

99% & 26dB Bandwidth

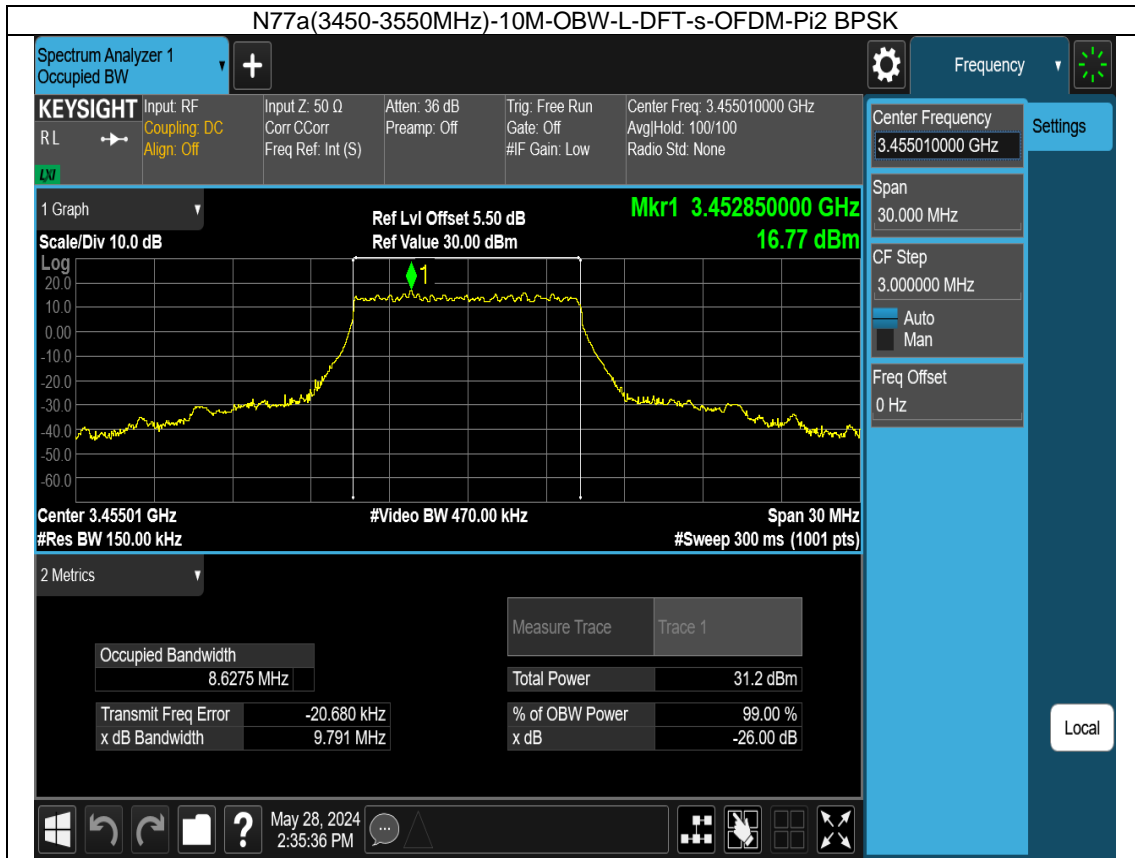
Test Result

5G NR n77a(3450-3550MHz) SCS=30kHz 10MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	8.628	9.791	/	Pass
CP-OFDM QPSK		Outer_Full	8.644	10.23	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	8.634	9.991	/	Pass
CP-OFDM QPSK		Outer_Full	8.641	10.10	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	8.644	9.961	/	Pass
CP-OFDM QPSK		Outer_Full	8.652	10.21	/	Pass

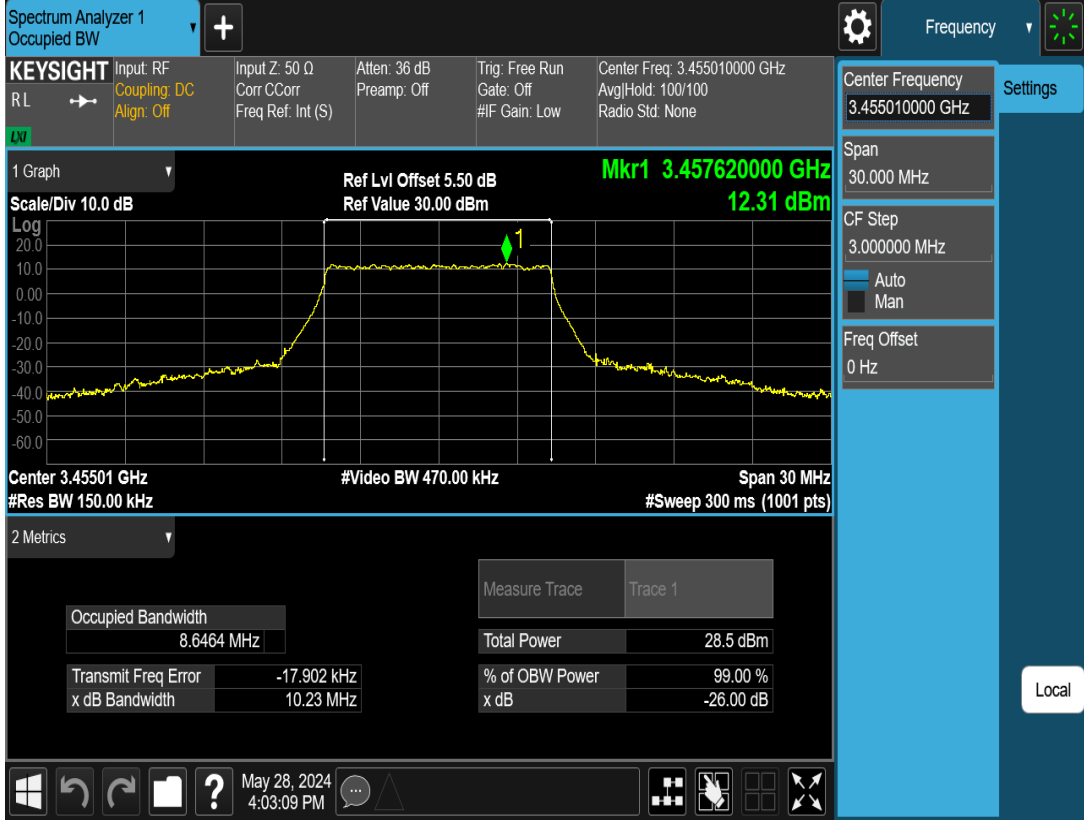
5G NR n77a(3450-3550MHz) SCS=30kHz 15MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	13.037	14.82	/	Pass
CP-OFDM QPSK		Outer_Full	13.711	15.45	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	12.986	14.48	/	Pass
CP-OFDM QPSK		Outer_Full	13.669	15.45	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	12.975	14.57	/	Pass
CP-OFDM QPSK		Outer_Full	13.663	15.49	/	Pass

5G NR n77a(3450-3550MHz) SCS=30kHz 20MHz						
Modulation	CH	RB Allocation	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	17.888	19.45	/	Pass
CP-OFDM QPSK		Outer_Full	18.259	20.11	/	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	17.906	19.69	/	Pass
CP-OFDM QPSK		Outer_Full	18.313	20.24	/	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	17.893	19.48	/	Pass
CP-OFDM QPSK		Outer_Full	18.249	20.04	/	Pass

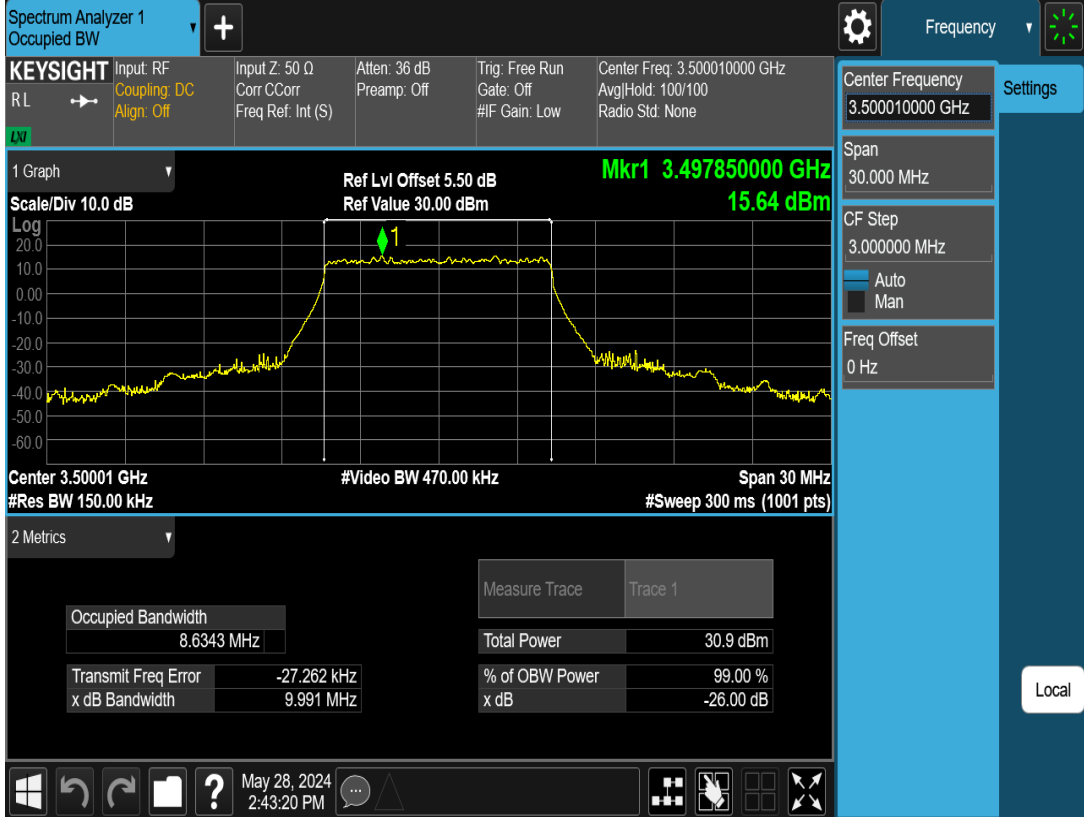
Test graph



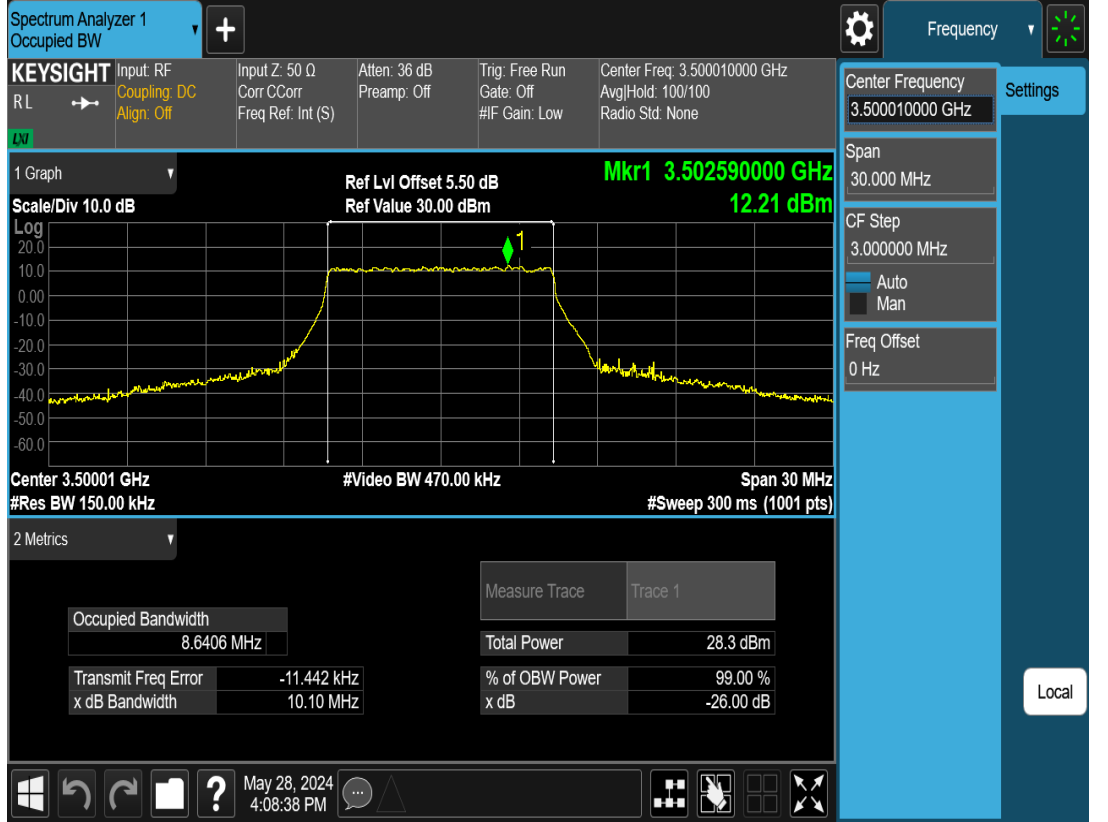
N77a(3450-3550MHz)-10M-OBW-L-CP-OFDM-QPSK



