

99% & 26dB Bandwidth

Test Result

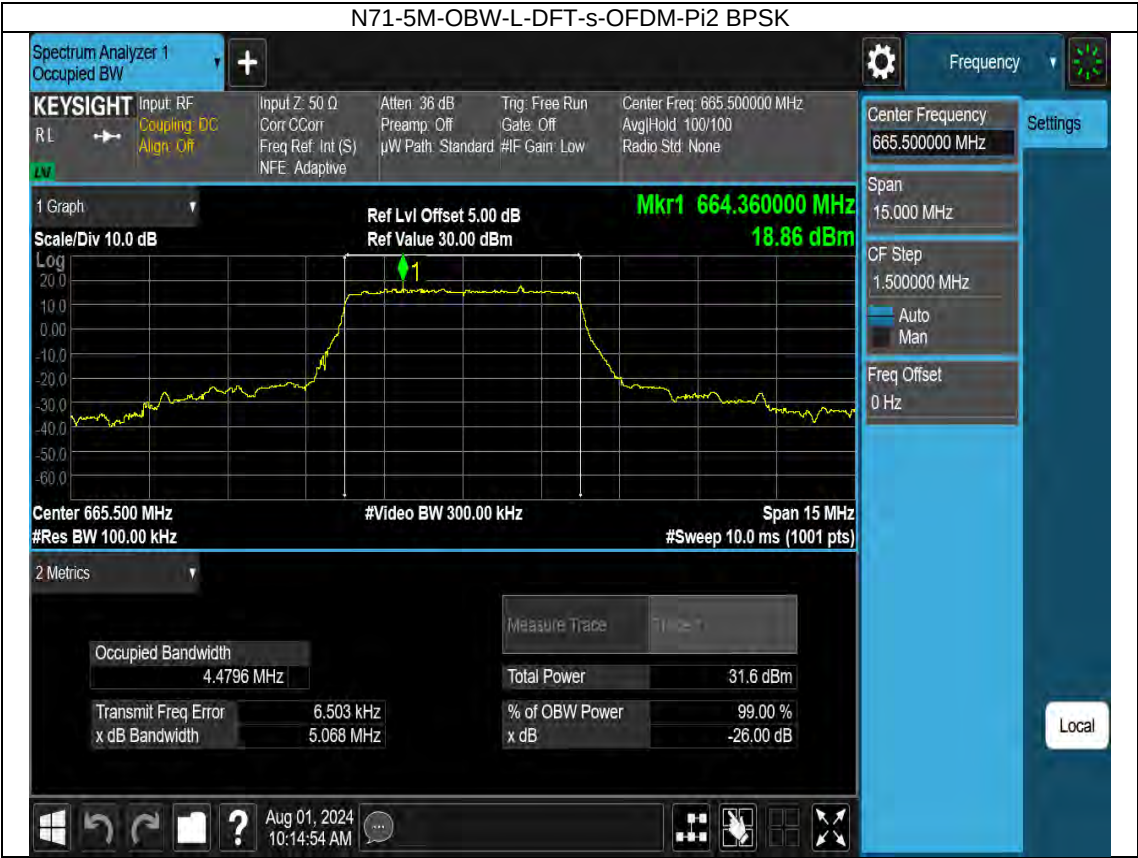
5G NR N71 SCS=15kHz 5MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.48	5.07	/	Pass
CP-OFDM QPSK		Outer_Full	4.49	5.22	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	4.49	5.06	/	Pass
CP-OFDM QPSK		Outer_Full	4.49	5.23	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.48	5.08	/	Pass
CP-OFDM QPSK		Outer_Full	4.51	5.31	/	Pass

5G NR N71 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	8.93	9.59	/	Pass
CP-OFDM QPSK		Outer_Full	9.3	10.09	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	8.93	9.56	/	Pass
CP-OFDM QPSK		Outer_Full	9.31	10.27	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	8.93	9.67	/	Pass
CP-OFDM QPSK		Outer_Full	9.29	10.14	/	Pass

5G NR N71 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	13.45	14.5	/	Pass
CP-OFDM QPSK		Outer_Full	14.11	15.29	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	13.44	14.45	/	Pass
CP-OFDM QPSK		Outer_Full	14.11	15.14	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	13.44	14.53	/	Pass
CP-OFDM QPSK		Outer_Full	14.1	15.18	/	Pass

5G NR N71 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	17.88	19.07	/	Pass
CP-OFDM QPSK		Outer_Full	18.91	20.1	/	Pass
DFT-s-OFDM PI/2 BPSK	Mid	Outer_Full	17.92	19.14	/	Pass
CP-OFDM QPSK		Outer_Full	18.9	20.19	/	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	17.94	19.13	/	Pass
CP-OFDM QPSK		Outer_Full	18.96	20.07	/	Pass

Test Graph

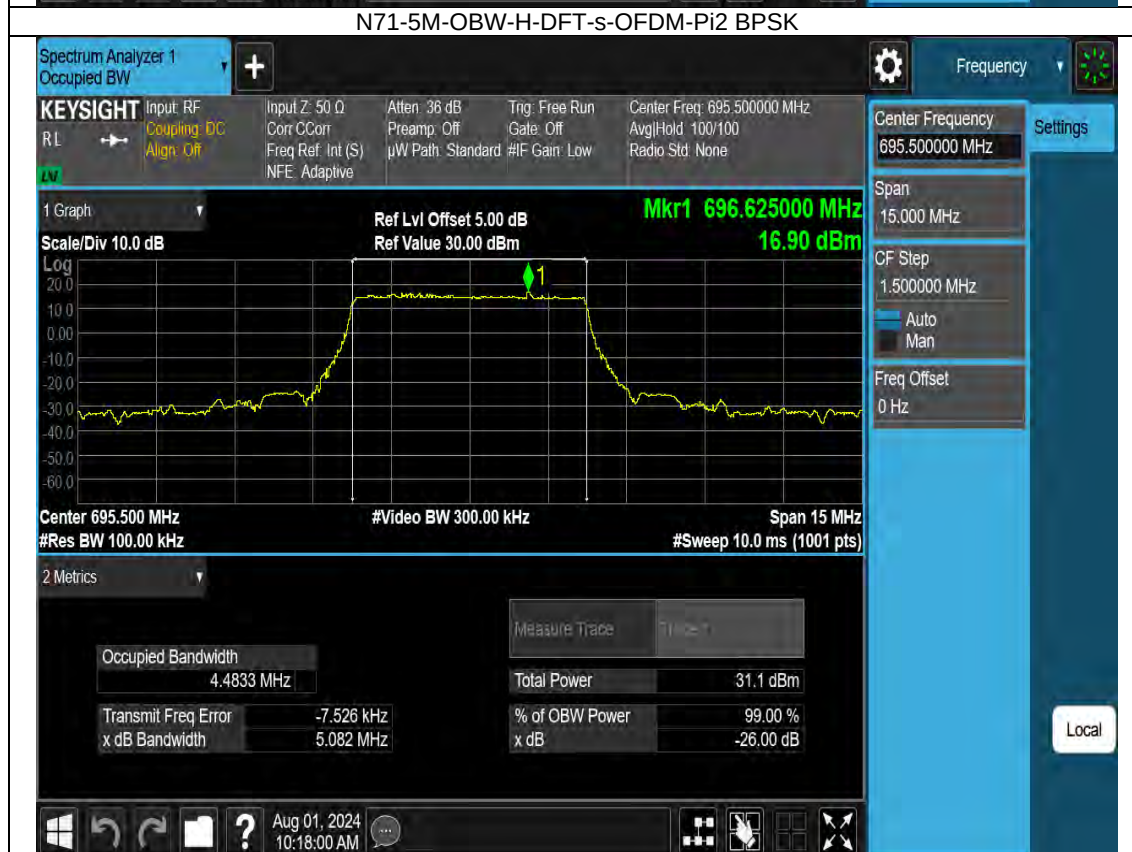
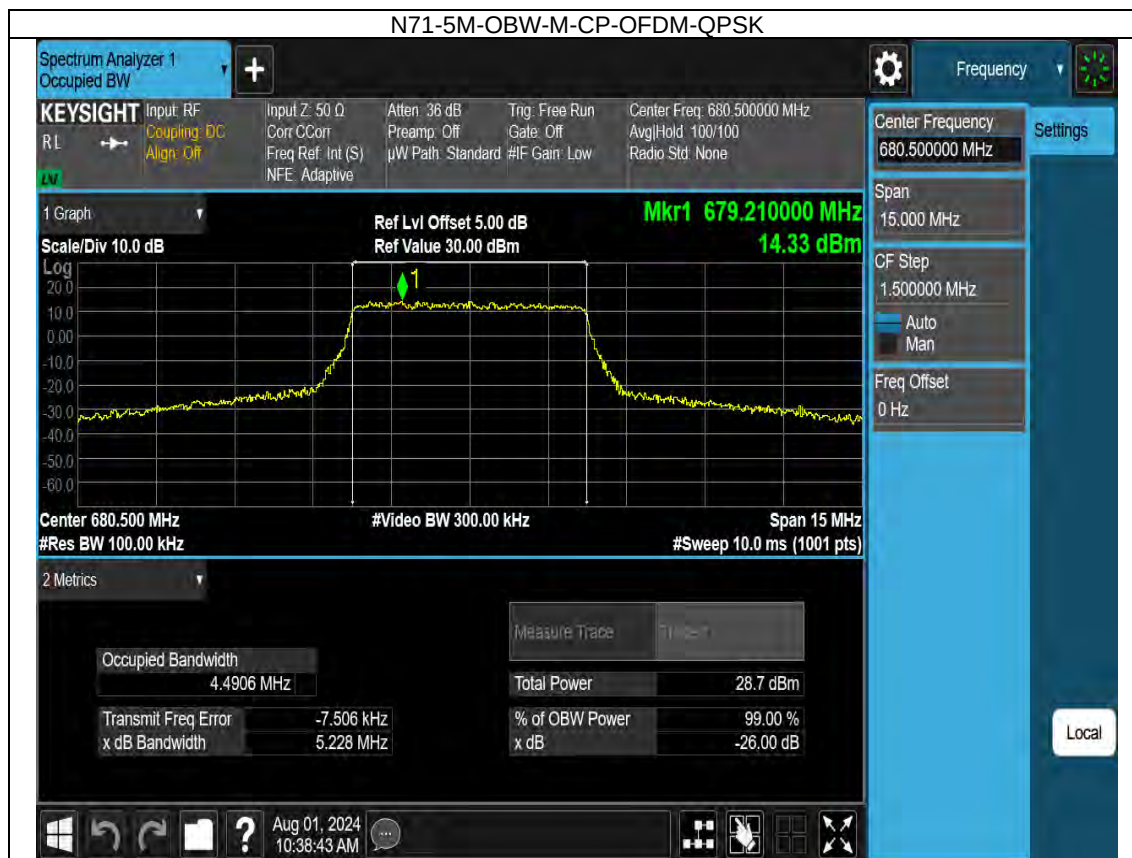


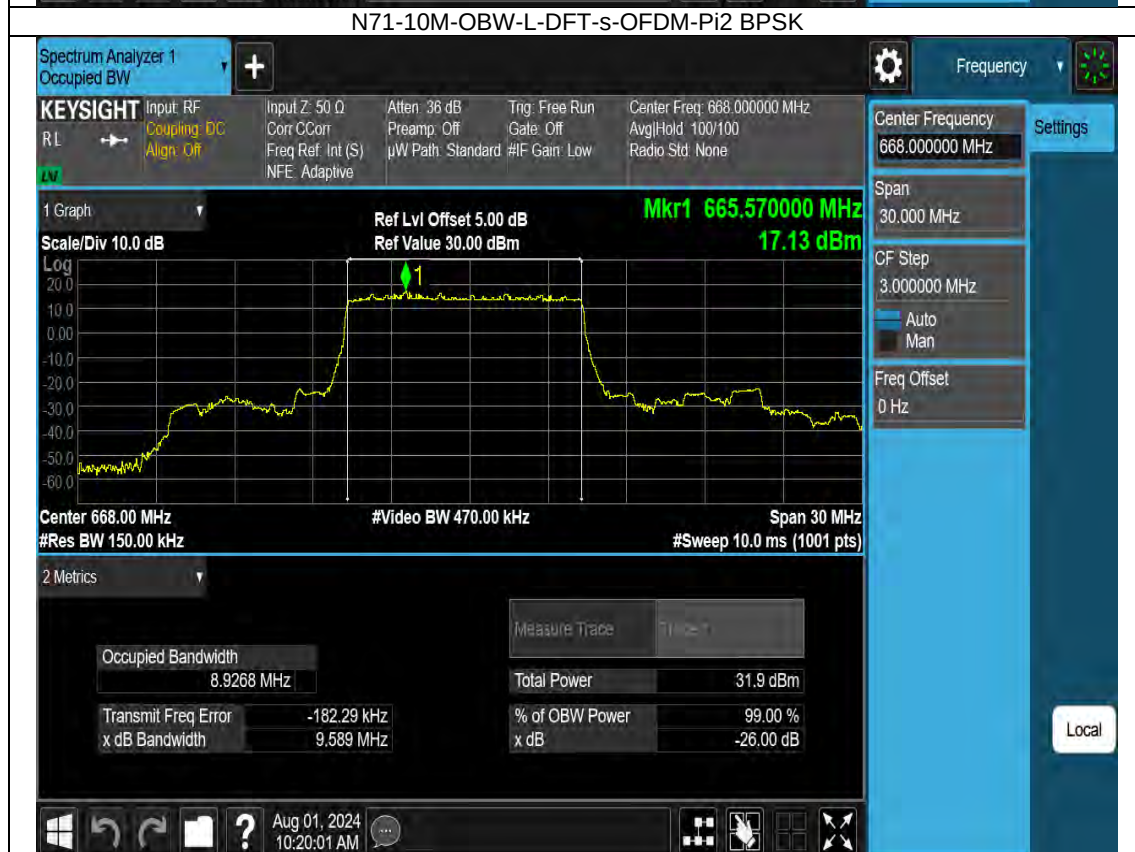
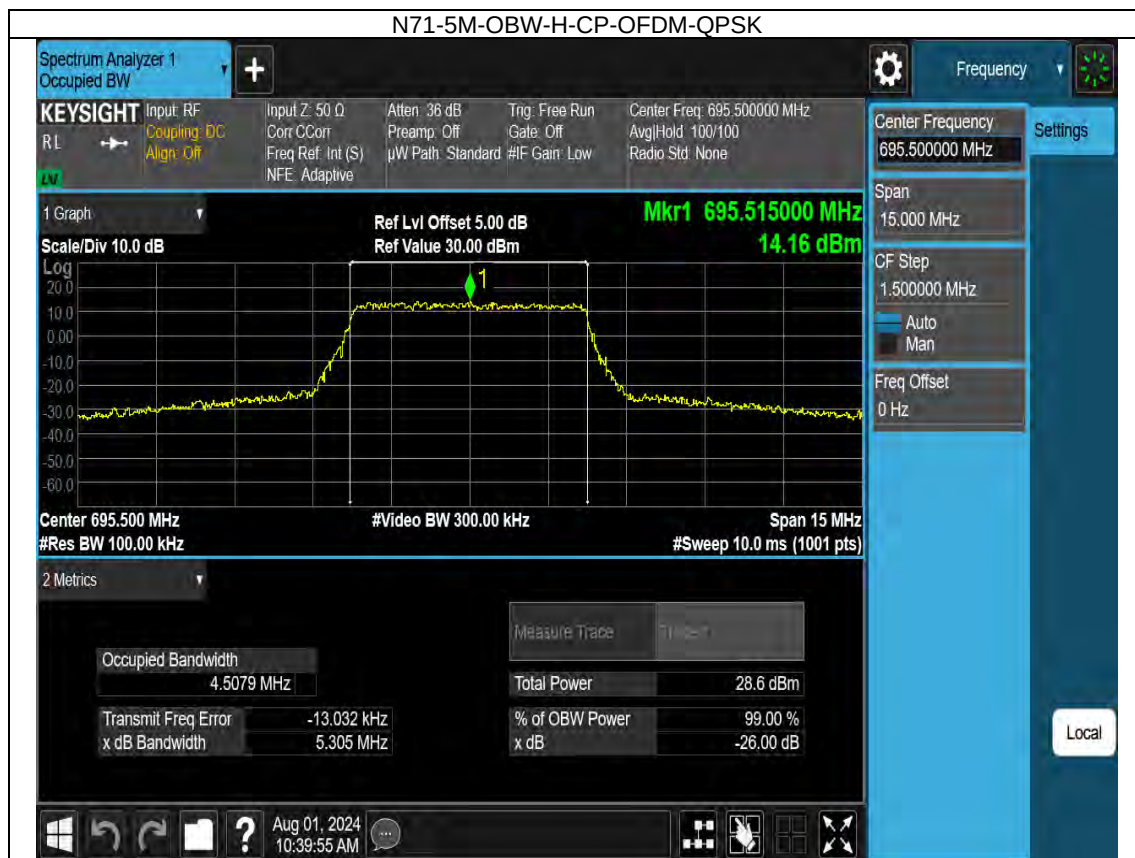
N71-5M-OBW-L-CP-OFDM-QPSK



