ANT2

Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11b	2 412	-5.28	8.00	13.28
	2 442	-4.47	8.00	12.47
	2 472	-4.87	8.00	12.87
802.11g	2 412	-9.44	8.00	17.44
	2 442	-10.20	8.00	18.20
	2 472	-10.00	8.00	18.00
802.11n_HT20	2 412	-11.50	8.00	19.50
	2 442	-11.64	8.00	19.64
	2 472	-10.33	8.00	18.33
802.11ax_HE20_SU	2 412	-11.38	8.00	19.38
	2 442	-11.73	8.00	19.73
	2 472	-11.77	8.00	19.77

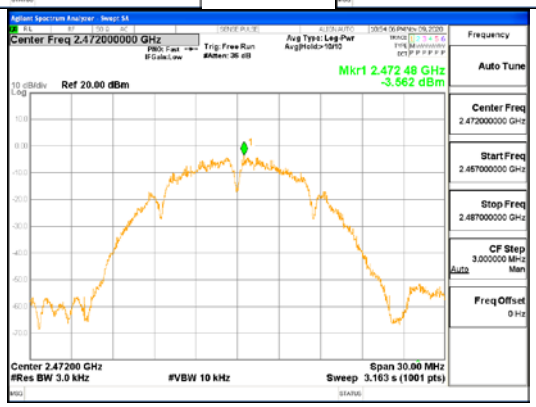
Test Mode	Frequency (MHz)	RU Index	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11ax_HE20_26T	2 412	Low	-2.36	8.00	10.36
		Mid	-3.71	8.00	11.71
		High	-4.65	8.00	12.65
	2 442	Low	-4.73	8.00	12.73
		Mid	-4.82	8.00	12.82
		High	-4.25	8.00	12.25
	2 472	Low	-5.88	8.00	13.88
		Mid	-5.77	8.00	13.77
		High	-5.51	8.00	13.51

ANT1 + ANT2 (MIMO)

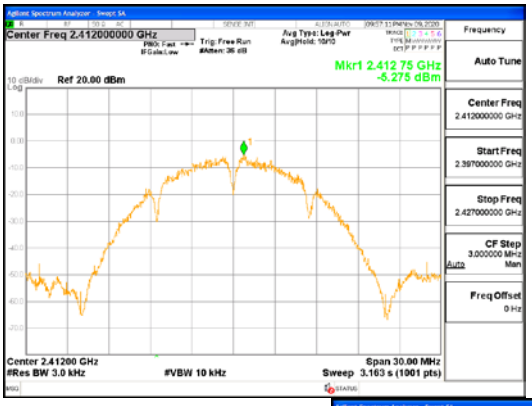
Test Mode	Frequency (MHz)	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11g	2 412	-6.55	8.00	14.55
	2 442	-7.01	8.00	15.01
	2 472	-7.13	8.00	15.13
802.11n_HT20	2 412	-8.55	8.00	16.55
	2 442	-8.35	8.00	16.35
	2 472	-7.44	8.00	15.44
802.11ax_HE20	2 412	-8.64	8.00	16.64
	2 442	-8.66	8.00	16.66
	2 472	-8.77	8.00	16.77

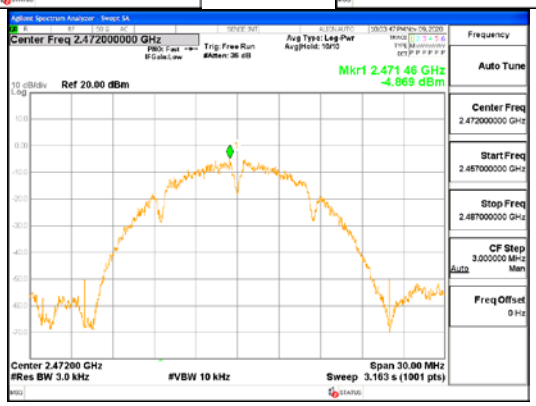
Test Mode	Frequency (MHz)	RU Index	Measured Power Density (dBm)	Limit (dBm)	Margin(dB)
802.11ax_HE20 _26T	2 412	Low	0.66	8.00	7.34
		Mid	-0.38	8.00	8.38
		High	-0.95	8.00	8.95
	2 442	Low	-0.29	8.00	8.29
		Mid	-0.10	8.00	8.10
		High	-0.62	8.00	8.62
	2 472	Low	-2.15	8.00	10.15
		Mid	-2.12	8.00	10.12
		High	-1.61	8.00	9.61

See next pages for actual measured spectrum plots.

