1 Conducted output power for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Power (dBm)	Gain (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
n78(3450-3550)	30	70	632334	90@45	DFT_BPSK	27.44	-1.95	25.49	30	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_BPSK	26.88	-1.95	24.93	30	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_BPSK	26.80	-1.95	24.85	30	PASS
n78(3450-3550)	30	70	632334	90@45	DFT_QPSK	27.44	-1.95	25.49	30	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_QPSK	26.72	-1.95	24.77	30	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_QPSK	26.59	-1.95	24.64	30	PASS
n78(3450-3550)	30	70	632334	90@45	DFT_QAM16	26.42	-1.95	24.47	30	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_QAM16	25.79	-1.95	23.84	30	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_QAM16	25.66	-1.95	23.71	30	PASS
n78(3450-3550)	30	70	632334	90@45	DFT_QAM64	24.94	-1.95	22.99	30	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_QAM64	24.66	-1.95	22.71	30	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_QAM64	24.55	-1.95	22.6	30	PASS
n78(3450-3550)	30	70	632334	95@47	CP_QPSK	25.92	-1.95	23.97	30	PASS
n78(3450-3550)	30	70	632334	1@1	CP_QPSK	25.47	-1.95	23.52	30	PASS
n78(3450-3550)	30	70	632334	1@187	CP_QPSK	25.23	-1.95	23.28	30	PASS
n78(3450-3550)	30	70	632334	95@47	CP_QAM16	25.44	-1.95	23.49	30	PASS
n78(3450-3550)	30	70	632334	1@1	CP_QAM16	24.83	-1.95	22.88	30	PASS
n78(3450-3550)	30	70	632334	1@187	CP_QAM16	25.04	-1.95	23.09	30	PASS
n78(3450-3550)	30	70	632334	95@47	CP_QAM64	23.81	-1.95	21.86	30	PASS
n78(3450-3550)	30	70	632334	1@1	CP_QAM64	24.13	-1.95	22.18	30	PASS
n78(3450-3550)	30	70	632334	1@187	CP_QAM64	23.30	-1.95	21.35	30	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_BPSK	27.32	-1.95	25.37	30	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_BPSK	26.93	-1.95	24.98	30	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_BPSK	26.86	-1.95	24.91	30	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_QPSK	27.31	-1.95	25.36	30	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_QPSK	26.72	-1.95	24.77	30	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_QPSK	26.68	-1.95	24.73	30	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_QAM16	26.29	-1.95	24.34	30	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_QAM16	25.85	-1.95	23.9	30	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_QAM16	25.76	-1.95	23.81	30	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_QAM64	24.79	-1.95	22.84	30	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_QAM64	24.47	-1.95	22.52	30	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_QAM64	24.43	-1.95	22.48	30	PASS
n78(3450-3550)	30	70	633334	95@47	CP_QPSK	25.78	-1.95	23.83	30	PASS
n78(3450-3550)	30	70	633334	1@1	CP_QPSK	25.33	-1.95	23.38	30	PASS
n78(3450-3550)	30	70	633334	1@187	CP_QPSK	25.24	-1.95	23.29	30	PASS

n78(3450-3550)	30	70	633334	95@47	CP_QAM16	25.28	-1.95	23.33	30	PASS
n78(3450-3550)	30	70	633334	1@1	CP_QAM16	25.19	-1.95	23.24	30	PASS
n78(3450-3550)	30	70	633334	1@187	CP_QAM16	25.15	-1.95	23.2	30	PASS
n78(3450-3550)	30	70	633334	95@47	CP_QAM64	23.74	-1.95	21.79	30	PASS
n78(3450-3550)	30	70	633334	1@1	CP_QAM64	24.03	-1.95	22.08	30	PASS
n78(3450-3550)	30	70	633334	1@187	CP_QAM64	23.98	-1.95	22.03	30	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_BPSK	27.15	-1.95	25.2	30	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_BPSK	27.15	-1.95	25.2	30	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_BPSK	27.13	-1.95	25.18	30	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_QPSK	27.11	-1.95	25.16	30	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_QPSK	26.94	-1.95	24.99	30	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_QPSK	26.87	-1.95	24.92	30	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_QAM16	26.16	-1.95	24.21	30	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_QAM16	26.21	-1.95	24.26	30	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_QAM16	25.99	-1.95	24.04	30	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_QAM64	24.64	-1.95	22.69	30	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_QAM64	24.83	-1.95	22.88	30	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_QAM64	24.74	-1.95	22.79	30	PASS
n78(3450-3550)	30	70	634332	95@47	CP_QPSK	25.62	-1.95	23.67	30	PASS
n78(3450-3550)	30	70	634332	1@1	CP_QPSK	25.53	-1.95	23.58	30	PASS
n78(3450-3550)	30	70	634332	1@187	CP_QPSK	25.53	-1.95	23.58	30	PASS
n78(3450-3550)	30	70	634332	95@47	CP_QAM16	25.20	-1.95	23.25	30	PASS
n78(3450-3550)	30	70	634332	1@1	CP_QAM16	25.06	-1.95	23.11	30	PASS
n78(3450-3550)	30	70	634332	1@187	CP_QAM16	24.92	-1.95	22.97	30	PASS
n78(3450-3550)	30	70	634332	95@47	CP_QAM64	23.71	-1.95	21.76	30	PASS
n78(3450-3550)	30	70	634332	1@1	CP_QAM64	24.00	-1.95	22.05	30	PASS
n78(3450-3550)	30	70	634332	1@187	CP_QAM64	23.91	-1.95	21.96	30	PASS

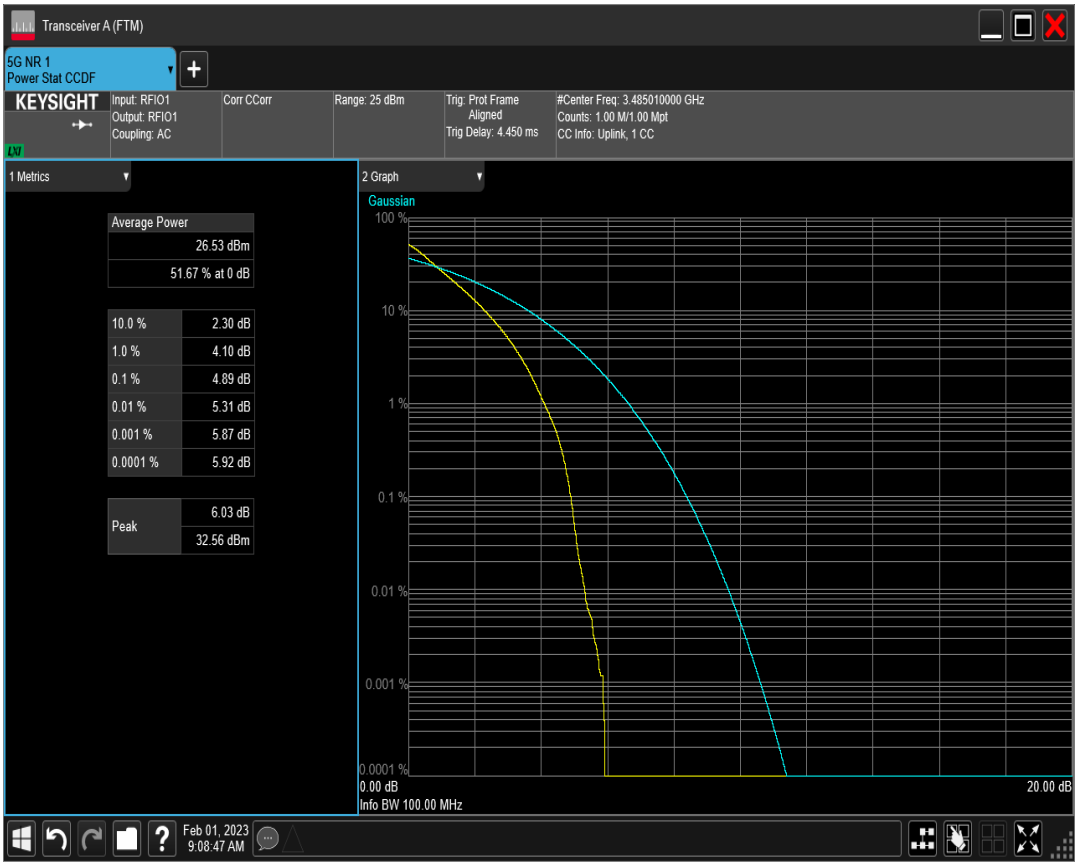
2 Frequency stability for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Result(Hz)	Result (ppm)	Low Limit (ppm)	high Limit (ppm)	Verdict
n78(3450-3550)	30	70	632334	90@45	DFT_BPSK	-28.23	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_BPSK	-25.63	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_BPSK	-31.94	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	632334	90@45	DFT_QPSK	-23.10	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	632334	1@1	DFT_QPSK	-23.80	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	632334	1@187	DFT_QPSK	-26.87	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_BPSK	-25.26	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_BPSK	-27.91	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_BPSK	-28.35	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	90@45	DFT_QPSK	-27.15	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	1@1	DFT_QPSK	-27.17	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	633334	1@187	DFT_QPSK	-30.81	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_BPSK	-25.43	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_BPSK	-25.86	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_BPSK	-26.24	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	90@45	DFT_QPSK	-29.91	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	1@1	DFT_QPSK	-26.76	-0.01	-2.5	2.5	PASS
n78(3450-3550)	30	70	634332	1@187	DFT_QPSK	-28.55	-0.01	-2.5	2.5	PASS

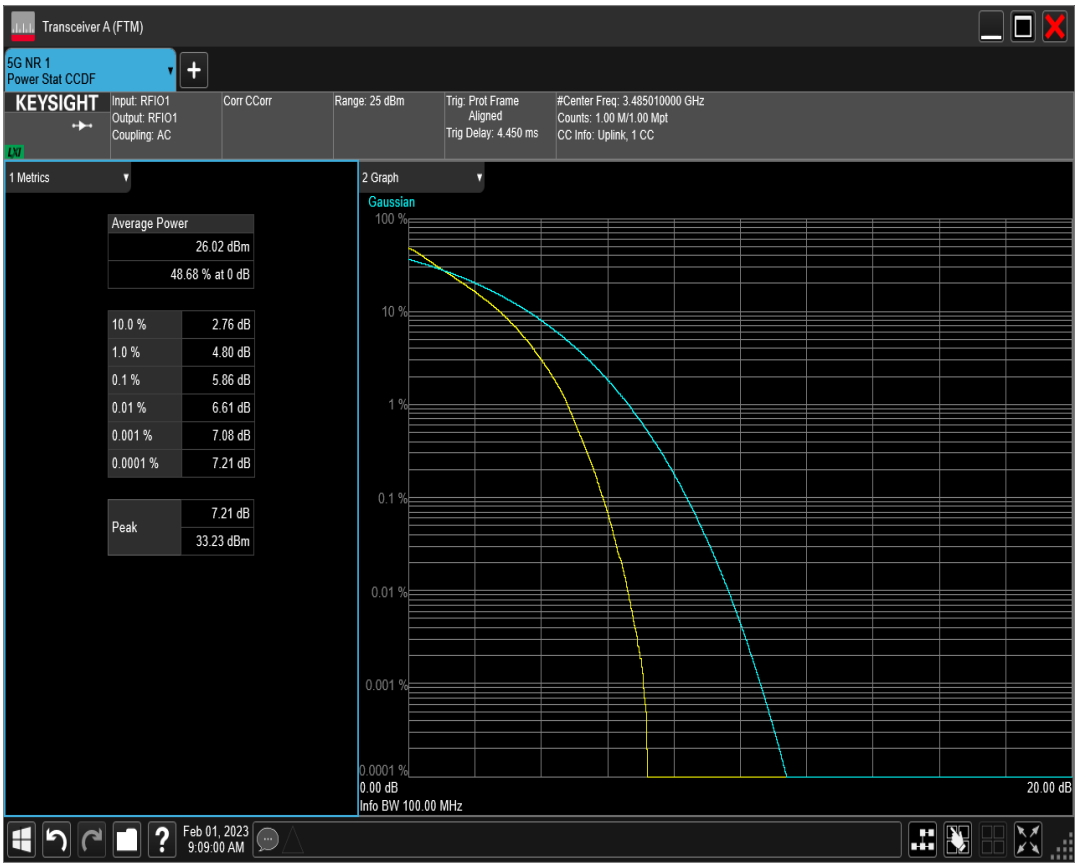
3 Peak-to-Average Ratio for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Result (dB)	high Limit (dB)	Verdict
n78(3450-3550)	30	70	632334	180@0	DFT_BPSK	4.89	13	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QPSK	5.86	13	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QAM16	6.60	13	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QAM64	6.92	13	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_BPSK	4.93	13	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QPSK	5.90	13	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QAM16	6.64	13	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QAM64	6.90	13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_BPSK	4.93	13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QPSK	5.91	13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QAM16	6.64	13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QAM64	6.96	13	PASS

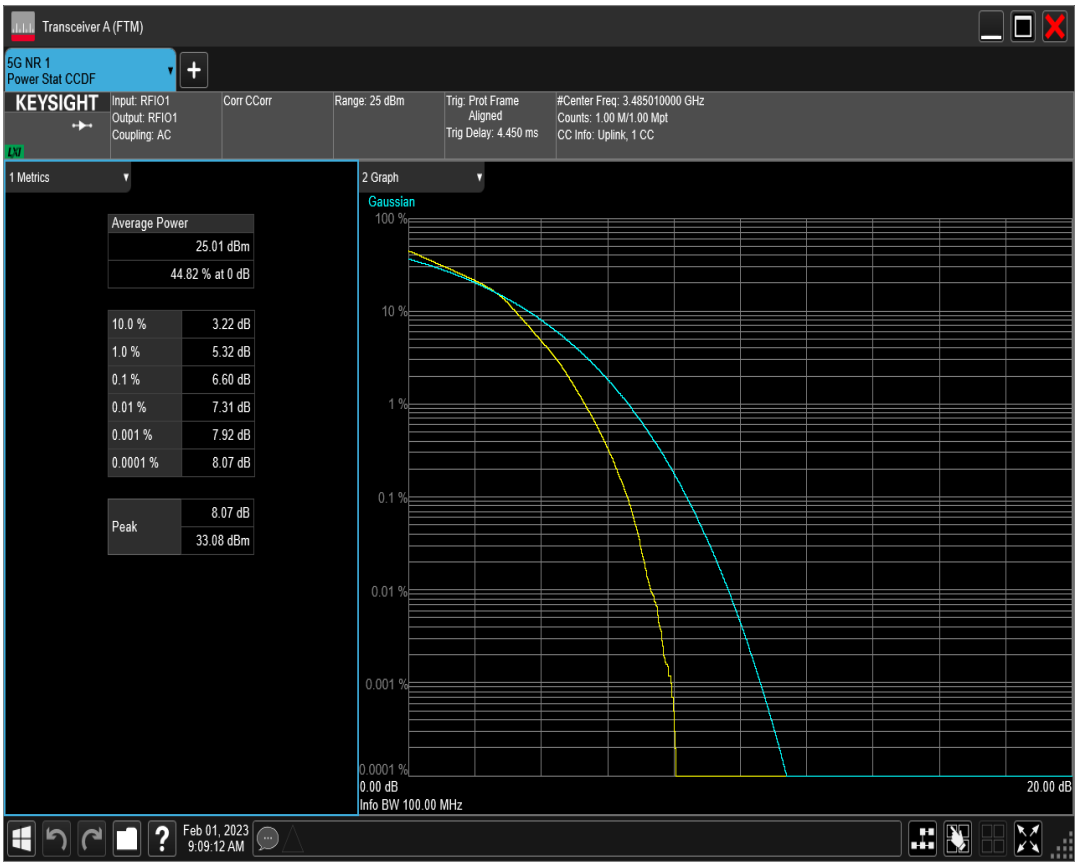
n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=632334 RB=180@0



