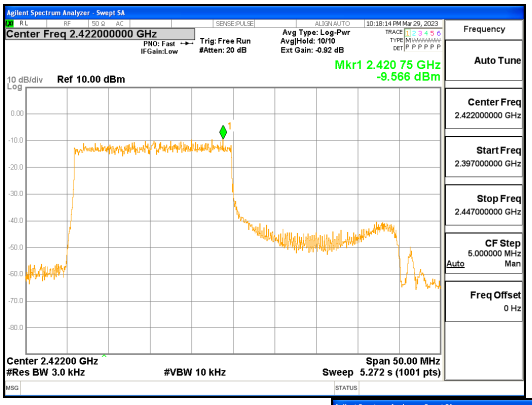
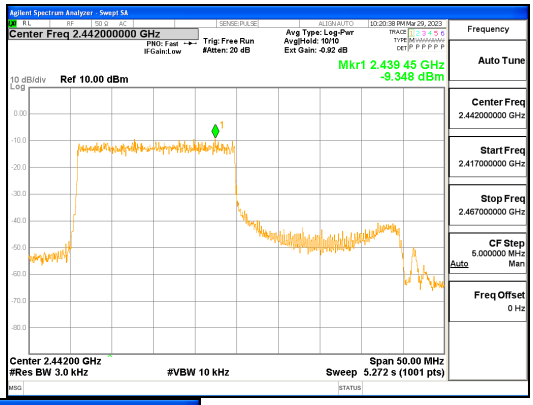
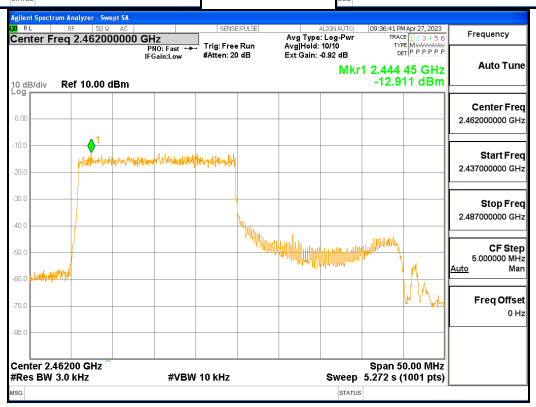
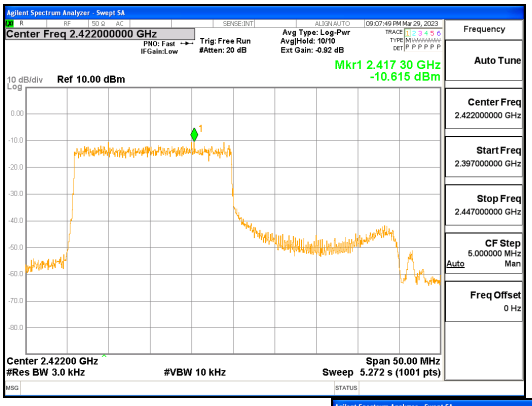
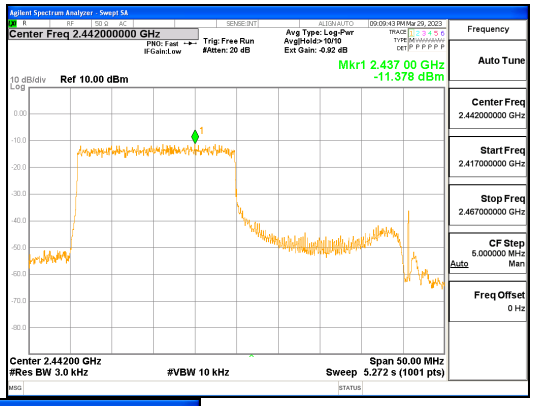


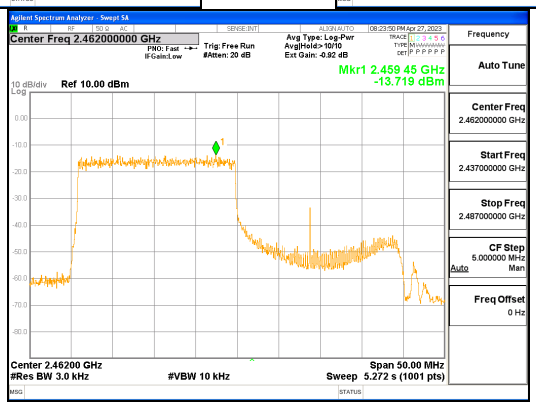




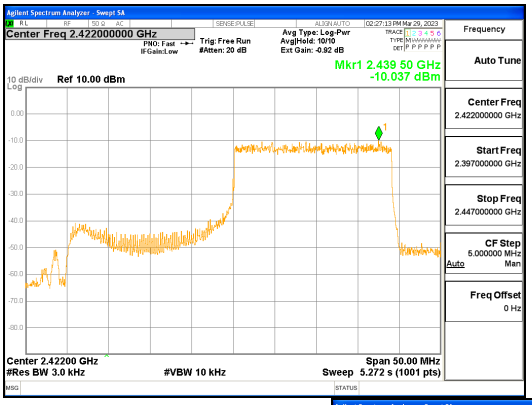
ANT0, 802.11ax_HE40_242T_Low

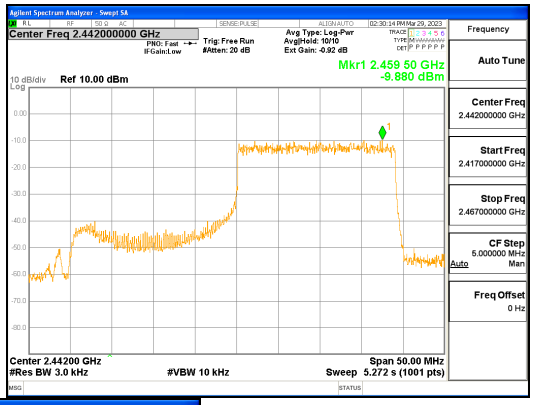


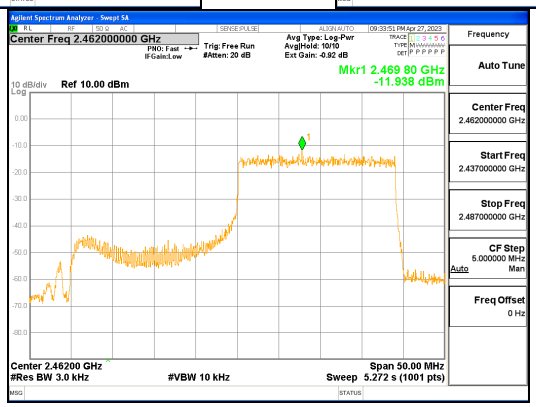




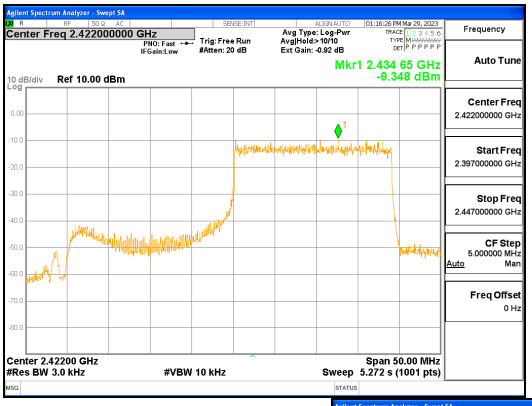
ANT1, 802.11ax_HE40_242T_Low

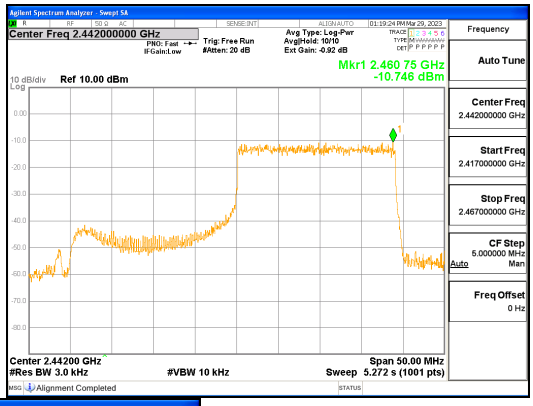


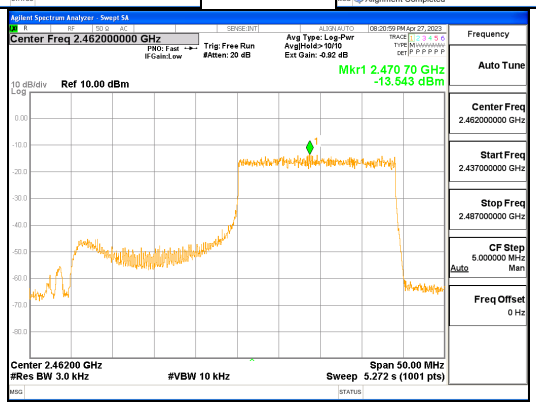




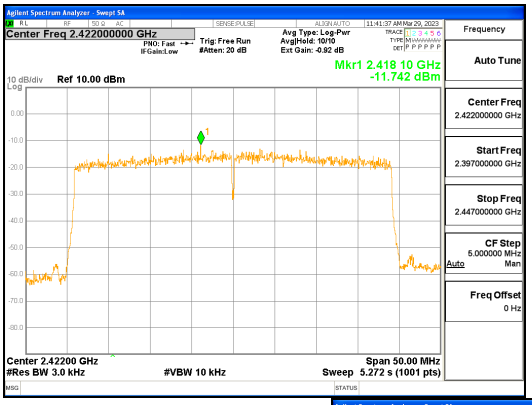
ANT0, 802.11ax_HE40_242T_High

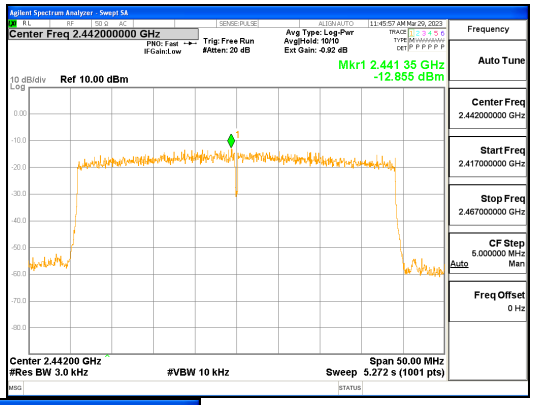


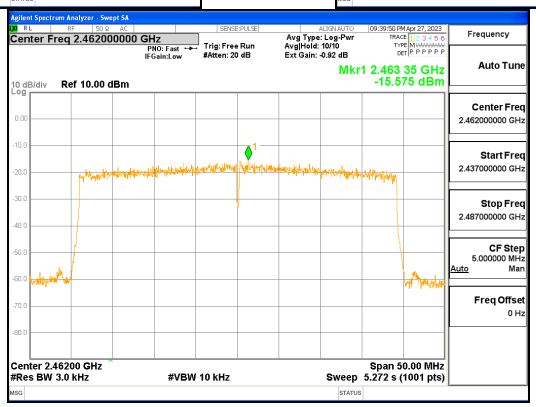




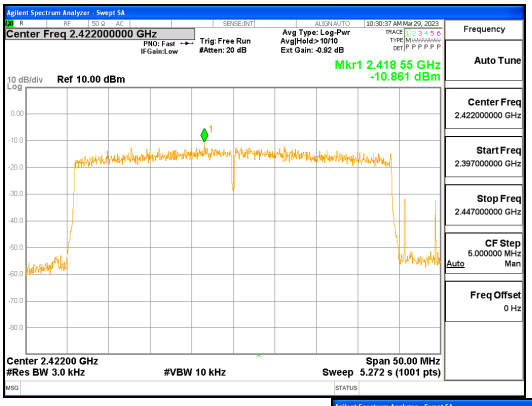
ANT1, 802.11ax_HE40_242T_High

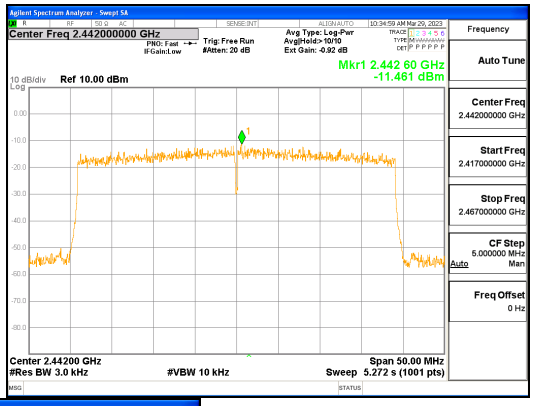


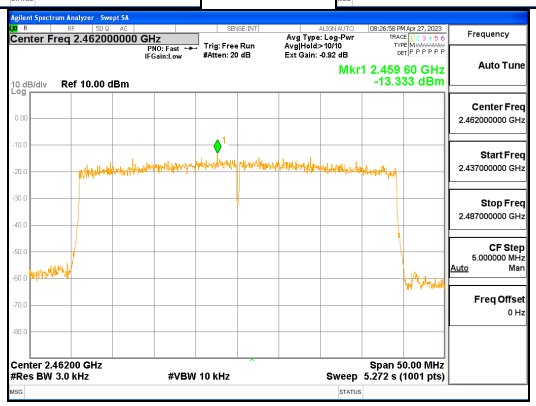




ANT0, 802.11ax_HE40_484T







ANT1, 802.11ax_HE40_484T

4.4 Conducted Spurious emission

Test Procedures

KDB 558074 - Section 8.5
ANSI C63.10-2013 - Section 11.11.3

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.
After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

Test Settings:

Center frequency = the highest, middle and the lowest channels

a) RBW = 100 kHz
b) VBW ≥ 3 x RBW
c) Detector = peak
d) Sweep time = auto couple
e) Trace mode= max hold
f) Allow trace to fully stabilize
g) Use the peak marker function to determine the maximum amplitude level.

Limit :

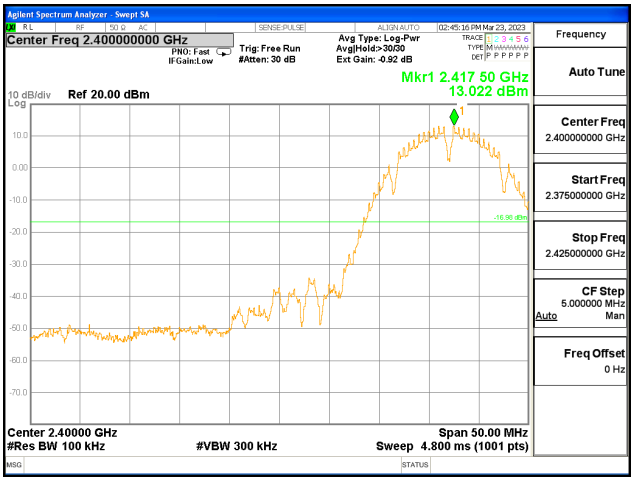
Emission level	<	30 dBc

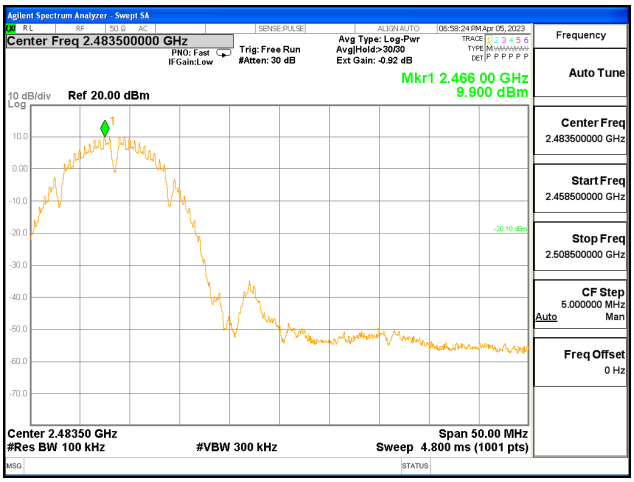
Test Data: Complies

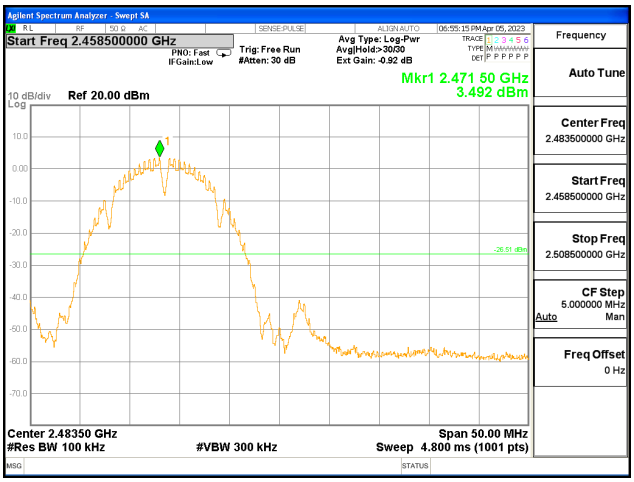
- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 30dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

See next pages for actual measured spectrum plots.