N71-5M-OBW-M-DFT-s-OFDM-Pi2 BPSK



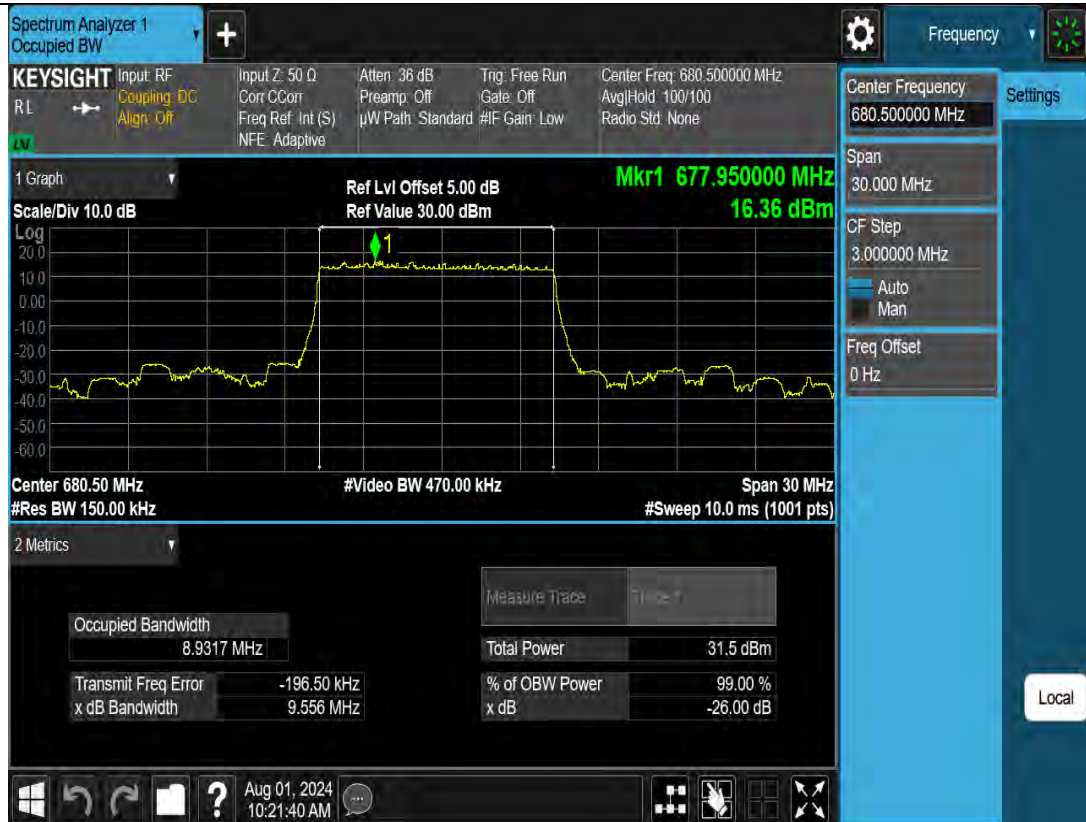




N71-10M-OBW-L-CP-OFDM-QPSK



N71-10M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N71-10M-OBW-M-CP-OFDM-QPSK



N71-10M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N71-10M-OBW-H-CP-OFDM-QPSK



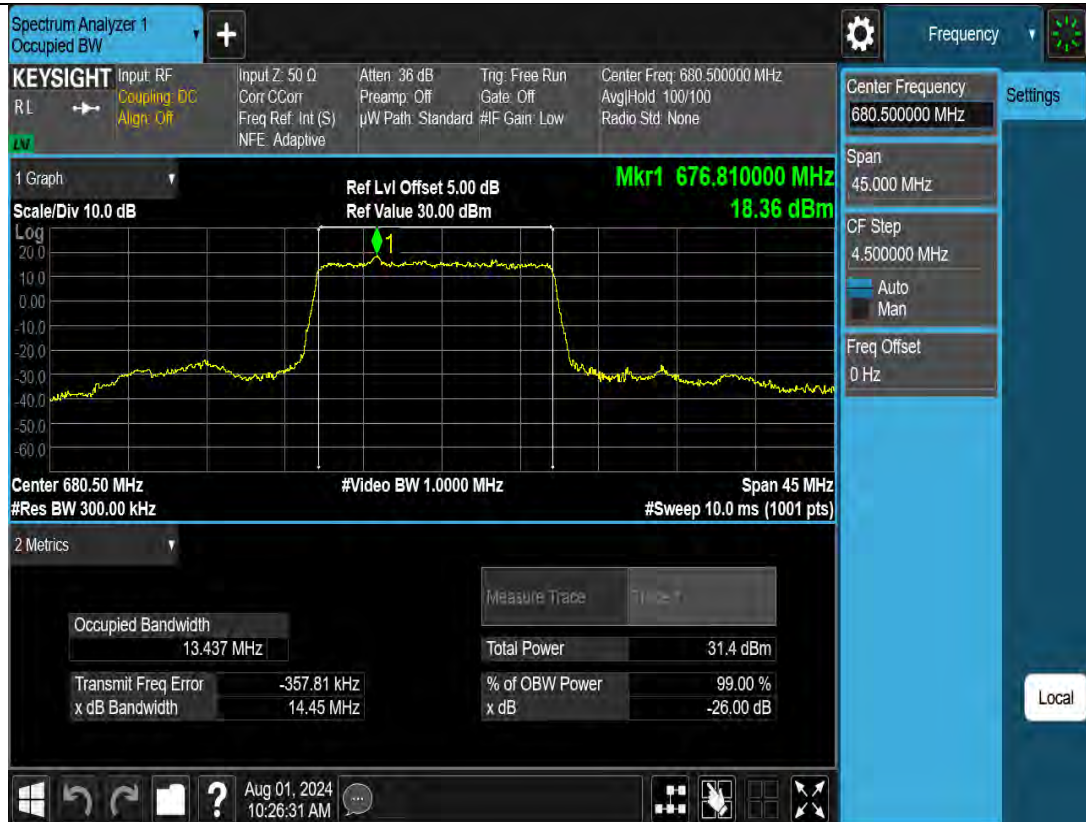
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N71-15M-OBW-L-CP-OFDM-QPSK



N71-15M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N71-15M-OBW-M-CP-OFDM-QPSK



N71-15M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N71-15M-OBW-H-CP-OFDM-QPSK



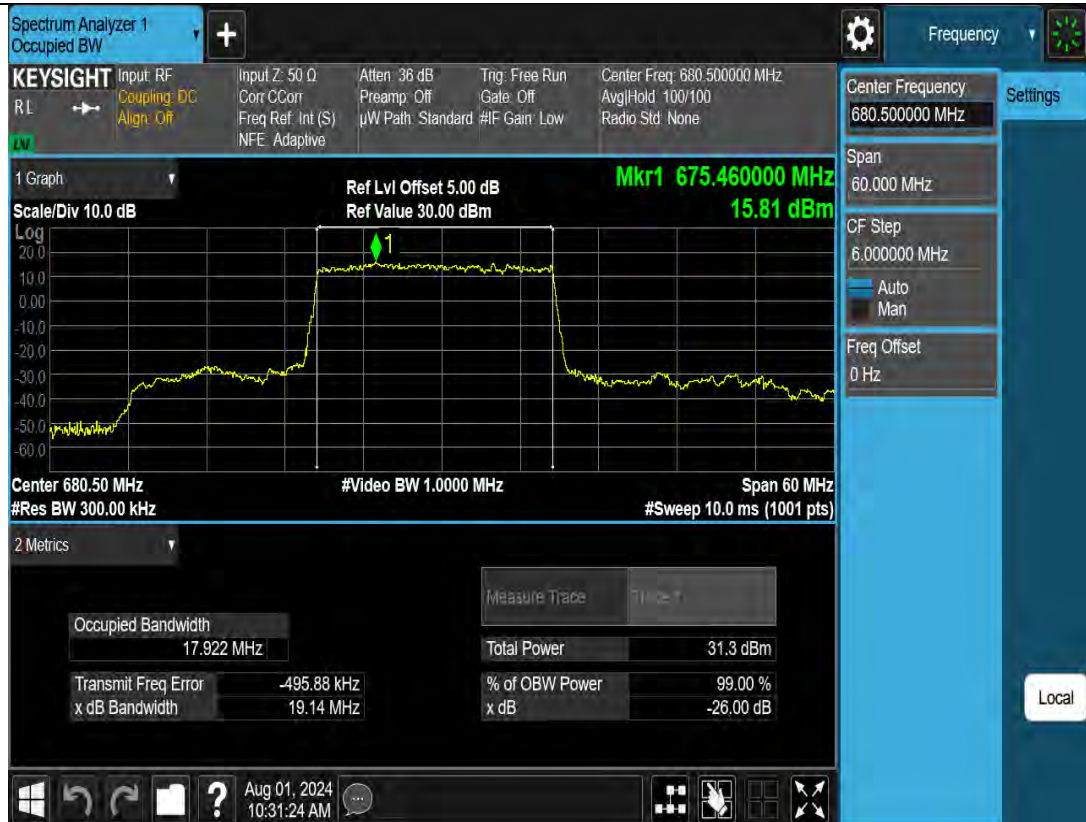
N71-20M-OBW-L-DFT-s-OFDM-Pi2 BPSK



N71-20M-OBW-L-CP-OFDM-QPSK



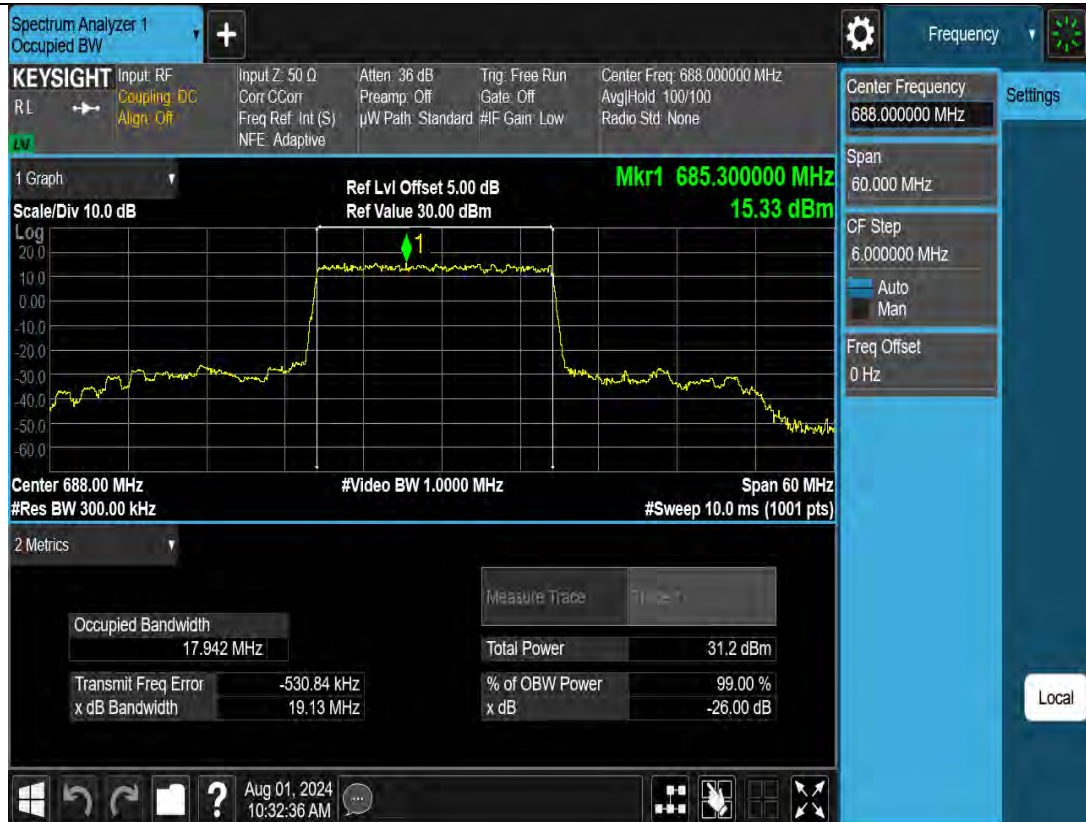
N71-20M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N71-20M-OBW-M-CP-OFDM-QPSK



N71-20M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N71-20M-OBW-H-CP-OFDM-QPSK



Peak-Average Ratio

Test Result

5G NR N71 SCS=15kHz 5MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	3.79	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.74	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.4	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.1	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.4	<=13	Pass
CP-OFDM QPSK		Outer_Full	7	<=13	Pass

5G NR N71 SCS=15kHz 10MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.39	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.2	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.6	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.19	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.1	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.22	<=13	Pass

