99% & 26dB Bandwidth

Test Result

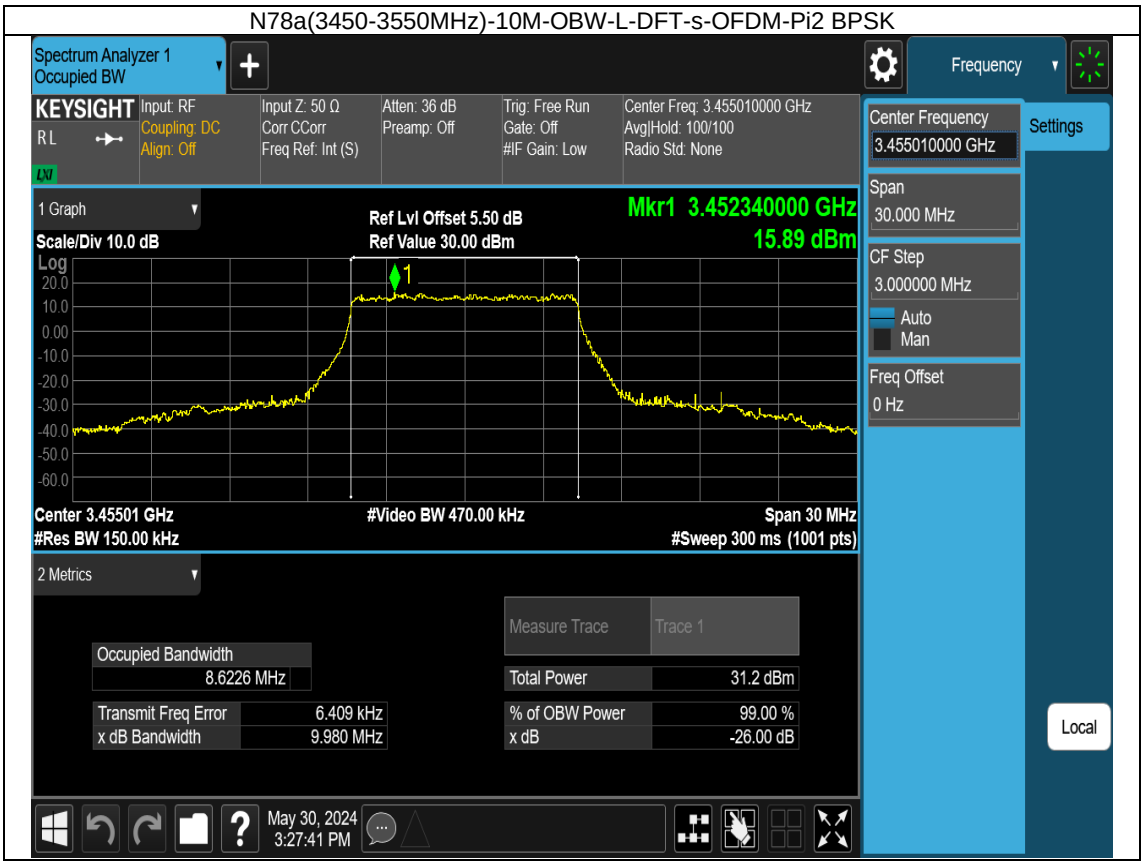
5G NR n78a(3450-3550MHz) SCS=30kHz 10MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	8.623	9.980	/	Pass
CP-OFDM QPSK		Outer_Full	8.646	10.08	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	8.640	9.902	/	Pass
CP-OFDM QPSK		Outer_Full	8.633	9.990	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	8.654	10.02	/	Pass
CP-OFDM QPSK		Outer_Full	8.653	10.16	/	Pass

5G NR n78a(3450-3550MHz) SCS=30kHz 15MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	12.952	14.68	/	Pass
CP-OFDM QPSK		Outer_Full	13.678	15.55	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	13.027	14.51	/	Pass
CP-OFDM QPSK		Outer_Full	13.710	15.66	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	12.989	14.69	/	Pass
CP-OFDM QPSK		Outer_Full	13.724	15.54	/	Pass

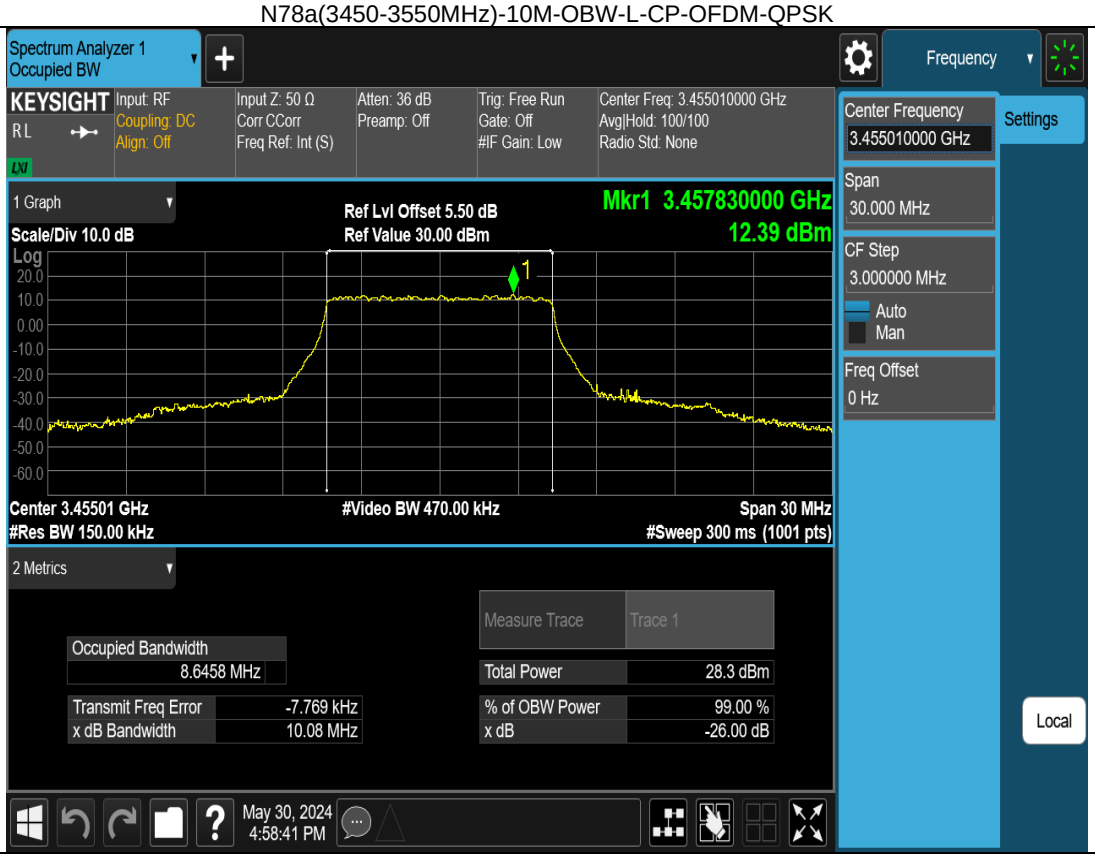
5G NR n78a(3450-3550MHz) SCS=30kHz 20MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	17.945	19.60	/	Pass
CP-OFDM QPSK		Outer_Full	18.290	20.20	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	17.891	19.41	/	Pass
CP-OFDM QPSK		Outer_Full	18.253	20.03	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	17.923	19.59	/	Pass
CP-OFDM QPSK		Outer_Full	18.315	20.19	/	Pass

Test graph

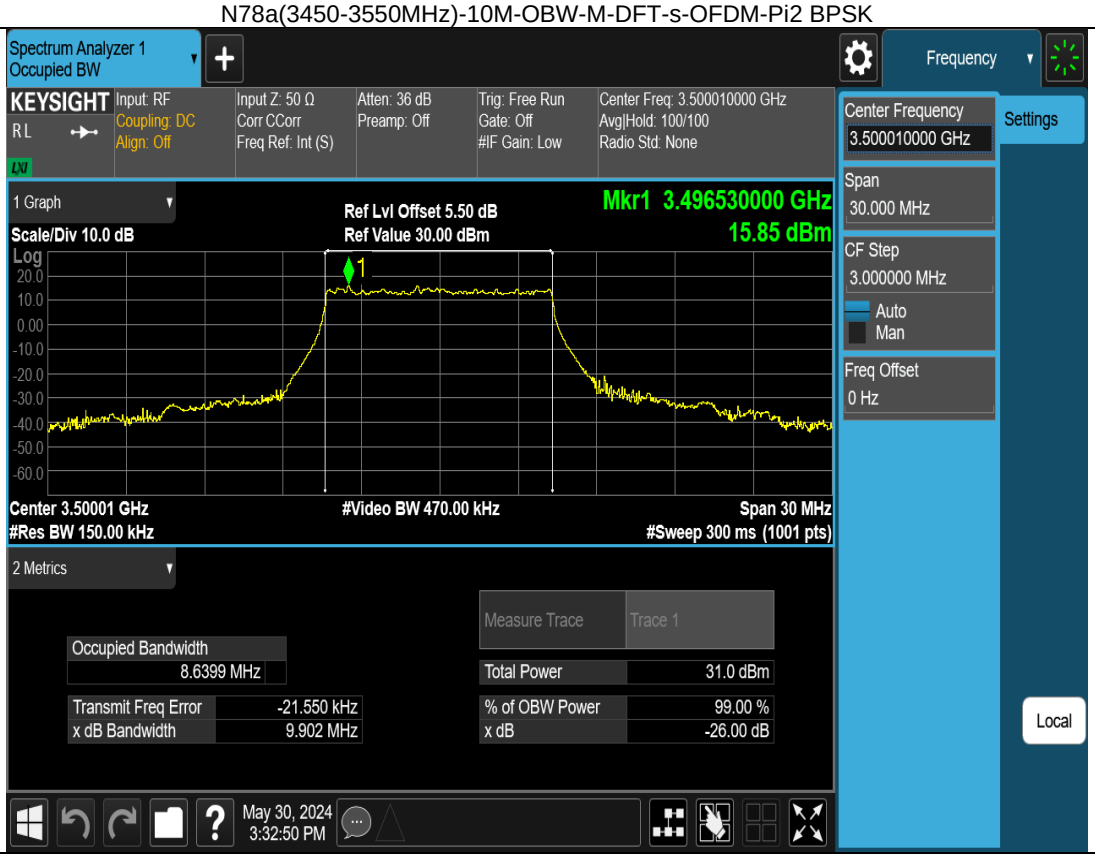
N78a(3450-3550MHz)-10M-OBW-L-DFT-s-OFDM-Pi2 BPSK



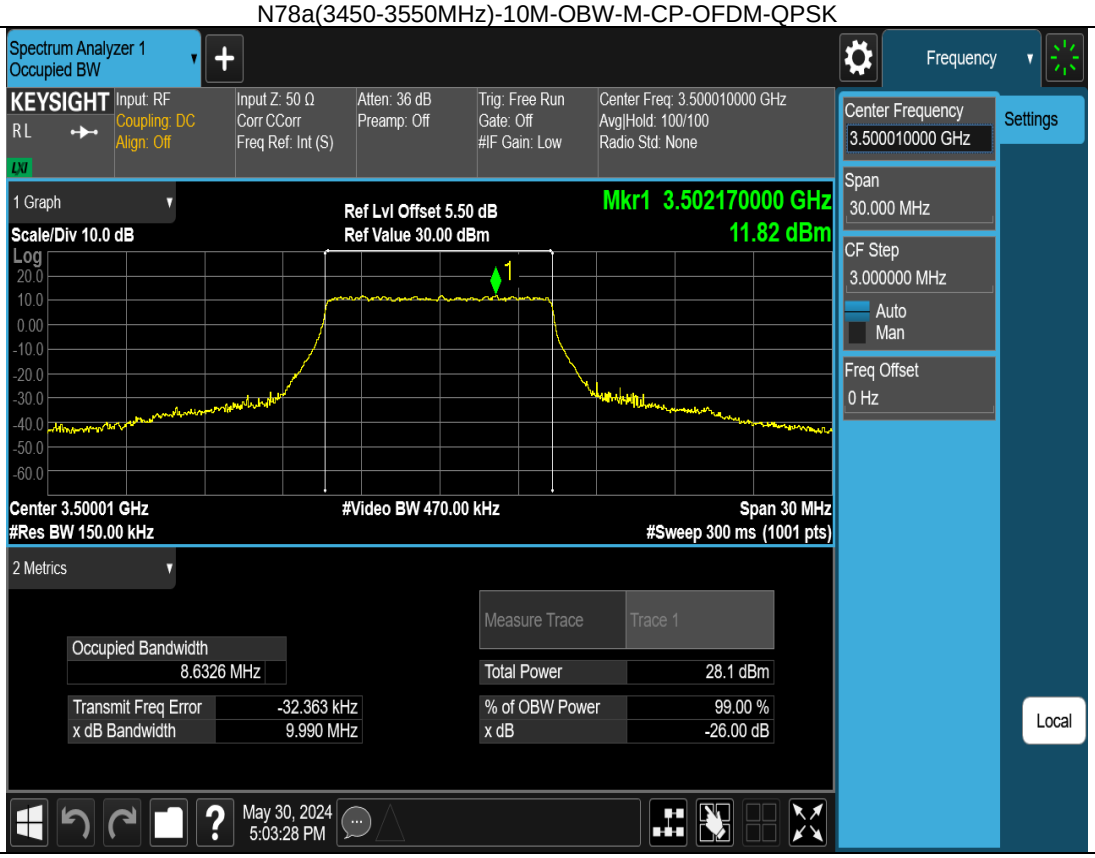
N78a(3450-3550MHz)-10M-OBW-L-CP-OFDM-QPSK



