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(3700-3800)	30	70	649000	90@45	DFT_BPSK	27.15	-1.95	25.2	30	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_BPSK	26.62	-1.95	24.67	30	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_BPSK	26.75	-1.95	24.8	30	PASS
n78(3700-3800)	30	70	649000	90@45	DFT_QPSK	27.24	-1.95	25.29	30	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_QPSK	26.44	-1.95	24.49	30	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_QPSK	26.73	-1.95	24.78	30	PASS
n78(3700-3800)	30	70	649000	90@45	DFT_QAM16	26.26	-1.95	24.31	30	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_QAM16	25.59	-1.95	23.64	30	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_QAM16	26.29	-1.95	24.34	30	PASS
n78(3700-3800)	30	70	649000	90@45	DFT_QAM64	24.81	-1.95	22.86	30	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_QAM64	24.22	-1.95	22.27	30	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_QAM64	24.40	-1.95	22.45	30	PASS
n78(3700-3800)	30	70	649000	95@47	CP_QPSK	25.74	-1.95	23.79	30	PASS
n78(3700-3800)	30	70	649000	1@1	CP_QPSK	24.98	-1.95	23.03	30	PASS
n78(3700-3800)	30	70	649000	1@187	CP_QPSK	25.37	-1.95	23.42	30	PASS
n78(3700-3800)	30	70	649000	95@47	CP_QAM16	25.24	-1.95	23.29	30	PASS
n78(3700-3800)	30	70	649000	1@1	CP_QAM16	25.00	-1.95	23.05	30	PASS
n78(3700-3800)	30	70	649000	1@187	CP_QAM16	25.17	-1.95	23.22	30	PASS
n78(3700-3800)	30	70	649000	95@47	CP_QAM64	23.75	-1.95	21.8	30	PASS
n78(3700-3800)	30	70	649000	1@1	CP_QAM64	23.50	-1.95	21.55	30	PASS
n78(3700-3800)	30	70	649000	1@187	CP_QAM64	23.65	-1.95	21.7	30	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_BPSK	27.28	-1.95	25.33	30	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_BPSK	26.87	-1.95	24.92	30	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_BPSK	26.81	-1.95	24.86	30	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_QPSK	27.21	-1.95	25.26	30	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_QPSK	26.57	-1.95	24.62	30	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_QPSK	26.47	-1.95	24.52	30	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_QAM16	26.26	-1.95	24.31	30	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_QAM16	26.24	-1.95	24.29	30	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_QAM16	26.16	-1.95	24.21	30	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_QAM64	24.81	-1.95	22.86	30	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_QAM64	24.33	-1.95	22.38	30	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_QAM64	24.32	-1.95	22.37	30	PASS
n78(3700-3800)	30	70	650000	95@47	CP_QPSK	25.80	-1.95	23.85	30	PASS
n78(3700-3800)	30	70	650000	1@1	CP_QPSK	25.12	-1.95	23.17	30	PASS
n78(3700-3800)	30	70	650000	1@187	CP_QPSK	25.29	-1.95	23.34	30	PASS

n78(3700-3800)	30	70	650000	95@47	CP_QAM16	25.26	-1.95	23.31	30	PASS
n78(3700-3800)	30	70	650000	1@1	CP_QAM16	25.14	-1.95	23.19	30	PASS
n78(3700-3800)	30	70	650000	1@187	CP_QAM16	25.12	-1.95	23.17	30	PASS
n78(3700-3800)	30	70	650000	95@47	CP_QAM64	23.79	-1.95	21.84	30	PASS
n78(3700-3800)	30	70	650000	1@1	CP_QAM64	23.96	-1.95	22.01	30	PASS
n78(3700-3800)	30	70	650000	1@187	CP_QAM64	23.89	-1.95	21.94	30	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_BPSK	27.27	-1.95	25.32	30	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_BPSK	26.83	-1.95	24.88	30	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_BPSK	26.77	-1.95	24.82	30	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_QPSK	27.24	-1.95	25.29	30	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_QPSK	26.73	-1.95	24.78	30	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_QPSK	26.44	-1.95	24.49	30	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_QAM16	26.17	-1.95	24.22	30	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_QAM16	25.91	-1.95	23.96	30	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_QAM16	25.64	-1.95	23.69	30	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_QAM64	24.76	-1.95	22.81	30	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_QAM64	24.37	-1.95	22.42	30	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_QAM64	24.23	-1.95	22.28	30	PASS
n78(3700-3800)	30	70	651000	95@47	CP_QPSK	25.70	-1.95	23.75	30	PASS
n78(3700-3800)	30	70	651000	1@1	CP_QPSK	25.36	-1.95	23.41	30	PASS
n78(3700-3800)	30	70	651000	1@187	CP_QPSK	25.21	-1.95	23.26	30	PASS
n78(3700-3800)	30	70	651000	95@47	CP_QAM16	25.22	-1.95	23.27	30	PASS
n78(3700-3800)	30	70	651000	1@1	CP_QAM16	24.86	-1.95	22.91	30	PASS
n78(3700-3800)	30	70	651000	1@187	CP_QAM16	24.67	-1.95	22.72	30	PASS
n78(3700-3800)	30	70	651000	95@47	CP_QAM64	23.89	-1.95	21.94	30	PASS
n78(3700-3800)	30	70	651000	1@1	CP_QAM64	23.66	-1.95	21.71	30	PASS
n78(3700-3800)	30	70	651000	1@187	CP_QAM64	23.80	-1.95	21.85	30	PASS

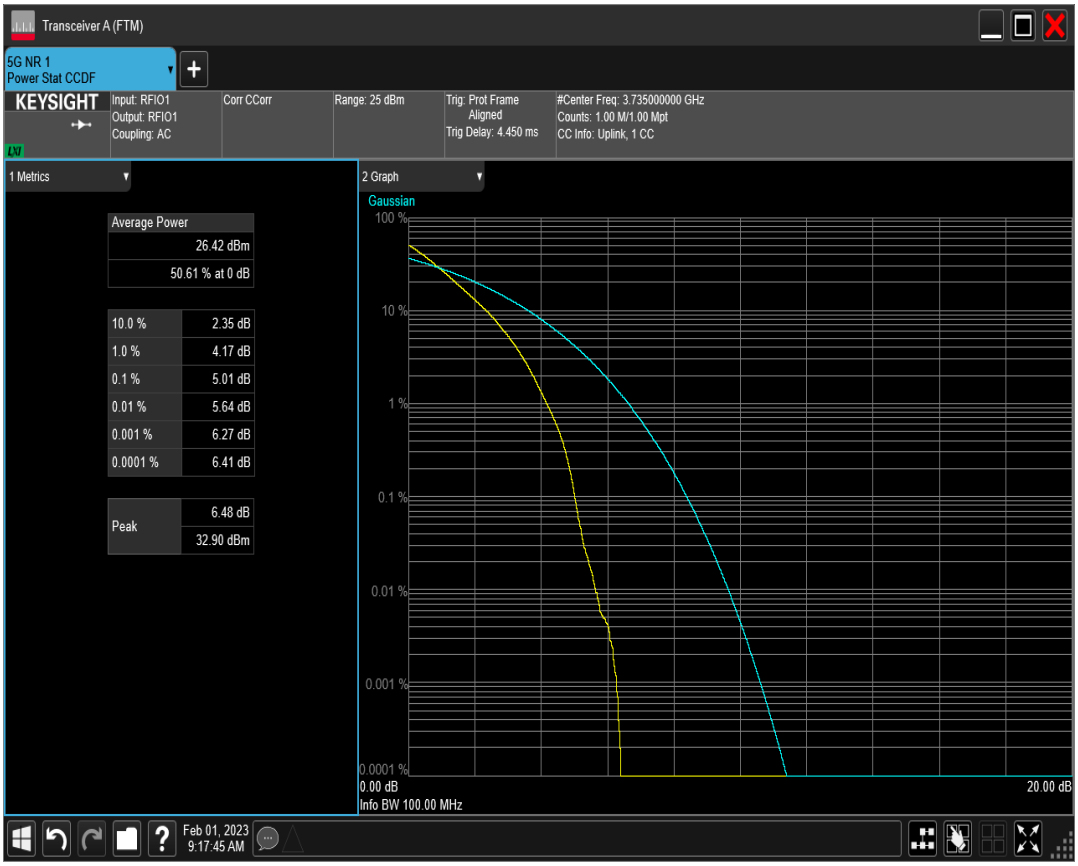
2 Frequency stability for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Result(Hz)	Result (ppm)	Low Limit (ppm)	high Limit (ppm)	Verdict
n78(3700-3800)	30	70	649000	90@45	DFT_BPSK	-30.68	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_BPSK	-25.15	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_BPSK	-25.53	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	649000	90@45	DFT_QPSK	-31.80	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	649000	1@1	DFT_QPSK	-31.67	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	649000	1@187	DFT_QPSK	-28.73	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_BPSK	-19.09	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_BPSK	-30.35	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_BPSK	-30.89	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	90@45	DFT_QPSK	-26.06	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	1@1	DFT_QPSK	-23.30	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	650000	1@187	DFT_QPSK	-28.20	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_BPSK	-22.49	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_BPSK	-23.35	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_BPSK	-29.00	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	90@45	DFT_QPSK	-29.05	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	1@1	DFT_QPSK	-27.94	-0.01	-2.5	2.5	PASS
n78(3700-3800)	30	70	651000	1@187	DFT_QPSK	-26.15	-0.01	-2.5	2.5	PASS

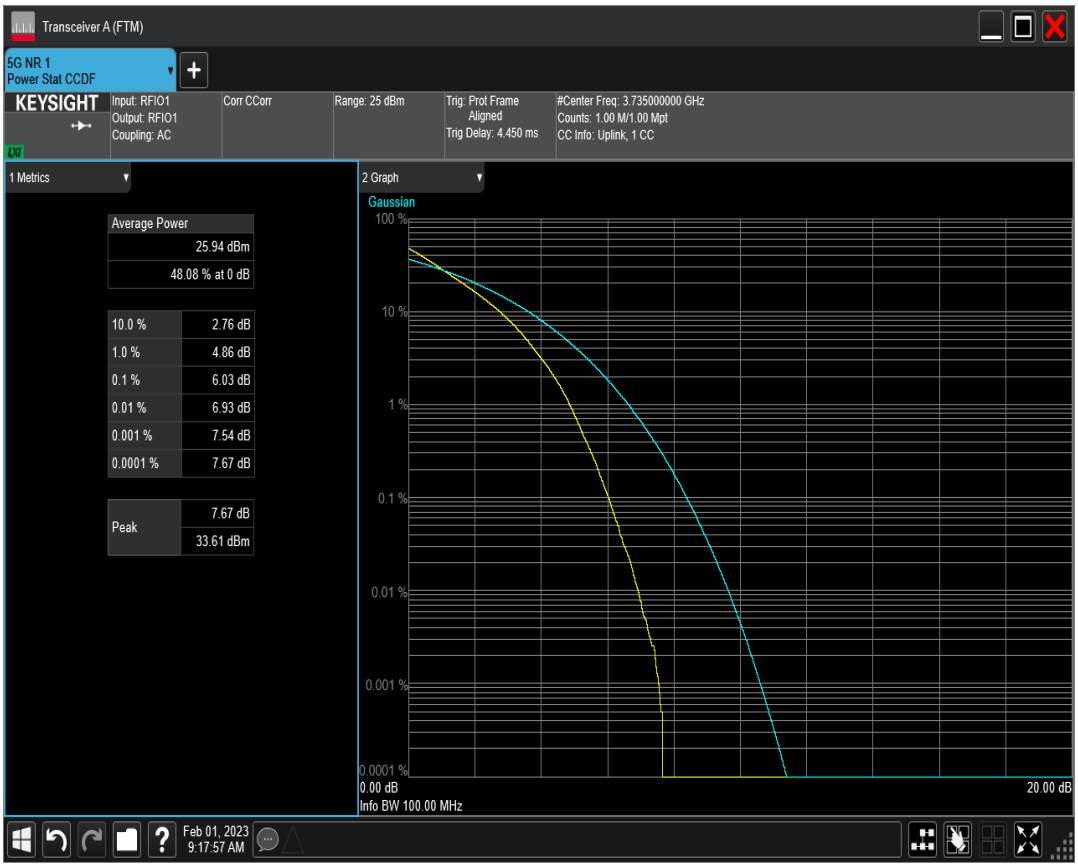
3 Peak-to-Average Ratio for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Result (dB)	high Limit (dB)	Verdict
n78(3700-3800)	30	70	649000	180@0	DFT_BPSK	5.01	0	FAIL
n78(3700-3800)	30	70	649000	180@0	DFT_QPSK	6.03	0	FAIL
n78(3700-3800)	30	70	649000	180@0	DFT_QAM16	6.76	0	FAIL
n78(3700-3800)	30	70	649000	180@0	DFT_QAM64	7.06	0	FAIL
n78(3700-3800)	30	70	650000	180@0	DFT_BPSK	5.01	0	FAIL
n78(3700-3800)	30	70	650000	180@0	DFT_QPSK	6.04	0	FAIL
n78(3700-3800)	30	70	650000	180@0	DFT_QAM16	6.78	0	FAIL
n78(3700-3800)	30	70	650000	180@0	DFT_QAM64	7.05	0	FAIL
n78(3700-3800)	30	70	651000	180@0	DFT_BPSK	5.01	0	FAIL
n78(3700-3800)	30	70	651000	180@0	DFT_QPSK	6.07	0	FAIL
n78(3700-3800)	30	70	651000	180@0	DFT_QAM16	6.77	0	FAIL
n78(3700-3800)	30	70	651000	180@0	DFT_QAM64	7.08	0	FAIL

