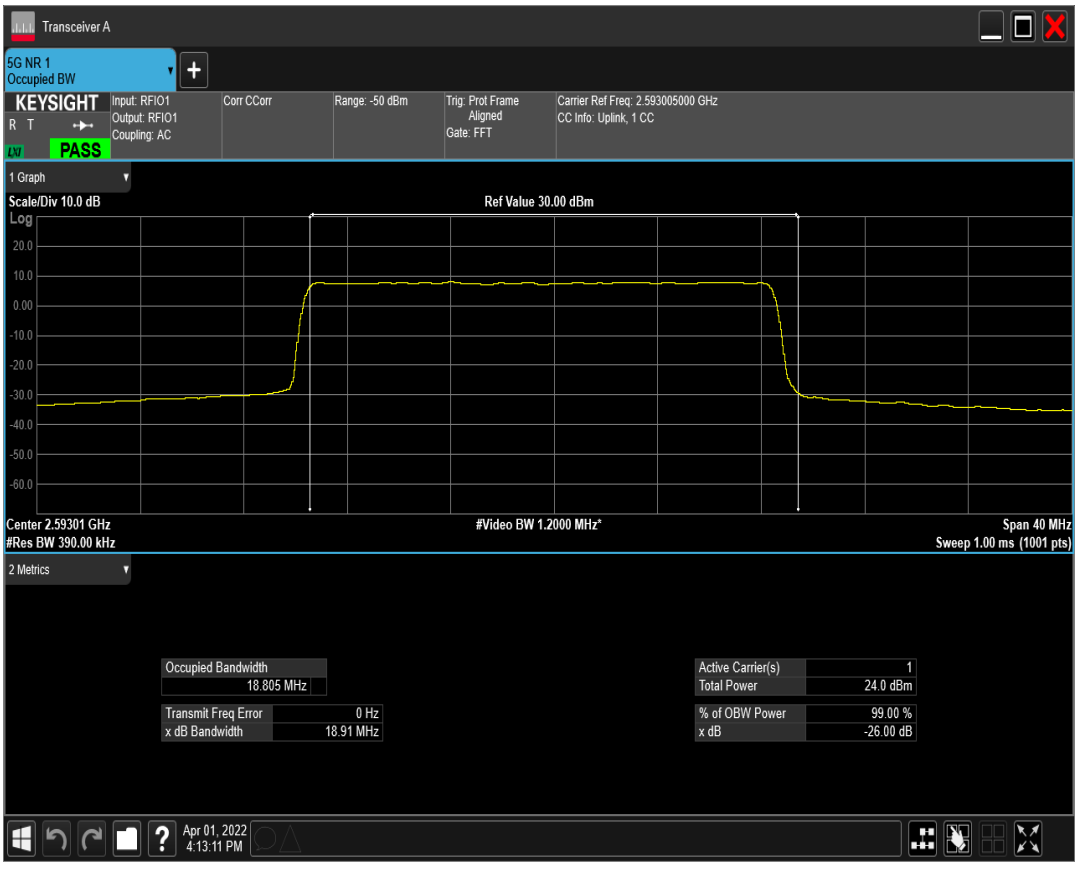
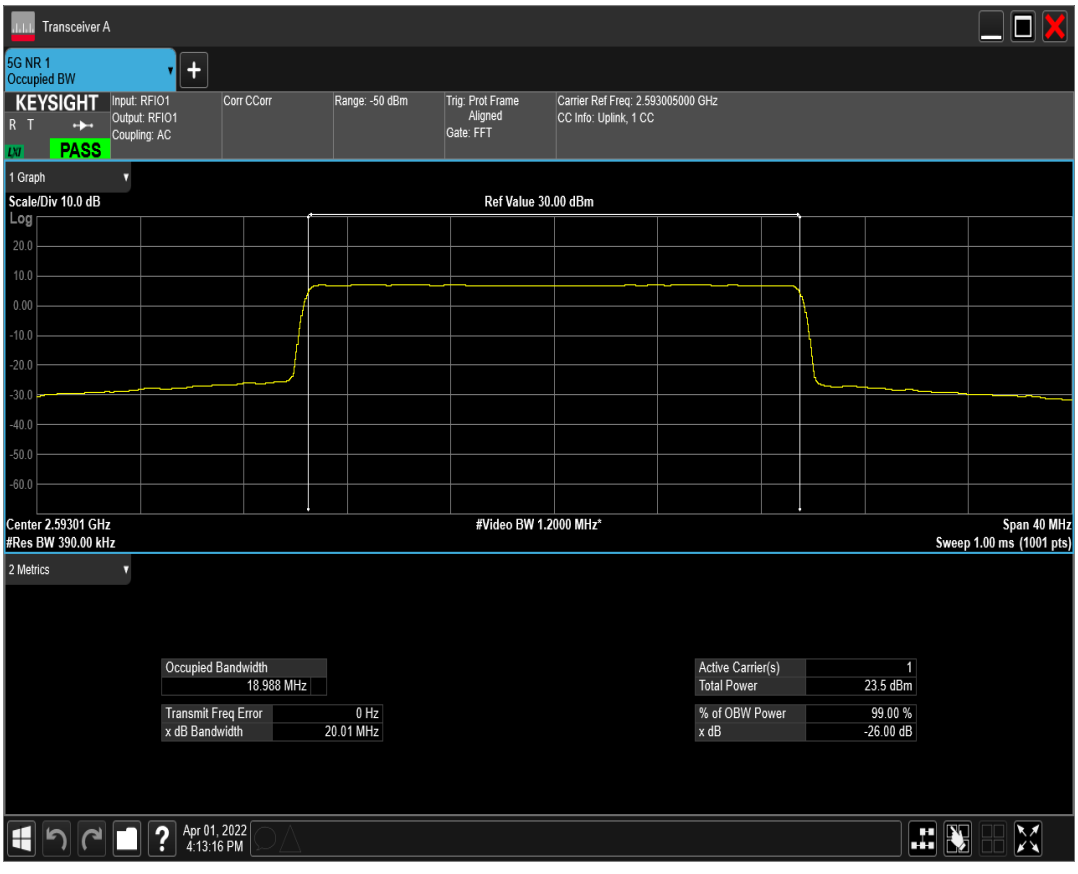
n41 SCS=15kHz DFT_QAM64 BW=20MHz Channel=518601 RB=100@0



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

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

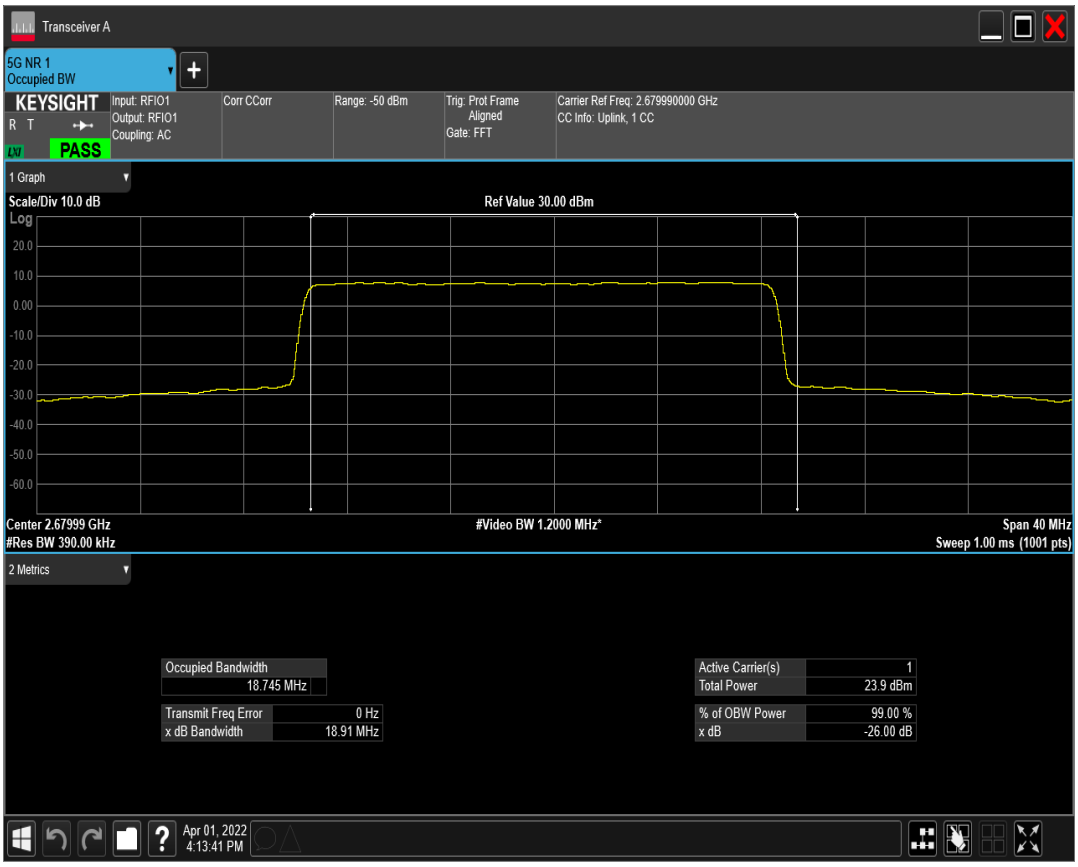


n41 SCS=15kHz DFT_BPSK BW=20MHz Channel=535998 RB=100@0

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

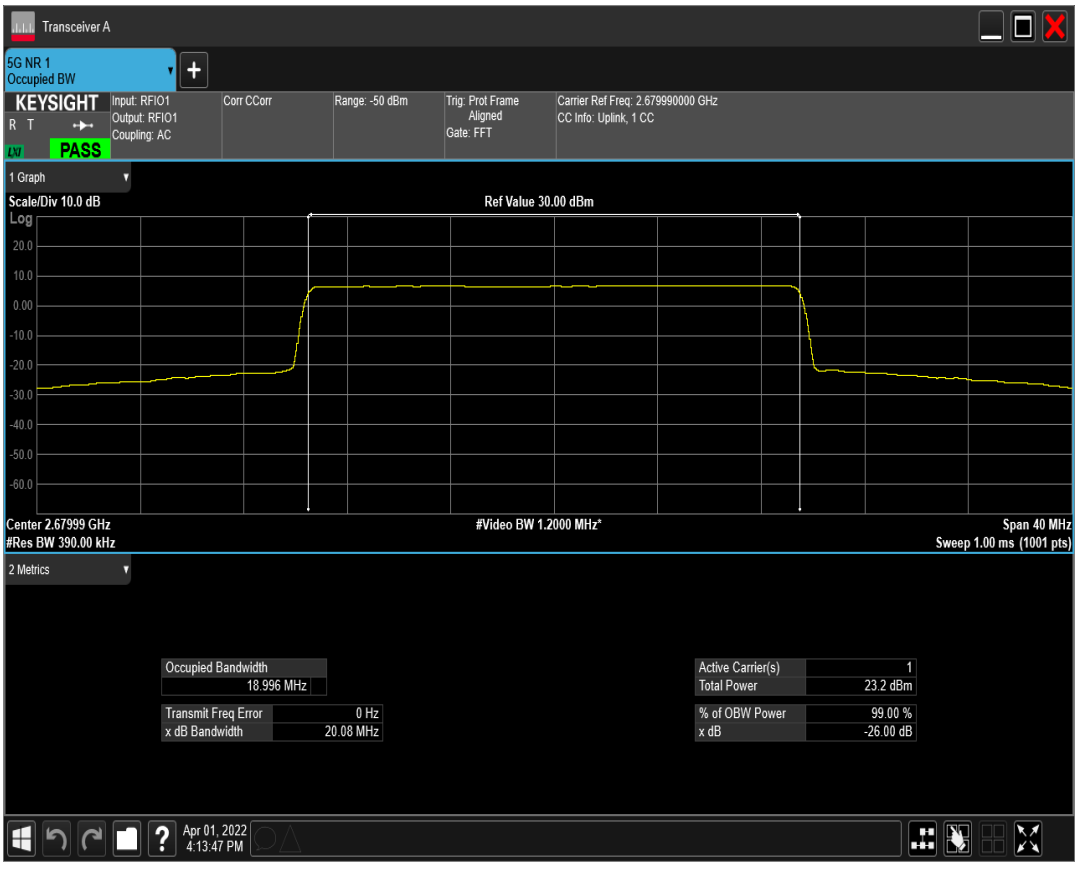
n41 SCS=15kHz DFT_QAM16 BW=20MHz Channel=535998 RB=100@0

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



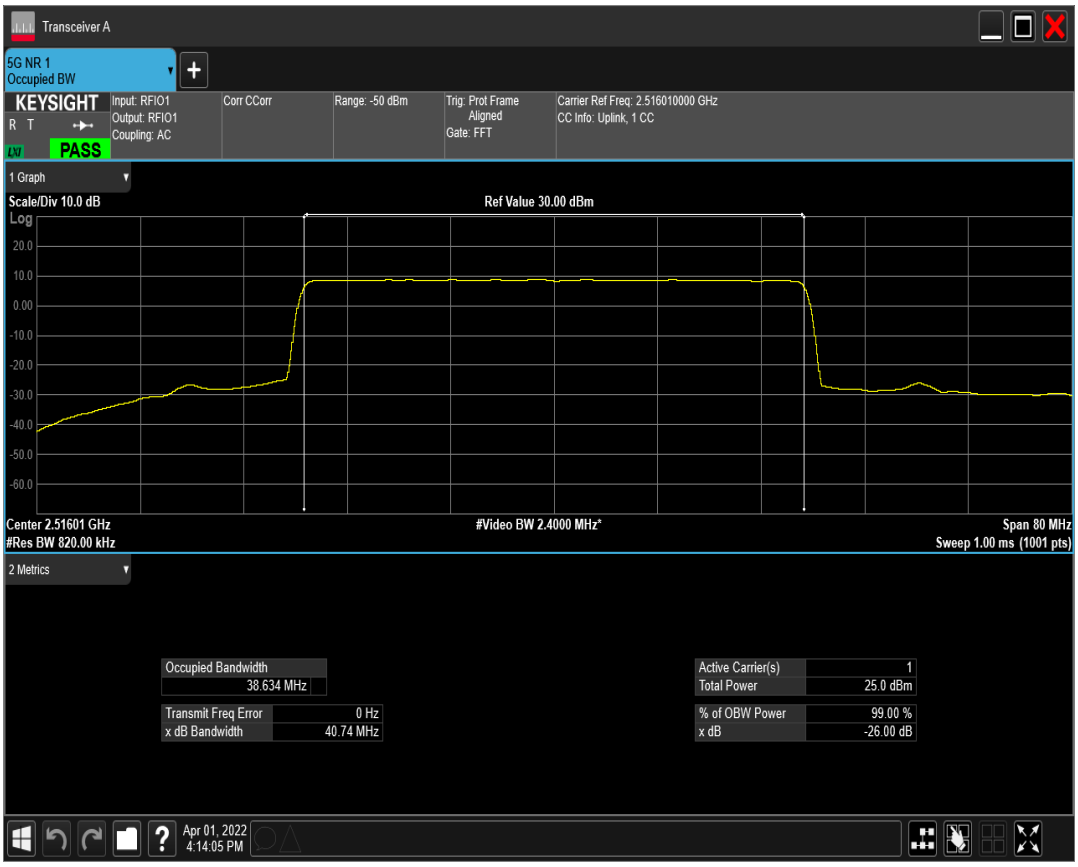
n41 SCS=15kHz DFT_QAM256 BW=20MHz Channel=535998 RB=100@0

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

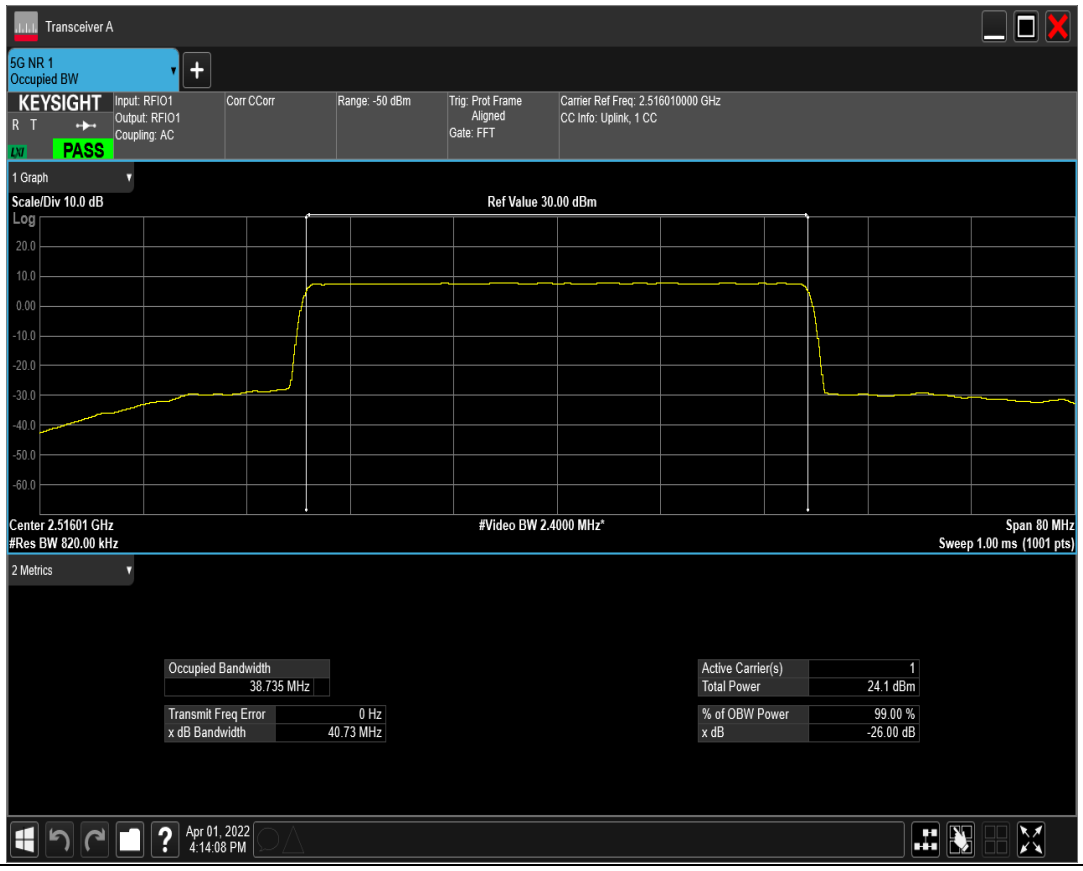


n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=503202 RB=216@0

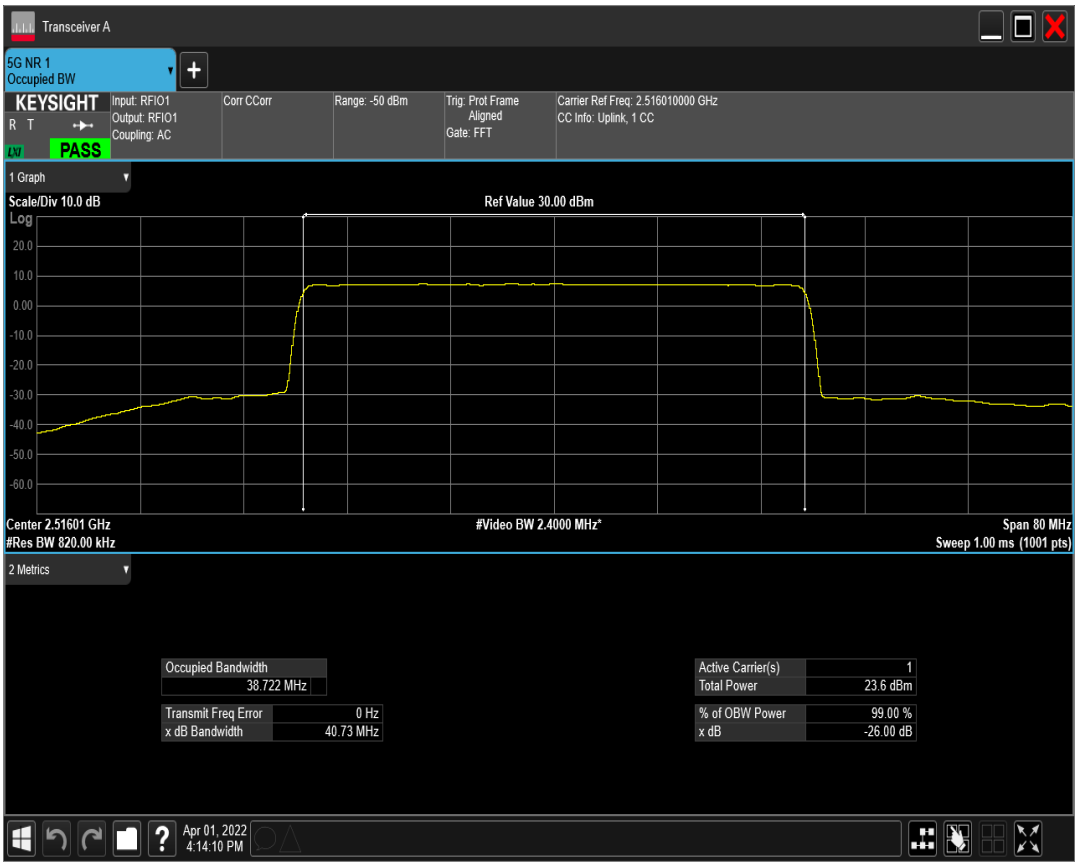
n41 SCS=15kHz DFT_QPSK BW=40MHz Channel=503202 RB=216@0



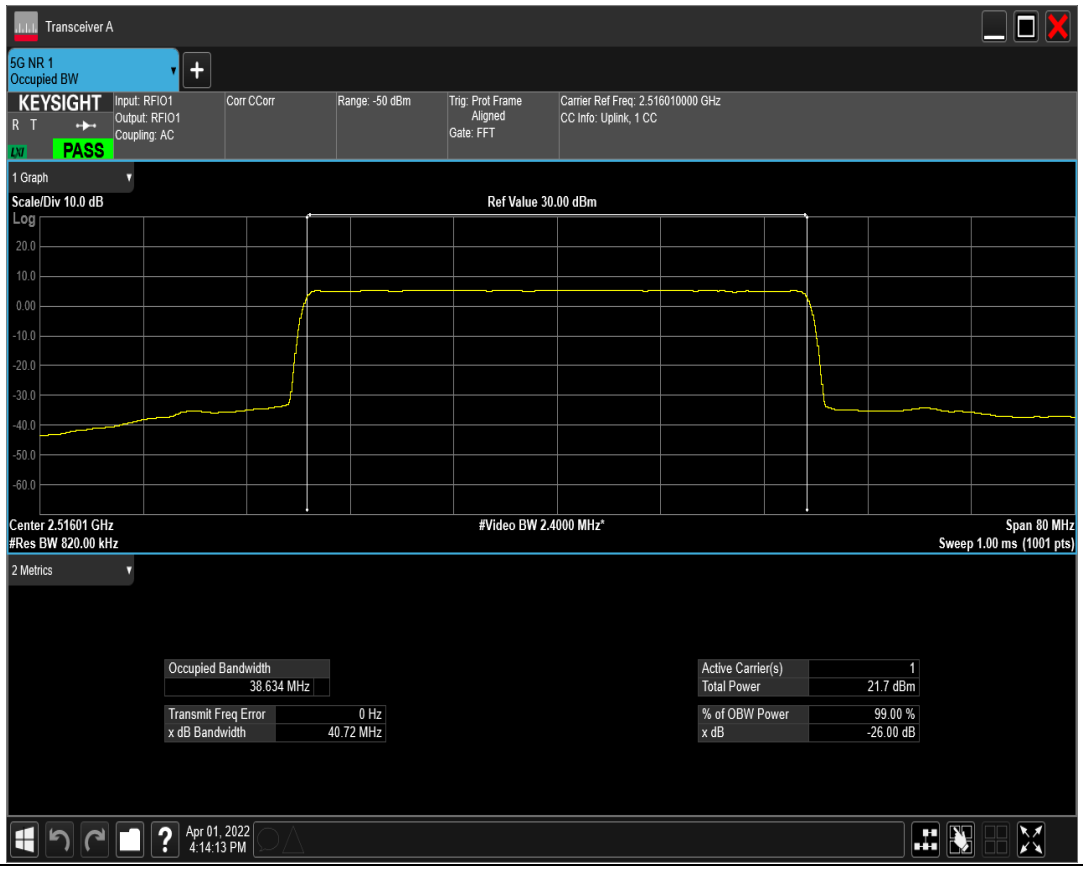
n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=503202 RB=216@0