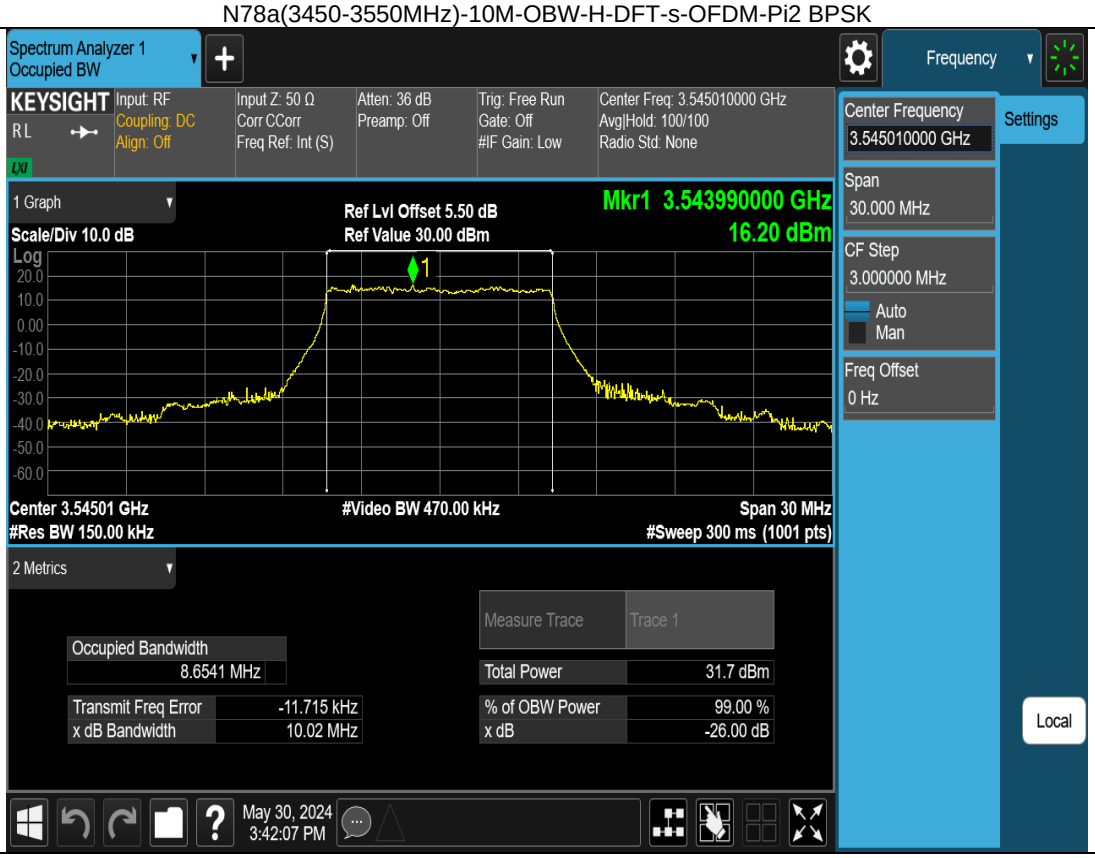
N78a(3450-3550MHz)-10M-OBW-M-DFT-s-OFDM-Pi2 BPSK



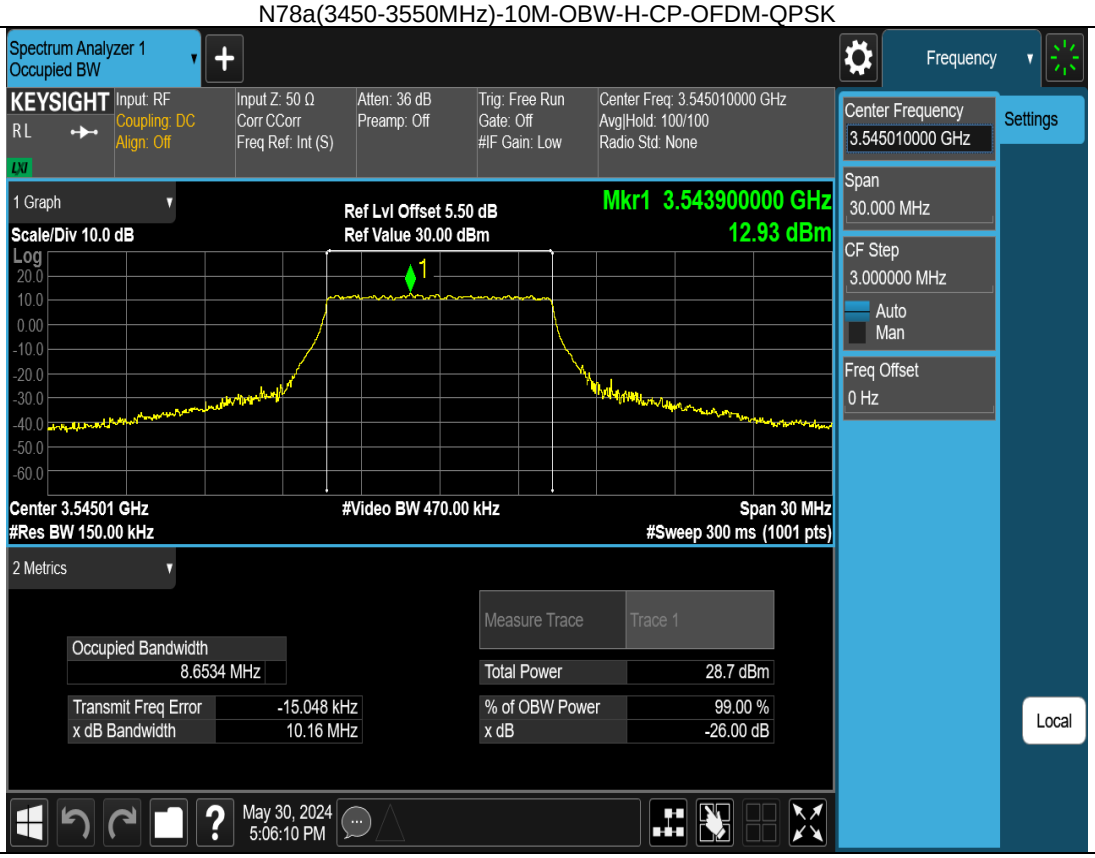
N78a(3450-3550MHz)-10M-OBW-M-CP-OFDM-QPSK



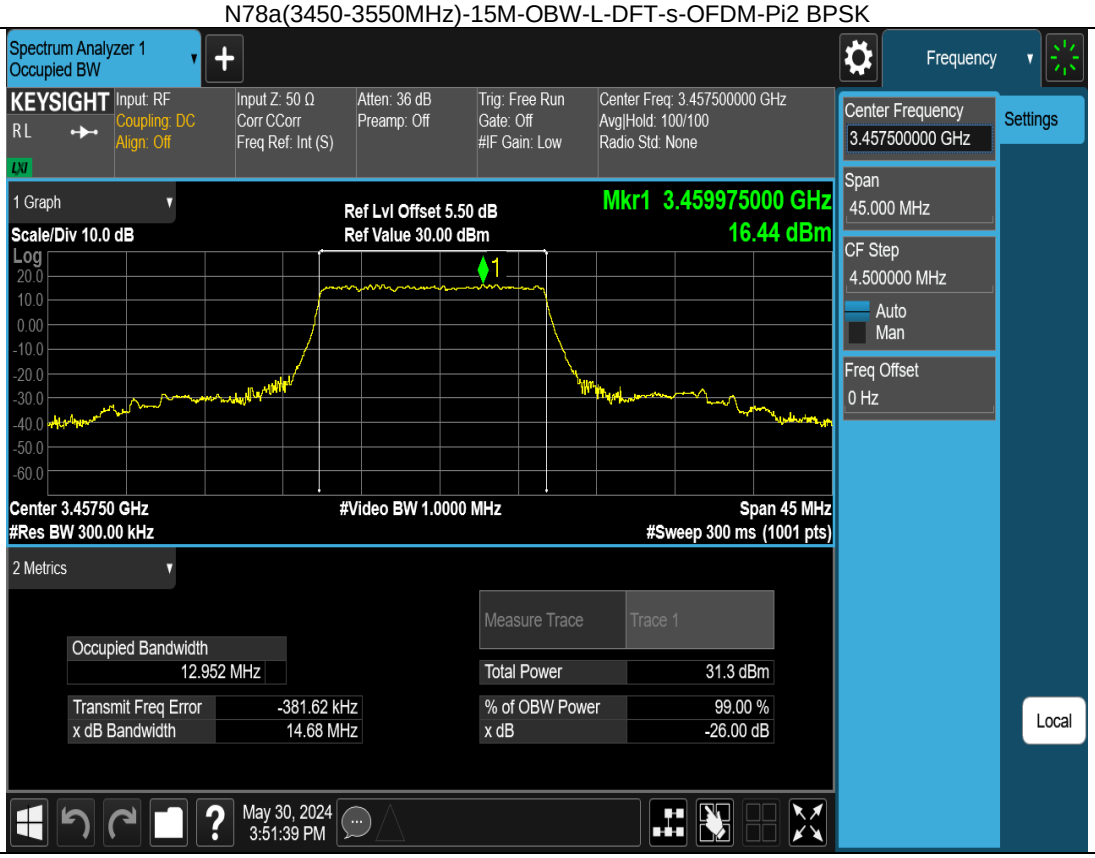
N78a(3450-3550MHz)-10M-OBW-H-DFT-s-OFDM-Pi2 BPSK



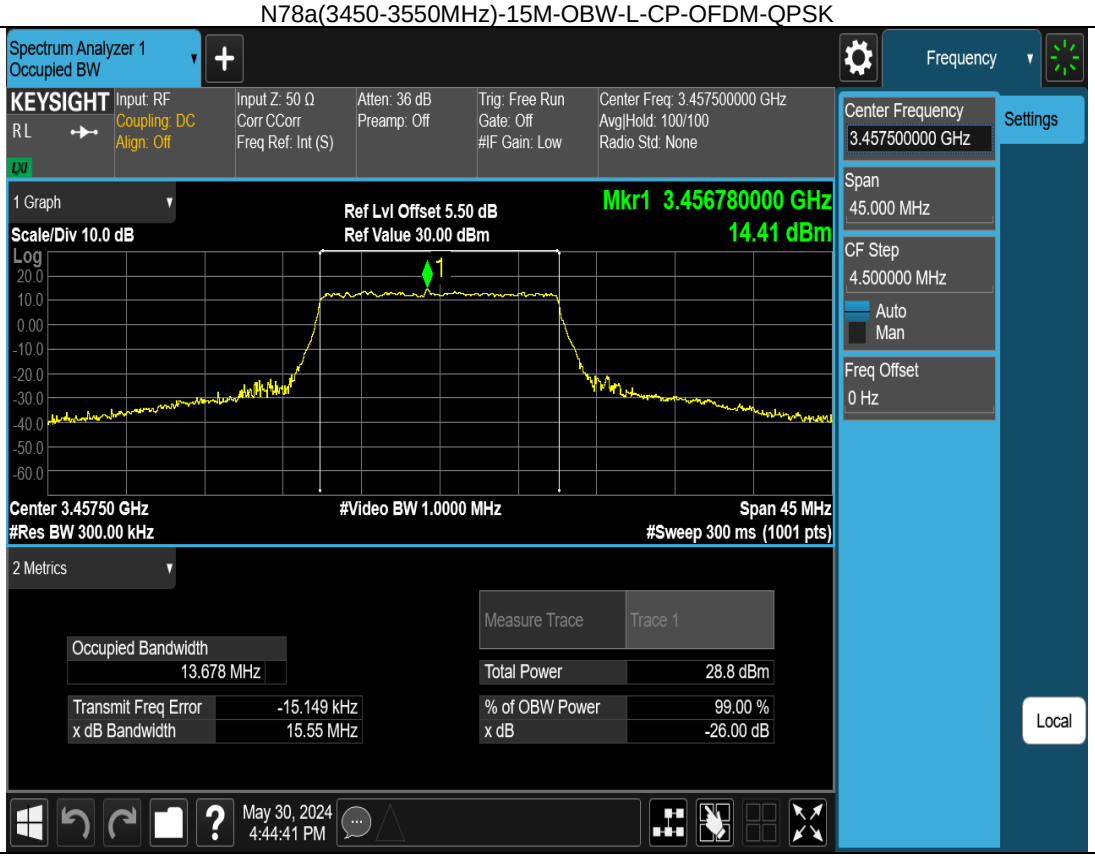
N78a(3450-3550MHz)-10M-OBW-H-CP-OFDM-QPSK