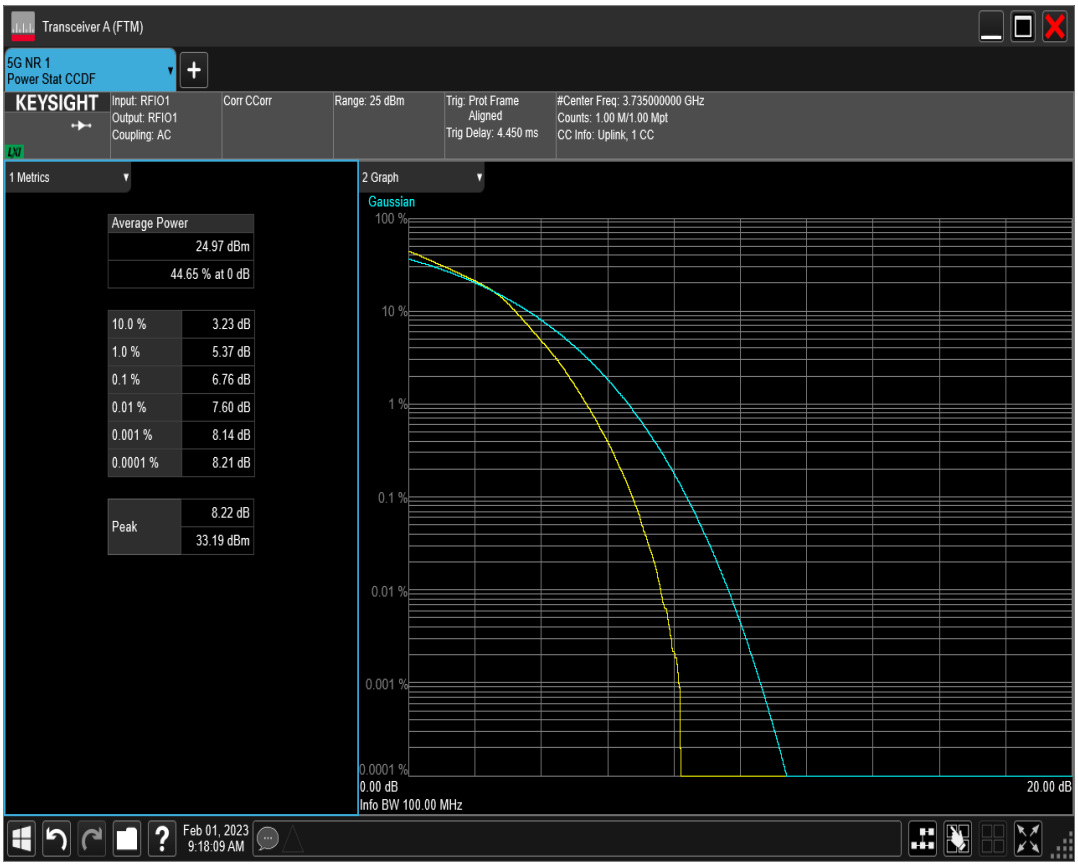
n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=649000 RB=180@0



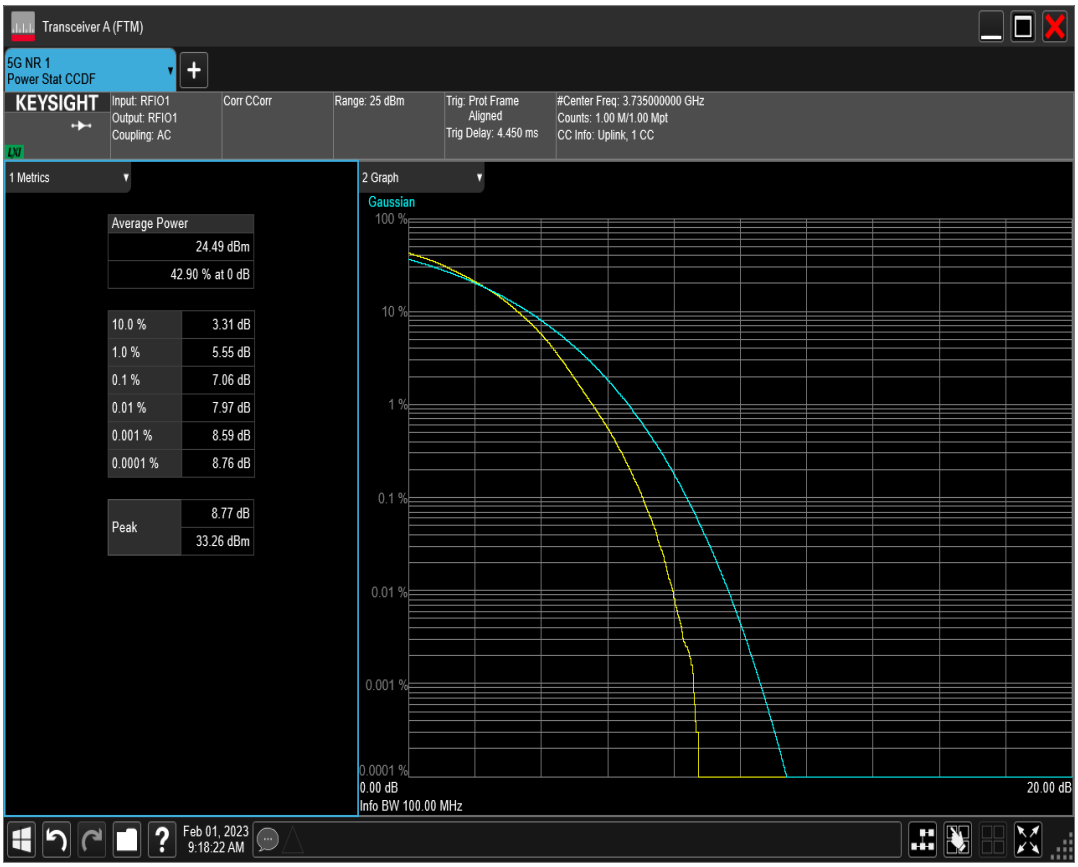
n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=180@0



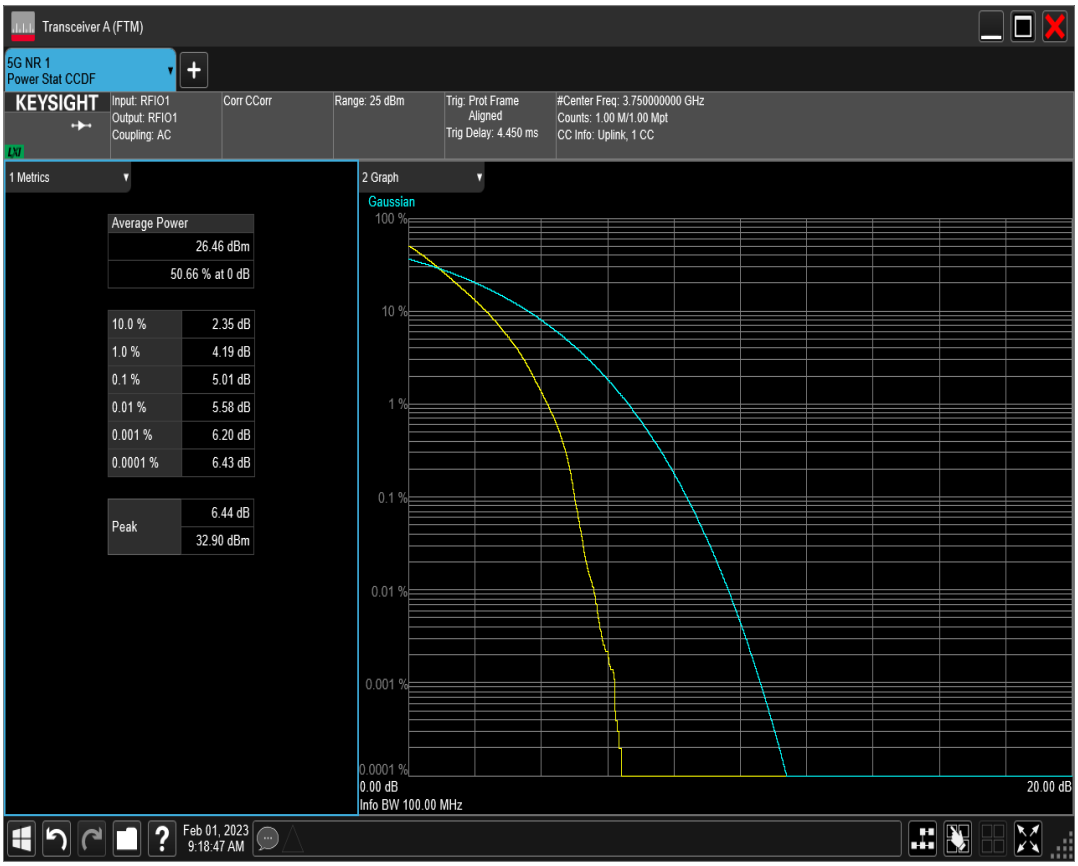
n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=649000 RB=180@0



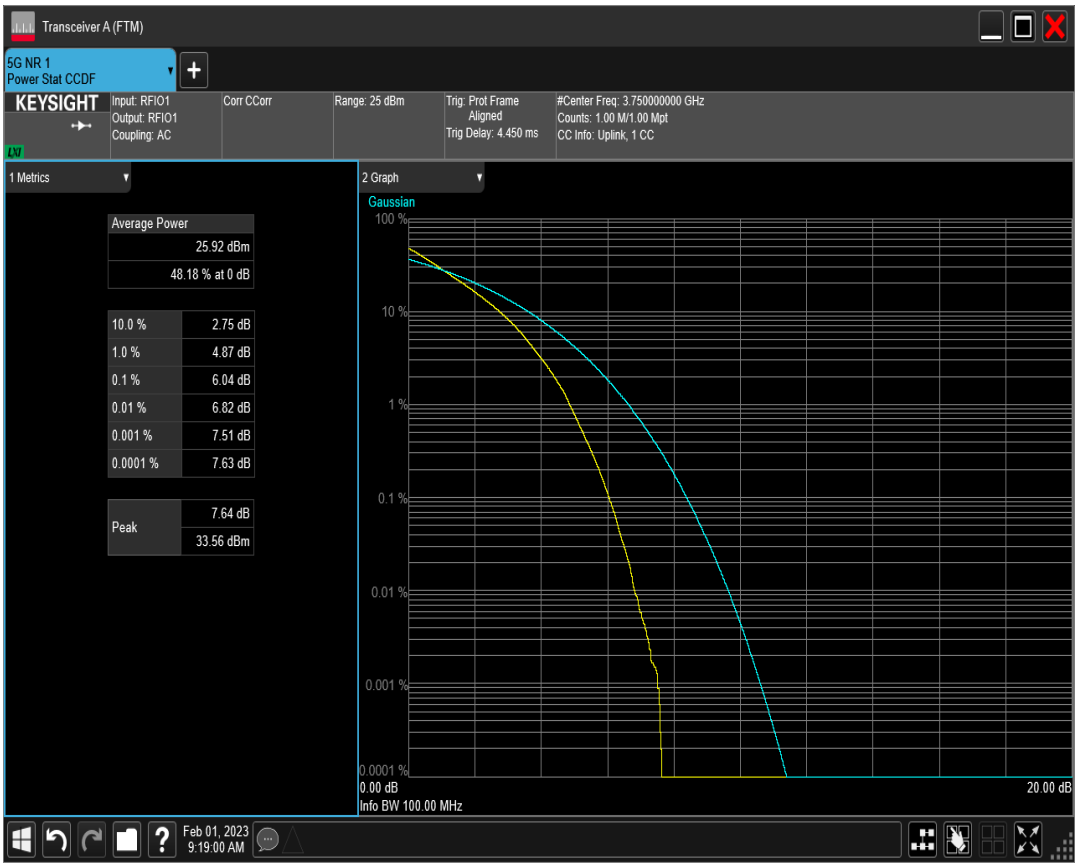
n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=649000 RB=180@0



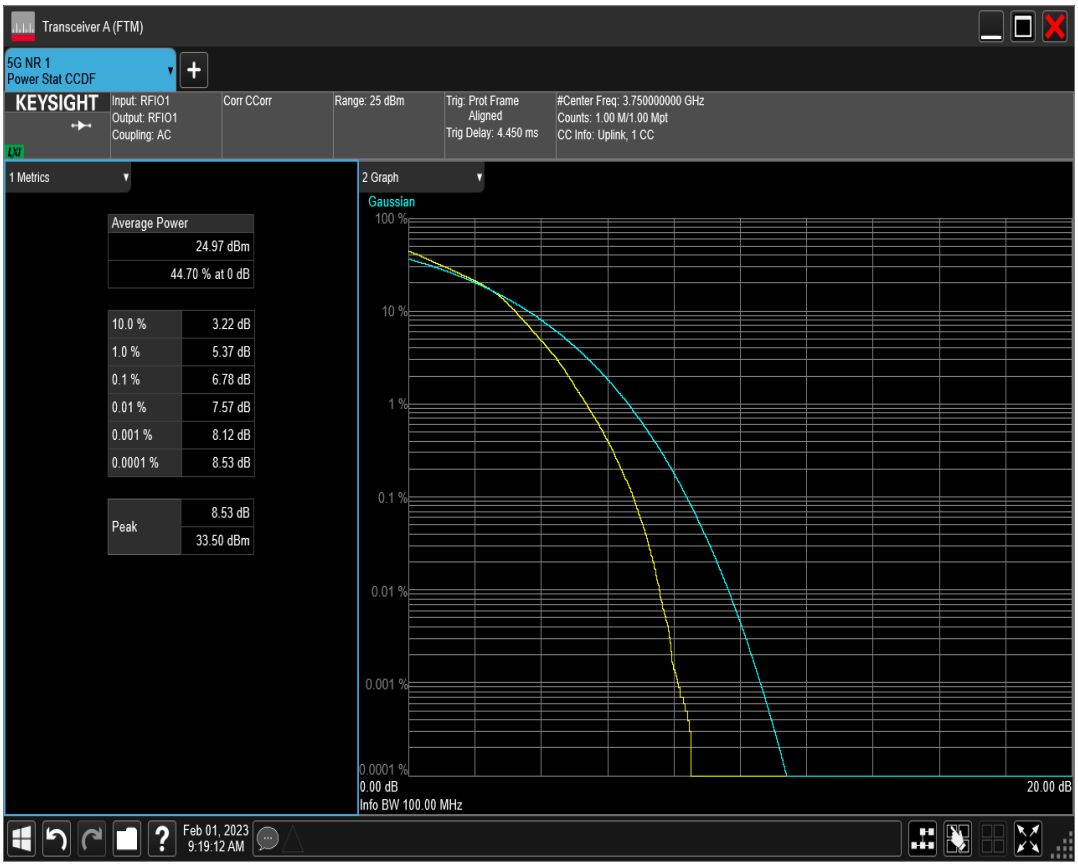
n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=650000 RB=180@0