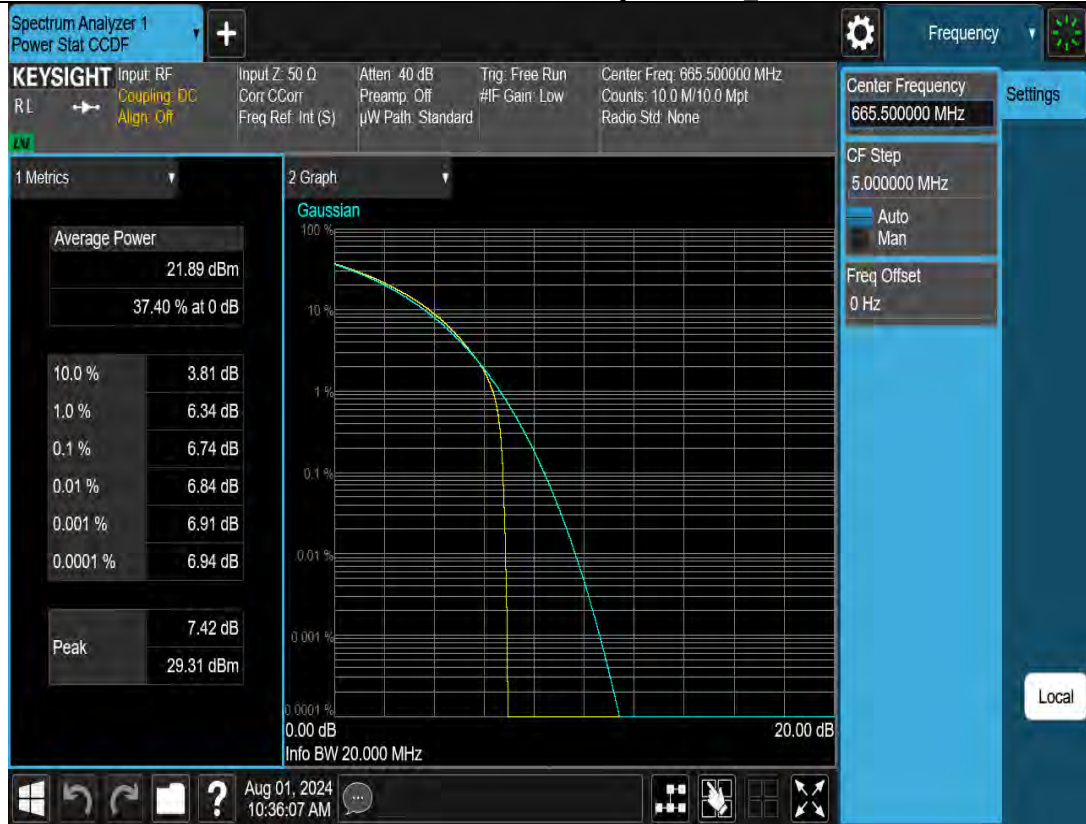
5G NR N71 SCS=15kHz 15MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.3	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.33	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.43	<=13	Pass
CP-OFDM QPSK		Outer_Full	6.99	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.18	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.16	<=13	Pass

5G NR N71 SCS=15kHz 20MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low	Outer_Full	4.4	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.43	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle	Outer_Full	4.3	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.07	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High	Outer_Full	4.31	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.34	<=13	Pass

Test Graph



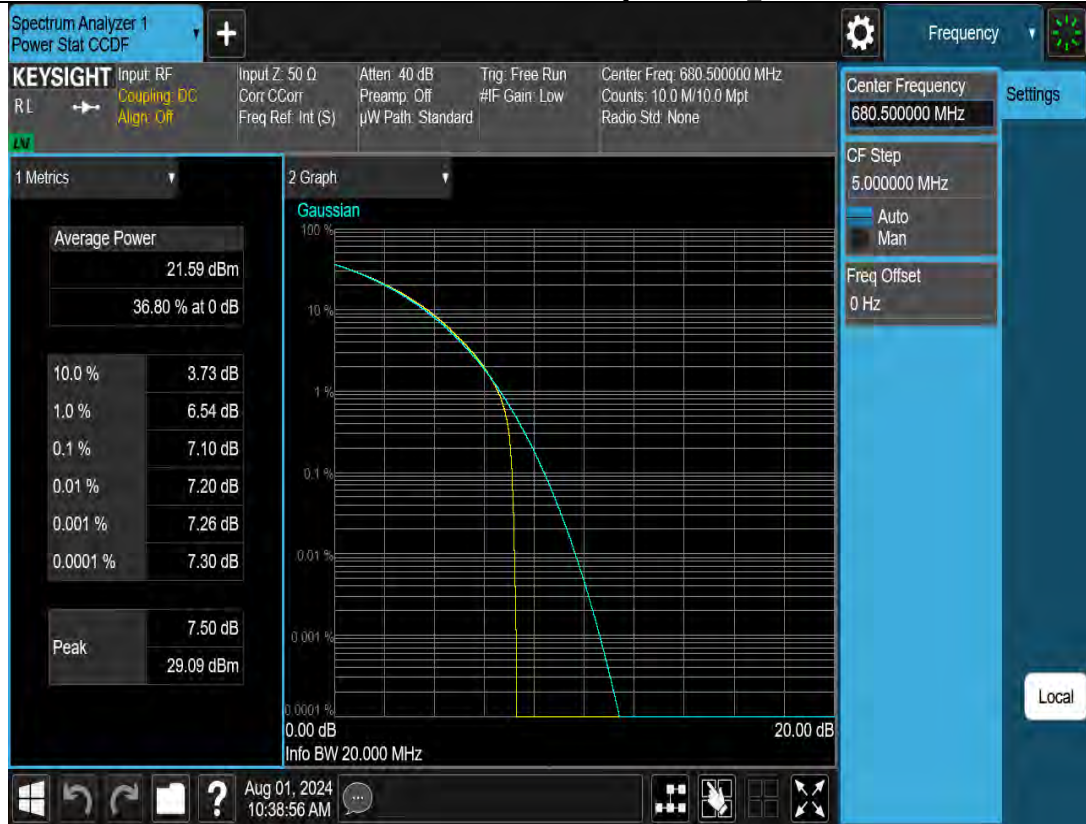
N71-5M-PAPR-L-CP-OFDM-QPSK-Outer Full



N71-5M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



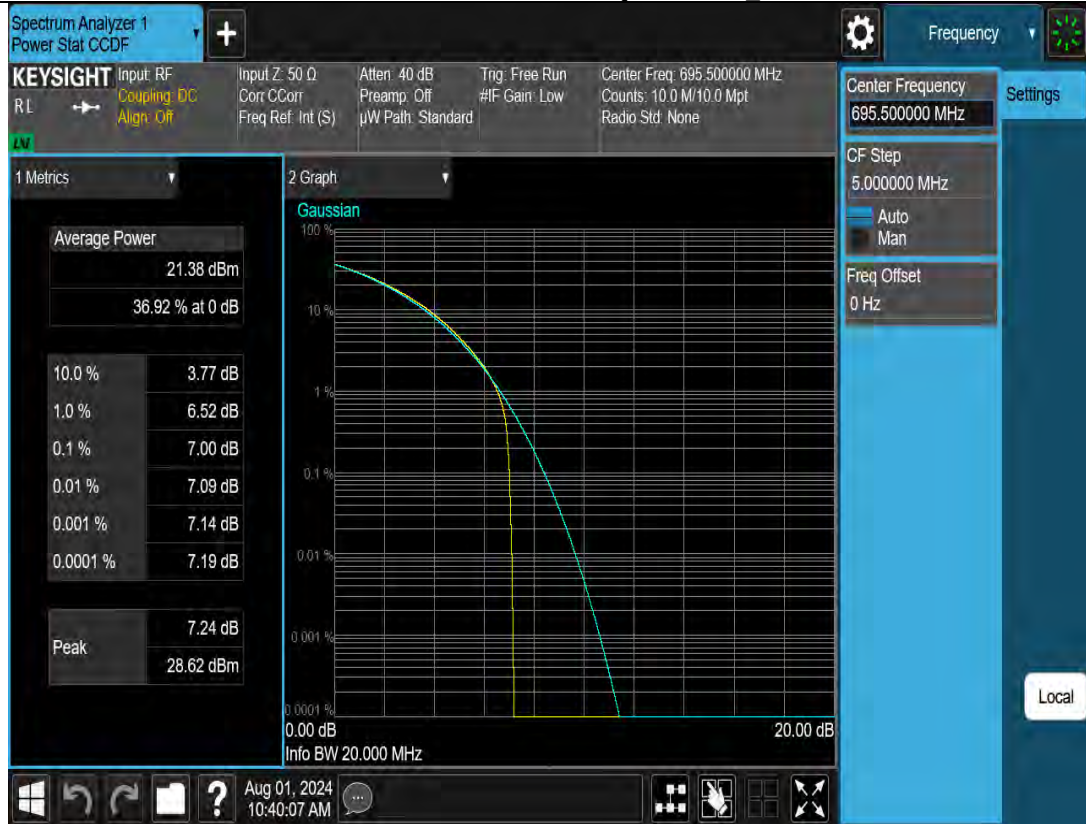
N71-5M-PAPR-M-CP-OFDM-QPSK-Outer Full



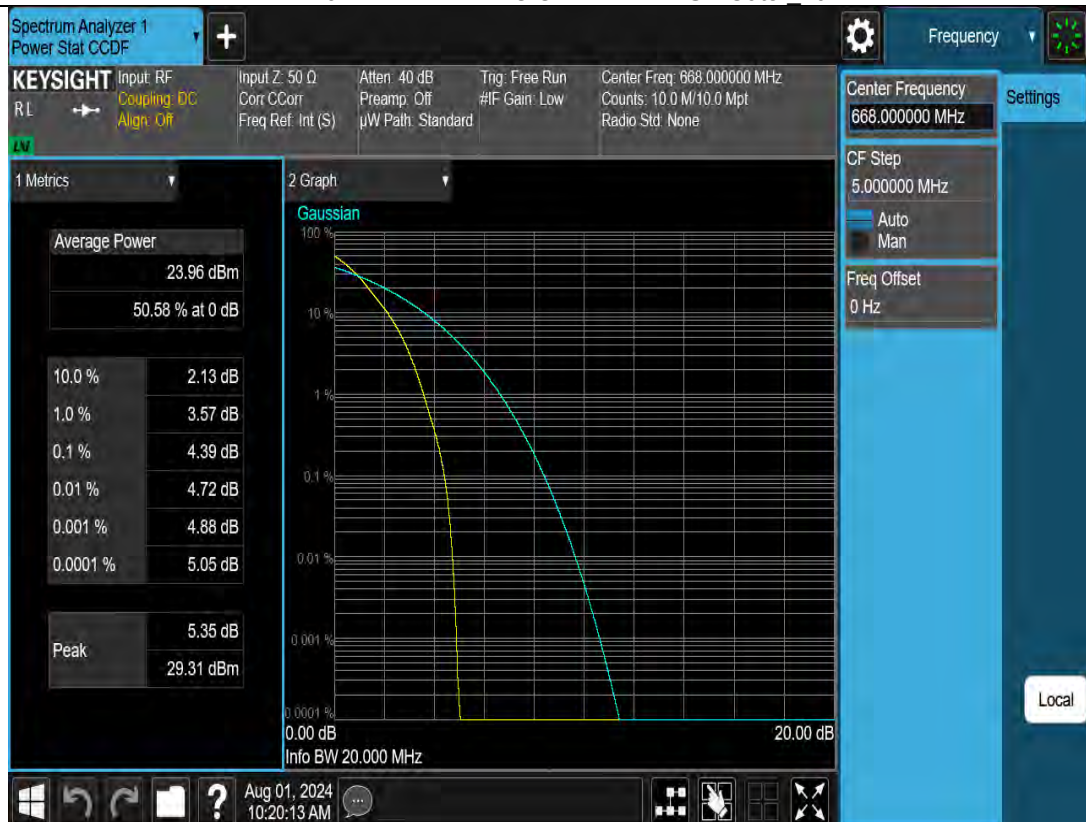
N71-5M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



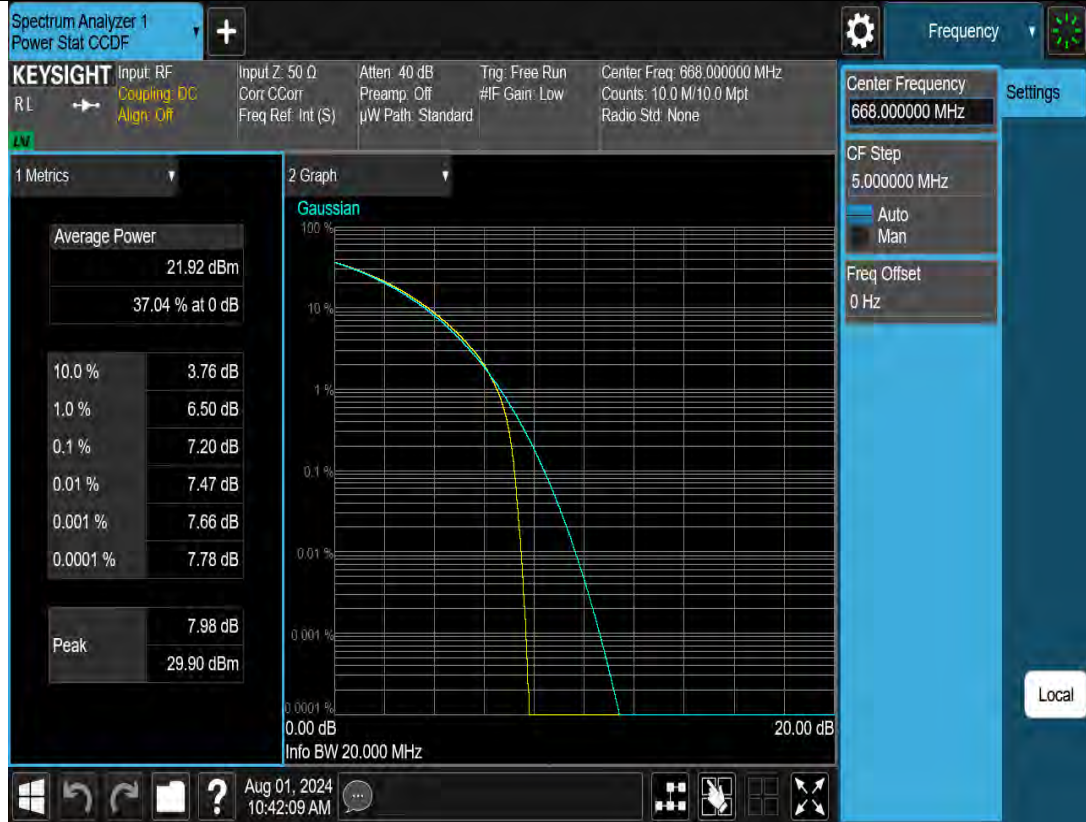
N71-5M-PAPR-H-CP-OFDM-QPSK-Outer Full



N71-10M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



N71-10M-PAPR-L-CP-OFDM-QPSK-Outer Full



N71-10M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



N71-10M-PAPR-M-CP-OFDM-QPSK-Outer Full



N71-10M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input: RF
Coupling: DC
Align: Off