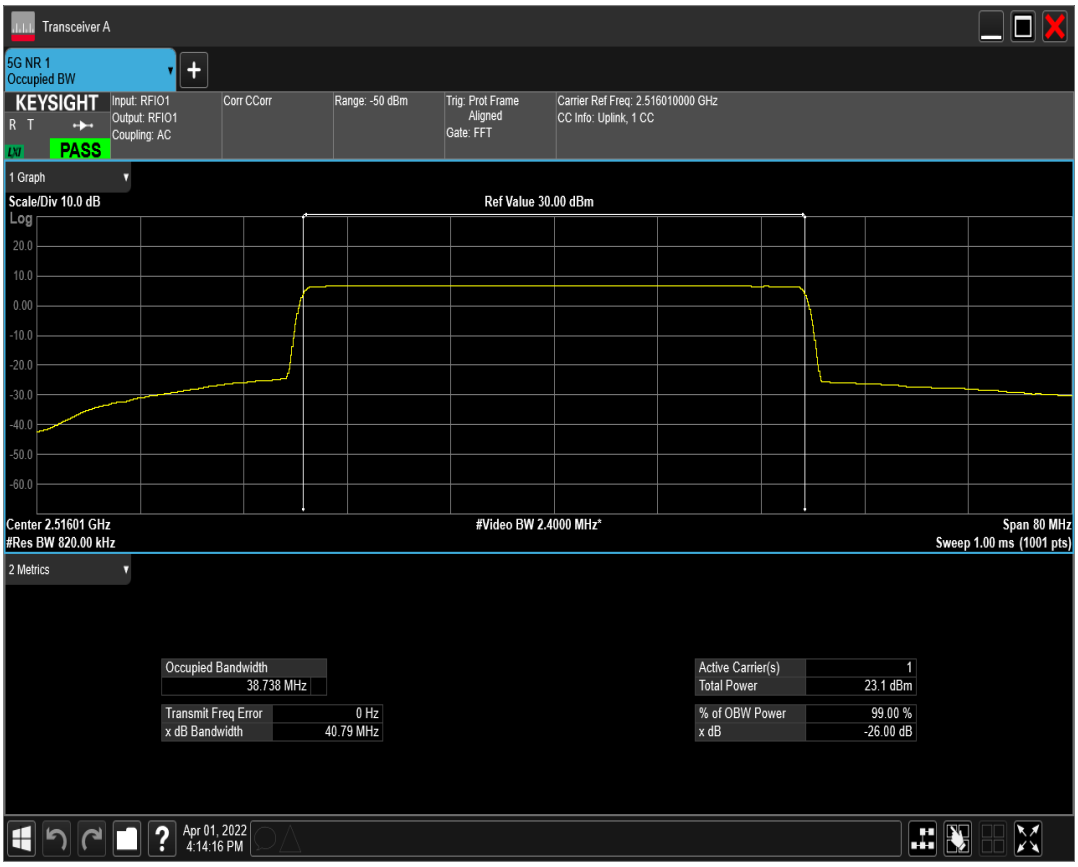
n41 SCS=15kHz DFT_QAM64 BW=40MHz Channel=503202 RB=216@0



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

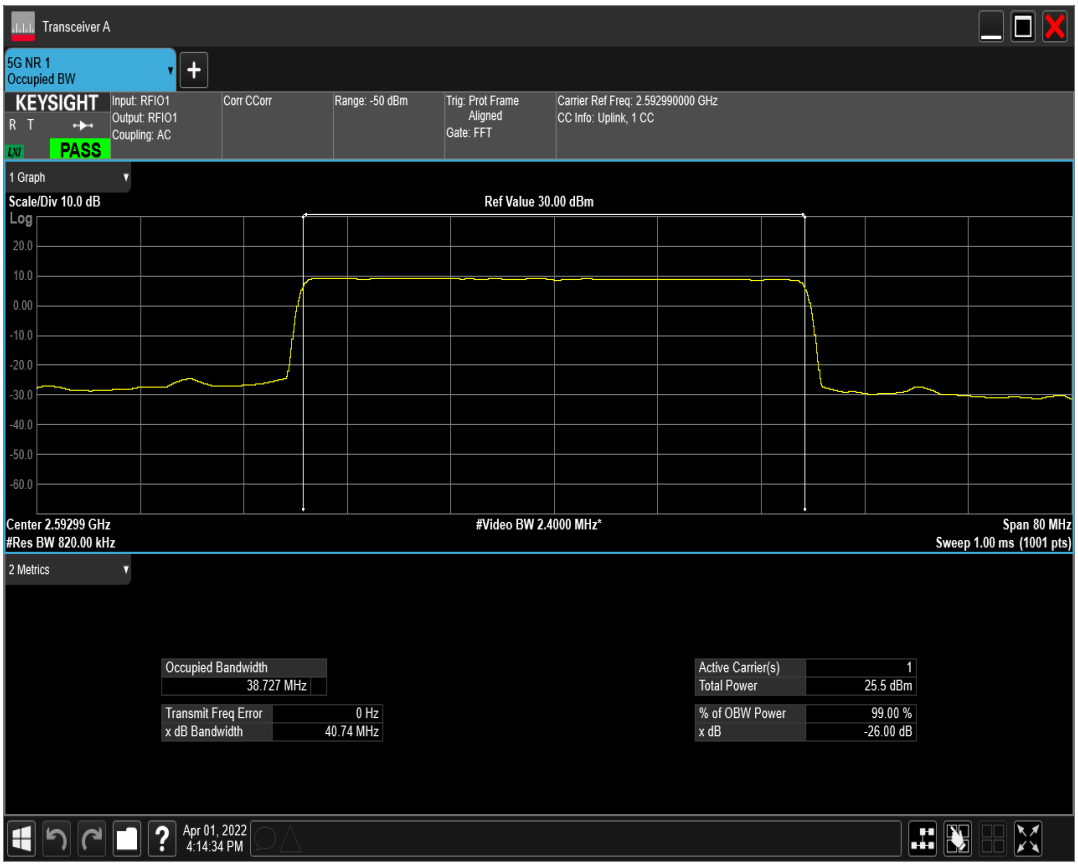


n41 SCS=15kHz CP_QPSK BW=40MHz Channel=503202 RB=216@0



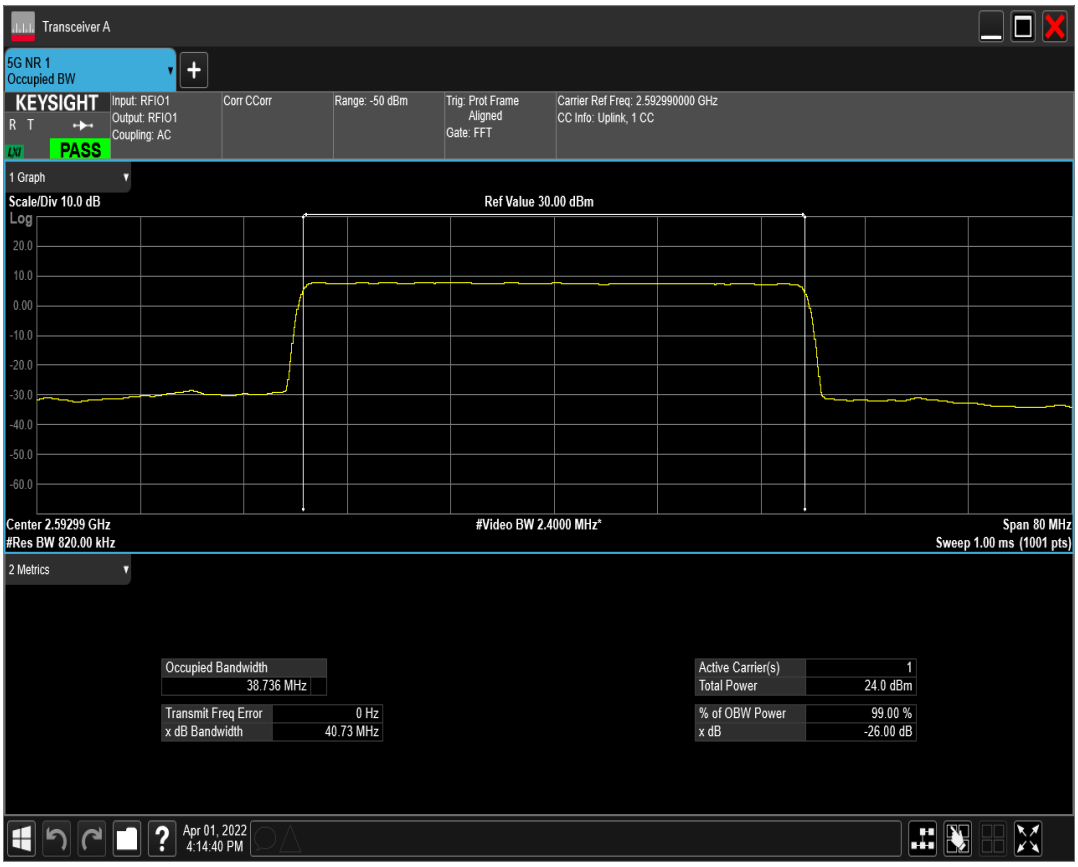
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=518598 RB=216@0

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

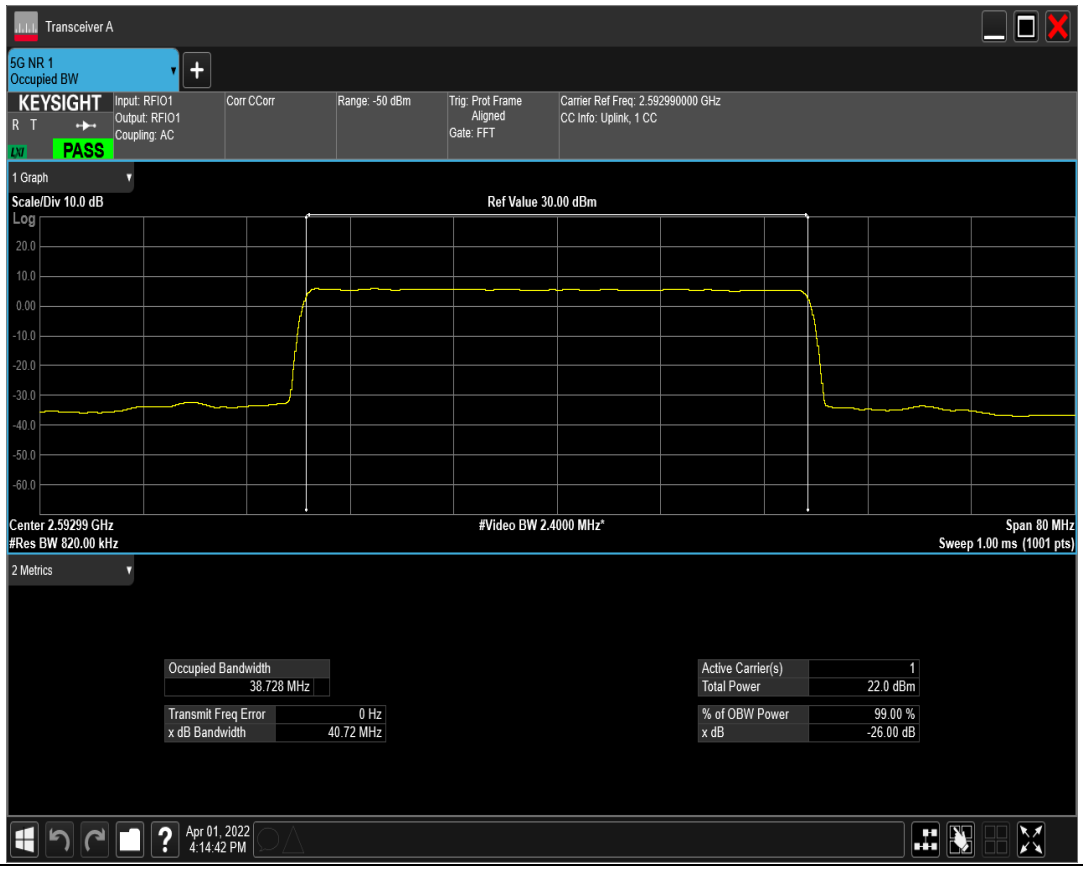


n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=518598 RB=216@0

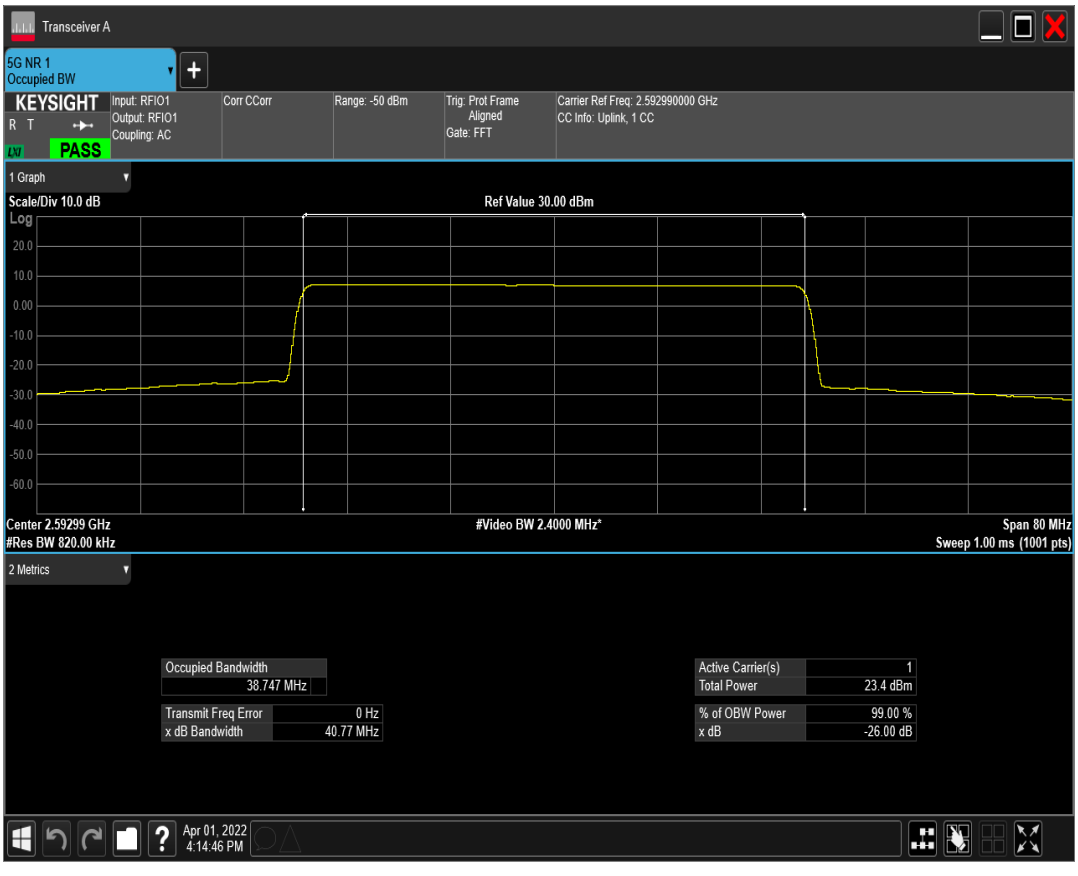
n41 SCS=15kHz DFT_QAM64 BW=40MHz Channel=518598 RB=216@0



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

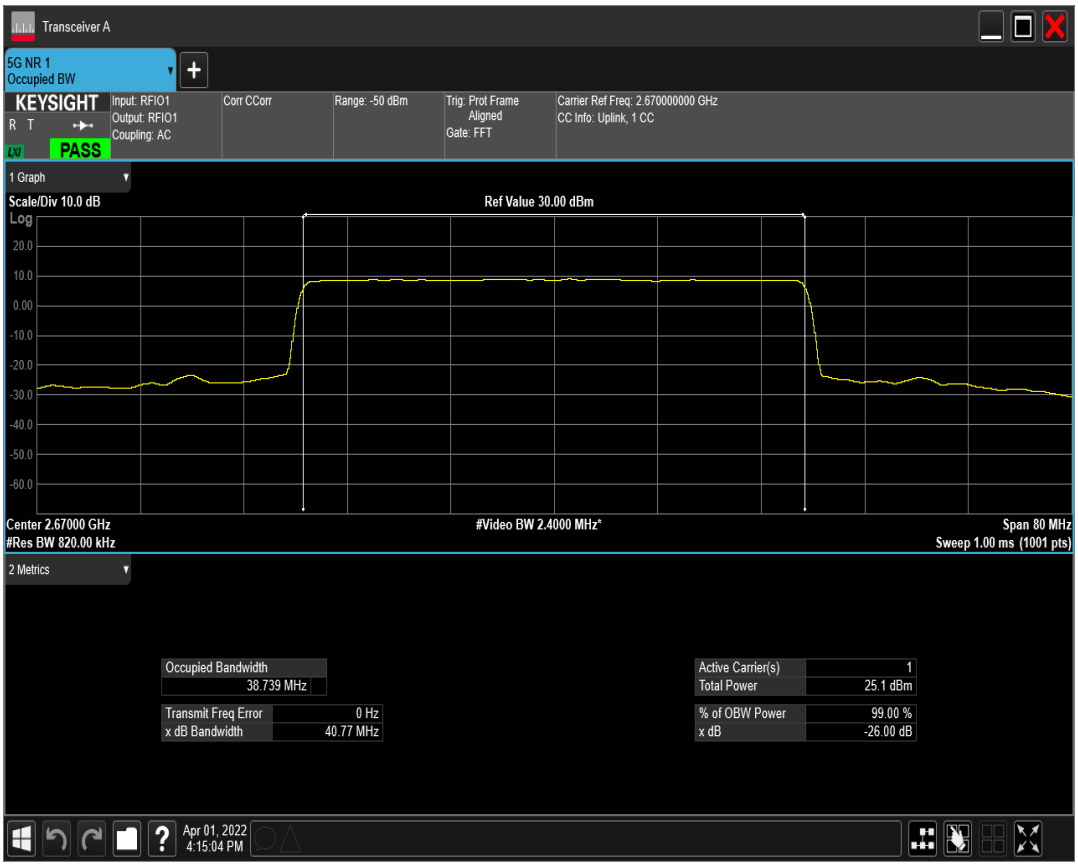


n41 SCS=15kHz CP_QPSK BW=40MHz Channel=518598 RB=216@0



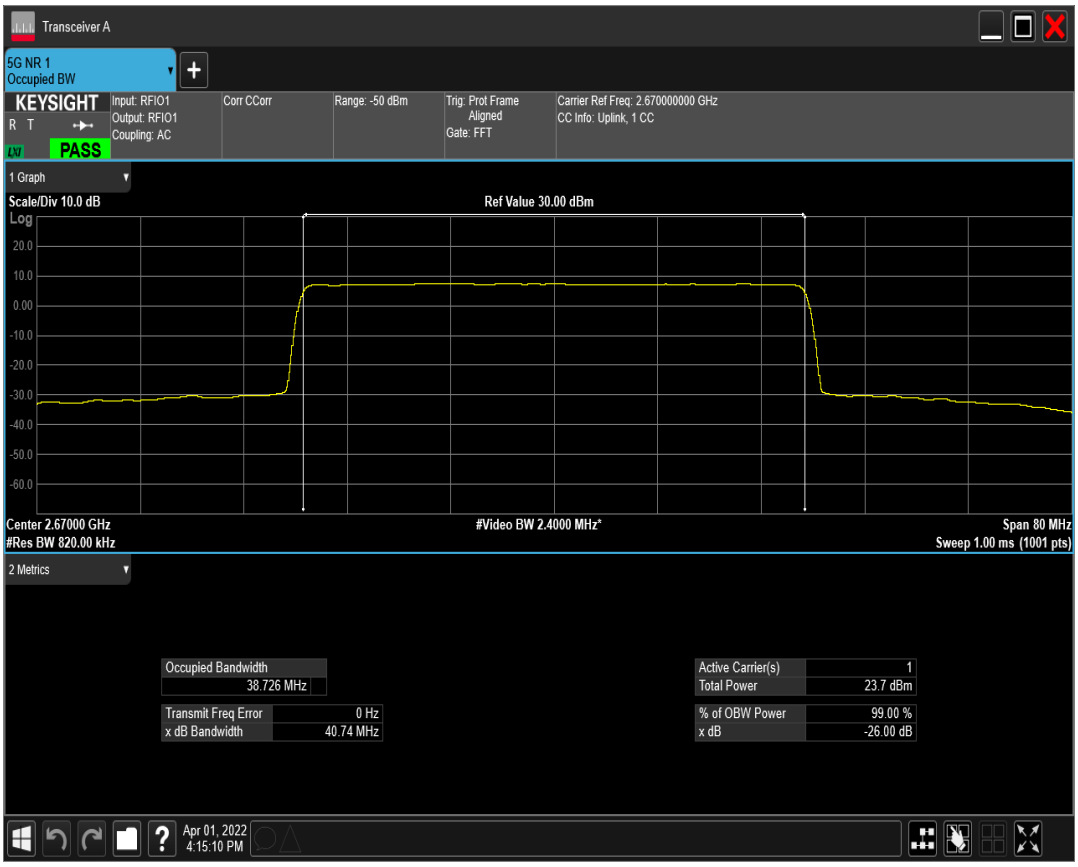
n41 SCS=15kHz DFT_BPSK BW=40MHz Channel=534000 RB=216@0

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



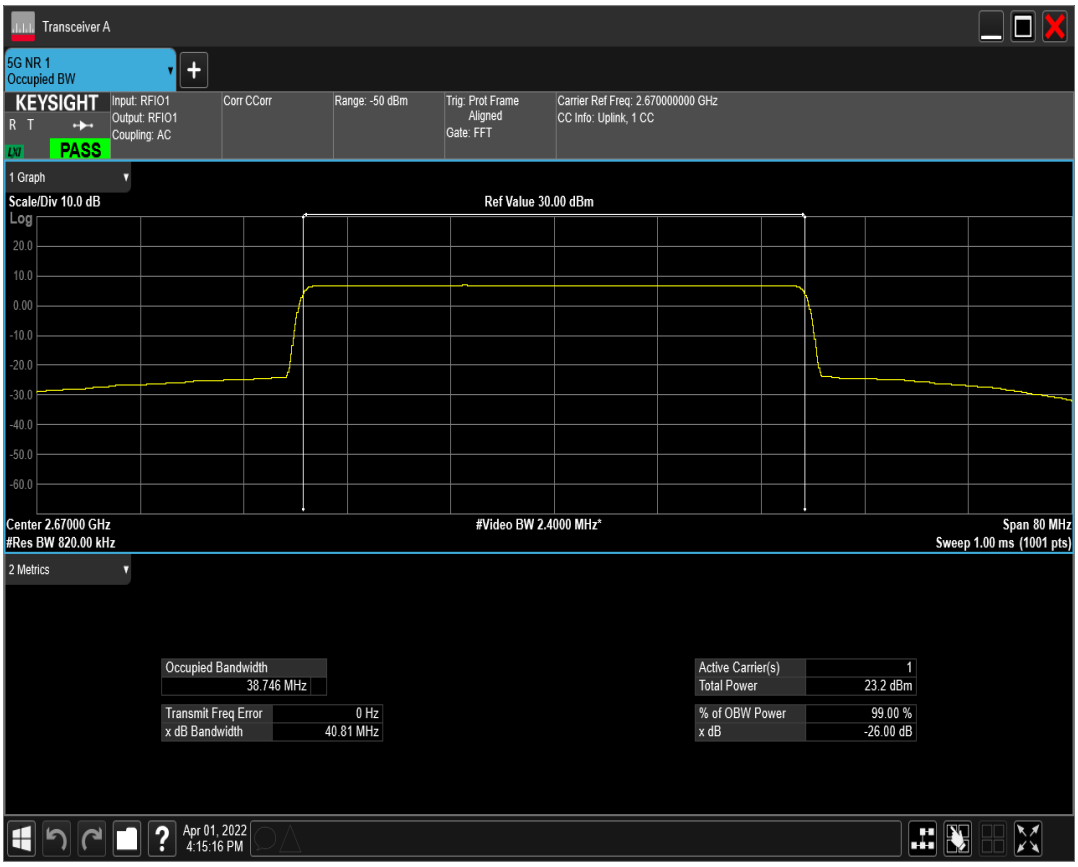
n41 SCS=15kHz DFT_QAM16 BW=40MHz Channel=534000 RB=216@0