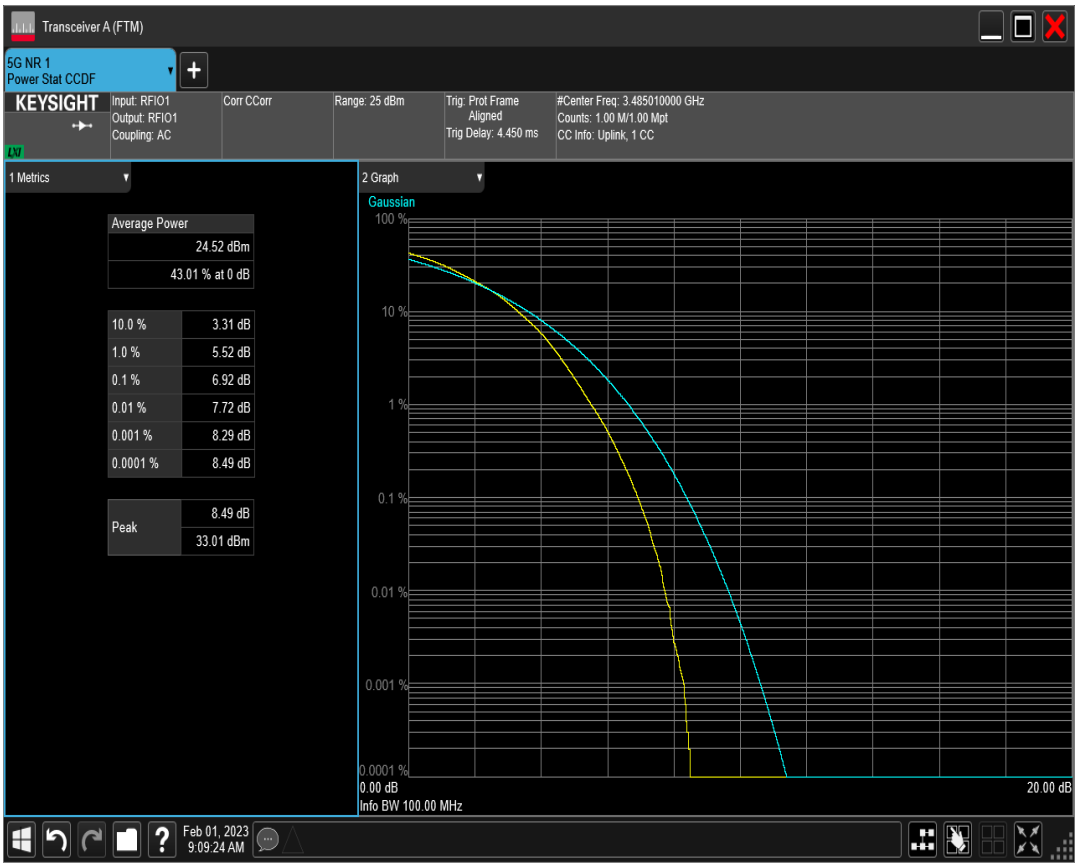
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=180@0



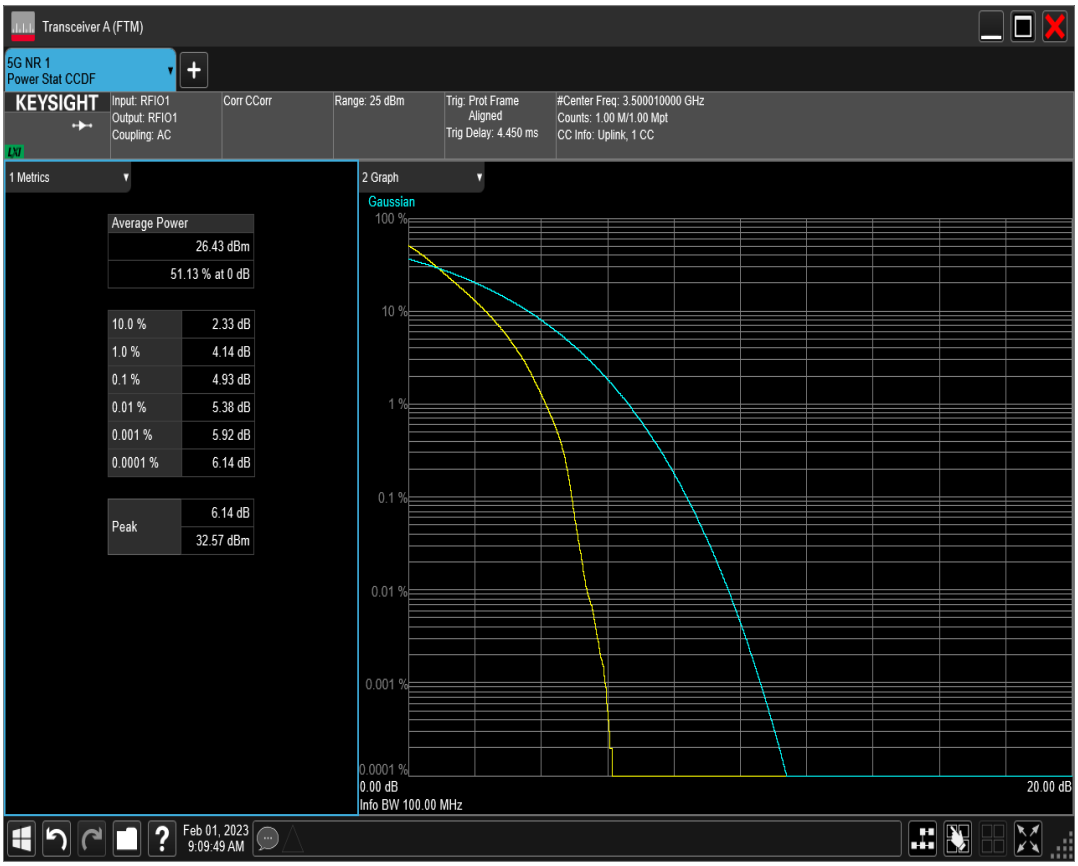
n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=632334 RB=180@0



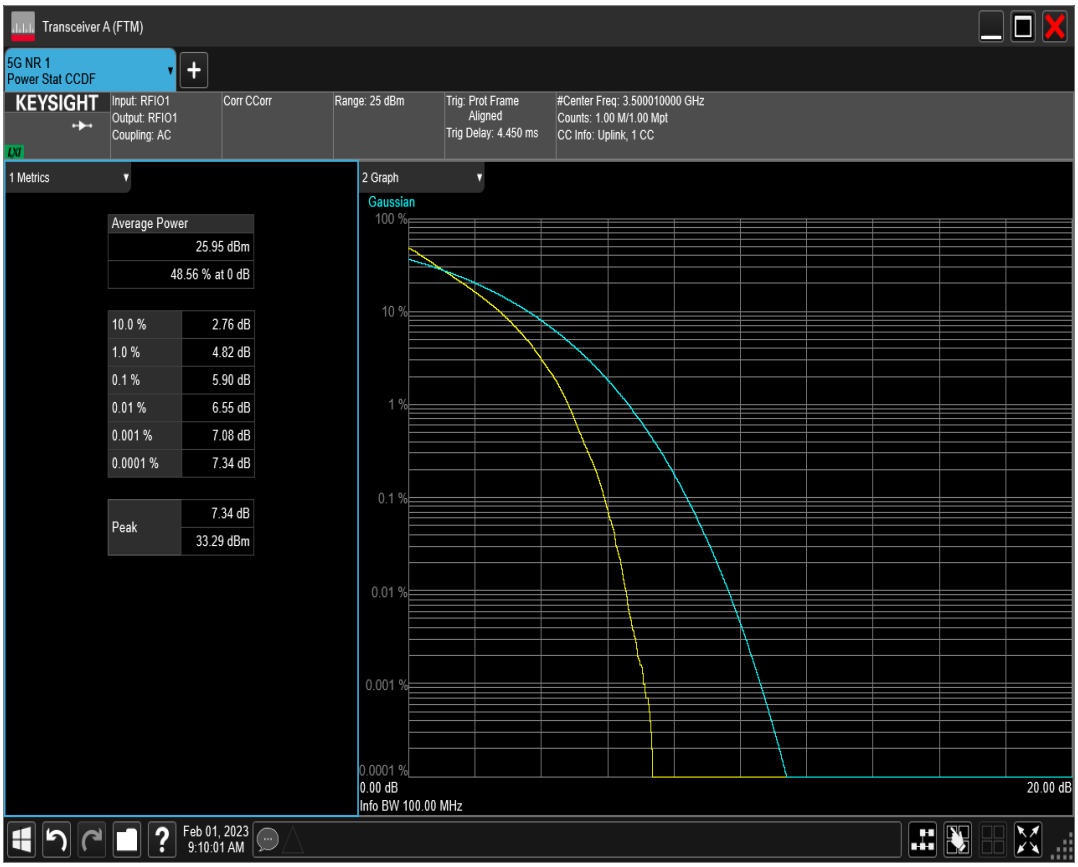
n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=632334 RB=180@0



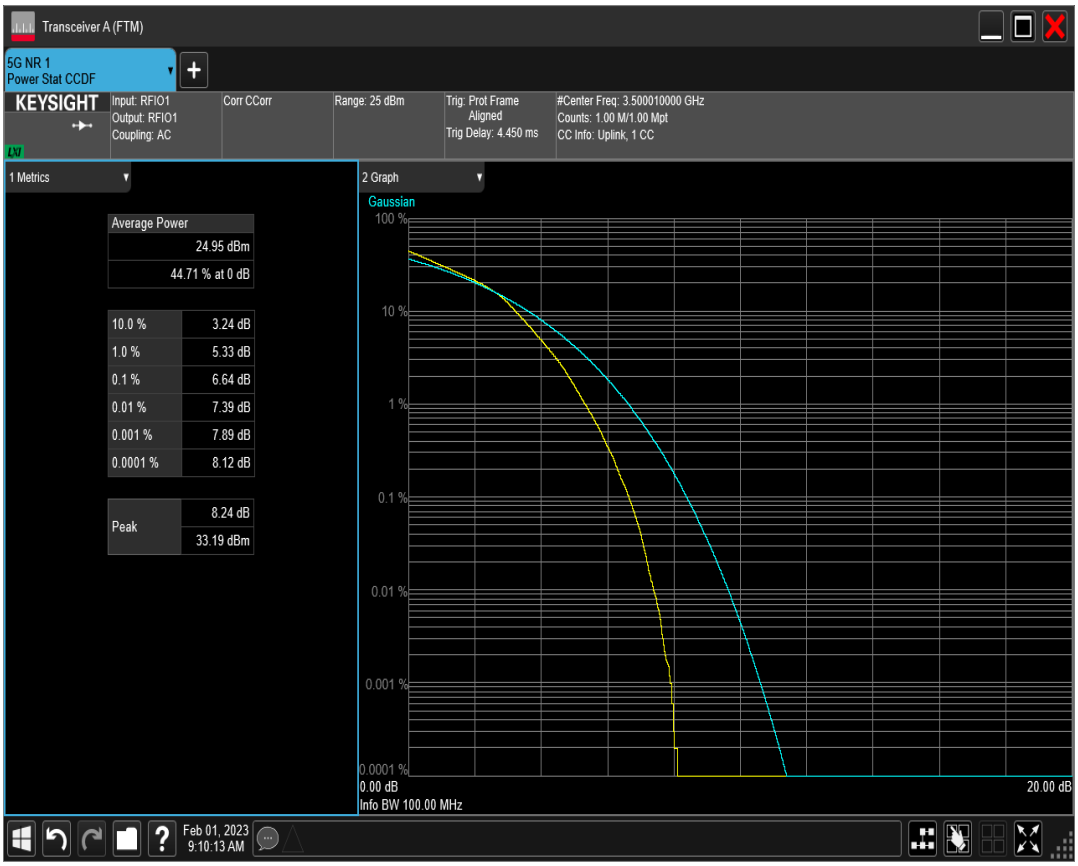
n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=633334 RB=180@0



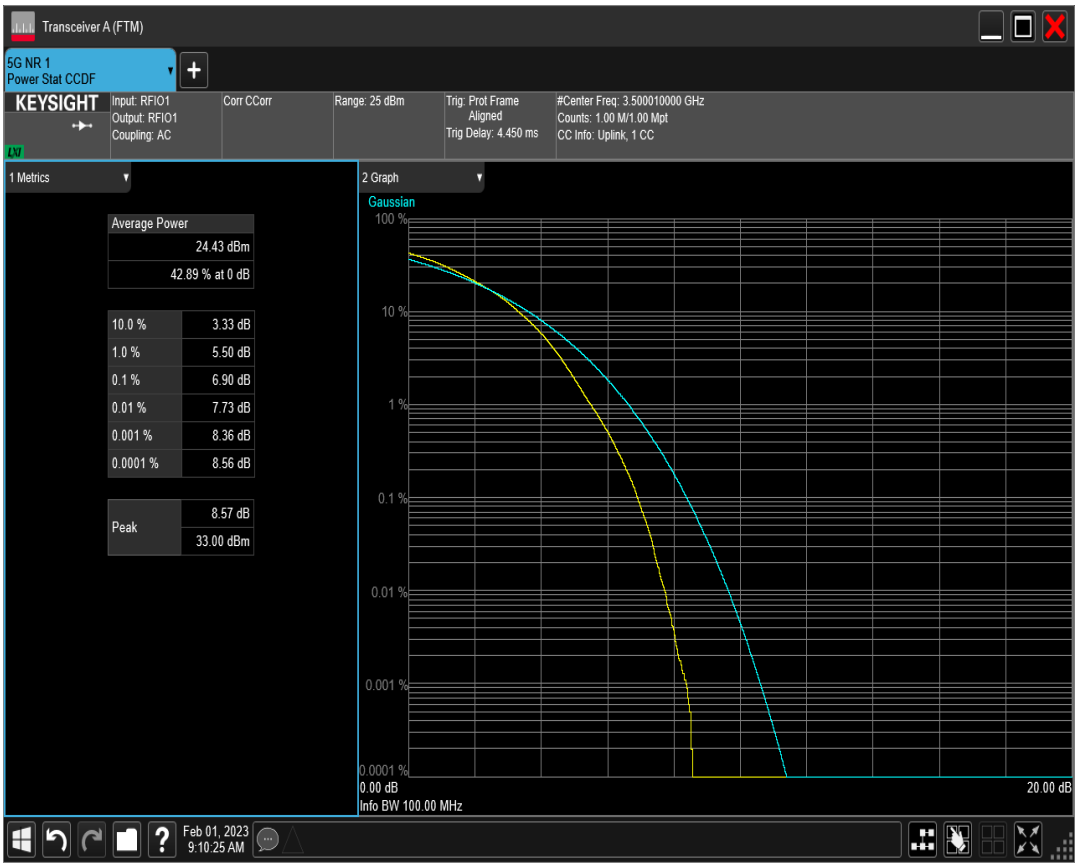
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=633334 RB=180@0