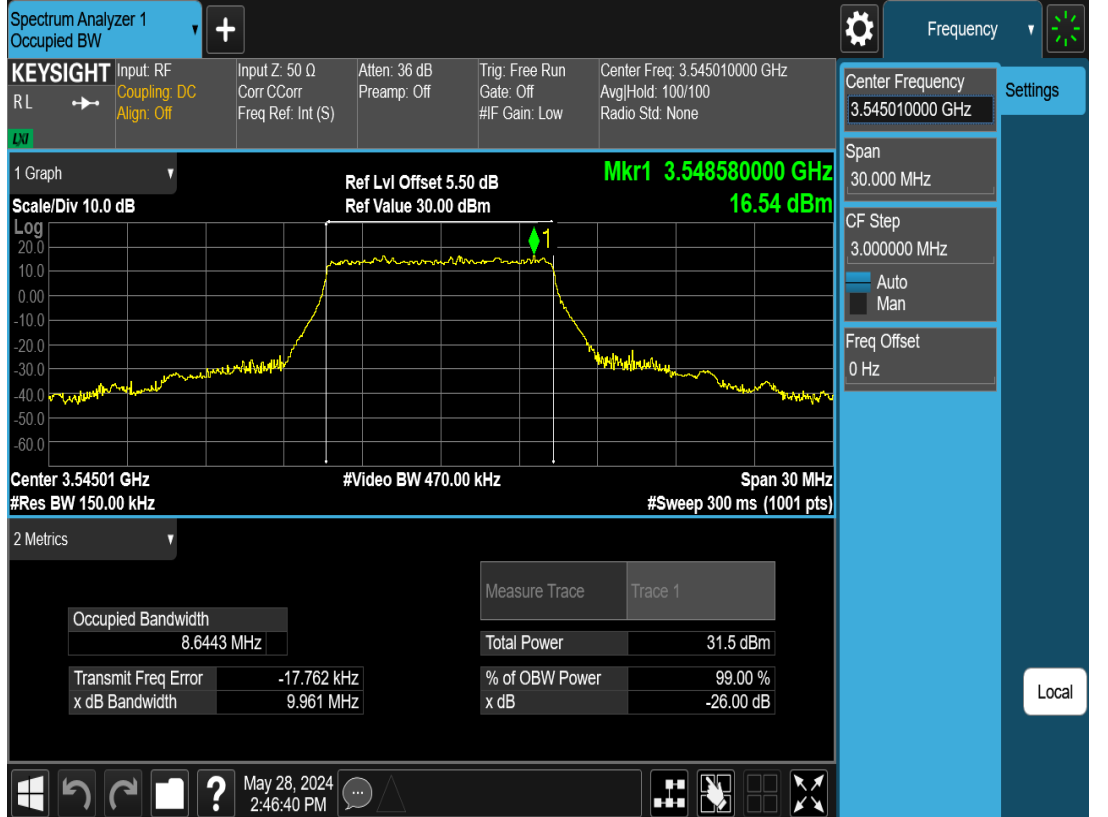
N77a(3450-3550MHz)-10M-OBW-M-DFT-s-OFDM-Pi2 BPSK



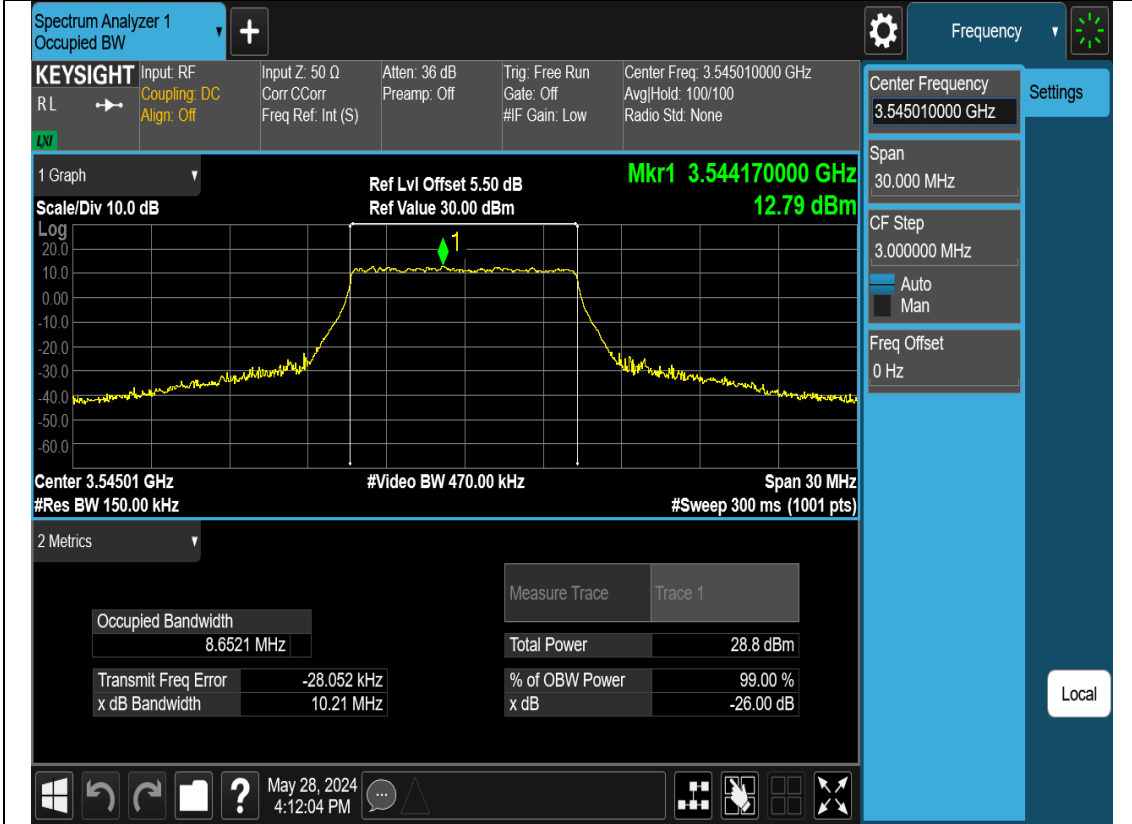
N77a(3450-3550MHz)-10M-OBW-M-CP-OFDM-QPSK



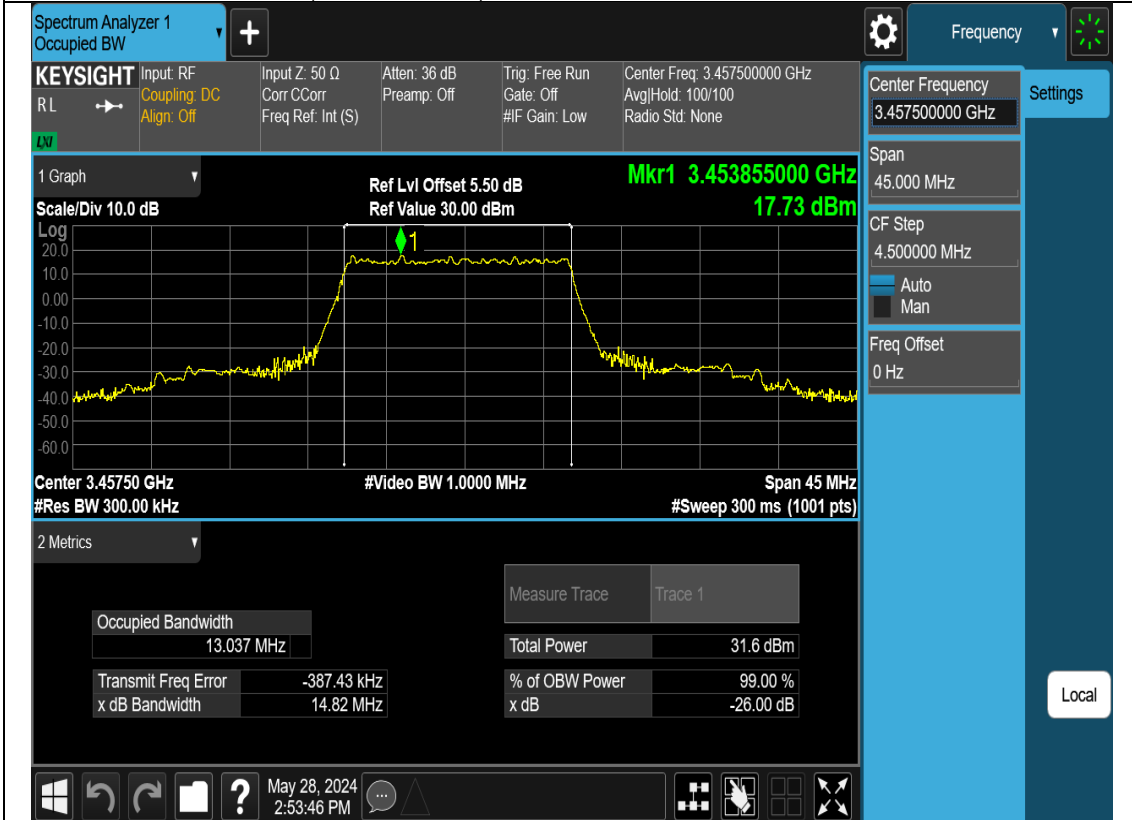
N77a(3450-3550MHz)-10M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N77a(3450-3550MHz)-10M-OBW-H-CP-OFDM-QPSK



N77a(3450-3550MHz)-15M-OBW-L-DFT-s-OFDM-Pi2 BPSK



N77a(3450-3550MHz)-15M-OBW-L-CP-OFDM-QPSK

Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input RF
RL Coupling: DC
Align: Off

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

Atten: 36 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 3.45750000 GHz
Avg/Hold: 100/100
Radio Std: None

Center Frequency: 3.45750000 GHz

Span: 45.000 MHz

CF Step: 4.500000 MHz
Auto
Man

Freq Offset: 0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 3.450975000 GHz
14.52 dBm

Center 3.45750 GHz
#Res BW 300.00 kHz
#Video BW 1.0000 MHz
Span 45 MHz
#Sweep 300 ms (1001 pts)

2 Metrics

Measure Trace		Trace 1	
Occupied Bandwidth	13.711 MHz	Total Power	29.0 dBm
Transmit Freq Error	-13.299 kHz	% of OBW Power	99.00 %
x dB Bandwidth	15.45 MHz	x dB	-26.00 dB

May 28, 2024
3:50:06 PM

Local

N77a(3450-3550MHz)-15M-OBW-M-DFT-s-OFDM-Pi2 BPSK

Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input RF
RL Coupling: DC
Align: Off

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

Atten: 36 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 3.500010000 GHz
Avg/Hold: 100/100
Radio Std: None

Center Frequency: 3.500010000 GHz

Span: 45.000 MHz

CF Step: 4.500000 MHz
Auto
Man

Freq Offset: 0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 3.496410000 GHz
18.77 dBm

Center 3.50001 GHz
#Res BW 300.00 kHz
#Video BW 1.0000 MHz
Span 45 MHz
#Sweep 300 ms (1001 pts)

2 Metrics

Measure Trace		Trace 1	
Occupied Bandwidth	12.986 MHz	Total Power	31.5 dBm
Transmit Freq Error	-403.49 kHz	% of OBW Power	99.00 %
x dB Bandwidth	14.48 MHz	x dB	-26.00 dB

May 28, 2024
2:59:11 PM

Local

N77a(3450-3550MHz)-15M-OBW-M-CP-OFDM-QPSK

Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input RF
RL Coupling: DC
Align: Off

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

Atten: 36 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 3.500010000 GHz
Avg/Hold: 100/100
Radio Std: None

Center Frequency: 3.500010000 GHz
Span: 45.000 MHz
CF Step: 4.500000 MHz
Auto Man
Freq Offset: 0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 3.493530000 GHz
14.57 dBm

Center 3.50001 GHz
#Res BW 300.00 kHz
#Video BW 1.0000 MHz
Span 45 MHz
#Sweep 300 ms (1001 pts)

2 Metrics

Measure Trace		Trace 1	
Occupied Bandwidth	13.669 MHz	Total Power	29.2 dBm
Transmit Freq Error	-27.244 kHz	% of OBW Power	99.00 %
x dB Bandwidth	15.45 MHz	x dB	-26.00 dB

May 28, 2024
3:54:47 PM

Local

N77a(3450-3550MHz)-15M-OBW-H-DFT-s-OFDM-Pi2 BPSK

Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input RF
RL Coupling: DC
Align: Off

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

Atten: 36 dB
Preamp: Off

Trig: Free Run
Gate: Off
#F Gain: Low

Center Freq: 3.542520000 GHz
Avg/Hold: 100/100
Radio Std: None

Center Frequency: 3.542520000 GHz
Span: 45.000 MHz
CF Step: 4.500000 MHz
Auto Man
Freq Offset: 0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 3.545400000 GHz
18.77 dBm

Center 3.54252 GHz
#Res BW 300.00 kHz
#Video BW 1.0000 MHz
Span 45 MHz
#Sweep 300 ms (1001 pts)