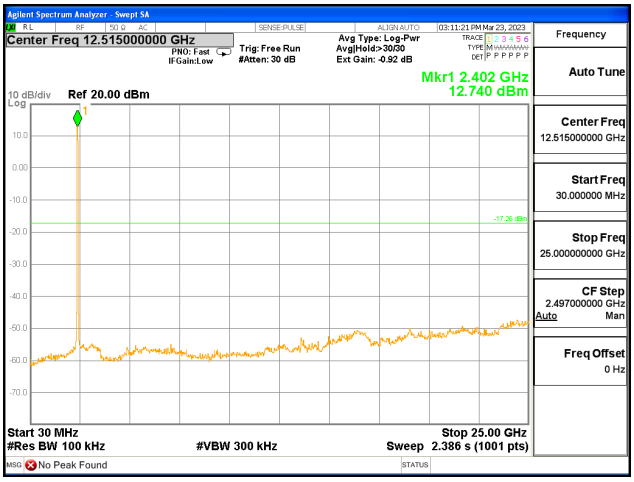
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 30 dB
Mkr1 2.412 50 GHz
13.452 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

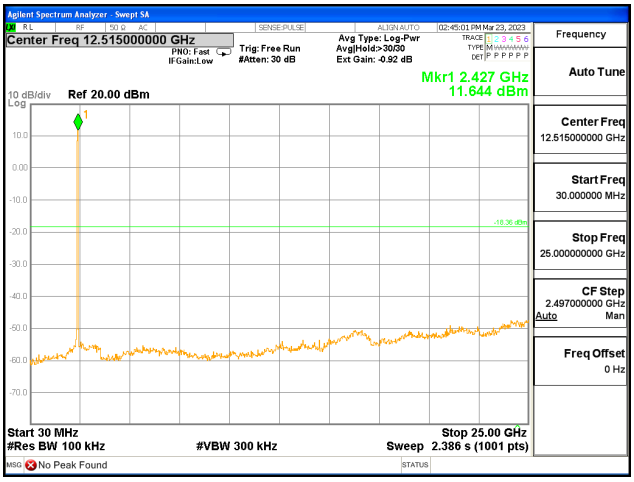

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 30 dB
Mkr1 2.417 50 GHz
13.022 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

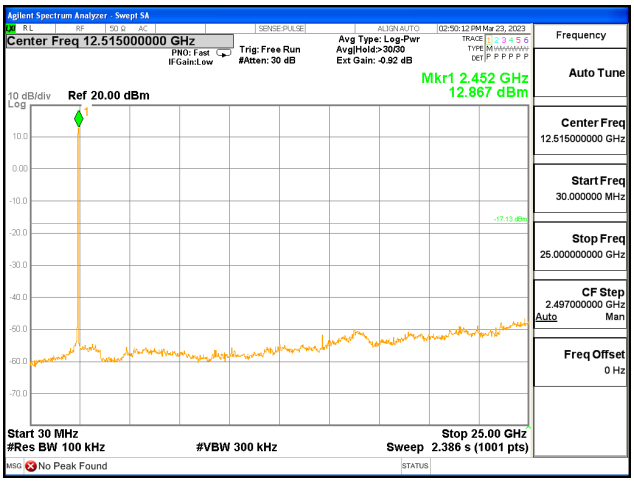

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 30 dB
Mkr1 2.466 00 GHz
9.900 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

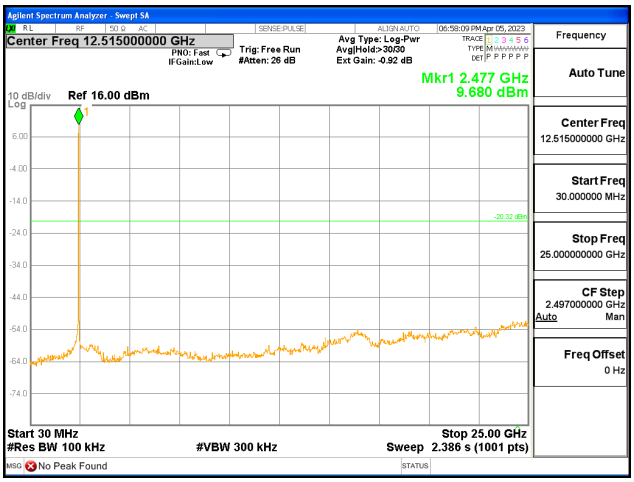

Agilent Spectrum Analyzer - Swept SA
Start Freq 2.458500000 GHz
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 30 dB
Mkr1 2.471 50 GHz
3.492 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

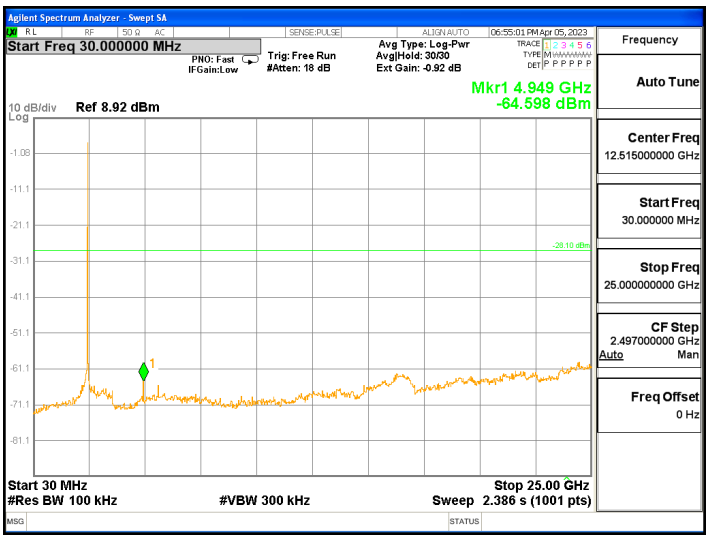
ANT0, 802.11b


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
03:11:21 PM Mar 23, 2023
Mkr1 2.402 GHz
12.740 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

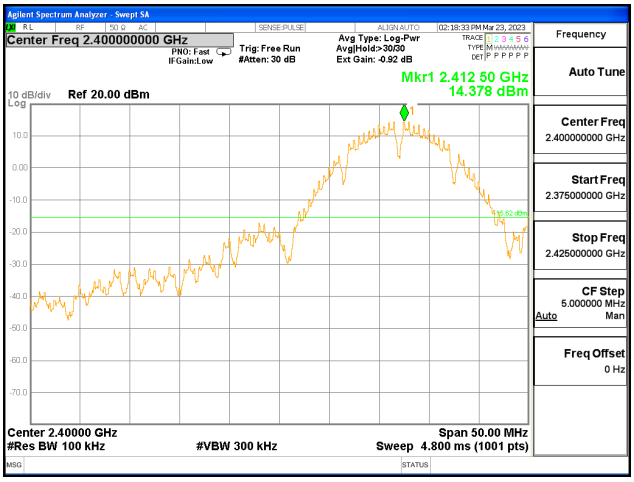

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
02:45:01 PM Mar 23, 2023
Mkr1 2.427 GHz
11.644 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
02:50:12 PM Mar 23, 2023
Mkr1 2.452 GHz
12.867 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 26 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
06:58:09 PM Apr 05, 2023
Mkr1 2.477 GHz
9.680 dBm
10 dB/div
Ref 16.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

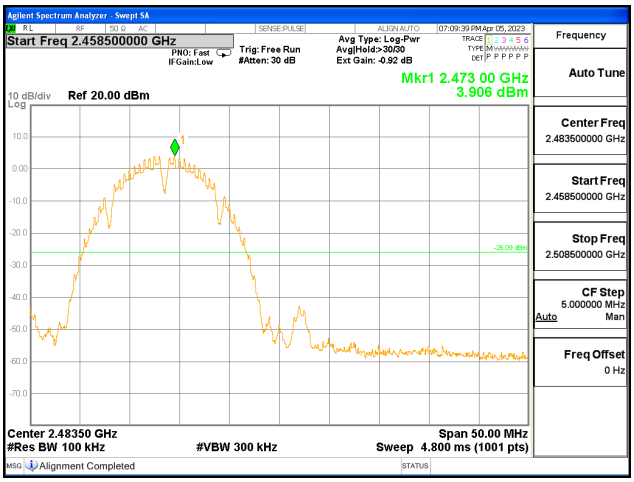

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 18 dB
Avg Type: Log-Pwr
Avg|Hold: 30/30
Ext Gain: -0.92 dB
06:55:01 PM Apr 05, 2023
Mkr1 4.949 GHz
-64.598 dBm
10 dB/div
Ref 8.92 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

ANT0, 802.11b

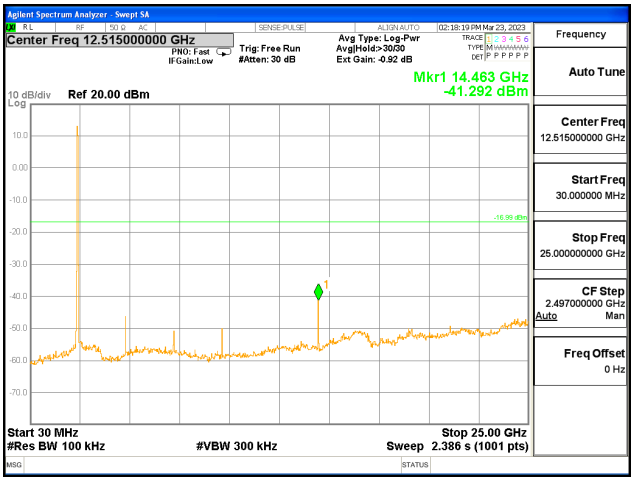

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.412 50 GHz
14.378 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Frequency
Auto Tune
Center Freq 2.400000000 GHz
Start Freq 2.375000000 GHz
Stop Freq 2.425000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

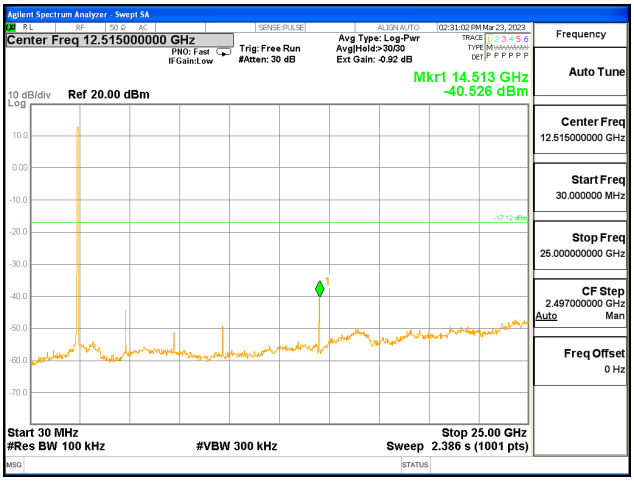
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.416 50 GHz
14.005 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Frequency
Auto Tune
Center Freq 2.400000000 GHz
Start Freq 2.375000000 GHz
Stop Freq 2.425000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

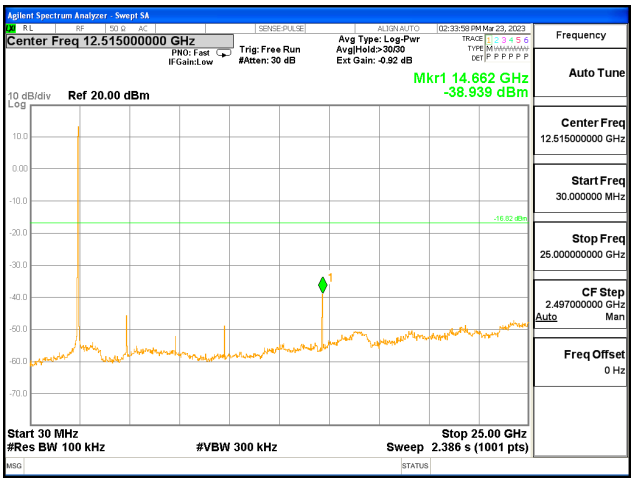
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.467 50 GHz
12.213 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Frequency
Auto Tune
Center Freq 2.483500000 GHz
Start Freq 2.458500000 GHz
Stop Freq 2.508500000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

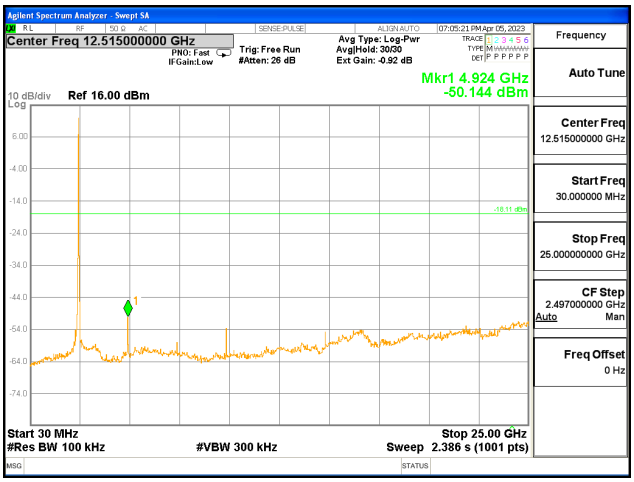

Agilent Spectrum Analyzer - Swept SA
Start Freq 2.458500000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.473 00 GHz
3.906 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Alignment Completed
Frequency
Auto Tune
Center Freq 2.483500000 GHz
Start Freq 2.458500000 GHz
Stop Freq 2.508500000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

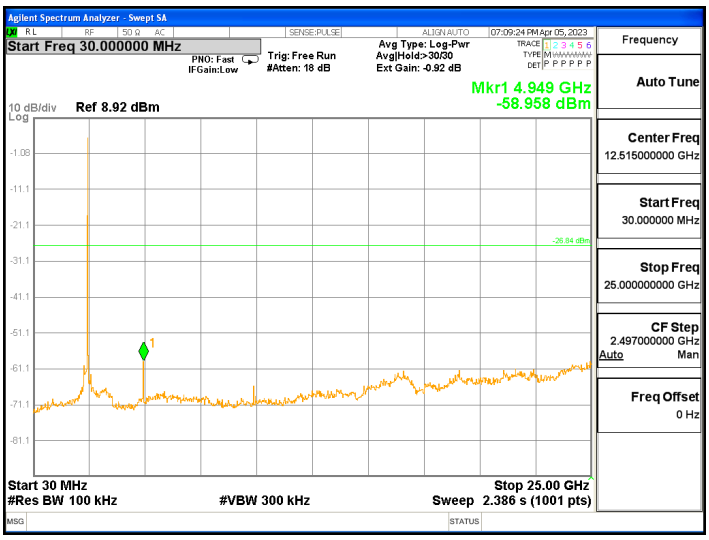
ANT1, 802.11b


Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
02:18:19 PM Mar 23, 2023
Mkr1 14.463 GHz
-41.292 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

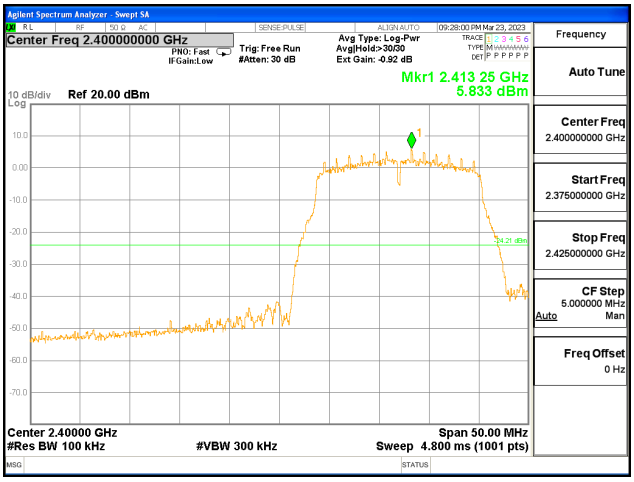

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
02:31:02 PM Mar 23, 2023
Mkr1 14.513 GHz
-40.526 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

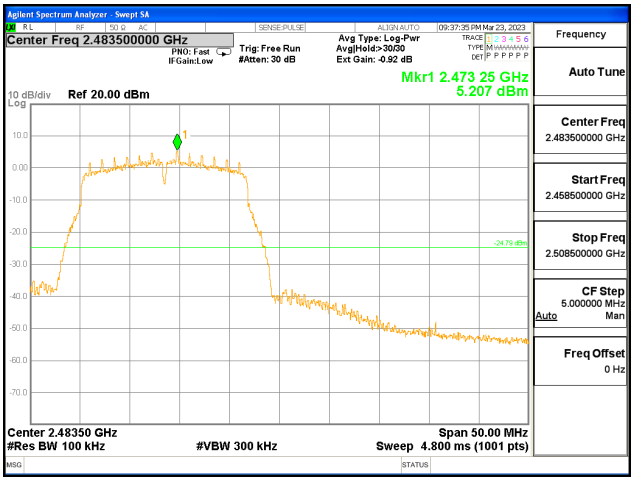

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
02:33:58 PM Mar 23, 2023
Mkr1 14.662 GHz
-38.939 dBm
10 dB/div
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

