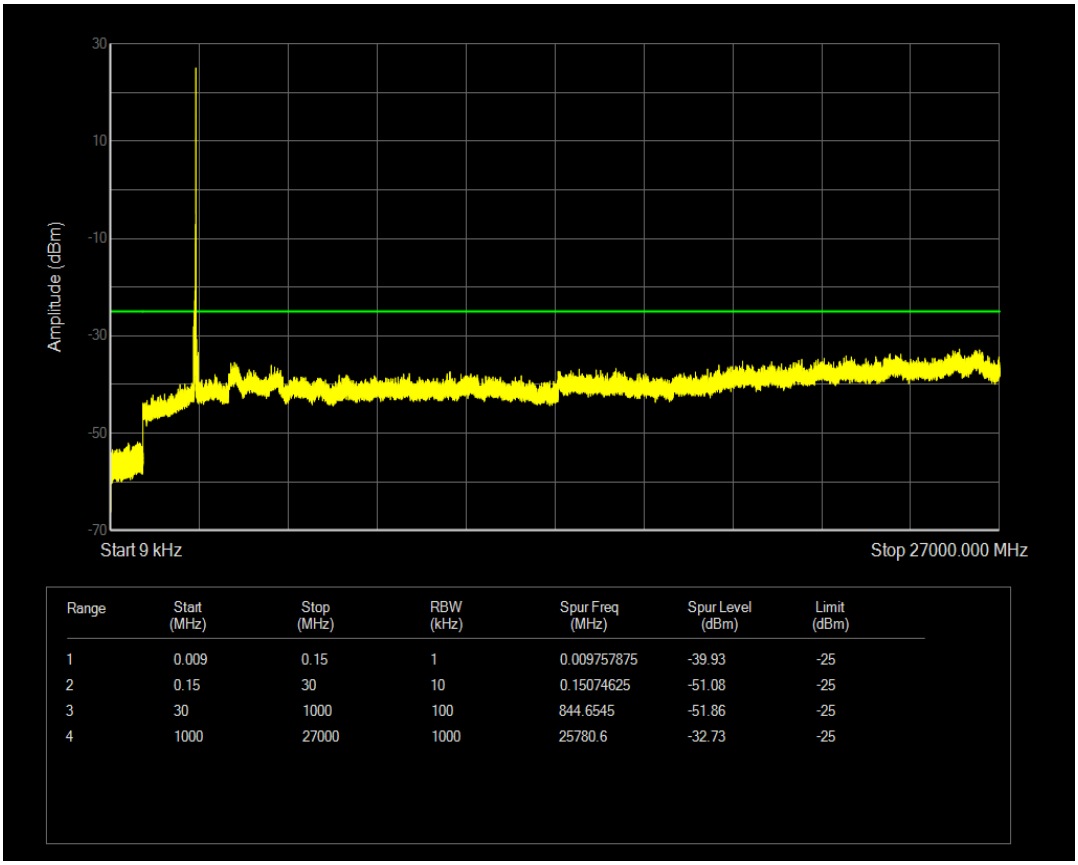
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01019145	-40.02	-25
2	0.15	30	10	0.1514925	-51.83	-25
3	30	1000	100	897.5195	-50.57	-25
4	1000	27000	1000	26192.7	-32.37	-25

