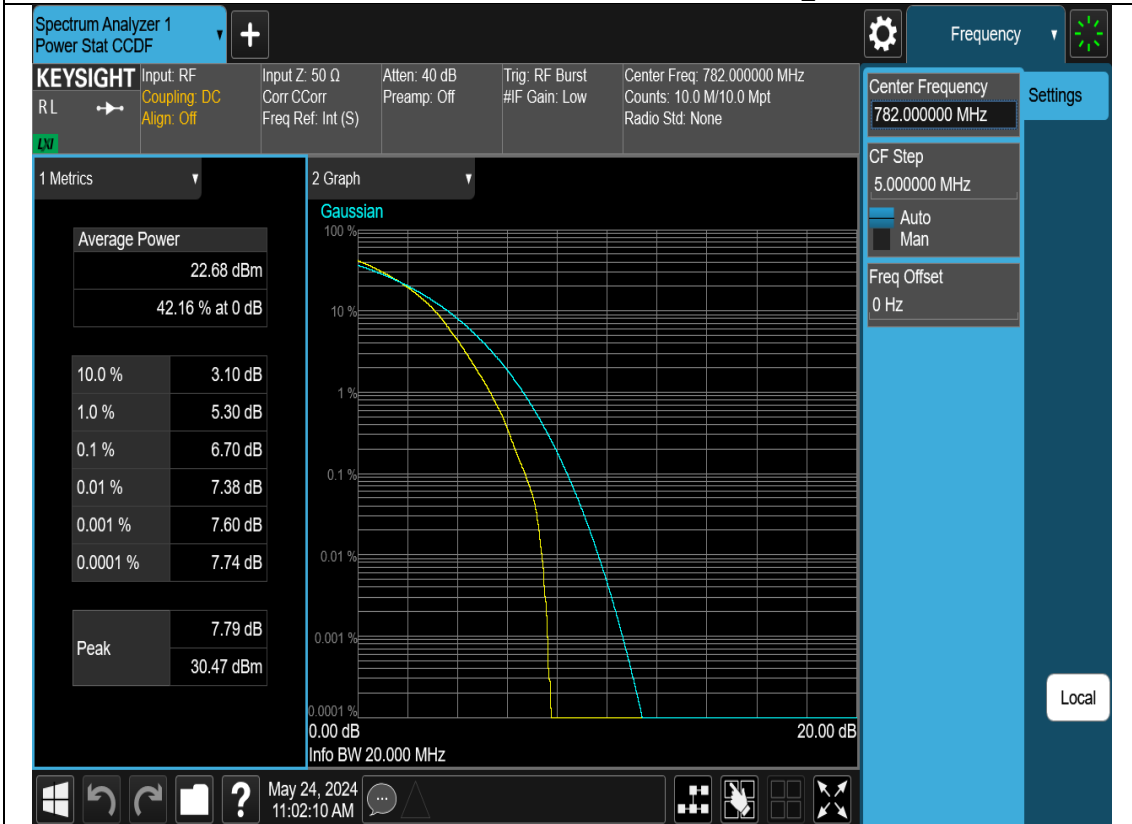


N13-10M-PAPR-M-DFT-s-OFDM-16QAM-Outer\_Full



N13-10M-PAPR-M-DFT-s-OFDM-64QAM-Outer\_Full



N13-10M-PAPR-M-DFT-s-OFDM-256QAM-Outer\_Full

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

Trig: RF Burst  
#IF Gain: Low

Center Freq: 782.000000 MHz  
Counts: 10.0 M/10.0 Mpt  
Radio Std: None

Center Frequency: 782.000000 MHz  
CF Step: 5.000000 MHz  
Freq Offset: 0 Hz

1 Metrics

Average Power  
20.73 dBm  
41.96 % at 0 dB

|          |         |
|----------|---------|
| 10.0 %   | 3.06 dB |
| 1.0 %    | 5.33 dB |
| 0.1 %    | 6.68 dB |
| 0.01 %   | 7.75 dB |
| 0.001 %  | 8.31 dB |
| 0.0001 % | 8.49 dB |

Peak  
8.54 dB  
29.27 dBm

2 Graph  
Gaussian

0.0001 %  
0.001 %  
0.01 %  
0.1 %  
1 %  
10 %  
100 %

0.00 dB  
20.00 dB

Info BW 20.000 MHz

May 24, 2024  
11:03:02 AM

Local

N13-10M-PAPR-M-CP-OFDM-QPSK-Outer\_Full

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

Trig: RF Burst  
#IF Gain: Low

Center Freq: 782.000000 MHz  
Counts: 10.0 M/10.0 Mpt  
Radio Std: None

Center Frequency: 782.000000 MHz  
CF Step: 5.000000 MHz  
Freq Offset: 0 Hz

1 Metrics

Average Power  
22.22 dBm  
36.57 % at 0 dB

|          |         |
|----------|---------|
| 10.0 %   | 3.70 dB |
| 1.0 %    | 6.59 dB |
| 0.1 %    | 7.68 dB |
| 0.01 %   | 8.20 dB |
| 0.001 %  | 8.53 dB |
| 0.0001 % | 8.58 dB |