RL

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

Atten: 40 dB
Preamp: Off
μW Path: Standard

Tng: Free Run
#IF Gain: Low

Center Freq: 693.000000 MHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

1 Metrics

Average Power

21.42 dBm

37.15 % at 0 dB

10.0 % 3.72 dB

1.0 % 6.53 dB

0.1 % 7.22 dB

0.01 % 7.35 dB

0.001 % 7.42 dB

0.0001 % 7.47 dB

Peak

7.55 dB

28.97 dBm

2 Graph

Gaussian

100 %

10 %

1 %

0.1 %

0.01 %

0.001 %

0.0001 %

0.00 dB

20.00 dB

Info BW 20.000 MHz

Settings

Center Frequency

693.000000 MHz

CF Step

5.000000 MHz

Auto

Man

Freq Offset

0 Hz

Local

Spectrum Analyzer 1
Power Stat CCDF

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

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

Atten: 40 dB
Preamp: Off
 μ W Path: Standard

Trig: Free Run
#IF Gain: Low

Center Freq: 670.500000 MHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

1 Metrics

Average Power

23.75 dBm	
50.40 % at 0 dB	

10.0 % 2.13 dB
1.0 % 3.59 dB
0.1 % 4.30 dB
0.01 % 4.57 dB
0.001 % 4.75 dB
0.0001 % 4.93 dB

Peak 5.19 dB
28.94 dBm

2 Graph

Gaussian

0.00 dB 20.00 dB

Info BW 20.000 MHz

Settings

Center Frequency
670.500000 MHz

CF Step
5.000000 MHz

Auto
Man

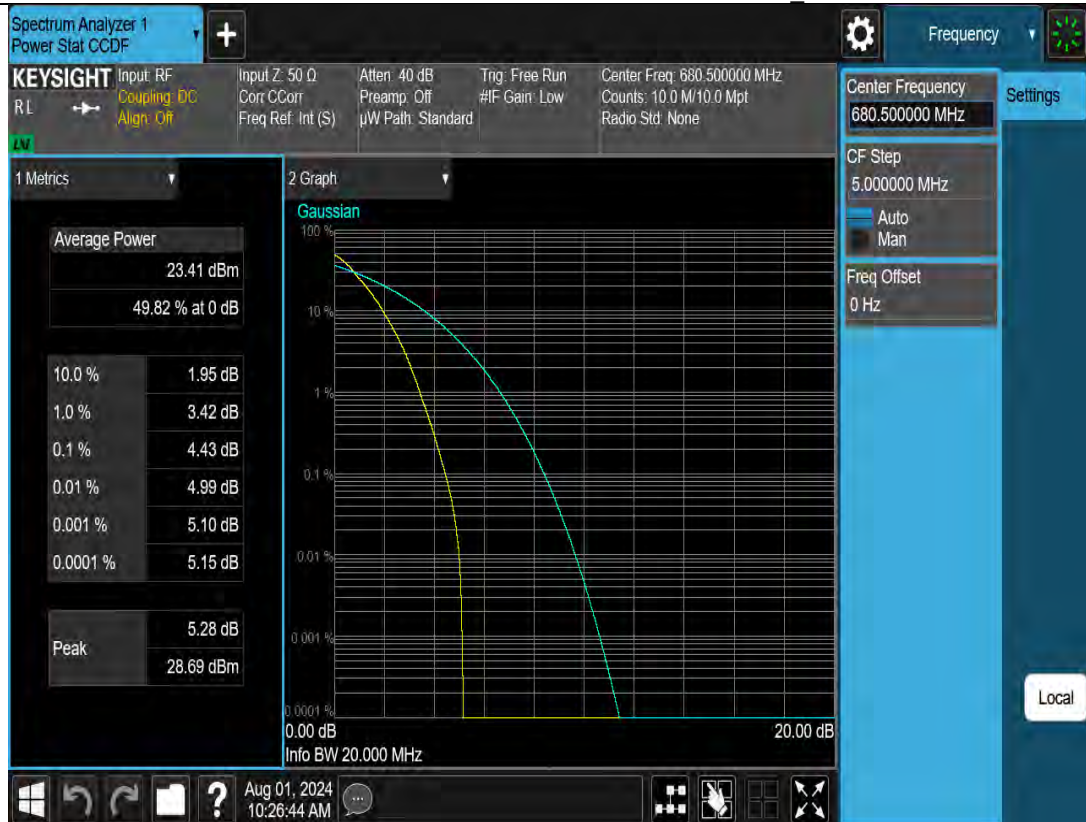
Freq Offset
0 Hz

Local

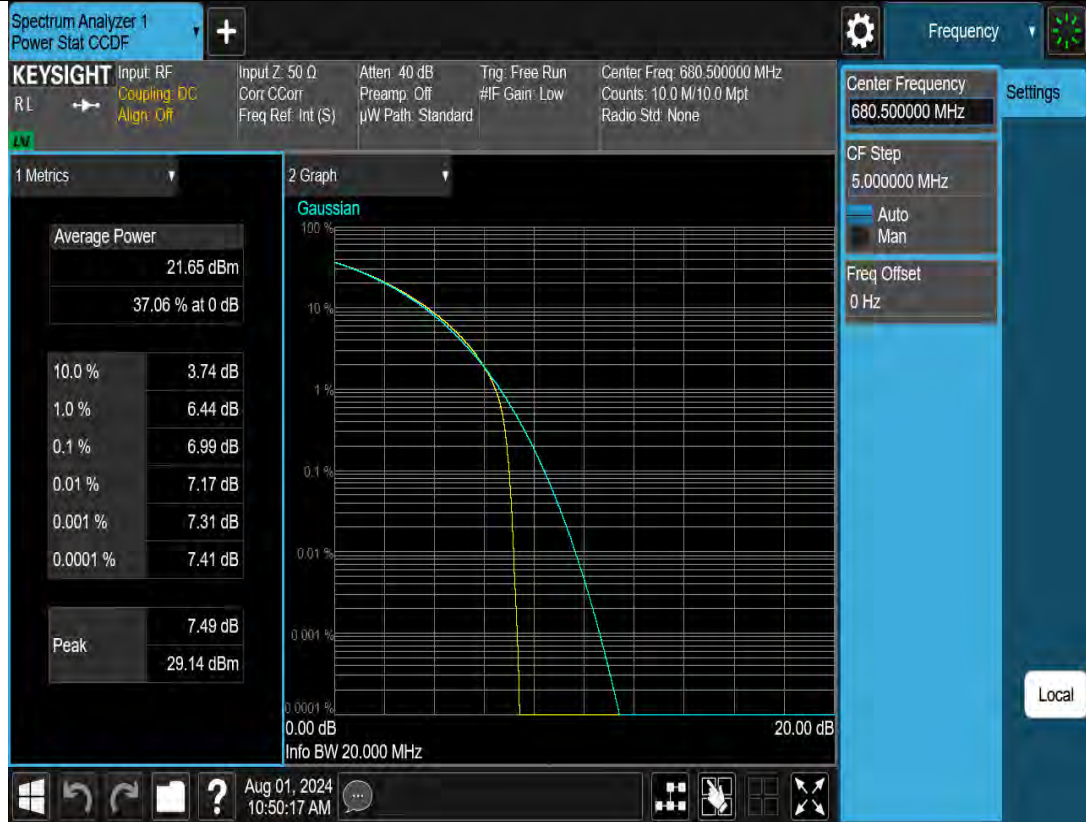
N71-15M-PAPR-L-CP-OFDM-QPSK-Outer Full



N71-15M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



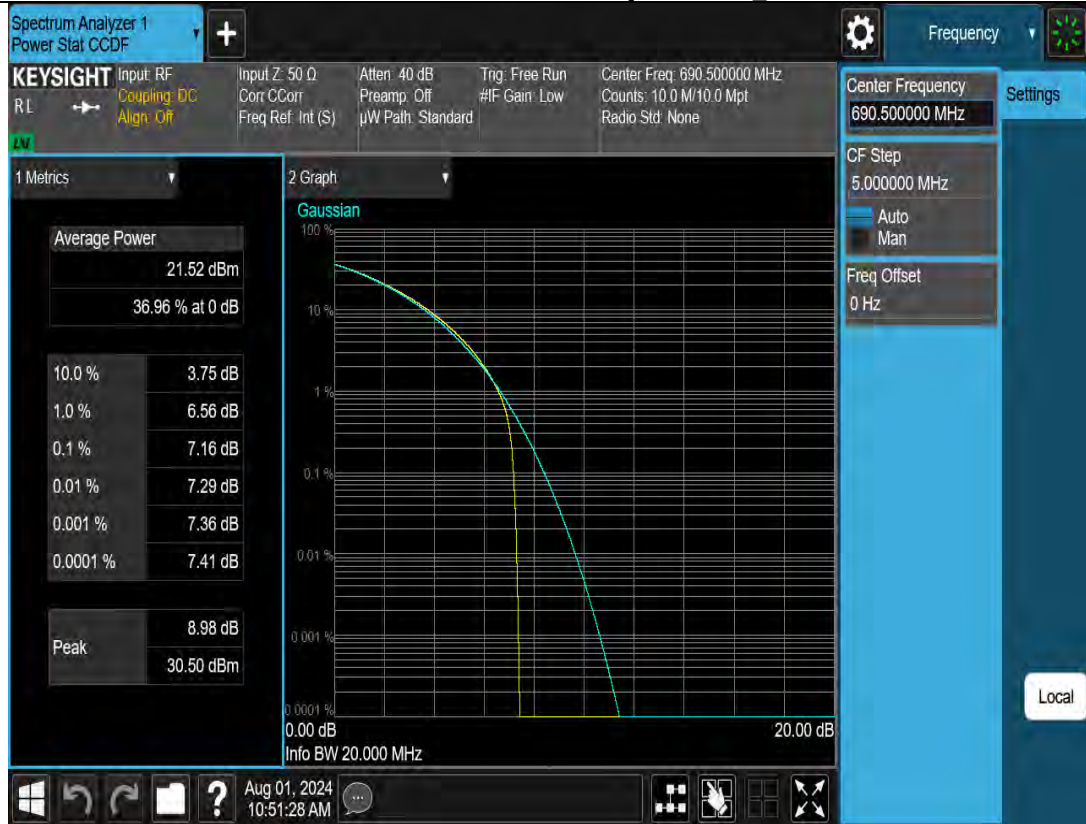
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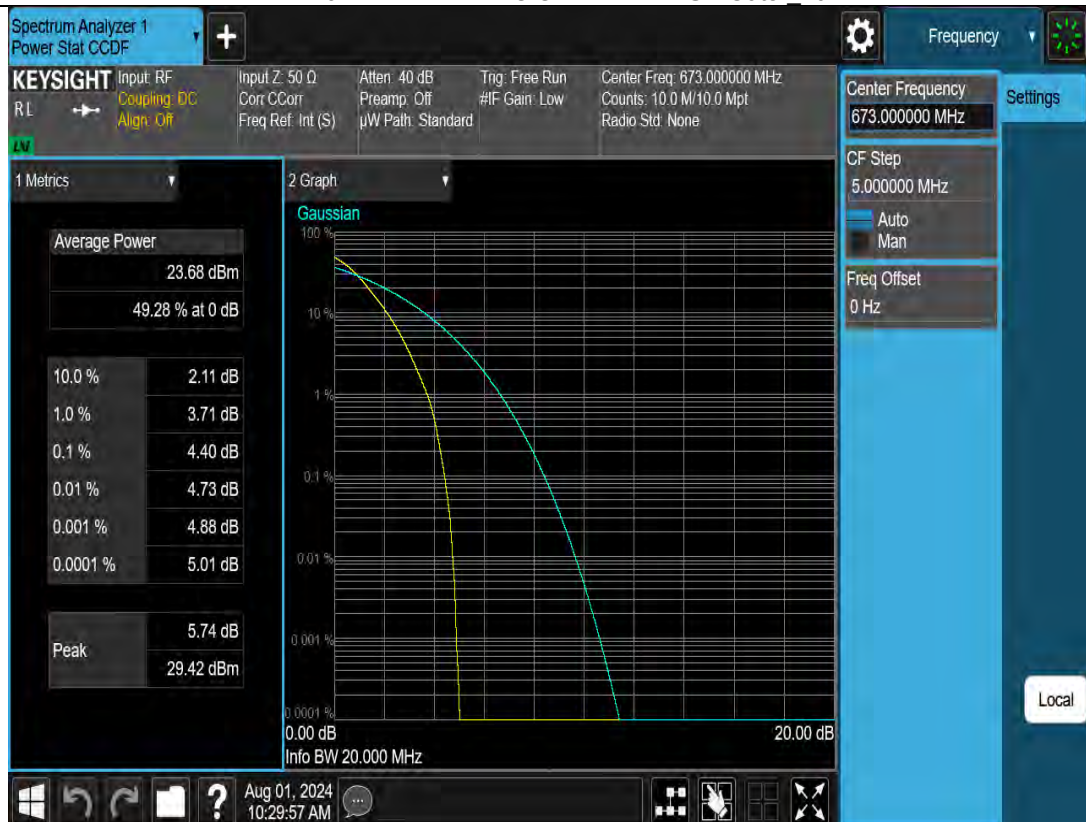
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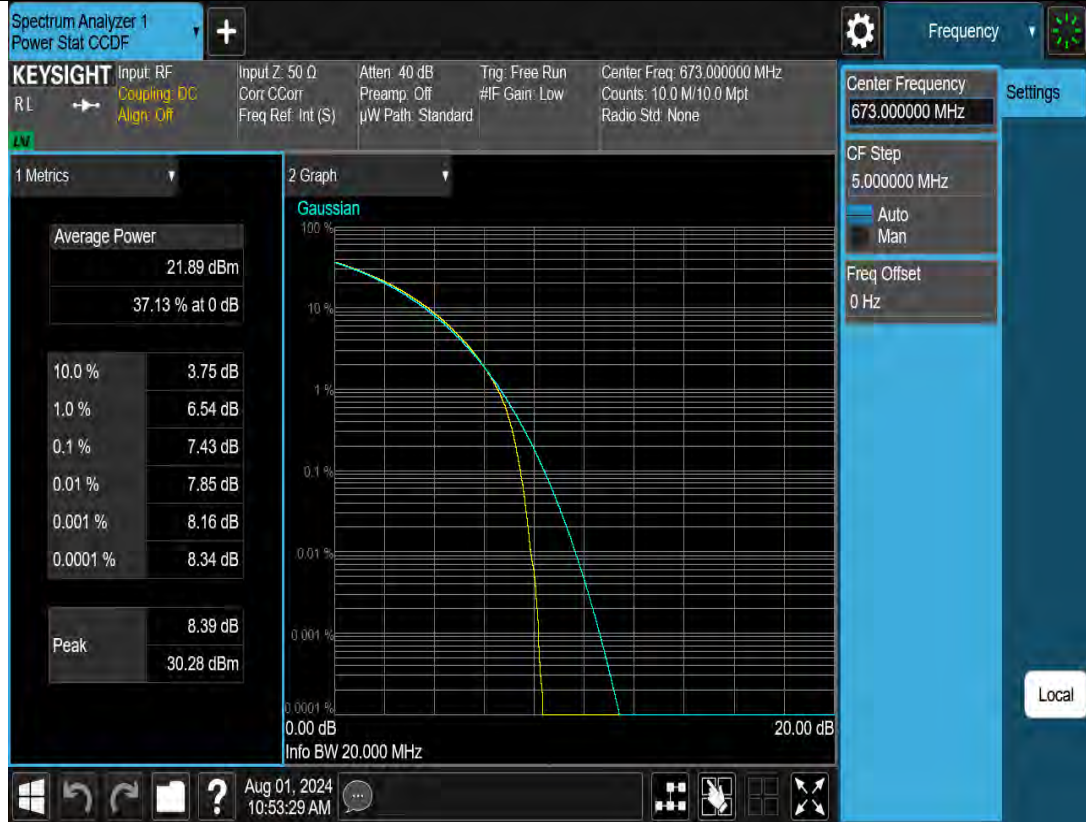
N71-15M-PAPR-H-CP-OFDM-QPSK-Outer Full



