

99% & 26dB Bandwidth

Test Result

5G NR N7 SCS=15kHz 5MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.5	5.13	/	Pass
CP-OFDM QPSK		Outer_Full	4.51	5.34	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	4.5	5.1	/	Pass
CP-OFDM QPSK		Outer_Full	4.5	5.31	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.5	5.12	/	Pass
CP-OFDM QPSK		Outer_Full	4.5	5.24	/	Pass

5G NR N7 SCS=15kHz 10MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	8.94	9.73	/	Pass
CP-OFDM QPSK		Outer_Full	9.3	10.18	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	8.94	9.59	/	Pass
CP-OFDM QPSK		Outer_Full	9.31	10.14	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	8.95	9.69	/	Pass
CP-OFDM QPSK		Outer_Full	9.3	10.18	/	Pass

5G NR N7 SCS=15kHz 15MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	13.46	14.56	/	Pass
CP-OFDM QPSK		Outer_Full	14.17	15.15	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	13.46	14.47	/	Pass
CP-OFDM QPSK		Outer_Full	14.19	15.26	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	13.47	14.5	/	Pass
CP-OFDM QPSK		Outer_Full	14.21	15.26	/	Pass

5G NR N7 SCS=15kHz 20MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	17.87	19.09	/	Pass
CP-OFDM QPSK		Outer_Full	18.95	20.07	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	17.89	19.1	/	Pass
CP-OFDM QPSK		Outer_Full	18.99	20.11	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	17.9	19.07	/	Pass
CP-OFDM QPSK		Outer_Full	18.96	20.1	/	Pass

Test Graph



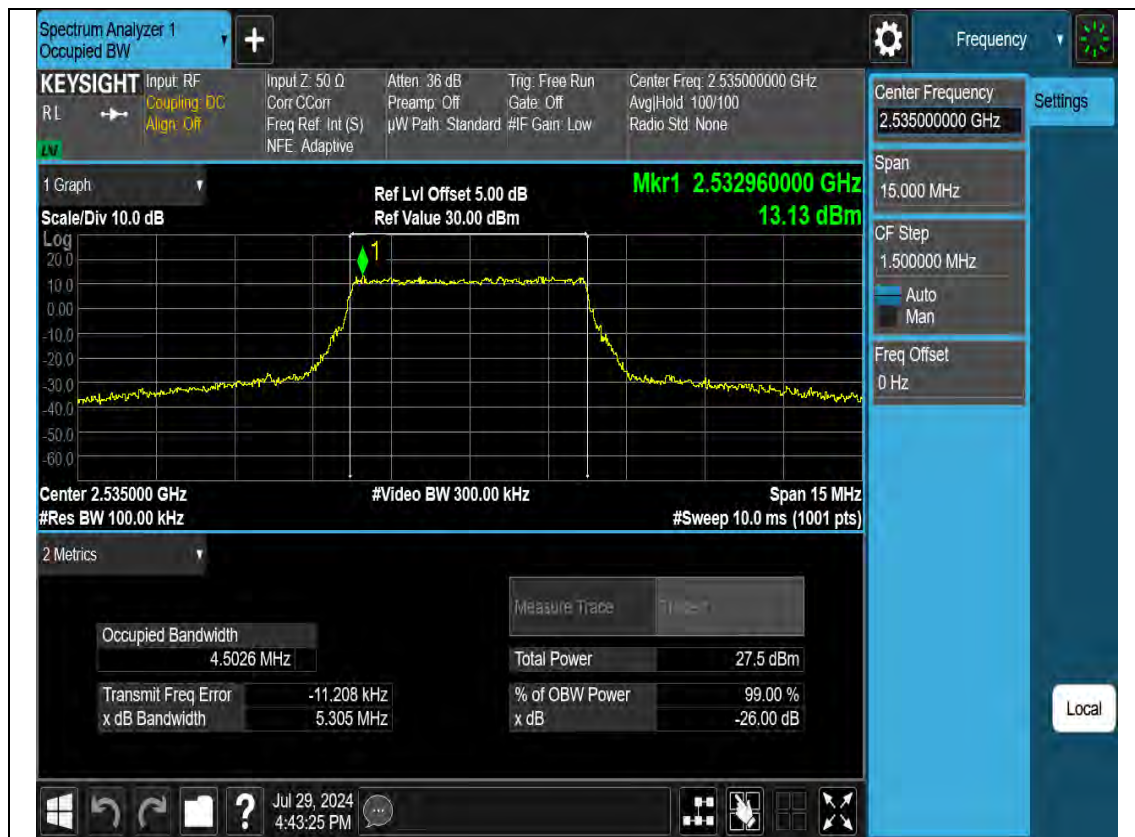
N7-5M-OBW-L-CP-OFDM-QPSK



N7-5M-OBW-M-DFT-s-OFDM-Pi2 BPSK



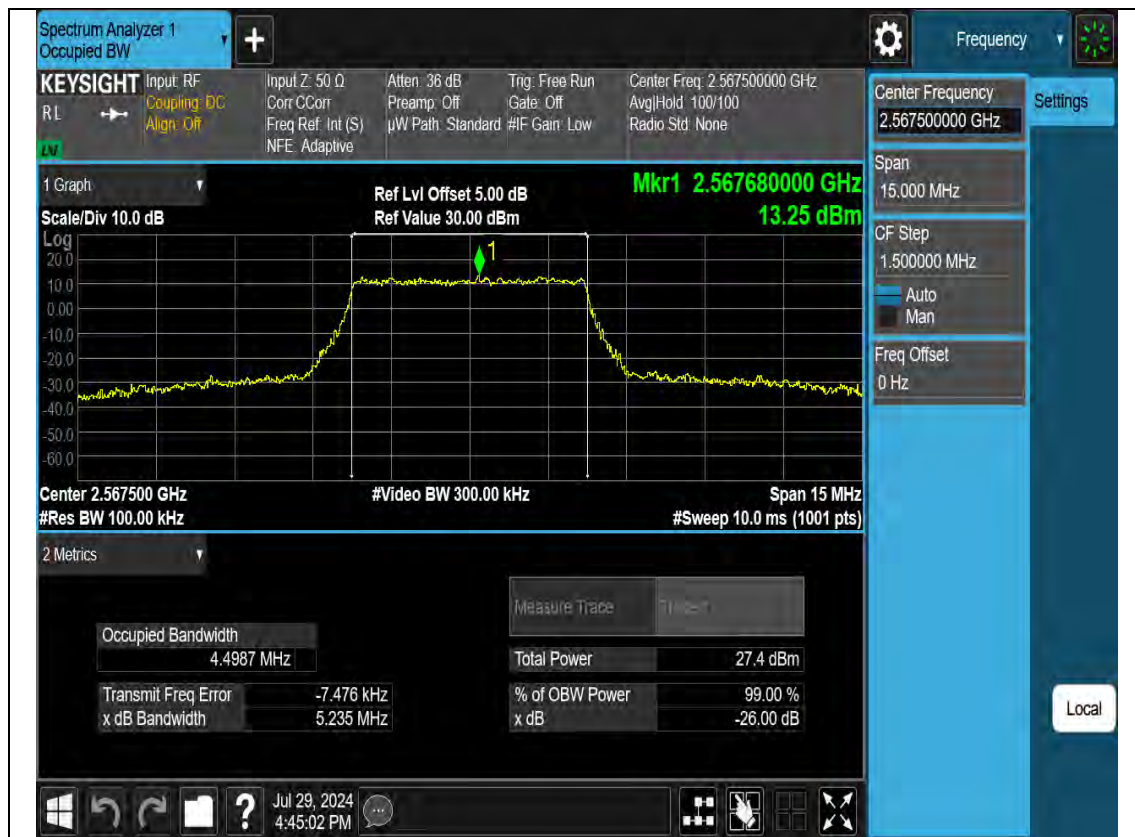
N7-5M-OBW-M-CP-OFDM-QPSK



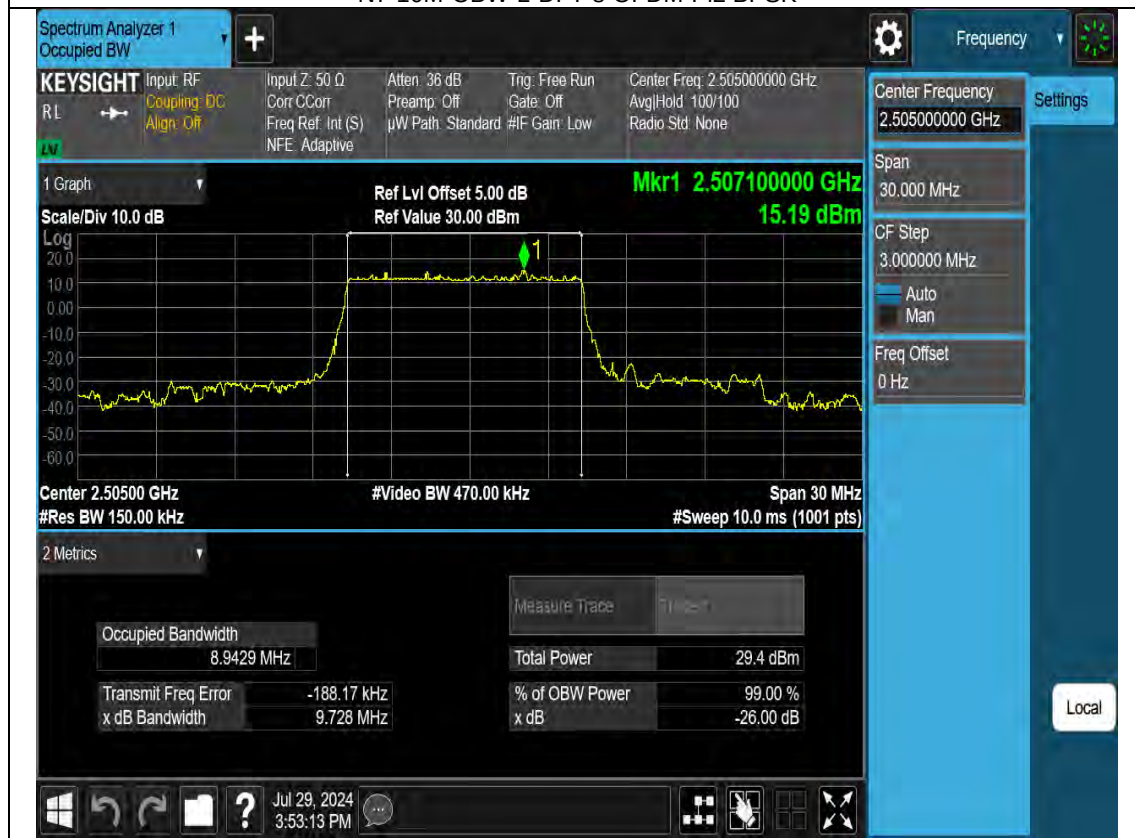
N7-5M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N7-5M-OBW-H-CP-OFDM-QPSK



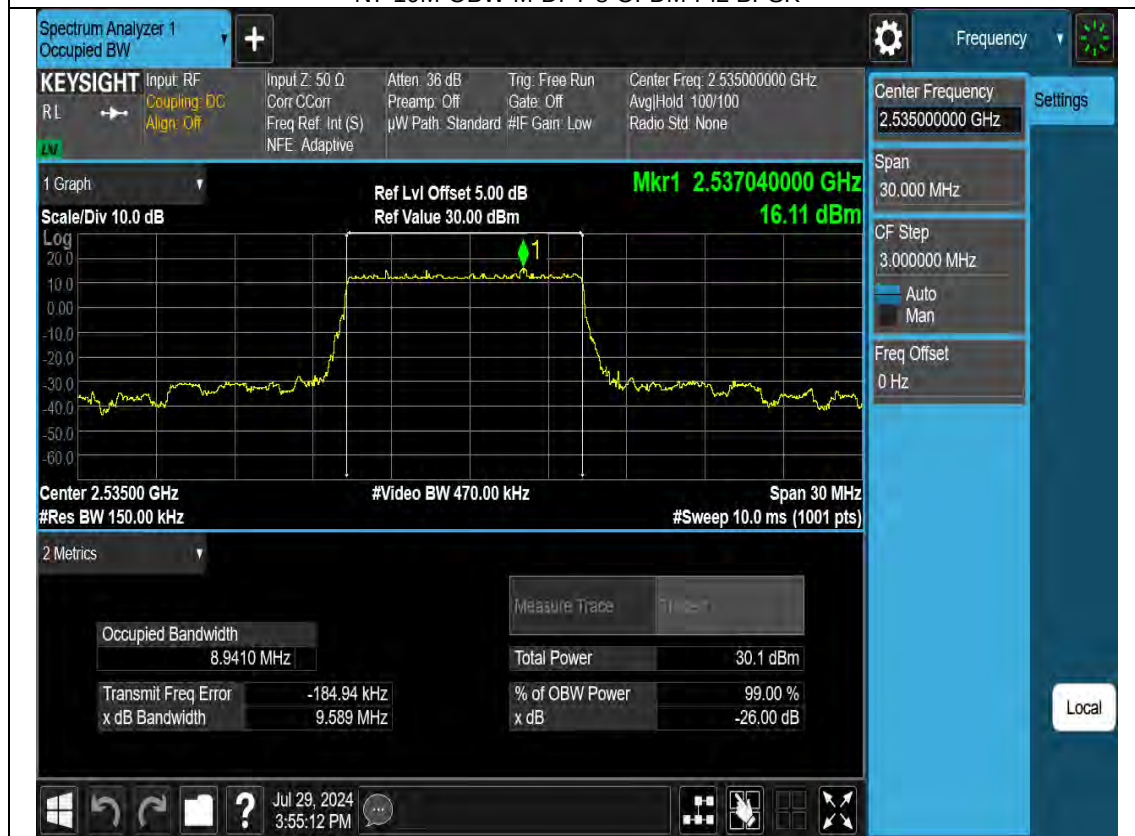
N7-10M-OBW-L-DFT-s-OFDM-Pi2 BPSK



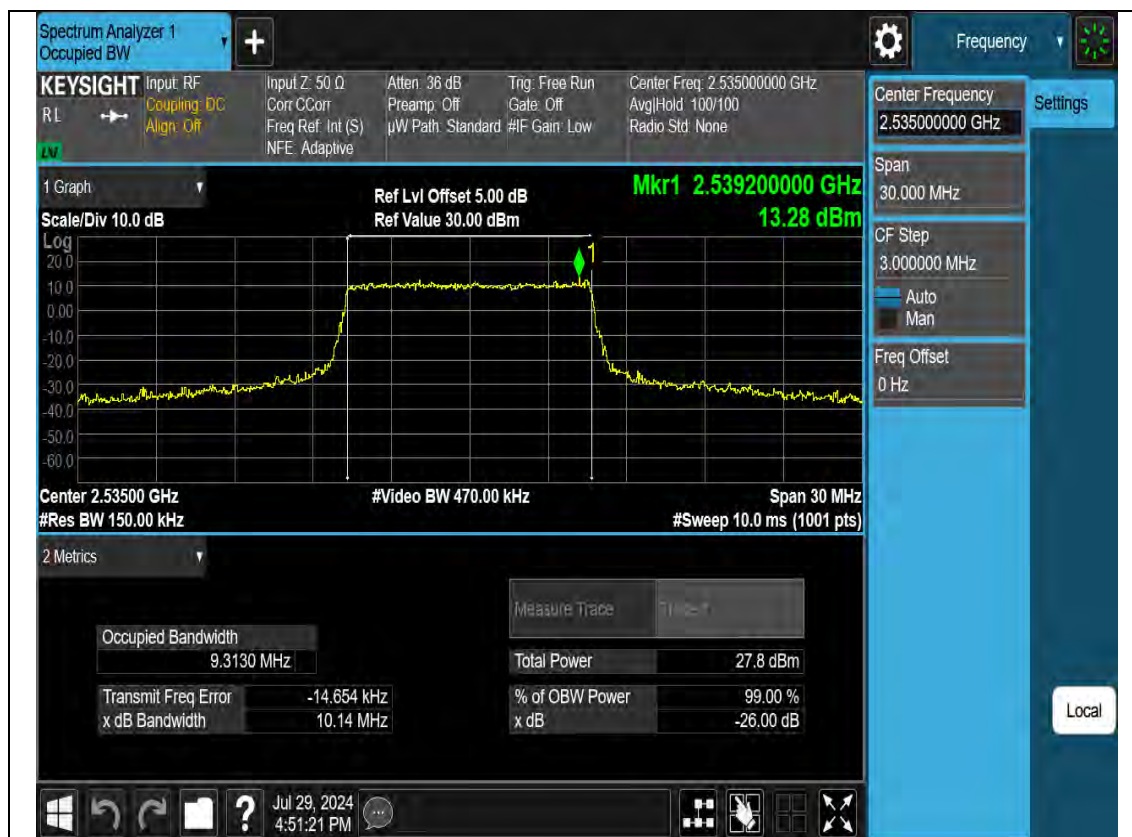
N7-10M-OBW-L-CP-OFDM-QPSK



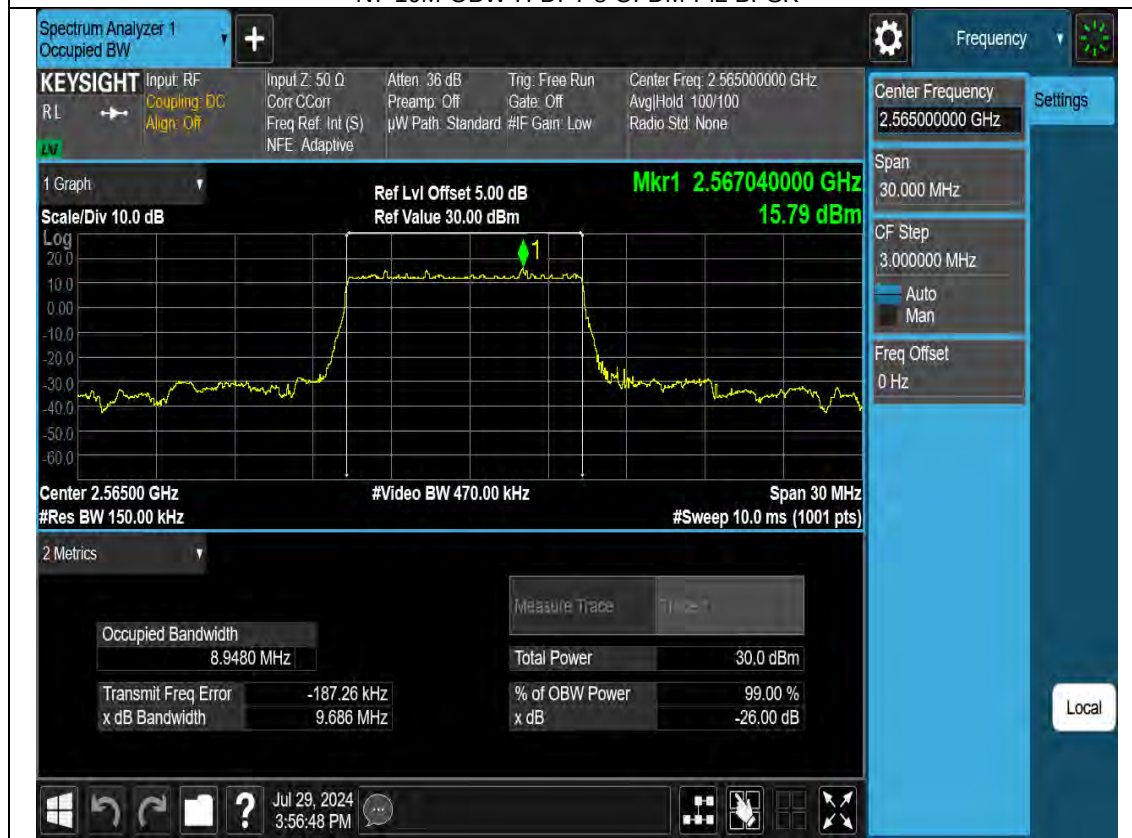
N7-10M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N7-10M-OBW-M-CP-OFDM-QPSK