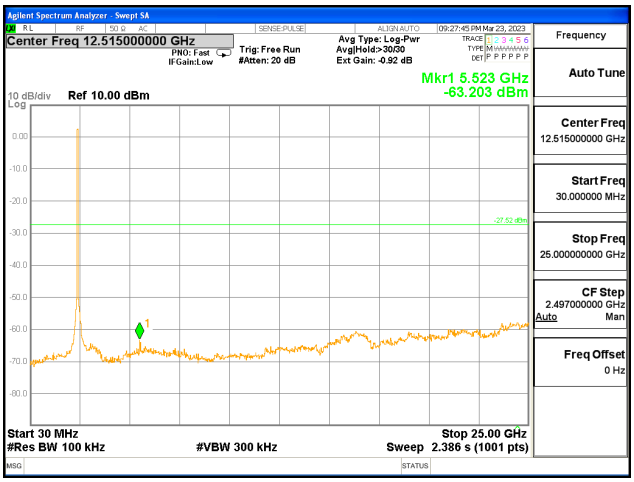

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 26 dB
Avg Type: Log-Pwr
Avg|Hold: 30/30
Ext Gain: -0.92 dB
07:05:21 PM Apr 05, 2023
Mkr1 4.924 GHz
-50.144 dBm
10 dB/div
Ref 16.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

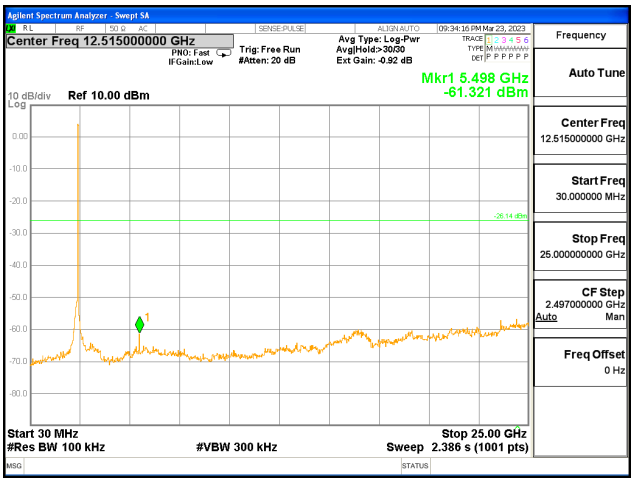

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 18 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
07:09:24 PM Apr 05, 2023
Mkr1 4.949 GHz
-58.958 dBm
10 dB/div
Ref 8.92 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

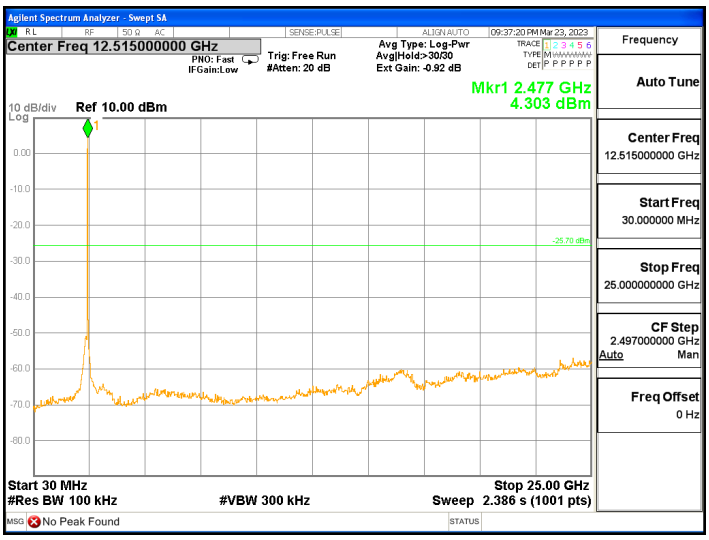
ANT1, 802.11b


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.413 25 GHz
5.833 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Frequency
Auto Tune
Center Freq 2.400000000 GHz
Start Freq 2.375000000 GHz
Stop Freq 2.425000000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

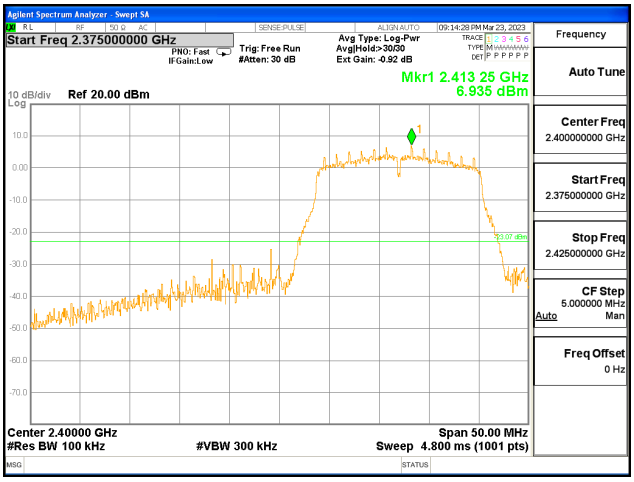

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.473 25 GHz
5.207 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)
Frequency
Auto Tune
Center Freq 2.483500000 GHz
Start Freq 2.458500000 GHz
Stop Freq 2.508500000 GHz
CF Step 5.000000 MHz
Auto Man
Freq Offset 0 Hz

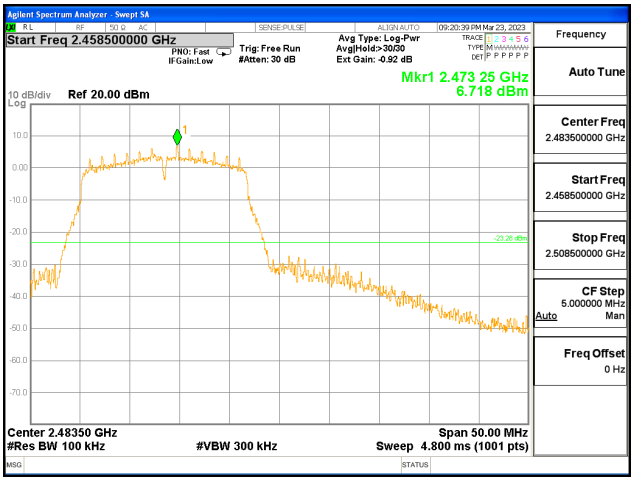

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 5.523 GHz
-63.203 dBm
10 dB/div Ref 10.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq 12.515000000 GHz
Start Freq 30.000000 MHz
Stop Freq 25.000000000 GHz
CF Step 2.497000000 GHz
Auto Man
Freq Offset 0 Hz

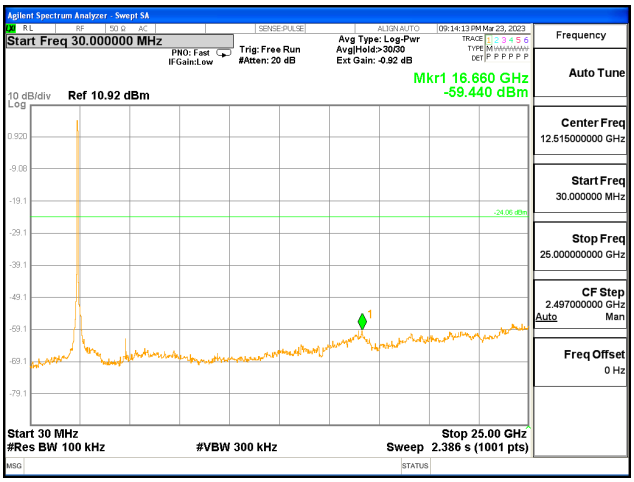

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 5.498 GHz
-61.321 dBm
10 dB/div Ref 10.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
Frequency
Auto Tune
Center Freq 12.515000000 GHz
Start Freq 30.000000 MHz
Stop Freq 25.000000000 GHz
CF Step 2.497000000 GHz
Auto Man
Freq Offset 0 Hz

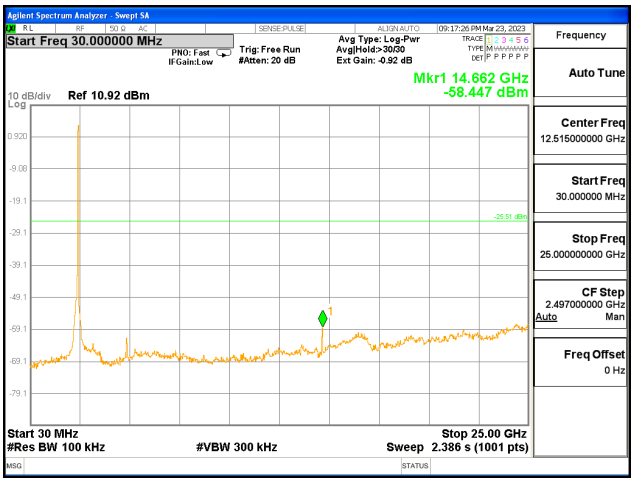

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.92 dB
Mkr1 2.477 GHz
4.303 dBm
10 dB/div Ref 10.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found
Frequency
Auto Tune
Center Freq 12.515000000 GHz
Start Freq 30.000000 MHz
Stop Freq 25.000000000 GHz
CF Step 2.497000000 GHz
Auto Man
Freq Offset 0 Hz

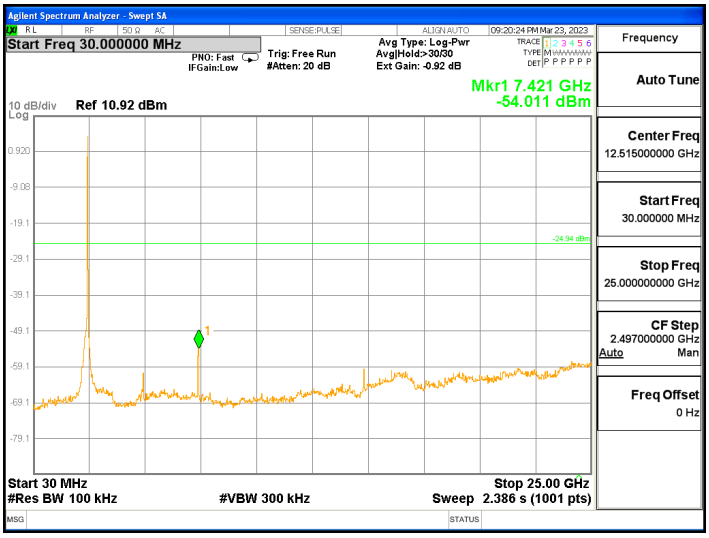
ANT0, 802.11g


Agilent Spectrum Analyzer - Swept SA
Start Freq 2.375000000 GHz
Mkr1 2.413 25 GHz
6.935 dBm
10 dB/div Ref 20.00 dBm
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

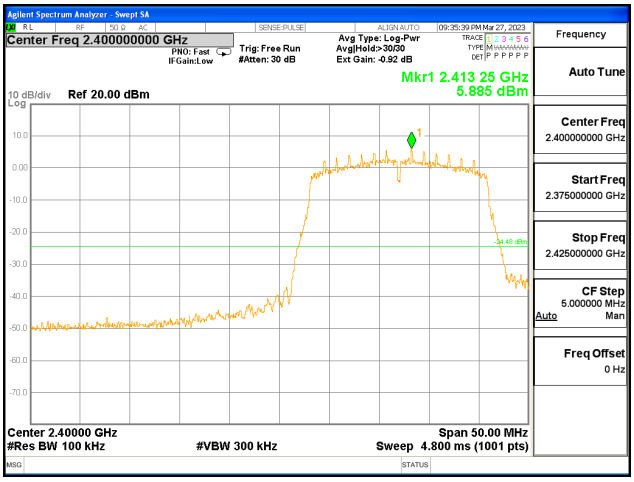

Agilent Spectrum Analyzer - Swept SA
Start Freq 2.458500000 GHz
Mkr1 2.473 25 GHz
6.718 dBm
10 dB/div Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

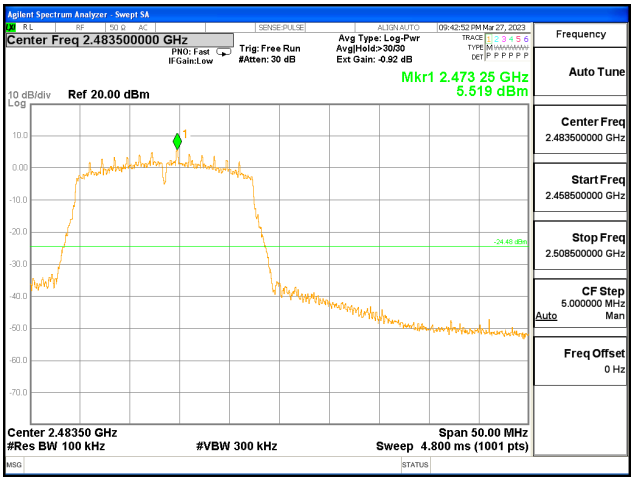

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
Mkr1 16.660 GHz
-59.440 dBm
10 dB/div Ref 10.92 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

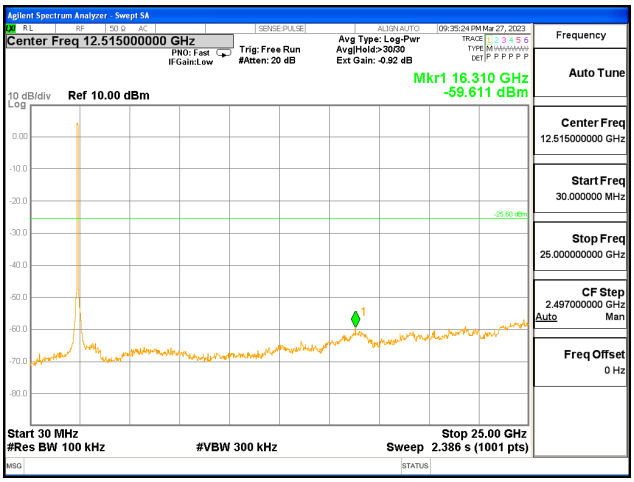

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
Mkr1 14.662 GHz
-58.447 dBm
10 dB/div Ref 10.92 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

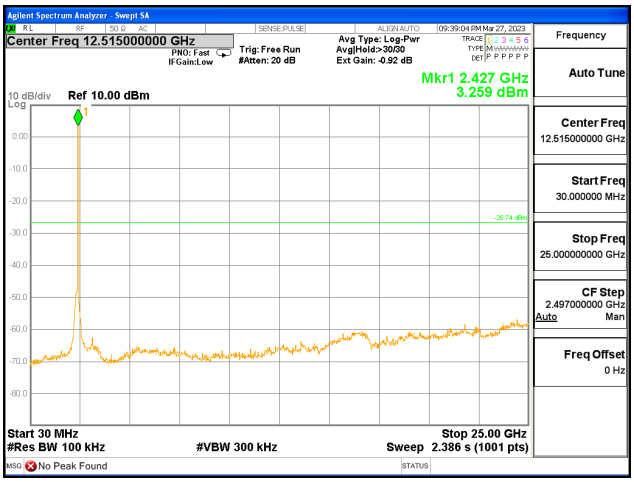

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
Mkr1 7.421 GHz
-54.011 dBm
10 dB/div Ref 10.92 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