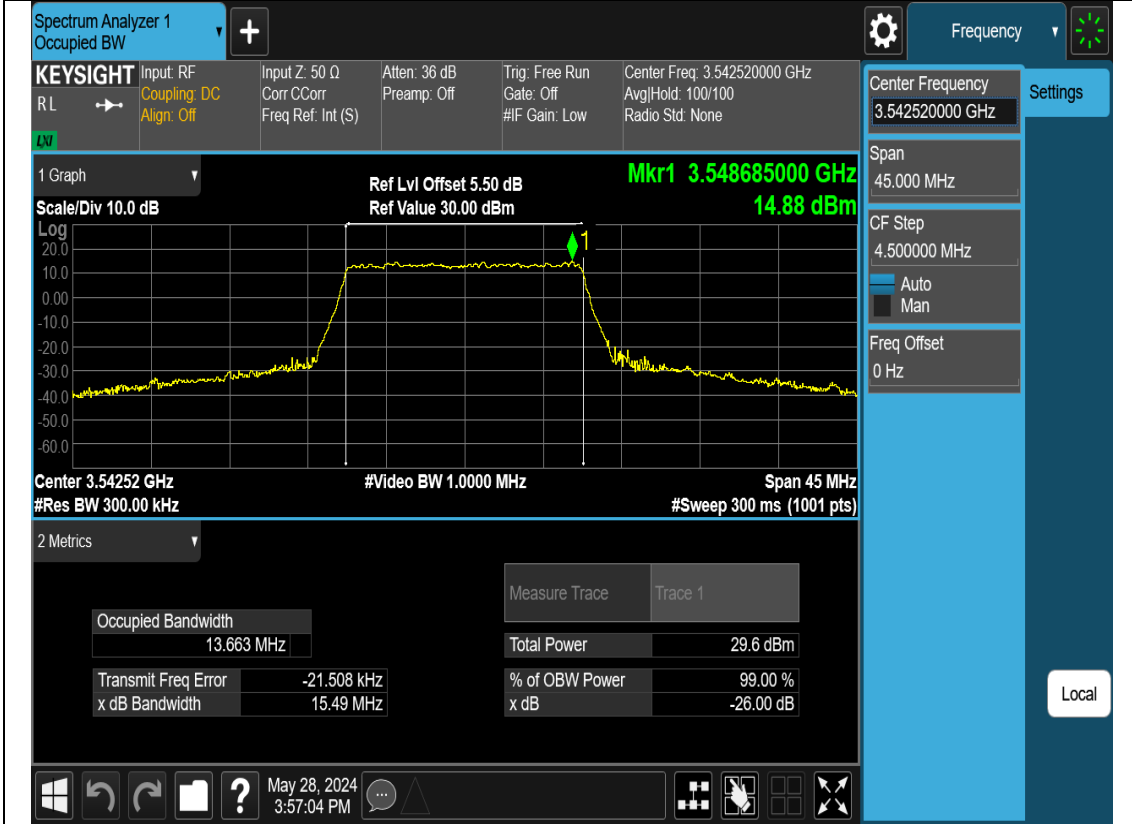
2 Metrics

Measure Trace		Trace 1	
Occupied Bandwidth	12.975 MHz	Total Power	32.1 dBm
Transmit Freq Error	-384.12 kHz	% of OBW Power	99.00 %
x dB Bandwidth	14.57 MHz	x dB	-26.00 dB

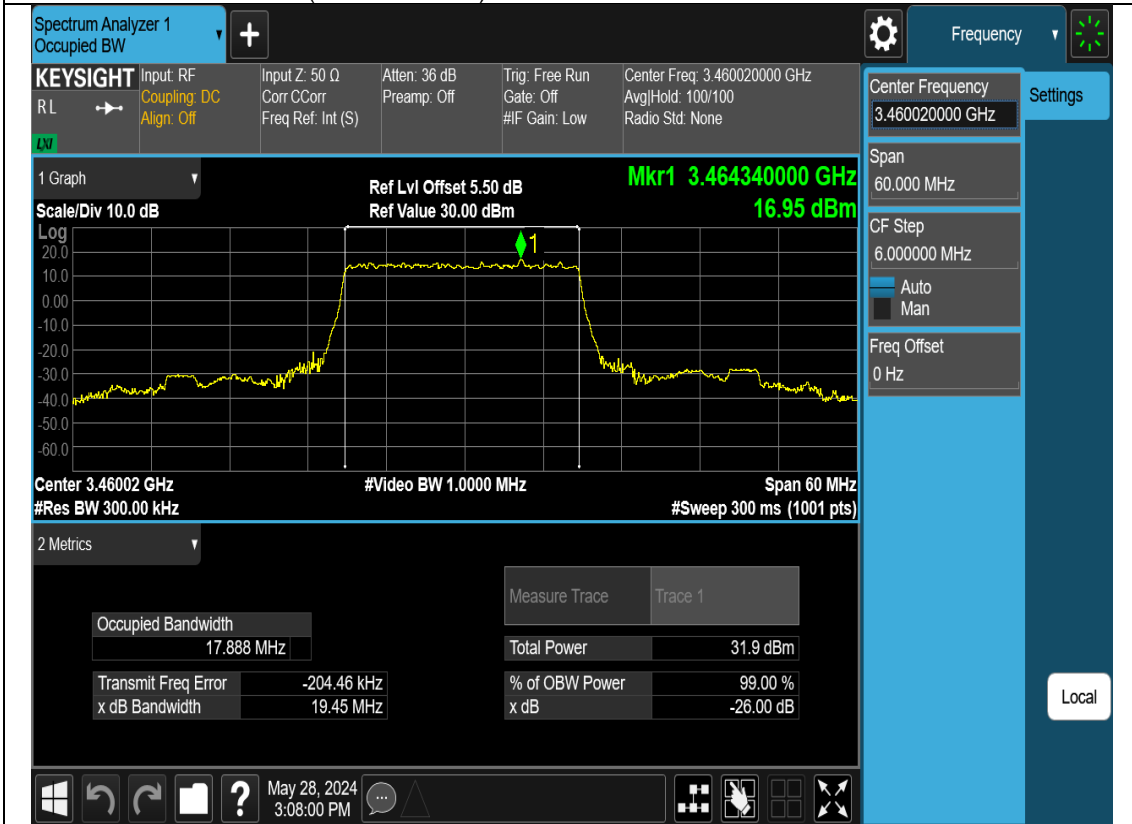
May 28, 2024
3:01:35 PM

Local

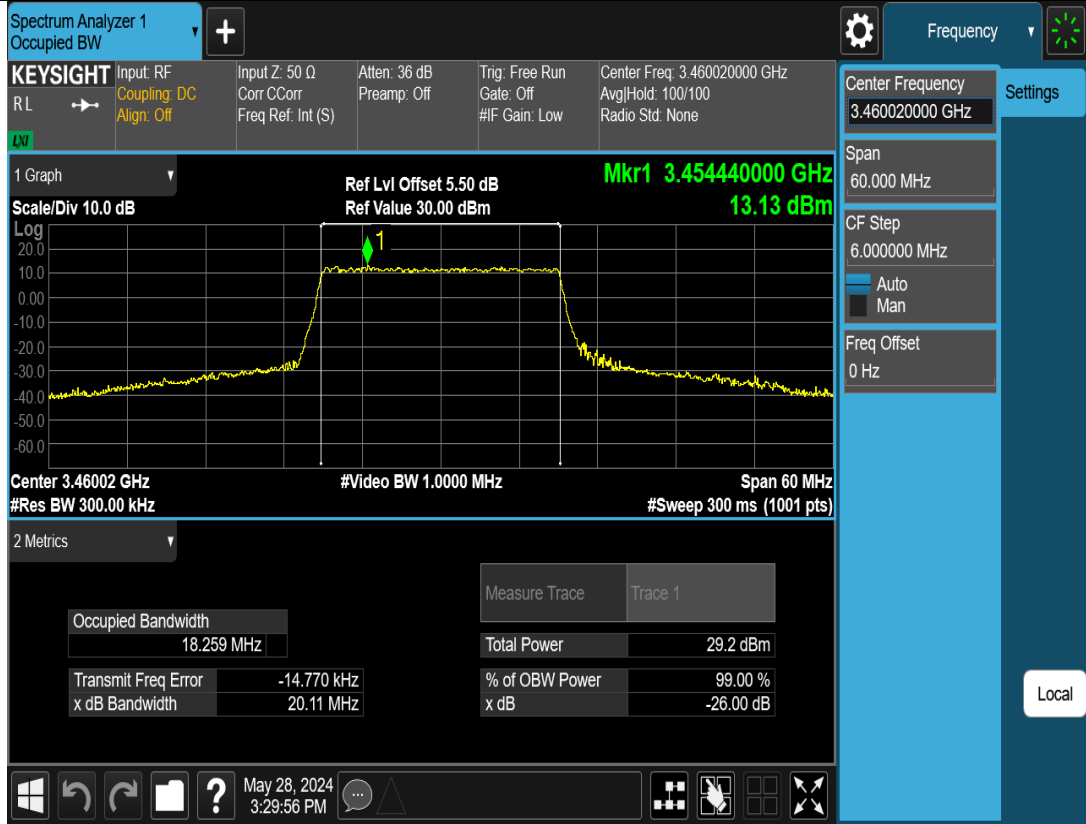
N77a(3450-3550MHz)-15M-OBW-H-CP-OFDM-QPSK



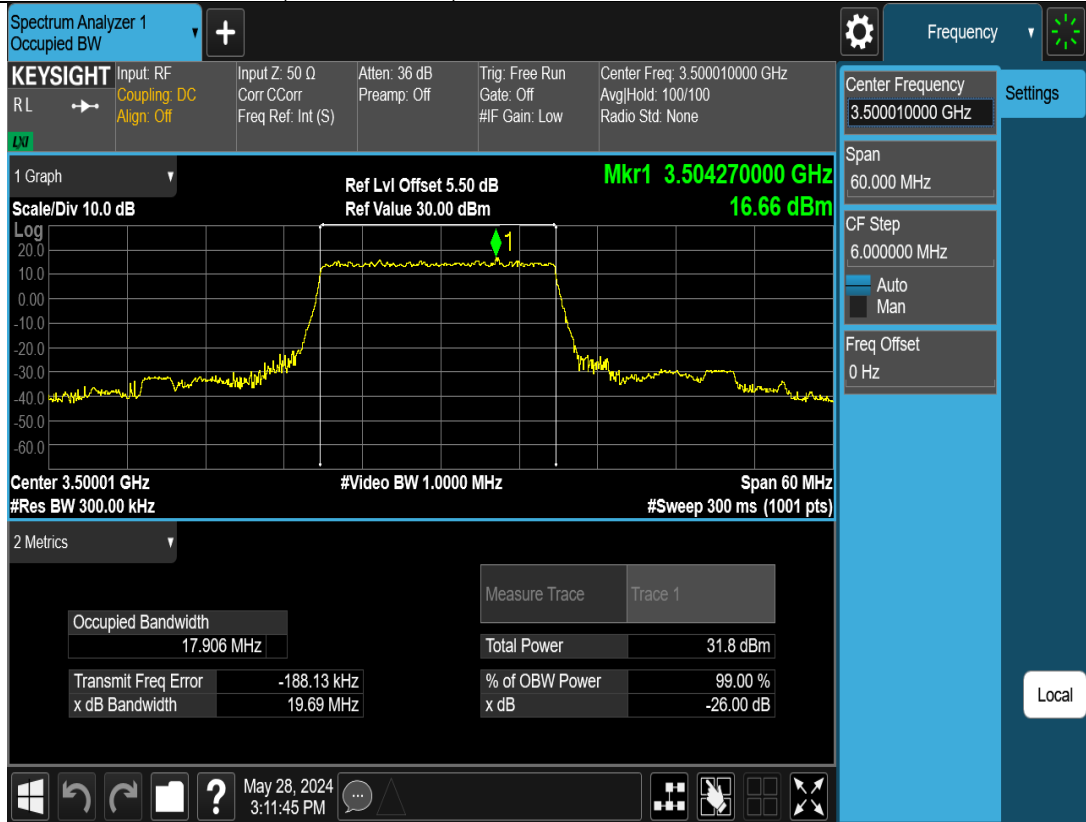
N77a(3450-3550MHz)-20M-OBW-L-DFT-s-OFDM-Pi2 BPSK



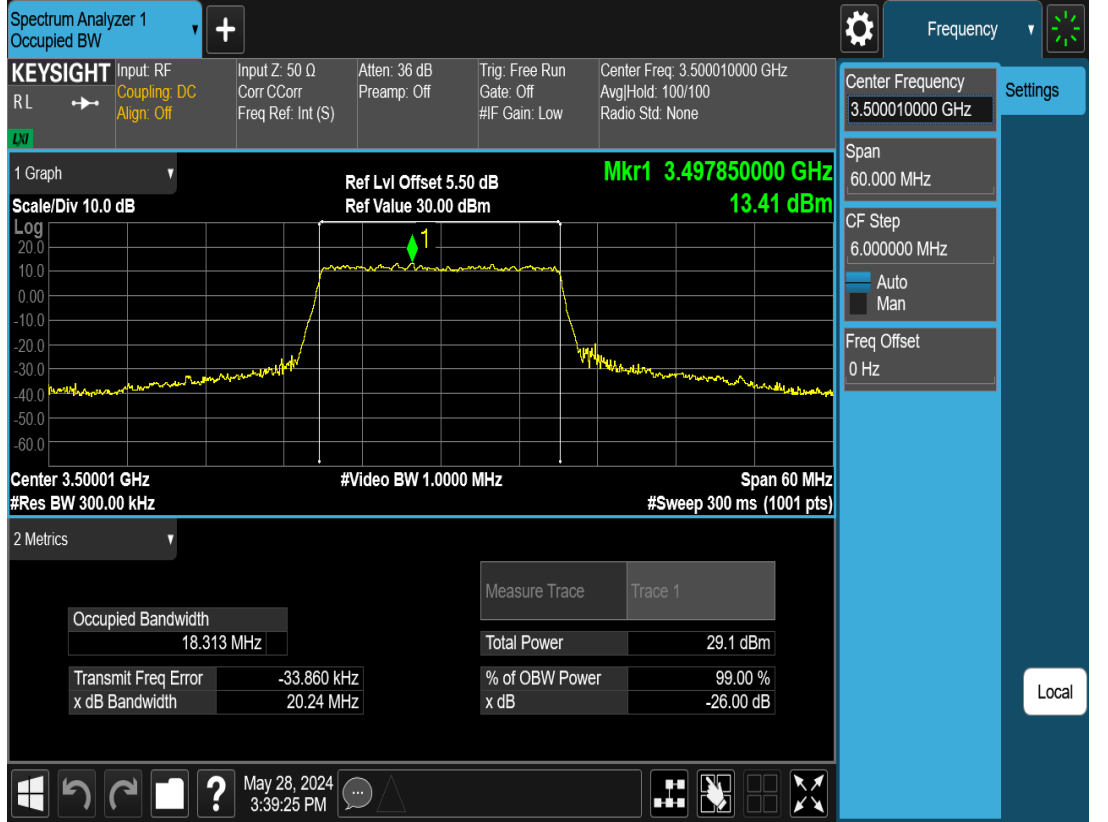
N77a(3450-3550MHz)-20M-OBW-L-CP-OFDM-QPSK