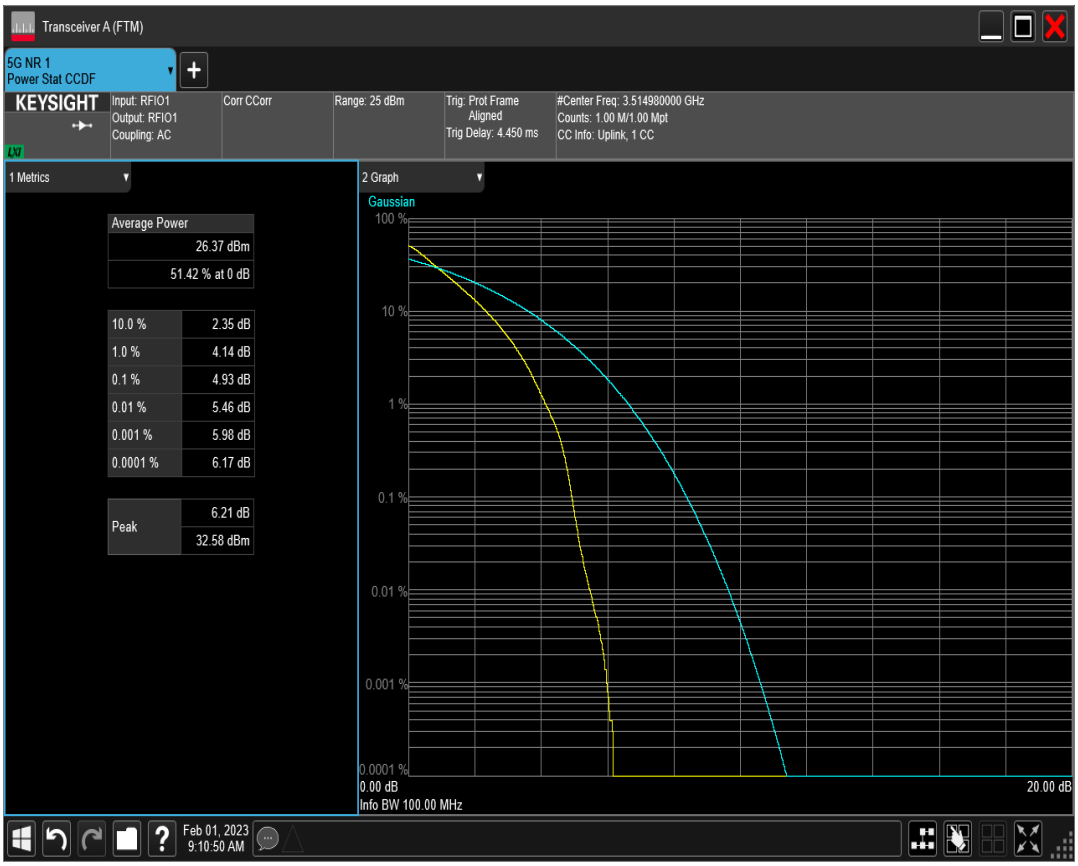
n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=633334 RB=180@0



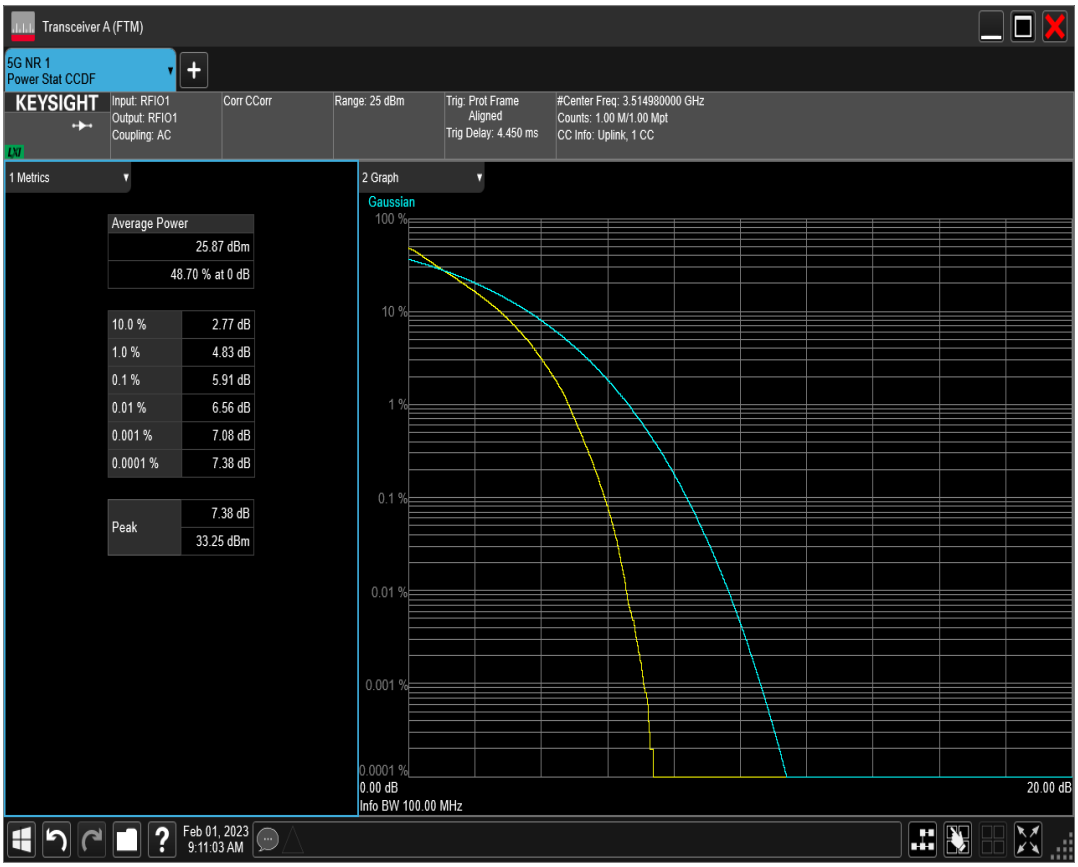
n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=633334 RB=180@0



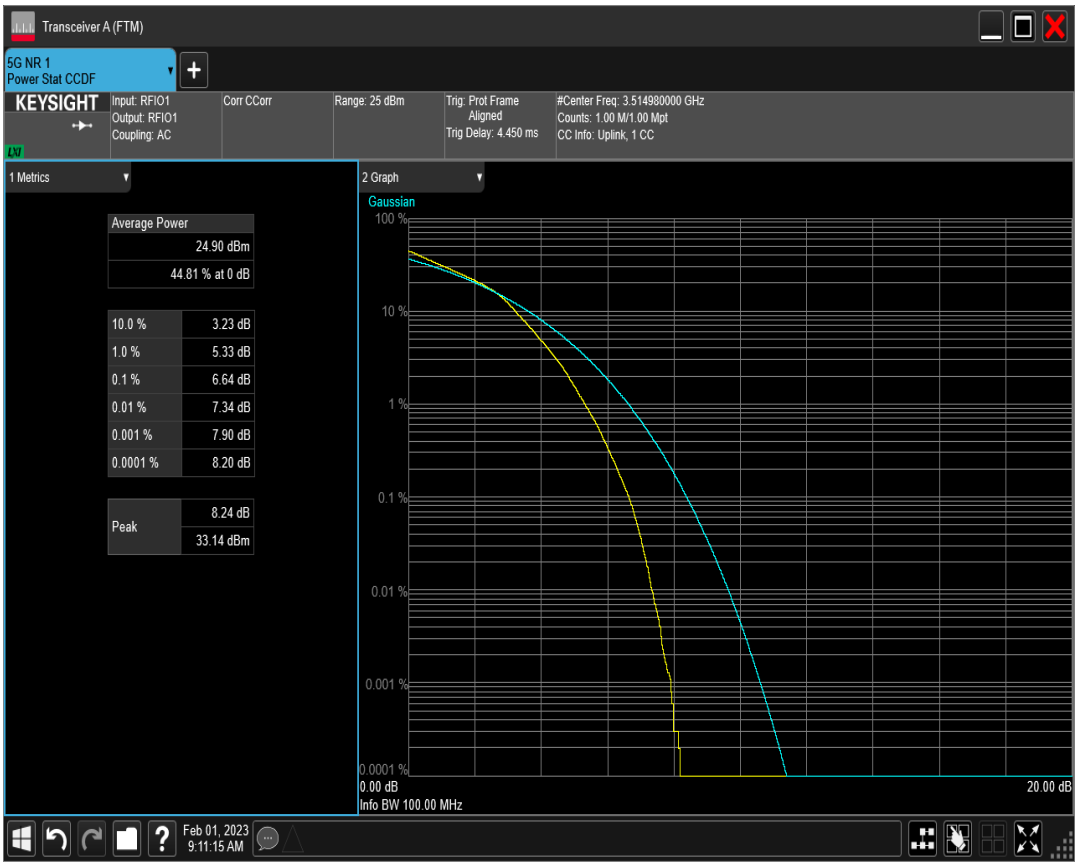
n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=634332 RB=180@0



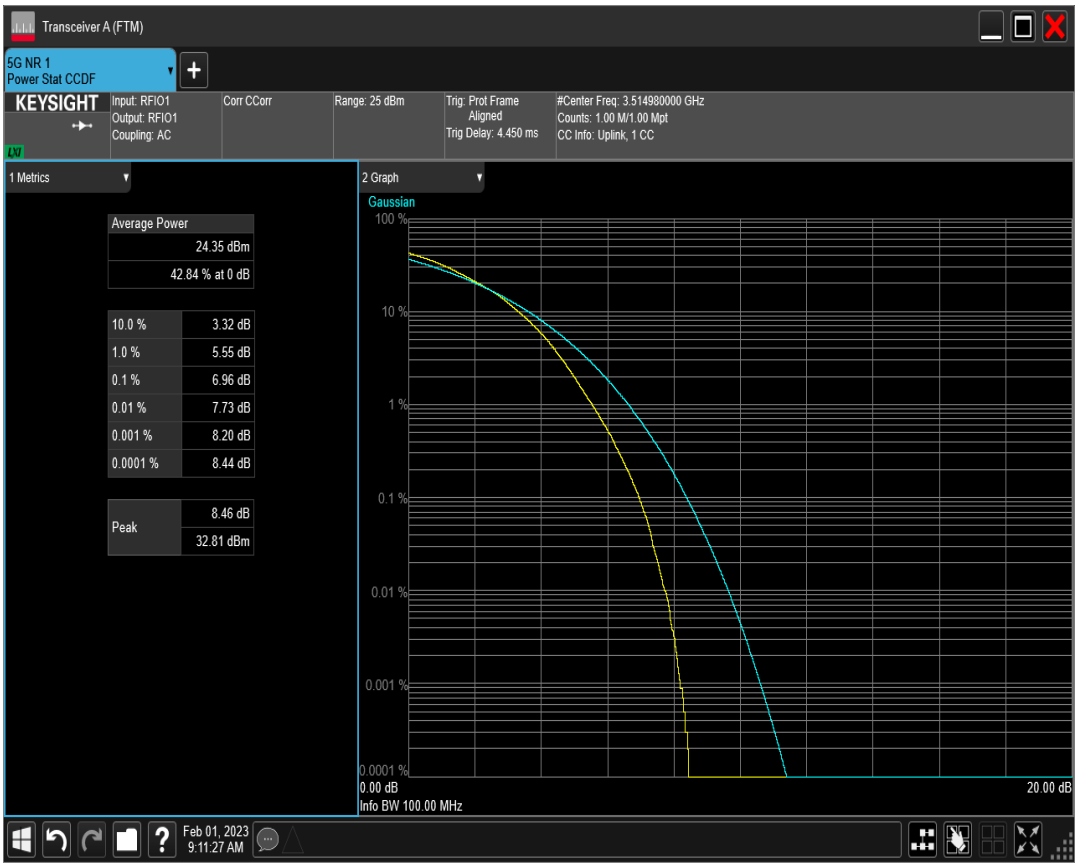
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=180@0



n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=634332 RB=180@0



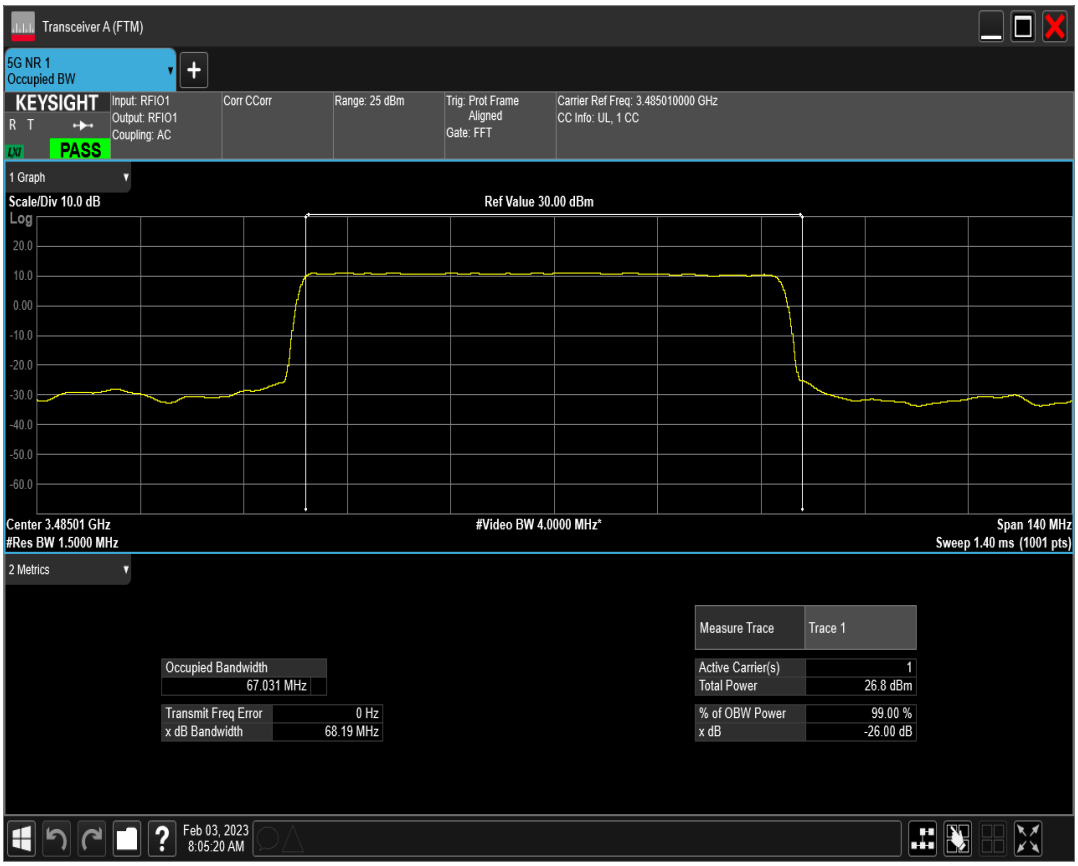
n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=634332 RB=180@0