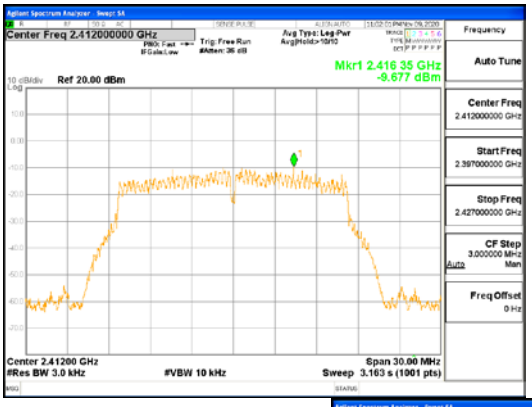


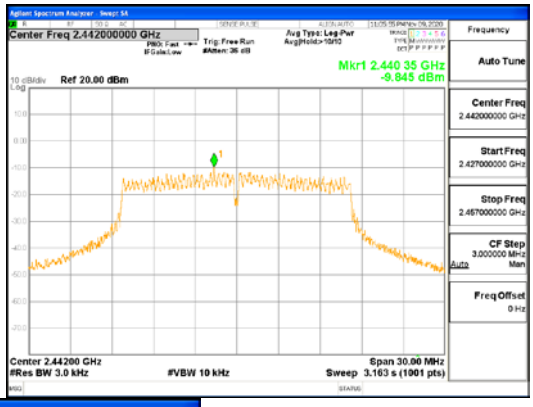
ANT1, 802.11b

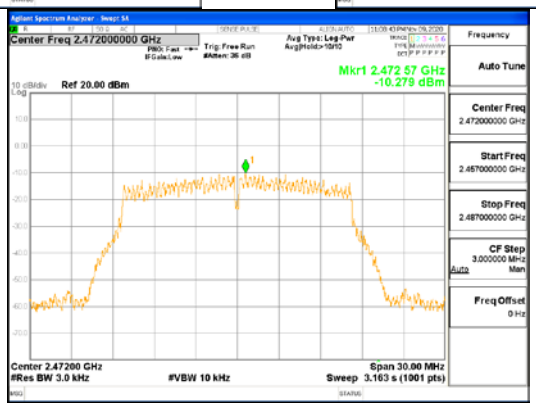




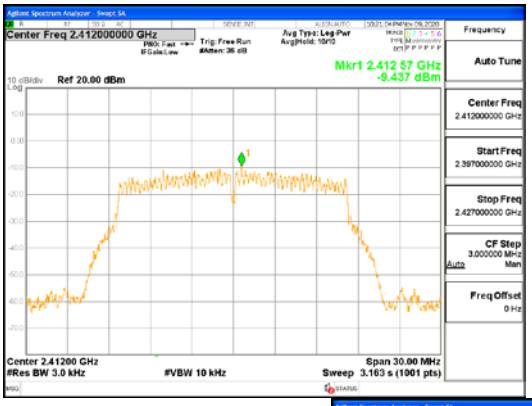
ANT2, 802.11b

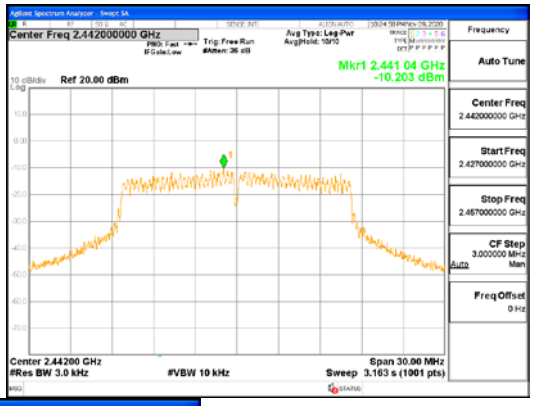


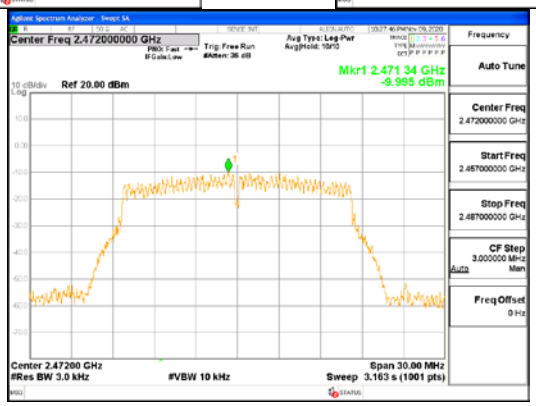