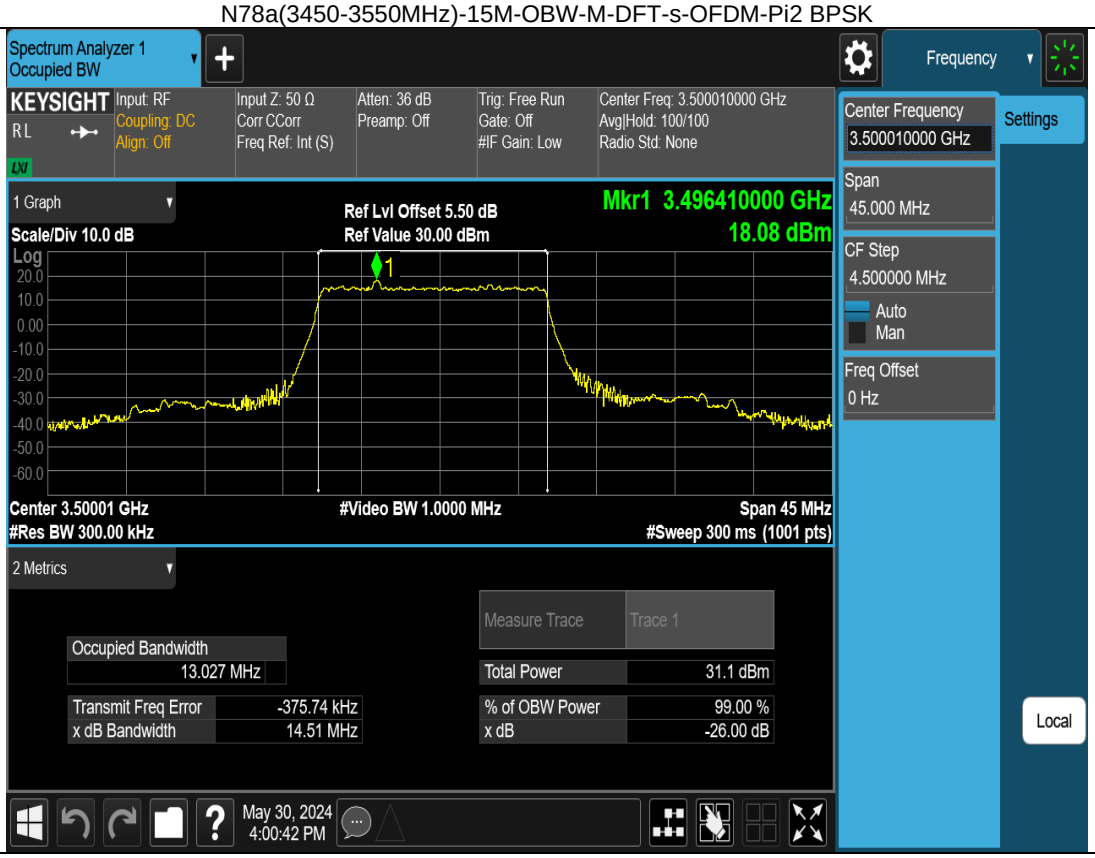
N78a(3450-3550MHz)-15M-OBW-L-DFT-s-OFDM-Pi2 BPSK



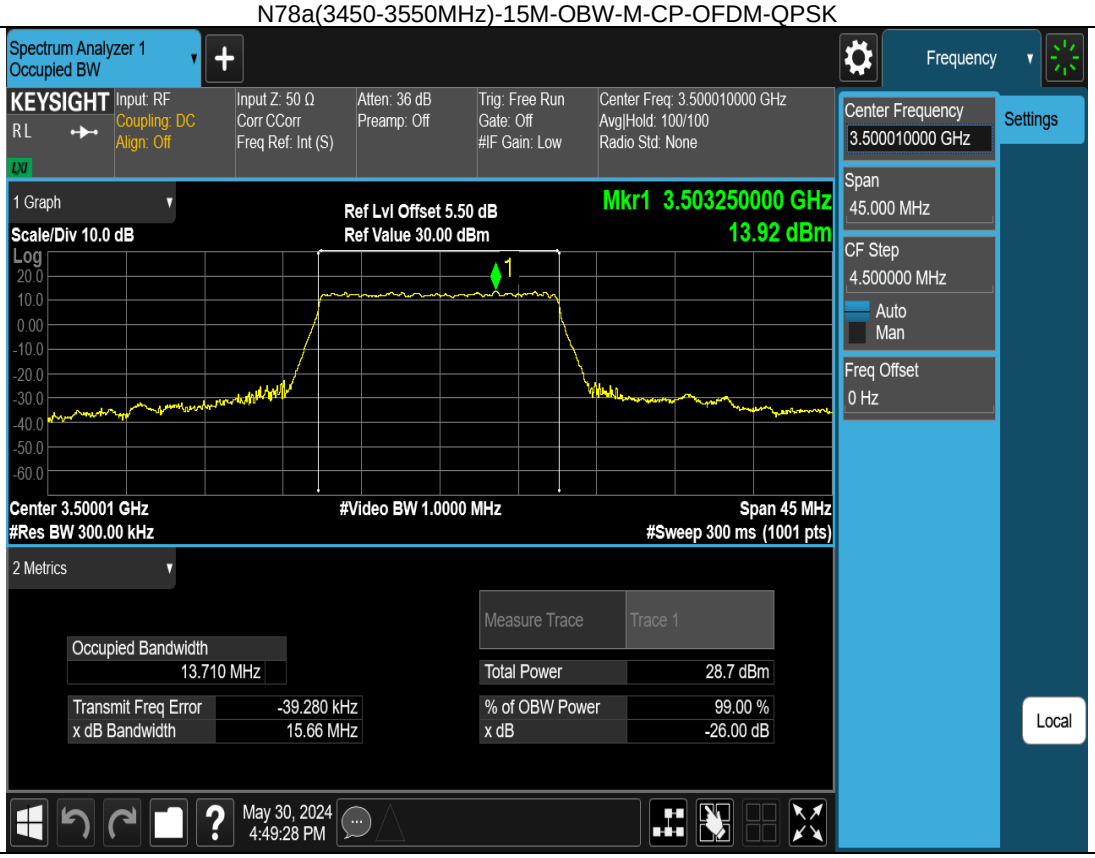
N78a(3450-3550MHz)-15M-OBW-L-CP-OFDM-QPSK



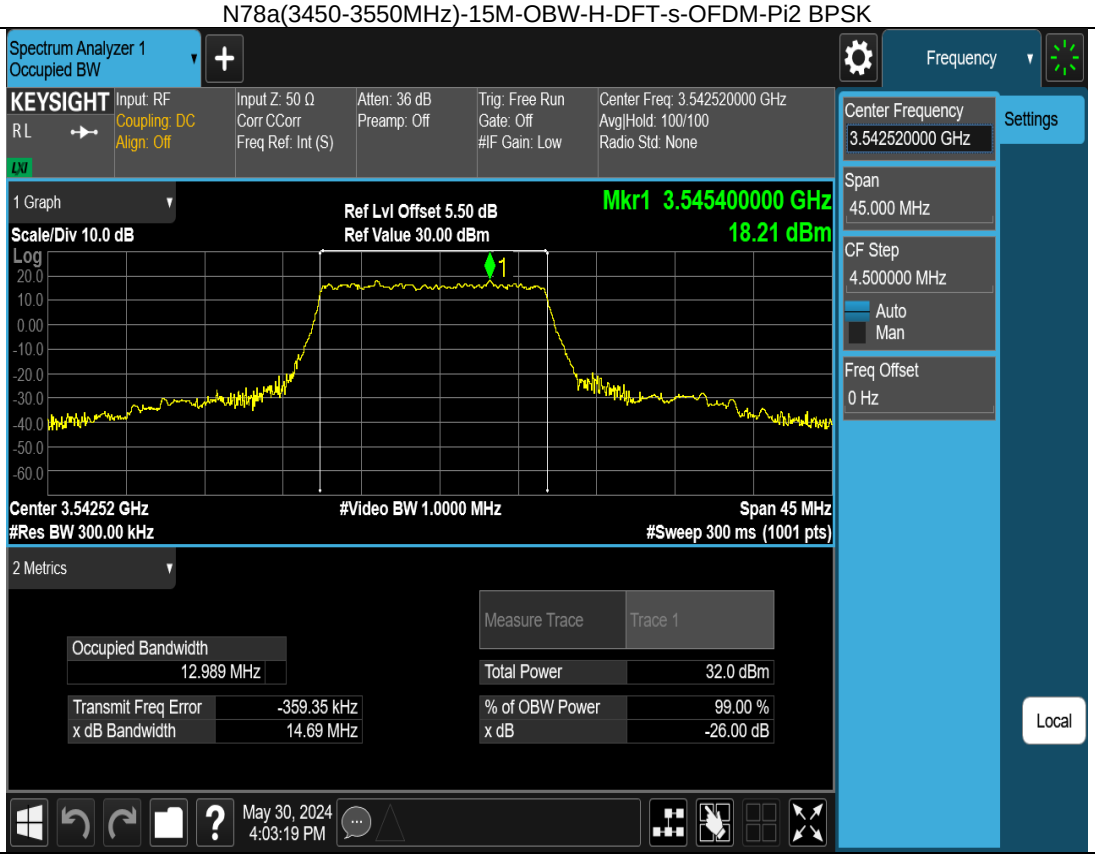
N78a(3450-3550MHz)-15M-OBW-M-DFT-s-OFDM-Pi2 BPSK



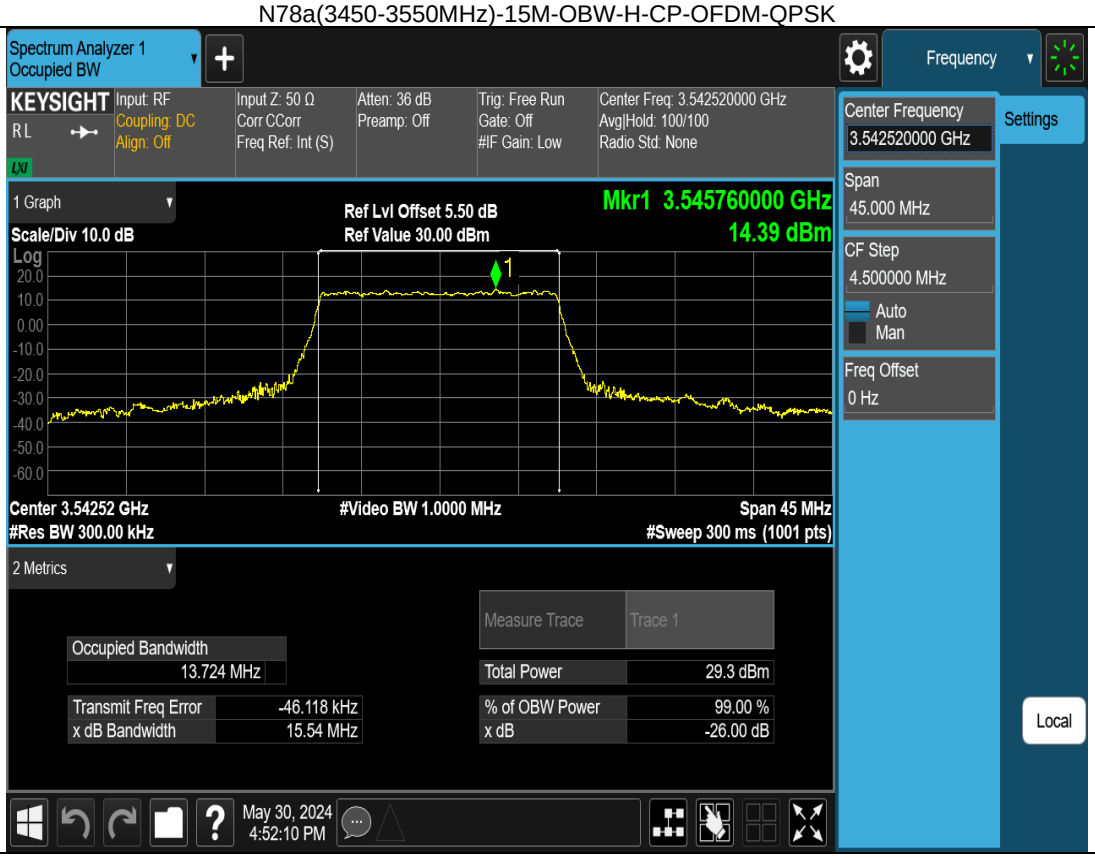
N78a(3450-3550MHz)-15M-OBW-M-CP-OFDM-QPSK