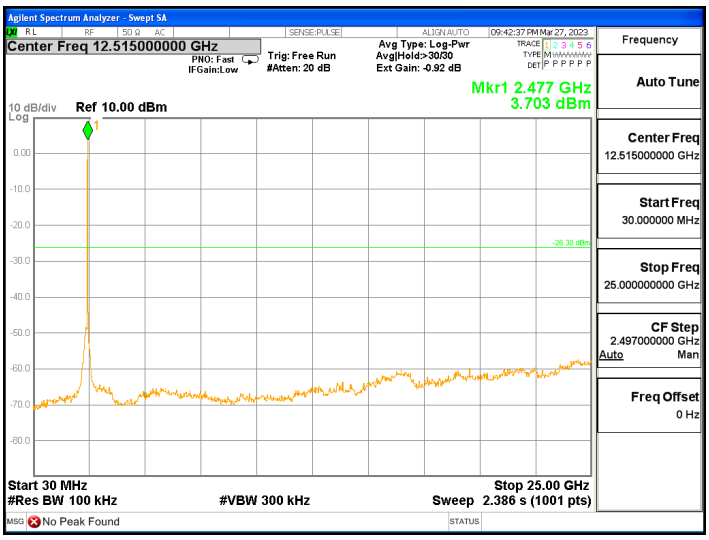
ANT1, 802.11g



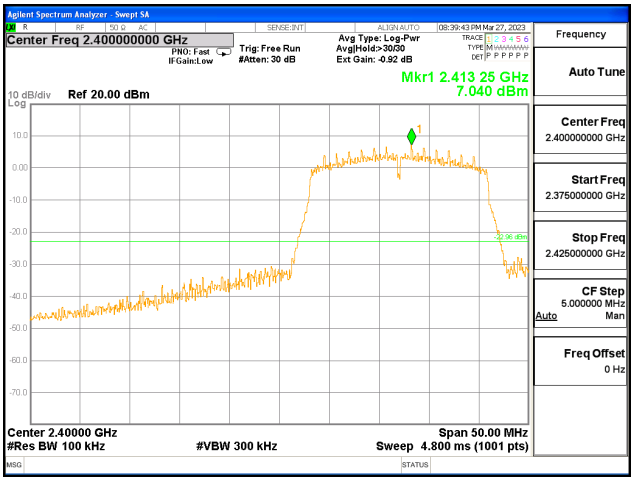


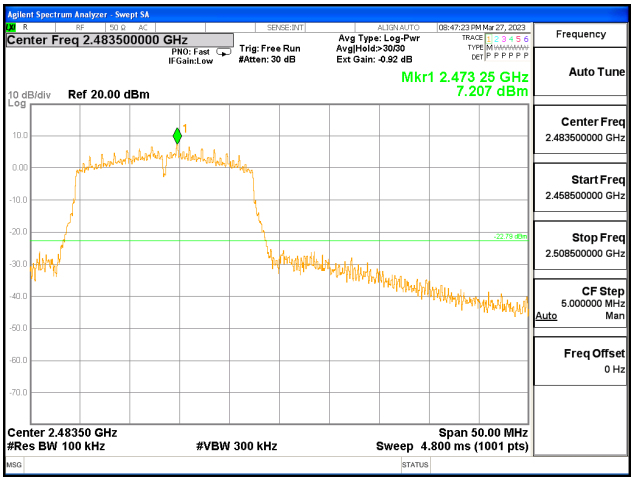


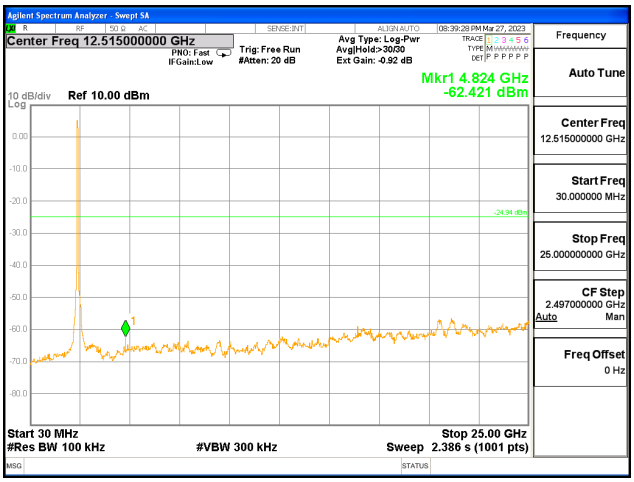


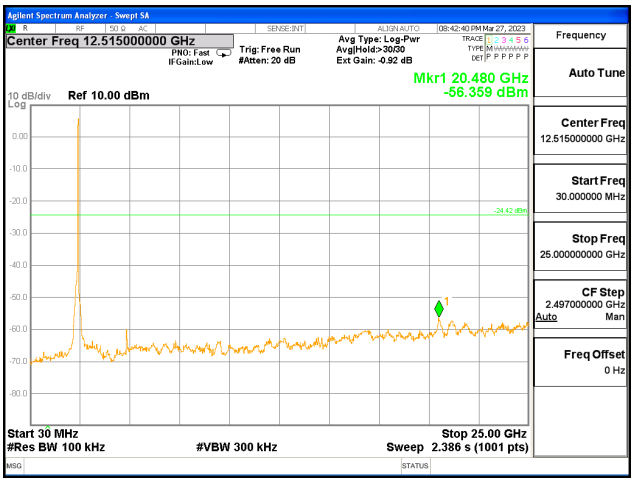


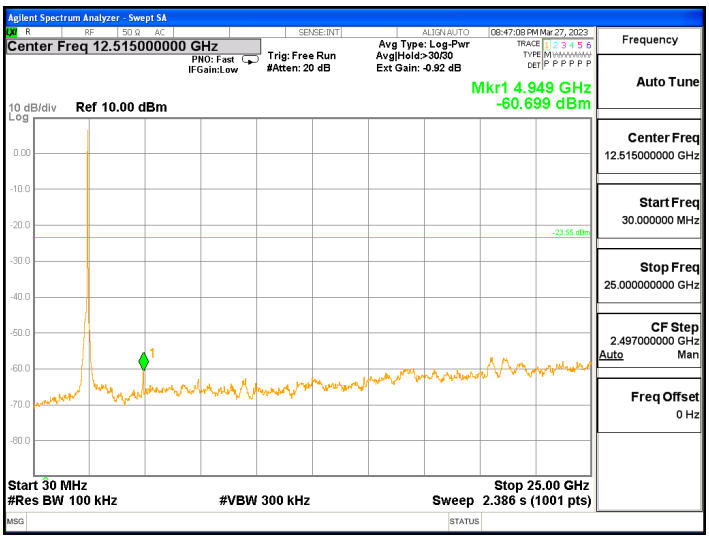
ANT0, 802.11n_HT20



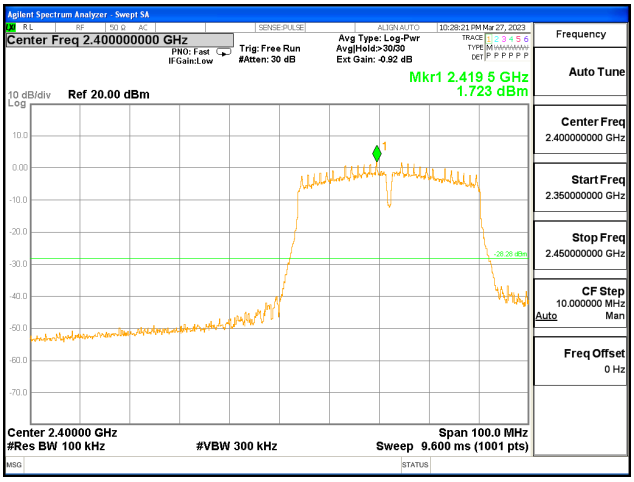


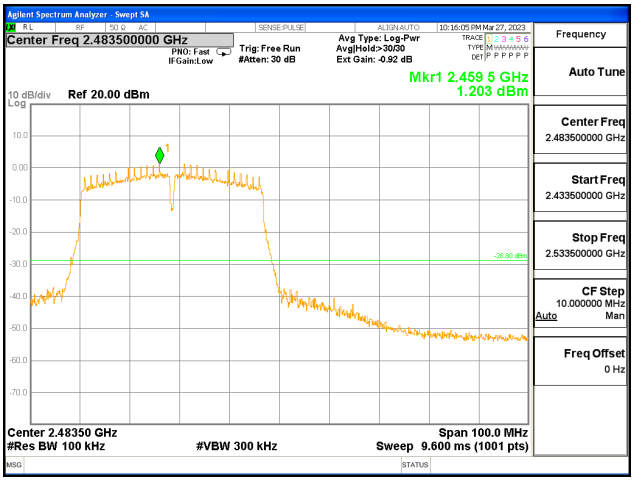


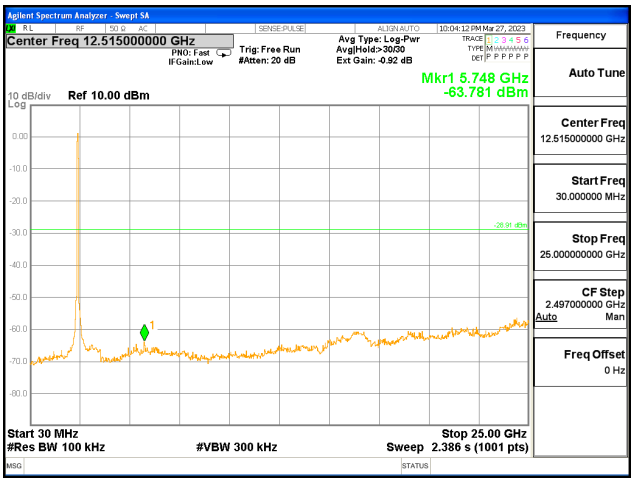


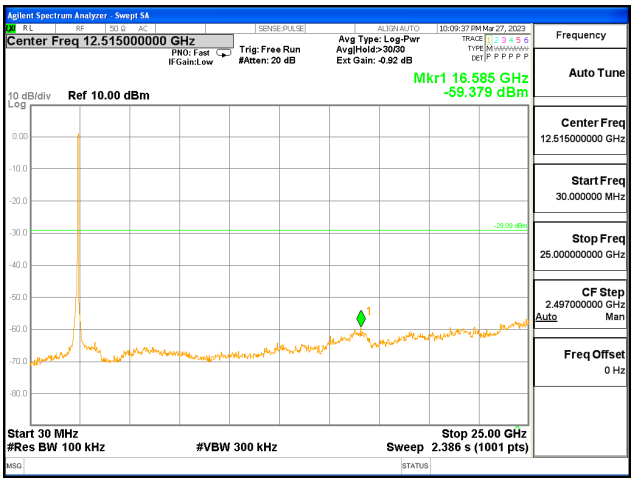


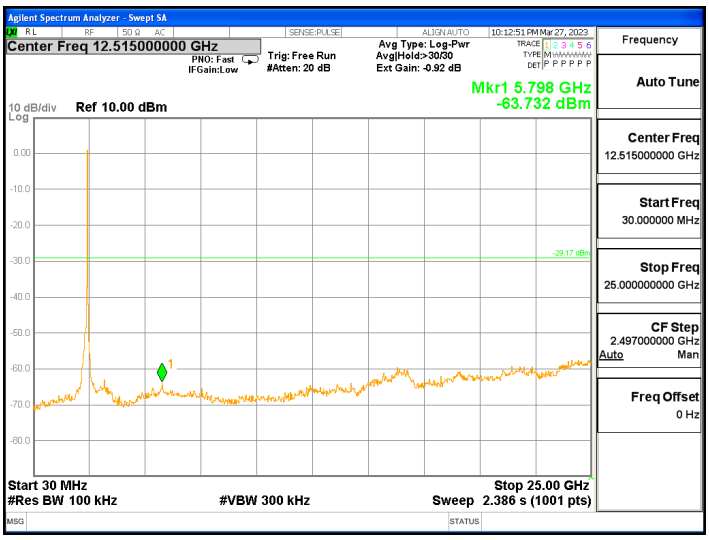
ANT1, 802.11n_HT20



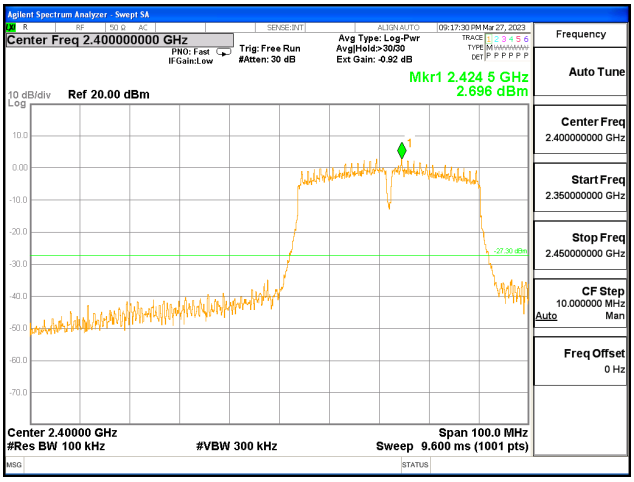


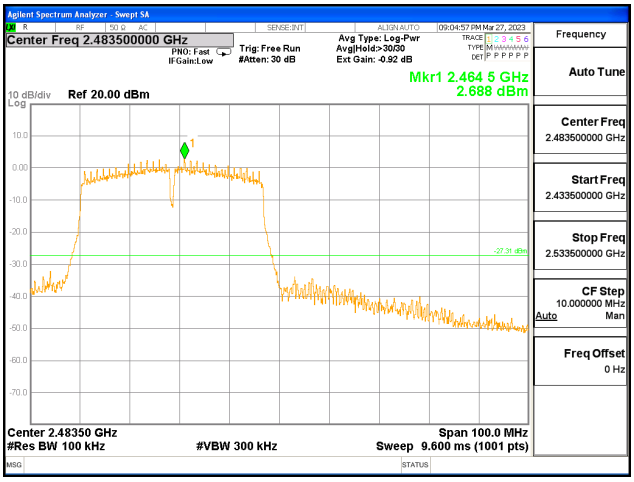


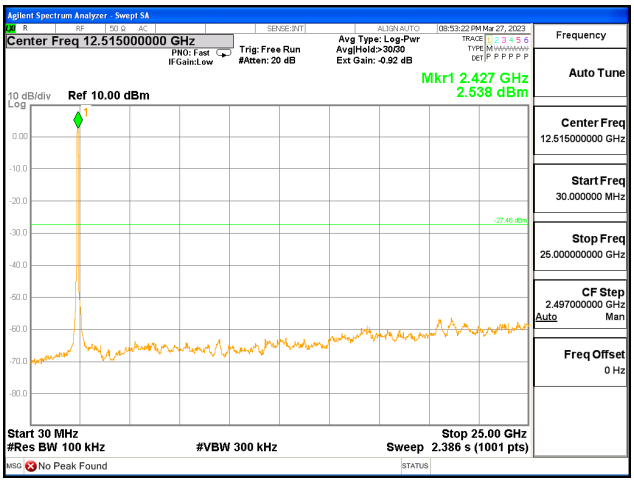


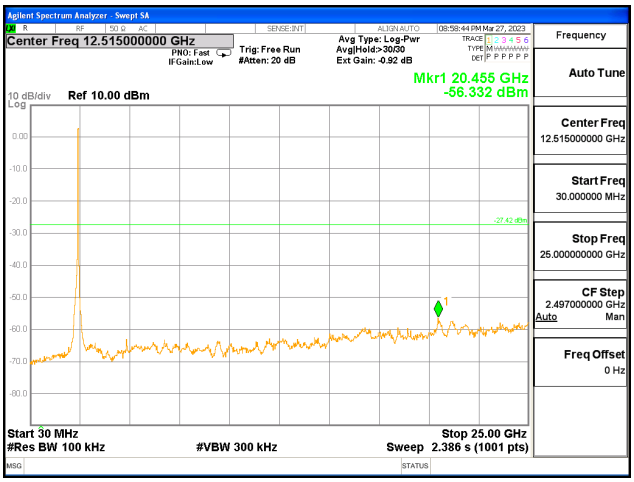


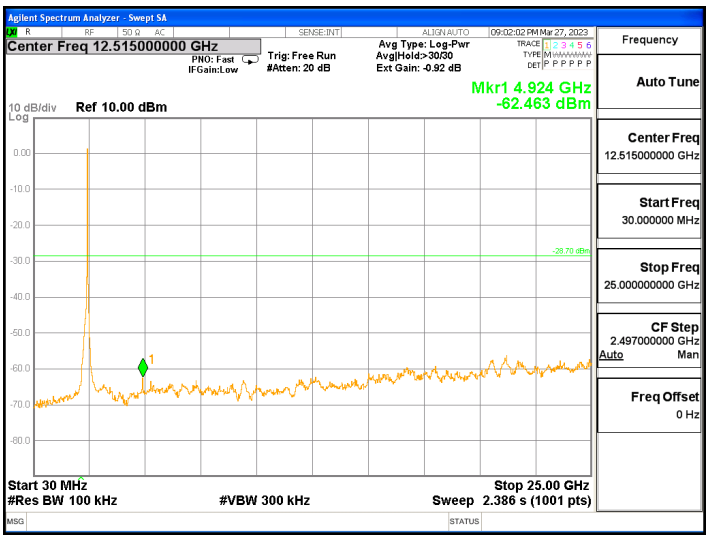
ANT0, 802.11n_HT40



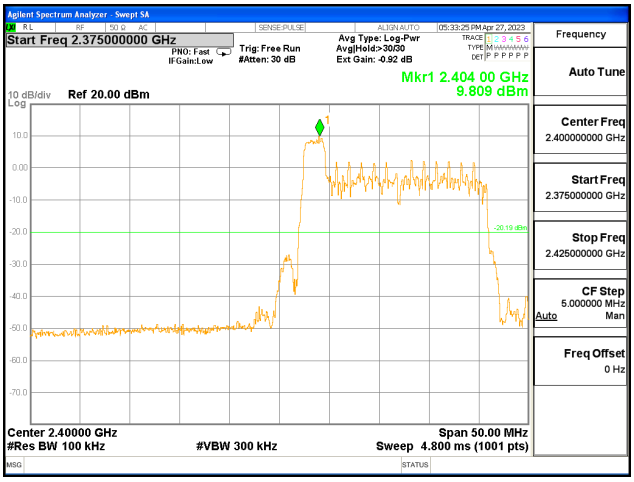


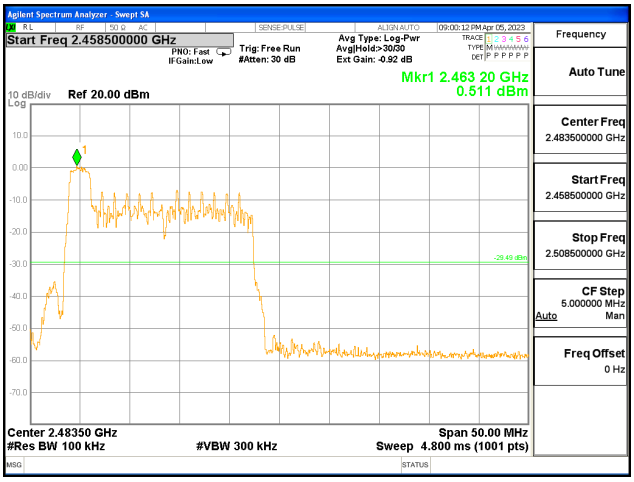


