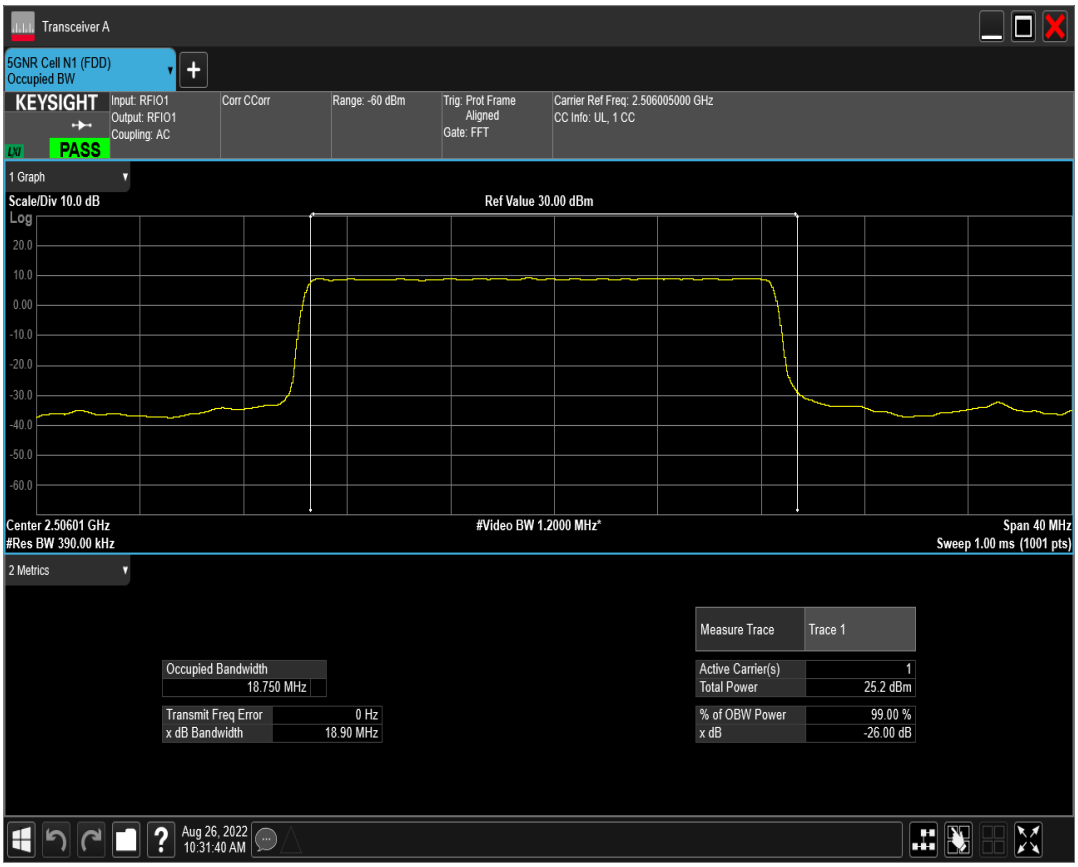
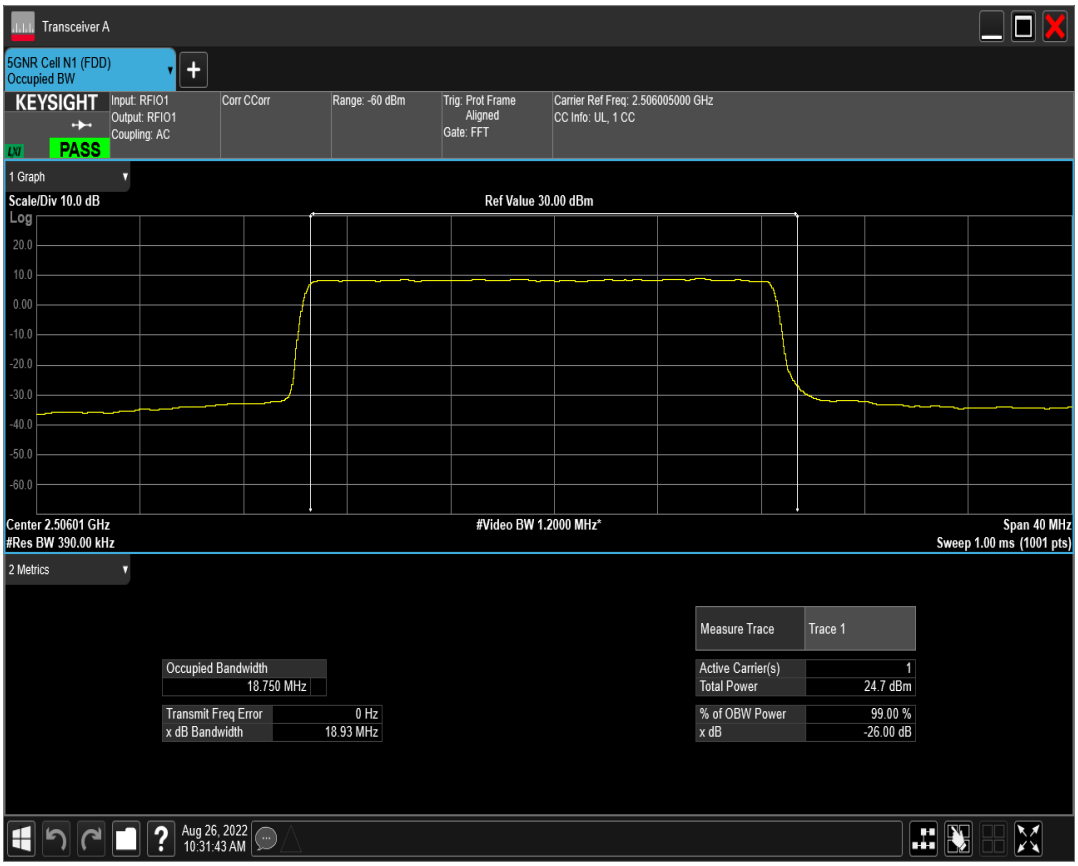
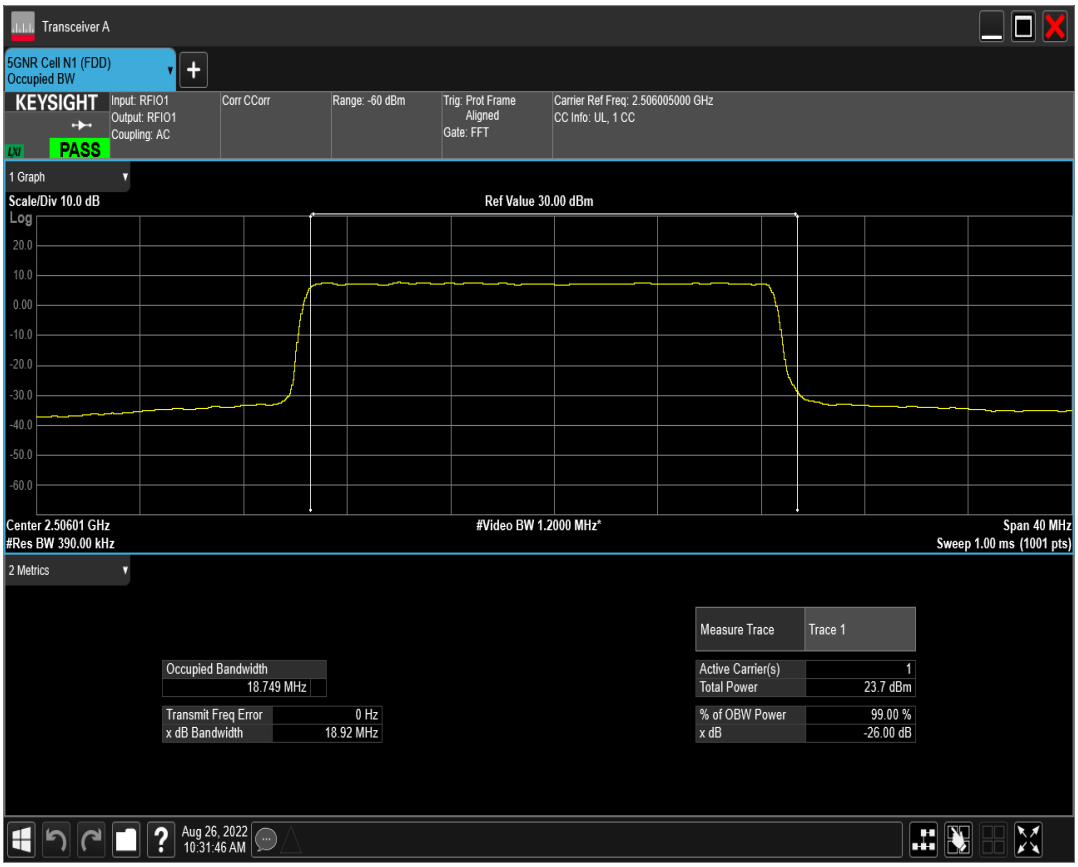


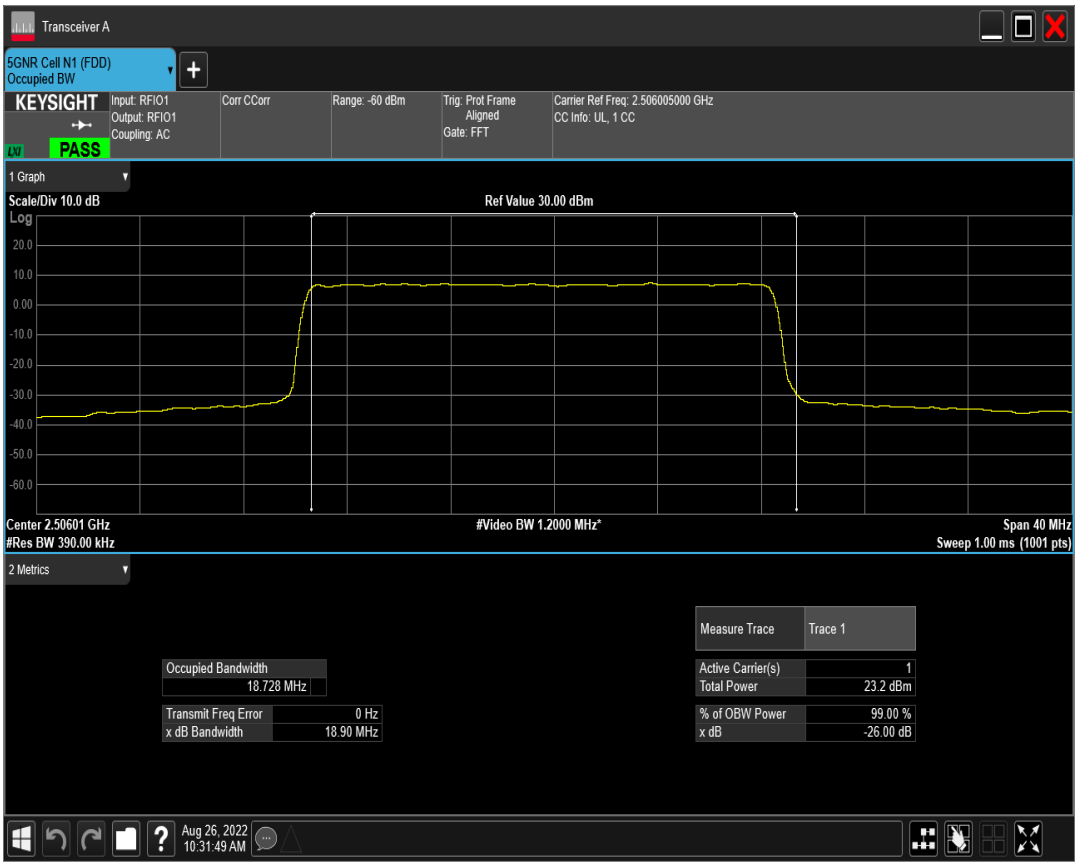
n41 SCS=15kHz DFT_QPSK BW=20MHz Channel=501201 RB=100@0



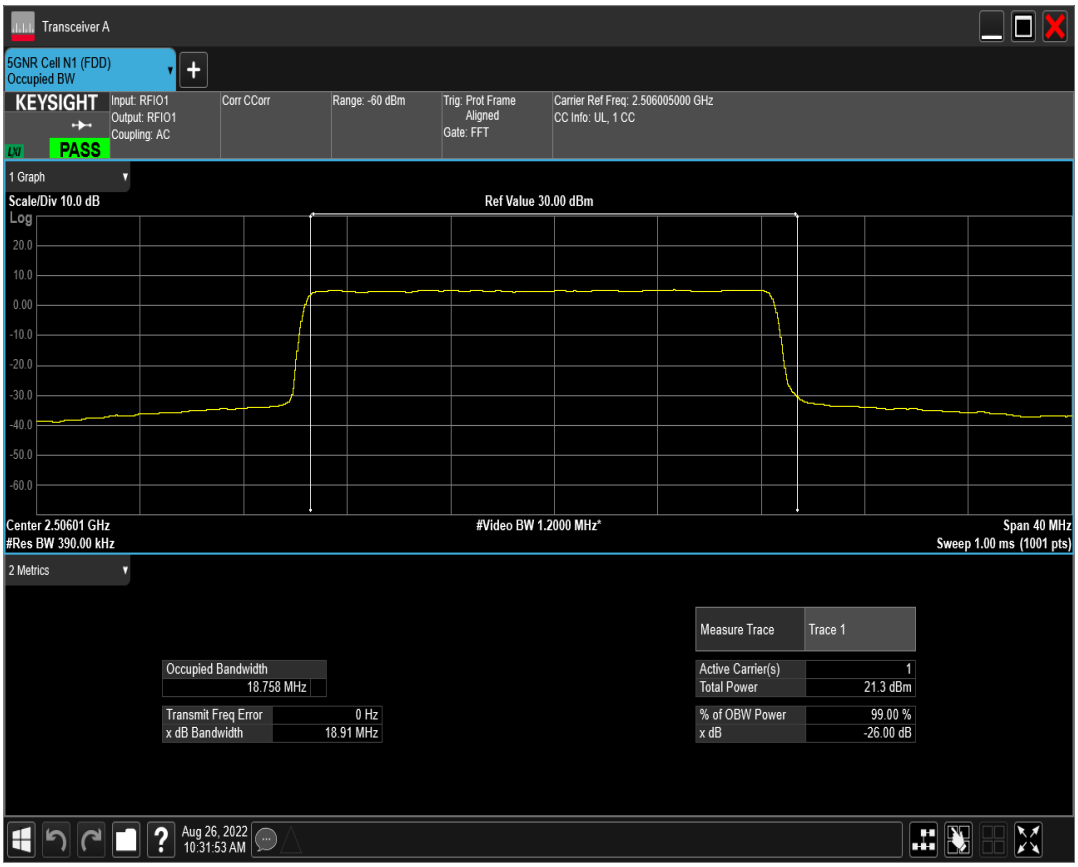
n41 SCS=15kHz DFT_QAM16 BW=20MHz Channel=501201 RB=100@0



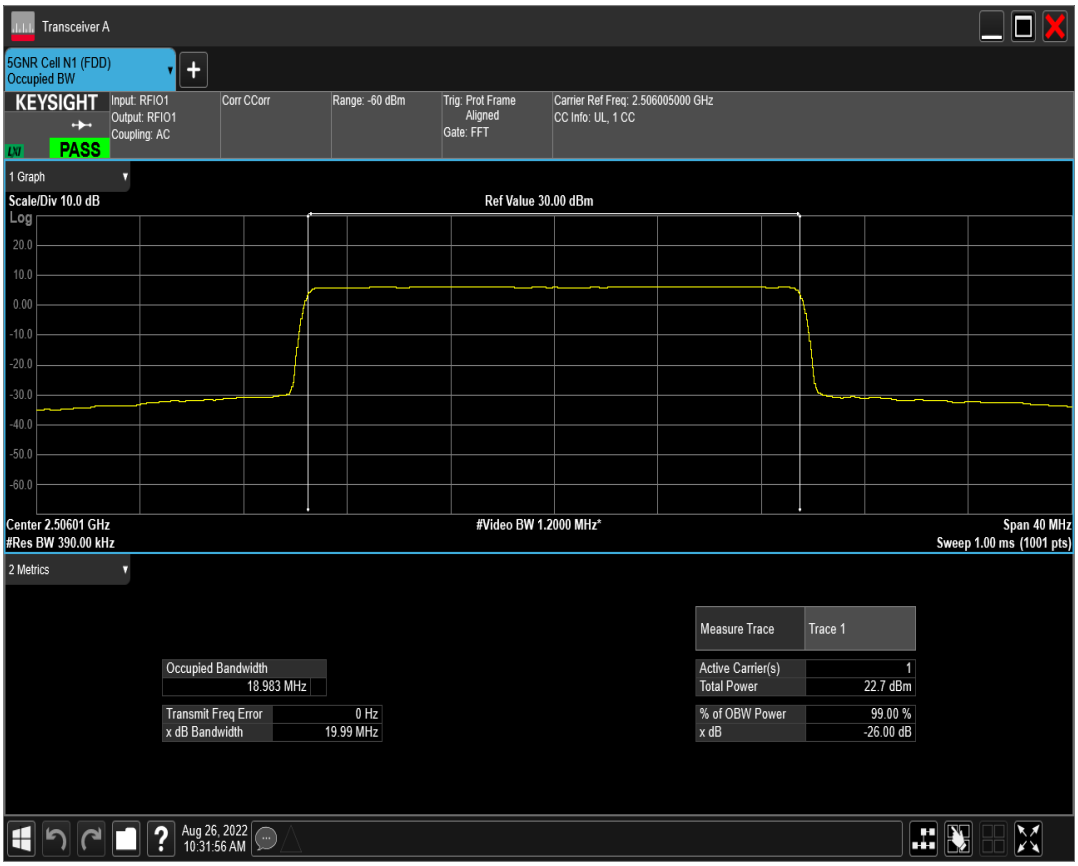
n41 SCS=15kHz DFT_QAM64 BW=20MHz Channel=501201 RB=100@0



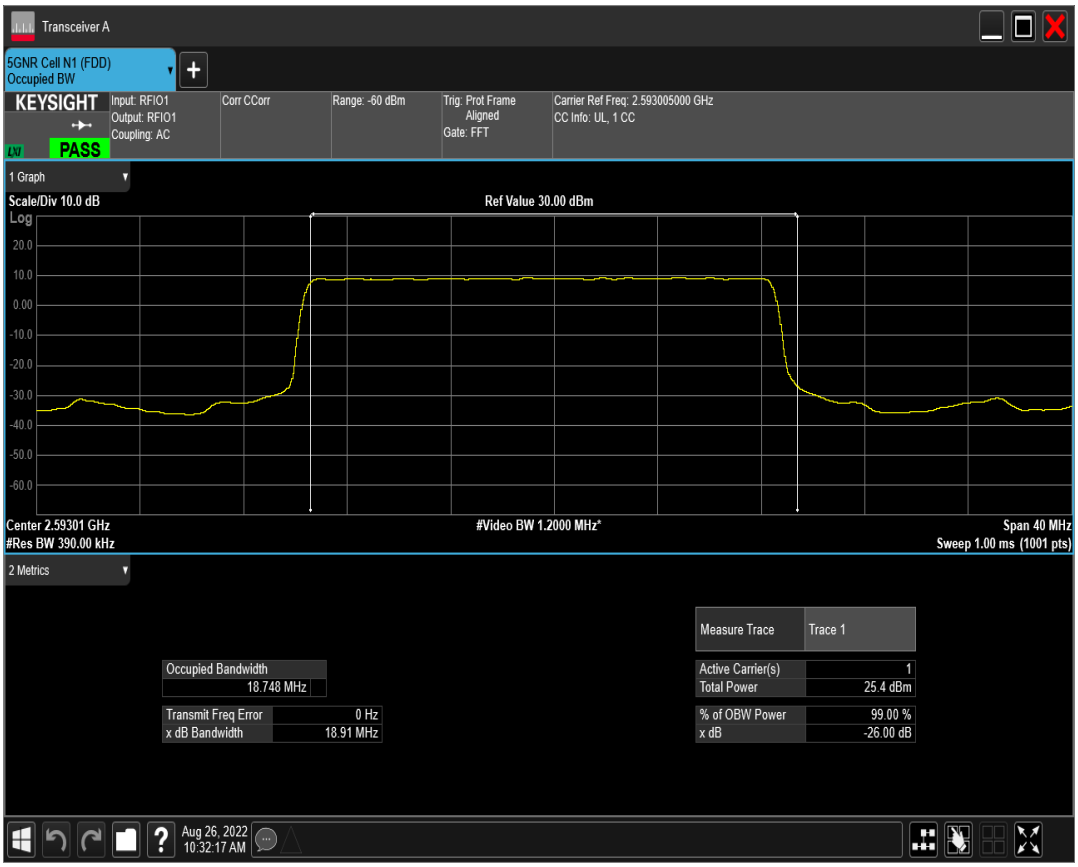
n41 SCS=15kHz DFT_QAM256 BW=20MHz Channel=501201 RB=100@0



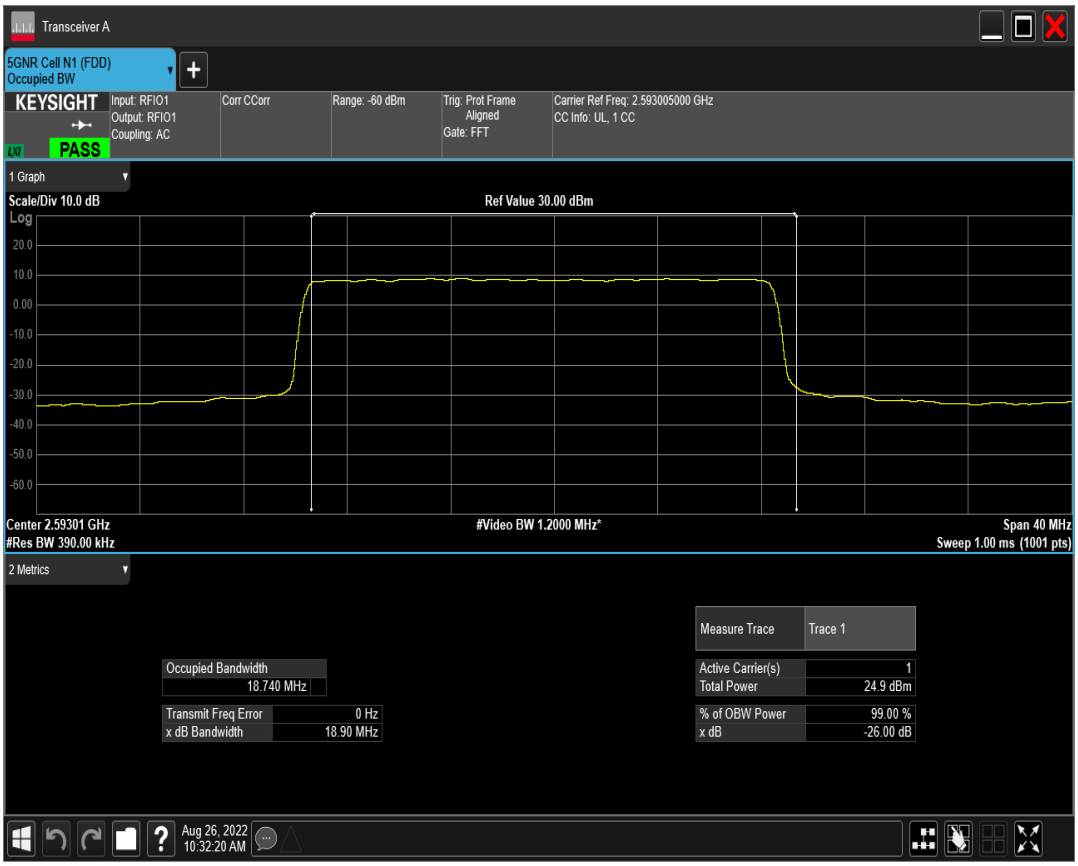
n41 SCS=15kHz CP_QPSK BW=20MHz Channel=501201 RB=106@0



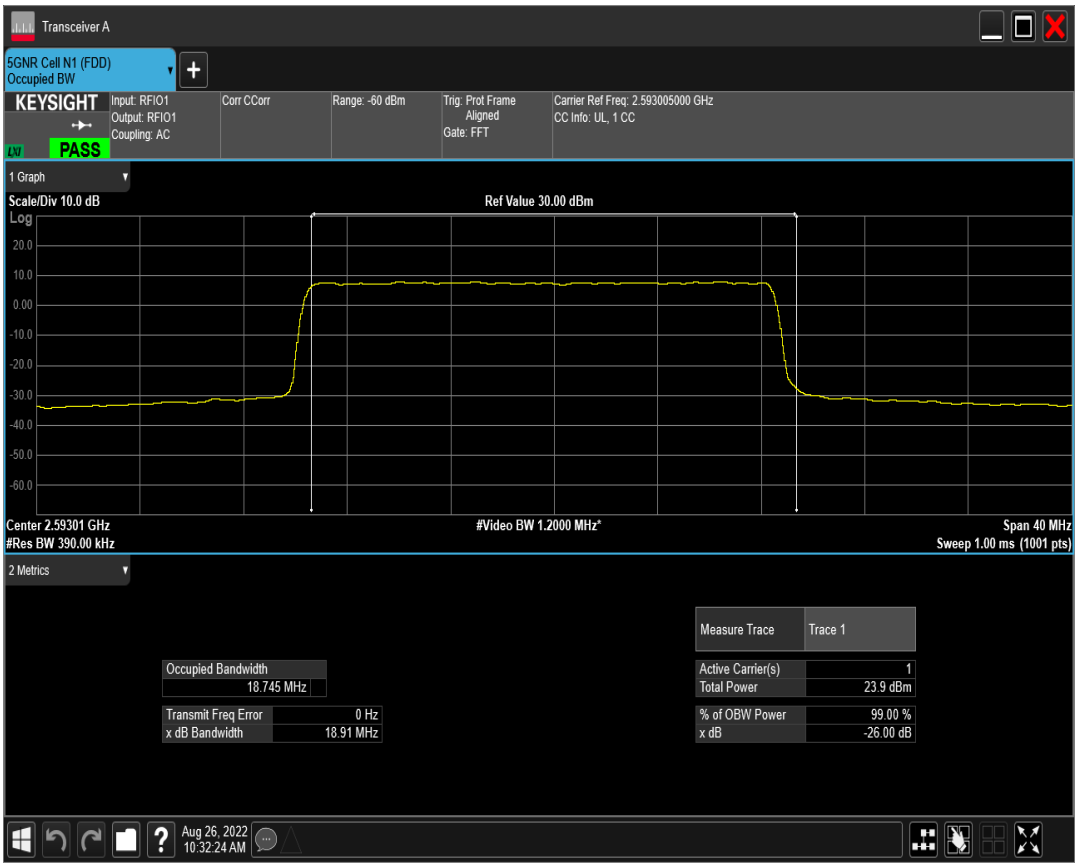
n41 SCS=15kHz DFT_BPSK BW=20MHz Channel=518601 RB=100@0



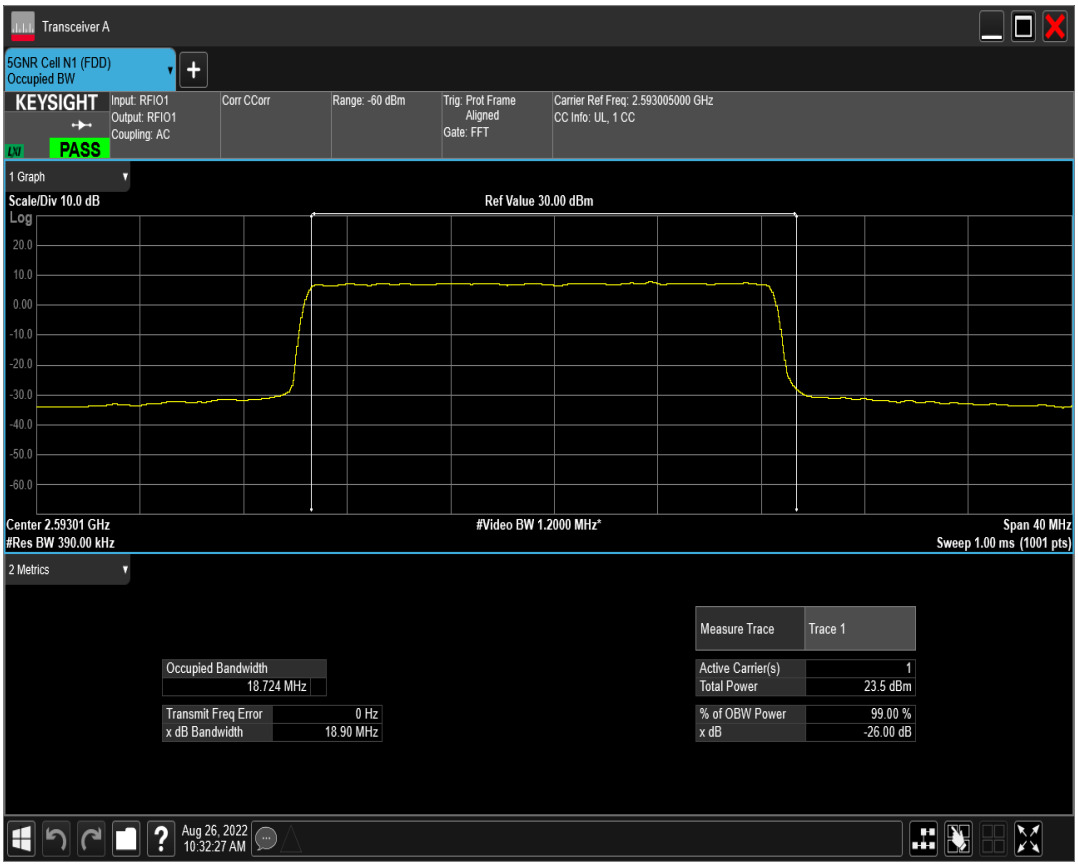
n41 SCS=15kHz DFT_QPSK BW=20MHz Channel=518601 RB=100@0



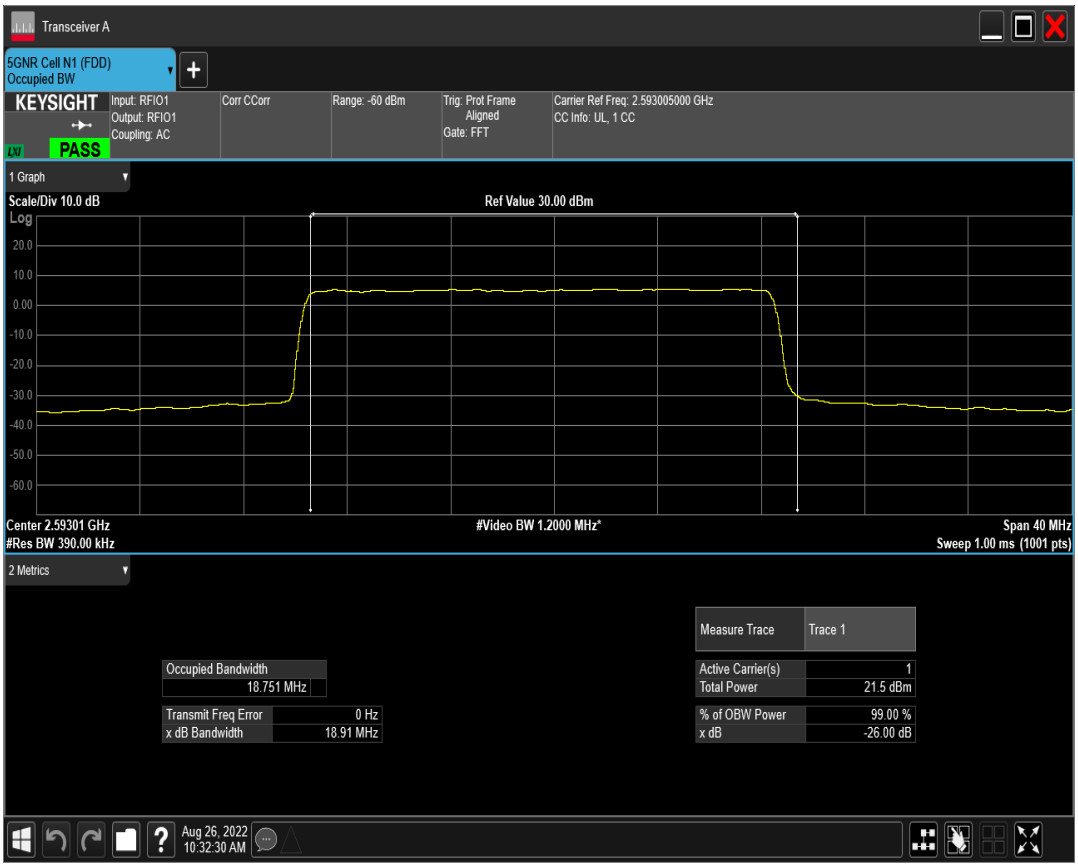
n41 SCS=15kHz DFT_QAM16 BW=20MHz Channel=518601 RB=100@0



