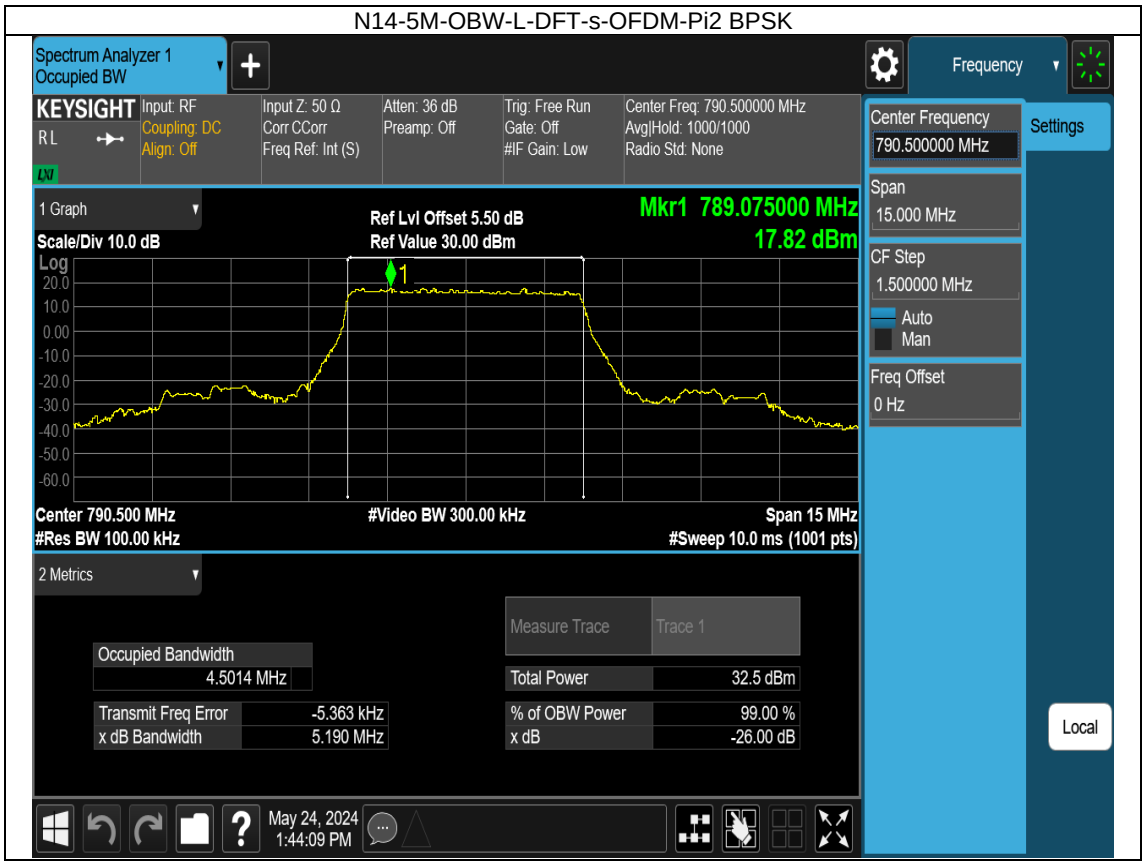
99% & 26dB Bandwidth

Test Result

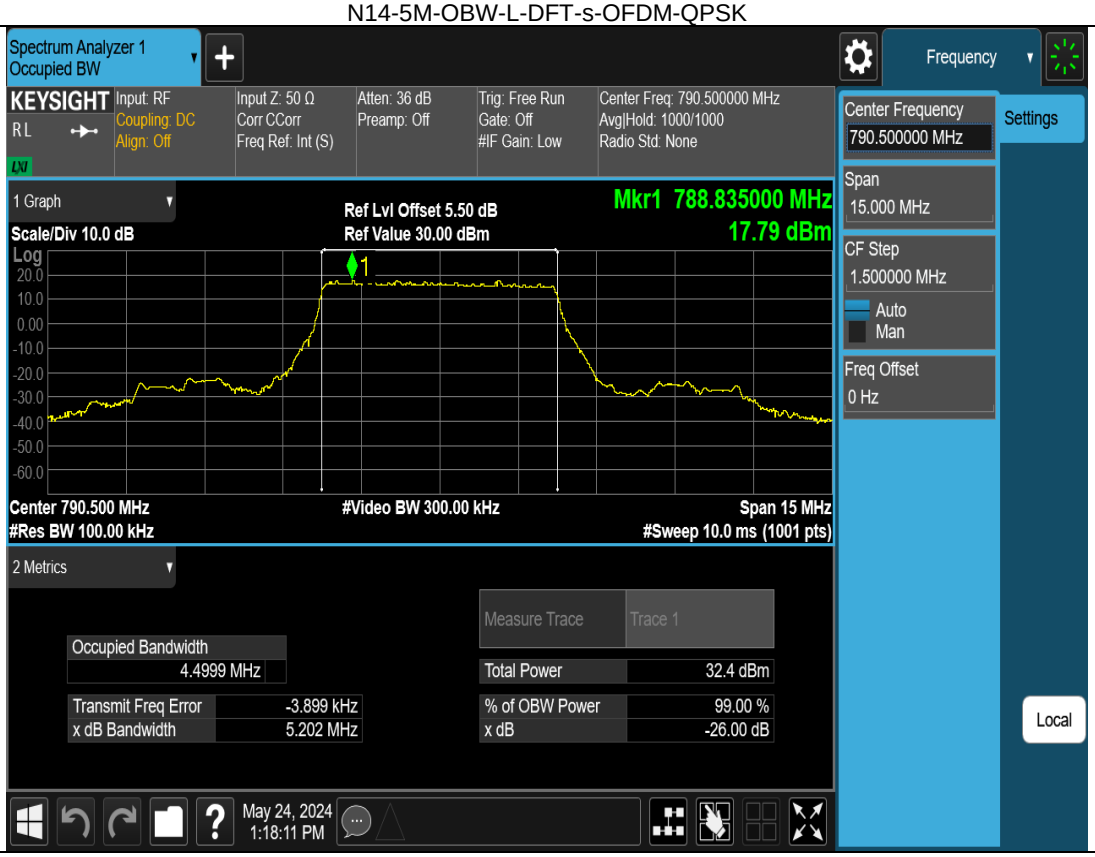
5G NR n14 SCS=15kHz 5MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.501	5.190	/	Pass
DFT-s-OFDM QPSK		Outer_Full	4.500	5.202	/	Pass
DFT-s-OFDM 16QAM		Outer_Full	4.507	5.190	/	Pass
DFT-s-OFDM 64QAM		Outer_Full	4.507	5.239	/	Pass
DFT-s-OFDM 256QAM		Outer_Full	4.485	5.034	/	Pass
CP-OFDM QPSK		Outer_Full	4.493	5.153	/	Pass
CP-OFDM 16QAM		Outer_Full	4.513	5.199	/	Pass
CP-OFDM 64QAM		Outer_Full	4.491	5.137	/	Pass
CP-OFDM 256QAM		Outer_Full	4.500	5.011	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.527	5.288	/	Pass
DFT-s-OFDM QPSK		Outer_Full	4.490	5.121	/	Pass
DFT-s-OFDM 16QAM		Outer_Full	4.491	5.166	/	Pass
DFT-s-OFDM 64QAM		Outer_Full	4.512	5.080	/	Pass
DFT-s-OFDM 256QAM		Outer_Full	4.507	5.257	/	Pass
CP-OFDM QPSK		Outer_Full	4.498	5.160	/	Pass
CP-OFDM 16QAM		Outer_Full	4.497	5.137	/	Pass
CP-OFDM 64QAM		Outer_Full	4.519	5.281	/	Pass
CP-OFDM 256QAM		Outer_Full	4.498	5.149	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.505	5.276	/	Pass
DFT-s-OFDM QPSK		Outer_Full	4.504	5.199	/	Pass
DFT-s-OFDM 16QAM		Outer_Full	4.500	5.146	/	Pass
DFT-s-OFDM 64QAM		Outer_Full	4.505	5.181	/	Pass
DFT-s-OFDM 256QAM		Outer_Full	4.499	5.114	/	Pass
CP-OFDM QPSK		Outer_Full	4.524	5.203	/	Pass
CP-OFDM 16QAM		Outer_Full	4.519	5.195	/	Pass
CP-OFDM 64QAM		Outer_Full	4.496	5.207	/	Pass
CP-OFDM 256QAM		Outer_Full	4.511	5.090	/	Pass

5G NR n14 SCS=15kHz 10MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	8.957	9.727	/	Pass
DFT-s-OFDM QPSK		Outer_Full	8.954	9.656	/	Pass
DFT-s-OFDM 16QAM		Outer_Full	9.308	10.14	/	Pass
DFT-s-OFDM 64QAM		Outer_Full	8.973	9.772	/	Pass
DFT-s-OFDM 256QAM		Outer_Full	8.947	9.671	/	Pass
CP-OFDM QPSK		Outer_Full	9.317	10.13	/	Pass
CP-OFDM 16QAM		Outer_Full	9.300	10.13	/	Pass
CP-OFDM 64QAM		Outer_Full	9.323	10.11	/	Pass
CP-OFDM 256QAM		Outer_Full	8.969	9.789	/	Pass

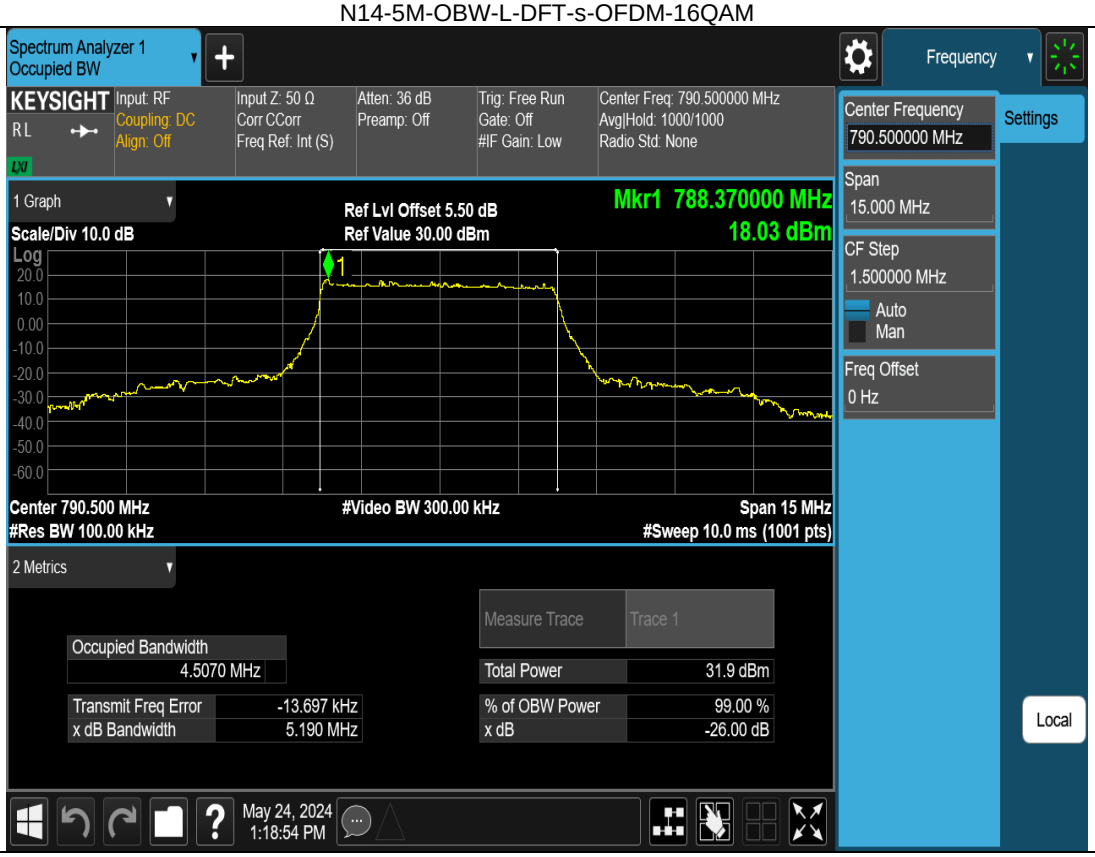
Test graph


N14-5M-OBW-L-DFT-s-OFDM-Pi2 BPSK
Spectrum Analyzer 1
Occupied BW
Frequency
KEYSIGHT
Input: RF
Coupling: DC
Align: Off
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 36 dB
Preamp: Off
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 790.500000 MHz
Avg|Hold: 1000/1000
Radio Std: None
Center Frequency
790.500000 MHz
Settings
Span
15.000 MHz
CF Step
1.500000 MHz
Auto
Man
Freq Offset
0 Hz
1 Graph
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 789.075000 MHz
17.82 dBm
Scale/Div 10.0 dB
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 790.500 MHz
#Res BW 100.00 kHz
#Video BW 300.00 kHz
Span 15 MHz
#Sweep 10.0 ms (1001 pts)
2 Metrics
Measure Trace
Trace 1
Occupied Bandwidth
4.5014 MHz
Total Power
32.5 dBm
Transmit Freq Error
-5.363 kHz
% of OBW Power
99.00 %
x dB Bandwidth
5.190 MHz
x dB
-26.00 dB
Local
May 24, 2024
1:44:09 PM