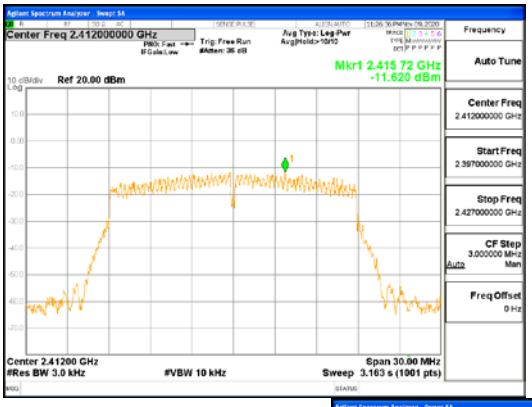
ANT1, 802.11g

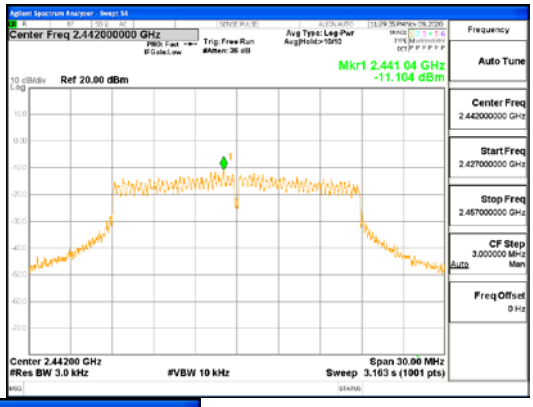


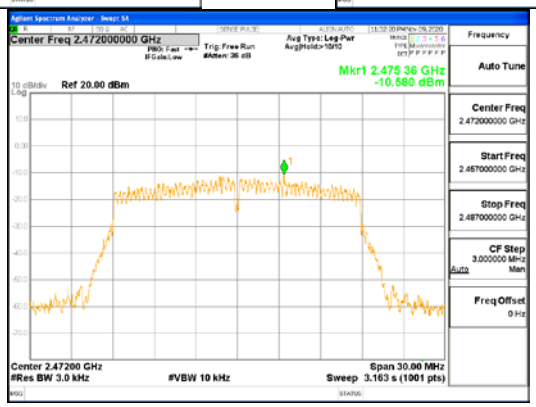




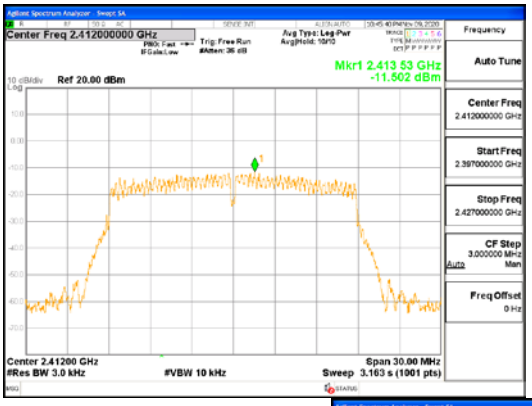
ANT2, 802.11g

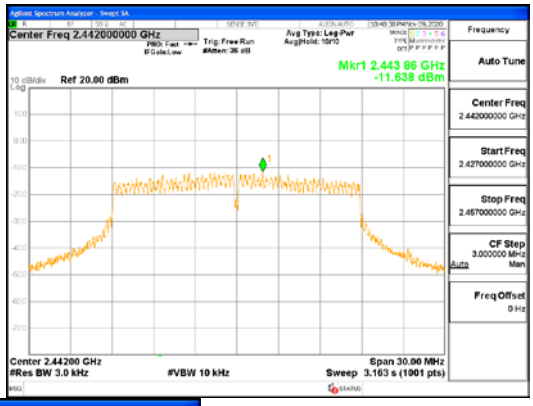


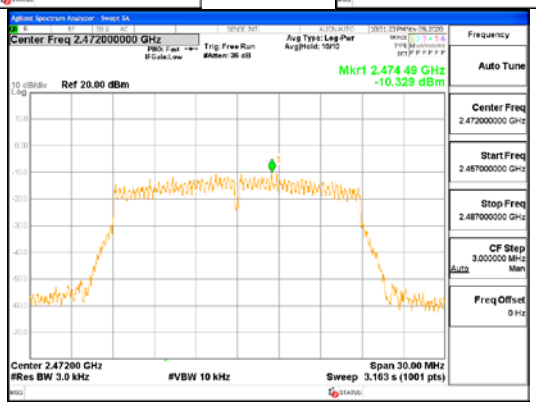