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



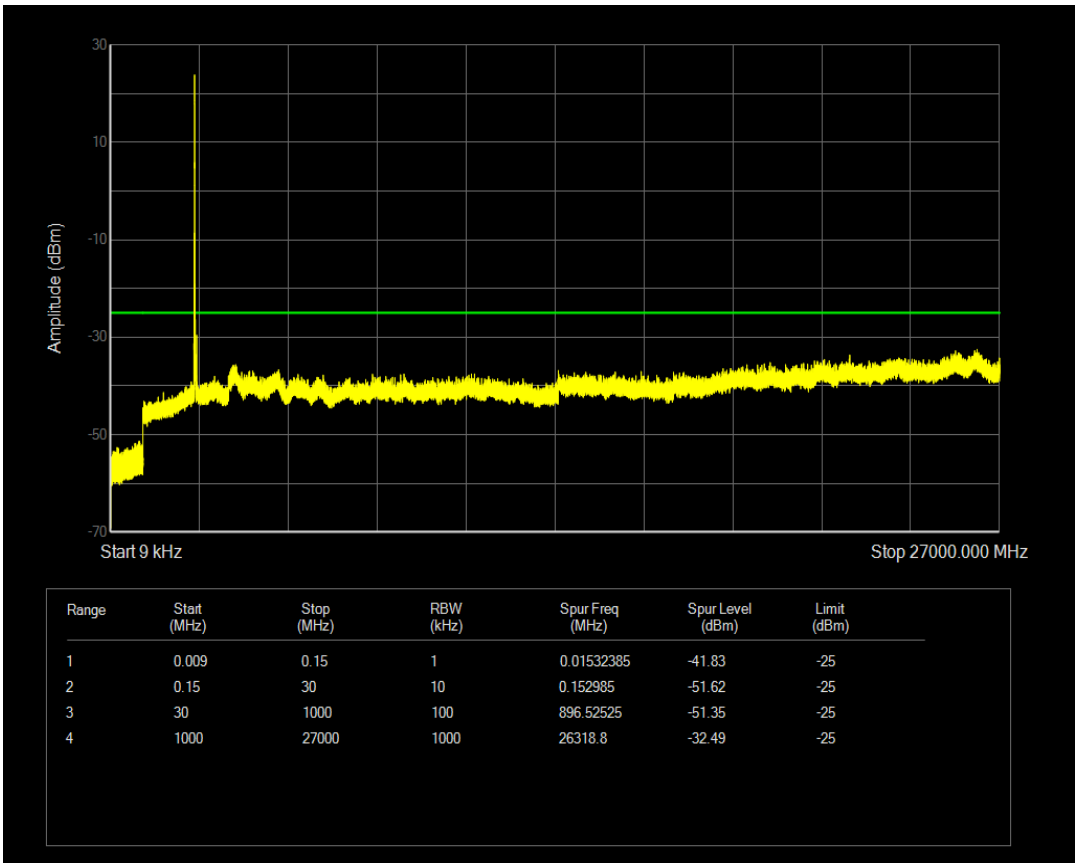
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01155915	-41.12	-25
2	0.15	30	10	0.1694025	-51.77	-25
3	30	1000	100	885.51575	-51.31	-25
4	1000	27000	1000	25766.3	-32.73	-25

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



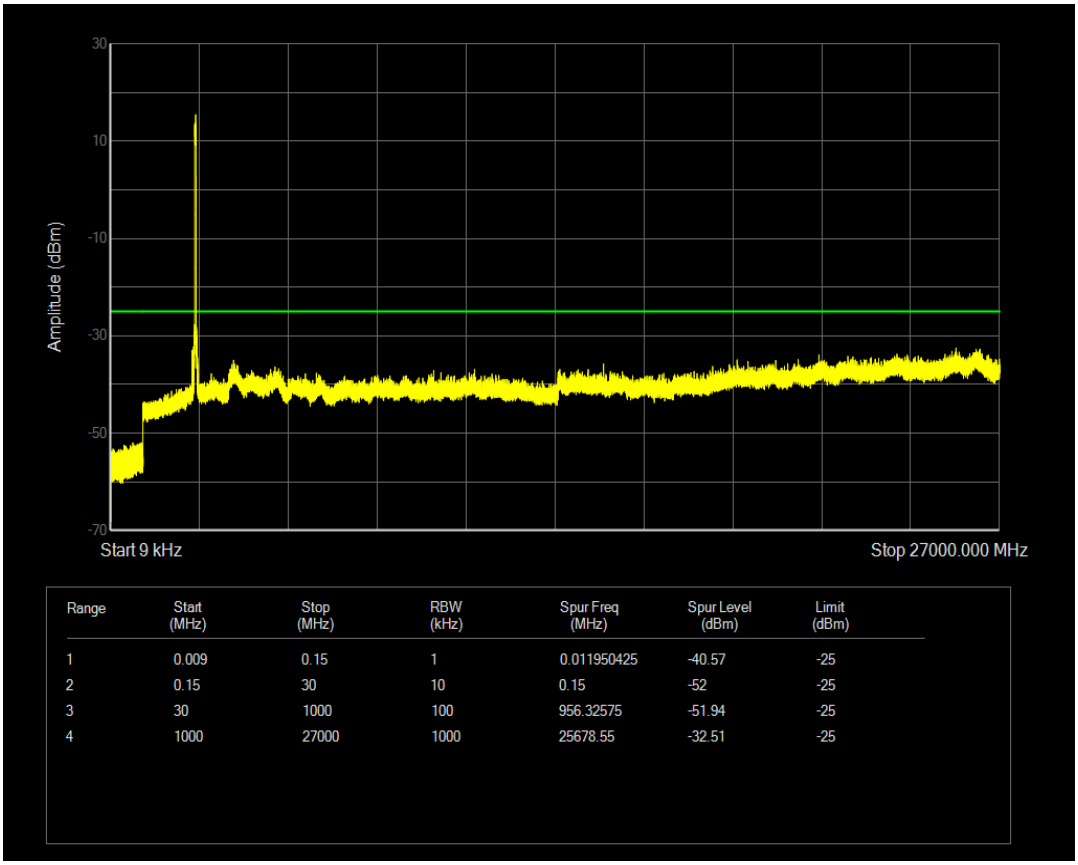
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009757875	-39.93	-25
2	0.15	30	10	0.15074625	-51.08	-25
3	30	1000	100	844.6545	-51.86	-25
4	1000	27000	1000	25780.6	-32.73	-25