N7-10M-OBW-H-DFT-s-OFDM-Pi2 BPSK



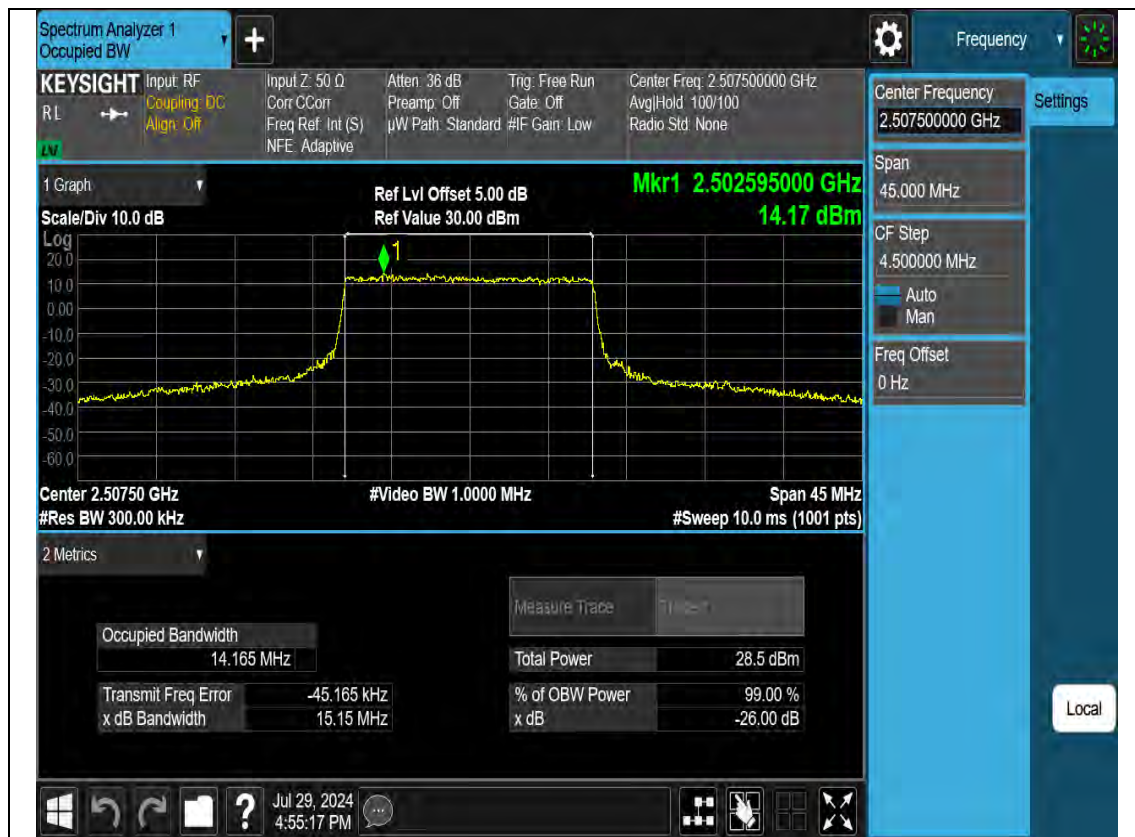
N7-10M-OBW-H-CP-OFDM-QPSK



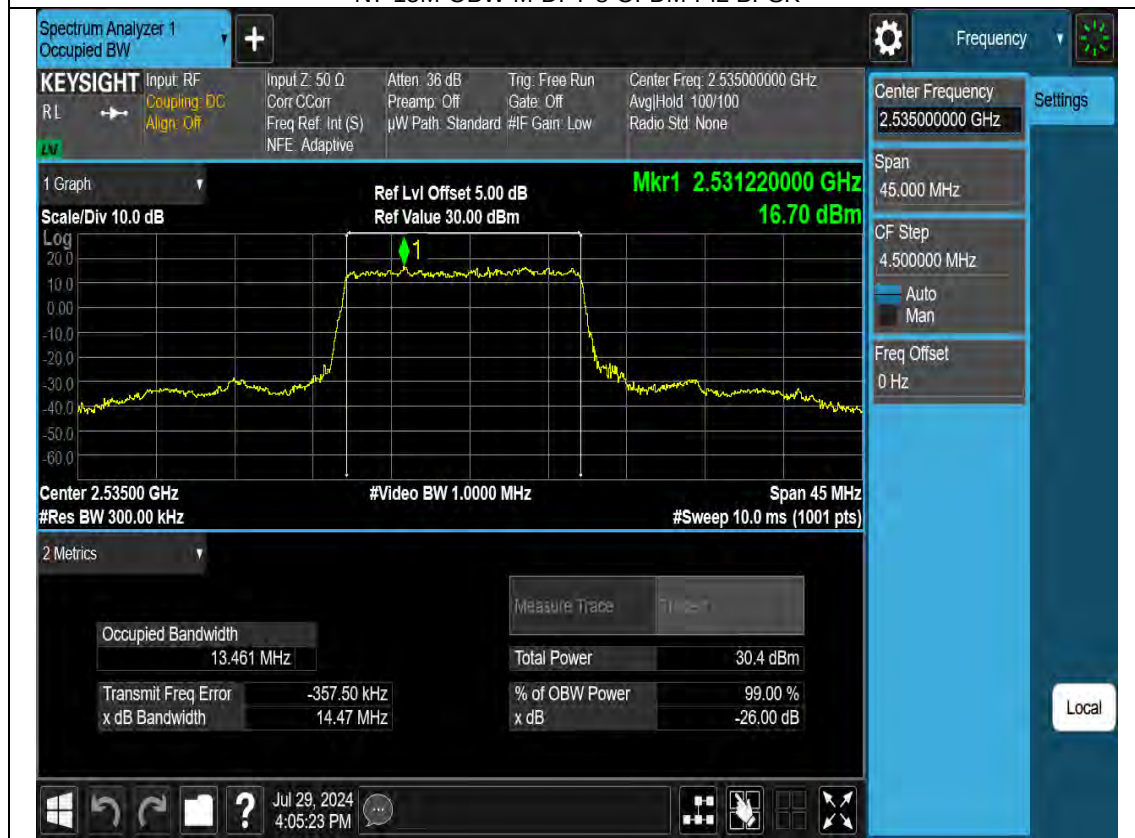
N7-15M-OBW-L-DFT-s-OFDM-Pi2 BPSK



N7-15M-OBW-L-CP-OFDM-QPSK



N7-15M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N7-15M-OBW-M-CP-OFDM-QPSK



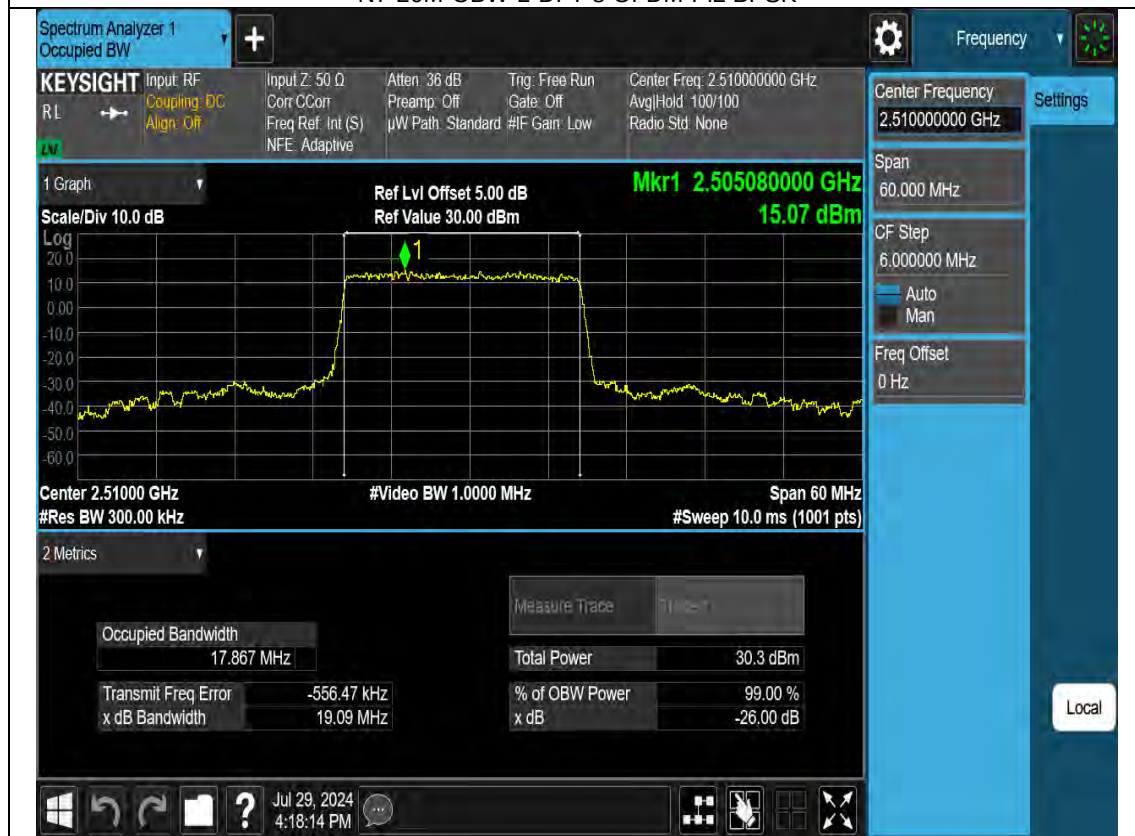
N7-15M-OBW-H-DFT-s-OFDM-Pi2 BPSK



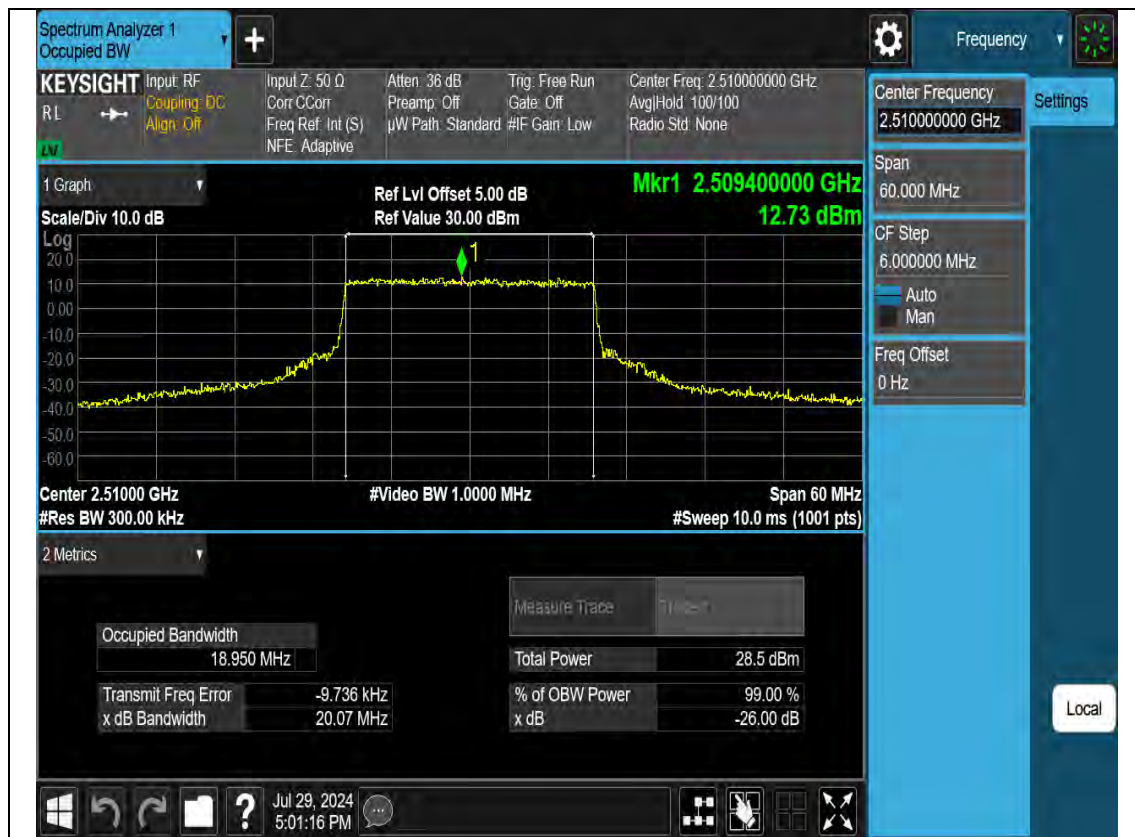
N7-15M-OBW-H-CP-OFDM-QPSK



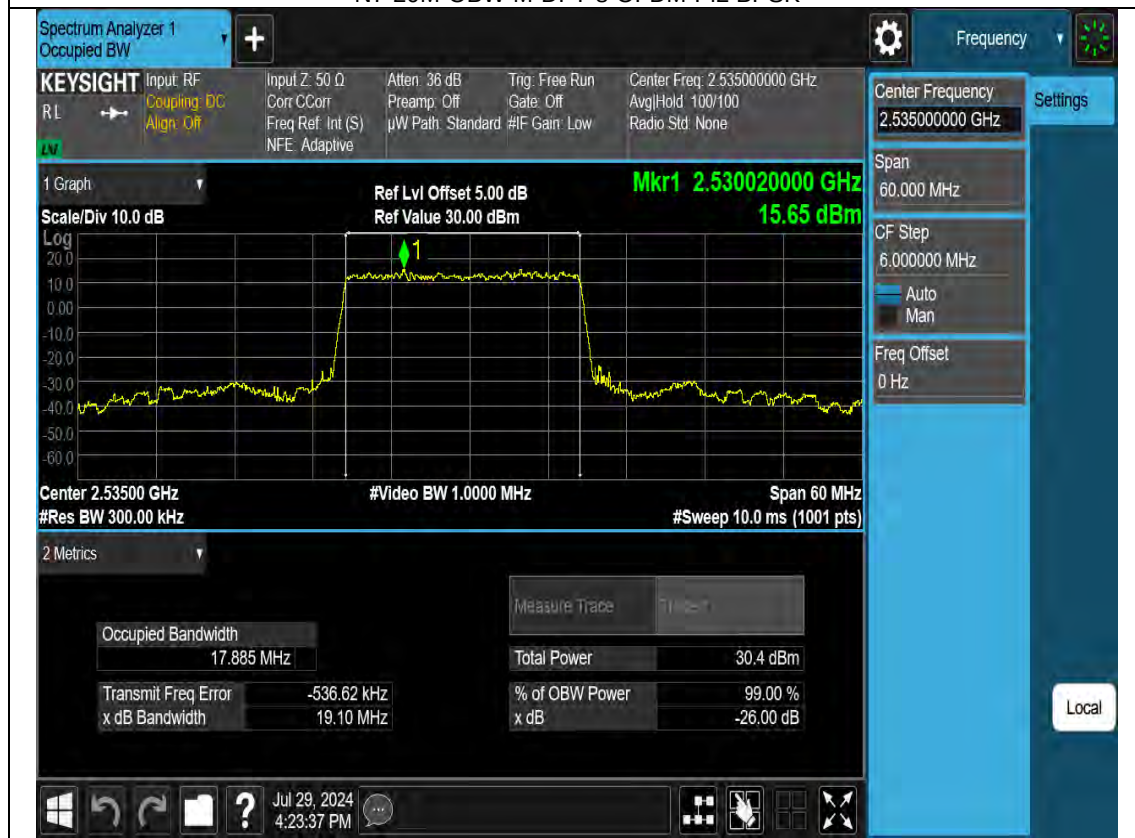
N7-20M-OBW-L-DFT-s-OFDM-Pi2 BPSK



N7-20M-OBW-L-CP-OFDM-QPSK



N7-20M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N7-20M-OBW-M-CP-OFDM-QPSK



N7-20M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N7-20M-OBW-H-CP-OFDM-QPSK



Peak-Average Ratio

Test Result

5G NR N7 SCS=15kHz 5MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.29	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.52	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.31	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.6	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.19	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.02	<=13	Pass

5G NR N7 SCS=15kHz 10MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.41	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.09	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.47	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.08	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.33	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.49	<=13	Pass

5G NR N7 SCS=15kHz 15MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.2	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.01	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.12	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.98	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.36	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.54	<=13	Pass

5G NR N7 SCS=15kHz 20MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.45	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.95	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.41	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.93	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.46	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.95	<=13	Pass