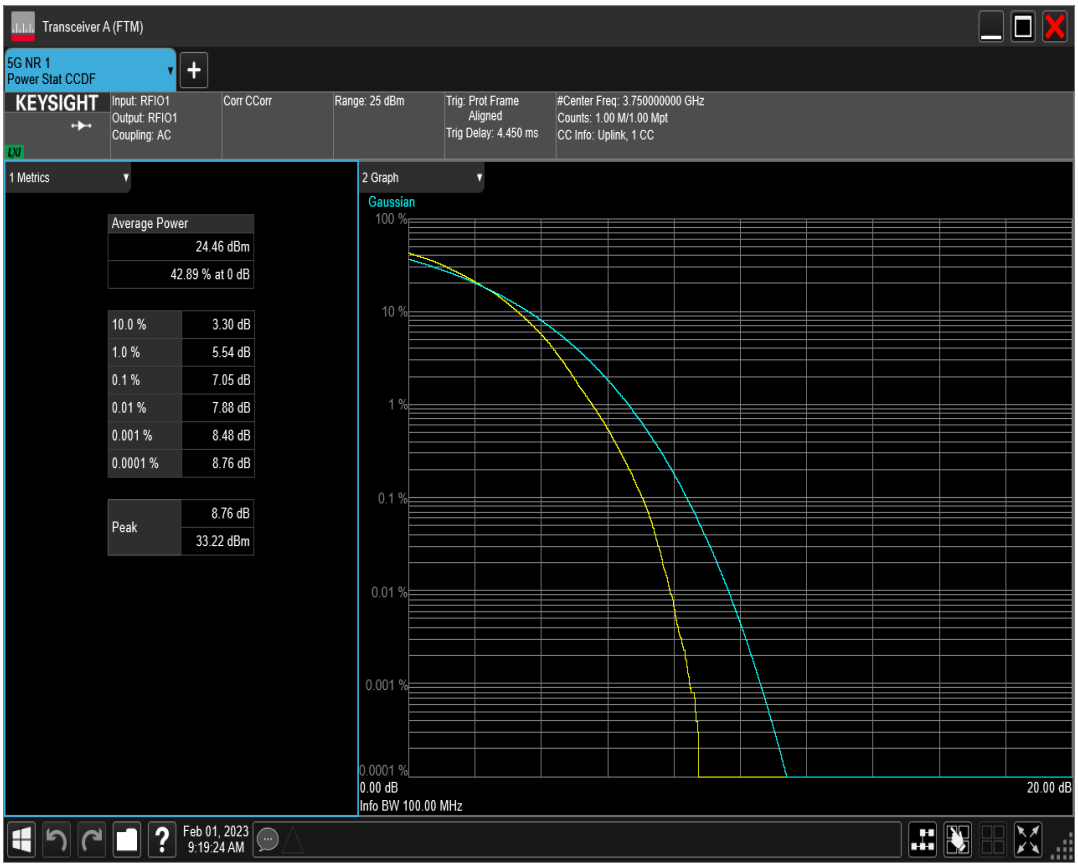
n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=650000 RB=180@0



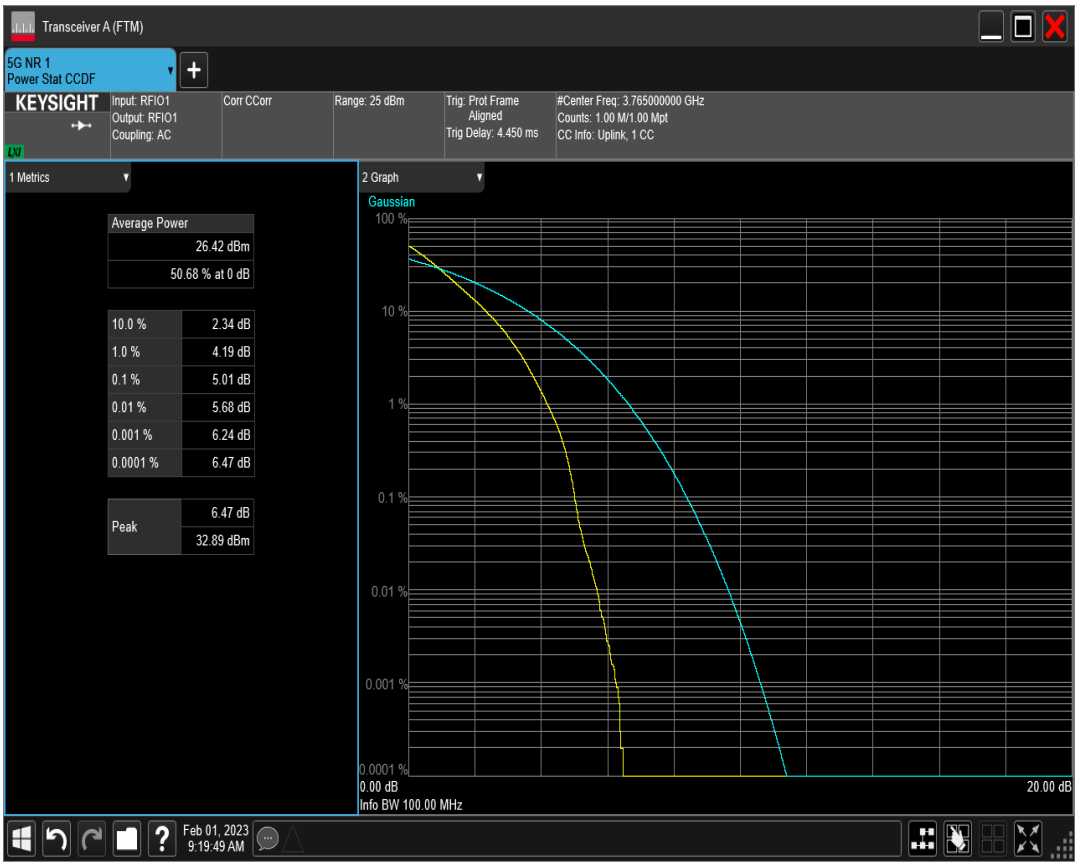
n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=650000 RB=180@0



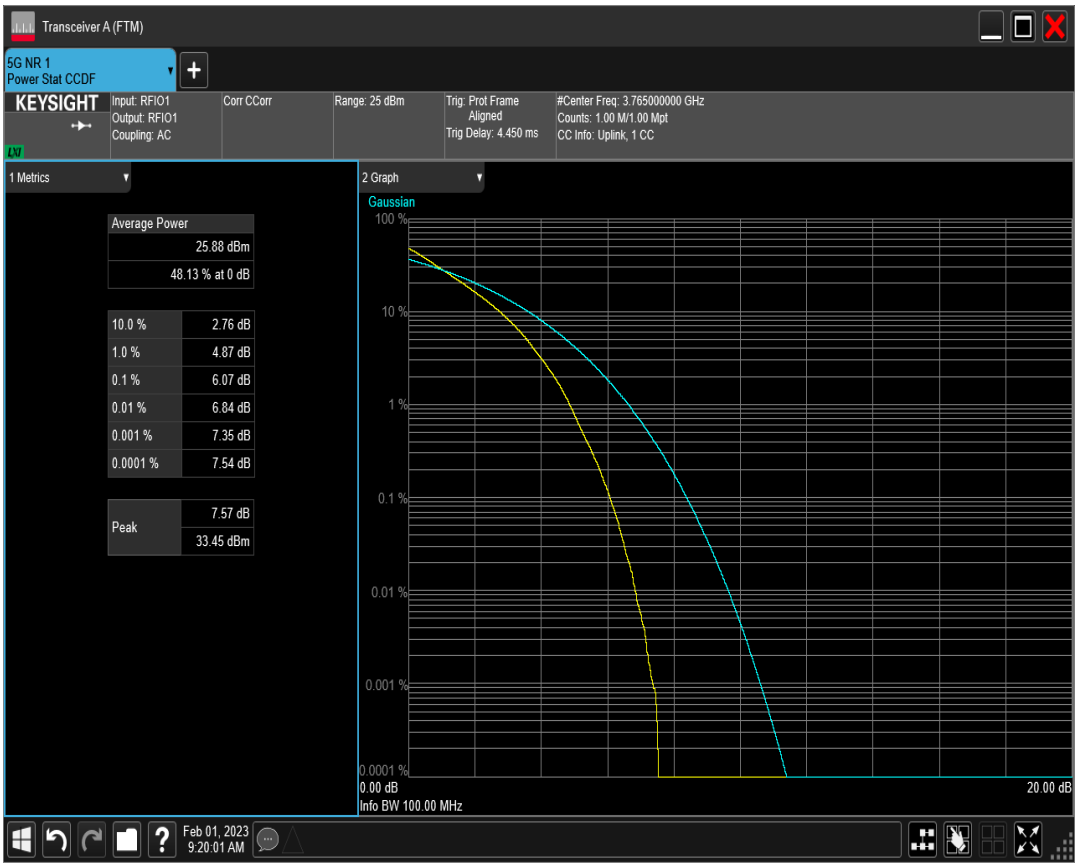
n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=650000 RB=180@0



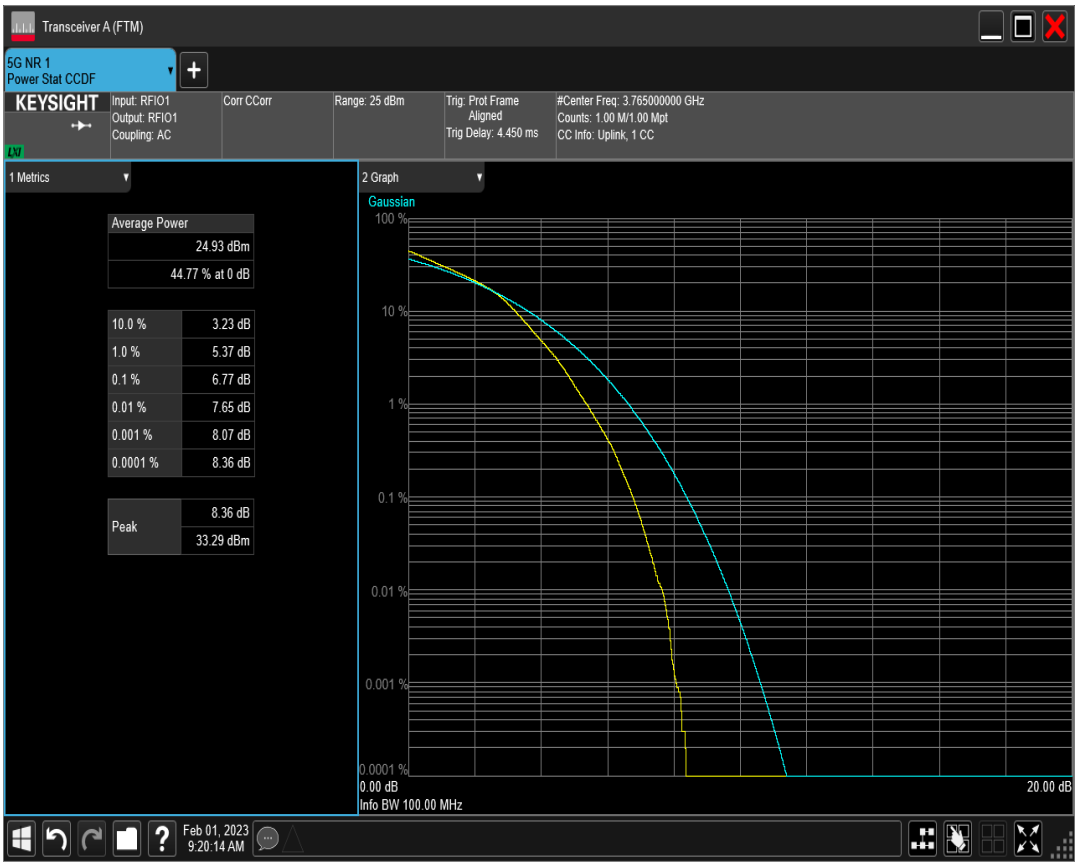
n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=651000 RB=180@0



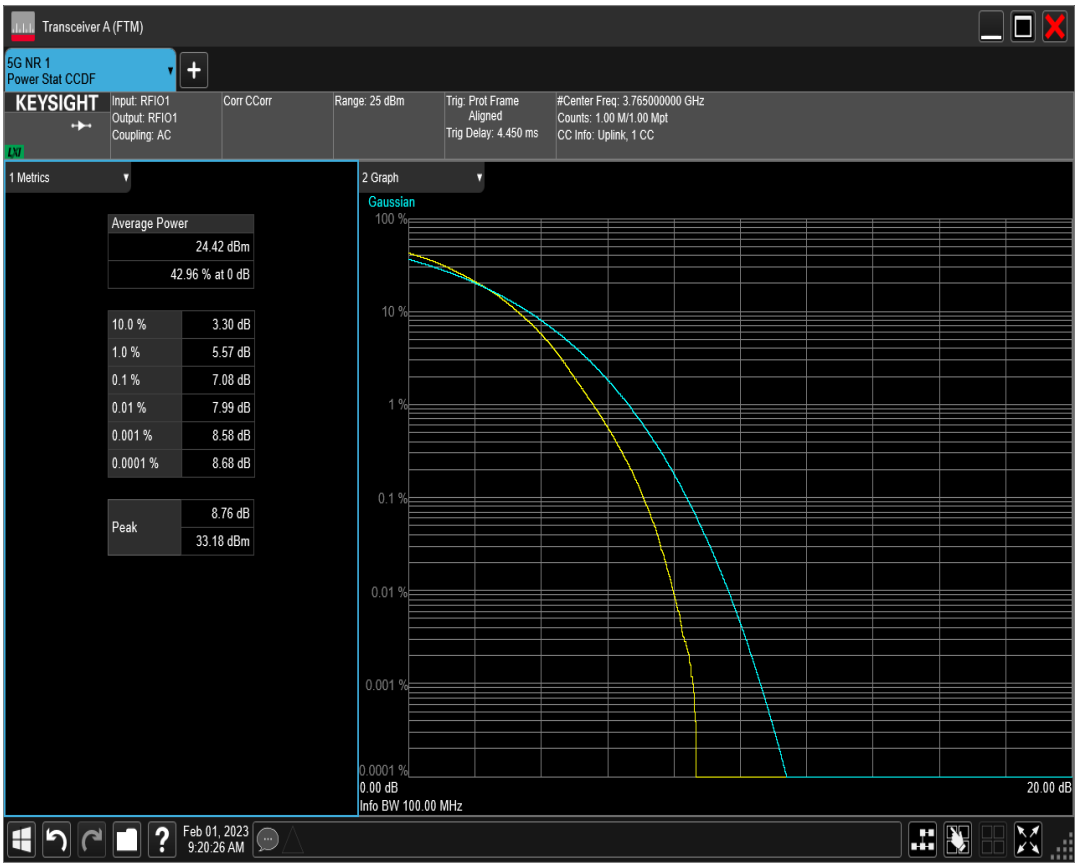
n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=180@0



n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=651000 RB=180@0



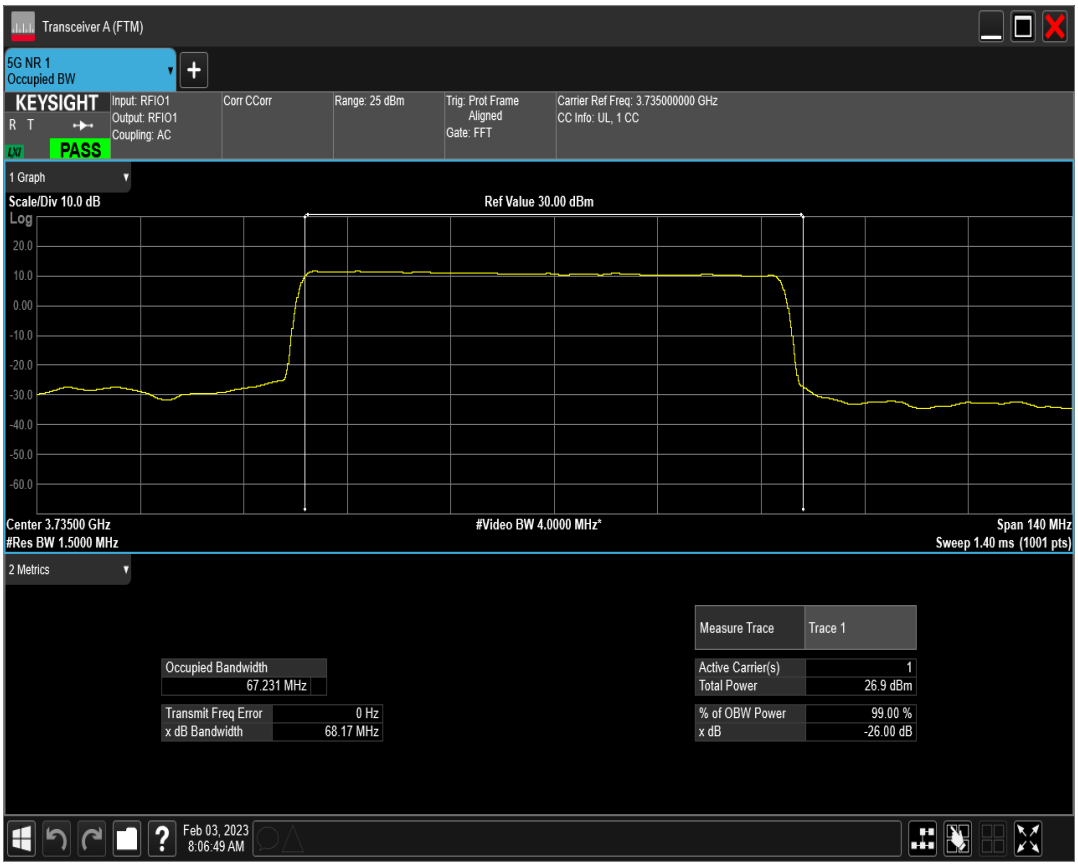
n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=651000 RB=180@0