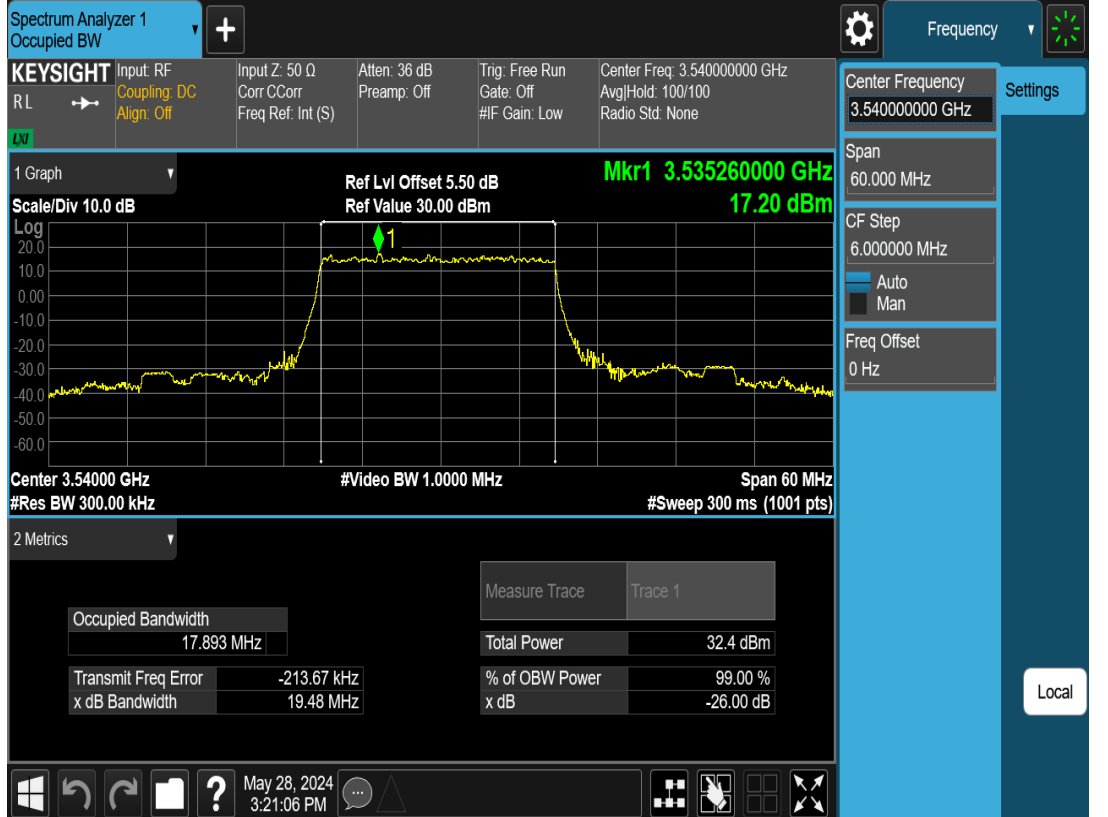
N77a(3450-3550MHz)-20M-OBW-M-DFT-s-OFDM-Pi2 BPSK



N77a(3450-3550MHz)-20M-OBW-M-CP-OFDM-QPSK



N77a(3450-3550MHz)-20M-OBW-H-DFT-s-OFDM-Pi2 BPSK



N77a(3450-3550MHz)-20M-OBW-H-CP-OFDM-QPSK

Spectrum Analyzer 1
Occupied BW

KEYSIGHT Input RF
RL → Coupling: DC
Align: Off

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

Atten: 36 dB
Preamp: Off

Trig: Free Run
Gate: Off
#IF Gain: Low

Center Freq: 3.540000000 GHz
Avg/Hold: 100/100
Radio Std: None

Center Frequency: 3.540000000 GHz

Span: 60.000 MHz

CF Step: 6.000000 MHz
Auto
Man

Freq Offset: 0 Hz

1 Graph
Scale/Div 10.0 dB
Log
Ref Lvl Offset 5.50 dB
Ref Value 30.00 dBm
Mkr1 3.531840000 GHz
14.04 dBm

Center 3.54000 GHz
#Res BW 300.00 kHz
#Video BW 1.0000 MHz
Span 60 MHz
#Sweep 300 ms (1001 pts)

2 Metrics

Measure Trace		Trace 1	
Occupied Bandwidth	18.249 MHz	Total Power	29.8 dBm
Transmit Freq Error	-27.751 kHz	% of OBW Power	99.00 %
x dB Bandwidth	20.04 MHz	x dB	-26.00 dB

Local

May 28, 2024
3:43:55 PM

Peak-Average Ratio

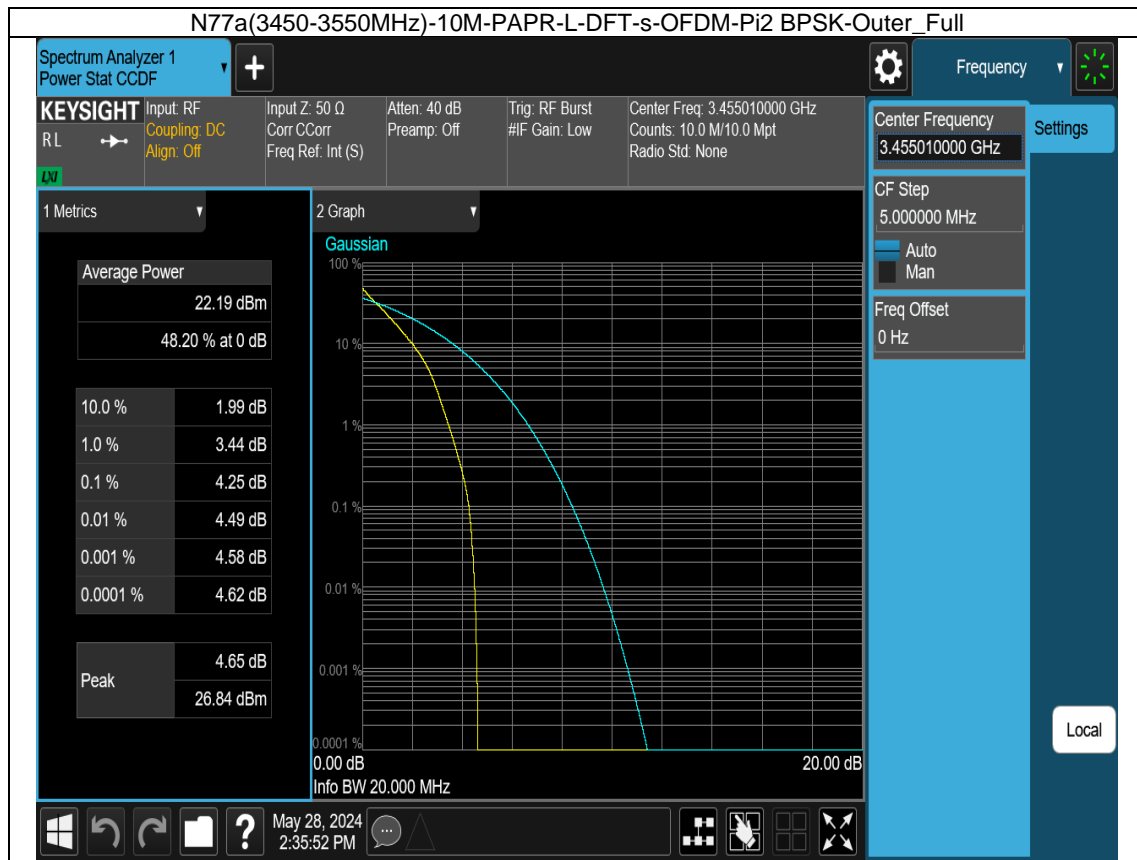
Test Result

5G NR n77a(3450-3550MHz) SCS=30kHz 10MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.25	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.48	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.37	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.25	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.36	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.54	<=13	Pass

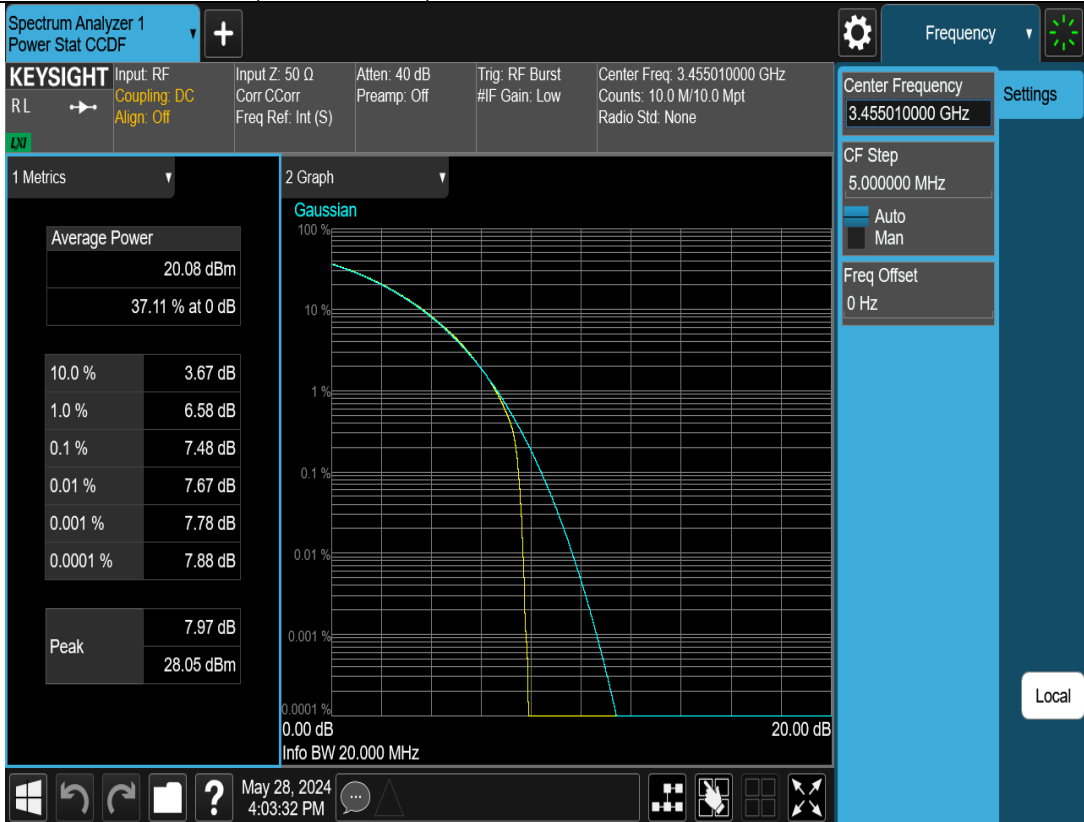
5G NR n77a(3450-3550MHz) SCS=30kHz 15MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.40	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.41	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.42	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.30	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.22	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.63	<=13	Pass

5G NR n77a(3450-3550MHz) SCS=30kHz 20MHz					
Modulation	CH	RB Allocation	Peak-Average Ratio (dB)	Limit	Verdict
DFT-s-OFDM PI/2 BPSK	Low CH	Outer_Full	4.00	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.49	<=13	Pass
DFT-s-OFDM PI/2 BPSK	Middle CH	Outer_Full	4.38	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.29	<=13	Pass
DFT-s-OFDM PI/2 BPSK	High CH	Outer_Full	4.45	<=13	Pass
CP-OFDM QPSK		Outer_Full	7.50	<=13	Pass