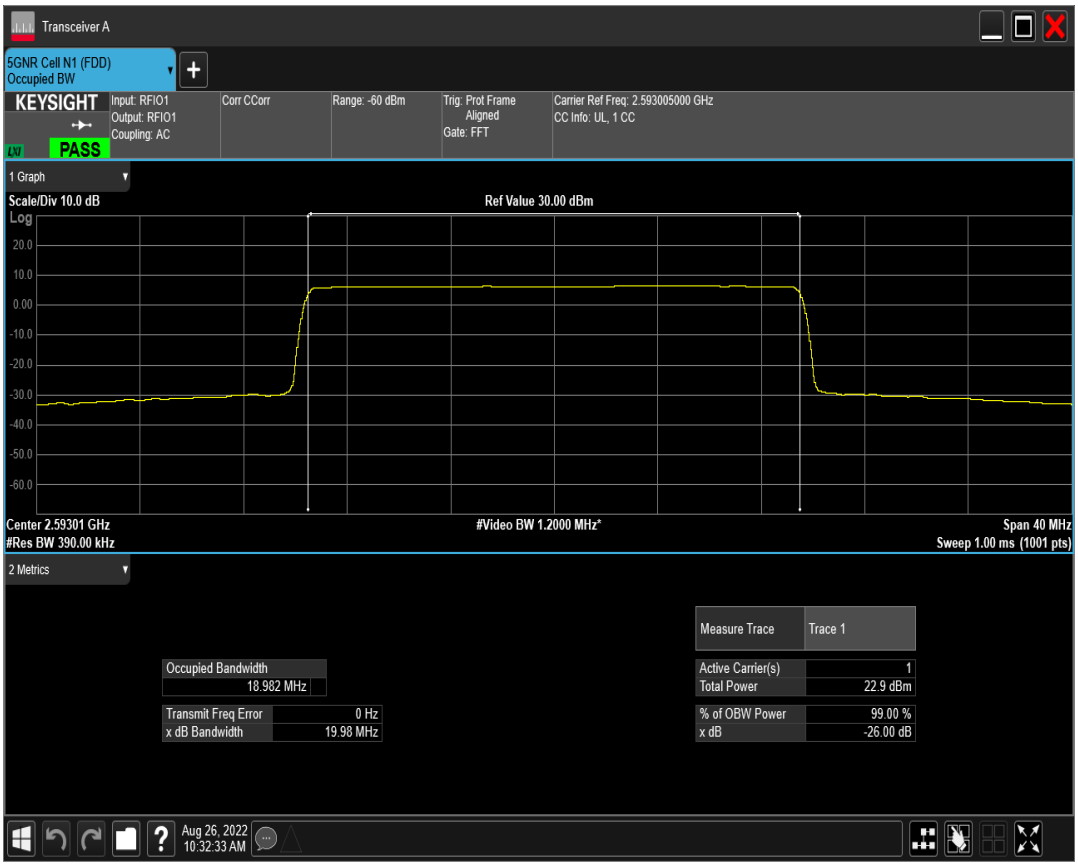
n41 SCS=15kHz DFT_QAM64 BW=20MHz Channel=518601 RB=100@0



n41 SCS=15kHz DFT_QAM256 BW=20MHz Channel=518601 RB=100@0

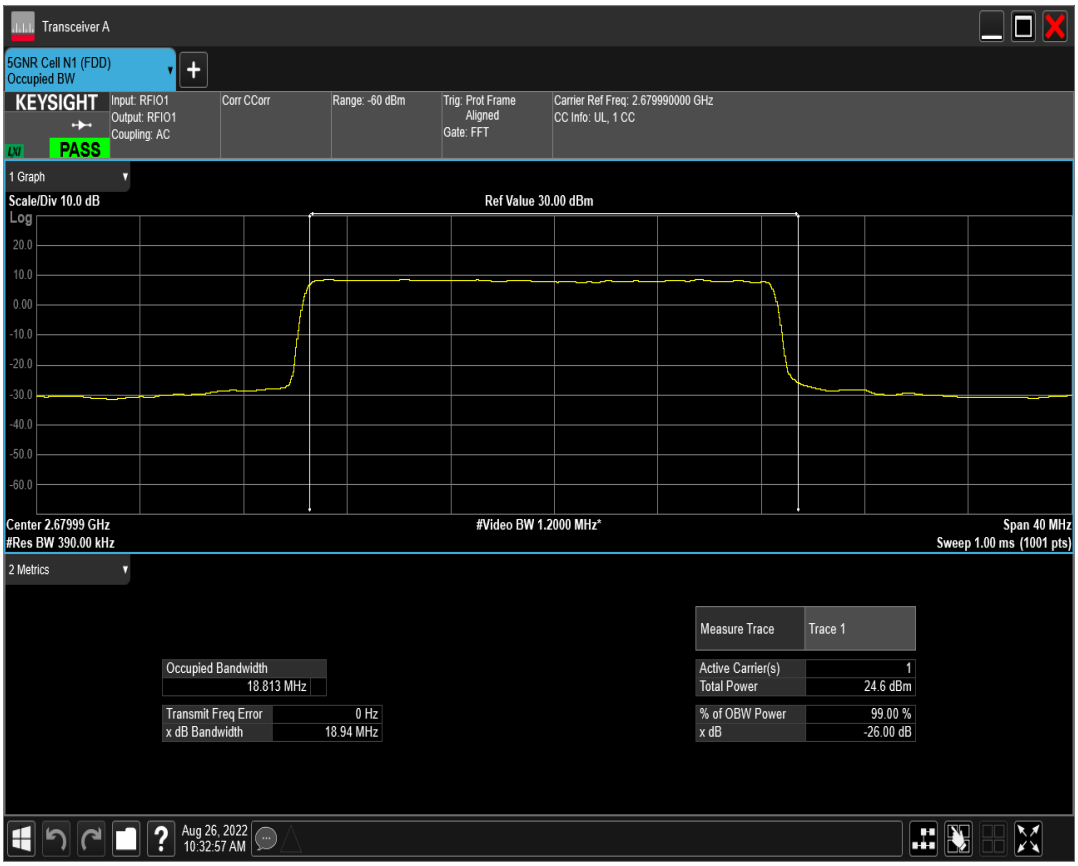


n41 SCS=15kHz CP_QPSK BW=20MHz Channel=518601 RB=106@0

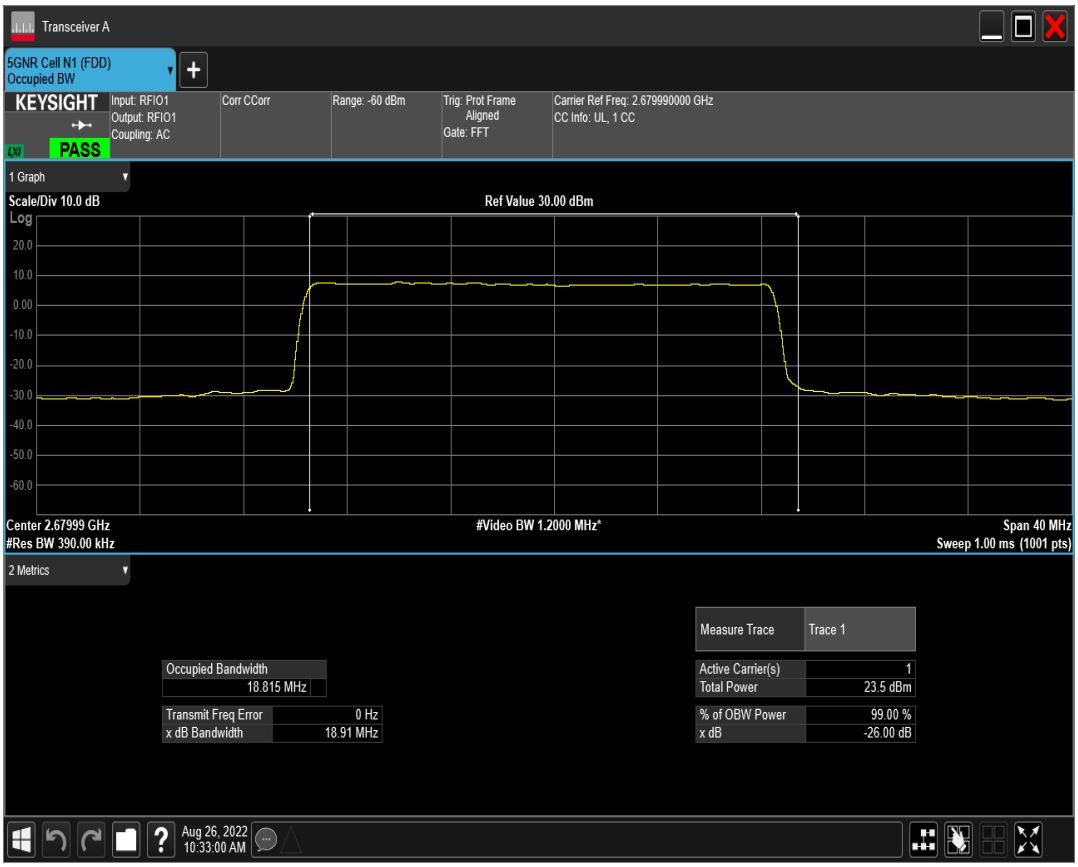


n41 SCS=15kHz DFT_BPSK BW=20MHz Channel=535998 RB=100@0

n41 SCS=15kHz DFT_QPSK BW=20MHz Channel=535998 RB=100@0

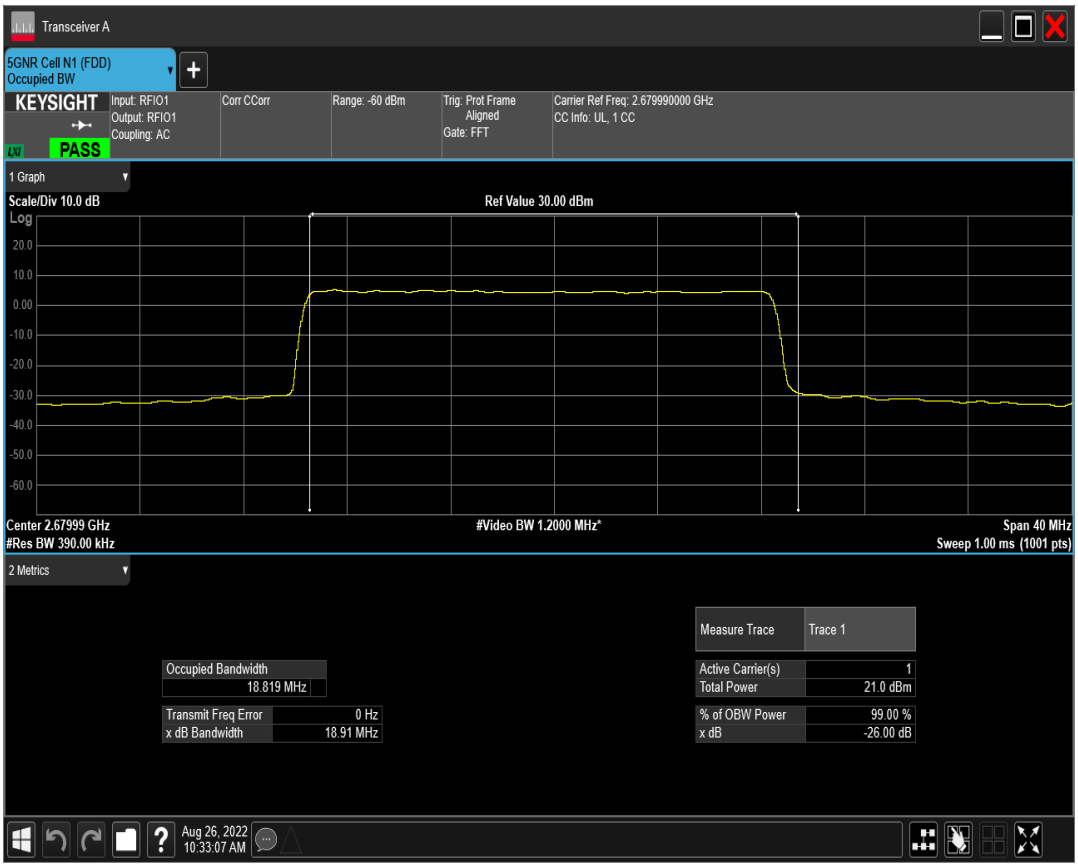


n41 SCS=15kHz DFT_QAM16 BW=20MHz Channel=535998 RB=100@0

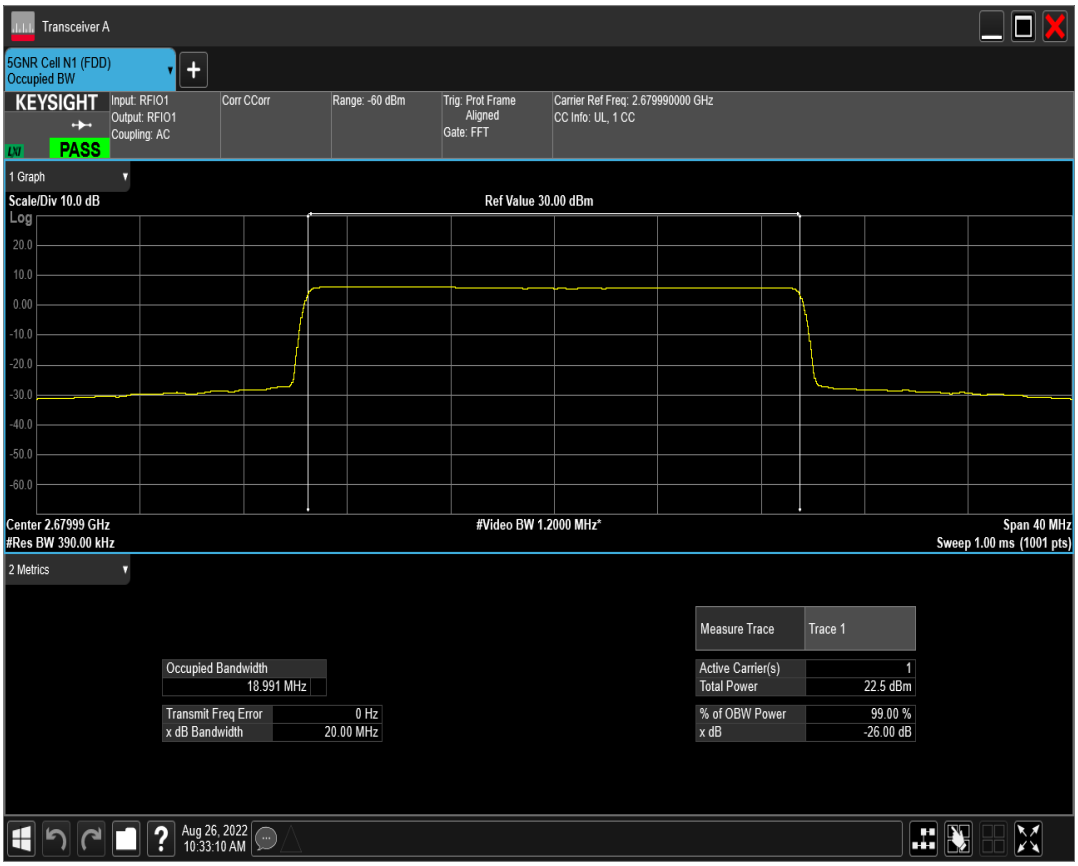


n41 SCS=15kHz DFT_QAM64 BW=20MHz Channel=535998 RB=100@0

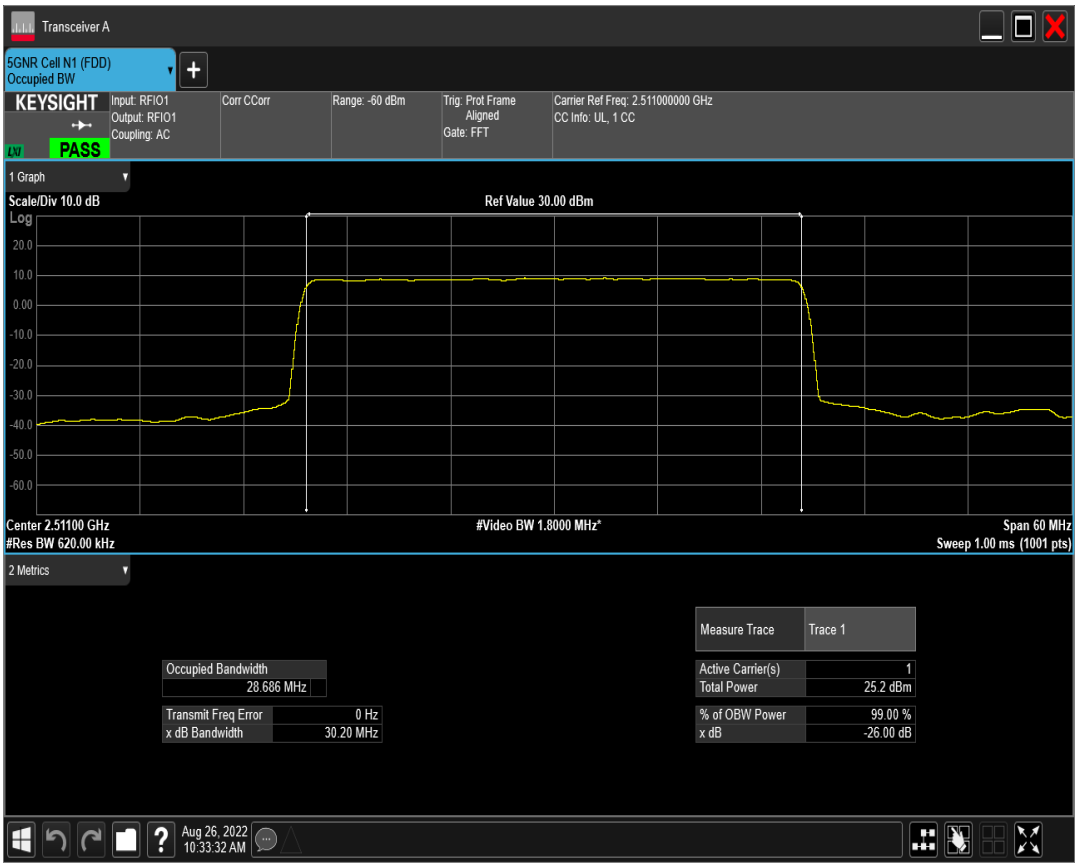
n41 SCS=15kHz DFT_QAM256 BW=20MHz Channel=535998 RB=100@0



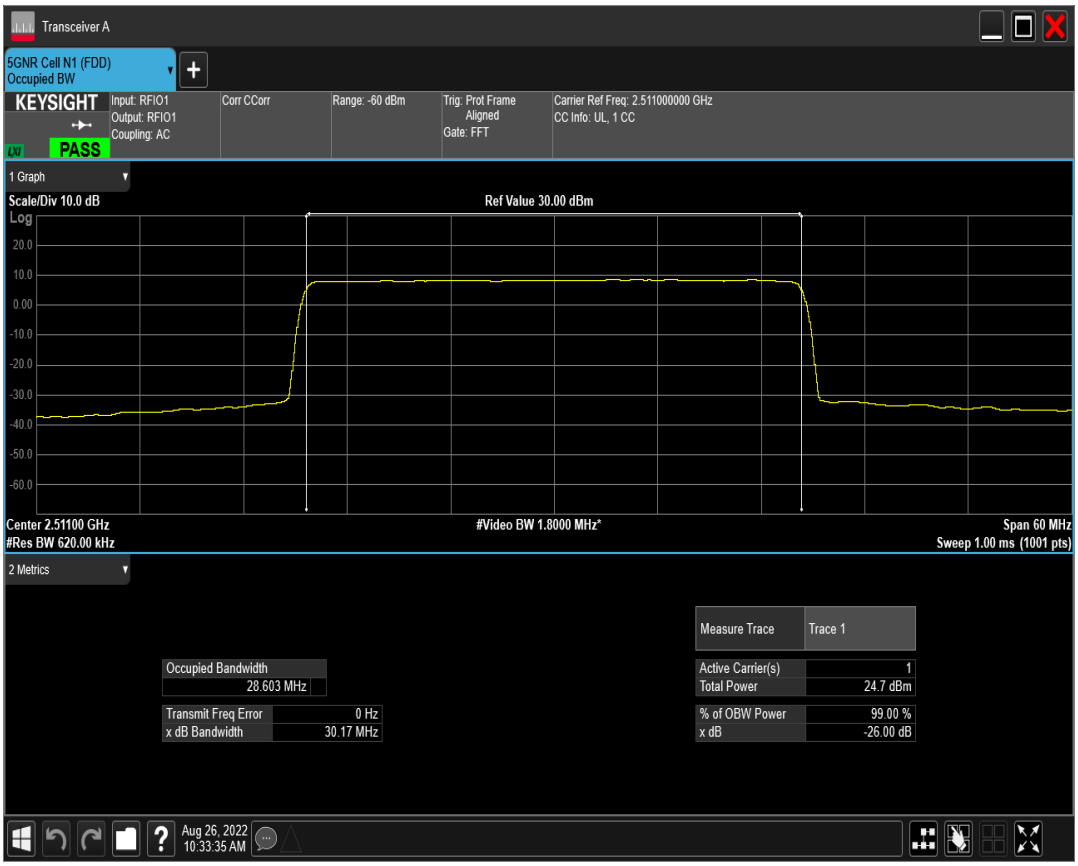
n41 SCS=15kHz CP_QPSK BW=20MHz Channel=535998 RB=106@0



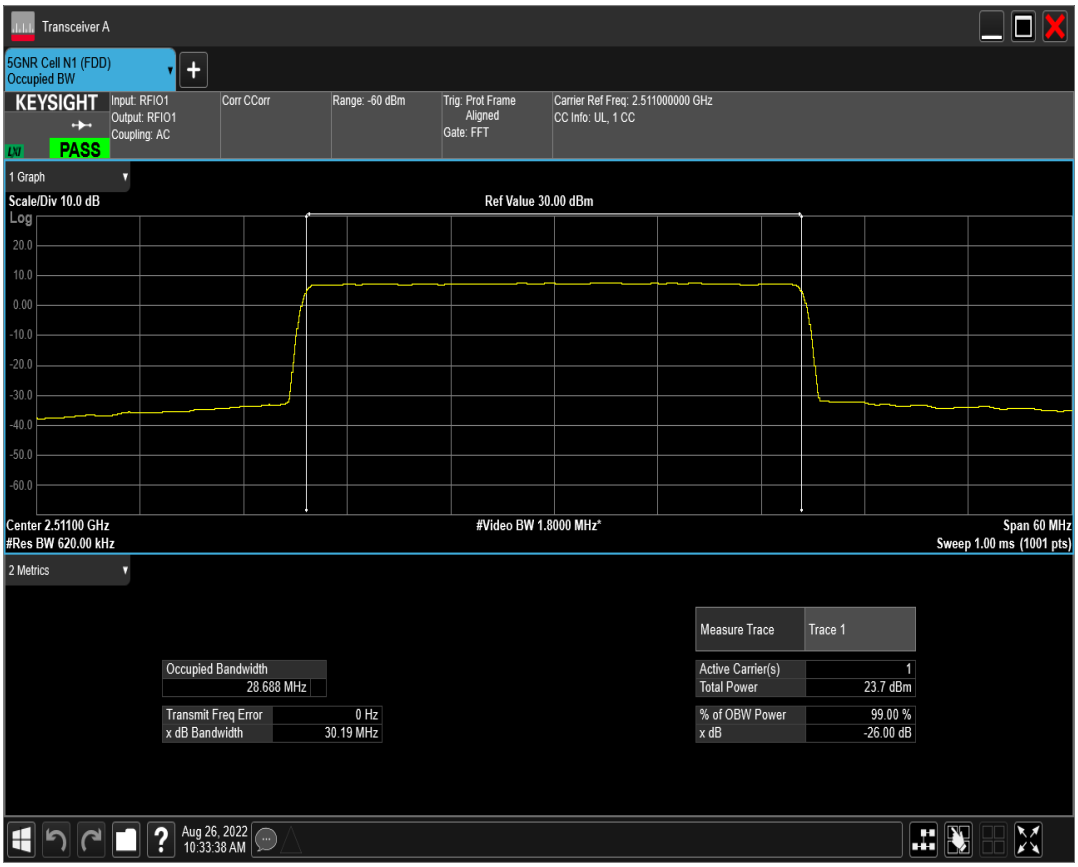
n41 SCS=15kHz DFT_BPSK BW=30MHz Channel=502200 RB=160@0



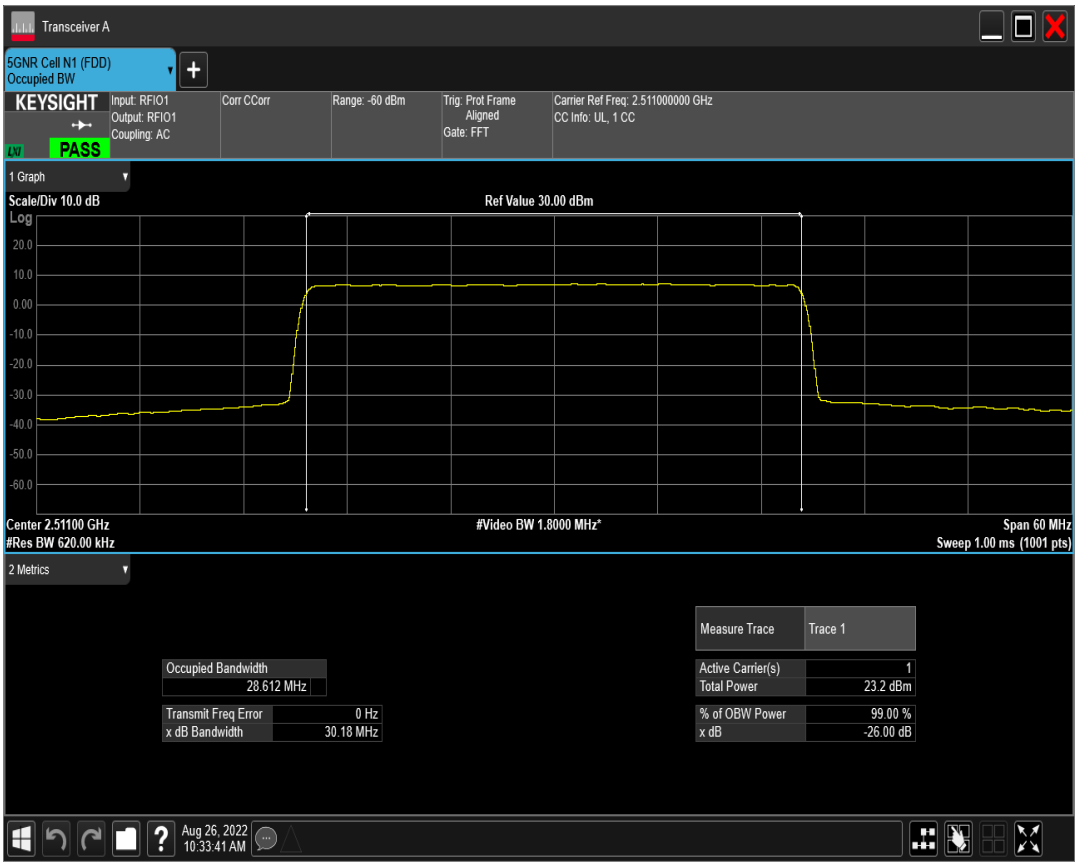
n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=502200 RB=160@0



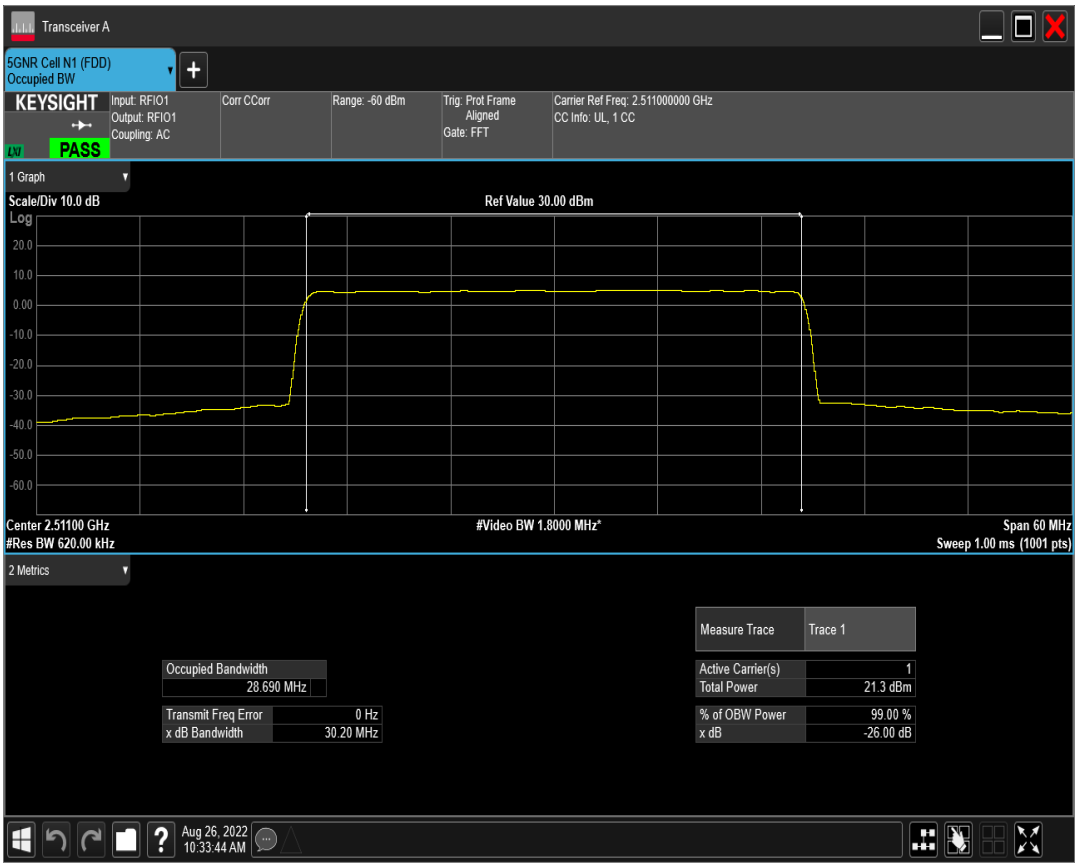
n41 SCS=15kHz DFT_QAM16 BW=30MHz Channel=502200 RB=160@0