Peak  
8.63 dB  
30.85 dBm

2 Graph  
Gaussian

0.0001 %  
0.001 %  
0.01 %  
0.1 %  
1 %  
10 %  
100 %

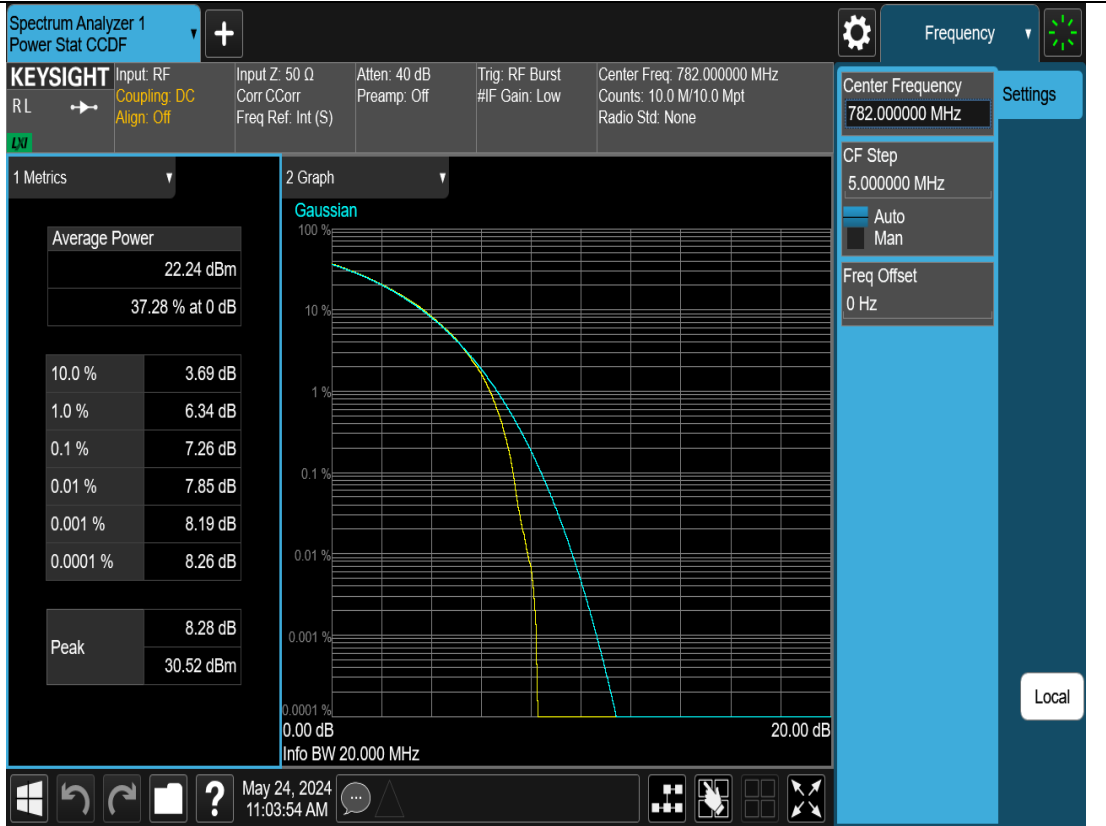
0.00 dB  
20.00 dB

Info BW 20.000 MHz

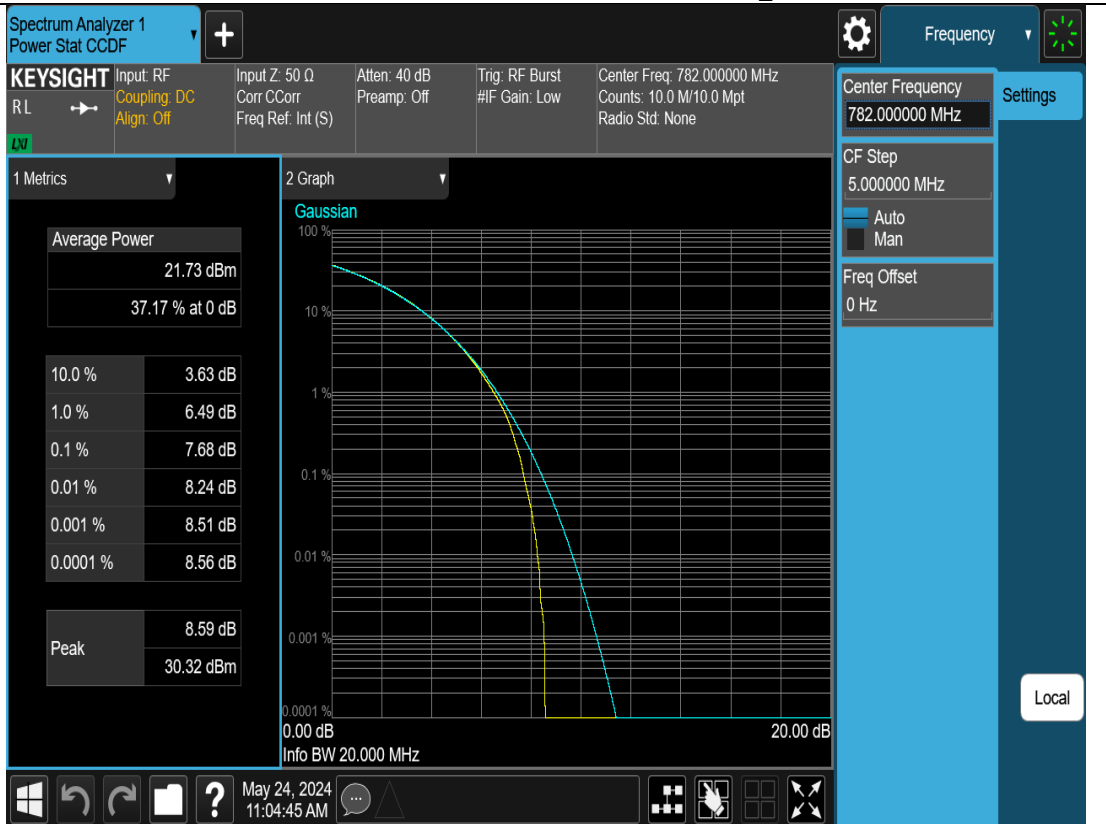
May 24, 2024  
11:40:54 AM

Local

N13-10M-PAPR-M-CP-OFDM-16QAM-Outer\_Full



N13-10M-PAPR-M-CP-OFDM-64QAM-Outer\_Full



N13-10M-PAPR-M-CP-OFDM-256QAM-Outer\_Full

Spectrum Analyzer 1  
Power Stat CCDF

KEYSIGHT Input: RF  
RL Coupling: DC  
Align: Off

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

Atten: 40 dB  
Preamp: Off

Trig: RF Burst  
#F Gain: Low

Center Freq: 782.000000 MHz  
Counts: 10.0 M/10.0 Mpt  
Radio Std: None

Center Frequency: 782.000000 MHz  
CF Step: 5.000000 MHz  
Auto  
Man  
Freq Offset: 0 Hz

1 Metrics

Average Power

|  |                 |
|--|-----------------|
|  | 18.73 dBm       |
|  | 36.76 % at 0 dB |

10.0 % 3.54 dB  
1.0 % 6.74 dB  
0.1 % 8.77 dB  
0.01 % 9.79 dB  
0.001 % 10.25 dB  
0.0001 % 10.31 dB

Peak 10.34 dB  
29.07 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

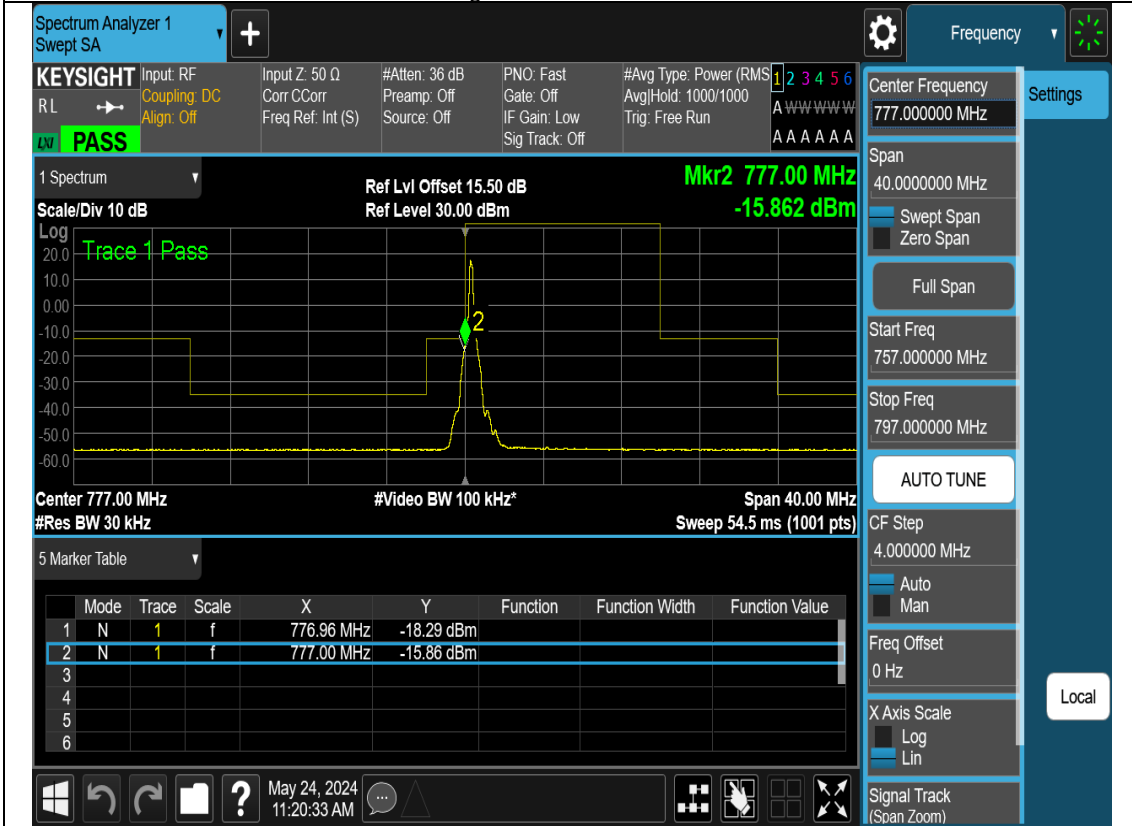
Local

May 24, 2024  
11:05:43 AM

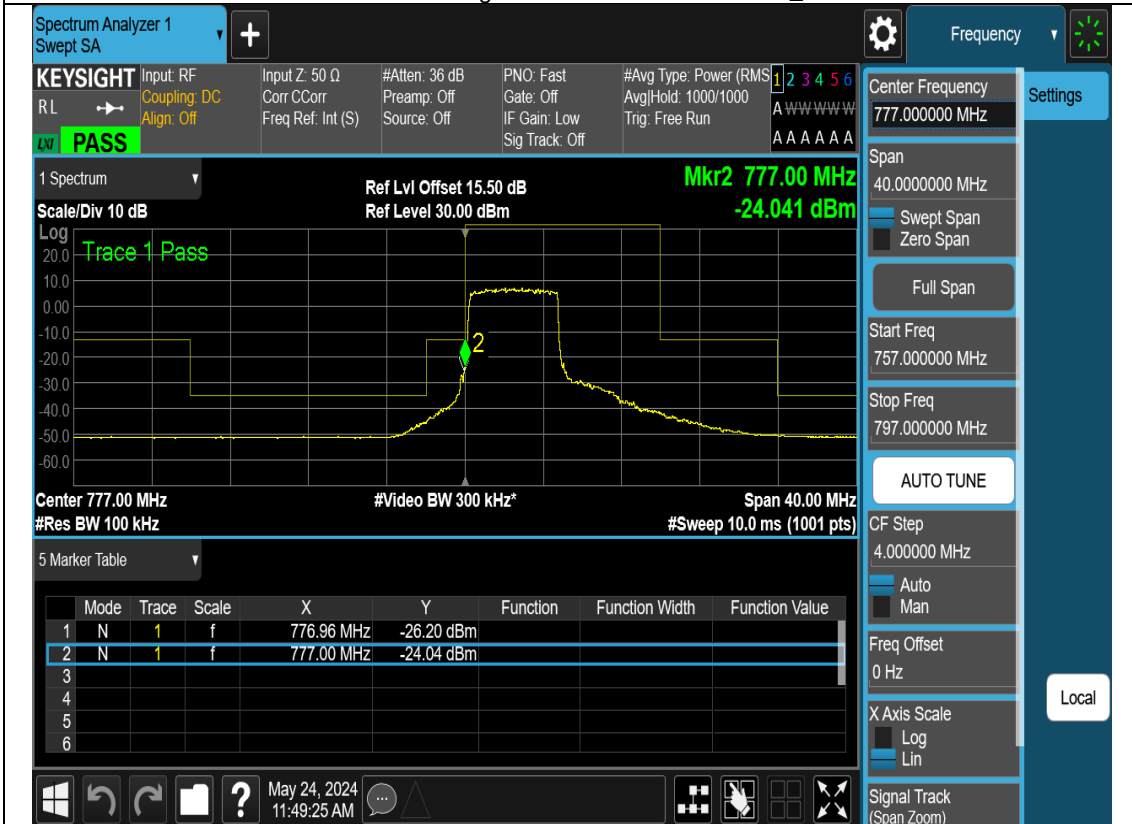
Bandedge test graph



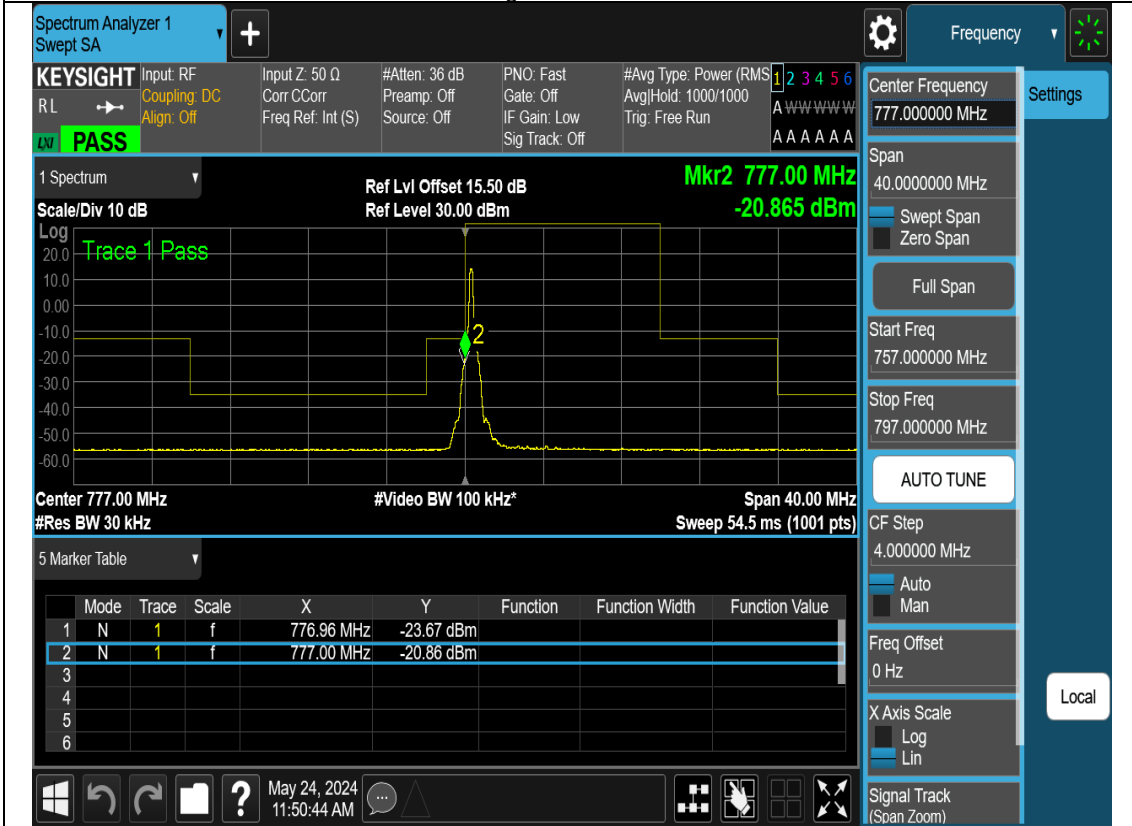
N13-5M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



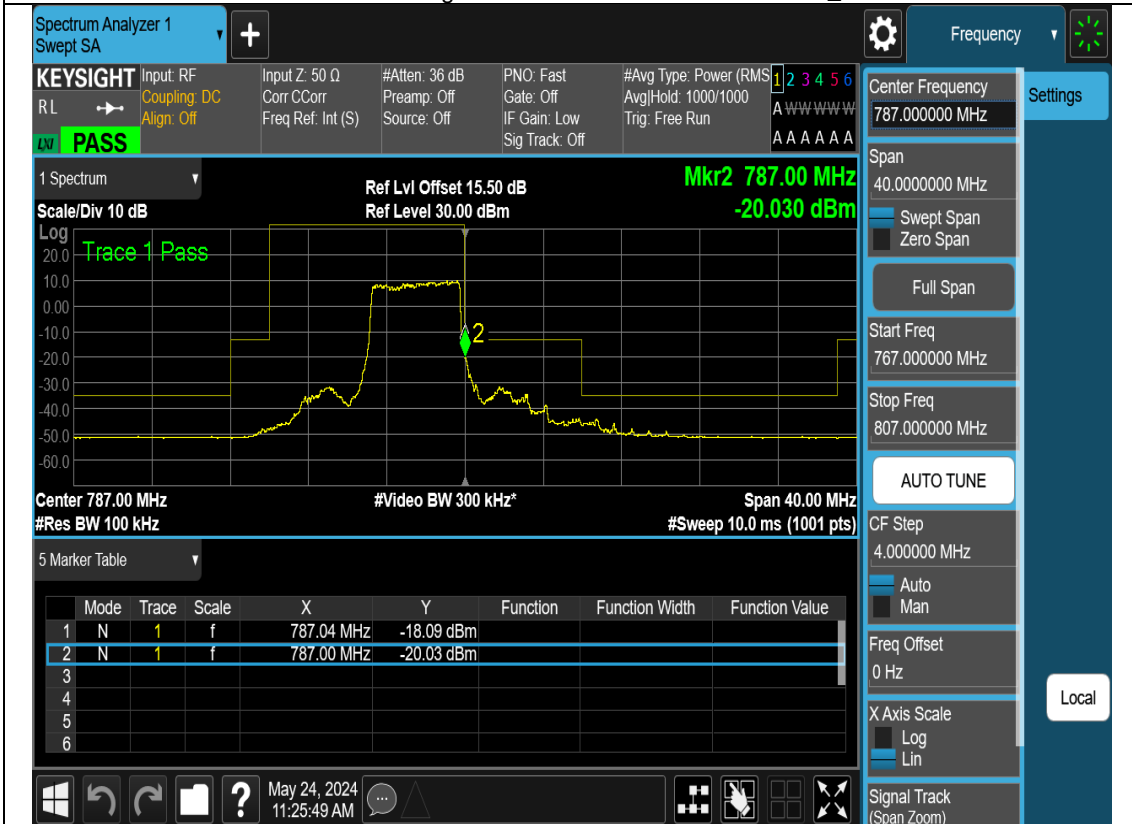
N13-5M-Bandedge-L-CP-OFDM-QPSK-Outer\_Full



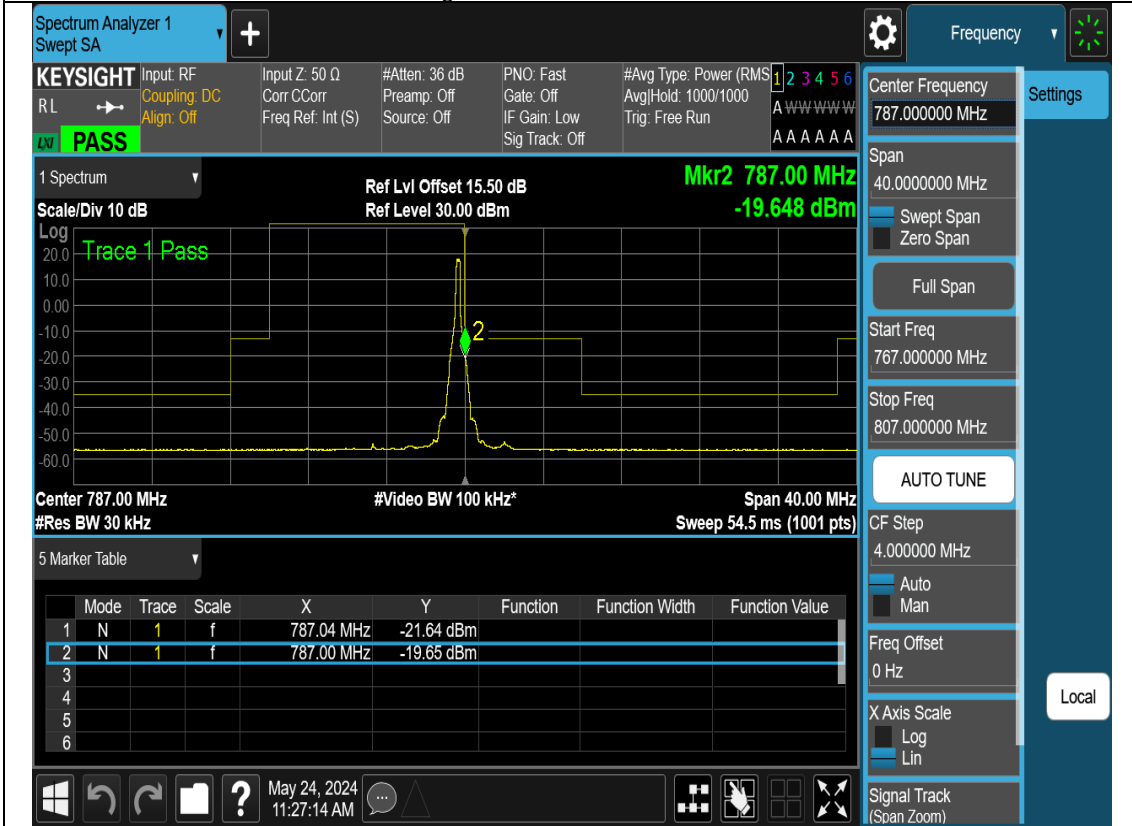
N13-5M-Bandedge-L-CP-OFDM-QPSK-1RB0



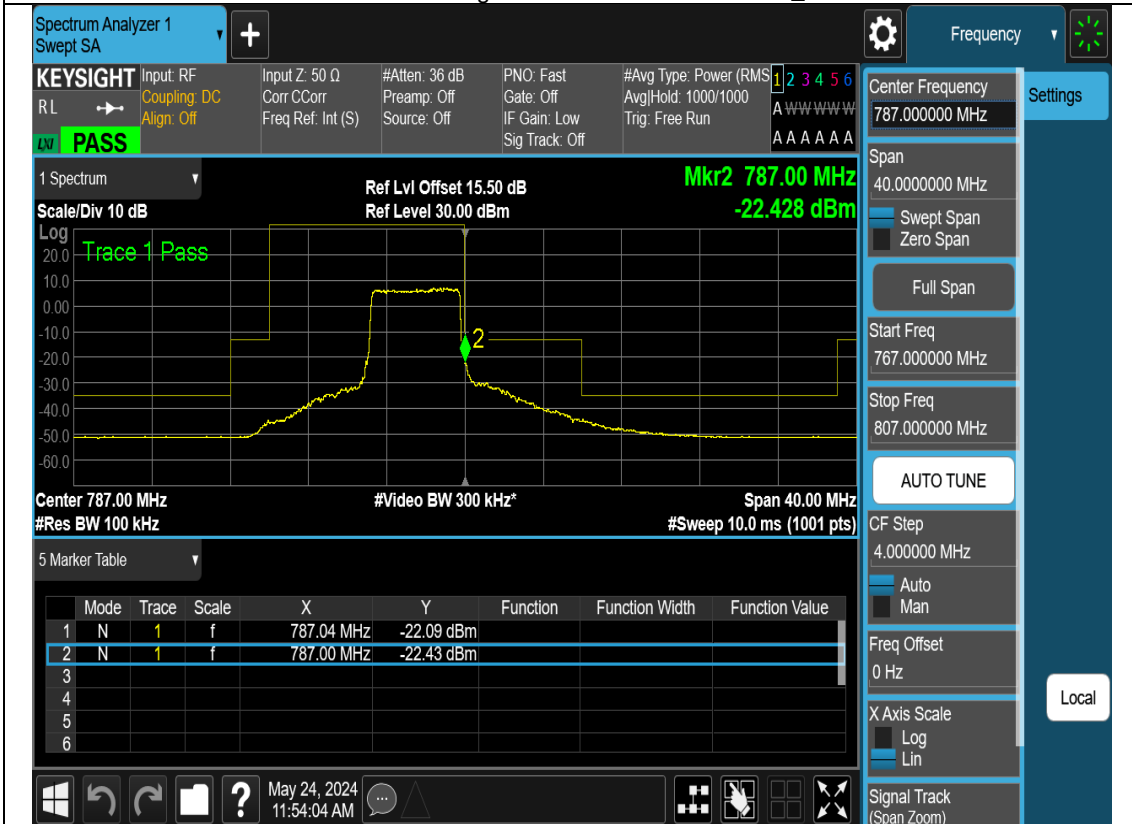
N13-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer\_Full



N13-5M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB\_MAX

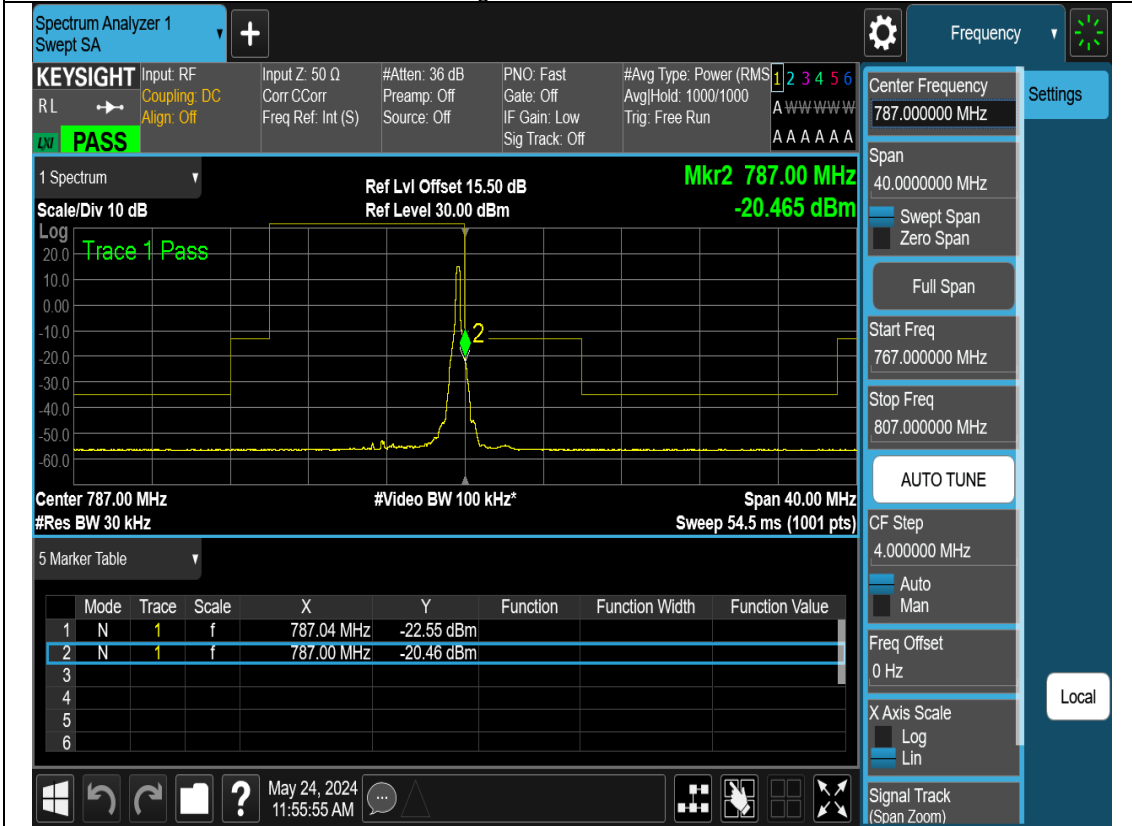


N13-5M-Bandedge-H-CP-OFDM-QPSK-Outer\_Full

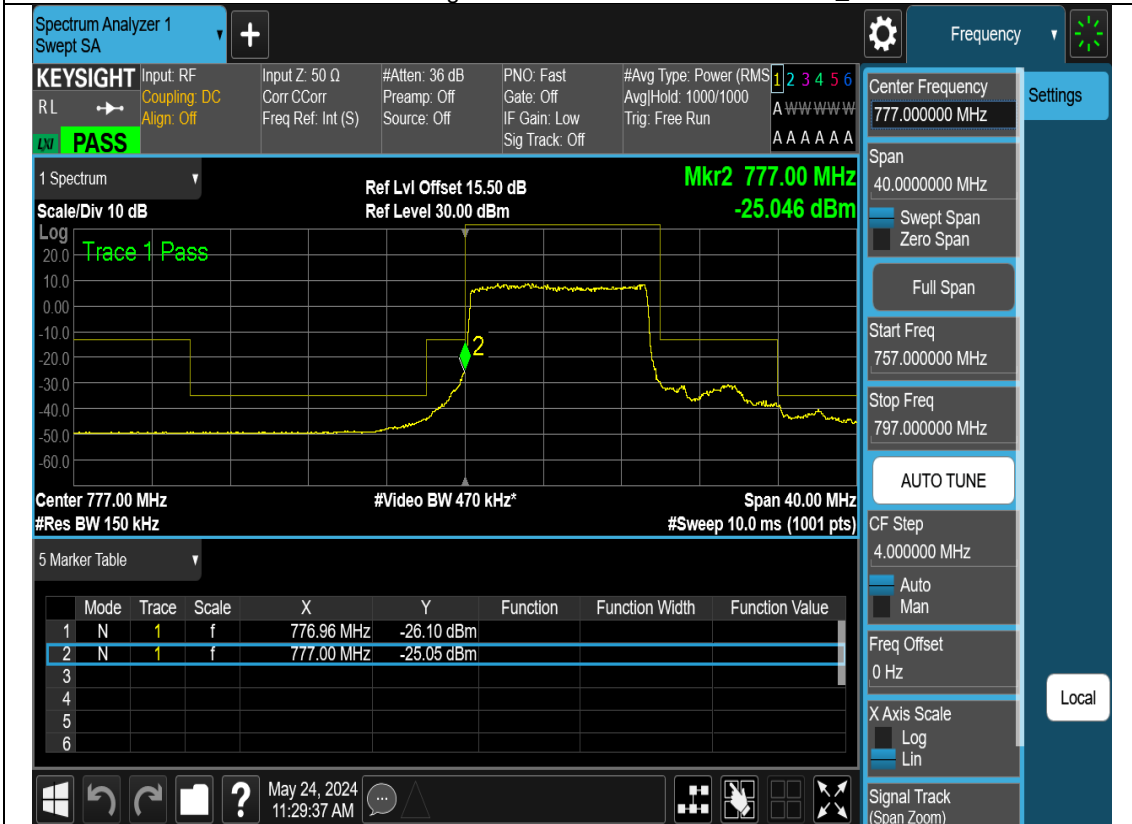




N13-5M-Bandedge-H-CP-OFDM-QPSK-1RB\_MAX



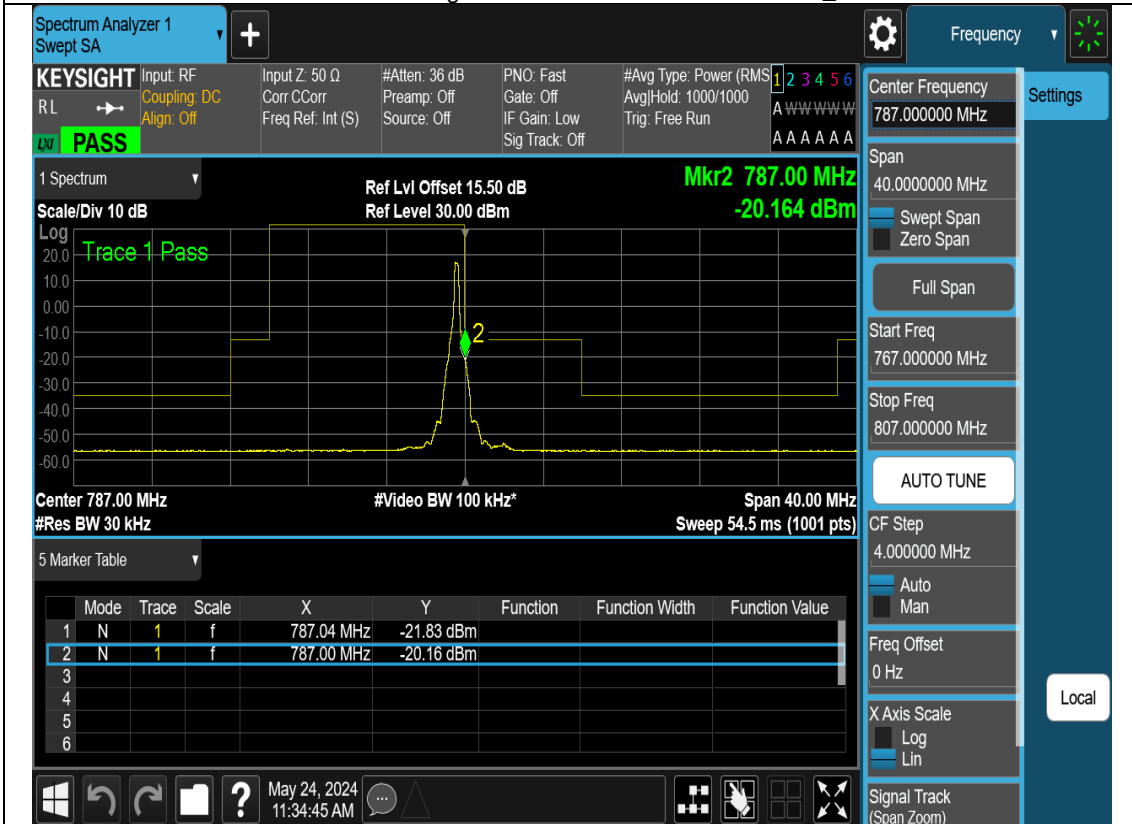
N13-10M-Bandedge-M-DFT-s-OFDM-Pi2 BPSK-Outer\_Full



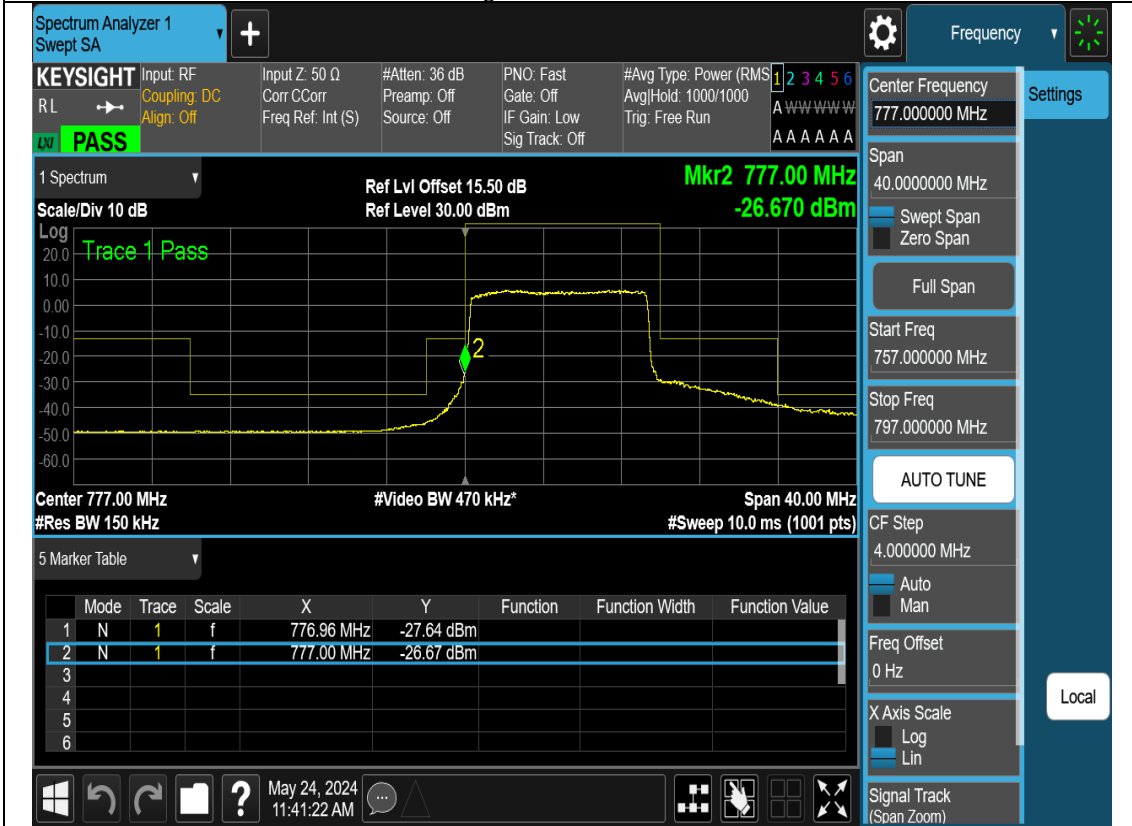
N13-10M-Bandedge-M-DFT-s-OFDM-Pi2 BPSK-1RB0



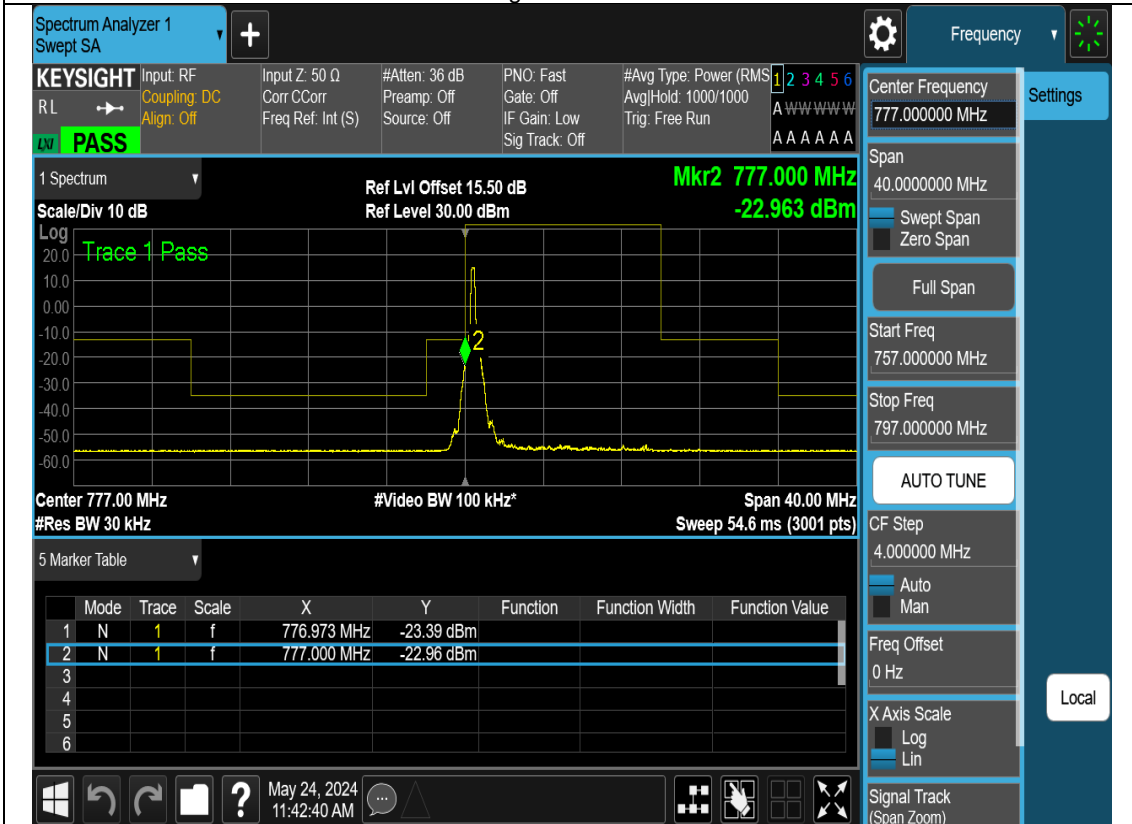
N13-10M-Bandedge-M-DFT-s-OFDM-Pi2 BPSK-1RB\_MAX



