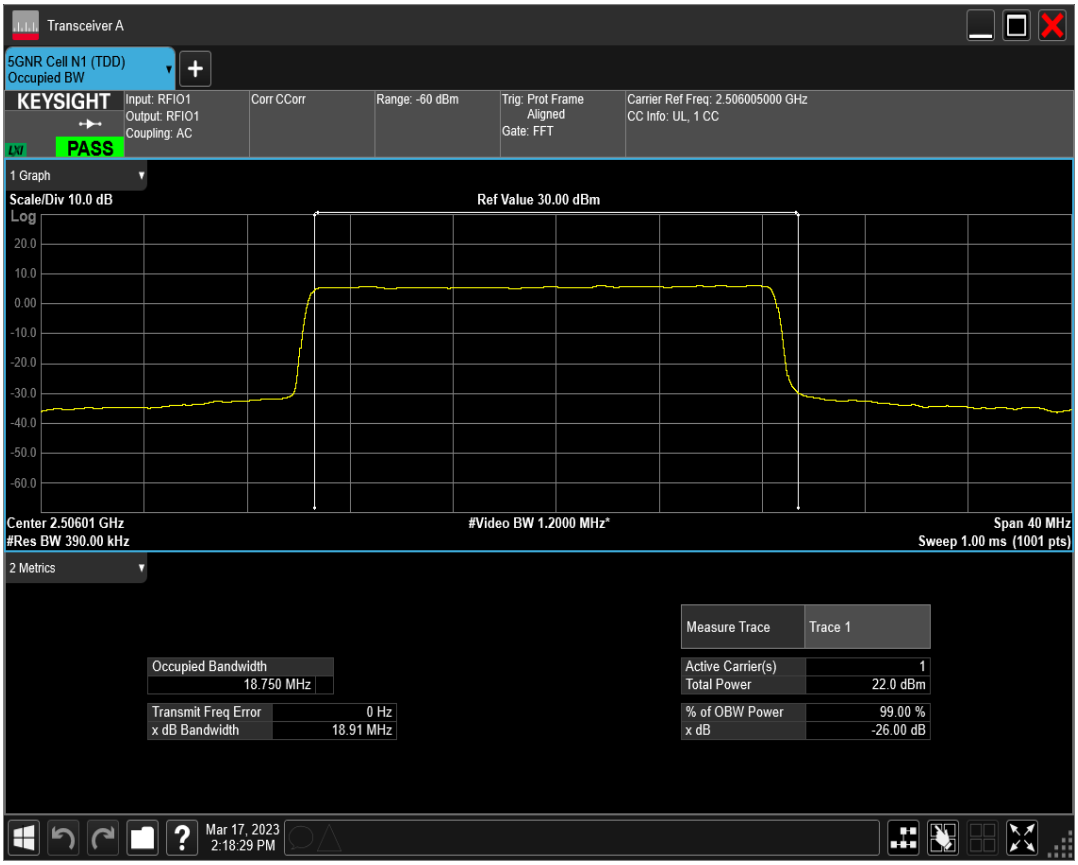
n41 SCS=15kHz DFT_BPSK BW=20MHz Channel=501201 RB=100@0

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

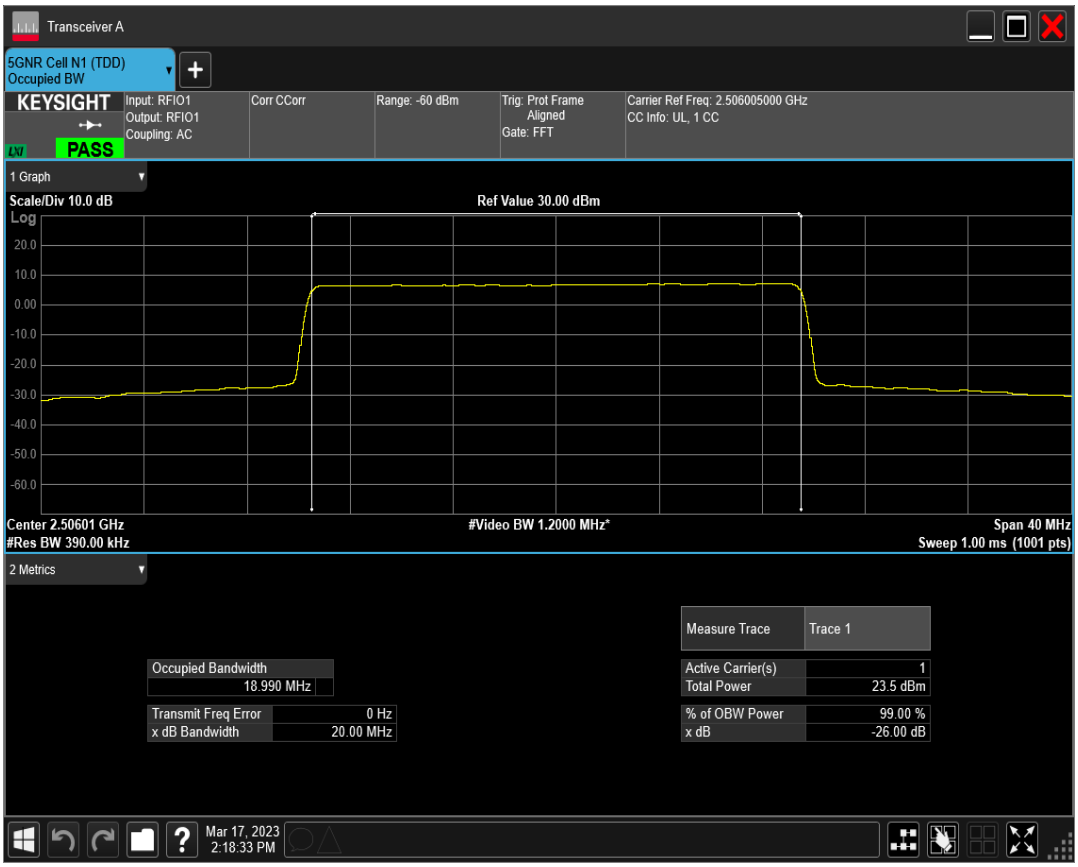
n41 SCS=15kHz DFT_QAM16 BW=20MHz Channel=501201 RB=100@0

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

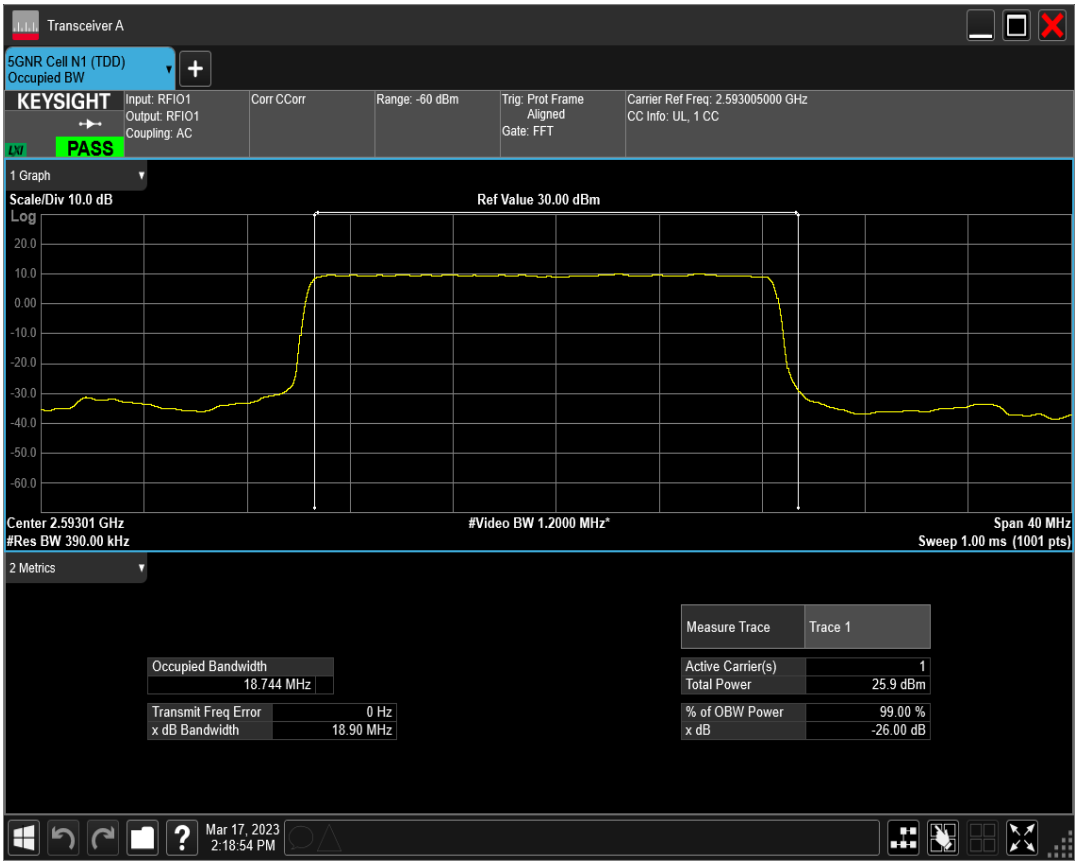
n41 SCS=15kHz DFT_QAM256 BW=20MHz Channel=501201 RB=100@0



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



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

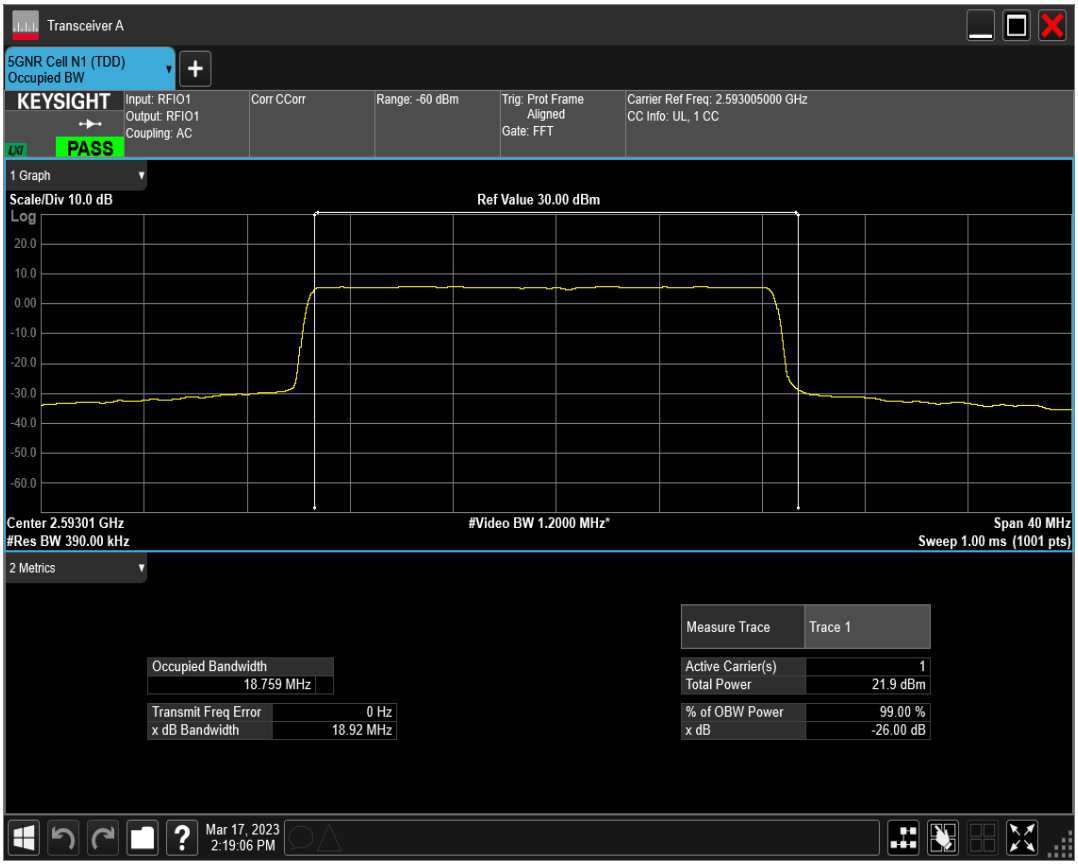


n41 SCS=15kHz DFT_QPSK BW=20MHz Channel=518601 RB=100@0

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

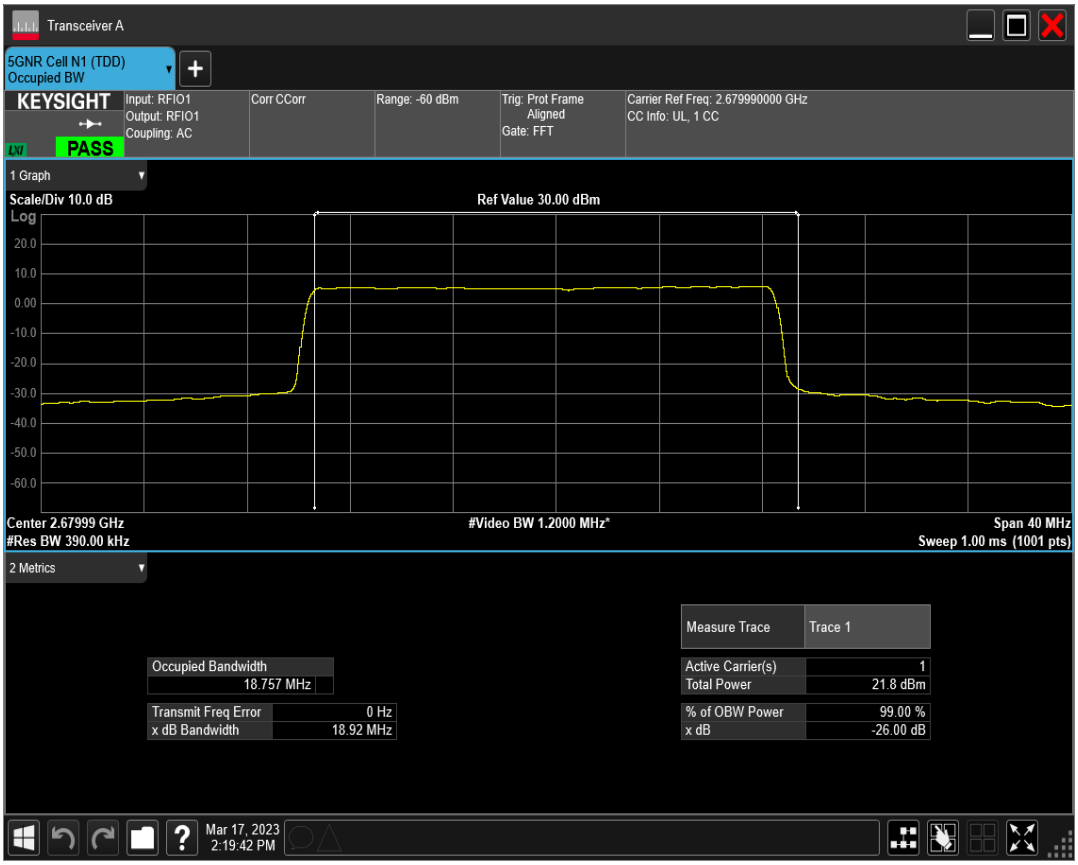
n41 SCS=15kHz DFT_BPSK BW=20MHz Channel=535998 RB=100@0