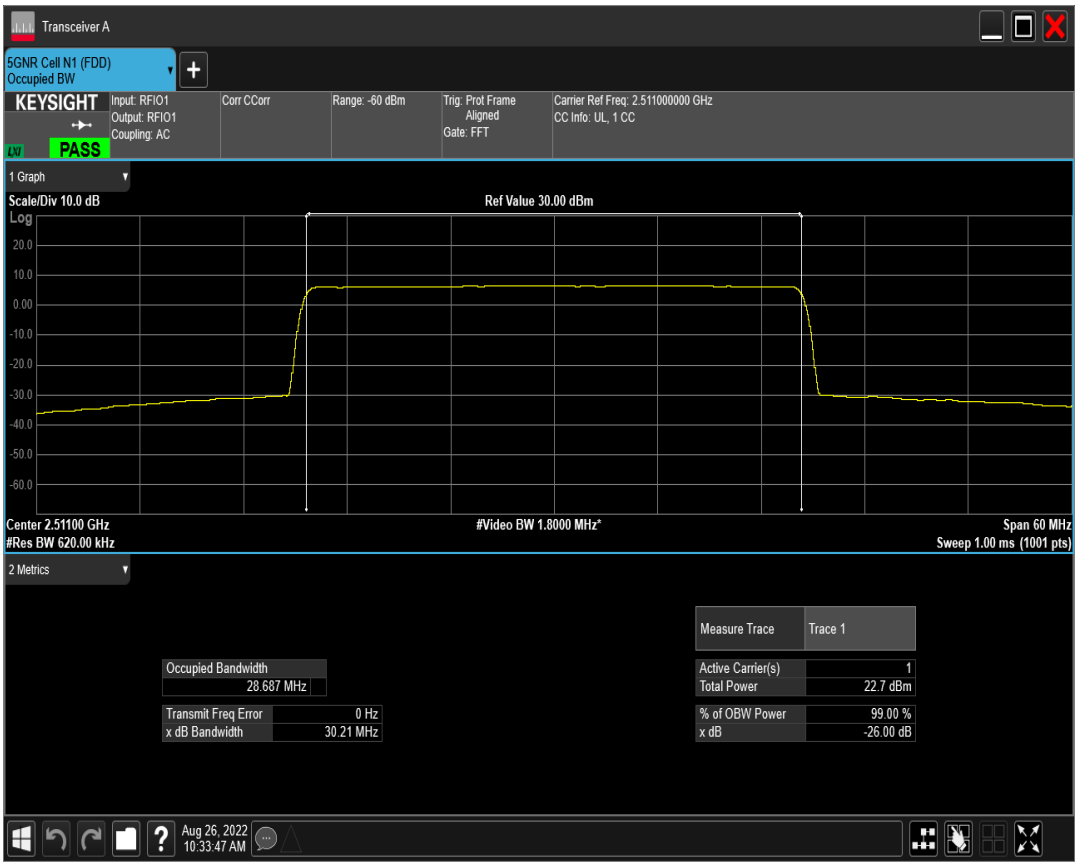
n41 SCS=15kHz DFT_QAM64 BW=30MHz Channel=502200 RB=160@0



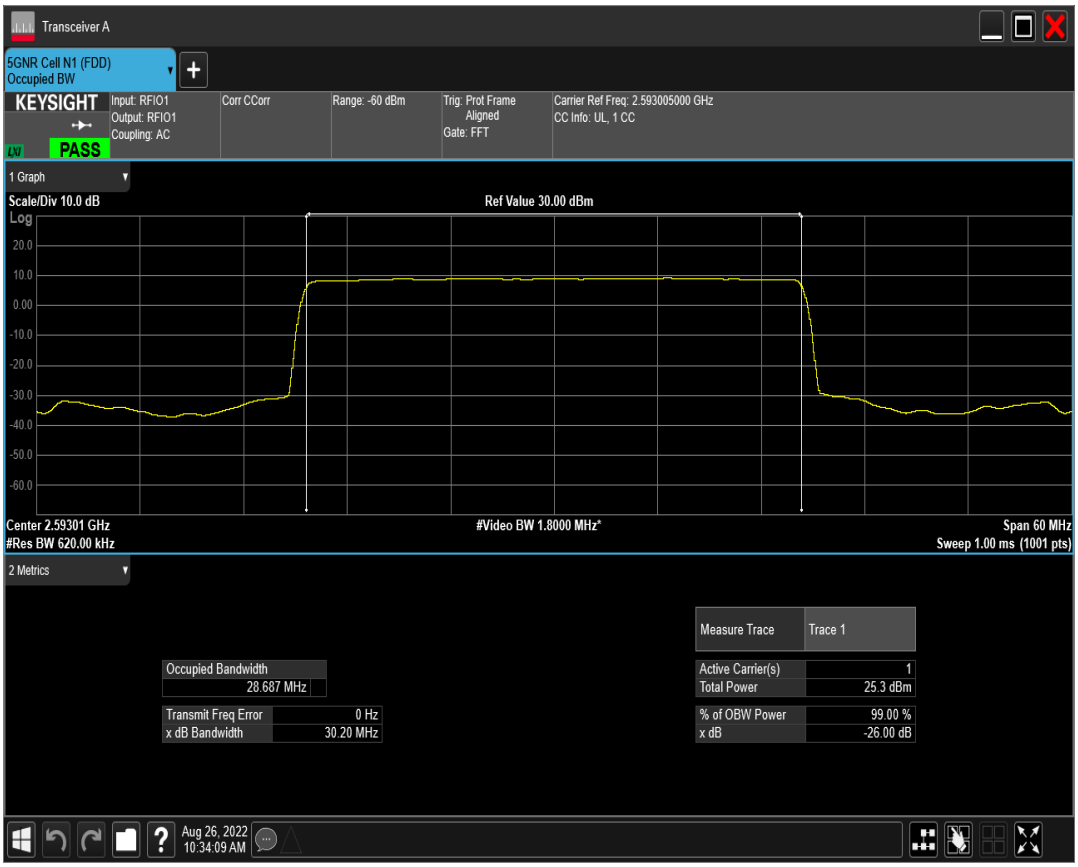
n41 SCS=15kHz DFT_QAM256 BW=30MHz Channel=502200 RB=160@0



n41 SCS=15kHz CP_QPSK BW=30MHz Channel=502200 RB=160@0

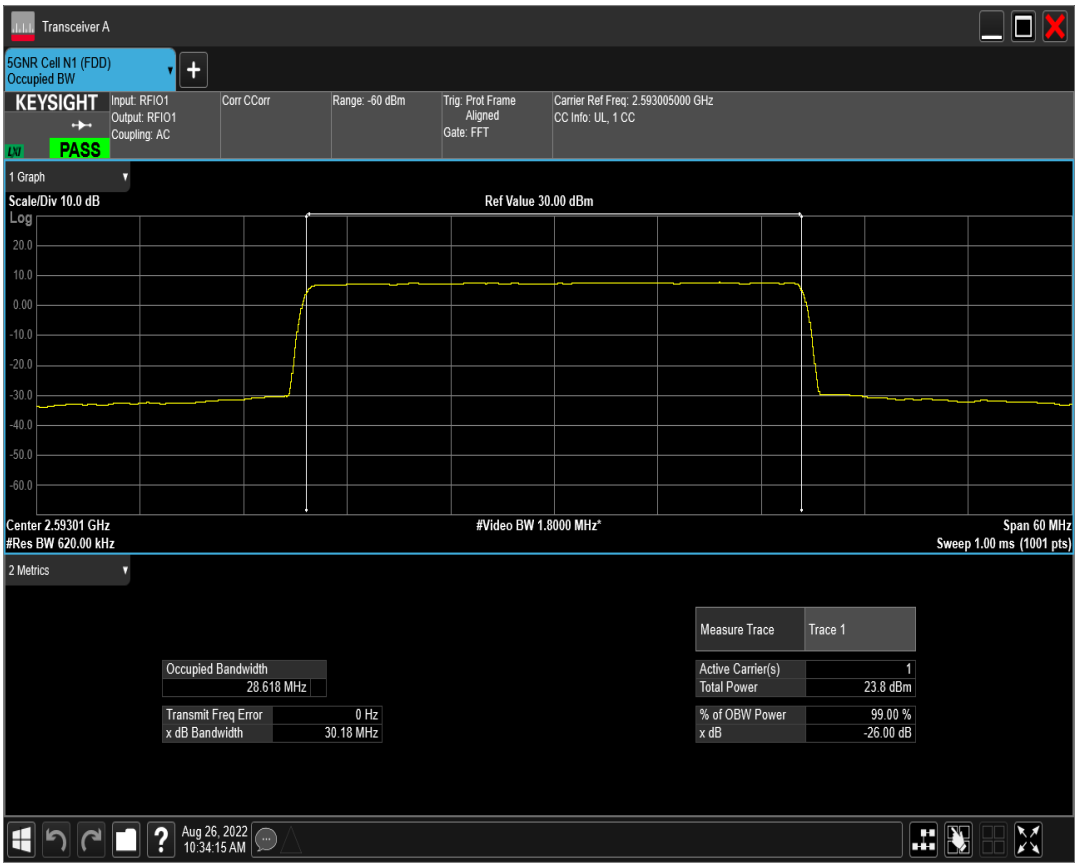


n41 SCS=15kHz DFT_BPSK BW=30MHz Channel=518601 RB=160@0

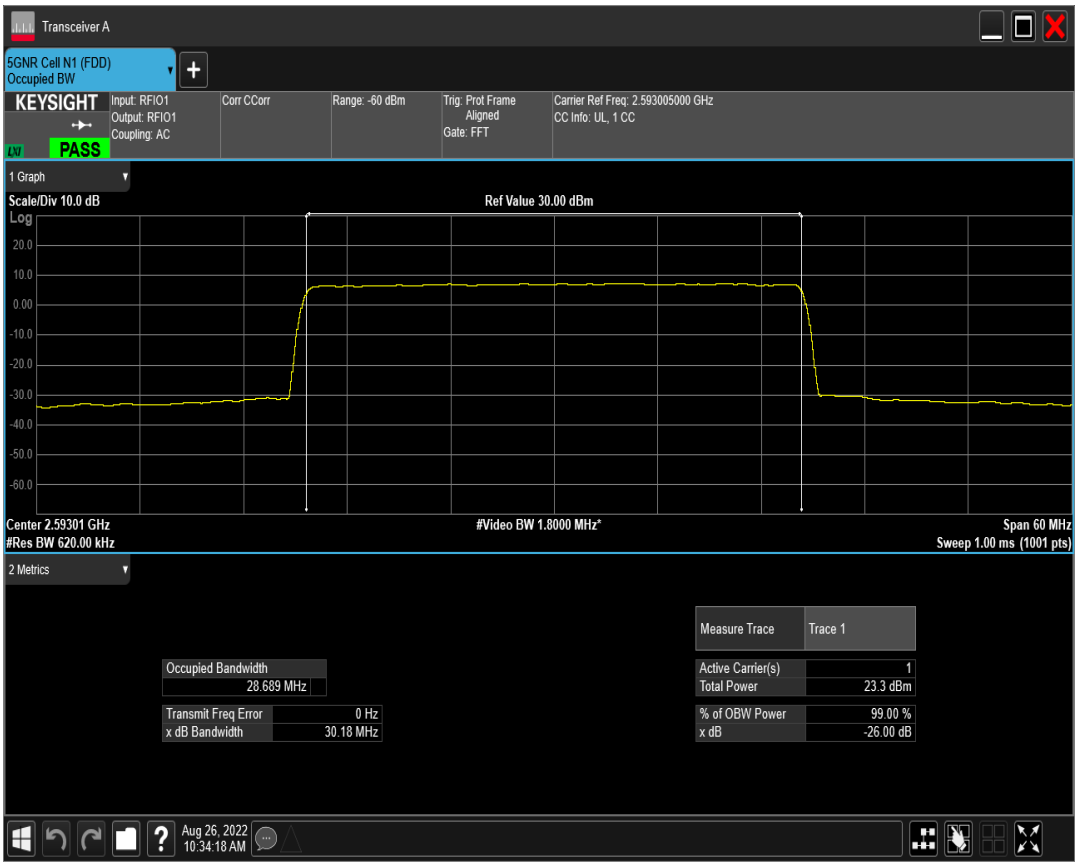


n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=518601 RB=160@0

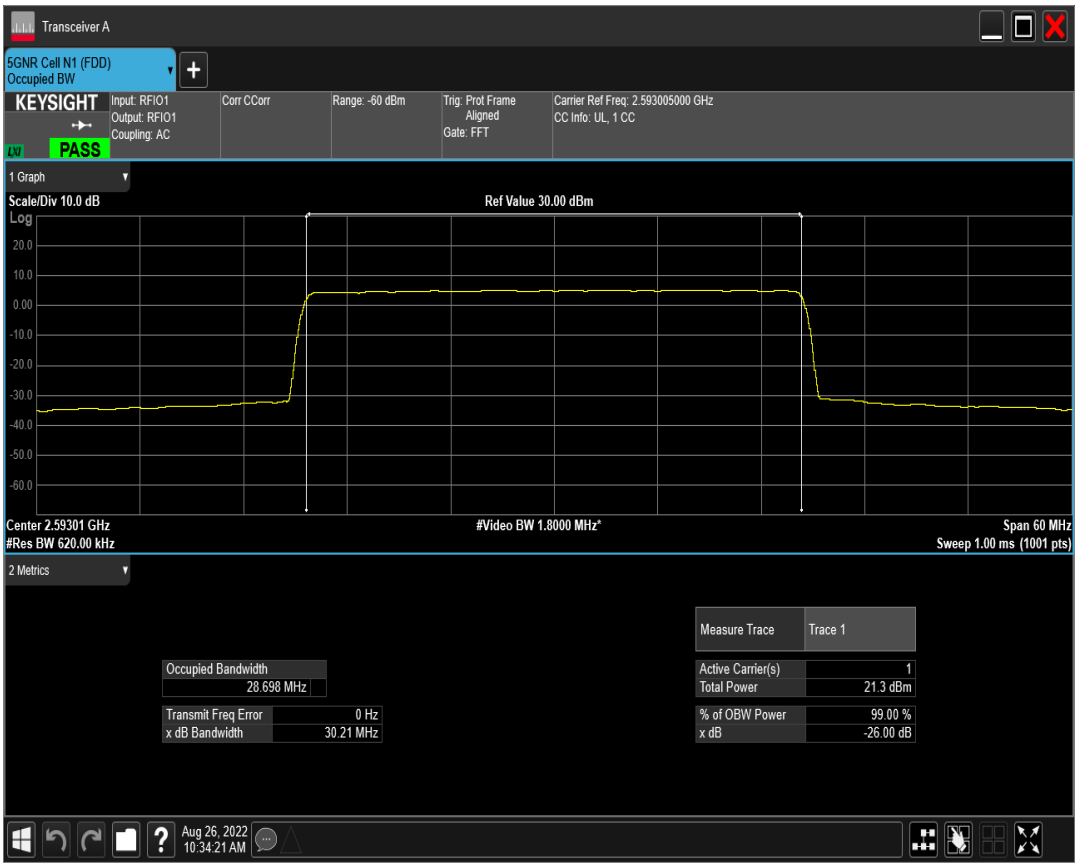
n41 SCS=15kHz DFT_QAM16 BW=30MHz Channel=518601 RB=160@0



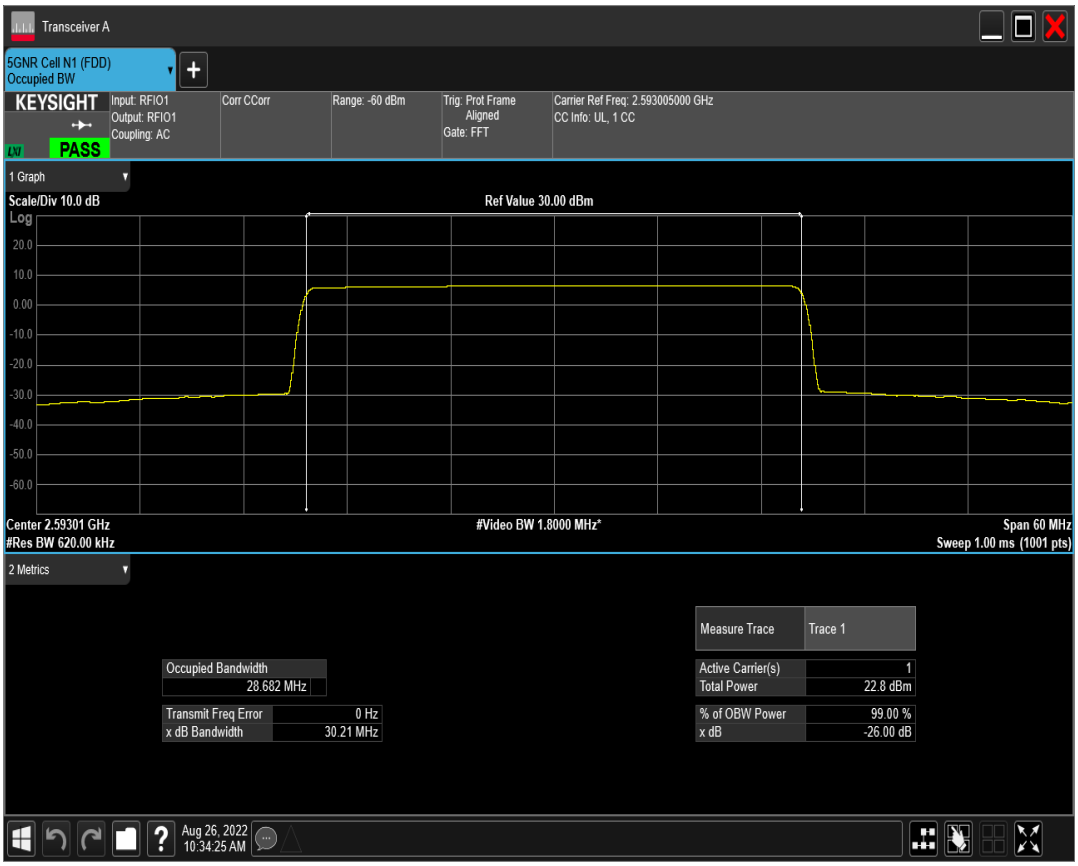
n41 SCS=15kHz DFT_QAM64 BW=30MHz Channel=518601 RB=160@0



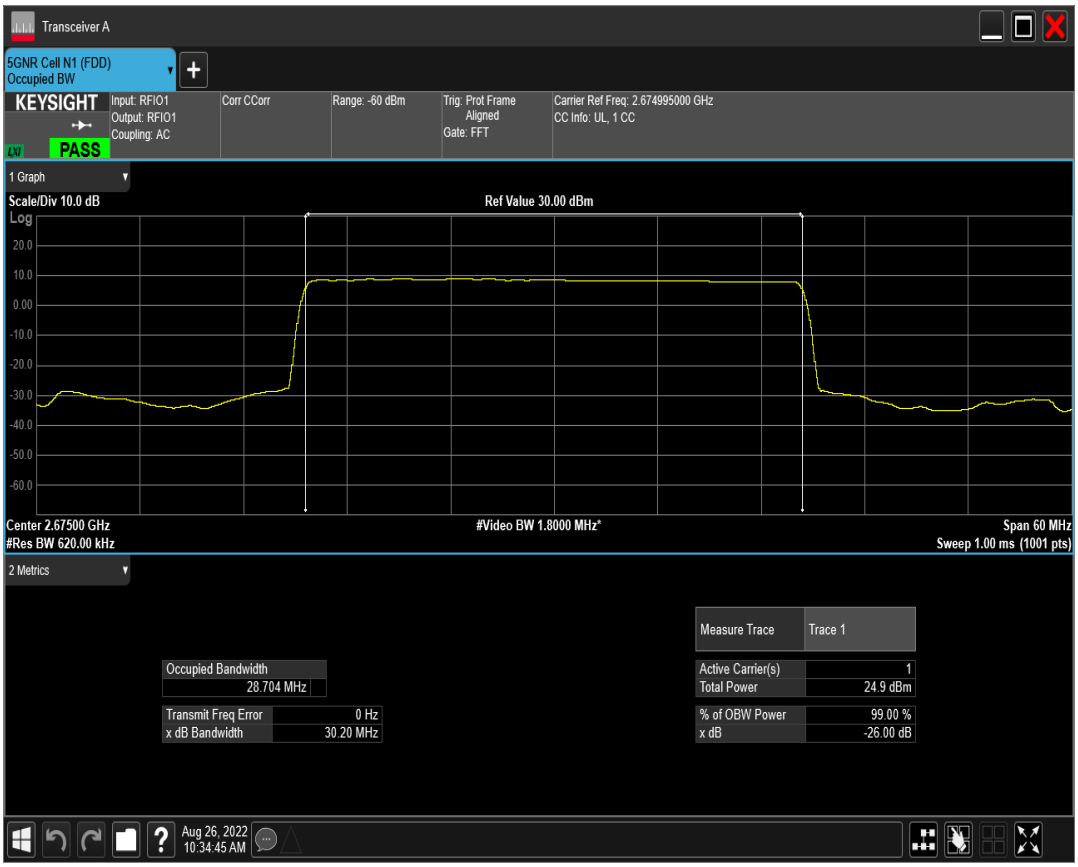
n41 SCS=15kHz DFT_QAM256 BW=30MHz Channel=518601 RB=160@0



n41 SCS=15kHz CP_QPSK BW=30MHz Channel=518601 RB=160@0

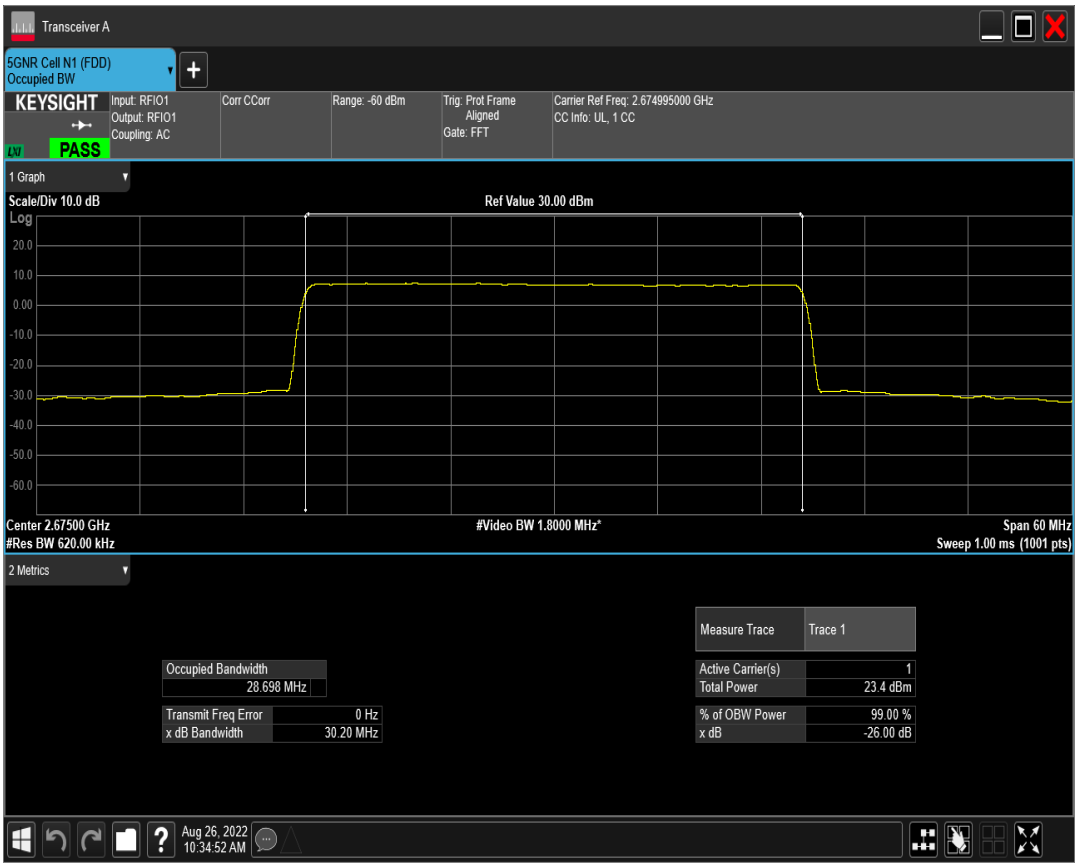


n41 SCS=15kHz DFT_BPSK BW=30MHz Channel=534999 RB=160@0

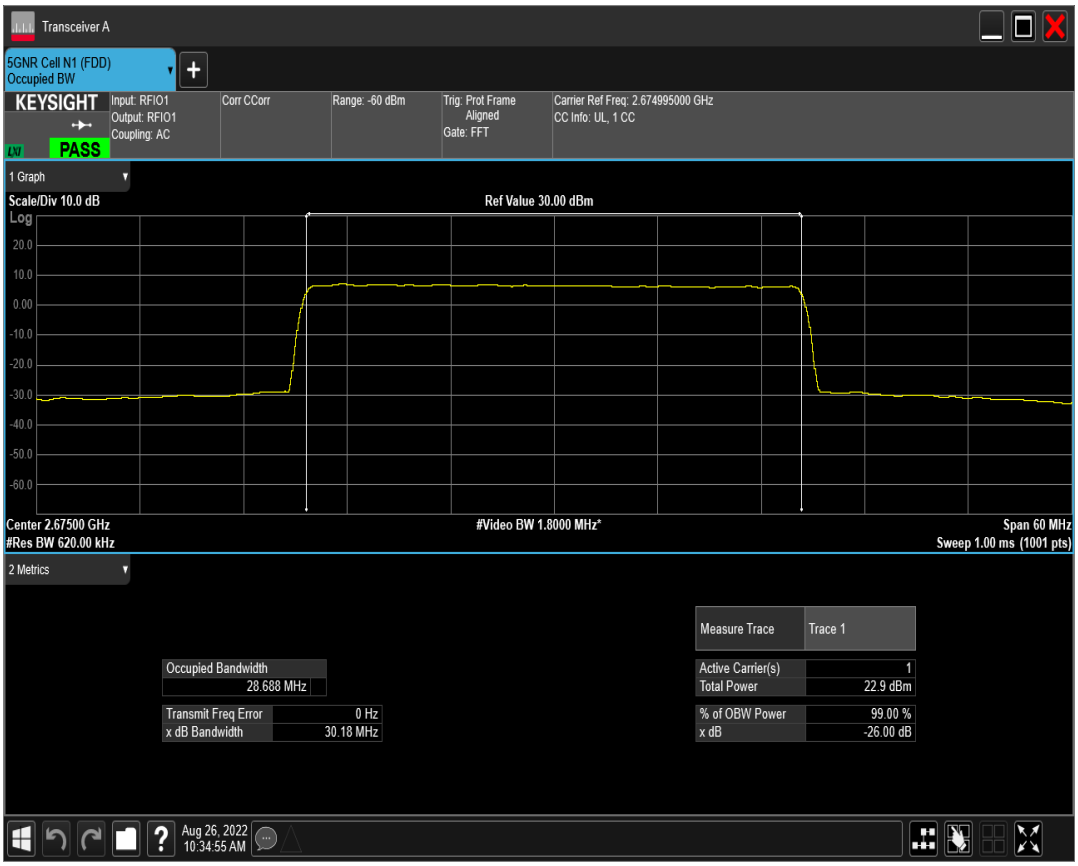


n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=534999 RB=160@0

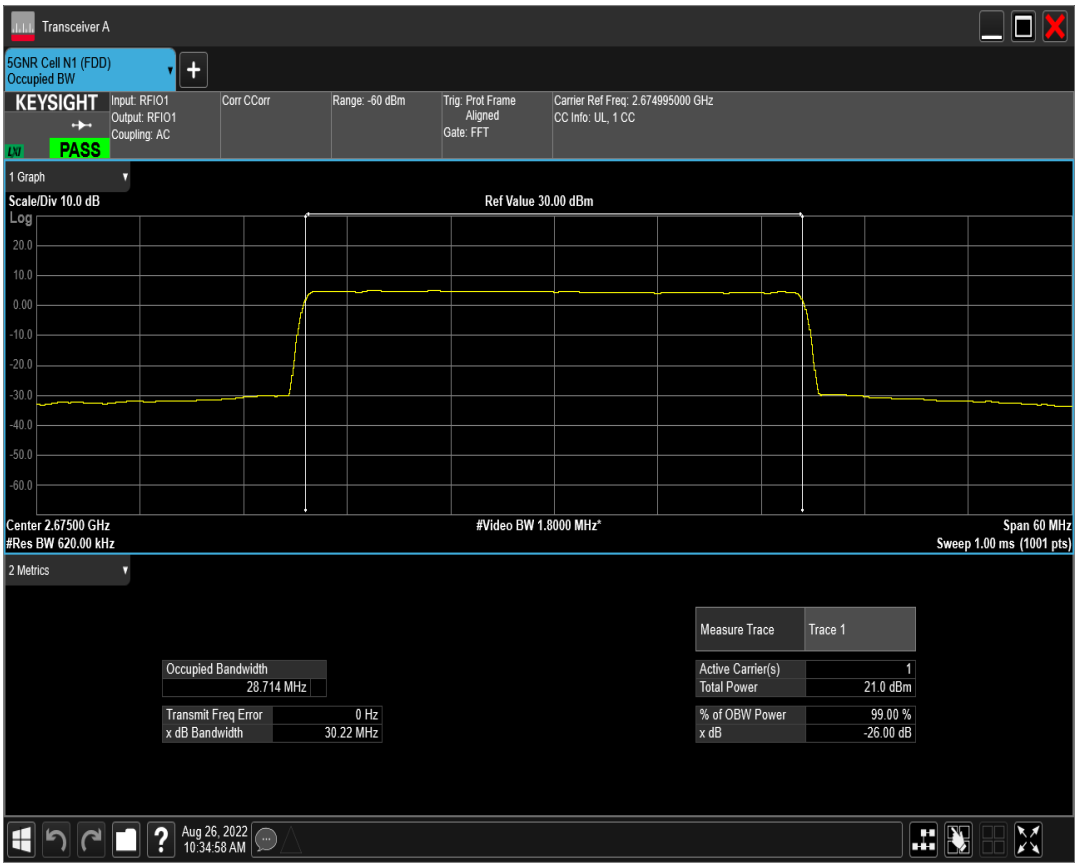
n41 SCS=15kHz DFT_QAM16 BW=30MHz Channel=534999 RB=160@0