Test graph



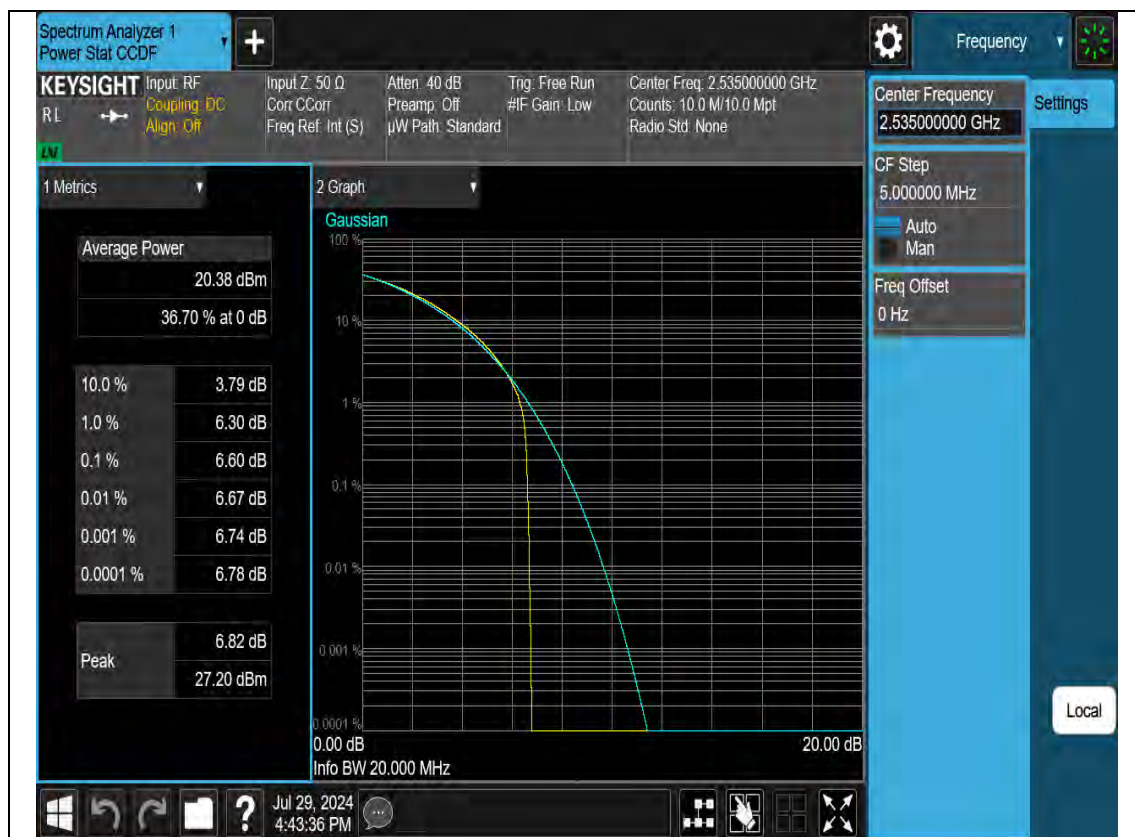
N7-5M-PAPR-L-CP-OFDM-QPSK-Outer_Full



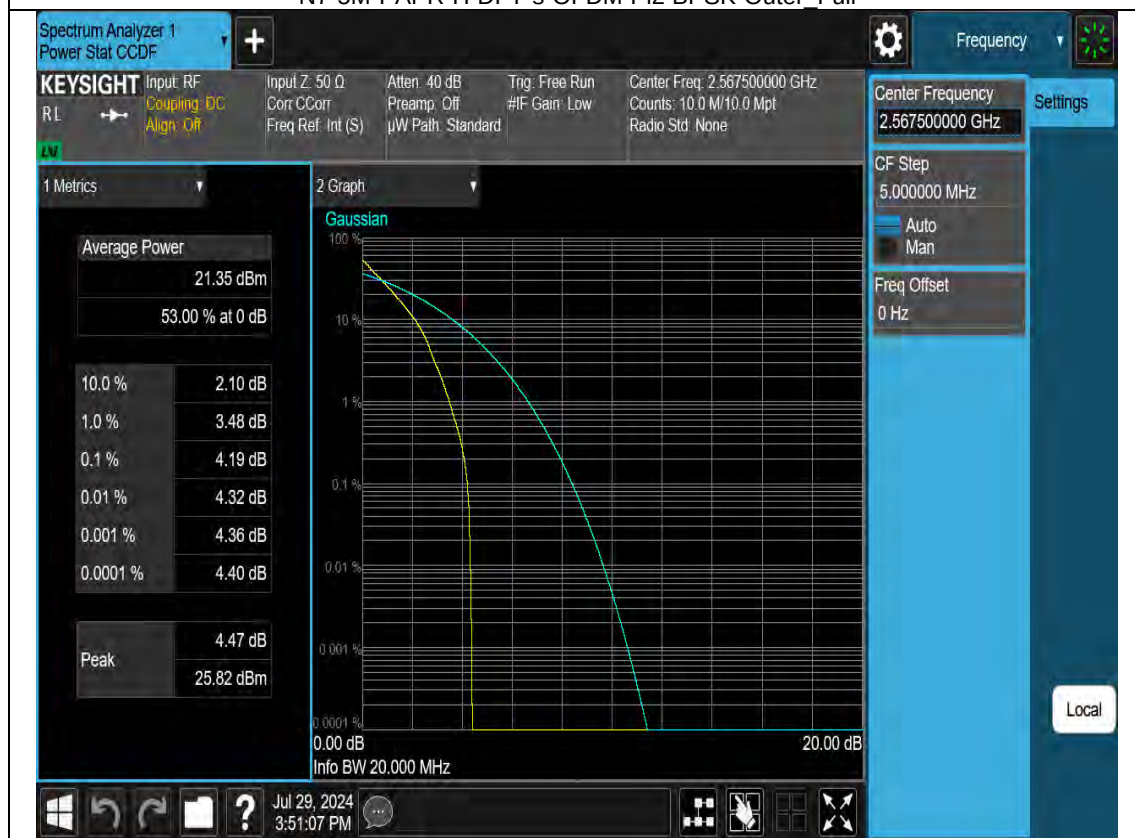
N7-5M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full



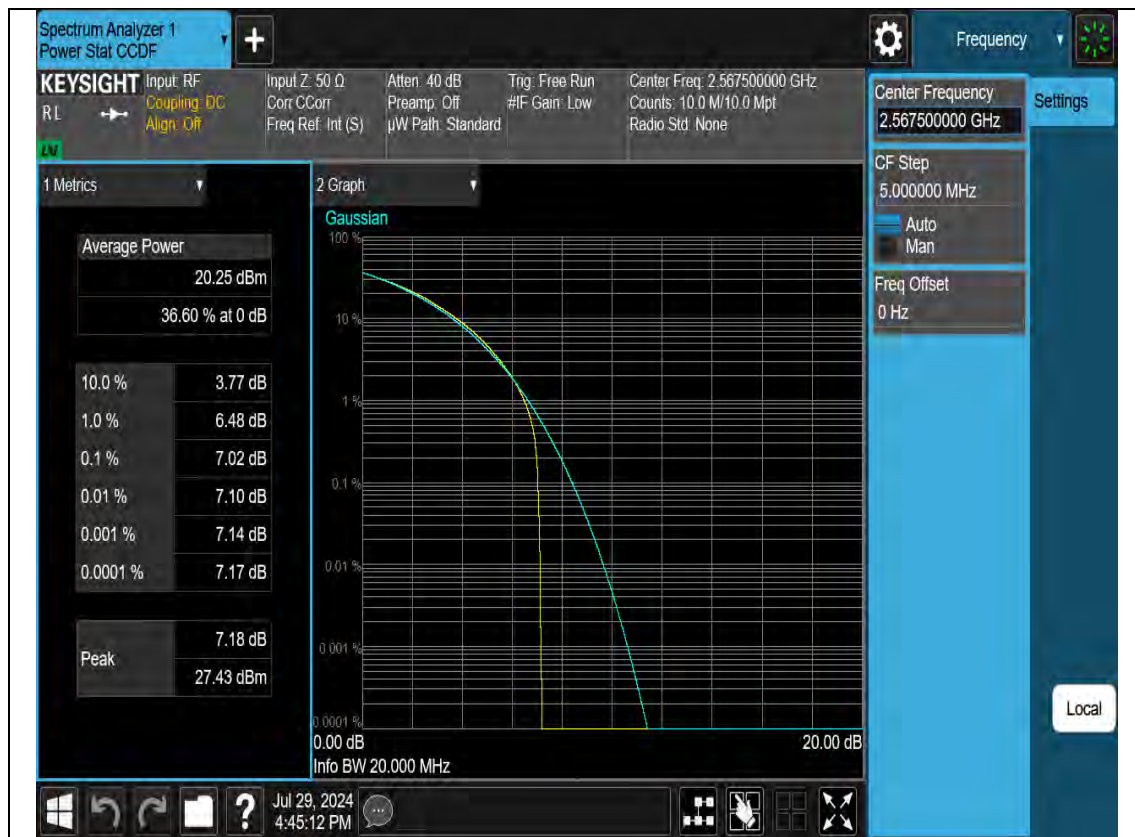
N7-5M-PAPR-M-CP-OFDM-QPSK-Outer_Full



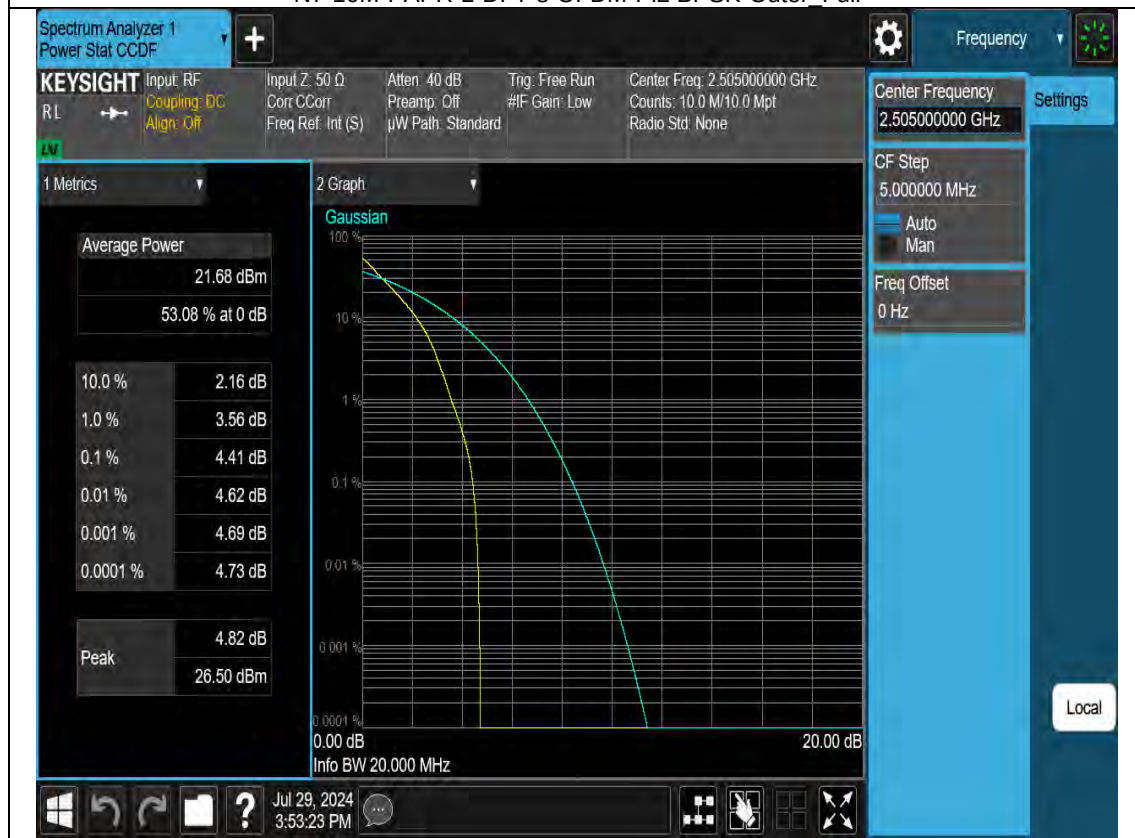
N7-5M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



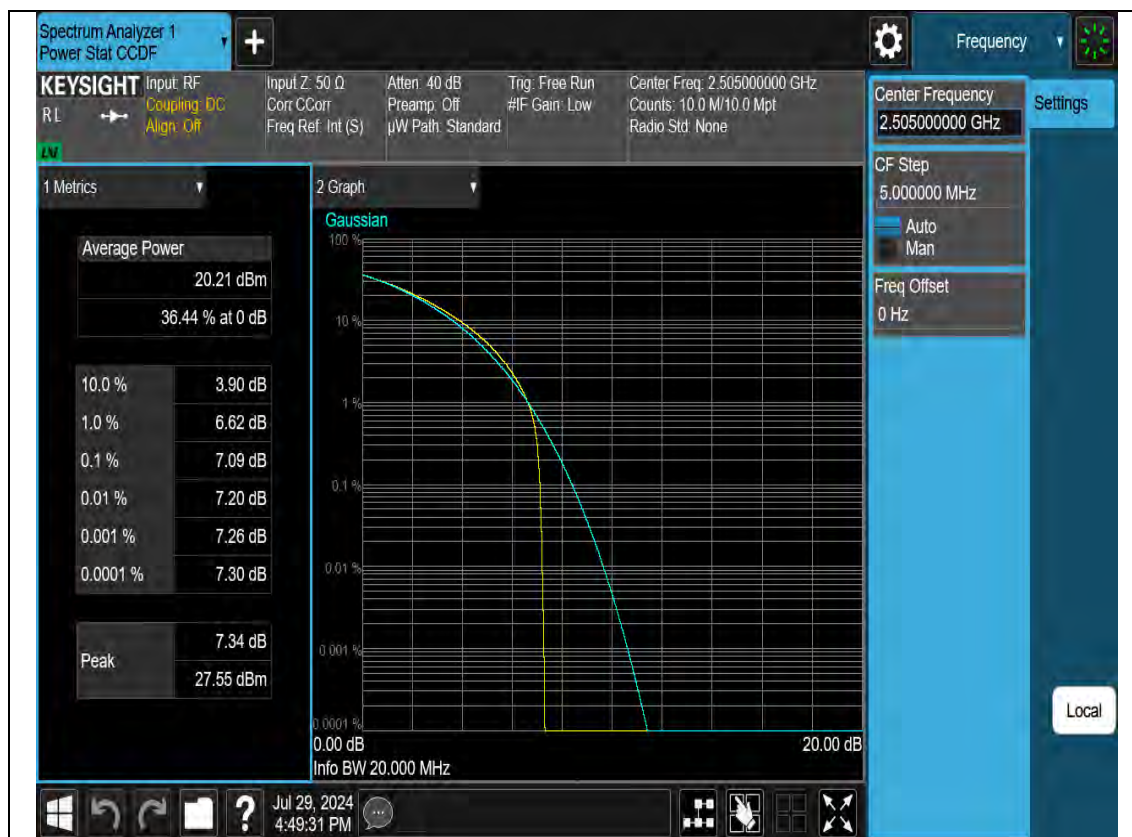
N7-5M-PAPR-H-CP-OFDM-QPSK-Outer Full



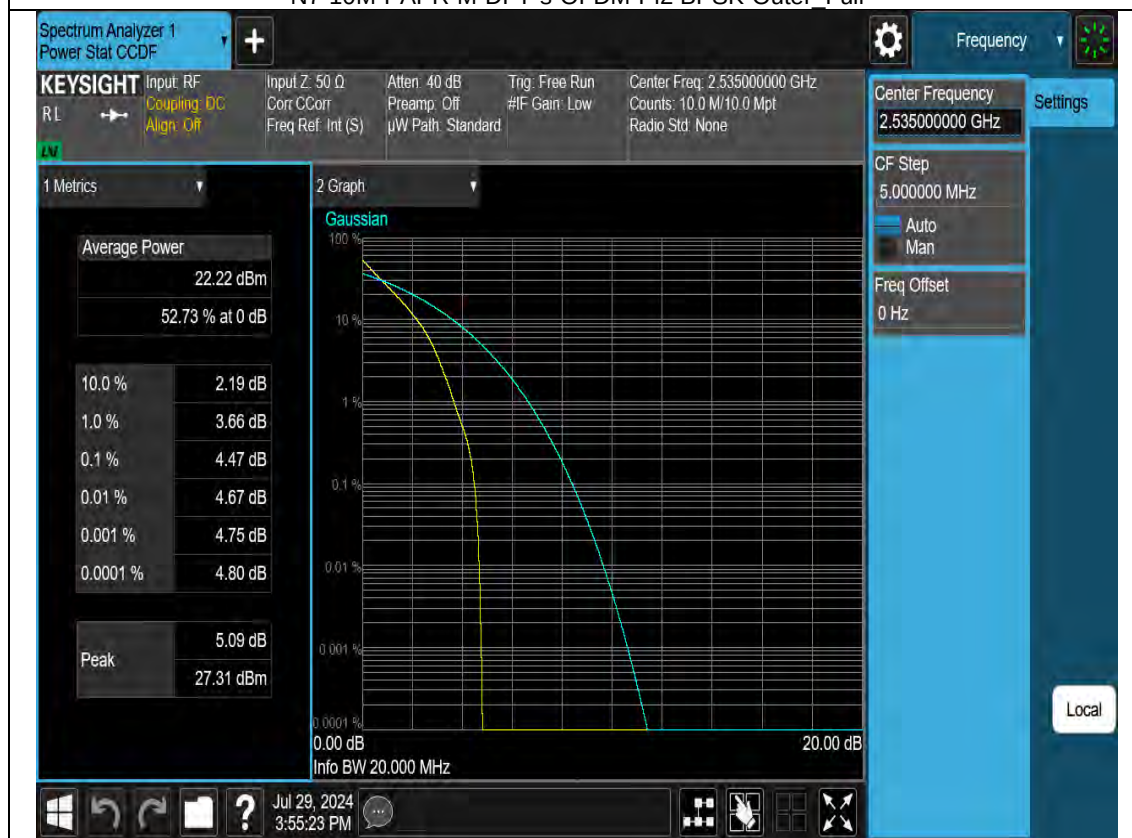
N7-10M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outter Full