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



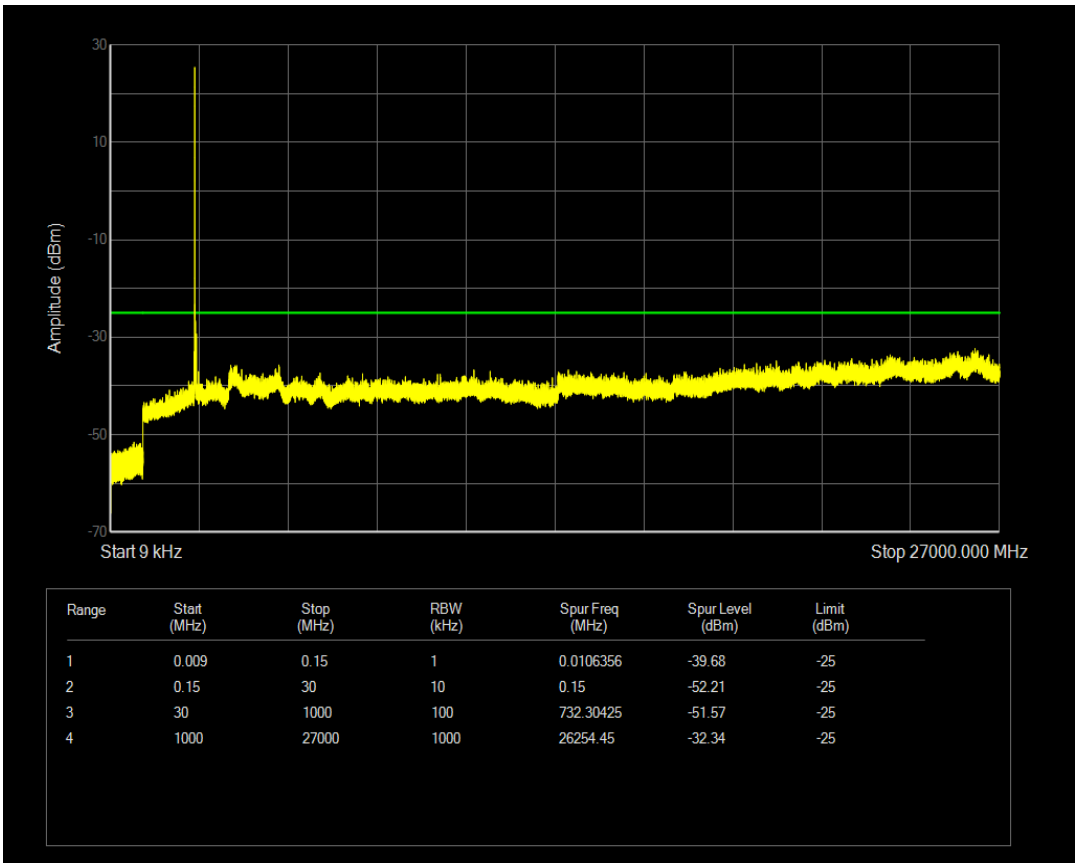
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01532385	-41.83	-25
2	0.15	30	10	0.152985	-51.62	-25
3	30	1000	100	896.52525	-51.35	-25
4	1000	27000	1000	26318.8	-32.49	-25