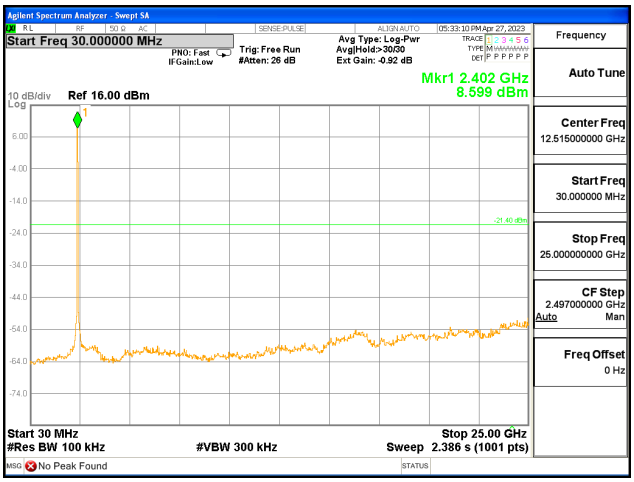


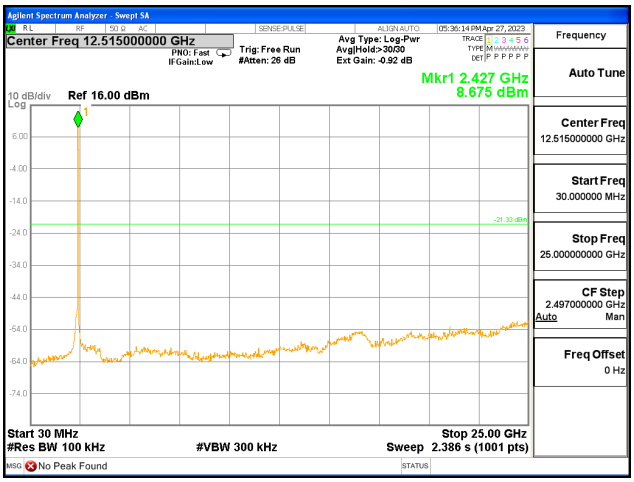


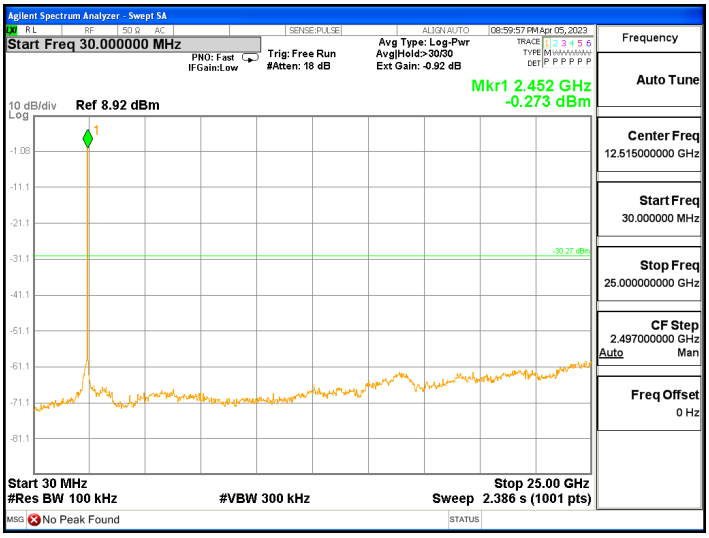
ANT1, 802.11n_HT40



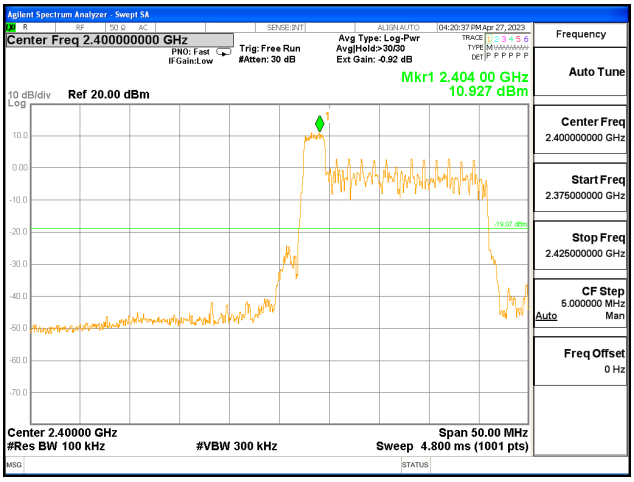


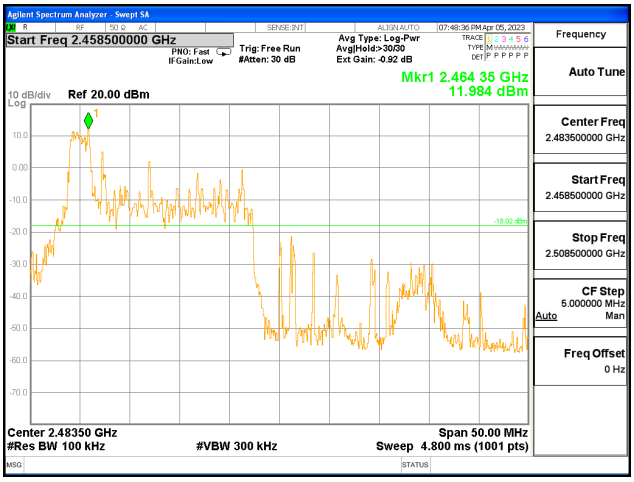


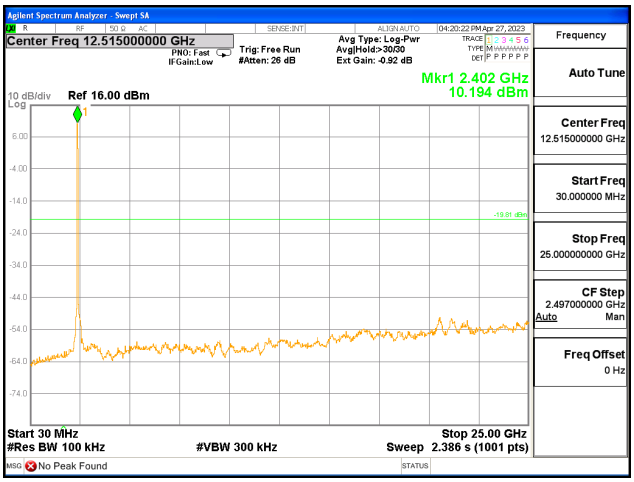


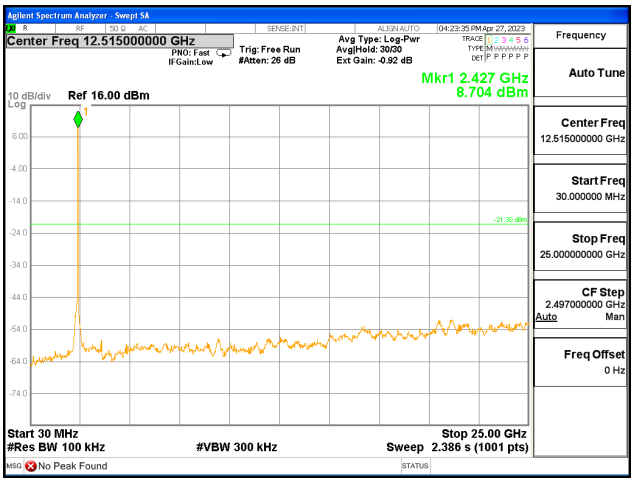


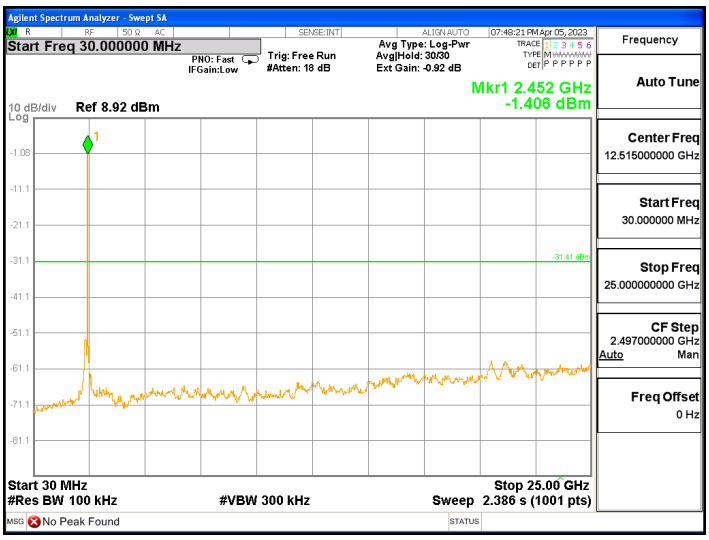
ANT0, 802.11ax_HE20_26T_Low



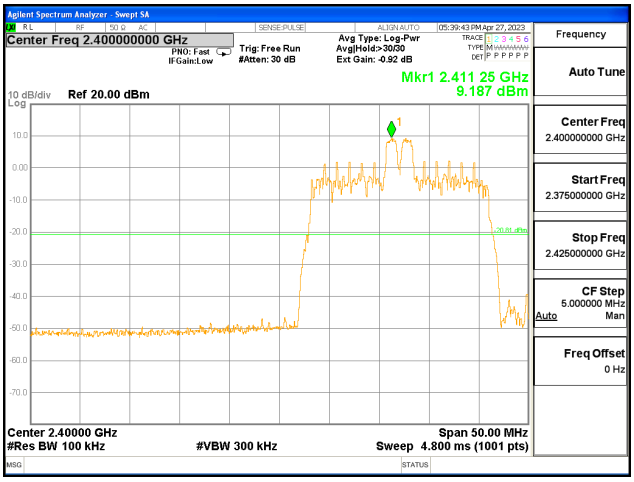


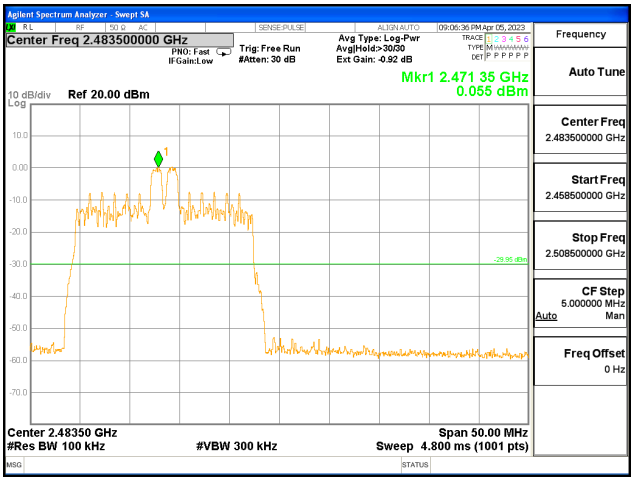


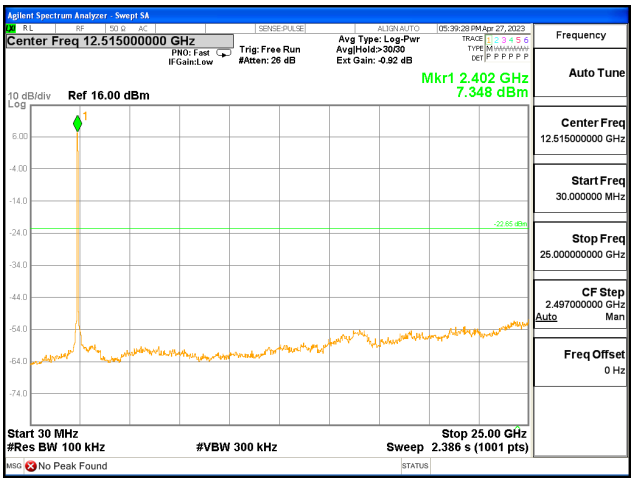


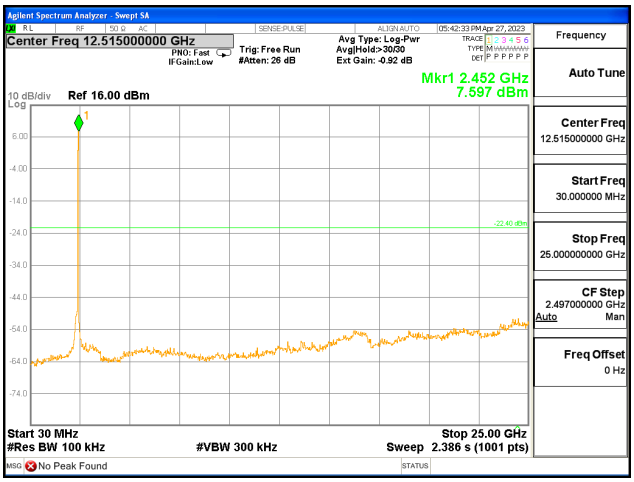


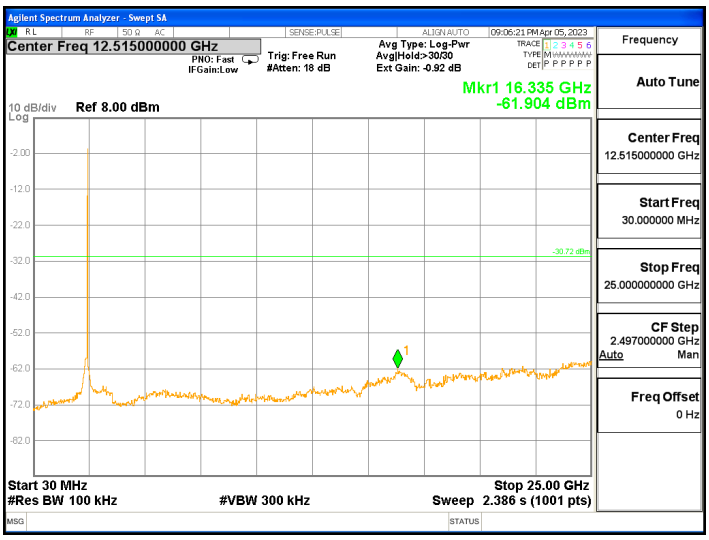
ANT1, 802.11ax_HE20_26T_Low



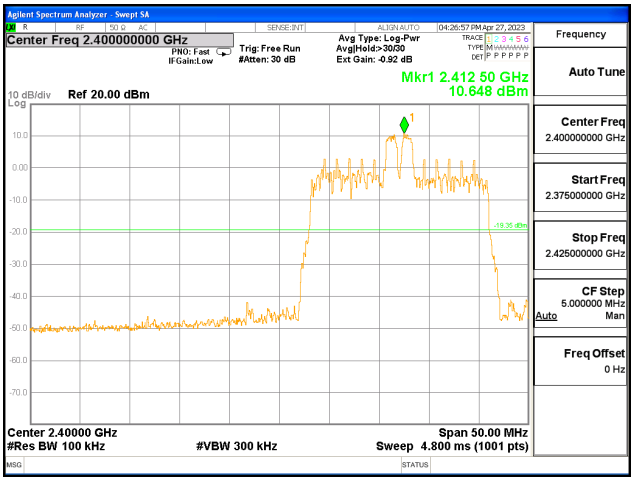


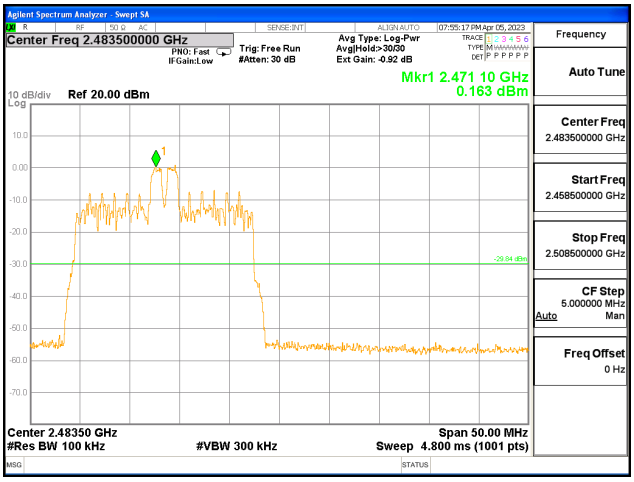


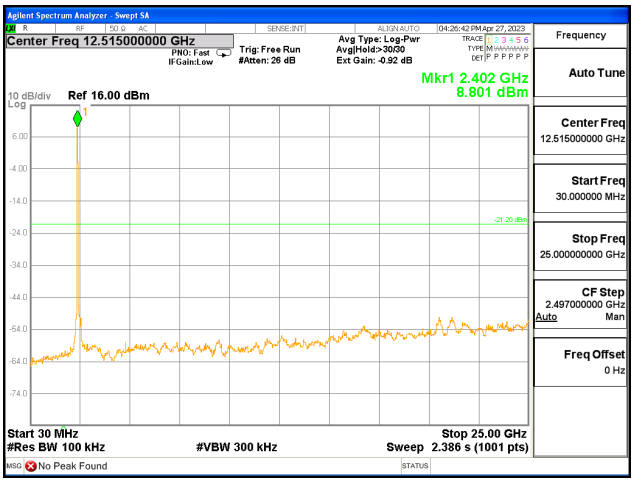


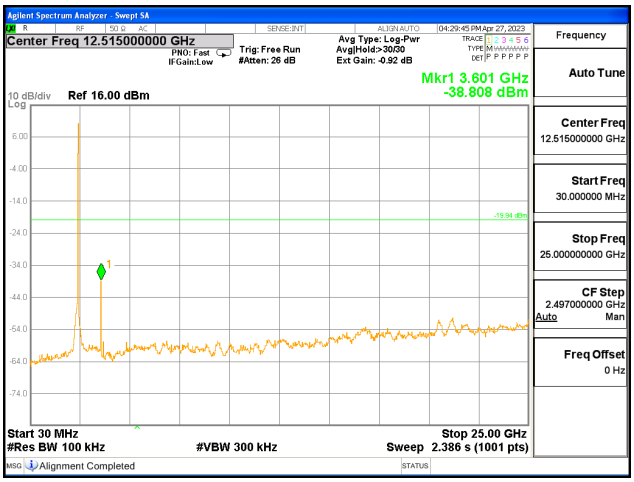