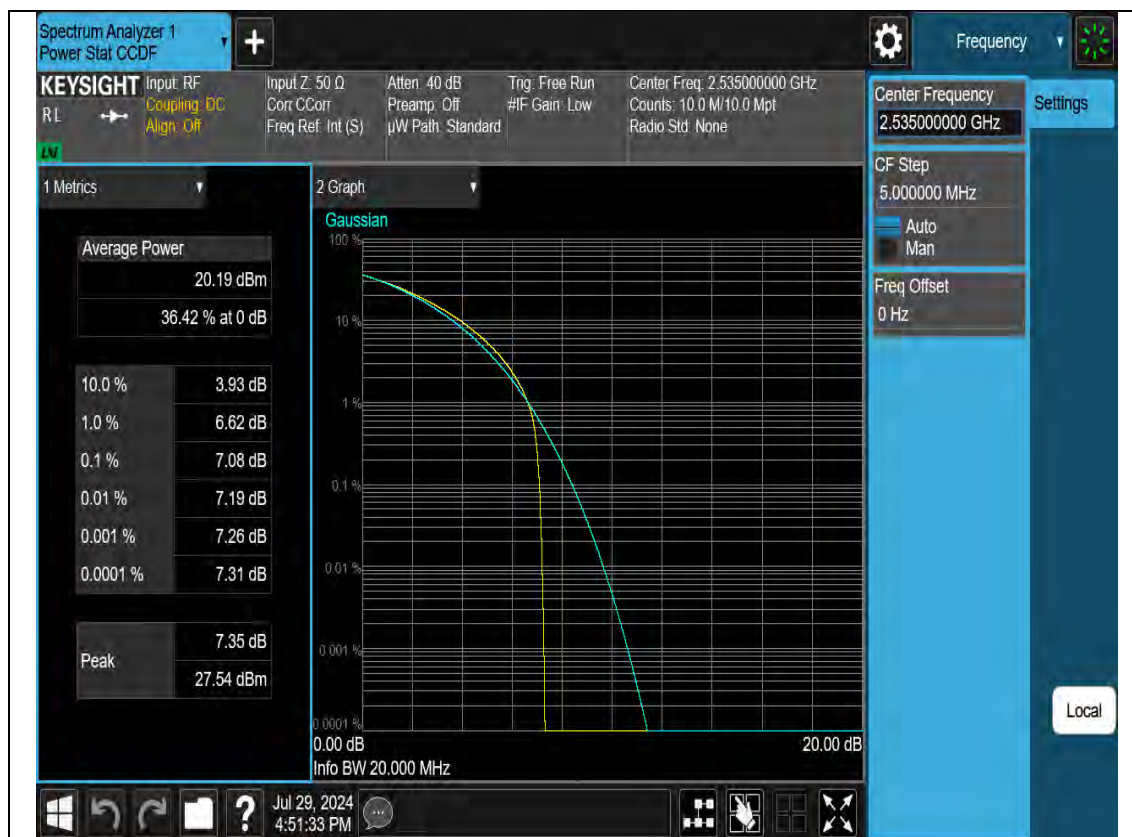
N7-10M-PAPR-L-CP-OFDM-QPSK-Outter Full



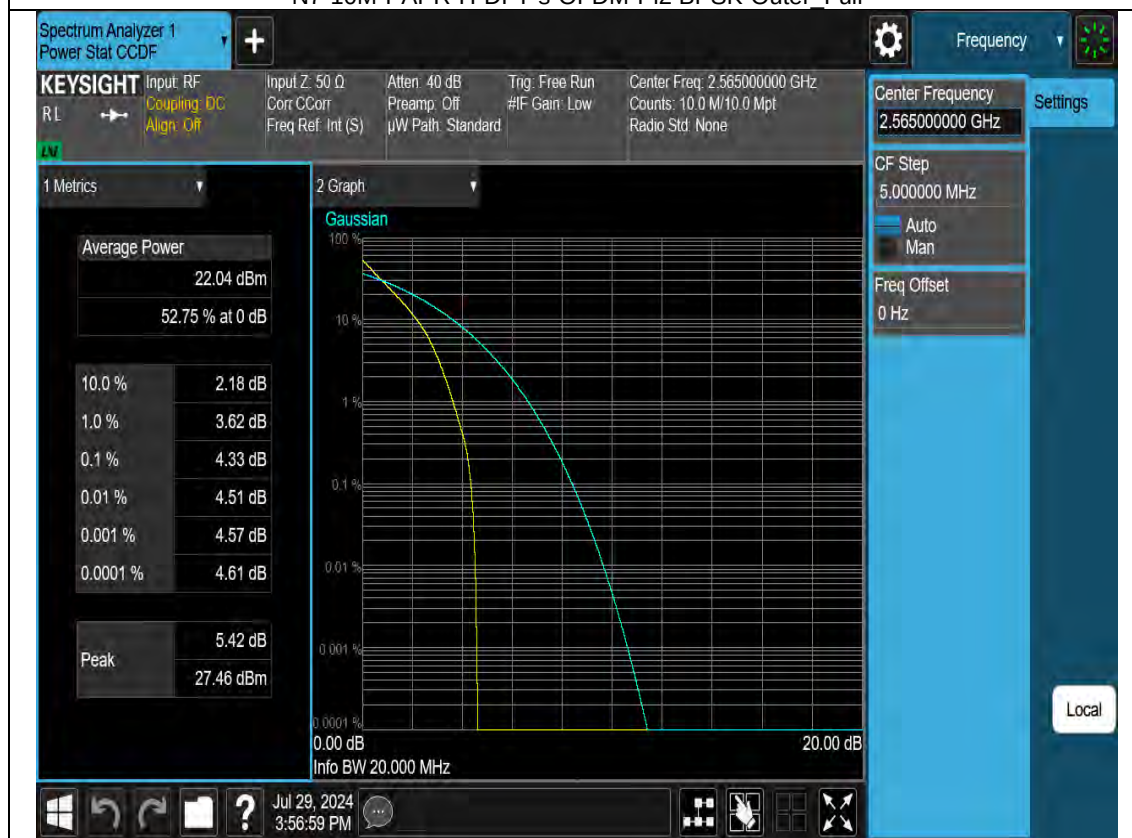
N7-10M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



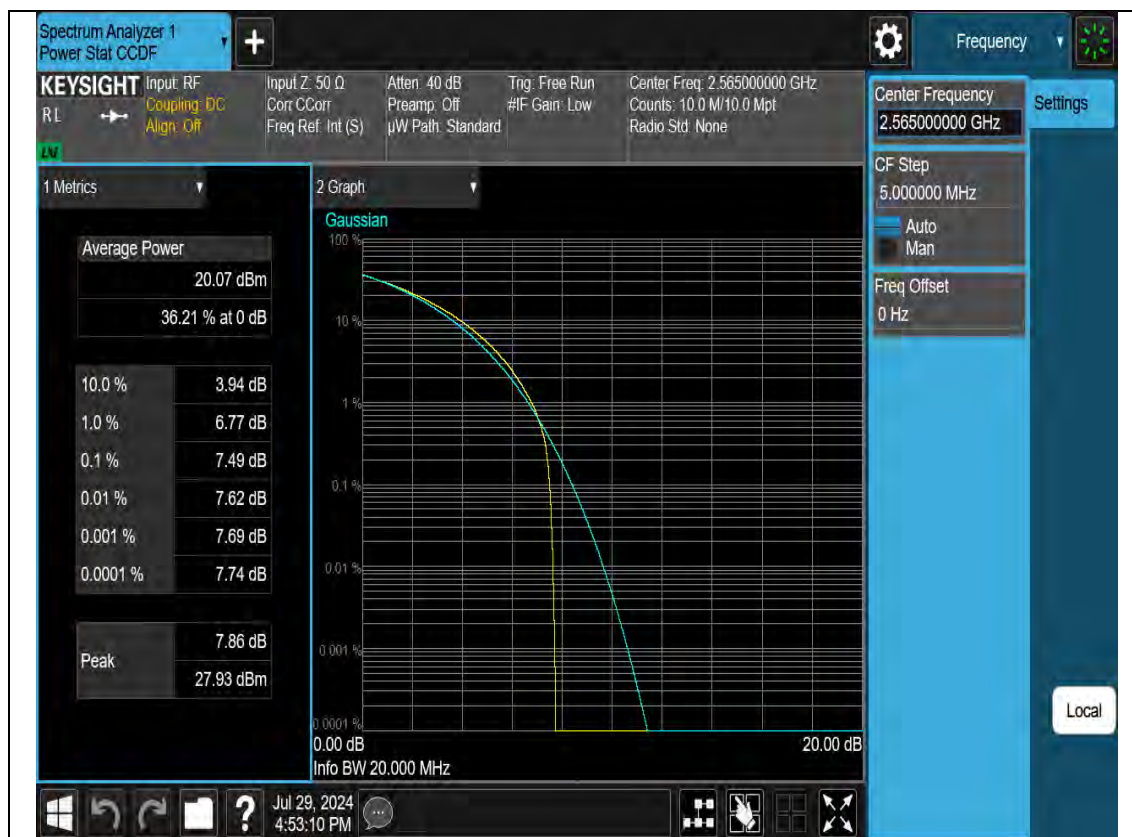
N7-10M-PAPR-M-CP-OFDM-QPSK-Outer Full



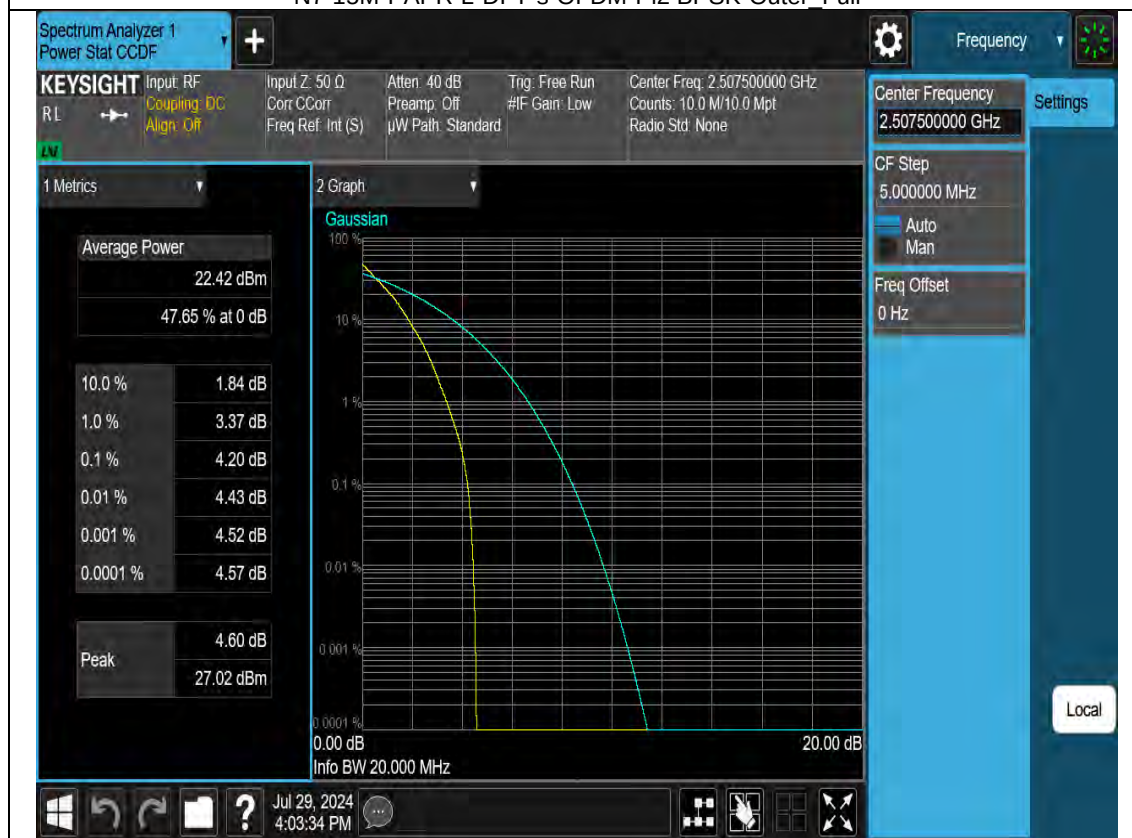
N7-10M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



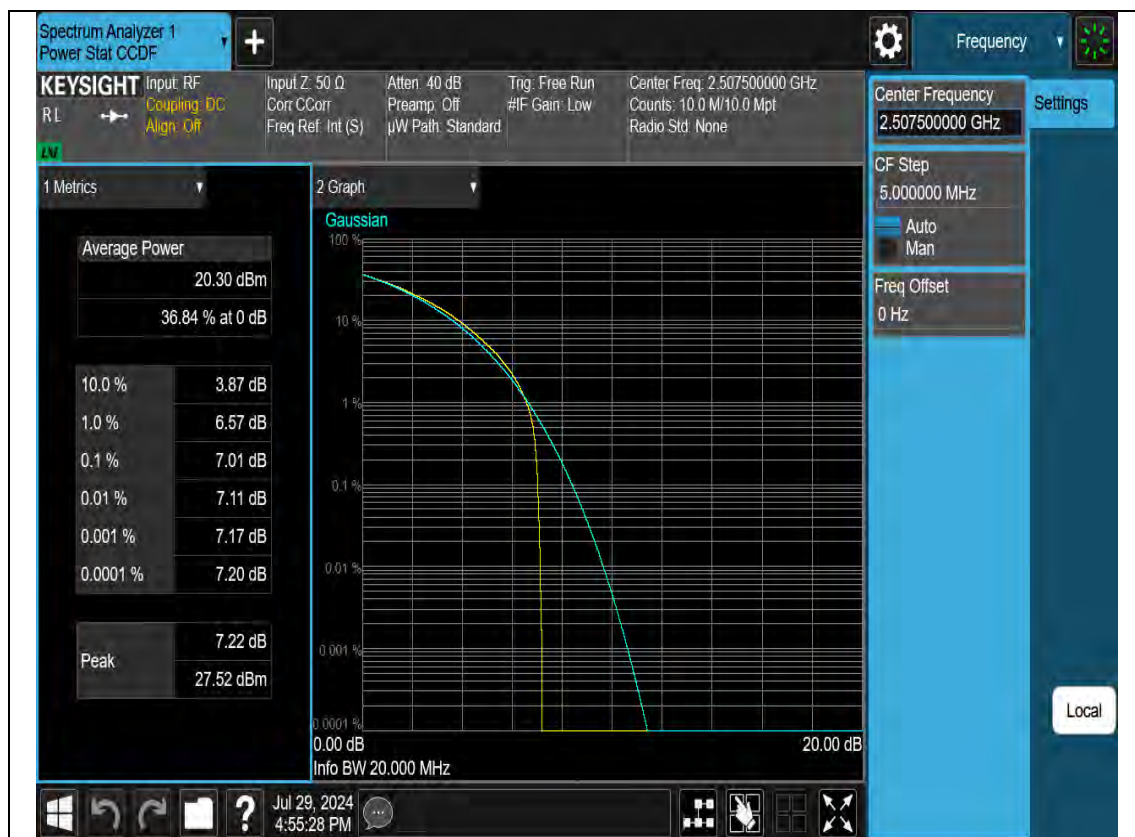
N7-10M-PAPR-H-CP-OFDM-QPSK-Outer Full



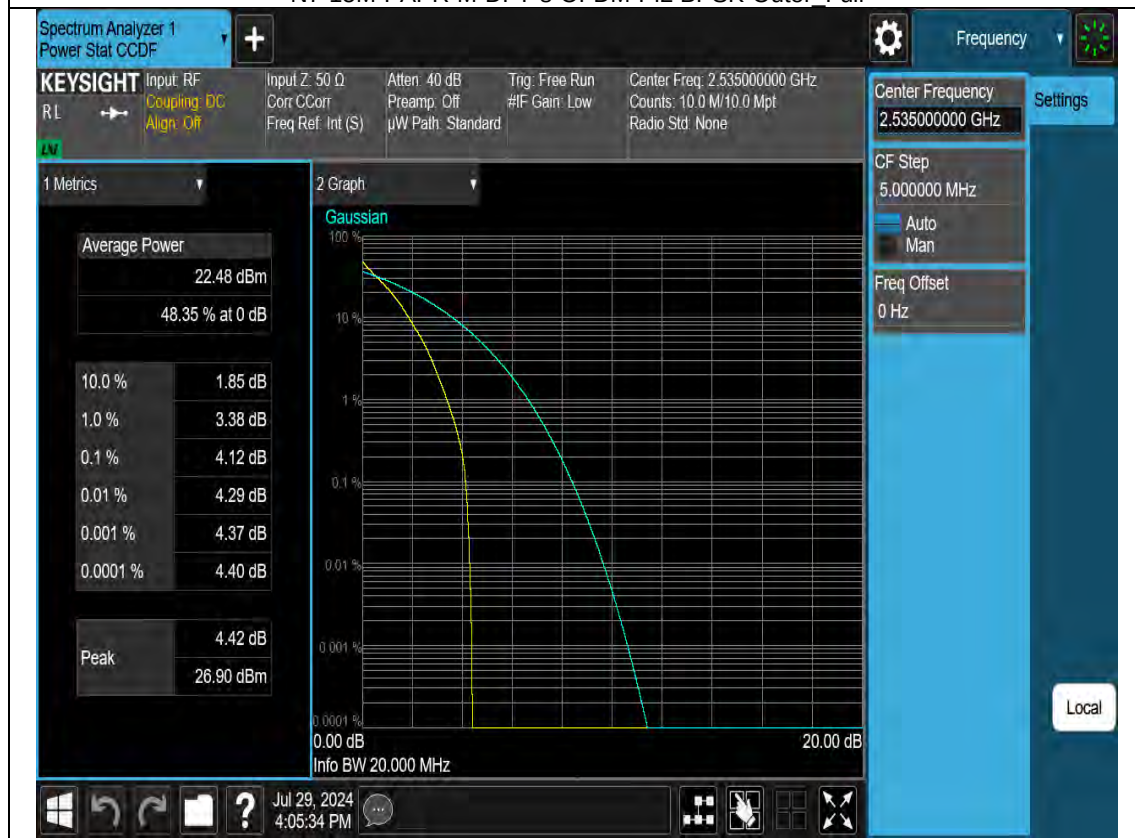
N7-15M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