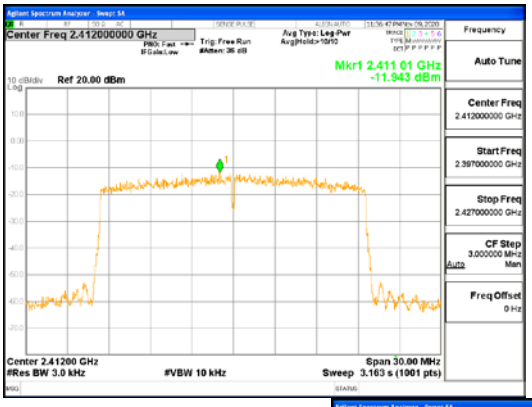
ANT1, 802.11n_HT20

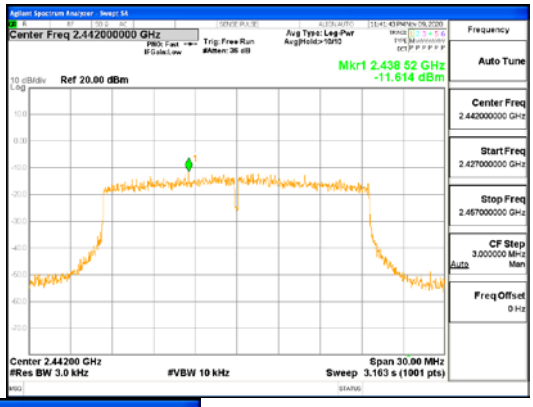


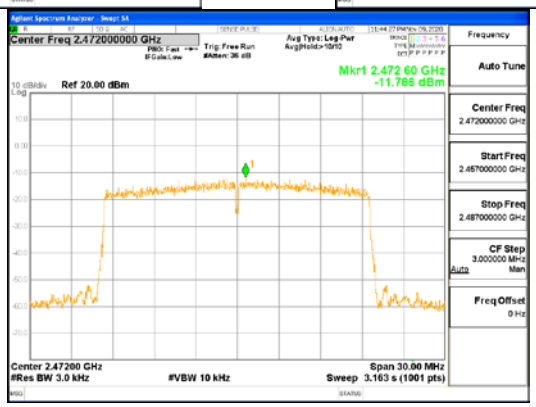




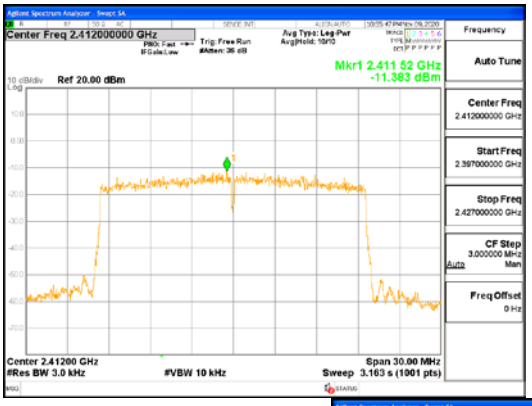
ANT2, 802.11n_HT20

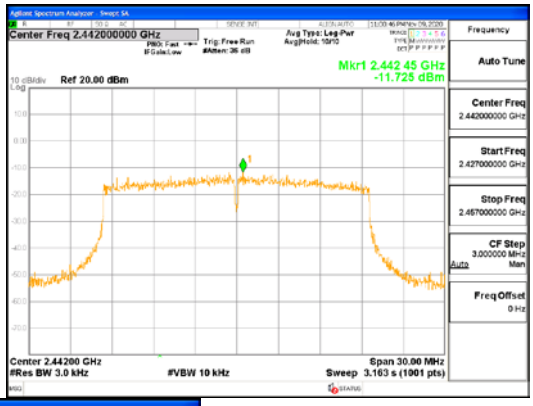


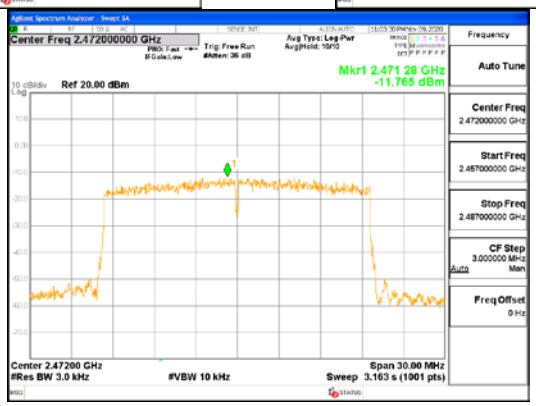