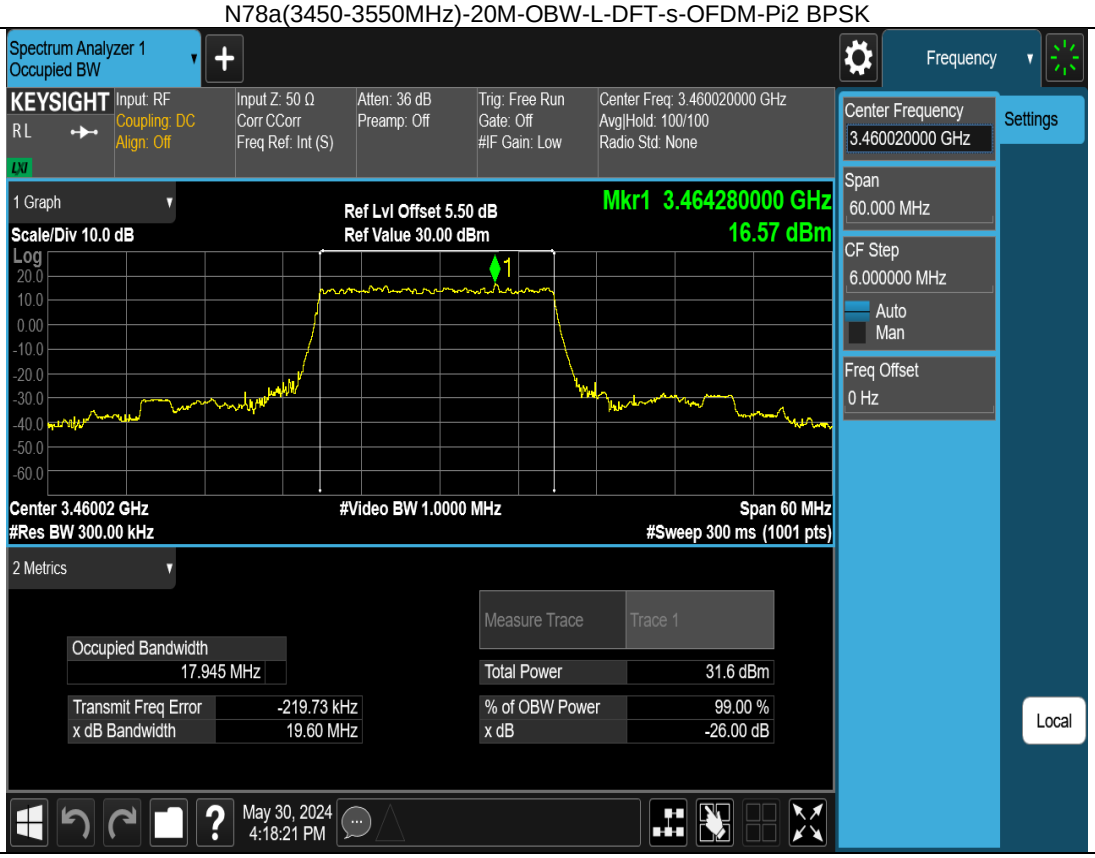
N78a(3450-3550MHz)-15M-OBW-H-DFT-s-OFDM-Pi2 BPSK



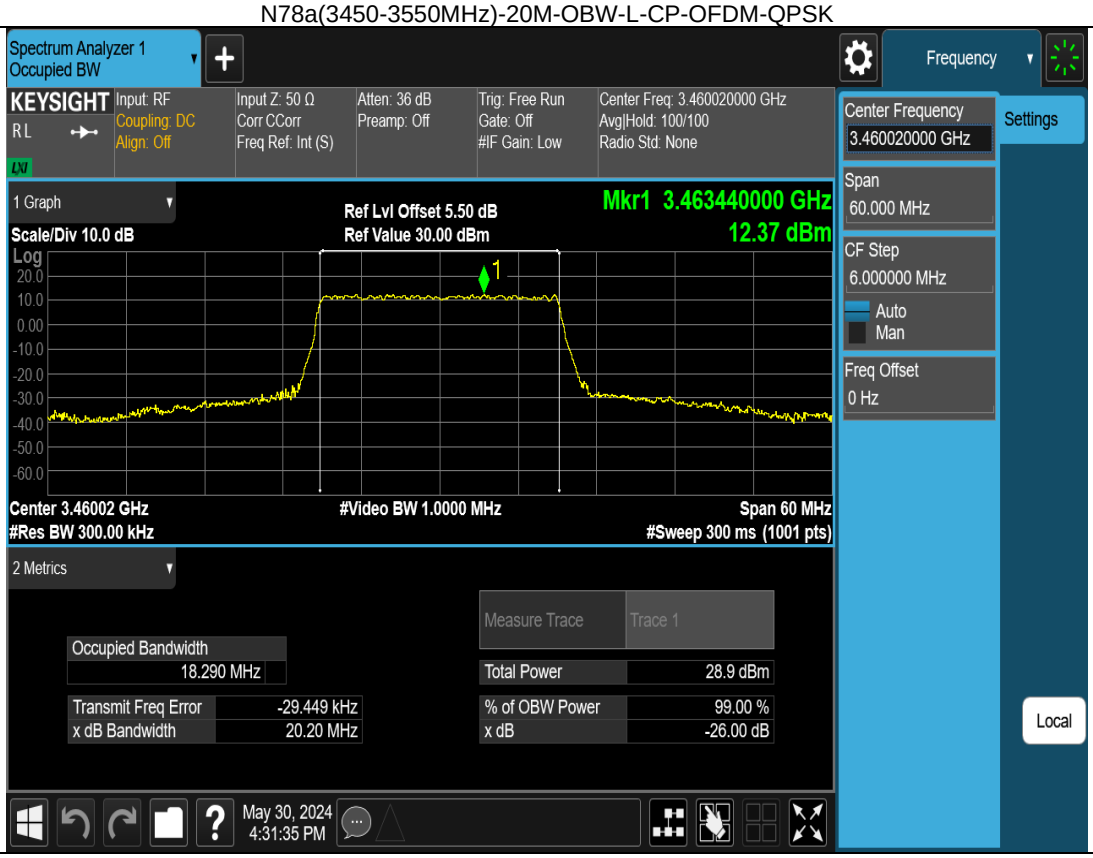
N78a(3450-3550MHz)-15M-OBW-H-CP-OFDM-QPSK



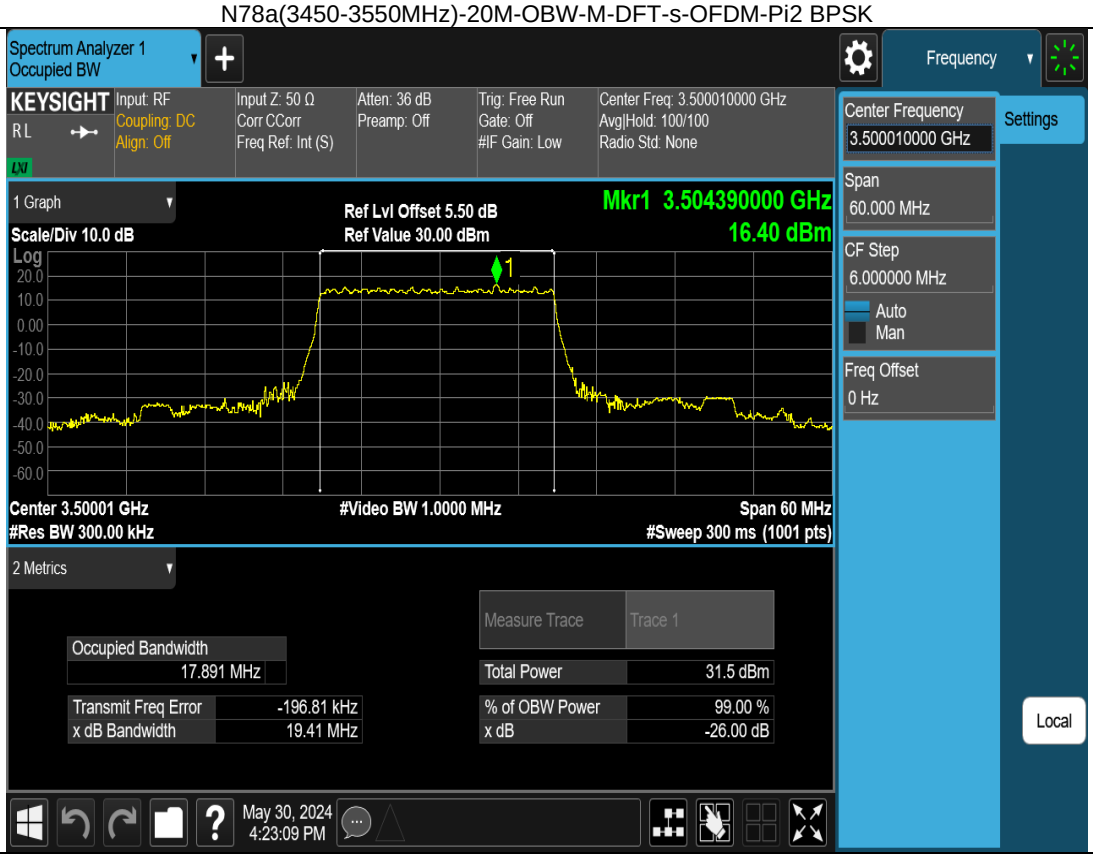
N78a(3450-3550MHz)-20M-OBW-L-DFT-s-OFDM-Pi2 BPSK



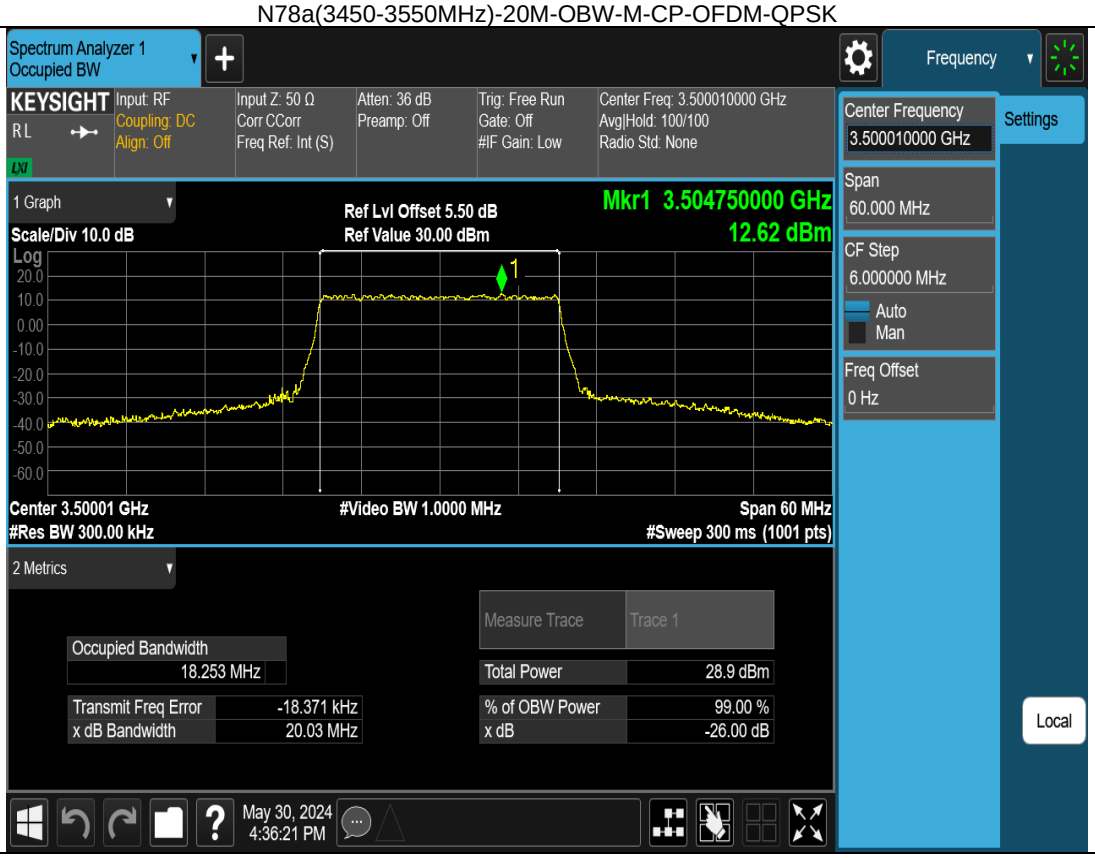
N78a(3450-3550MHz)-20M-OBW-L-CP-OFDM-QPSK



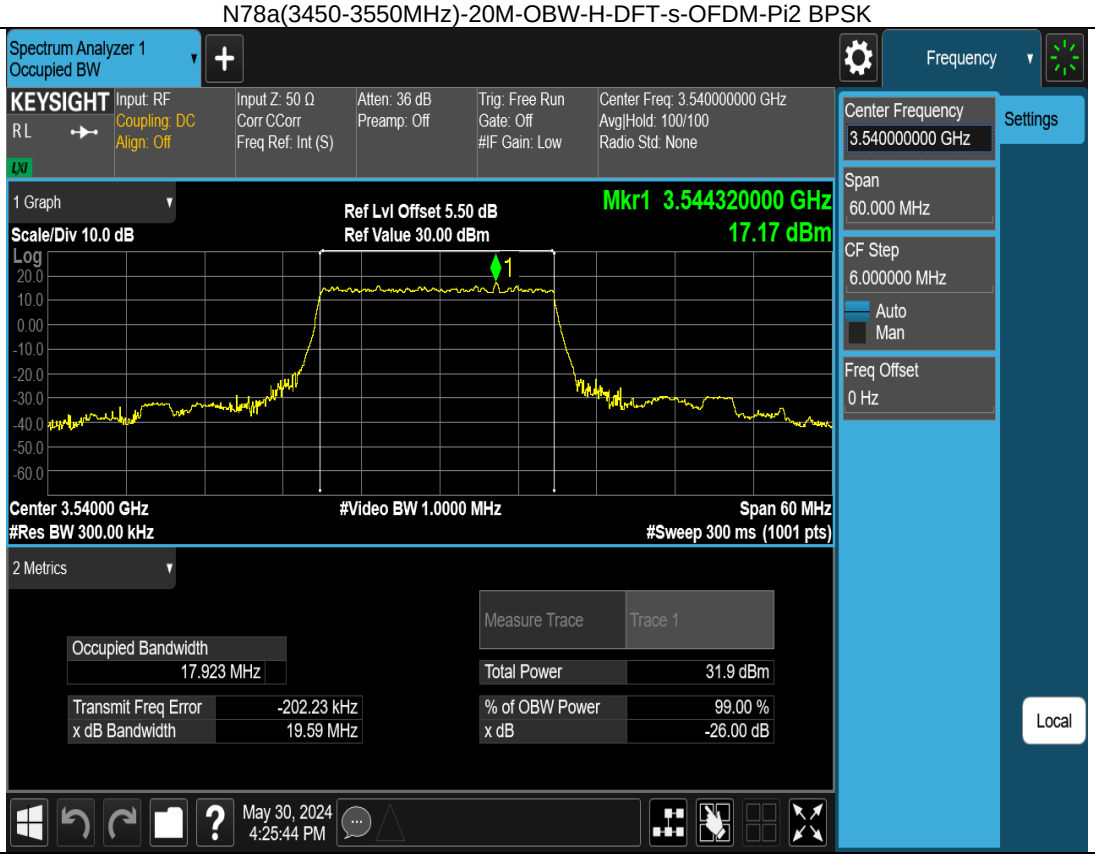
N78a(3450-3550MHz)-20M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N78a(3450-3550MHz)-20M-OBW-M-CP-OFDM-QPSK