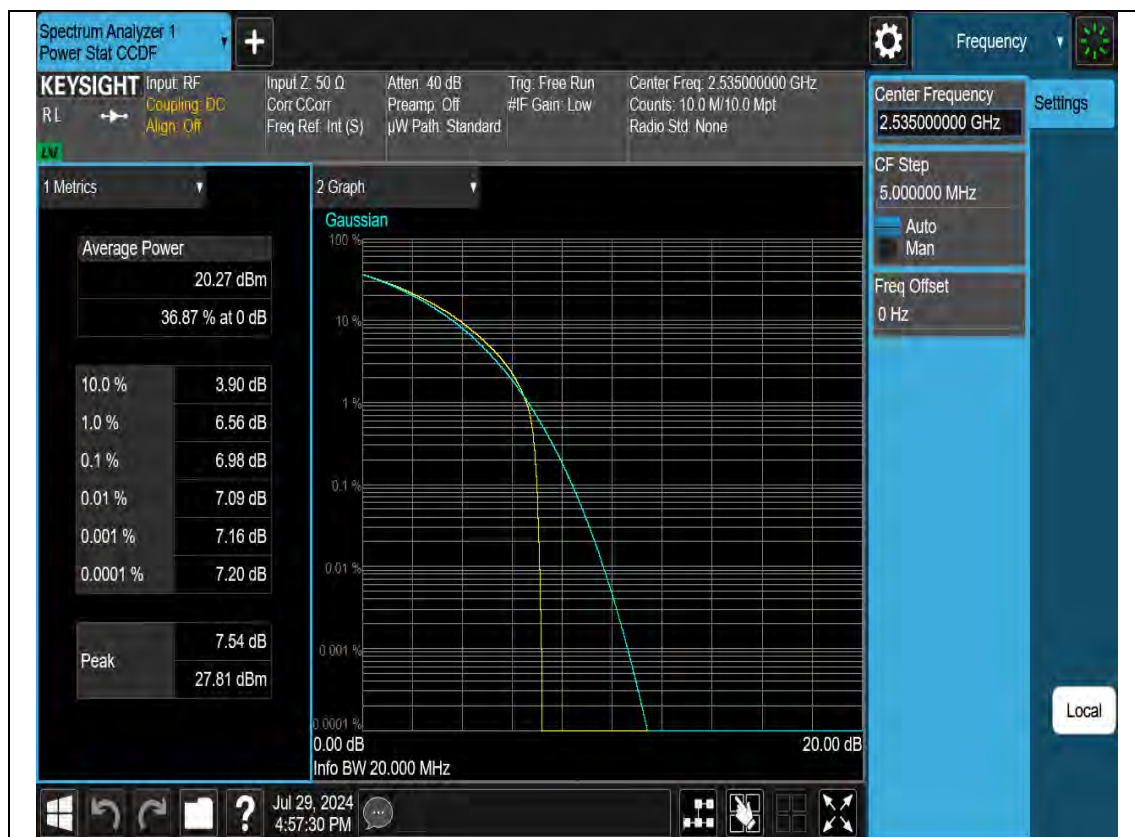
N7-15M-PAPR-L-CP-OFDM-QPSK-Outer Full



N7-15M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



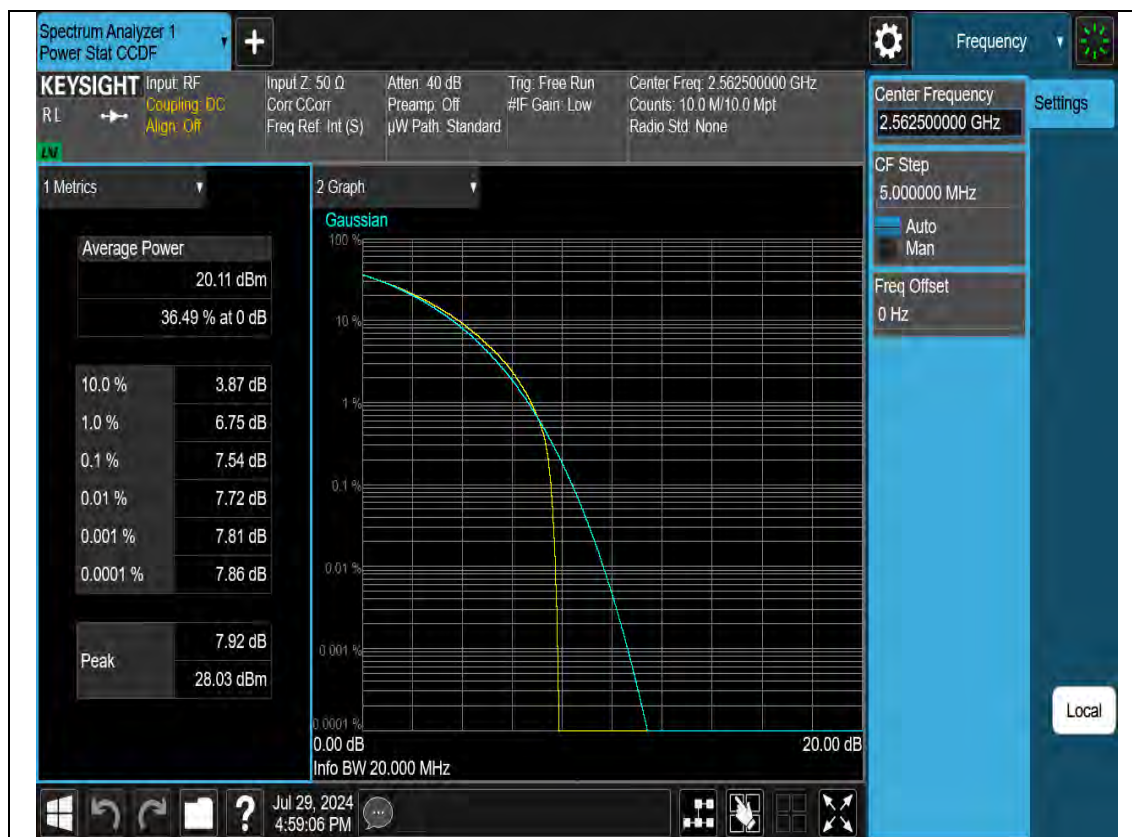
N7-15M-PAPR-M-CP-OFDM-QPSK-Outer Full



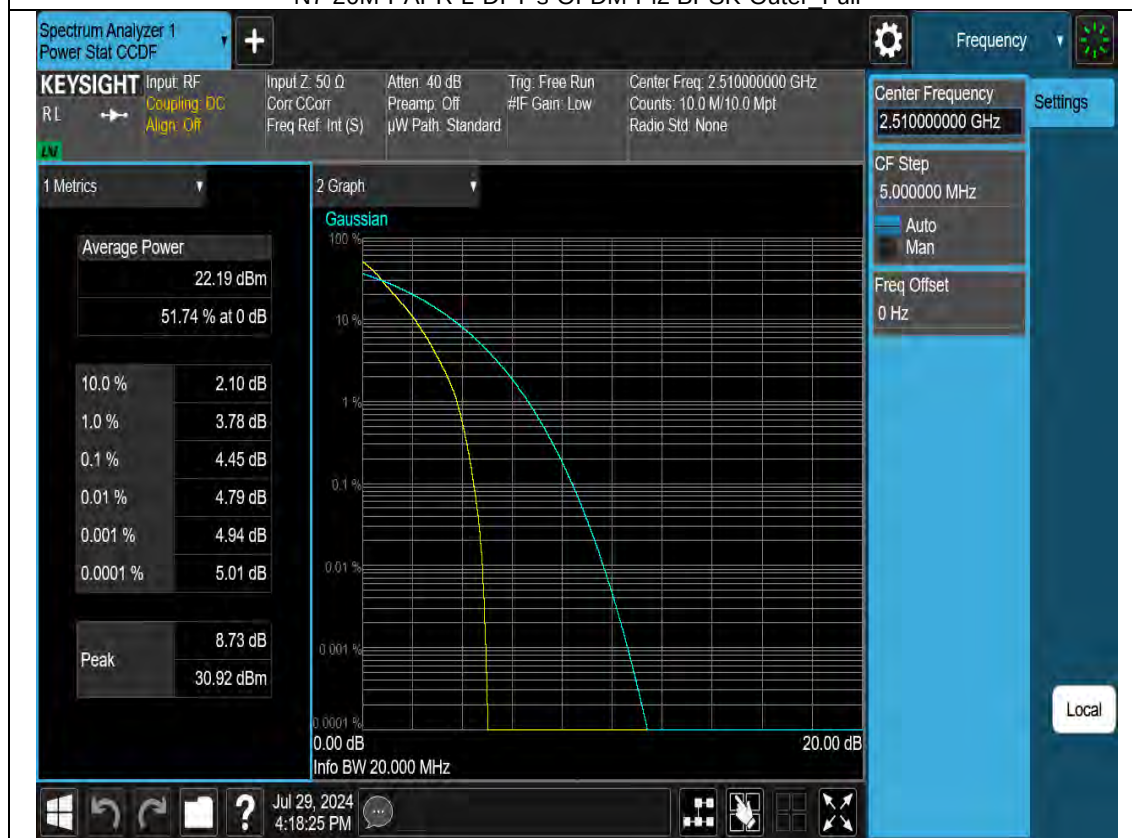
N7-15M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



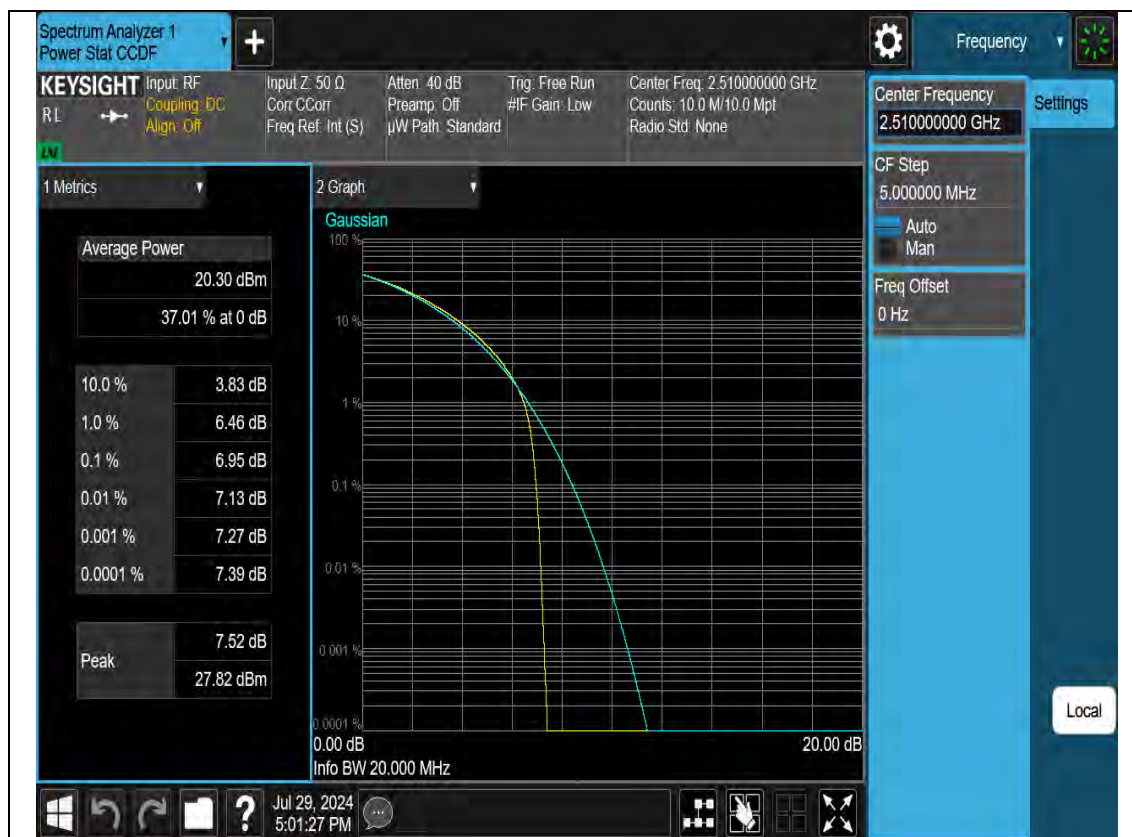
N7-15M-PAPR-H-CP-OFDM-QPSK-Outer Full



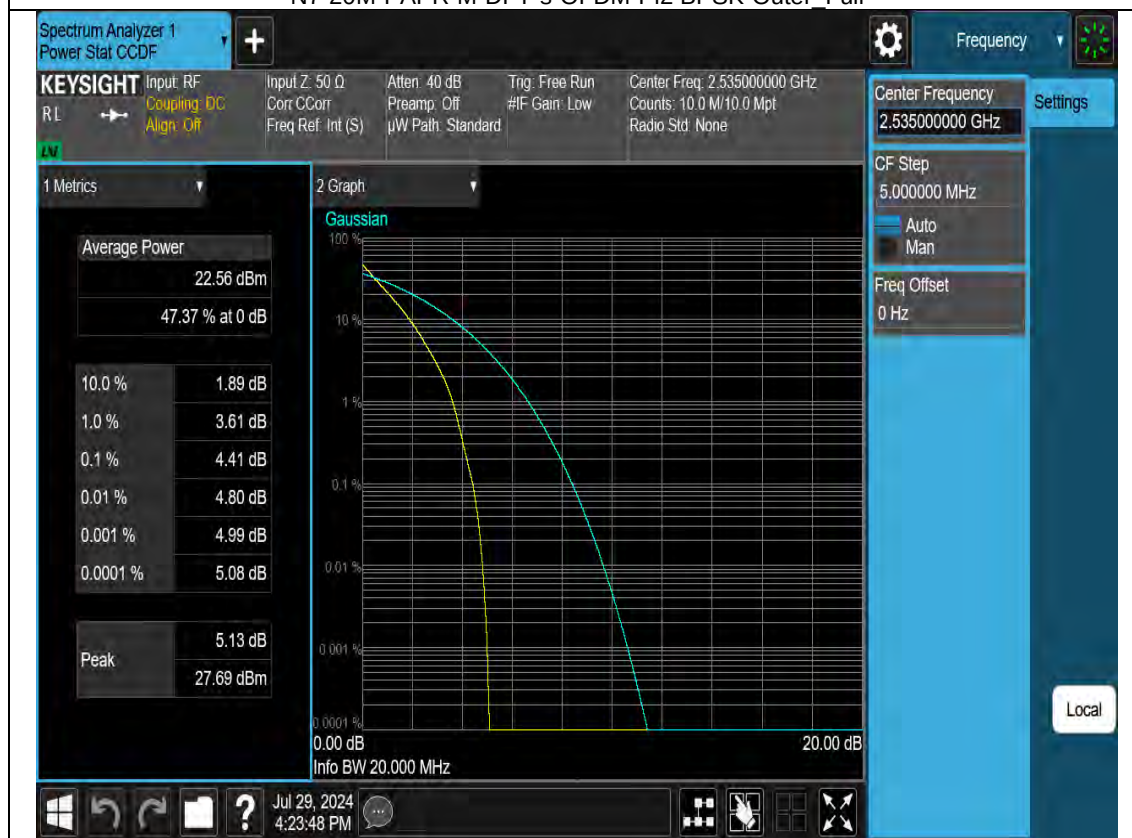
N7-20M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outter Full



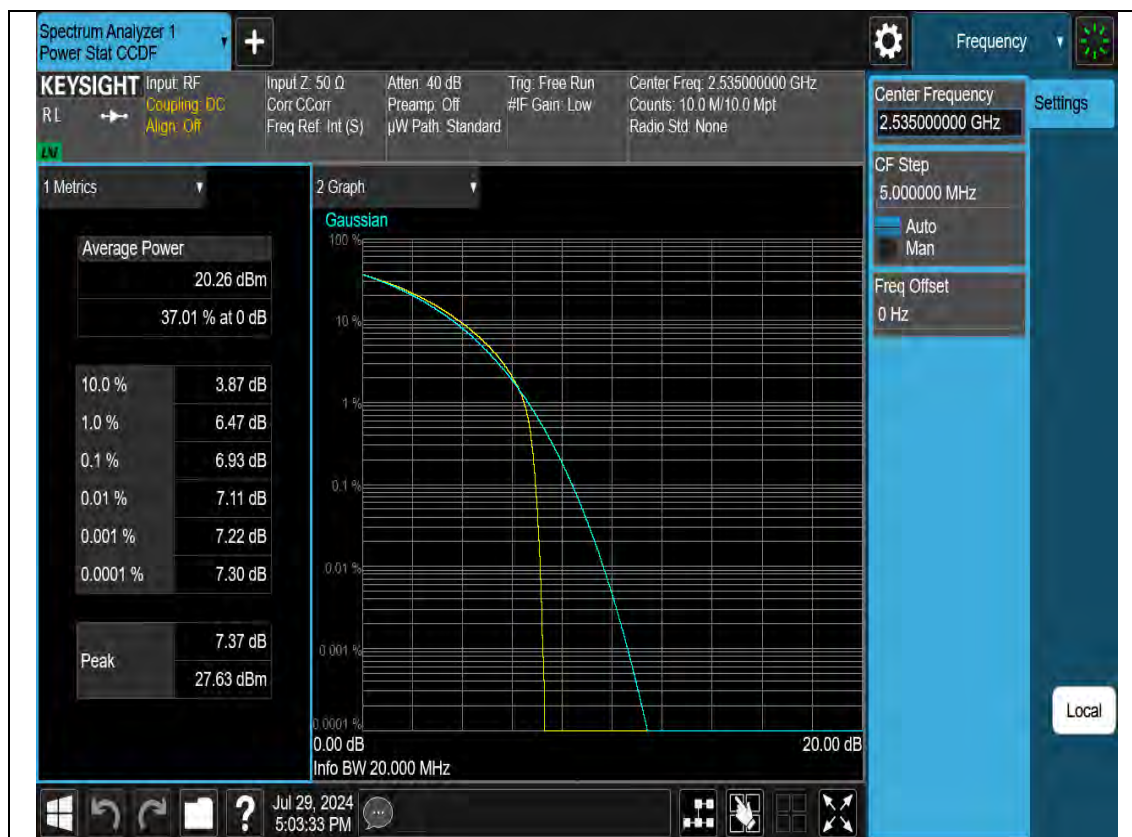
N7-20M-PAPR-L-CP-OFDM-QPSK-Outter Full



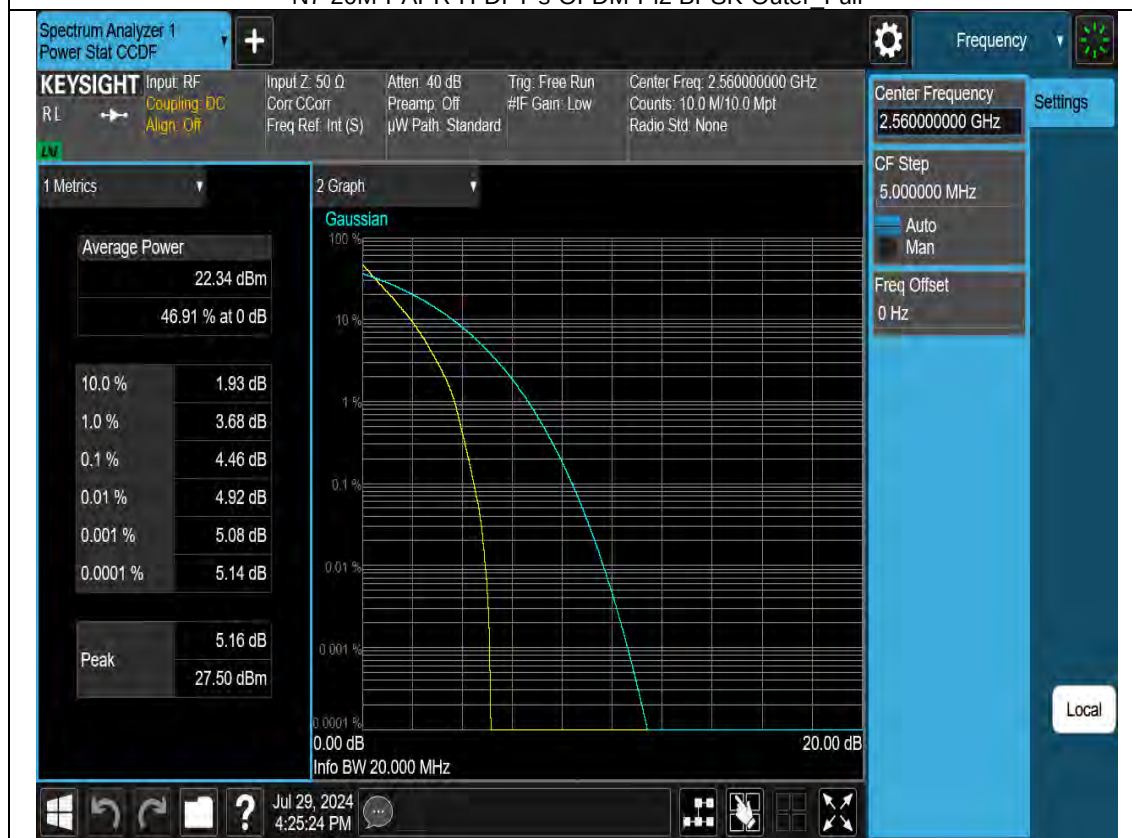
N7-20M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