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

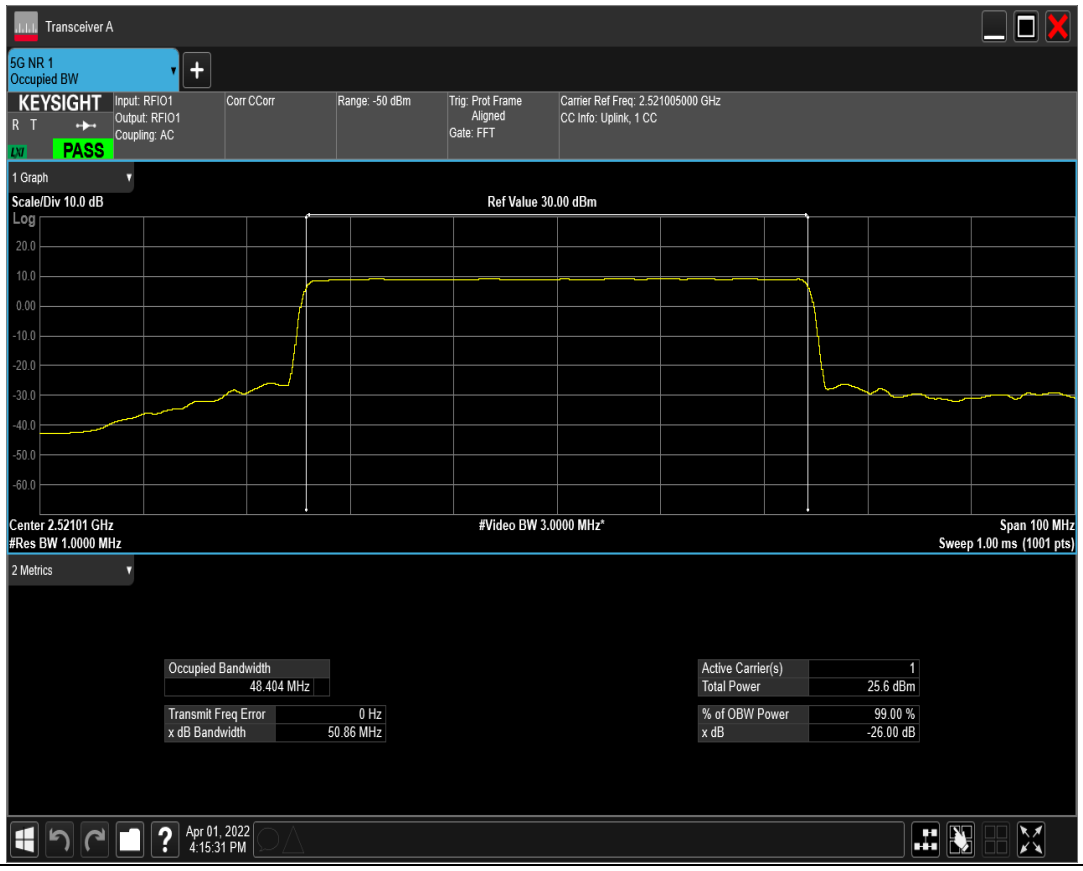


n41 SCS=15kHz DFT_QAM256 BW=40MHz Channel=534000 RB=216@0

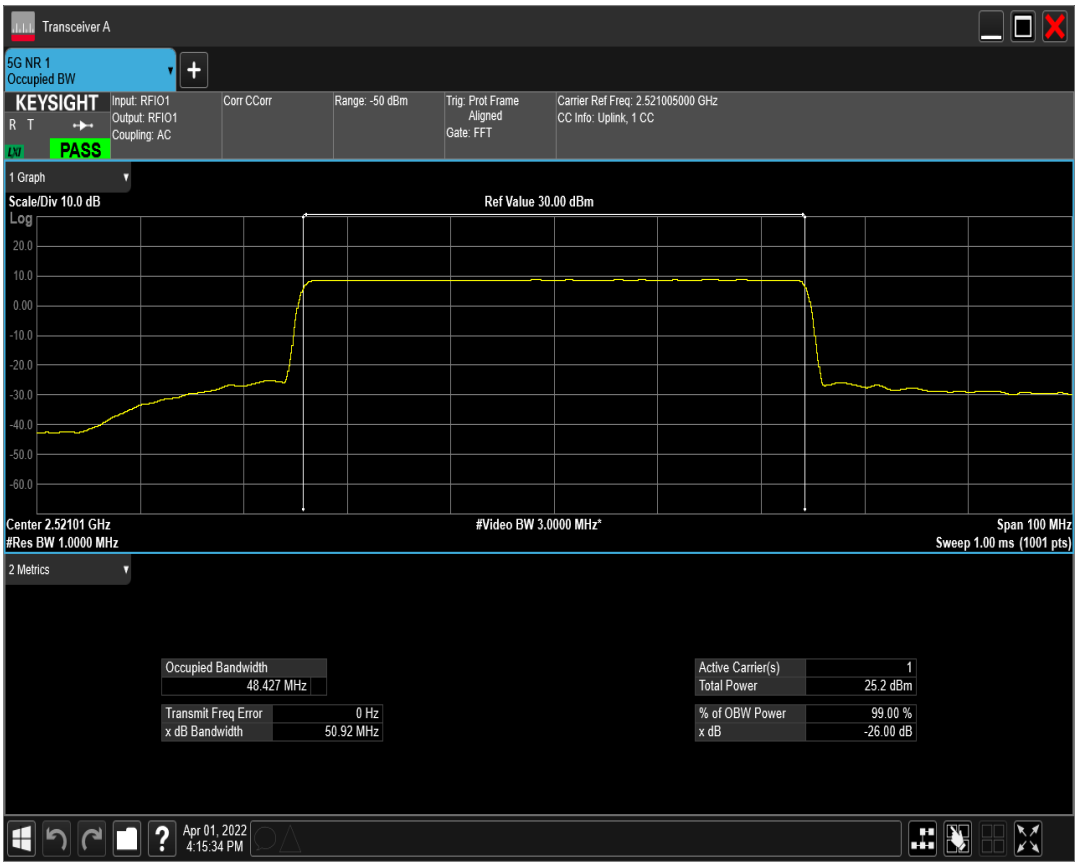
n41 SCS=15kHz CP_QPSK BW=40MHz Channel=534000 RB=216@0



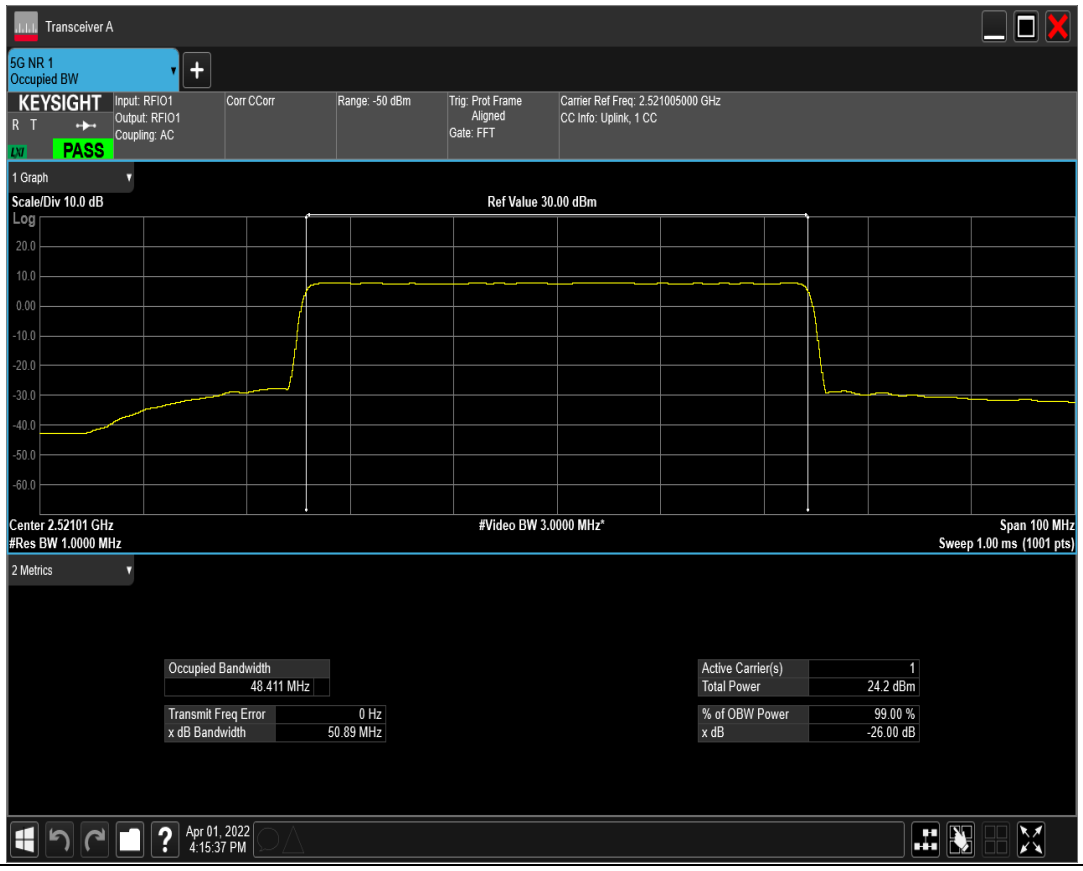
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=504201 RB=270@0



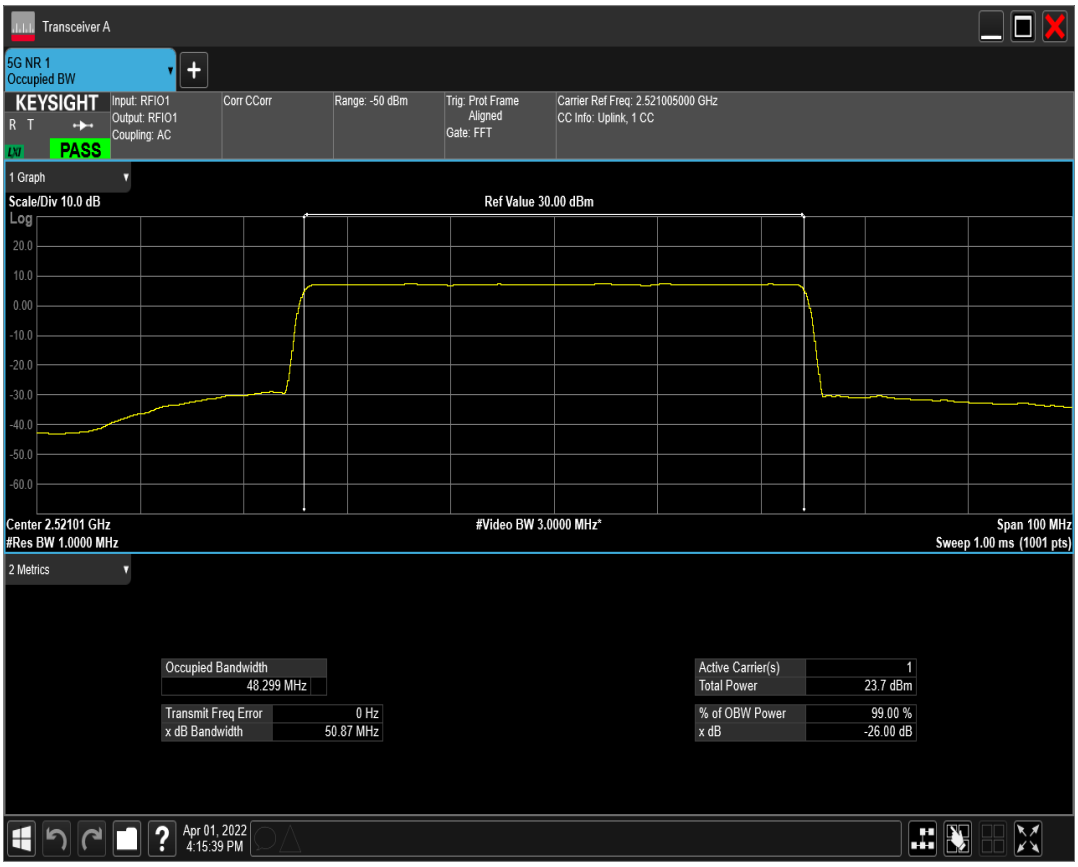
n41 SCS=15kHz DFT_QPSK BW=50MHz Channel=504201 RB=270@0



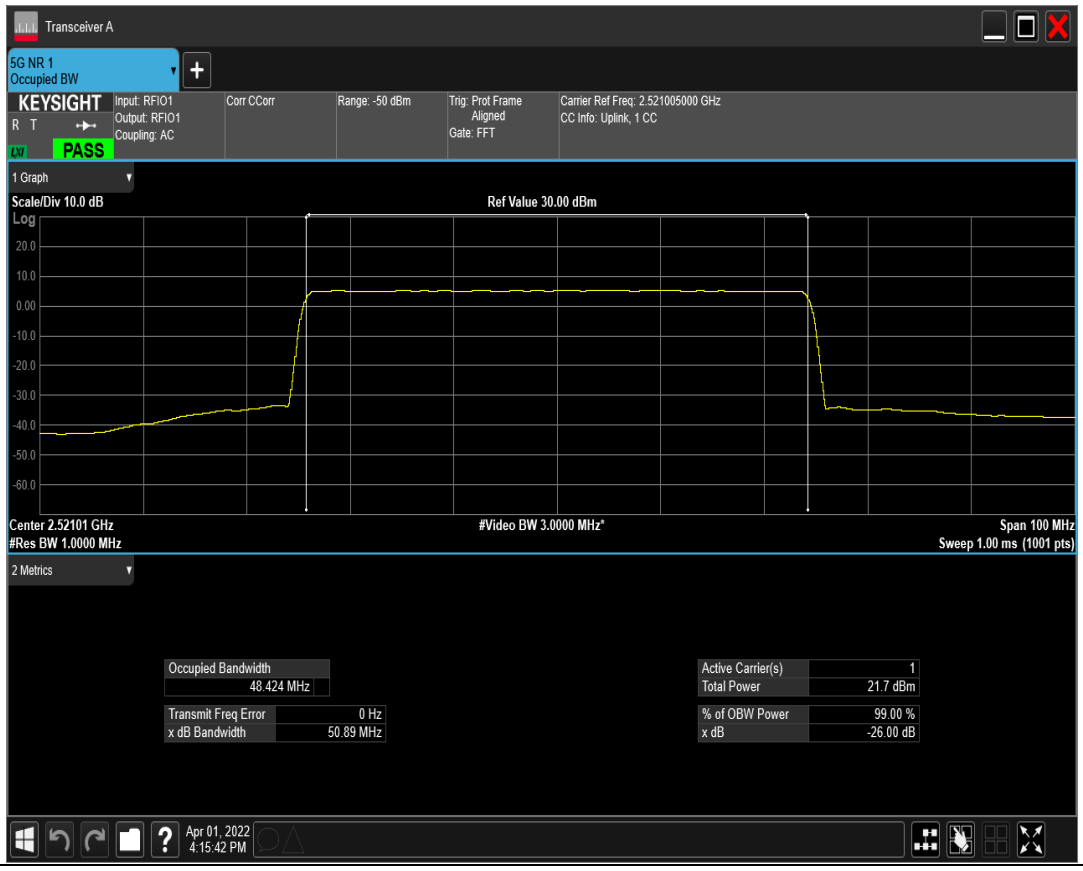
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=504201 RB=270@0



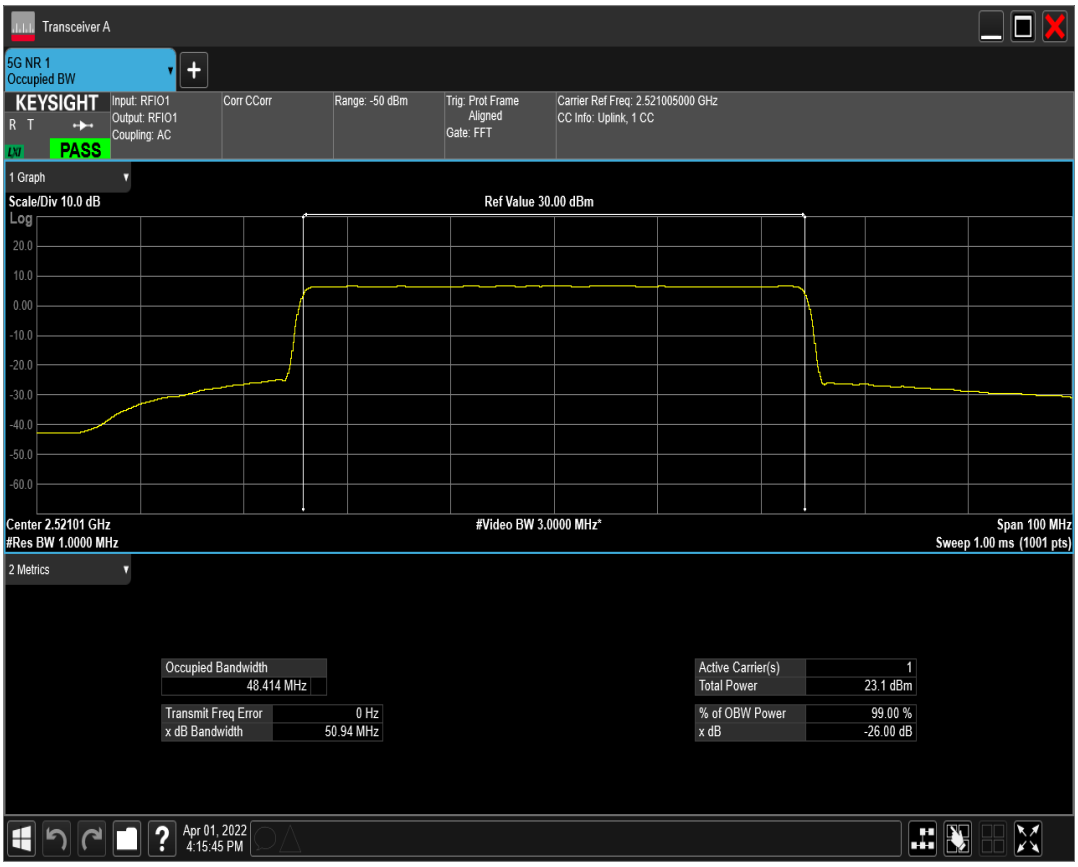
n41 SCS=15kHz DFT_QAM64 BW=50MHz Channel=504201 RB=270@0



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

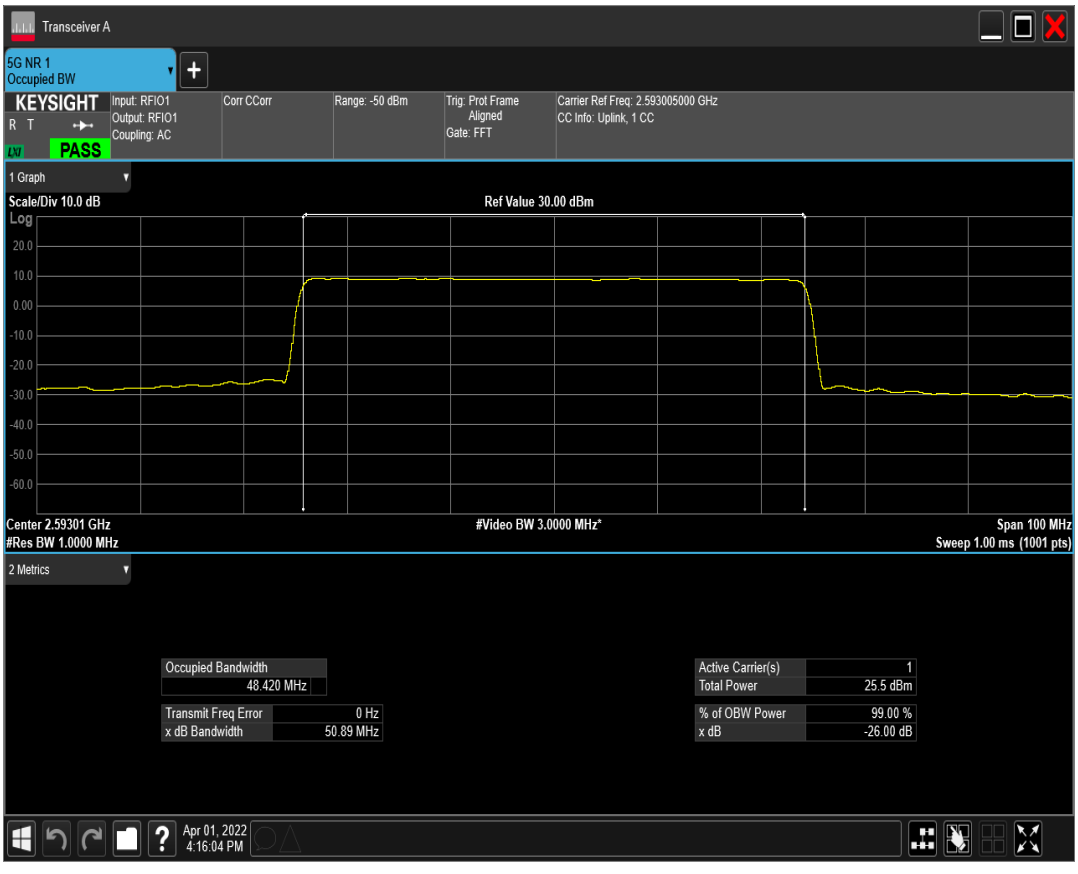


n41 SCS=15kHz CP_QPSK BW=50MHz Channel=504201 RB=270@0



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

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

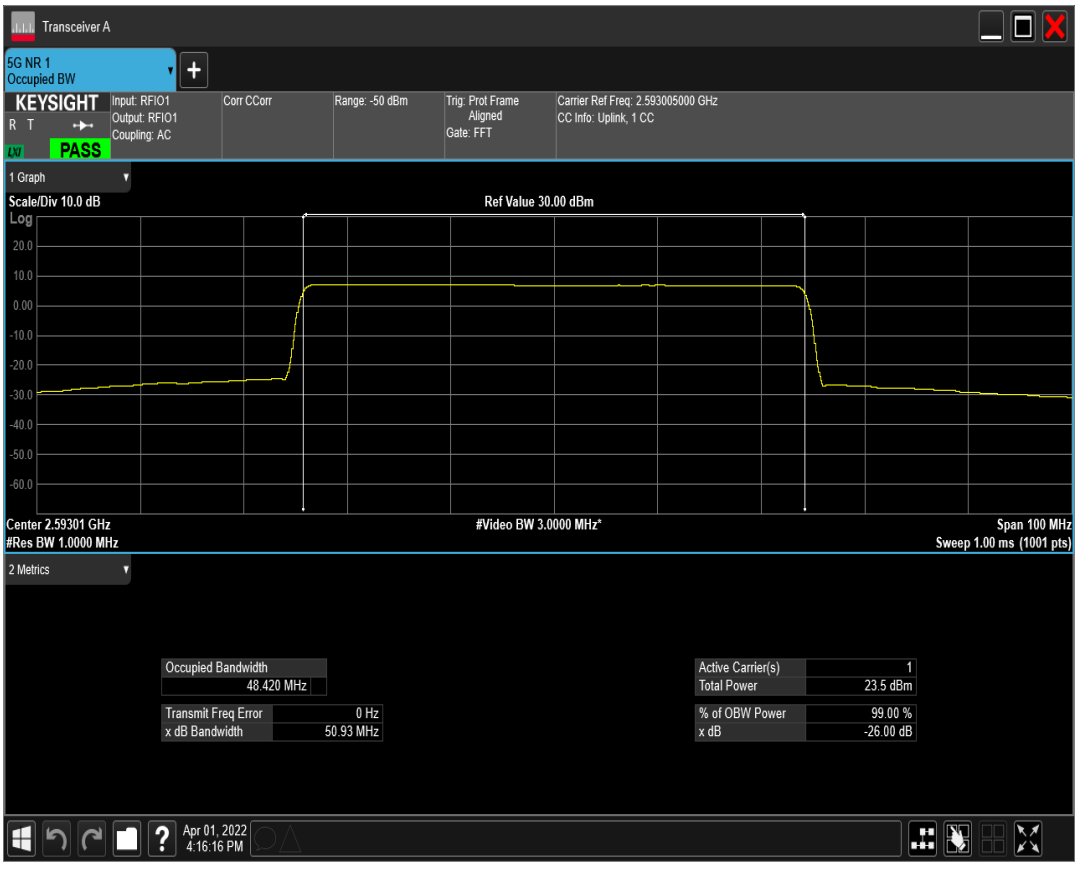


n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=518601 RB=270@0

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

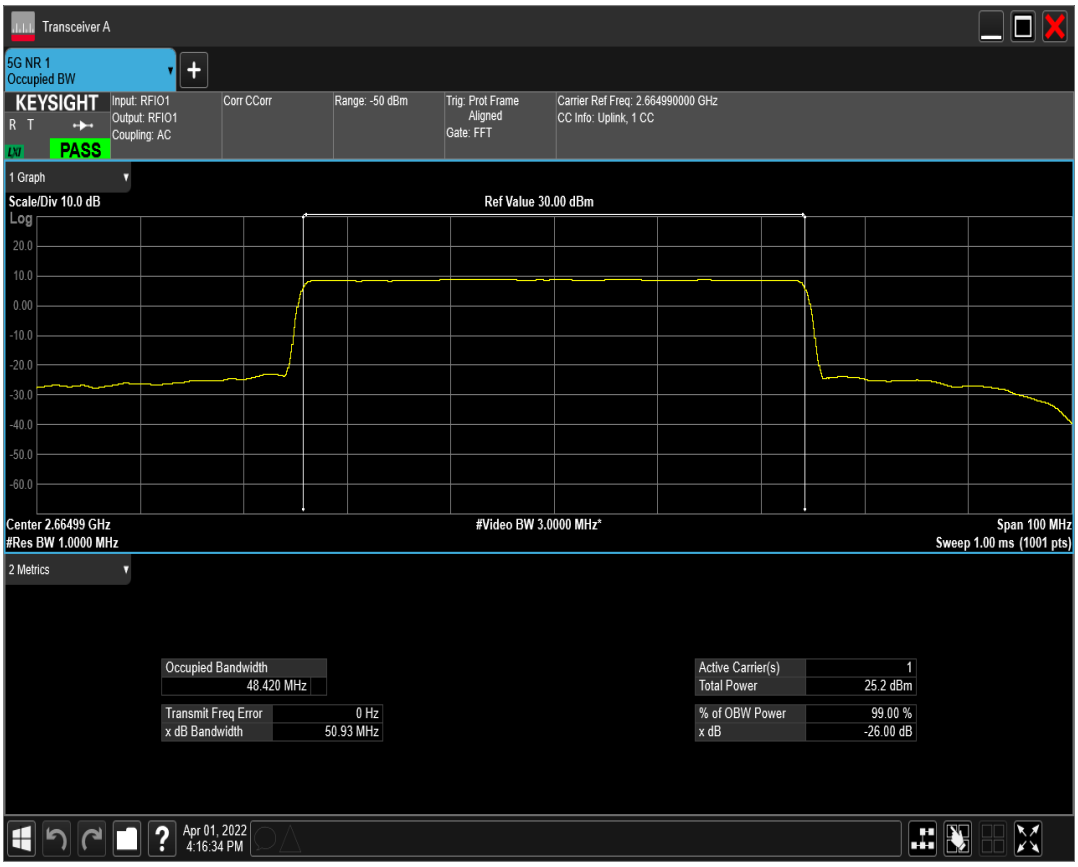
n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=518601 RB=270@0