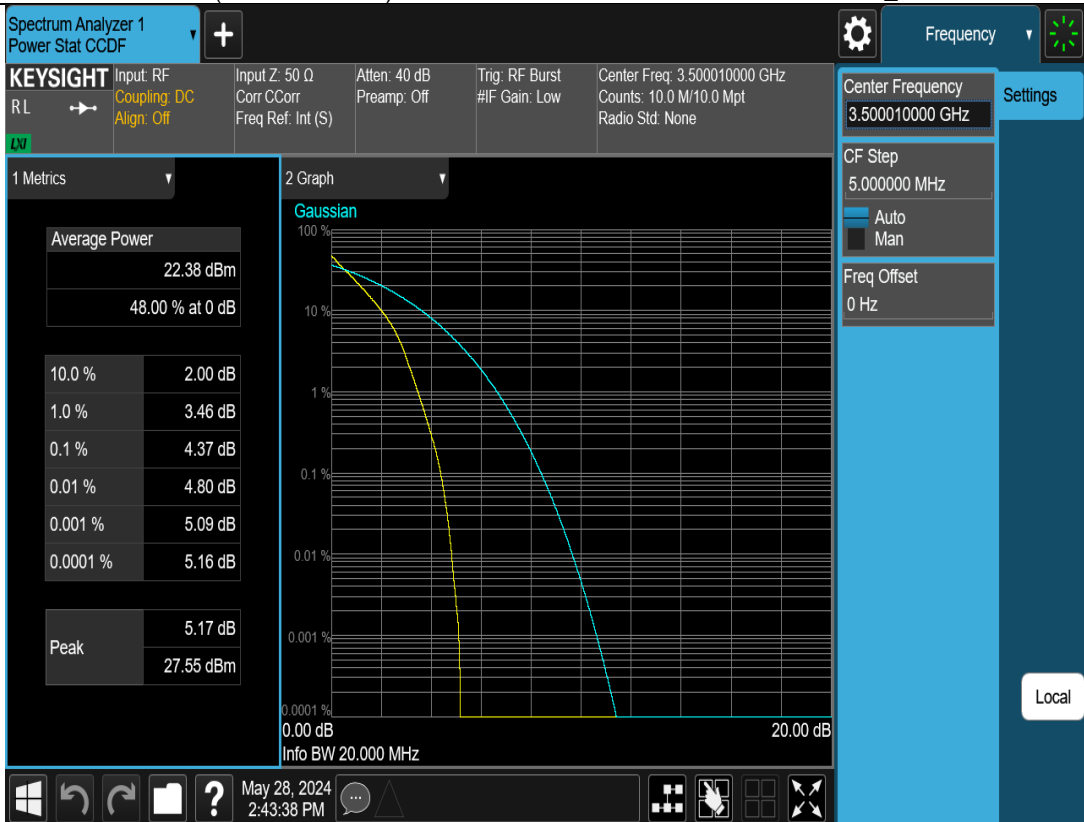
Test Graph



N77a(3450-3550MHz)-10M-PAPR-L-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-10M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-10M-PAPR-M-CP-OFDM-QPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL \rightarrow 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: 3.500010000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.500010000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

20.12 dBm

37.23 % at 0 dB

10.0 %	3.67 dB
1.0 %	6.52 dB
0.1 %	7.25 dB
0.01 %	7.43 dB
0.001 %	7.52 dB
0.0001 %	7.60 dB

Peak

7.64 dB

27.76 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 28, 2024
4:09:01 PM

Local

N77a(3450-3550MHz)-10M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL \rightarrow 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: 3.545010000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.545010000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

22.77 dBm

47.64 % at 0 dB

10.0 %	2.00 dB
1.0 %	3.46 dB
0.1 %	4.36 dB
0.01 %	4.66 dB
0.001 %	4.76 dB
0.0001 %	4.79 dB

Peak

4.87 dB

27.64 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 28, 2024
2:46:56 PM

Local

N77a(3450-3550MHz)-10M-PAPR-H-CP-OFDM-QPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL 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: 3.545010000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.545010000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

20.57 dBm

36.92 % at 0 dB

10.0 %	3.70 dB
1.0 %	6.60 dB
0.1 %	7.54 dB
0.01 %	7.76 dB
0.001 %	7.86 dB
0.0001 %	7.94 dB

Peak

7.97 dB

28.54 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

May 28, 2024 4:12:27 PM

Local

N77a(3450-3550MHz)-15M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL 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: 3.457500000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.457500000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

22.37 dBm

47.68 % at 0 dB

10.0 %	1.99 dB
1.0 %	3.42 dB
0.1 %	4.40 dB
0.01 %	4.90 dB
0.001 %	5.05 dB
0.0001 %	5.12 dB

Peak

5.15 dB

27.52 dBm

2 Graph

Gaussian

100 %

10 %

1 %

0.1 %

0.01 %

0.001 %

0.0001 %

0.00 dB

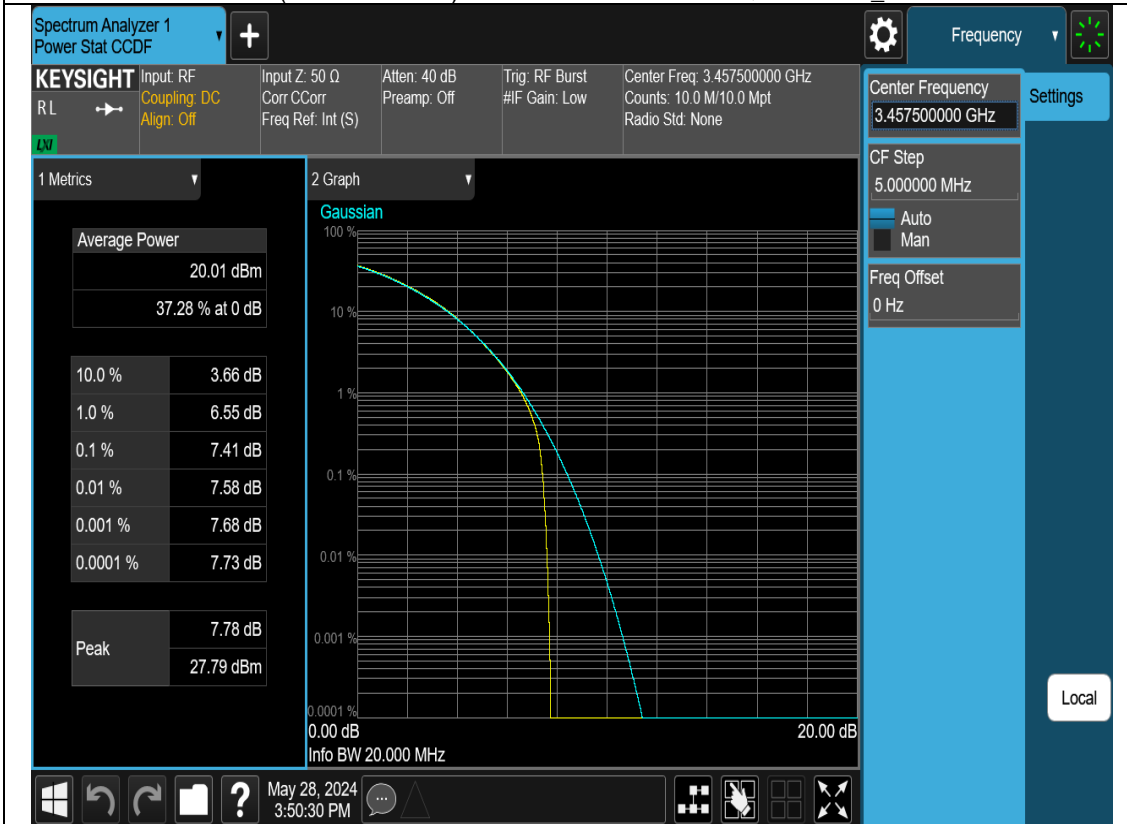
20.00 dB

Info BW 20.000 MHz

May 28, 2024 2:54:03 PM

Local

N77a(3450-3550MHz)-15M-PAPR-L-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-15M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-15M-PAPR-M-CP-OFDM-QPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL 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: 3.500010000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.500010000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

20.10 dBm

37.00 % at 0 dB

10.0 %	3.68 dB
1.0 %	6.50 dB
0.1 %	7.30 dB
0.01 %	7.48 dB
0.001 %	7.59 dB
0.0001 %	7.64 dB

Peak

7.67 dB

27.77 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

May 28, 2024
3:55:10 PM

Local

N77a(3450-3550MHz)-15M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full

Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF
RL 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: 3.542520000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.542520000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

23.01 dBm

48.18 % at 0 dB

10.0 %	1.97 dB
1.0 %	3.42 dB
0.1 %	4.22 dB
0.01 %	4.42 dB
0.001 %	4.53 dB
0.0001 %	4.58 dB

Peak

4.61 dB

27.62 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

May 28, 2024
3:01:51 PM

Local

N77a(3450-3550MHz)-15M-PAPR-H-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: 3.542520000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.542520000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

20.56 dBm

36.88 % at 0 dB

10.0 %	3.67 dB
1.0 %	6.62 dB
0.1 %	7.63 dB
0.01 %	7.81 dB
0.001 %	7.91 dB
0.0001 %	7.97 dB

Peak

8.01 dB

28.57 dBm

2 Graph

Gaussian

0.0001 %
0.00 dB
Info BW 20.000 MHz

May 28, 2024
3:57:27 PM

Local

N77a(3450-3550MHz)-20M-PAPR-L-DFT-s-OFDM-Pi2 BPSK-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: 3.460020000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency: 3.460020000 GHz

CF Step: 5.000000 MHz

Freq Offset: 0 Hz

1 Metrics

Average Power

22.56 dBm

48.49 % at 0 dB

10.0 %	1.96 dB
1.0 %	3.33 dB
0.1 %	4.00 dB
0.01 %	4.21 dB
0.001 %	4.33 dB
0.0001 %	4.46 dB