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



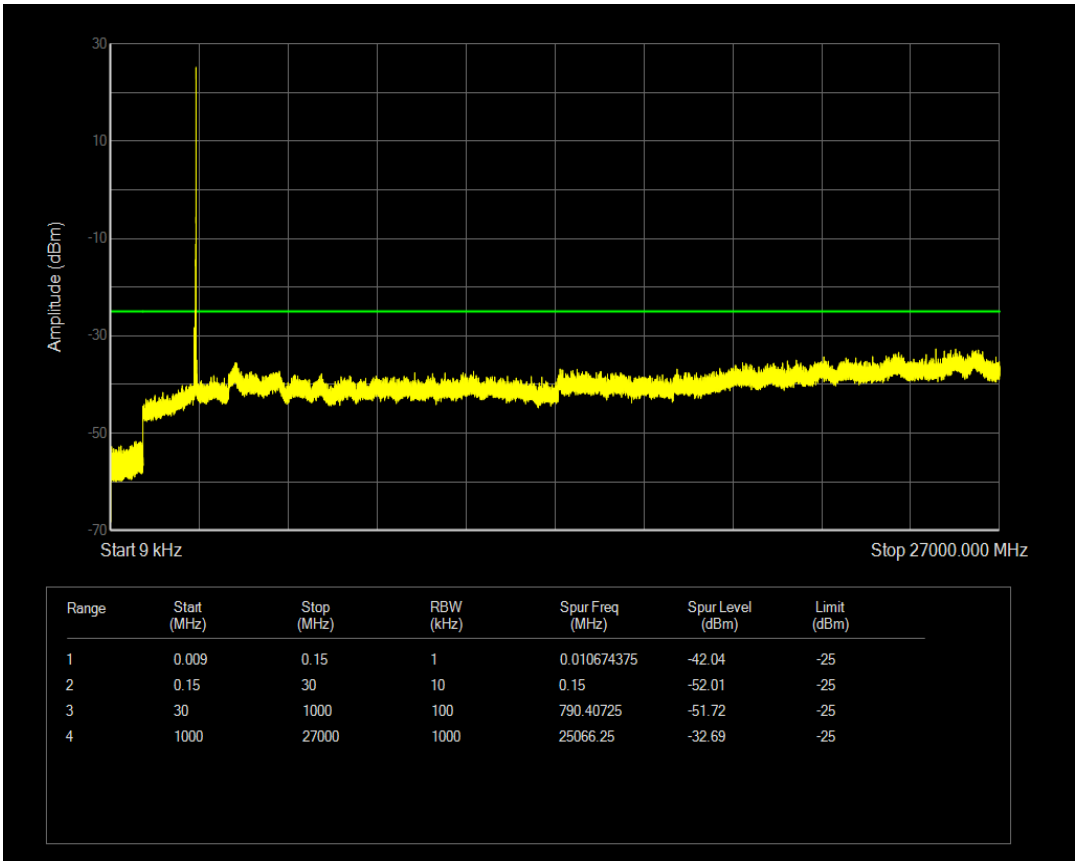
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011950425	-40.57	-25
2	0.15	30	10	0.15	-52	-25
3	30	1000	100	956.32575	-51.94	-25
4	1000	27000	1000	25678.55	-32.51	-25