Transceiver A (FTM)
5G NR 1
Power Stat CCDF
KEYSIGHT
Input: RFIO1
Output: RFIO1
Coupling: AC
Corr CCorr
Range: 25 dBm
Trig: Prot Frame
Aligned
Trig Delay: 4.450 ms
#Center Freq: 3.514980000 GHz
Counts: 1.00 M/1.00 Mpt
CC Info: Uplink, 1 CC
1 Metrics
Average Power
24.35 dBm
42.84 % at 0 dB
10.0 % 3.32 dB
1.0 % 5.55 dB
0.1 % 6.96 dB
0.01 % 7.73 dB
0.001 % 8.20 dB
0.0001 % 8.44 dB
Peak 8.46 dB
32.81 dBm
2 Graph
Gaussian
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.00 dB
20.00 dB
Info BW 100.00 MHz
Feb 01, 2023
9:11:27 AM

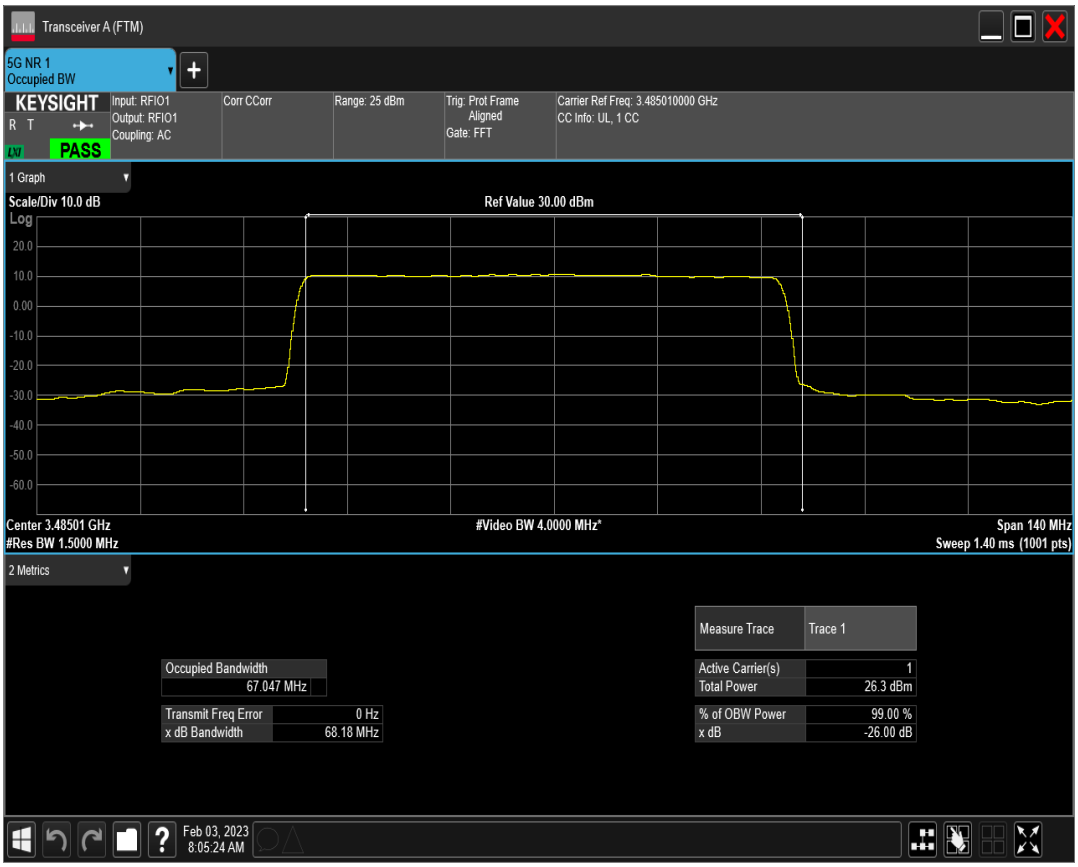
4 Occupied bandwidth for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	99% OBW (MHz)	-26dB EBW (MHz)	Verdict
n78(3450-3550)	30	70	632334	180@0	DFT_BPSK	67.030	68.190	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QPSK	67.050	68.180	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QAM16	67.050	68.180	PASS
n78(3450-3550)	30	70	632334	180@0	DFT_QAM64	67.050	68.190	PASS
n78(3450-3550)	30	70	632334	189@0	CP_QPSK	67.810	71.460	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_BPSK	66.990	68.180	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QPSK	66.970	68.150	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QAM16	66.990	68.200	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QAM64	66.960	68.160	PASS
n78(3450-3550)	30	70	633334	189@0	CP_QPSK	67.810	71.440	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_BPSK	67.050	68.180	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QPSK	67.050	68.200	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QAM16	67.220	68.180	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QAM64	67.020	68.150	PASS
n78(3450-3550)	30	70	634332	189@0	CP_QPSK	67.820	71.450	PASS

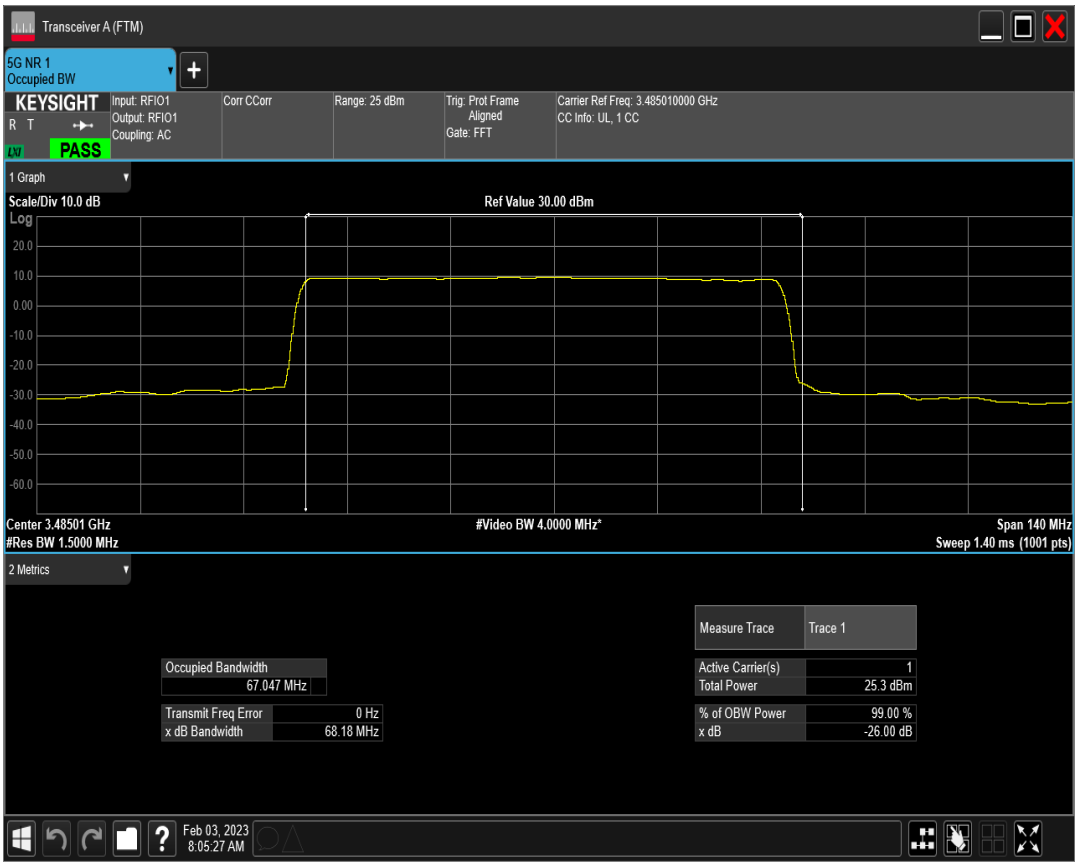
n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=632334 RB=180@0



n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=180@0

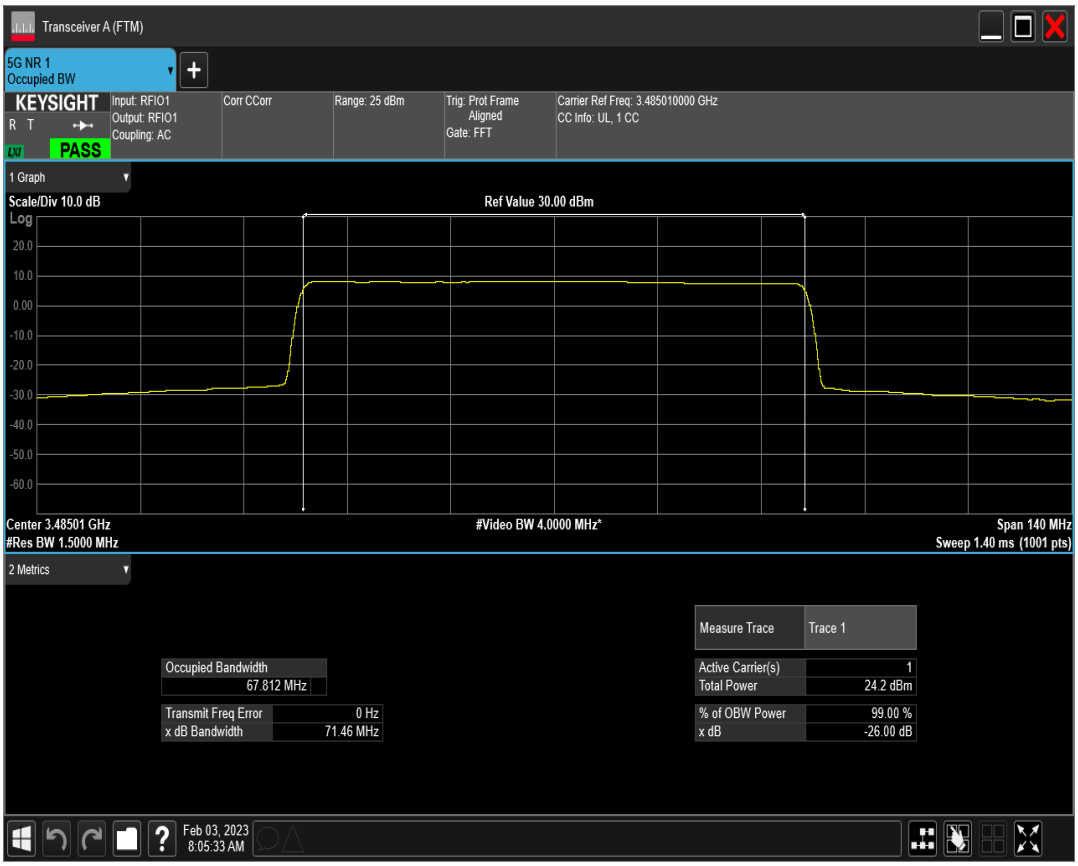


n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=632334 RB=180@0

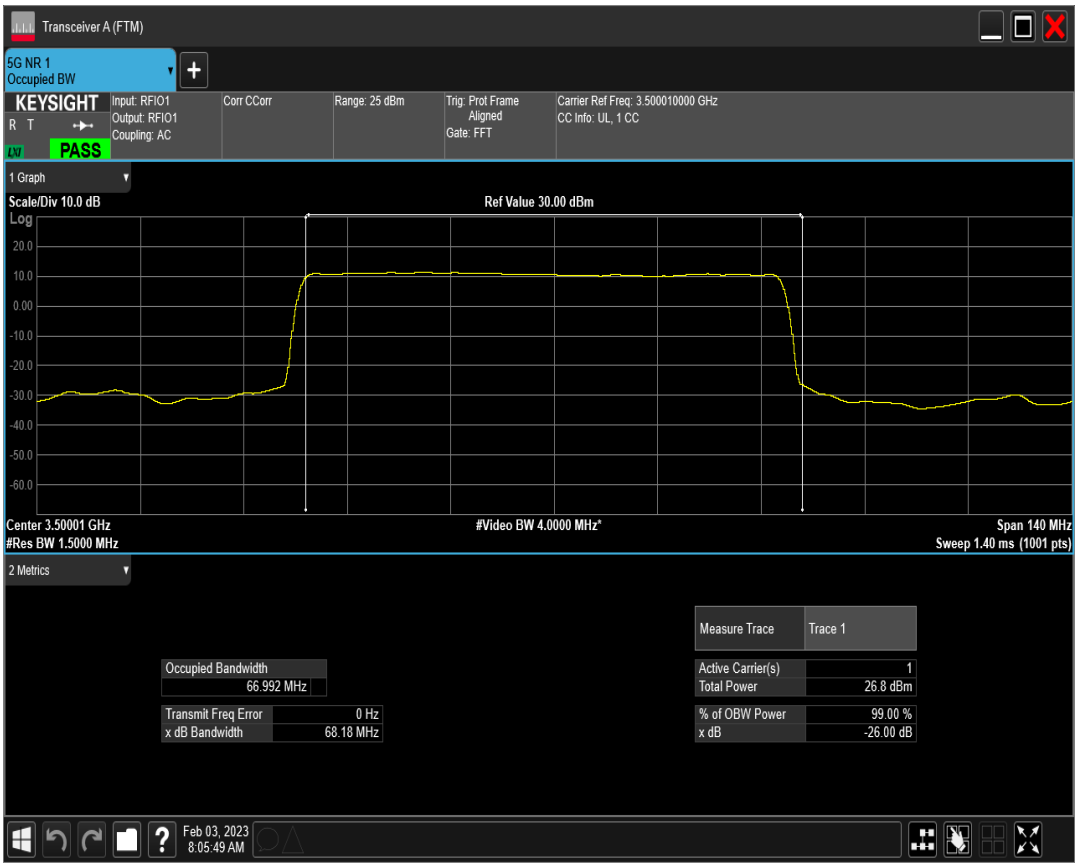


n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=632334 RB=180@0

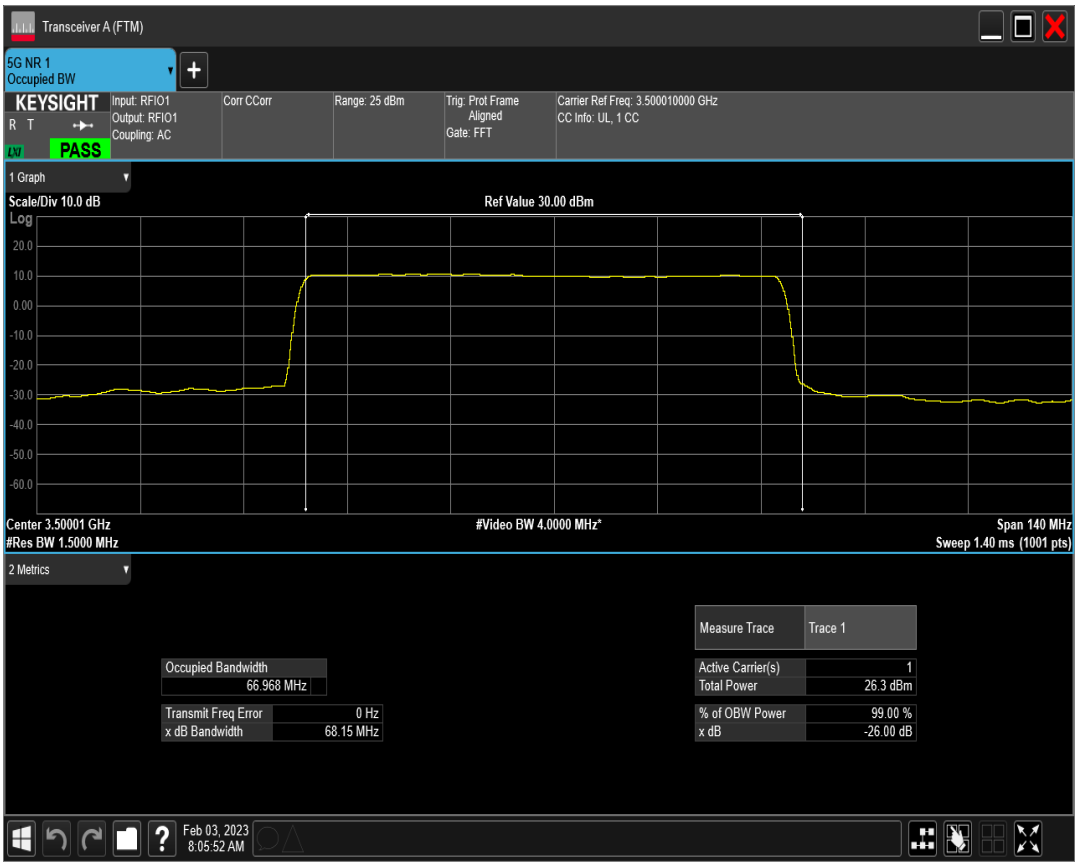
n78(3450-3550) SCS=30kHz CP_QPSK BW=70MHz Channel=632334 RB=189@0