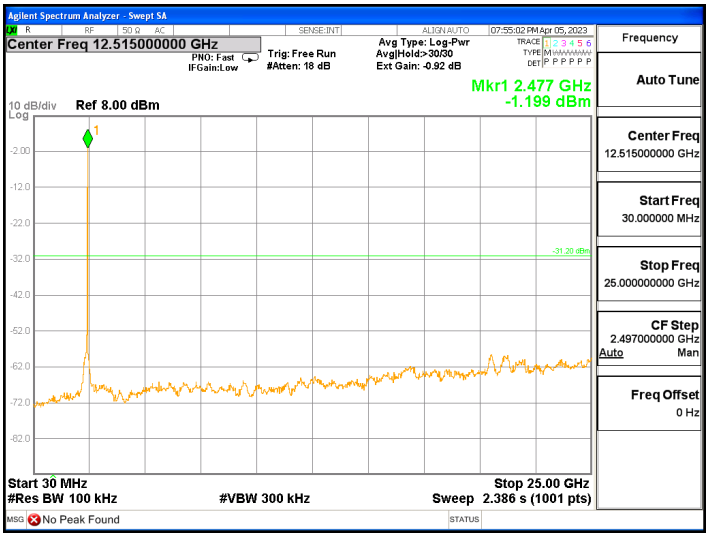
ANT0, 802.11ax_HE20_26T_Mid











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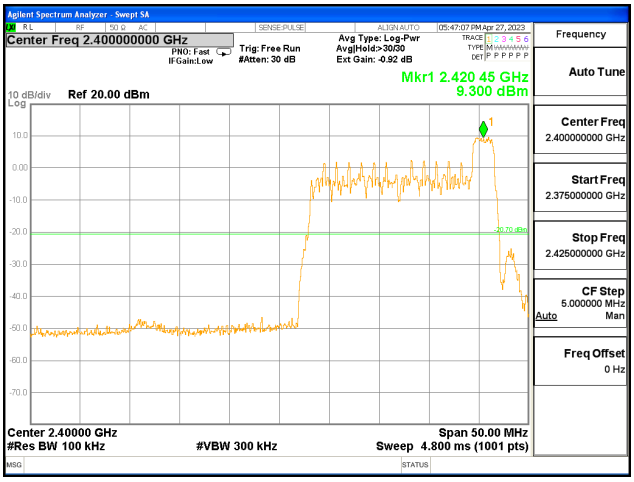
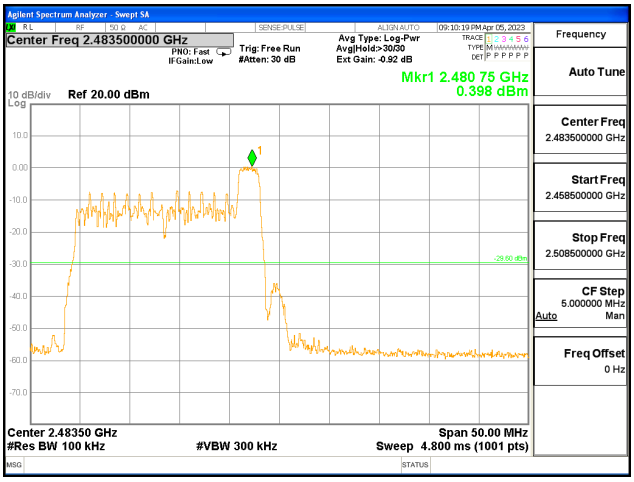
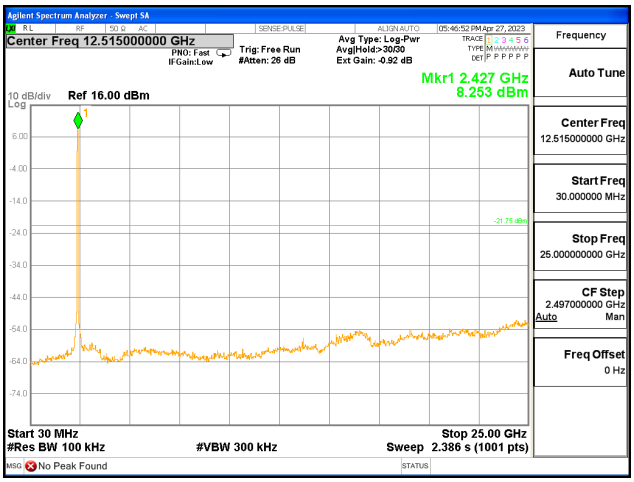
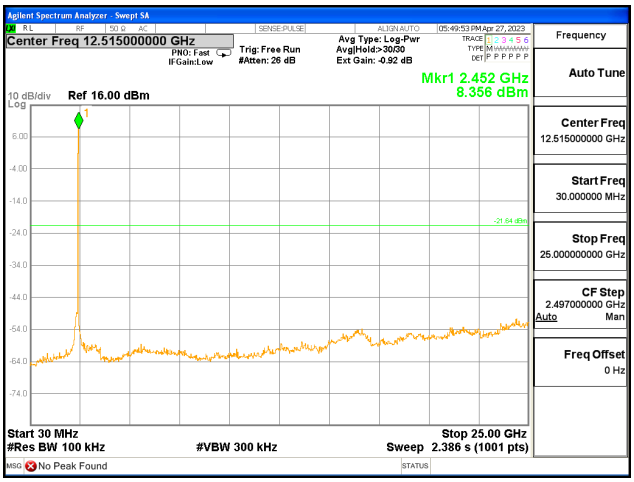
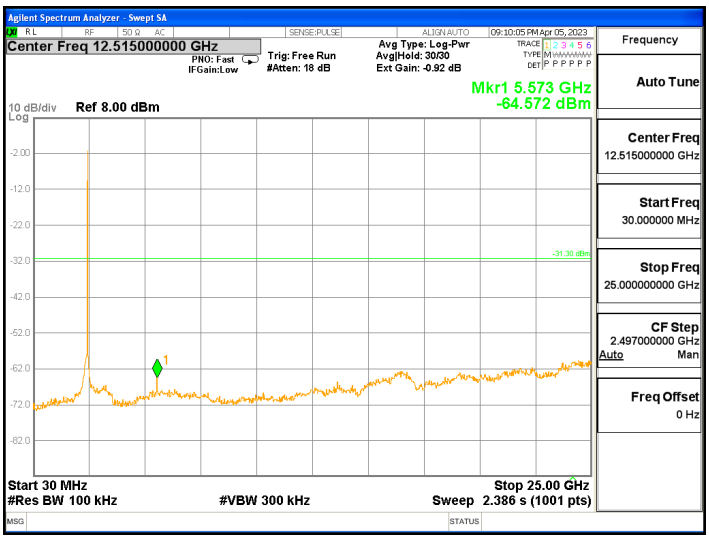


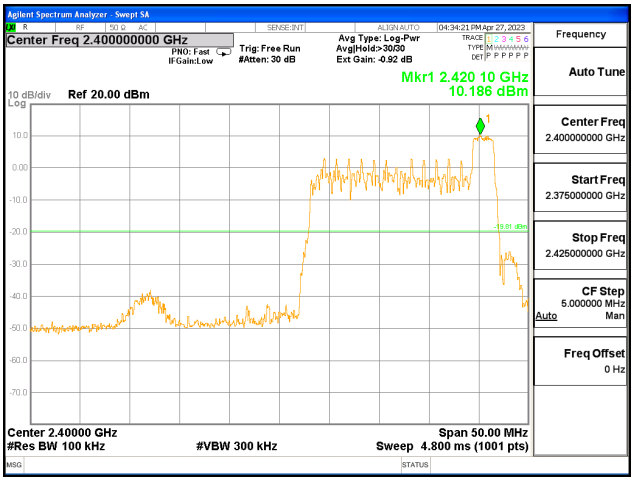


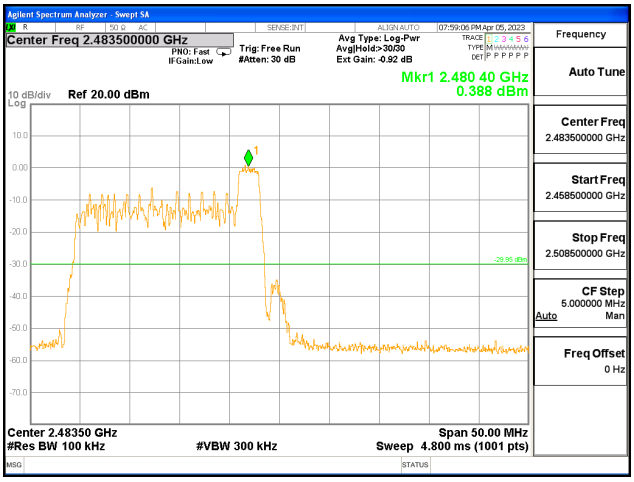


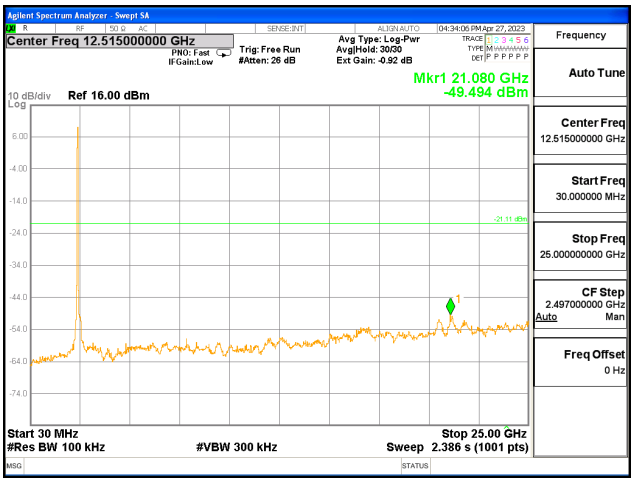


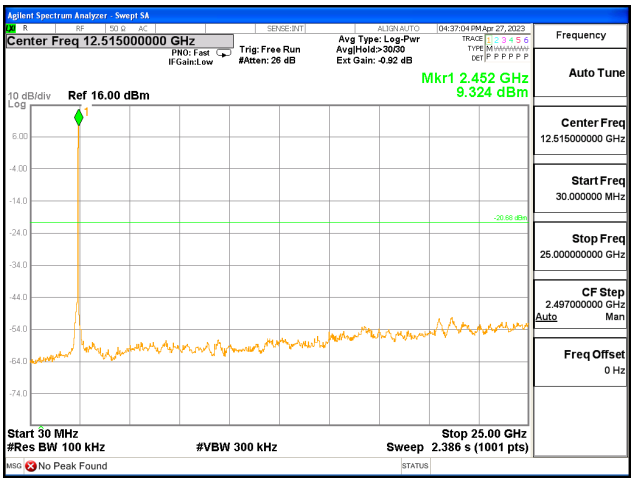


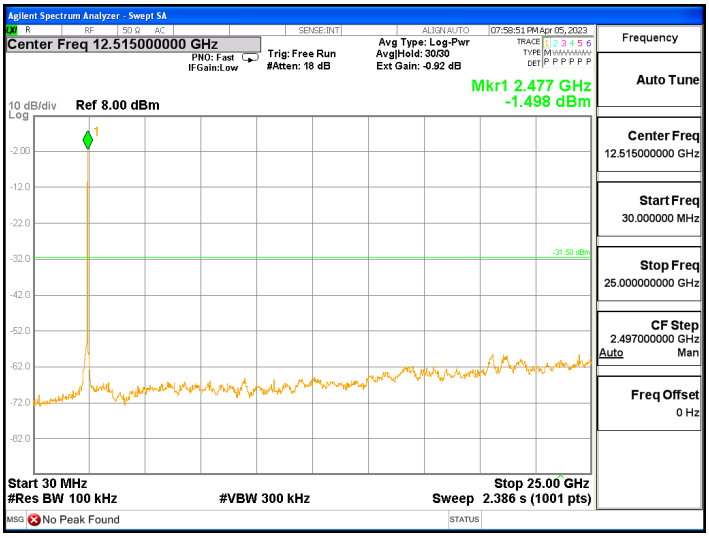
ANT0, 802.11ax_HE20_26T_High











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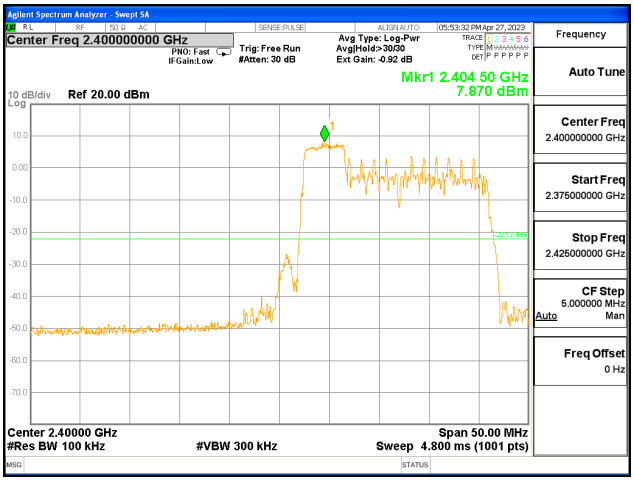

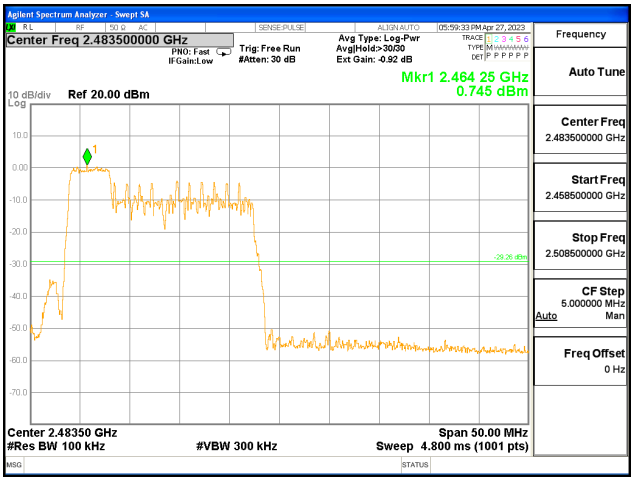

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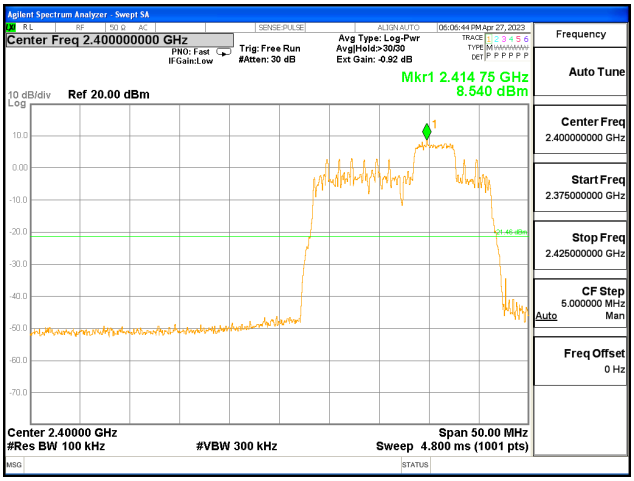