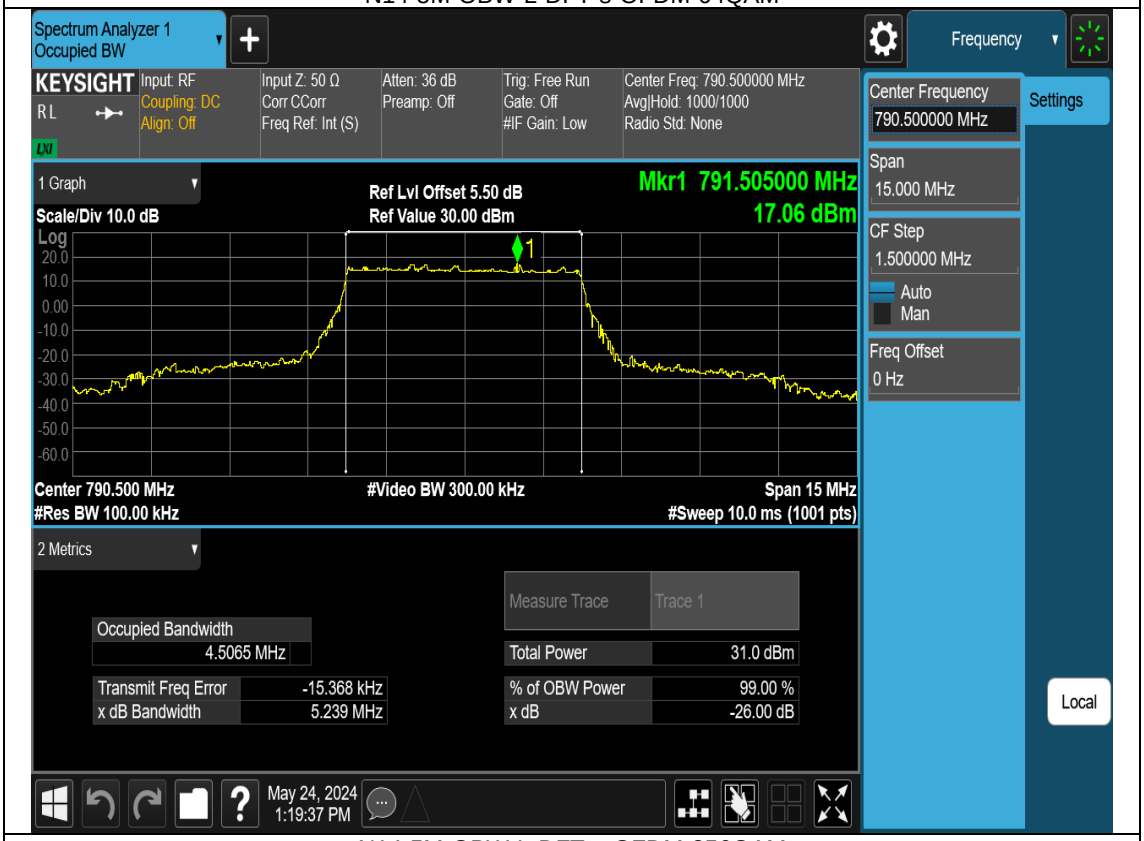
N14-5M-OBW-L-DFT-s-OFDM-QPSK



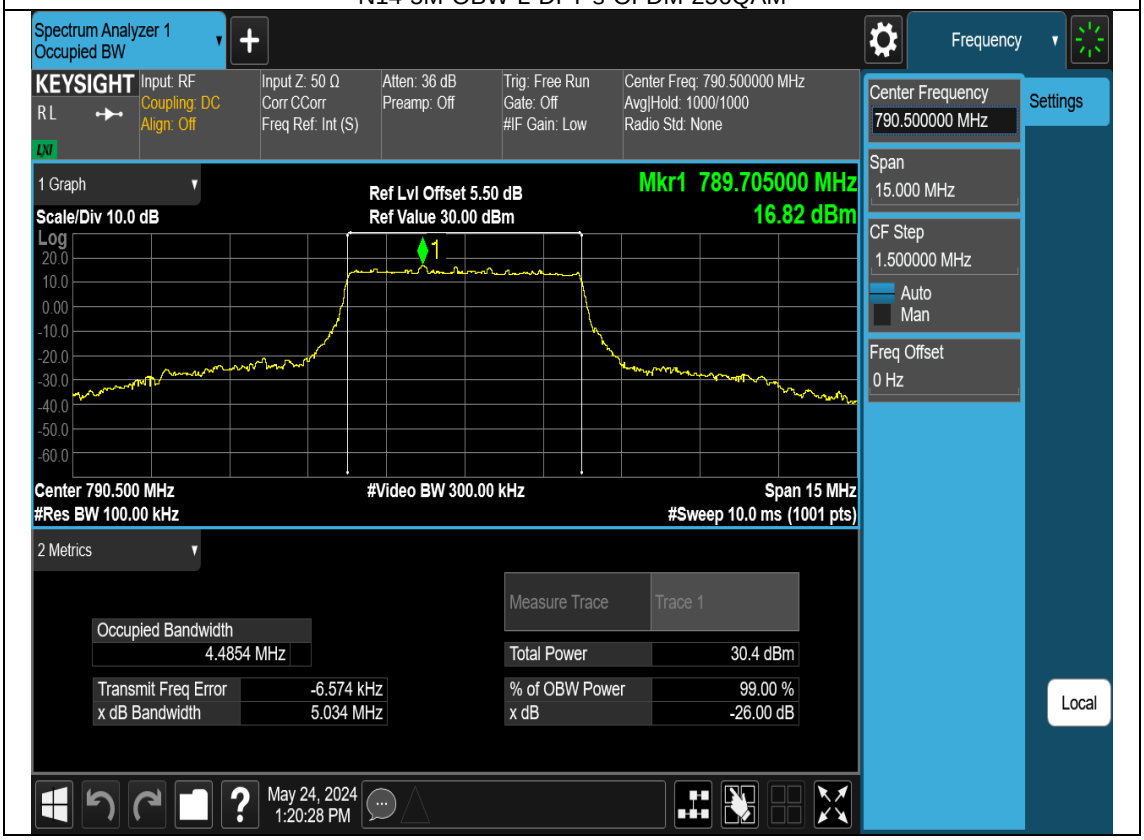
N14-5M-OBW-L-DFT-s-OFDM-16QAM



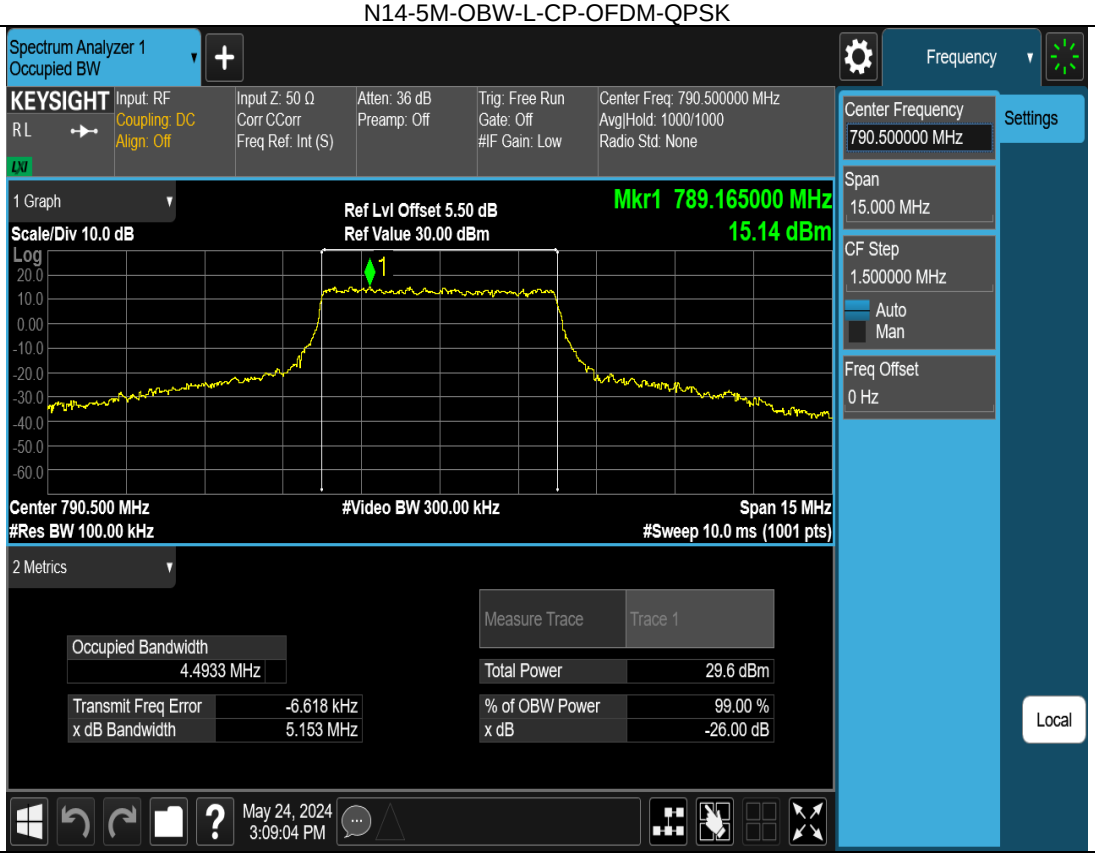
N14-5M-OBW-L-DFT-s-OFDM-64QAM



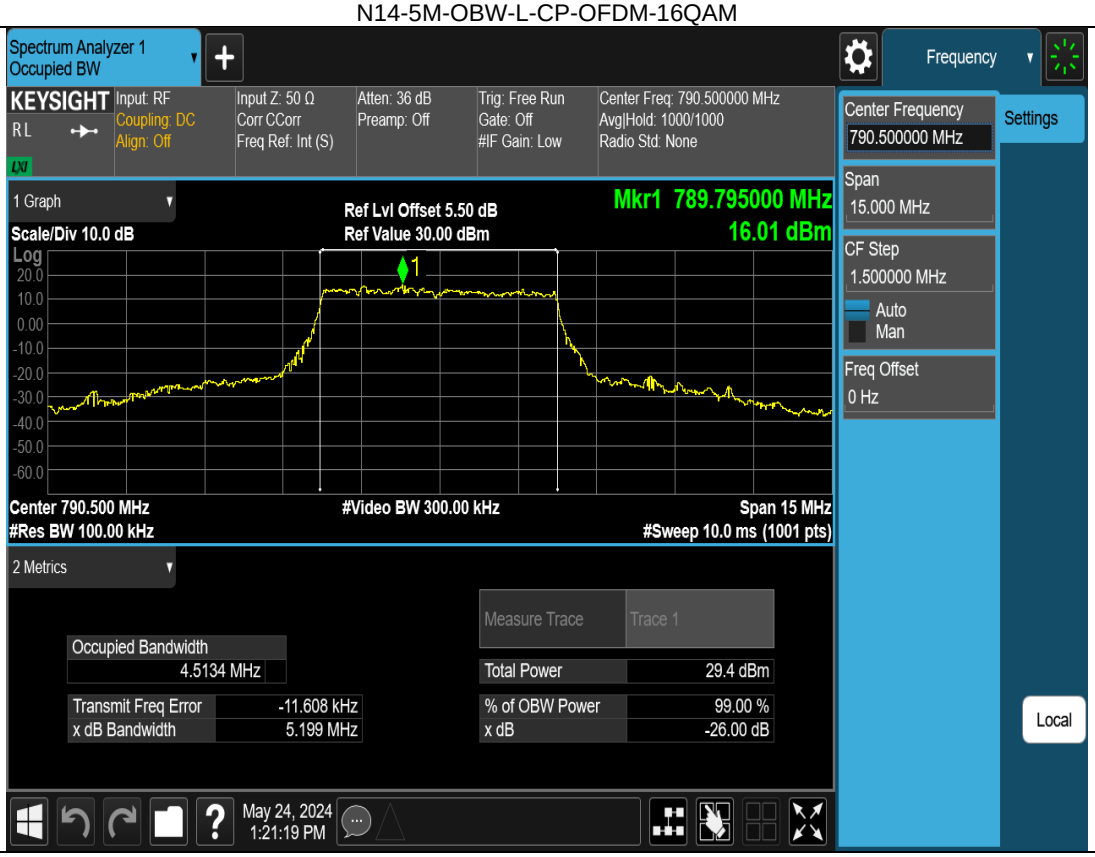
N14-5M-OBW-L-DFT-s-OFDM-256QAM



N14-5M-OBW-L-CP-OFDM-QPSK



N14-5M-OBW-L-CP-OFDM-16QAM



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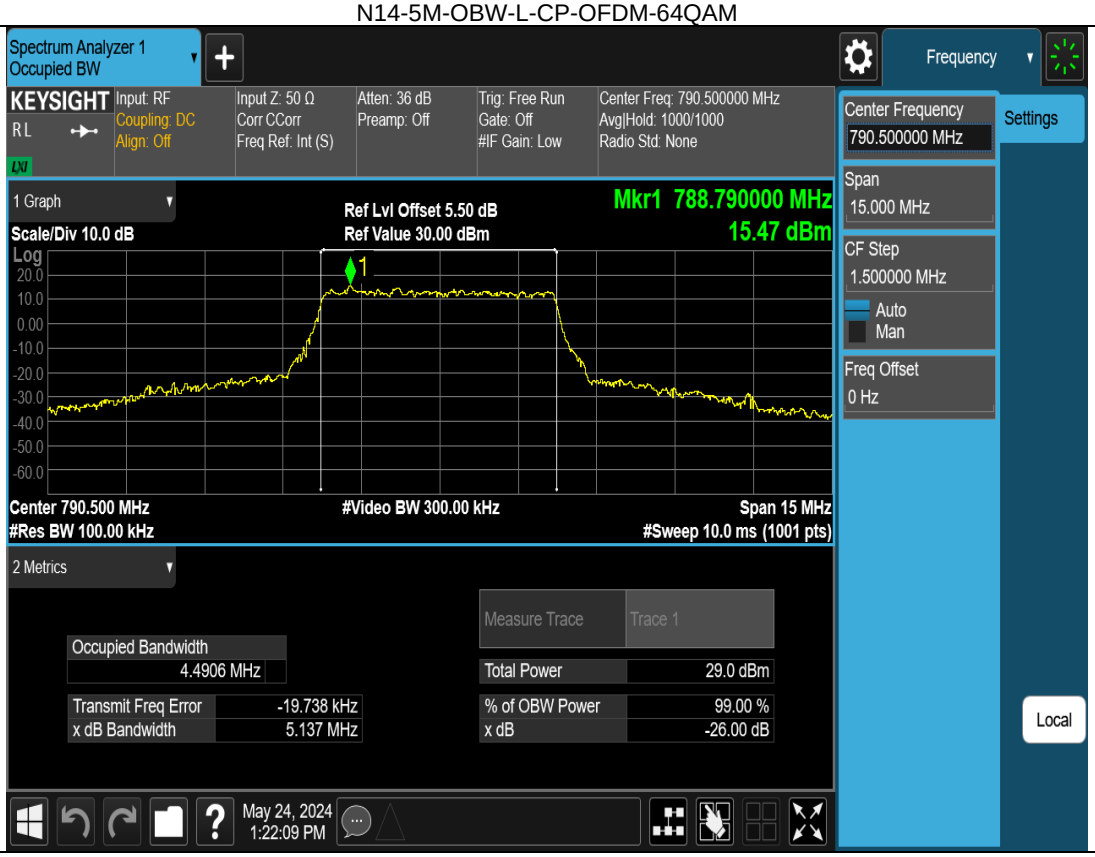
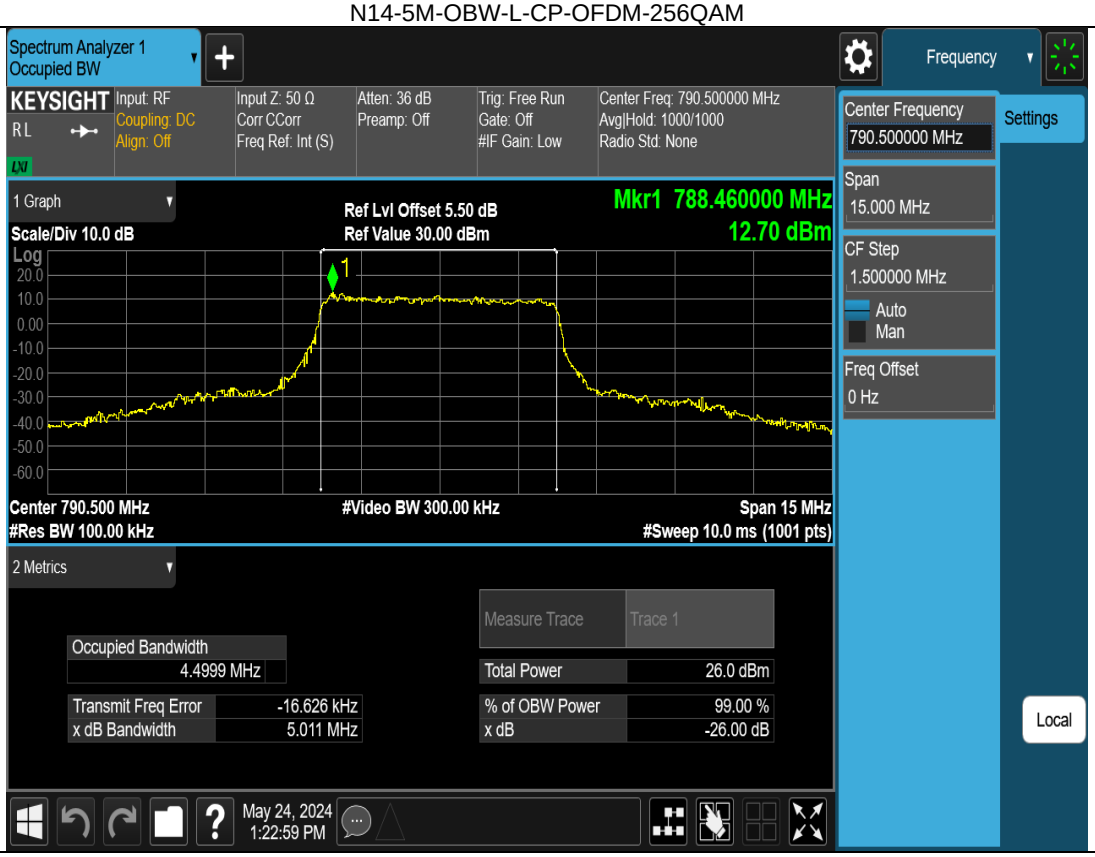
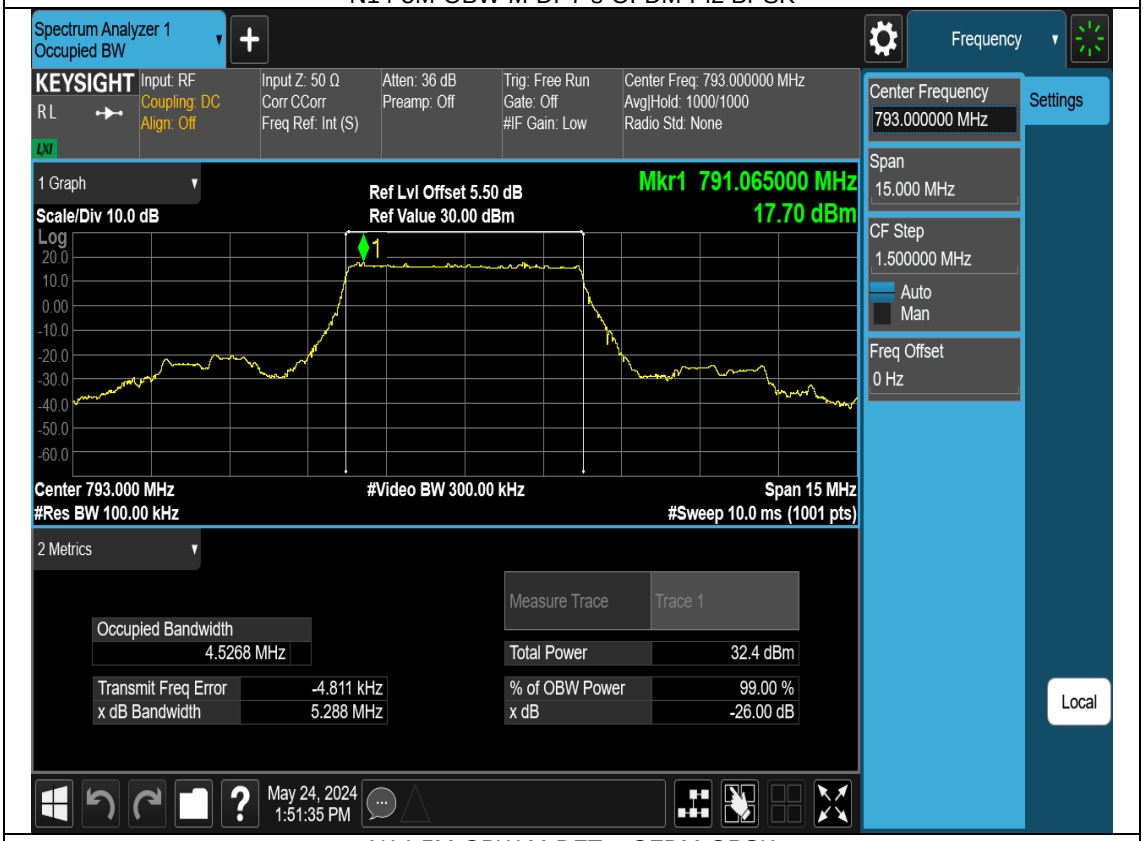