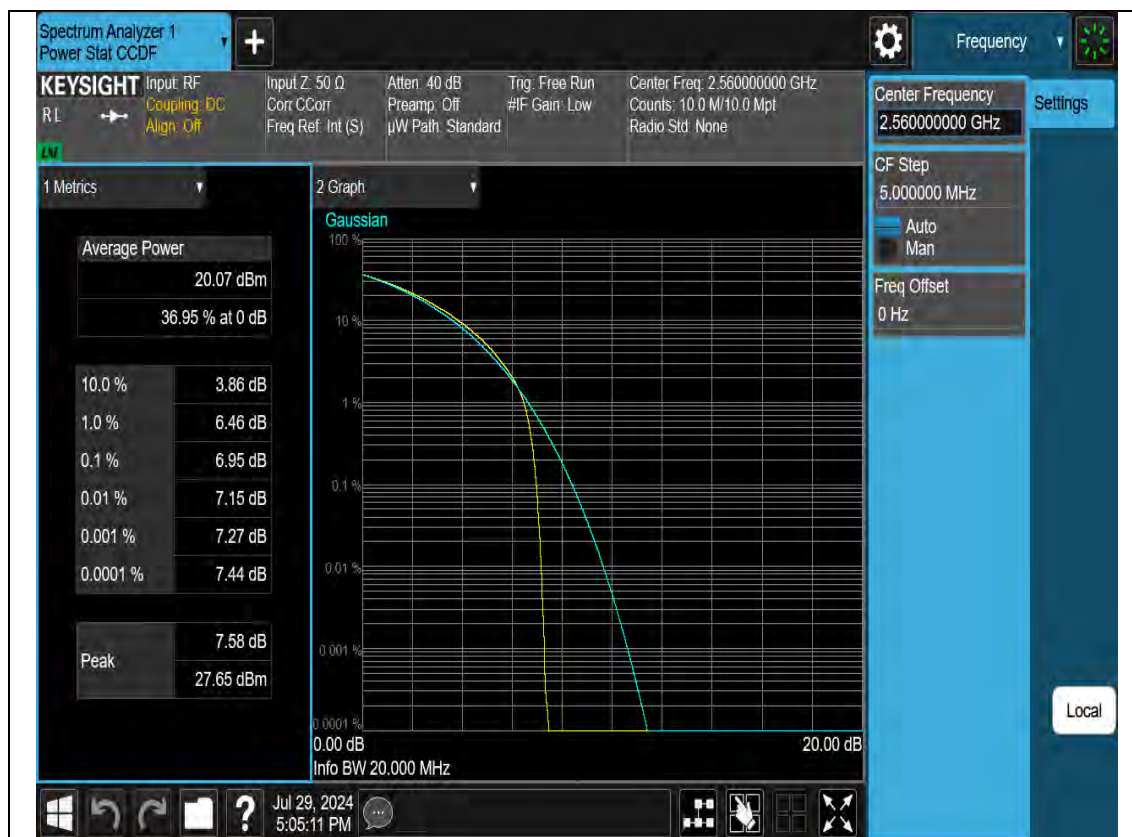
N7-20M-PAPR-M-CP-OFDM-QPSK-Outer Full



N7-20M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



N7-20M-PAPR-H-CP-OFDM-QPSK-Outer Full



Bandedge

test graph



N7-5M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input: RF
R/L Coupling: DC
Align: Off

Input Z: 50 Ω
Corr: Corr
Freq Ref: Int (S)
NFE: Adaptive

#Atten: 30 dB
Preamp: Off
μW Path: Standard

PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS)
Avg/Hold: 100/100
Trig: Free Run

1 2 3 4 5 6
A W W W W W
A A A A A A

Center Frequency
2.500000000 GHz

Span
10.000000000 MHz

Swept Span
Zero Span

Full Span

Start Freq
2.495000000 GHz

Stop Freq
2.505000000 GHz

AUTO TUNE

CF Step
1.0000000 MHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

Local

1 Spectrum

Ref Lvl Offset 5.24 dB
Ref Level 25.24 dBm

Mkr2 2.500 000 GHz
-20.748 dBm

Scale/Div 10 dB
Log

Trace 1 Pass

Center 2.500000 GHz
#Res BW 30 kHz

#Video BW 100 kHz*
Span 10.00 MHz
Sweep ~14.5 ms (3001 pts)

5 Marker Table

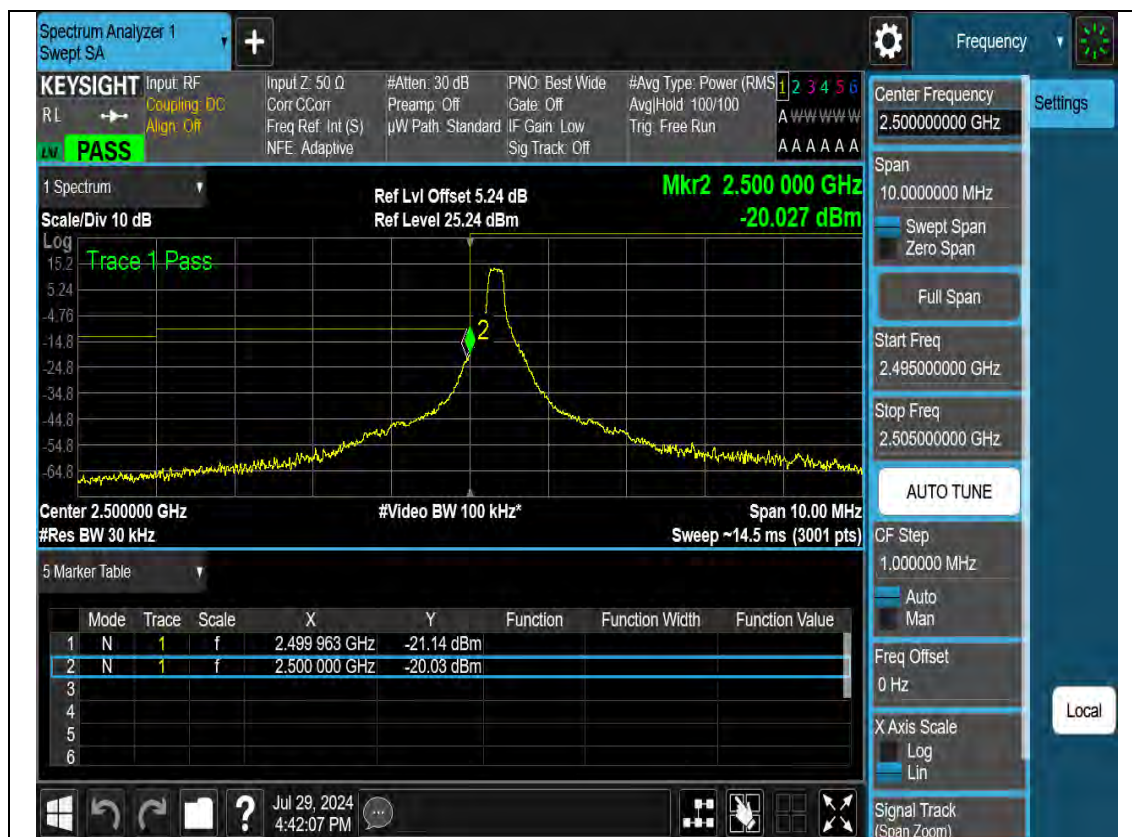
	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.499 980 GHz	-18.64 dBm			
2	N	1	f	2.500 000 GHz	-20.75 dBm			
3								
4								
5								
6								

Jul 29, 2024
3:47:46 PM

The screenshot displays a Spectrum Analyzer interface with the following details:

- Top Bar:** Spectrum Analyzer 1, Swept SA, and a settings gear icon.
- KEYSIGHT Section:**
 - Input: RF, Coupling: DC, Align: Off
 - Input Z: 50 Ω , Corr: CCorr
 - #Atten: 30 dB, Preamp: Off
 - IPNO: Best Wide, Gate: Off
 - #Avg Type: Power (RMS), Avg/Hold: 100/100
 - μ W Path: Standard, IF Gain: Low
 - Sig Track: Off
 - Trig: Free Run
- Center Frequency:** 2.500000000 GHz
- Span:** 10.00000000 MHz
- Start Freq:** 2.495000000 GHz
- Stop Freq:** 2.505000000 GHz
- Full Span:** Button
- AUTO TUNE:** Button
- CF Step:** 1.000000 MHz
- Auto/Man:** Toggle (Auto selected)
- Freq Offset:** 0 Hz
- X Axis Scale:** Log/Lin (Lin selected)
- Signal Track:** (Span Zoom)
- Local:** Button
- 1 Spectrum:** Scale/Div 10 dB, Log, Trace 1 Pass
- Ref Lvl Offset:** 5.24 dB
- Ref Level:** 25.24 dBm
- Mkr2:** 2.500 00 GHz, -24.490 dBm
- Center:** 2.500000 GHz
- #Video BW:** 300 kHz*
- Span:** 10.00 MHz
- #Res BW:** 100 kHz
- Sweep:** ~5.41 ms (1001 pts)
- 5 Marker Table:**

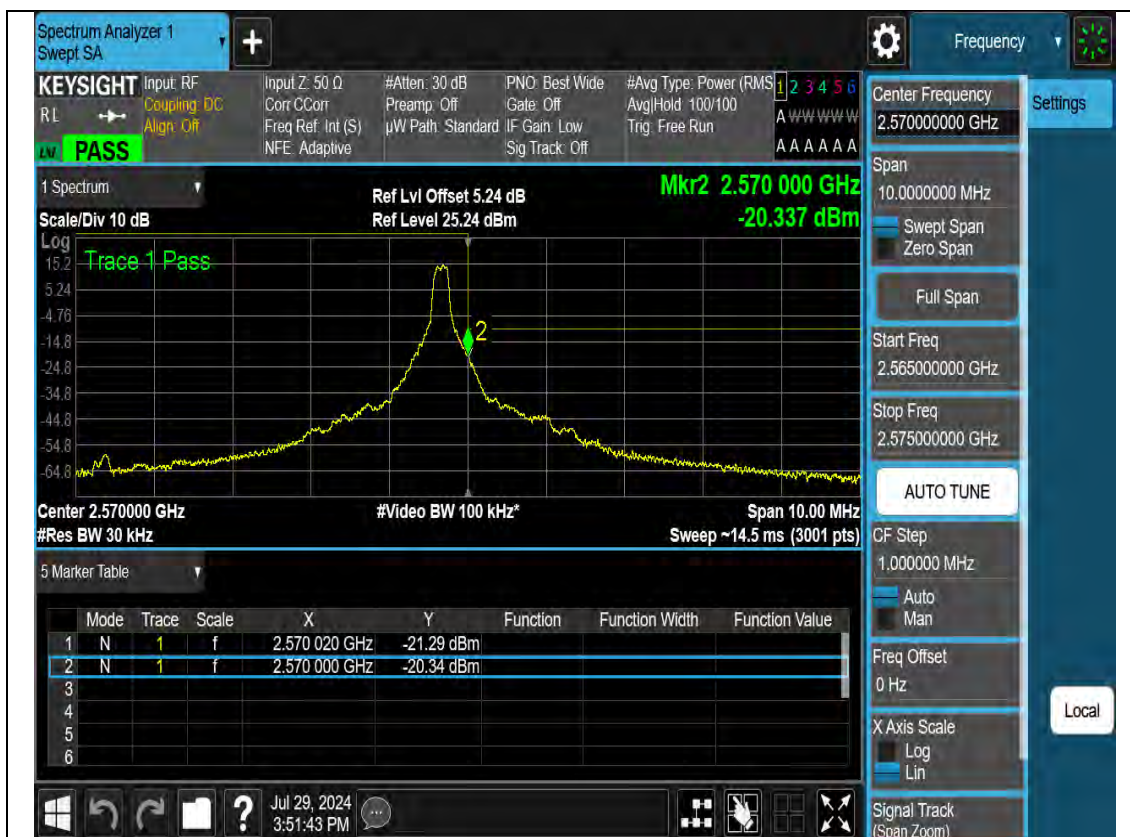
	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.499 98 GHz	-21.93 dBm			
2	N	1	f	2.500 00 GHz	-24.49 dBm			
3								
4								
5								
6								
- Bottom Bar:** Windows icons, date/time (Jul 29, 2024 4:41:49 PM), and navigation controls.



N7-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



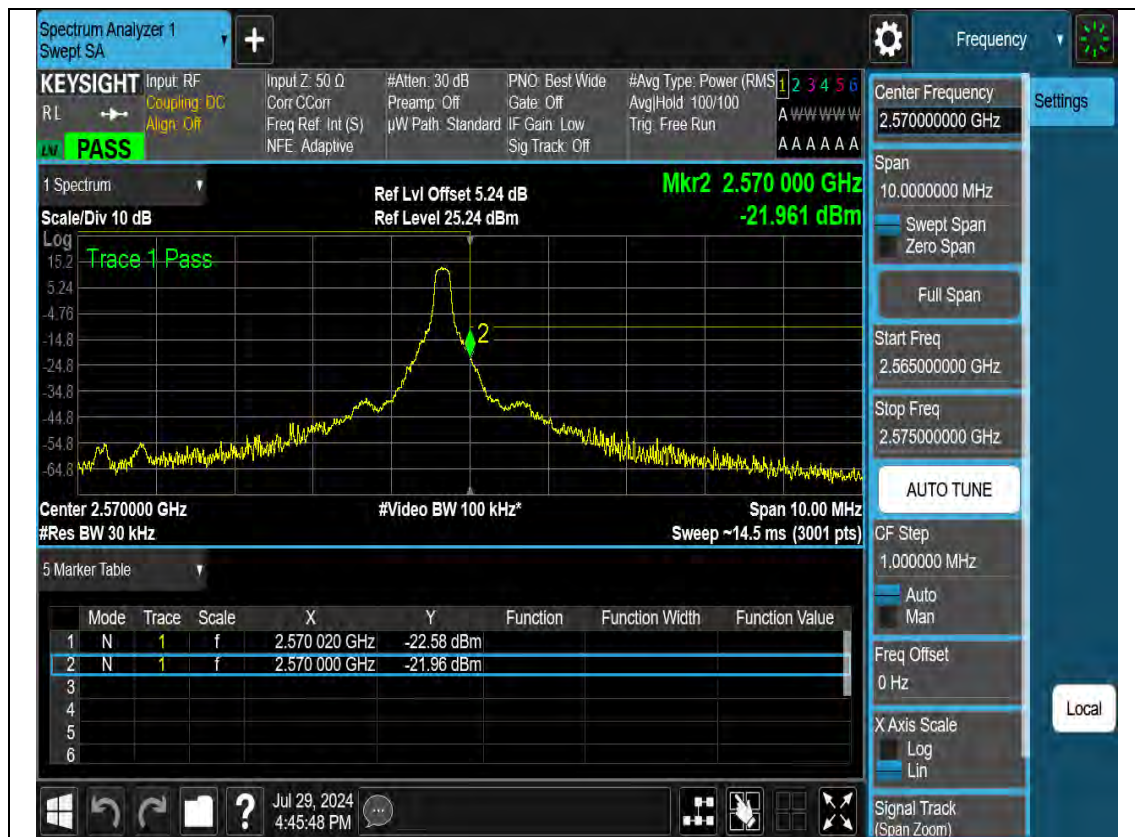
N7-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N7-5M-Bandedge-H-CP-OFDM-QPSK-Outer Full