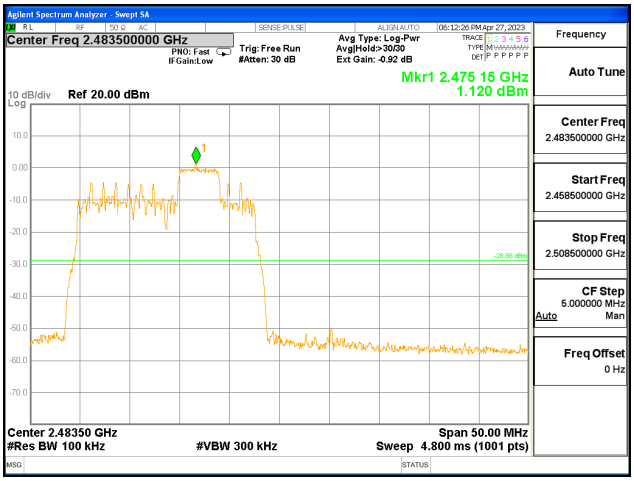

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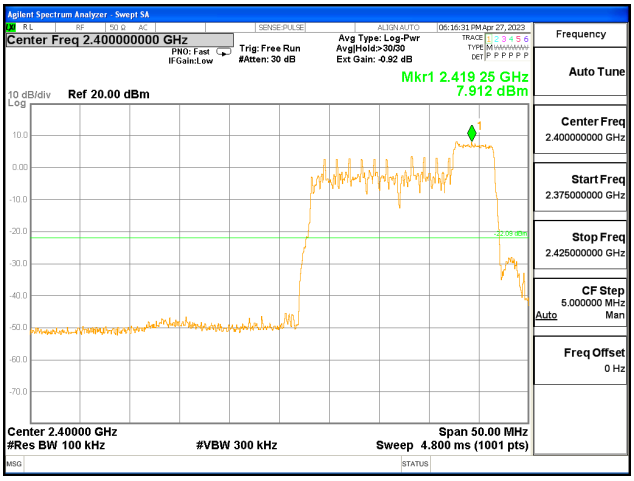

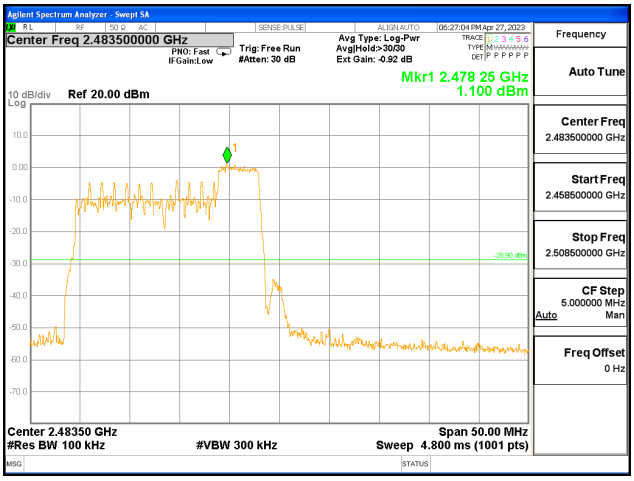

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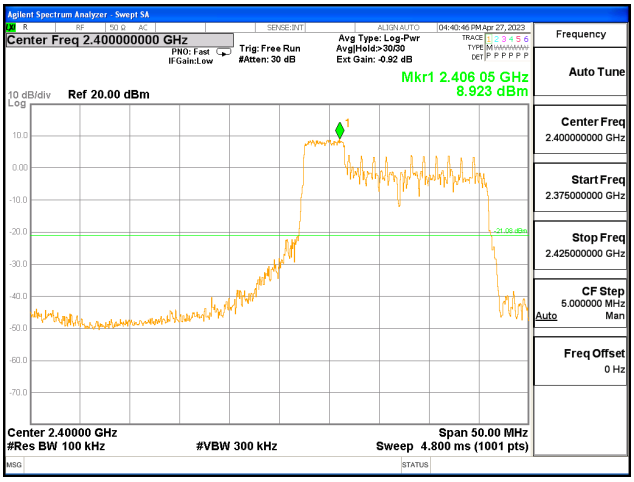

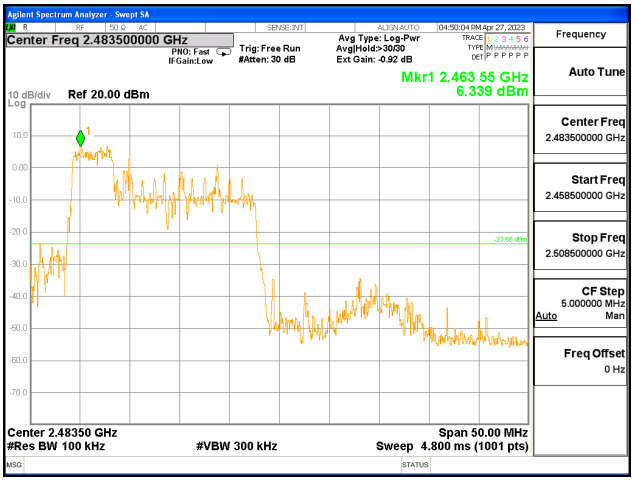

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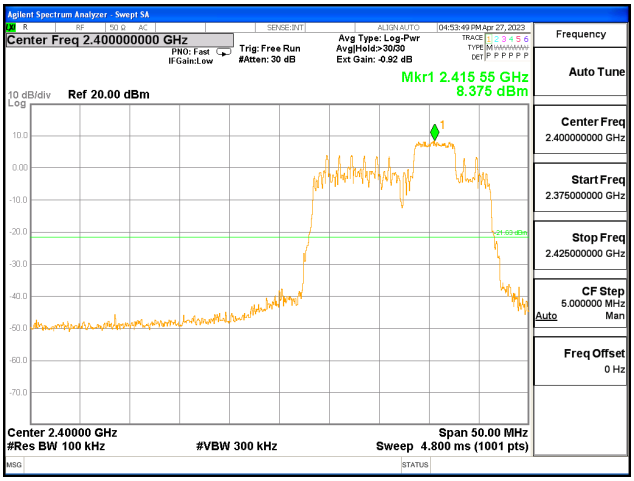

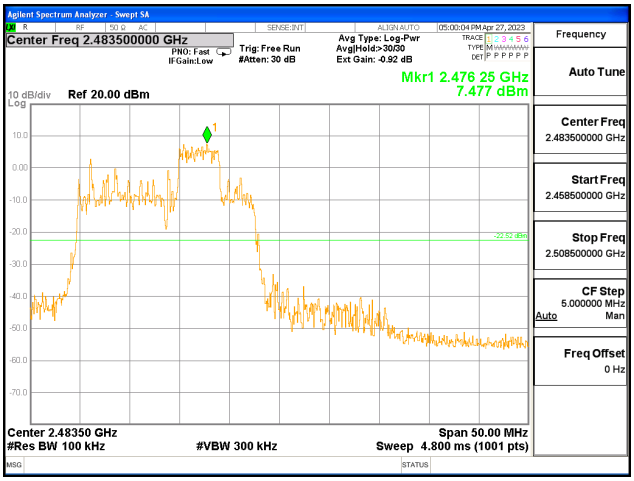

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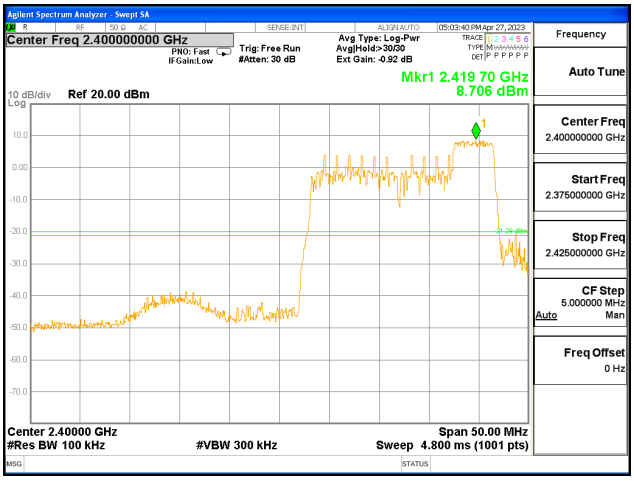

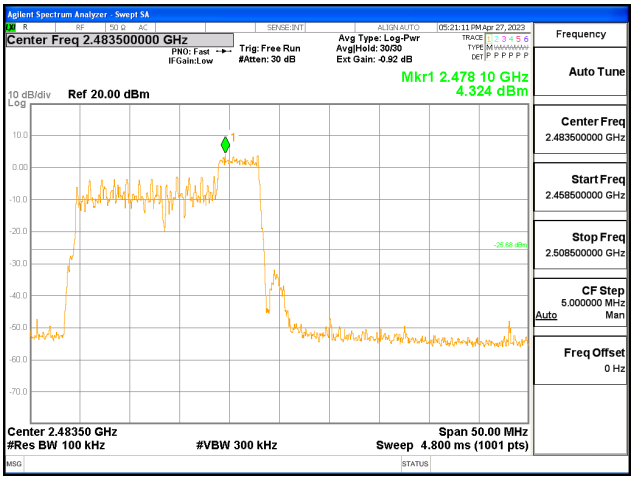

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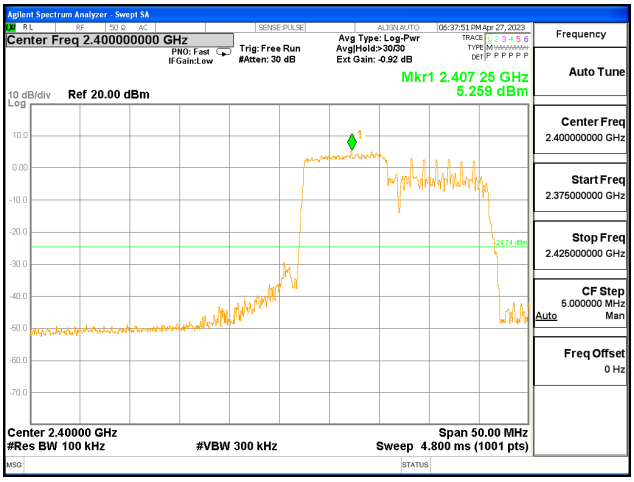

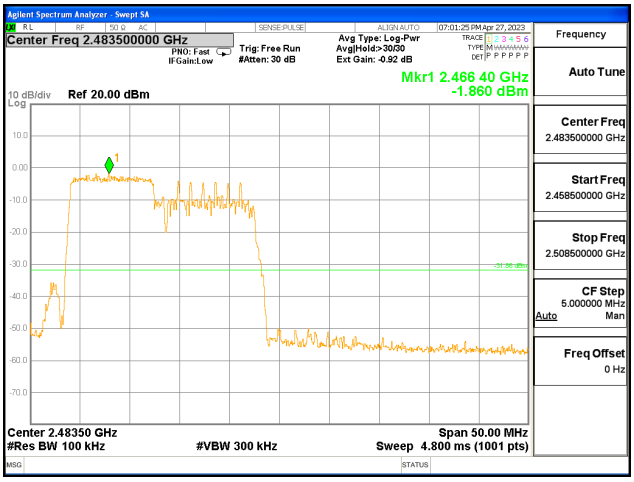

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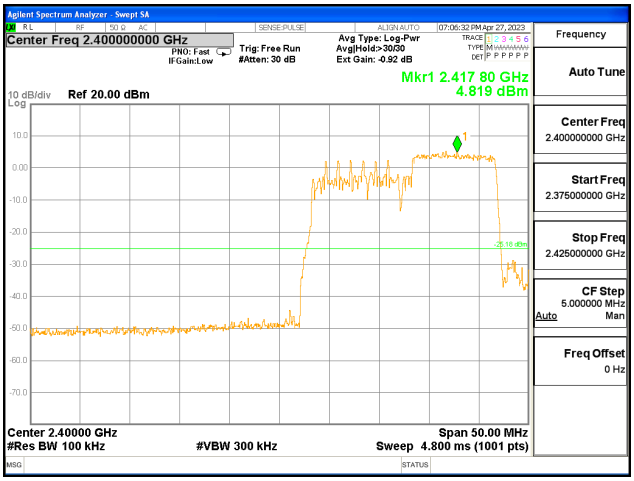

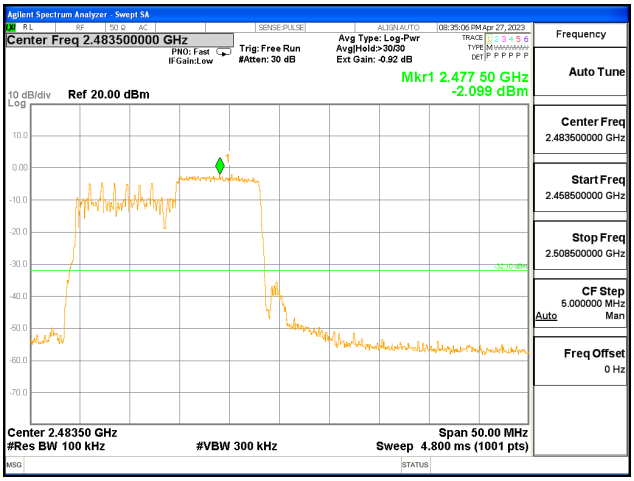

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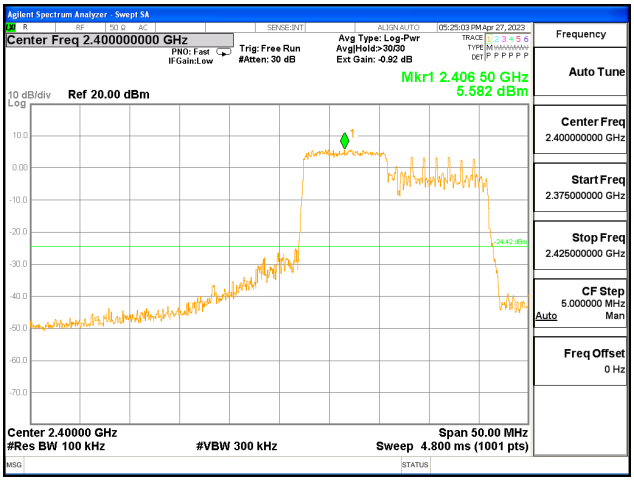

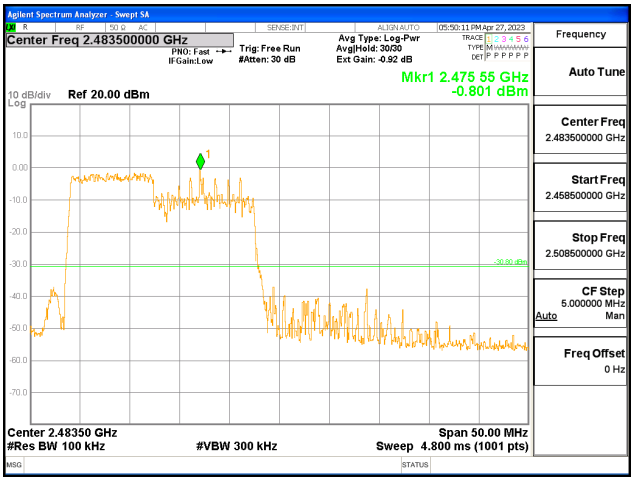

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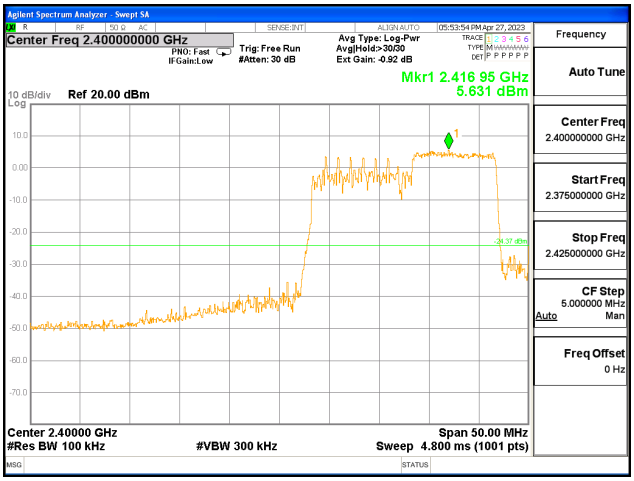