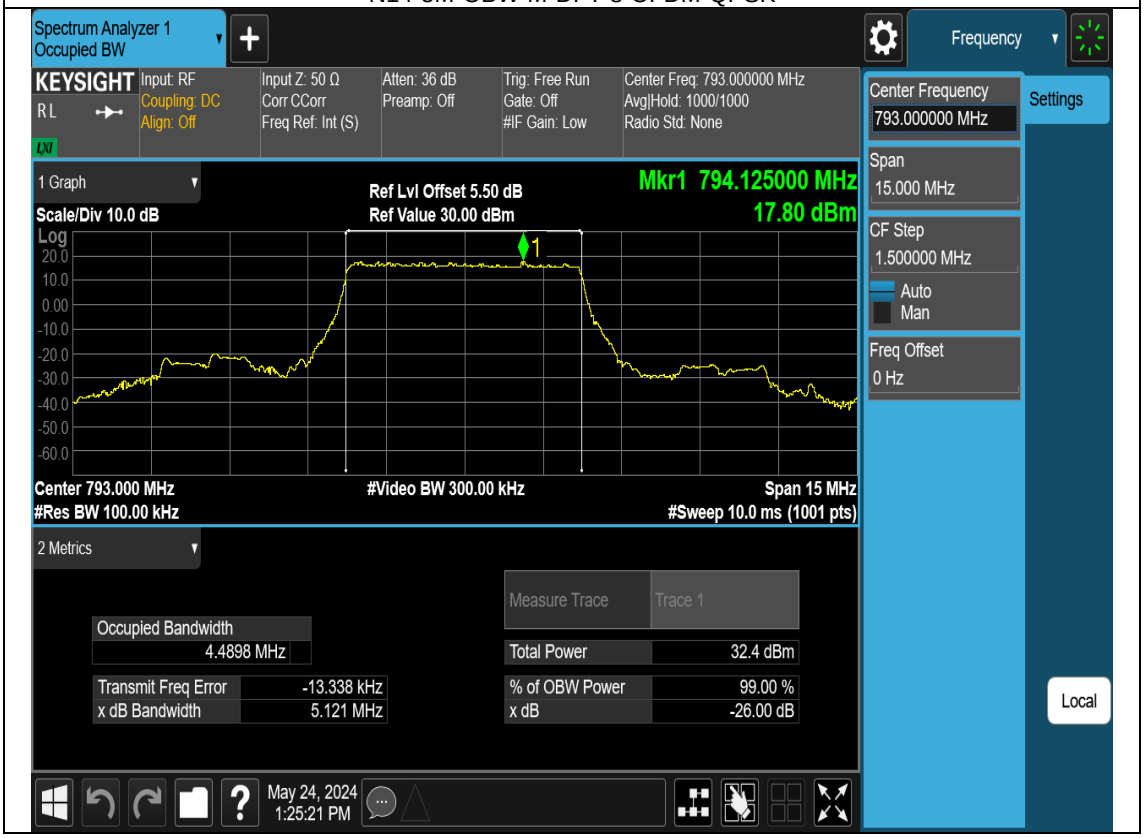
N14-5M-OBW-L-CP-OFDM-256QAM



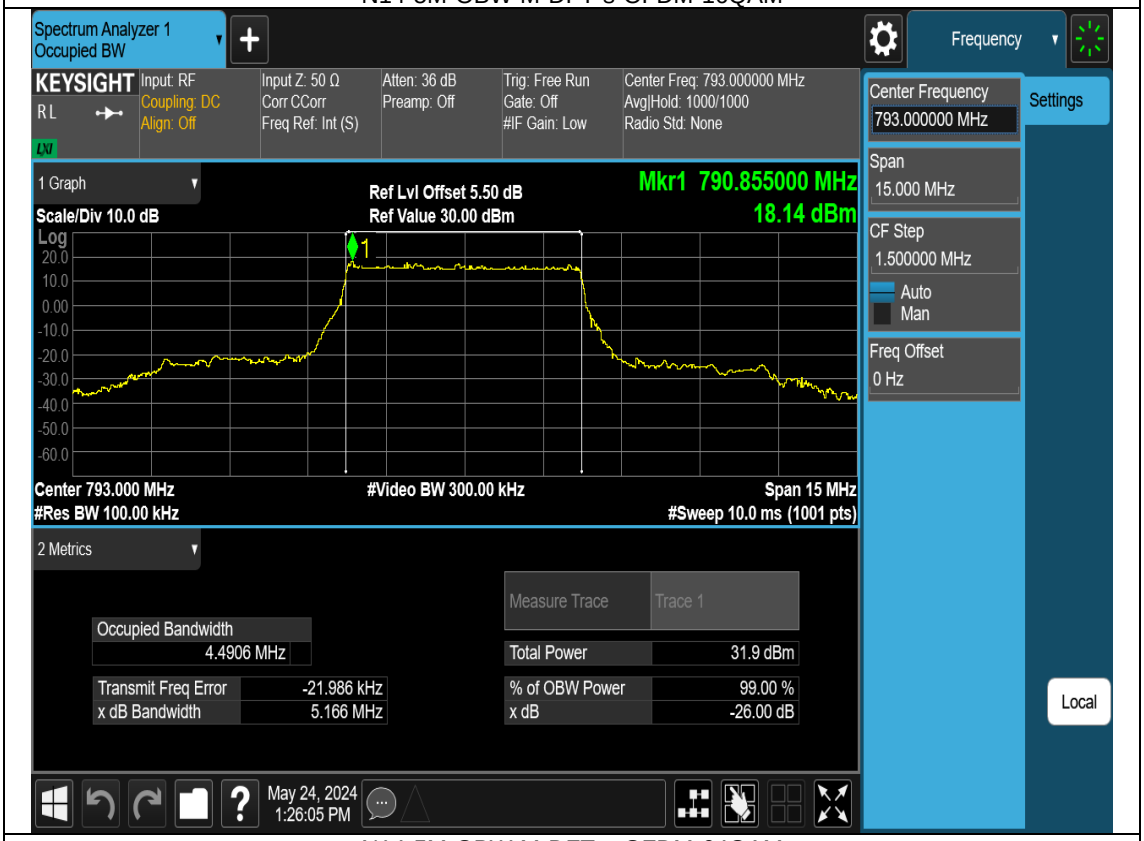
N14-5M-OBW-M-DFT-s-OFDM-Pi2 BPSK



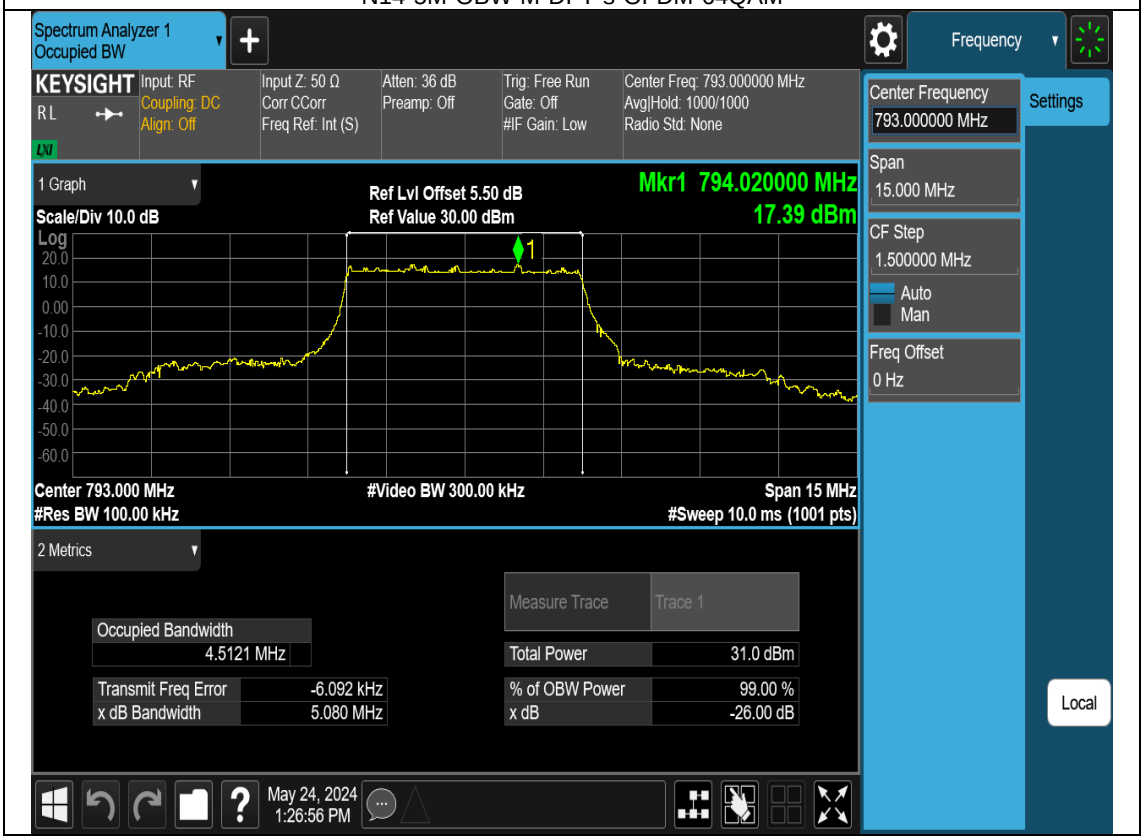
N14-5M-OBW-M-DFT-s-OFDM-QPSK



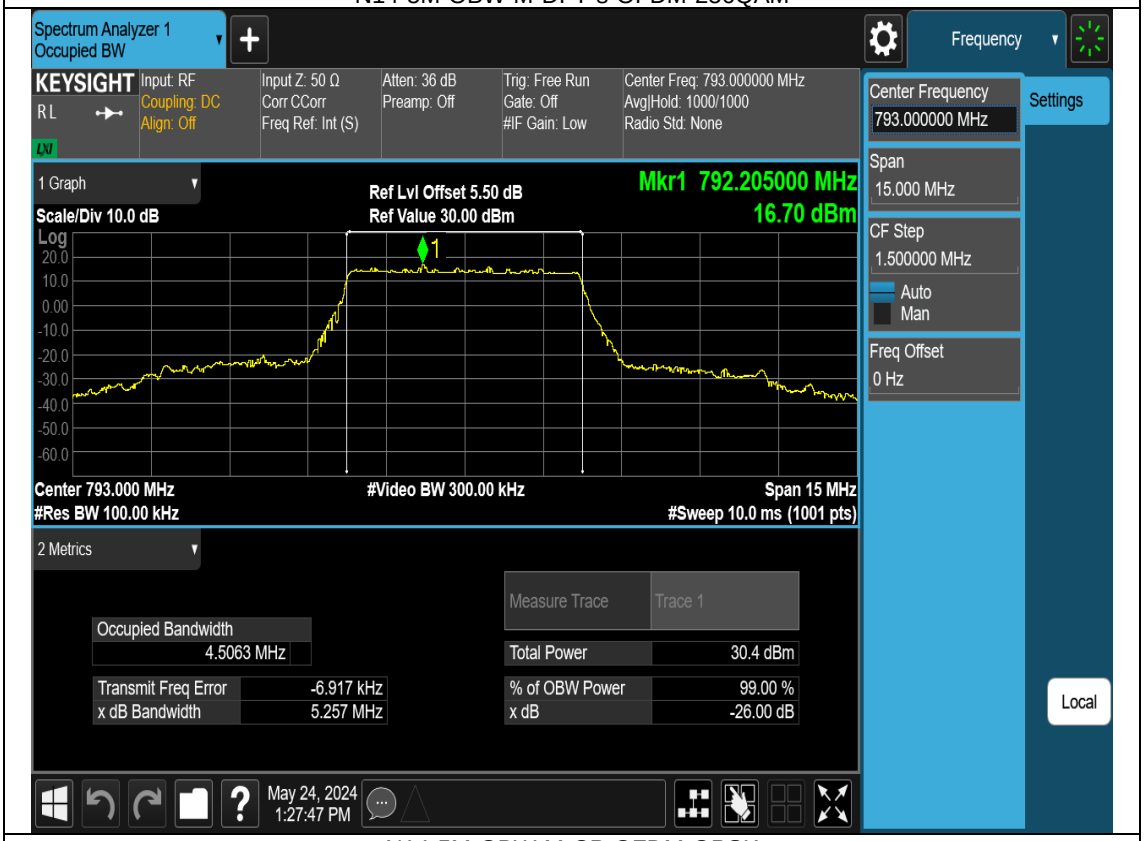
N14-5M-OBW-M-DFT-s-OFDM-16QAM



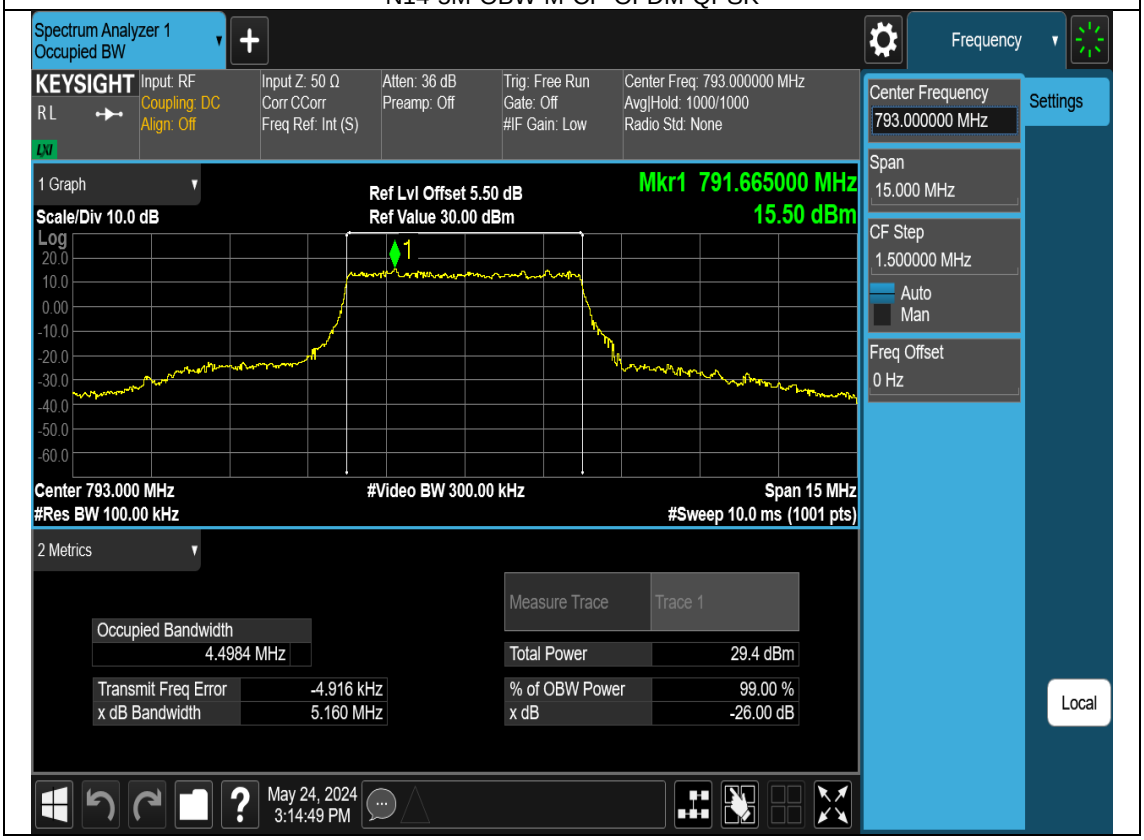
N14-5M-OBW-M-DFT-s-OFDM-64QAM