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



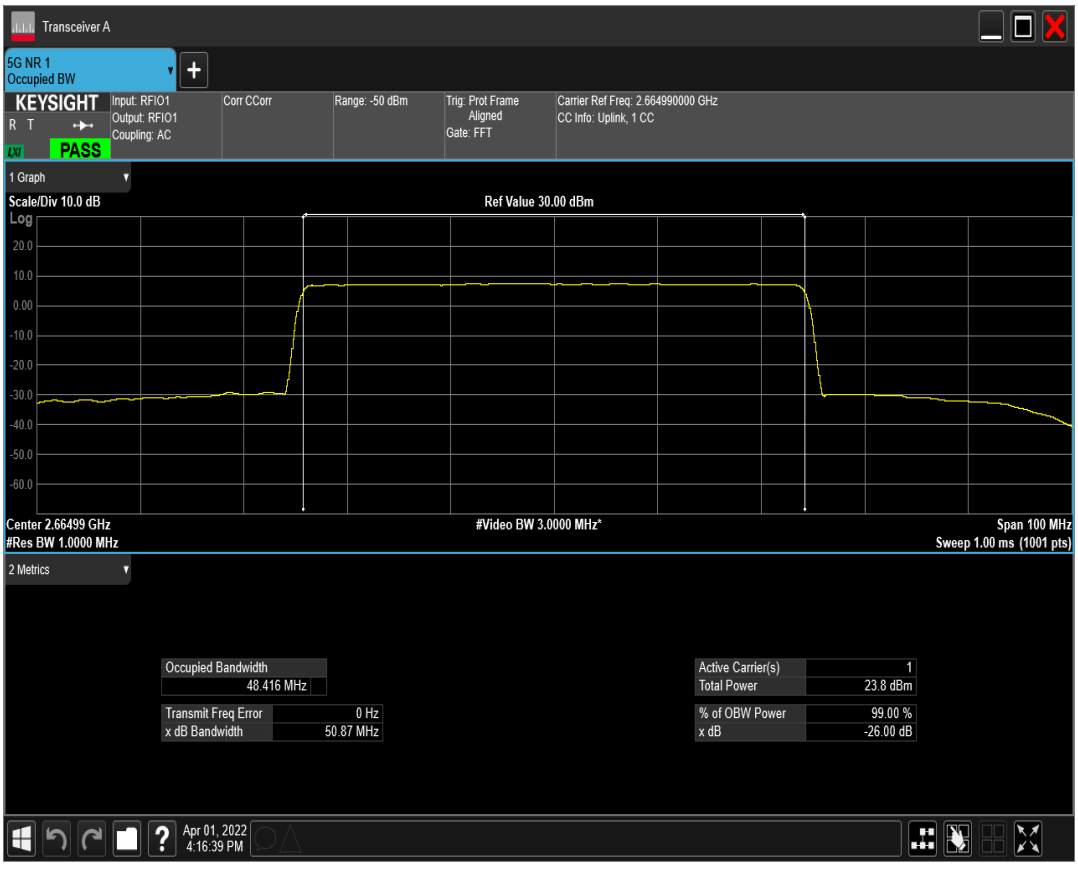
n41 SCS=15kHz DFT_BPSK BW=50MHz Channel=532998 RB=270@0

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



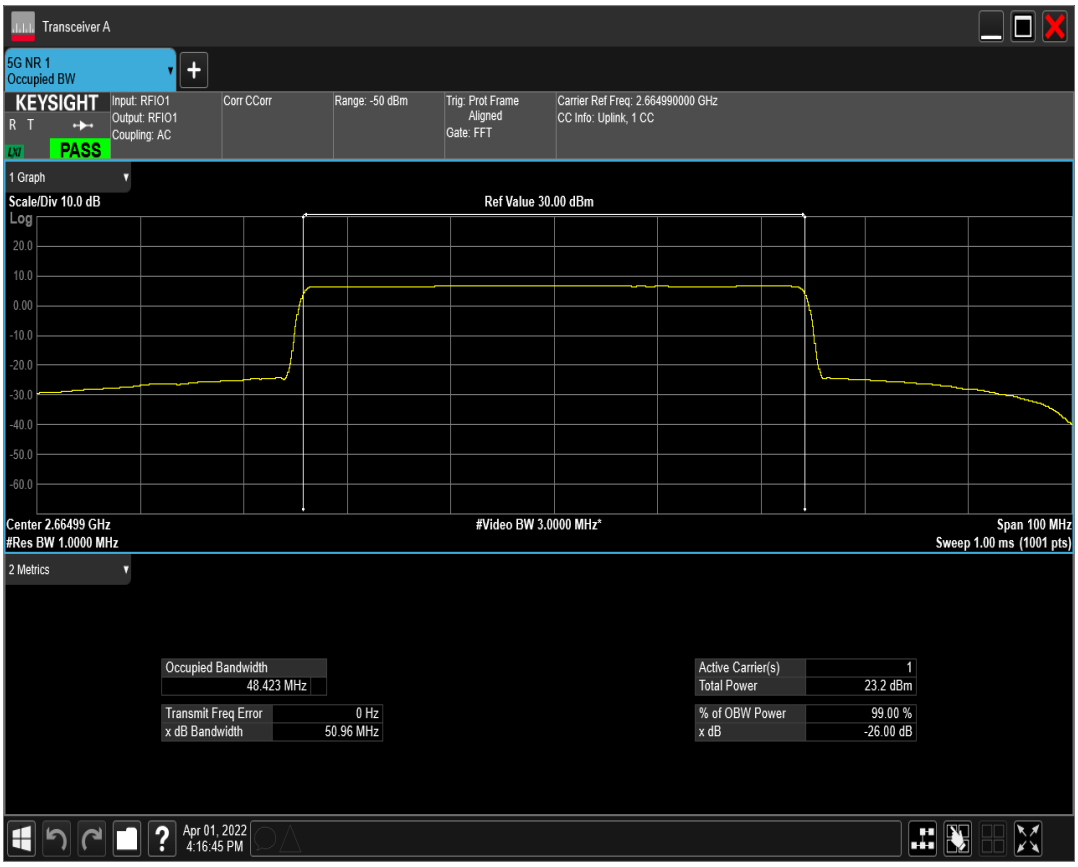
n41 SCS=15kHz DFT_QAM16 BW=50MHz Channel=532998 RB=270@0

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



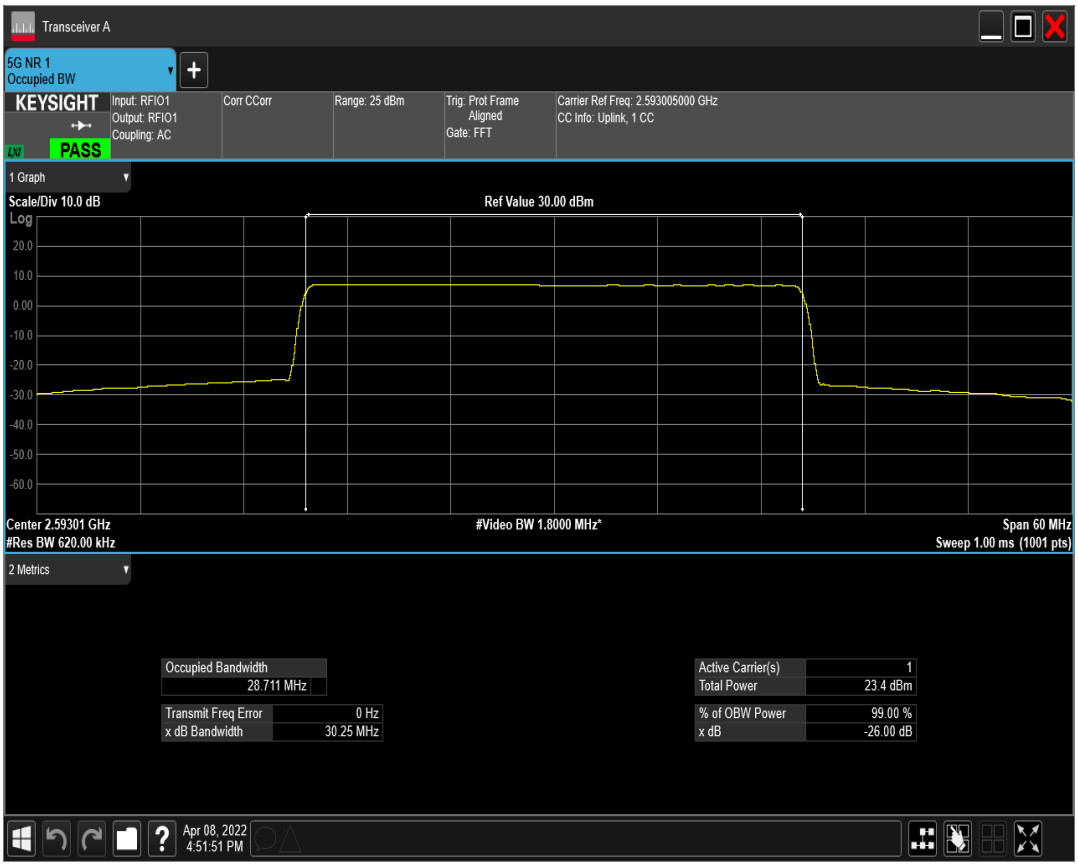
n41 SCS=15kHz DFT_QAM256 BW=50MHz Channel=532998 RB=270@0

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

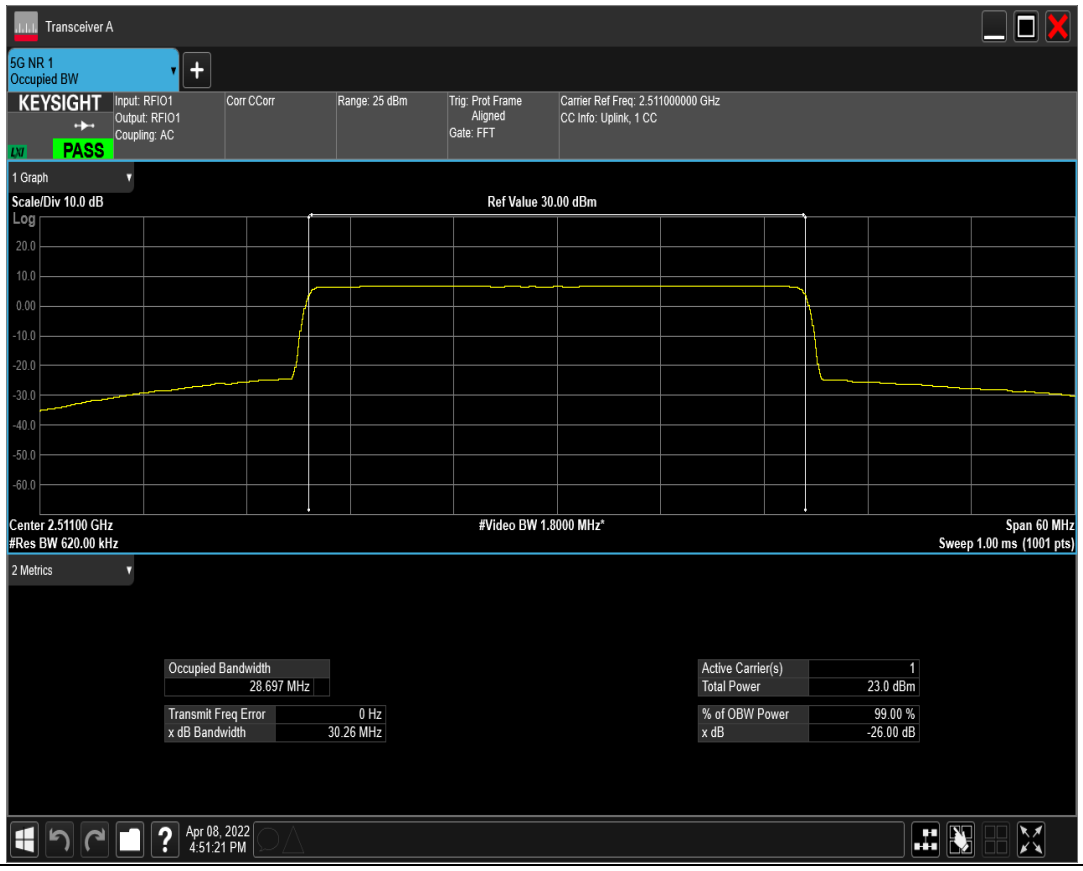


n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=534999 RB=160@0

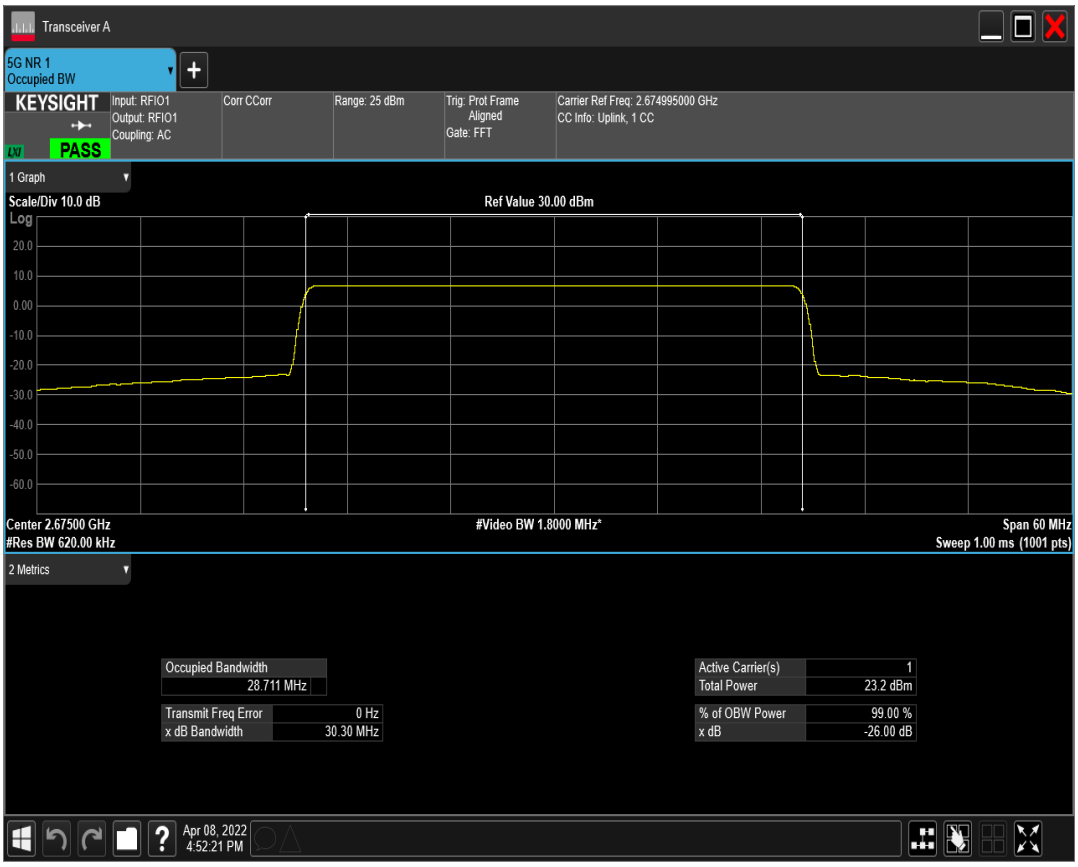
n41 SCS=15kHz CP_QPSK BW=30MHz Channel=518601 RB=160@0



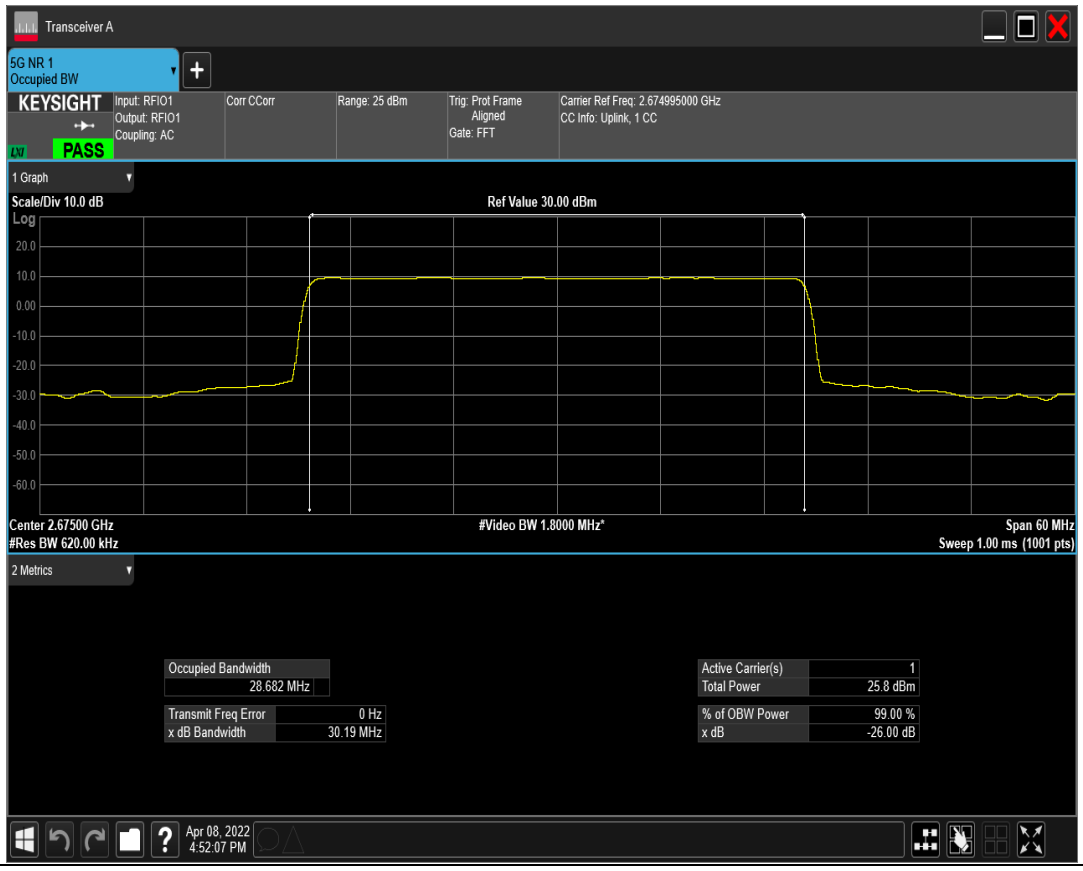
n41 SCS=15kHz CP_QPSK BW=30MHz Channel=502200 RB=160@0



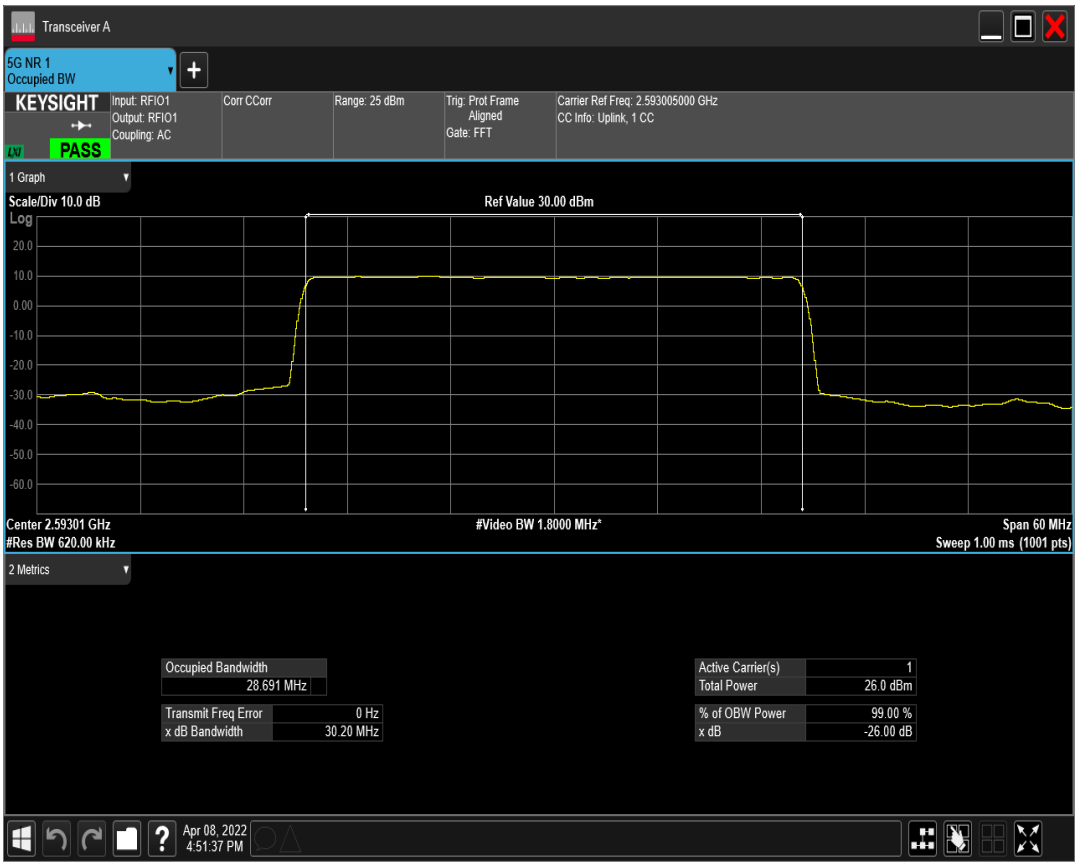
n41 SCS=15kHz CP_QPSK BW=30MHz Channel=534999 RB=160@0



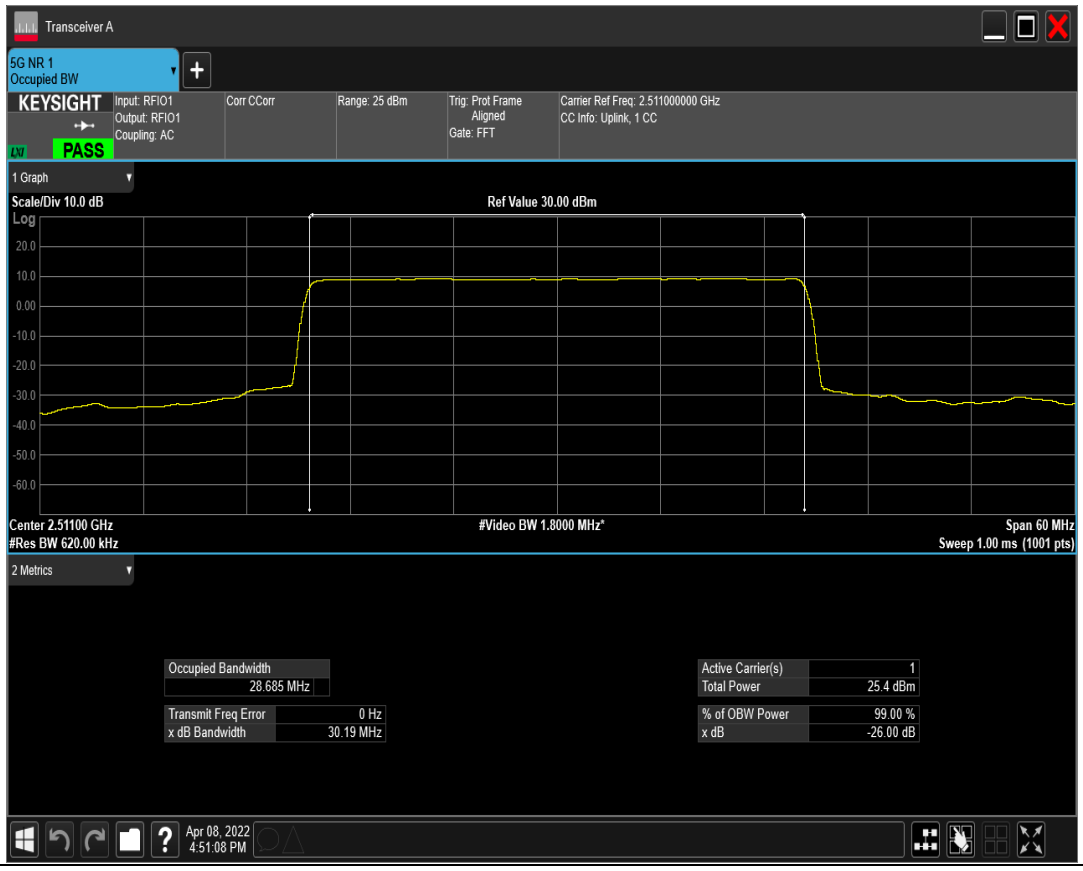
n41 SCS=15kHz DFT_BPSK BW=30MHz Channel=534999 RB=160@0



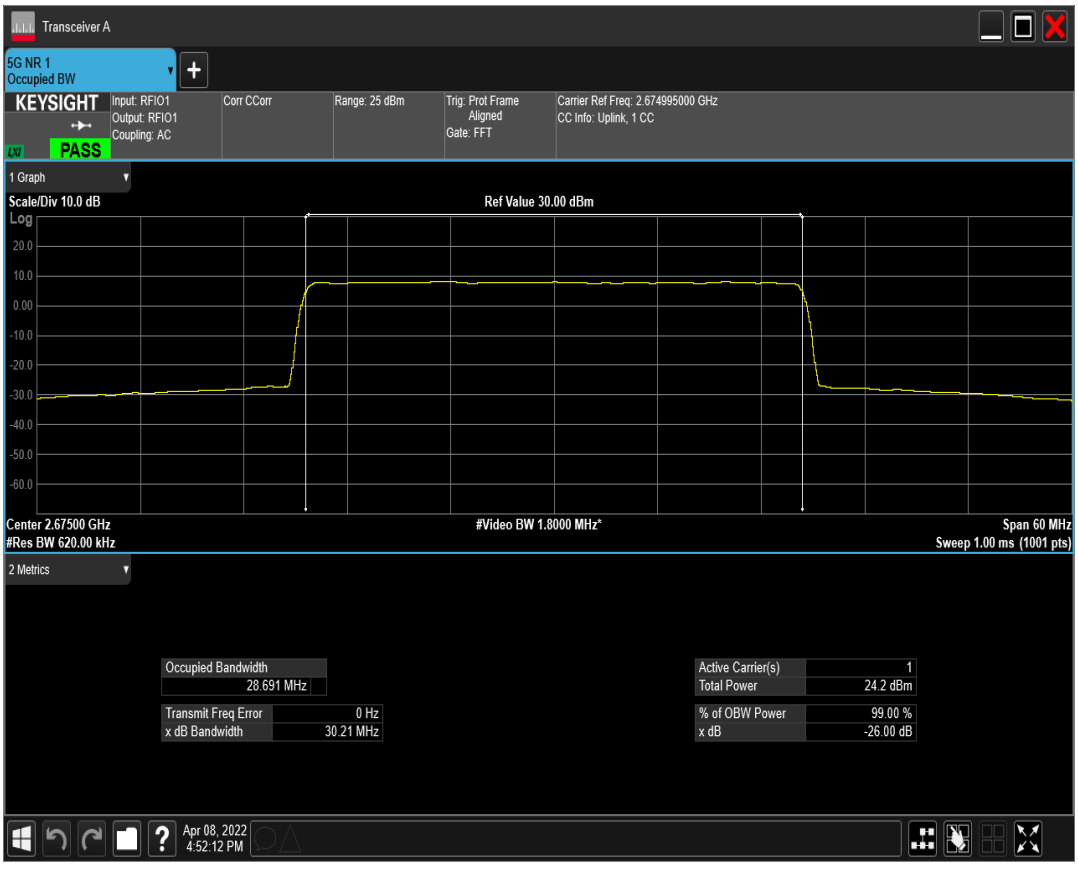
n41 SCS=15kHz DFT_BPSK BW=30MHz Channel=518601 RB=160@0