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: 3.765000000 GHz
Counts: 1.00 M/1.00 Mpt
CC Info: Uplink, 1 CC
1 Metrics
Average Power
24.42 dBm
42.96 % at 0 dB
10.0 % 3.30 dB
1.0 % 5.57 dB
0.1 % 7.08 dB
0.01 % 7.99 dB
0.001 % 8.58 dB
0.0001 % 8.68 dB
Peak 8.76 dB
33.18 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
9:20:26 AM

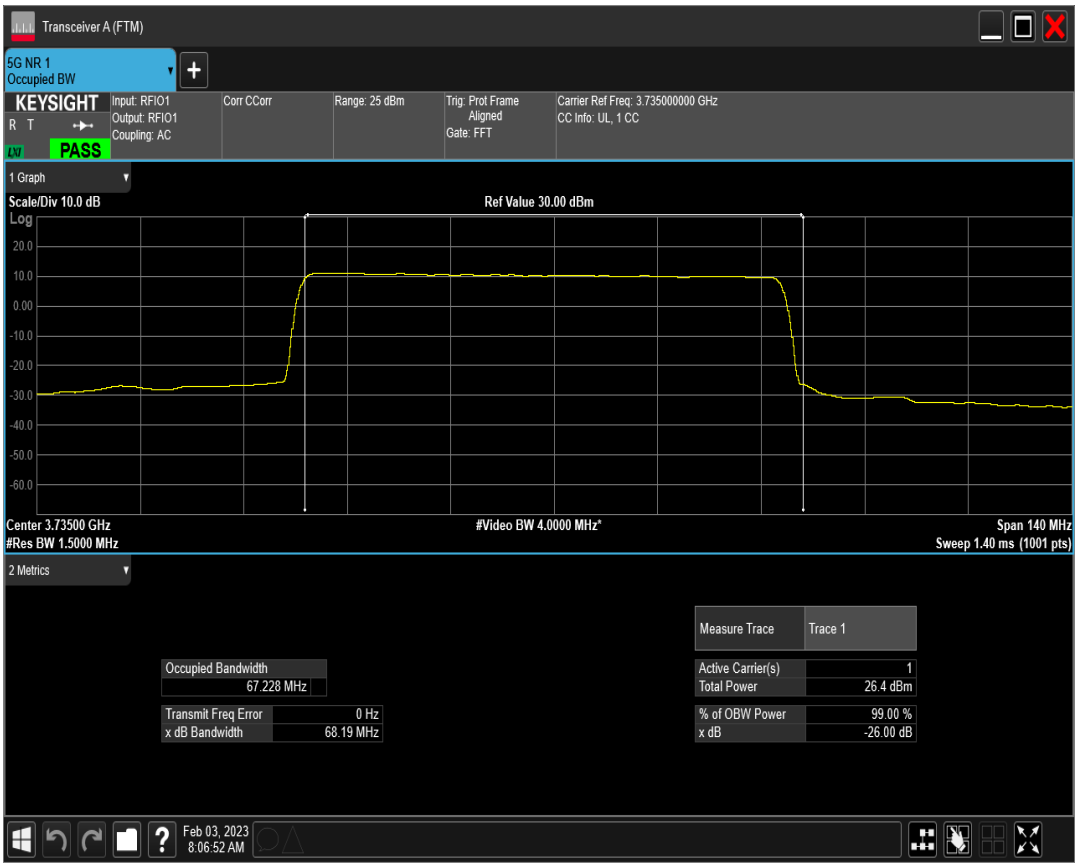
4 Occupied bandwidth for NR FR1

Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	99% OBW (MHz)	-26dB EBW (MHz)	Verdict
n78(3700-3800)	30	70	649000	180@0	DFT_BPSK	67.230	68.170	PASS
n78(3700-3800)	30	70	649000	180@0	DFT_QPSK	67.230	68.190	PASS
n78(3700-3800)	30	70	649000	180@0	DFT_QAM16	67.230	68.210	PASS
n78(3700-3800)	30	70	649000	180@0	DFT_QAM64	67.260	68.150	PASS
n78(3700-3800)	30	70	649000	189@0	CP_QPSK	67.830	71.430	PASS
n78(3700-3800)	30	70	650000	180@0	DFT_BPSK	67.240	68.180	PASS
n78(3700-3800)	30	70	650000	180@0	DFT_QPSK	67.220	68.200	PASS
n78(3700-3800)	30	70	650000	180@0	DFT_QAM16	67.260	68.180	PASS
n78(3700-3800)	30	70	650000	180@0	DFT_QAM64	67.050	68.140	PASS
n78(3700-3800)	30	70	650000	189@0	CP_QPSK	67.830	71.440	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_BPSK	67.230	68.190	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_QPSK	67.220	68.210	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_QAM16	67.260	68.180	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_QAM64	67.050	68.140	PASS
n78(3700-3800)	30	70	651000	189@0	CP_QPSK	67.830	71.450	PASS

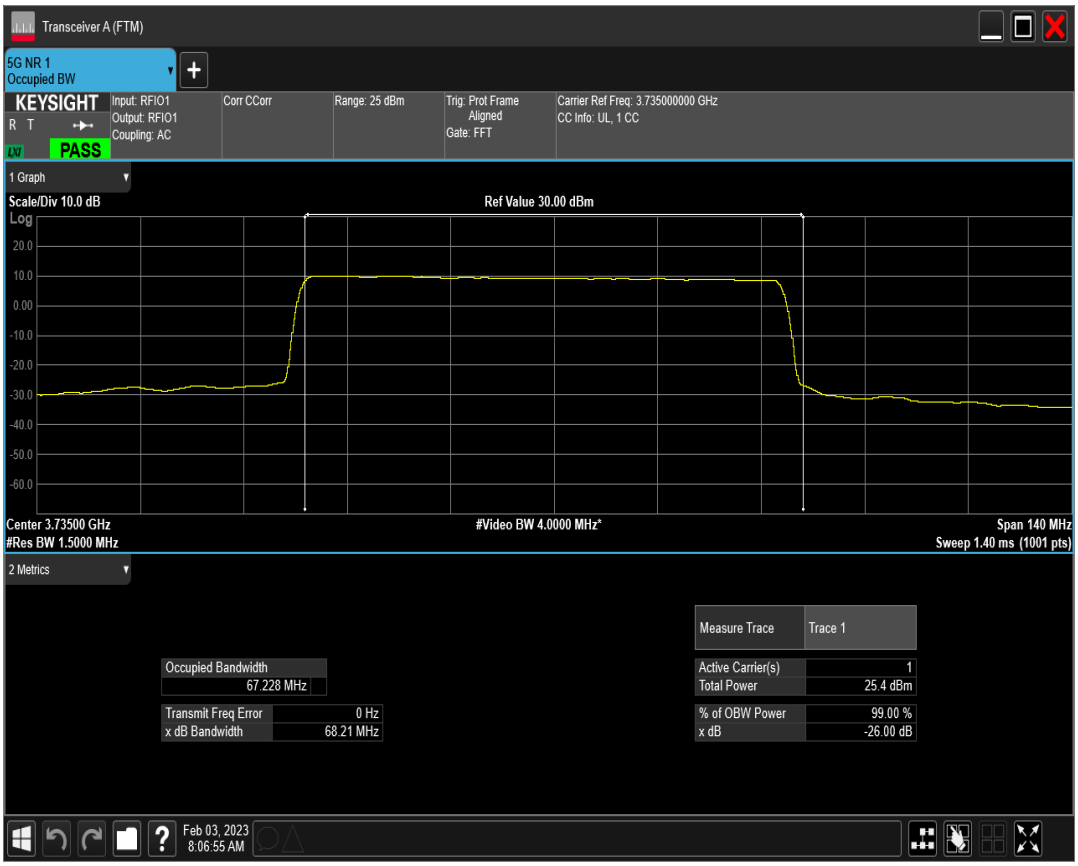
n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=649000 RB=180@0



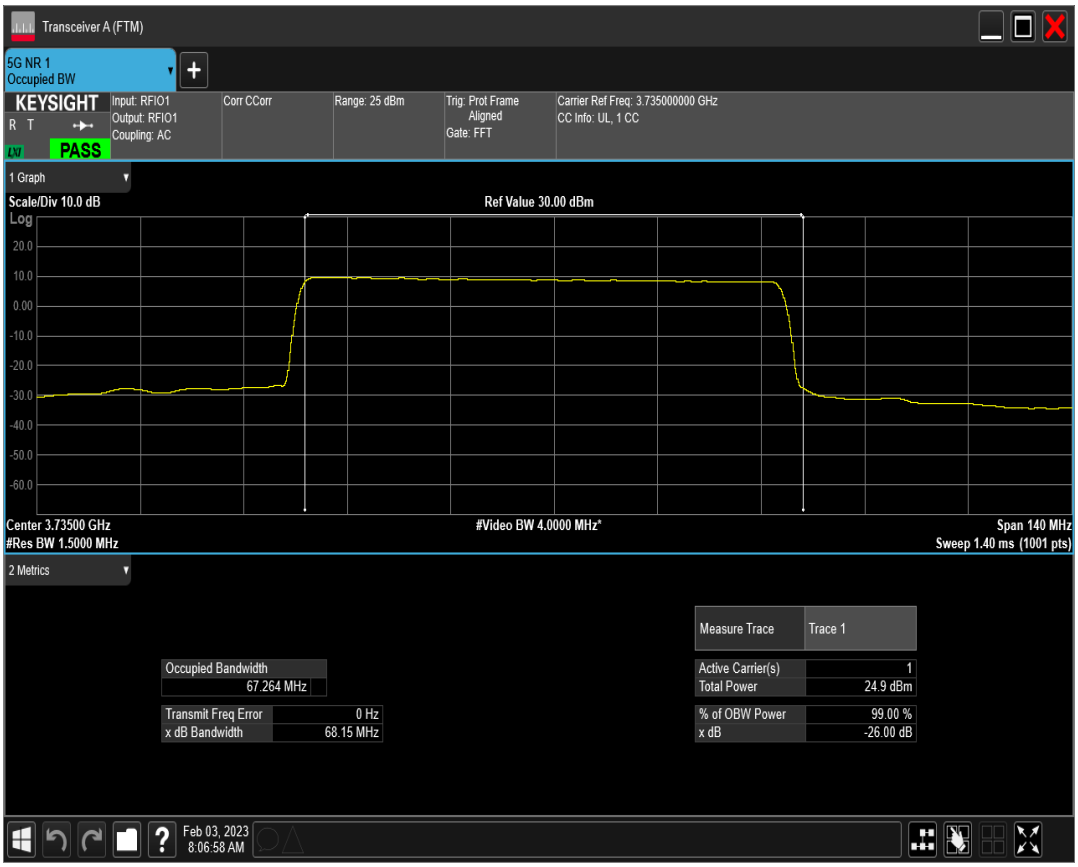
n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=180@0



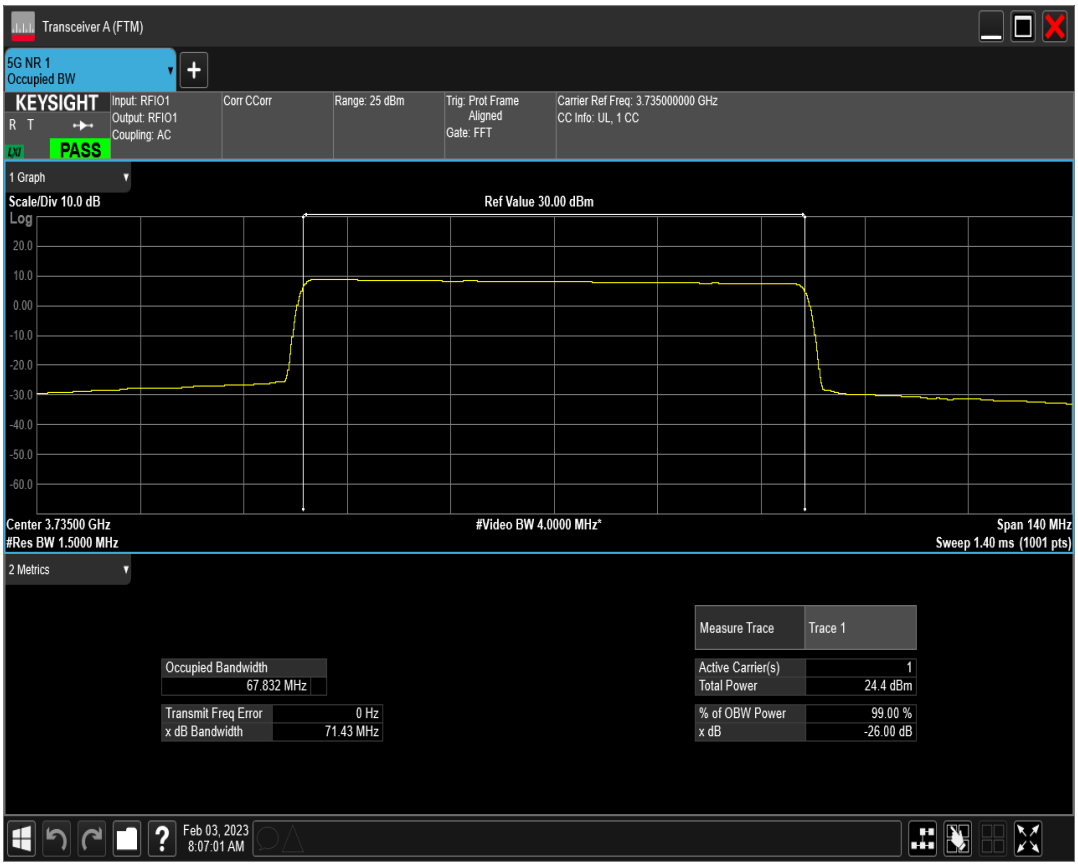
n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=649000 RB=180@0