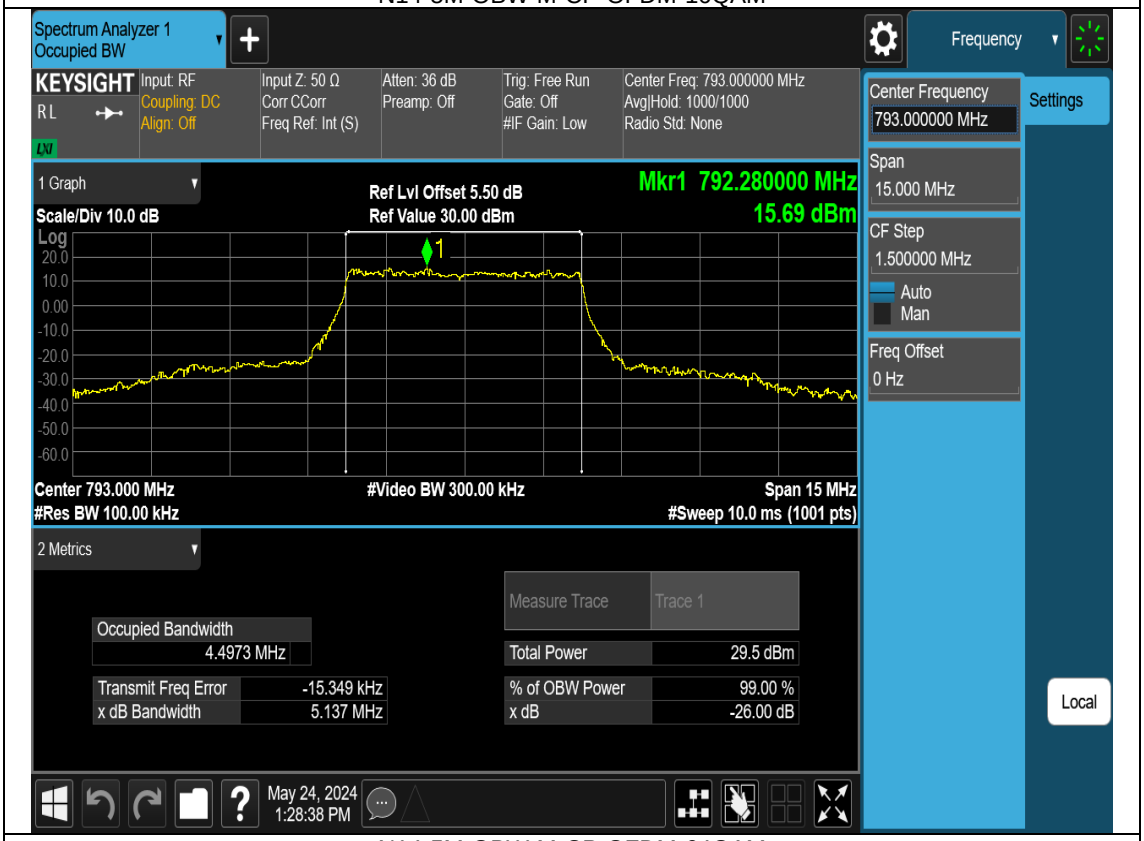
N14-5M-OBW-M-DFT-s-OFDM-256QAM



N14-5M-OBW-M-CP-OFDM-QPSK



N14-5M-OBW-M-CP-OFDM-16QAM



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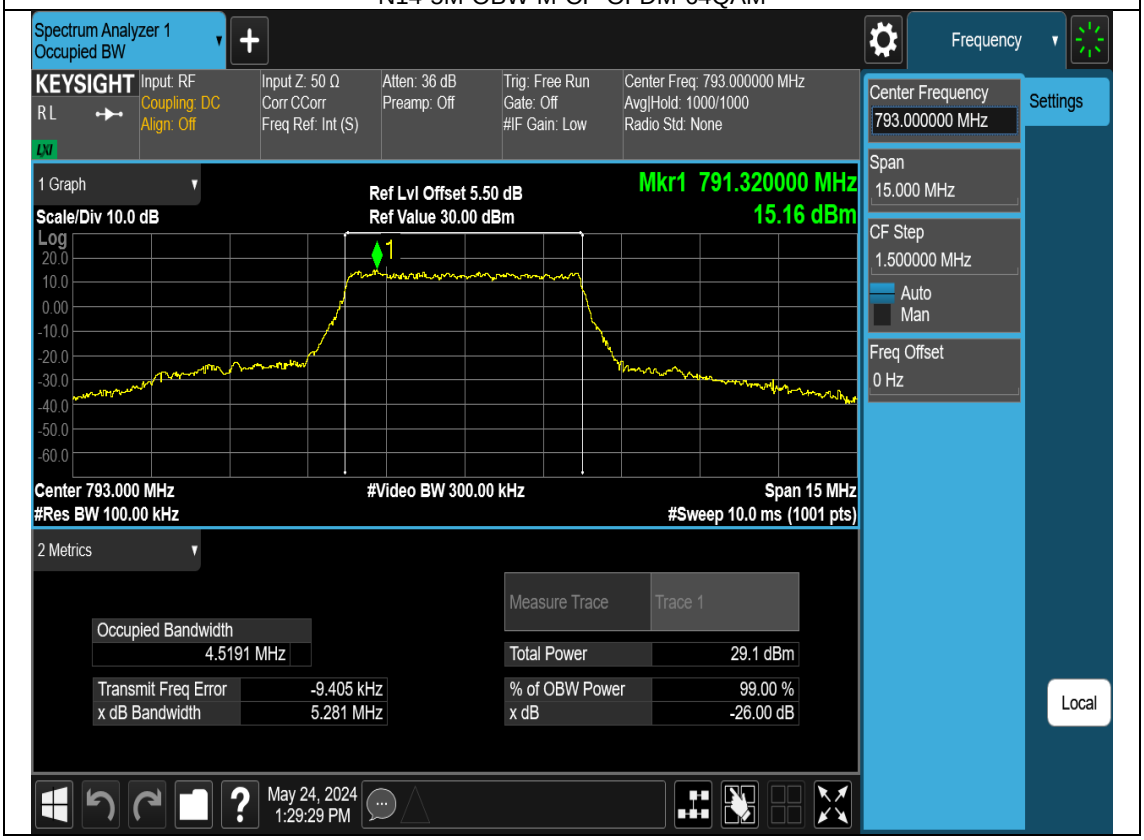

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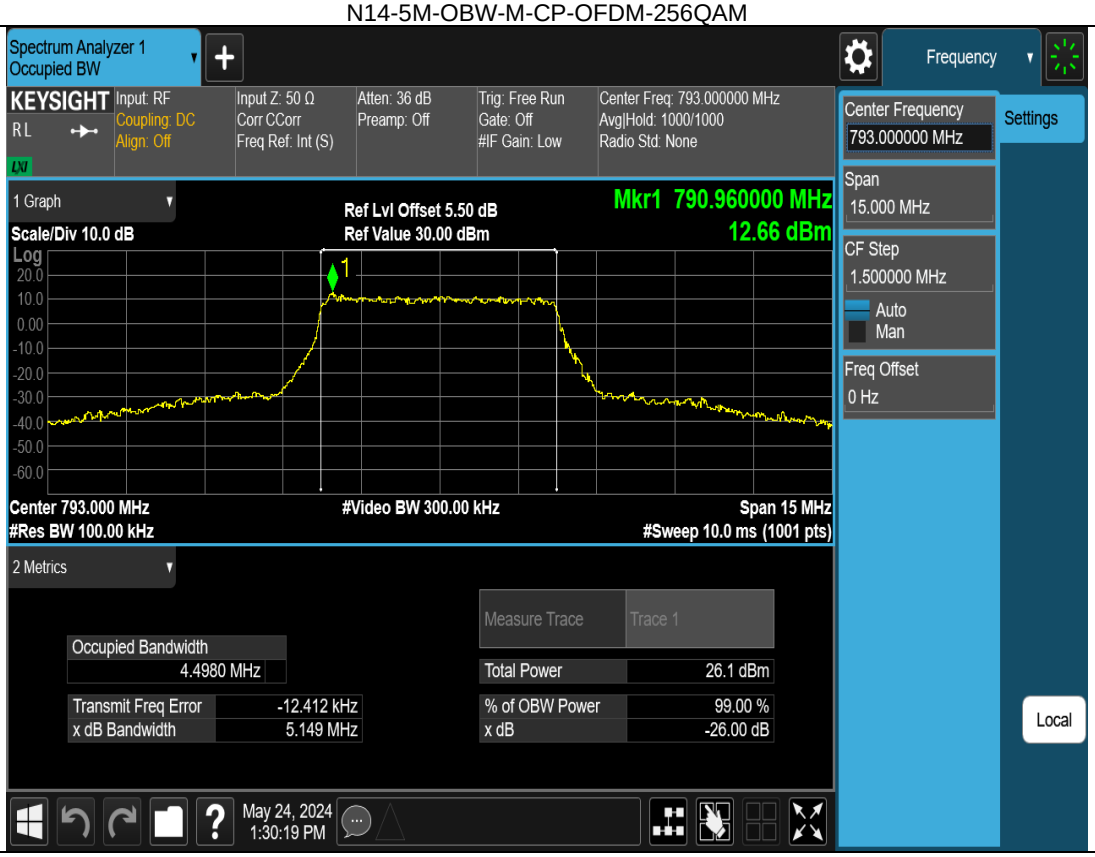
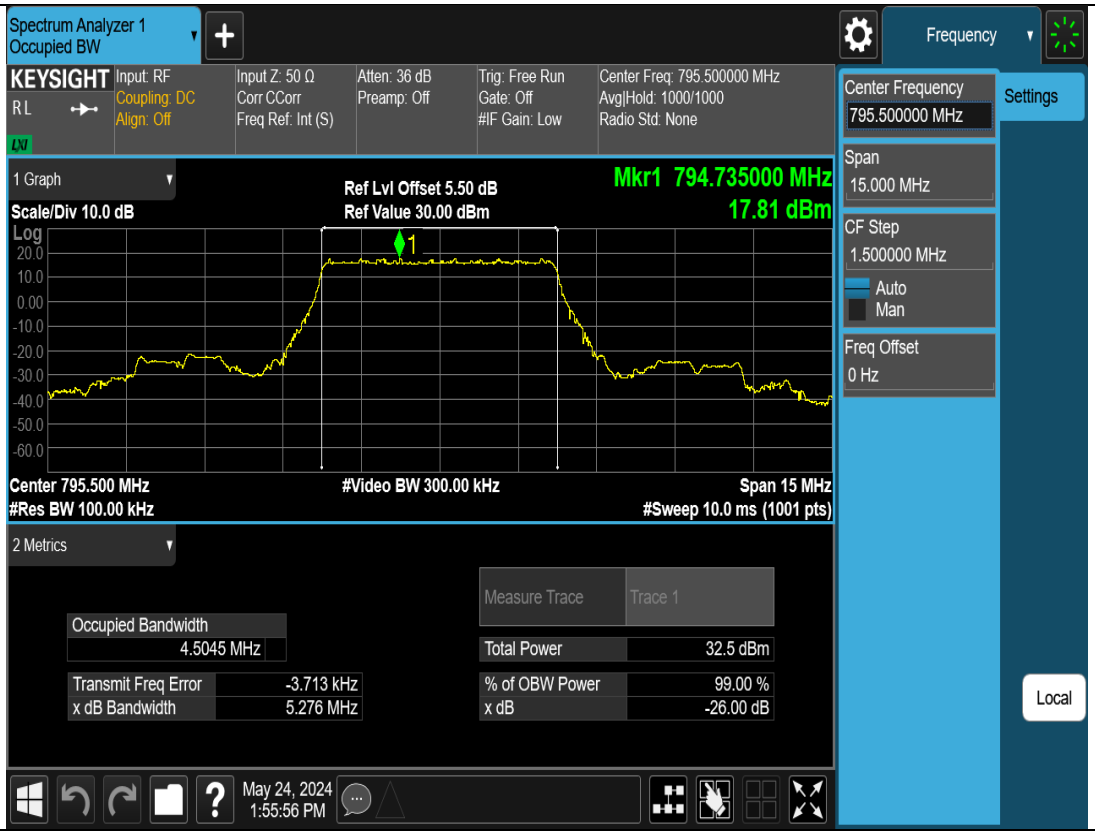
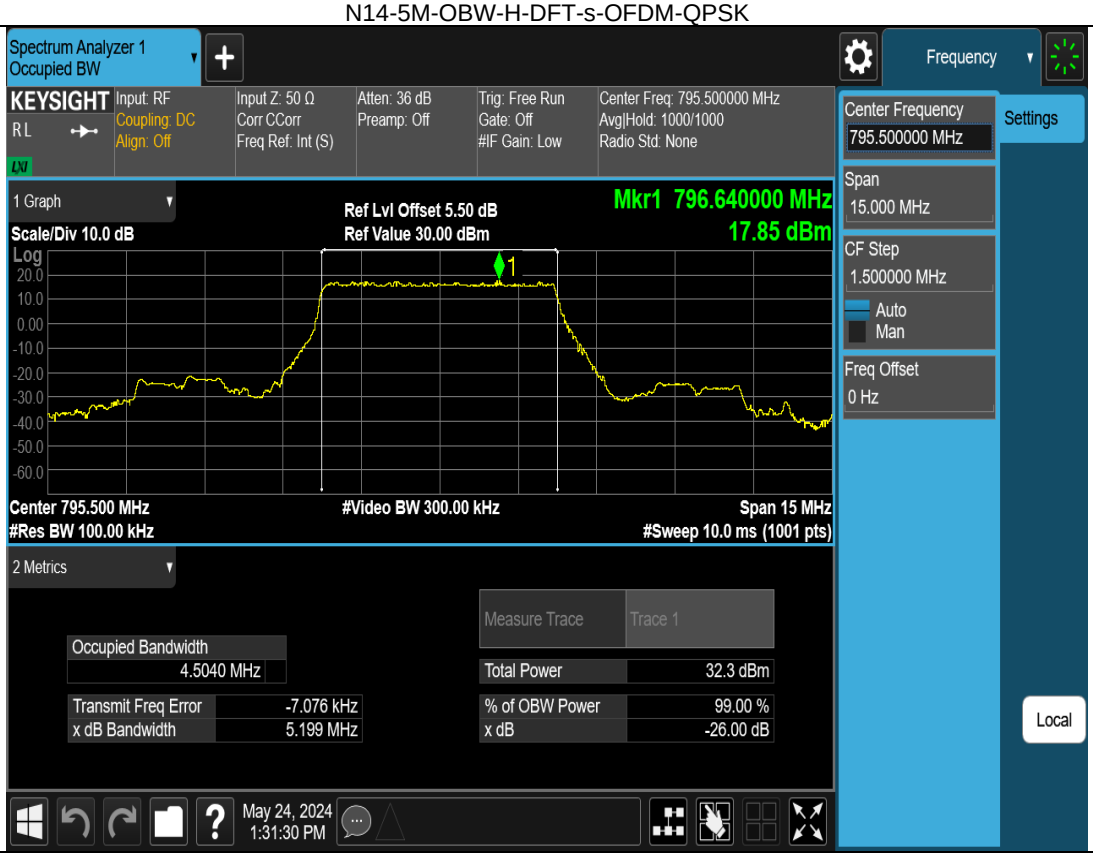