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

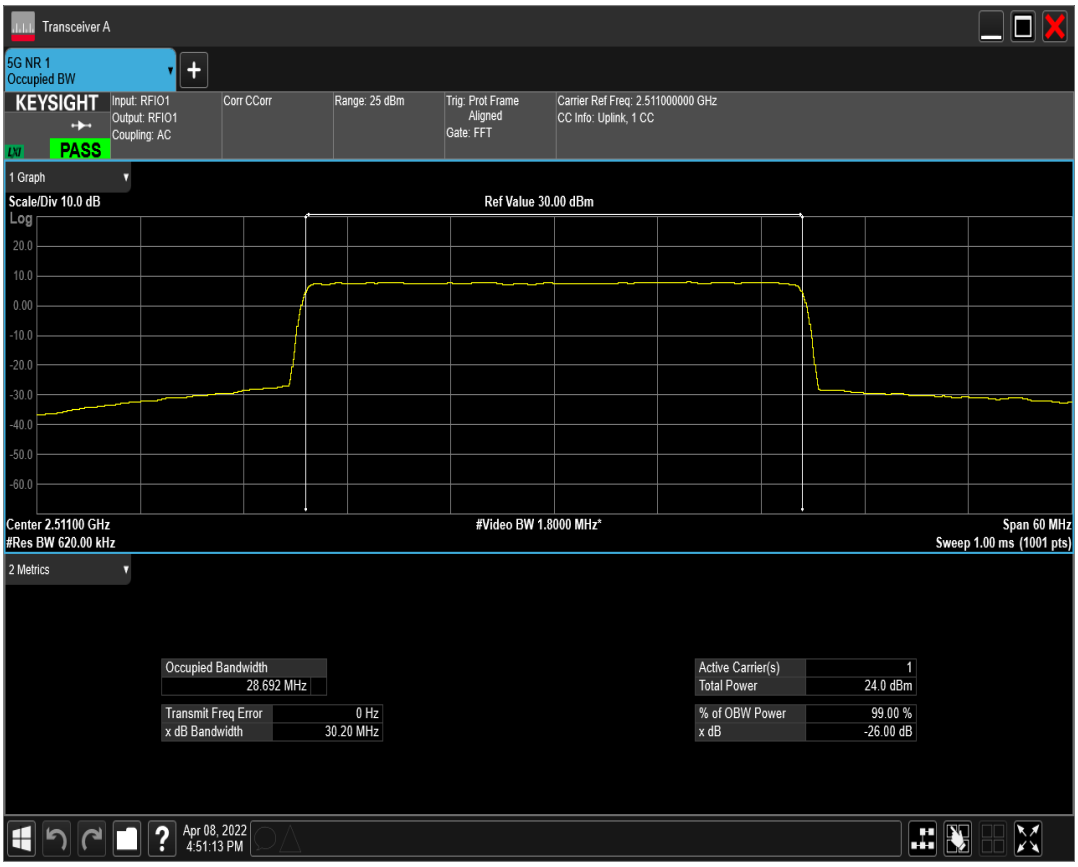


n41 SCS=15kHz DFT_QAM16 BW=30MHz Channel=534999 RB=160@0



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

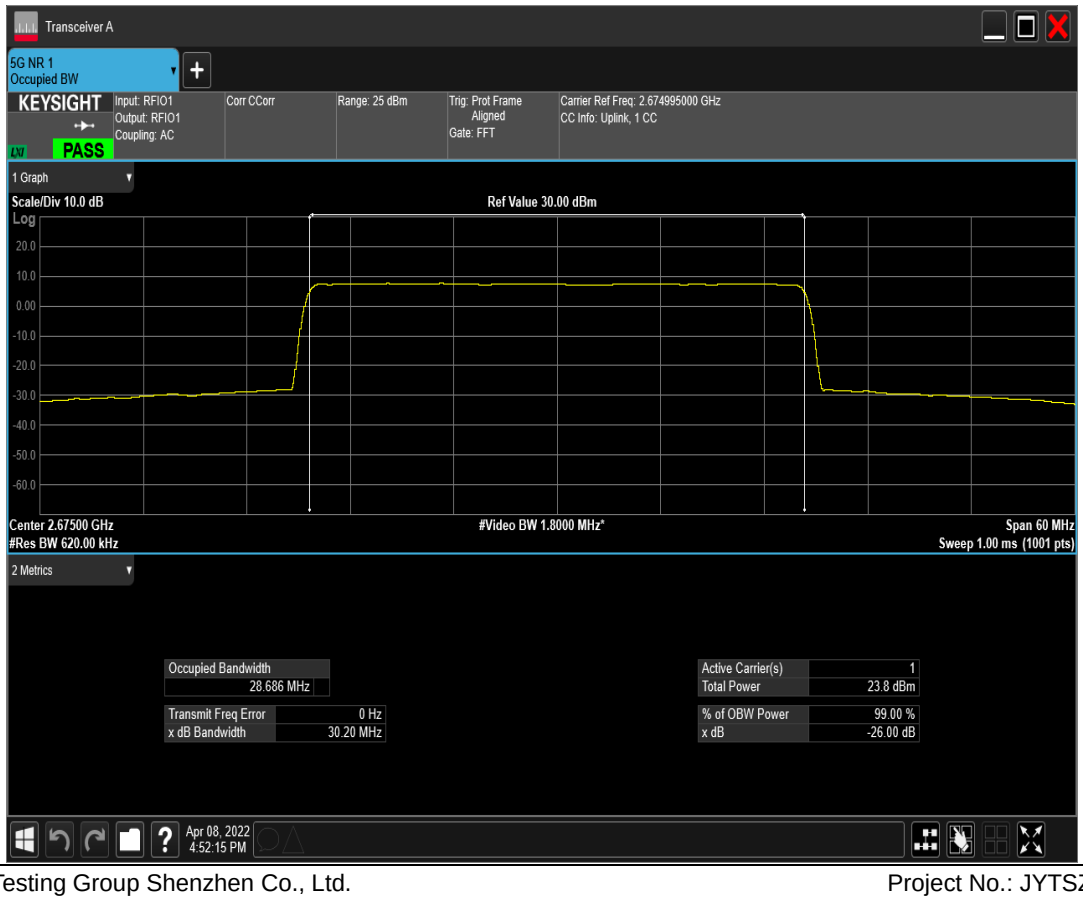
n41 SCS=15kHz DFT_QAM16 BW=30MHz Channel=502200 RB=160@0



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

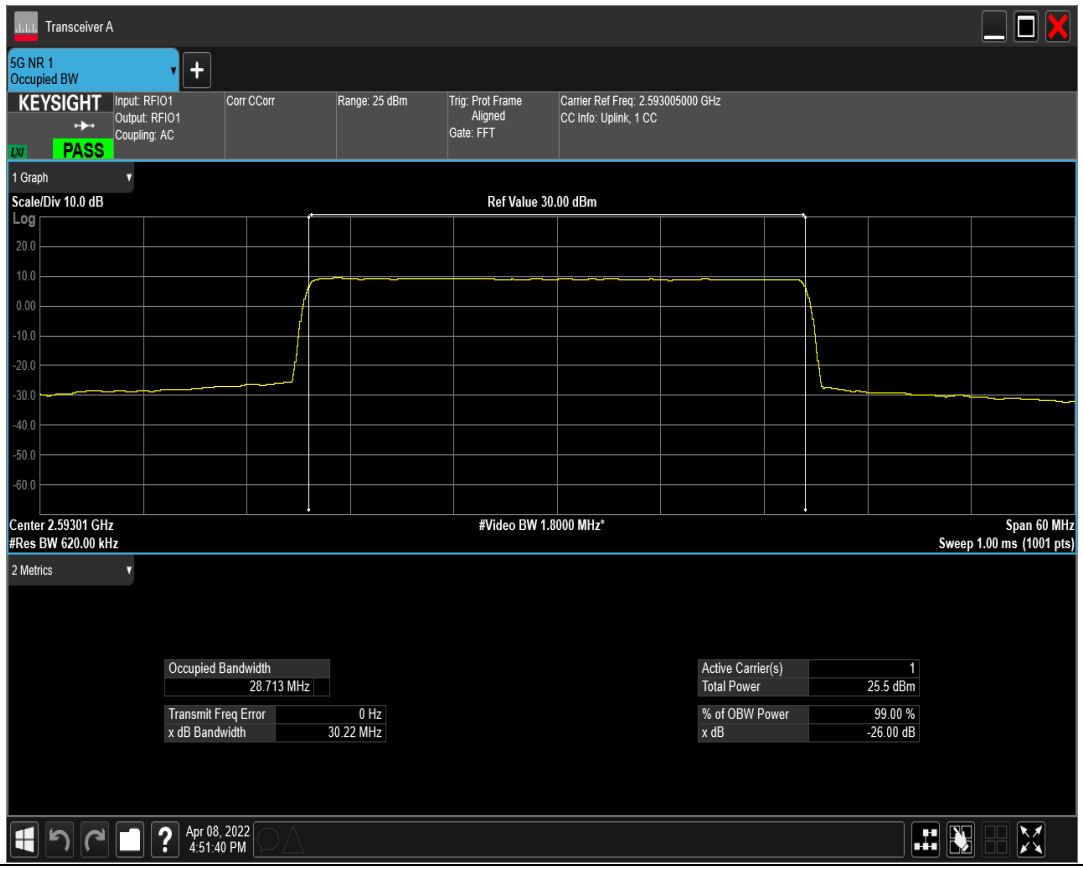
n41 SCS=15kHz DFT_QAM256 BW=30MHz Channel=534999 RB=160@0

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

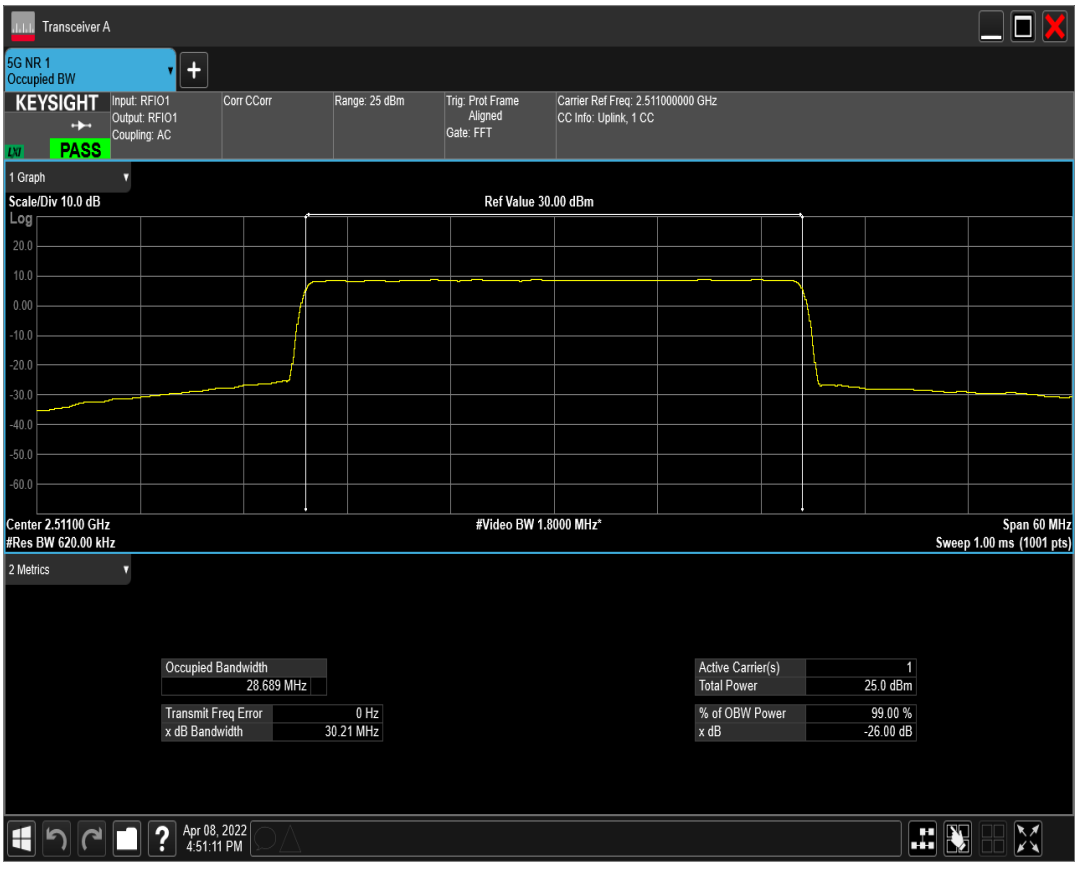


n41 SCS=15kHz DFT_QAM64 BW=30MHz Channel=518601 RB=160@0

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

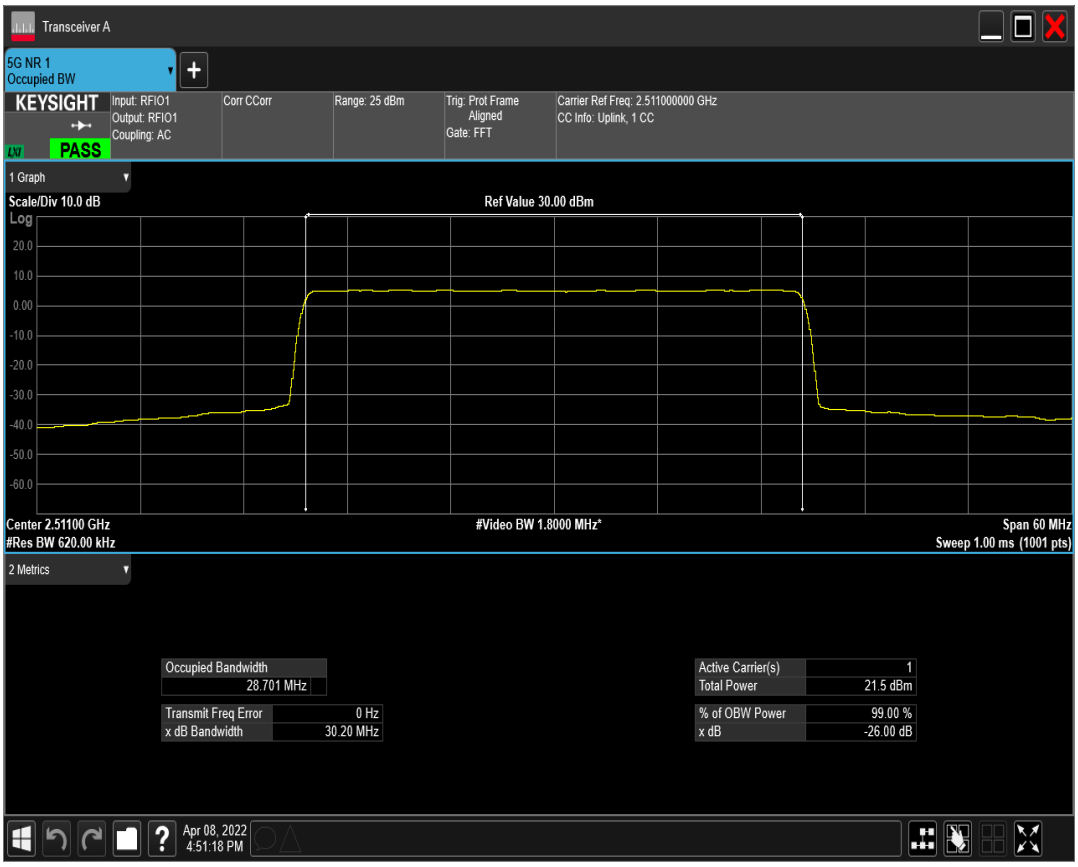


n41 SCS=15kHz DFT_QPSK BW=30MHz Channel=502200 RB=160@0



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

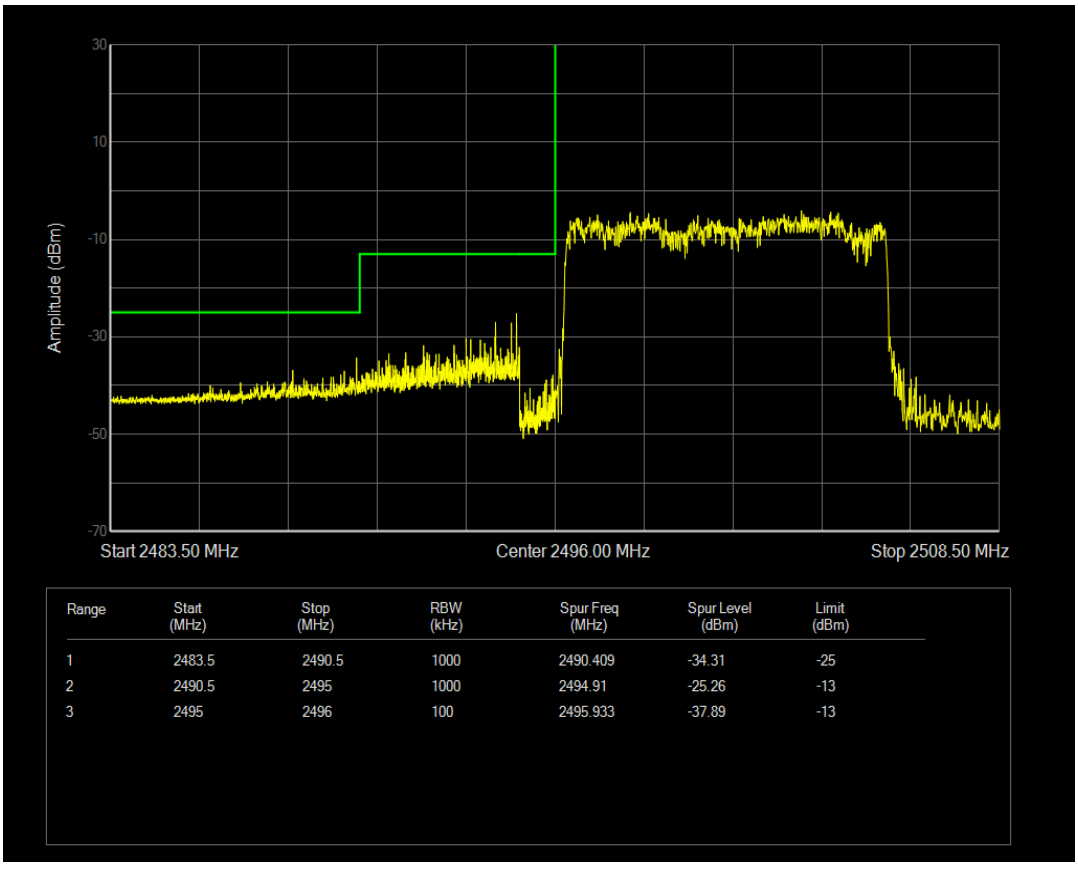
n41 SCS=15kHz DFT_QAM256 BW=30MHz Channel=502200 RB=160@0



5 Band edge for NR FR1

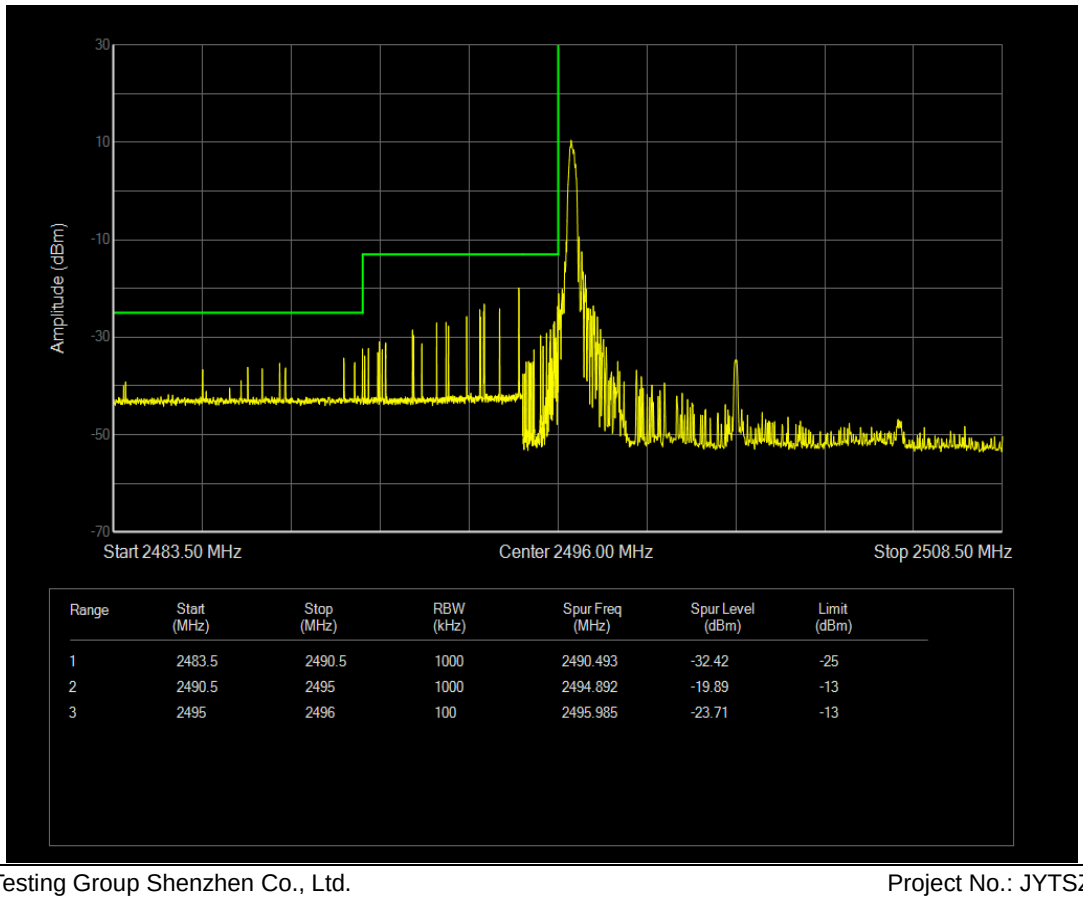
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n41	15	10	500202	50@0	DFT_QPSK	2490.41	-34.31	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	2494.89	-19.89	-13	PASS
n41	15	10	537000	50@0	DFT_QPSK	2700.22	-32.34	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	2691.23	-17.90	-10	PASS
n41	15	50	504201	270@0	DFT_QPSK	2490.27	-36.73	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	2495.00	-21.42	-13	PASS
n41	15	50	532998	270@0	DFT_QPSK	2690.01	-23.60	-10	PASS
n41	15	50	532998	1@269	DFT_QPSK	2691.08	-22.26	-10	PASS

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



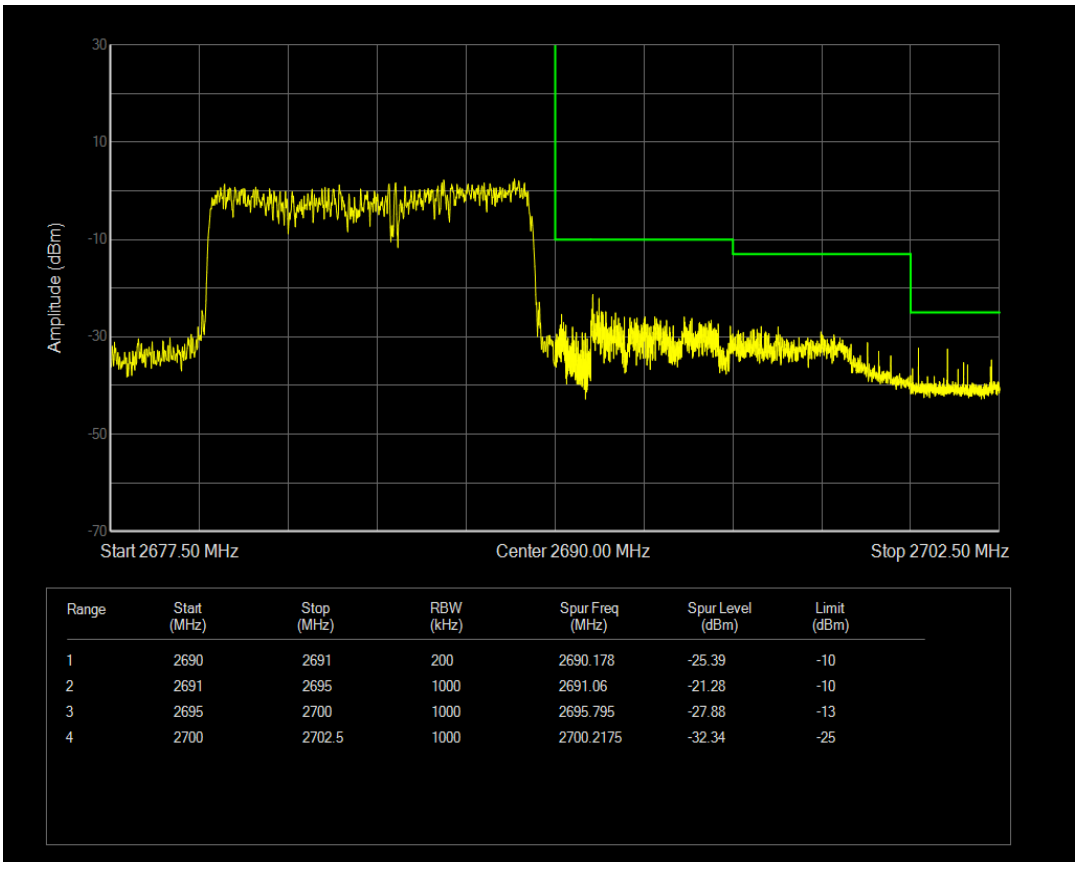
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2483.5	2490.5	1000	2490.409	-34.31	-25
2	2490.5	2495	1000	2494.91	-25.26	-13
3	2495	2496	100	2495.933	-37.89	-13