N71-20M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



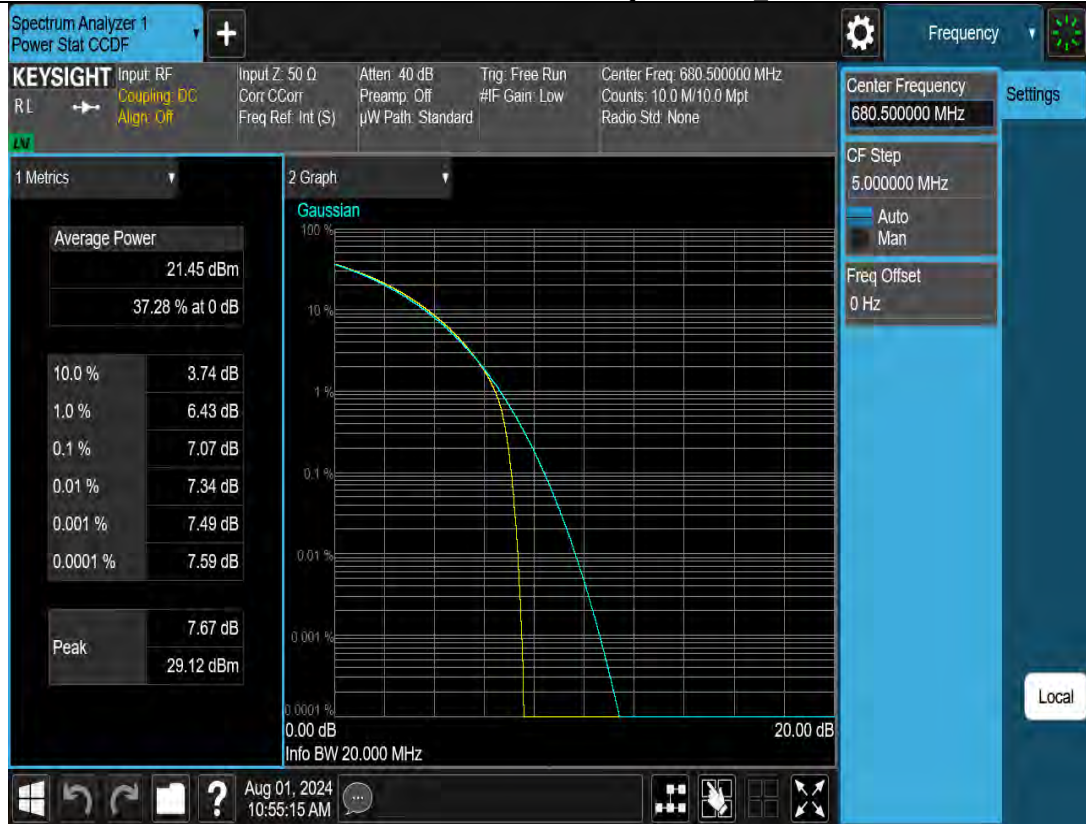
N71-20M-PAPR-L-CP-OFDM-QPSK-Outer Full



N71-20M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer Full



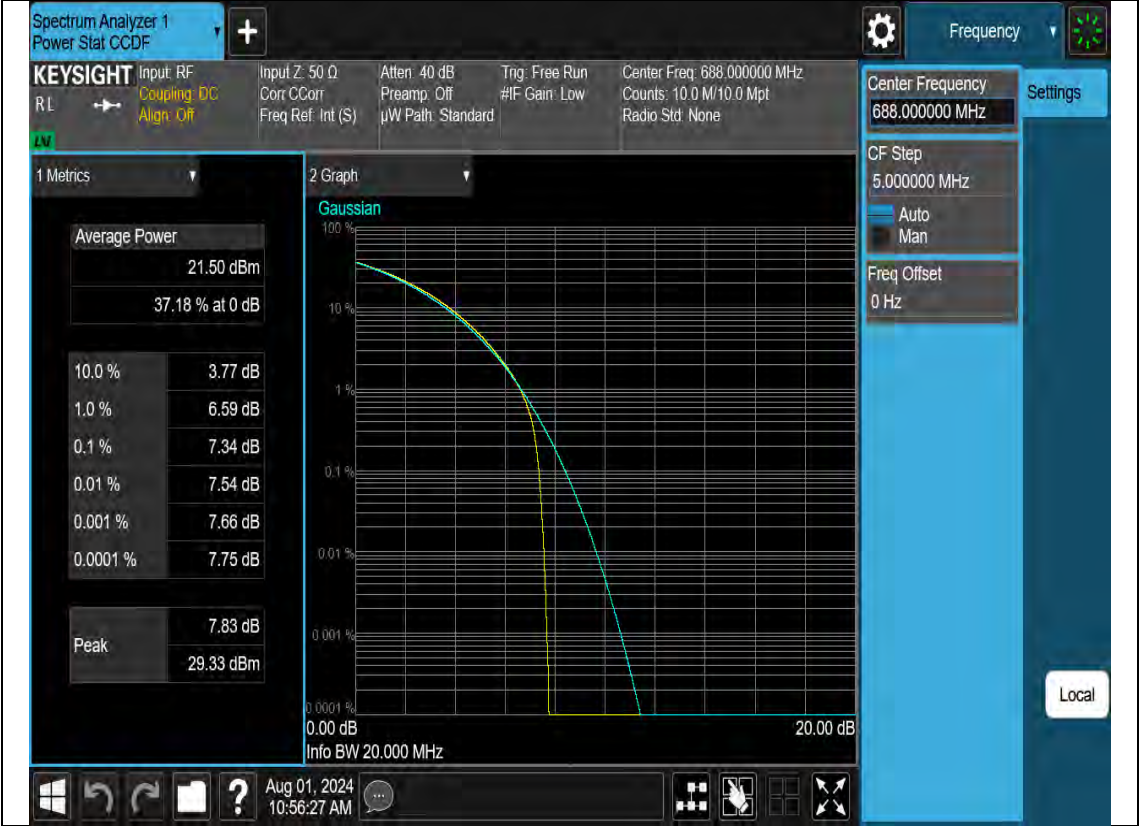
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N71-20M-PAPR-H-CP-OFDM-QPSK-Outer Full

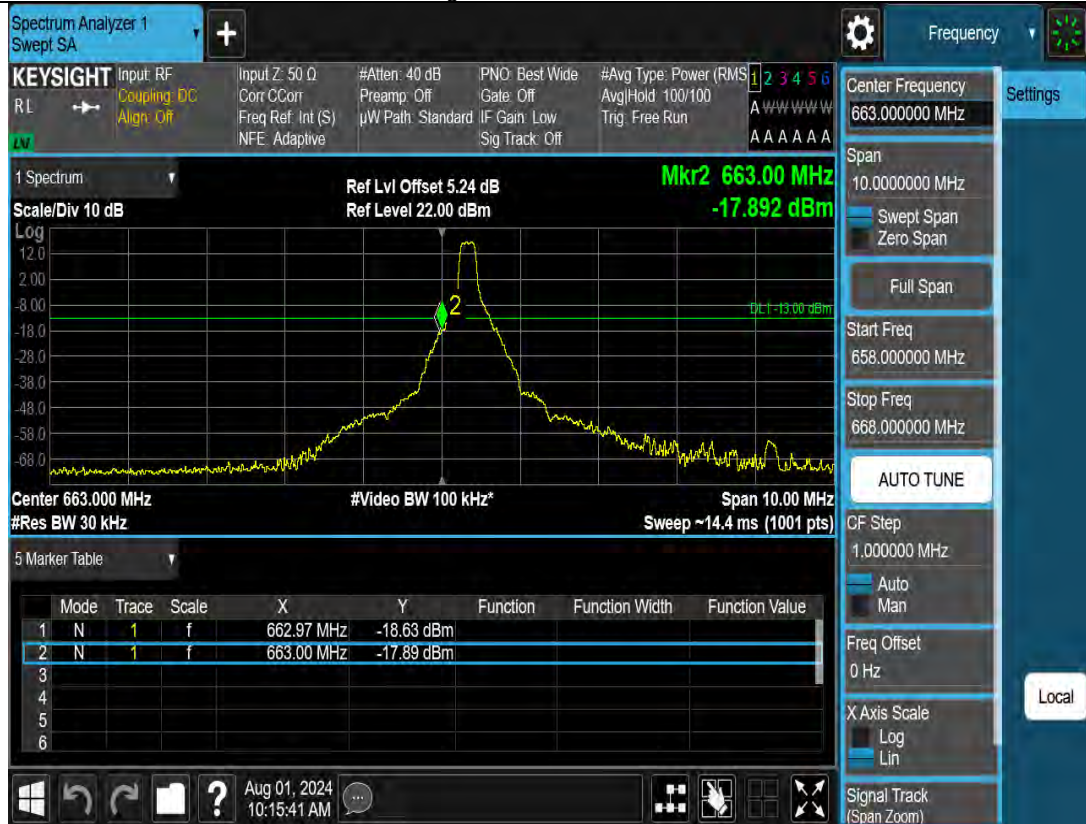


Bandedge

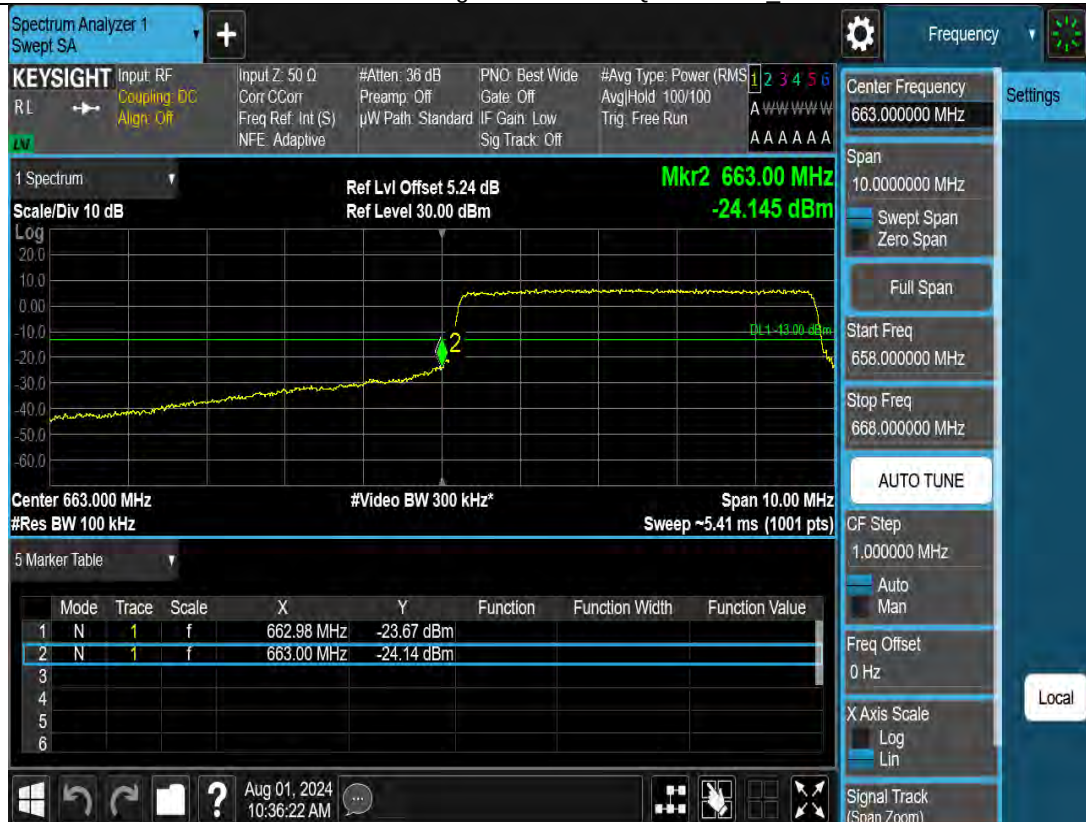
test graph



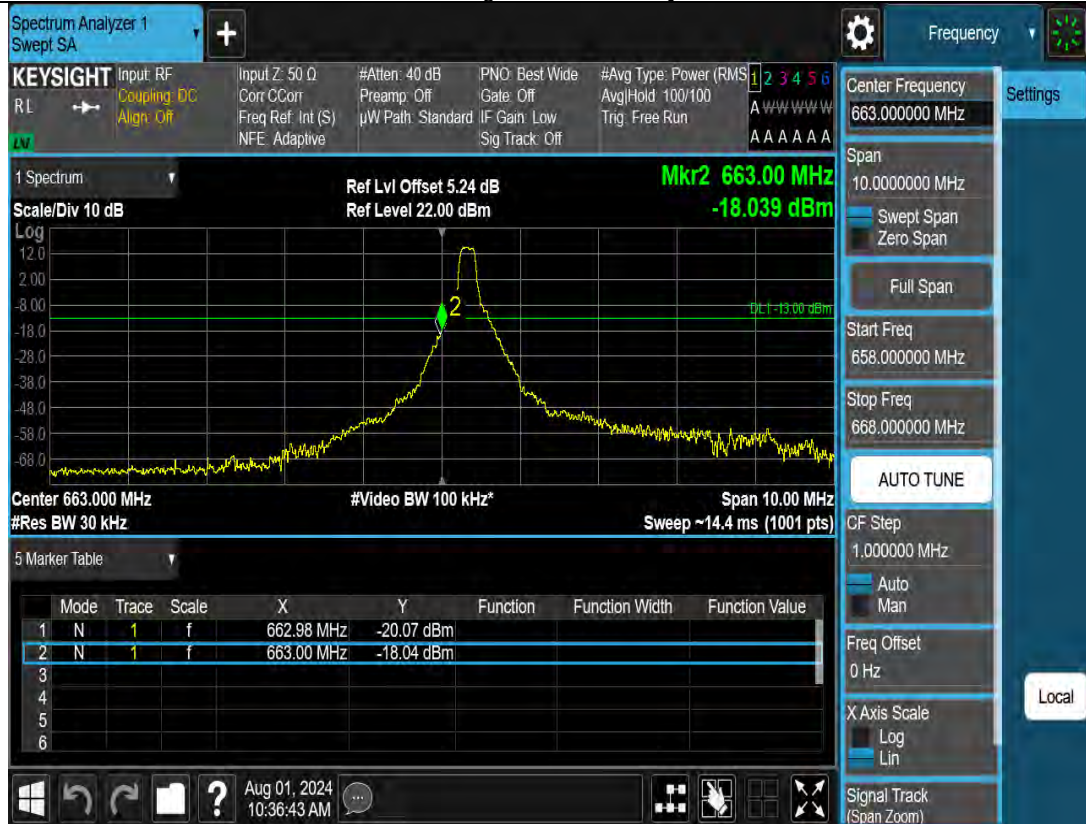
N71-5M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