n41 SCS=15kHz DFT_QAM64 BW=30MHz Channel=534999 RB=160@0

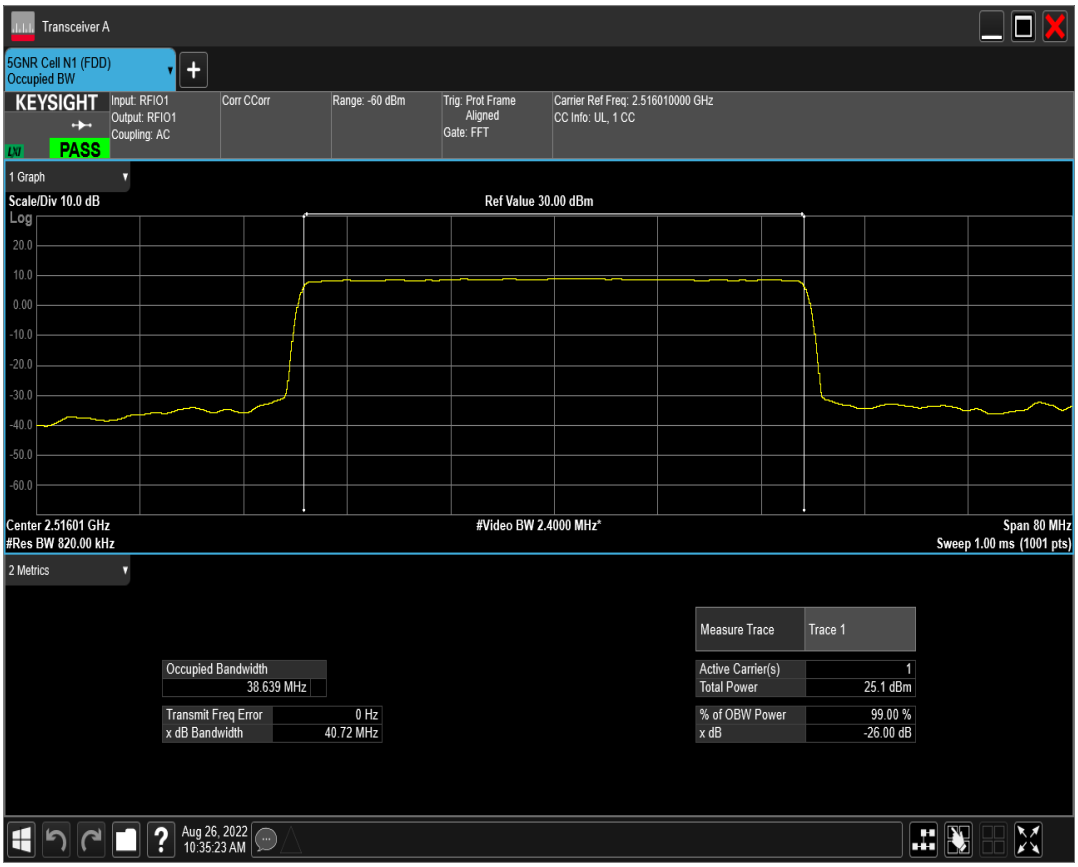


n41 SCS=15kHz DFT_QAM256 BW=30MHz Channel=534999 RB=160@0

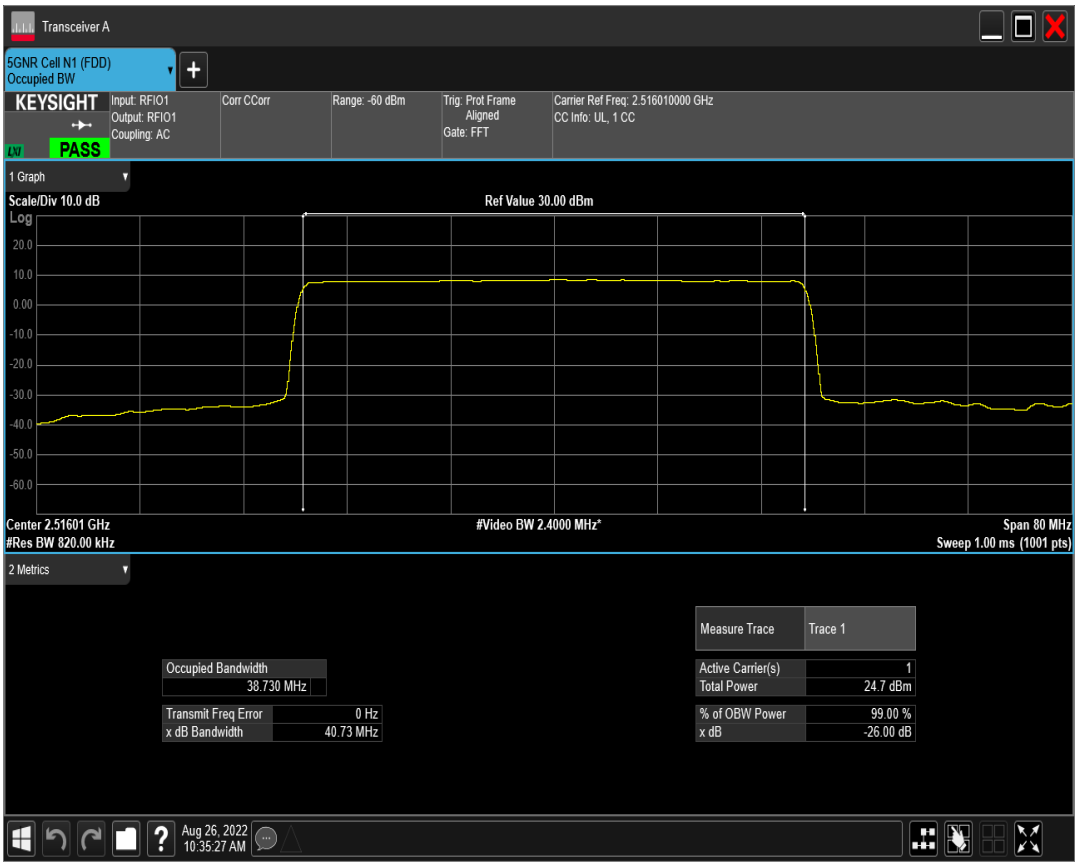


n41 SCS=15kHz CP_QPSK BW=30MHz Channel=534999 RB=160@0

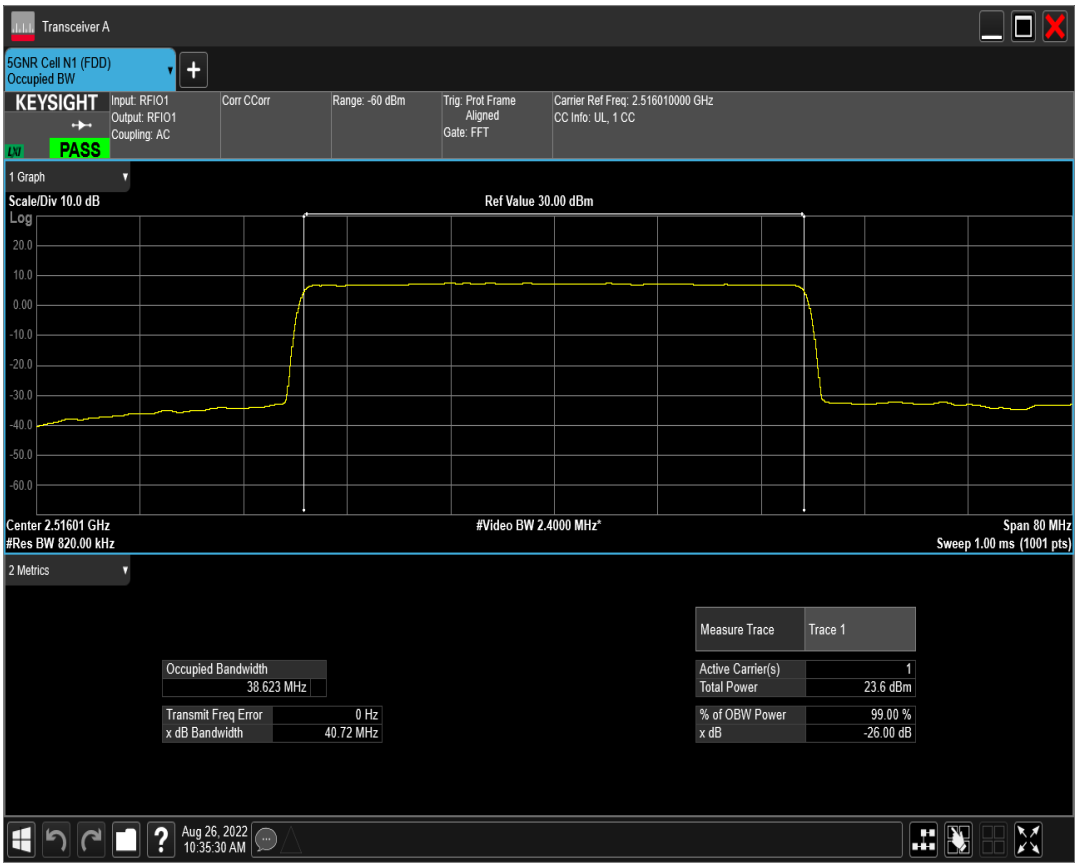
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=503202 RB=216@0



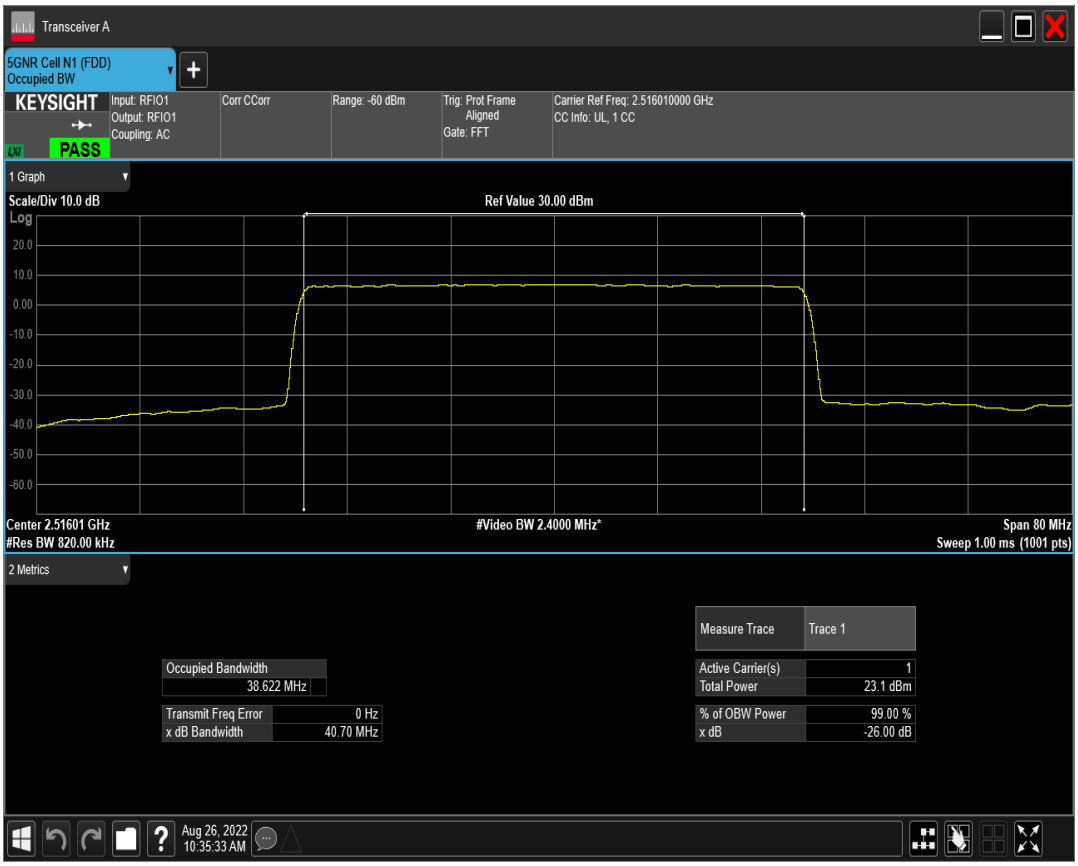
n41 SCS=15kHz DFT_QPSK BW=40MHz Channel=503202 RB=216@0



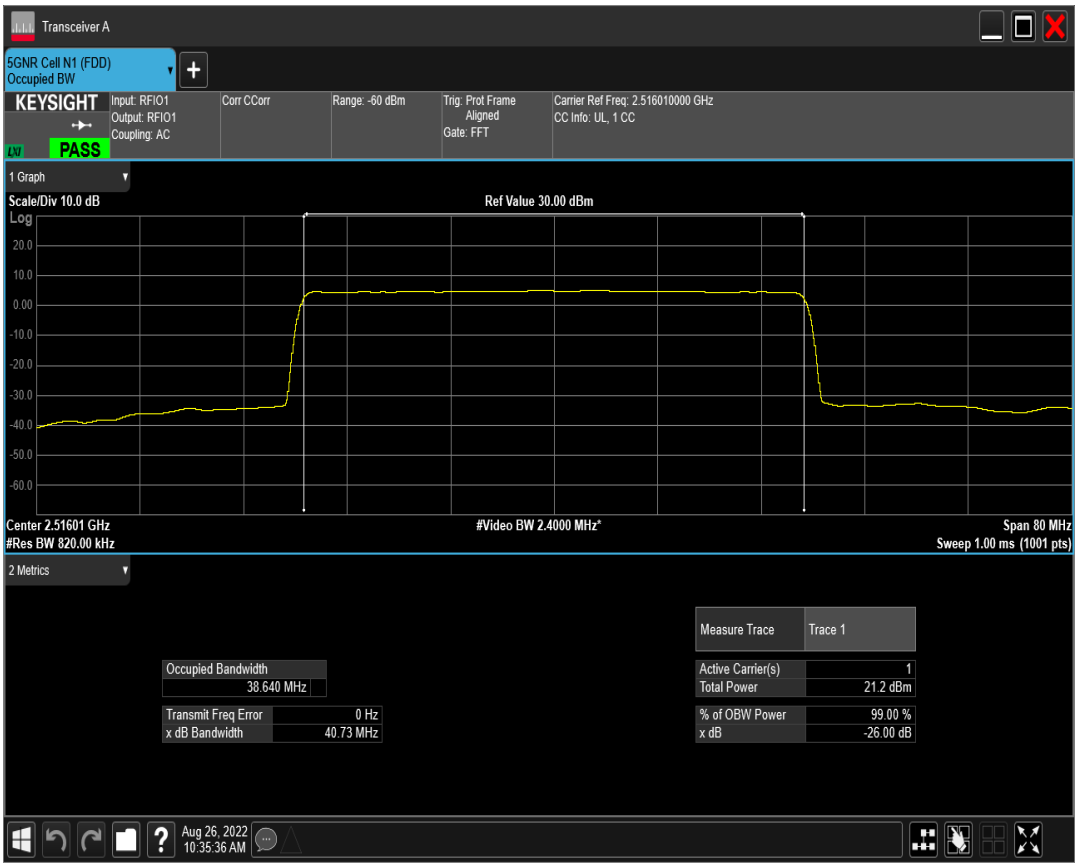
n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=503202 RB=216@0



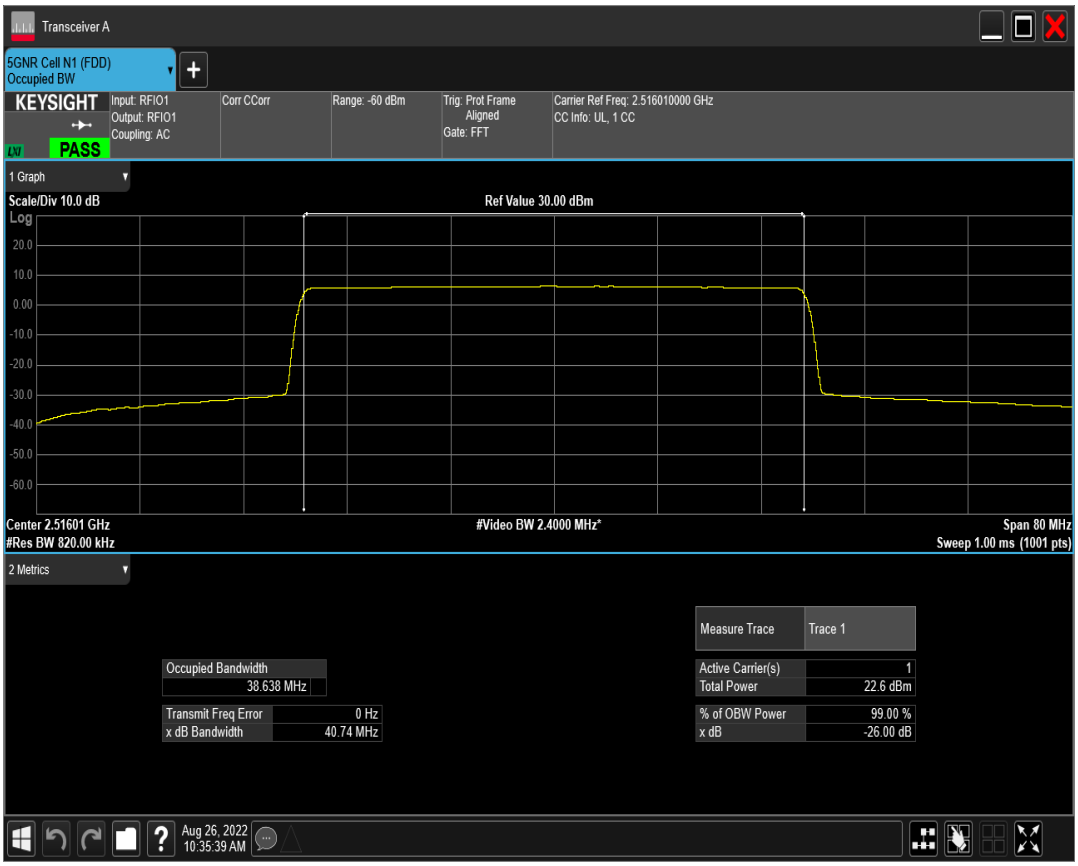
n41 SCS=15kHz DFT_QAM64 BW=40MHz Channel=503202 RB=216@0



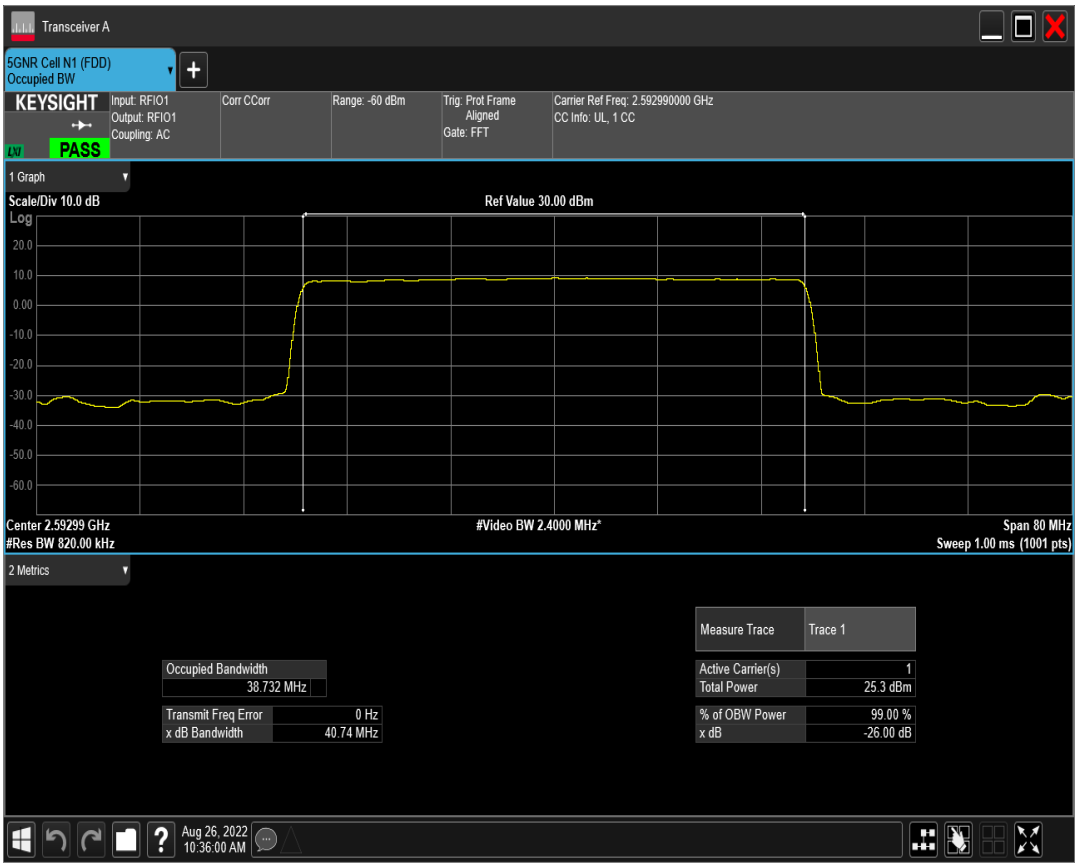
n41 SCS=15kHz DFT_QAM256 BW=40MHz Channel=503202 RB=216@0



n41 SCS=15kHz CP_QPSK BW=40MHz Channel=503202 RB=216@0



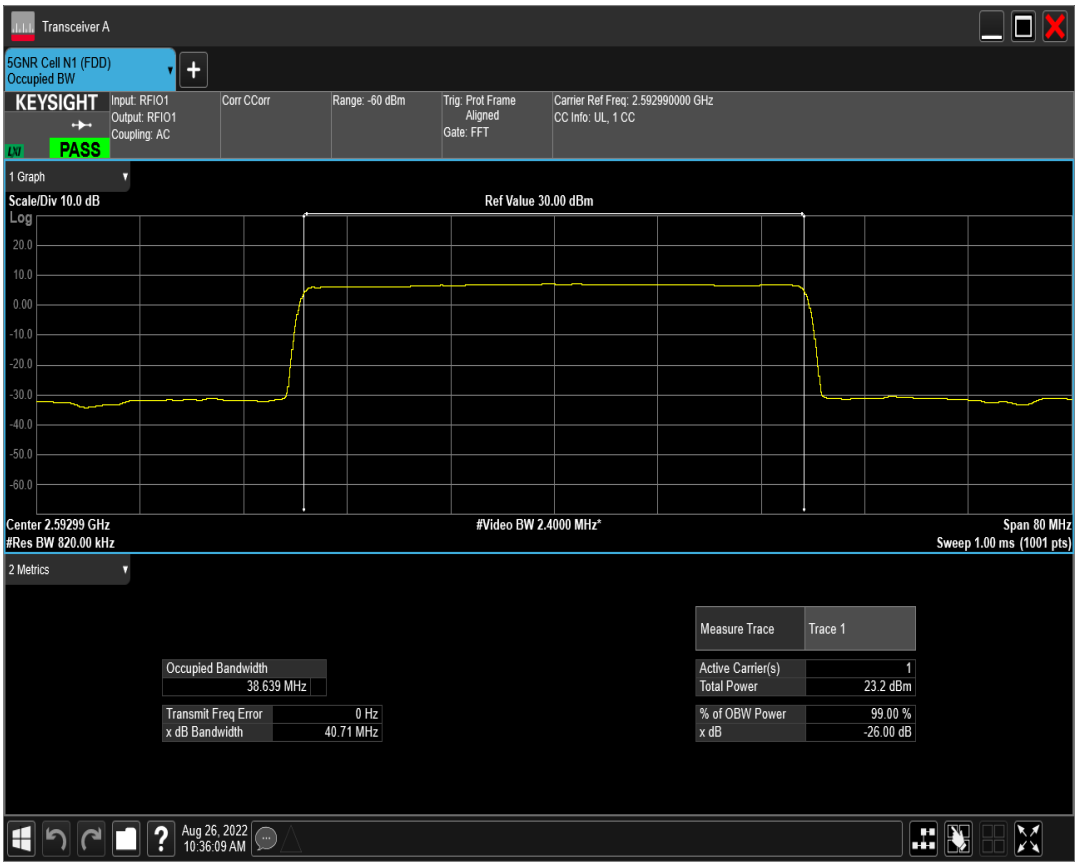
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=518598 RB=216@0



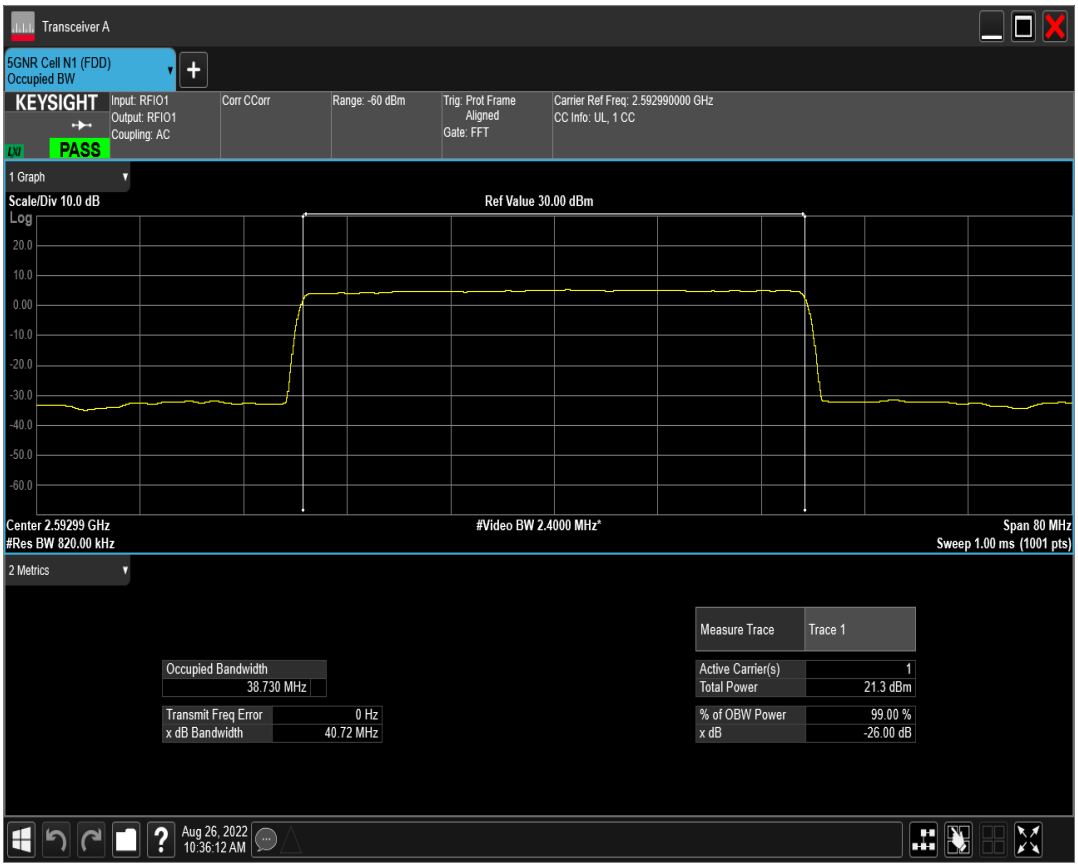
n41 SCS=15kHz DFT_QPSK BW=40MHz Channel=518598 RB=216@0

n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=518598 RB=216@0

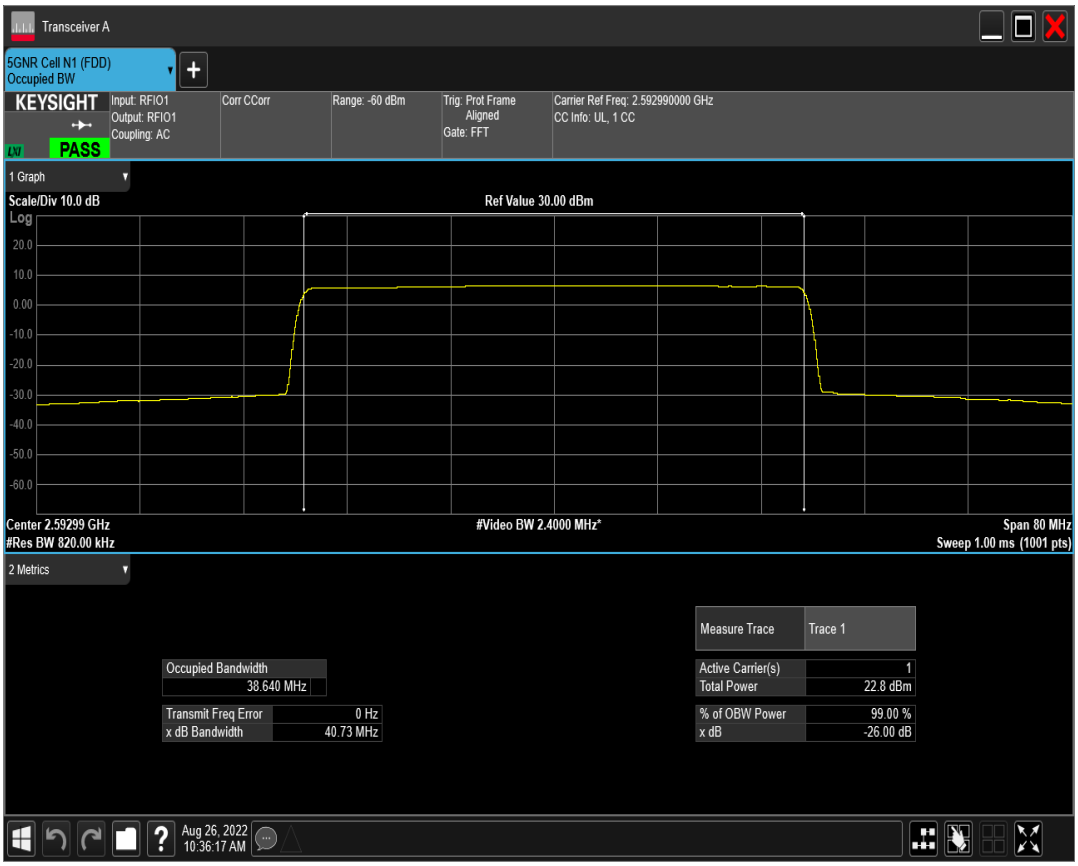
n41 SCS=15kHz DFT_QAM64 BW=40MHz Channel=518598 RB=216@0



n41 SCS=15kHz DFT_QAM256 BW=40MHz Channel=518598 RB=216@0



n41 SCS=15kHz CP_QPSK BW=40MHz Channel=518598 RB=216@0

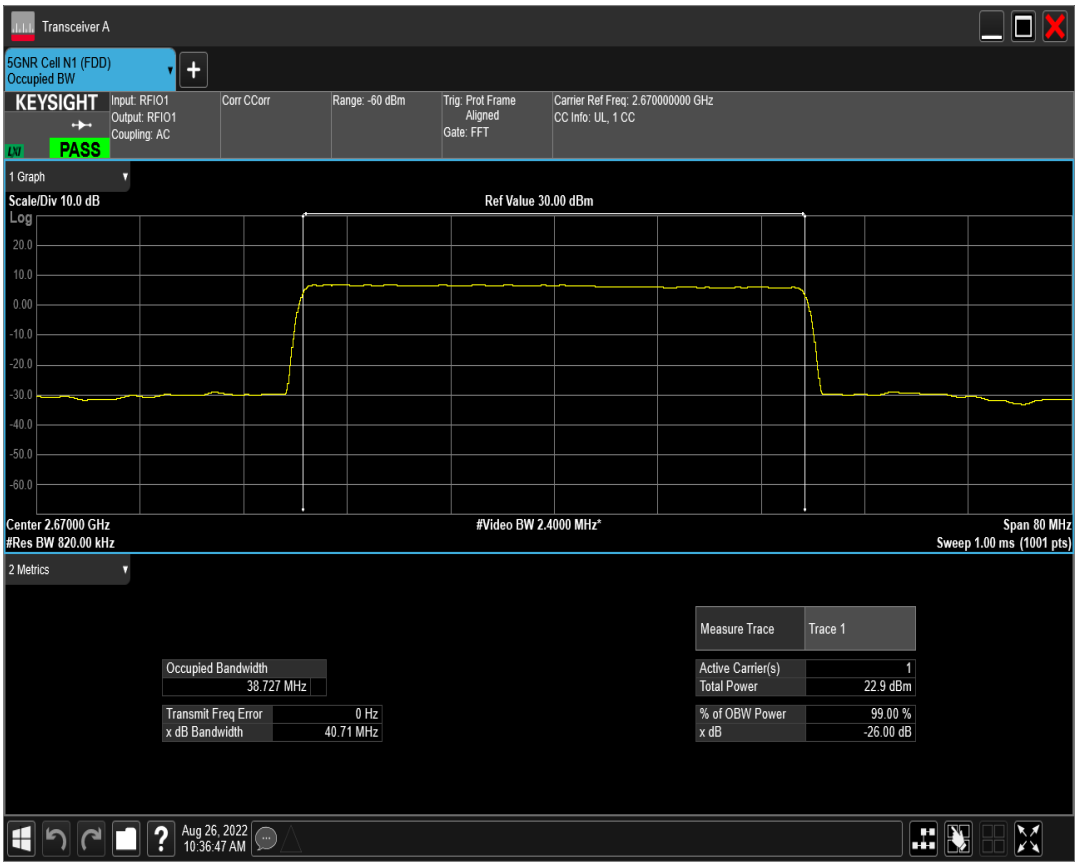


n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=534000 RB=216@0

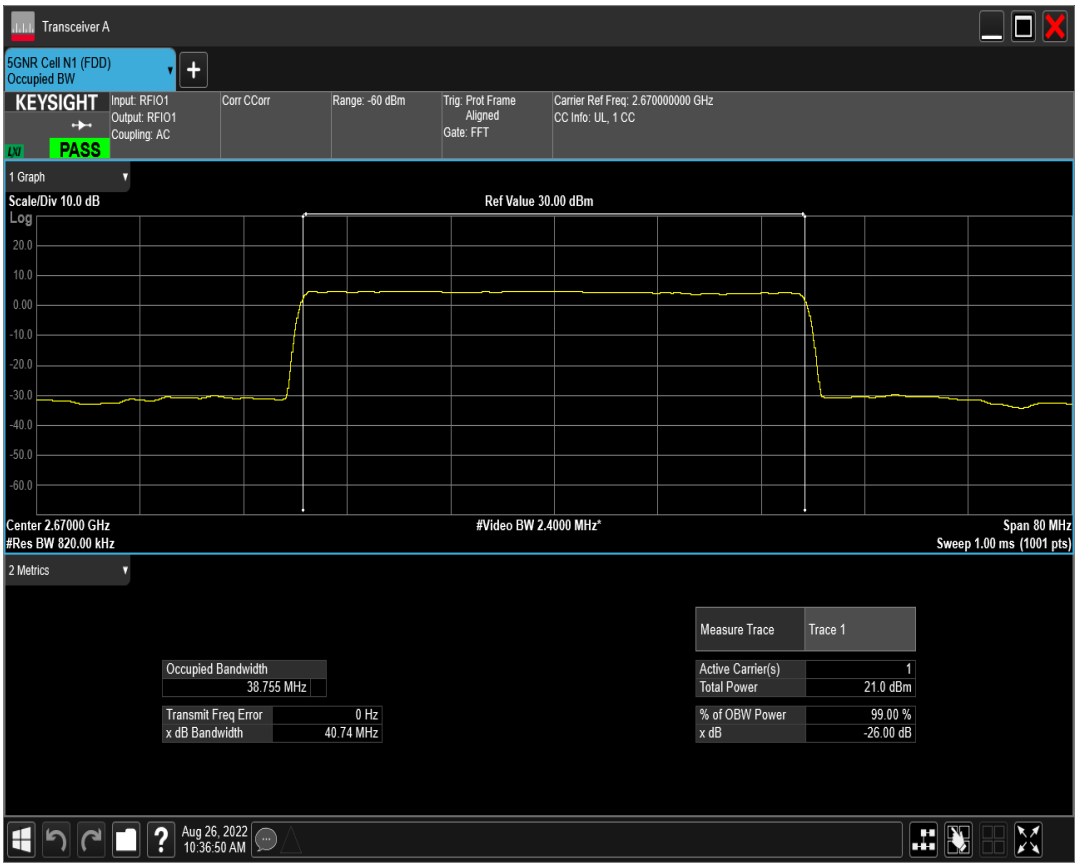
n41 SCS=15kHz DFT_QPSK BW=40MHz Channel=534000 RB=216@0