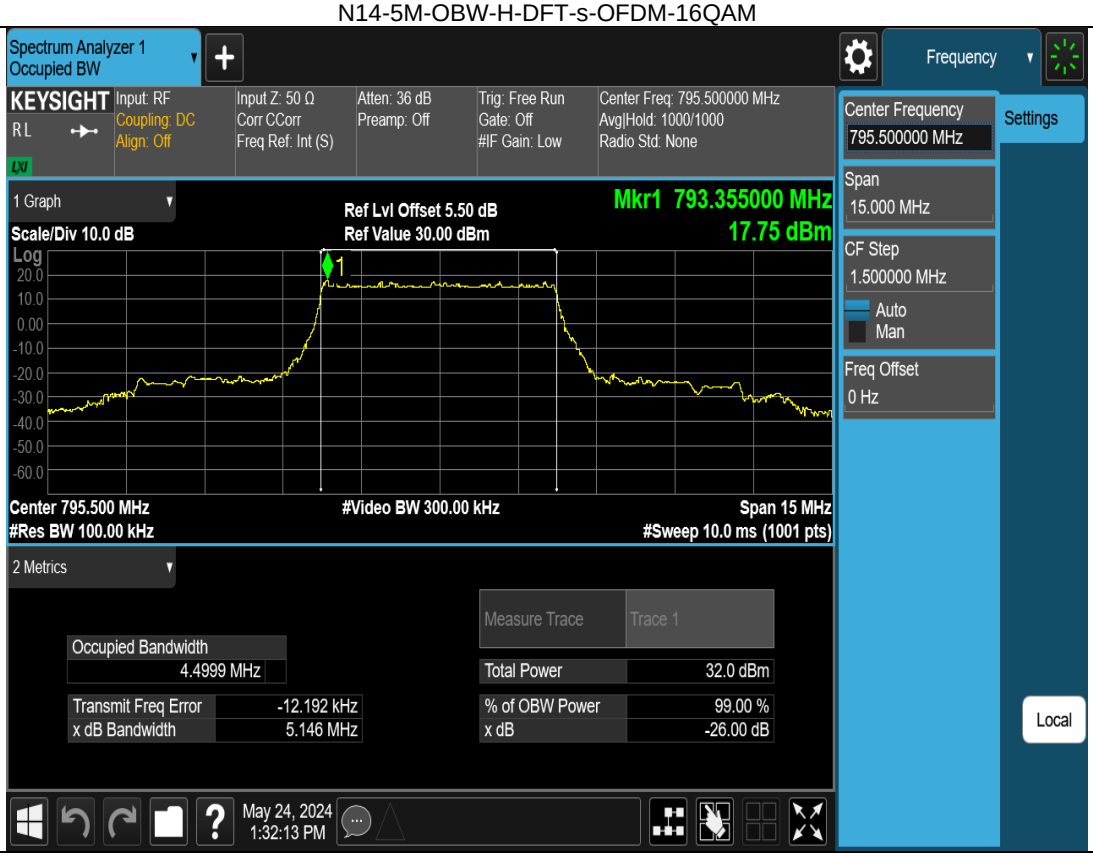
N14-5M-OBW-H-DFT-s-OFDM-Pi2 BPSK



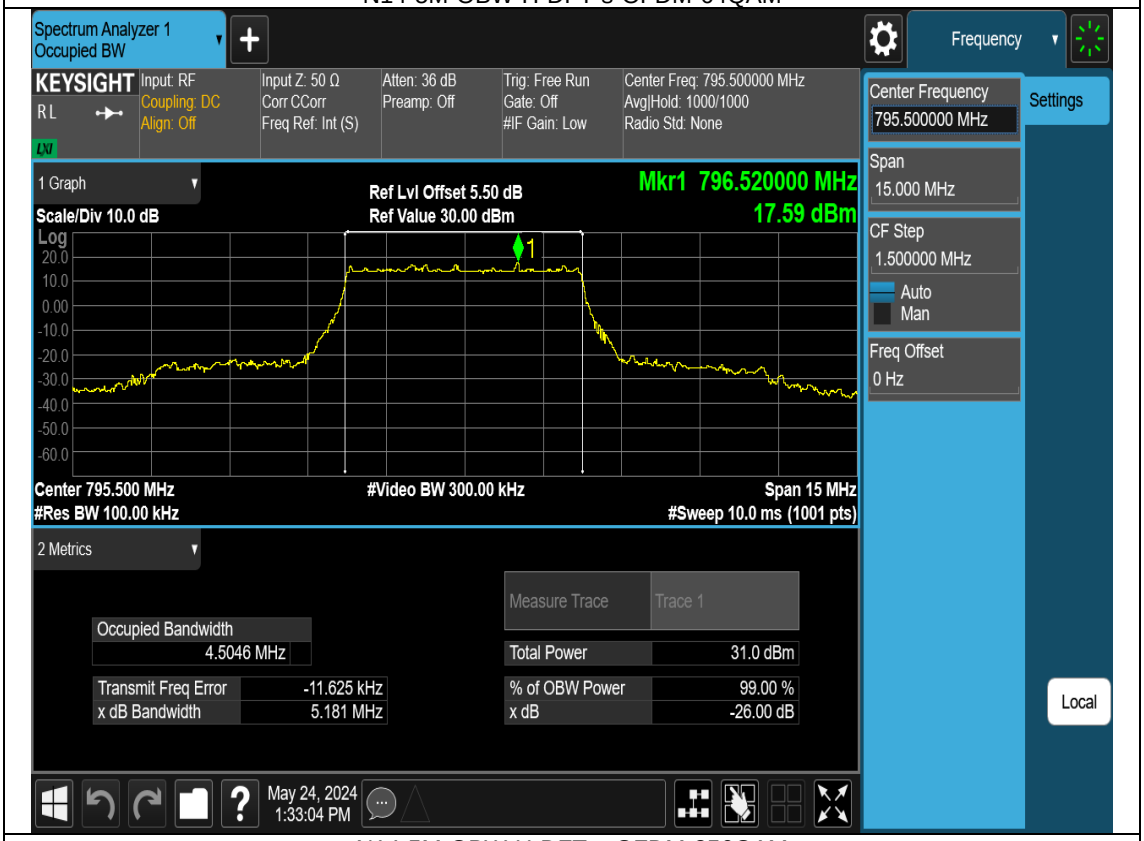
N14-5M-OBW-H-DFT-s-OFDM-QPSK



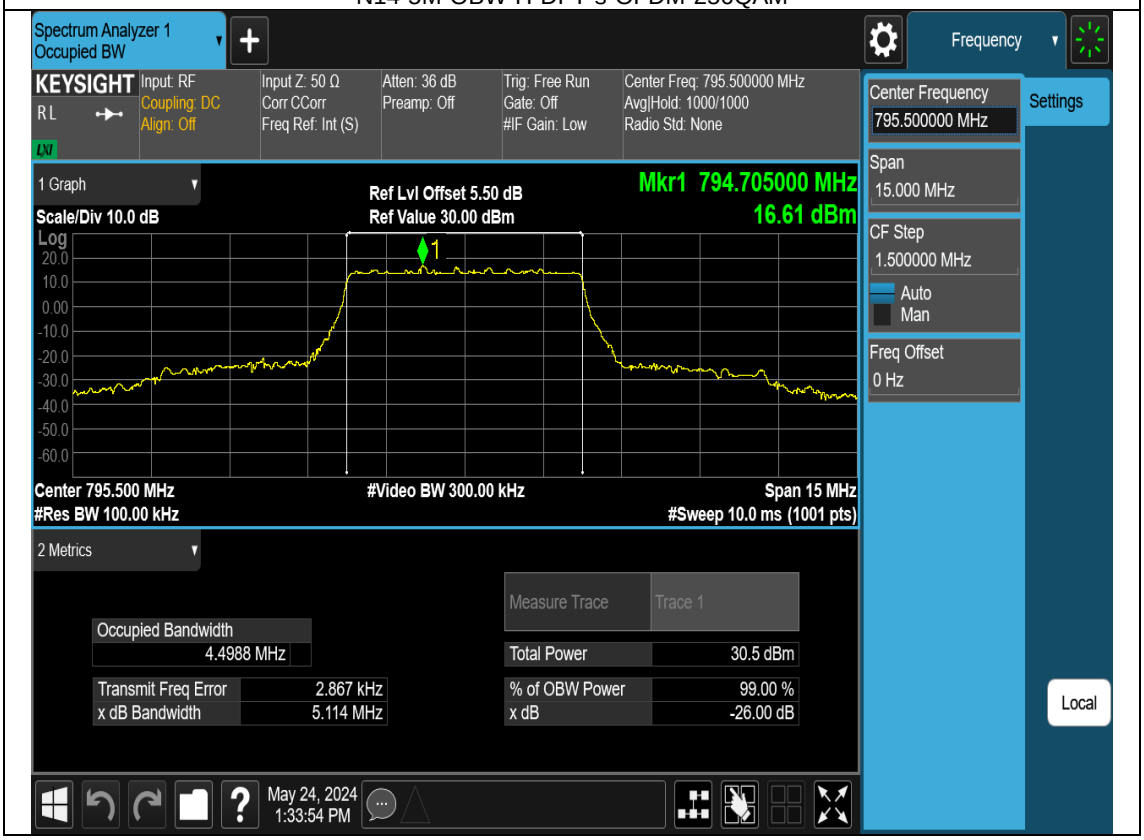
N14-5M-OBW-H-DFT-s-OFDM-16QAM



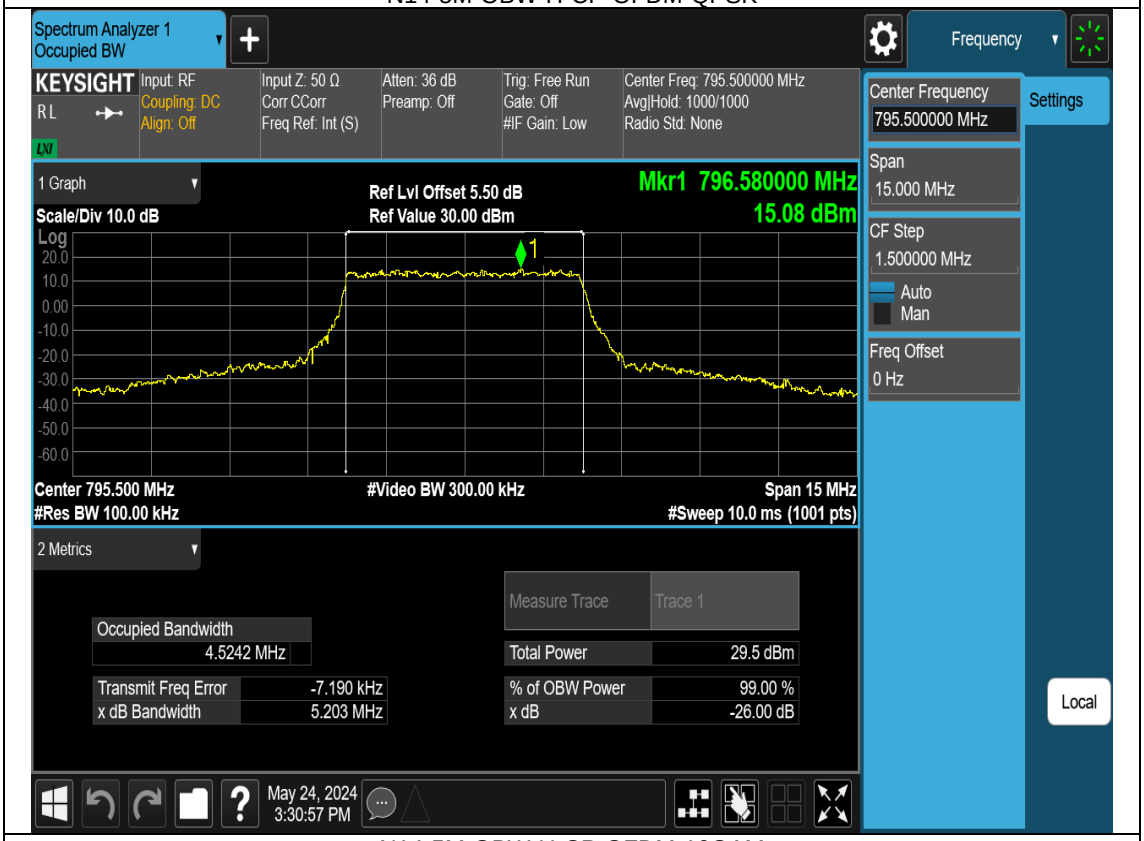
N14-5M-OBW-H-DFT-s-OFDM-64QAM



N14-5M-OBW-H-DFT-s-OFDM-256QAM



N14-5M-OBW-H-CP-OFDM-QPSK



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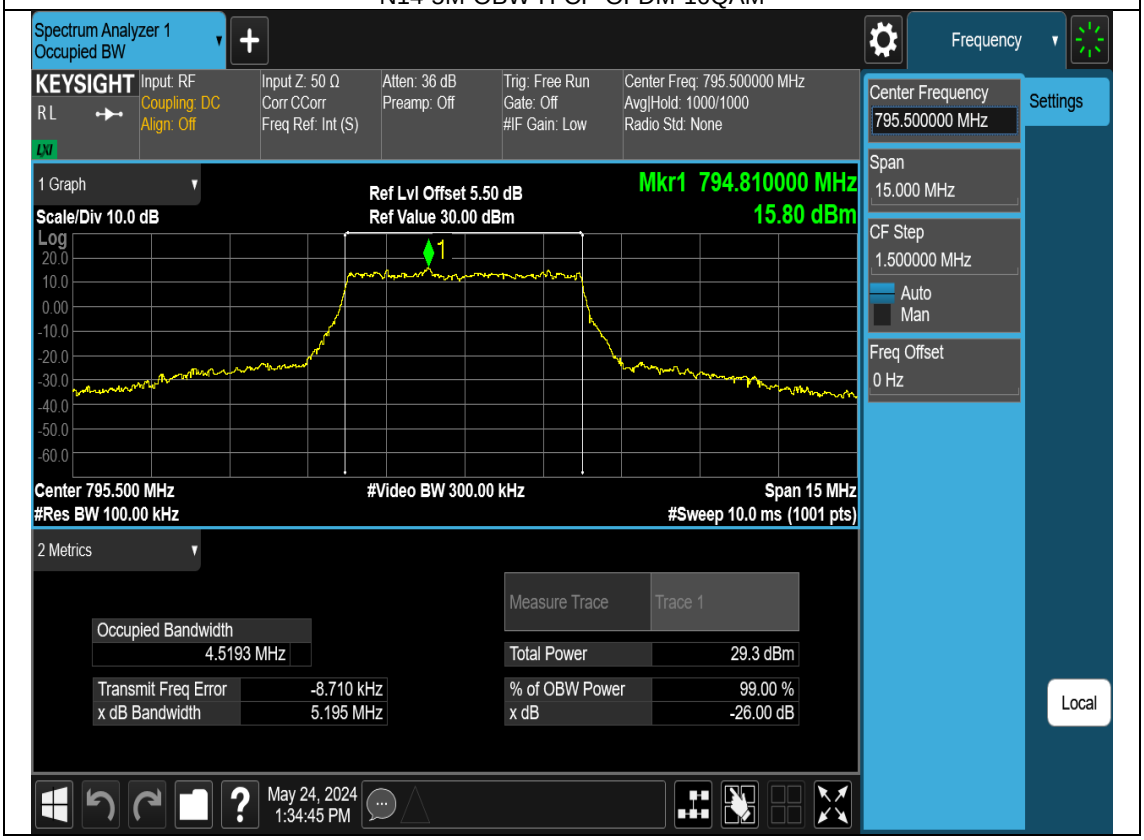

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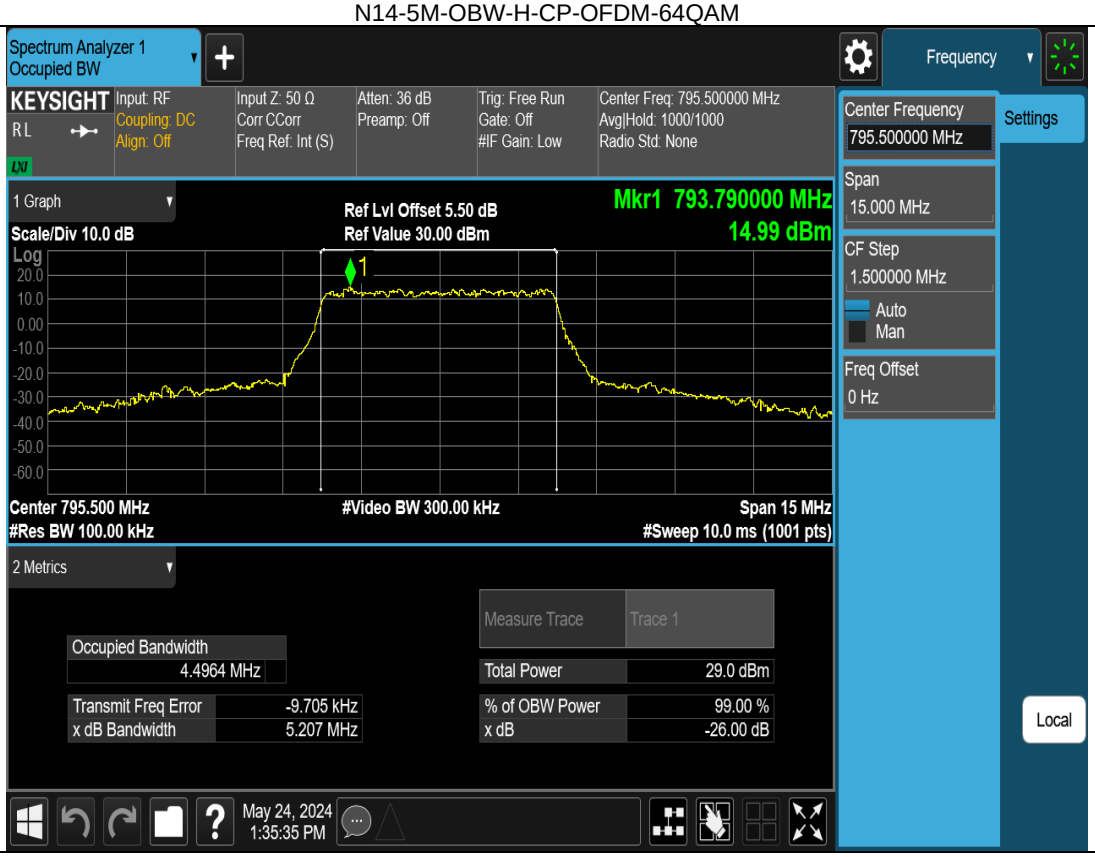