Peak

4.51 dB

27.07 dBm

2 Graph

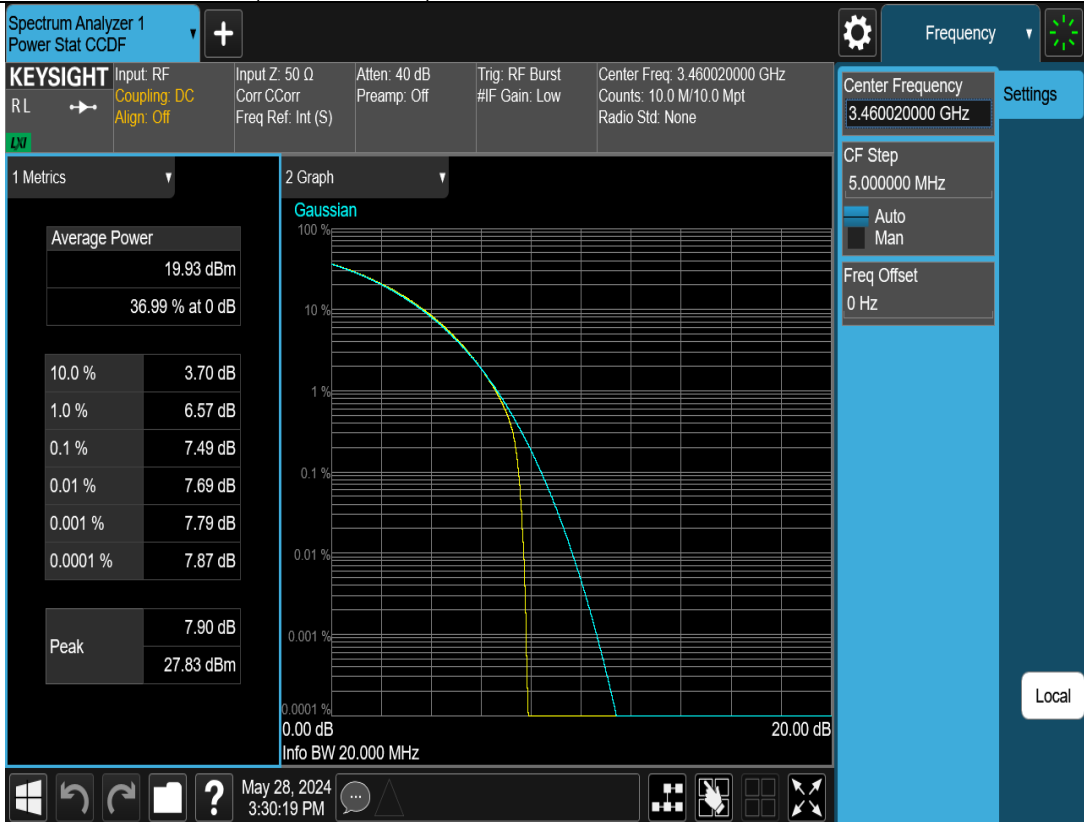
Gaussian

0.0001 %
0.00 dB
Info BW 20.000 MHz

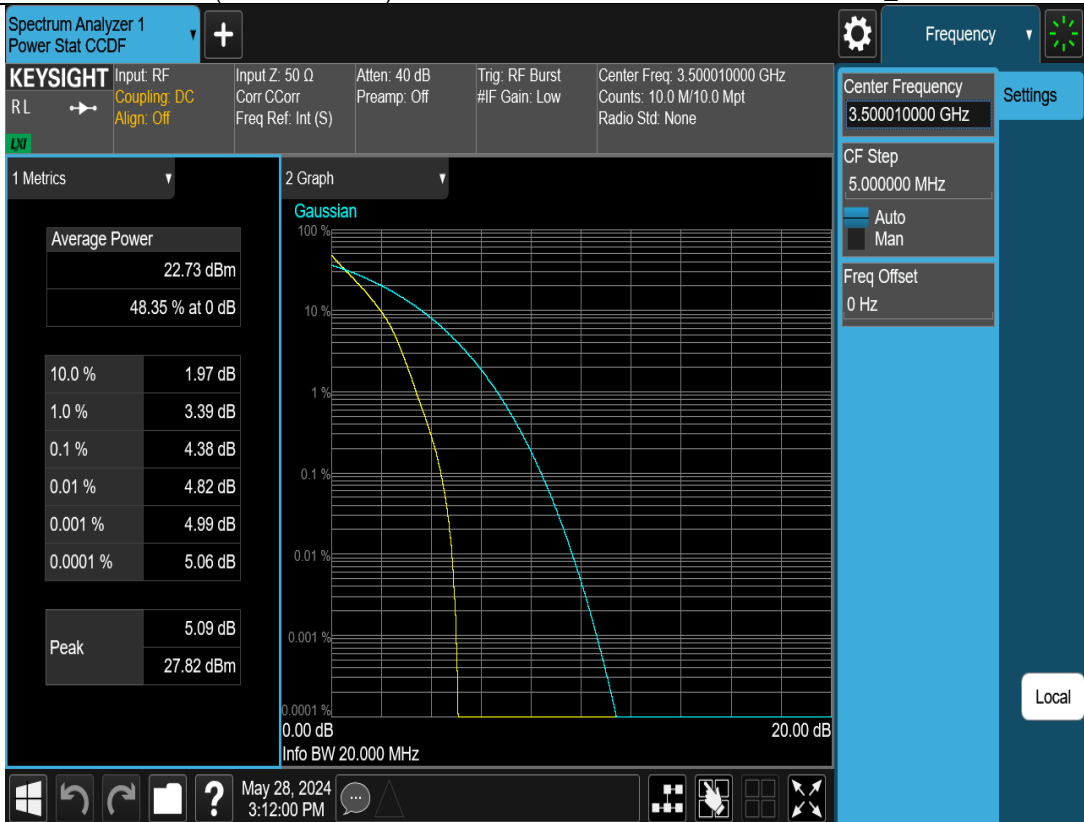
May 28, 2024
3:08:17 PM

Local

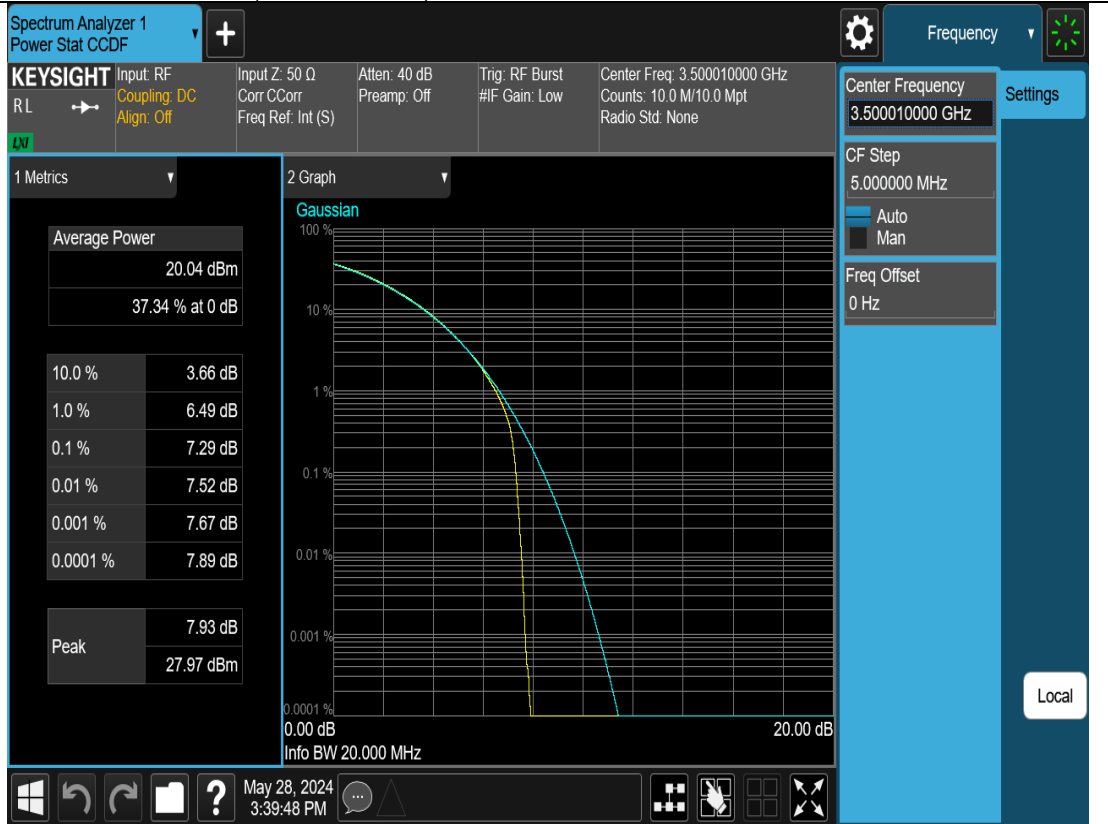
N77a(3450-3550MHz)-20M-PAPR-L-CP-OFDM-QPSK-Outer_Full



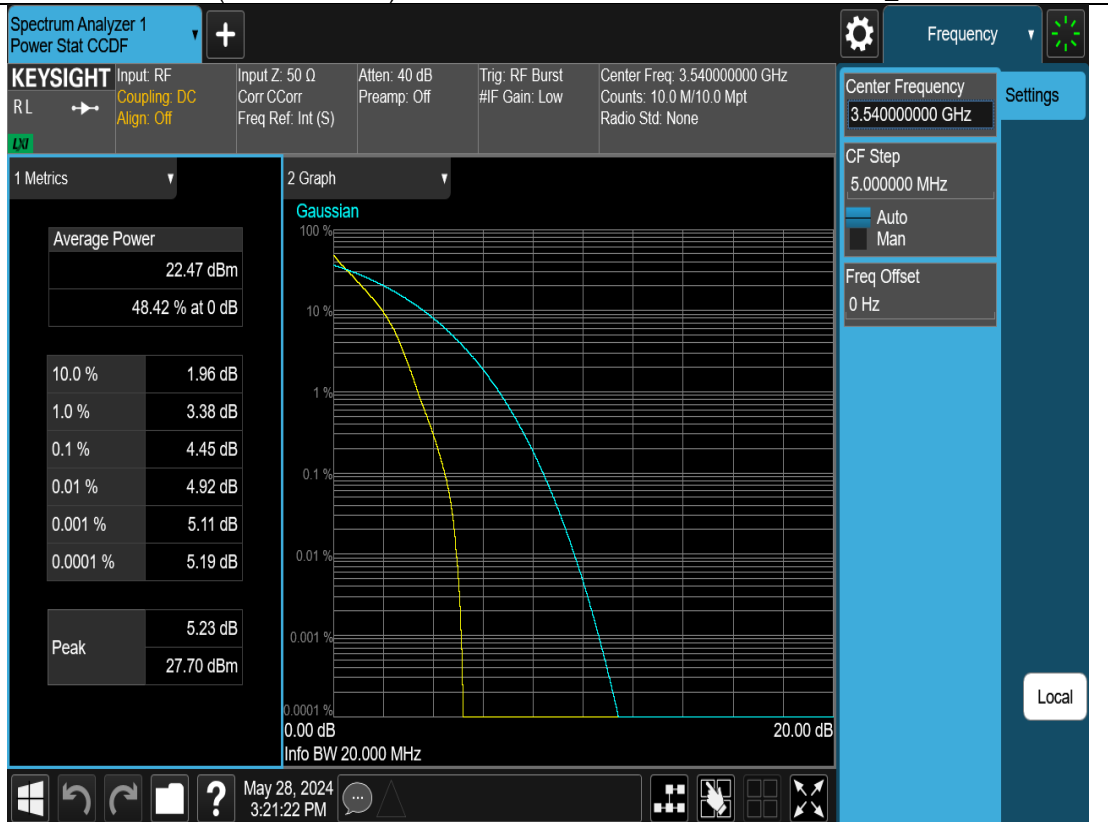
N77a(3450-3550MHz)-20M-PAPR-M-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-20M-PAPR-M-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-20M-PAPR-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-20M-PAPR-H-CP-OFDM-QPSK-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: 3.54000000 GHz
Counts: 10.0 M/10.0 Mpt
Radio Std: None

Center Frequency
3.54000000 GHz

CF Step
5.000000 MHz

Auto
Man

Freq Offset
0 Hz

Settings

Local

1 Metrics

Average Power

20.54 dBm

36.84 % at 0 dB

10.0 %	3.67 dB
1.0 %	6.60 dB
0.1 %	7.50 dB
0.01 %	7.68 dB
0.001 %	7.78 dB
0.0001 %	7.85 dB

Peak

7.89 dB

28.43 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

Windows taskbar: May 28, 2024 3:44:19 PM

Bandedge test graph



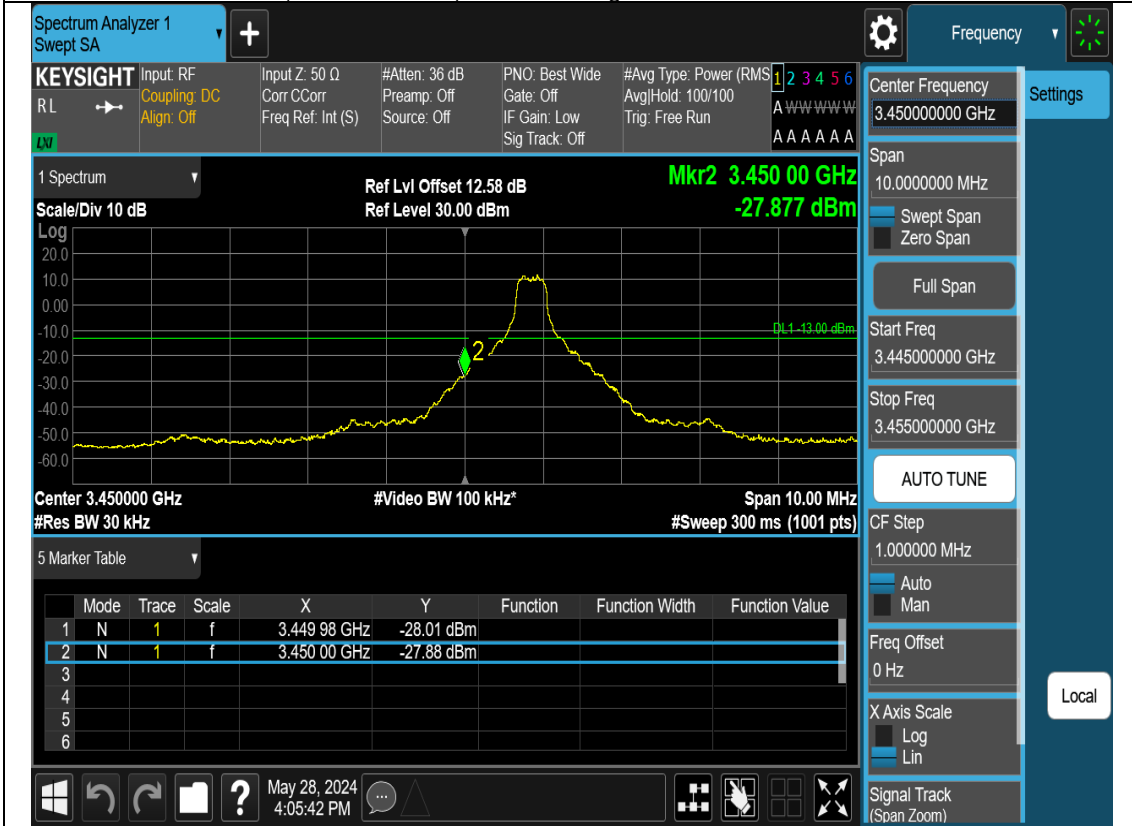
N77a(3450-3550MHz)-10M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



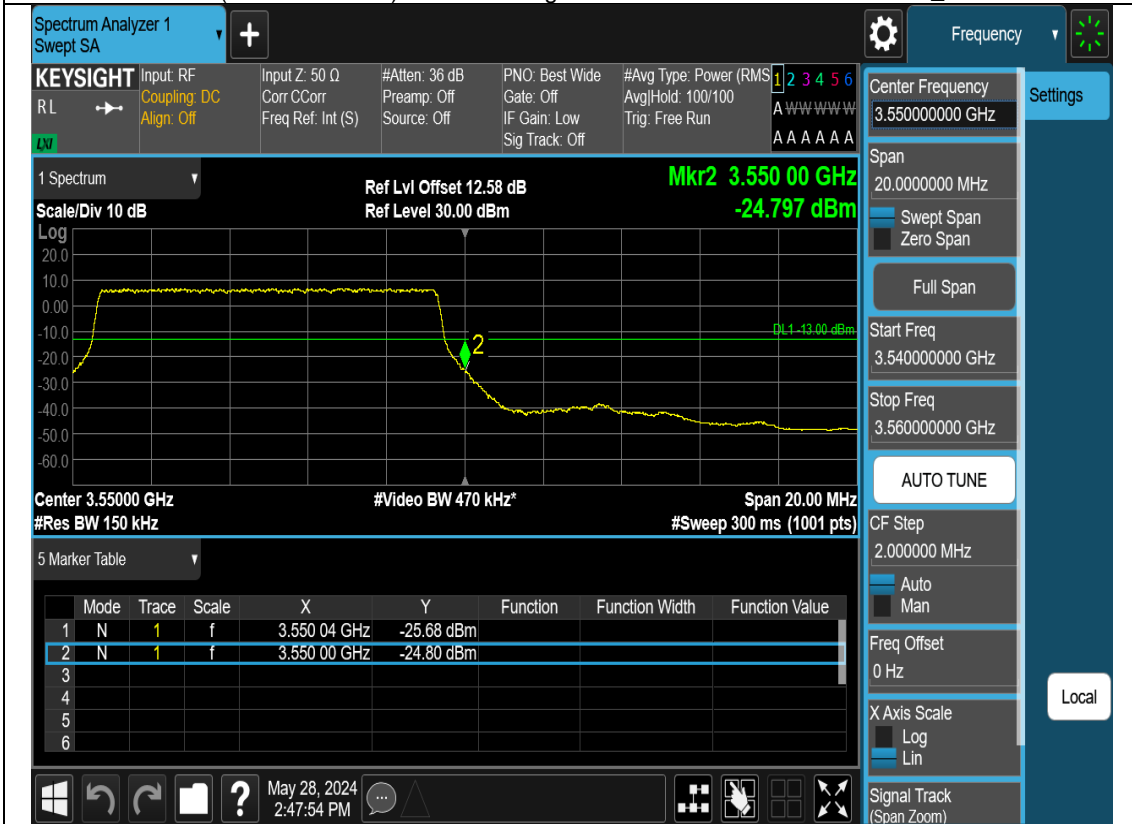
N77a(3450-3550MHz)-10M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-10M-Bandedge-L-CP-OFDM-QPSK-1RB0