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

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

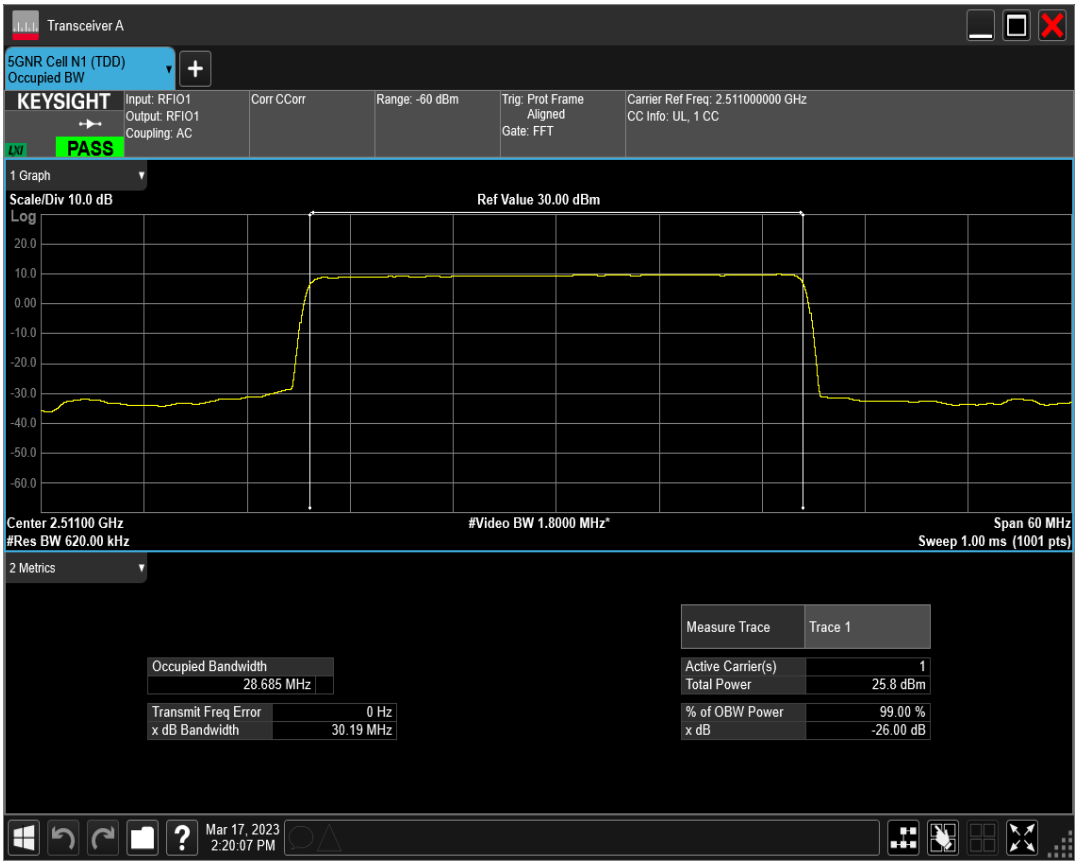
n41 SCS=15kHz DFT_QAM64 BW=20MHz Channel=535998 RB=100@0

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

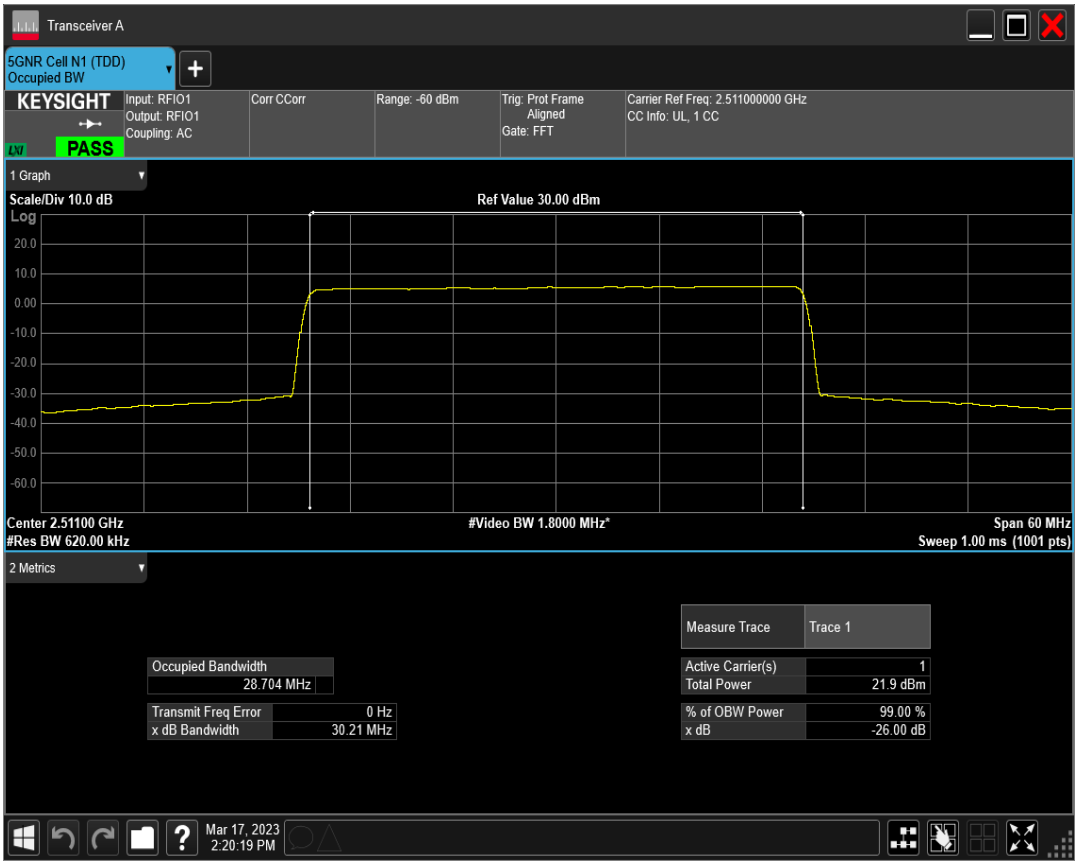


n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=502200 RB=160@0

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

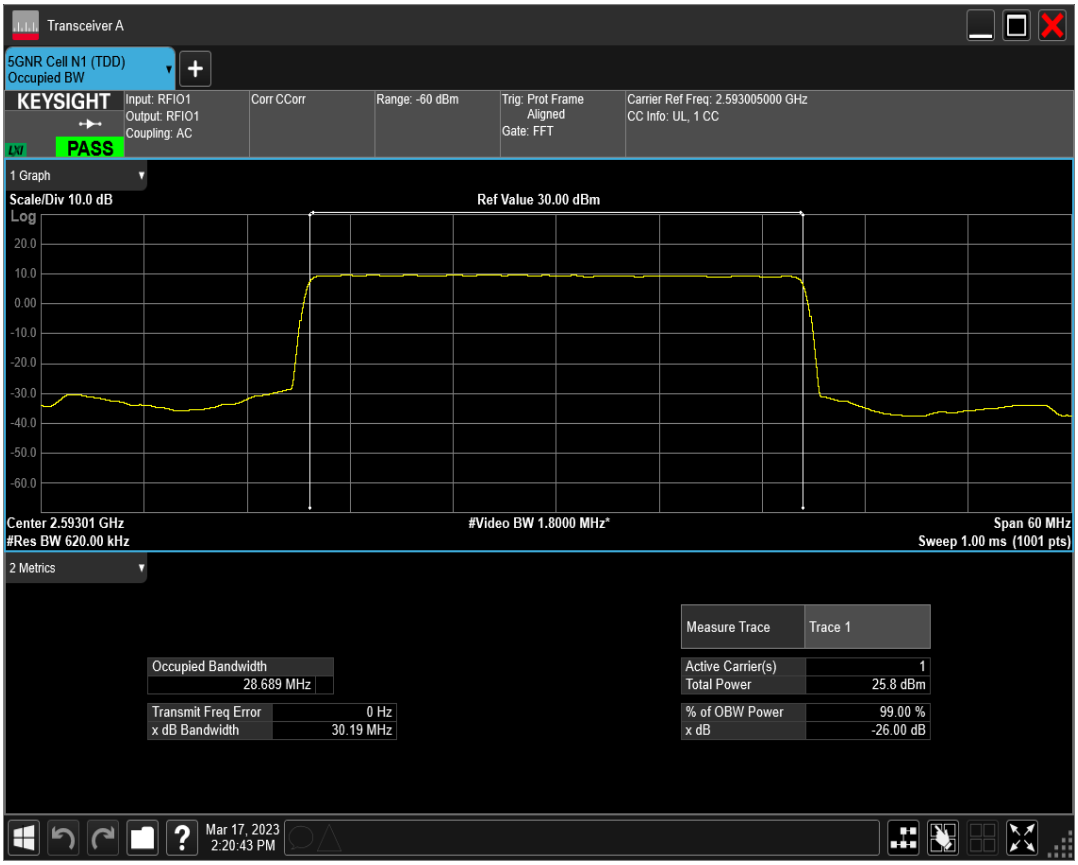
n41 SCS=15kHz DFT_QAM64 BW=30MHz Channel=502200 RB=160@0

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

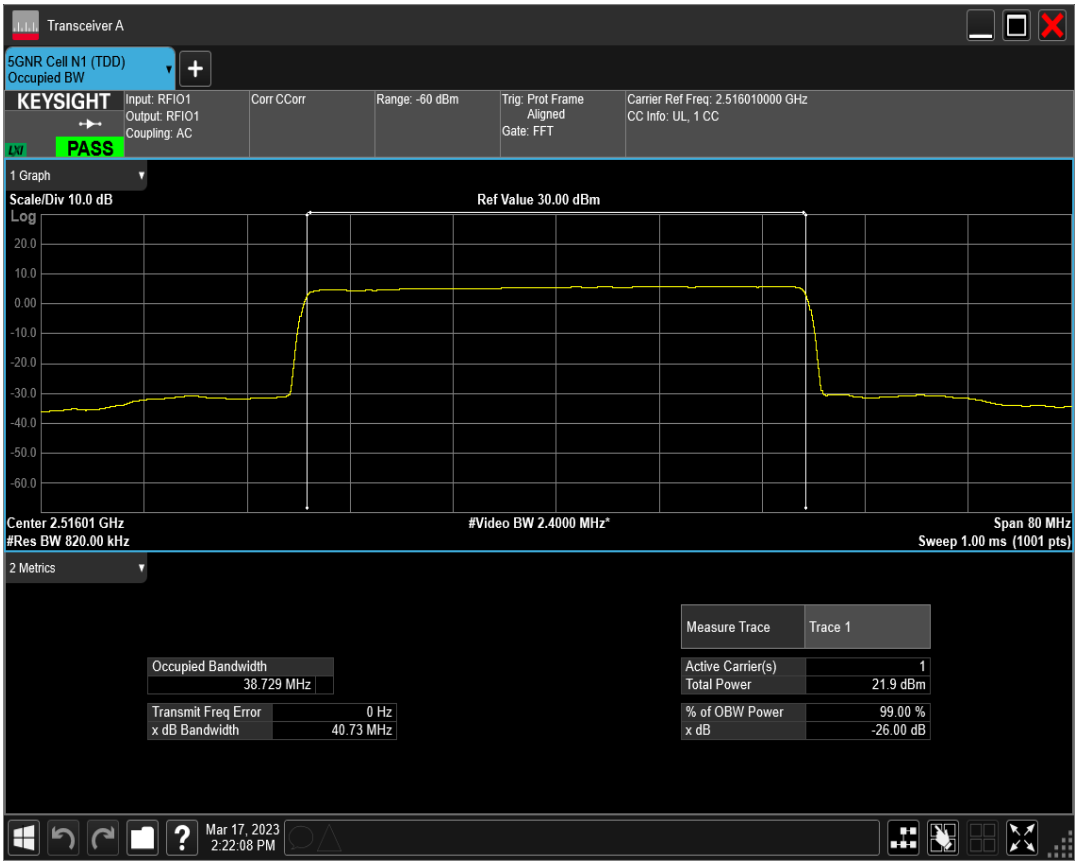
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=503202 RB=216@0

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

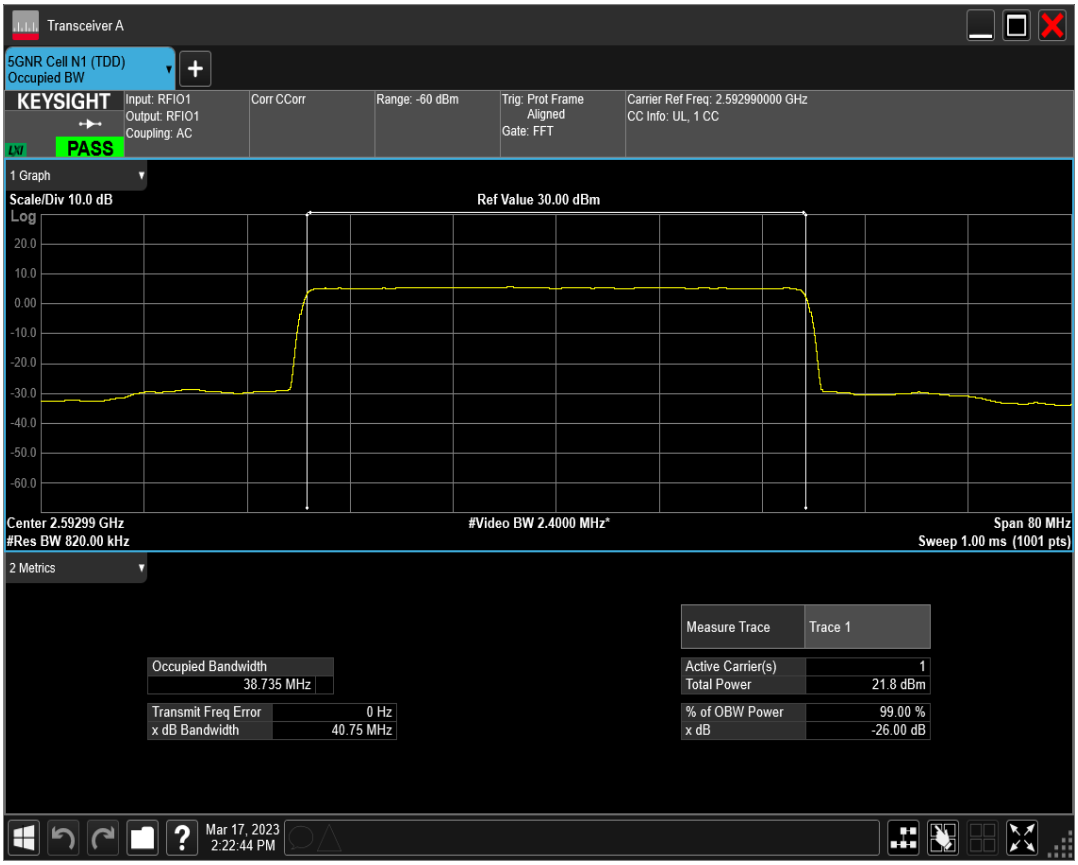
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=518598 RB=216@0