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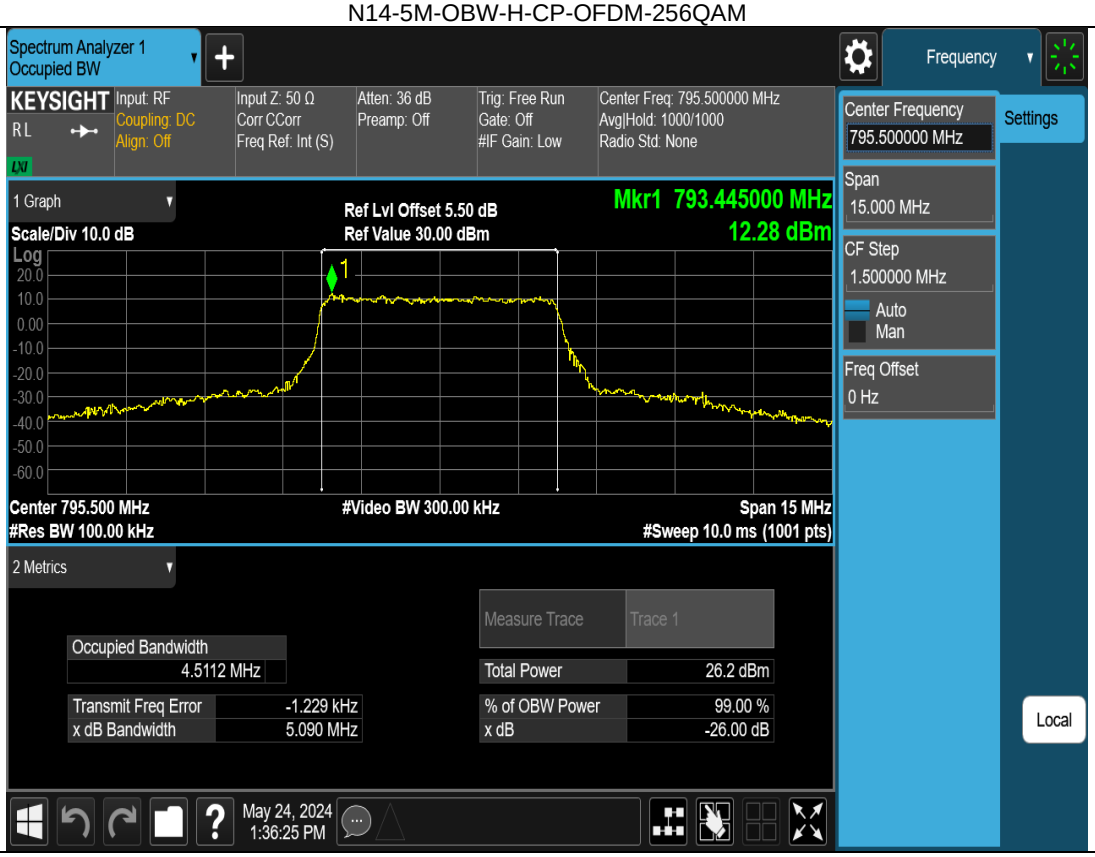
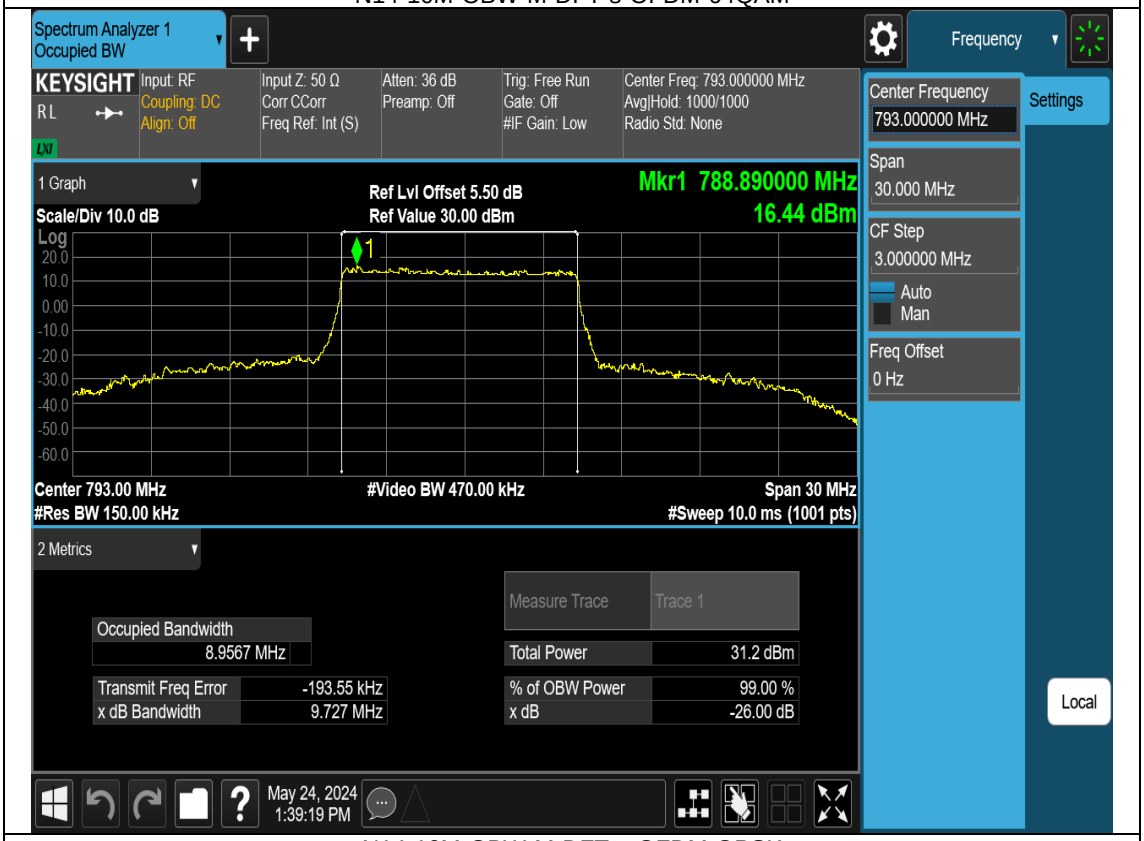
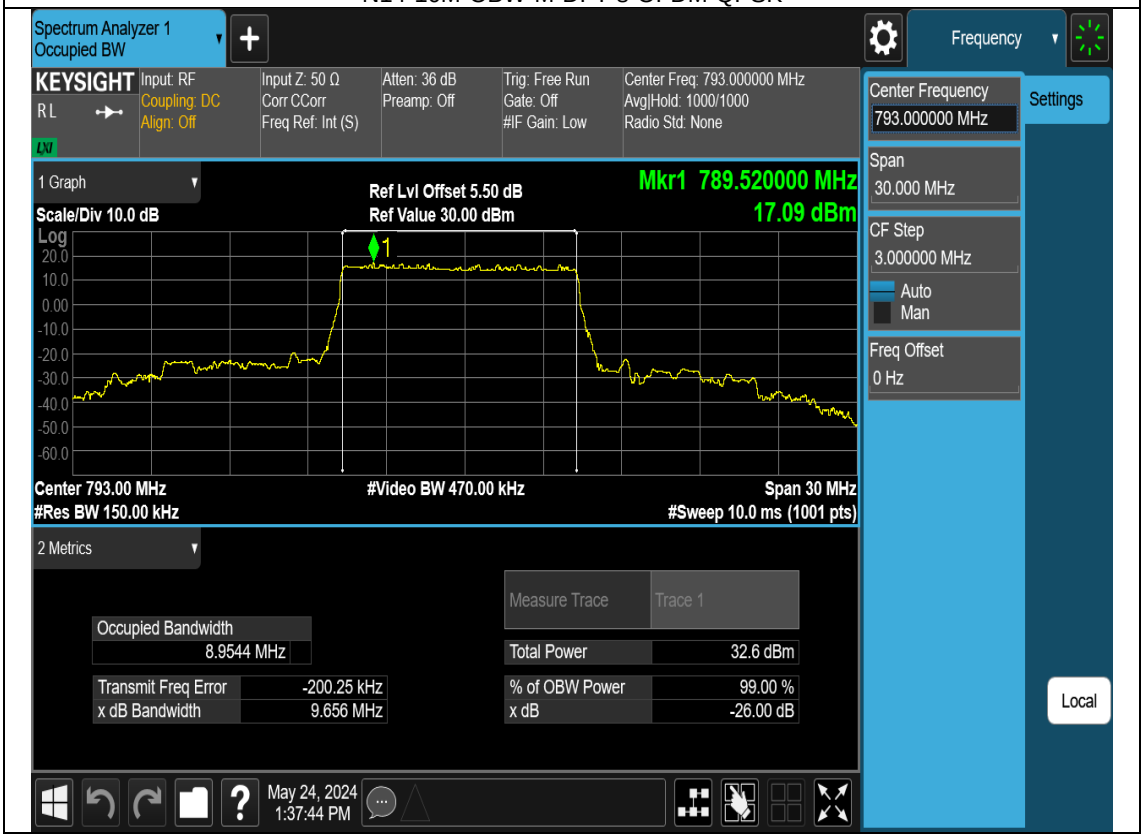