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



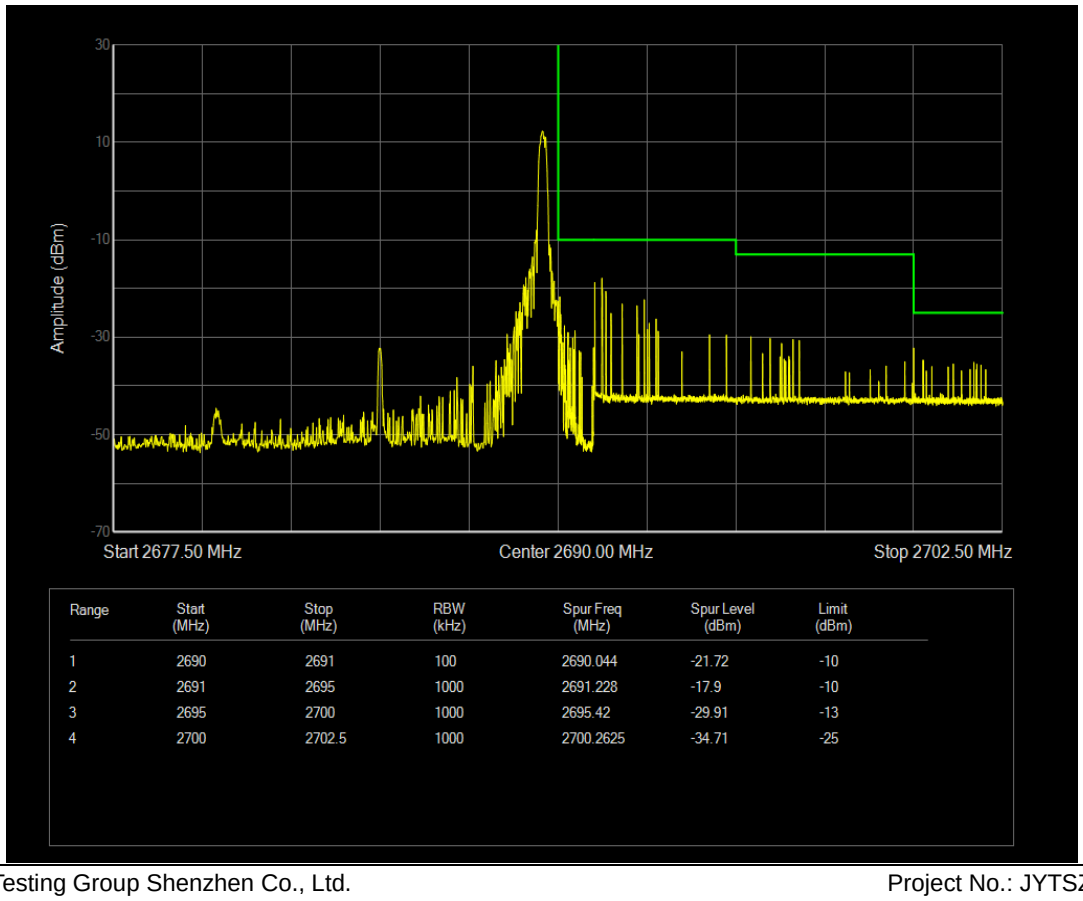
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2483.5	2490.5	1000	2490.493	-32.42	-25
2	2490.5	2495	1000	2494.892	-19.89	-13
3	2495	2496	100	2495.985	-23.71	-13

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



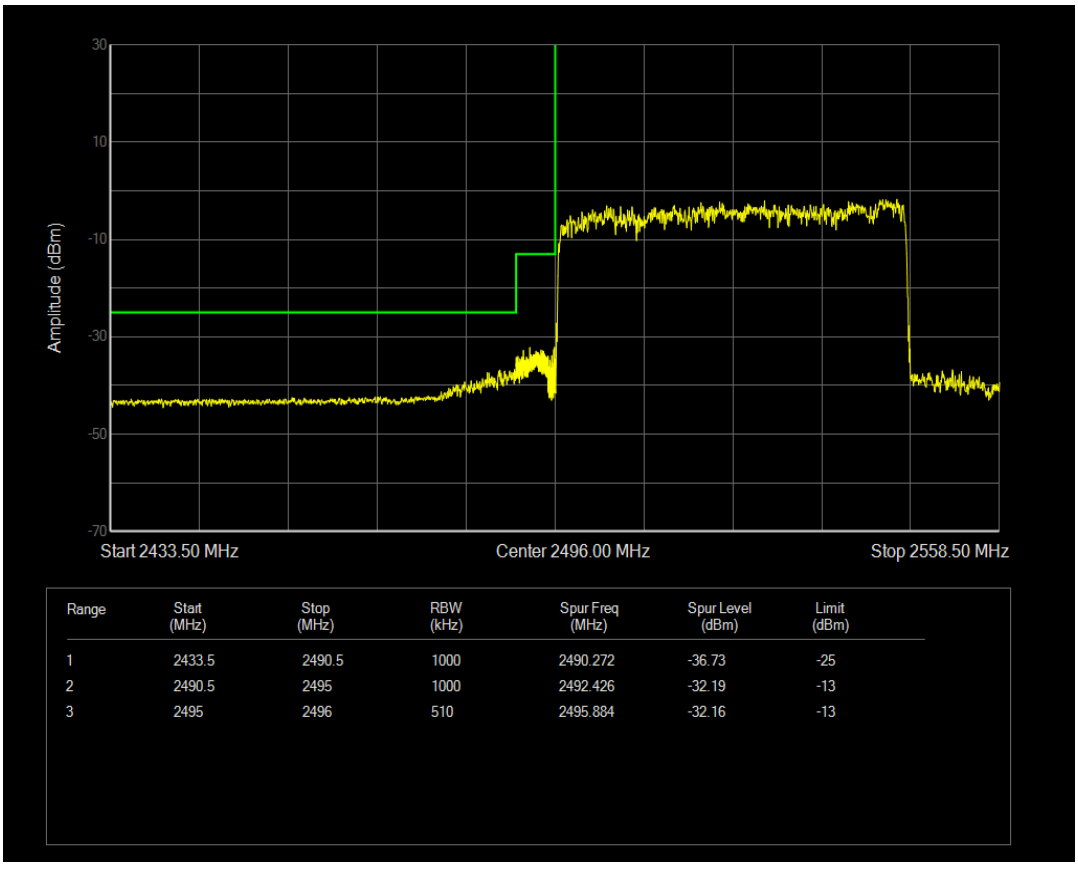
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	200	2690.178	-25.39	-10
2	2691	2695	1000	2691.06	-21.28	-10
3	2695	2700	1000	2695.795	-27.88	-13
4	2700	2702.5	1000	2700.2175	-32.34	-25

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



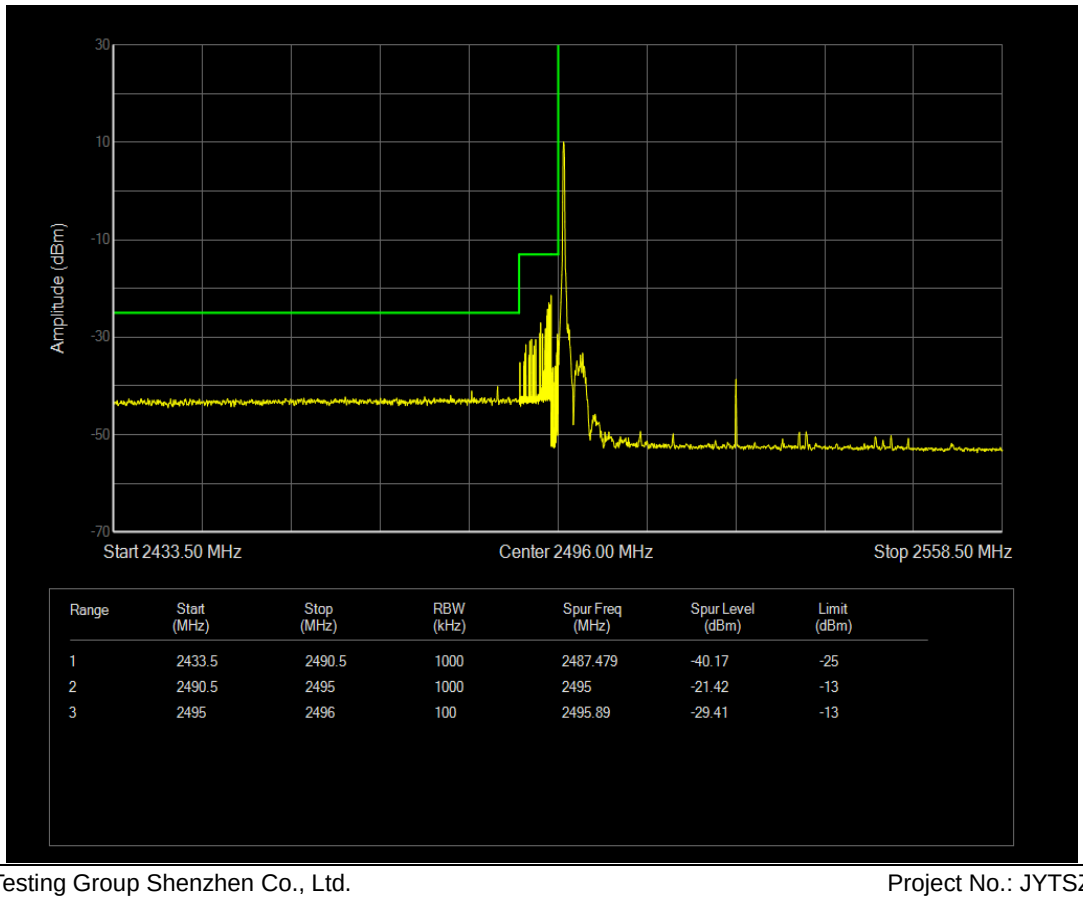
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.044	-21.72	-10
2	2691	2695	1000	2691.228	-17.9	-10
3	2695	2700	1000	2695.42	-29.91	-13
4	2700	2702.5	1000	2700.2625	-34.71	-25

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



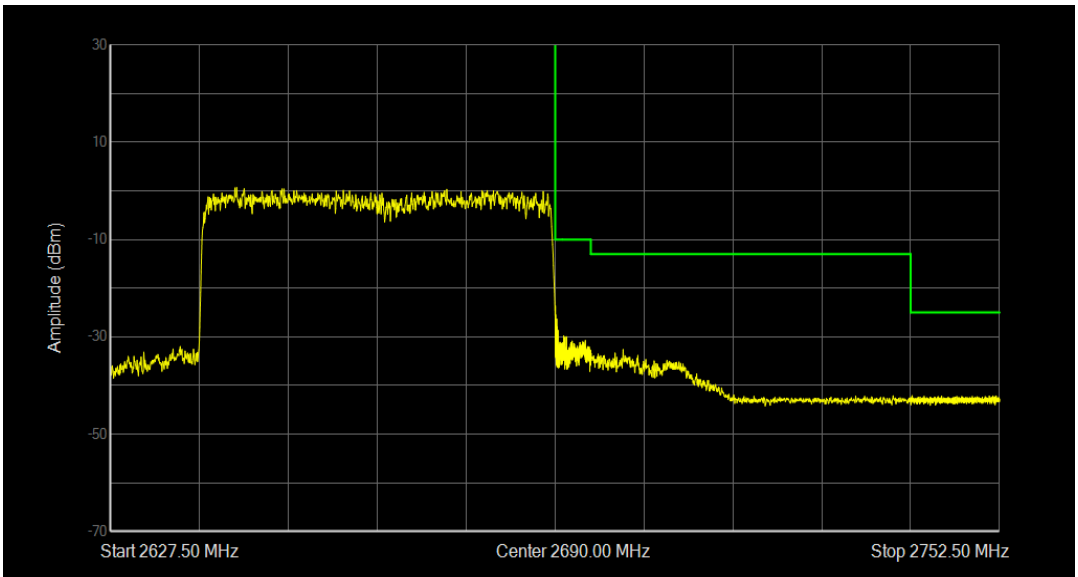
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2490.272	-36.73	-25
2	2490.5	2495	1000	2492.426	-32.19	-13
3	2495	2496	510	2495.884	-32.16	-13

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



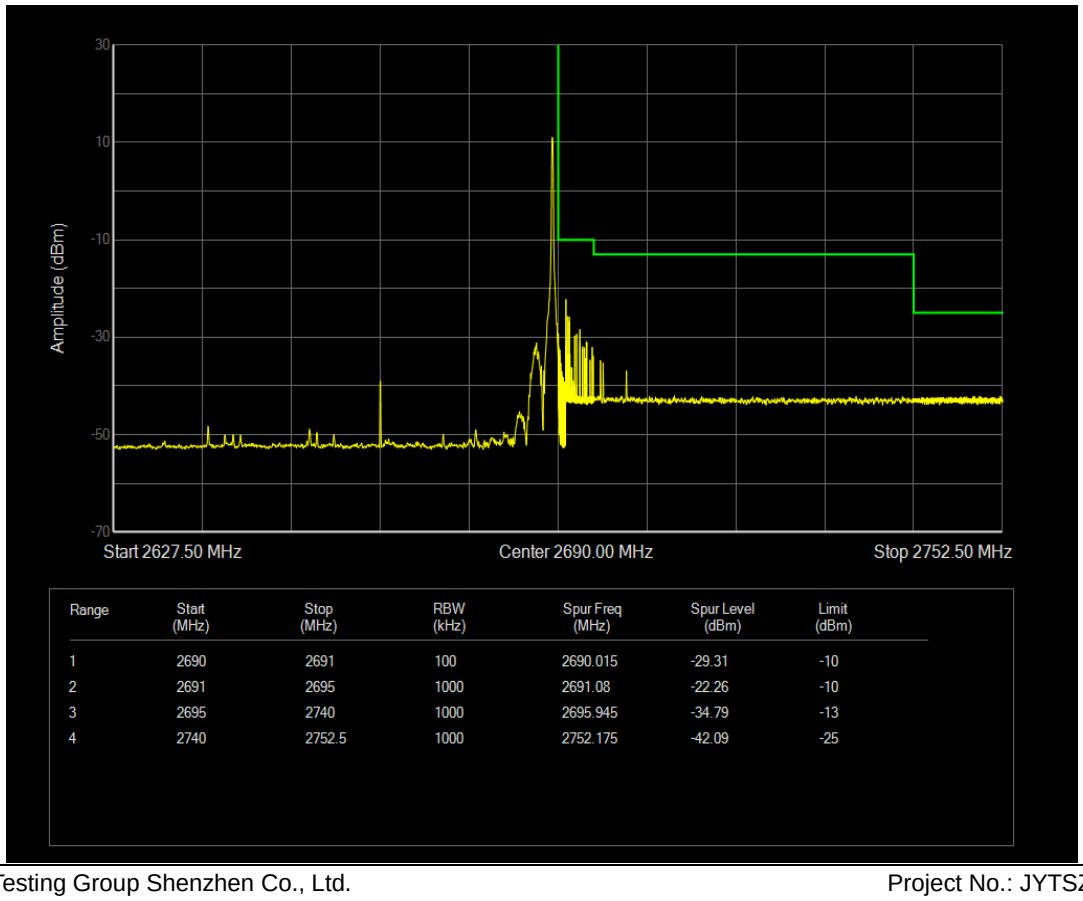
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2433.5	2490.5	1000	2487.479	-40.17	-25
2	2490.5	2495	1000	2495	-21.42	-13
3	2495	2496	100	2495.89	-29.41	-13

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	2690.012	-23.6	-10
2	2691	2695	1000	2691.2	-29.82	-10
3	2695	2740	1000	2699.545	-32.61	-13
4	2740	2752.5	1000	2740.2	-42.09	-25

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

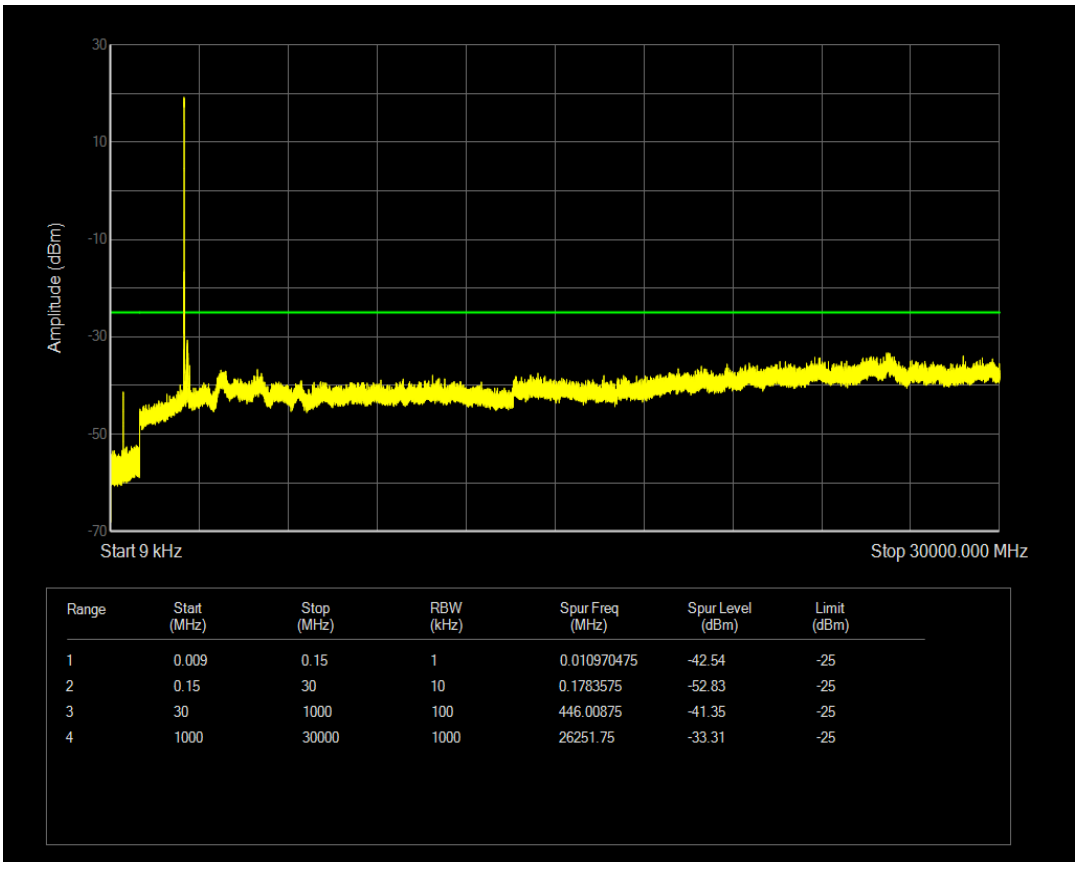


Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	2690	2691	100	2690.015	-29.31	-10
2	2691	2695	1000	2691.08	-22.26	-10
3	2695	2740	1000	2695.945	-34.79	-13
4	2740	2752.5	1000	2752.175	-42.09	-25

6 Out-of-band emissions for NR FR1

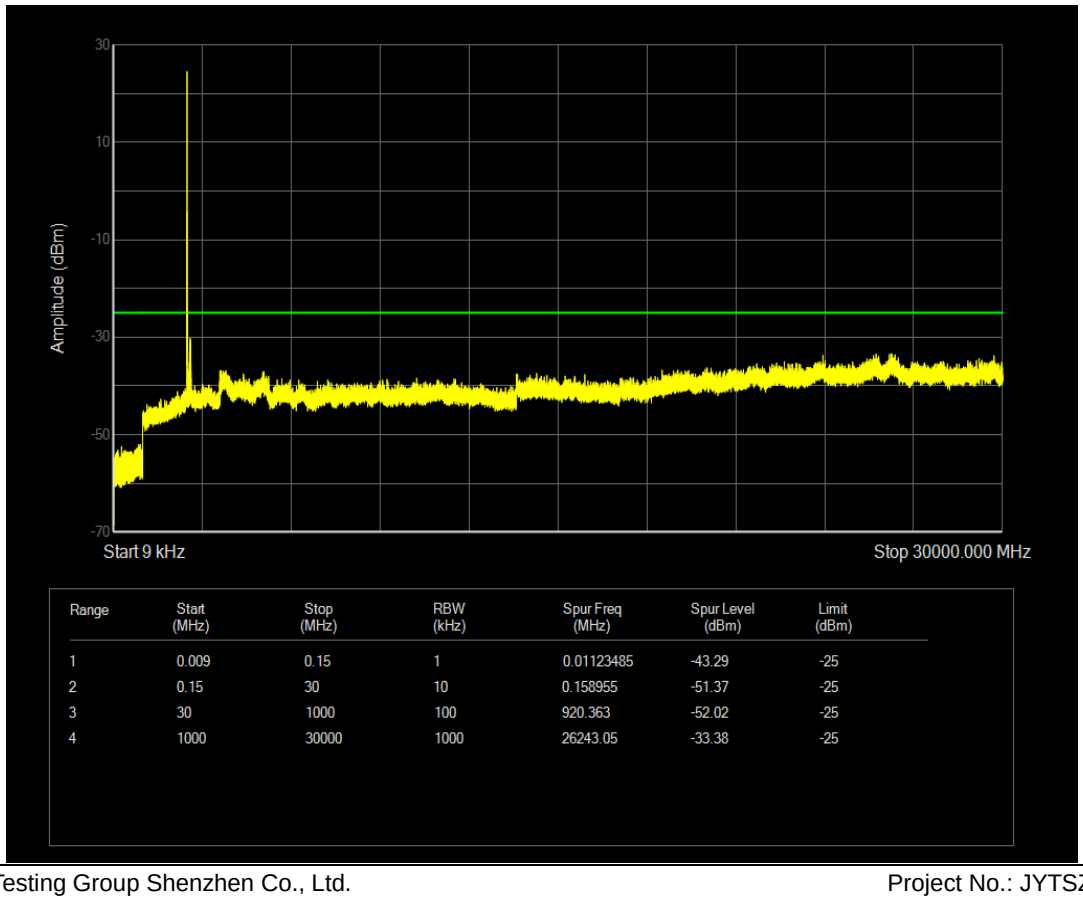
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n41	15	10	500202	50@0	DFT_QPSK	26251.75	-33.31	-25	PASS
n41	15	10	500202	1@0	DFT_QPSK	26243.05	-33.38	-25	PASS
n41	15	10	500202	1@51	DFT_QPSK	26208.25	-33.61	-25	PASS
n41	15	10	518601	50@0	DFT_QPSK	26277.85	-33.10	-25	PASS
n41	15	10	518601	1@0	DFT_QPSK	26203.18	-33.05	-25	PASS
n41	15	10	518601	1@51	DFT_QPSK	25695.68	-33.50	-25	PASS
n41	15	10	537000	50@0	DFT_QPSK	26276.40	-32.99	-25	PASS
n41	15	10	537000	1@0	DFT_QPSK	26290.18	-33.34	-25	PASS
n41	15	10	537000	1@51	DFT_QPSK	26330.78	-33.48	-25	PASS
n41	15	50	504201	270@0	DFT_QPSK	26266.25	-33.00	-25	PASS
n41	15	50	504201	1@0	DFT_QPSK	26216.23	-32.46	-25	PASS
n41	15	50	504201	1@269	DFT_QPSK	26267.70	-32.88	-25	PASS
n41	15	50	518601	270@0	DFT_QPSK	29759.30	-33.57	-25	PASS
n41	15	50	518601	1@0	DFT_QPSK	26174.90	-33.31	-25	PASS
n41	15	50	518601	1@269	DFT_QPSK	26264.80	-33.25	-25	PASS
n41	15	50	532998	270@0	DFT_QPSK	25611.58	-33.52	-25	PASS
n41	15	50	532998	1@0	DFT_QPSK	26145.18	-33.81	-25	PASS
n41	15	50	532998	1@269	DFT_QPSK	25720.33	-33.43	-25	PASS