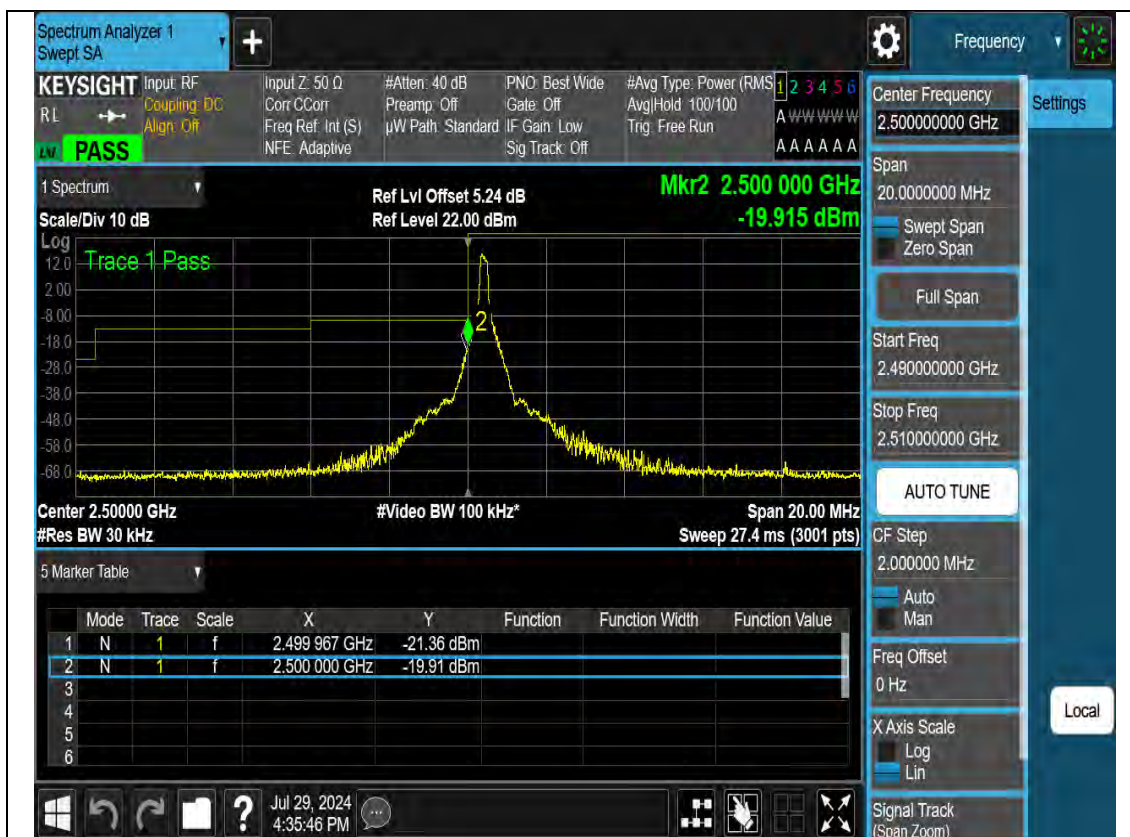
N7-5M-Bandedge-H-CP-OFDM-QPSK-1RB MAX



N7-10M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



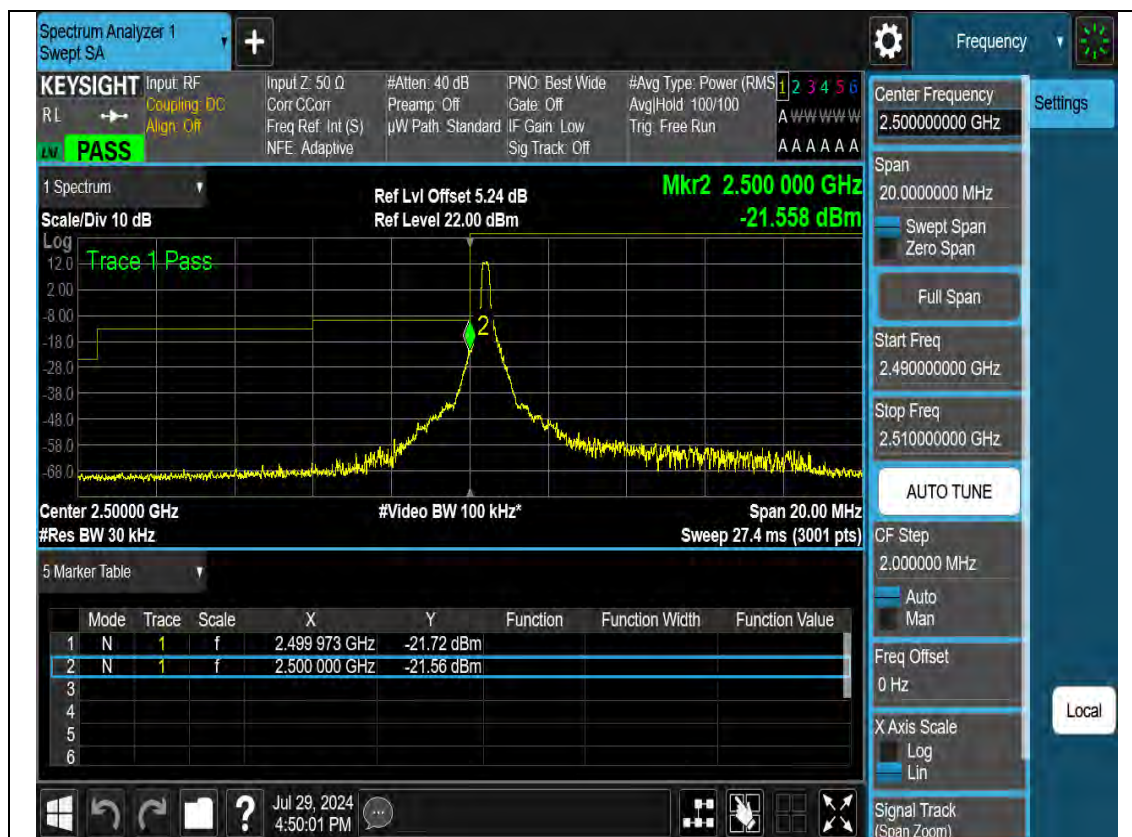
N7-10M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



N7-10M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



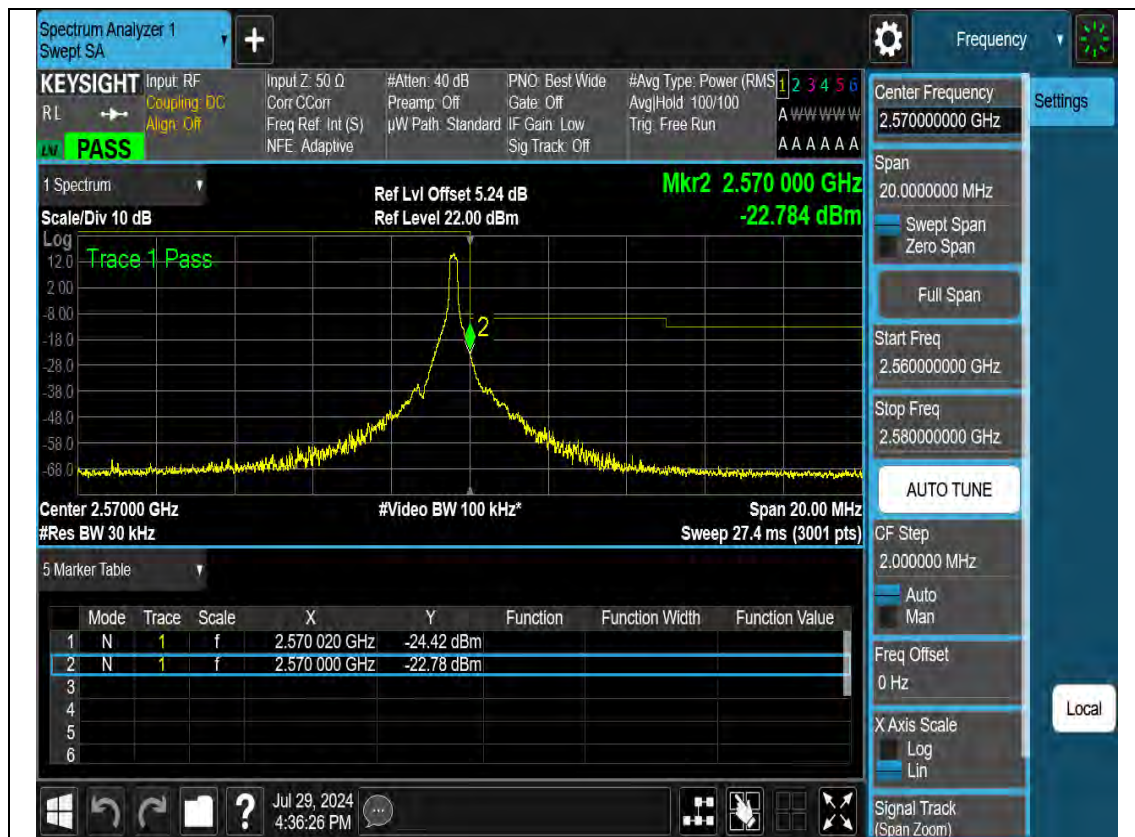
N7-10M-Bandedge-L-CP-OFDM-QPSK-1RB0



N7-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



N7-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N7-10M-Bandedge-H-CP-OFDM-QPSK-Outer Full



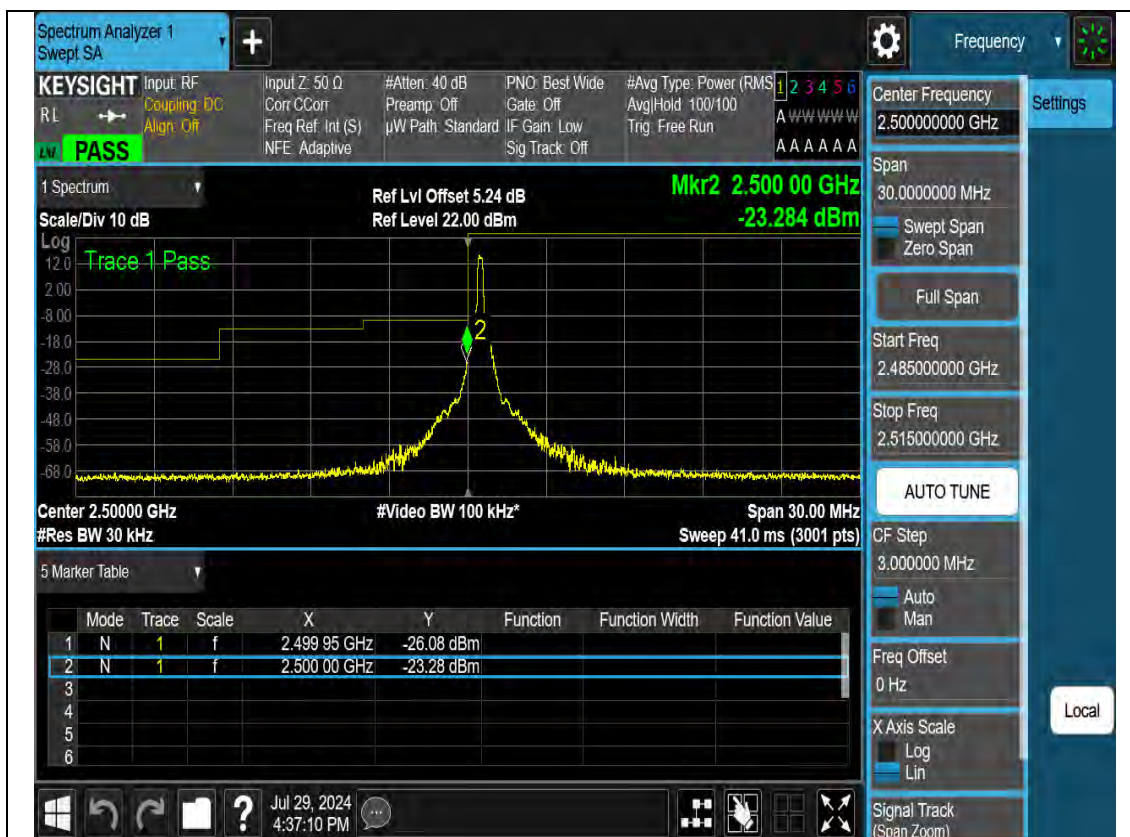
N7-10M-Bandedge-H-CP-OFDM-QPSK-1RB MAX



N7-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



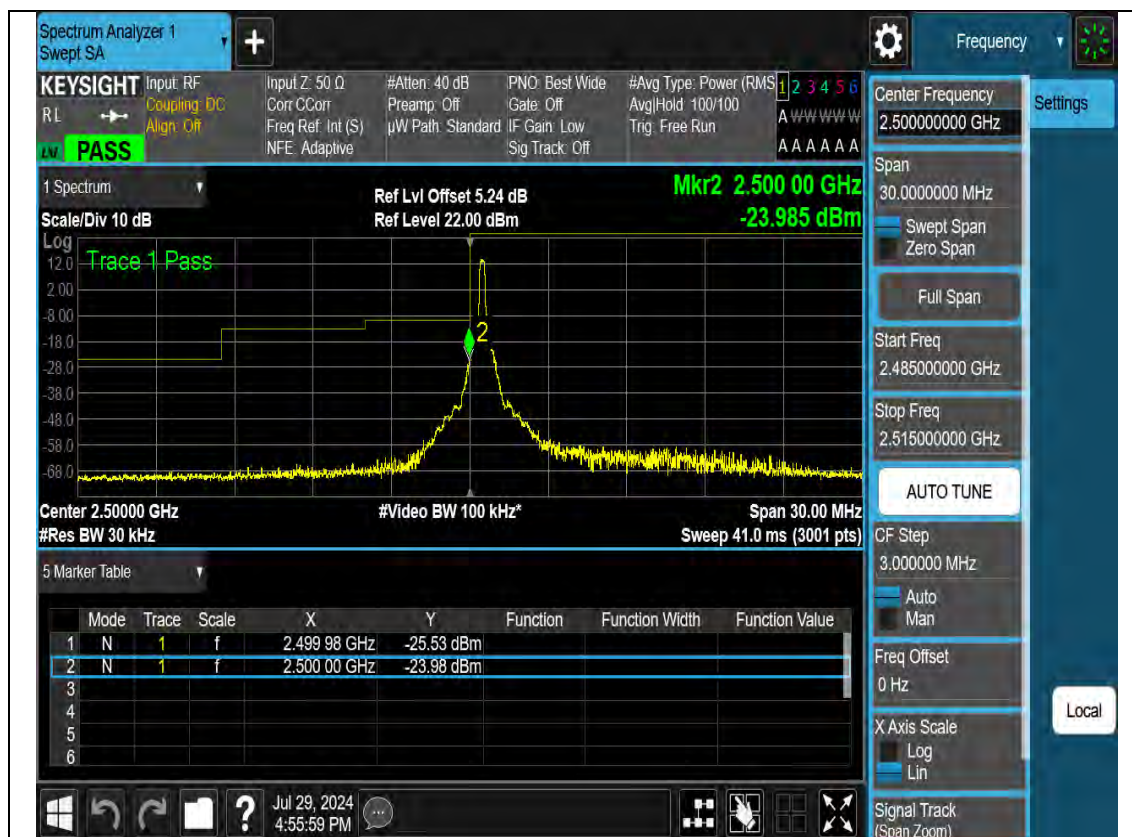
N7-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



N7-15M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



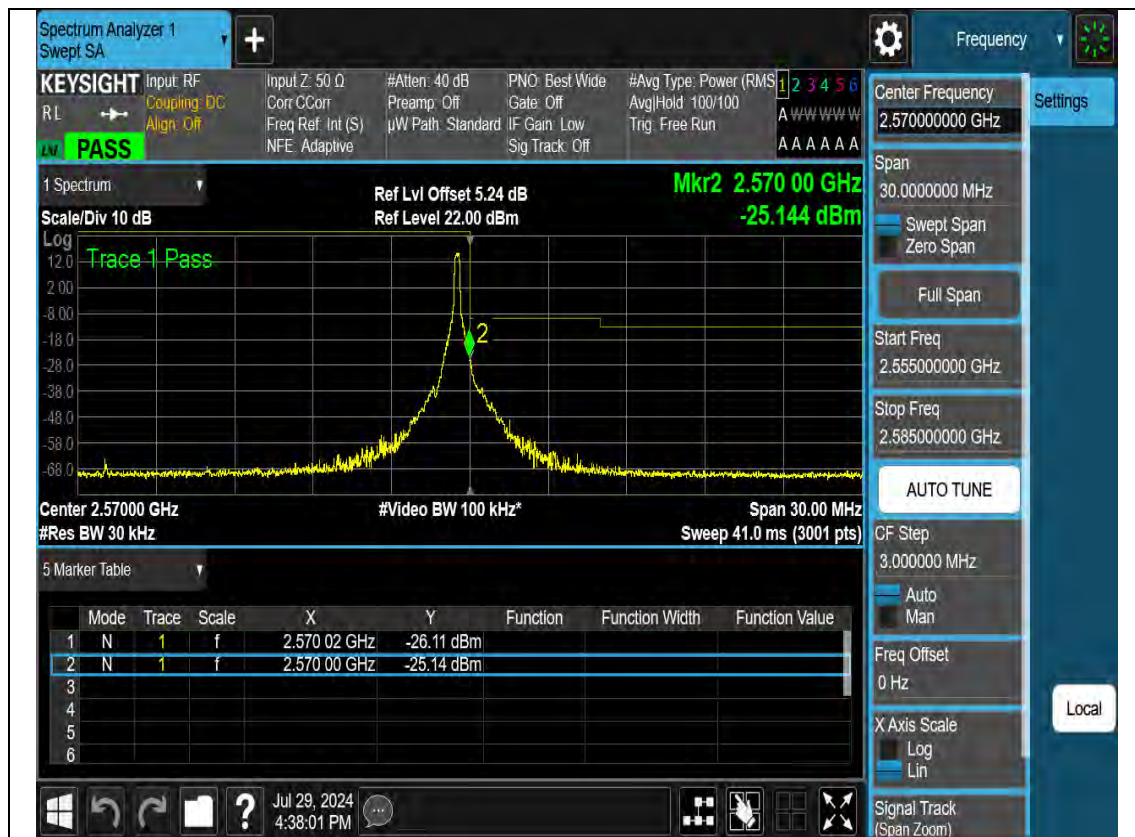
N7-15M-Bandedge-L-CP-OFDM-QPSK-1RB0



N7-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



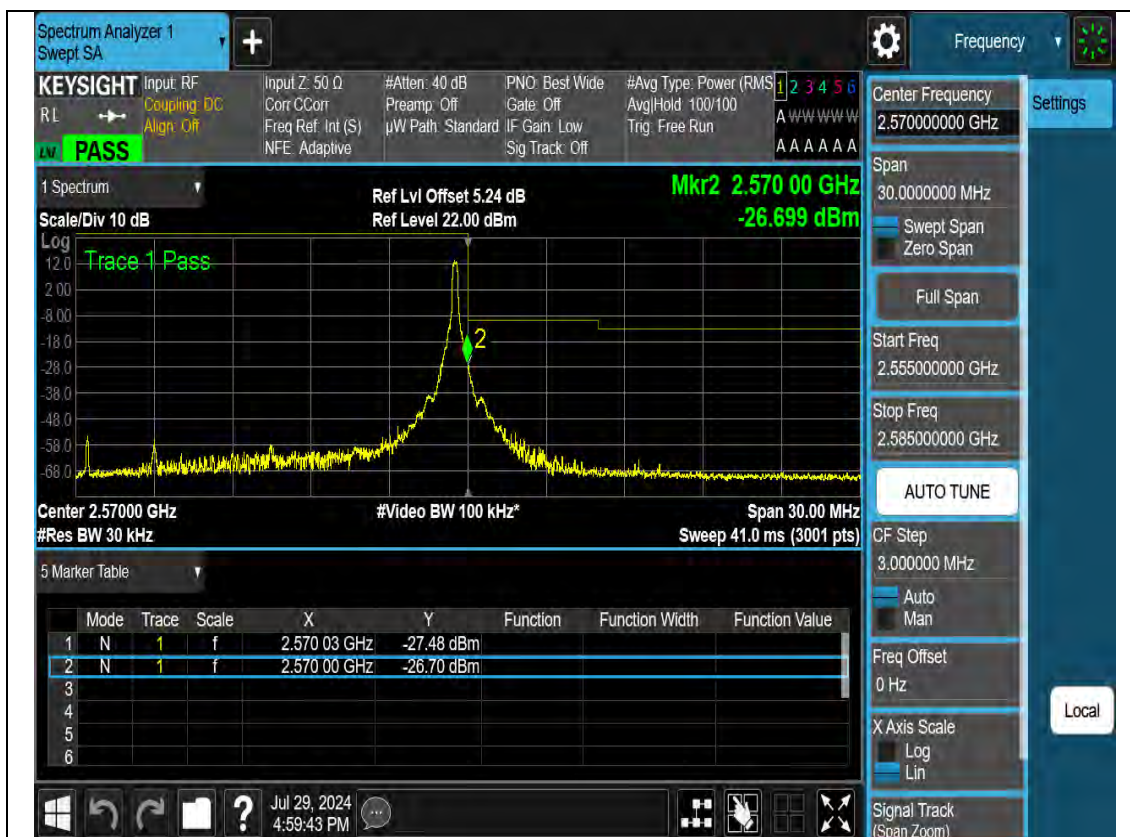
N7-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N7-15M-Bandedge-H-CP-OFDM-QPSK-Outer Full