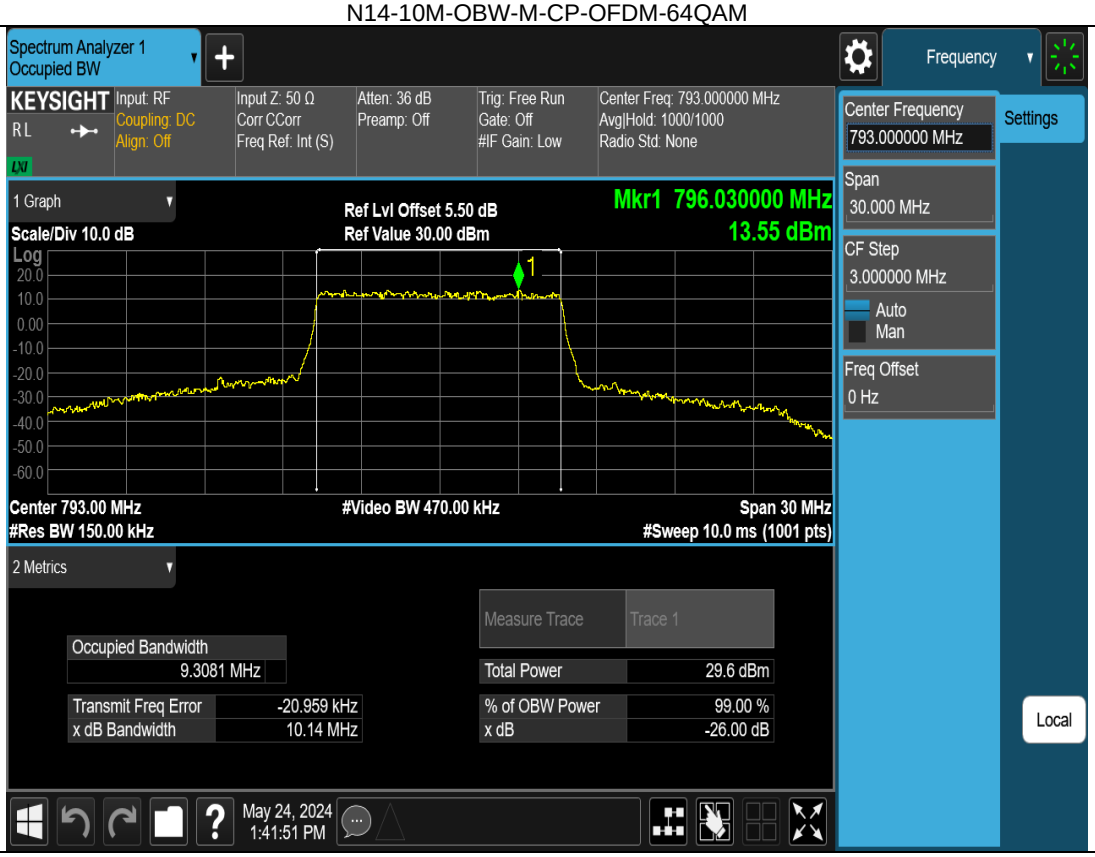
N14-10M-OBW-M-DFT-s-OFDM-64QAM



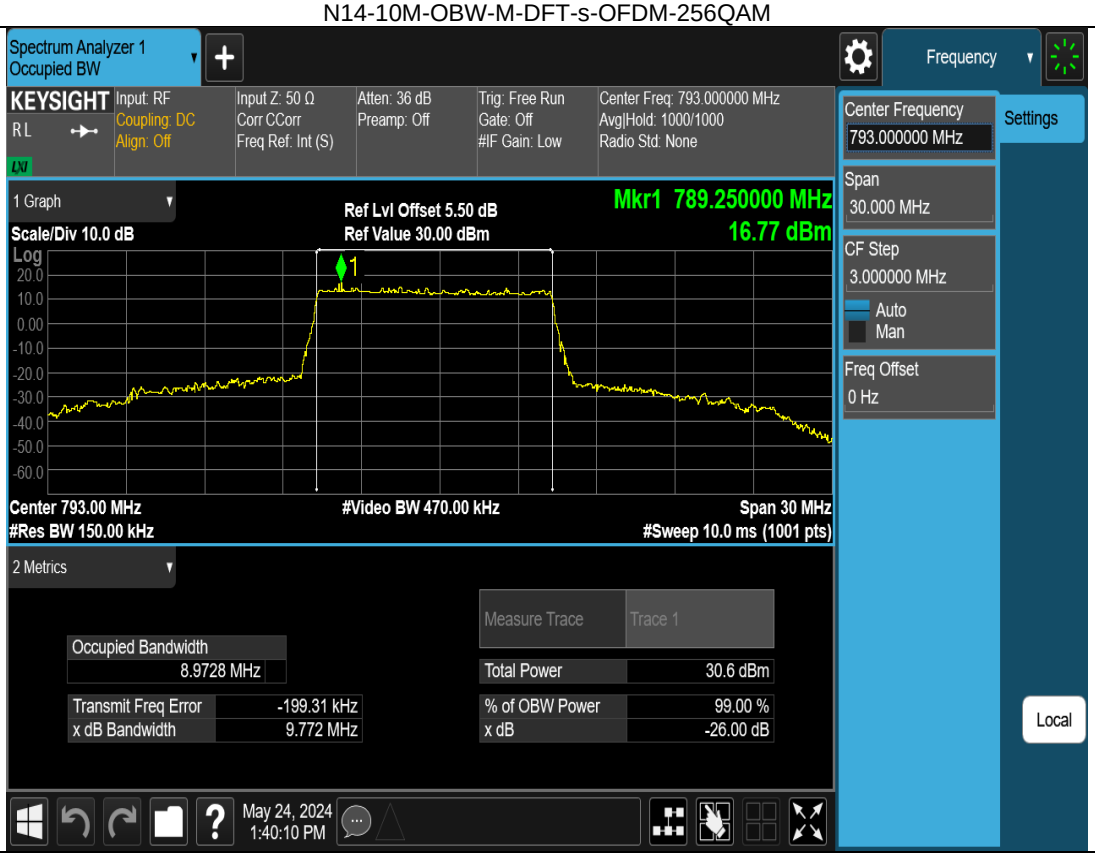
N14-10M-OBW-M-DFT-s-OFDM-QPSK



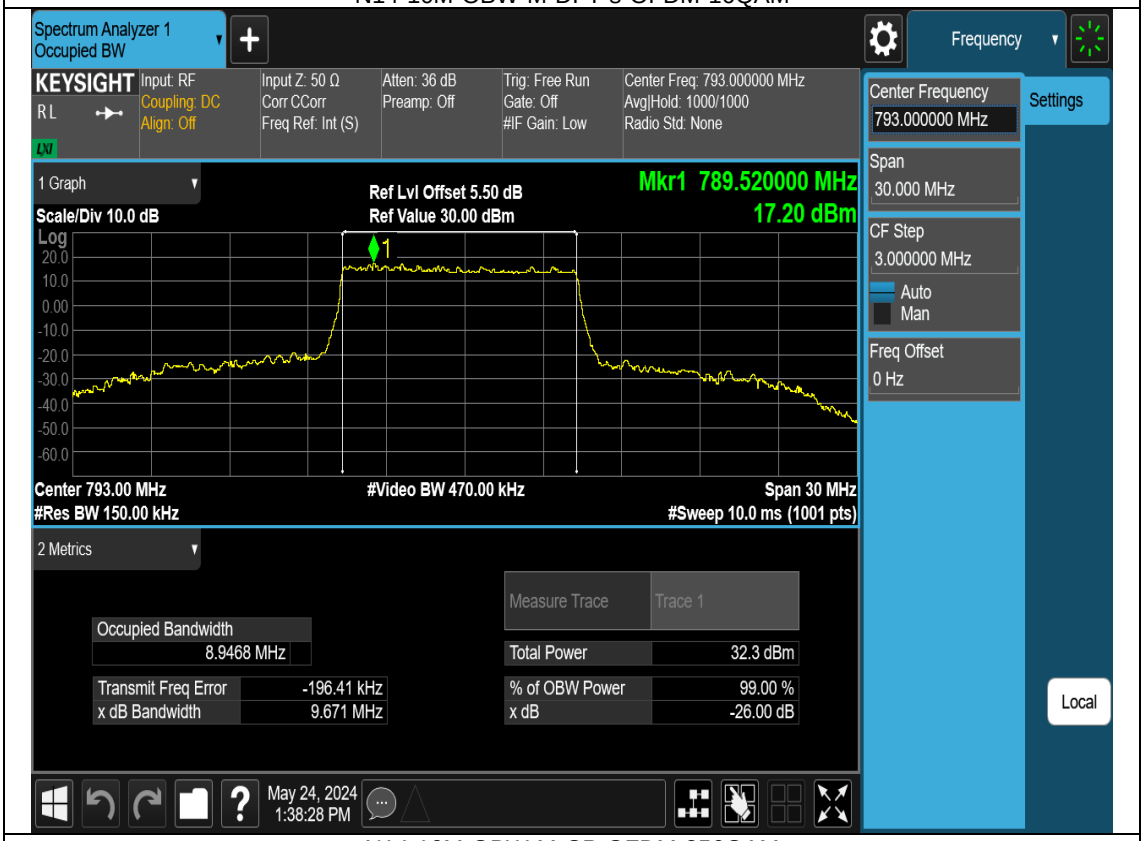
N14-10M-OBW-M-CP-OFDM-64QAM



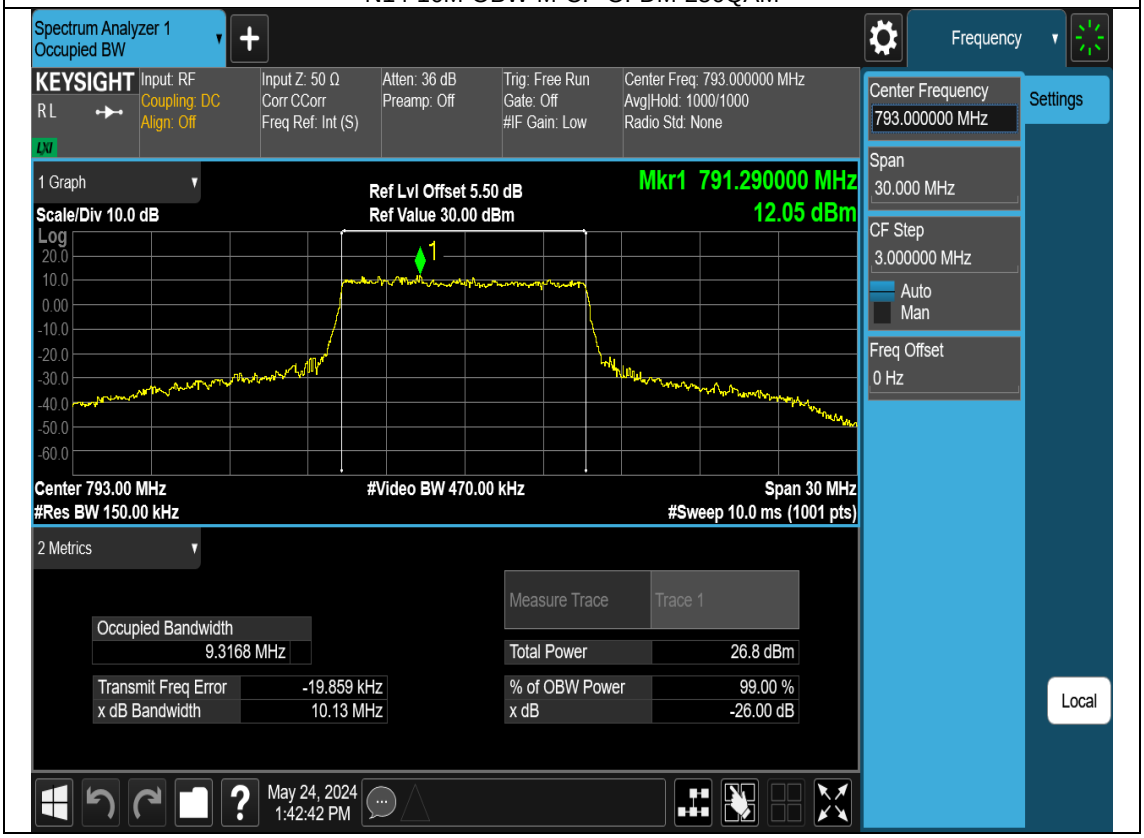
N14-10M-OBW-M-DFT-s-OFDM-256QAM



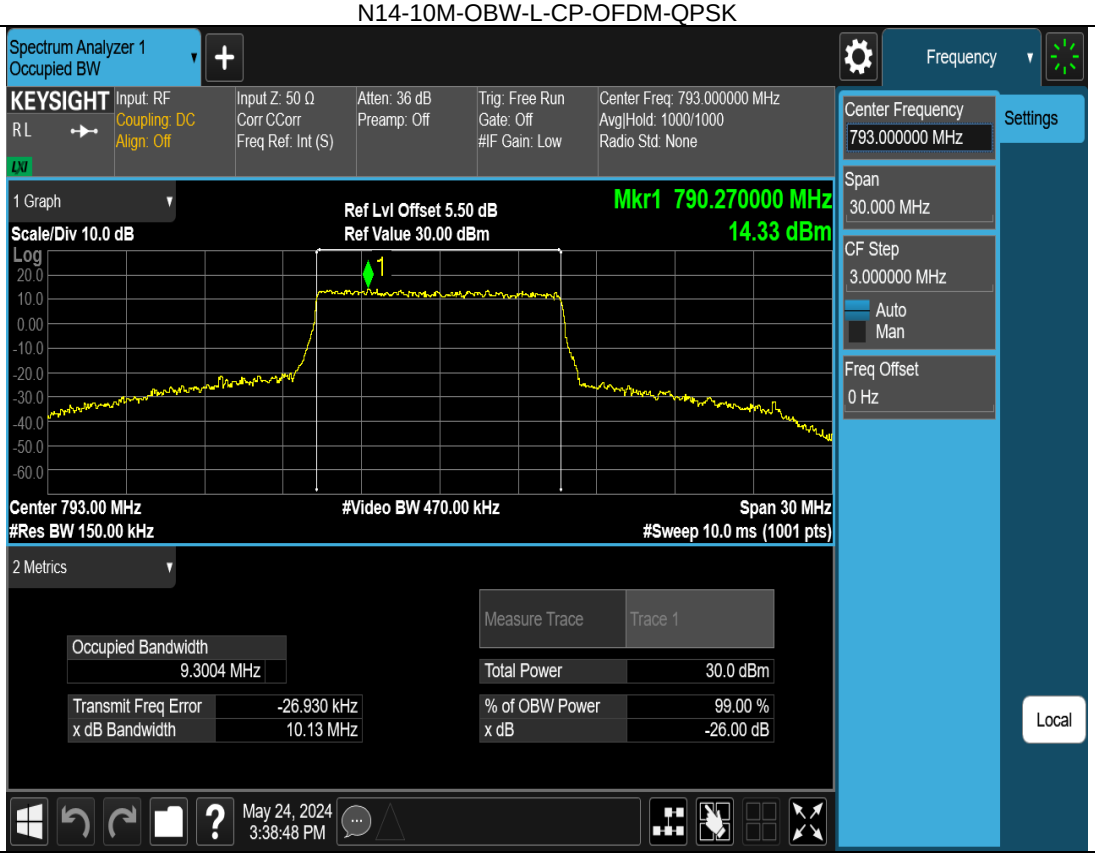
N14-10M-OBW-M-DFT-s-OFDM-16QAM



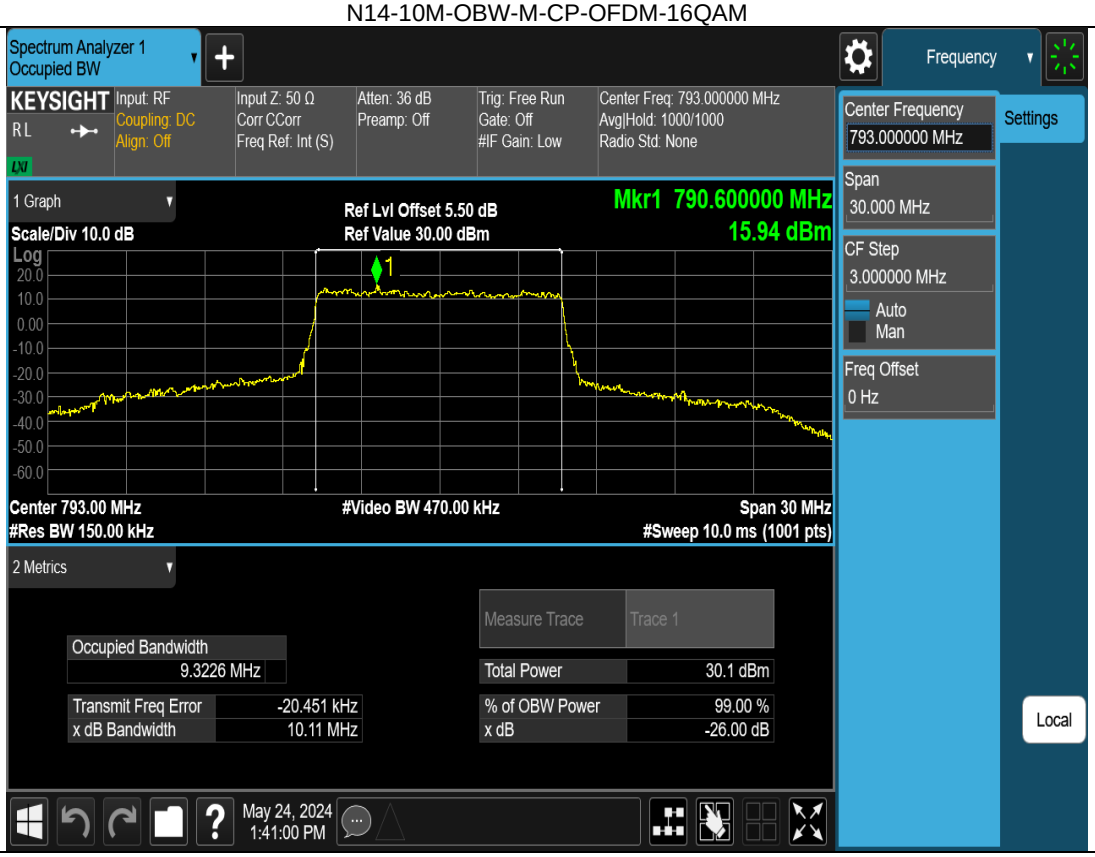
N14-10M-OBW-M-CP-OFDM-256QAM



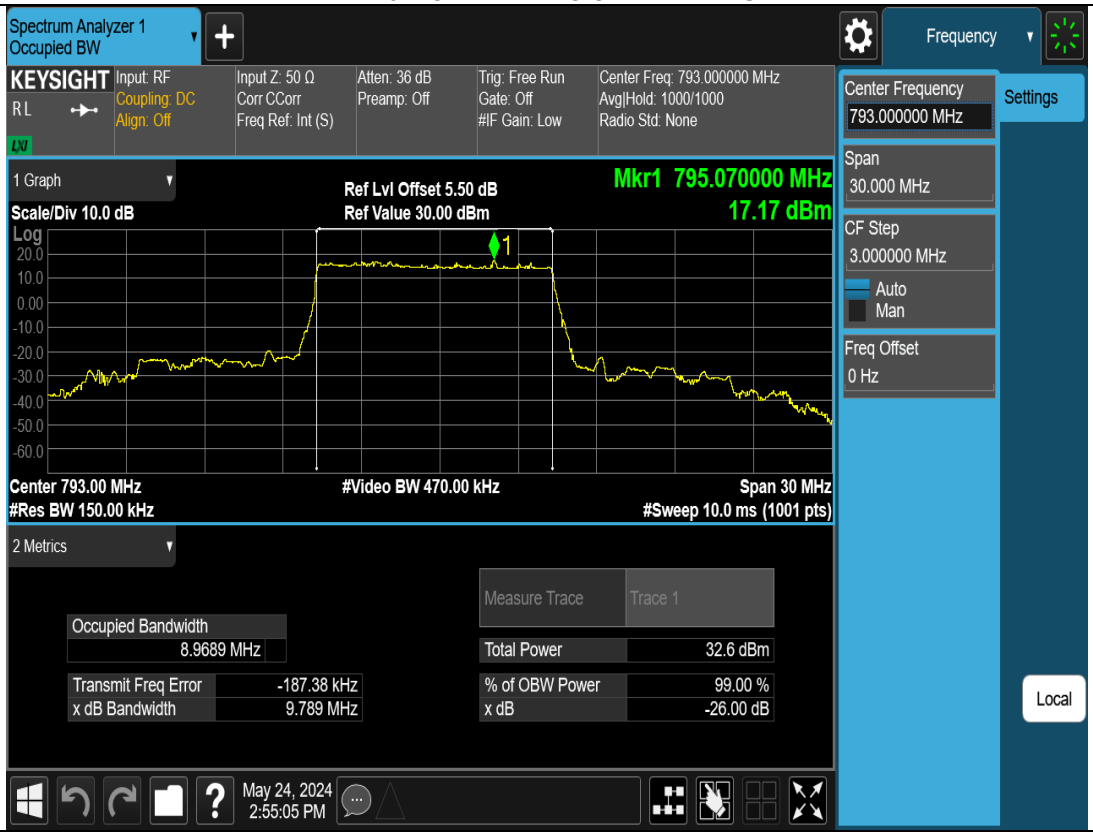
N14-10M-OBW-L-CP-OFDM-QPSK



N14-10M-OBW-M-CP-OFDM-16QAM



N14-10M-OBW-L-DFT-s-OFDM-Pi2 BPSK



Peak-Average Ratio

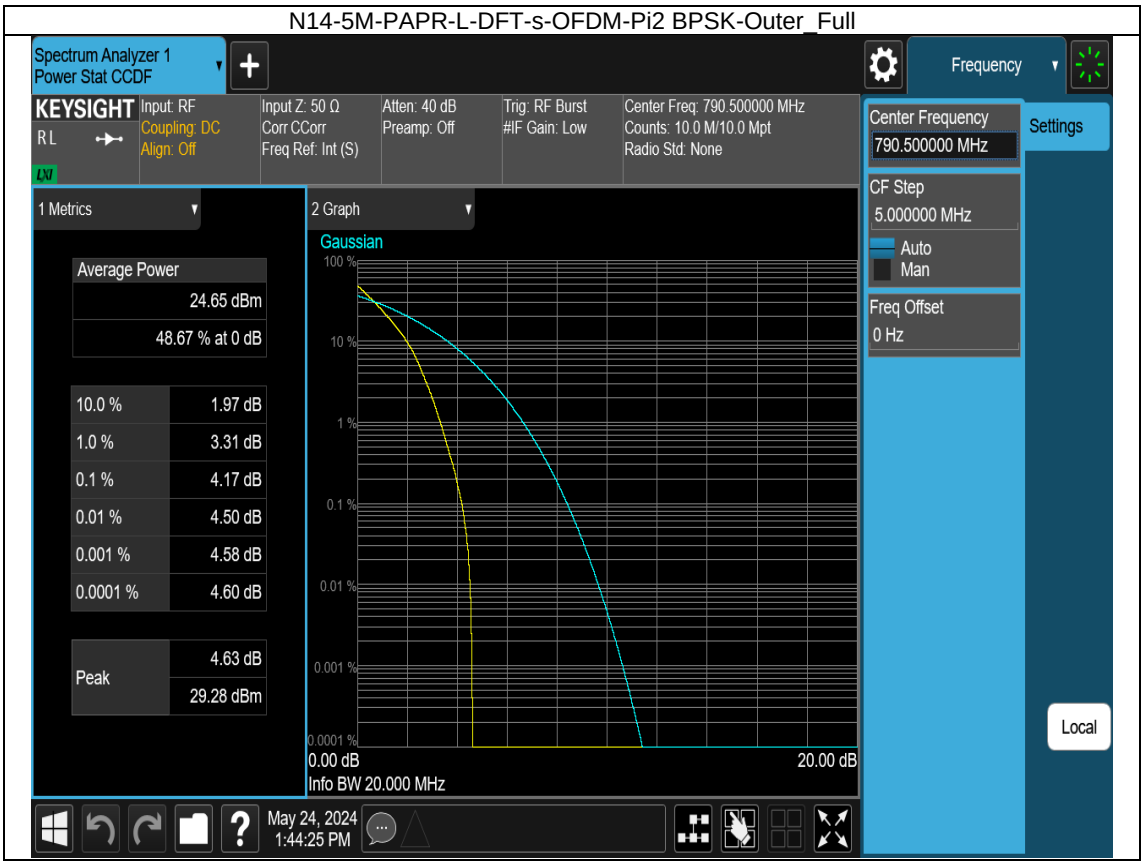
Test Result

5G NR n14 SCS=15kHz 5MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.17	<=13	Pass
DFT-s-OFDM QPSK		Outer_Full	4.16	<=13	Pass
DFT-s-OFDM 16QAM		Outer_Full	4.95	<=13	Pass
DFT-s-OFDM 64QAM		Outer_Full	6.23	<=13	Pass
DFT-s-OFDM 256QAM		Outer_Full	6.22	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.99	<=13	Pass
CP-OFDM 16QAM		Outer_Full	7.09	<=13	Pass
CP-OFDM 64QAM		Outer_Full	7.47	<=13	Pass
CP-OFDM 256QAM		Outer_Full	8.19	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.35	<=13	Pass
DFT-s-OFDM QPSK		Outer_Full	4.24	<=13	Pass
DFT-s-OFDM 16QAM		Outer_Full	5.74	<=13	Pass
DFT-s-OFDM 64QAM		Outer_Full	6.46	<=13	Pass
DFT-s-OFDM 256QAM		Outer_Full	6.71	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.09	<=13	Pass
CP-OFDM 16QAM		Outer_Full	7.08	<=13	Pass
CP-OFDM 64QAM		Outer_Full	7.54	<=13	Pass
CP-OFDM 256QAM		Outer_Full	8.61	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.32	<=13	Pass
DFT-s-OFDM QPSK		Outer_Full	4.30	<=13	Pass
DFT-s-OFDM 16QAM		Outer_Full	5.82	<=13	Pass
DFT-s-OFDM 64QAM		Outer_Full	6.54	<=13	Pass
DFT-s-OFDM 256QAM		Outer_Full	6.79	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.98	<=13	Pass
CP-OFDM 16QAM		Outer_Full	7.12	<=13	Pass
CP-OFDM 64QAM		Outer_Full	7.57	<=13	Pass
CP-OFDM 256QAM		Outer_Full	8.64	<=13	Pass

5G NR n14 SCS=15kHz 10MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	6.53	<=13	Pass
DFT-s-OFDM QPSK		Outer_Full	4.33	<=13	Pass
DFT-s-OFDM 16QAM		Outer_Full	7.65	<=13	Pass
DFT-s-OFDM 64QAM		Outer_Full	6.66	<=13	Pass
DFT-s-OFDM 256QAM		Outer_Full	5.79	<=13	Pass
CP-OFDM QPSK		Outer_Full	8.12	<=13	Pass
CP-OFDM 16QAM		Outer_Full	6.99	<=13	Pass
CP-OFDM 64QAM		Outer_Full	7.07	<=13	Pass
CP-OFDM 256QAM		Outer_Full	4.29	<=13	Pass