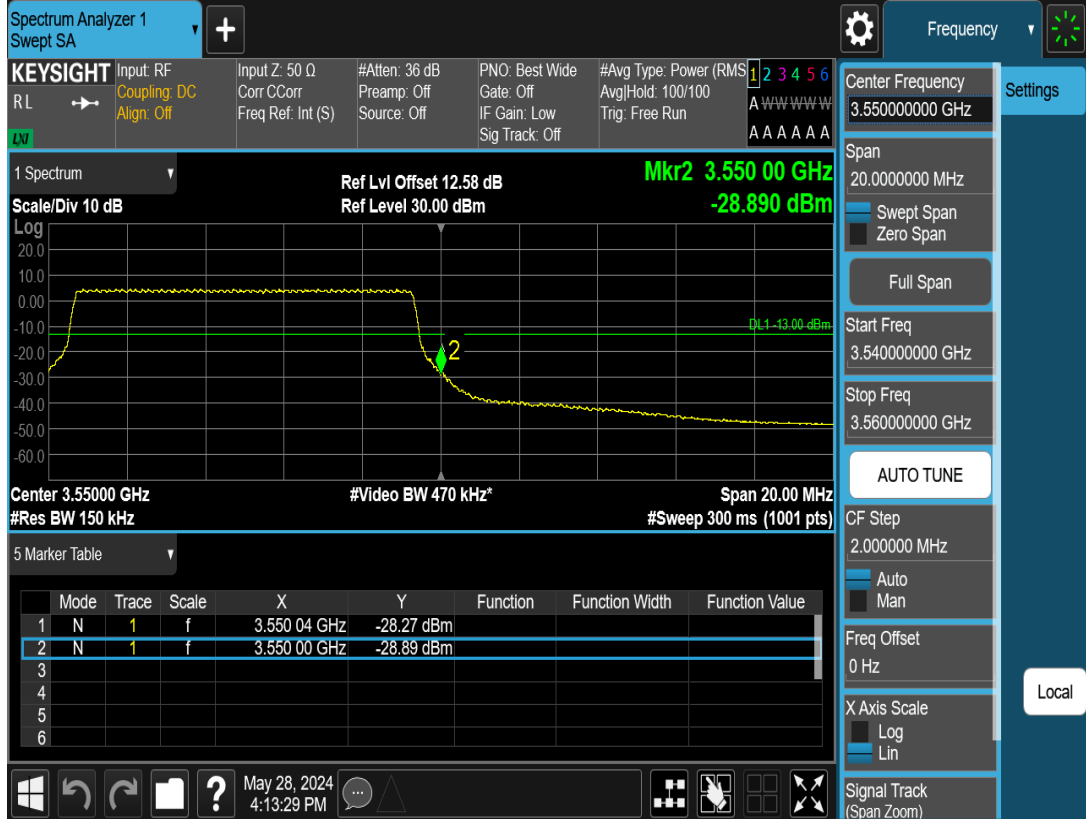
N77a(3450-3550MHz)-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-10M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX



N77a(3450-3550MHz)-10M-Bandedge-H-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-10M-Bandedge-H-CP-OFDM-QPSK-1RB_MAX

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: Best Wide Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) AvglHold: 100/100 Trig: Free Run

Center Frequency: 3.55000000 GHz

Span: 10.000000 MHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB Ref Level 30.00 dBm

Mkr2 3.550 00 GHz -27.589 dBm

Center 3.550000 GHz #Res BW 30 kHz #Video BW 100 kHz* Span 10.00 MHz #Sweep 300 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.550 02 GHz	-27.89 dBm		
2	N	1	f	3.550 00 GHz	-27.59 dBm		
3							
4							
5							
6							

May 28, 2024 4:15:03 PM

N77a(3450-3550MHz)-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

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) AvglHold: 100/100 Trig: Free Run

Center Frequency: 3.45000000 GHz

Span: 30.000000 MHz

Scale/Div 10 dB

Ref Lvl Offset 12.58 dB Ref Level 30.00 dBm

Mkr2 3.450 00 GHz -23.892 dBm

Center 3.450000 GHz #Res BW 300 kHz #Video BW 1.0 MHz* Span 30.00 MHz #Sweep 300 ms (1001 pts)

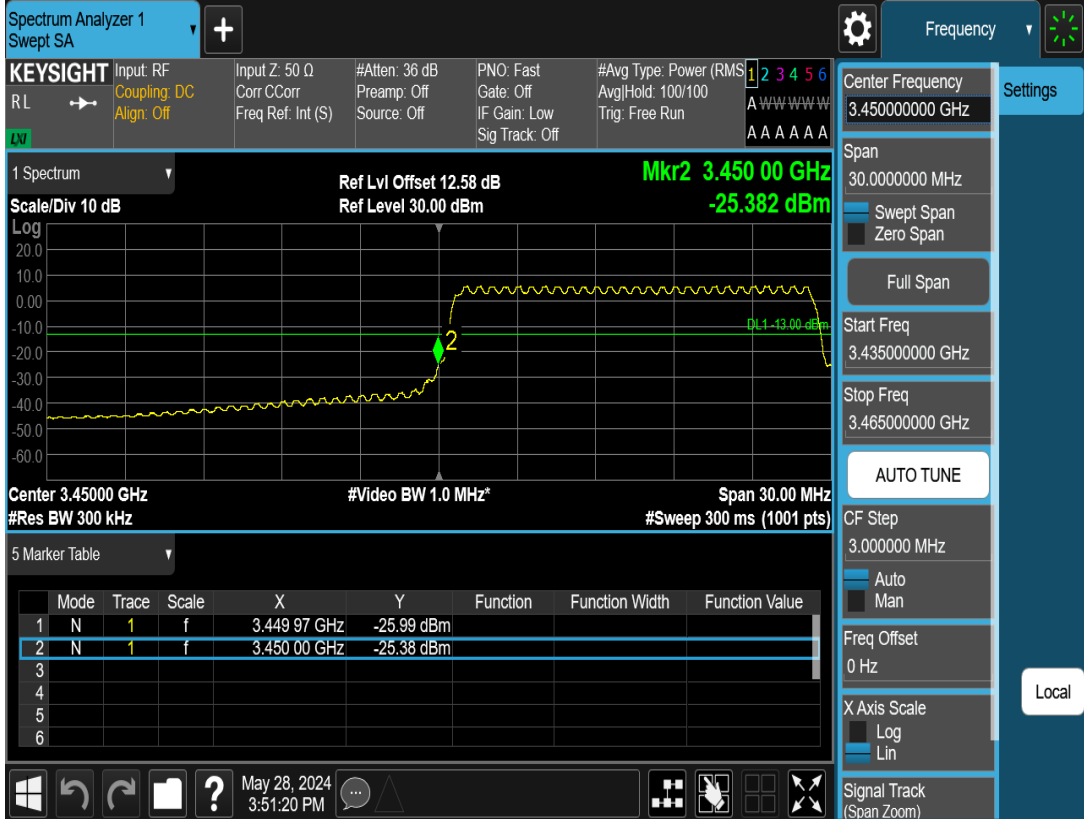
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.449 88 GHz	-23.56 dBm		
2	N	1	f	3.450 00 GHz	-23.89 dBm		
3							
4							
5							
6							

May 28, 2024 2:55:08 PM

N77a(3450-3550MHz)-15M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0



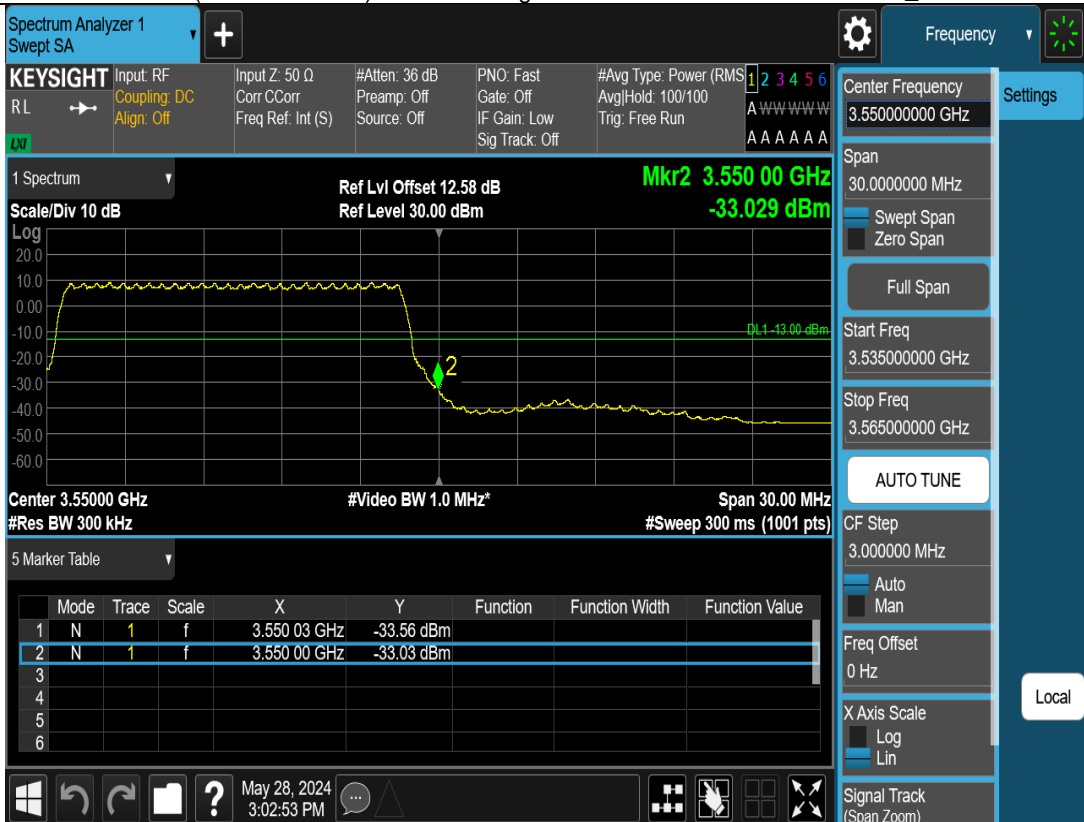
N77a(3450-3550MHz)-15M-Bandedge-L-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-15M-Bandedge-L-CP-OFDM-QPSK-1RB0



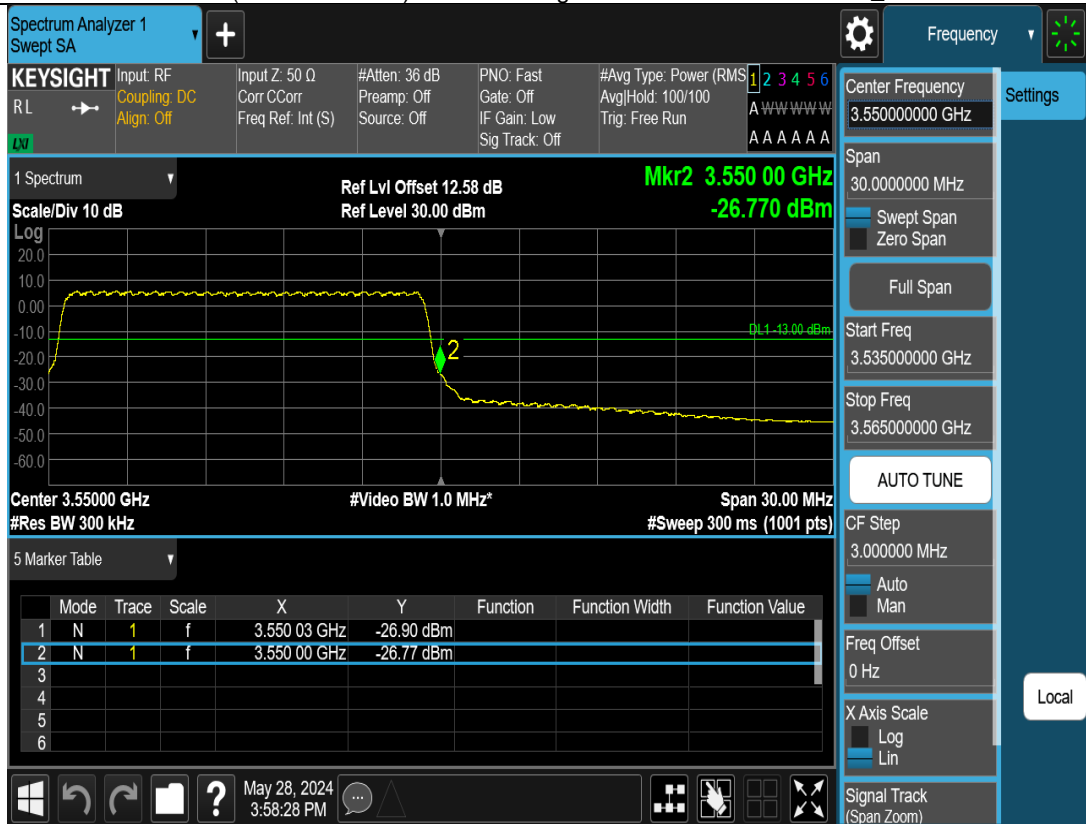
N77a(3450-3550MHz)-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-15M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX



N77a(3450-3550MHz)-15M-Bandedge-H-CP-OFDM-QPSK-Outer_Full



N77a(3450-3550MHz)-15M-Bandedge-H-CP-OFDM-QPSK-1RB_MAX

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: Best Wide 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 A A A A A A