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

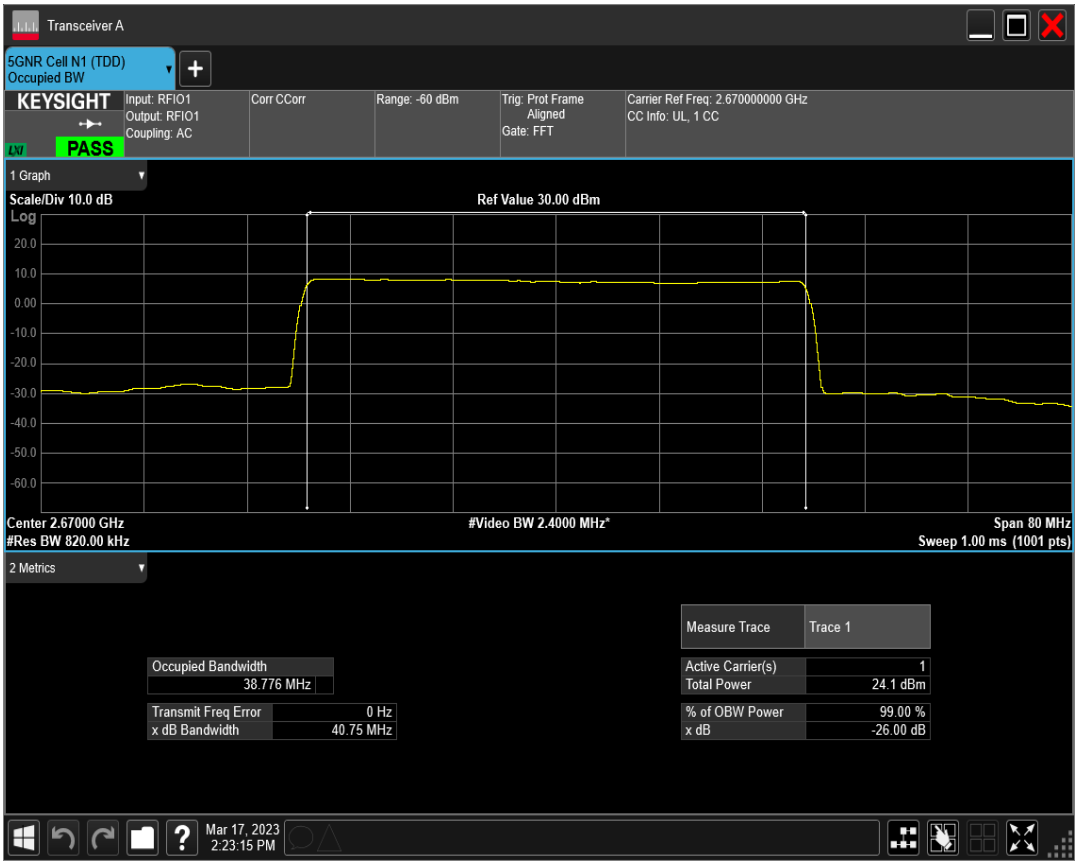


n41 SCS=15kHz CP_QPSK BW=40MHz Channel=518598 RB=216@0

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

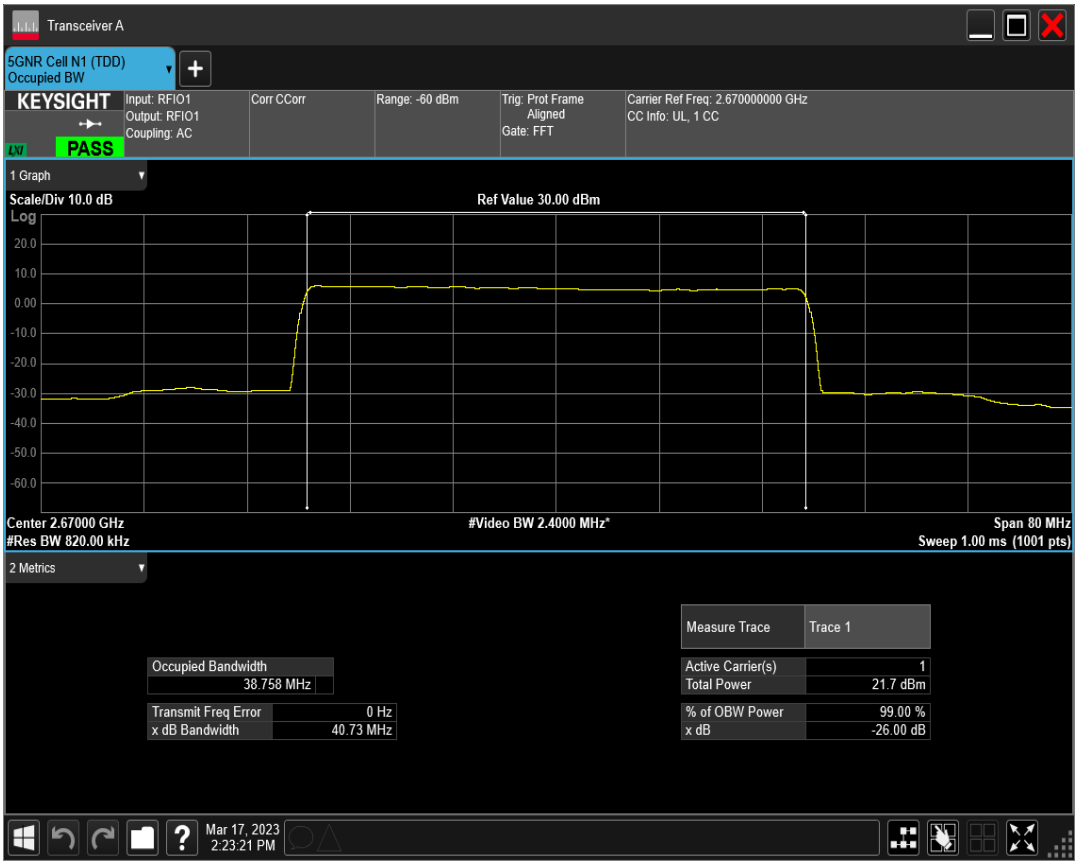
n41 SCS=15kHz DFT_QPSK BW=40MHz Channel=534000 RB=216@0

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

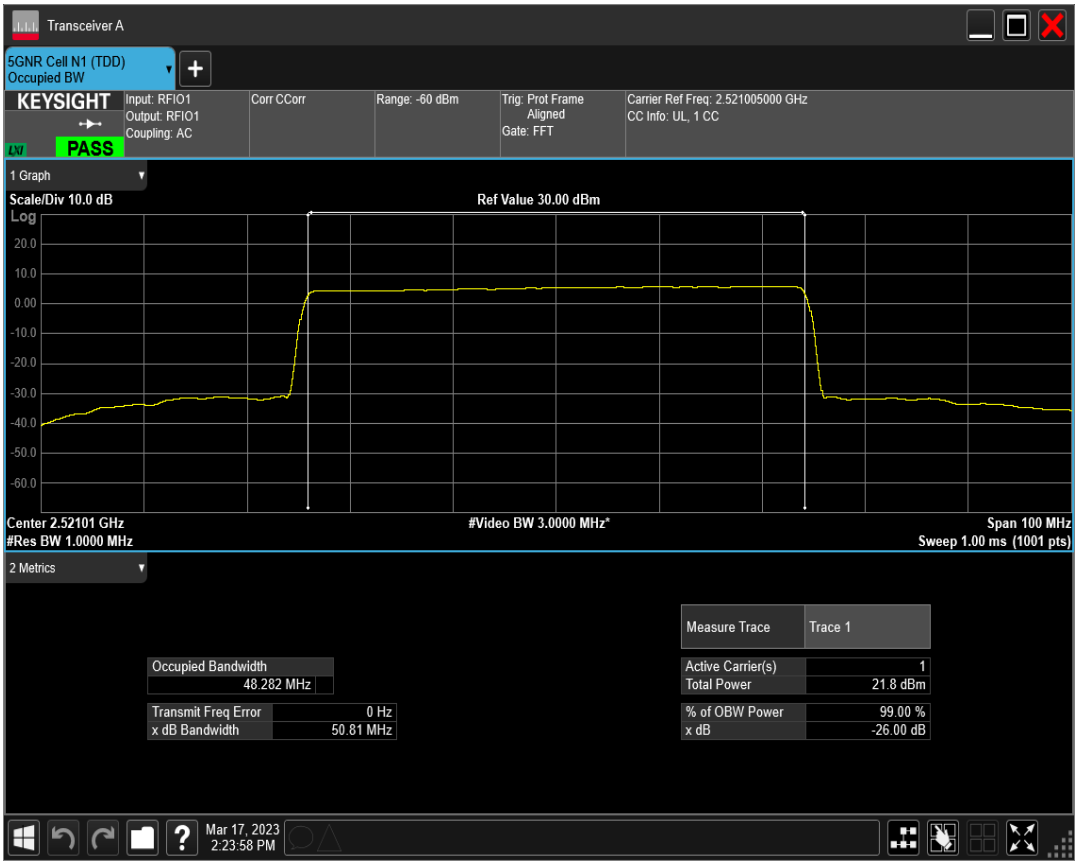
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=504201 RB=270@0

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

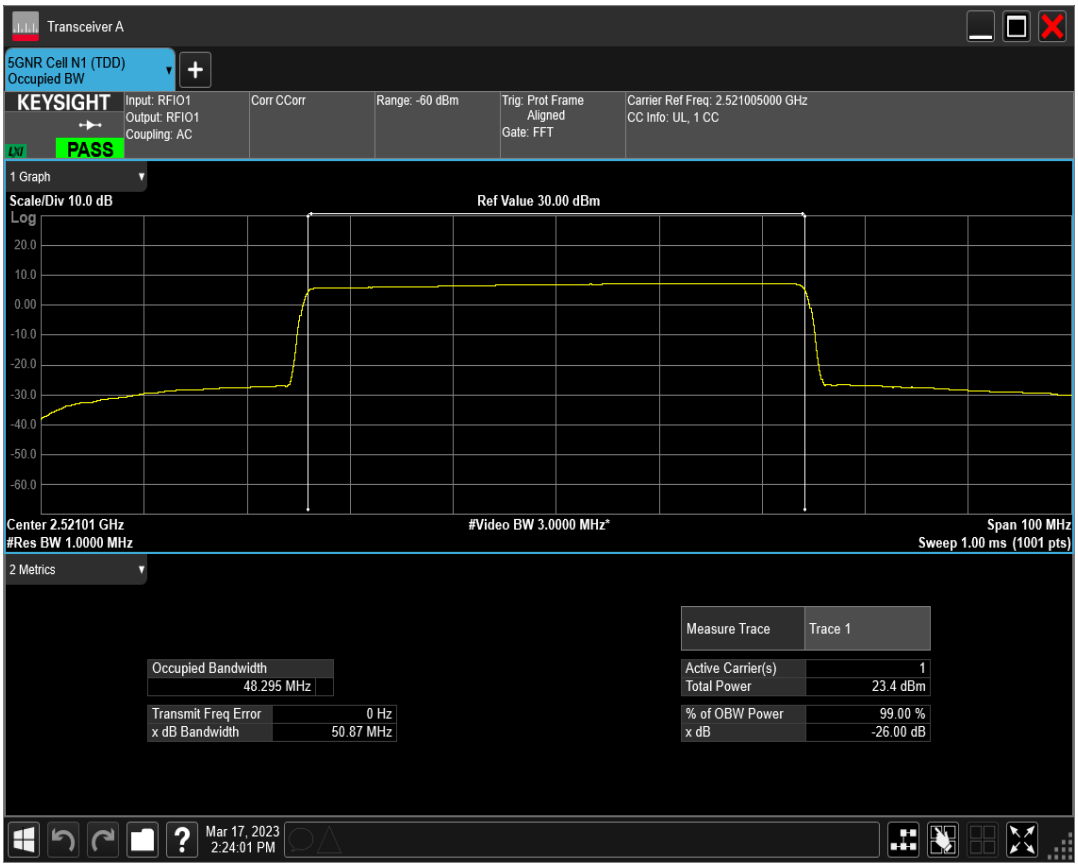
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=504201 RB=270@0

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



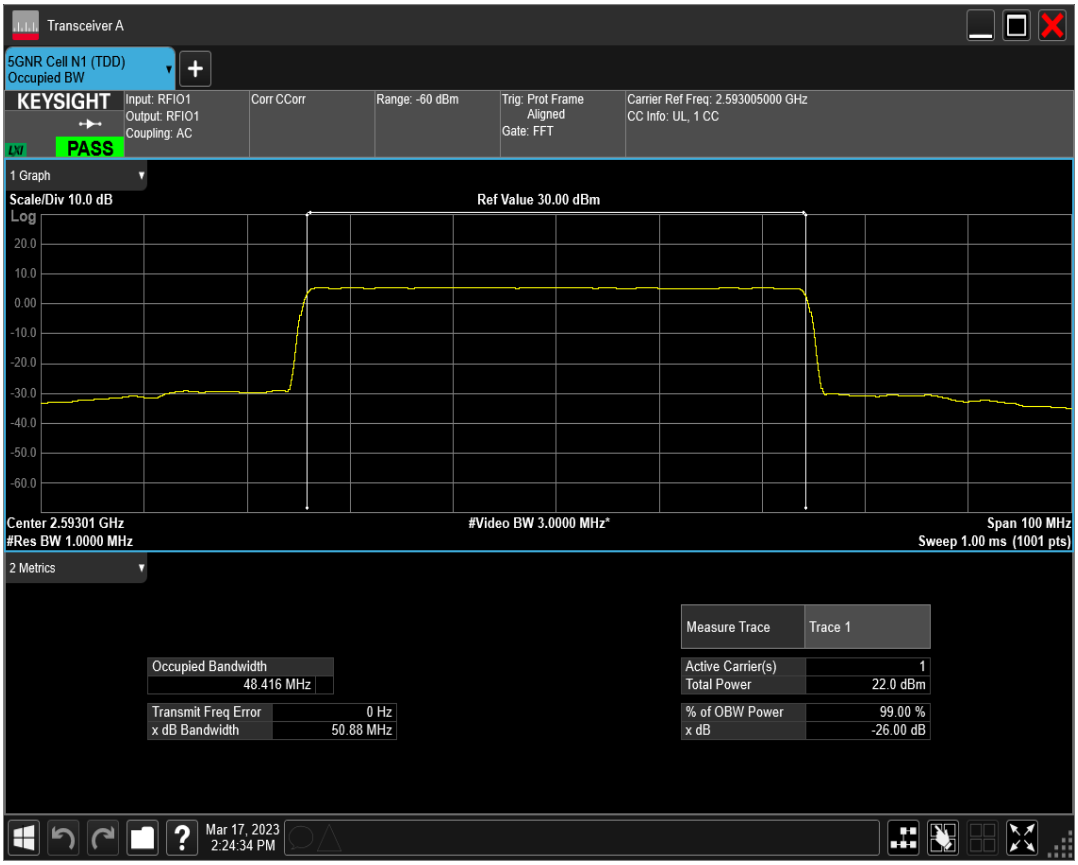
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=518601 RB=270@0

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

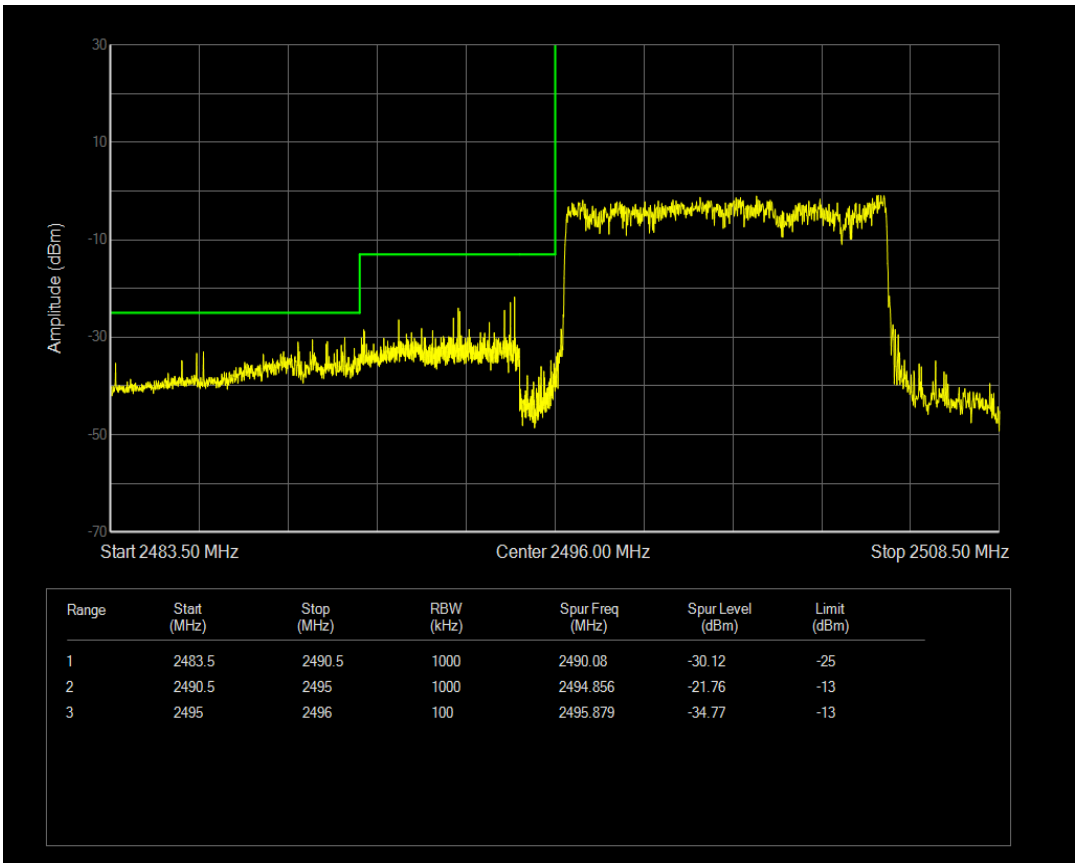
n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=532998 RB=270@0