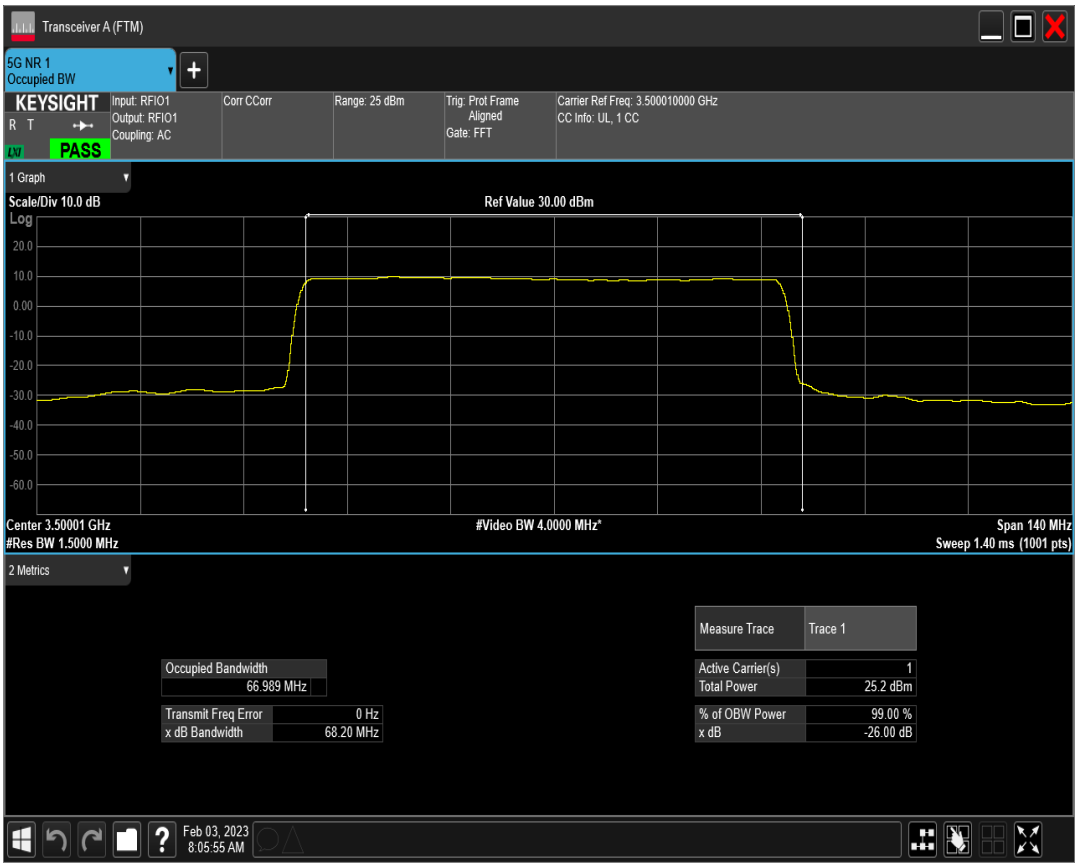
n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=633334 RB=180@0



n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=633334 RB=180@0

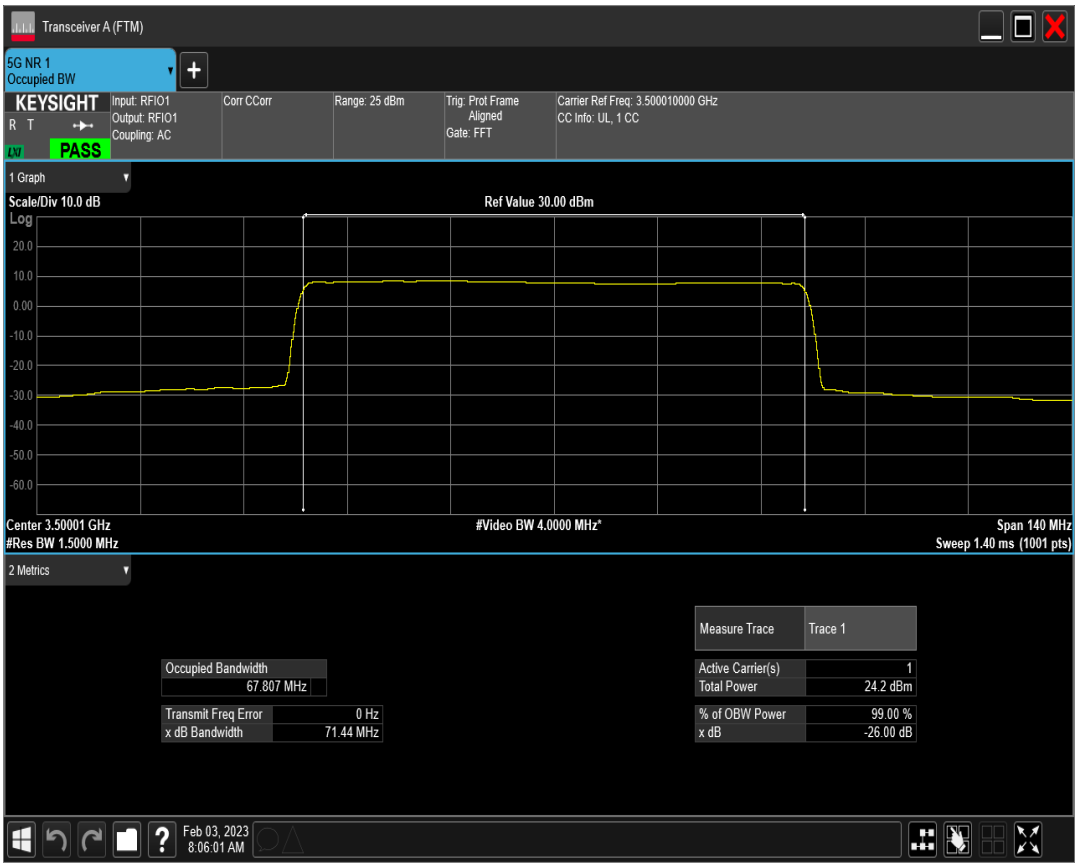


n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=633334 RB=180@0



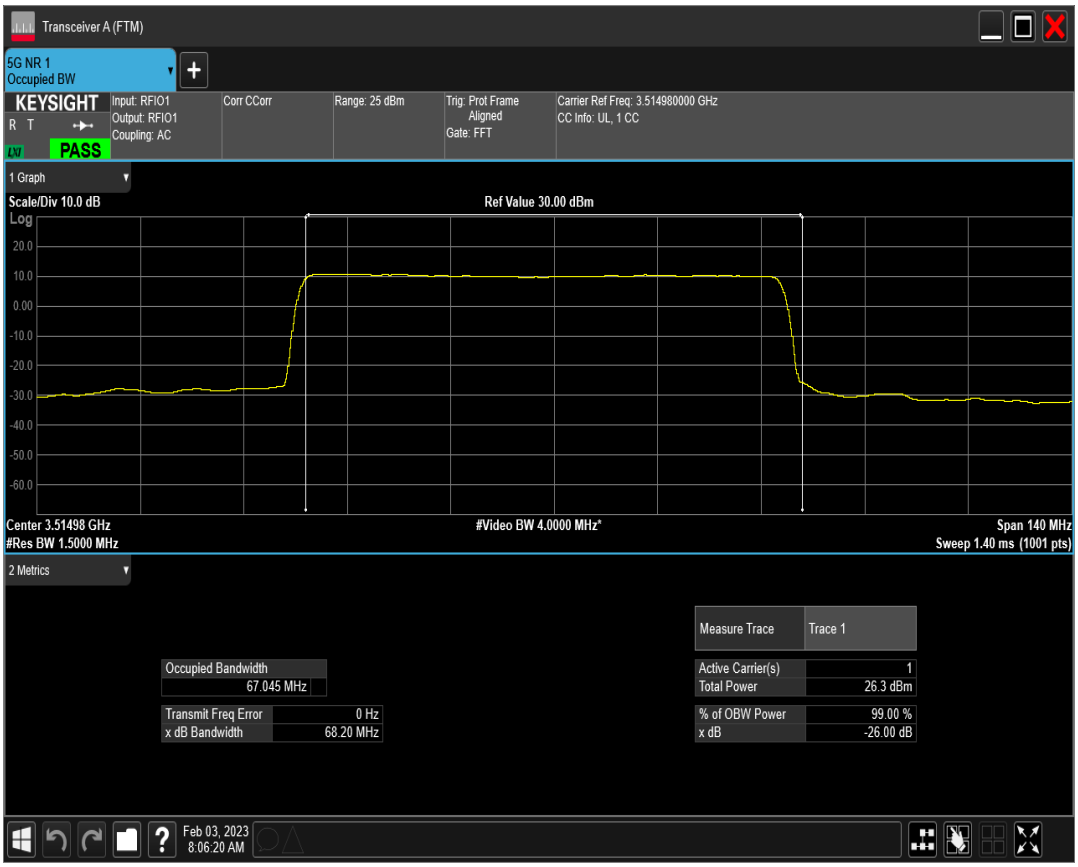
n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=633334 RB=180@0

n78(3450-3550) SCS=30kHz CP_QPSK BW=70MHz Channel=633334 RB=189@0

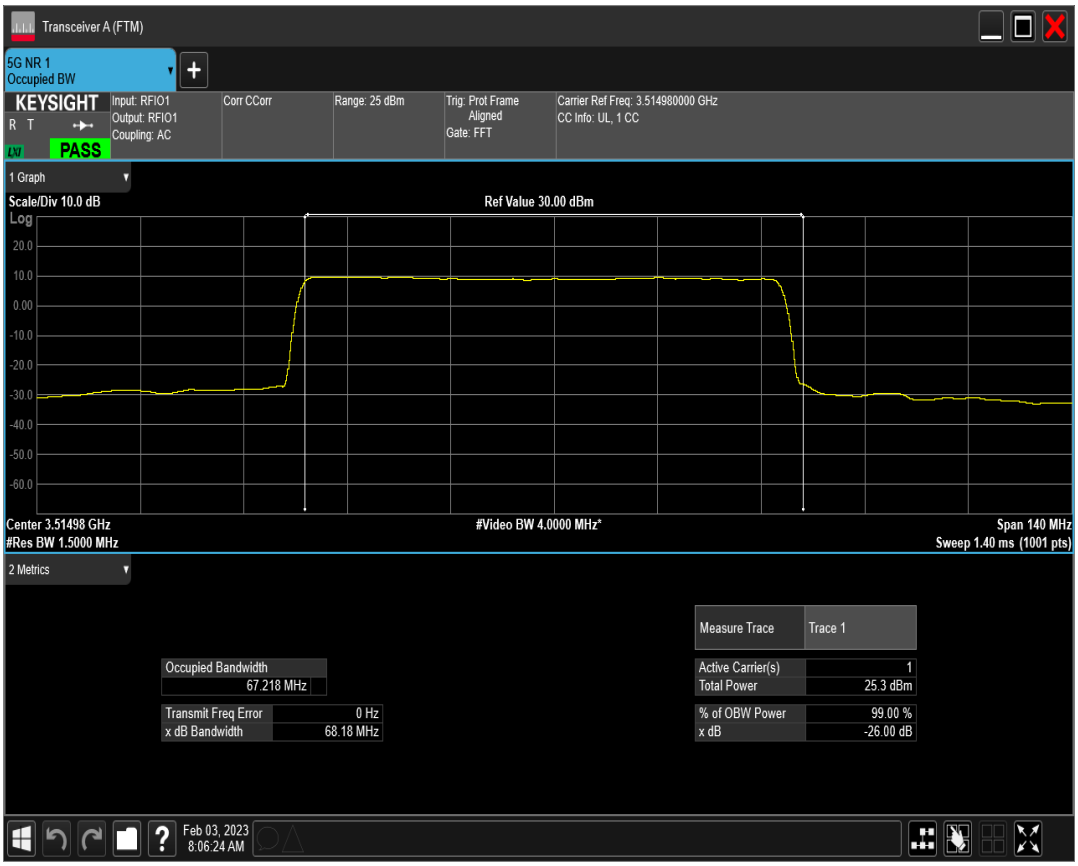


n78(3450-3550) SCS=30kHz DFT_BPSK BW=70MHz Channel=634332 RB=180@0

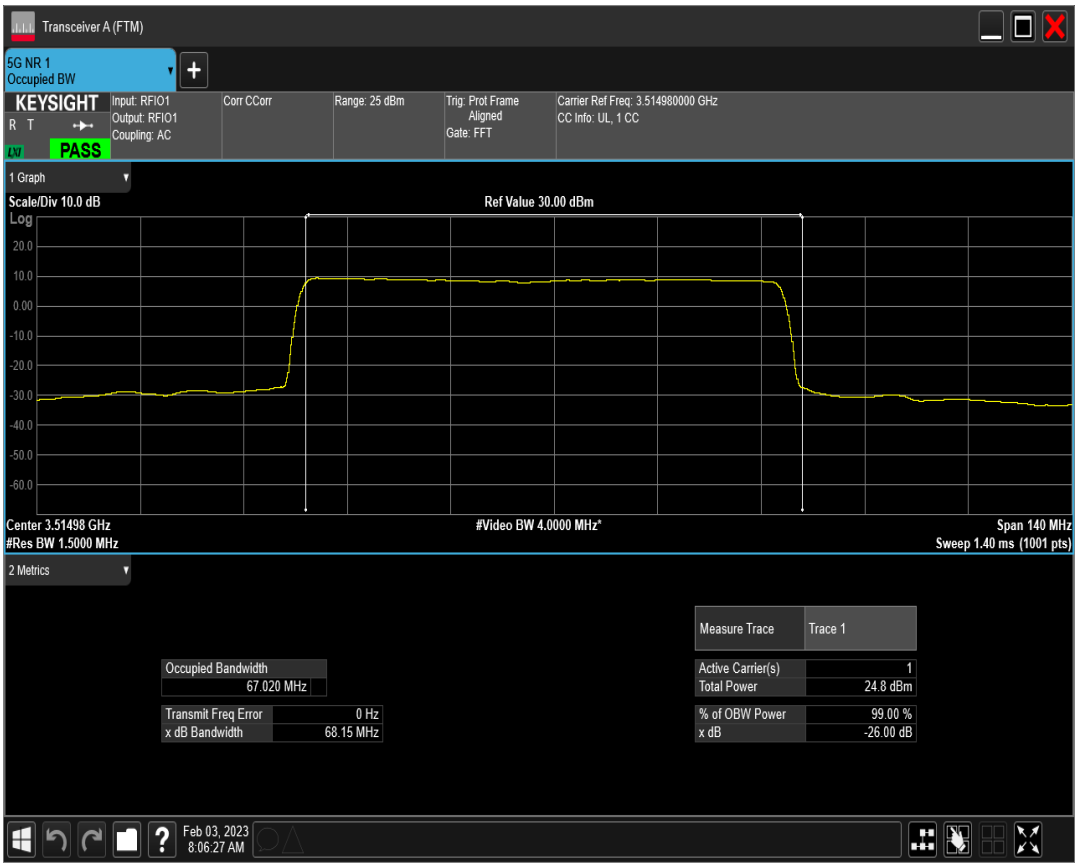
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=180@0