n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=534000 RB=216@0

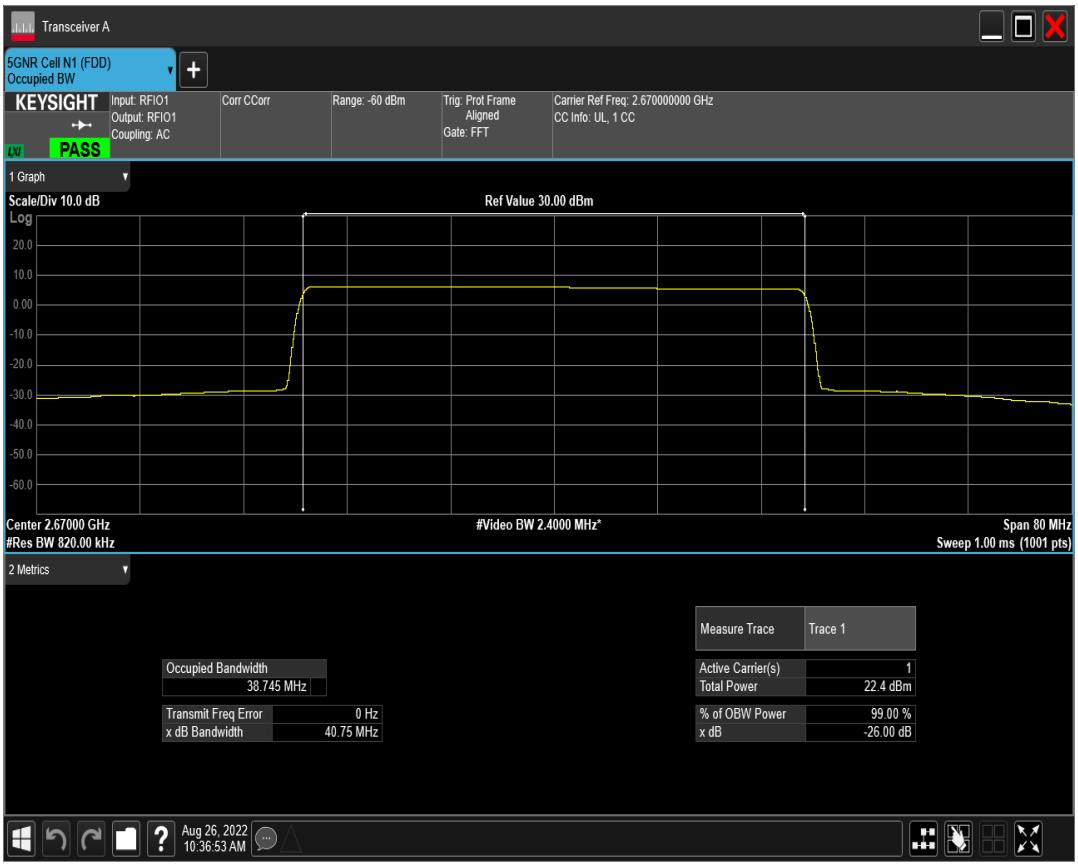
n41 SCS=15kHz DFT_QAM64 BW=40MHz Channel=534000 RB=216@0



n41 SCS=15kHz DFT_QAM256 BW=40MHz Channel=534000 RB=216@0

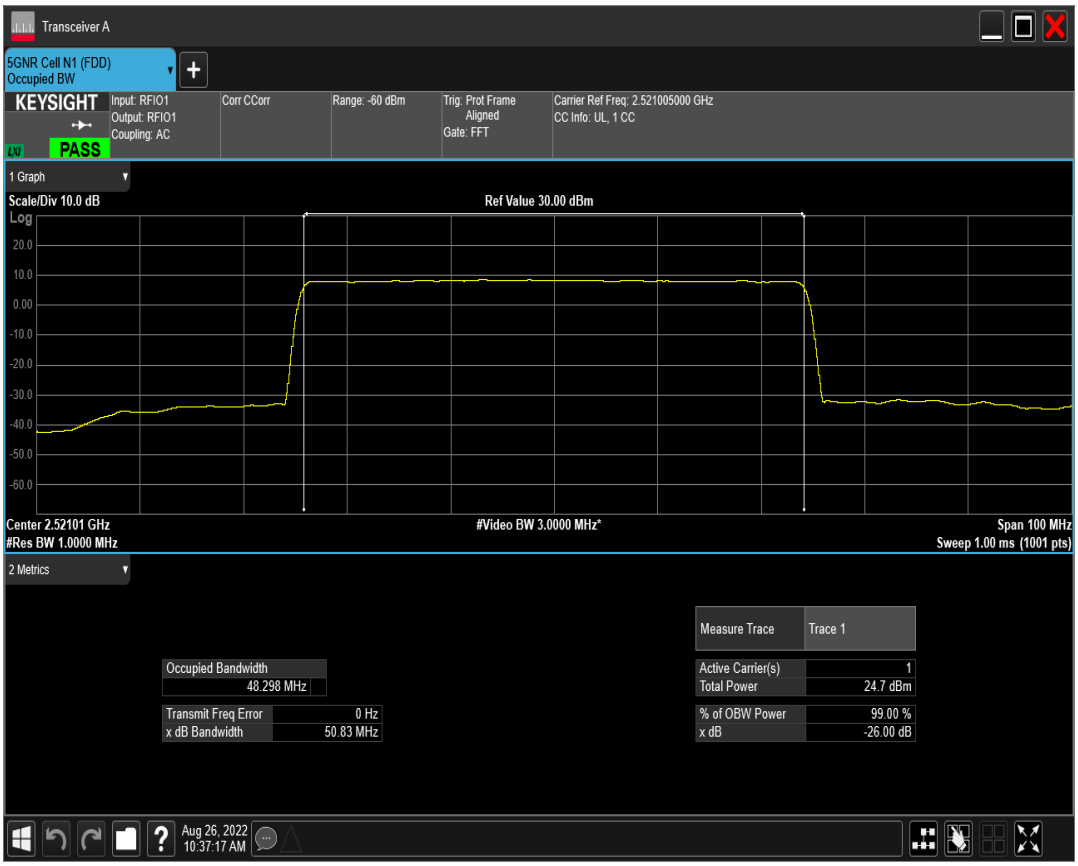


n41 SCS=15kHz CP_QPSK BW=40MHz Channel=534000 RB=216@0

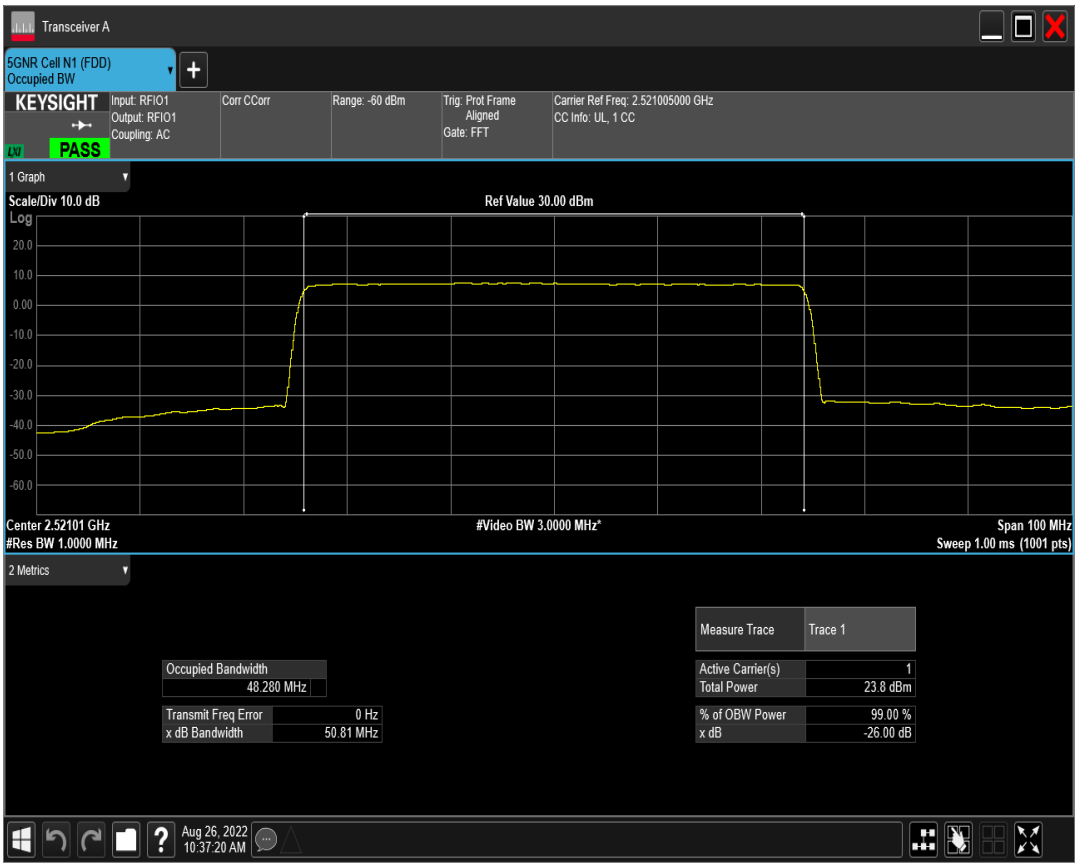


n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=504201 RB=270@0

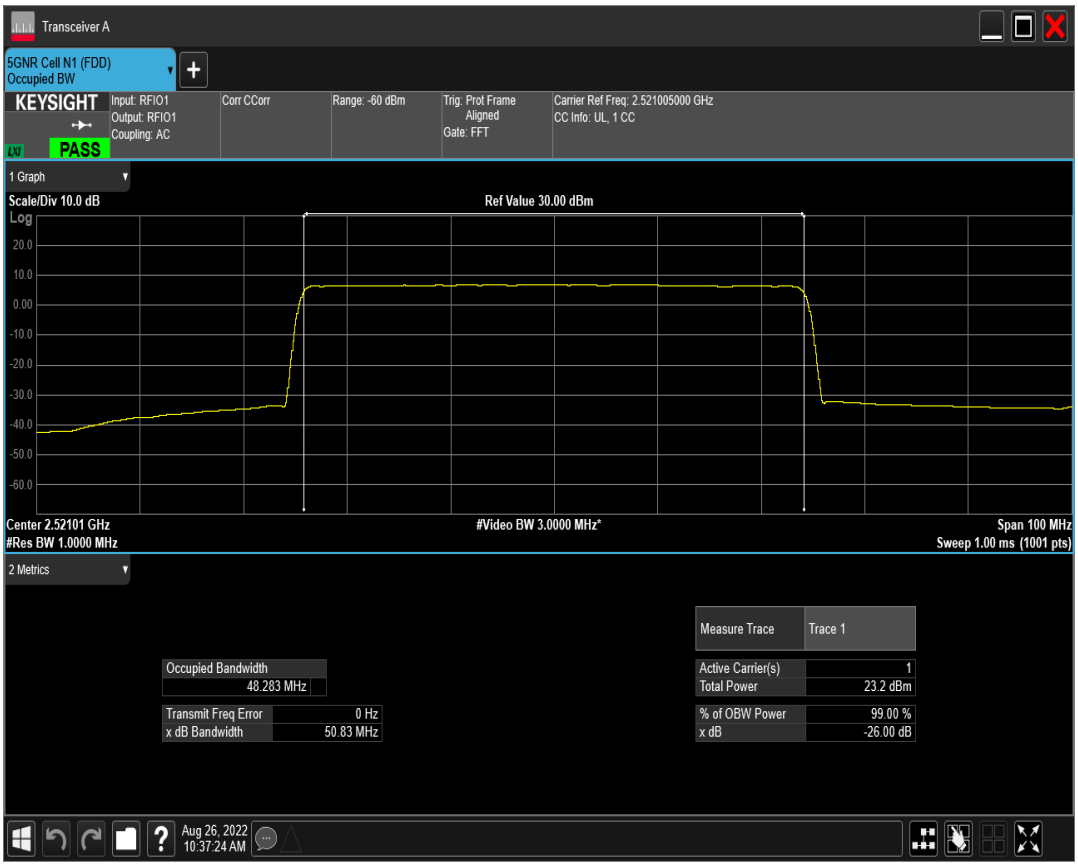
n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=270@0



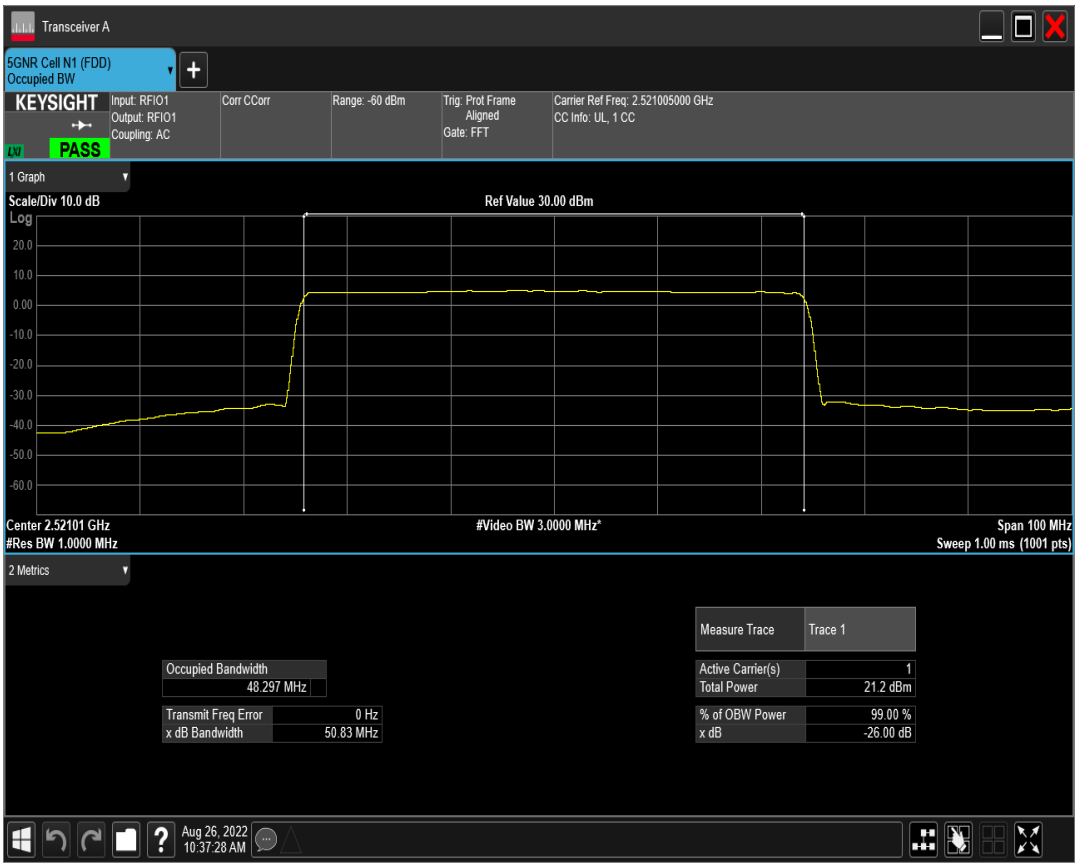
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=504201 RB=270@0



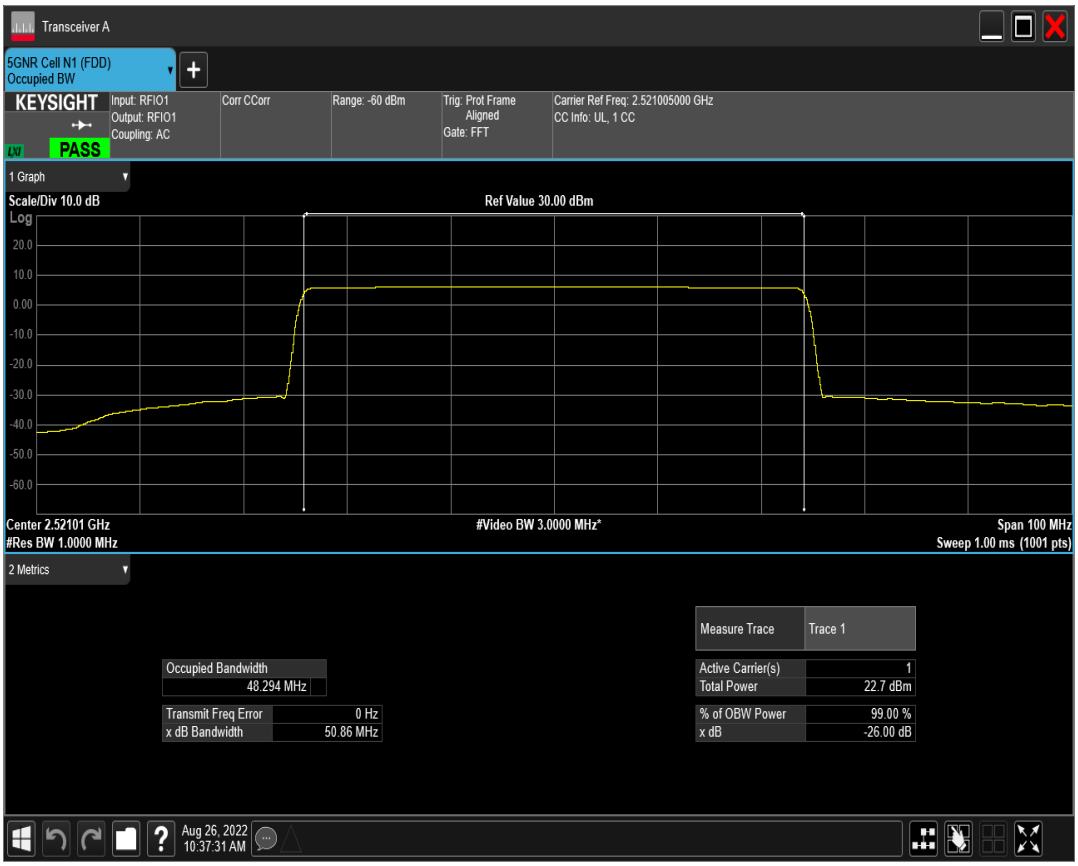
n41 SCS=15kHz DFT_QAM64 BW=50MHz Channel=504201 RB=270@0



n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=504201 RB=270@0



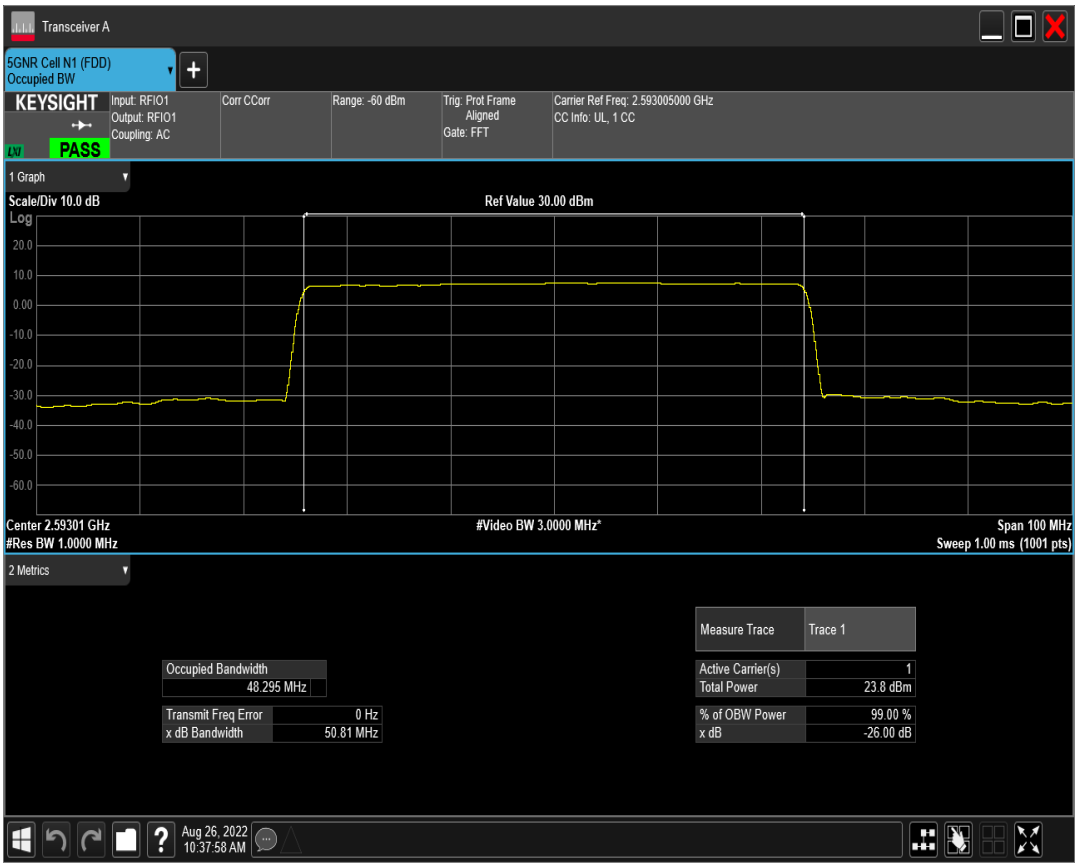
n41 SCS=15kHz CP_QPSK BW=50MHz Channel=504201 RB=270@0



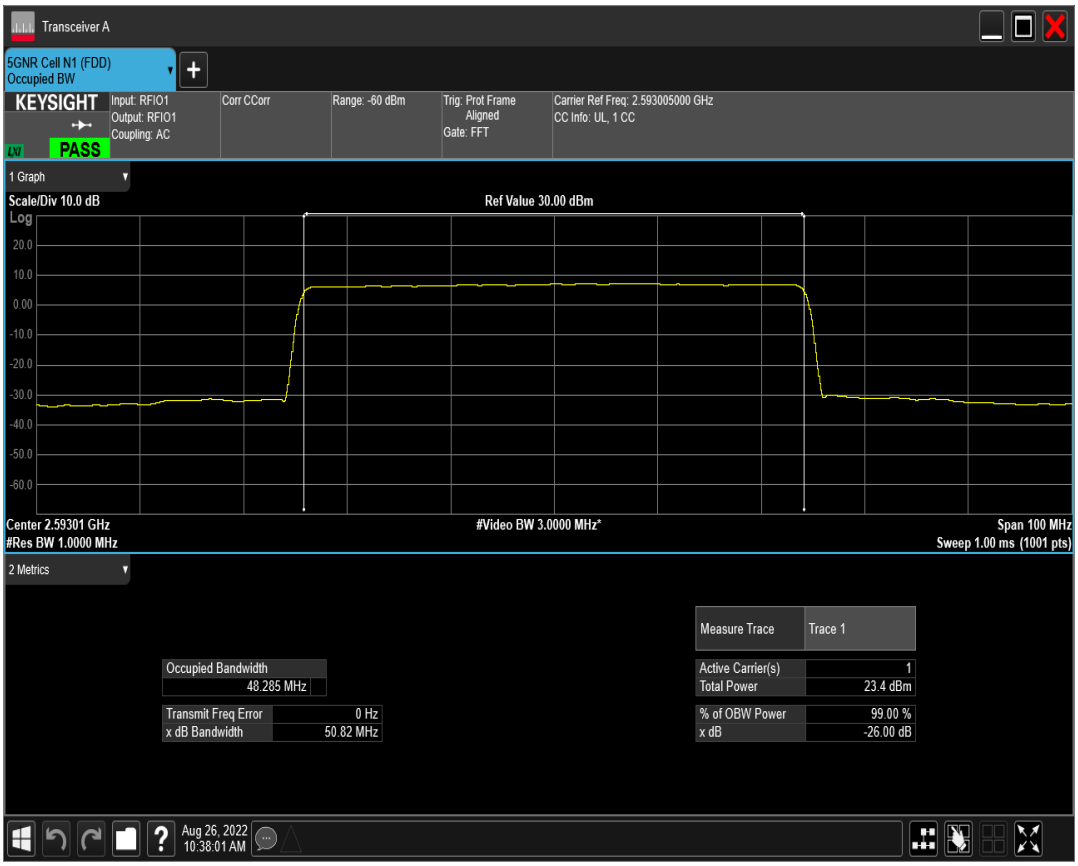
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=518601 RB=270@0

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=518601 RB=270@0

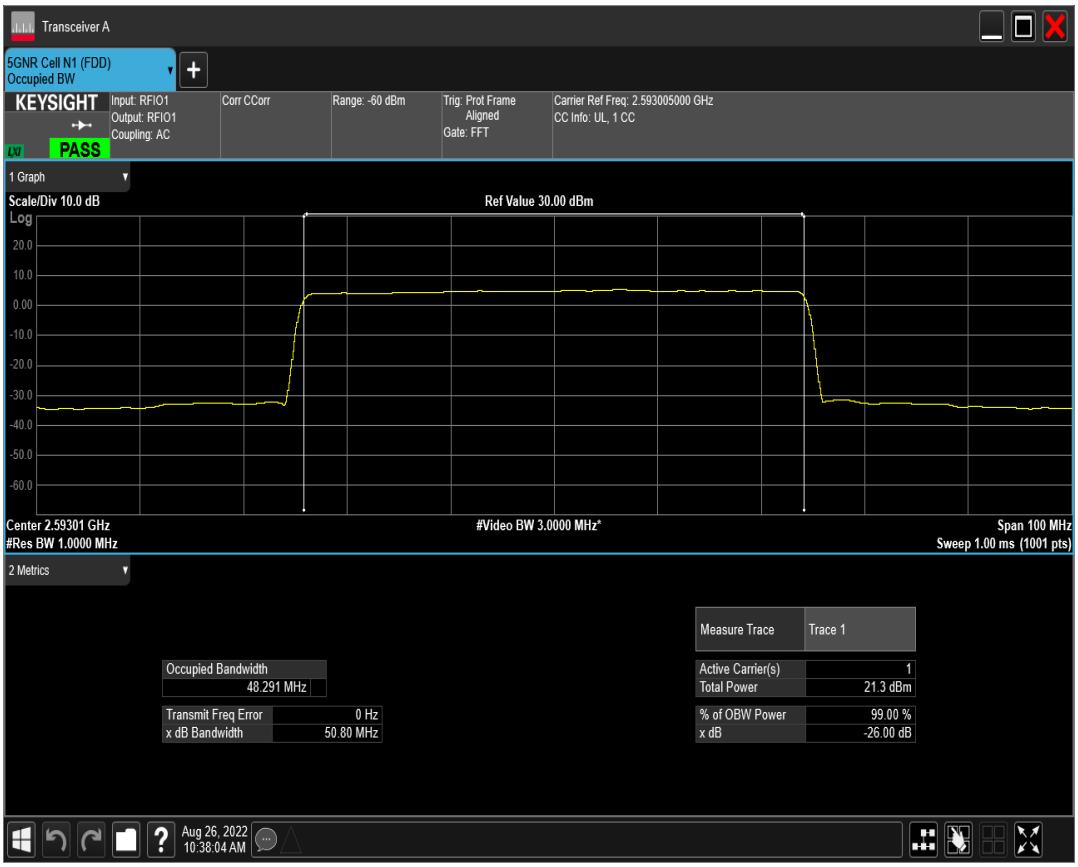
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=518601 RB=270@0