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

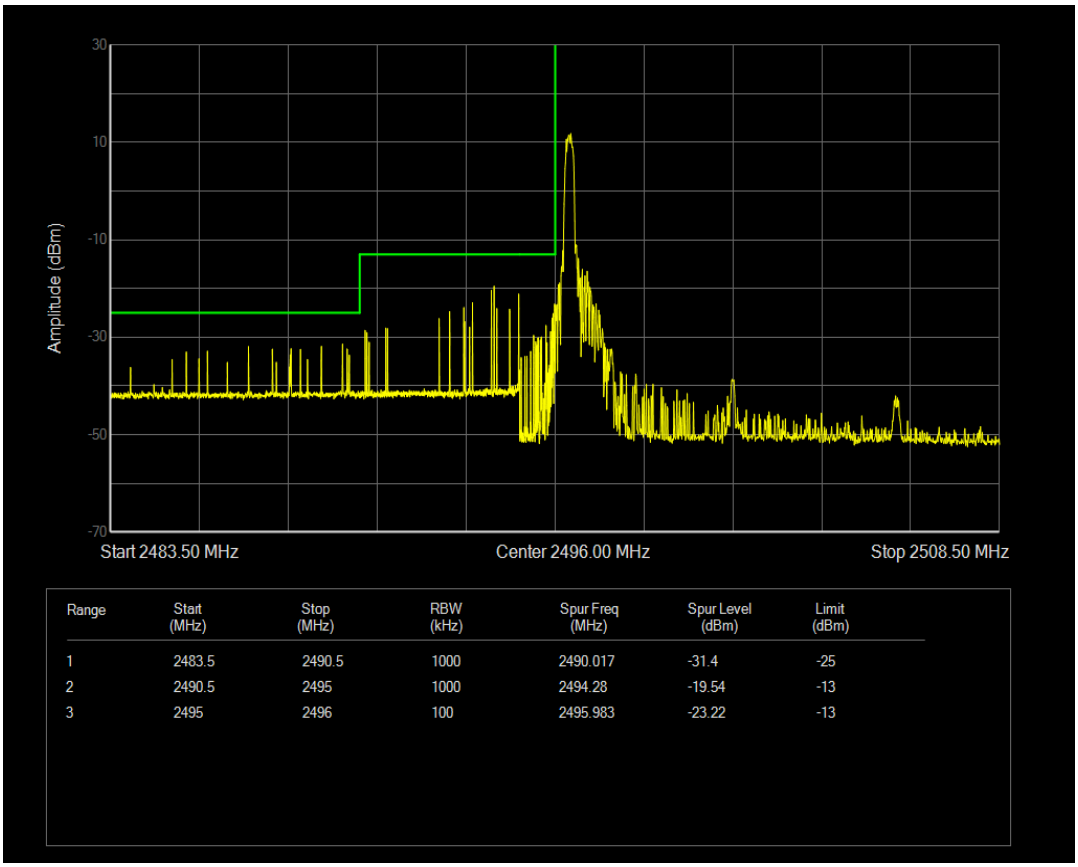
5 Band edge for NR FR1

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	-30.12	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	2490.02	-31.40	-25	PASS
n41	15	10	537000	50@0	DFT_QPSK	2700.50	-30.13	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	2691.20	-17.50	-10	PASS
n41	15	50	504201	270@0	DFT_QPSK	2489.87	-35.45	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	2494.74	-20.65	-13	PASS
n41	15	50	532998	270@0	DFT_QPSK	2690.01	-23.88	-10	PASS
n41	15	50	532998	1@269	DFT_QPSK	2691.39	-23.36	-10	PASS

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

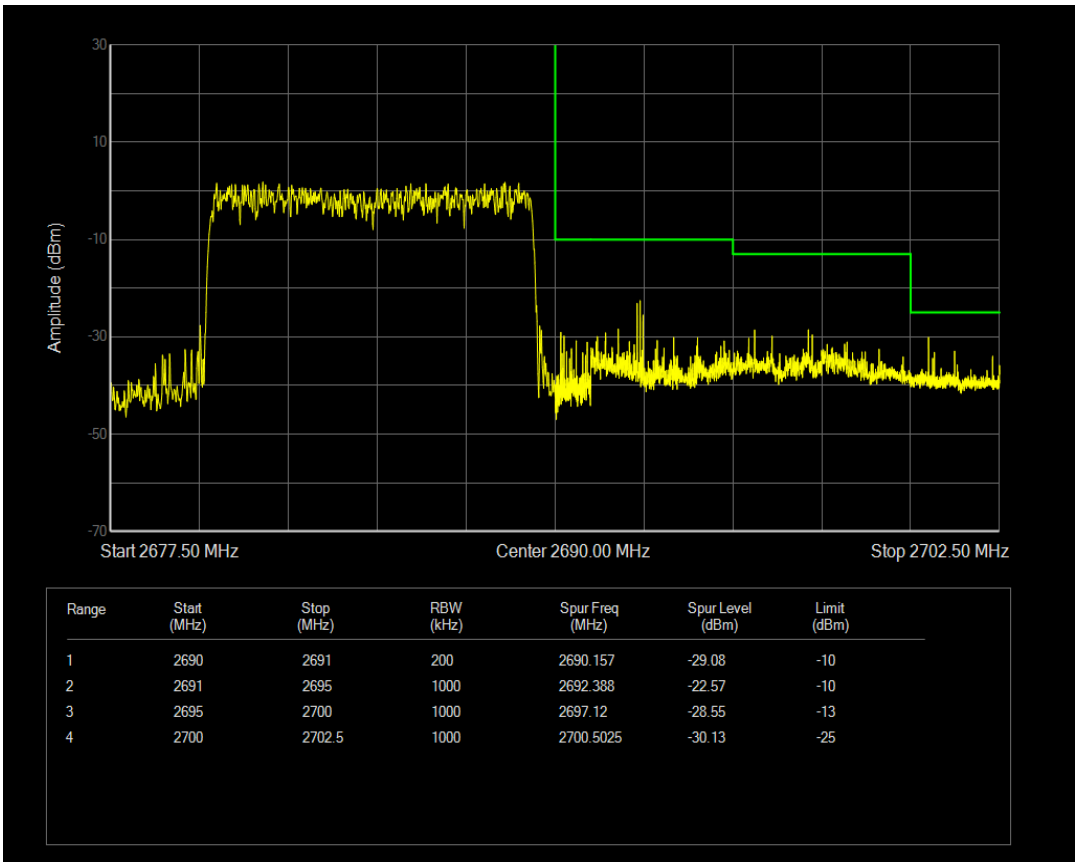


n41 SCS=15kHz DFT_QPSK BW=10MHz Channel=500202 RB=1@0



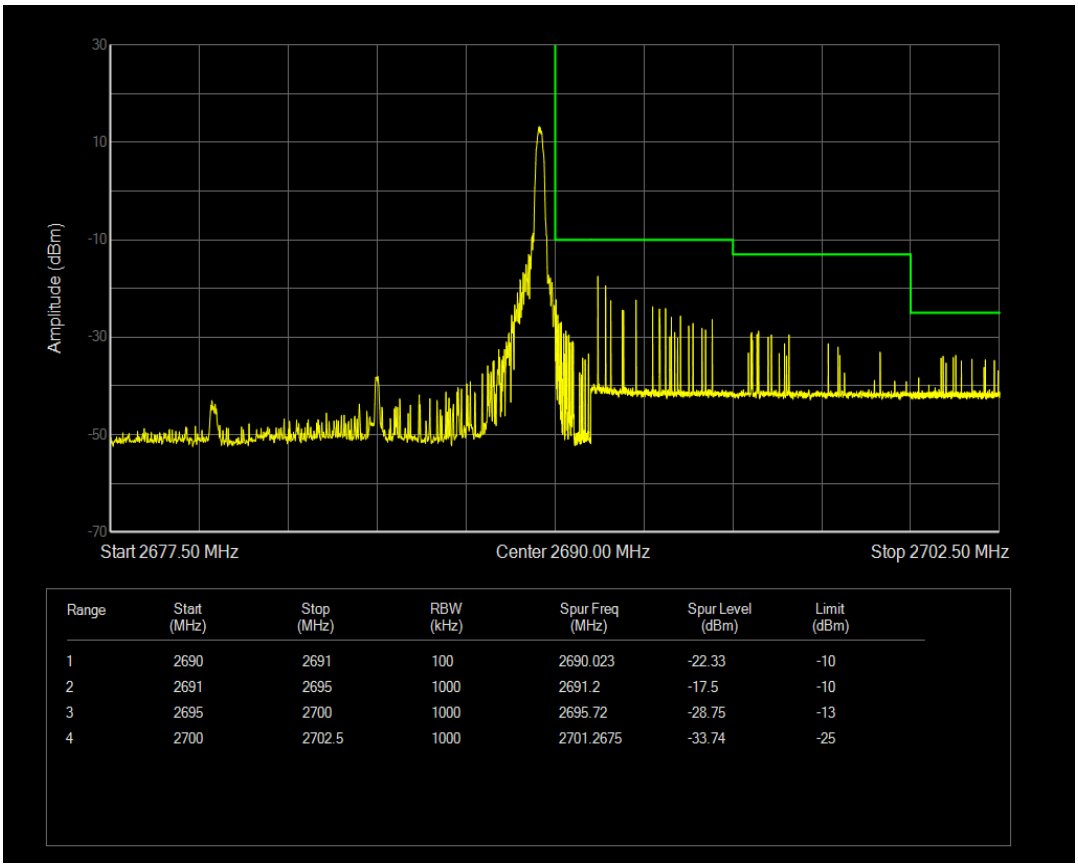
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2483.5	2490.5	1000	2490.017	-31.4	-25
2	2490.5	2495	1000	2494.28	-19.54	-13
3	2495	2496	100	2495.983	-23.22	-13

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



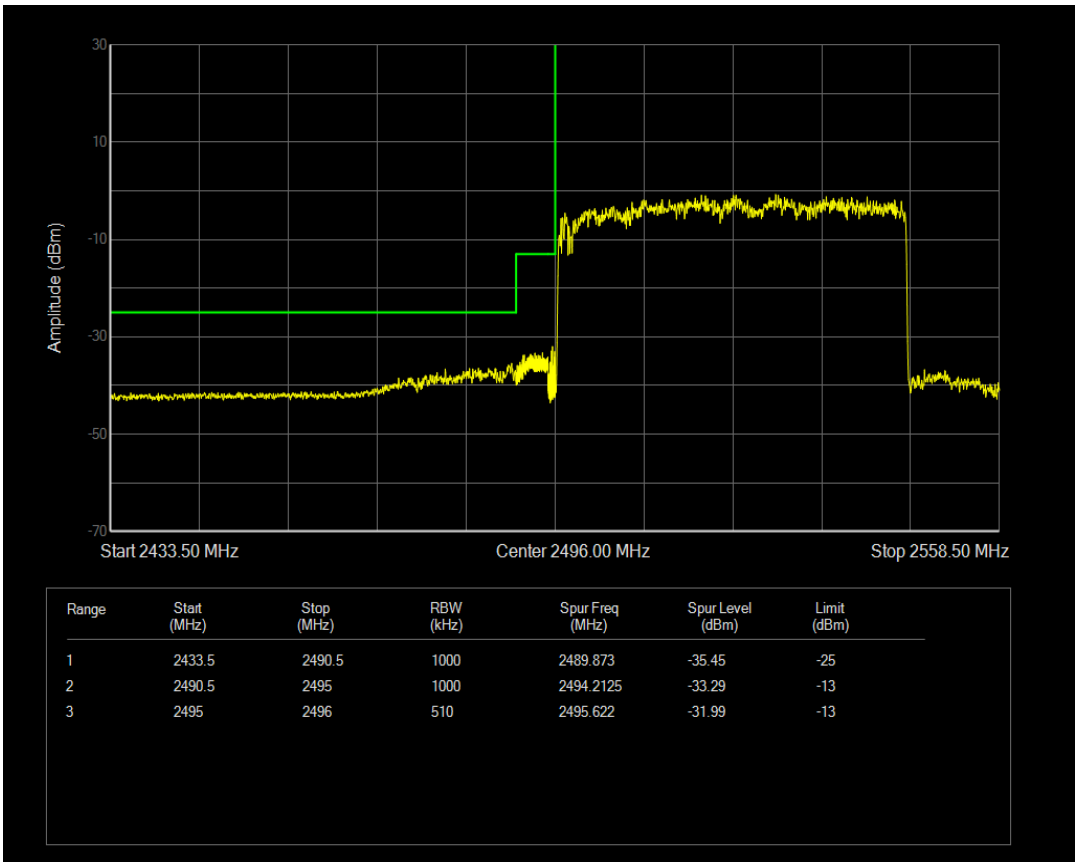
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	200	2690.157	-29.08	-10
2	2691	2695	1000	2692.388	-22.57	-10
3	2695	2700	1000	2697.12	-28.55	-13
4	2700	2702.5	1000	2700.5025	-30.13	-25

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



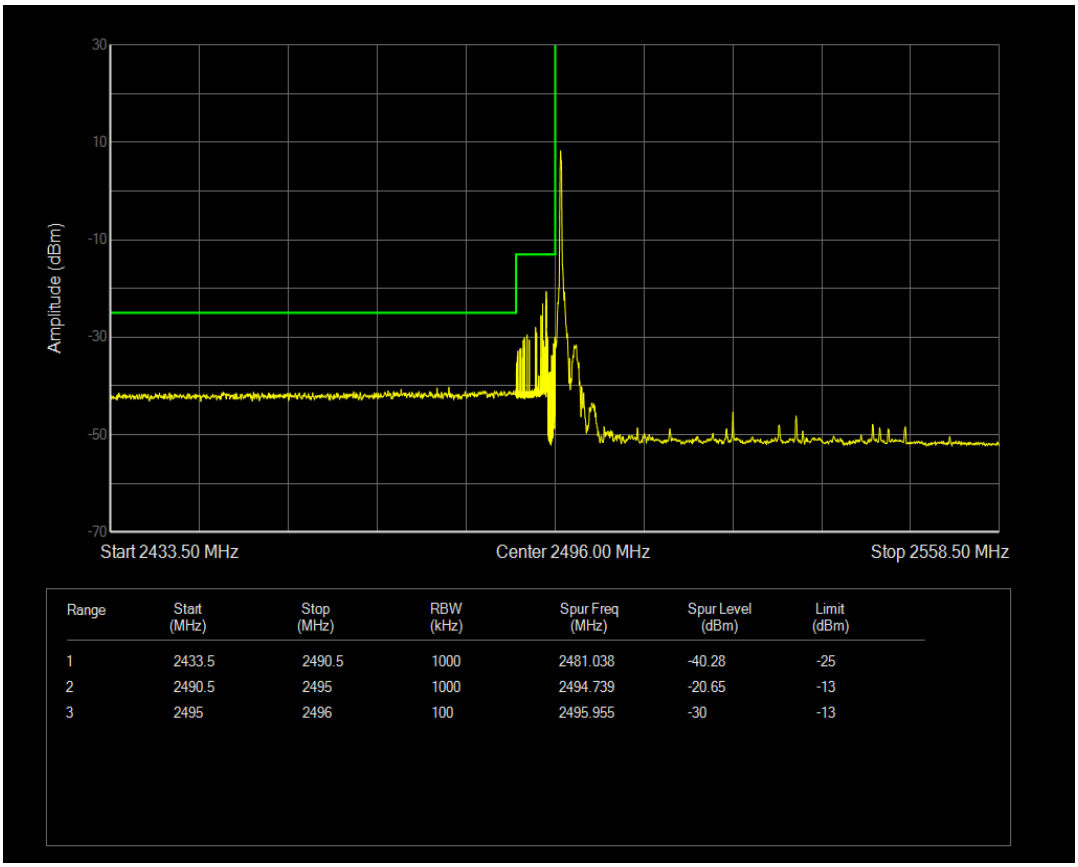
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.023	-22.33	-10
2	2691	2695	1000	2691.2	-17.5	-10
3	2695	2700	1000	2695.72	-28.75	-13
4	2700	2702.5	1000	2701.2675	-33.74	-25