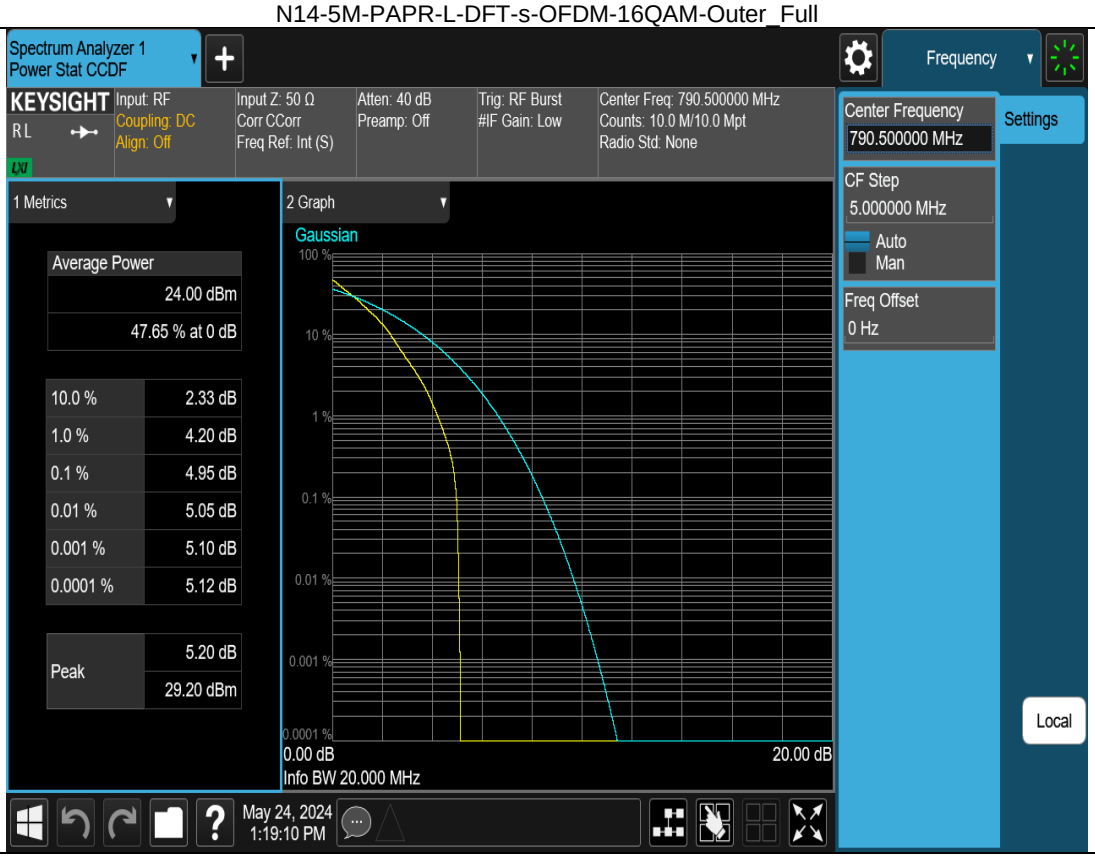
Test Graph

N14-5M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

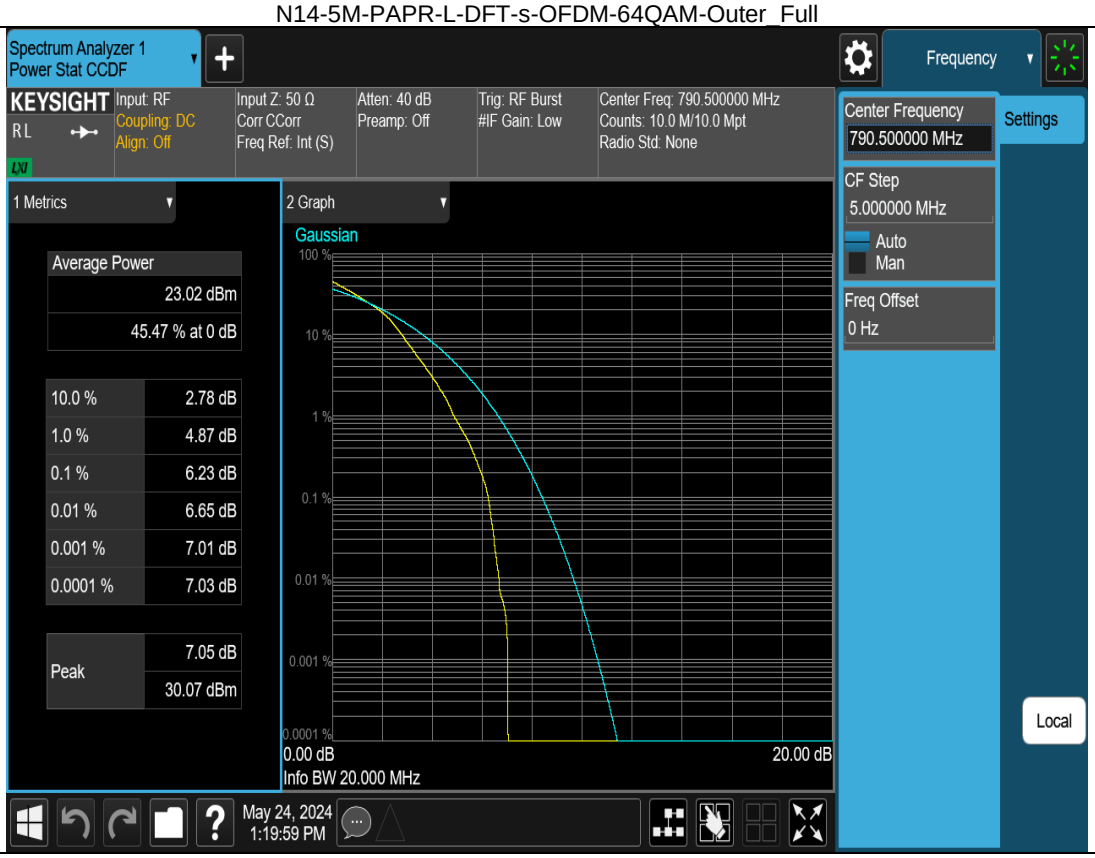


N14-5M-PAPR-L-DFT-s-OFDM-QPSK-Outer_Full

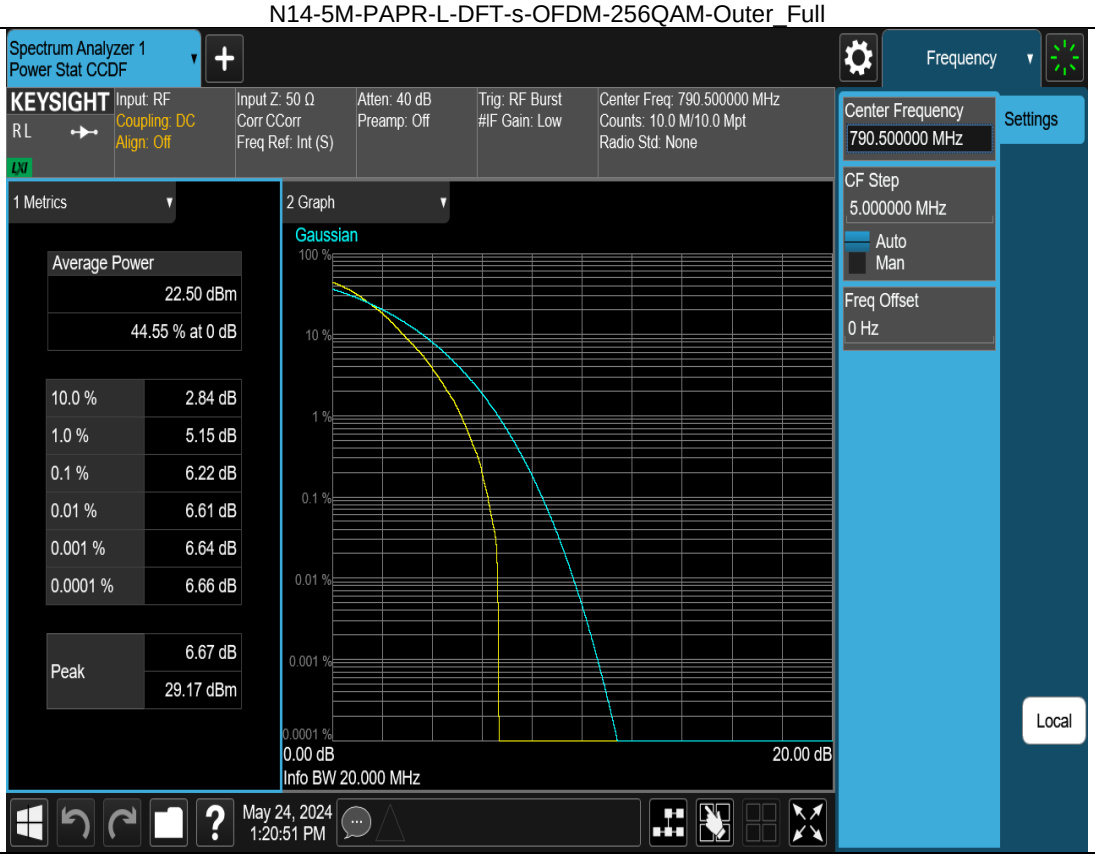
N14-5M-PAPR-L-DFT-s-OFDM-16QAM-Outer_Full



N14-5M-PAPR-L-DFT-s-OFDM-64QAM-Outer_Full



N14-5M-PAPR-L-DFT-s-OFDM-256QAM-Outer_Full



N14-5M-PAPR-L-CP-OFDM-QPSK-Outer_Full

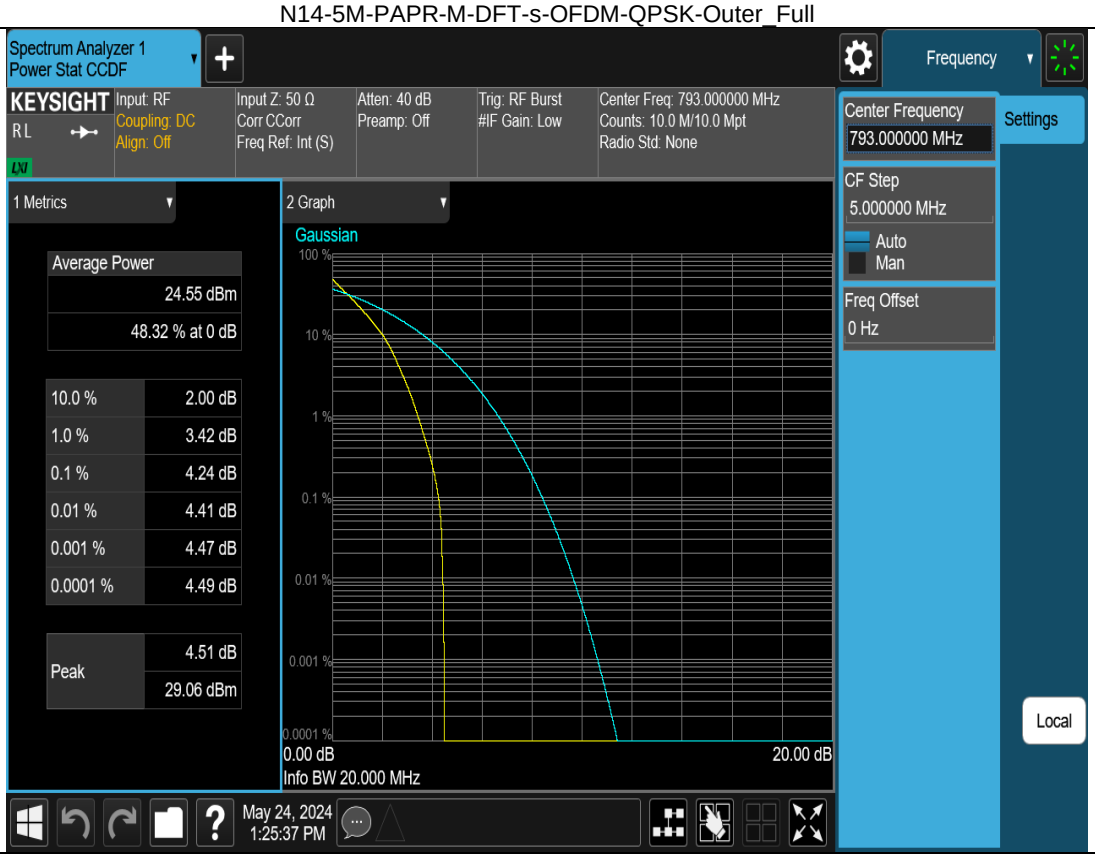
N14-5M-PAPR-L-CP-OFDM-16QAM-Outer_Full

N14-5M-PAPR-L-CP-OFDM-64QAM-Outer_Full

N14-5M-PAPR-L-CP-OFDM-256QAM-Outer_Full

N14-5M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N14-5M-PAPR-M-DFT-s-OFDM-QPSK-Outer_Full



N14-5M-PAPR-M-DFT-s-OFDM-16QAM-Outer_Full

N14-5M-PAPR-M-DFT-s-OFDM-64QAM-Outer_Full

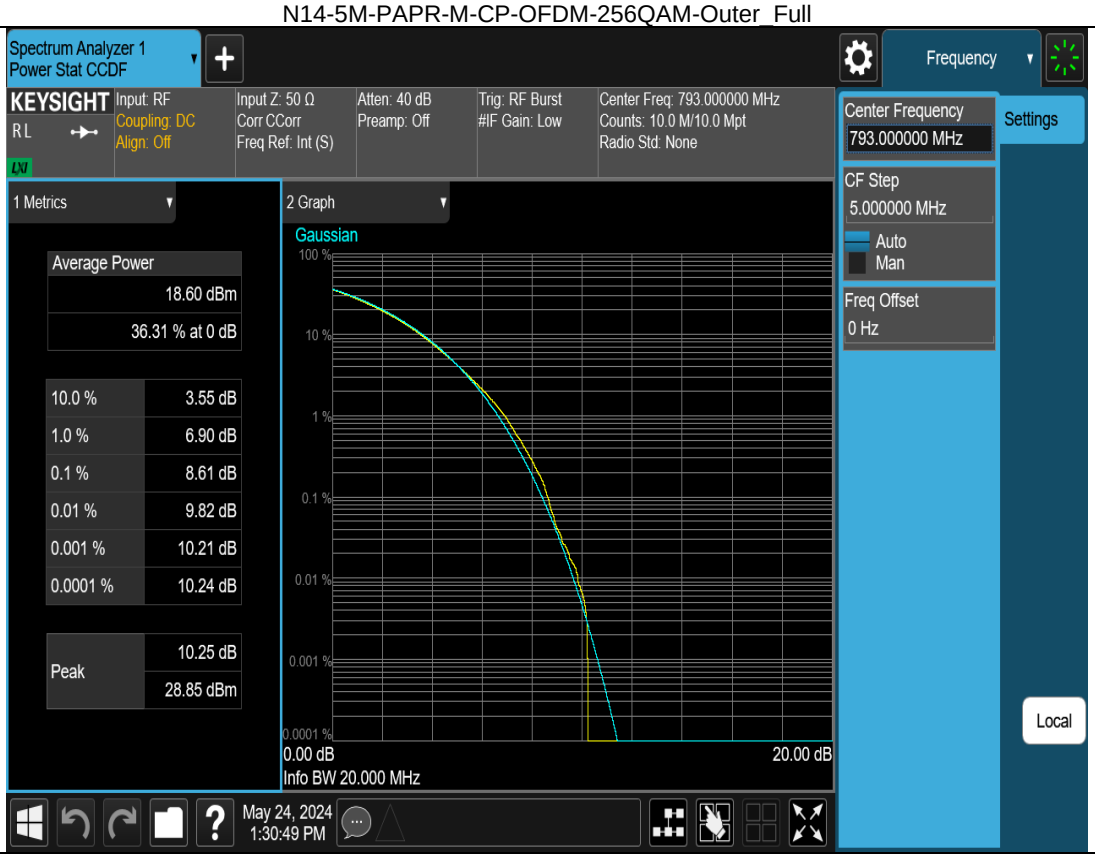
N14-5M-PAPR-M-DFT-s-OFDM-256QAM-Outer_Full

N14-5M-PAPR-M-CP-OFDM-QPSK-Outer_Full

N14-5M-PAPR-M-CP-OFDM-16QAM-Outer_Full

N14-5M-PAPR-M-CP-OFDM-64QAM-Outer_Full

N14-5M-PAPR-M-CP-OFDM-256QAM-Outer_Full



N14-5M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

N14-5M-PAPR-H-DFT-s-OFDM-QPSK-Outer_Full

N14-5M-PAPR-H-DFT-s-OFDM-16QAM-Outer_Full

N14-5M-PAPR-H-DFT-s-OFDM-64QAM-Outer_Full

N14-5M-PAPR-H-DFT-s-OFDM-256QAM-Outer_Full

N14-5M-PAPR-H-CP-OFDM-QPSK-Outer_Full

N14-5M-PAPR-H-CP-OFDM-16QAM-Outer_Full

N14-5M-PAPR-H-CP-OFDM-64QAM-Outer_Full

N14-5M-PAPR-H-CP-OFDM-256QAM-Outer_Full

N14-10M-PAPR-M-DFT-s-OFDM-64QAM-Outer_Full

N14-10M-PAPR-M-DFT-s-OFDM-QPSK-Outer_Full