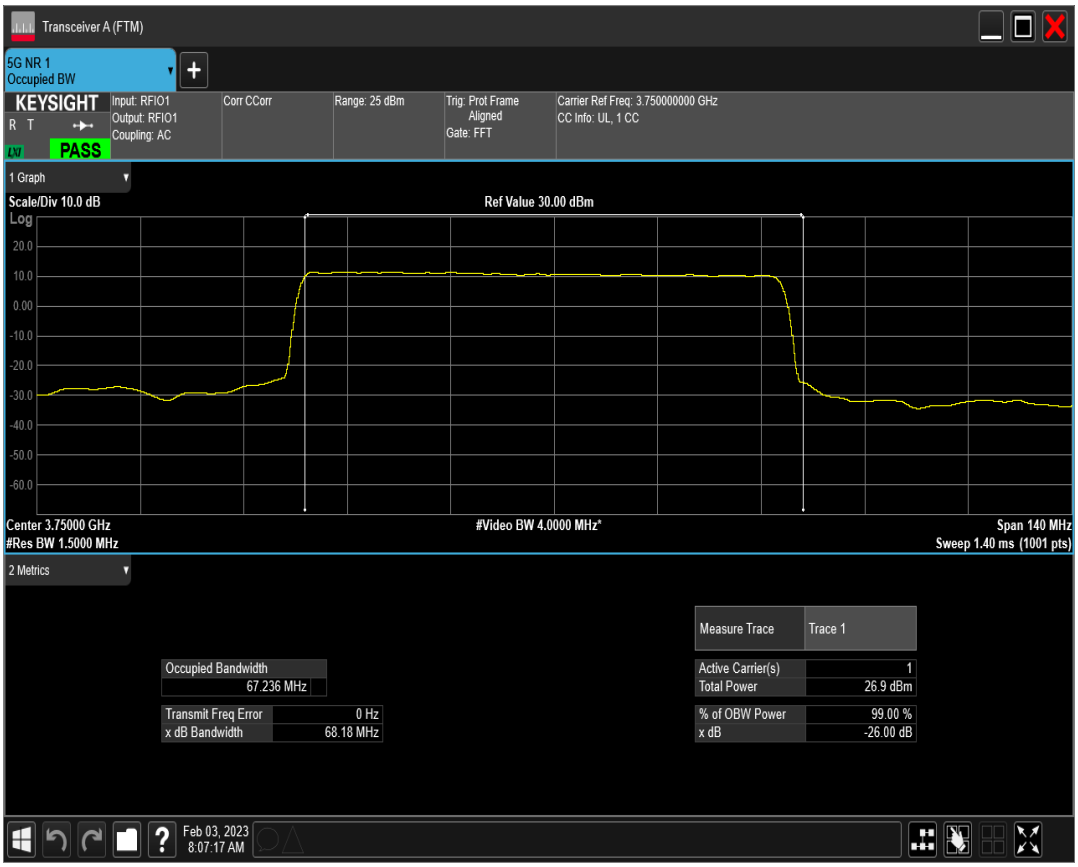
n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=649000 RB=180@0



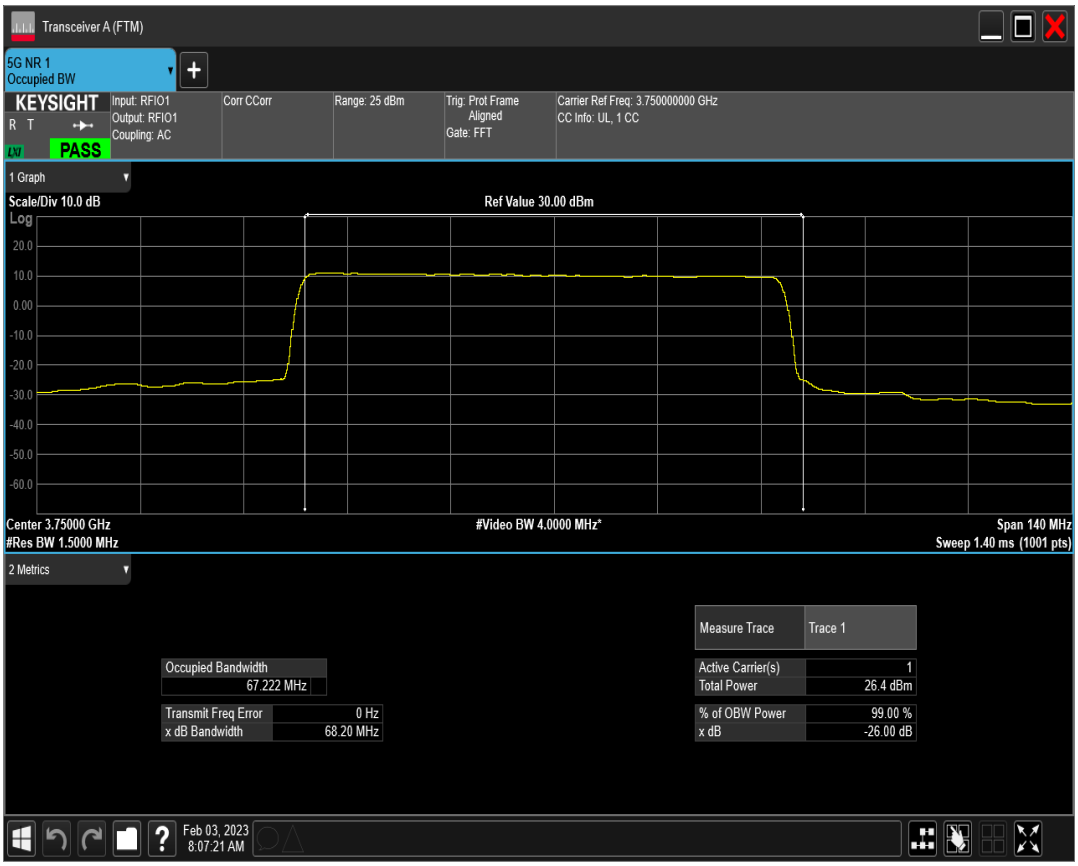
n78(3700-3800) SCS=30kHz CP_QPSK BW=70MHz Channel=649000 RB=189@0



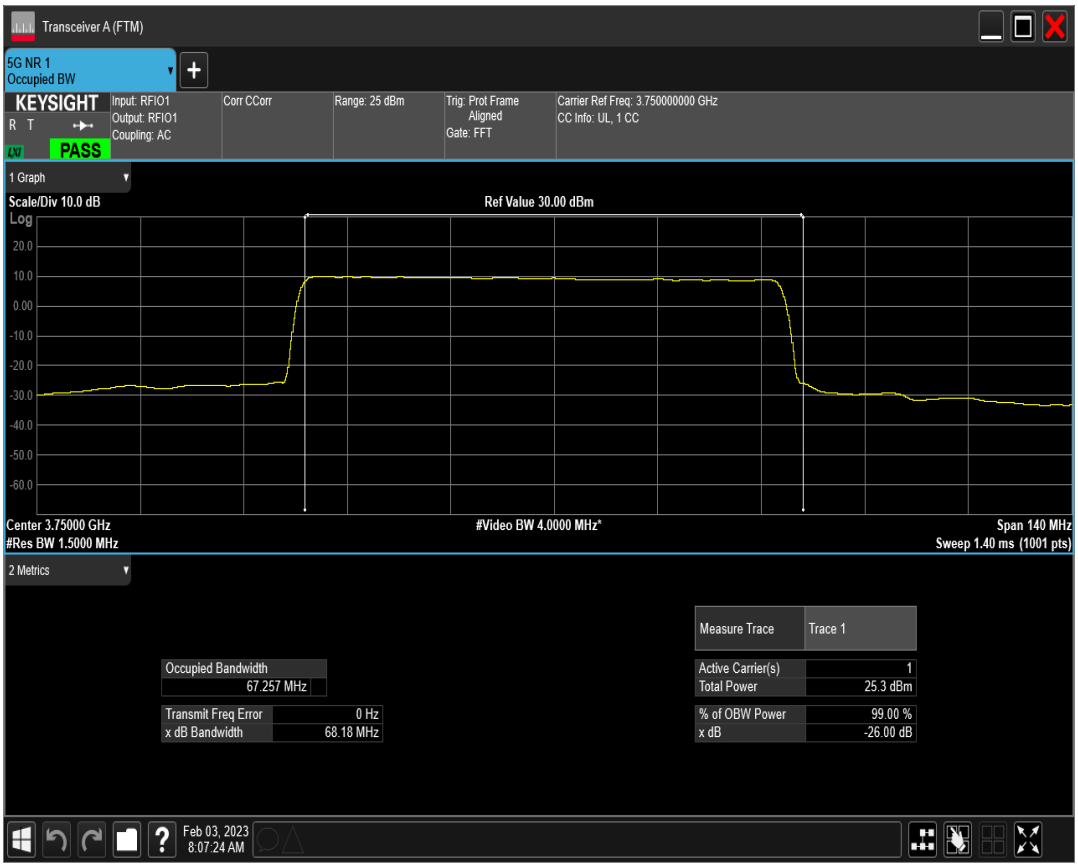
n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=650000 RB=180@0



n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=650000 RB=180@0

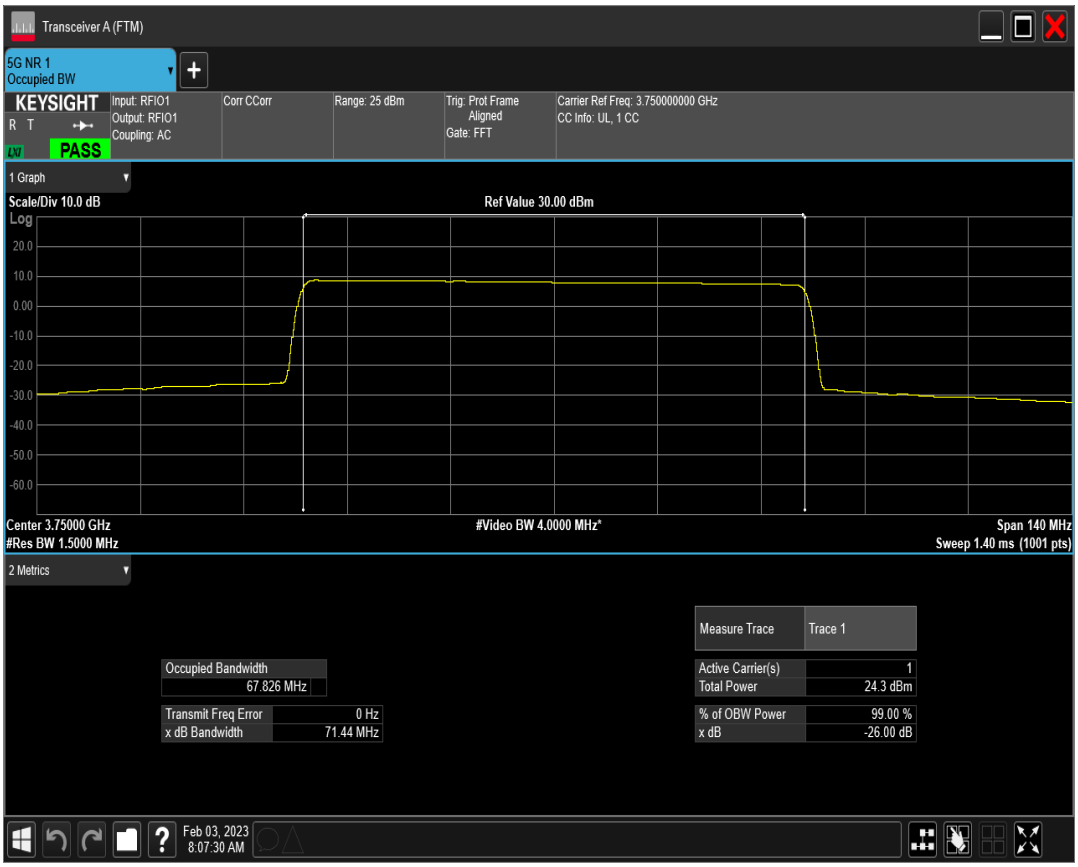


n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=650000 RB=180@0



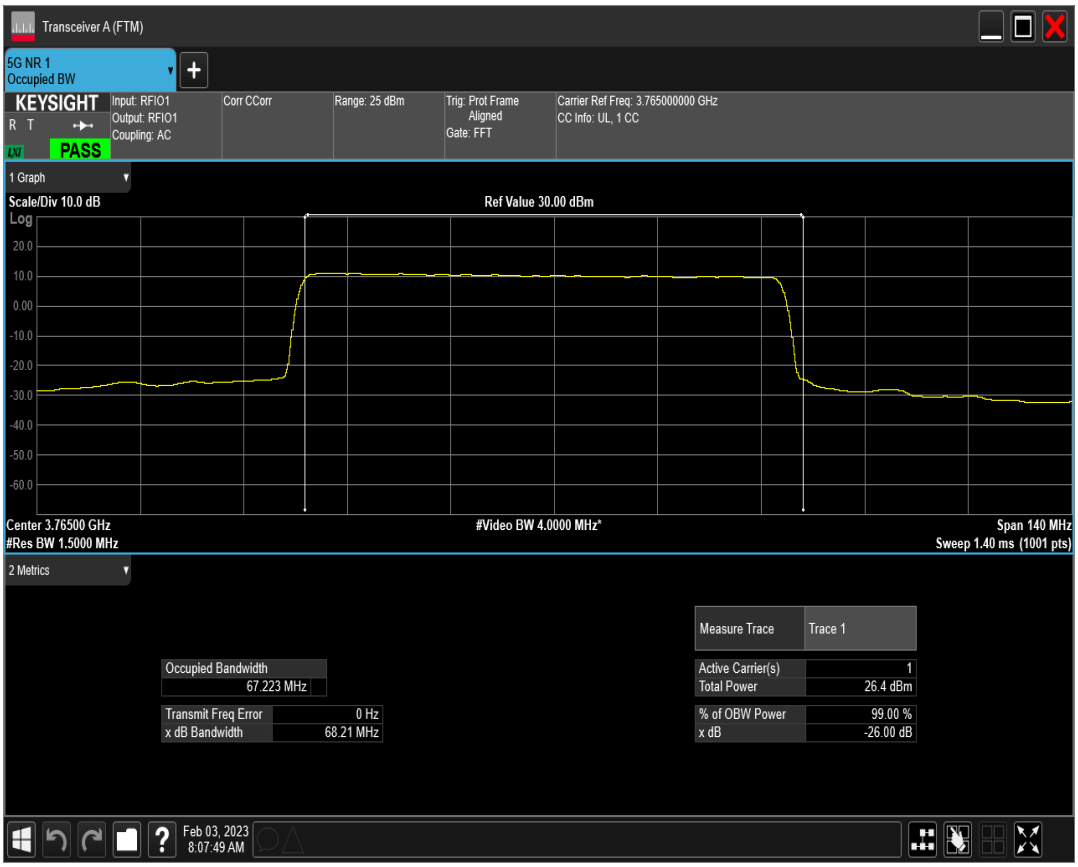
n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=650000 RB=180@0