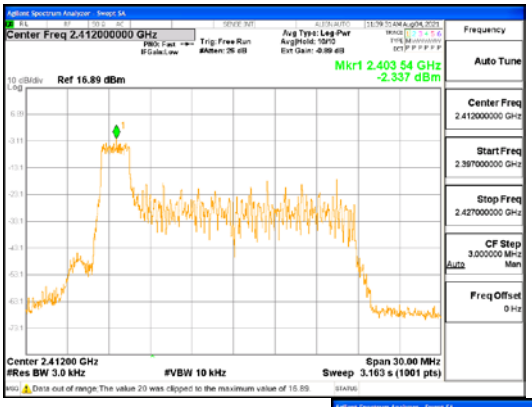
ANT1, 802.11ax_HE20_SU

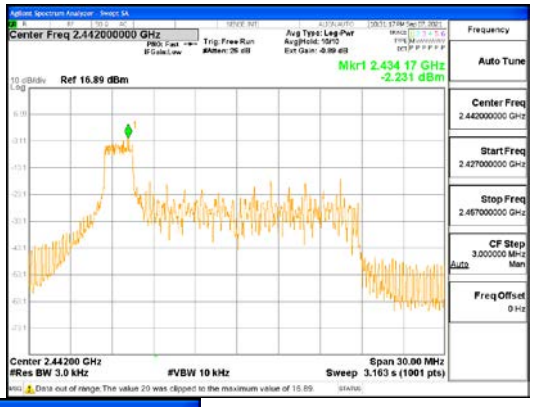


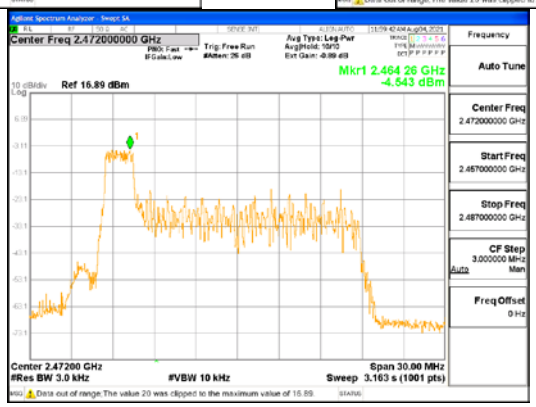




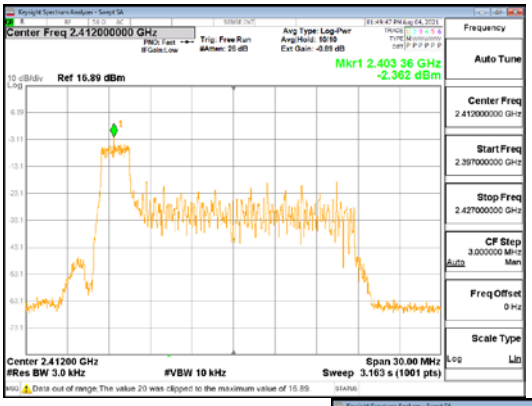
ANT2, 802.11ax_HE20_SU

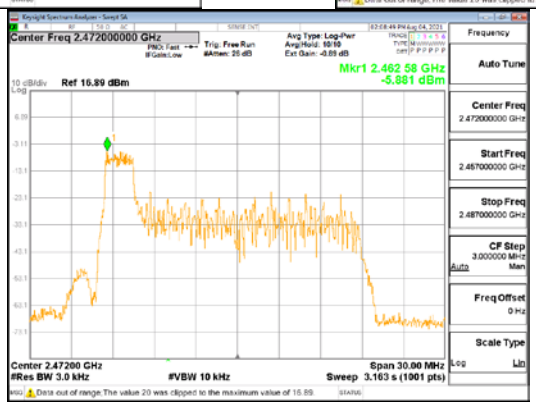




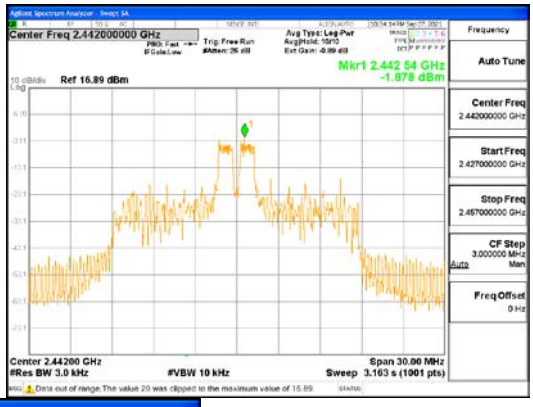