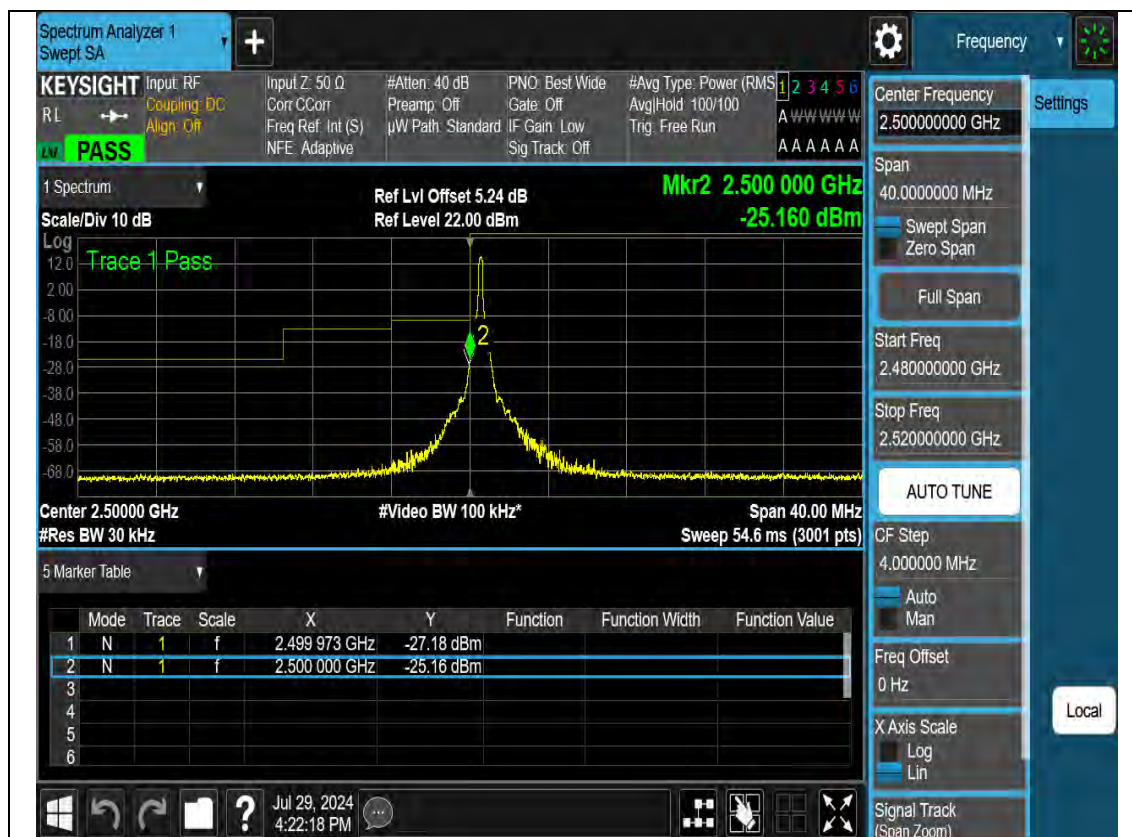
N7-15M-Bandedge-H-CP-OFDM-QPSK-1RB MAX



N7-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



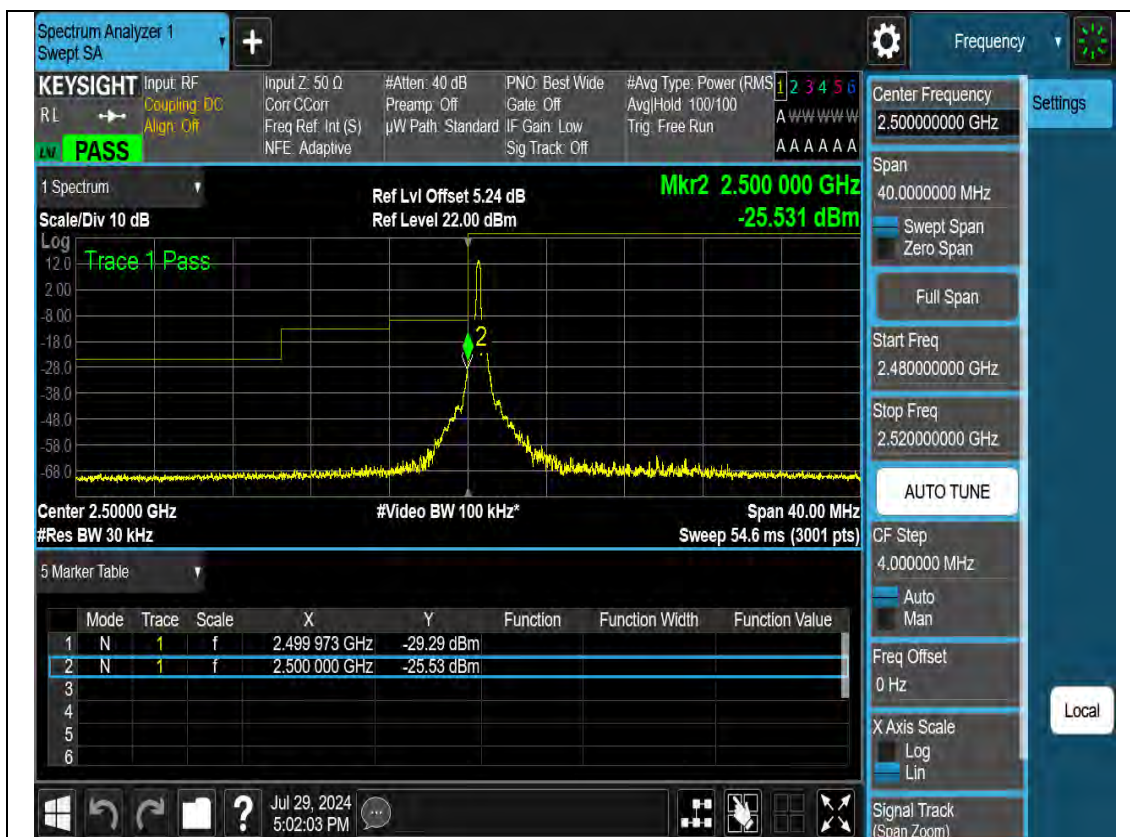
N7-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



N7-20M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



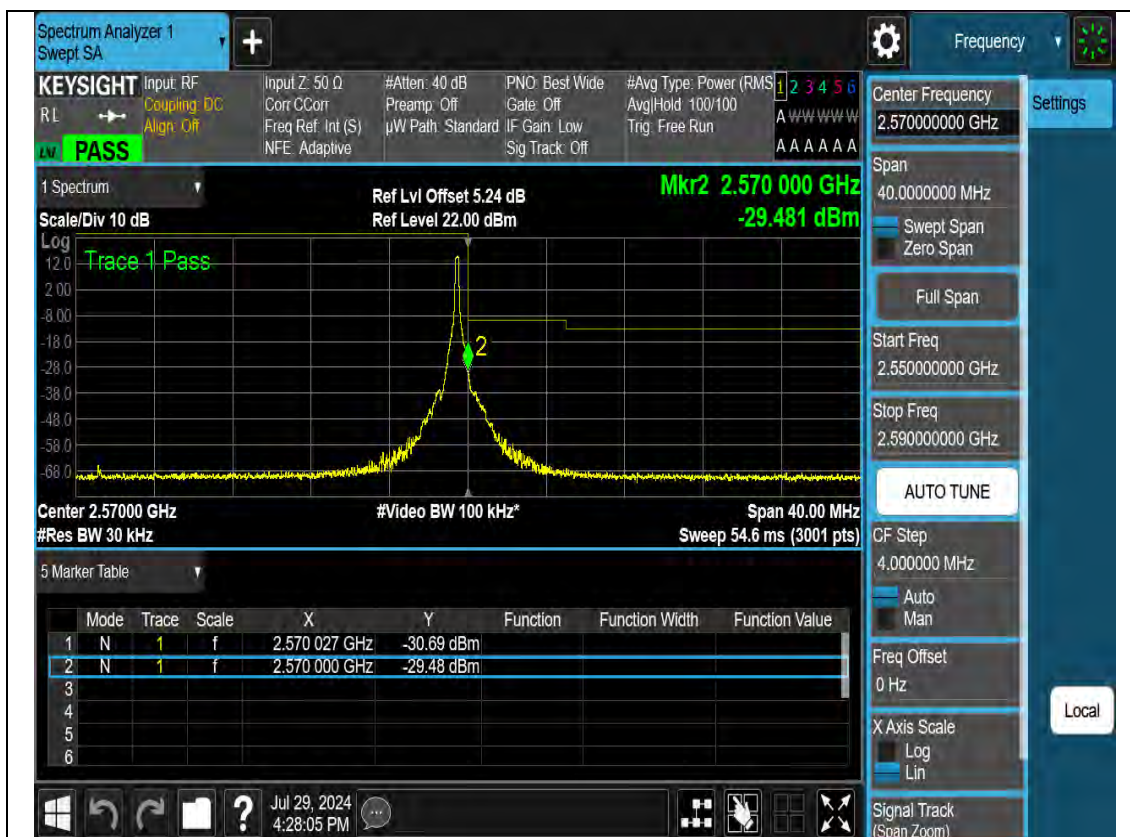
N7-20M-Bandedge-L-CP-OFDM-QPSK-1RB0



N7-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



N7-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N7-20M-Bandedge-H-CP-OFDM-QPSK-Outer Full



N7-20M-Bandedge-H-CP-OFDM-QPSK-1RB MAX

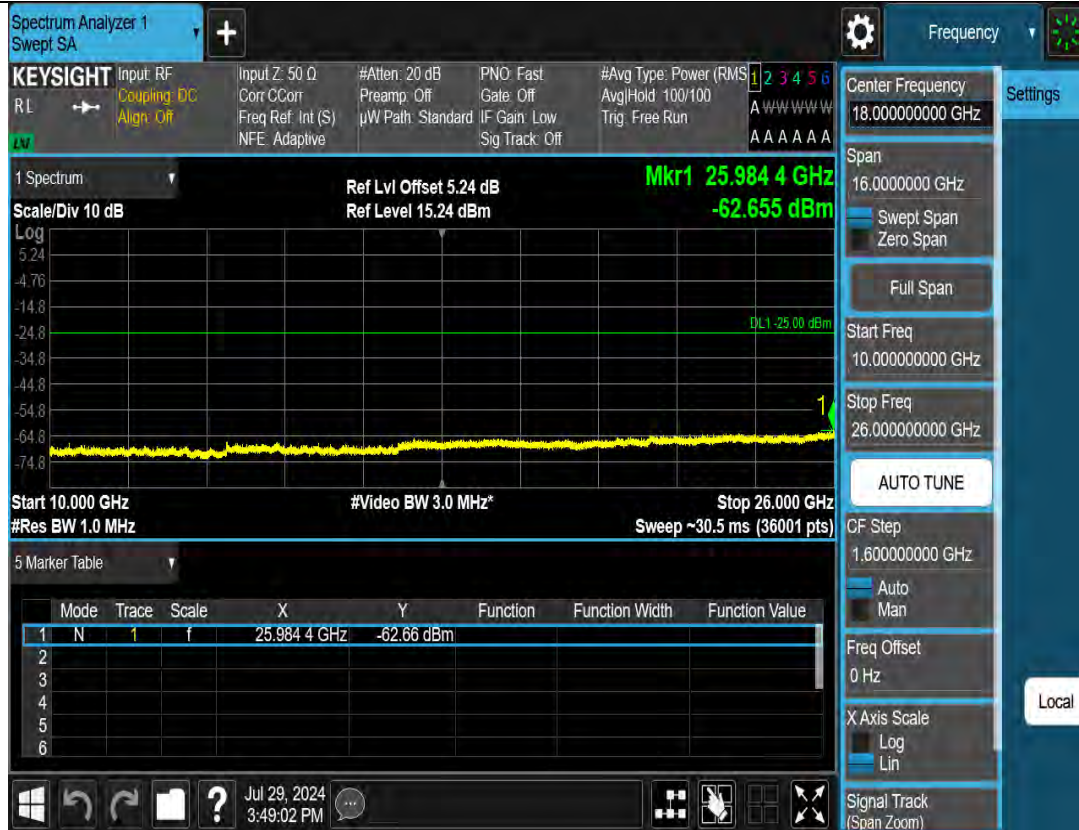


Conducted spurious emissions

test graph



N7-5M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-26GHz



N7-5M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N7-5M-CSE-L-CP-OFDM-QPSK-1RB0-10GHz-26GHz



N7-5M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N7-5M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-26GHz



N7-5M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N7-5M-CSE-M-CP-OFDM-QPSK-1RB0-10GHz-26GHz



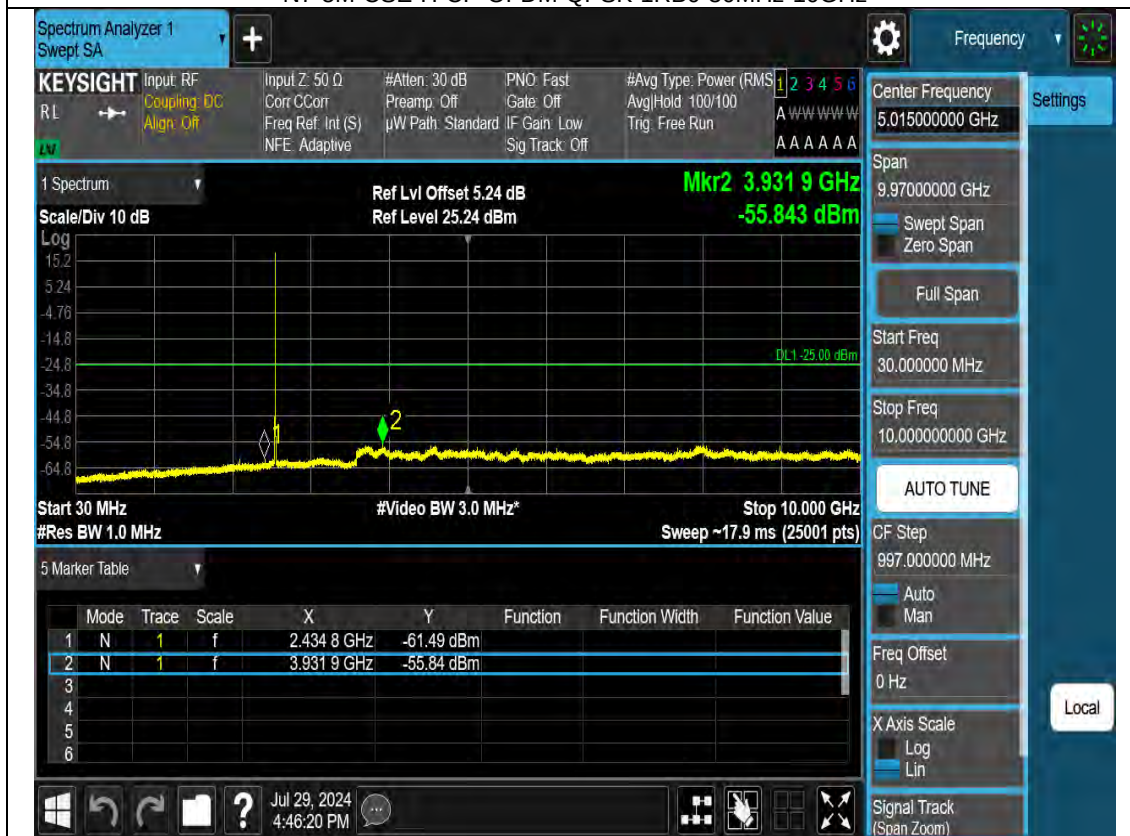
N7-5M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



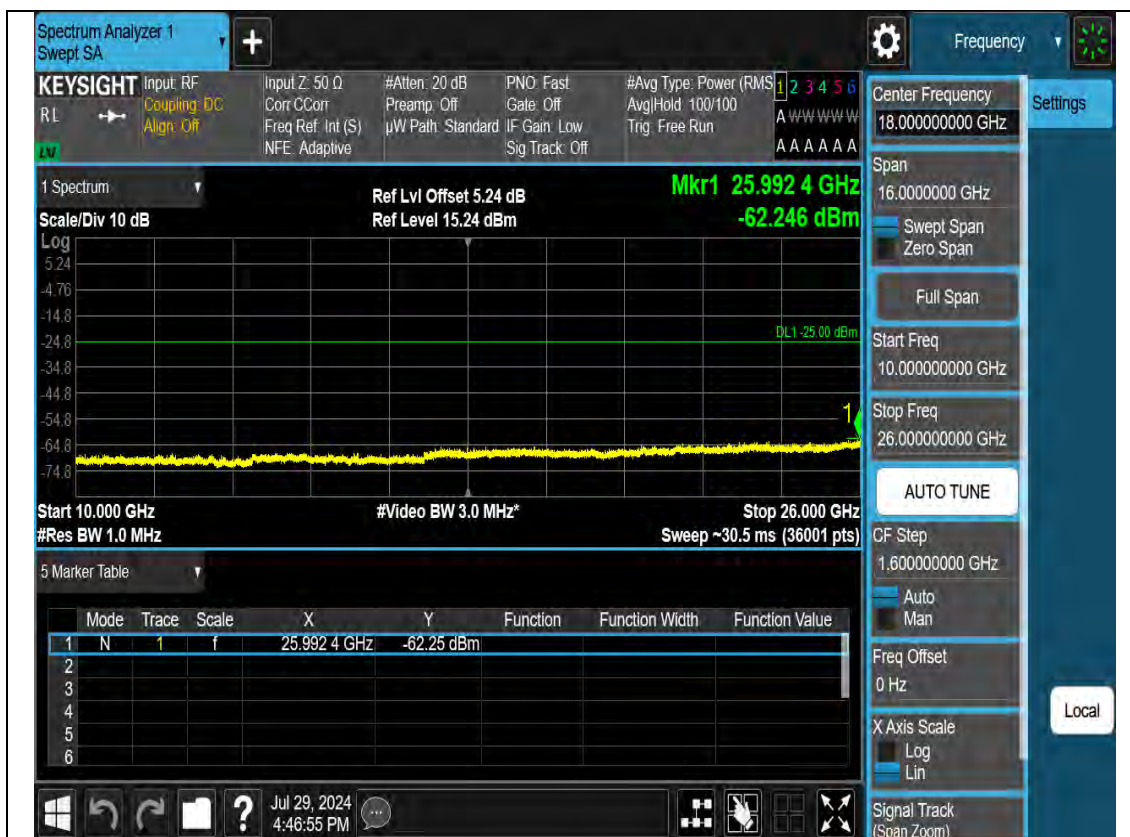
N7-5M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-26GHz



N7-5M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N7-5M-CSE-H-CP-OFDM-QPSK-1RB0-10GHz-26GHz



N7-10M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N7-10M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-26GHz



N7-10M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N7-10M-CSE-L-CP-OFDM-QPSK-1RB0-10GHz-26GHz



N7-10M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N7-10M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-26GHz



N7-10M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N7-10M-CSE-M-CP-OFDM-QPSK-1RB0-10GHz-26GHz