n78(3700-3800) SCS=30kHz CP_QPSK BW=70MHz Channel=650000 RB=189@0

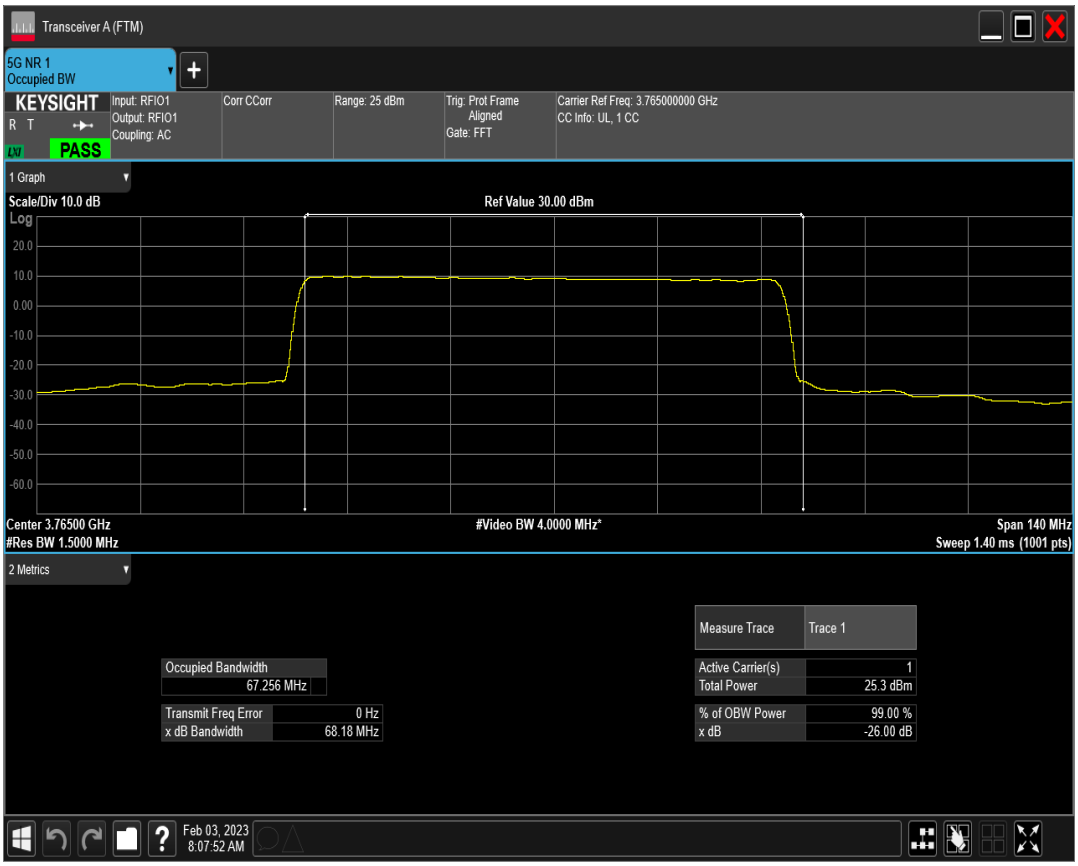


n78(3700-3800) SCS=30kHz DFT_BPSK BW=70MHz Channel=651000 RB=180@0

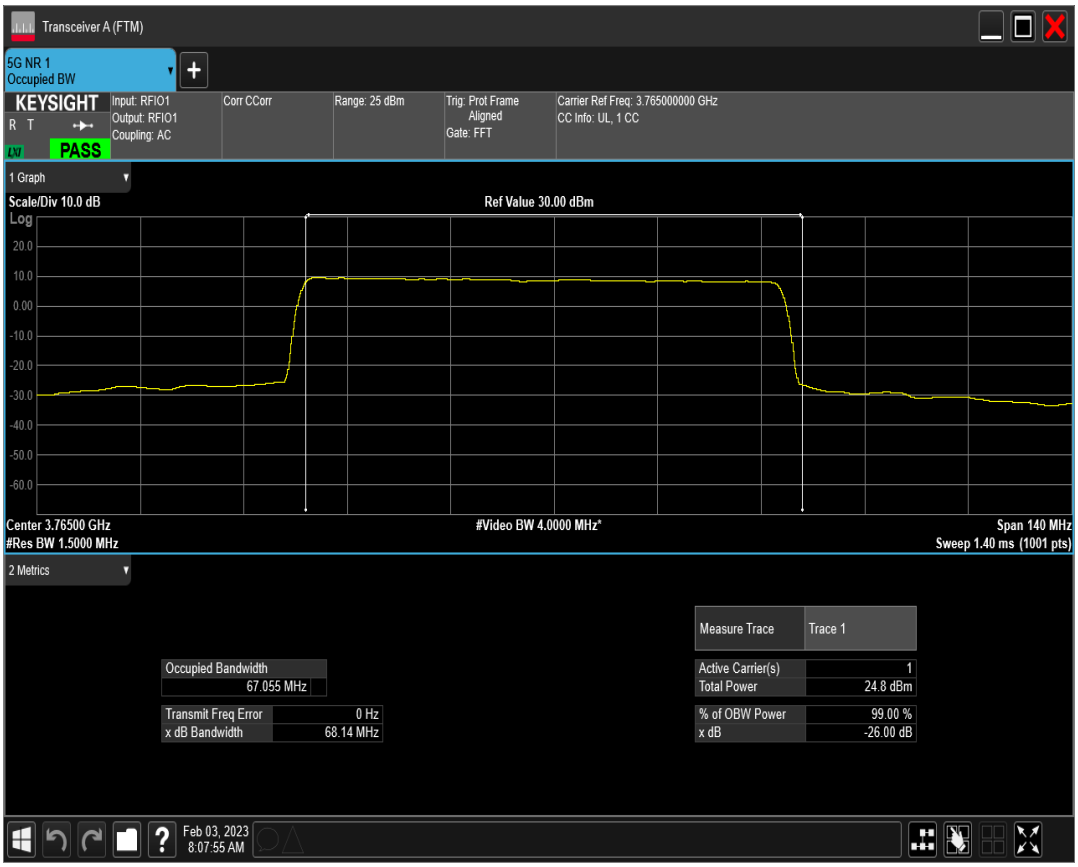
n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=180@0



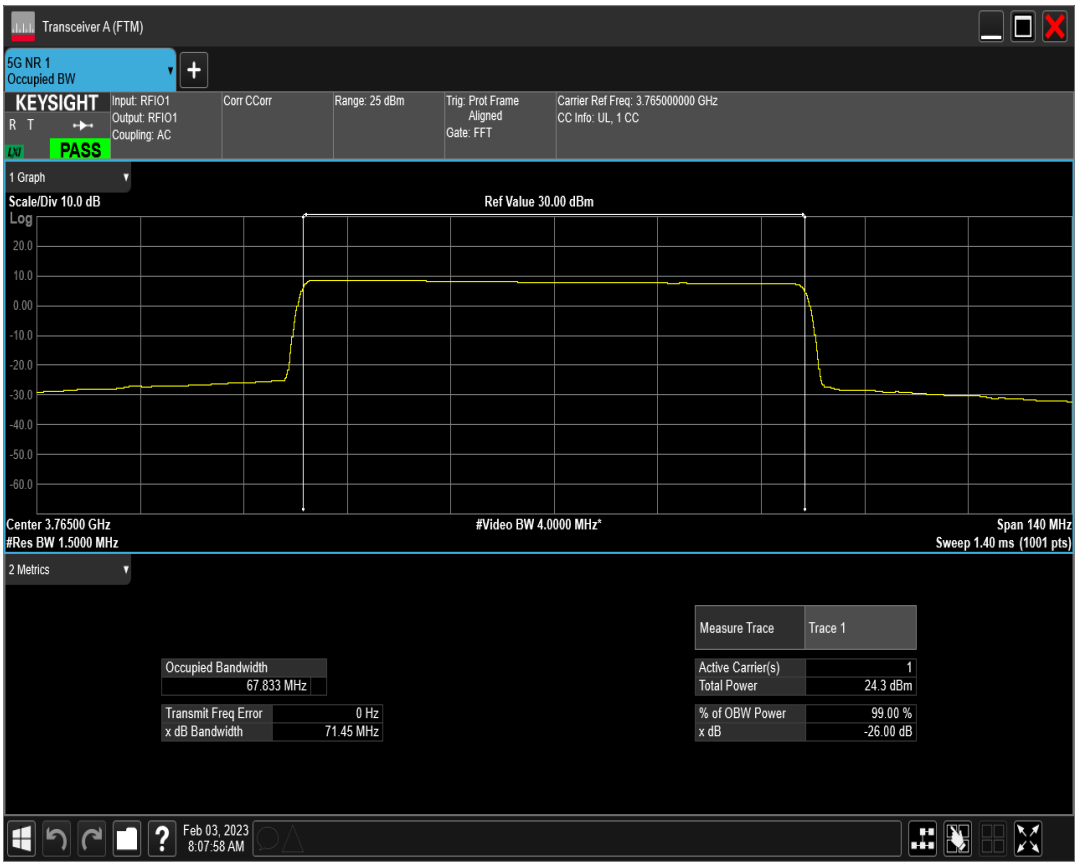
n78(3700-3800) SCS=30kHz DFT_QAM16 BW=70MHz Channel=651000 RB=180@0



n78(3700-3800) SCS=30kHz DFT_QAM64 BW=70MHz Channel=651000 RB=180@0



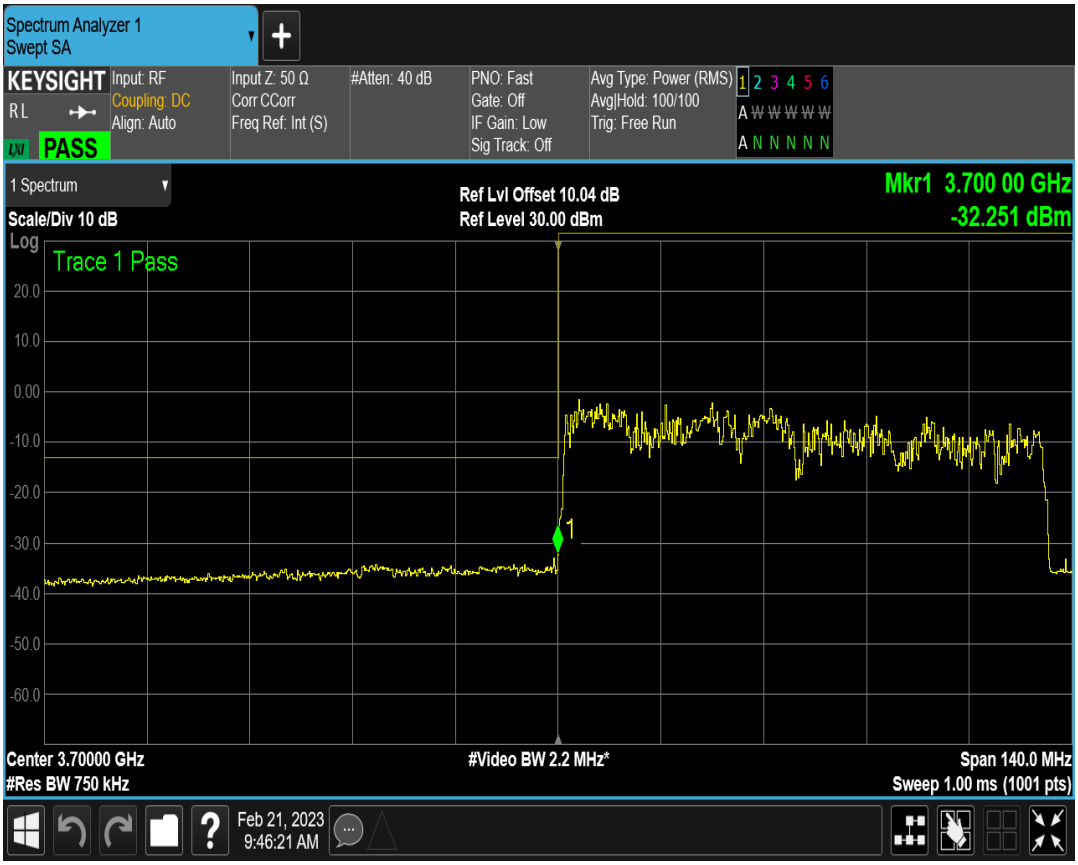
n78(3700-3800) SCS=30kHz CP_QPSK BW=70MHz Channel=651000 RB=189@0



5 Band edge for NR FR1

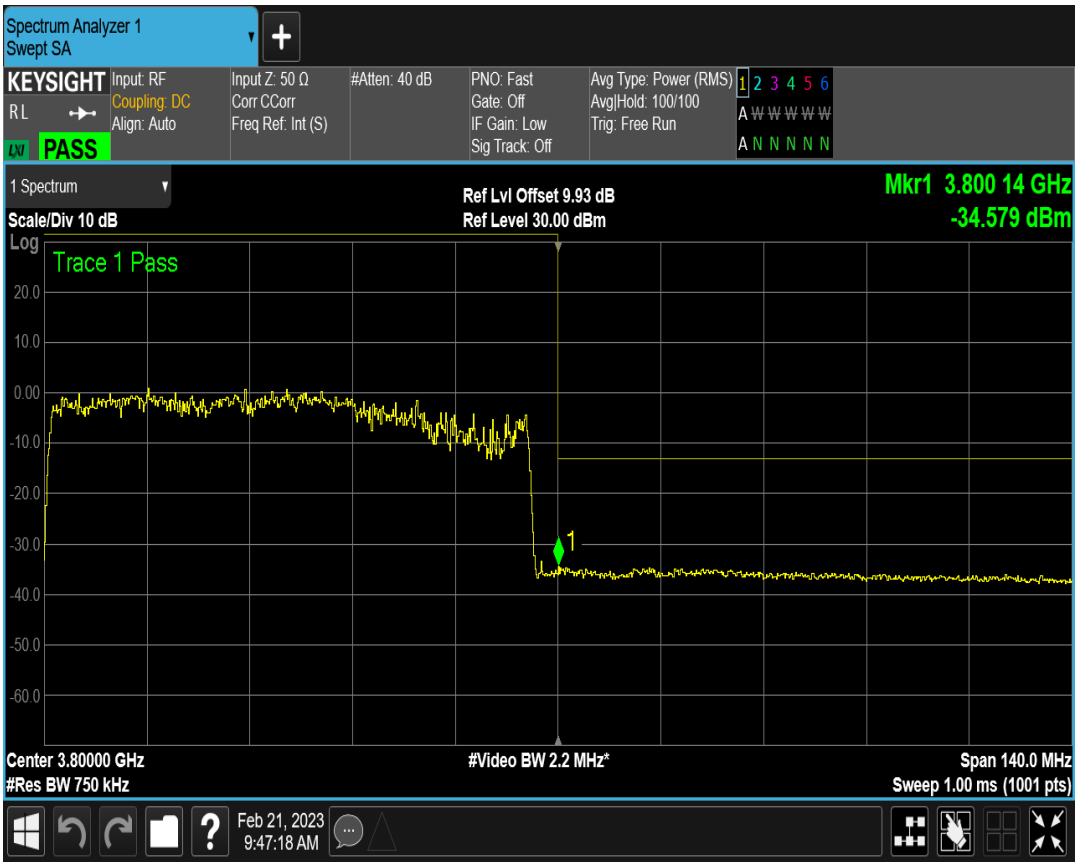
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n78(3700-3800)	30	70	649000	180@0	DFT_QPSK	3700.00	-32.25	-13	PASS
n78(3700-3800)	30	70	649000	1@0	DFT_QPSK	3699.16	-38.06	-13	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_QPSK	3800.14	-34.57	-13	PASS
n78(3700-3800)	30	70	651000	1@188	DFT_QPSK	3800.00	-30.01	-13	PASS