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



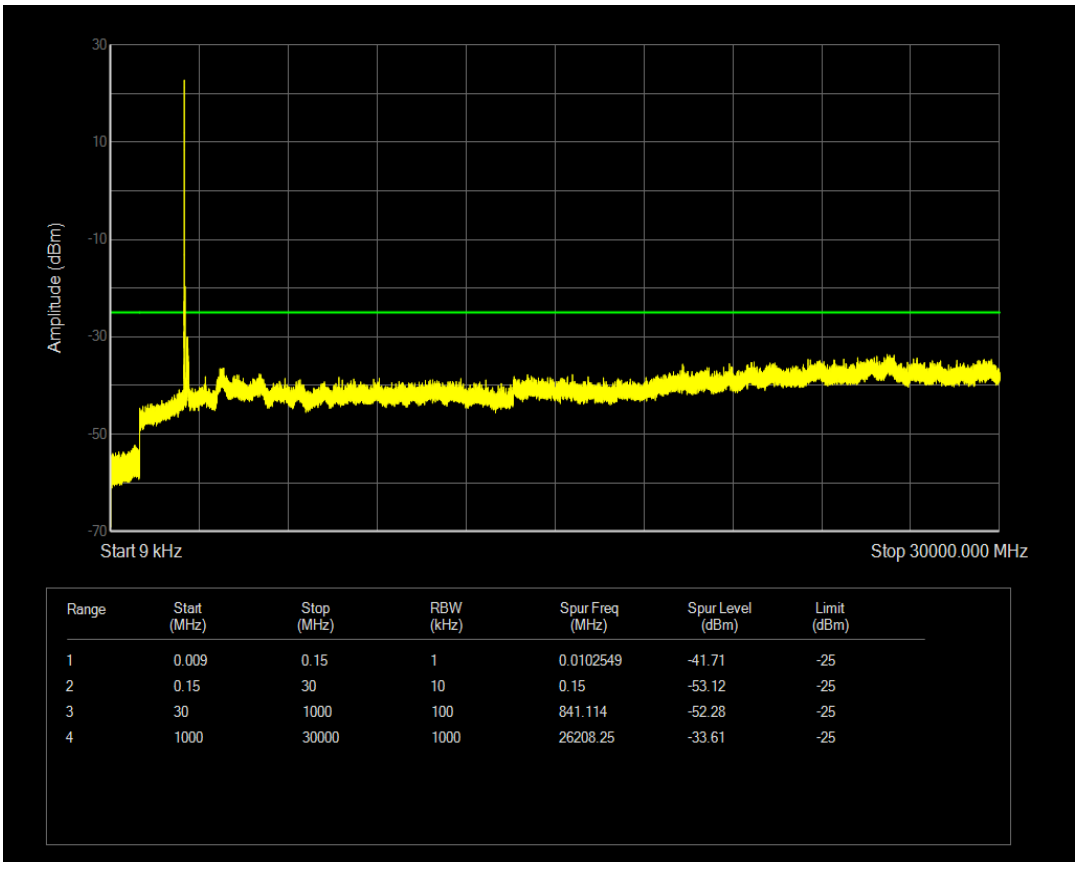
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010970475	-42.54	-25
2	0.15	30	10	0.1783575	-52.83	-25
3	30	1000	100	446.00875	-41.35	-25
4	1000	30000	1000	26251.75	-33.31	-25

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



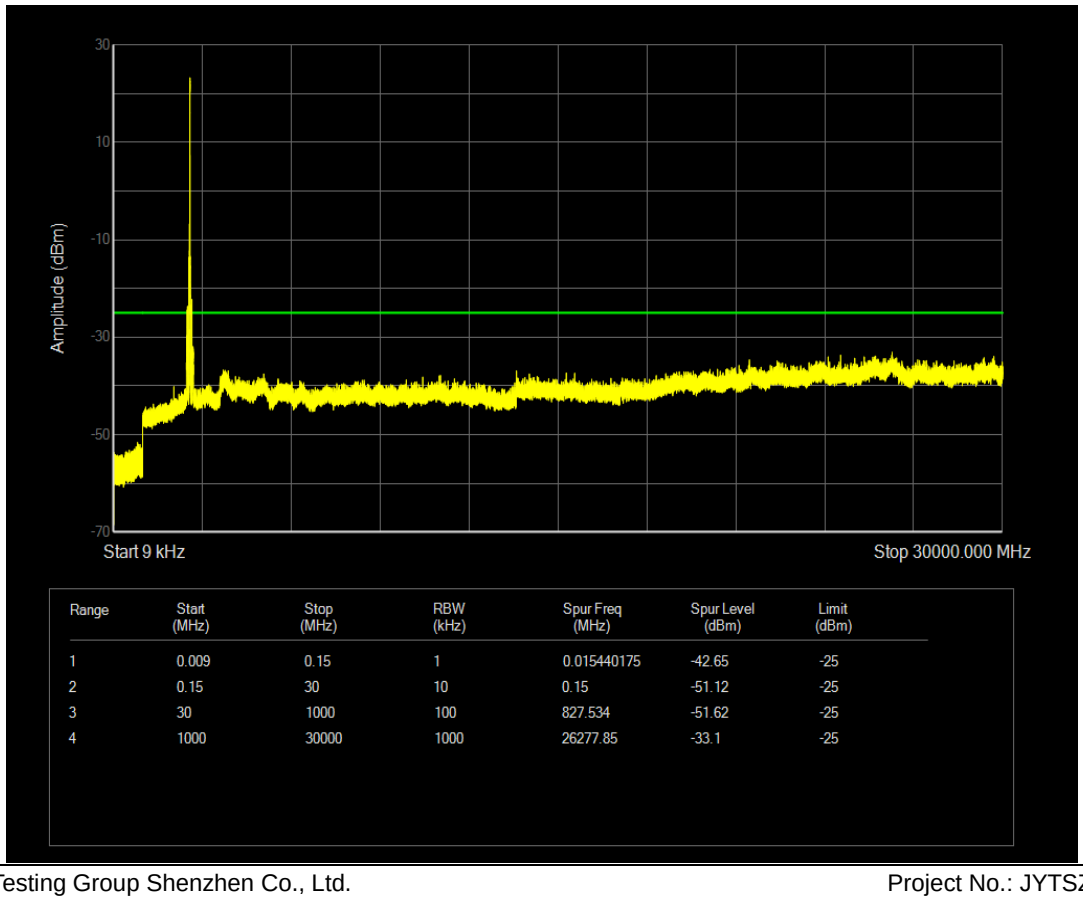
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01123485	-43.29	-25
2	0.15	30	10	0.158955	-51.37	-25
3	30	1000	100	920.363	-52.02	-25
4	1000	30000	1000	26243.05	-33.38	-25

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



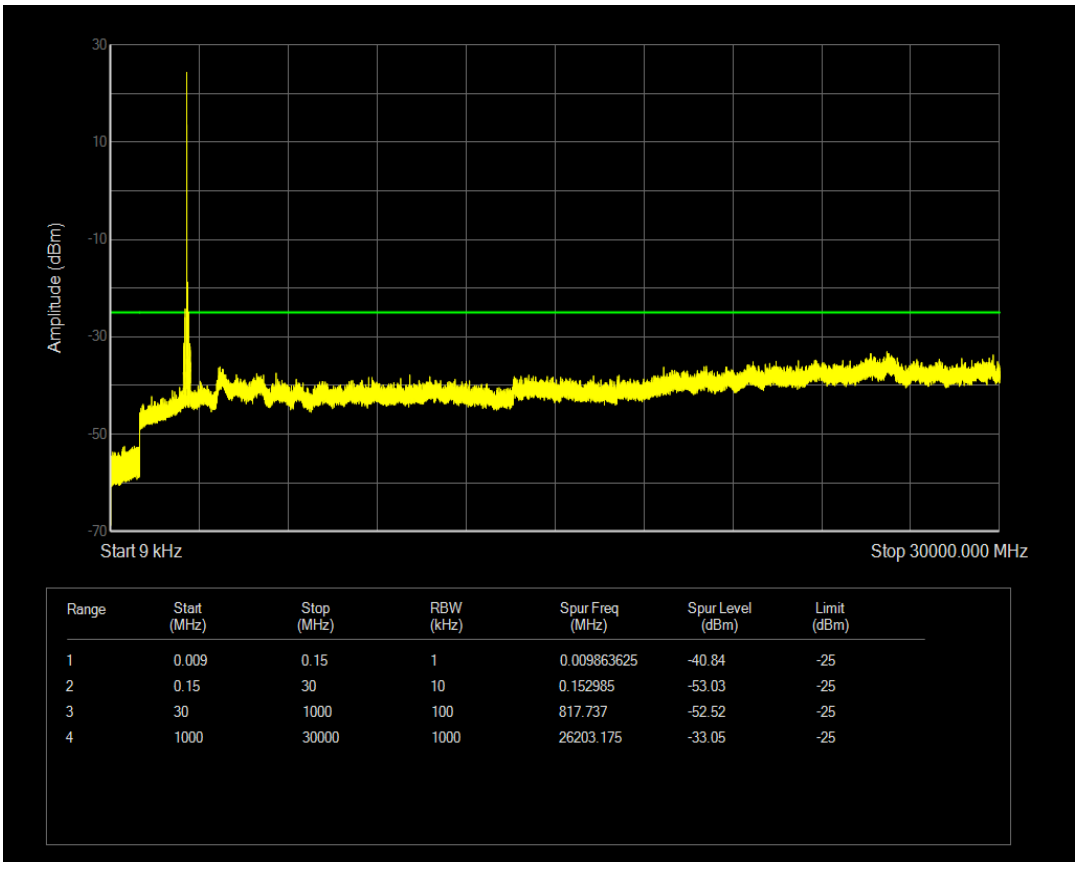
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0102549	-41.71	-25
2	0.15	30	10	0.15	-53.12	-25
3	30	1000	100	841.114	-52.28	-25
4	1000	30000	1000	26208.25	-33.61	-25

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



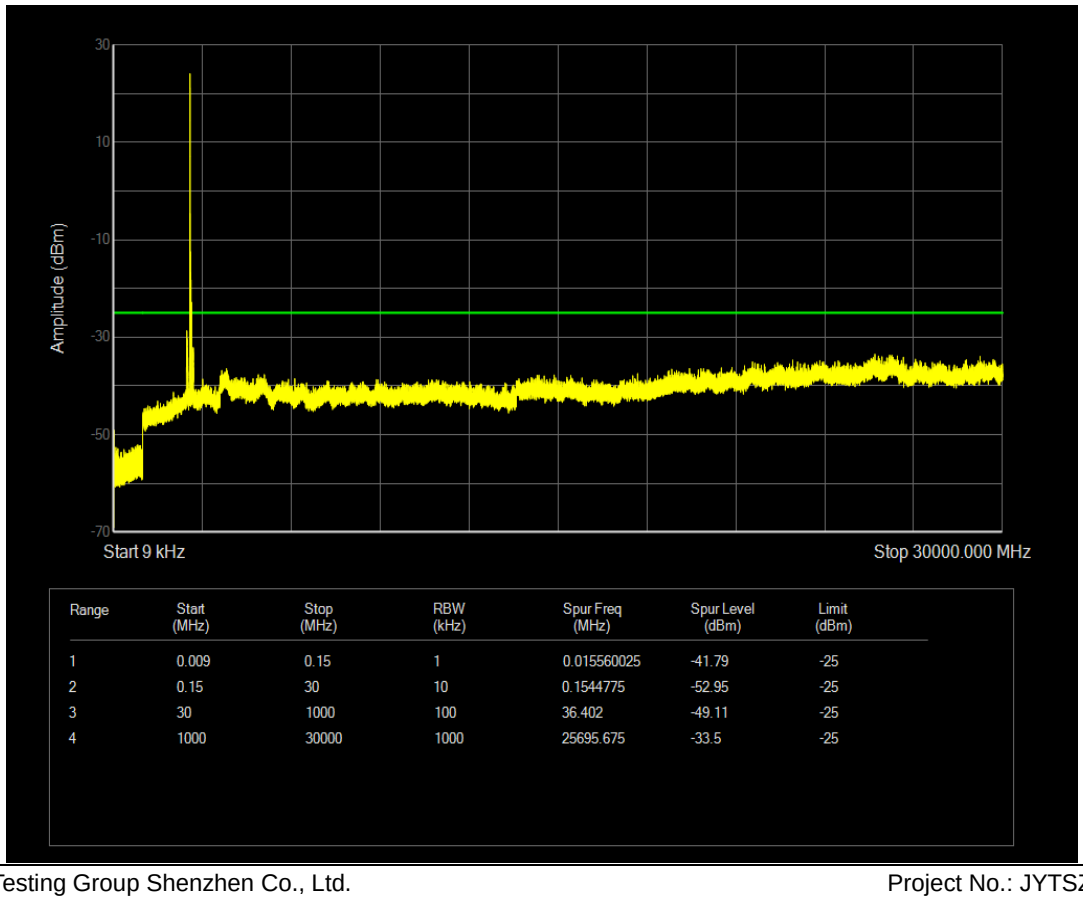
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015440175	-42.65	-25
2	0.15	30	10	0.15	-51.12	-25
3	30	1000	100	827.534	-51.62	-25
4	1000	30000	1000	26277.85	-33.1	-25

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



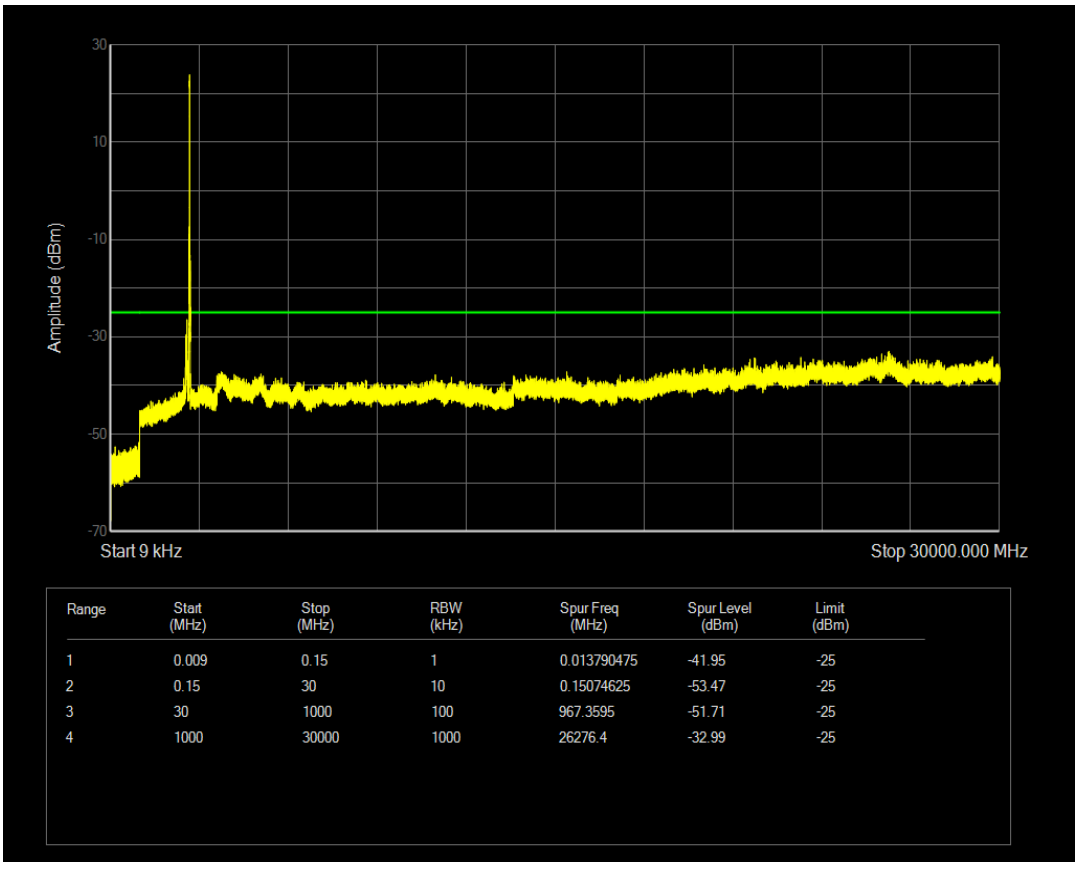
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009863625	-40.84	-25
2	0.15	30	10	0.152985	-53.03	-25
3	30	1000	100	817.737	-52.52	-25
4	1000	30000	1000	26203.175	-33.05	-25

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



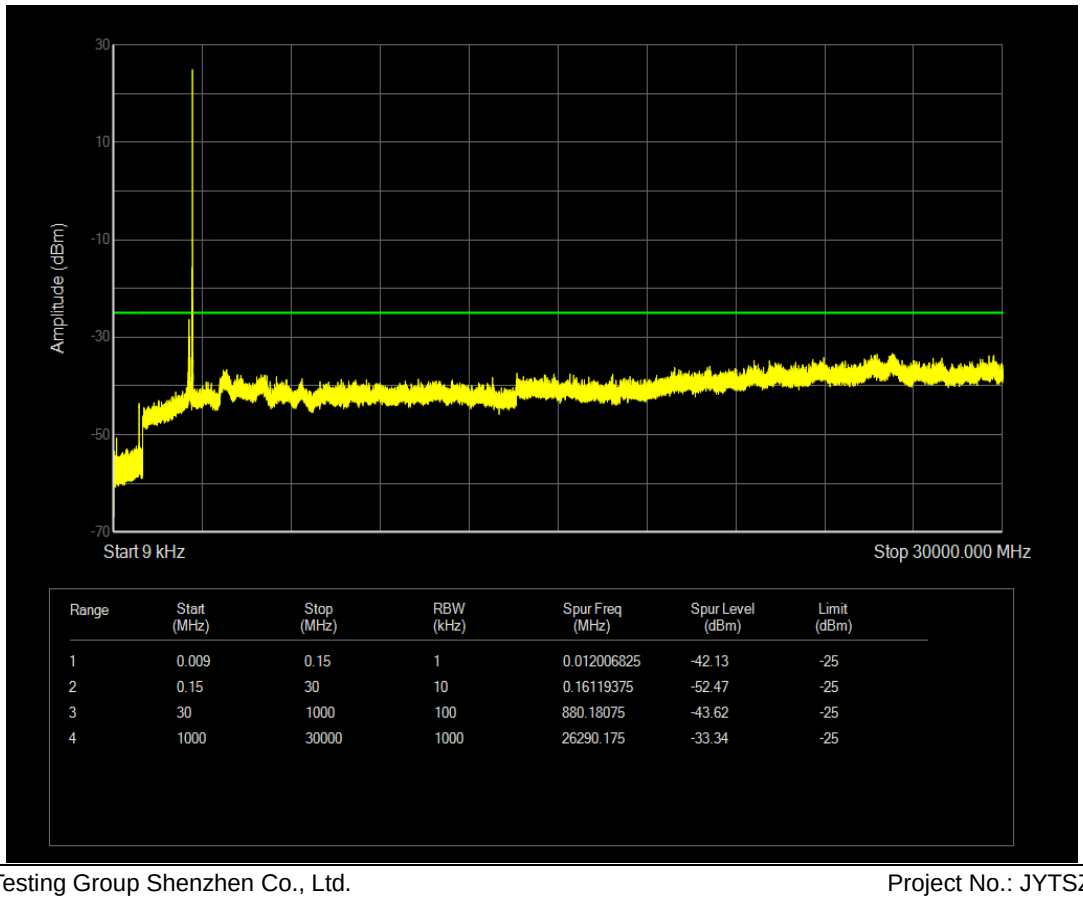
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015560025	-41.79	-25
2	0.15	30	10	0.1544775	-52.95	-25
3	30	1000	100	36.402	-49.11	-25
4	1000	30000	1000	25695.675	-33.5	-25

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



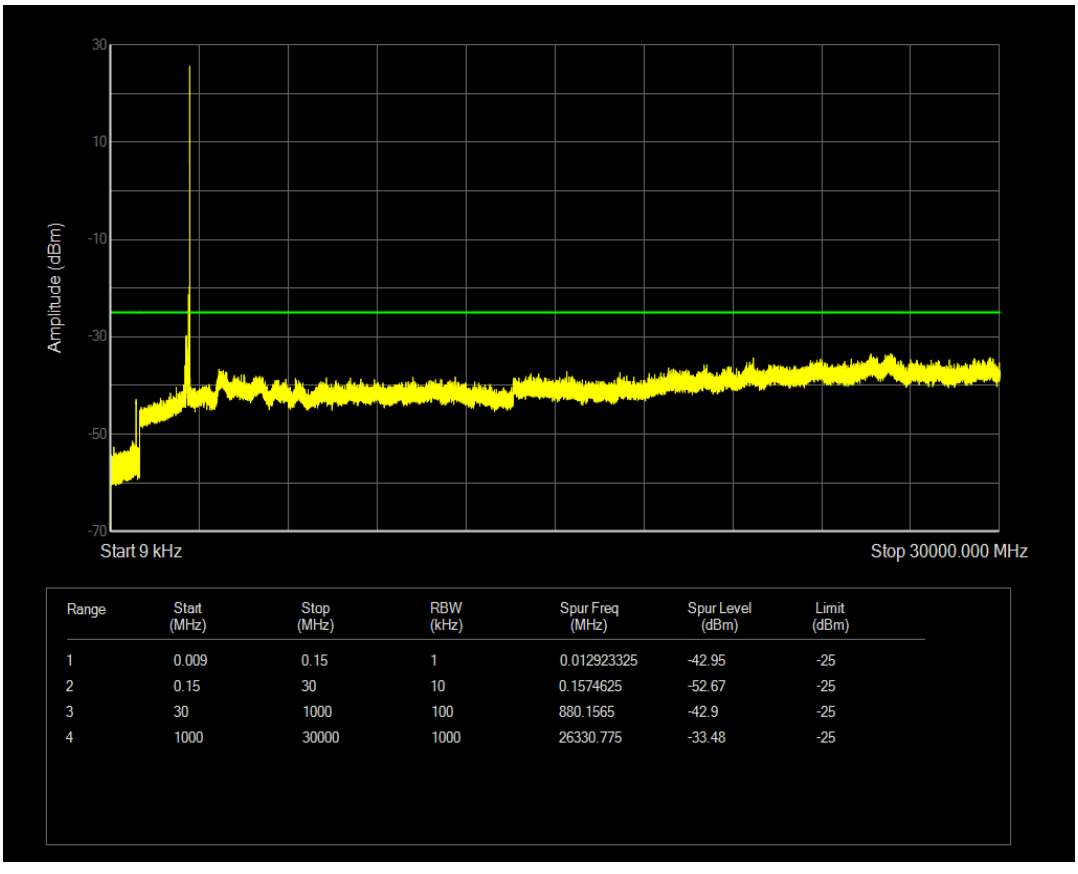
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.013790475	-41.95	-25
2	0.15	30	10	0.15074625	-53.47	-25
3	30	1000	100	967.3595	-51.71	-25
4	1000	30000	1000	26276.4	-32.99	-25

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



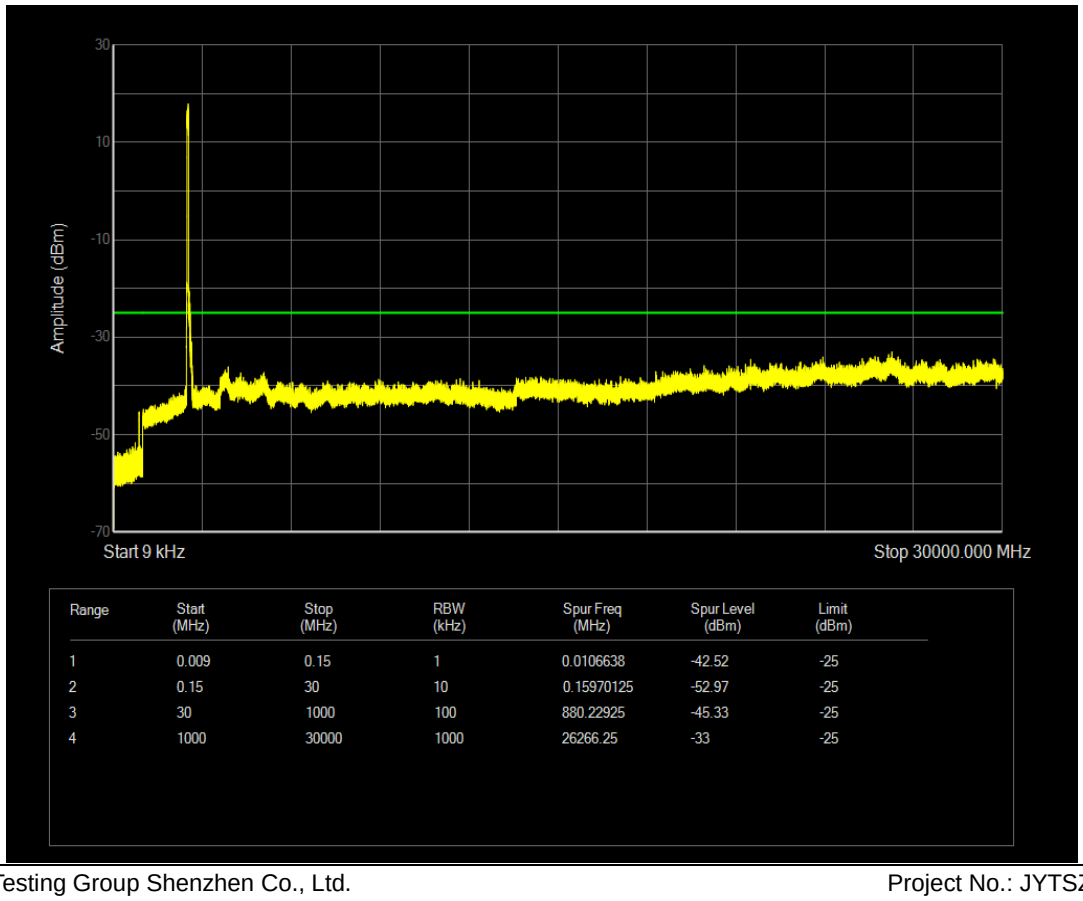
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012006825	-42.13	-25
2	0.15	30	10	0.16119375	-52.47	-25
3	30	1000	100	880.18075	-43.62	-25
4	1000	30000	1000	26290.175	-33.34	-25