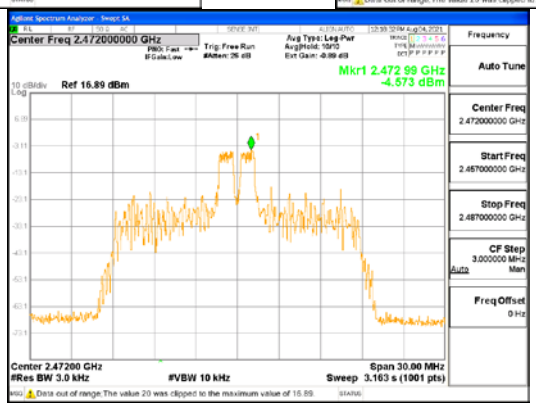
ANT1, 802.11ax_HE20_26T_Low



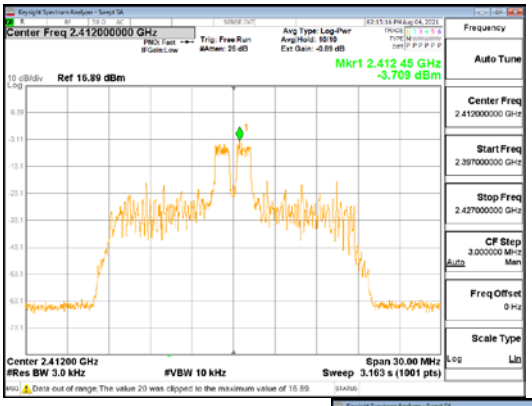


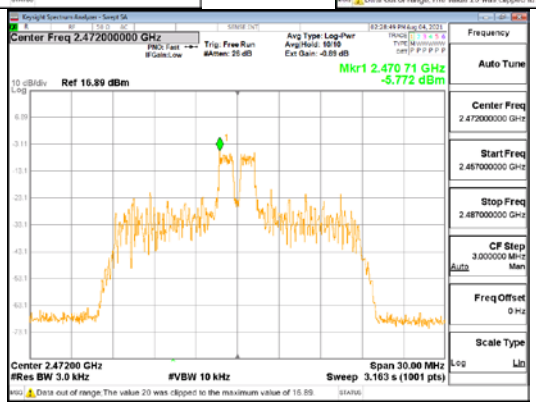
ANT2, 802.11ax_HE20_26T_Low



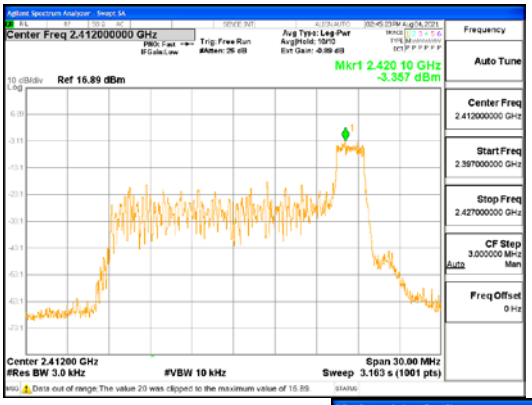


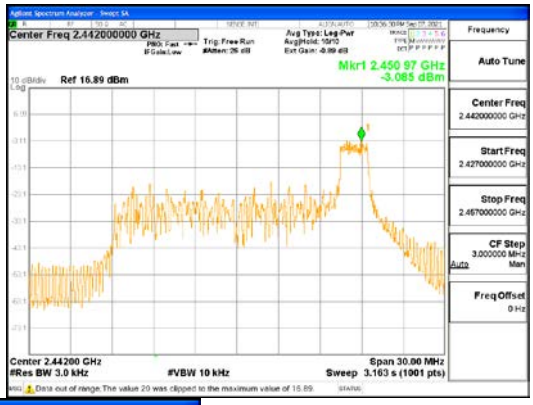
ANT1, 802.11ax_HE20_26T_Mid