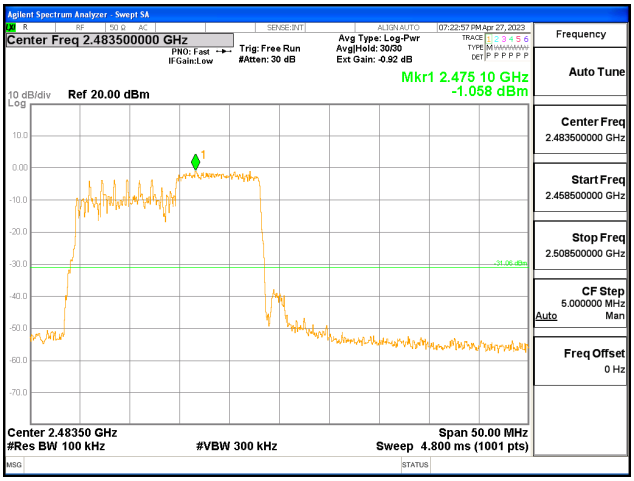

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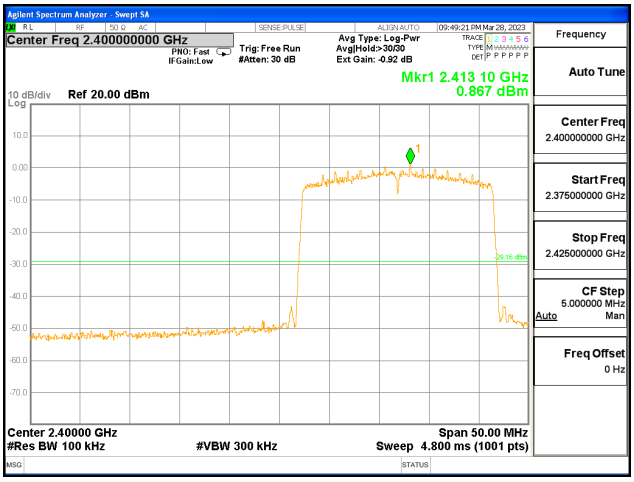

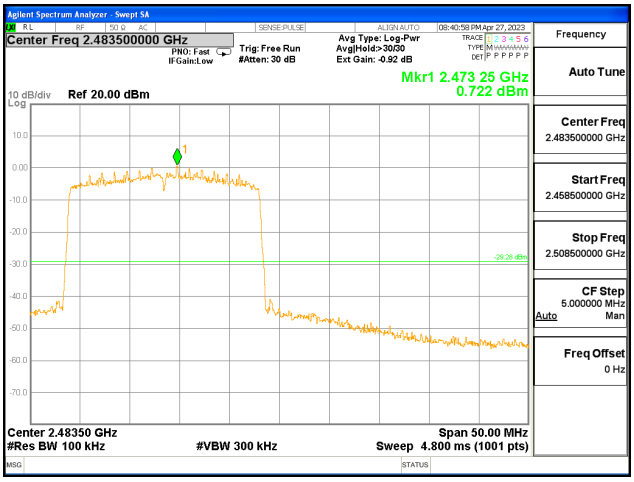

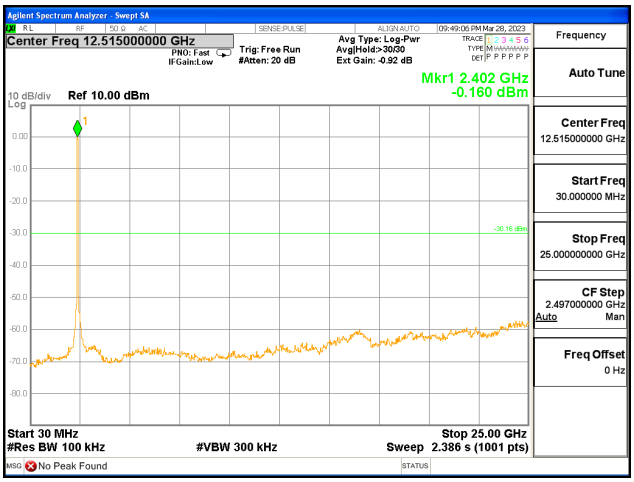

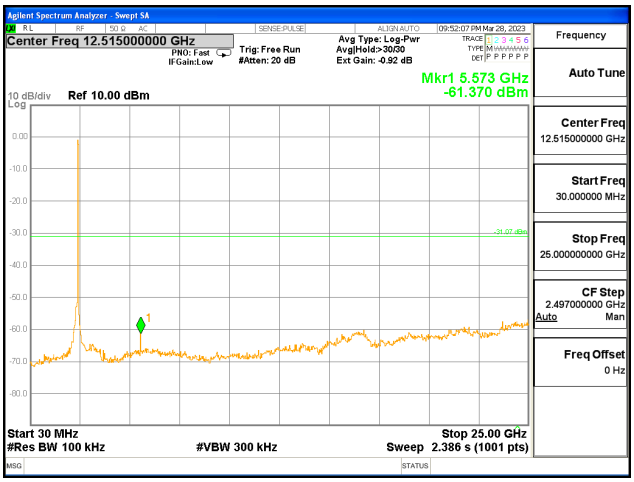

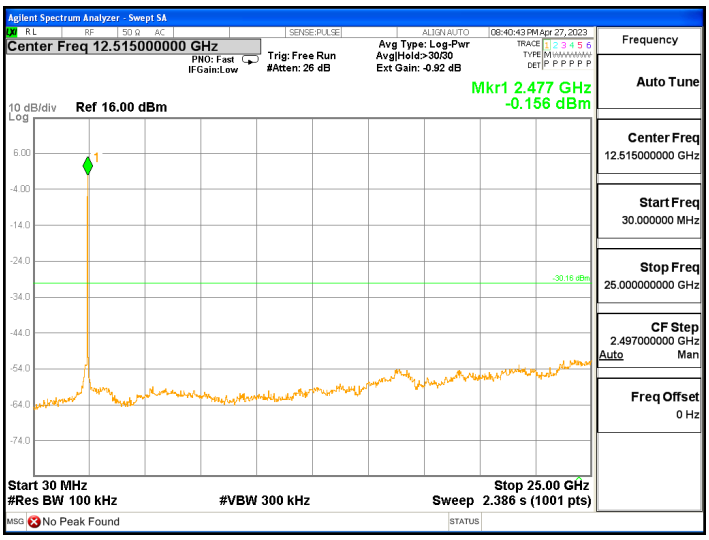

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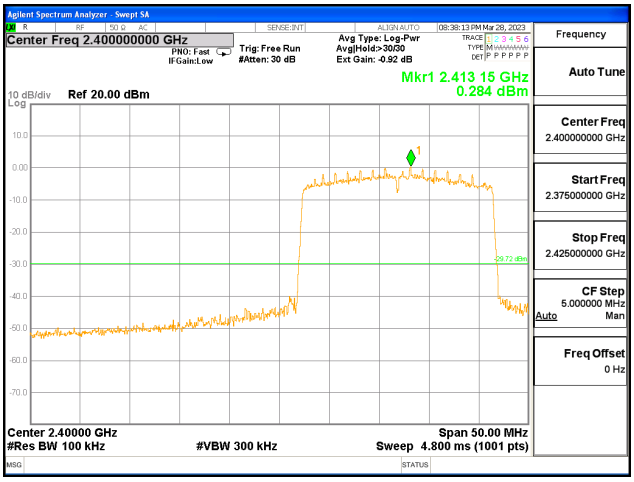

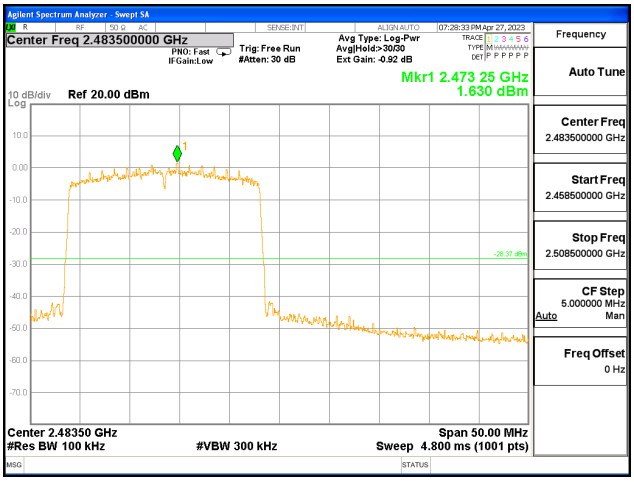

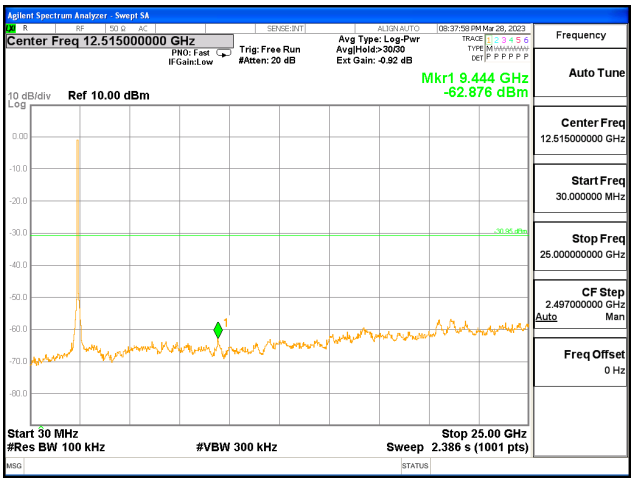

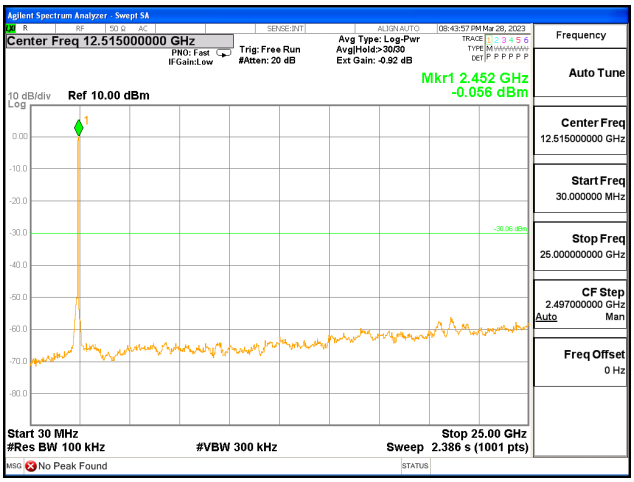

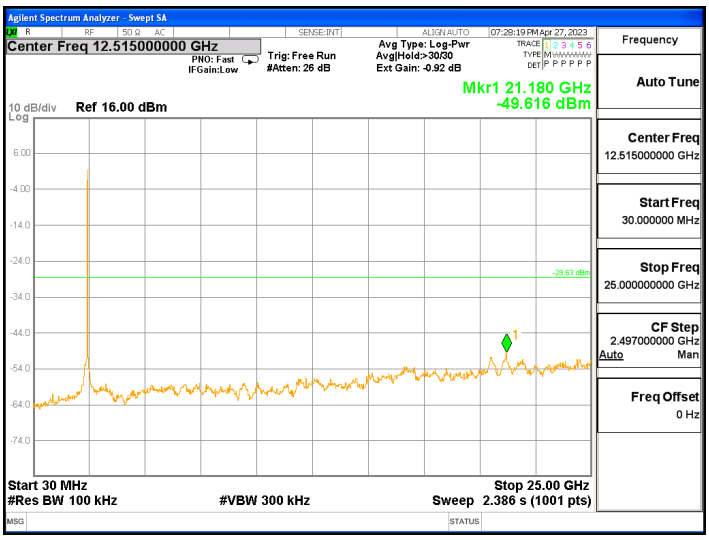

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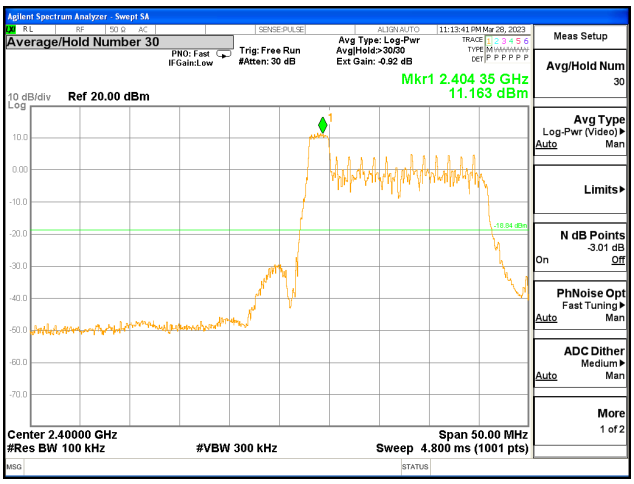

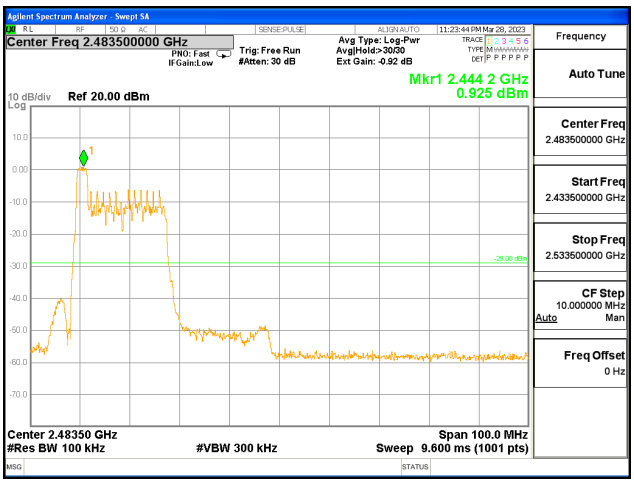

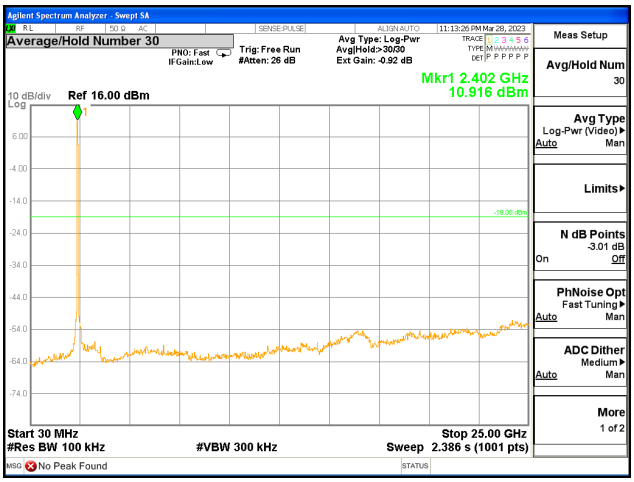

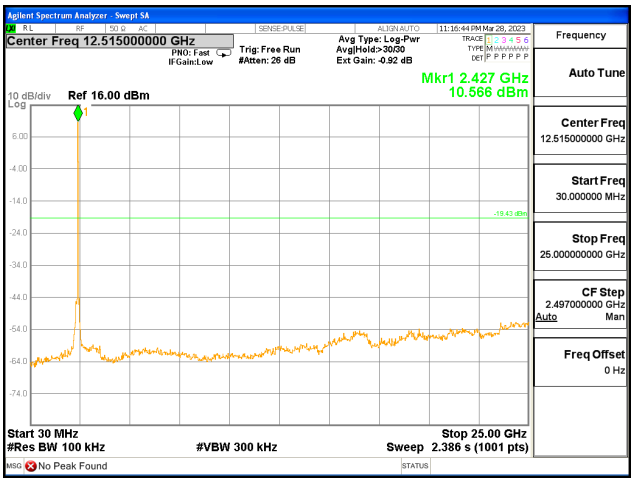

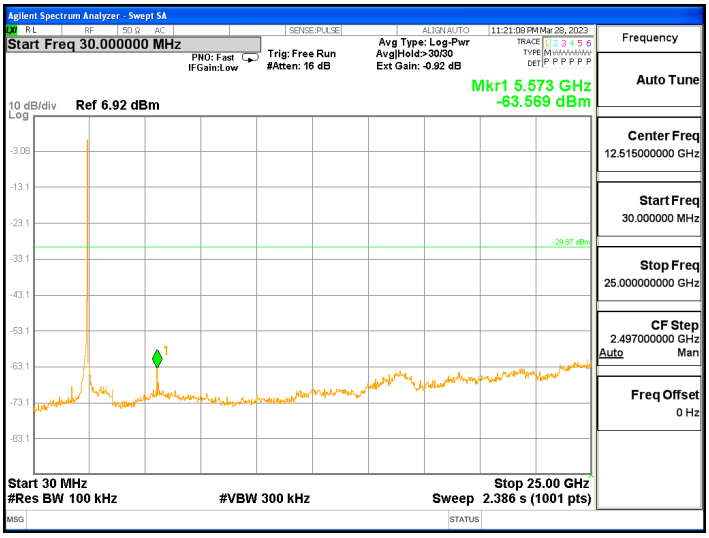

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