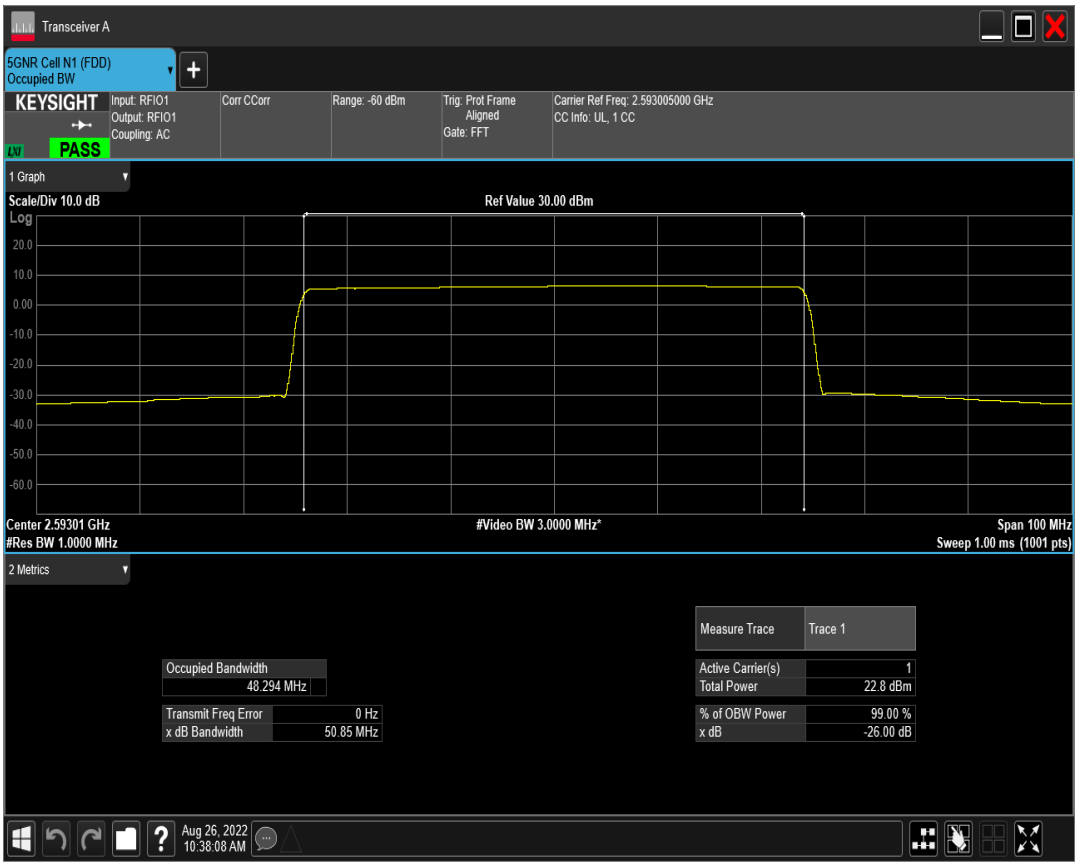
n41 SCS=15kHz DFT_QAM64 BW=50MHz Channel=518601 RB=270@0



n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=518601 RB=270@0



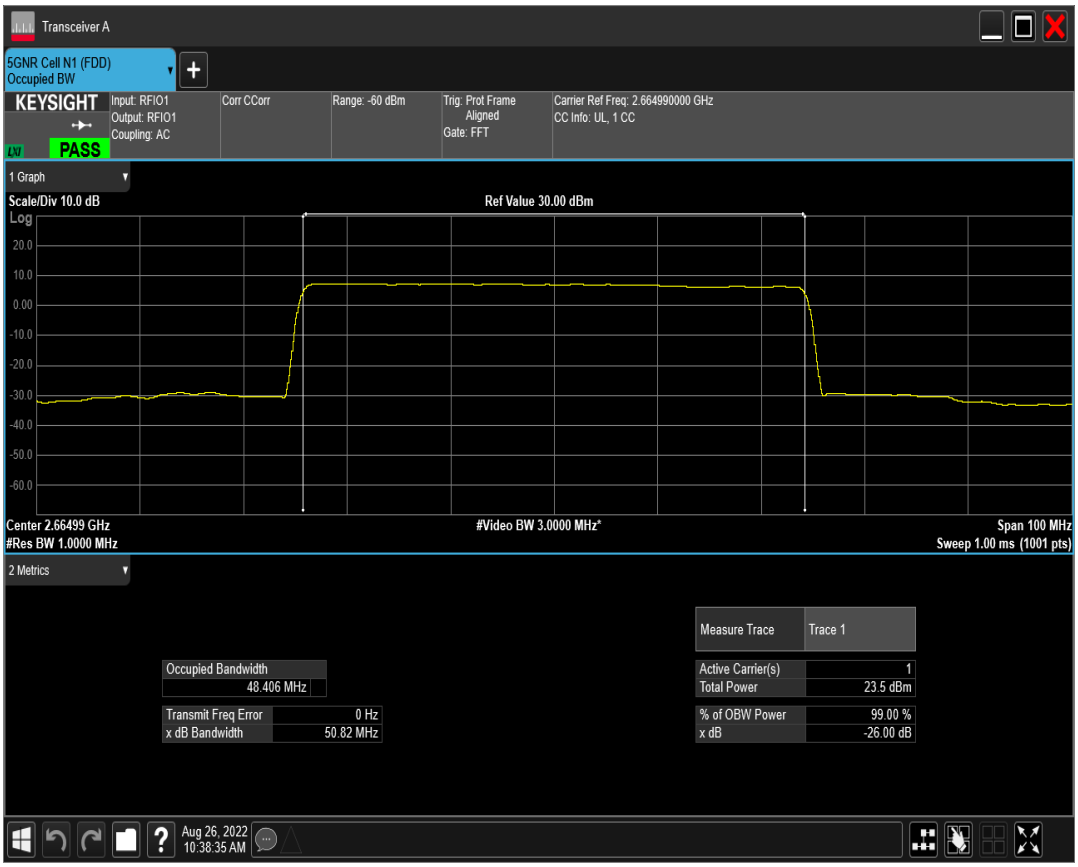
n41 SCS=15kHz CP_QPSK BW=50MHz Channel=518601 RB=270@0



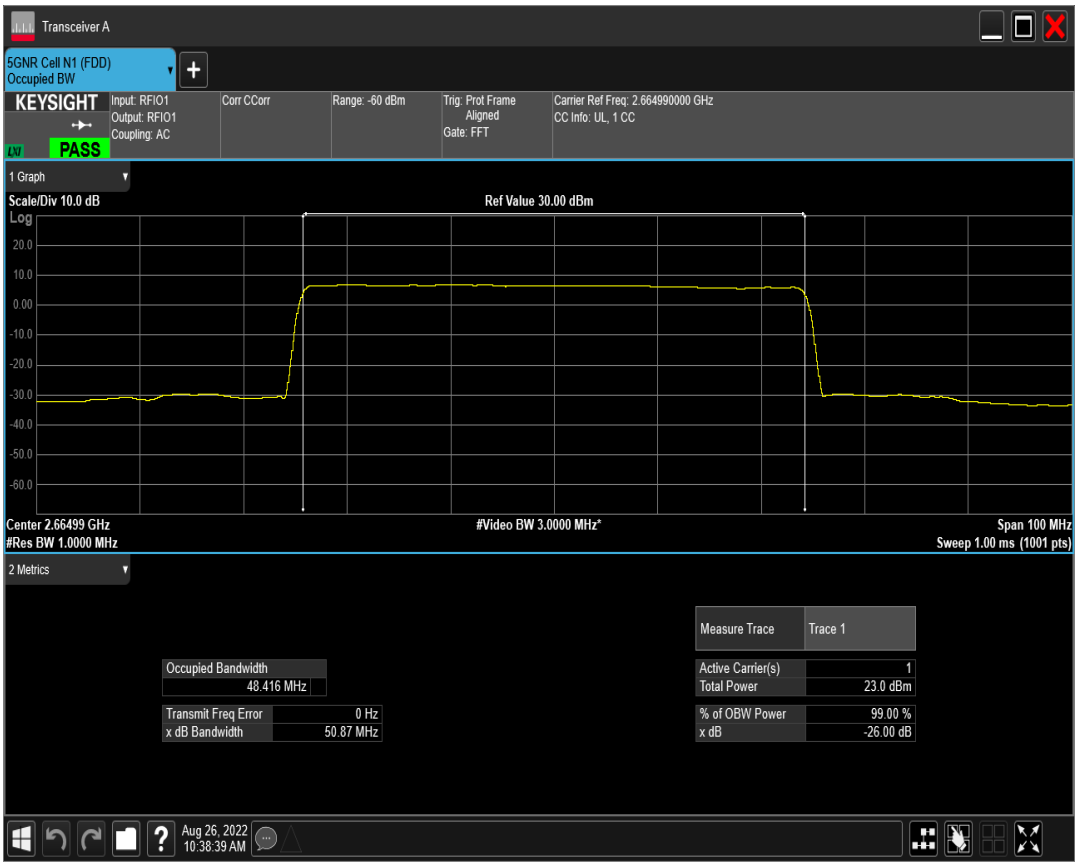
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=532998 RB=270@0

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=270@0

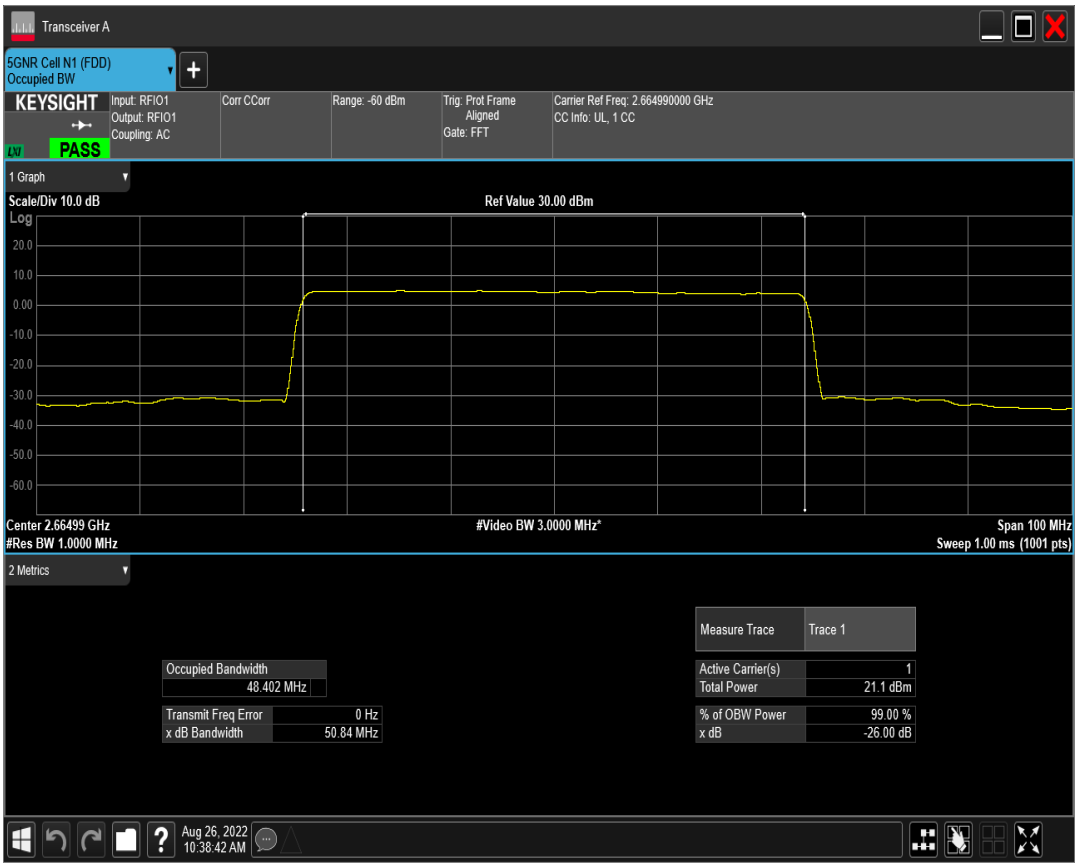
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=532998 RB=270@0



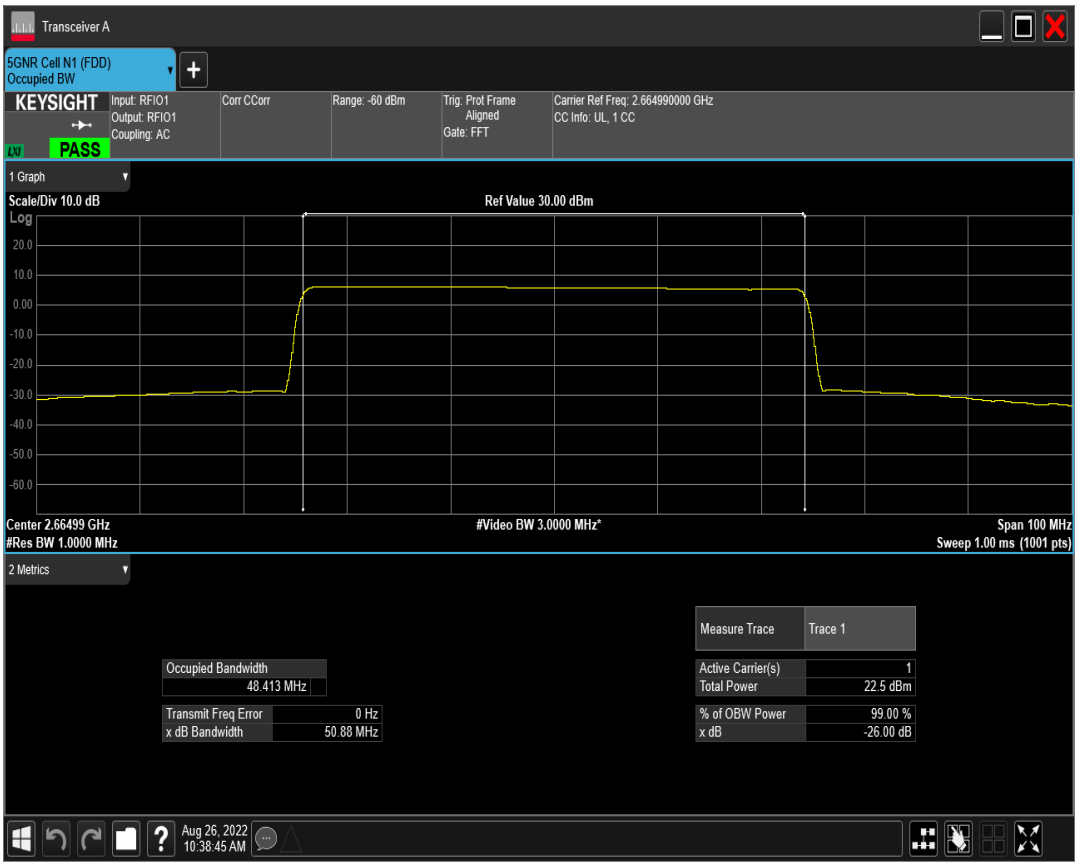
n41 SCS=15kHz DFT_QAM64 BW=50MHz Channel=532998 RB=270@0



n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=532998 RB=270@0



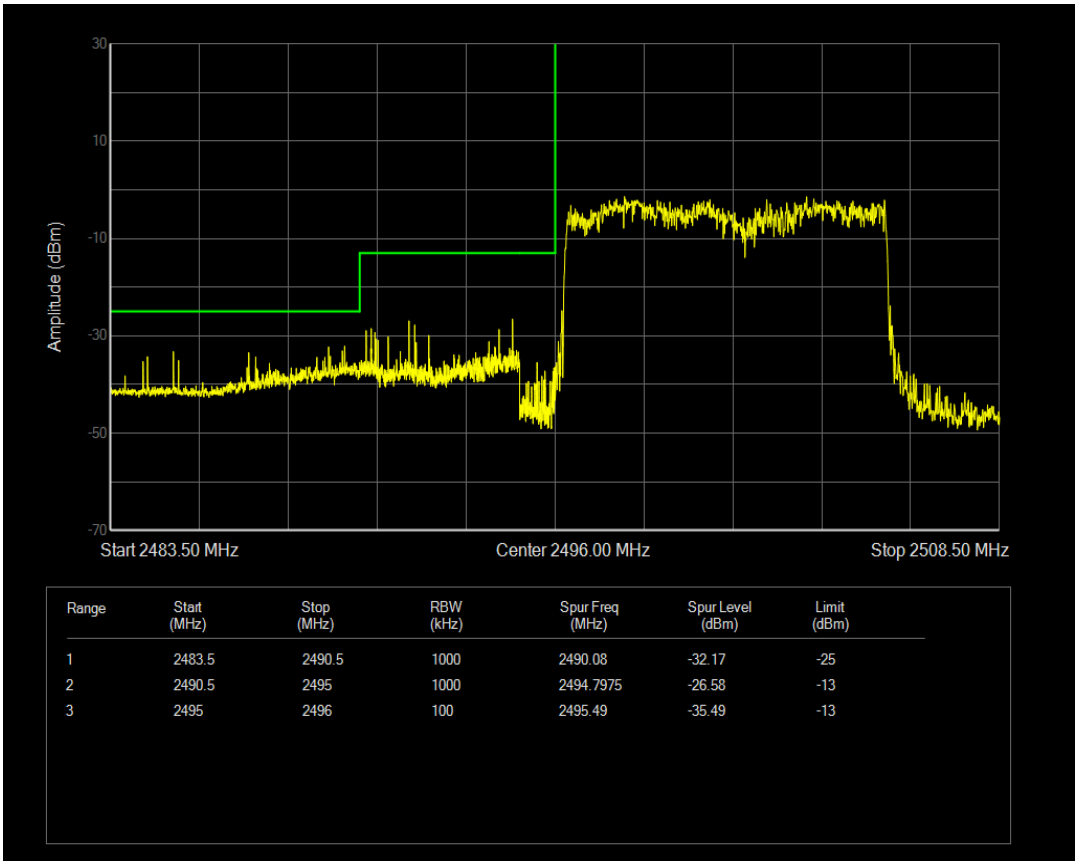
n41 SCS=15kHz CP_QPSK BW=50MHz Channel=532998 RB=270@0



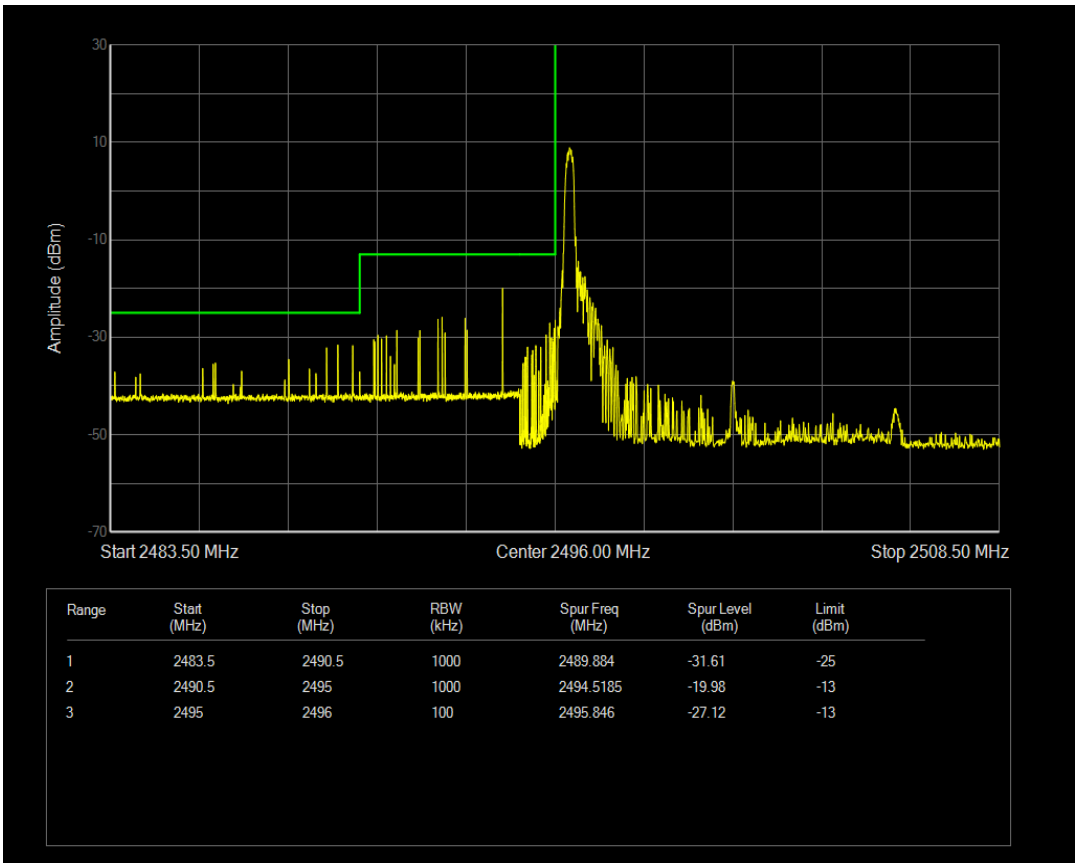
5 Band edge for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n41	15	10	500202	50@0	DFT_QPSK	2490.08	-32.17	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	2489.88	-31.61	-25	PASS
n41	15	10	537000	50@0	DFT_QPSK	2700.36	-31.56	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	2691.25	-18.69	-10	PASS
n41	15	50	504201	270@0	DFT_QPSK	2489.65	-37.30	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	2494.91	-21.12	-13	PASS
n41	15	50	532998	270@0	DFT_QPSK	2690.02	-24.47	-10	PASS
n41	15	50	532998	1@269	DFT_QPSK	2691.49	-24.96	-10	PASS

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=50@0

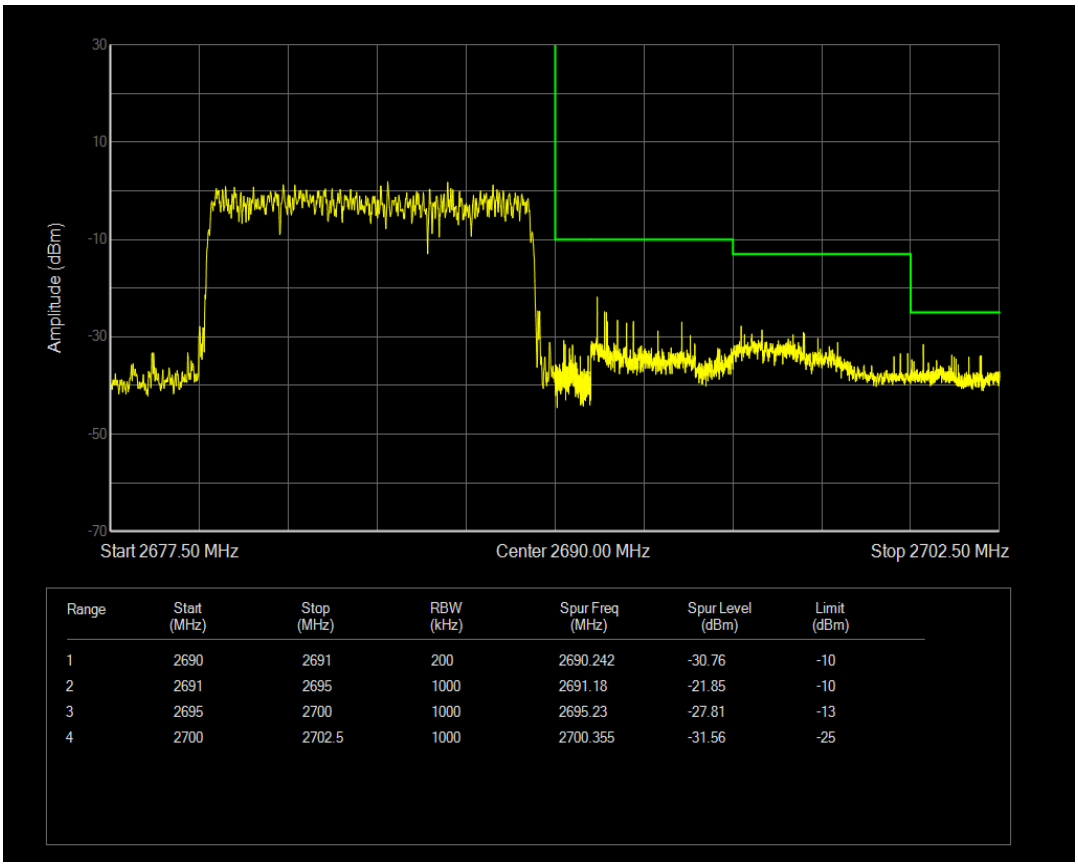


n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=1@0



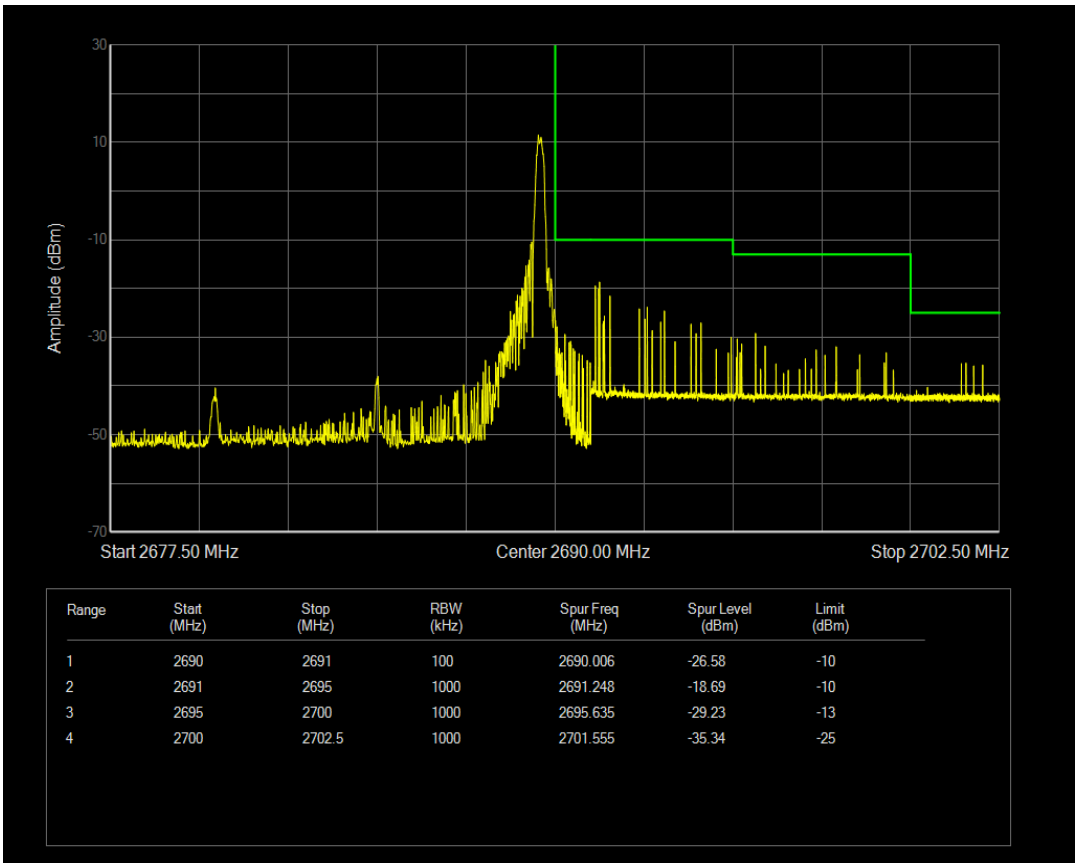
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2483.5	2490.5	1000	2489.884	-31.61	-25
2	2490.5	2495	1000	2494.5185	-19.98	-13
3	2495	2496	100	2495.846	-27.12	-13

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=537000 RB=50@0



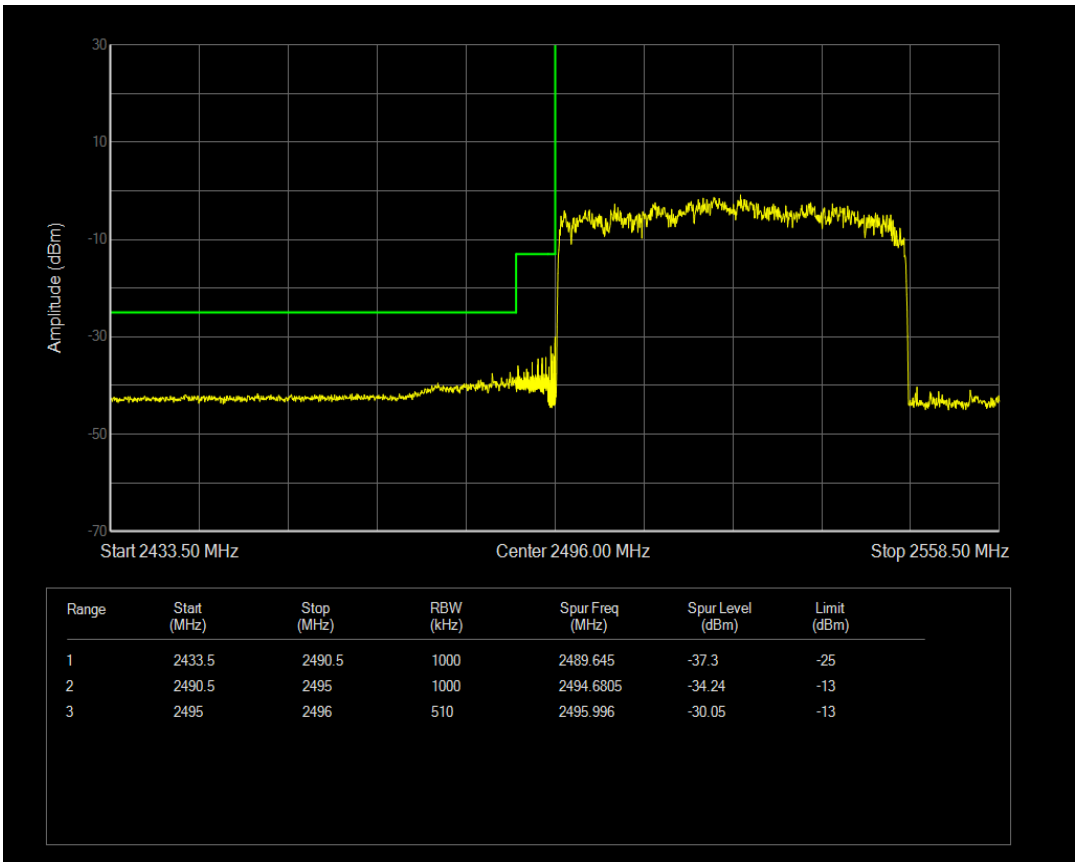
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	200	2690.242	-30.76	-10
2	2691	2695	1000	2691.18	-21.85	-10
3	2695	2700	1000	2695.23	-27.81	-13
4	2700	2702.5	1000	2700.355	-31.56	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=537000 RB=1@51



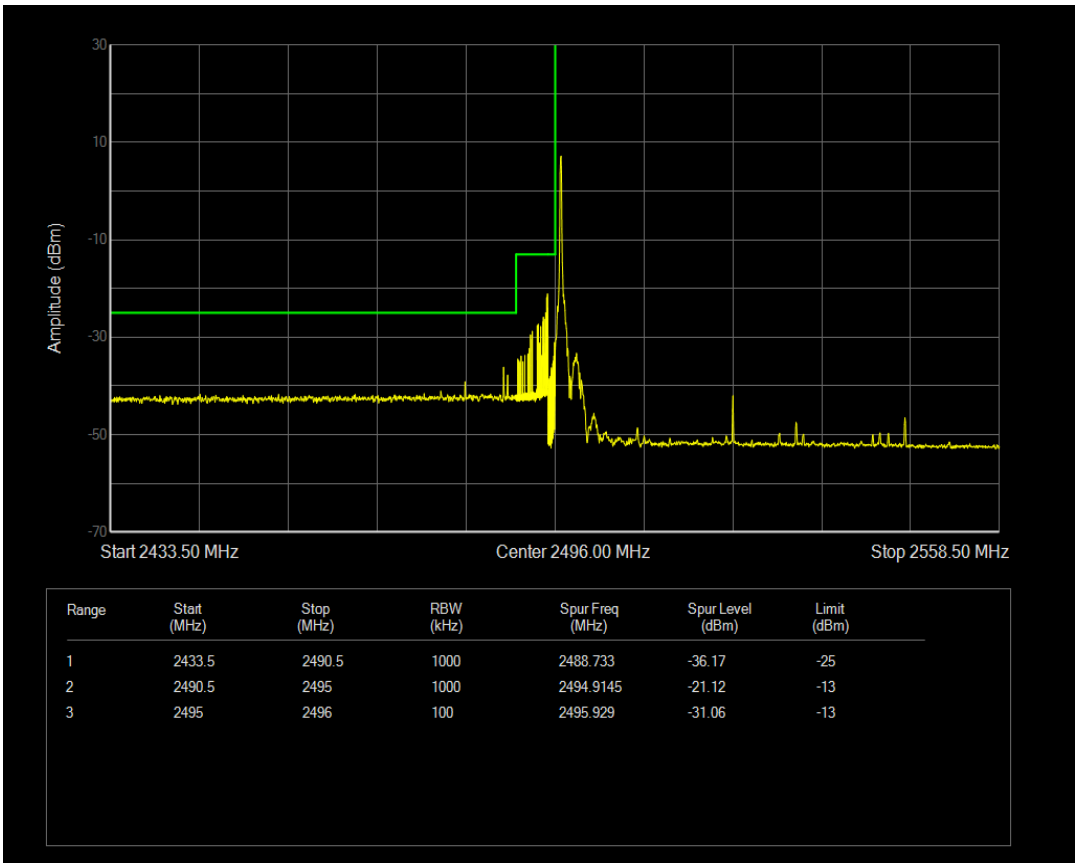
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.006	-26.58	-10
2	2691	2695	1000	2691.248	-18.69	-10
3	2695	2700	1000	2695.635	-29.23	-13
4	2700	2702.5	1000	2701.555	-35.34	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=270@0