Center Frequency 3.55000000 GHz

Span 10.000000 MHz

Scale/Div 10 dB Ref Lvl Offset 12.58 dB Ref Level 30.00 dBm

Mkr2 3.550 00 GHz -26.407 dBm

Center 3.550000 GHz #Res BW 30 kHz #Video BW 100 kHz* Span 10.00 MHz #Sweep 300 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.550 02 GHz	-26.95 dBm		
2	N	1	f	3.550 00 GHz	-26.41 dBm		
3							
4							
5							
6							

May 28, 2024 3:59:39 PM

N77a(3450-3550MHz)-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-Outer_Full

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 A A A A A A

Center Frequency 3.45000000 GHz

Span 40.000000 MHz

Scale/Div 10 dB Ref Lvl Offset 12.58 dB Ref Level 30.00 dBm

Mkr2 3.450 00 GHz -29.811 dBm

Center 3.450000 GHz #Res BW 300 kHz #Video BW 1.0 MHz* Span 40.00 MHz #Sweep 300 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.449 88 GHz	-27.81 dBm		
2	N	1	f	3.450 00 GHz	-29.81 dBm		
3							
4							
5							
6							

May 28, 2024 3:09:13 PM

N77a(3450-3550MHz)-20M-Bandedge-L-DFT-s-OFDM-Pi2 BPSK-1RB0

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Input Z: 50 Ω #Atten: 36 dB PNO: Best Wide #Avg Type: Power (RMS) 1 2 3 4 5 6
 RL Coupling: DC Corr C/Corr Preamp: Off Gate: Off Avg/Hold: 100/100 A www www www
 Align: Off Freq Ref: Int (S) Source: Off IF Gain: Low Trig: Free Run A A A A A A

Center Frequency 3.45000000 GHz
 Span 10.000000 MHz
 Start Freq 3.445000000 GHz
 Stop Freq 3.455000000 GHz
 AUTO TUNE
 CF Step 1.000000 MHz
 Freq Offset 0 Hz
 X Axis Scale Log
 Signal Track (Span Zoom)

1 Spectrum Ref Lvl Offset 12.58 dB Mkr2 3.450 00 GHz
 Scale/Div 10 dB Ref Level 30.00 dBm -28.143 dBm
 Log
 20.0
 10.0
 0.00
 -10.0
 -20.0
 -30.0
 -40.0
 -50.0
 -60.0
 Center 3.450000 GHz #Video BW 100 kHz* Span 10.00 MHz
 #Res BW 30 kHz #Sweep 300 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.449 98 GHz	-28.62 dBm		
2	N	1	f	3.450 00 GHz	-28.14 dBm		
3							
4							
5							
6							

May 28, 2024 3:10:10 PM

N77a(3450-3550MHz)-20M-Bandedge-L-CP-OFDM-QPSK-Outer_Full

Spectrum Analyzer 1 Swept SA

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

Center Frequency 3.45000000 GHz
 Span 40.000000 MHz
 Start Freq 3.430000000 GHz
 Stop Freq 3.470000000 GHz
 AUTO TUNE
 CF Step 4.000000 MHz
 Freq Offset 0 Hz
 X Axis Scale Log
 Signal Track (Span Zoom)

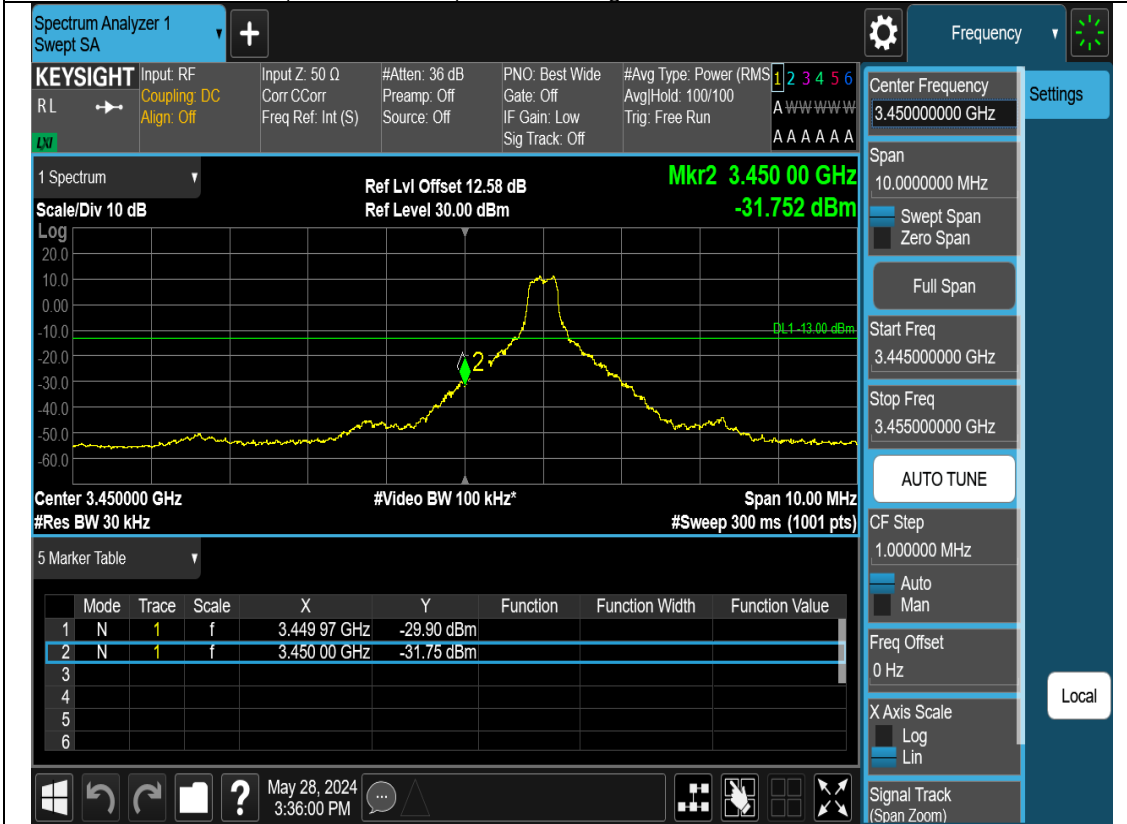
1 Spectrum Ref Lvl Offset 12.58 dB Mkr2 3.450 00 GHz
 Scale/Div 10 dB Ref Level 30.00 dBm -32.376 dBm
 Log
 20.0
 10.0
 0.00
 -10.0
 -20.0
 -30.0
 -40.0
 -50.0
 -60.0
 Center 3.450000 GHz #Video BW 1.0 MHz* Span 40.00 MHz
 #Res BW 300 kHz #Sweep 300 ms (1001 pts)

5 Marker Table

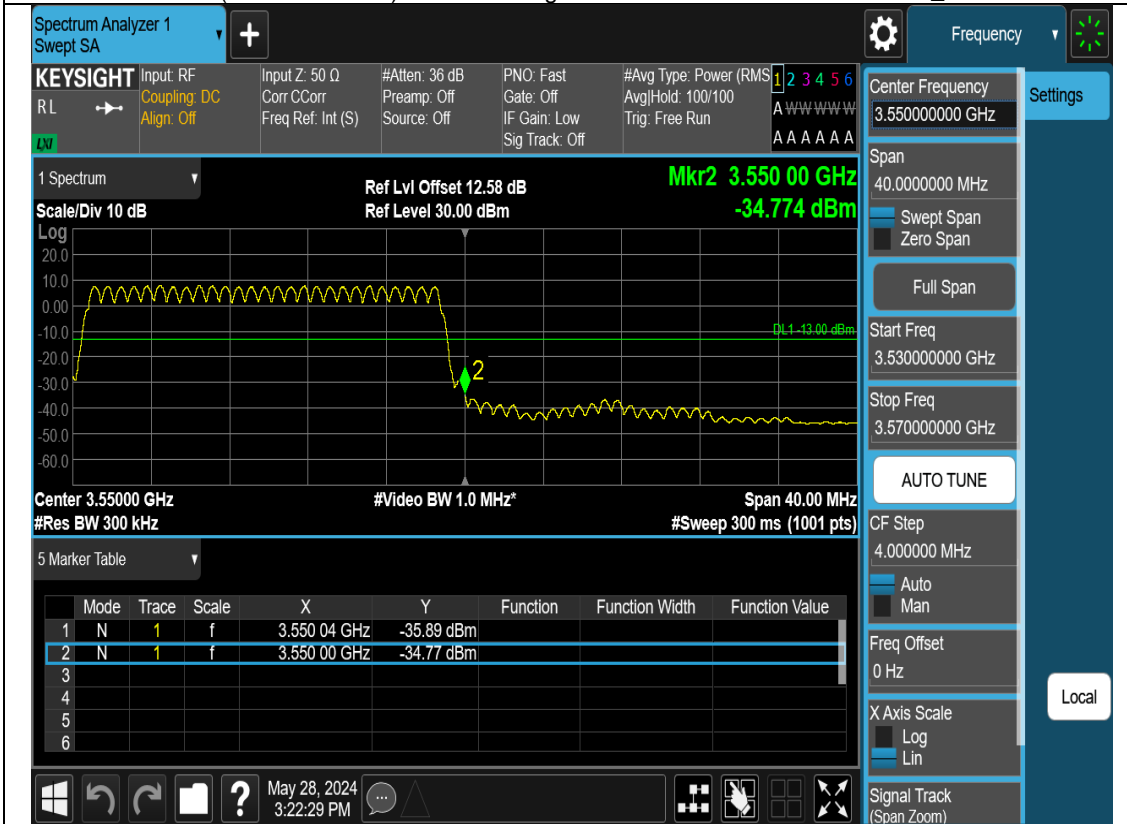
Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.449 68 GHz	-31.72 dBm		
2	N	1	f	3.450 00 GHz	-32.38 dBm		
3							
4							
5							
6							

May 28, 2024 3:34:53 PM

N77a(3450-3550MHz)-20M-Bandedge-L-CP-OFDM-QPSK-1RB0



N77a(3450-3550MHz)-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-Outer_Full



N77a(3450-3550MHz)-20M-Bandedge-H-DFT-s-OFDM-Pi2 BPSK-1RB_MAX

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Input Z: 50 Ω #Atten: 36 dB PNO: Best Wide #Avg Type: Power (RMS) 1 2 3 4 5 6
 RL Coupling: DC Corr CCorr Preamp: Off Gate: Off Avg/Hold: 100/100 A www www www
 Align: Off Freq Ref: Int (S) Source: Off IF Gain: Low Trig: Free Run A A A A A A

Center Frequency 3.55000000 GHz
 Span 10.000000 MHz
 Start Freq 3.545000000 GHz
 Stop Freq 3.555000000 GHz
 AUTO TUNE
 CF Step 1.000000 MHz
 Freq Offset 0 Hz
 X Axis Scale Log
 Signal Track (Span Zoom)

1 Spectrum Ref Lvl Offset 12.58 dB Mkr2 3.550 00 GHz
 Scale/Div 10 dB Ref Level 30.00 dBm -26.933 dBm
 Log
 20.0
 10.0
 0.00
 -10.0
 -20.0
 -30.0
 -40.0
 -50.0
 -60.0
 Center 3.550000 GHz #Video BW 100 kHz* Span 10.00 MHz
 #Res BW 30 kHz #Sweep 300 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.550 03 GHz	-28.92 dBm		
2	N	1	f	3.550 00 GHz	-26.93 dBm		
3							
4							
5							
6							

May 28, 2024 3:23:48 PM

N77a(3450-3550MHz)-20M-Bandedge-H-CP-OFDM-QPSK-Outer_Full

Spectrum Analyzer 1 Swept SA

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

Center Frequency 3.55000000 GHz
 Span 40.000000 MHz
 Start Freq 3.530000000 GHz
 Stop Freq 3.570000000 GHz
 AUTO TUNE
 CF Step 4.000000 MHz
 Freq Offset 0 Hz
 X Axis Scale Log
 Signal Track (Span Zoom)

1 Spectrum Ref Lvl Offset 12.58 dB Mkr2 3.550 00 GHz
 Scale/Div 10 dB Ref Level 30.00 dBm -30.087 dBm
 Log
 20.0
 10.0
 0.00
 -10.0
 -20.0
 -30.0
 -40.0
 -50.0
 -60.0
 Center 3.550000 GHz #Video BW 1.0 MHz* Span 40.00 MHz
 #Res BW 300 kHz #Sweep 300 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.550 04 GHz	-31.53 dBm		
2	N	1	f	3.550 00 GHz	-30.09 dBm		
3							
4							
5							
6							

May 28, 2024 3:45:05 PM

N77a(3450-3550MHz)-20M-Bandedge-H-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: Best Wide #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
 Sig Track: Off

1 Spectrum Ref Lvl Offset 12.58 dB **Mkr2 3.550 00 GHz**
 Scale/Div 10 dB Ref Level 30.00 dBm **-28.766 dBm**

Center 3.550000 GHz #Video BW 100 kHz* Span 10.00 MHz
 #Res BW 30 kHz #Sweep 300 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	3.550 02 GHz	-29.49 dBm		
2	N	1	f	3.550 00 GHz	-28.77 dBm		
3							
4							
5							
6							

Frequency

Center Frequency
3.550000000 GHz

Span
10.0000000 MHz

Swept Span
Zero Span

Full Span

Start Freq
3.545000000 GHz

Stop Freq
3.555000000 GHz

AUTO TUNE

CF Step
1.000000 MHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

Settings

Local

May 28, 2024 3:46:14 PM

Conducted spurious emissions test graph