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



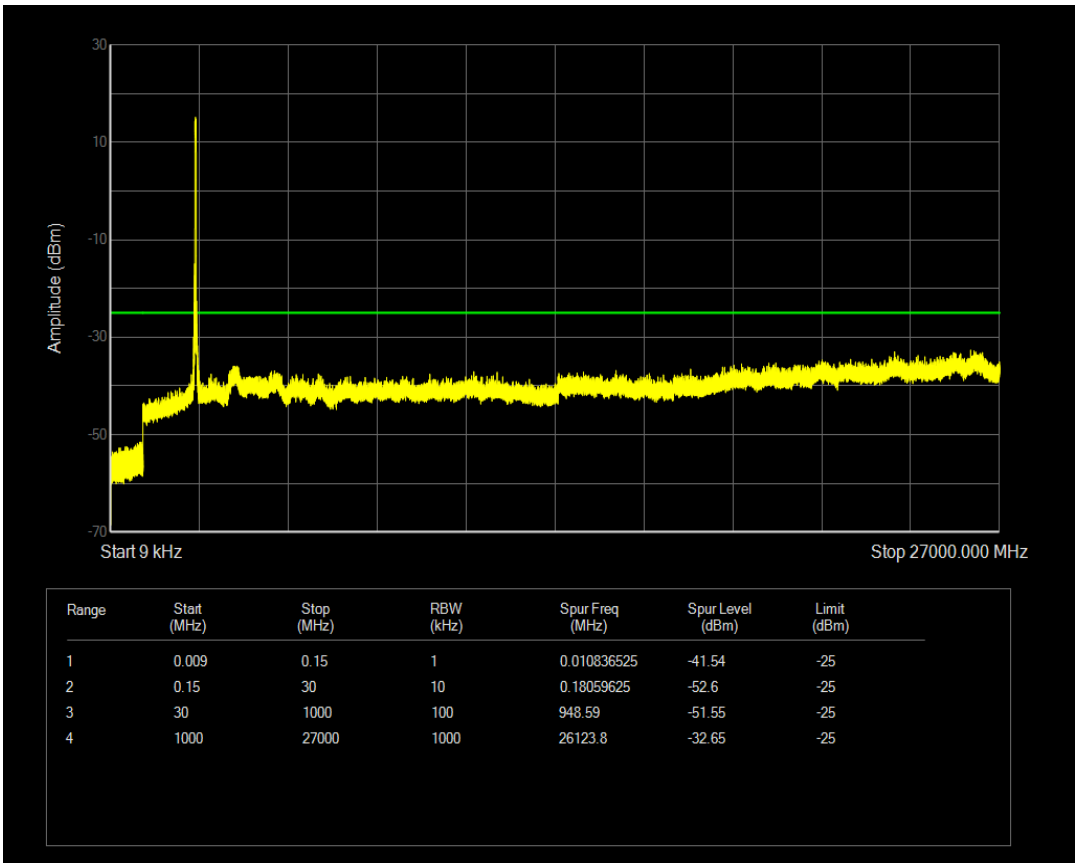
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0106356	-39.68	-25
2	0.15	30	10	0.15	-52.21	-25
3	30	1000	100	732.30425	-51.57	-25
4	1000	27000	1000	26254.45	-32.34	-25

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



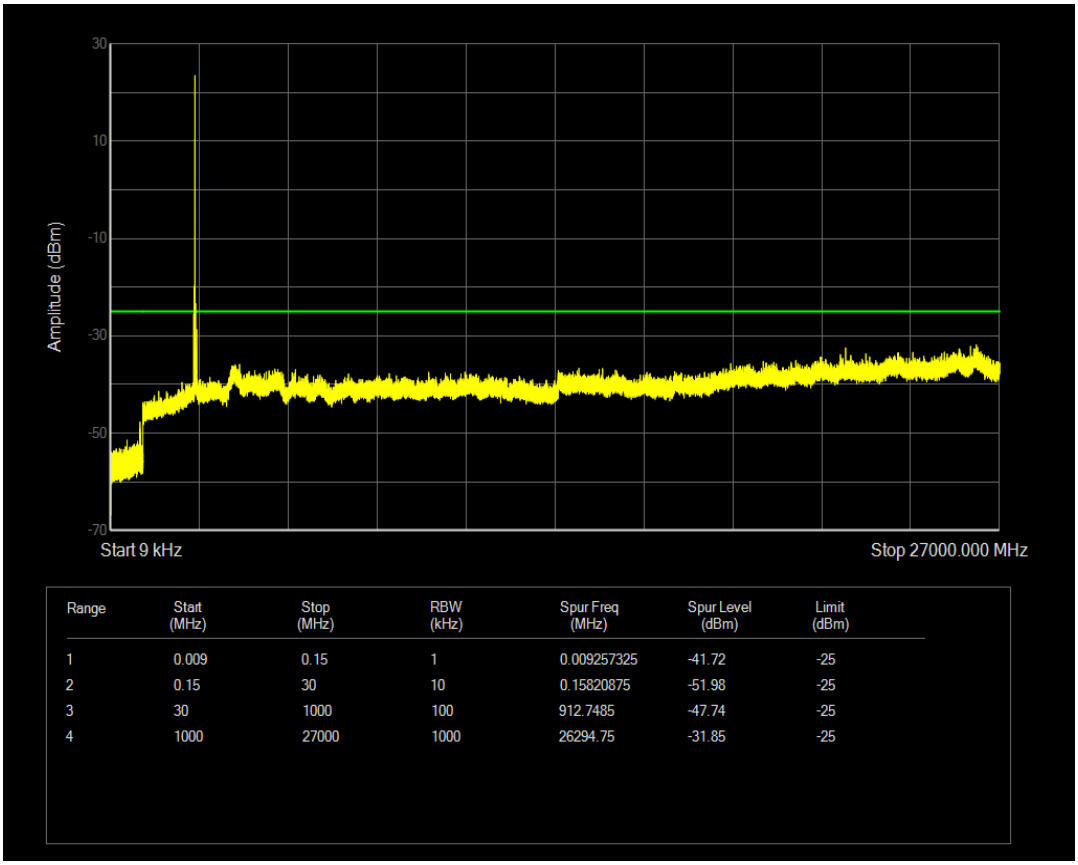
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010674375	-42.04	-25
2	0.15	30	10	0.15	-52.01	-25
3	30	1000	100	790.40725	-51.72	-25
4	1000	27000	1000	25066.25	-32.69	-25