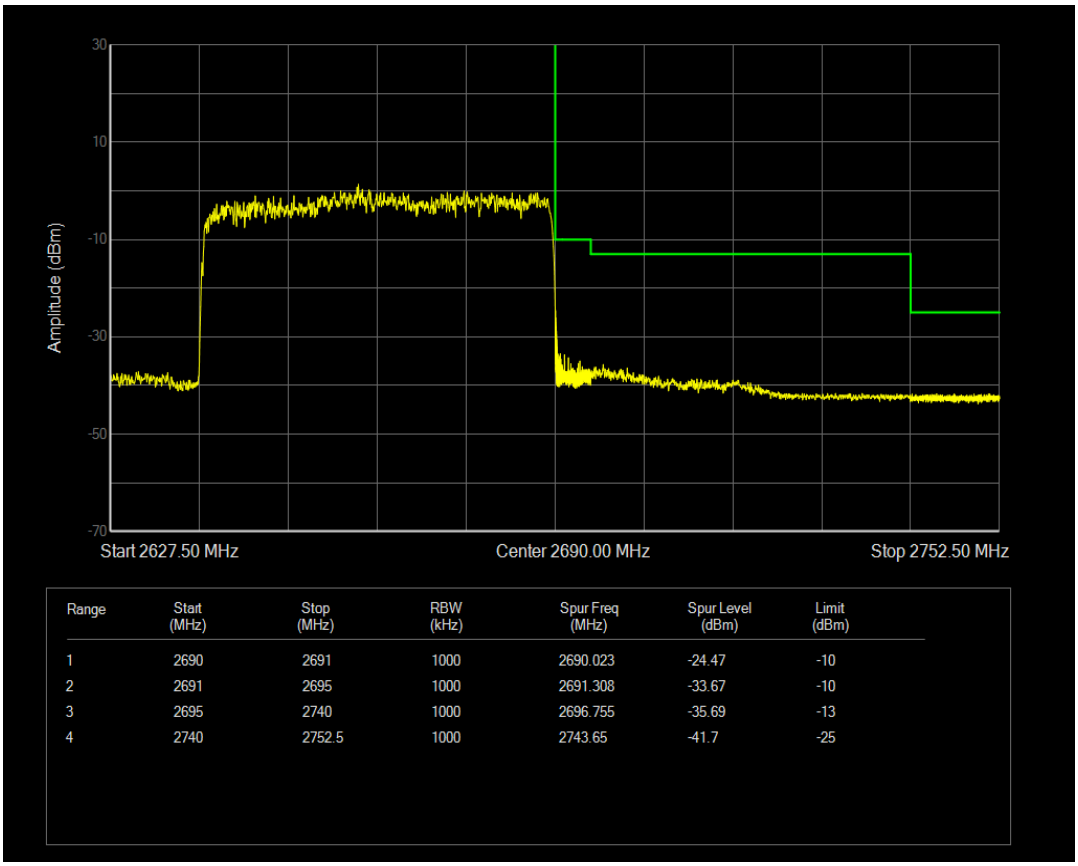
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2489.645	-37.3	-25
2	2490.5	2495	1000	2494.6805	-34.24	-13
3	2495	2496	510	2495.996	-30.05	-13

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=1@0



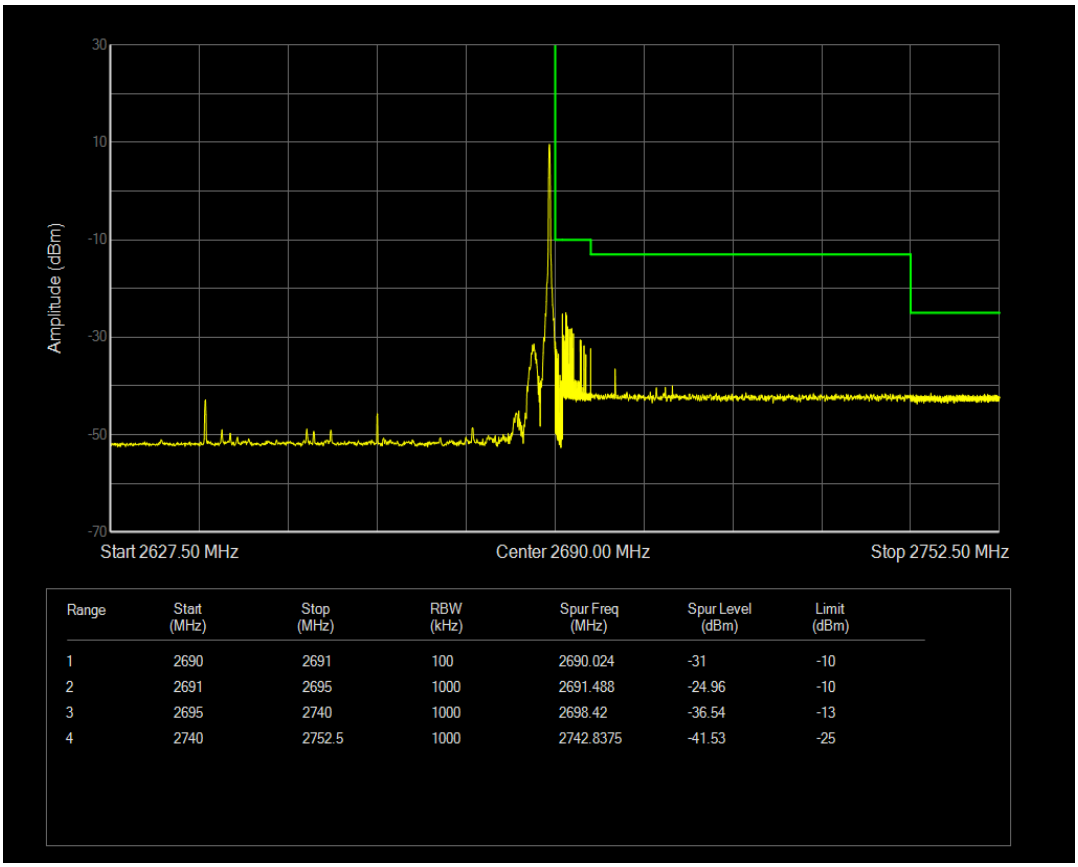
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2488.733	-36.17	-25
2	2490.5	2495	1000	2494.9145	-21.12	-13
3	2495	2496	100	2495.929	-31.06	-13

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=270@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	1000	2690.023	-24.47	-10
2	2691	2695	1000	2691.308	-33.67	-10
3	2695	2740	1000	2696.755	-35.69	-13
4	2740	2752.5	1000	2743.65	-41.7	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=1@269

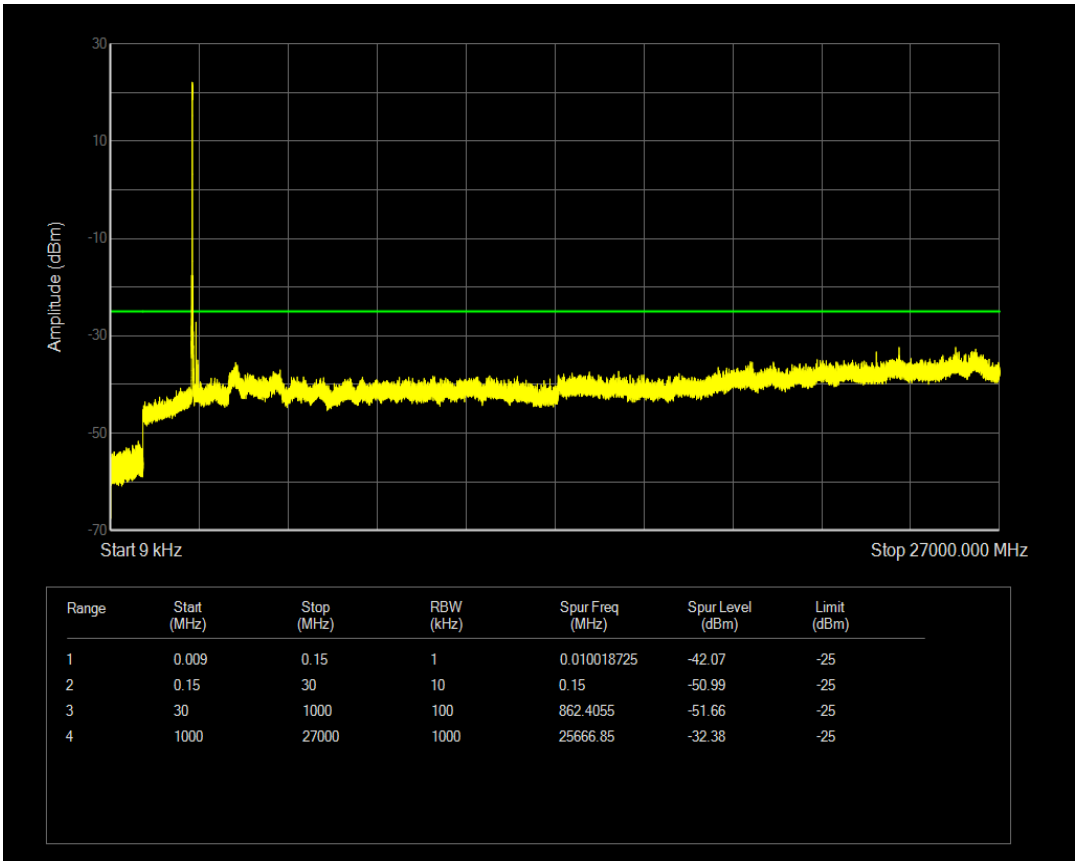


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.024	-31	-10
2	2691	2695	1000	2691.488	-24.96	-10
3	2695	2740	1000	2698.42	-36.54	-13
4	2740	2752.5	1000	2742.8375	-41.53	-25

6 Out-of-band emissions for NR FR1

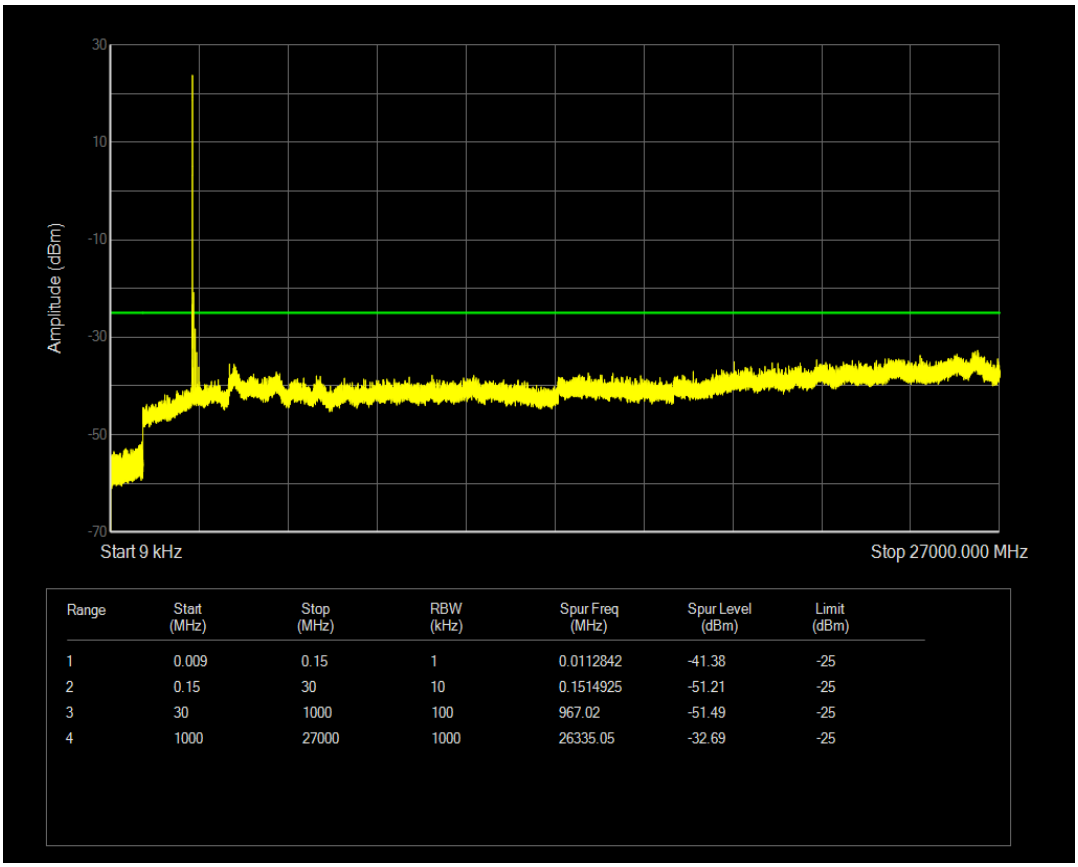
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n41	15	10	500202	50@0	DFT_QPSK	25666.85	-32.38	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	26204.40	-33.15	-25	PASS
n41	15	10	500202	1@51	DFT_QPSK	26335.05	-32.69	-25	PASS
n41	15	10	518601	50@0	DFT_QPSK	26128.35	-33.09	-25	PASS
n41	15	10	518601	1@0	DFT_QPSK	26329.20	-32.12	-25	PASS
n41	15	10	518601	1@51	DFT_QPSK	25662.30	-32.75	-25	PASS
n41	15	10	537000	50@0	DFT_QPSK	26394.20	-33.35	-25	PASS
n41	15	10	537000	1@0	DFT_QPSK	26264.85	-32.39	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	25703.25	-32.85	-25	PASS
n41	15	50	504201	270@0	DFT_QPSK	25553.75	-33.20	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	26283.05	-32.48	-25	PASS
n41	15	50	504201	1@269	DFT_QPSK	26249.90	-33.33	-25	PASS
n41	15	50	518601	270@0	DFT_QPSK	26344.80	-33.16	-25	PASS
n41	15	50	518601	1@0	DFT_QPSK	25674.00	-32.89	-25	PASS
n41	15	50	518601	1@269	DFT_QPSK	25592.75	-32.96	-25	PASS
n41	15	50	532998	270@0	DFT_QPSK	26201.15	-32.62	-25	PASS
n41	15	50	532998	1@0	DFT_QPSK	25757.20	-32.33	-25	PASS
n41	15	50	532998	1@269	DFT_QPSK	26203.10	-30.79	-25	PASS

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=50@0



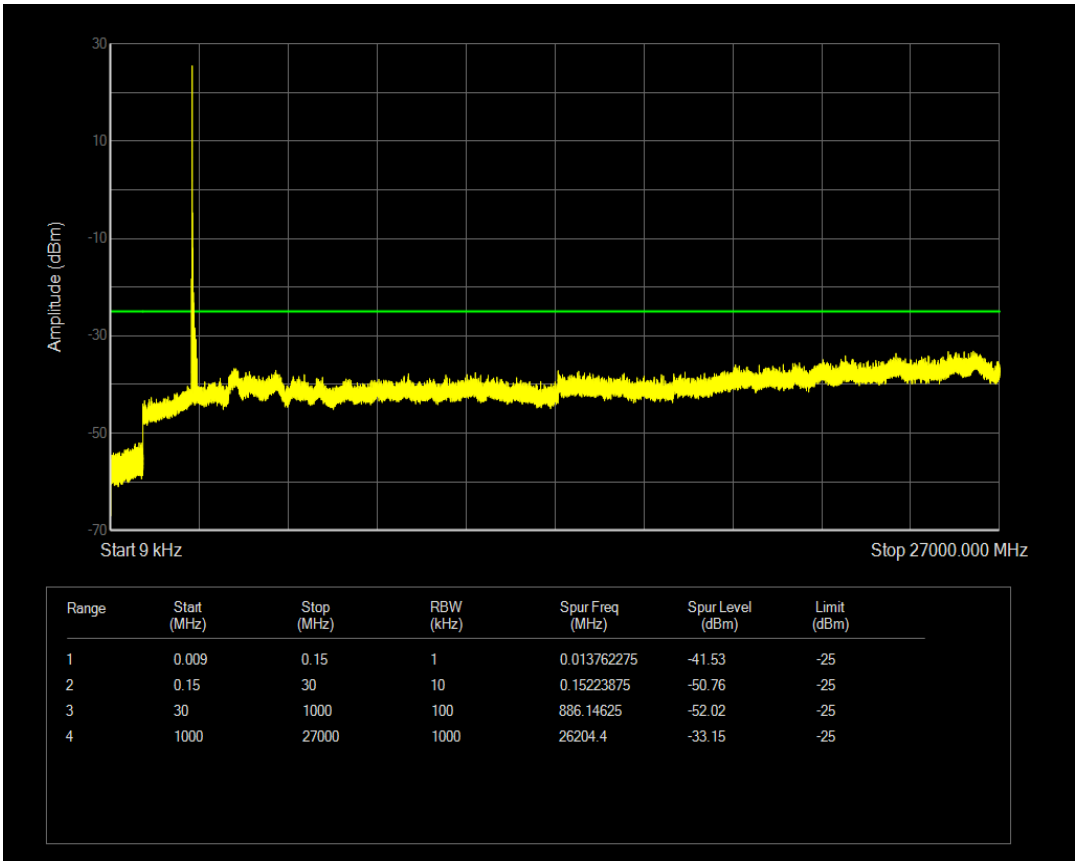
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010018725	-42.07	-25
2	0.15	30	10	0.15	-50.99	-25
3	30	1000	100	862.4055	-51.66	-25
4	1000	27000	1000	25666.85	-32.38	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=1@51



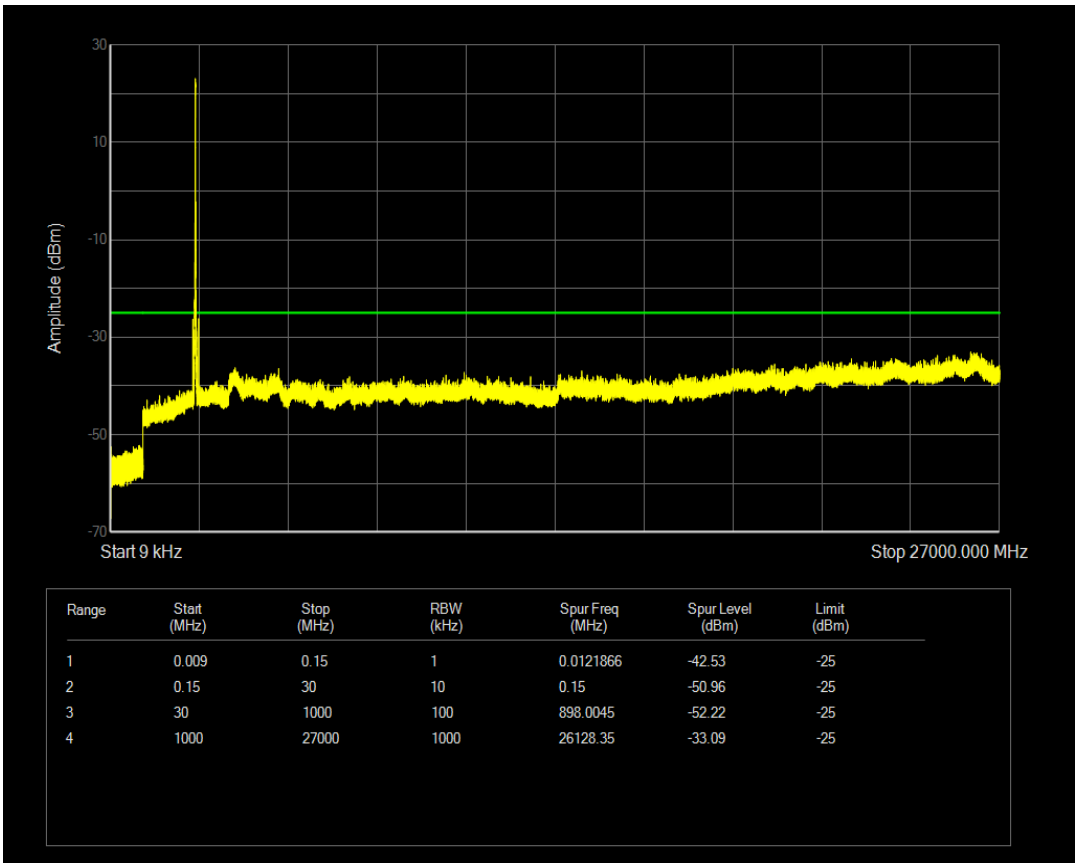
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0112842	-41.38	-25
2	0.15	30	10	0.1514925	-51.21	-25
3	30	1000	100	967.02	-51.49	-25
4	1000	27000	1000	26335.05	-32.69	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=1@0



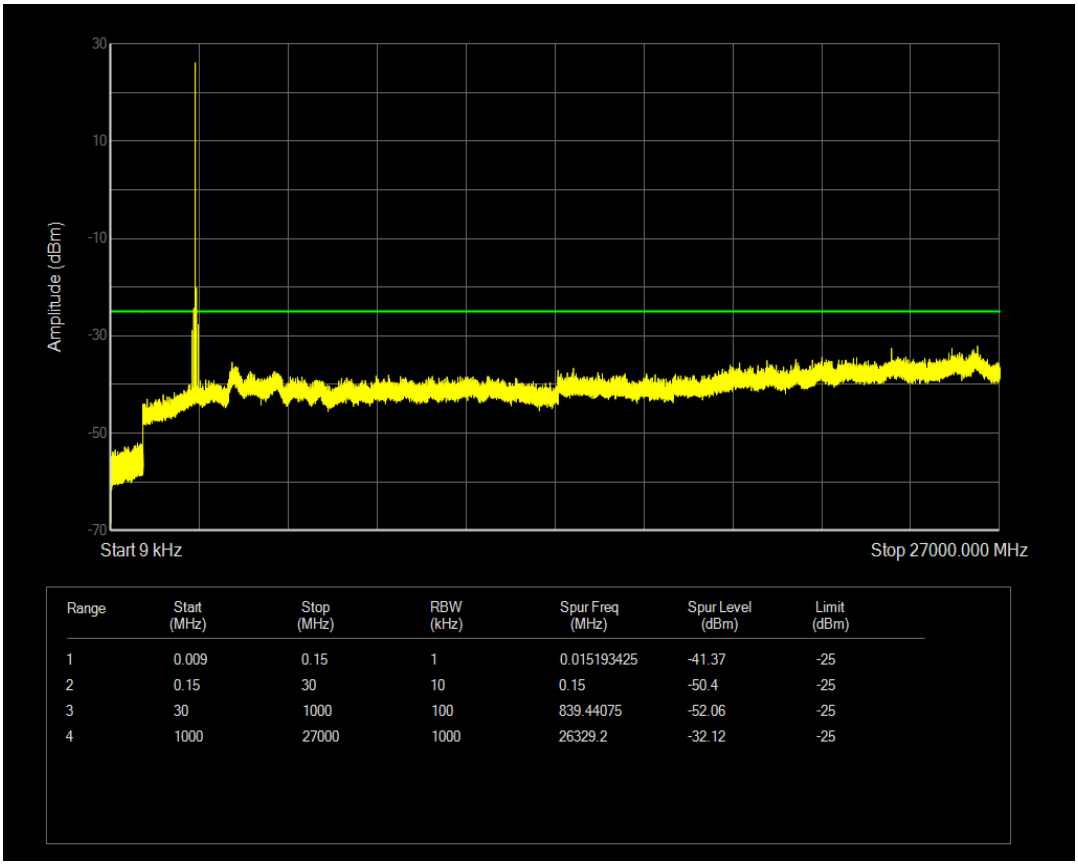
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013762275	-41.53	-25
2	0.15	30	10	0.15223875	-50.76	-25
3	30	1000	100	886.14625	-52.02	-25
4	1000	27000	1000	26204.4	-33.15	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=518601 RB=50@0



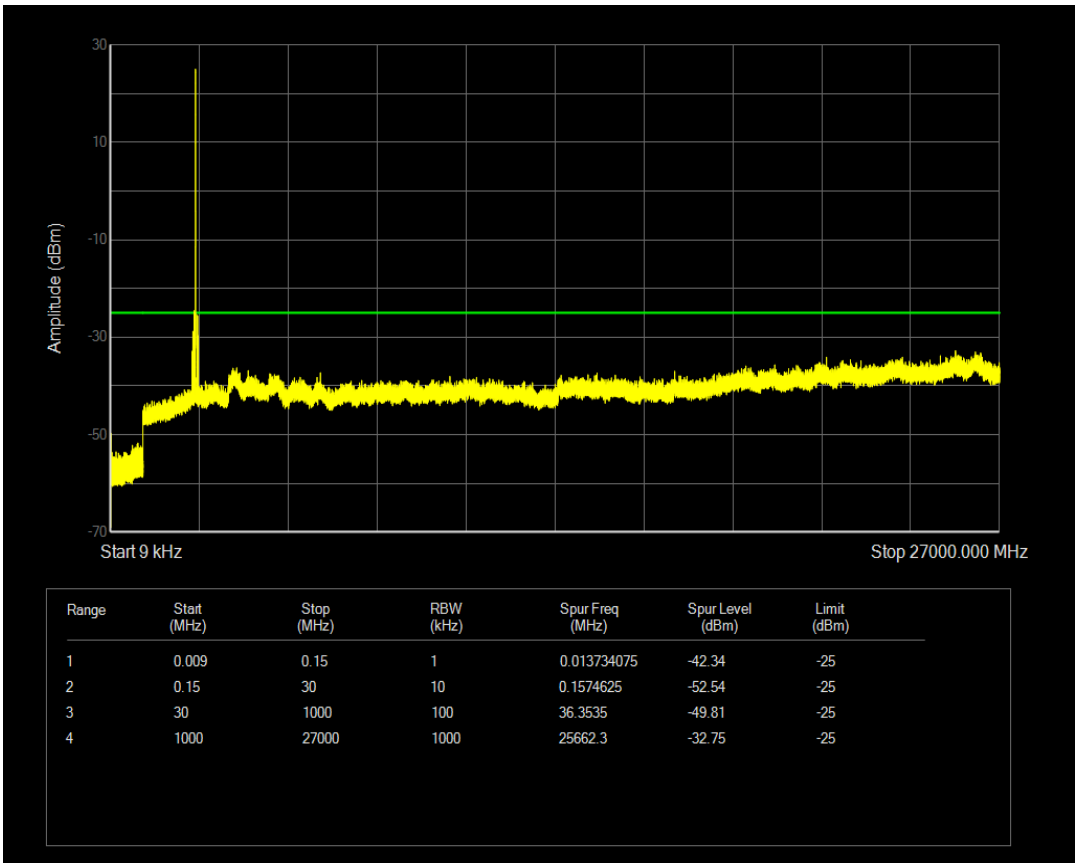
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0121866	-42.53	-25
2	0.15	30	10	0.15	-50.96	-25
3	30	1000	100	898.0045	-52.22	-25
4	1000	27000	1000	26128.35	-33.09	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=518601 RB=1@0



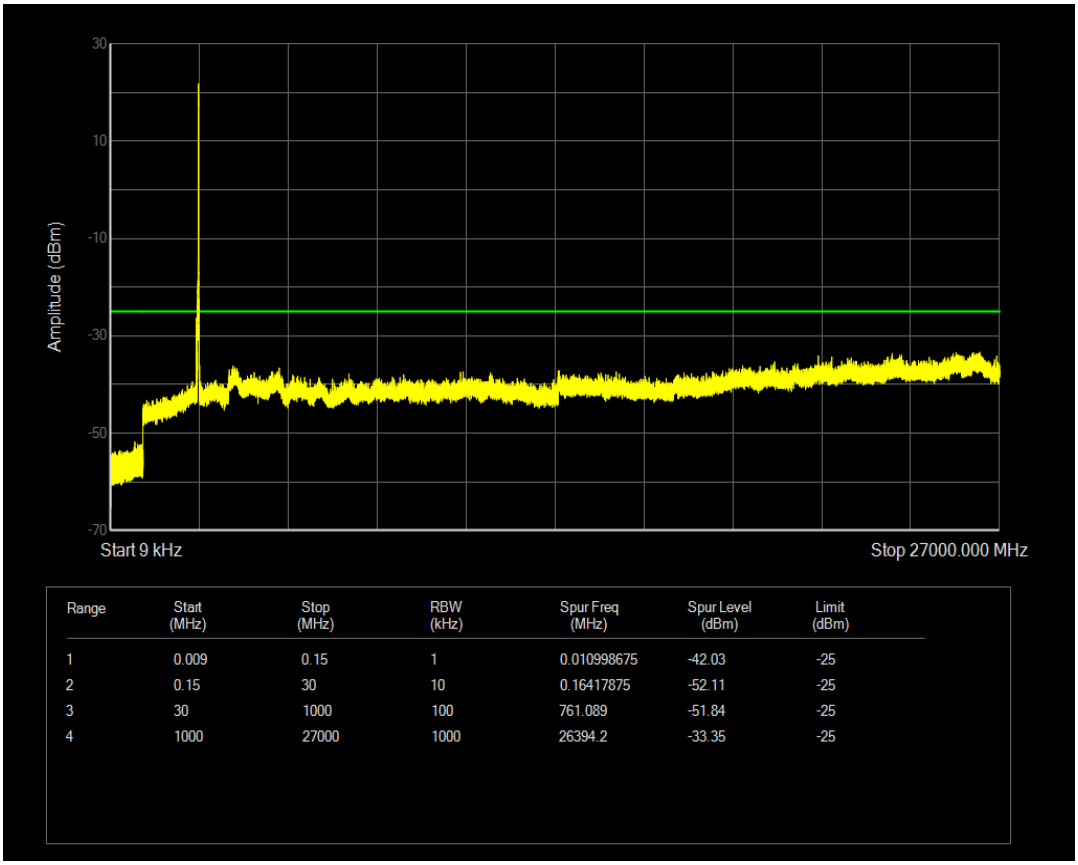
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015193425	-41.37	-25
2	0.15	30	10	0.15	-50.4	-25
3	30	1000	100	839.44075	-52.06	-25
4	1000	27000	1000	26329.2	-32.12	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=518601 RB=1@51