N71-5M-Bandedge-L-CP-OFDM-QPSK-Outer Full



N71-5M-Bandedge-L-CP-OFDM-QPSK-1RB0



N71-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



N71-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N71-5M-Bandedge-H-CP-OFDM-QPSK-Outer Full



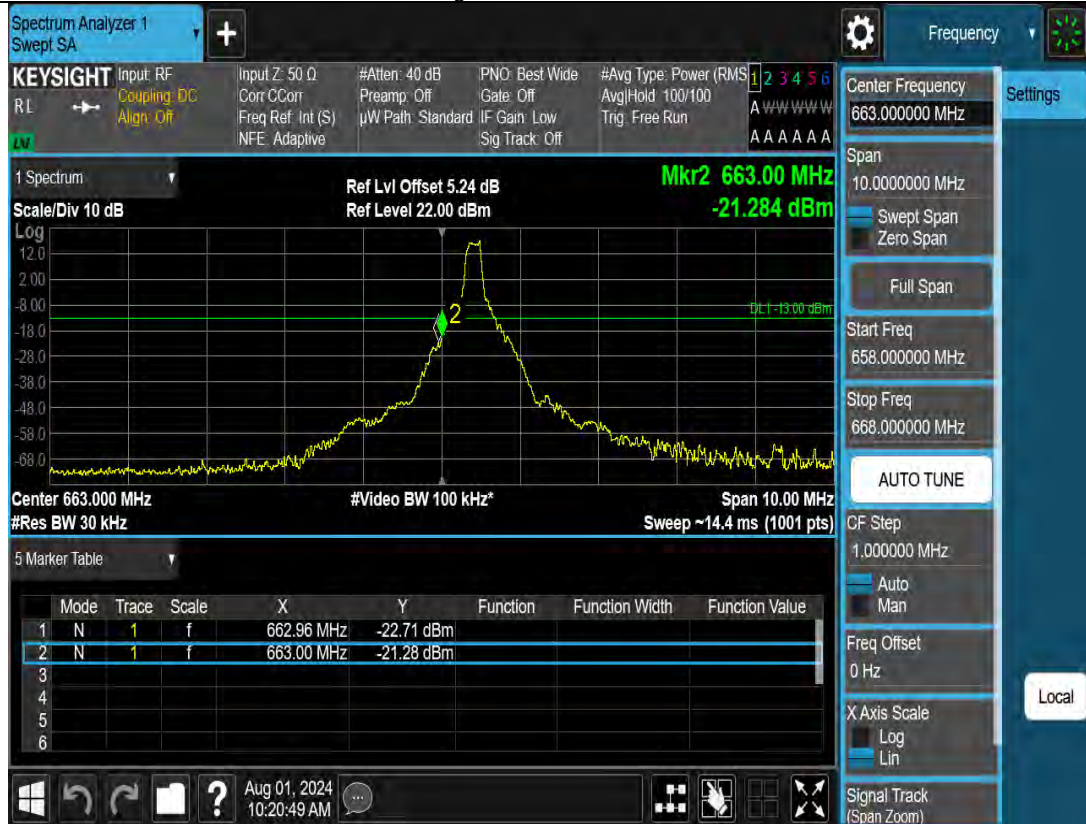
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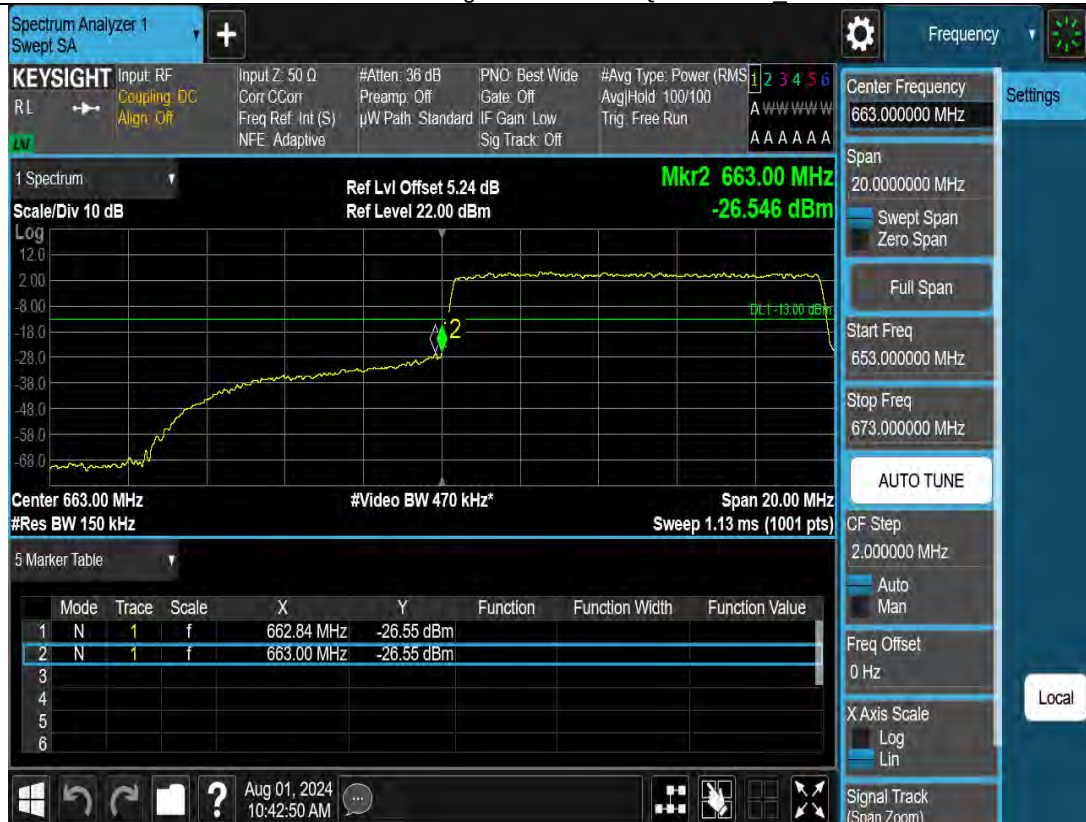
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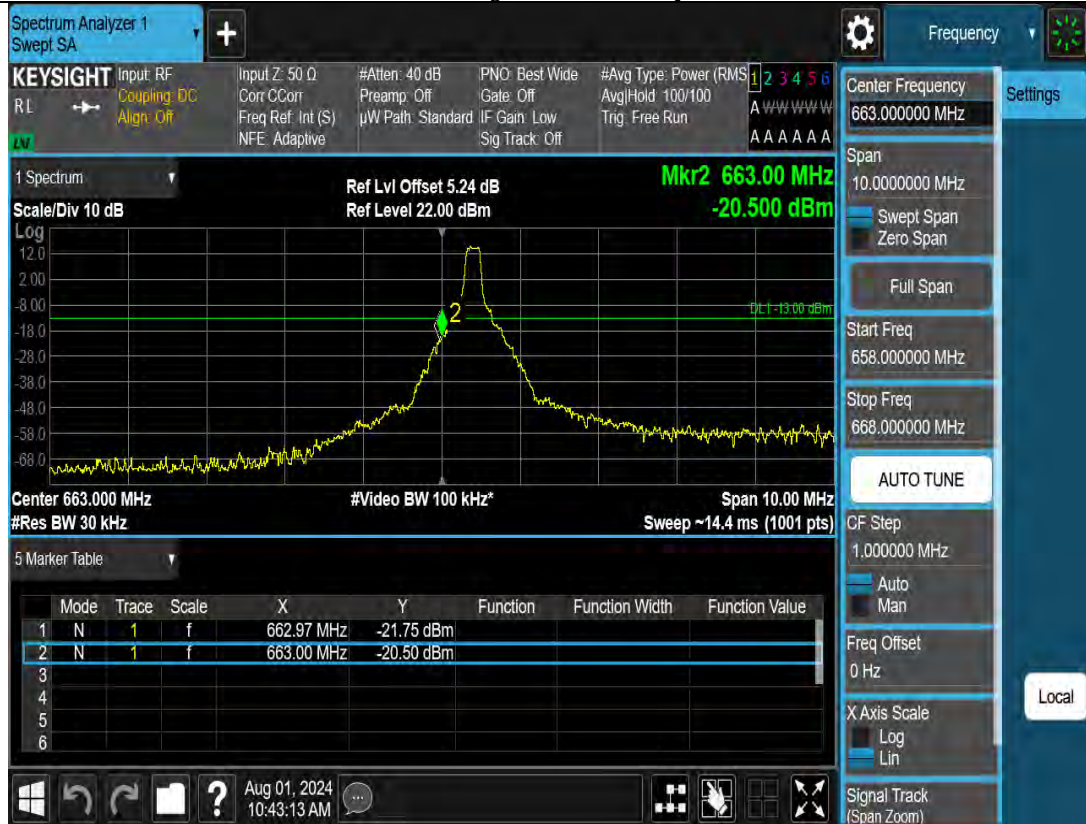
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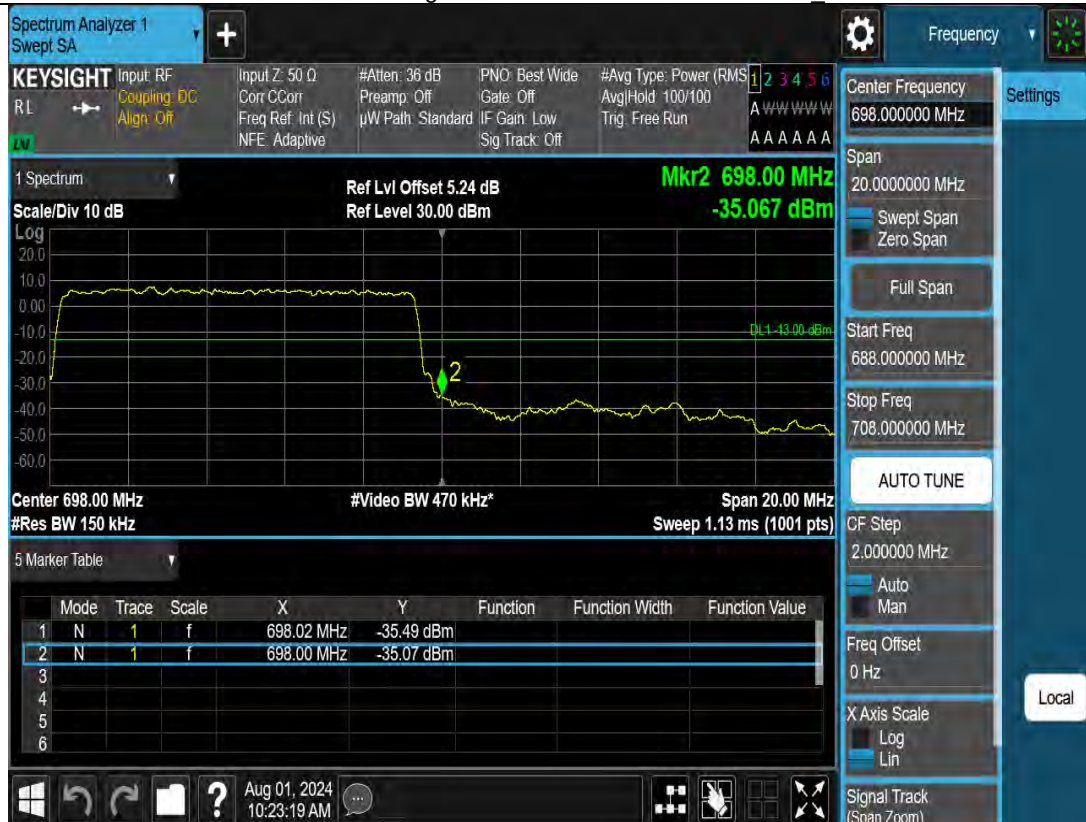
N71-10M-Bandedge-L-CP-OFDM-QPSK-Outer Full



N71-10M-Bandedge-L-CP-OFDM-QPSK-1RB0



N71-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



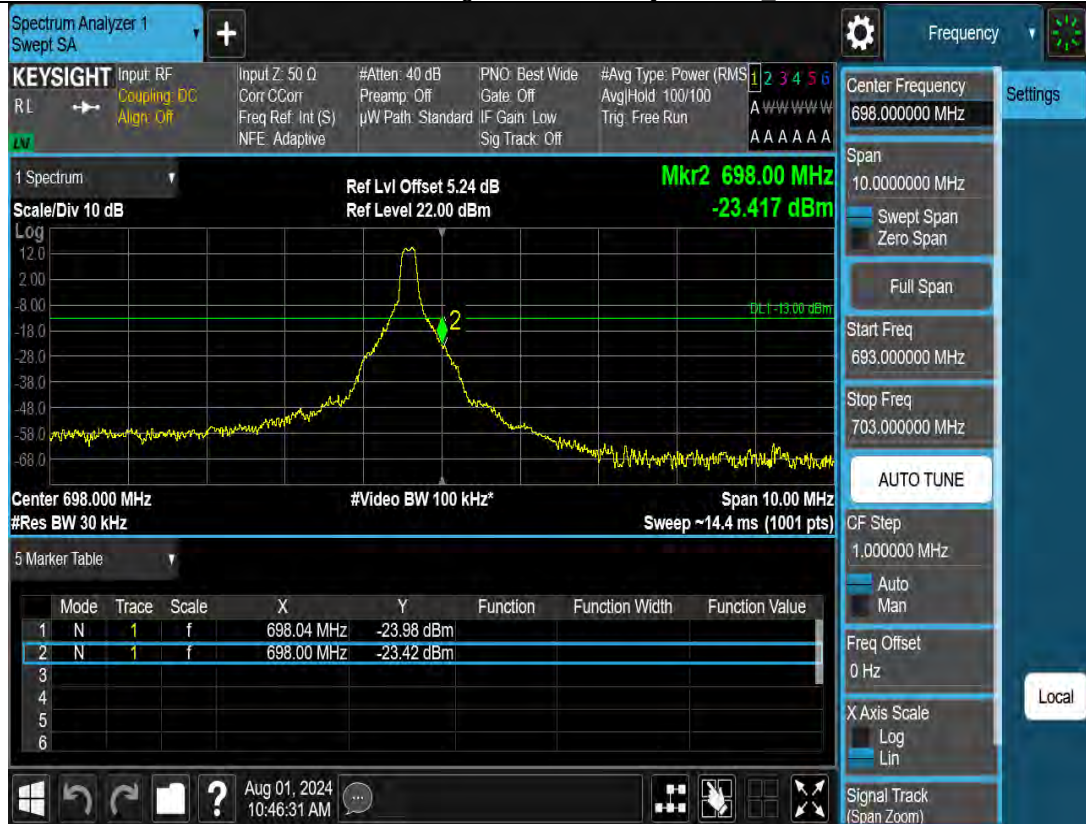
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N71-10M-Bandedge-H-CP-OFDM-QPSK-Outer Full