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



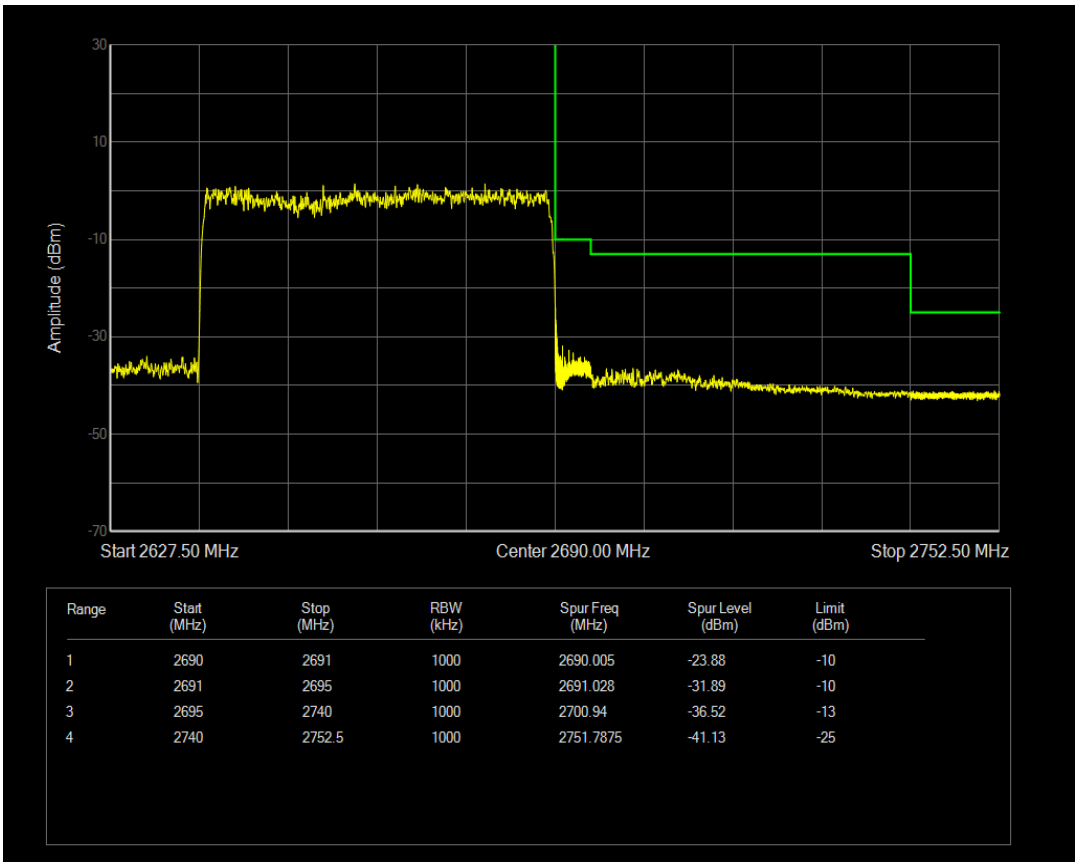
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2489.873	-35.45	-25
2	2490.5	2495	1000	2494.2125	-33.29	-13
3	2495	2496	510	2495.622	-31.99	-13

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



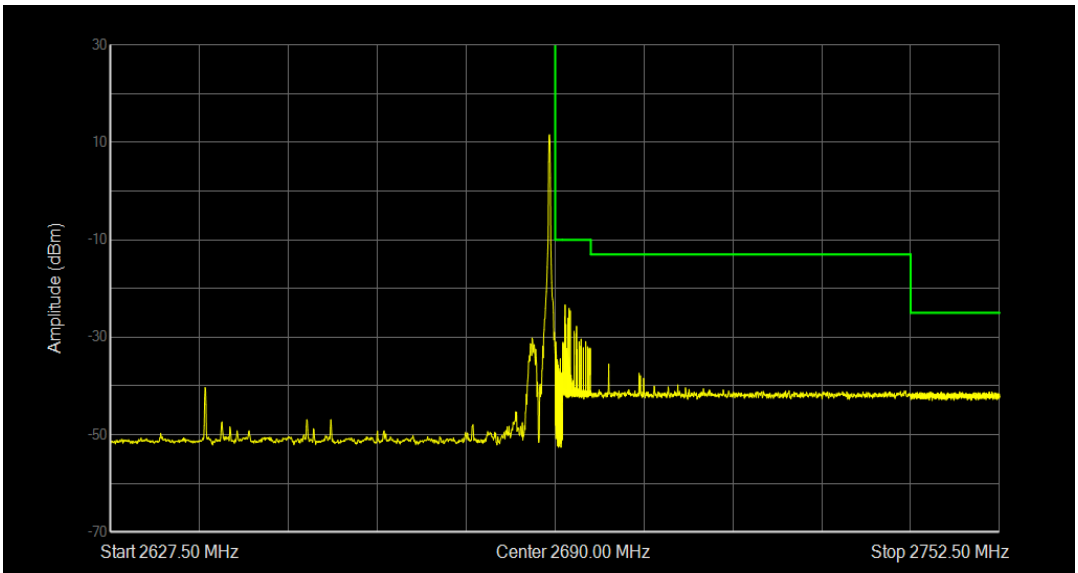
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2481.038	-40.28	-25
2	2490.5	2495	1000	2494.739	-20.65	-13
3	2495	2496	100	2495.955	-30	-13

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	2690.005	-23.88	-10
2	2691	2695	1000	2691.028	-31.89	-10
3	2695	2740	1000	2700.94	-36.52	-13
4	2740	2752.5	1000	2751.7875	-41.13	-25

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

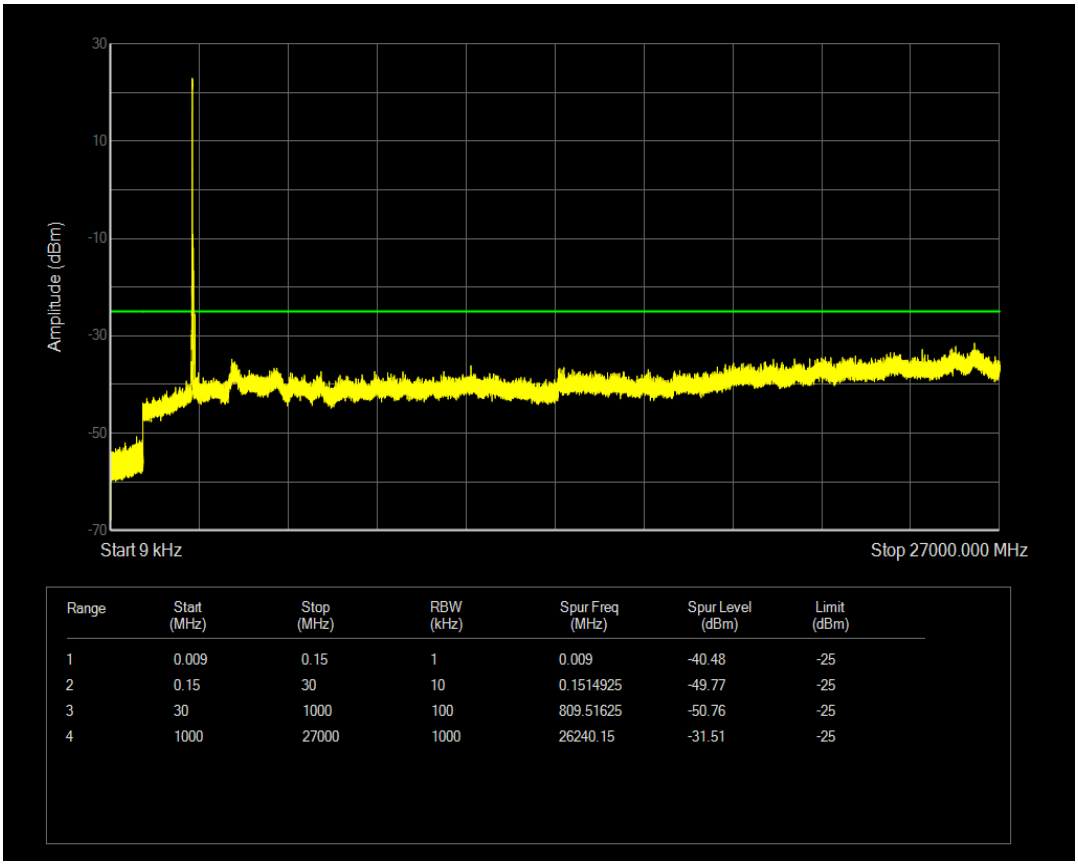


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.074	-30.99	-10
2	2691	2695	1000	2691.388	-23.36	-10
3	2695	2740	1000	2697.52	-35.5	-13
4	2740	2752.5	1000	2746.8875	-41.21	-25

6 Out-of-band emissions for NR FR1

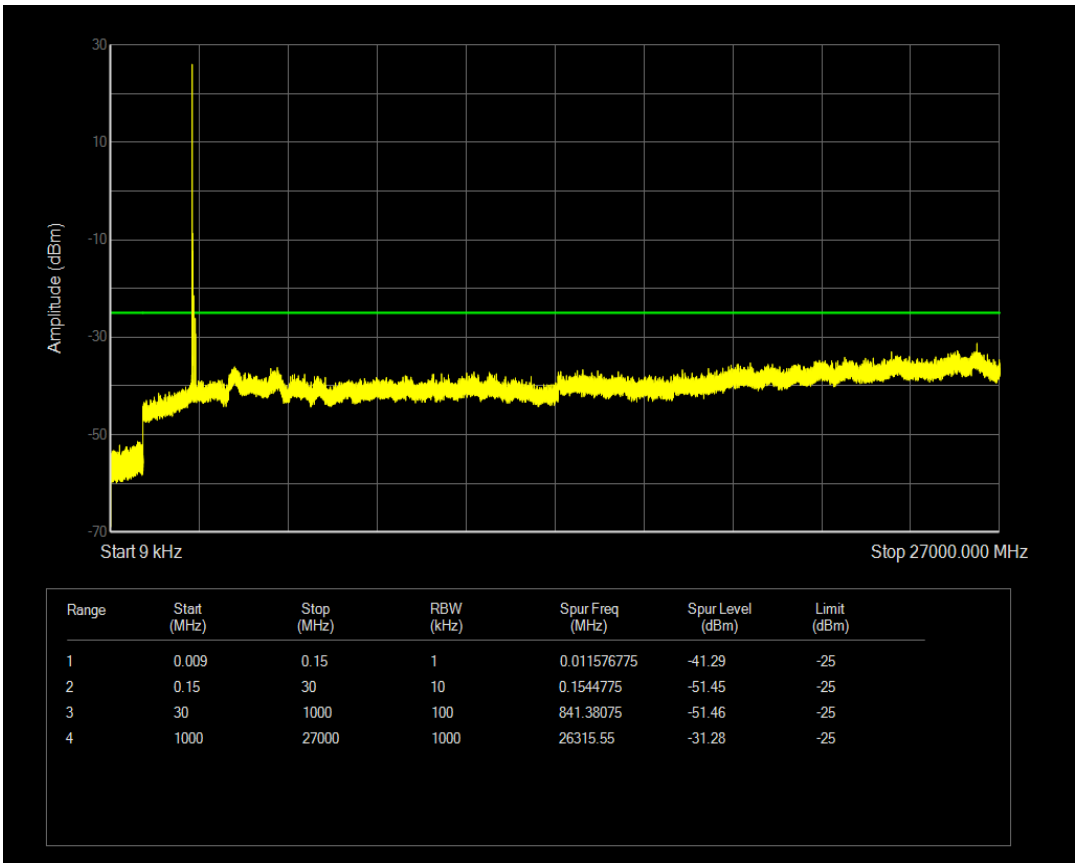
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n41	15	10	500202	50@0	DFT_QPSK	26240.15	-31.51	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	26315.55	-31.28	-25	PASS
n41	15	10	500202	1@51	DFT_QPSK	26351.95	-32.63	-25	PASS
n41	15	10	518601	50@0	DFT_QPSK	26345.45	-31.57	-25	PASS
n41	15	10	518601	1@0	DFT_QPSK	25758.50	-32.43	-25	PASS
n41	15	10	518601	1@51	DFT_QPSK	26297.35	-32.22	-25	PASS
n41	15	10	537000	50@0	DFT_QPSK	26276.55	-32.45	-25	PASS
n41	15	10	537000	1@0	DFT_QPSK	26230.40	-31.61	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	26207.00	-31.21	-25	PASS
n41	15	50	504201	270@0	DFT_QPSK	25630.45	-32.52	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	26270.70	-32.19	-25	PASS
n41	15	50	504201	1@269	DFT_QPSK	26461.80	-31.68	-25	PASS
n41	15	50	518601	270@0	DFT_QPSK	26363.00	-31.79	-25	PASS
n41	15	50	518601	1@0	DFT_QPSK	25649.95	-31.22	-25	PASS
n41	15	50	518601	1@269	DFT_QPSK	26259.00	-31.63	-25	PASS
n41	15	50	532998	270@0	DFT_QPSK	26216.10	-32.24	-25	PASS
n41	15	50	532998	1@0	DFT_QPSK	26306.45	-32.00	-25	PASS
n41	15	50	532998	1@269	DFT_QPSK	26259.65	-32.06	-25	PASS

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



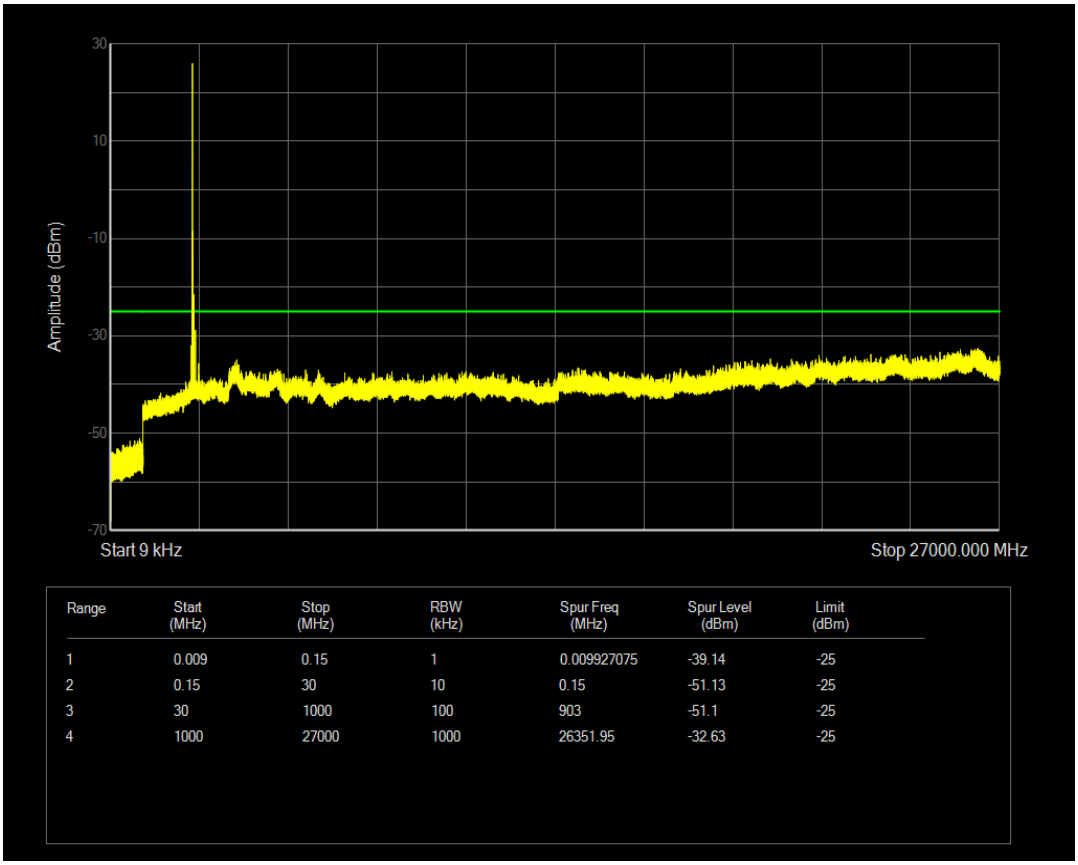
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009	-40.48	-25
2	0.15	30	10	0.1514925	-49.77	-25
3	30	1000	100	809.51625	-50.76	-25
4	1000	27000	1000	26240.15	-31.51	-25