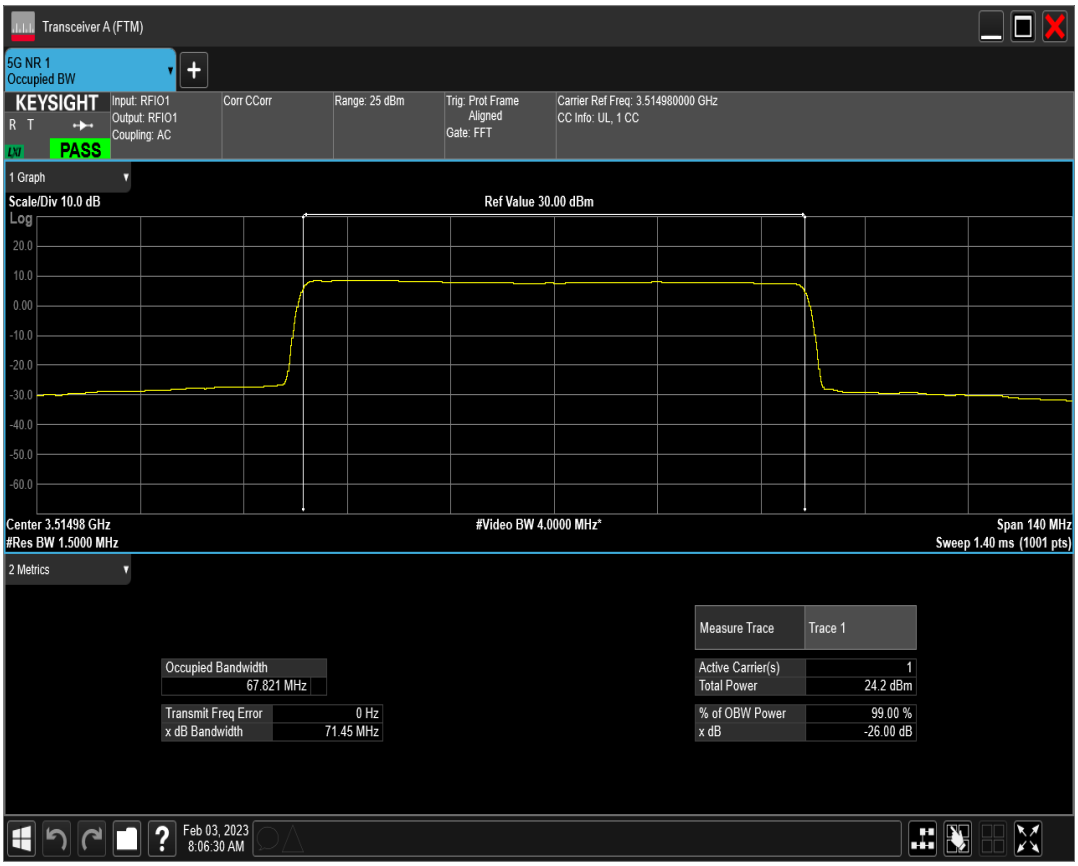
n78(3450-3550) SCS=30kHz DFT_QAM16 BW=70MHz Channel=634332 RB=180@0



n78(3450-3550) SCS=30kHz DFT_QAM64 BW=70MHz Channel=634332 RB=180@0



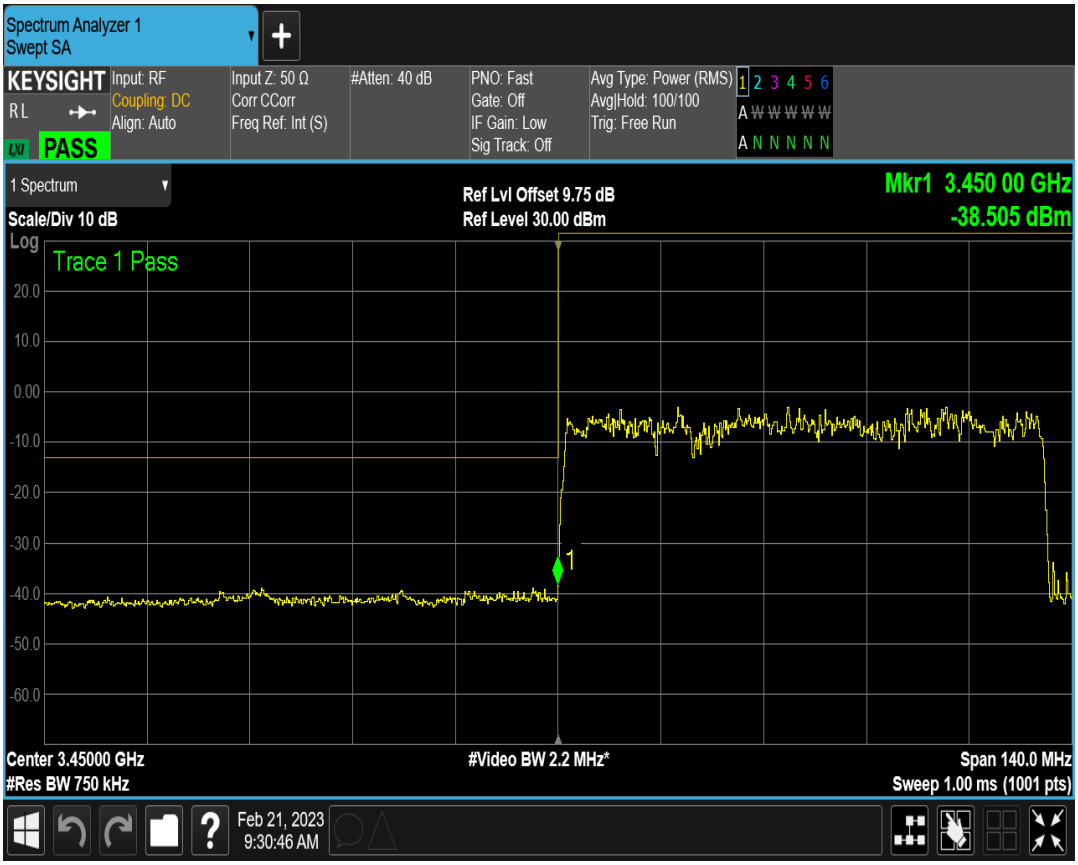
n78(3450-3550) SCS=30kHz CP_QPSK BW=70MHz Channel=634332 RB=189@0



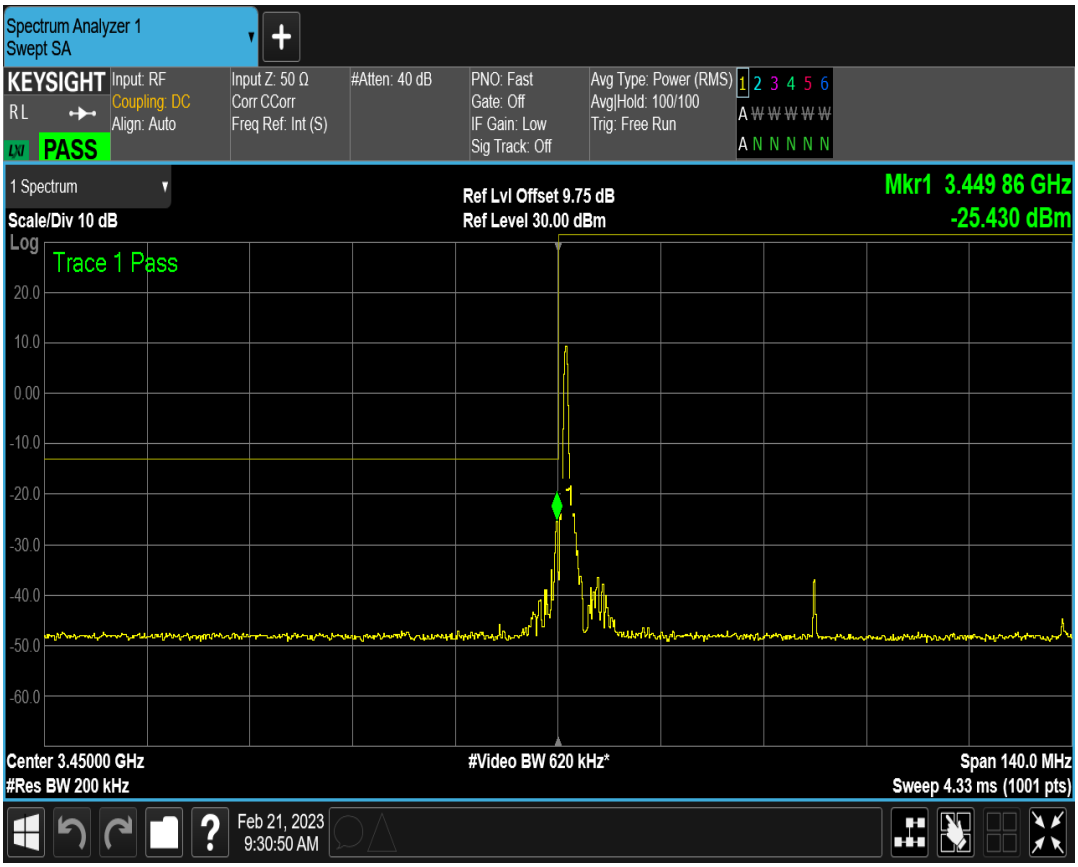
5 Band edge for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n78(3450-3550)	30	70	632334	180@0	DFT_QPSK	3450.00	-38.50	-13	PASS
n78(3450-3550)	30	70	632334	1@0	DFT_QPSK	3449.86	-25.42	-13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QPSK	3607.82	-37.33	-13	PASS
n78(3450-3550)	30	70	634332	1@188	DFT_QPSK	3550.28	-32.60	-13	PASS

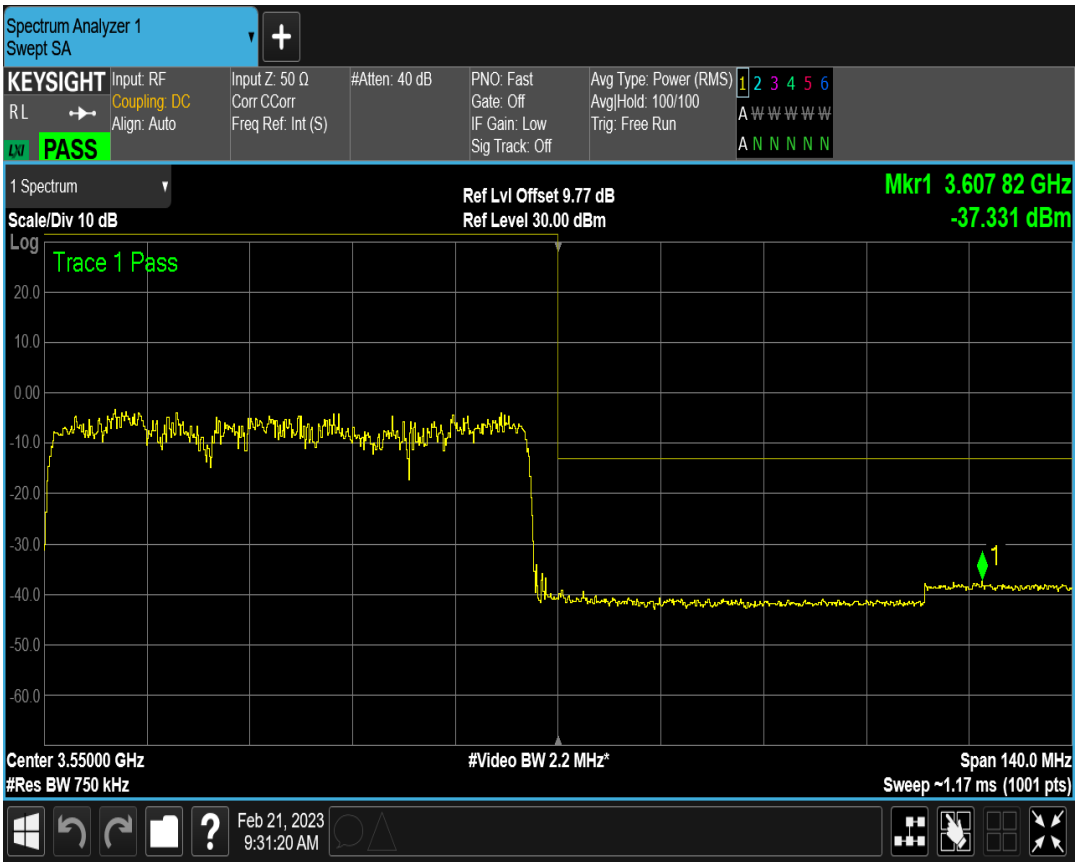
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=180@0