N78a(3450-3550MHz)-20M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N78a(3450-3550MHz)-20M-OBW-H-CP-OFDM-QPSK

Peak-Average Ratio

Test Result

5G NR n78a(3450-3550MHz) SCS=30kHz 10MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.38	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.19	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.37	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.15	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.26	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.44	<=13	Pass

5G NR n78a(3450-3550MHz) SCS=30kHz 15MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.29	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.29	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.41	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.16	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.17	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.49	<=13	Pass

5G NR n78a(3450-3550MHz) SCS=30kHz 20MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.42	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.08	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.35	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.02	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.18	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.36	<=13	Pass

Test Graph


N78a(3450-3550MHz)-10M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full
Spectrum Analyzer 1
Power Stat CCDF
Frequency
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 40 dB
Preamp: Off
Trig: RF Burst
#IF Gain: Low
Center Freq: 3.455010000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None
Center Frequency
3.455010000 GHz
Settings
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 Metrics
2 Graph
Gaussian
Average Power
22.79 dBm
47.84 % at 0 dB
10.0 % 1.99 dB
1.0 % 3.45 dB
0.1 % 4.38 dB
0.01 % 4.95 dB
0.001 % 5.20 dB
0.0001 % 5.26 dB
Peak
5.30 dB
28.09 dBm
100 %
10 %
1 %
0.1 %
0.01 %
0.001 %
0.0001 %
0.00 dB
20.00 dB
Info BW 20.000 MHz
Local
May 30, 2024
3:28:04 PM

N78a(3450-3550MHz)-10M-PAPR-L-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-10M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-10M-PAPR-M-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-10M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-10M-PAPR-H-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-L-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-M-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-15M-PAPR-H-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-20M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

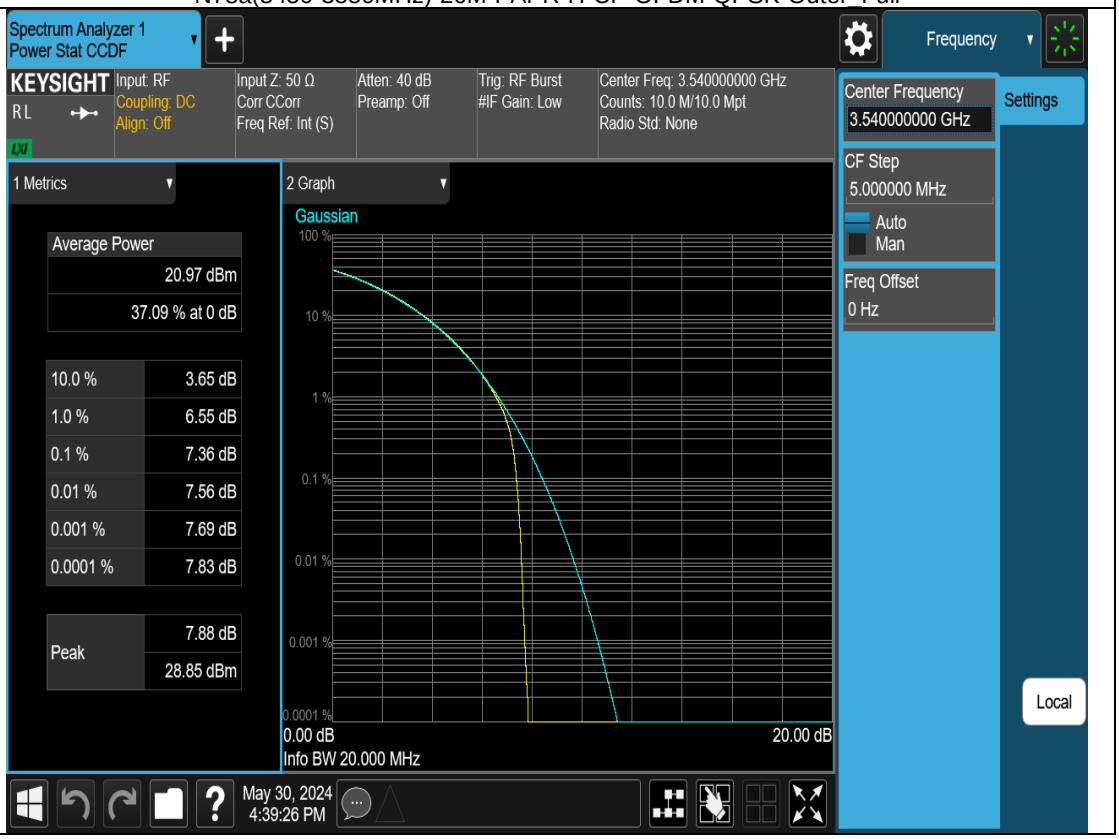
N78a(3450-3550MHz)-20M-PAPR-L-CP-OFDM-QPSK-Outer_Full

N78a(3450-3550MHz)-20M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-20M-PAPR-M-CP-OFDM-QPSK-Outer_Full

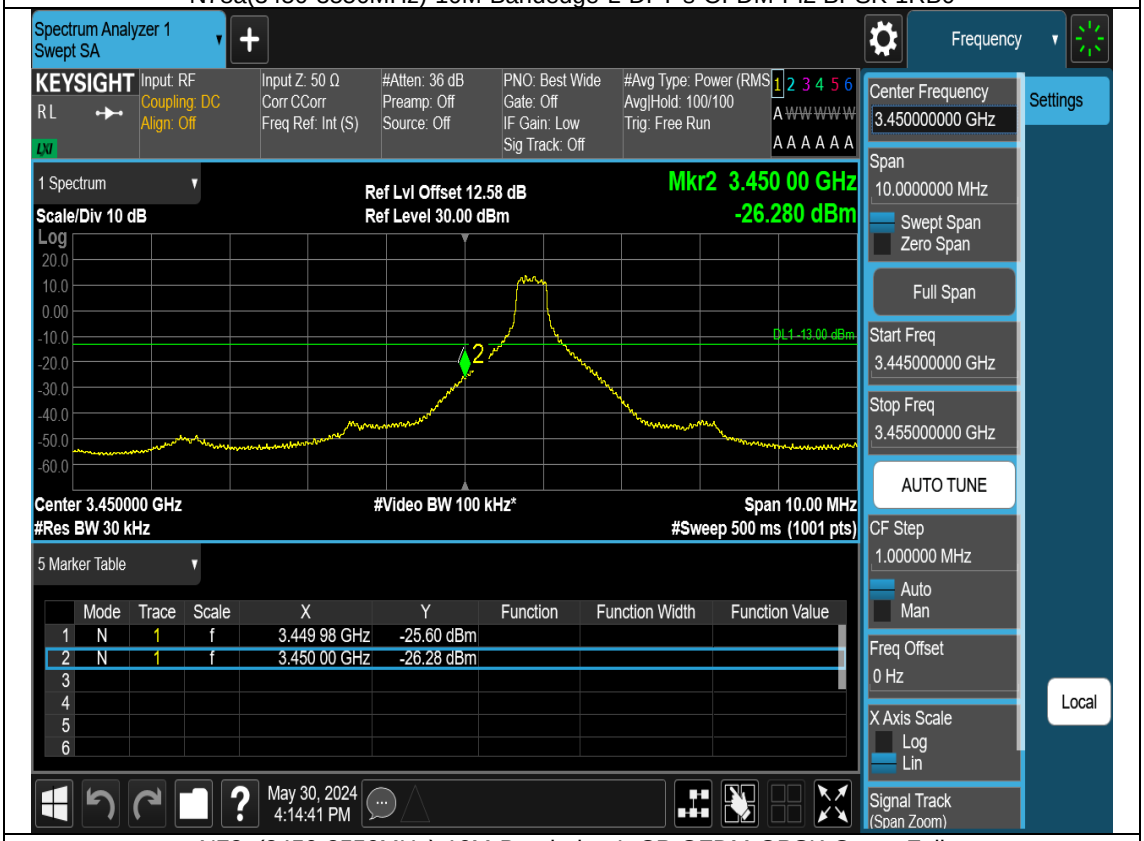
N78a(3450-3550MHz)-20M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N78a(3450-3550MHz)-20M-PAPR-H-CP-OFDM-QPSK-Outer_Full

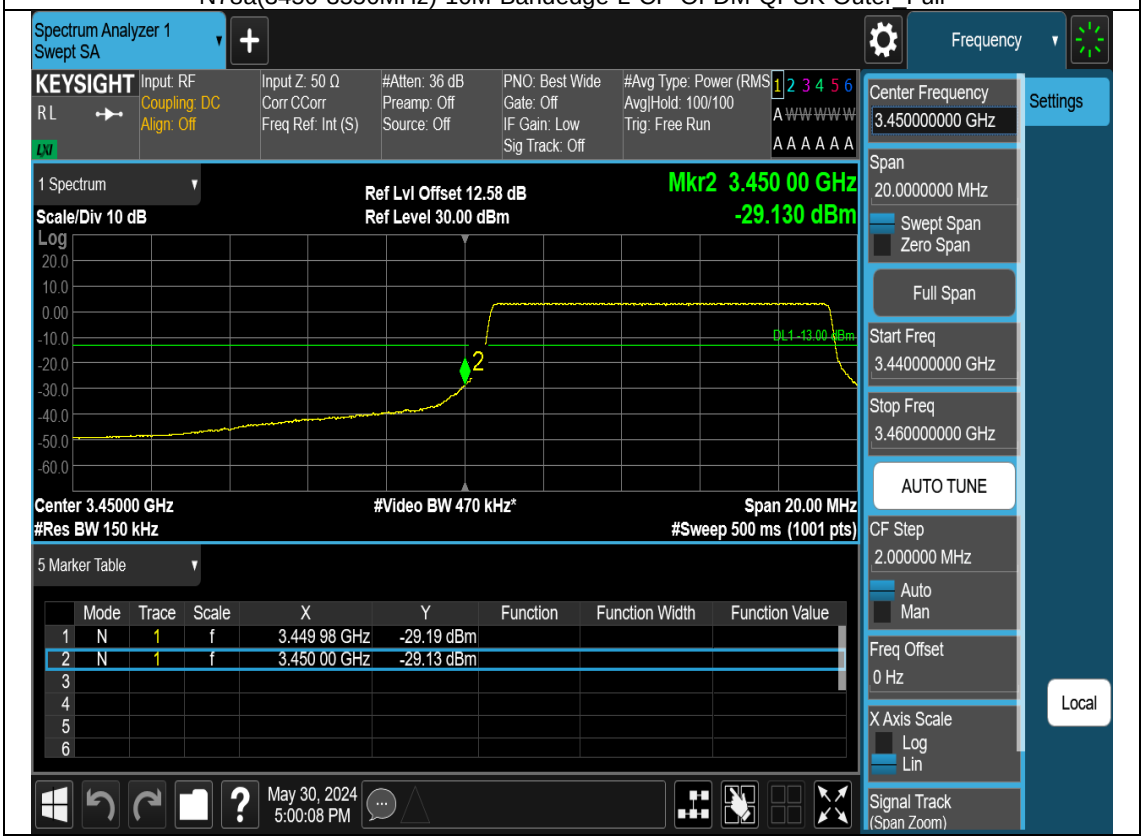


Bandedge test graph

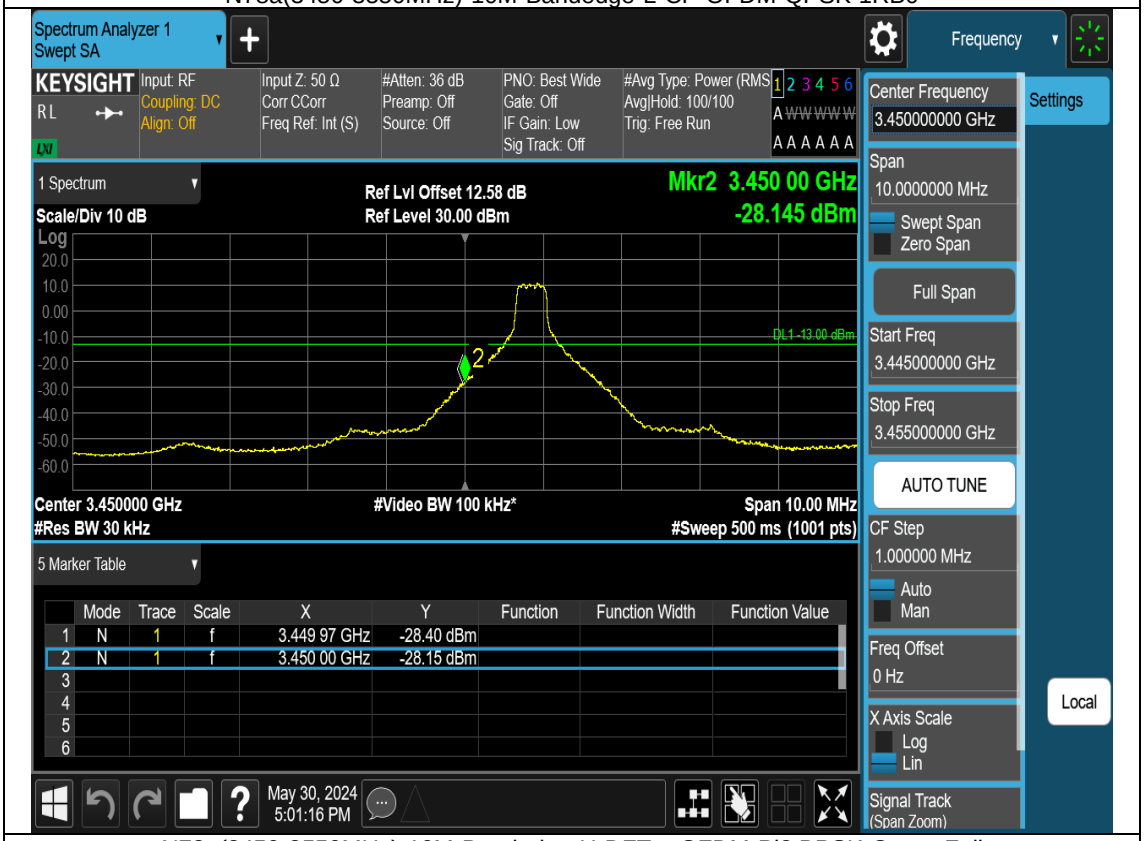
N78a(3450-3550MHz)-10M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