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



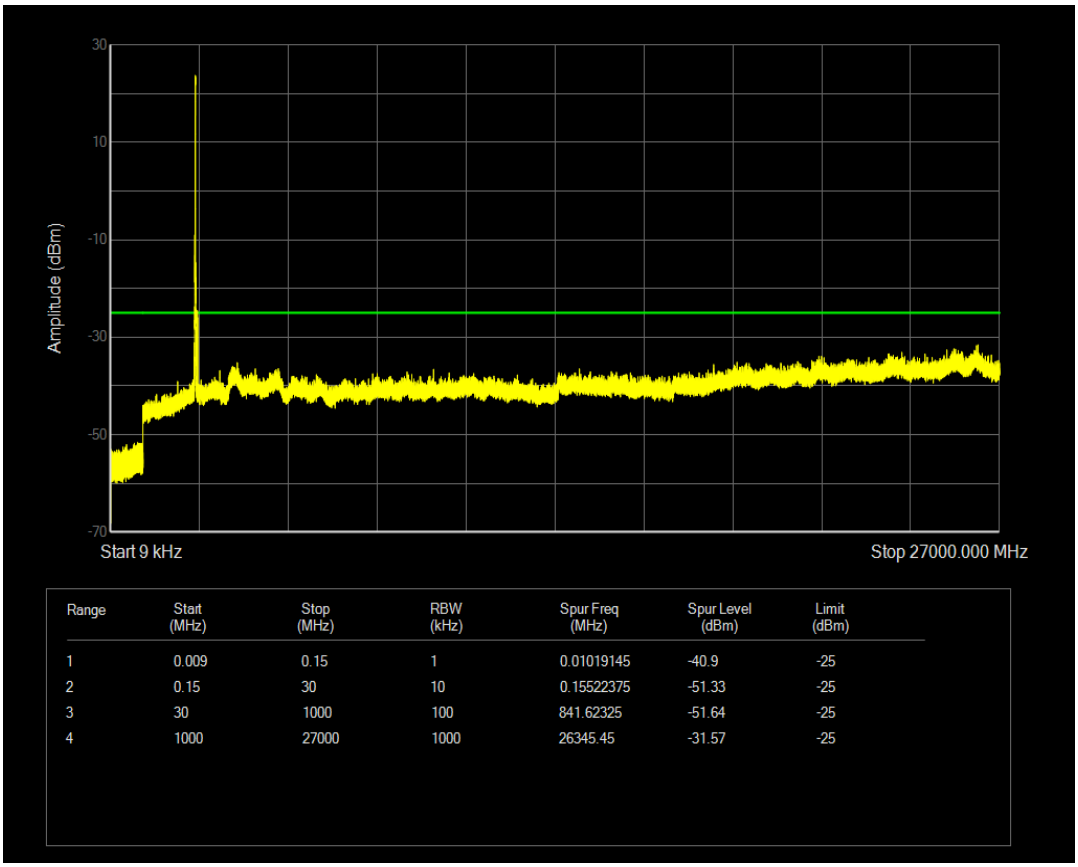
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011576775	-41.29	-25
2	0.15	30	10	0.1544775	-51.45	-25
3	30	1000	100	841.38075	-51.46	-25
4	1000	27000	1000	26315.55	-31.28	-25

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



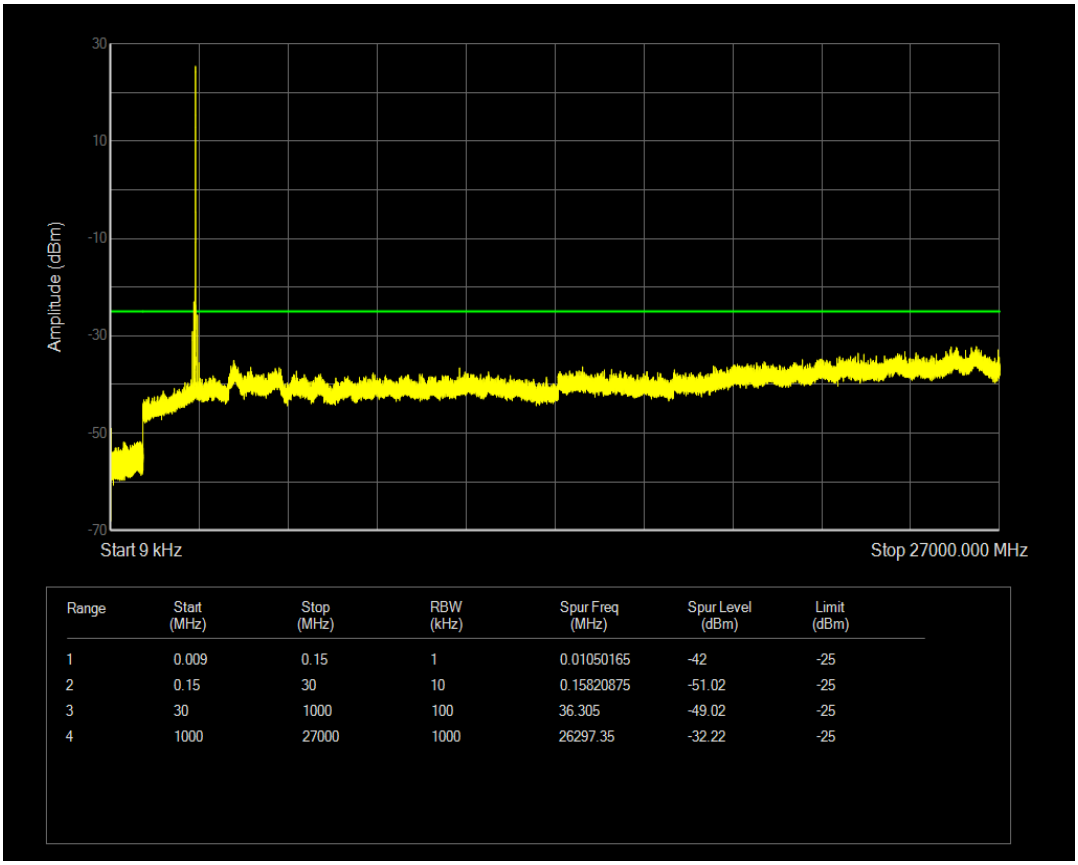
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009927075	-39.14	-25
2	0.15	30	10	0.15	-51.13	-25
3	30	1000	100	903	-51.1	-25
4	1000	27000	1000	26351.95	-32.63	-25

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



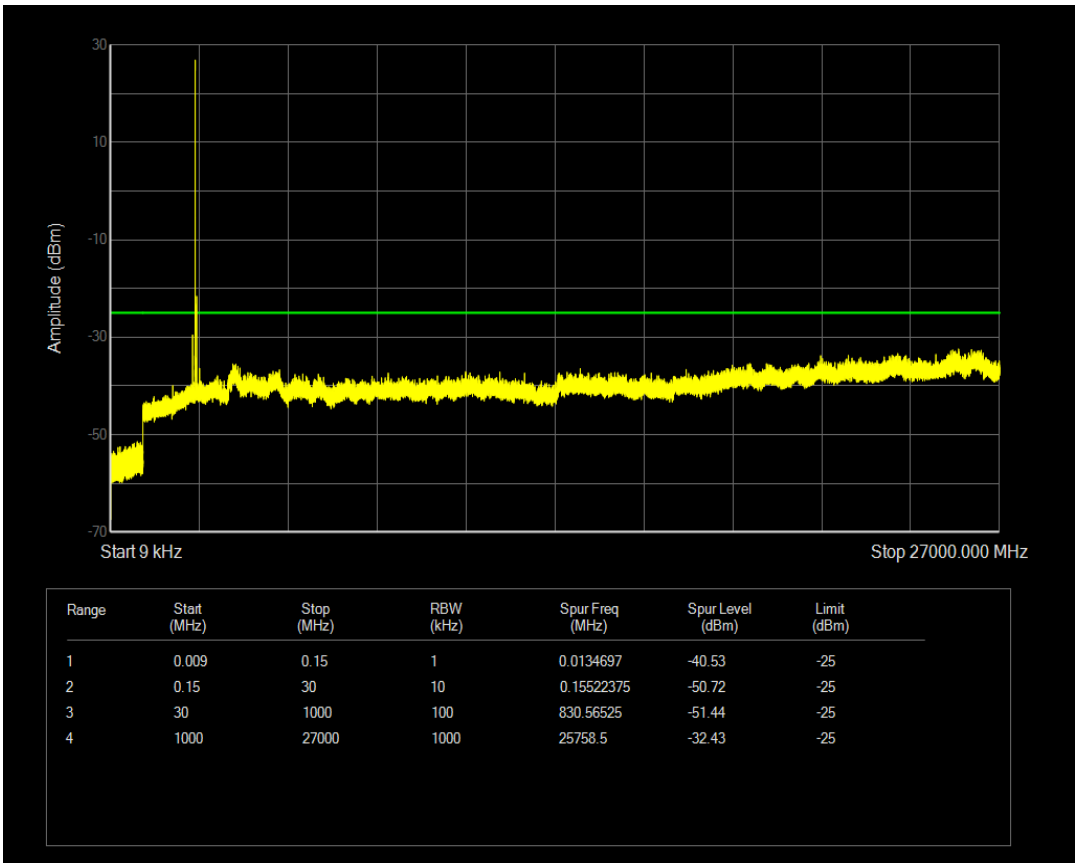
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01019145	-40.9	-25
2	0.15	30	10	0.15522375	-51.33	-25
3	30	1000	100	841.62325	-51.64	-25
4	1000	27000	1000	26345.45	-31.57	-25

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



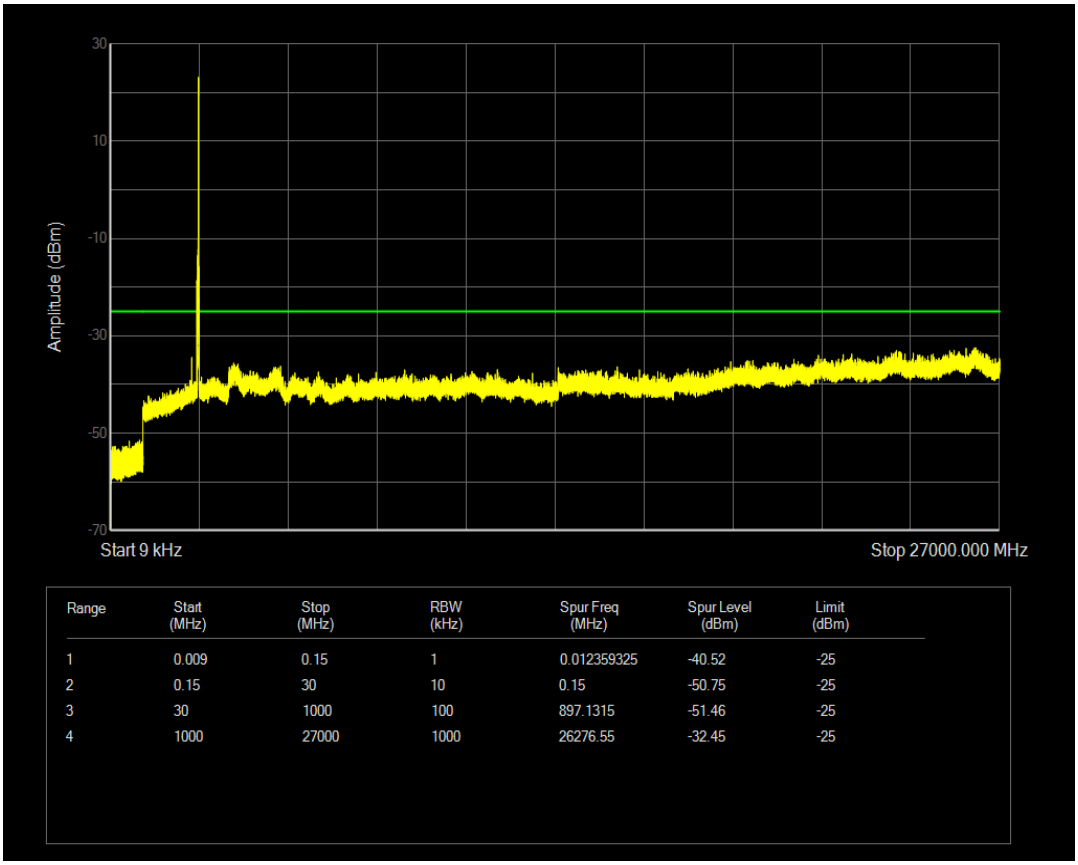
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01050165	-42	-25
2	0.15	30	10	0.15820875	-51.02	-25
3	30	1000	100	36.305	-49.02	-25
4	1000	27000	1000	26297.35	-32.22	-25

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



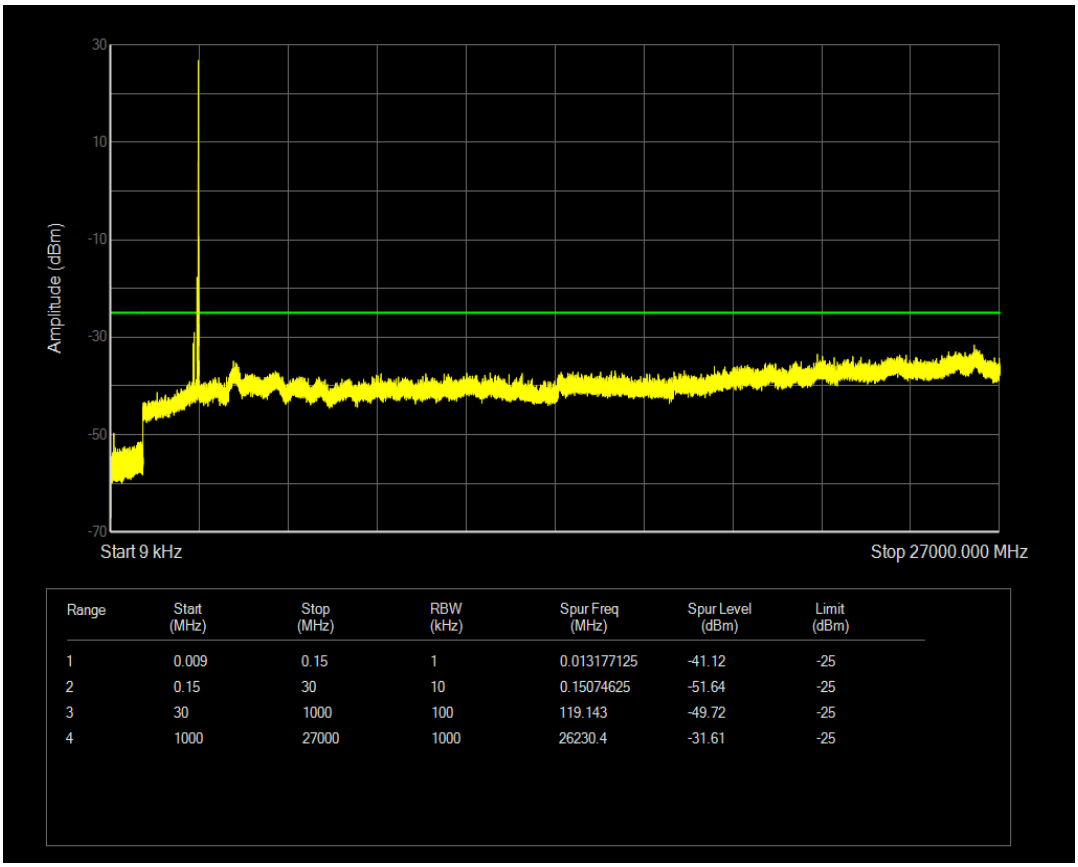
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0134697	-40.53	-25
2	0.15	30	10	0.15522375	-50.72	-25
3	30	1000	100	830.56525	-51.44	-25
4	1000	27000	1000	25758.5	-32.43	-25