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



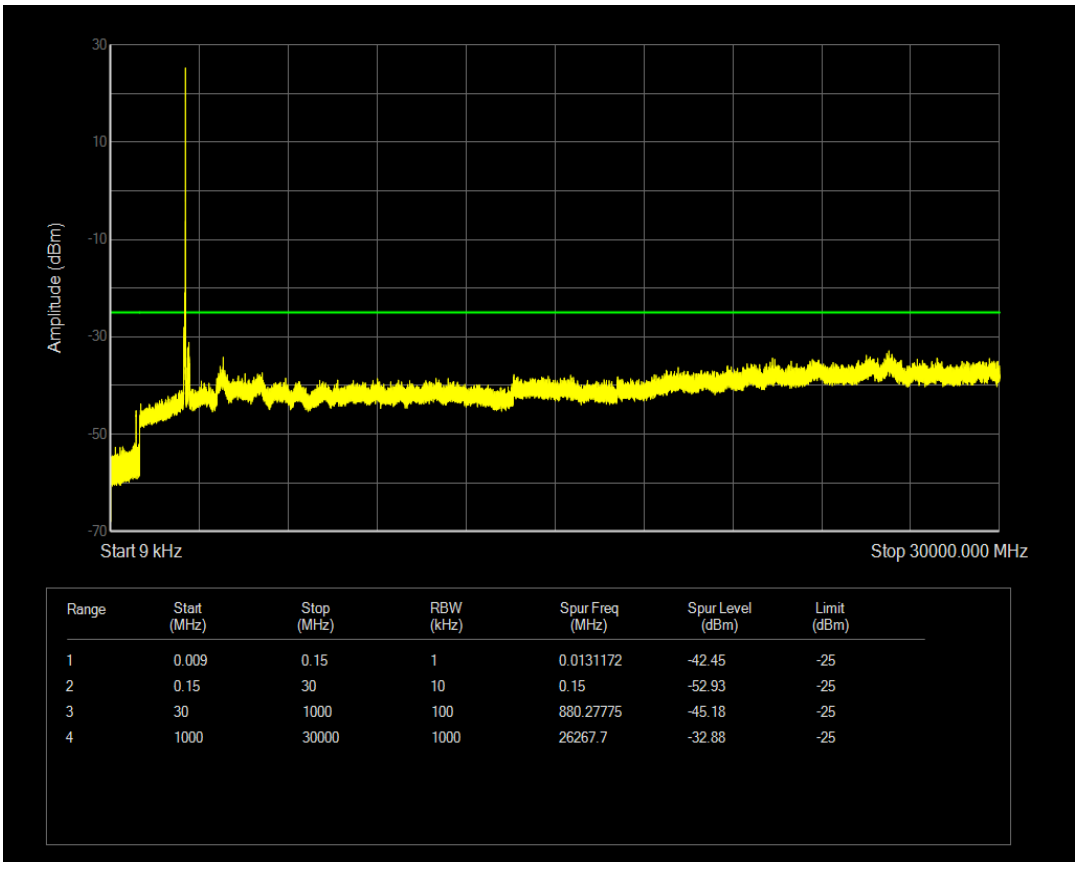
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012923325	-42.95	-25
2	0.15	30	10	0.1574625	-52.67	-25
3	30	1000	100	880.1565	-42.9	-25
4	1000	30000	1000	26330.775	-33.48	-25

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



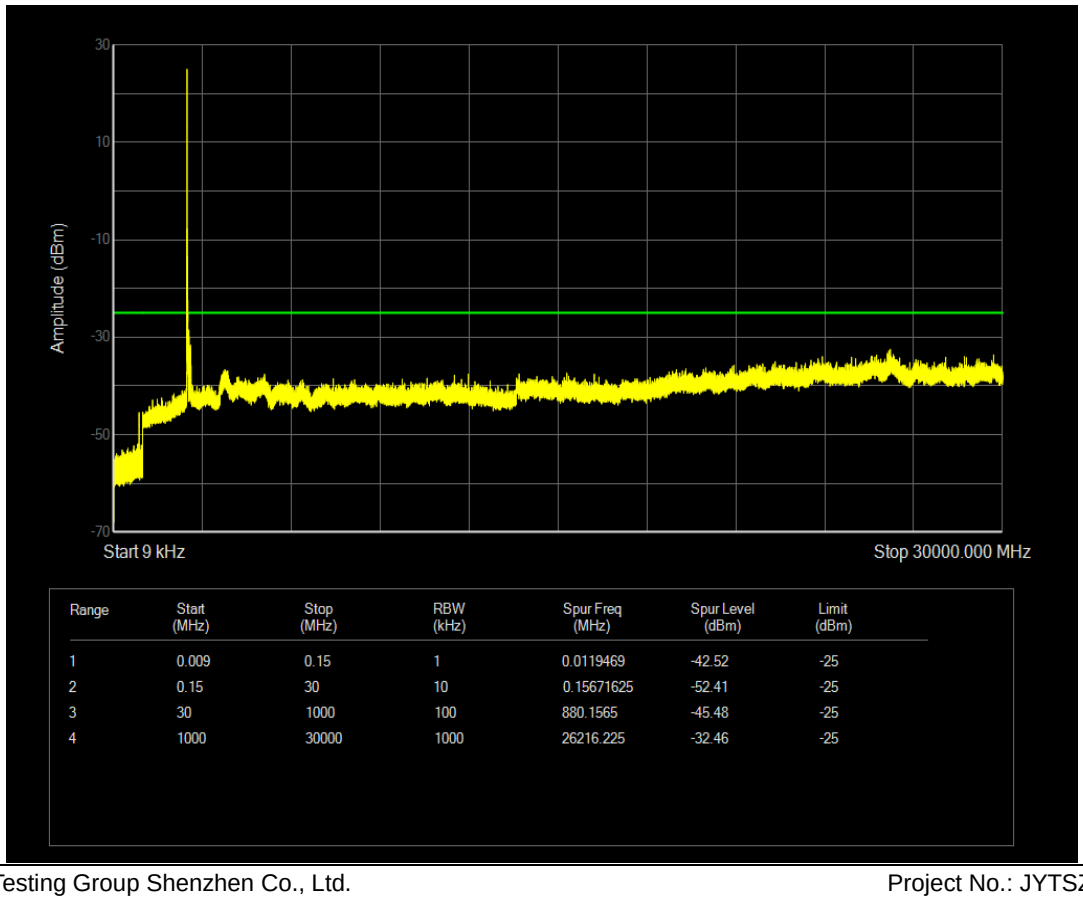
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0106638	-42.52	-25
2	0.15	30	10	0.15970125	-52.97	-25
3	30	1000	100	880.22925	-45.33	-25
4	1000	30000	1000	26266.25	-33	-25

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



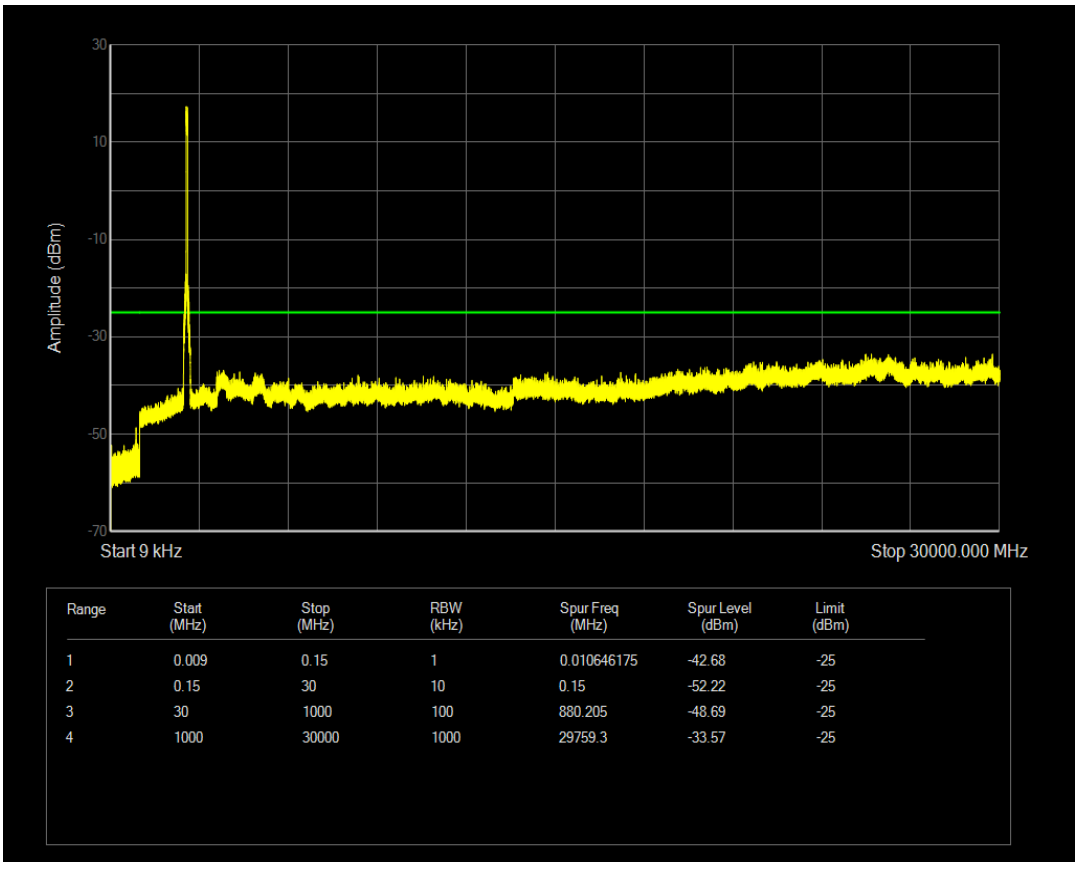
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0131172	-42.45	-25
2	0.15	30	10	0.15	-52.93	-25
3	30	1000	100	880.27775	-45.18	-25
4	1000	30000	1000	26267.7	-32.88	-25

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



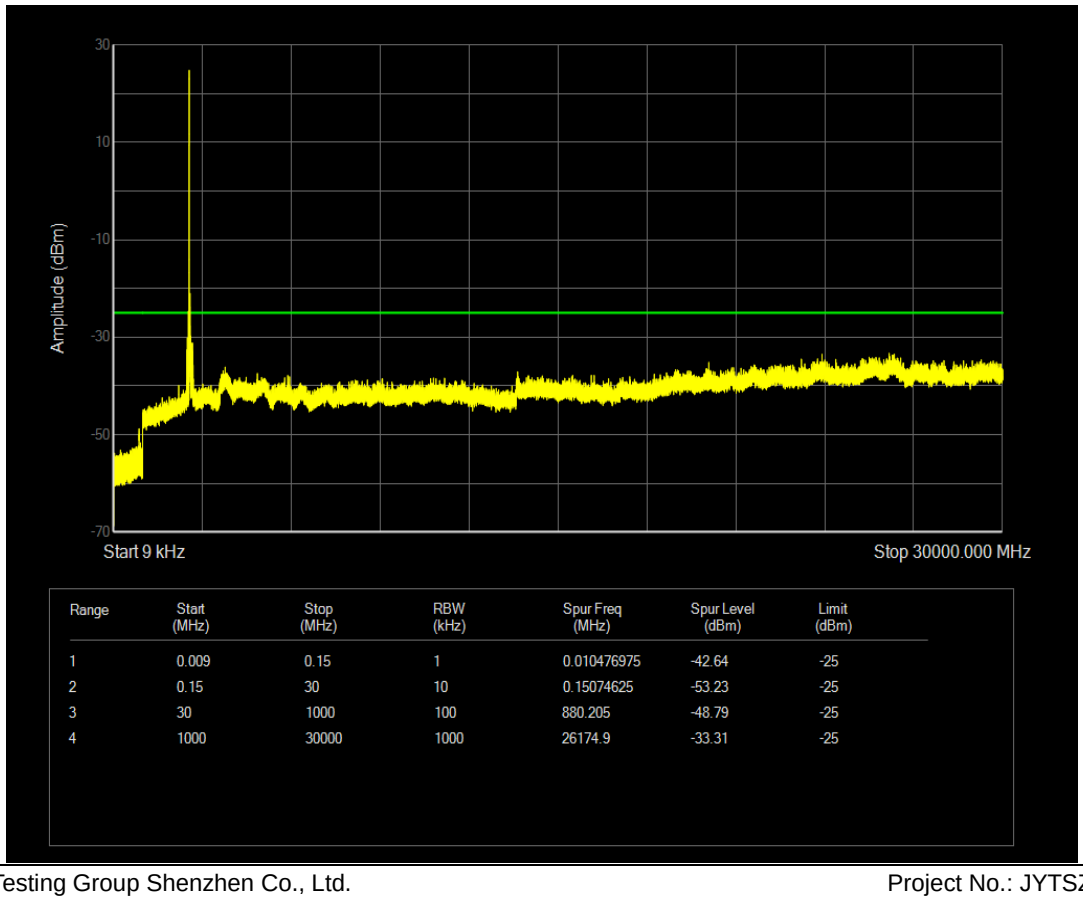
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0119469	-42.52	-25
2	0.15	30	10	0.15671625	-52.41	-25
3	30	1000	100	880.1565	-45.48	-25
4	1000	30000	1000	26216.225	-32.46	-25

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



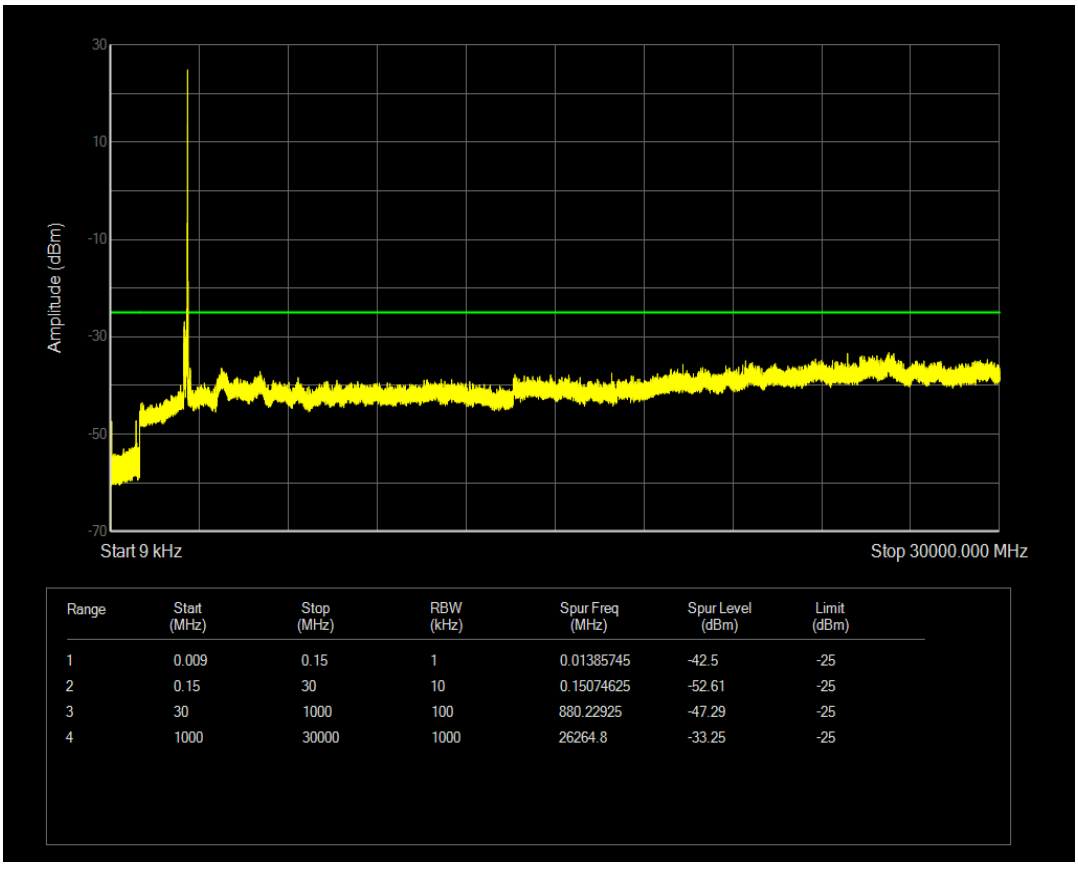
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010646175	-42.68	-25
2	0.15	30	10	0.15	-52.22	-25
3	30	1000	100	880.205	-48.69	-25
4	1000	30000	1000	29759.3	-33.57	-25

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



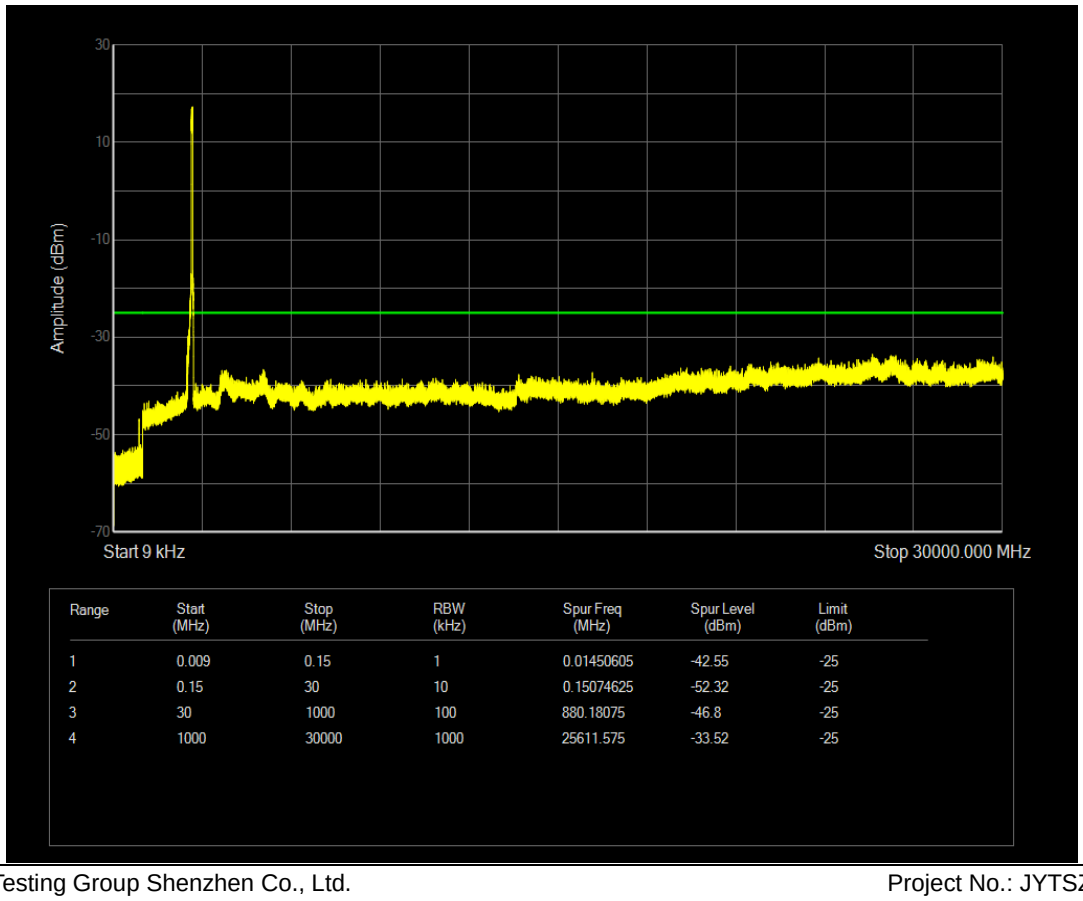
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010476975	-42.64	-25
2	0.15	30	10	0.15074625	-53.23	-25
3	30	1000	100	880.205	-48.79	-25
4	1000	30000	1000	26174.9	-33.31	-25

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



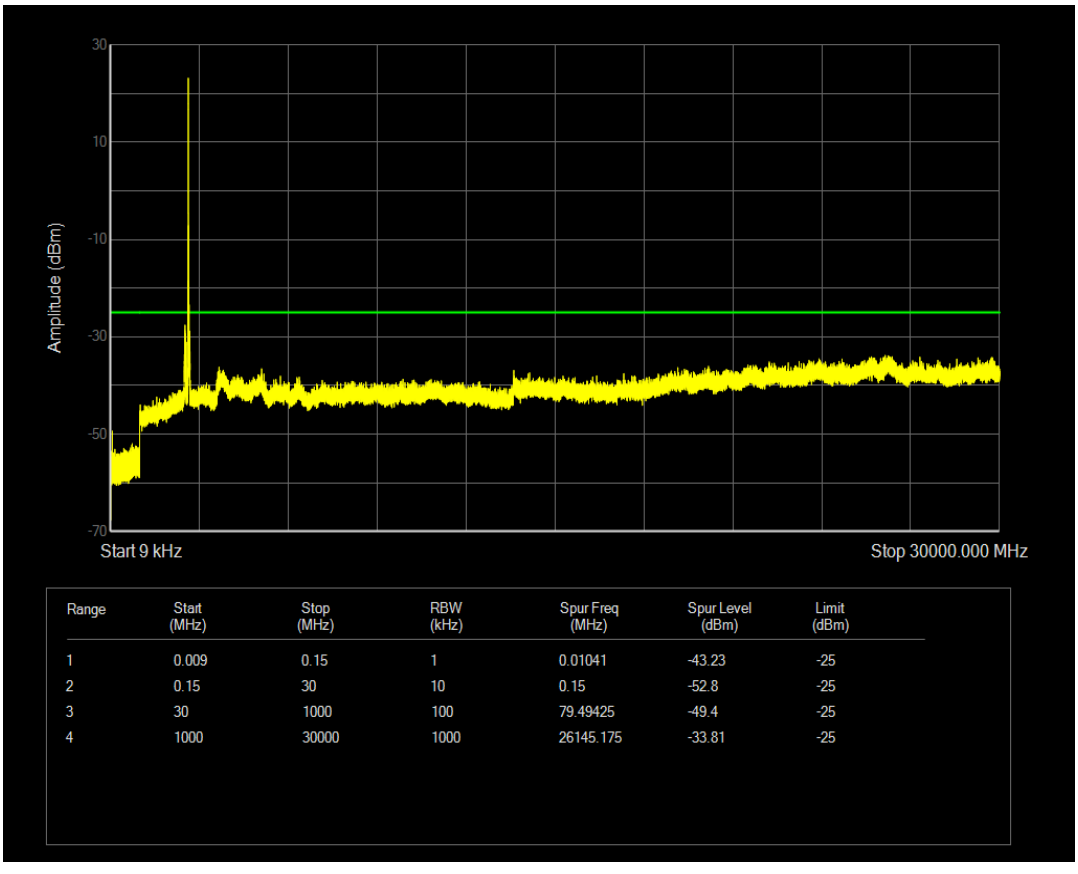
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01385745	-42.5	-25
2	0.15	30	10	0.15074625	-52.61	-25
3	30	1000	100	880.22925	-47.29	-25
4	1000	30000	1000	26264.8	-33.25	-25

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



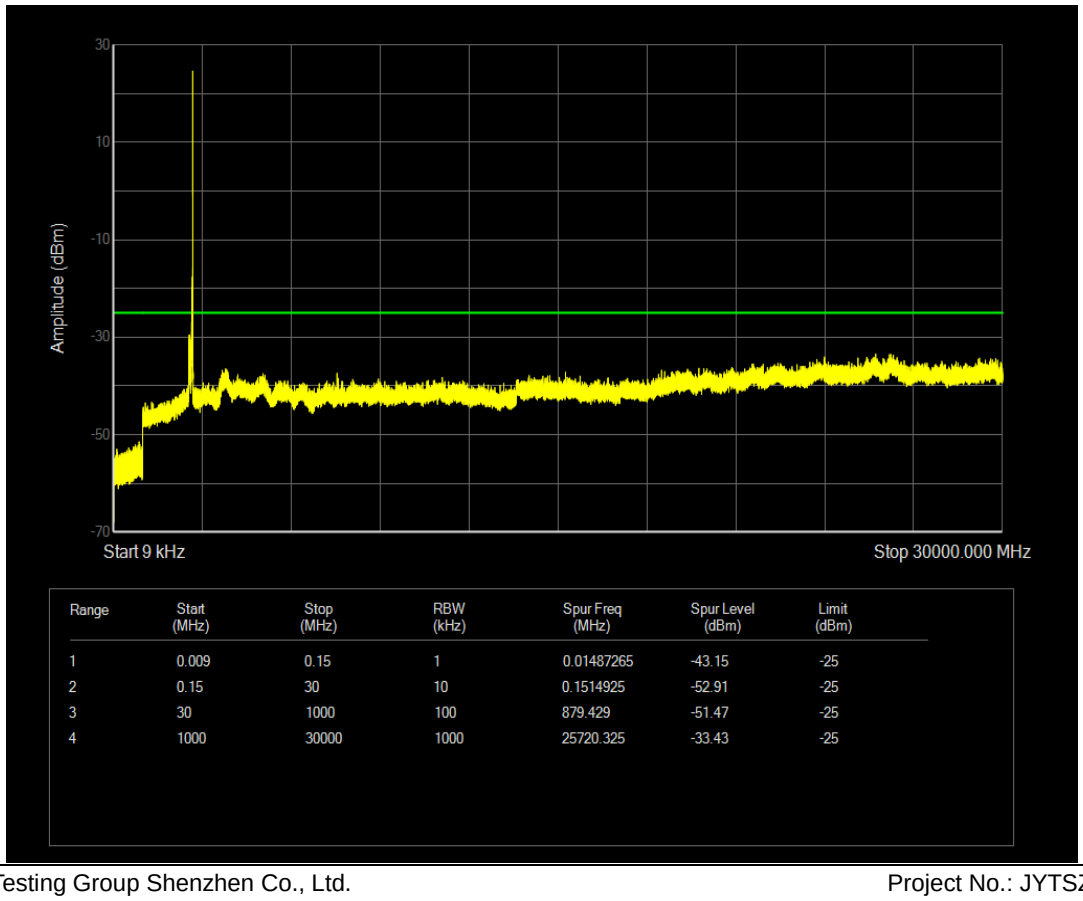
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01450605	-42.55	-25
2	0.15	30	10	0.15074625	-52.32	-25
3	30	1000	100	880.18075	-46.8	-25
4	1000	30000	1000	25611.575	-33.52	-25

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	0.01041	-43.23	-25
2	0.15	30	10	0.15	-52.8	-25
3	30	1000	100	79.49425	-49.4	-25
4	1000	30000	1000	26145.175	-33.81	-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	0.01487265	-43.15	-25
2	0.15	30	10	0.1514925	-52.91	-25
3	30	1000	100	879.429	-51.47	-25
4	1000	30000	1000	25720.325	-33.43	-25