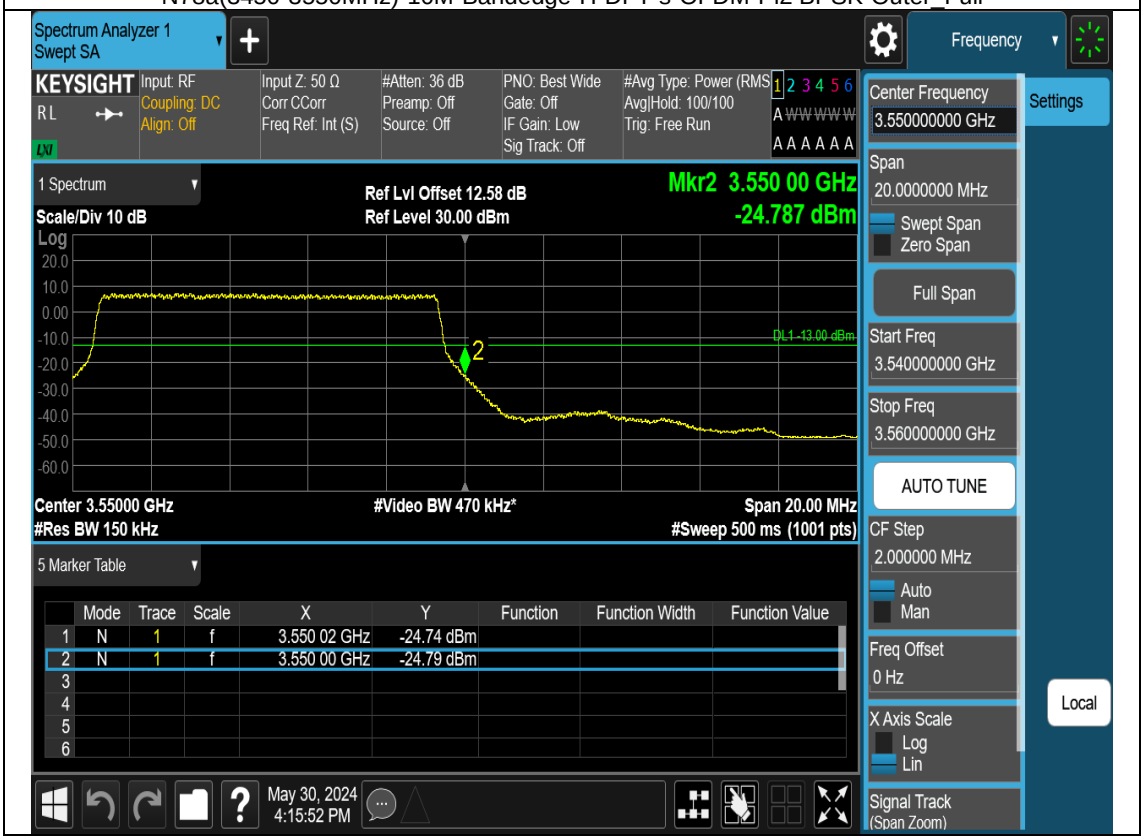
N78a(3450-3550MHz)-10M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



N78a(3450-3550MHz)-10M-Bandedge-L-CP-OFDM-QPSK-1RB0



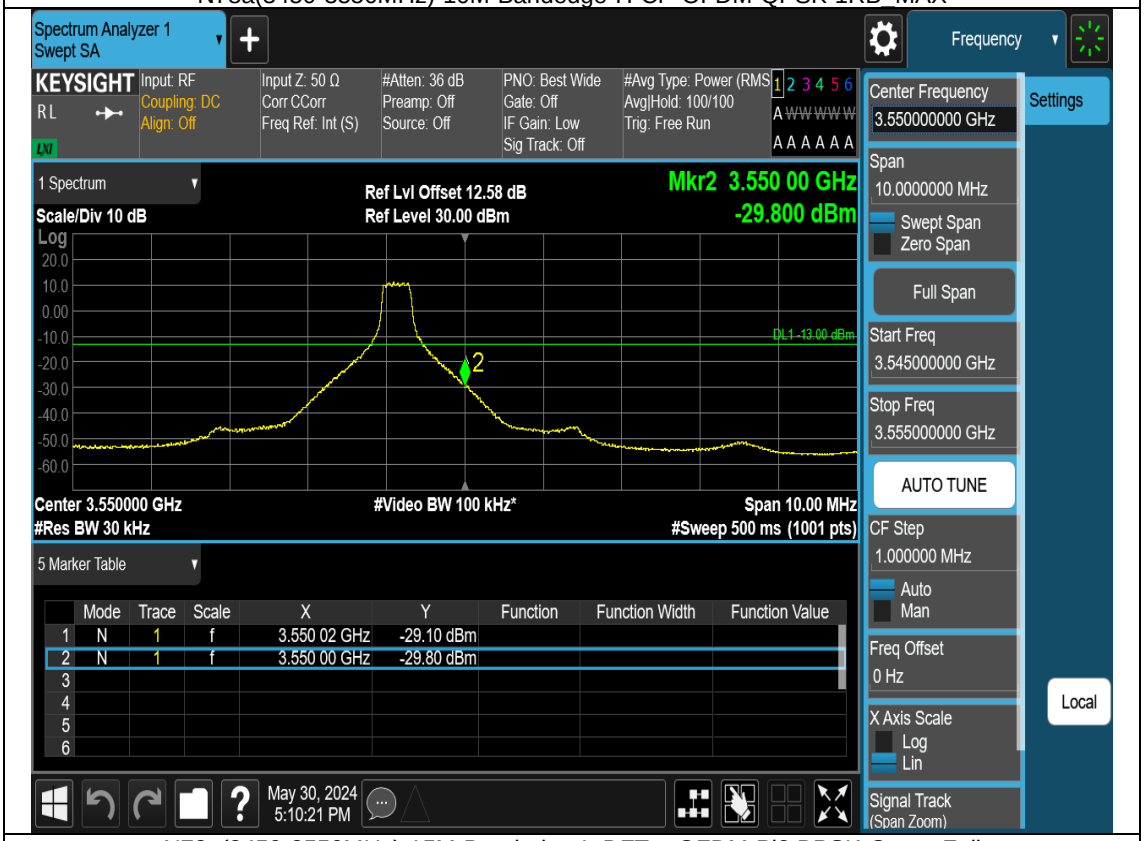
N78a(3450-3550MHz)-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



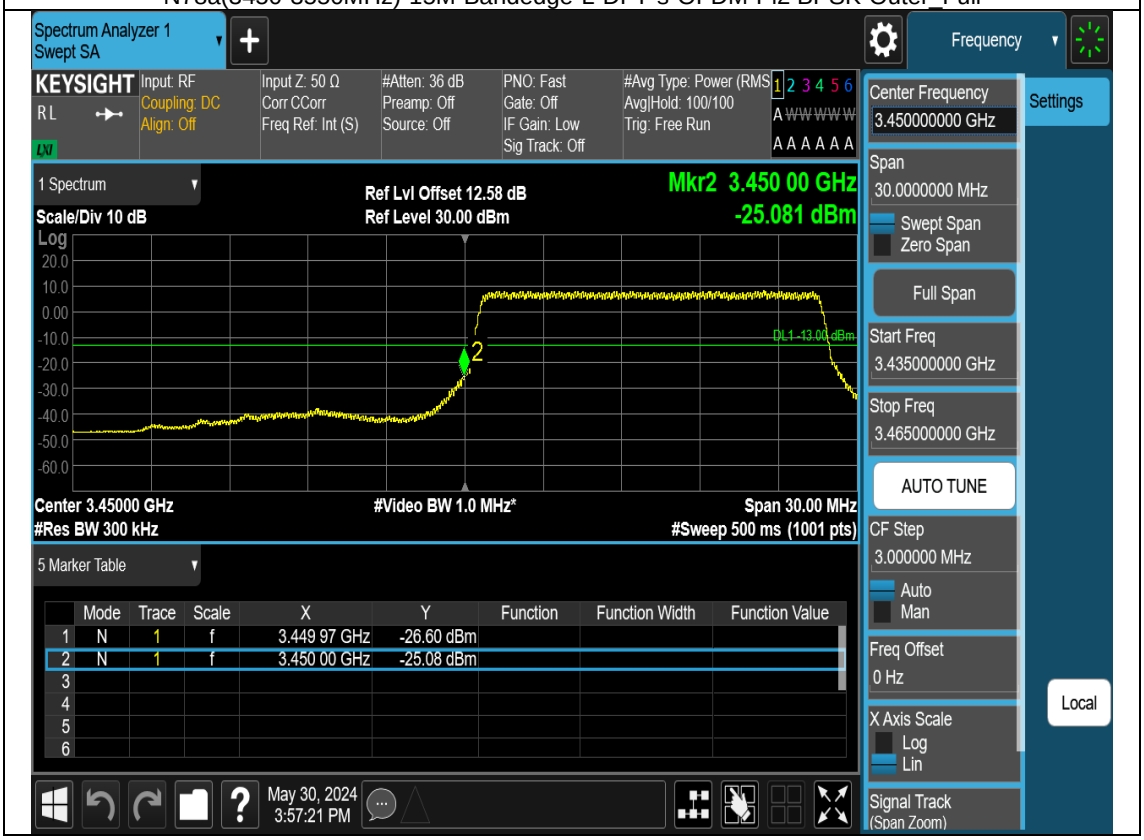
N78a(3450-3550MHz)-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX

N78a(3450-3550MHz)-10M-Bandedge-H-CP-OFDM-QPSK-Outer_Full

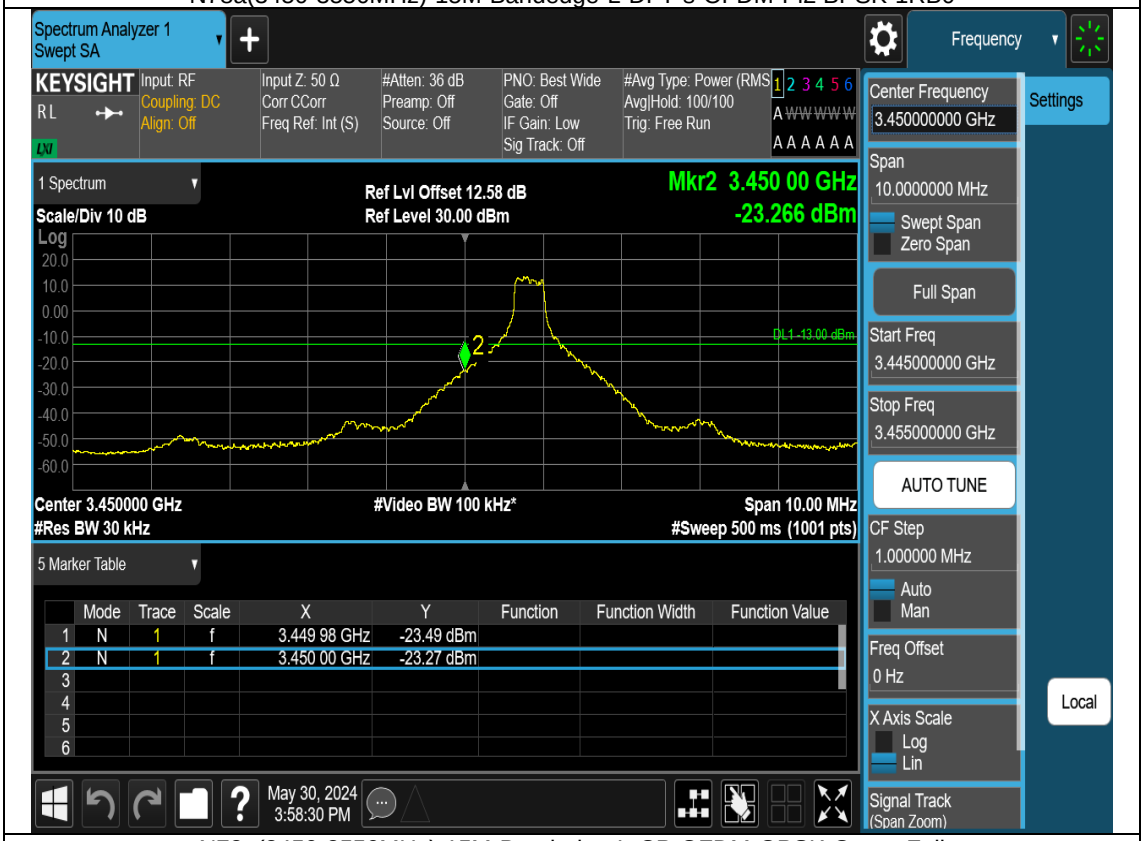
N78a(3450-3550MHz)-10M-Bandedge-H-CP-OFDM-QPSK-1RB_MAX