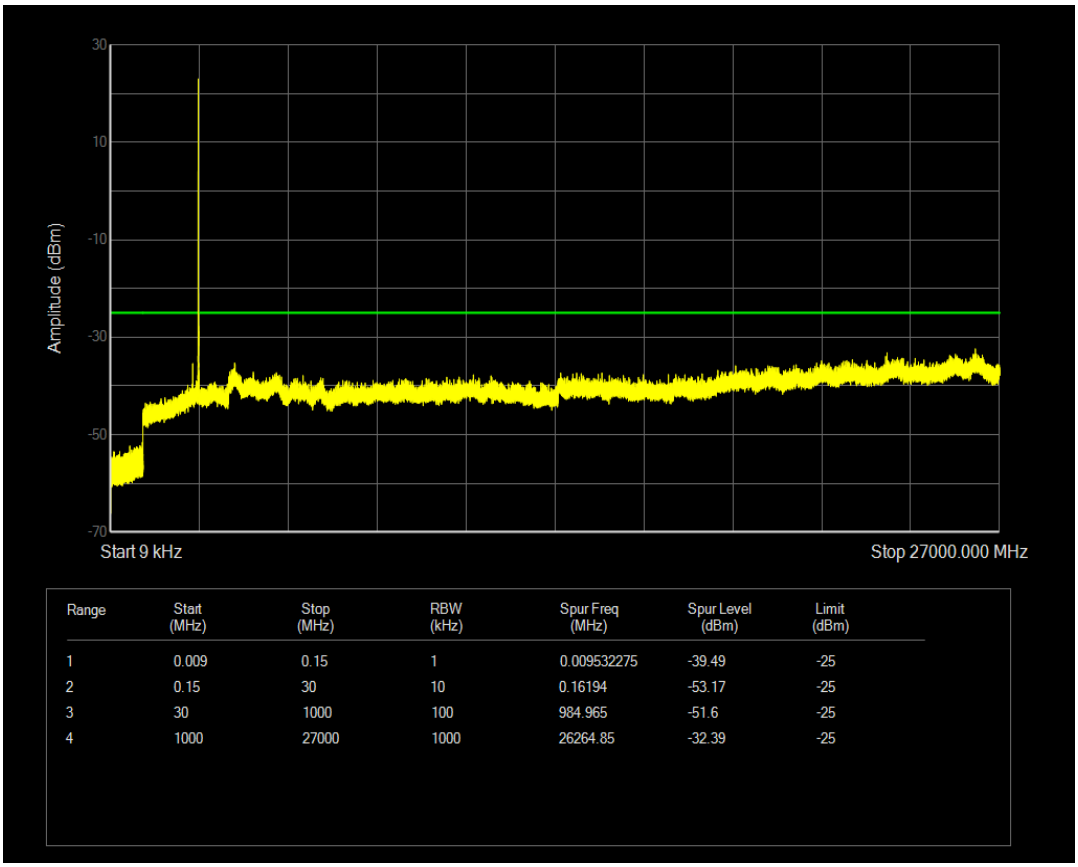
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013734075	-42.34	-25
2	0.15	30	10	0.1574625	-52.54	-25
3	30	1000	100	36.3535	-49.81	-25
4	1000	27000	1000	25662.3	-32.75	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=537000 RB=50@0



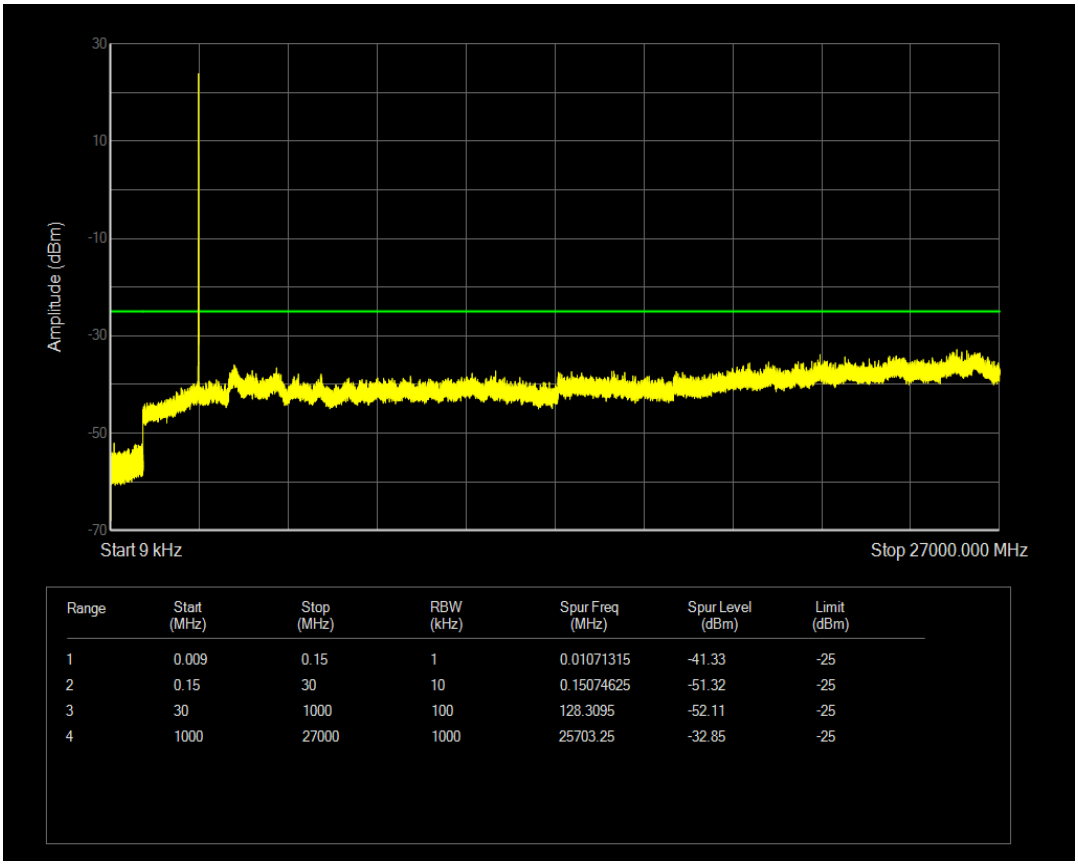
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010998675	-42.03	-25
2	0.15	30	10	0.16417875	-52.11	-25
3	30	1000	100	761.089	-51.84	-25
4	1000	27000	1000	26394.2	-33.35	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=537000 RB=1@0



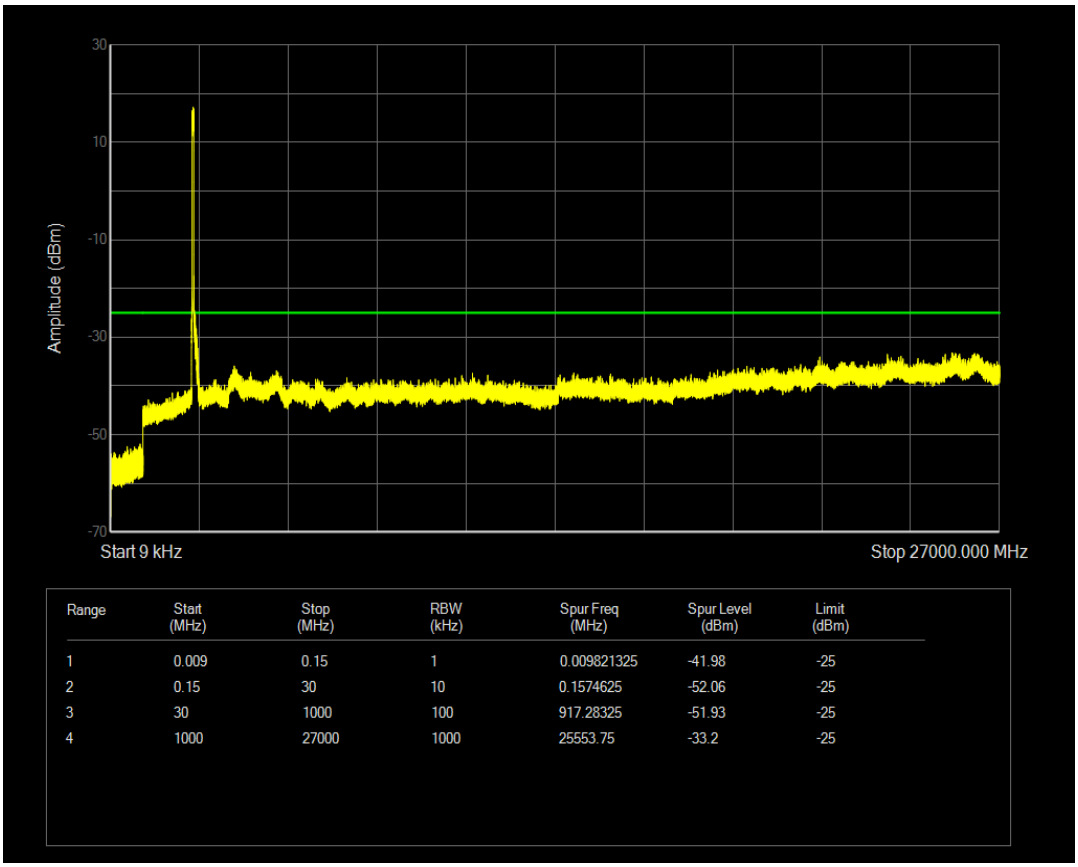
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009532275	-39.49	-25
2	0.15	30	10	0.16194	-53.17	-25
3	30	1000	100	984.965	-51.6	-25
4	1000	27000	1000	26264.85	-32.39	-25

n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=537000 RB=1@51



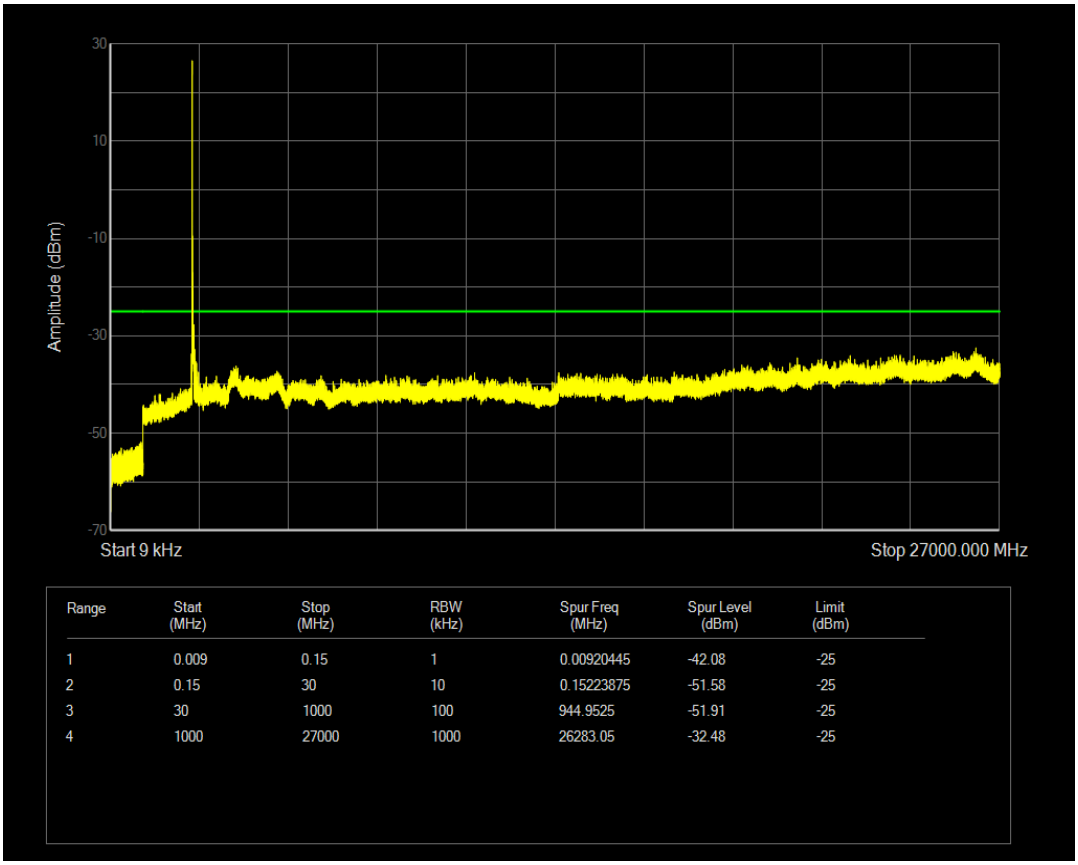
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01071315	-41.33	-25
2	0.15	30	10	0.15074625	-51.32	-25
3	30	1000	100	128.3095	-52.11	-25
4	1000	27000	1000	25703.25	-32.85	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=270@0



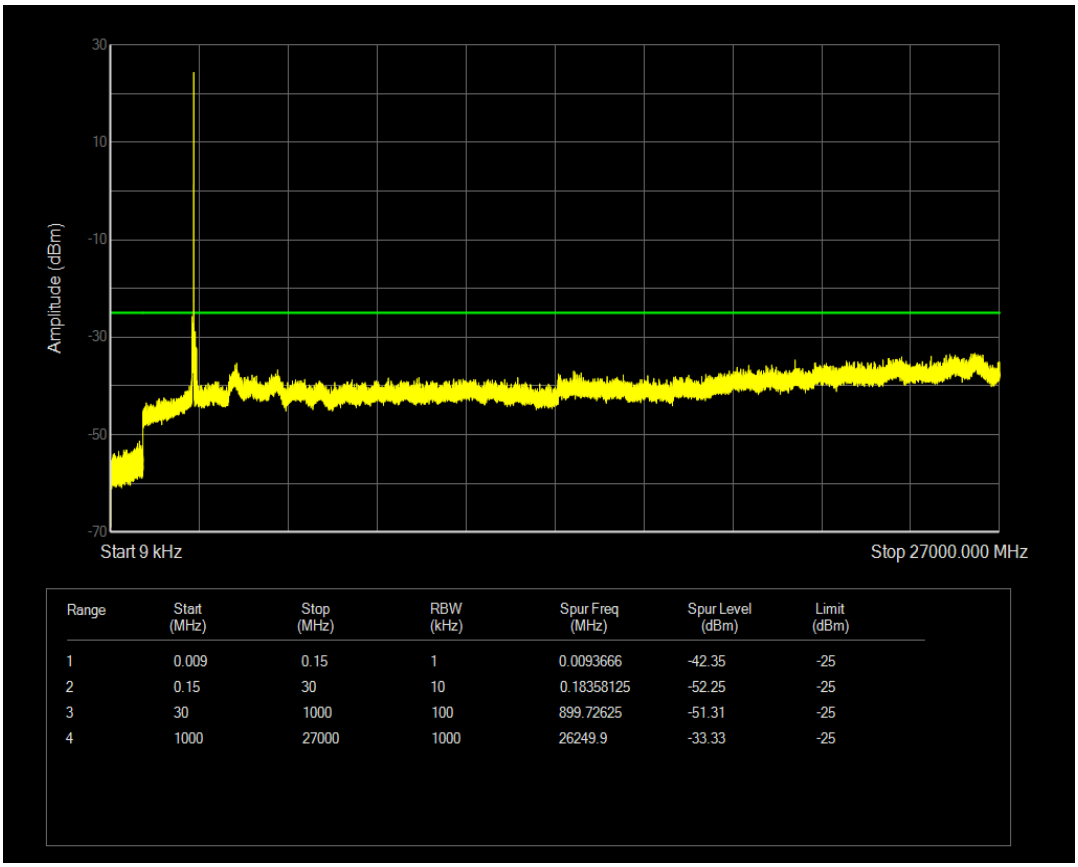
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009821325	-41.98	-25
2	0.15	30	10	0.1574625	-52.06	-25
3	30	1000	100	917.28325	-51.93	-25
4	1000	27000	1000	25553.75	-33.2	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=1@0



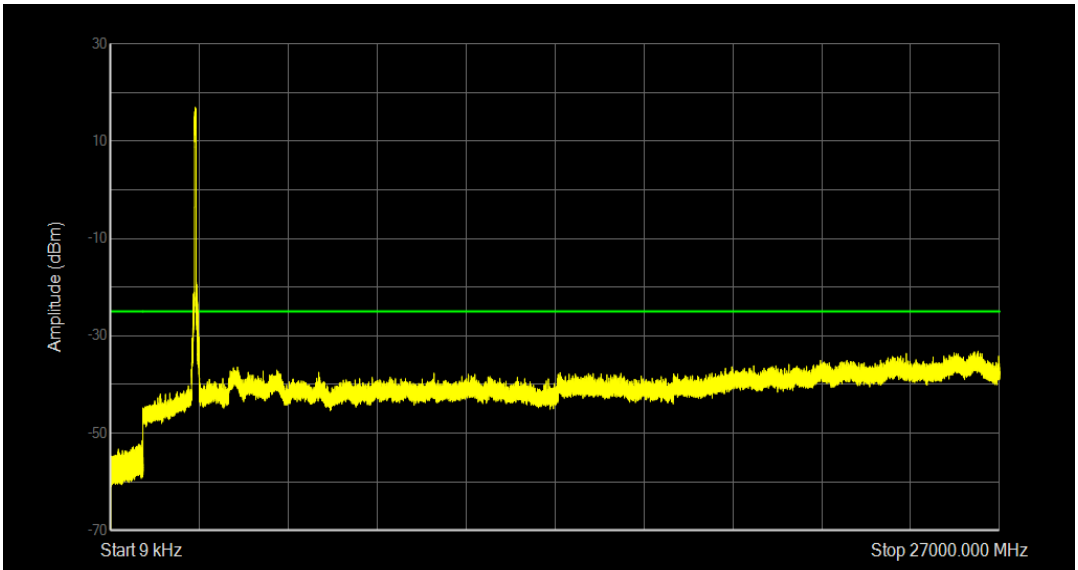
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.00920445	-42.08	-25
2	0.15	30	10	0.15223875	-51.58	-25
3	30	1000	100	944.9525	-51.91	-25
4	1000	27000	1000	26283.05	-32.48	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=1@269



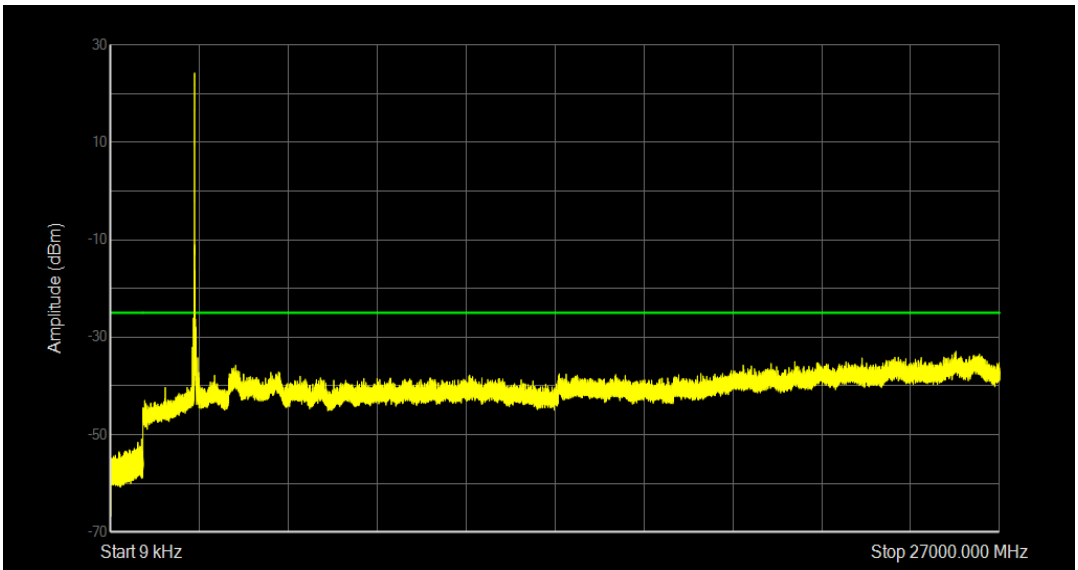
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0093666	-42.35	-25
2	0.15	30	10	0.18358125	-52.25	-25
3	30	1000	100	899.72625	-51.31	-25
4	1000	27000	1000	26249.9	-33.33	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=518601 RB=270@0



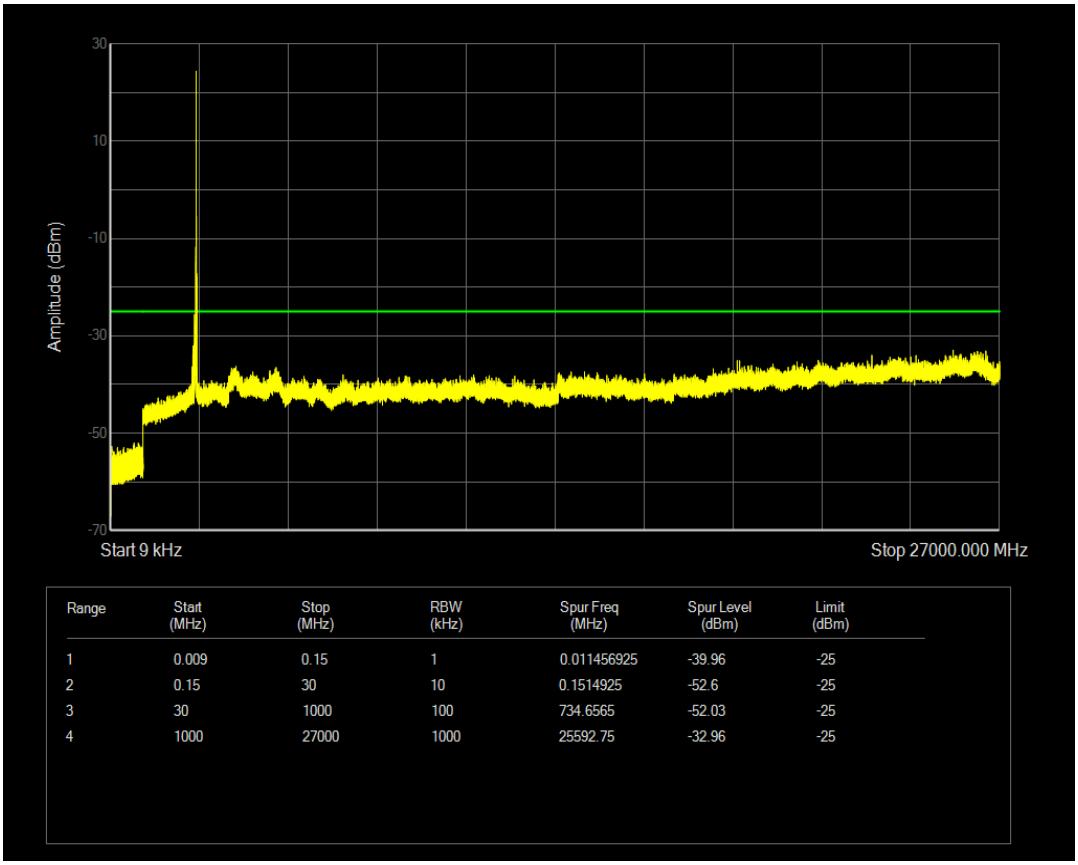
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01119255	-41.68	-25
2	0.15	30	10	0.15970125	-51.61	-25
3	30	1000	100	975.96825	-51.55	-25
4	1000	27000	1000	26344.8	-33.16	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=518601 RB=1@0



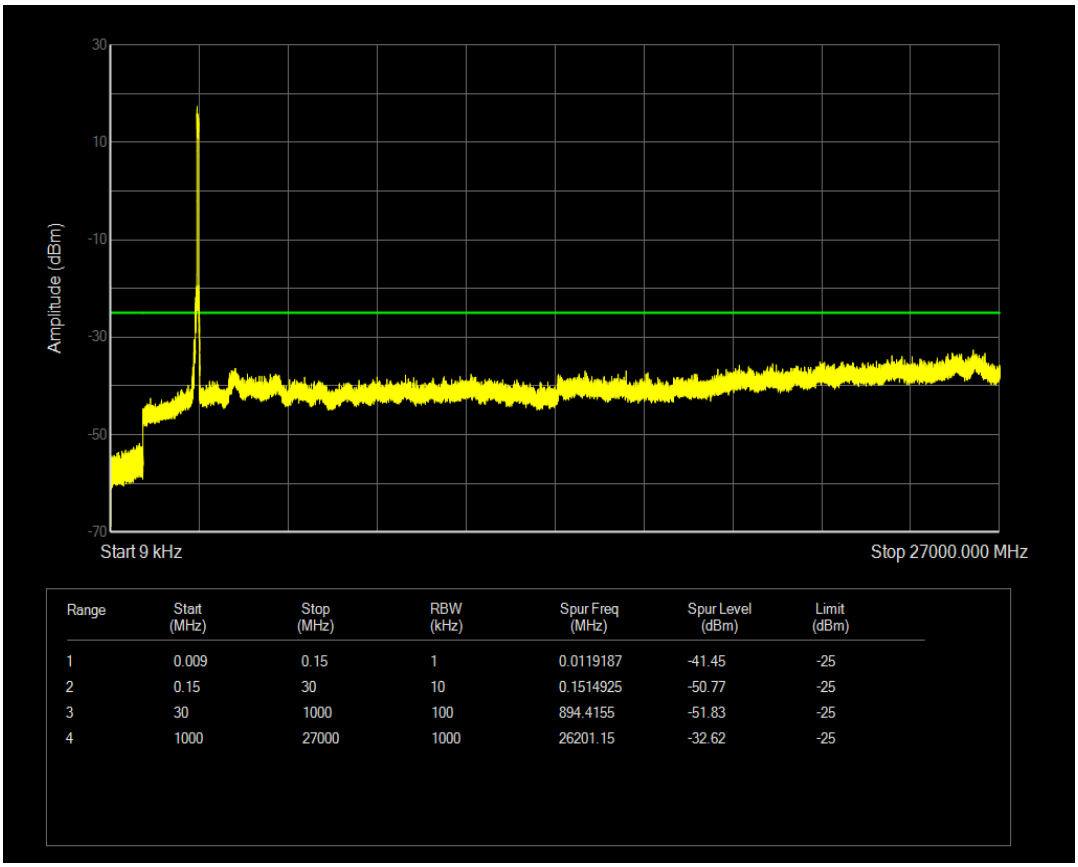
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009088125	-41.39	-25
2	0.15	30	10	0.15970125	-53.12	-25
3	30	1000	100	960.25425	-50.92	-25
4	1000	27000	1000	25674	-32.89	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=518601 RB=1@269



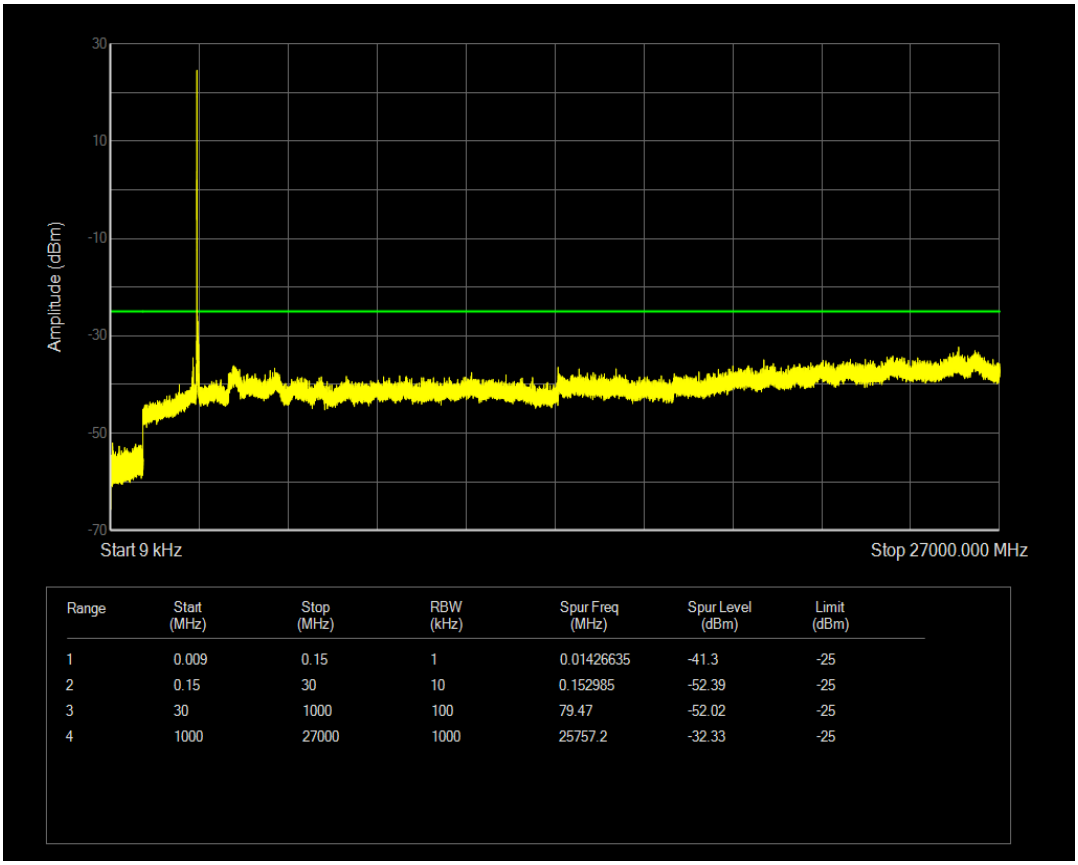
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011456925	-39.96	-25
2	0.15	30	10	0.1514925	-52.6	-25
3	30	1000	100	734.6565	-52.03	-25
4	1000	27000	1000	25592.75	-32.96	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=270@0



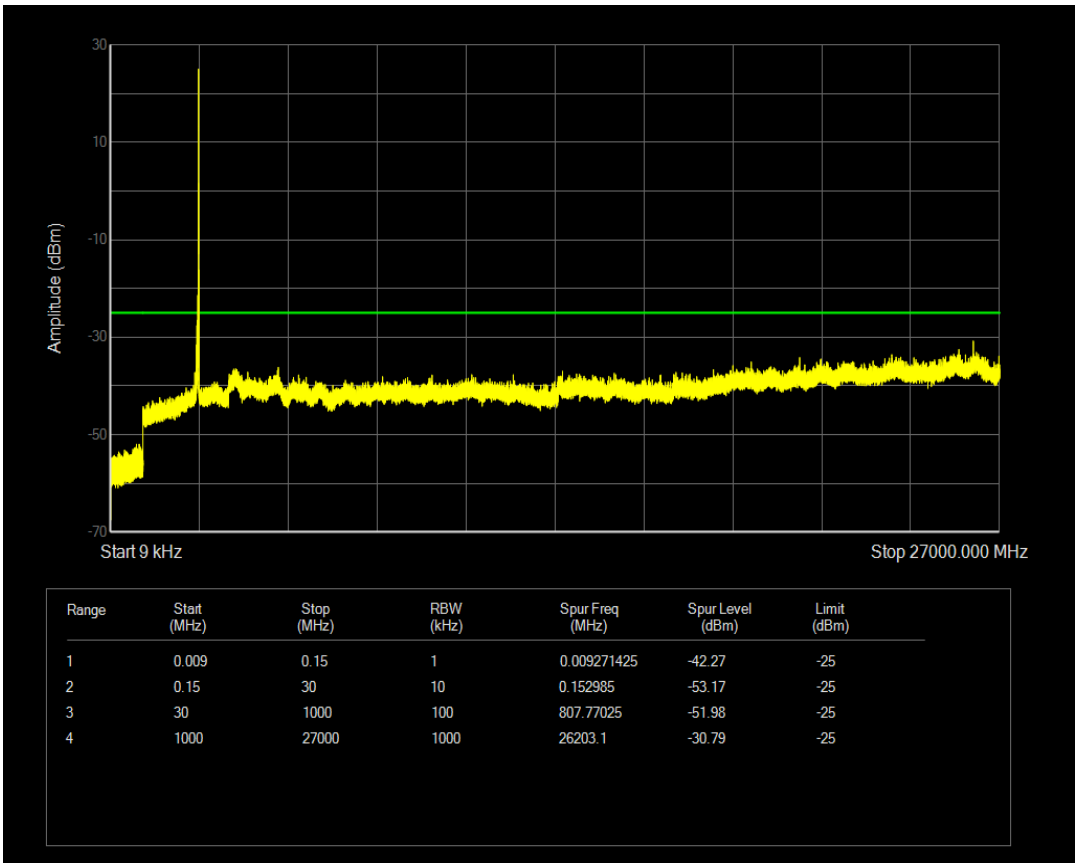
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0119187	-41.45	-25
2	0.15	30	10	0.1514925	-50.77	-25
3	30	1000	100	894.4155	-51.83	-25
4	1000	27000	1000	26201.15	-32.62	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=1@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01426635	-41.3	-25
2	0.15	30	10	0.152985	-52.39	-25
3	30	1000	100	79.47	-52.02	-25
4	1000	27000	1000	25757.2	-32.33	-25

n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=532998 RB=1@269



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009271425	-42.27	-25
2	0.15	30	10	0.152985	-53.17	-25
3	30	1000	100	807.77025	-51.98	-25
4	1000	27000	1000	26203.1	-30.79	-25