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



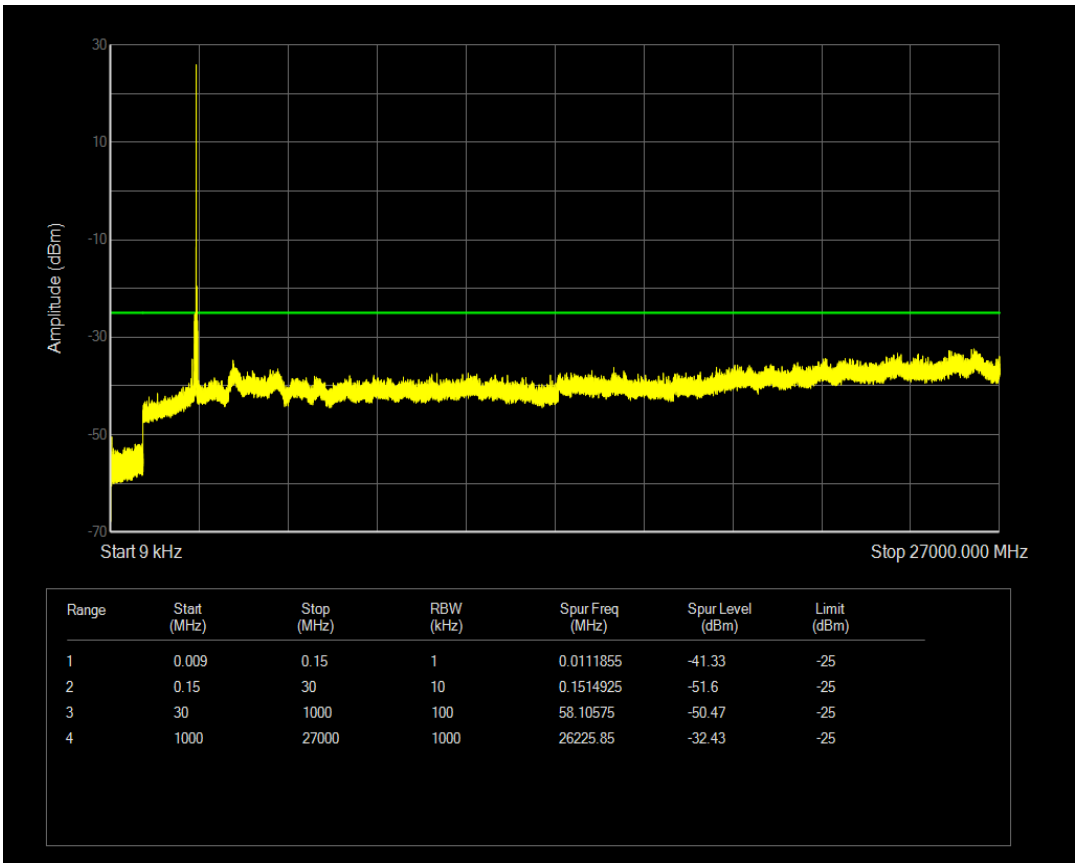
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010836525	-41.54	-25
2	0.15	30	10	0.18059625	-52.6	-25
3	30	1000	100	948.59	-51.55	-25
4	1000	27000	1000	26123.8	-32.65	-25

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	0.009257325	-41.72	-25
2	0.15	30	10	0.15820875	-51.98	-25
3	30	1000	100	912.7485	-47.74	-25
4	1000	27000	1000	26294.75	-31.85	-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	0.0111855	-41.33	-25
2	0.15	30	10	0.1514925	-51.6	-25
3	30	1000	100	58.10575	-50.47	-25
4	1000	27000	1000	26225.85	-32.43	-25