N71-10M-Bandedge-H-CP-OFDM-QPSK-1RB MAX



N71-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



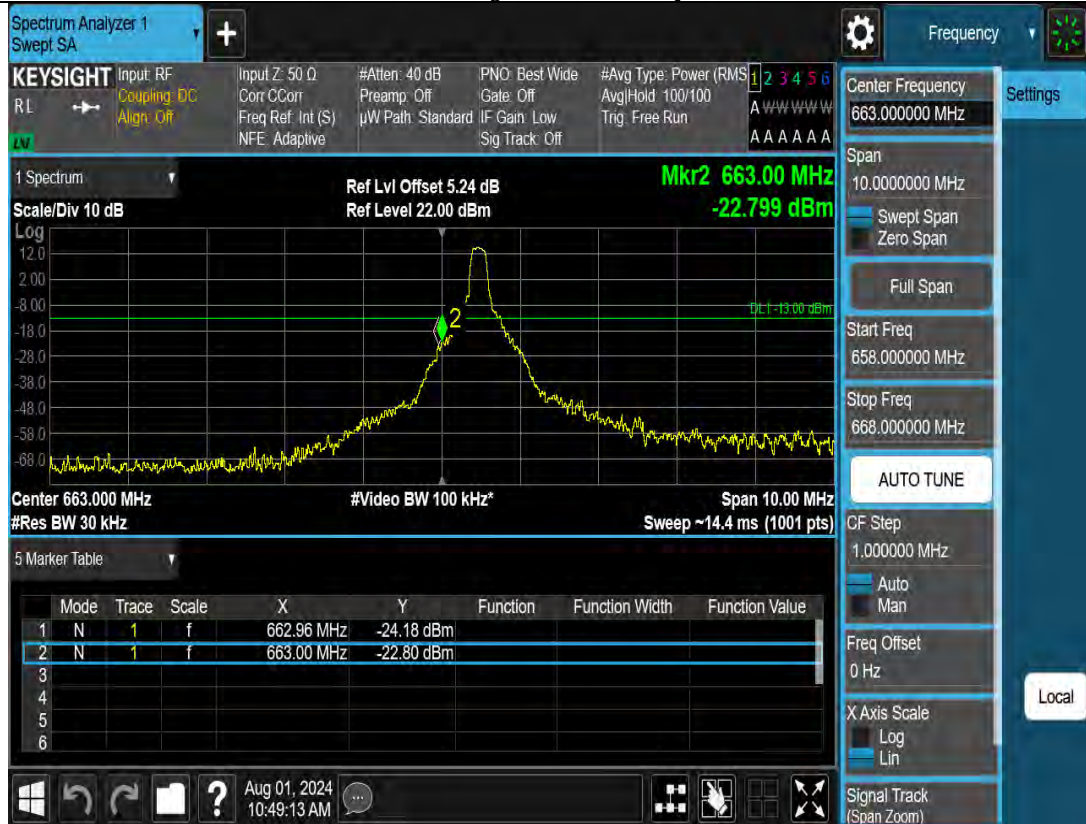
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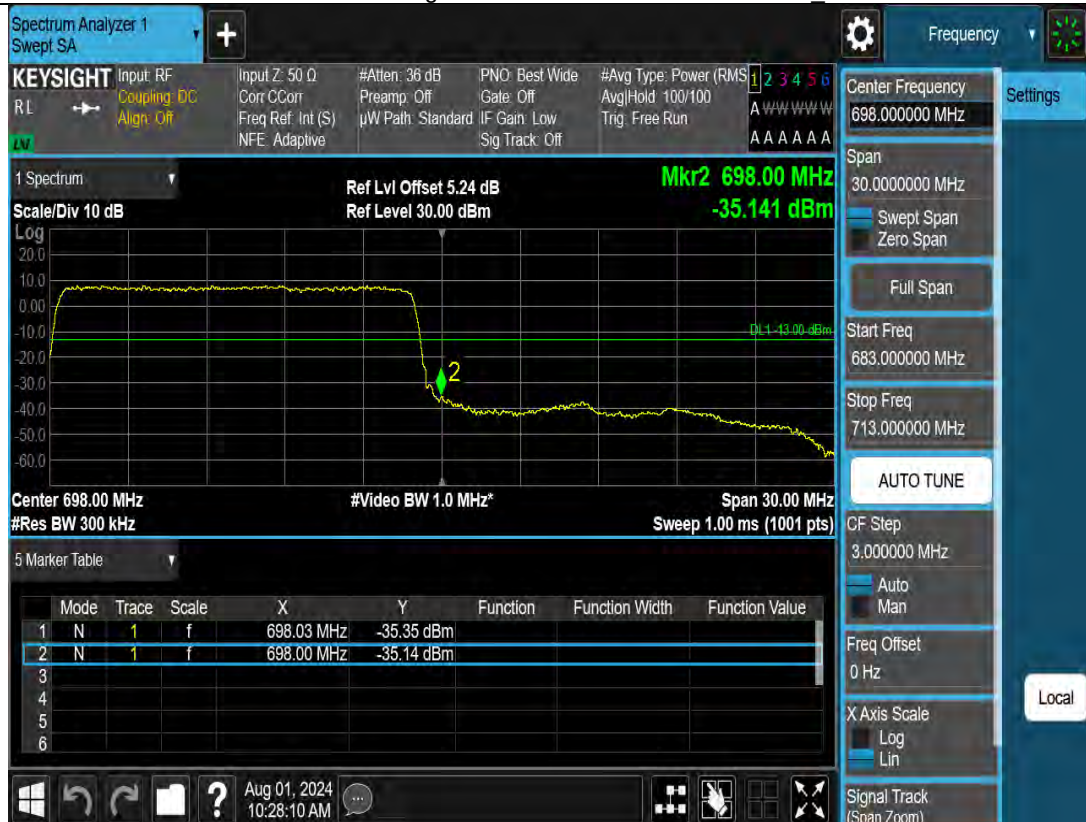
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N71-15M-Bandedge-L-CP-OFDM-QPSK-1RB0



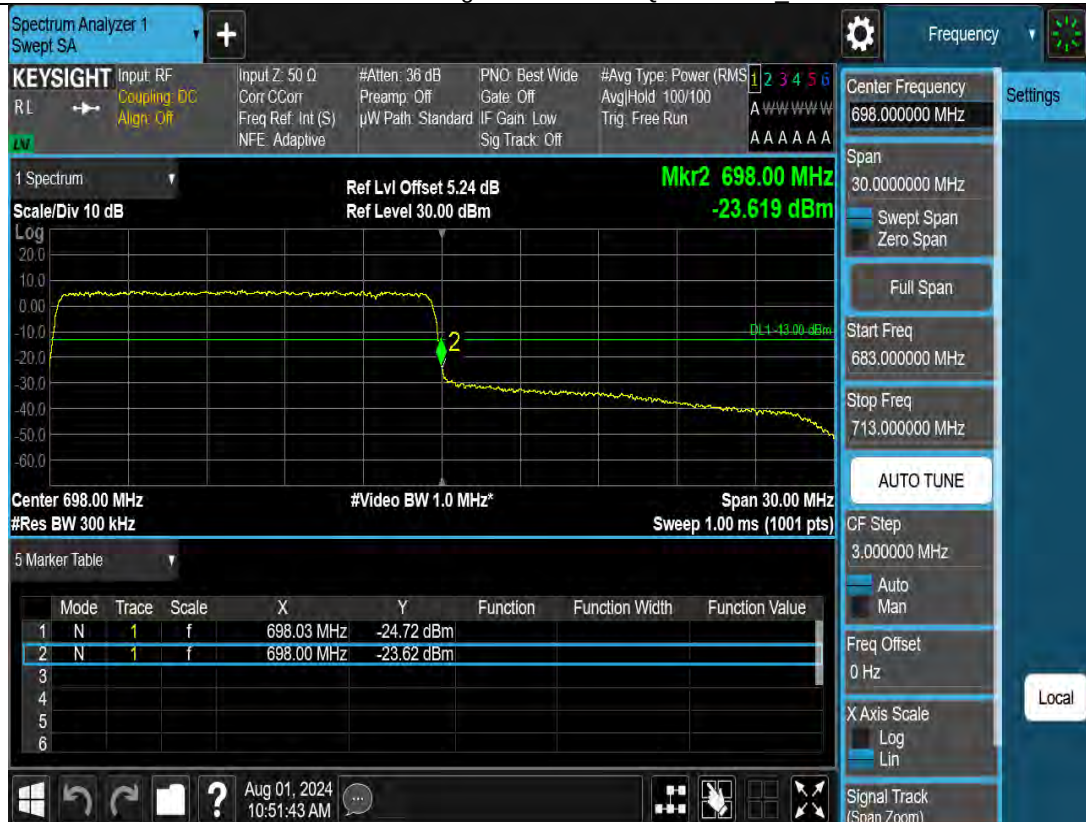
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N71-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



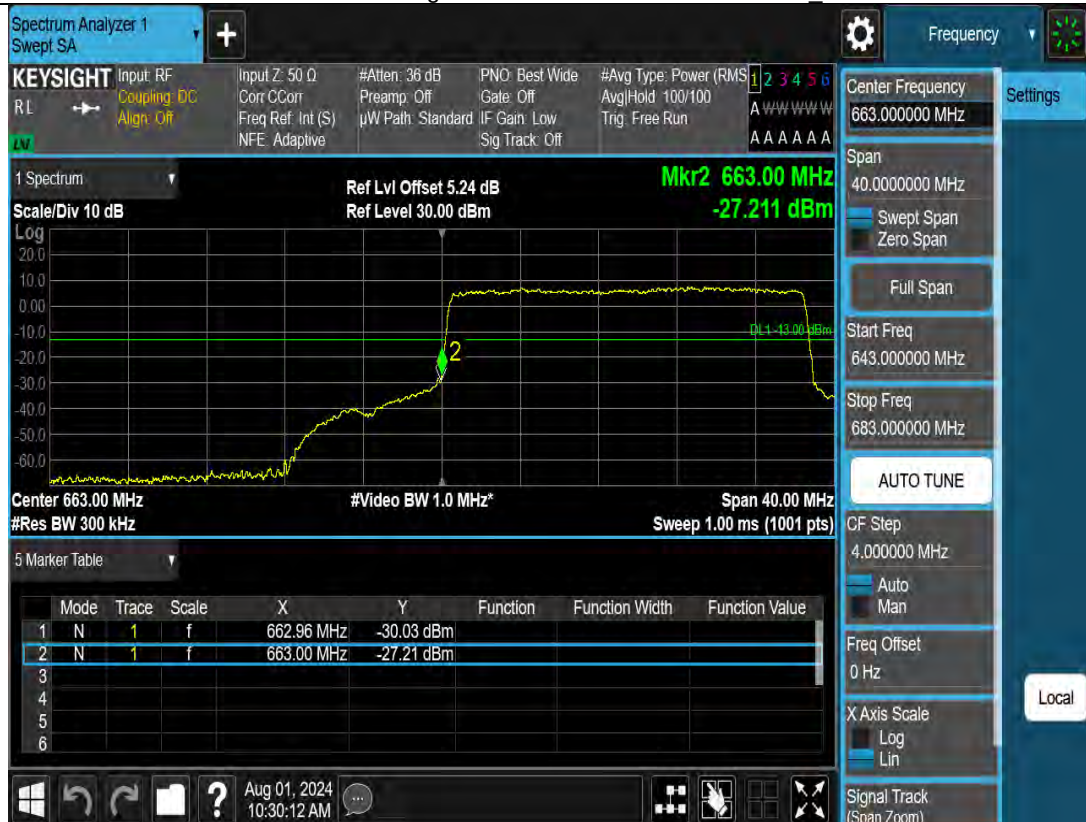
N71-15M-Bandedge-H-CP-OFDM-QPSK-Outer Full