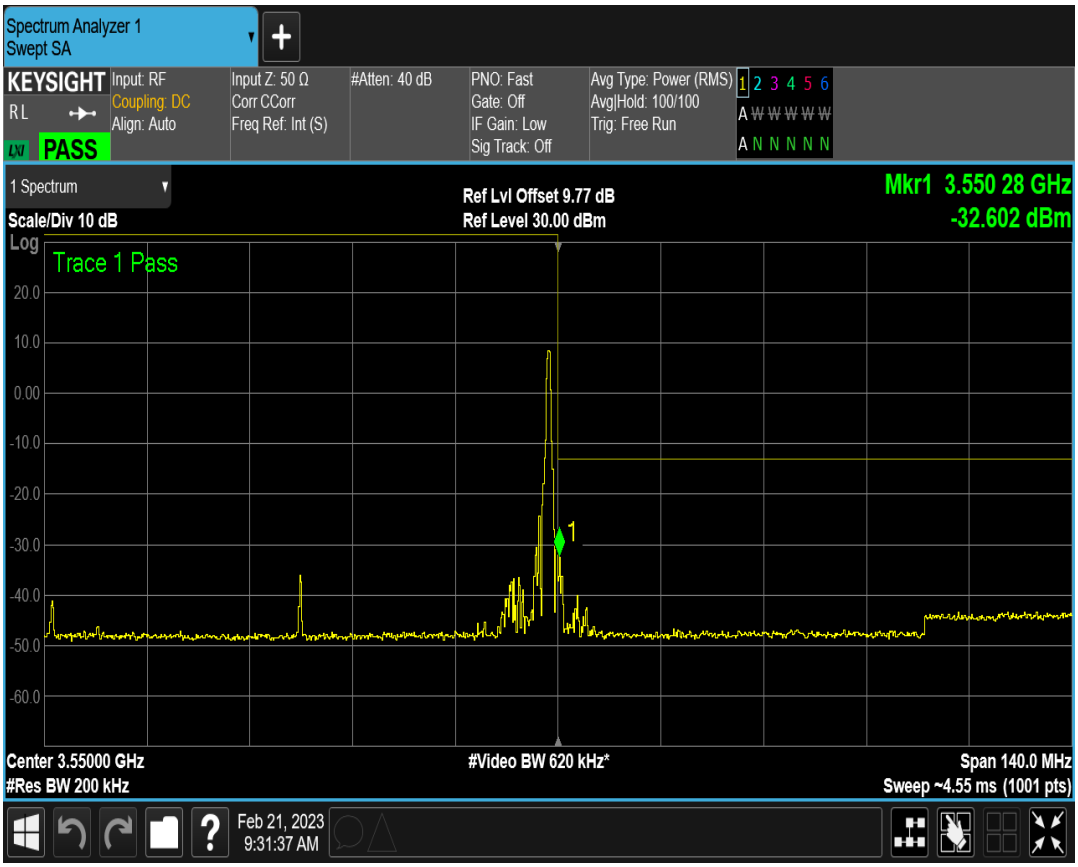
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=1@0



n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=180@0



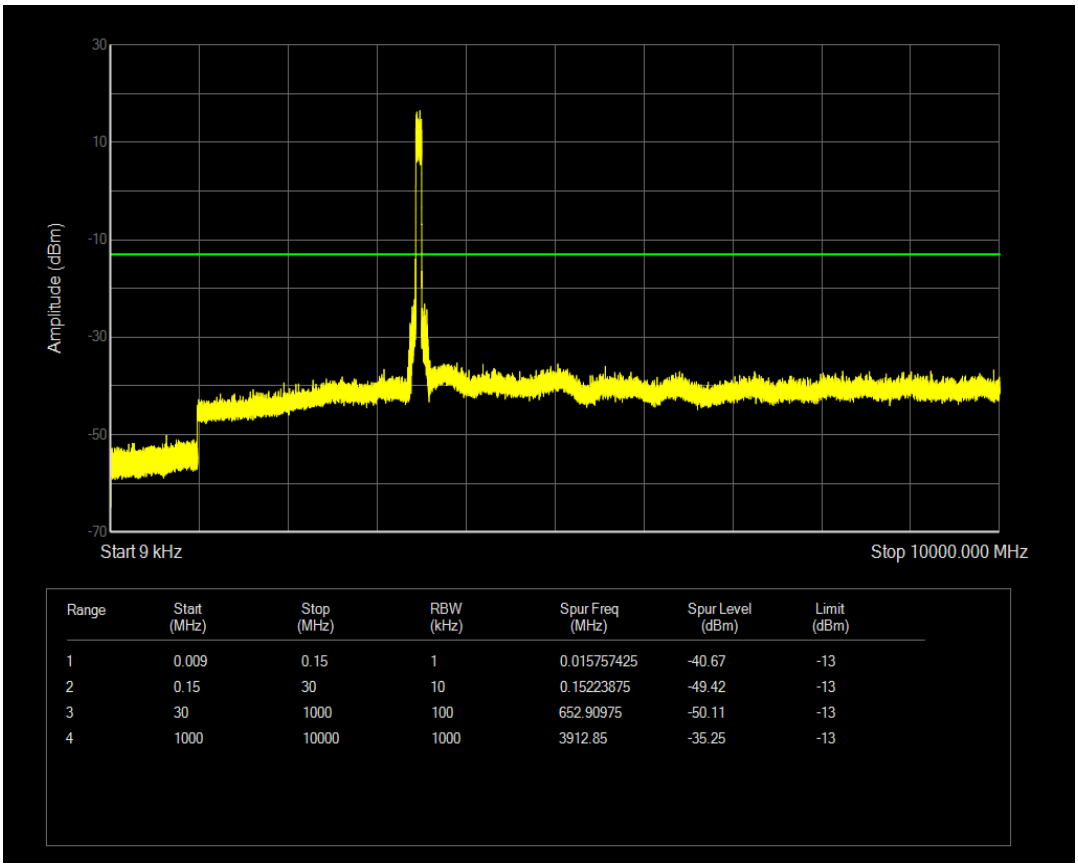
n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=1@188



6 Out-of-band emissions for NR FR1

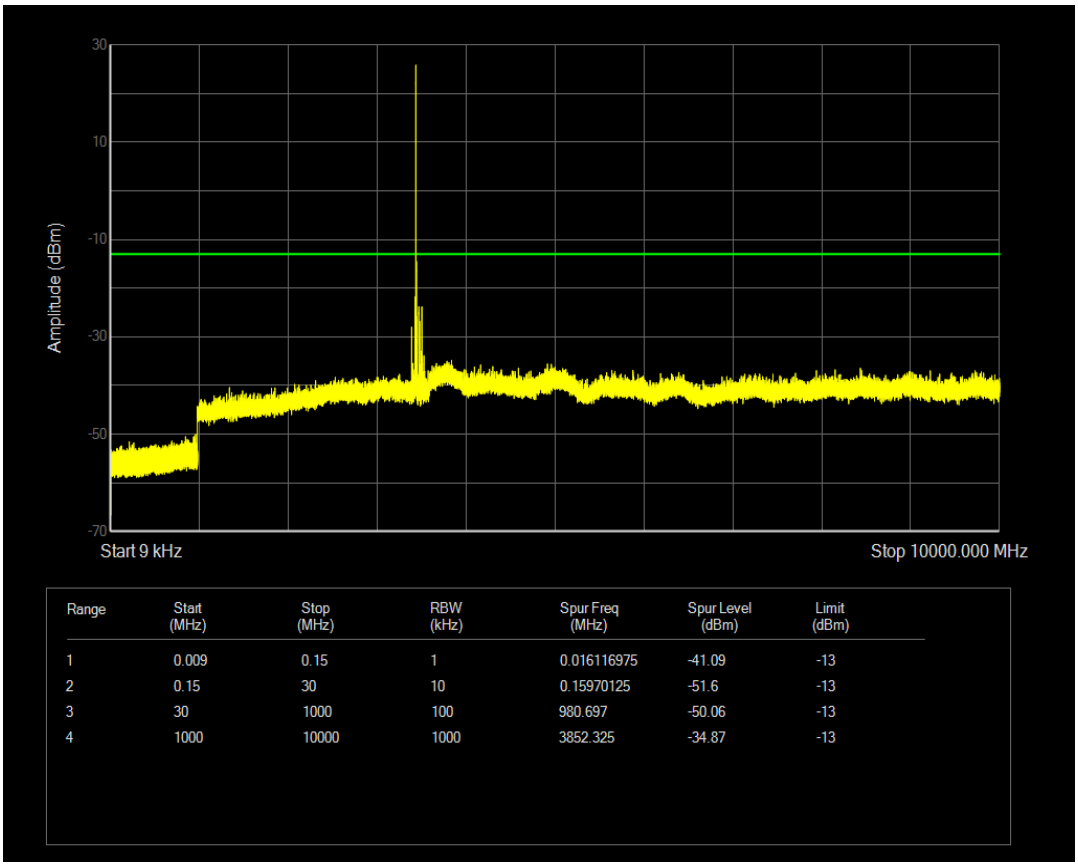
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n78(3450-3550)	30	70	632334	180@0	DFT_QPSK	3912.85	-35.25	-13	PASS
n78(3450-3550)	30	70	632334	1@0	DFT_QPSK	3852.33	-34.87	-13	PASS
n78(3450-3550)	30	70	632334	1@188	DFT_QPSK	3837.70	-35.48	-13	PASS
n78(3450-3550)	30	70	633334	180@0	DFT_QPSK	3849.63	-35.26	-13	PASS
n78(3450-3550)	30	70	633334	1@0	DFT_QPSK	3860.65	-35.05	-13	PASS
n78(3450-3550)	30	70	633334	1@188	DFT_QPSK	4982.73	-34.74	-13	PASS
n78(3450-3550)	30	70	634332	180@0	DFT_QPSK	3836.80	-34.98	-13	PASS
n78(3450-3550)	30	70	634332	1@0	DFT_QPSK	3838.15	-34.35	-13	PASS
n78(3450-3550)	30	70	634332	1@188	DFT_QPSK	5065.53	-35.07	-13	PASS

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=180@0



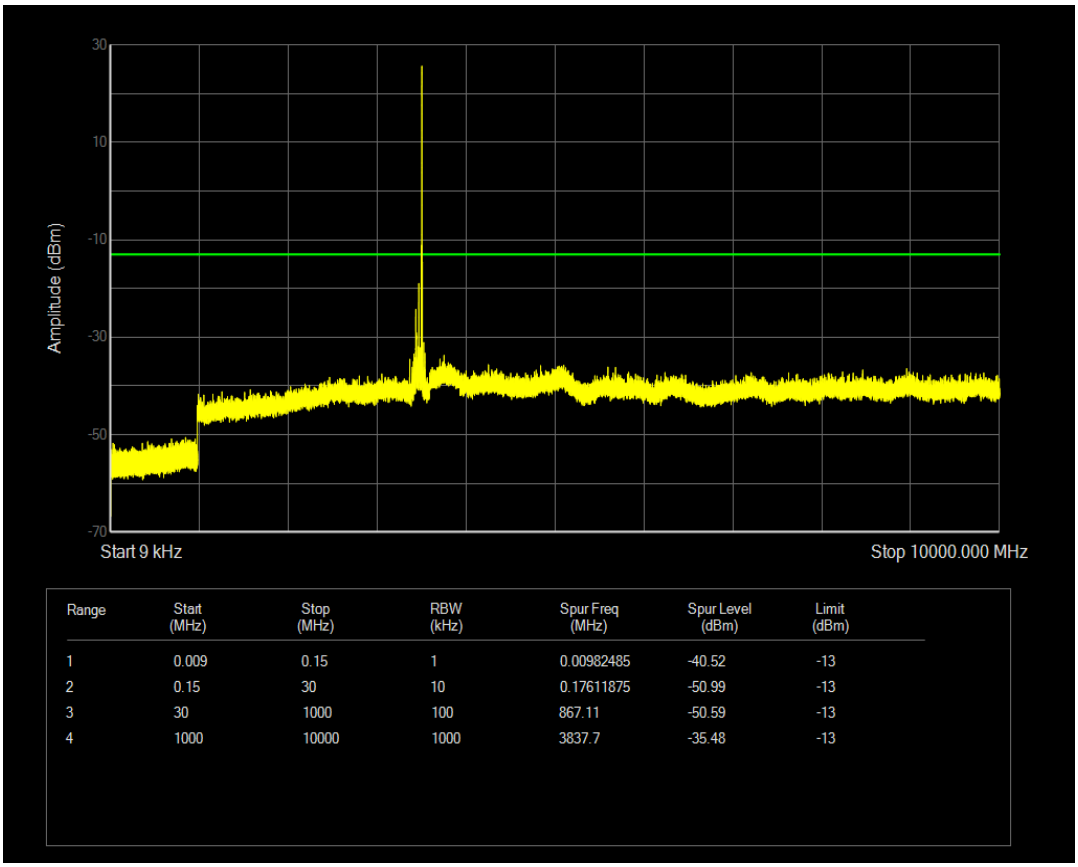
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.015757425	-40.67	-13
2	0.15	30	10	0.15223875	-49.42	-13
3	30	1000	100	652.90975	-50.11	-13
4	1000	10000	1000	3912.85	-35.25	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=1@0



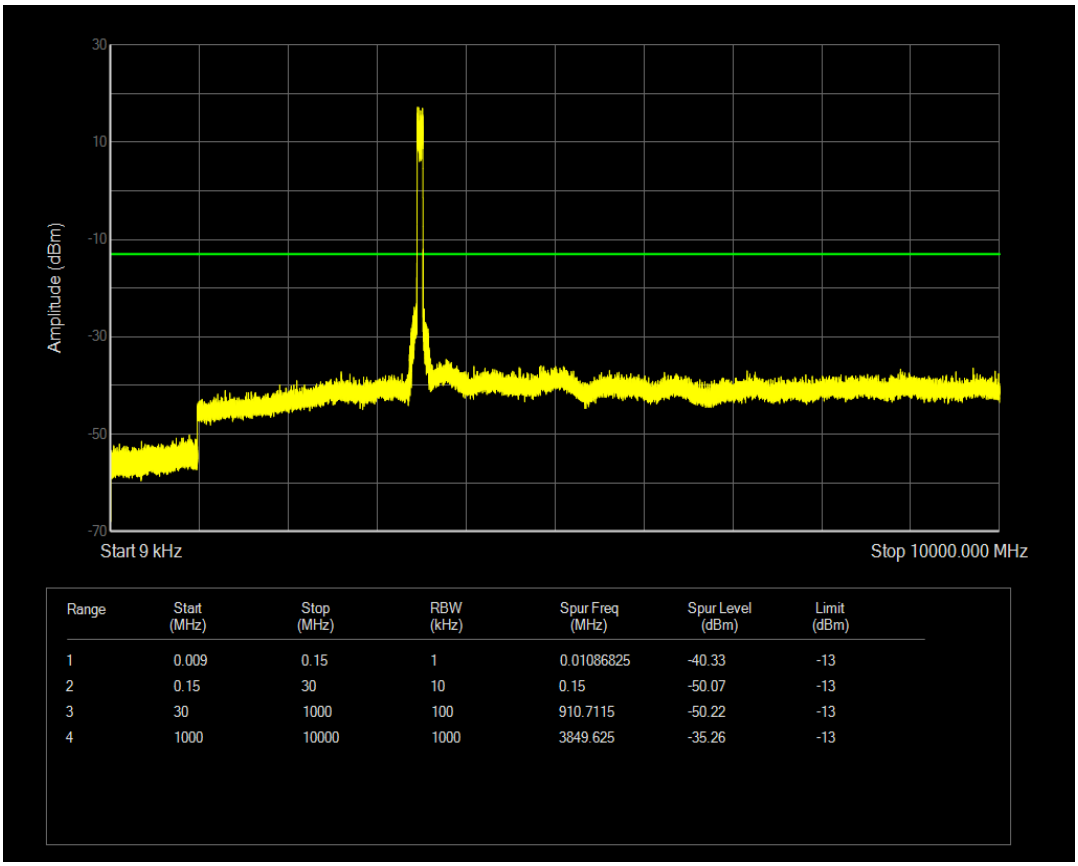
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.016116975	-41.09	-13
2	0.15	30	10	0.15970125	-51.6	-13
3	30	1000	100	980.697	-50.06	-13
4	1000	10000	1000	3852.325	-34.87	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=632334 RB=1@188