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=180@0



n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=1@0

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=180@0

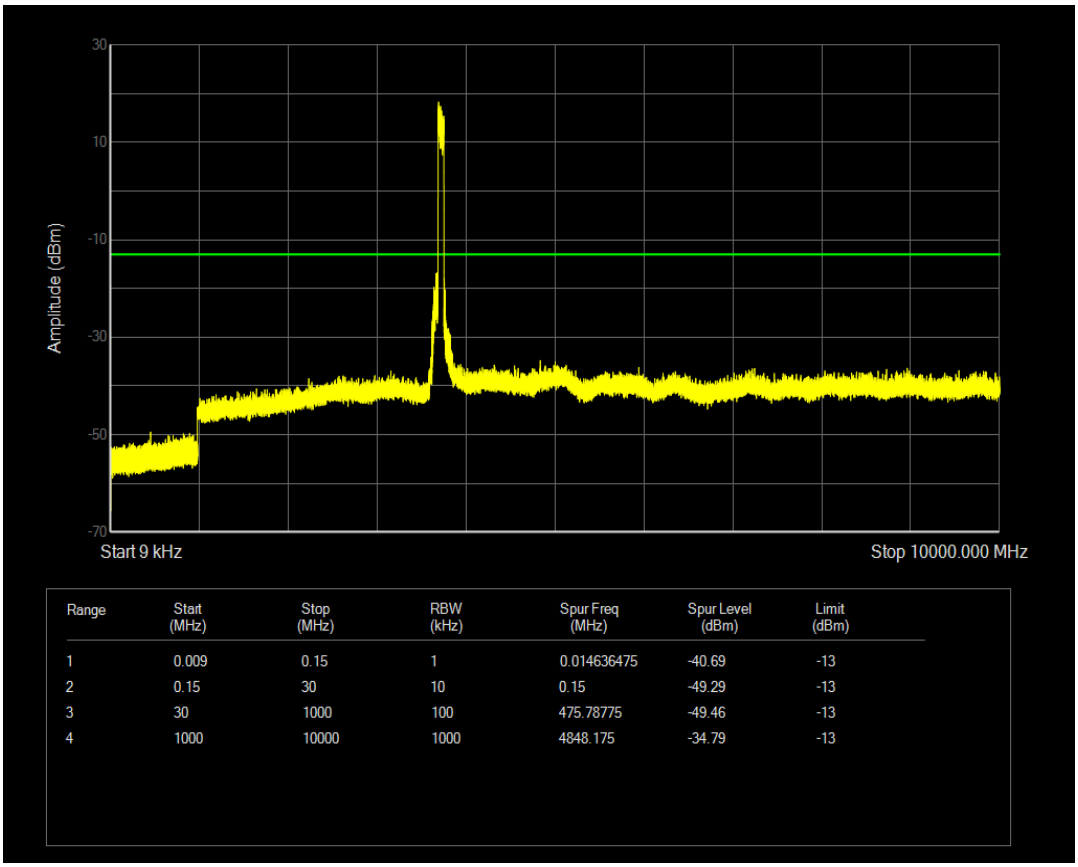


n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=1@188

6 Out-of-band emissions for NR FR1

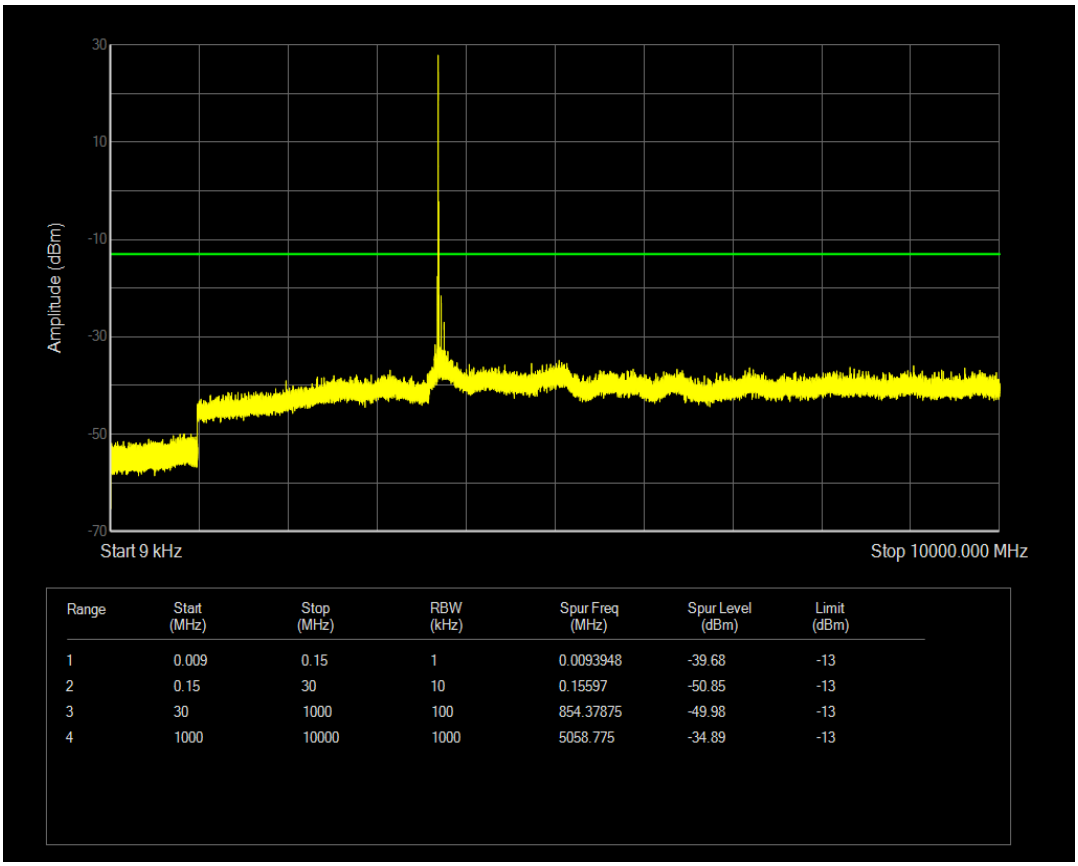
Band	SCS (kHz)	Bandwidth (MHz)	UL Channel	RB Allocation	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
n78(3700-3800)	30	70	649000	180@0	DFT_QPSK	4848.18	-34.79	-13	PASS
n78(3700-3800)	30	70	649000	1@0	DFT_QPSK	5058.78	-34.89	-13	PASS
n78(3700-3800)	30	70	649000	1@188	DFT_QPSK	5000.73	-34.82	-13	PASS
n78(3700-3800)	30	70	650000	180@0	DFT_QPSK	4276.68	-35.47	-13	PASS
n78(3700-3800)	30	70	650000	1@0	DFT_QPSK	4887.10	-35.47	-13	PASS
n78(3700-3800)	30	70	650000	1@188	DFT_QPSK	5103.78	-35.28	-13	PASS
n78(3700-3800)	30	70	651000	180@0	DFT_QPSK	4957.98	-34.96	-13	PASS
n78(3700-3800)	30	70	651000	1@0	DFT_QPSK	4178.35	-35.24	-13	PASS
n78(3700-3800)	30	70	651000	1@188	DFT_QPSK	5041.90	-35.70	-13	PASS

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=180@0



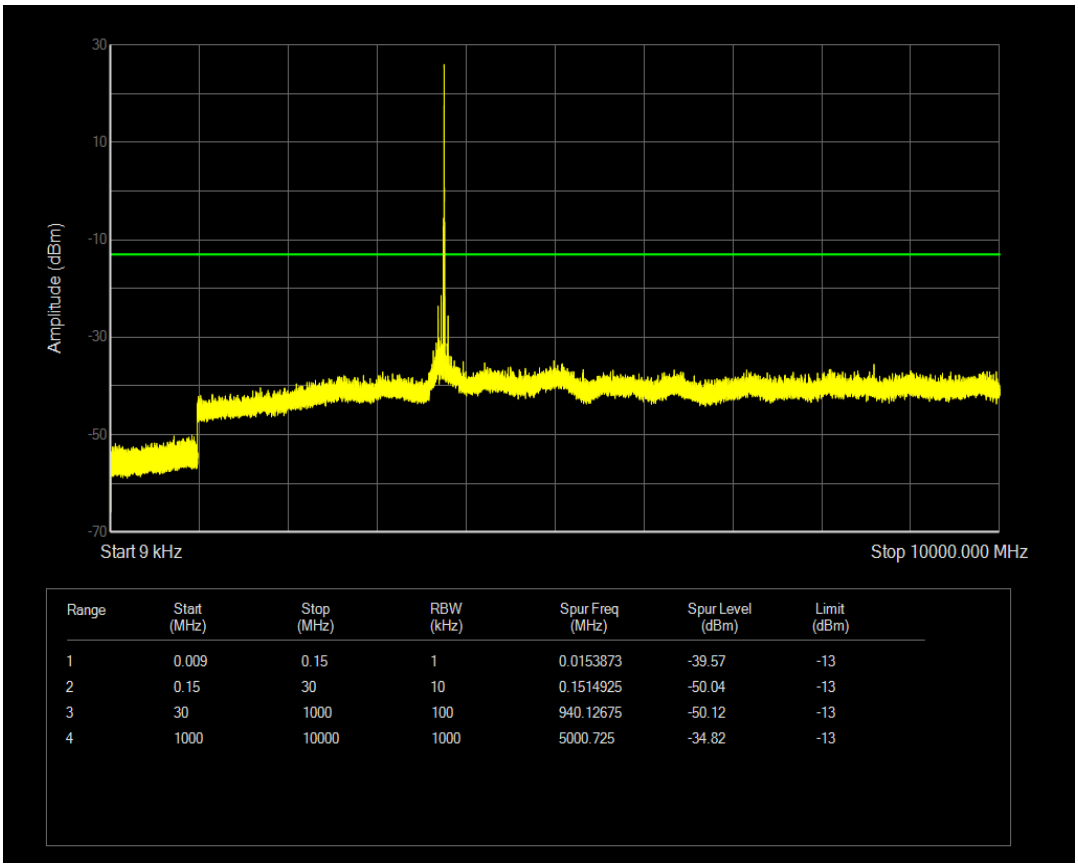
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.014636475	-40.69	-13
2	0.15	30	10	0.15	-49.29	-13
3	30	1000	100	475.78775	-49.46	-13
4	1000	10000	1000	4848.175	-34.79	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=1@0



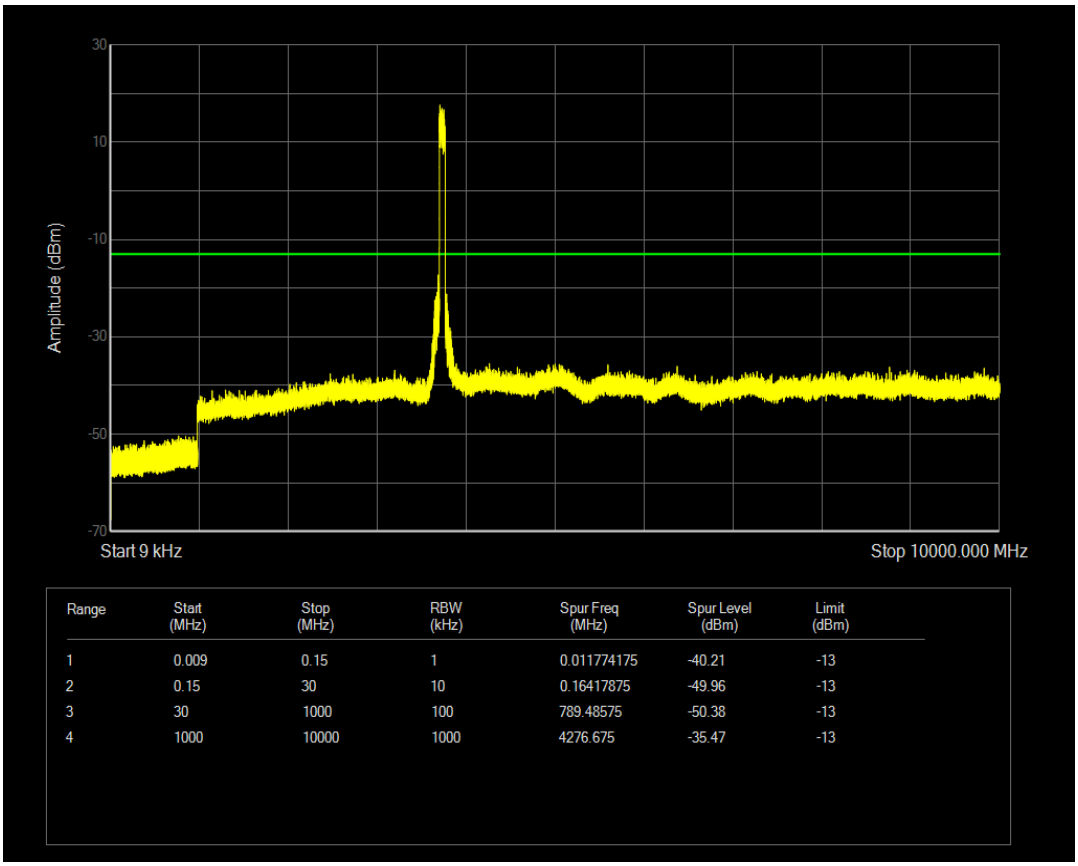
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0093948	-39.68	-13
2	0.15	30	10	0.15597	-50.85	-13
3	30	1000	100	854.37875	-49.98	-13
4	1000	10000	1000	5058.775	-34.89	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=649000 RB=1@188