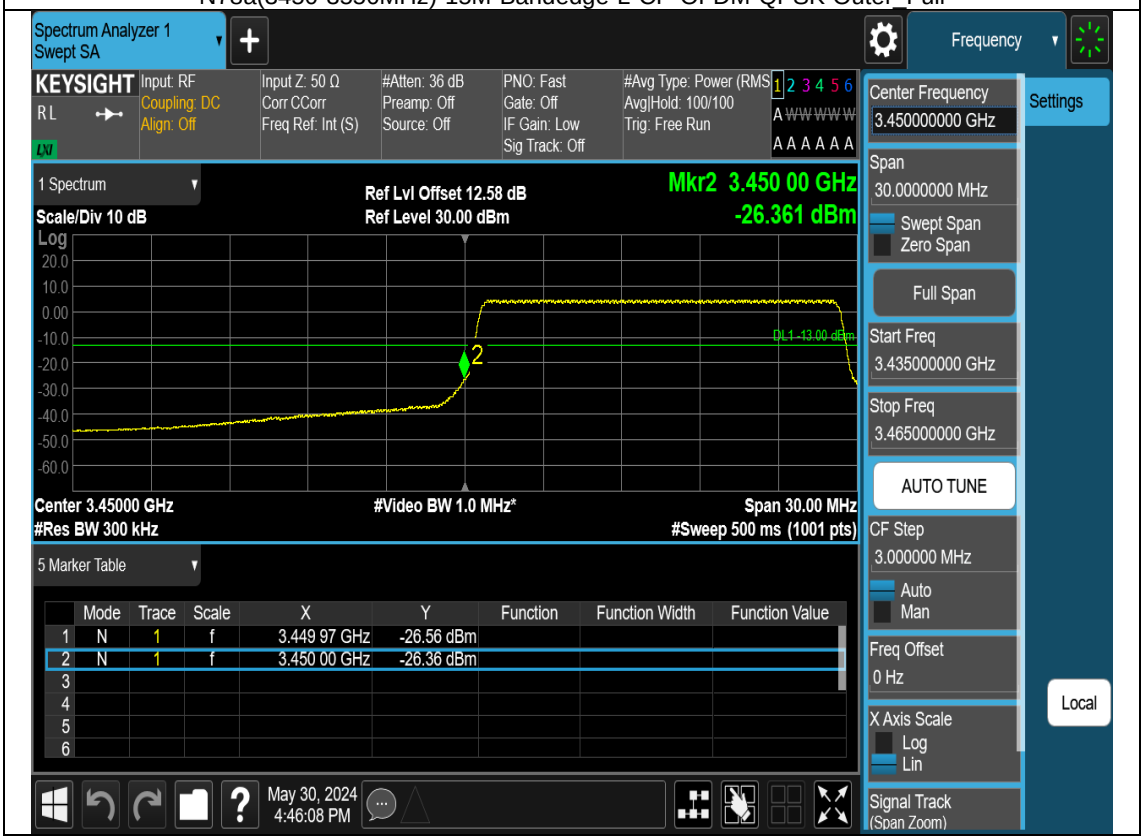
N78a(3450-3550MHz)-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full



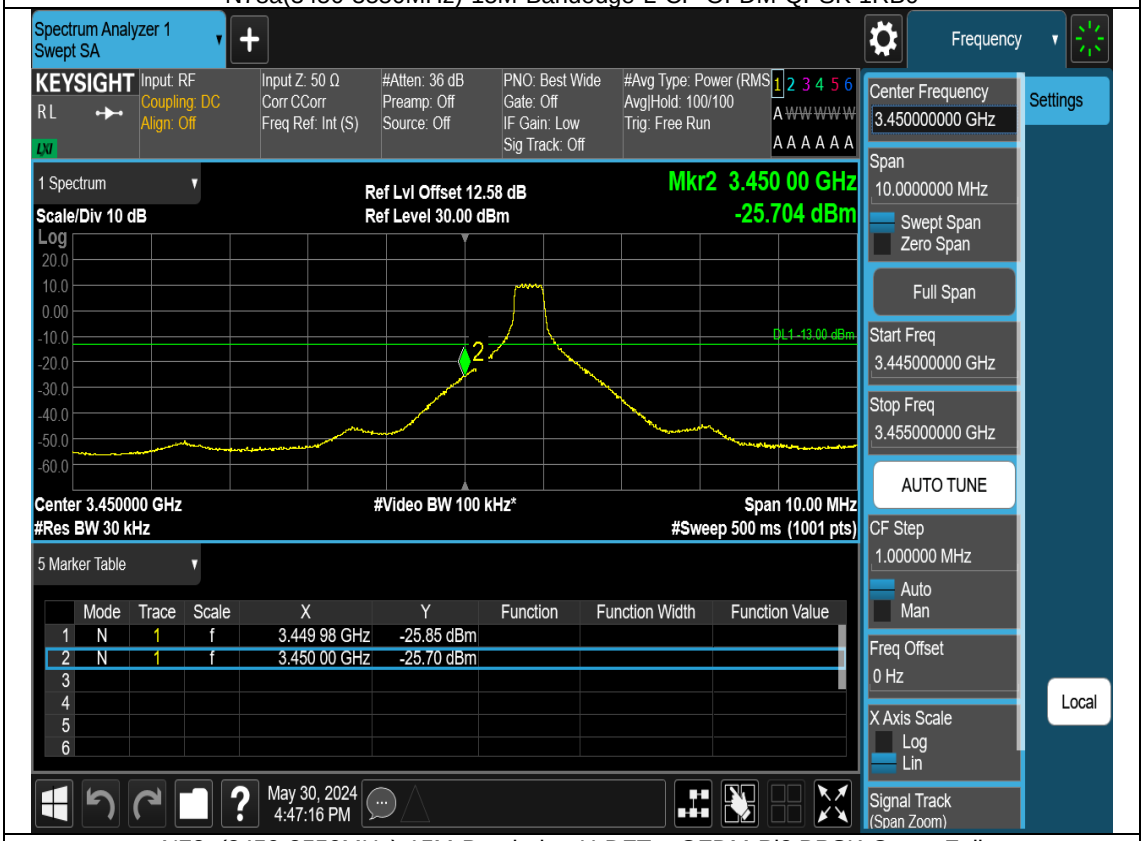
N78a(3450-3550MHz)-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



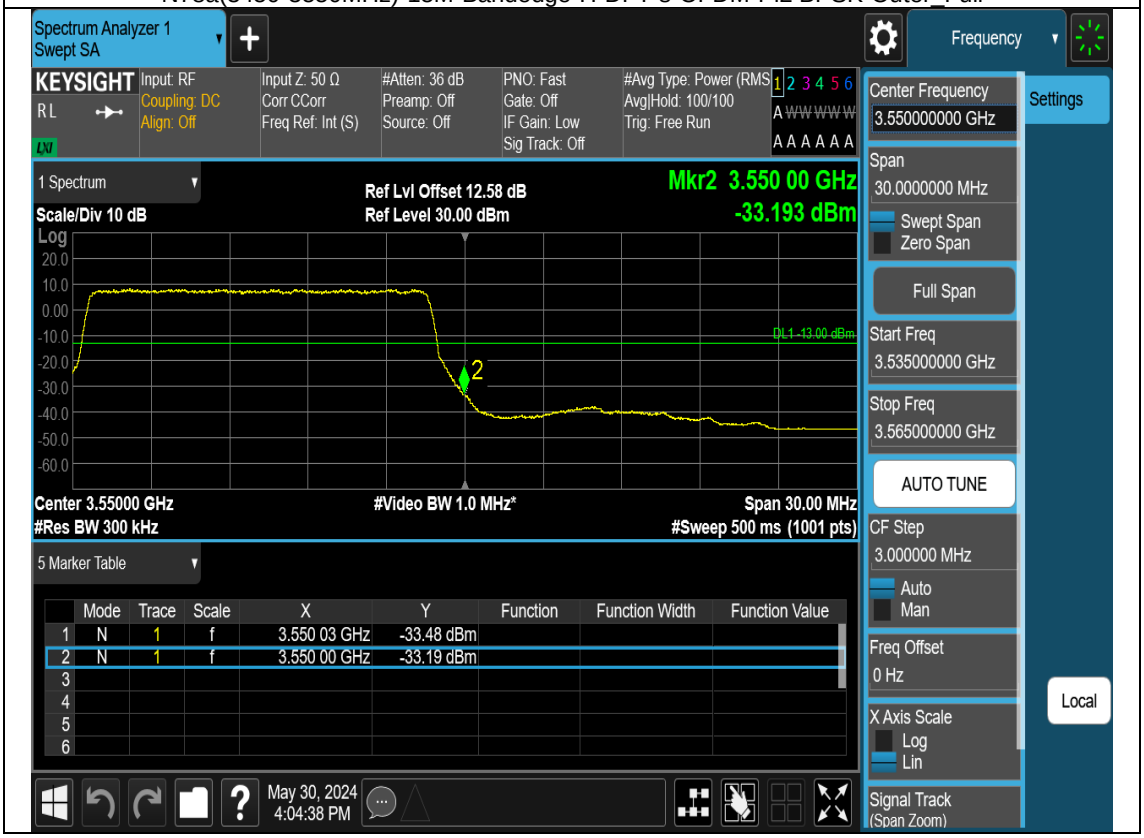
N78a(3450-3550MHz)-15M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



N78a(3450-3550MHz)-15M-Bandedge-L-CP-OFDM-QPSK-1RB0



N78a(3450-3550MHz)-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



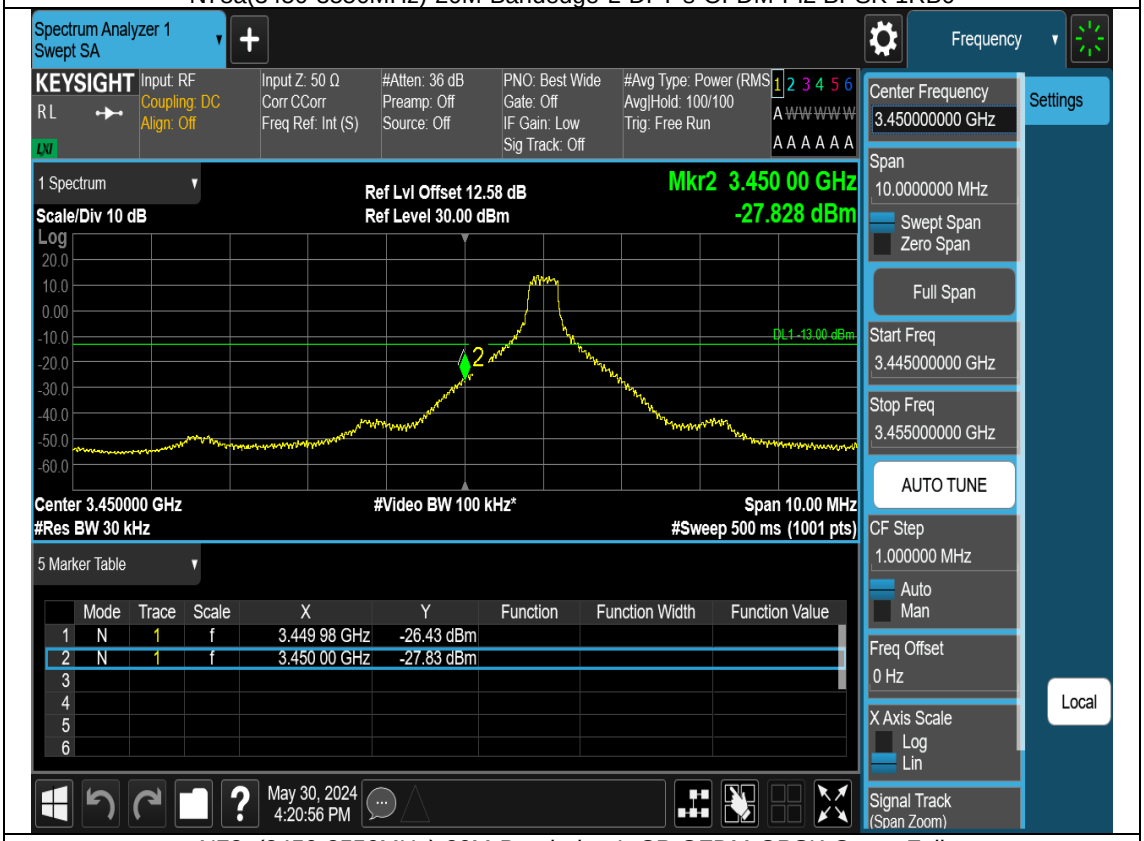
N78a(3450-3550MHz)-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX