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



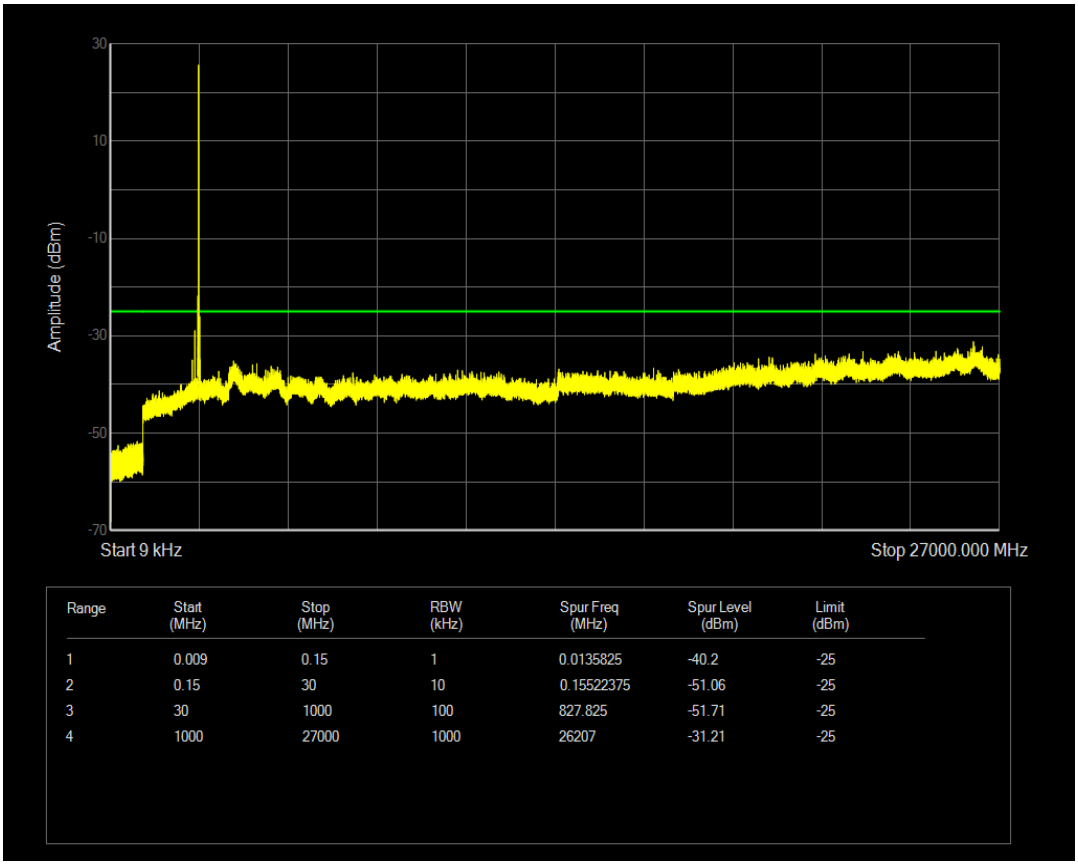
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012359325	-40.52	-25
2	0.15	30	10	0.15	-50.75	-25
3	30	1000	100	897.1315	-51.46	-25
4	1000	27000	1000	26276.55	-32.45	-25

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



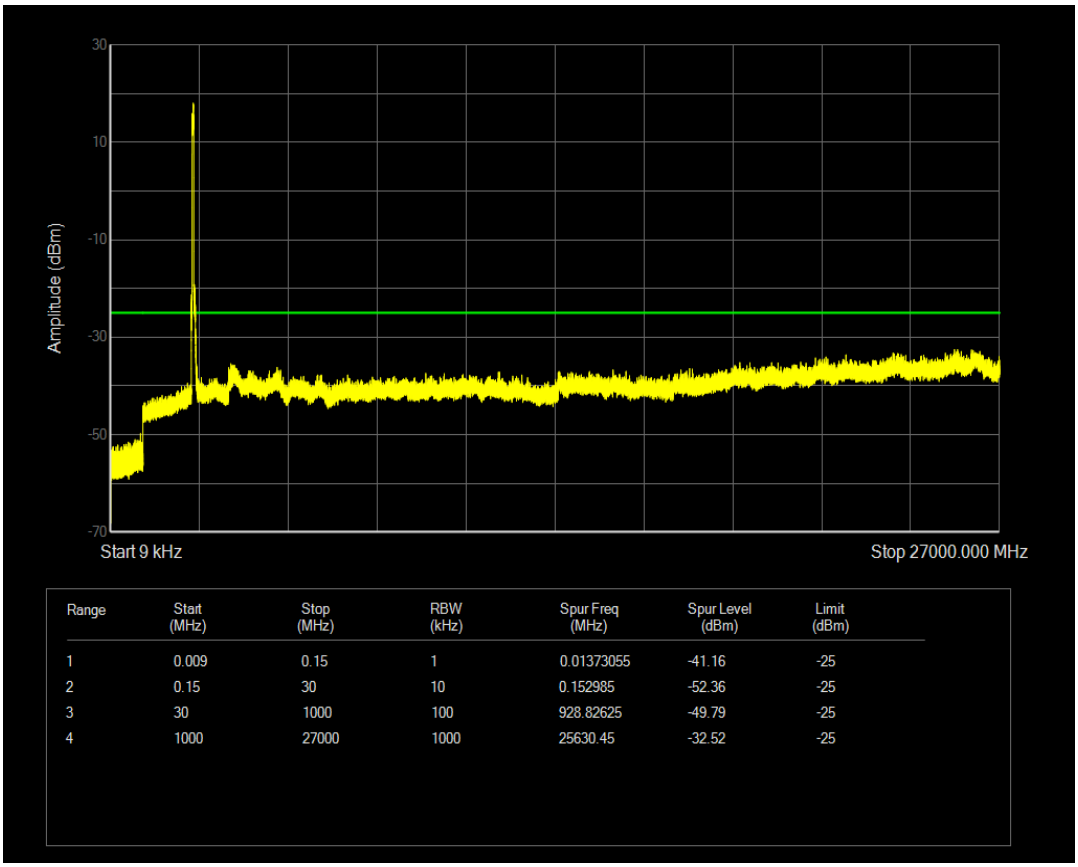
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013177125	-41.12	-25
2	0.15	30	10	0.15074625	-51.64	-25
3	30	1000	100	119.143	-49.72	-25
4	1000	27000	1000	26230.4	-31.61	-25

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



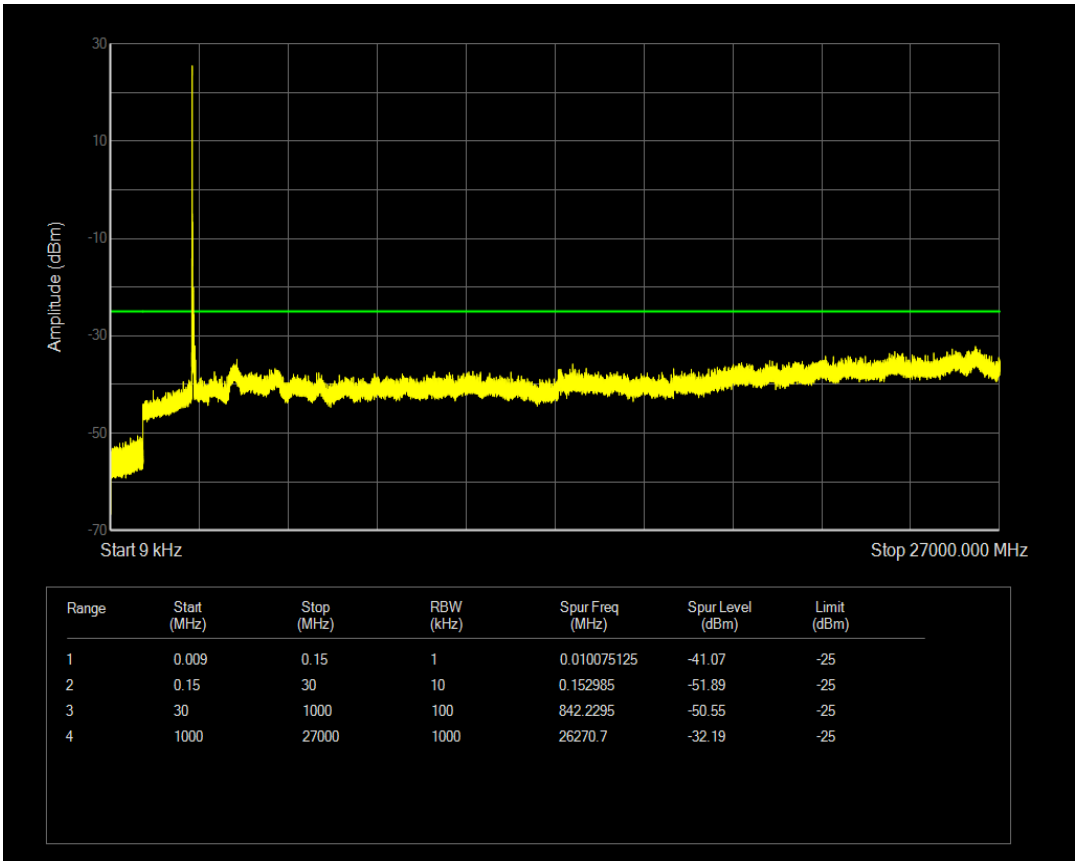
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0135825	-40.2	-25
2	0.15	30	10	0.15522375	-51.06	-25
3	30	1000	100	827.825	-51.71	-25
4	1000	27000	1000	26207	-31.21	-25

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



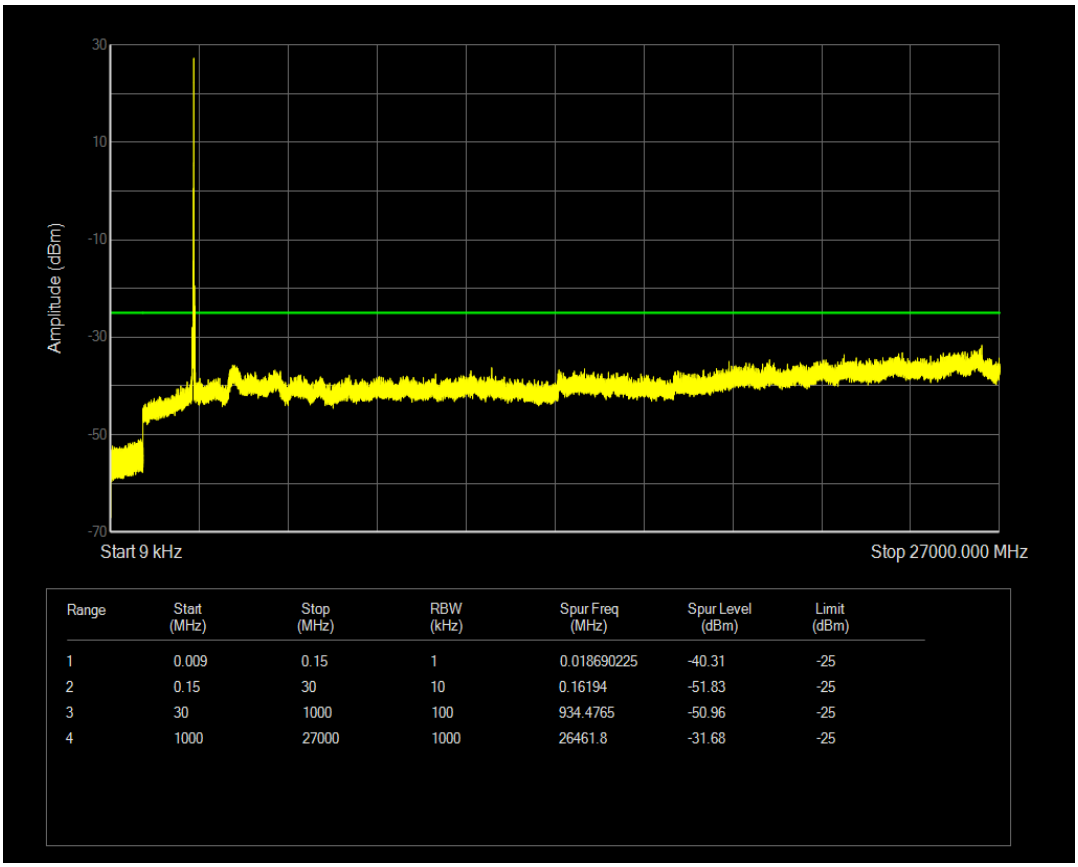
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01373055	-41.16	-25
2	0.15	30	10	0.152985	-52.36	-25
3	30	1000	100	928.82625	-49.79	-25
4	1000	27000	1000	25630.45	-32.52	-25

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



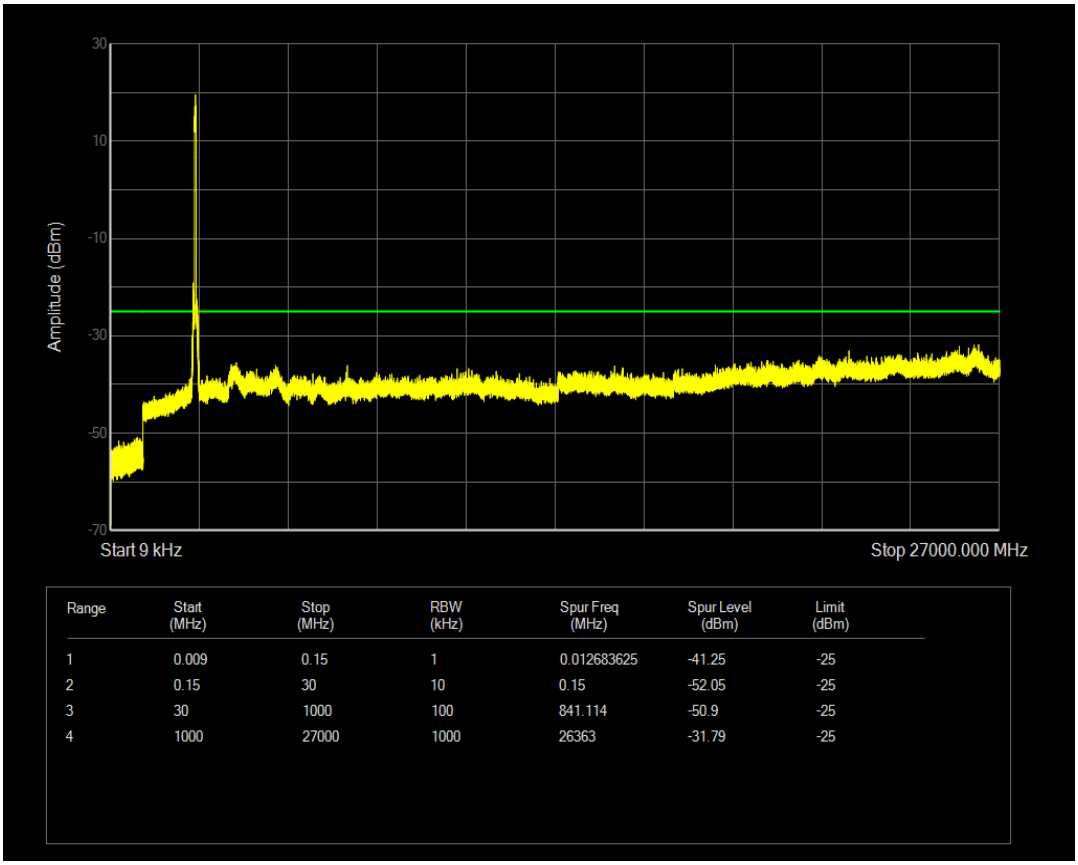
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010075125	-41.07	-25
2	0.15	30	10	0.152985	-51.89	-25
3	30	1000	100	842.2295	-50.55	-25
4	1000	27000	1000	26270.7	-32.19	-25