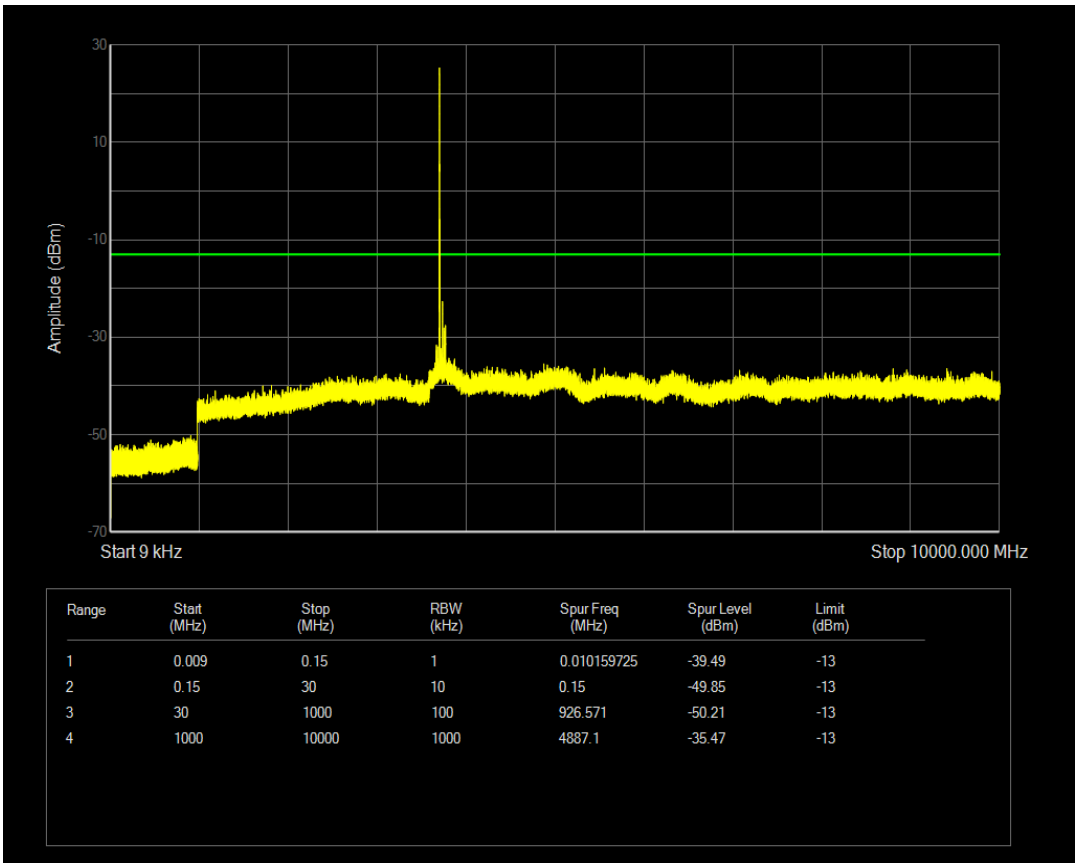
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0153873	-39.57	-13
2	0.15	30	10	0.1514925	-50.04	-13
3	30	1000	100	940.12675	-50.12	-13
4	1000	10000	1000	5000.725	-34.82	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=650000 RB=180@0



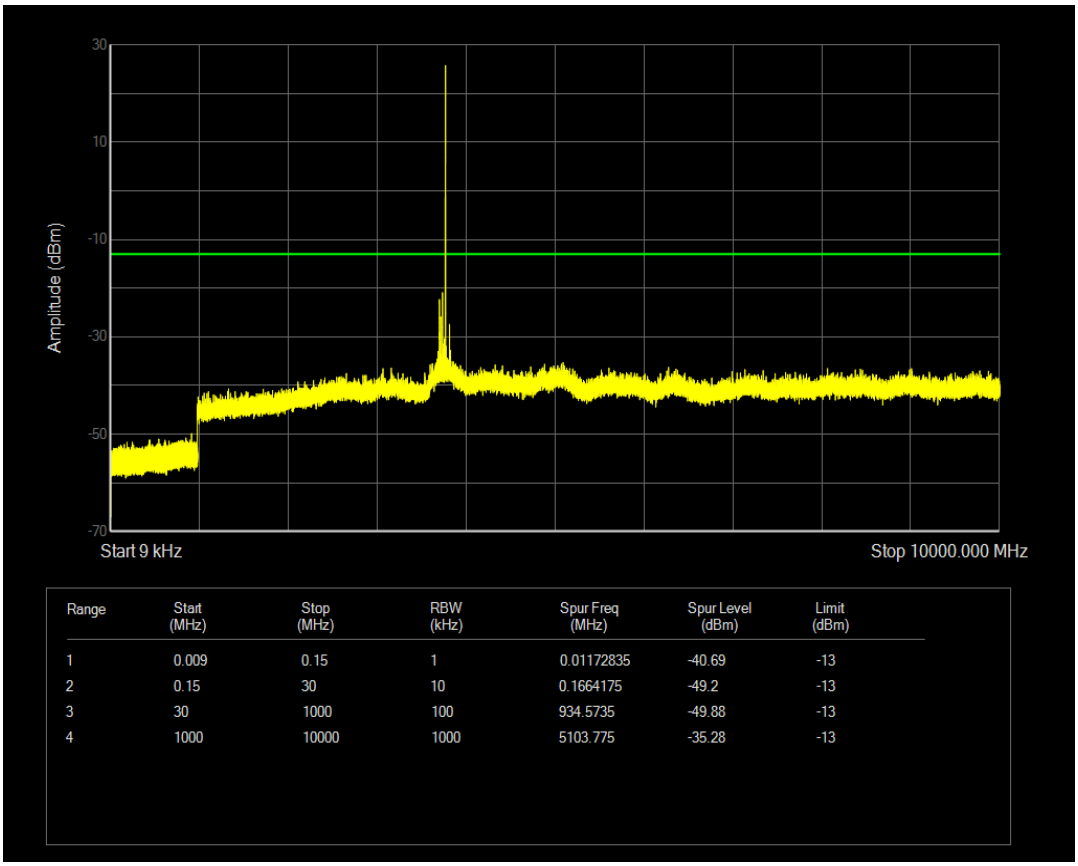
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011774175	-40.21	-13
2	0.15	30	10	0.16417875	-49.96	-13
3	30	1000	100	789.48575	-50.38	-13
4	1000	10000	1000	4276.675	-35.47	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=650000 RB=1@0



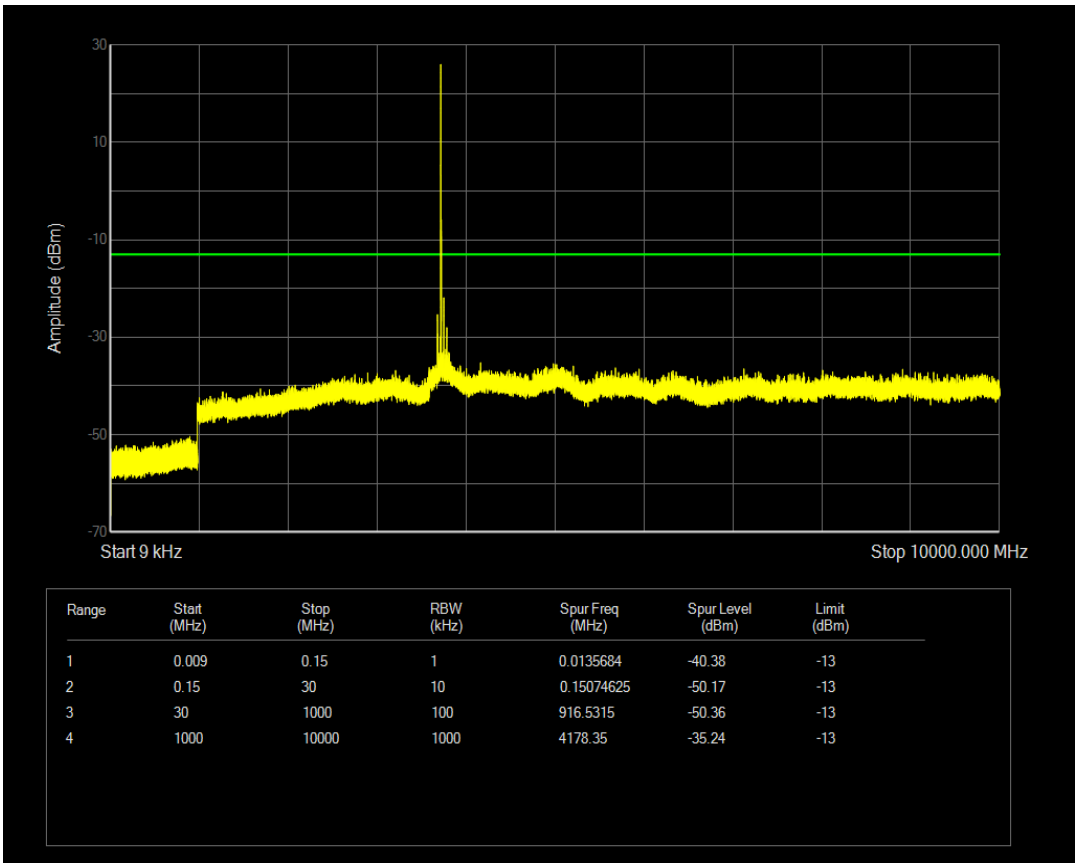
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.010159725	-39.49	-13
2	0.15	30	10	0.15	-49.85	-13
3	30	1000	100	926.571	-50.21	-13
4	1000	10000	1000	4887.1	-35.47	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=650000 RB=1@188



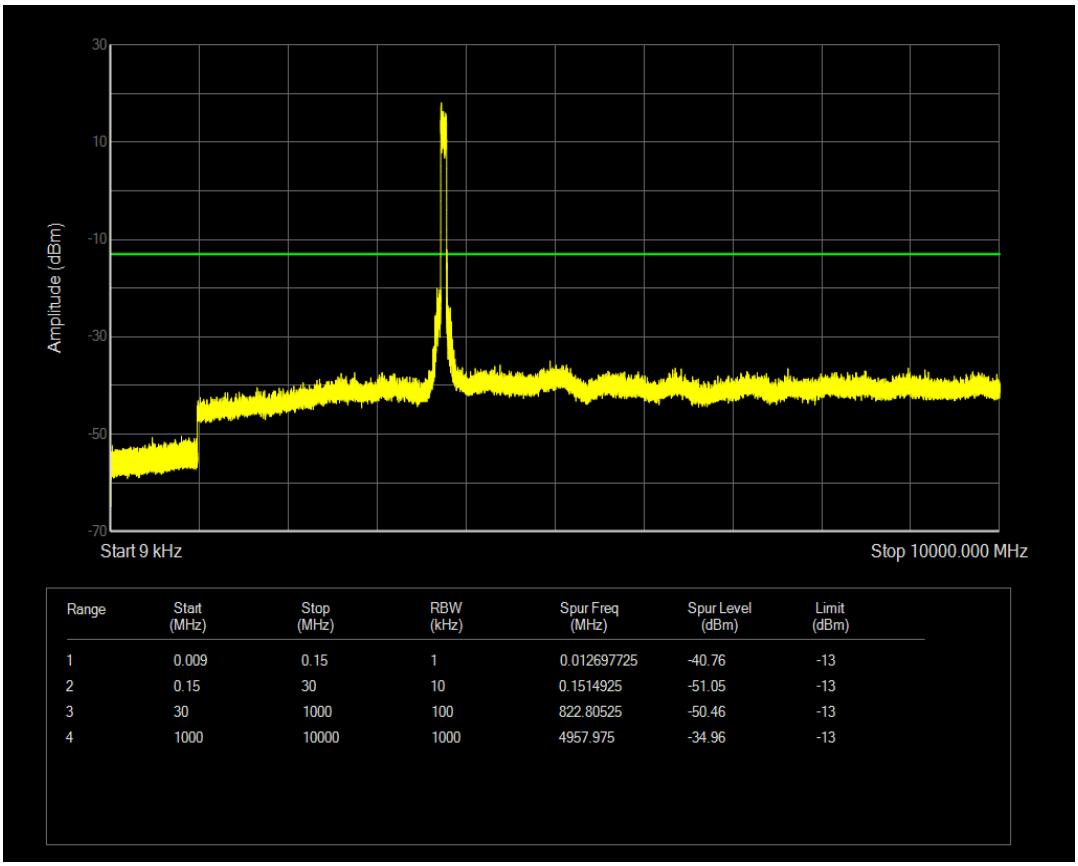
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01172835	-40.69	-13
2	0.15	30	10	0.1664175	-49.2	-13
3	30	1000	100	934.5735	-49.88	-13
4	1000	10000	1000	5103.775	-35.28	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=1@0



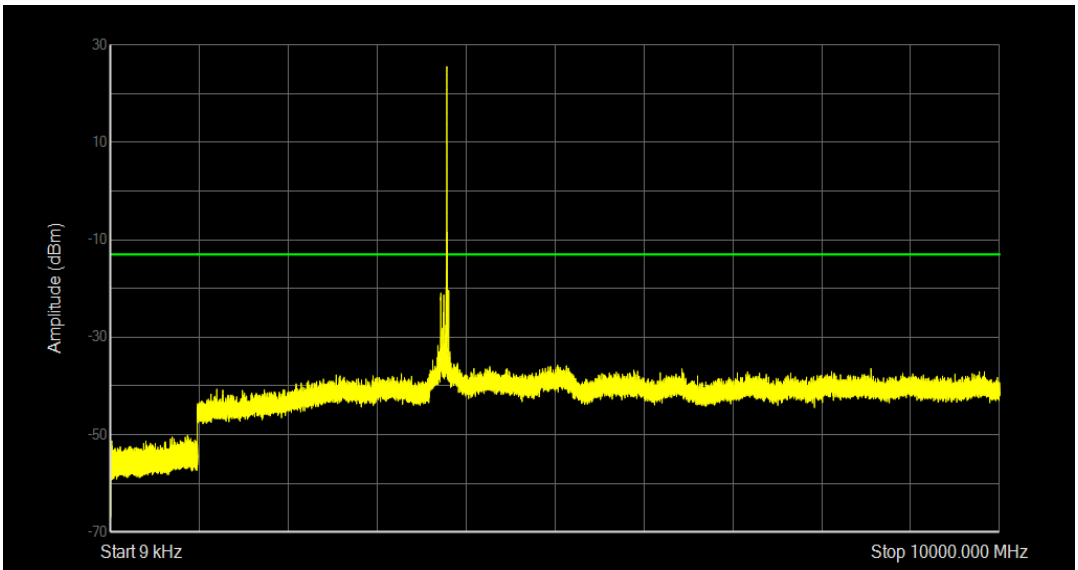
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0135684	-40.38	-13
2	0.15	30	10	0.15074625	-50.17	-13
3	30	1000	100	916.5315	-50.36	-13
4	1000	10000	1000	4178.35	-35.24	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=180@0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.012697725	-40.76	-13
2	0.15	30	10	0.1514925	-51.05	-13
3	30	1000	100	822.80525	-50.46	-13
4	1000	10000	1000	4957.975	-34.96	-13

n78(3700-3800) SCS=30kHz DFT_QPSK BW=70MHz Channel=651000 RB=1@188



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.00934545	-40.38	-13
2	0.15	30	10	0.1634325	-50.41	-13
3	30	1000	100	890.12325	-50.14	-13
4	1000	10000	1000	5041.9	-35.7	-13