N78a(3450-3550MHz)-15M-Bandedge-H-CP-OFDM-QPSK-Outer_Full

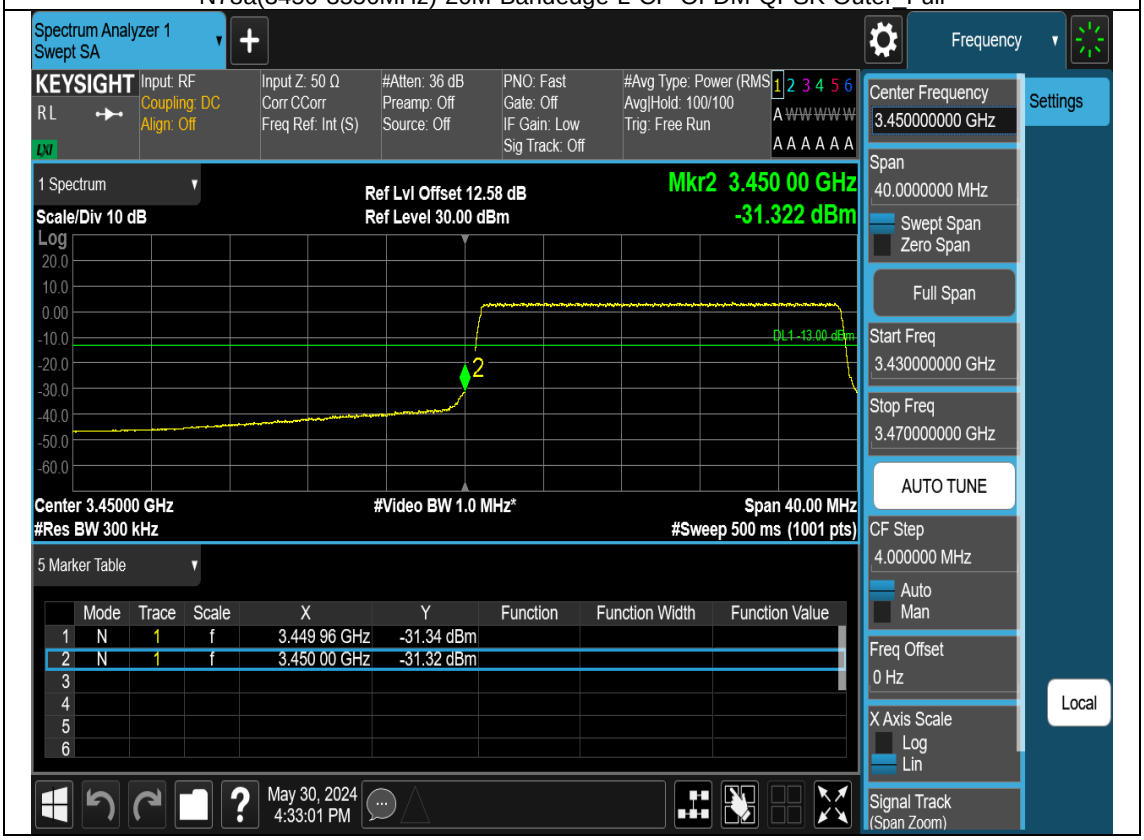
N78a(3450-3550MHz)-15M-Bandedge-H-CP-OFDM-QPSK-1RB_MAX

N78a(3450-3550MHz)-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

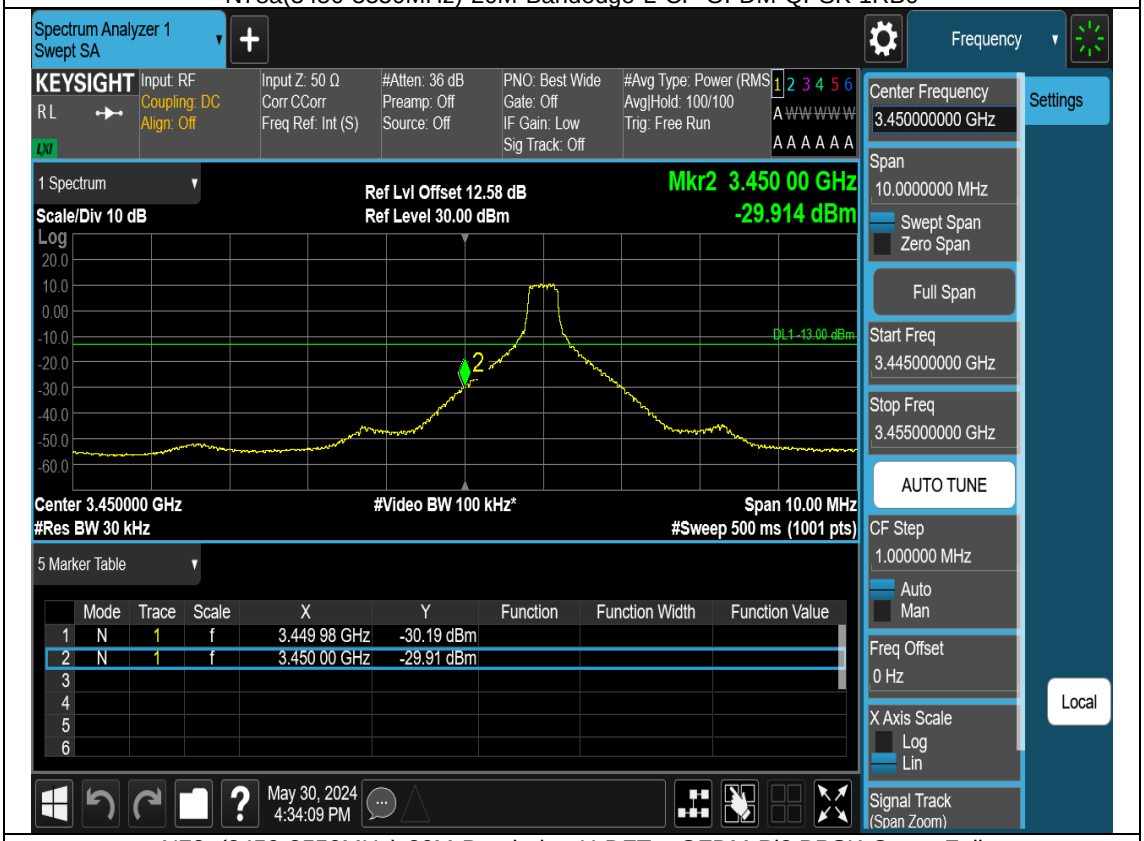
N78a(3450-3550MHz)-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



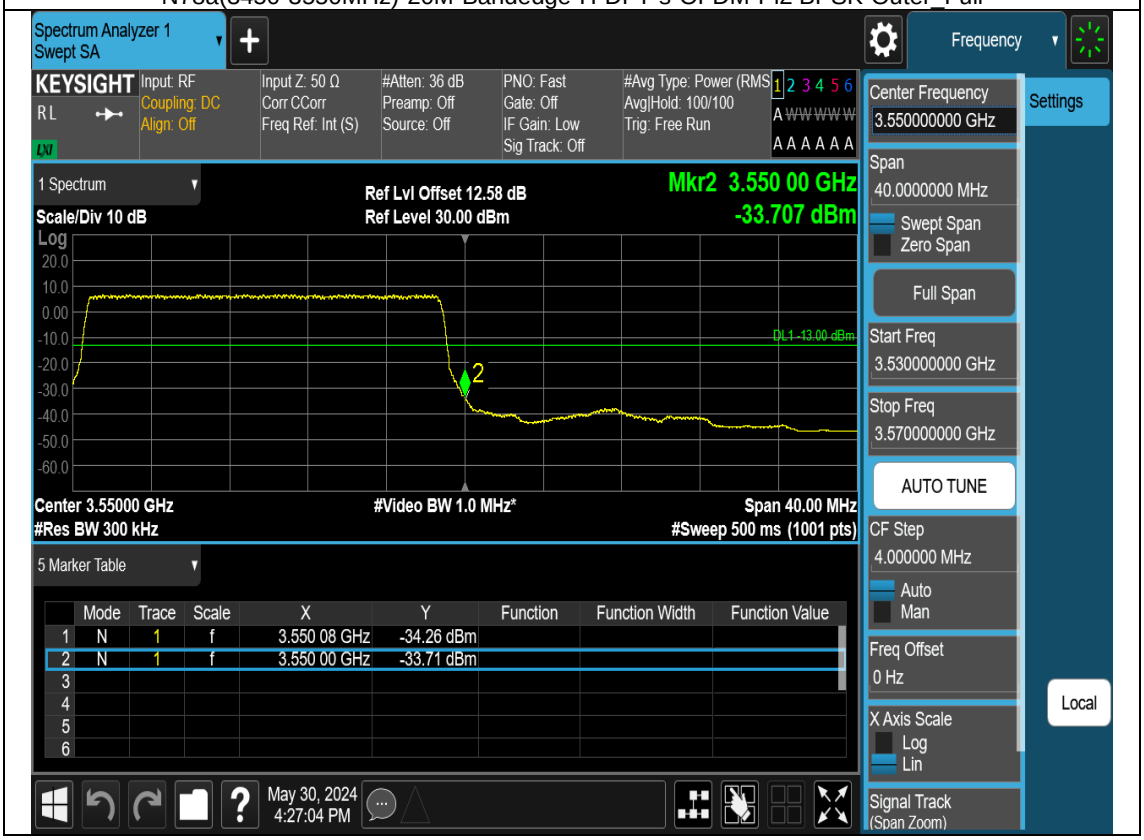
N78a(3450-3550MHz)-20M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



N78a(3450-3550MHz)-20M-Bandedge-L-CP-OFDM-QPSK-1RB0

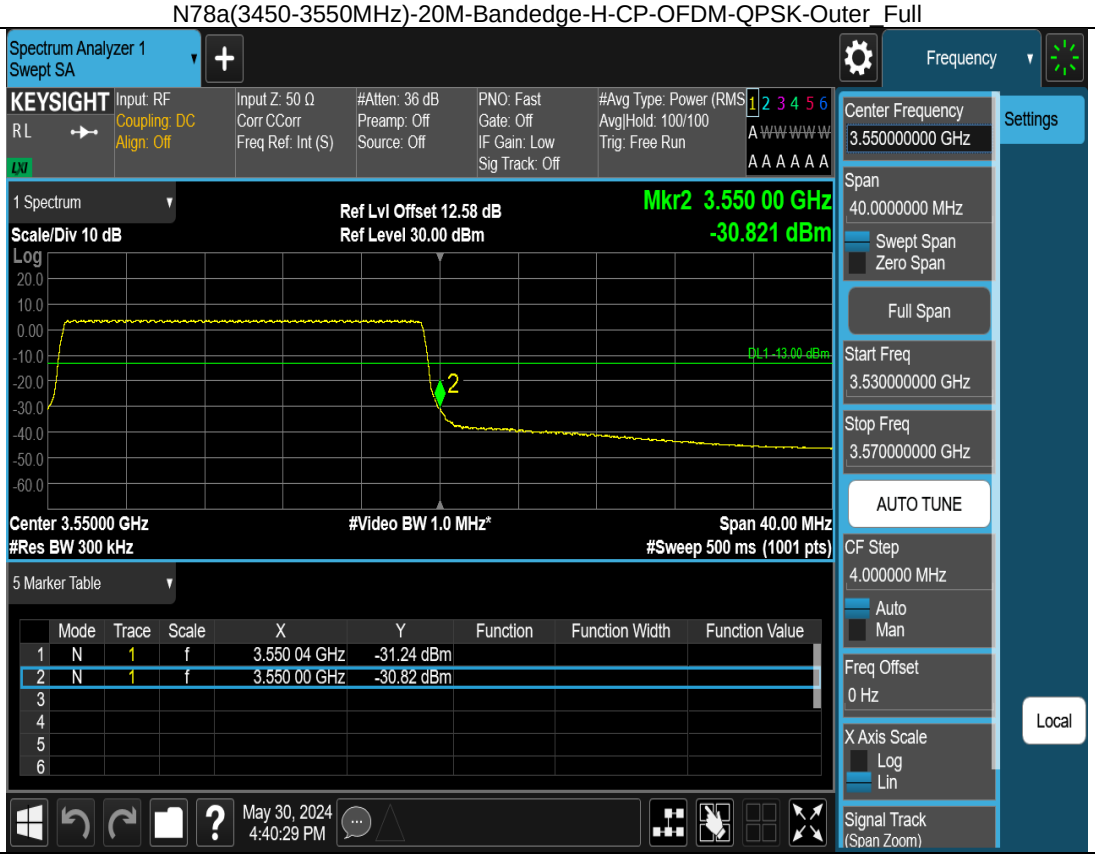


N78a(3450-3550MHz)-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N78a(3450-3550MHz)-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX

N78a(3450-3550MHz)-20M-Bandedge-H-CP-OFDM-QPSK-Outer_Full



N78a(3450-3550MHz)-20M-Bandedge-H-CP-OFDM-QPSK-1RB_MAX

Conducted spurious emissions test graph

N78a(3450-3550MHz)-10M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz