

N78a(3450-3550MHz)-10M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz

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) AvgHold: 100/100 Trig: Free Run

Center Frequency: 25.000000000 GHz

Span: 30.0000000 GHz

Start Freq: 10.000000000 GHz

Stop Freq: 40.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr1 38.333 0 GHz -28.370 dBm

Start 10.00 GHz #Res BW 1.0 MHz #Video BW 3.0 MHz* Stop 40.00 GHz Sweep ~59.2 ms (60001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.333 0 GHz			-28.37 dBm
2							
3							
4							
5							
6							

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N78a(3450-3550MHz)-10M-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) AvgHold: 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 12.58 dB

Ref Level 30.00 dBm

Mkr2 3.861 3 GHz -35.596 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	3.200 5 GHz			-38.04 dBm
2	N	1	f	3.861 3 GHz			-35.60 dBm
3							
4							
5							
6							

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N78a(3450-3550MHz)-10M-CSE-L-CP-OFDM-QPSK-1RB0-10GHz-40GHz

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: 25.00000000 GHz

Span: 30.00000000 GHz

Start Freq: 10.00000000 GHz

Stop Freq: 40.00000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr1 38.358 0 GHz -28.404 dBm

Log

Start 10.00 GHz #Res BW 1.0 MHz #Video BW 3.0 MHz* Stop 40.00 GHz Sweep ~59.2 ms (60001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.358 0 GHz			-28.40 dBm
2							
3							
4							
5							
6							

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N78a(3450-3550MHz)-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) 1 2 3 4 5 6 Avg/Hold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.00000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr2 3.833 4 GHz -35.446 dBm

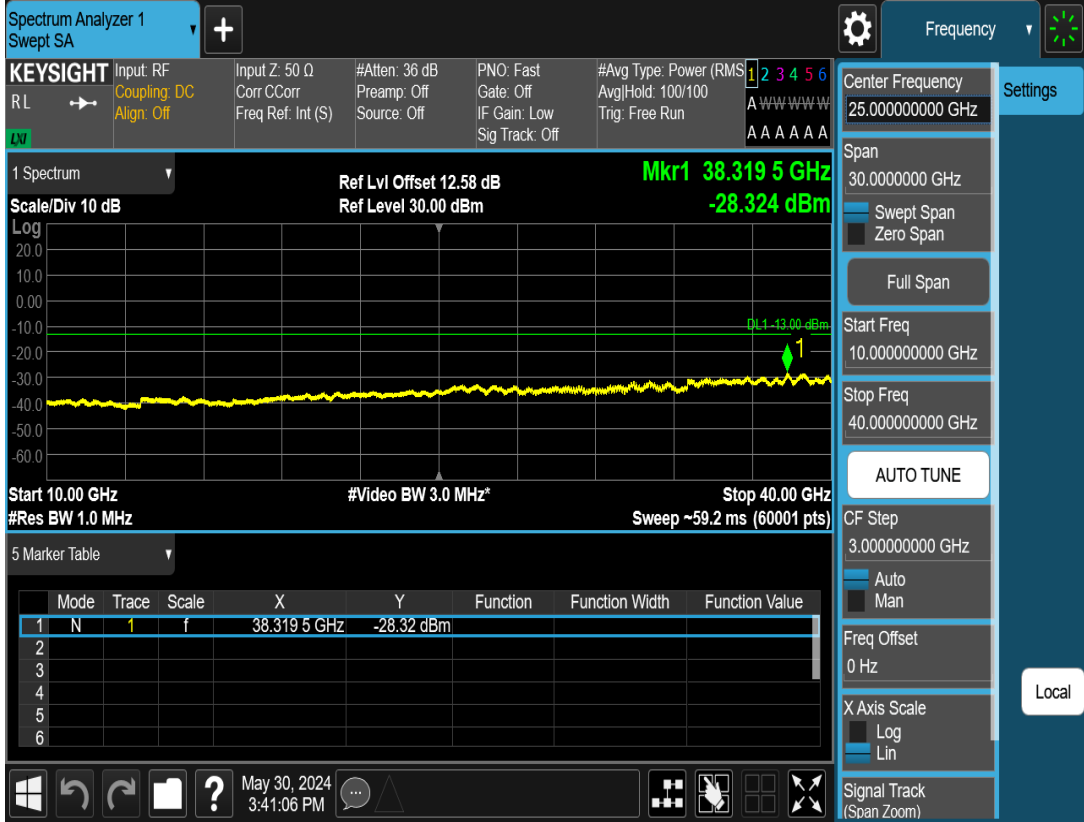
Log

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

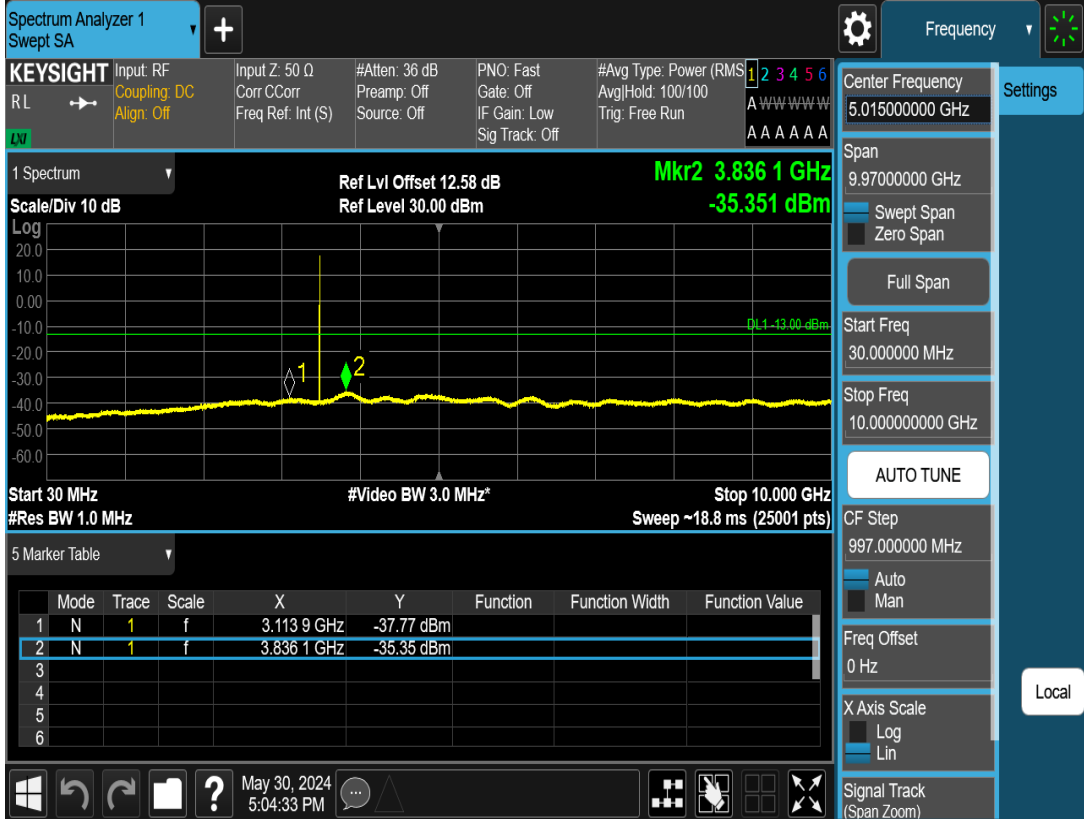
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.116 7 GHz			-38.07 dBm
2	N	1	f	3.833 4 GHz			-35.45 dBm
3							
4							
5							
6							

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N78a(3450-3550MHz)-10M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



N78a(3450-3550MHz)-10M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-10M-CSE-M-CP-OFDM-QPSK-1RB0-10GHz-40GHz

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: 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

Frequency ⊗

Center Frequency
25.000000000 GHz

Span
30.0000000 GHz

Swept Span
Zero Span

Full Span

Start Freq
10.000000000 GHz

Stop Freq
40.000000000 GHz

AUTO TUNE

CF Step
3.000000000 GHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

Settings

Local

1 Spectrum Mkr1 38.354 5 GHz
Scale/Div 10 dB -28.551 dBm

Ref Lvl Offset 12.58 dB
Ref Level 30.00 dBm

Start 10.00 GHz #Video BW 3.0 MHz* Stop 40.00 GHz
#Res BW 1.0 MHz Sweep ~59.2 ms (60001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.354 5 GHz	-28.55 dBm		
2							
3							
4							
5							
6							

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Windows icons and navigation buttons

N78a(3450-3550MHz)-10M-CSE-H-DFT-s-OFDM-Pi2 BPSK-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: C Corr 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

Frequency ⊗

Center Frequency
5.015000000 GHz

Span
9.970000000 GHz

Swept Span
Zero Span

Full Span

Start Freq
30.0000000 MHz

Stop Freq
10.000000000 GHz

AUTO TUNE

CF Step
997.0000000 MHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

Settings

Local

1 Spectrum Mkr2 3.826 6 GHz
Scale/Div 10 dB -35.587 dBm

Ref Lvl Offset 12.58 dB
Ref Level 30.00 dBm

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

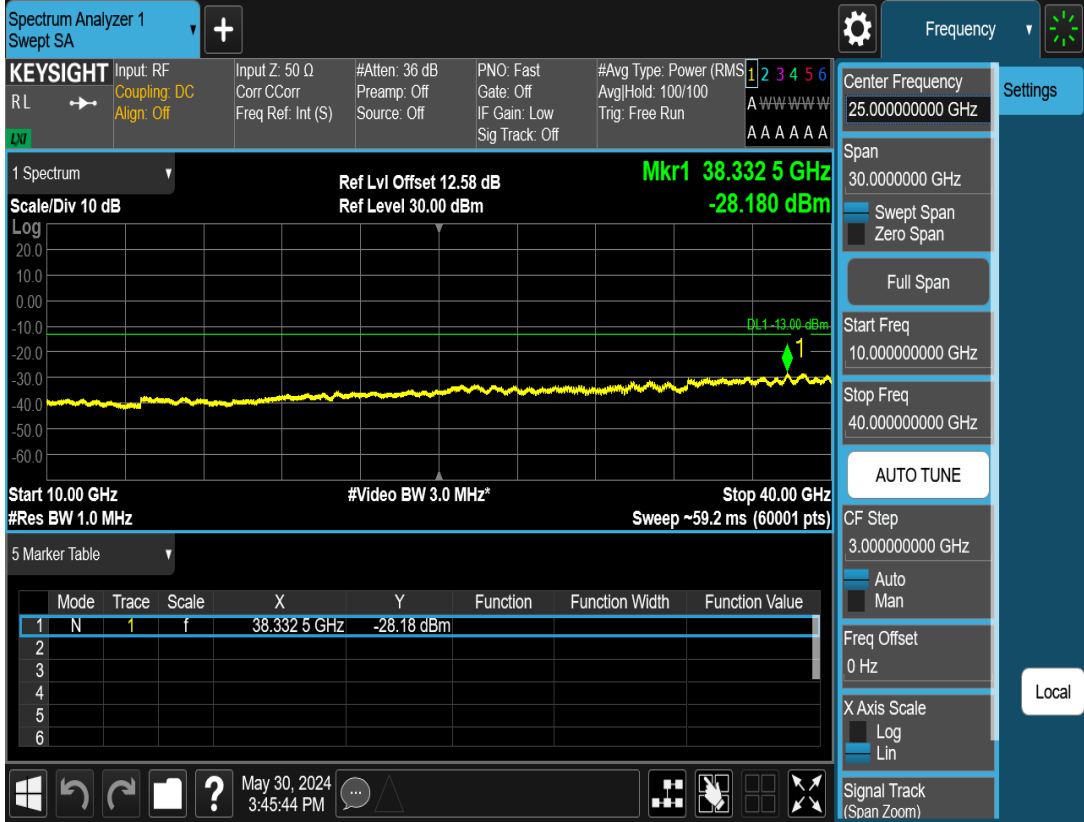
5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.136 3 GHz	-37.98 dBm		
2	N	1	f	3.826 6 GHz	-35.59 dBm		
3							
4							
5							
6							

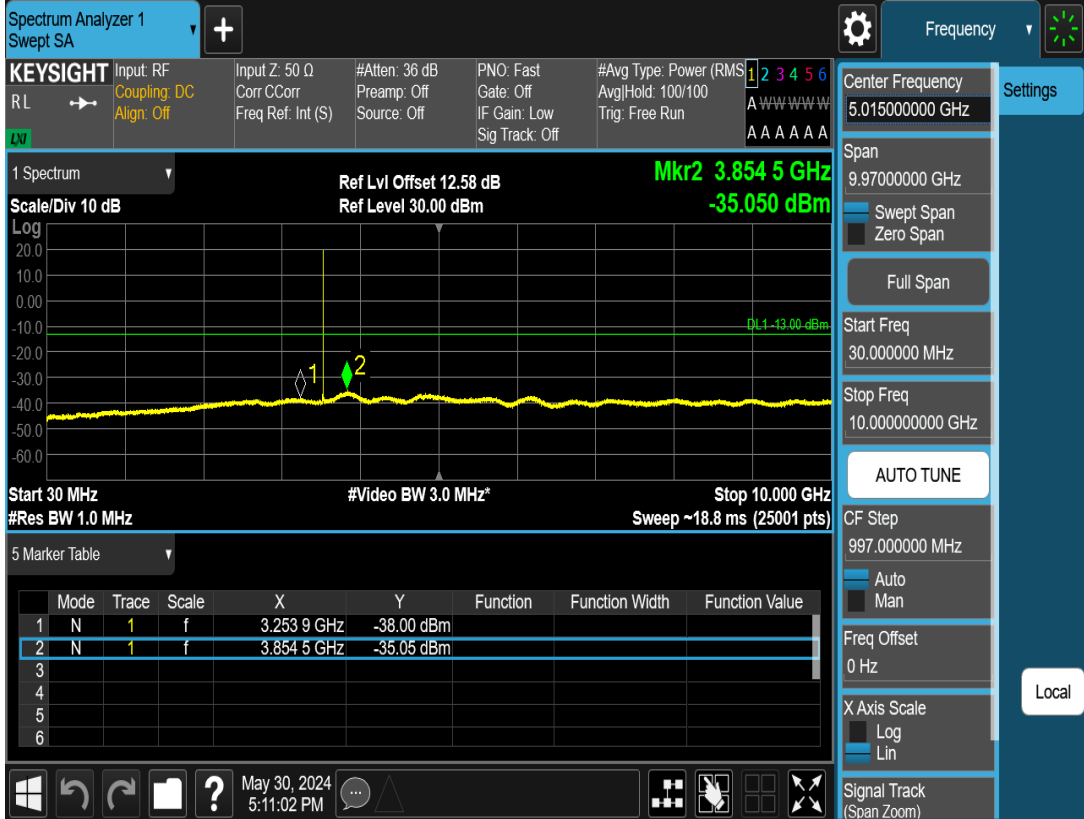
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Windows icons and navigation buttons

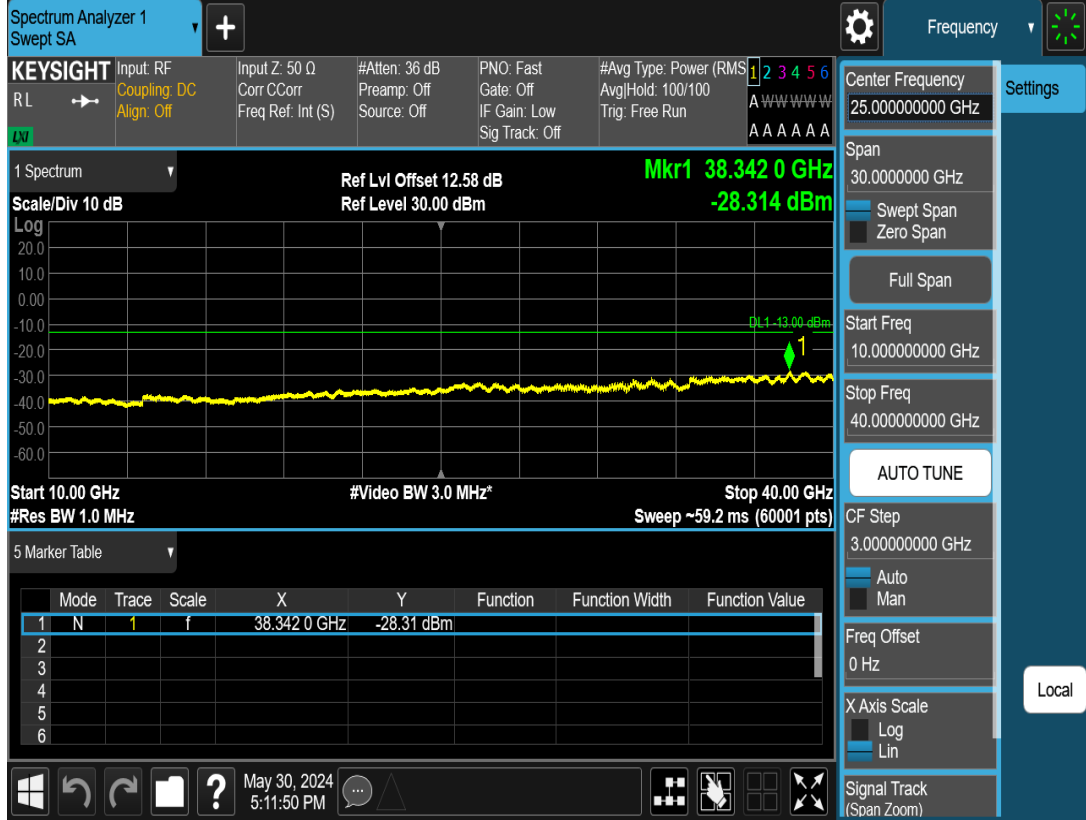
N78a(3450-3550MHz)-10M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



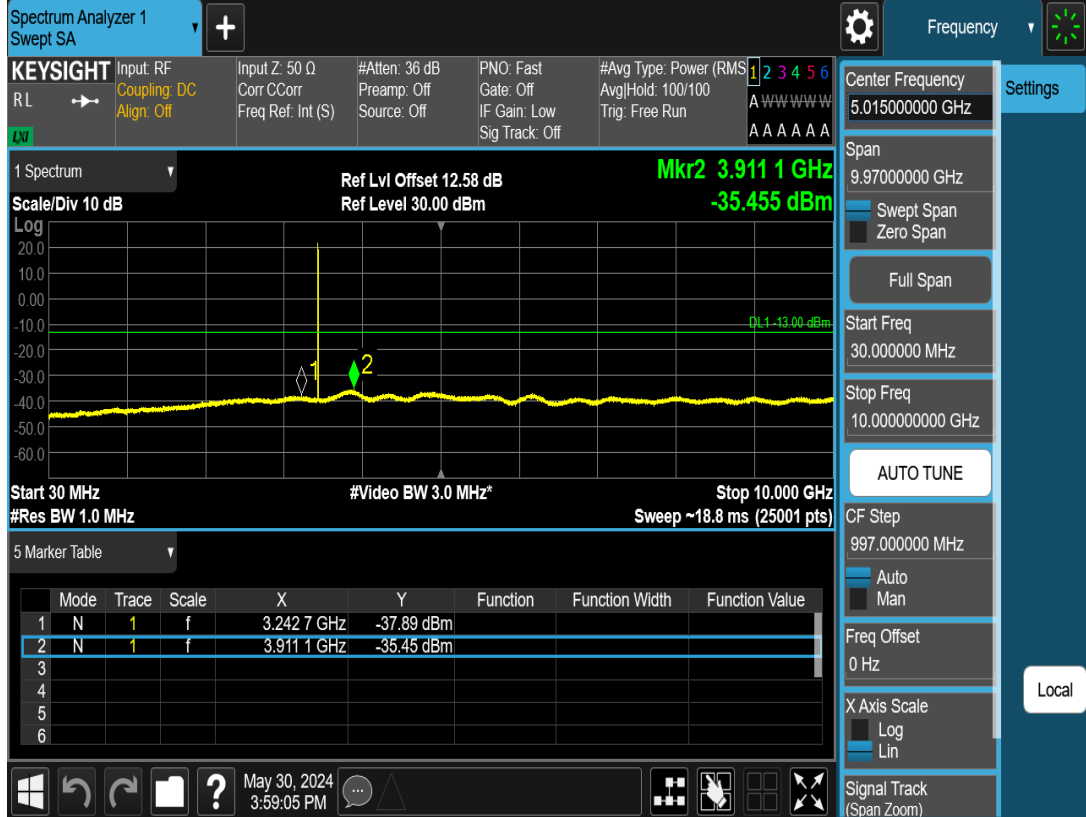
N78a(3450-3550MHz)-10M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



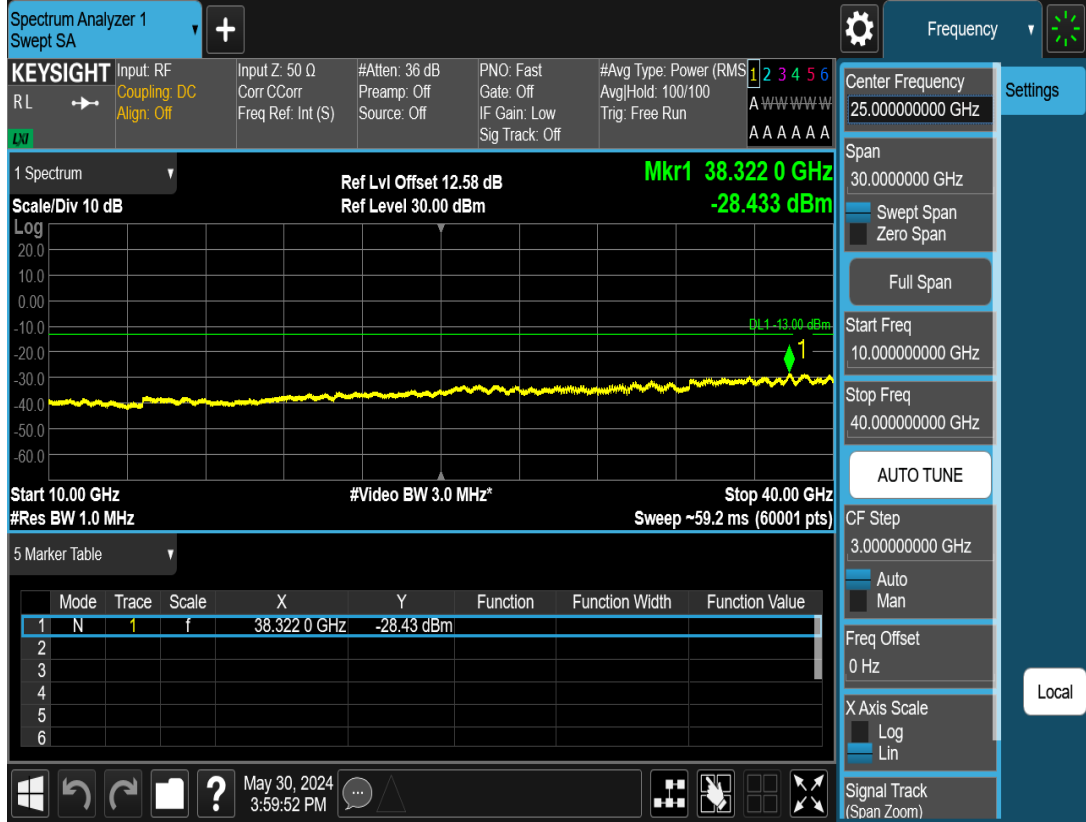
N78a(3450-3550MHz)-10M-CSE-H-CP-OFDM-QPSK-1RB0-10GHz-40GHz



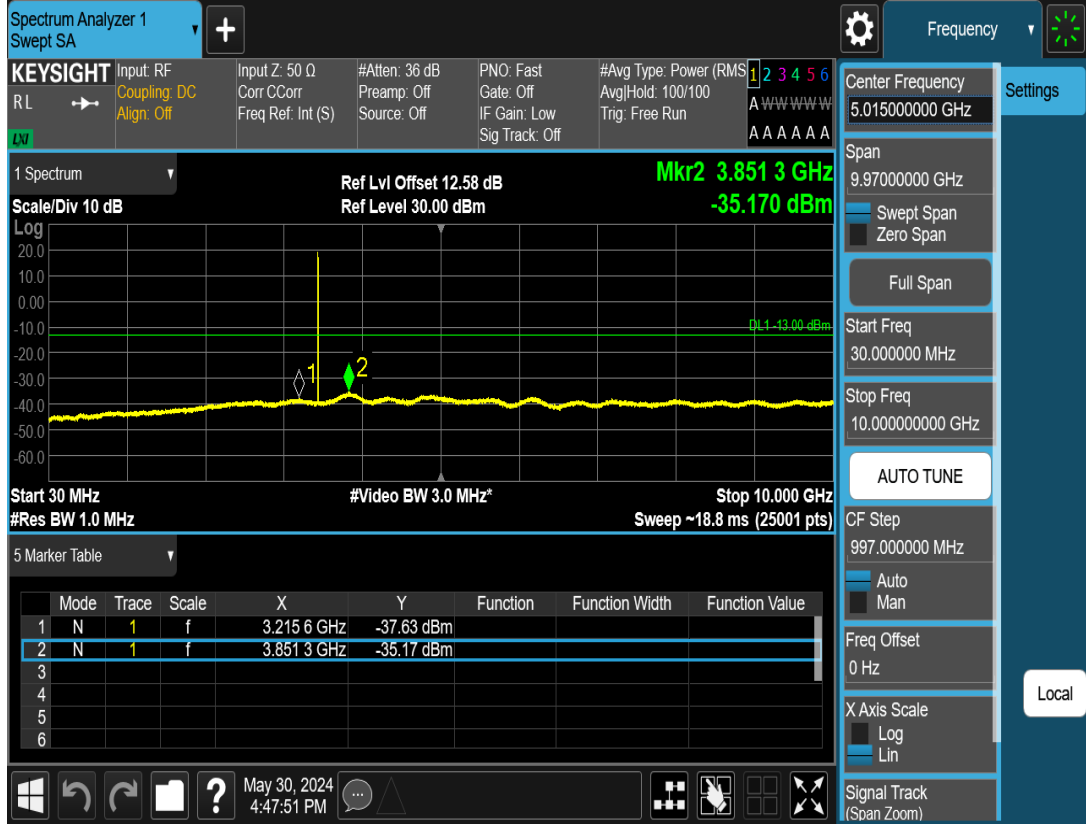
N78a(3450-3550MHz)-15M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-15M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



N78a(3450-3550MHz)-15M-CSE-L-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-15M-CSE-L-CP-OFDM-QPSK-1RB0-10GHz-40GHz

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) AvgHold: 100/100 Trig: Free Run

Center Frequency: 25.00000000 GHz

Span: 30.00000000 GHz

Start Freq: 10.00000000 GHz

Stop Freq: 40.00000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr1 38.368 0 GHz -28.434 dBm

Start 10.00 GHz #Res BW 1.0 MHz #Video BW 3.0 MHz* Stop 40.00 GHz Sweep ~59.2 ms (60001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.368 0 GHz			-28.43 dBm
2							
3							
4							
5							
6							

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N78a(3450-3550MHz)-15M-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) AvgHold: 100/100 Trig: Free Run

Center Frequency: 5.015000000 GHz

Span: 9.970000000 GHz

Start Freq: 30.00000000 MHz

Stop Freq: 10.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

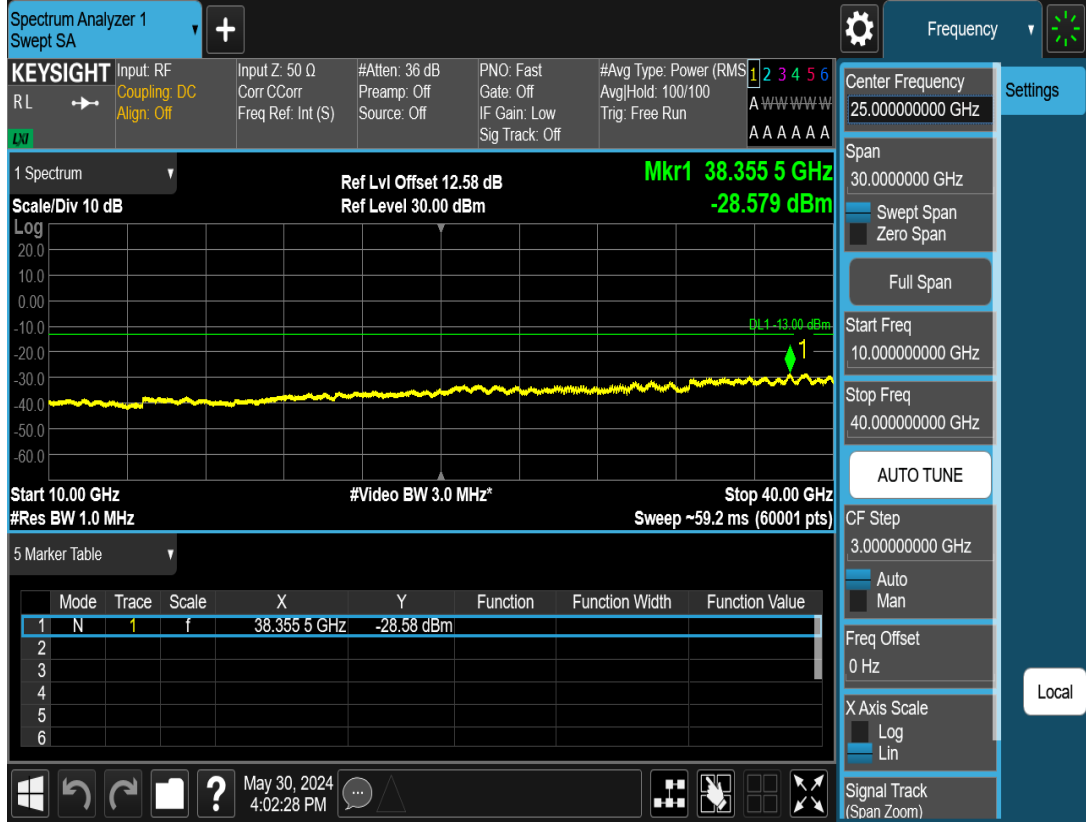
Mkr2 3.851 7 GHz -35.491 dBm

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

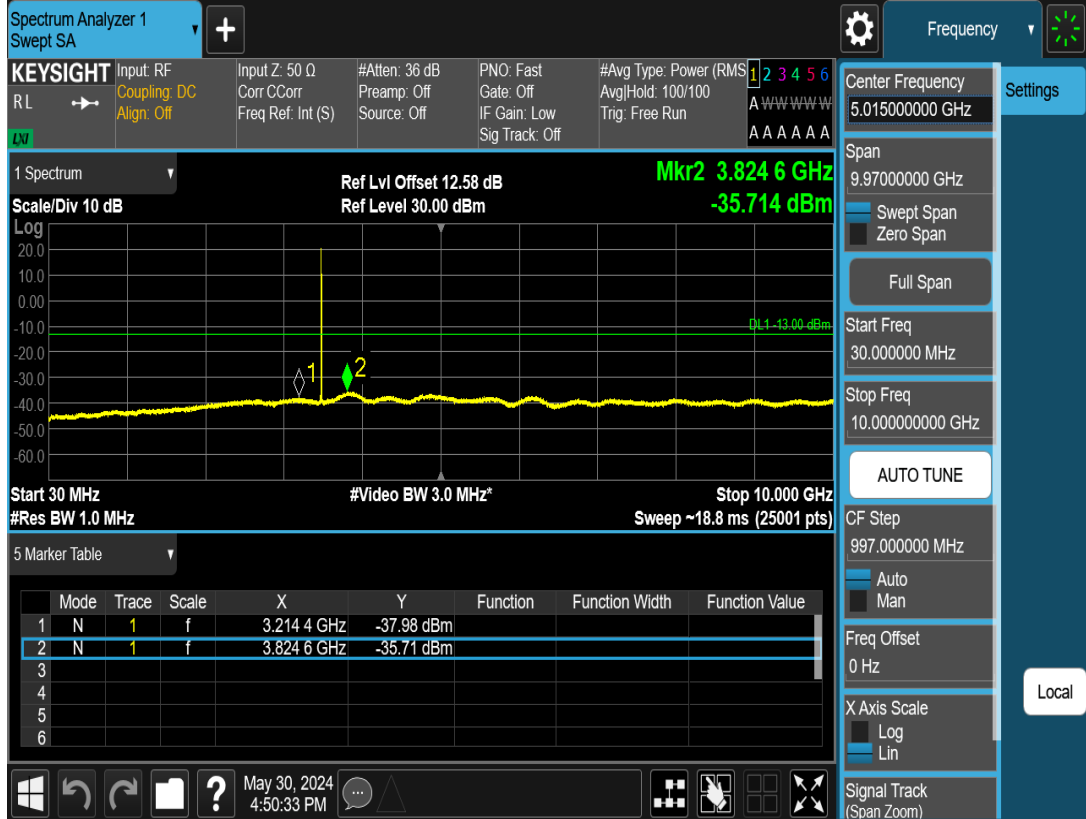
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.204 8 GHz			-38.04 dBm
2	N	1	f	3.851 7 GHz			-35.49 dBm
3							
4							
5							
6							

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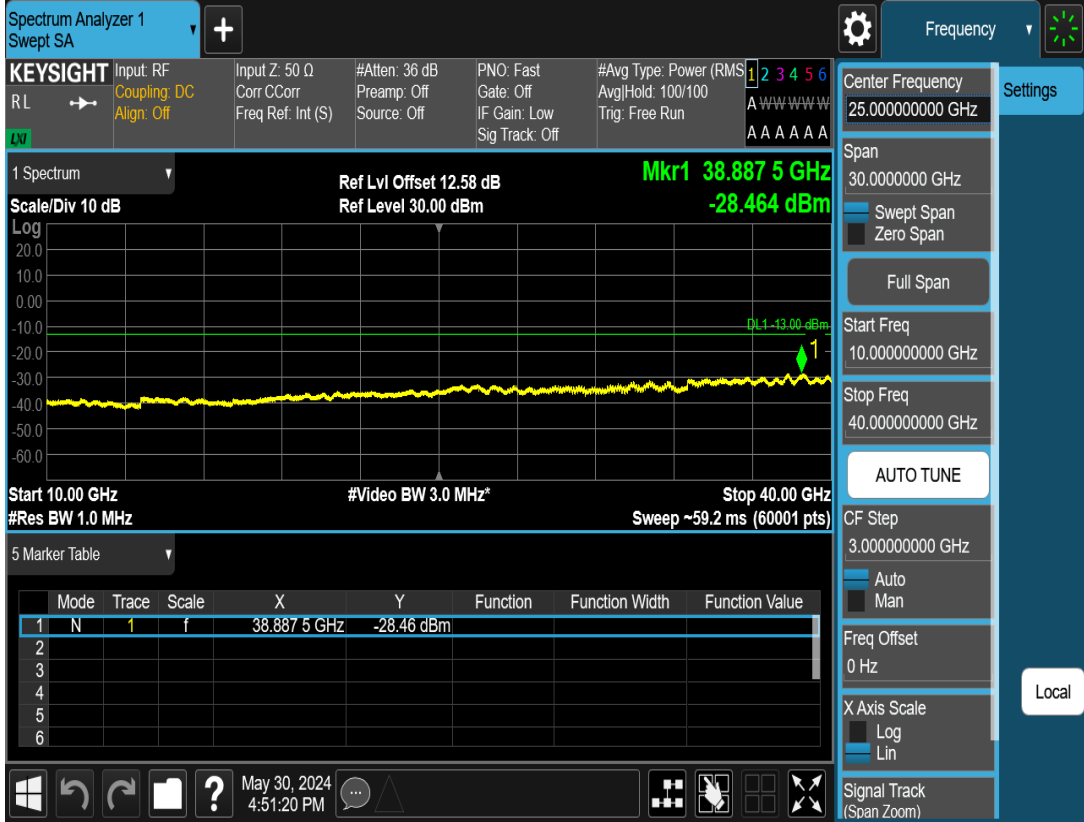
N78a(3450-3550MHz)-15M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



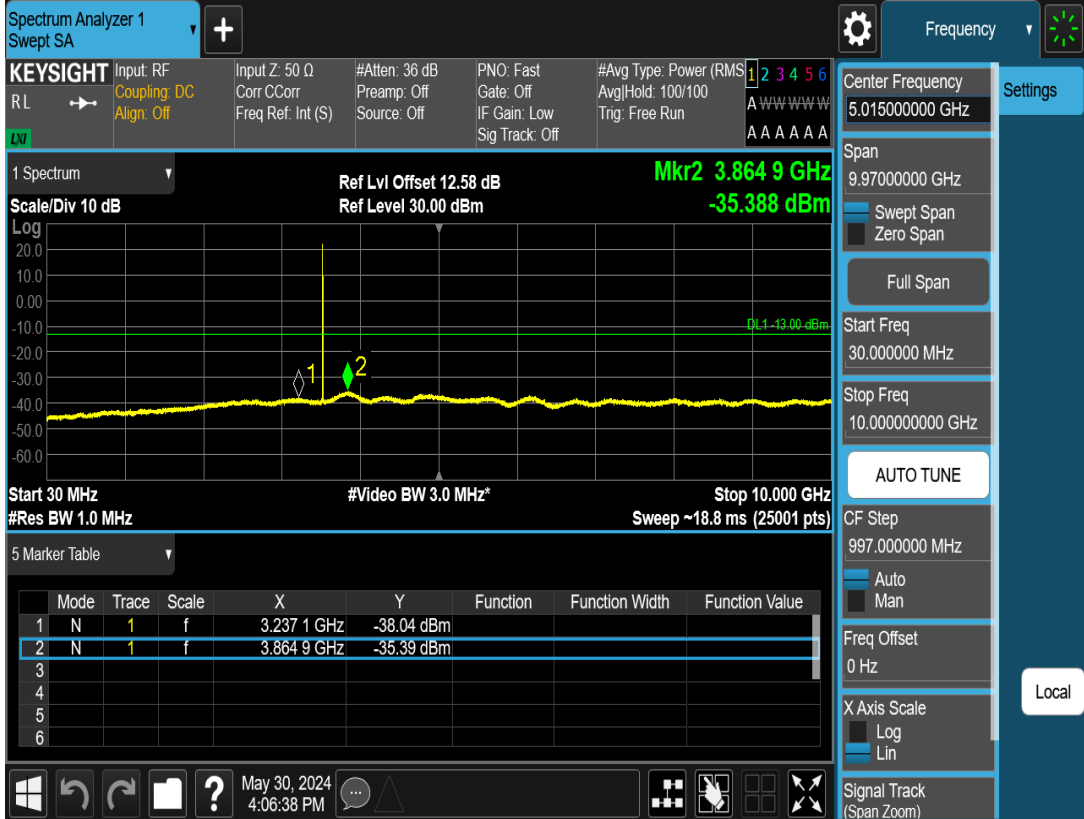
N78a(3450-3550MHz)-15M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



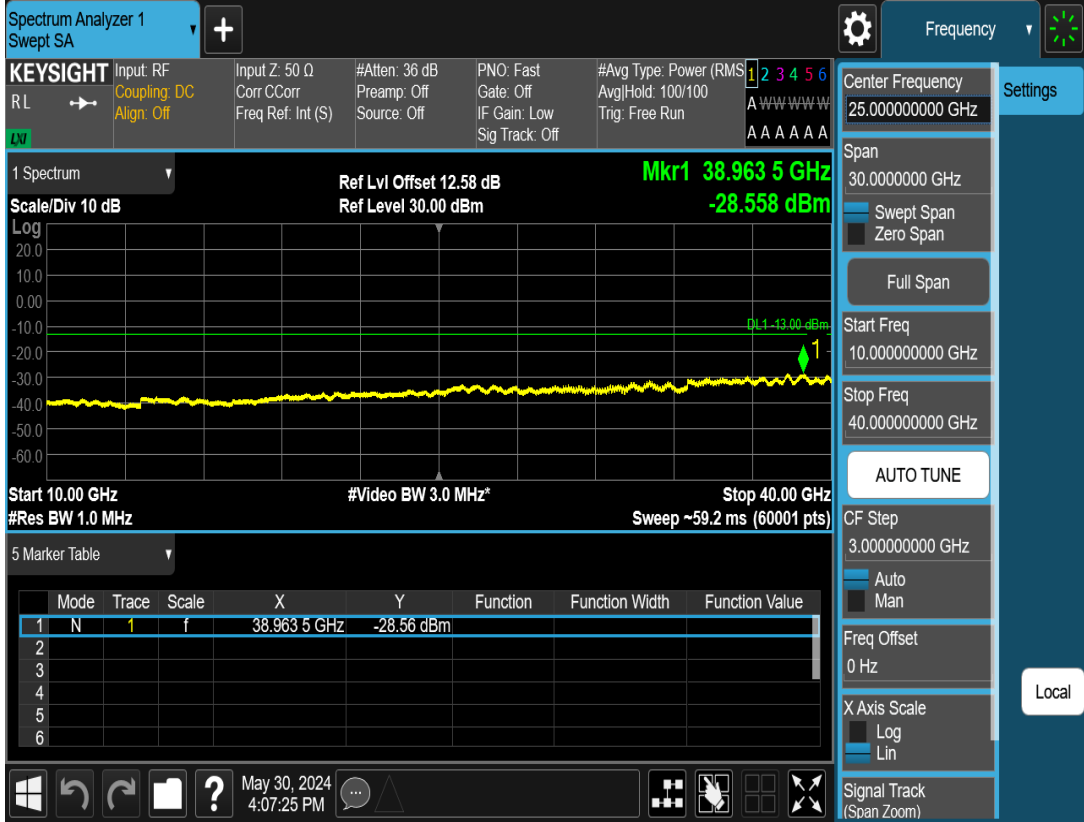
N78a(3450-3550MHz)-15M-CSE-M-CP-OFDM-QPSK-1RB0-10GHz-40GHz



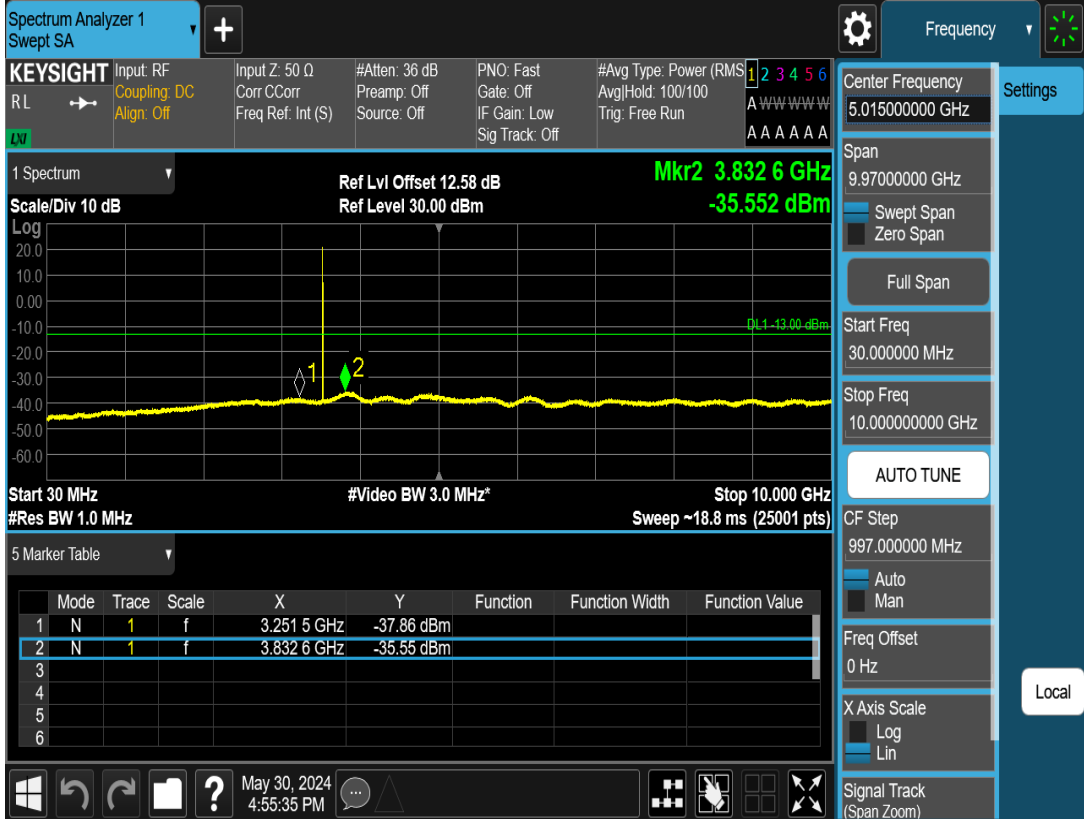
N78a(3450-3550MHz)-15M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



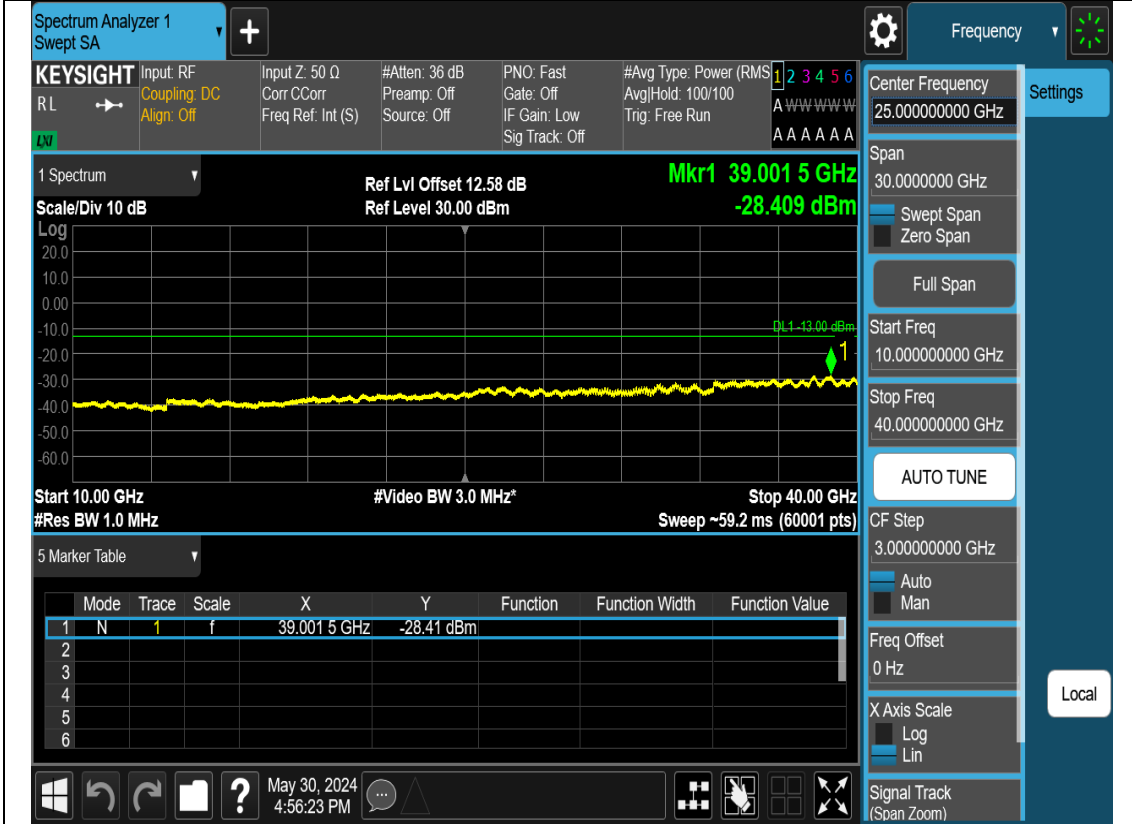
N78a(3450-3550MHz)-15M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



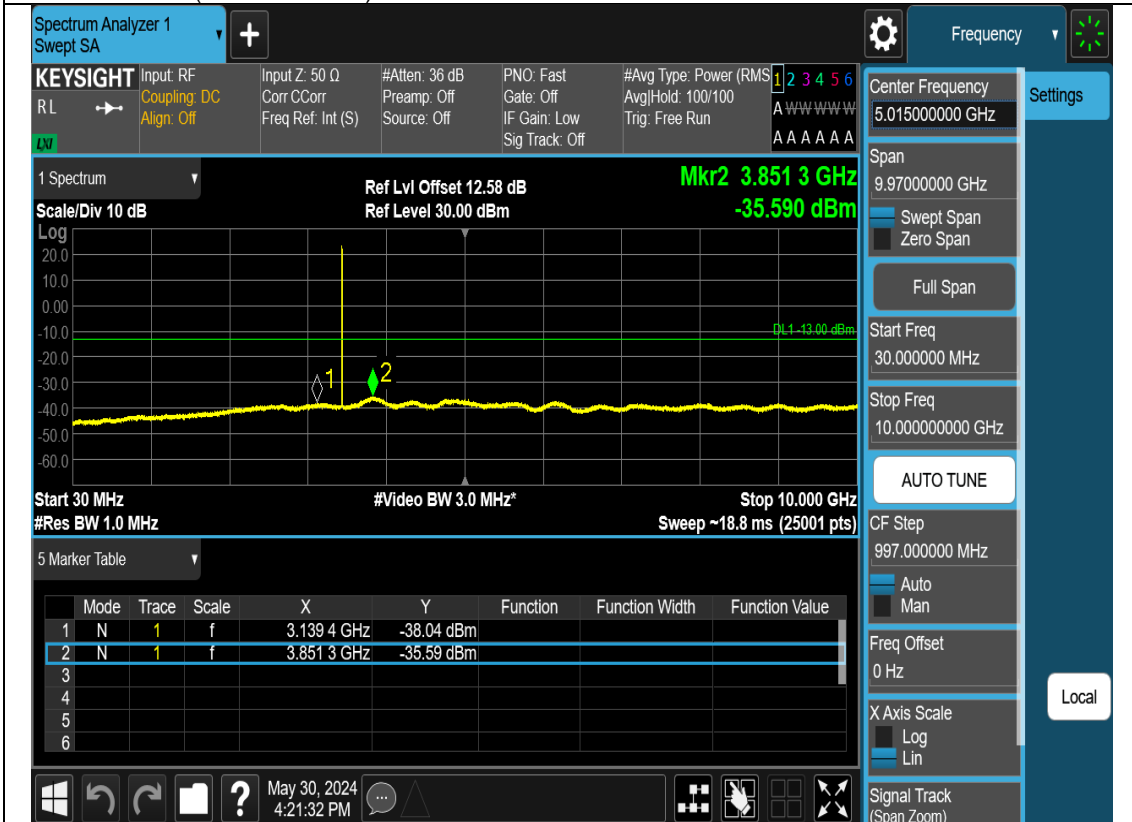
N78a(3450-3550MHz)-15M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-15M-CSE-H-CP-OFDM-QPSK-1RB0-10GHz-40GHz



N78a(3450-3550MHz)-20M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-20M-CSE-L-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz

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) AvgHold: 100/100 Trig: Free Run

Center Frequency: 25.000000000 GHz

Span: 30.0000000 GHz

Start Freq: 10.000000000 GHz

Stop Freq: 40.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr1 38.948 0 GHz -28.534 dBm

Start 10.00 GHz #Res BW 1.0 MHz #Video BW 3.0 MHz* Stop 40.00 GHz Sweep ~59.2 ms (60001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.948 0 GHz			-28.53 dBm
2							
3							
4							
5							
6							

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N78a(3450-3550MHz)-20M-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) AvgHold: 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 12.58 dB

Ref Level 30.00 dBm

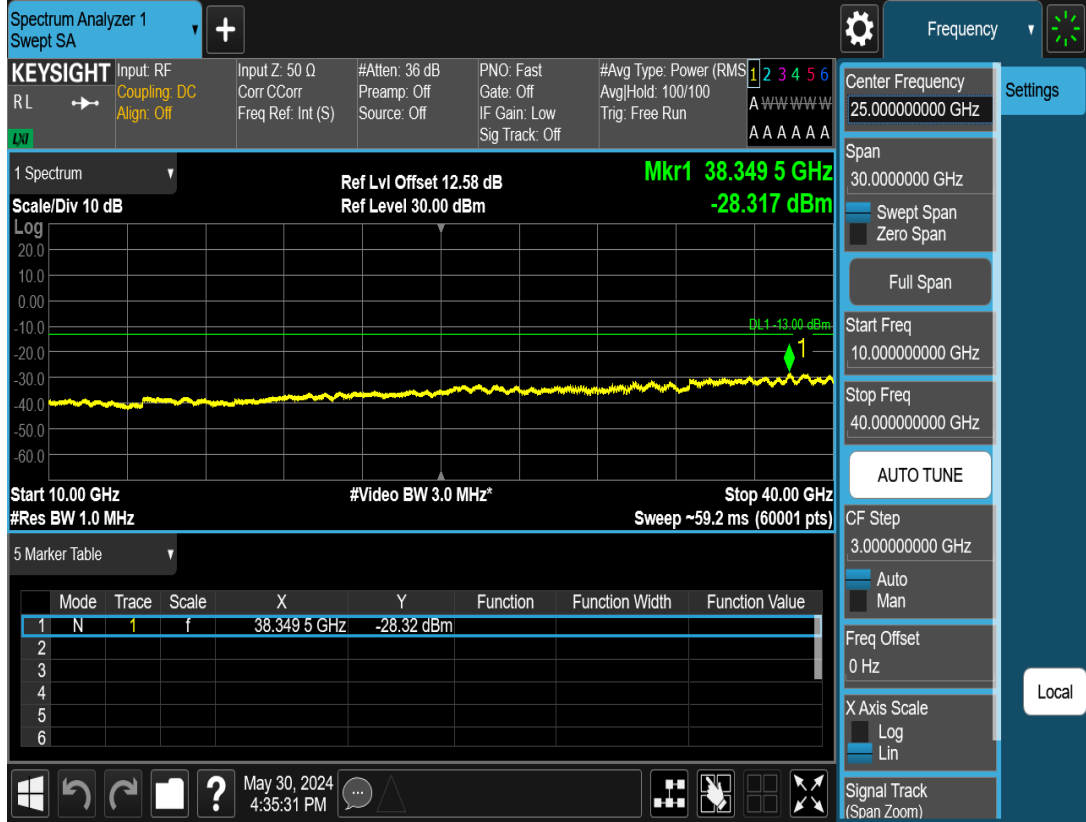
Mkr2 3.836 9 GHz -35.339 dBm

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

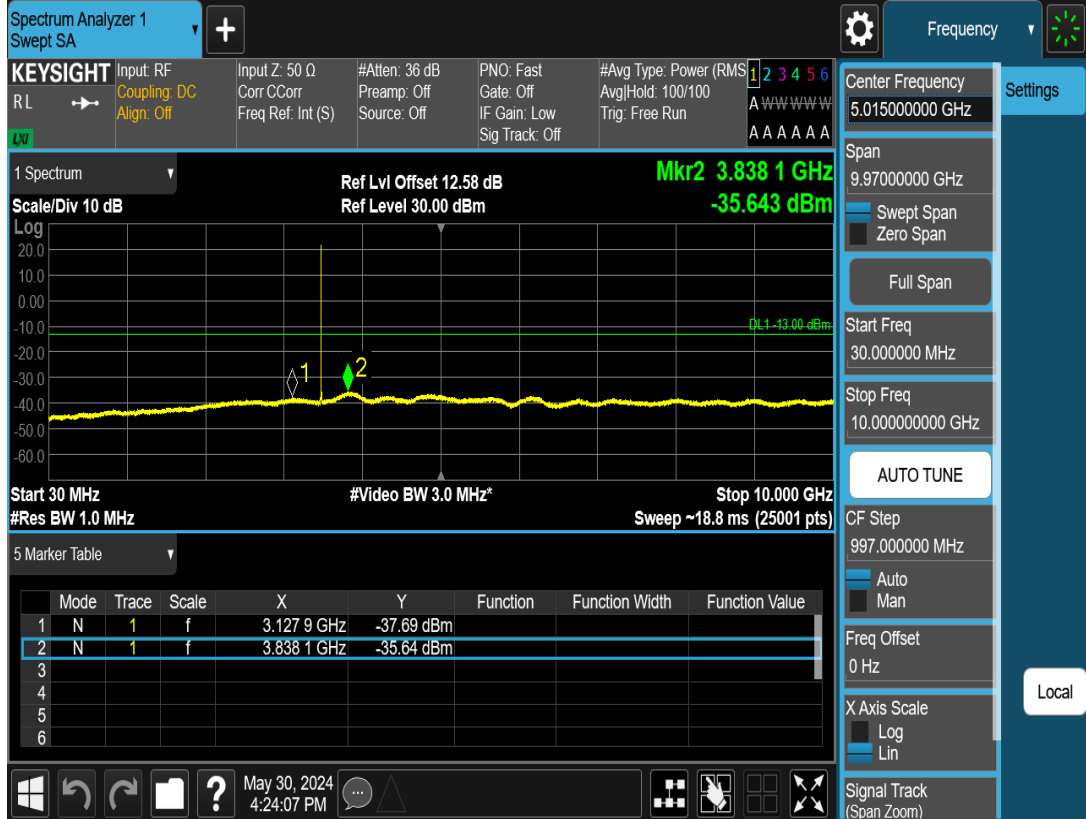
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.171 3 GHz			-38.04 dBm
2	N	1	f	3.836 9 GHz			-35.34 dBm
3							
4							
5							
6							

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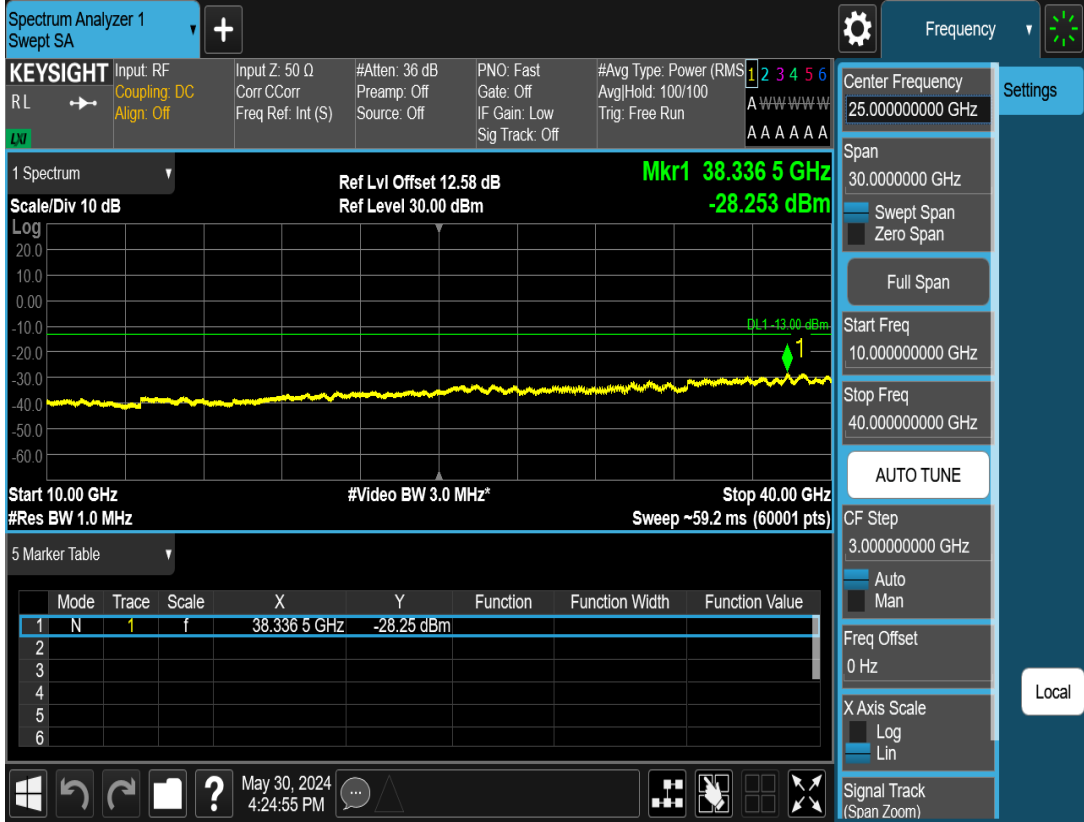
N78a(3450-3550MHz)-20M-CSE-L-CP-OFDM-QPSK-1RB0-10GHz-40GHz



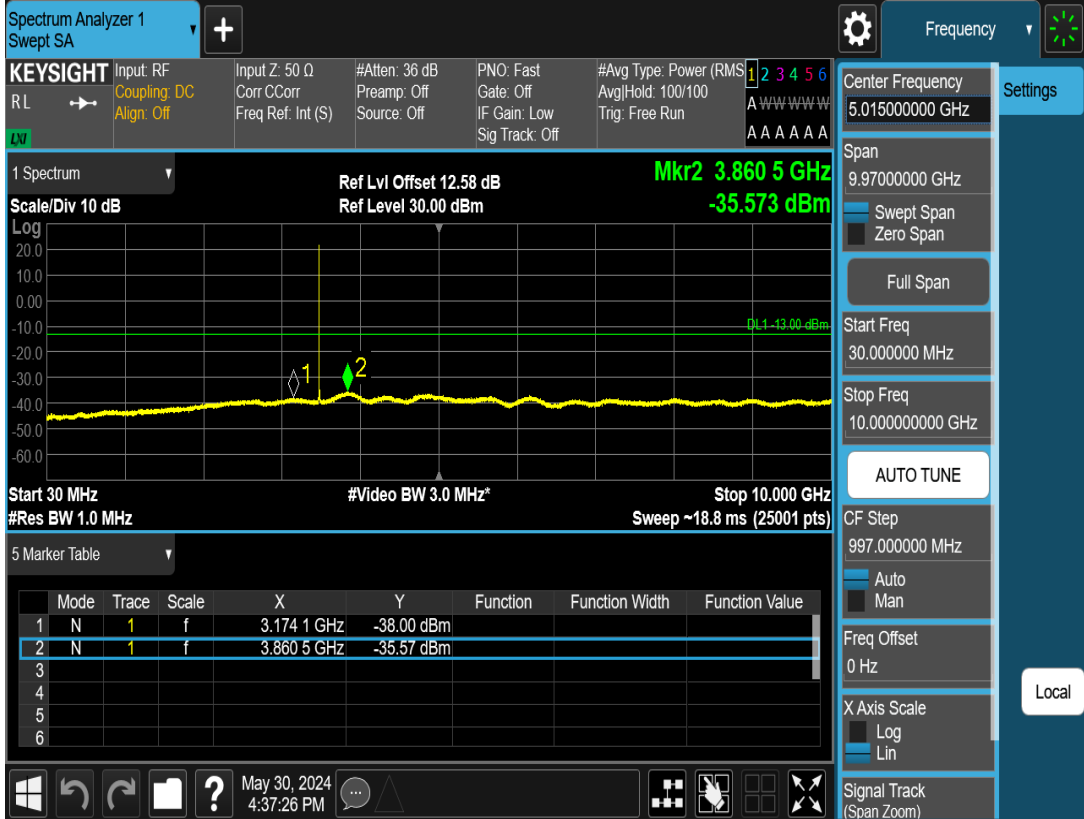
N78a(3450-3550MHz)-20M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-20M-CSE-M-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



N78a(3450-3550MHz)-20M-CSE-M-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-20M-CSE-M-CP-OFDM-QPSK-1RB0-10GHz-40GHz

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: 25.000000000 GHz

Span: 30.0000000 GHz

Start Freq: 10.000000000 GHz

Stop Freq: 40.000000000 GHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB

Ref Level 30.00 dBm

Mkr1 38.331 0 GHz -28.151 dBm

Start 10.00 GHz #Res BW 1.0 MHz #Video BW 3.0 MHz* Stop 40.00 GHz Sweep ~59.2 ms (60001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.331 0 GHz			-28.15 dBm
2							
3							
4							
5							
6							

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N78a(3450-3550MHz)-20M-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) 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 12.58 dB

Ref Level 30.00 dBm

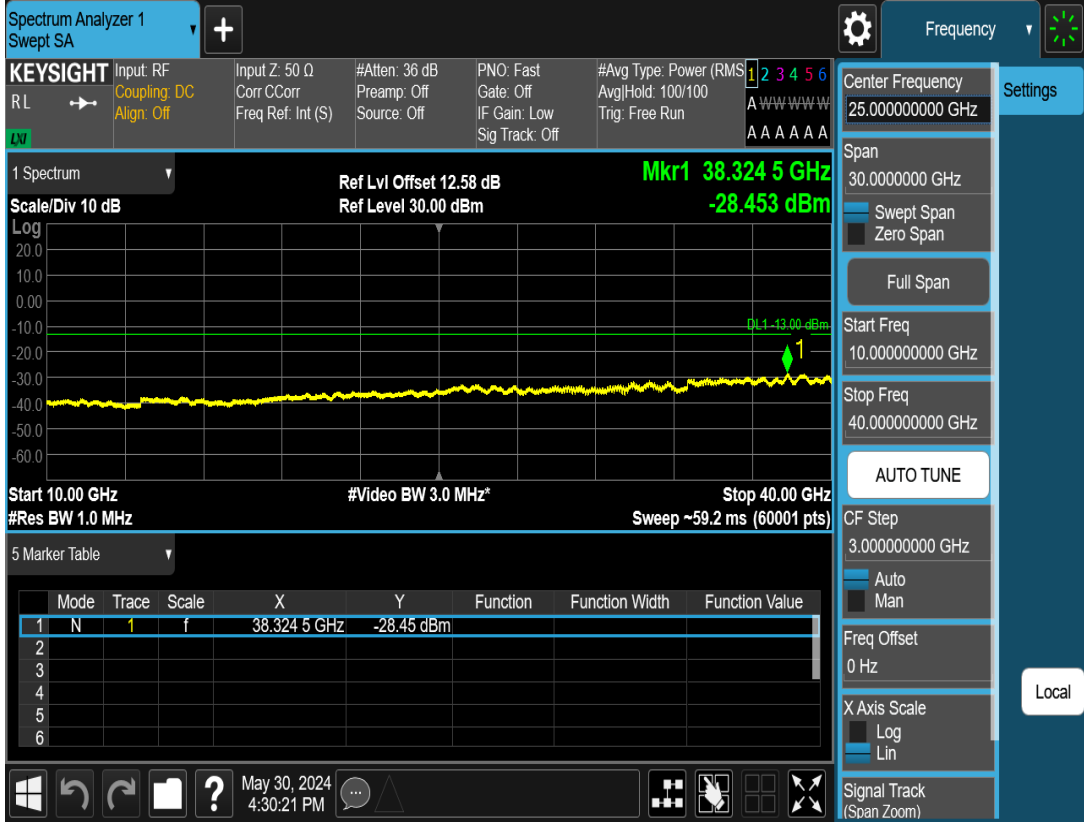
Mkr2 3.849 3 GHz -35.615 dBm

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

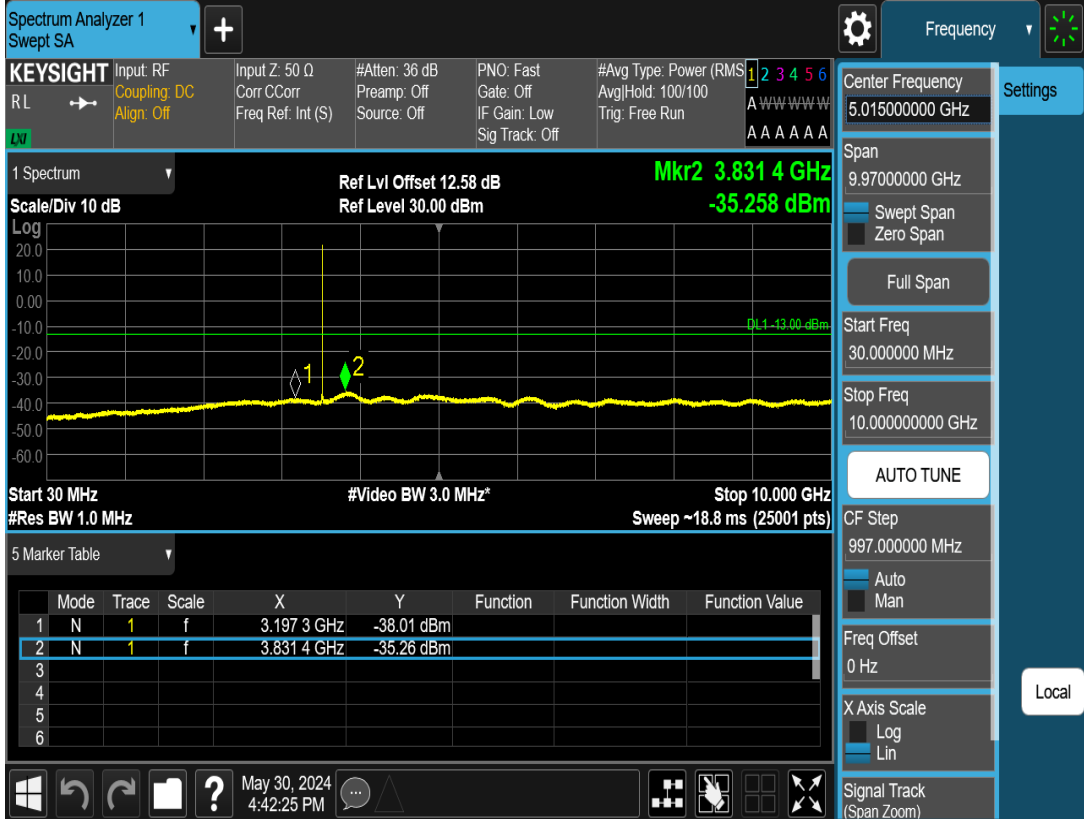
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.143 8 GHz			-37.89 dBm
2	N	1	f	3.849 3 GHz			-35.62 dBm
3							
4							
5							
6							

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N78a(3450-3550MHz)-20M-CSE-H-DFT-s-OFDM-Pi2 BPSK-1RB0-10GHz-40GHz



N78a(3450-3550MHz)-20M-CSE-H-CP-OFDM-QPSK-1RB0-30MHz-10GHz



N78a(3450-3550MHz)-20M-CSE-H-CP-OFDM-QPSK-1RB0-10GHz-40GHz

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: 100/100
Freq Ref: Int (S) Source: Off IF Gain: Low Trig: Free Run A www www w
Sig Track: Off A A A A A A

1 Spectrum Ref Lvl Offset 12.58 dB **Mkr1 38.366 5 GHz**
Scale/Div 10 dB Ref Level 30.00 dBm **-28.317 dBm**

Start 10.00 GHz #Video BW 3.0 MHz* Stop 40.00 GHz
#Res BW 1.0 MHz Sweep ~59.2 ms (60001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	38.366 5 GHz	-28.32 dBm		
2							
3							
4							
5							
6							

Settings

Center Frequency
25.000000000 GHz

Span
30.0000000 GHz

Swept Span
Zero Span

Full Span

Start Freq
10.000000000 GHz

Stop Freq
40.000000000 GHz

AUTO TUNE

CF Step
3.000000000 GHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

Local

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