N13-10M-Bandedge-M-CP-OFDM-QPSK-Outer\_Full



N13-10M-Bandedge-M-CP-OFDM-QPSK-1RB0



N13-10M-Bandedge-M-CP-OFDM-QPSK-1RB\_MAX

**Spectrum Analyzer 1**  
Swept SA

**KEYSIGHT** Input: RF  
 RL Coupling: DC  
Align: Off

Input Z: 50 Ω #Atten: 36 dB PNO: Fast #Avg Type: Power (RMS) 1 2 3 4 5 6  
 Corr: C Corr Preamp: Off Gate: Off Avg/Hold: 1000/1000 A www www w  
 Freq Ref: Int (S) Source: Off IF Gain: Low Trig: Free Run A A A A A A

1 Spectrum Ref Lvl Offset 15.50 dB **Mkr2 787.00 MHz**  
 Scale/Div 10 dB Ref Level 30.00 dBm **-22.161 dBm**

Log Trace 1 Pass

Center 787.00 MHz #Video BW 100 kHz\* Span 40.00 MHz  
 #Res BW 30 kHz Sweep 54.5 ms (1001 pts)

5 Marker Table

|   | Mode | Trace | Scale | X          | Y          | Function | Function Width | Function Value |
|---|------|-------|-------|------------|------------|----------|----------------|----------------|
| 1 | N    | 1     | f     | 787.04 MHz | -24.72 dBm |          |                |                |
| 2 | N    | 1     | f     | 787.00 MHz | -22.16 dBm |          |                |                |
| 3 |      |       |       |            |            |          |                |                |
| 4 |      |       |       |            |            |          |                |                |
| 5 |      |       |       |            |            |          |                |                |
| 6 |      |       |       |            |            |          |                |                |

Frequency Settings

Center Frequency  
787.000000 MHz

Span  
40.000000 MHz

Swept Span  
 Zero Span

Full Span

Start Freq  
767.000000 MHz

Stop Freq  
807.000000 MHz

AUTO TUNE

CF Step  
4.000000 MHz

Auto  
 Man

Freq Offset  
0 Hz

X Axis Scale  
 Log  
 Lin

Signal Track  
(Span Zoom)

Local

Windows
Refresh
Home
Help

May 24, 2024  
11:44:37 AM

Grid
Zoom
Zoom In
Zoom Out

Conducted spurious emissions test graph



N13-5M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Avg/Hold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.0000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.854 1 GHz -32.048 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 750.6 MHz   | -37.61 dBm |                |                |
| 2    | N     | 1     | f | 3.854 1 GHz | -32.05 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:51:13 AM

N13-5M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Avg/Hold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.0000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.831 4 GHz -31.893 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 752.2 MHz   | -37.48 dBm |                |                |
| 2    | N     | 1     | f | 3.831 4 GHz | -31.89 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:22:24 AM

N13-5M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) 1 2 3 4 5 6 Avg/Hold: 100/100 Trig: Free Run

Center Frequency 5.015000000 GHz

Span 9.970000000 GHz

Scale/Div 10 dB Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.858 5 GHz -31.832 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

5 Marker Table

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 751.0 MHz   | -35.95 dBm |                |                |
| 2    | N     | 1     | f | 3.858 5 GHz | -31.83 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:52:42 AM

N13-5M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) 1 2 3 4 5 6 Avg/Hold: 100/100 Trig: Free Run

Center Frequency 5.015000000 GHz

Span 9.970000000 GHz

Scale/Div 10 dB Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.882 0 GHz -31.918 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

5 Marker Table

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 755.4 MHz   | -36.26 dBm |                |                |
| 2    | N     | 1     | f | 3.882 0 GHz | -31.92 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:27:49 AM

N13-5M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Avg/Hold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.0000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.864 5 GHz -31.891 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 754.2 MHz   | -35.32 dBm |                |                |
| 2    | N     | 1     | f | 3.864 5 GHz | -31.89 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:56:30 AM

N13-10M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Off

Input Z: 50 Ω Corr: C Corr Freq Ref: Int (S) #Atten: 36 dB Preamp: Off Source: Off PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Avg/Hold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.0000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 15.50 dB Ref Level 30.00 dBm

Mkr2 3.845 3 GHz -32.067 dBm

Start 30 MHz #Res BW 1.0 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz Sweep ~18.8 ms (25001 pts)

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 755.4 MHz   | -37.43 dBm |                |                |
| 2    | N     | 1     | f | 3.845 3 GHz | -32.07 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

May 24, 2024 11:31:27 AM



N13-10M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz

**Spectrum Analyzer 1**  
Swept SA

**KEYSIGHT** Input RF  
RL → Coupling: DC  
Align: Off

Input Z: 50 Ω #Atten: 36 dB PNO: Fast #Avg Type: Power (RMS) 1 2 3 4 5 6  
Corr: CCorr Preamp: Off Gate: Off Avg/Hold: 100/100  
Freq Ref: Int (S) Source: Off IF Gain: Low Trig: Free Run A www www  
Sig Track: Off A A A A A A

1 Spectrum Ref Lvl Offset 15.50 dB **Mkr2 3.851 7 GHz**  
Scale/Div 10 dB Ref Level 30.00 dBm **-31.844 dBm**

Start 30 MHz #Video BW 3.0 MHz\* Stop 10.000 GHz  
#Res BW 1.0 MHz Sweep ~18.8 ms (25001 pts)

5 Marker Table

| Mode | Trace | Scale | X | Y           | Function   | Function Width | Function Value |
|------|-------|-------|---|-------------|------------|----------------|----------------|
| 1    | N     | 1     | f | 751.0 MHz   | -36.77 dBm |                |                |
| 2    | N     | 1     | f | 3.851 7 GHz | -31.84 dBm |                |                |
| 3    |       |       |   |             |            |                |                |
| 4    |       |       |   |             |            |                |                |
| 5    |       |       |   |             |            |                |                |
| 6    |       |       |   |             |            |                |                |

Frequency ⊗

Center Frequency  
5.015000000 GHz

Span  
9.97000000 GHz

Swept Span  
Zero Span

Full Span

Start Freq  
30.000000 MHz

Stop Freq  
10.000000000 GHz

AUTO TUNE

CF Step  
997.000000 MHz

Auto  
Man

Freq Offset  
0 Hz

X Axis Scale  
Log  
Lin

Signal Track  
(Span Zoom)

Settings

Local

May 24, 2024 11:43:09 AM