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



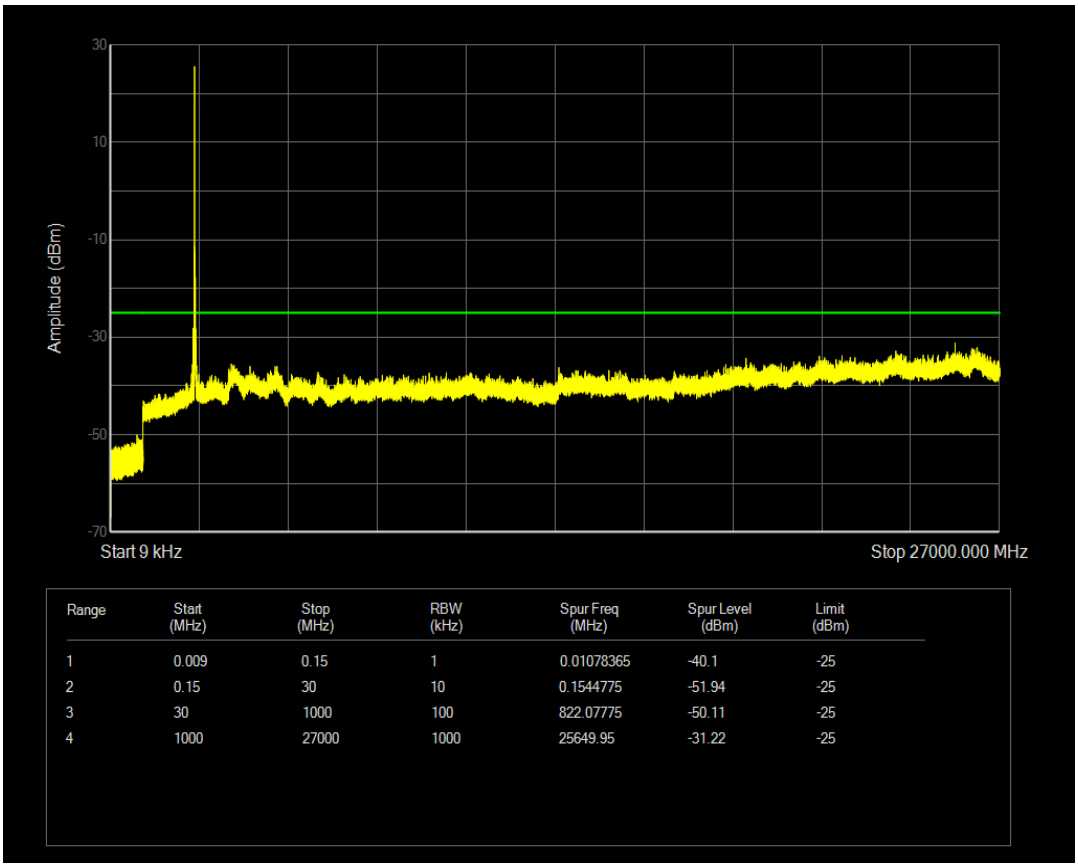
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.018690225	-40.31	-25
2	0.15	30	10	0.16194	-51.83	-25
3	30	1000	100	934.4765	-50.96	-25
4	1000	27000	1000	26461.8	-31.68	-25

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



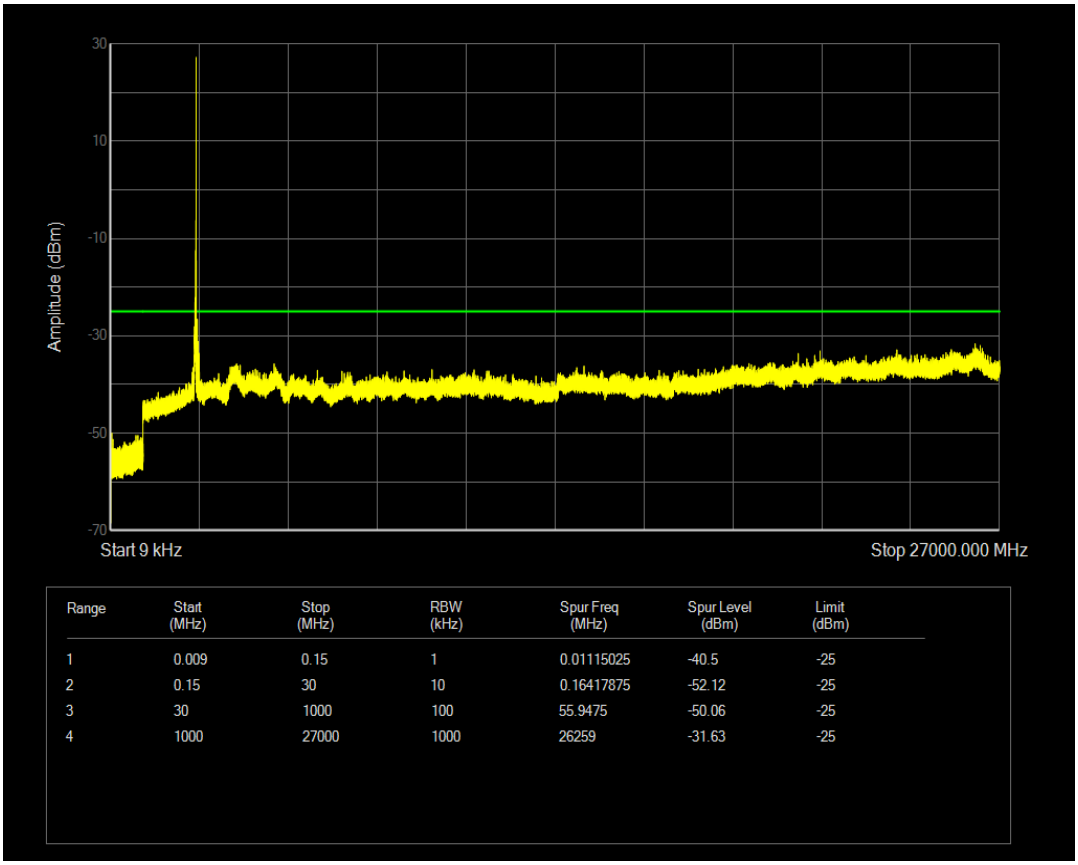
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012683625	-41.25	-25
2	0.15	30	10	0.15	-52.05	-25
3	30	1000	100	841.114	-50.9	-25
4	1000	27000	1000	26363	-31.79	-25

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



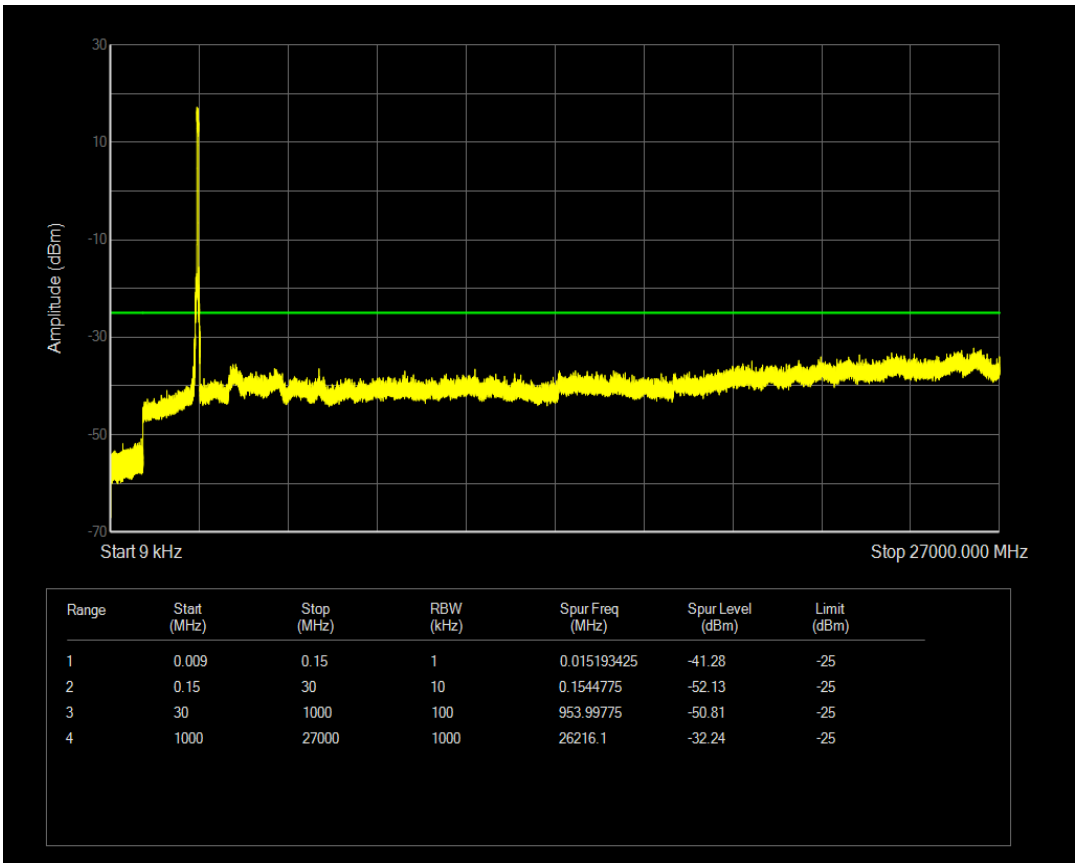
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01078365	-40.1	-25
2	0.15	30	10	0.1544775	-51.94	-25
3	30	1000	100	822.07775	-50.11	-25
4	1000	27000	1000	25649.95	-31.22	-25

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



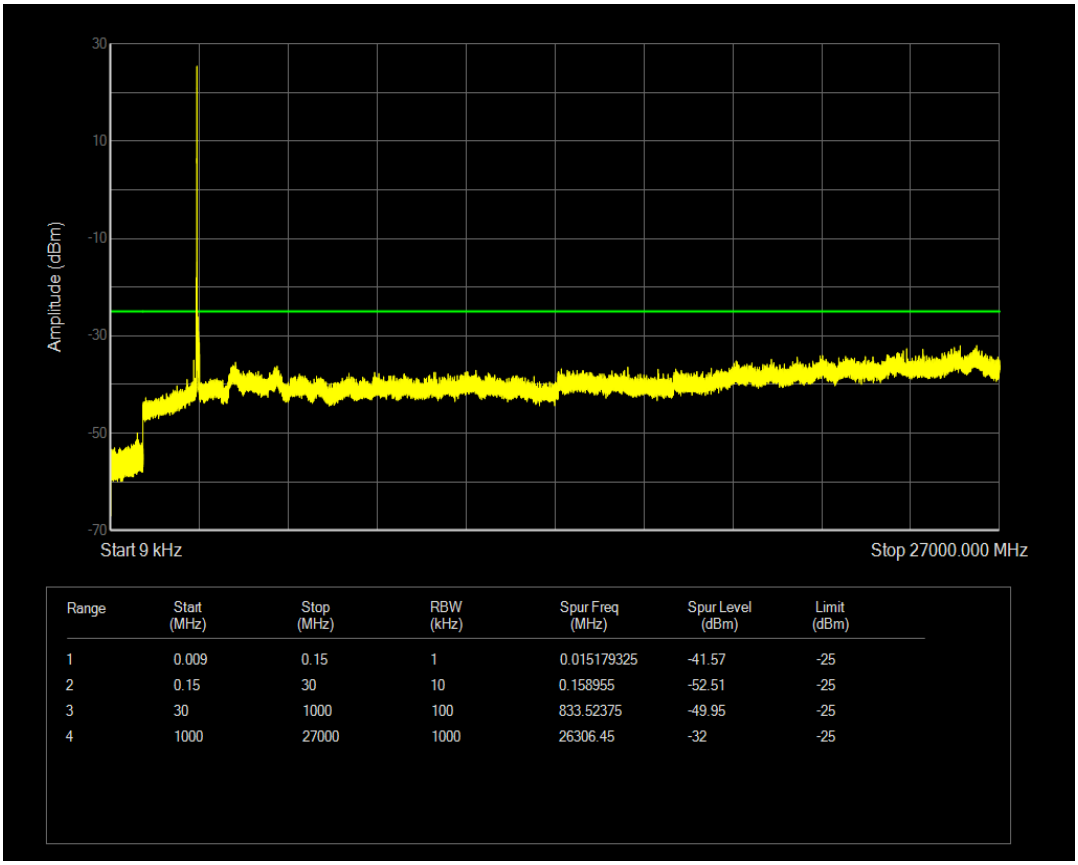
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01115025	-40.5	-25
2	0.15	30	10	0.16417875	-52.12	-25
3	30	1000	100	55.9475	-50.06	-25
4	1000	27000	1000	26259	-31.63	-25

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



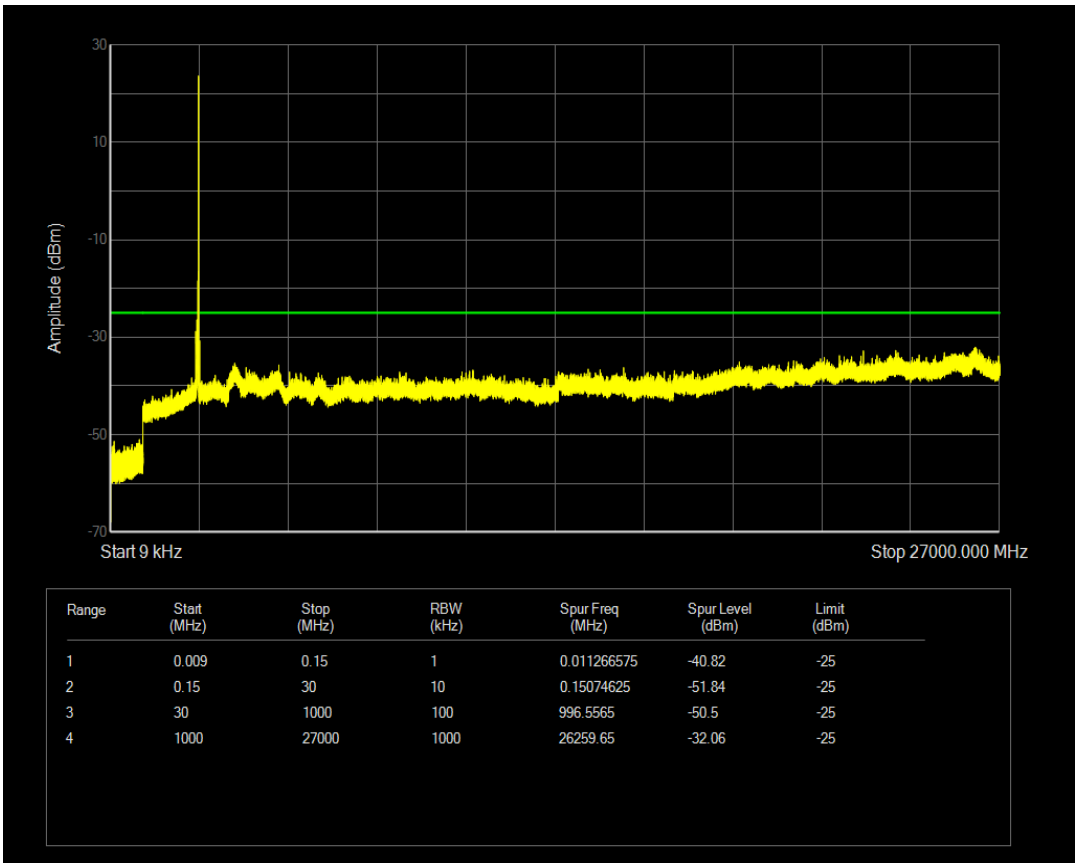
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015193425	-41.28	-25
2	0.15	30	10	0.1544775	-52.13	-25
3	30	1000	100	953.99775	-50.81	-25
4	1000	27000	1000	26216.1	-32.24	-25

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	0.015179325	-41.57	-25
2	0.15	30	10	0.158955	-52.51	-25
3	30	1000	100	833.52375	-49.95	-25
4	1000	27000	1000	26306.45	-32	-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	0.011266575	-40.82	-25
2	0.15	30	10	0.15074625	-51.84	-25
3	30	1000	100	996.5565	-50.5	-25
4	1000	27000	1000	26259.65	-32.06	-25