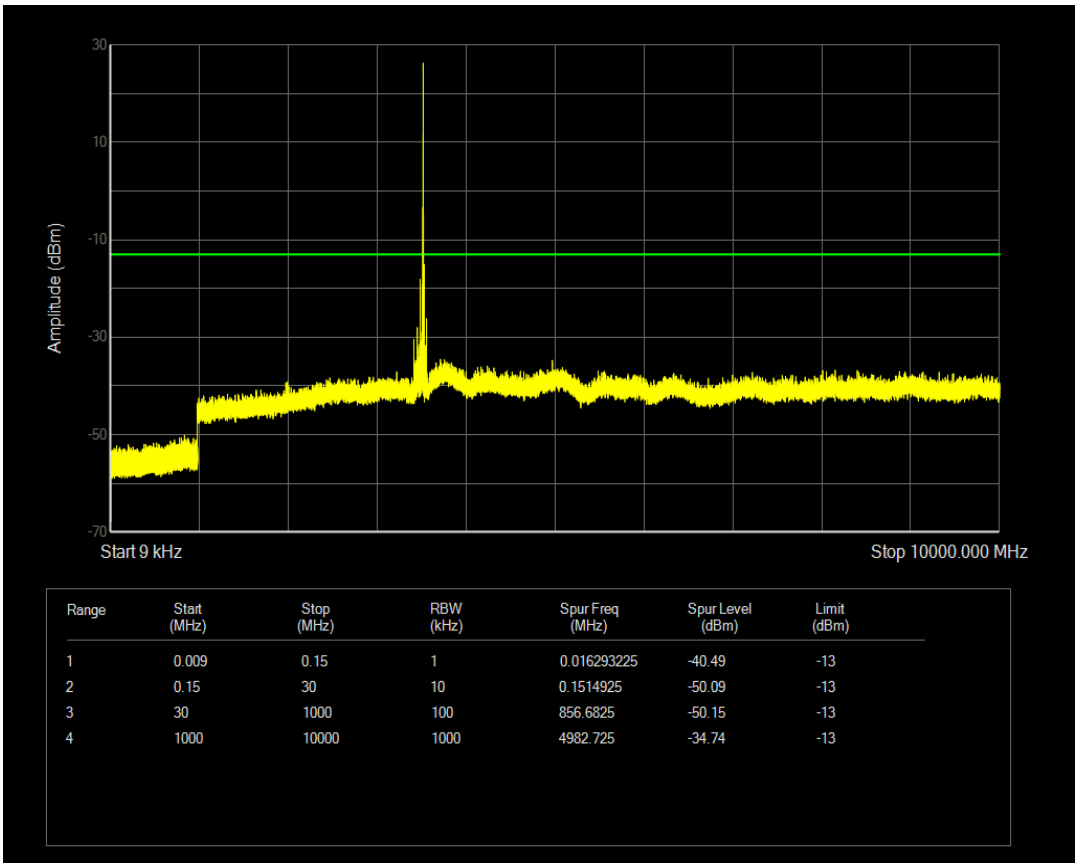
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.00982485	-40.52	-13
2	0.15	30	10	0.17611875	-50.99	-13
3	30	1000	100	867.11	-50.59	-13
4	1000	10000	1000	3837.7	-35.48	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=633334 RB=180@0



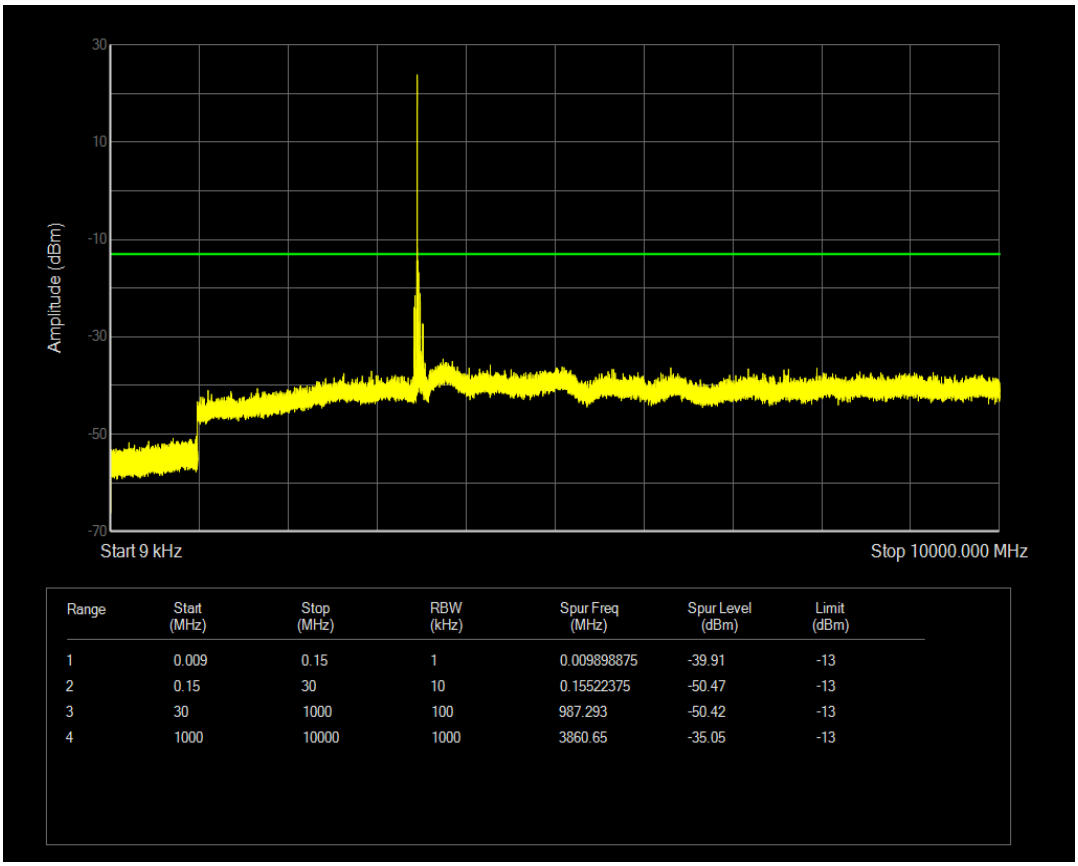
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01086825	-40.33	-13
2	0.15	30	10	0.15	-50.07	-13
3	30	1000	100	910.7115	-50.22	-13
4	1000	10000	1000	3849.625	-35.26	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=633334 RB=1@188



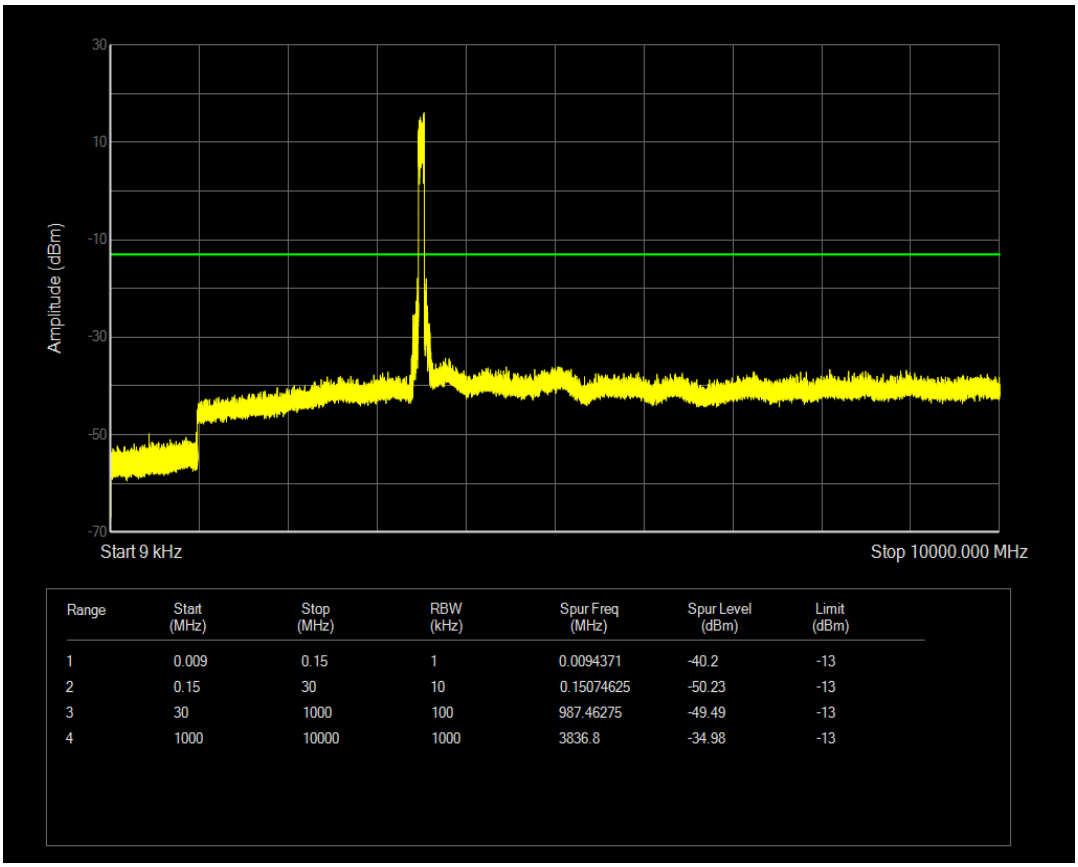
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.016293225	-40.49	-13
2	0.15	30	10	0.1514925	-50.09	-13
3	30	1000	100	856.6825	-50.15	-13
4	1000	10000	1000	4982.725	-34.74	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=633334 RB=1@0



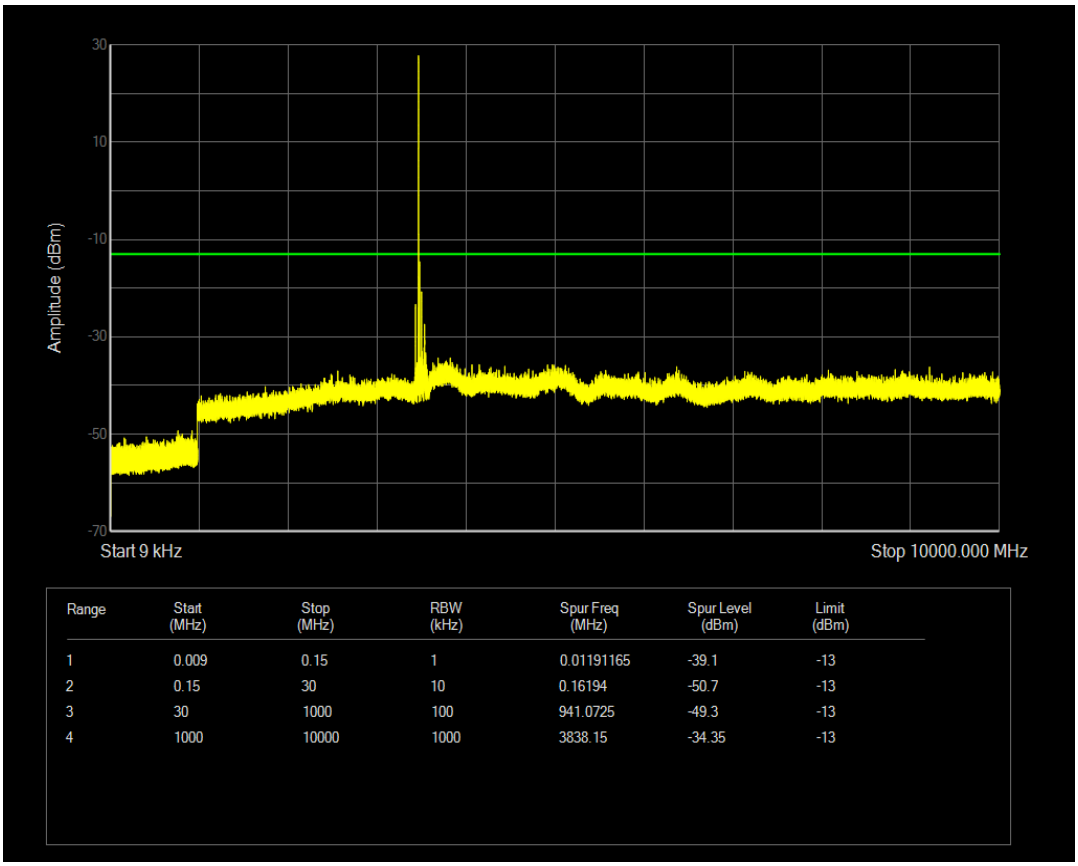
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009898875	-39.91	-13
2	0.15	30	10	0.15522375	-50.47	-13
3	30	1000	100	987.293	-50.42	-13
4	1000	10000	1000	3860.65	-35.05	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=180@0



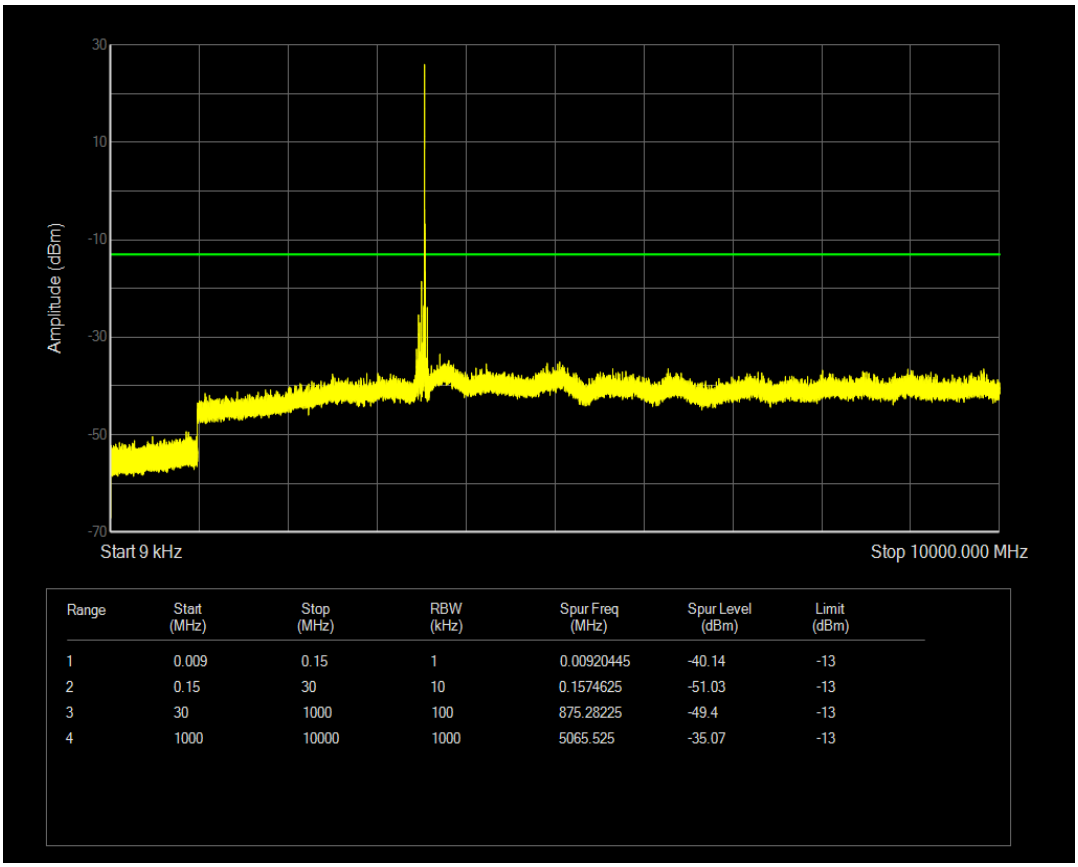
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0094371	-40.2	-13
2	0.15	30	10	0.15074625	-50.23	-13
3	30	1000	100	987.46275	-49.49	-13
4	1000	10000	1000	3836.8	-34.98	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=1@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01191165	-39.1	-13
2	0.15	30	10	0.16194	-50.7	-13
3	30	1000	100	941.0725	-49.3	-13
4	1000	10000	1000	3838.15	-34.35	-13

n78(3450-3550) SCS=30kHz DFT_QPSK BW=70MHz Channel=634332 RB=1@188



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.00920445	-40.14	-13
2	0.15	30	10	0.1574625	-51.03	-13
3	30	1000	100	875.28225	-49.4	-13
4	1000	10000	1000	5065.525	-35.07	-13