N71-15M-Bandedge-H-CP-OFDM-QPSK-1RB MAX



N71-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer Full



N71-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



N71-20M-Bandedge-L-CP-OFDM-QPSK-Outer Full



N71-20M-Bandedge-L-CP-OFDM-QPSK-1RB0



N71-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer Full



N71-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB MAX



N71-20M-Bandedge-H-CP-OFDM-QPSK-Outer Full



N71-20M-Bandedge-H-CP-OFDM-QPSK-1RB MAX

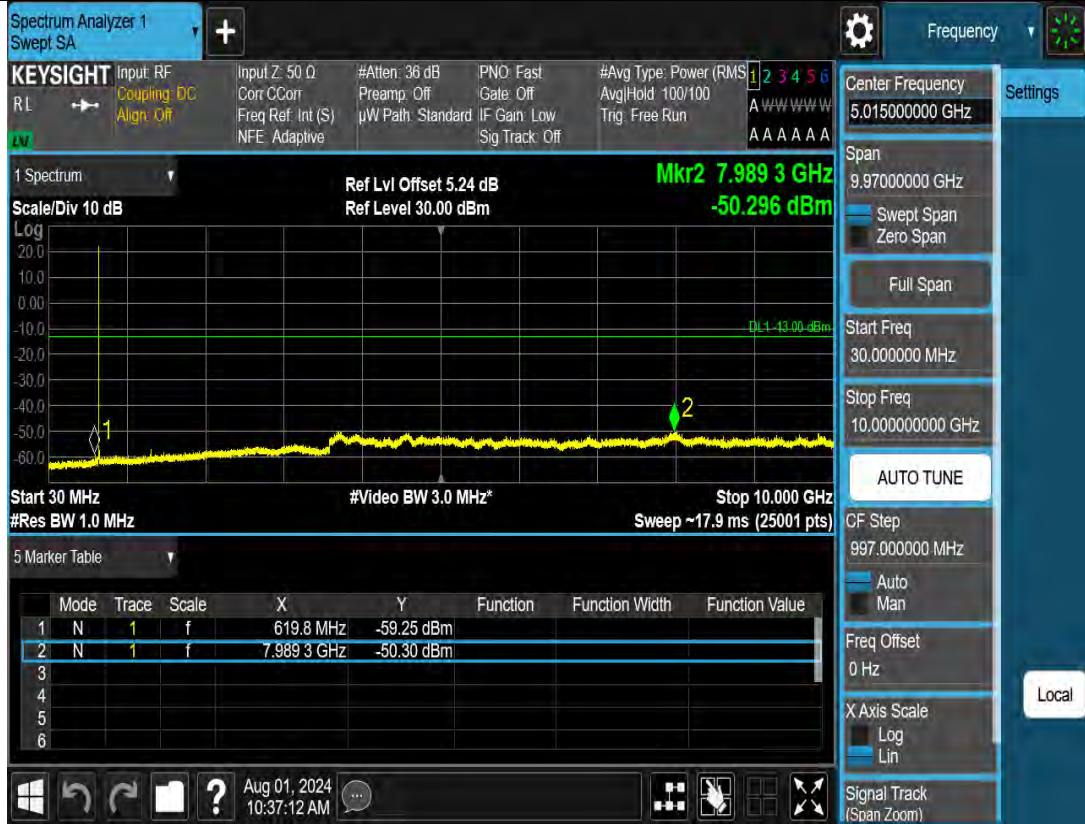


Conducted spurious emissions

test graph



N71-5M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz



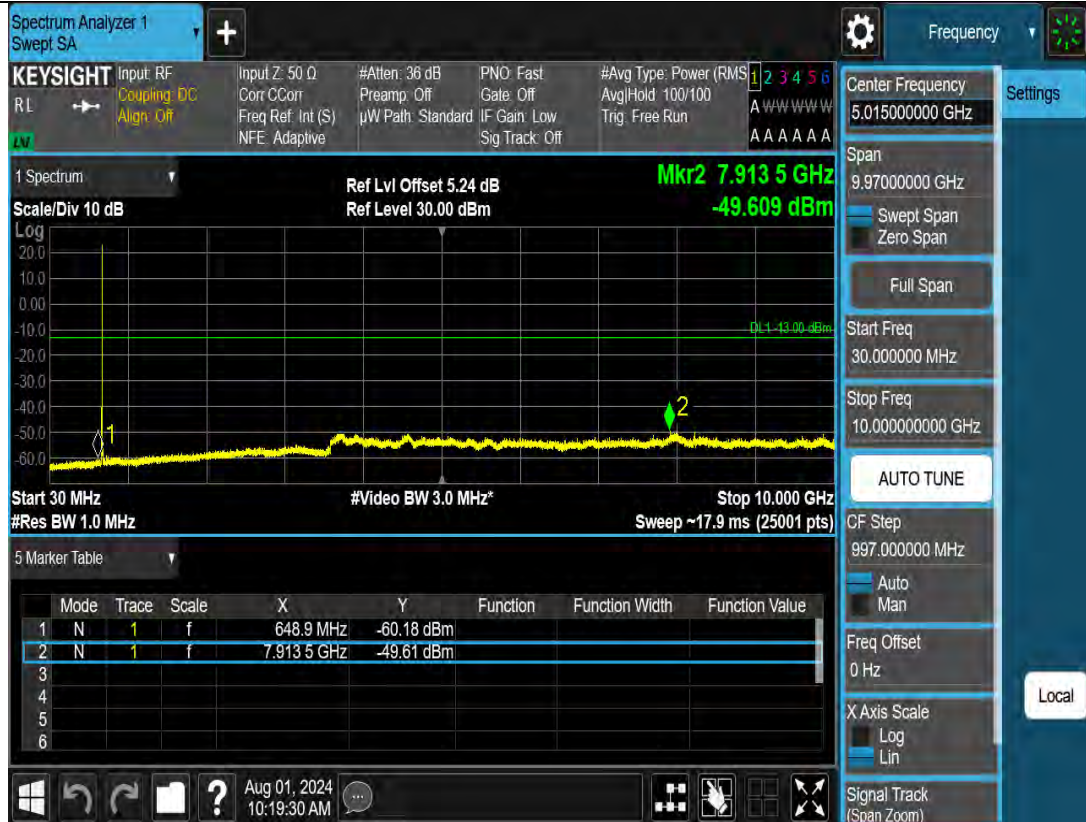
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N71-5M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N71-5M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N71-5M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



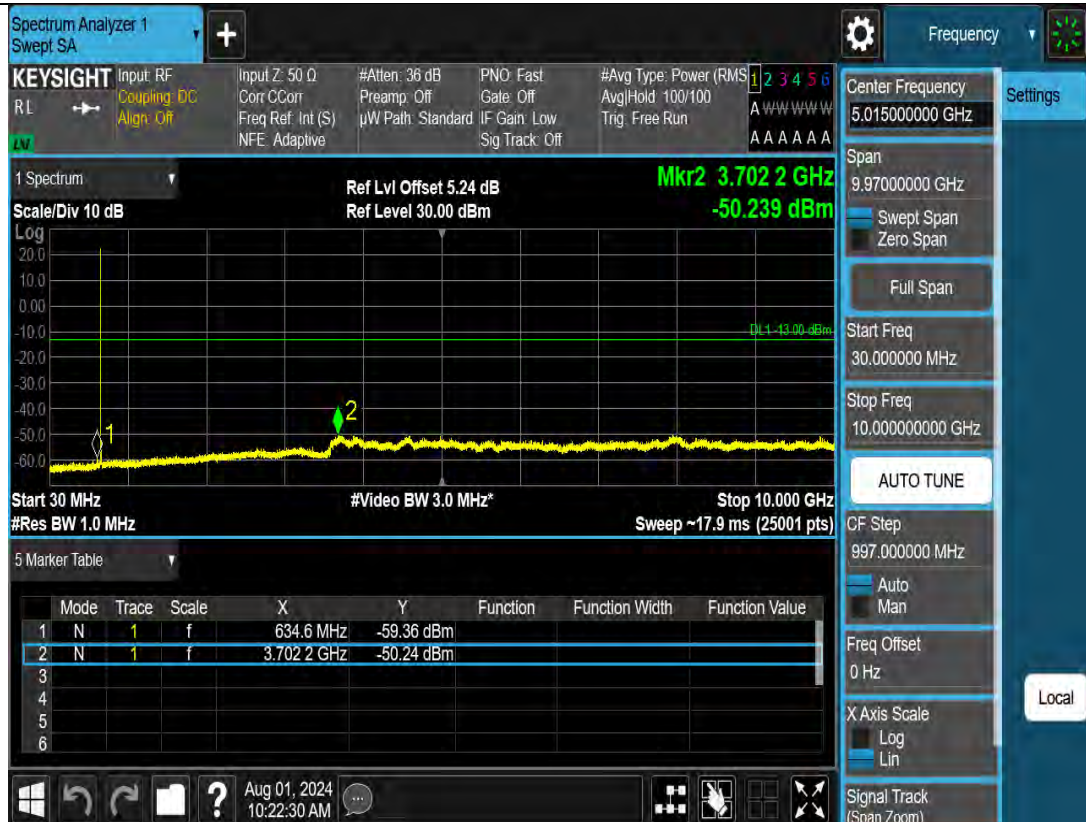
N71-10M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



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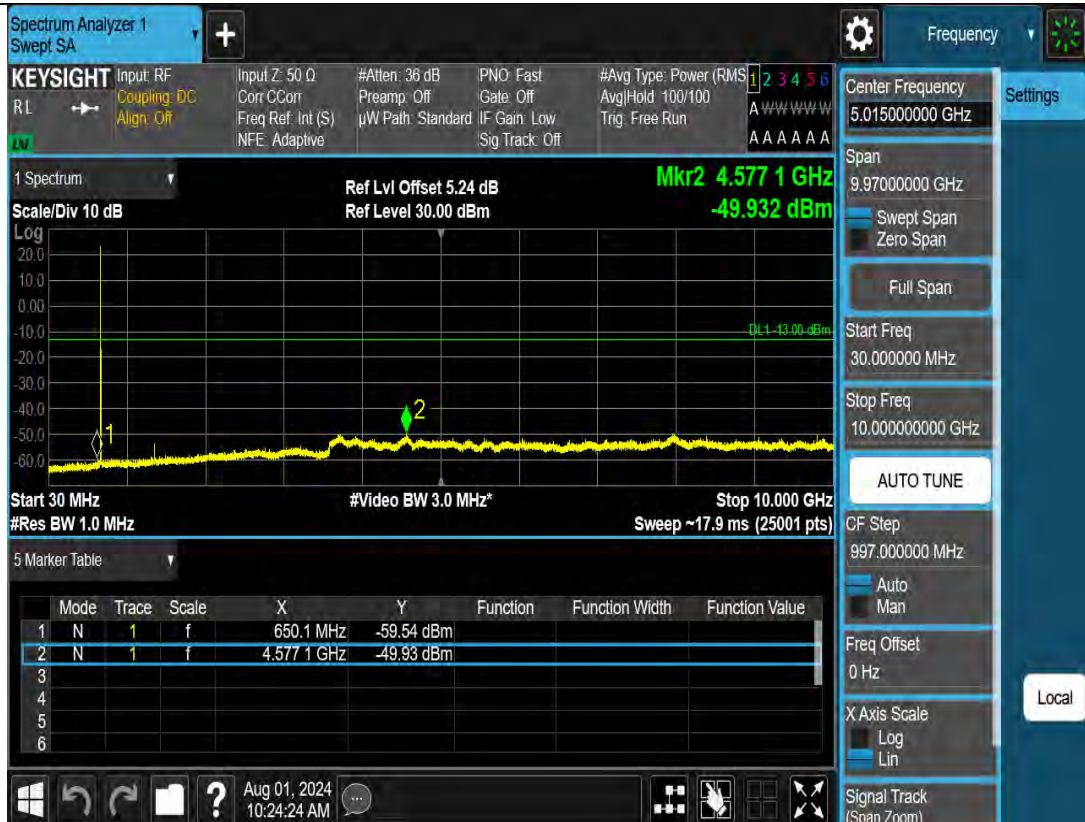
N71-10M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N71-10M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



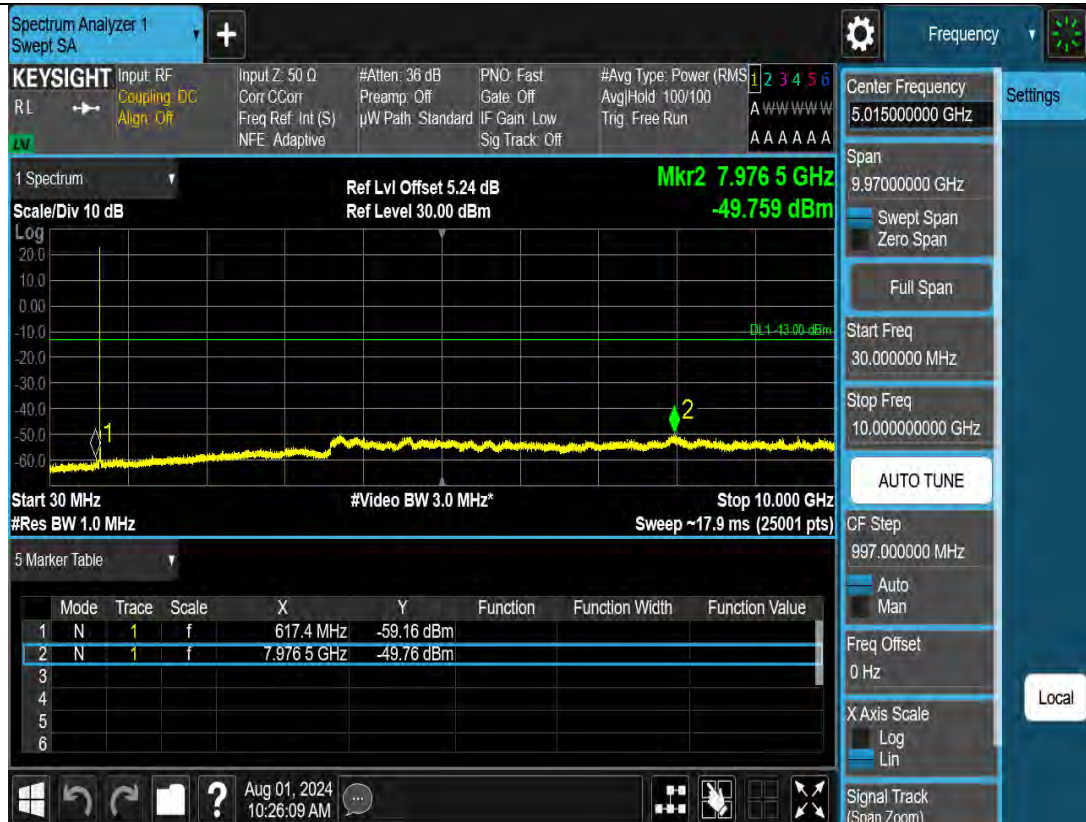
N71-10M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N71-10M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N71-15M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



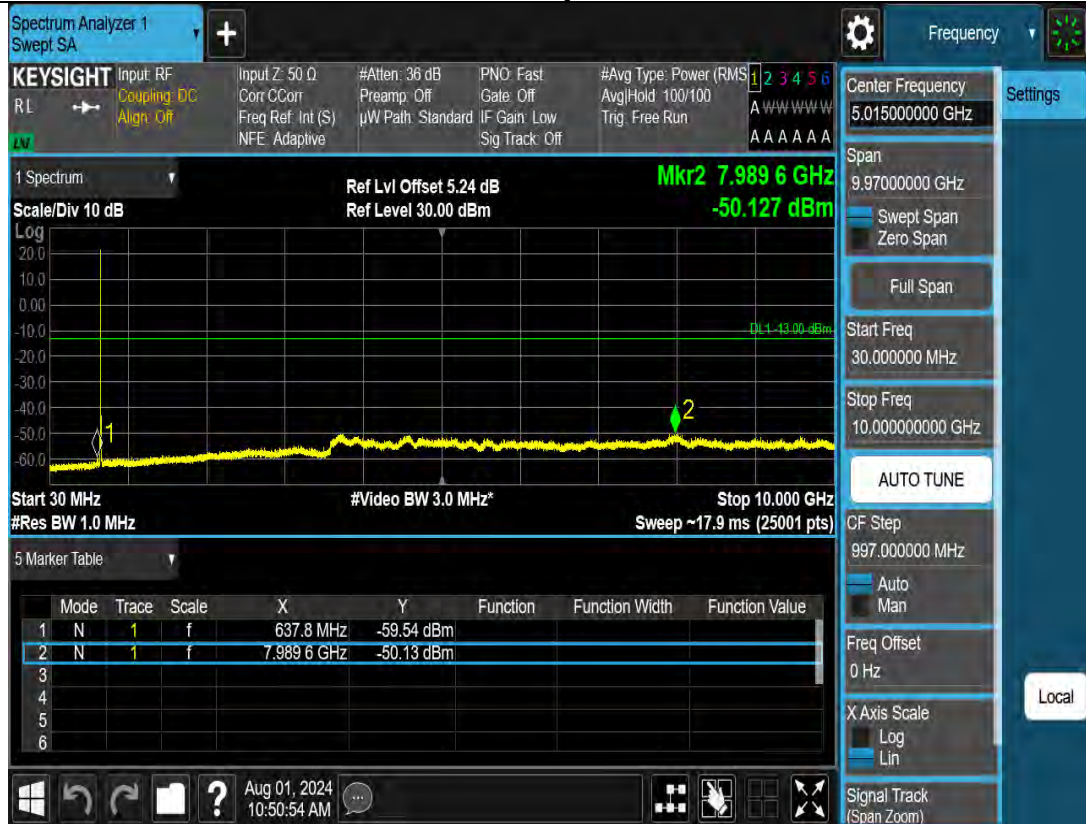
N71-15M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N71-15M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N71-15M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N71-15M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz