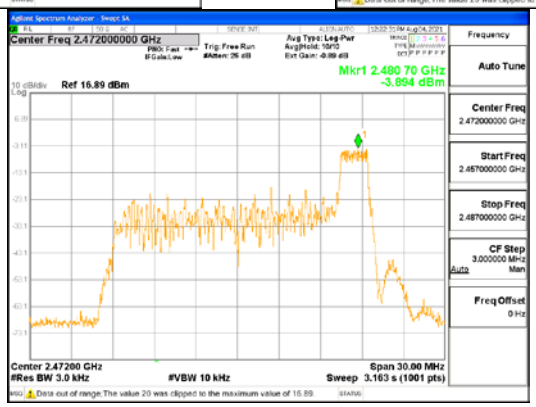




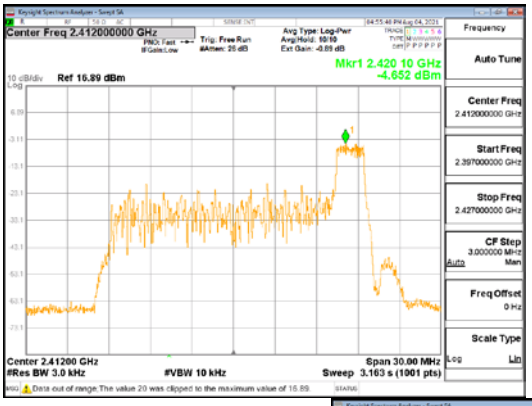
ANT2, 802.11ax_HE20_26T_Mid

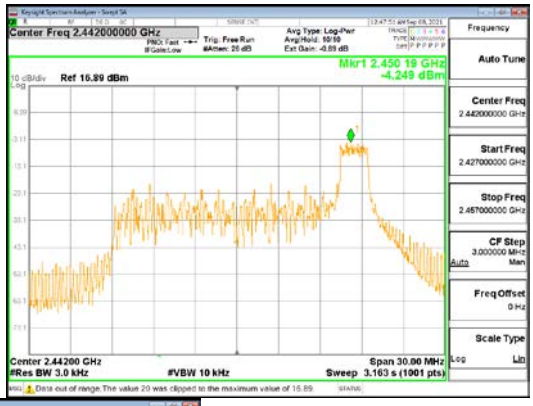


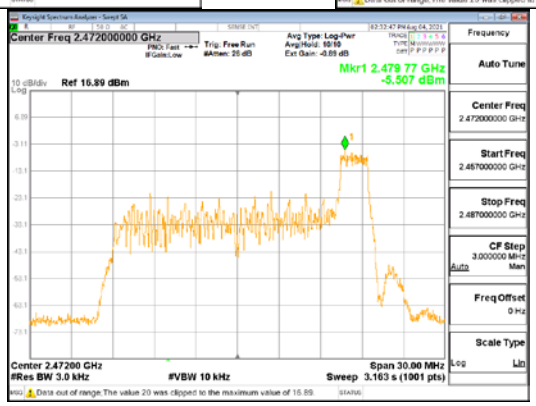




ANT1, 802.11ax_HE20_26T_High







ANT2, 802.11ax_HE20_26T_High

4.4 Conducted Spurious emission

Test Procedures

KDB 558074 - Section 8.5
ANSI C63.10-2013 - Section 11.11.3
RSS-Gen - Section 6.13

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.

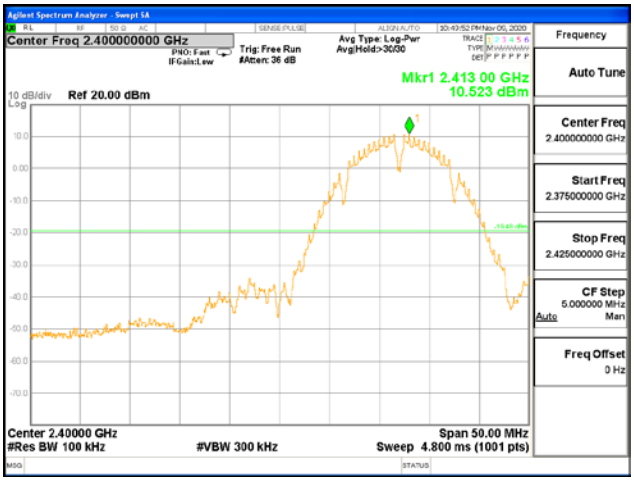
Limit :

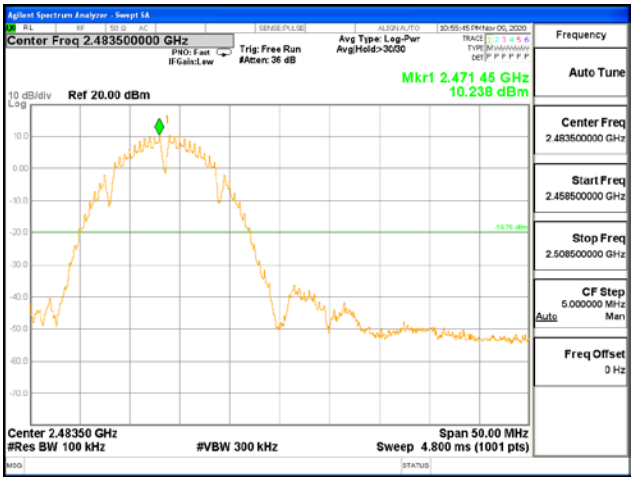
Emission level	<	30 dBc

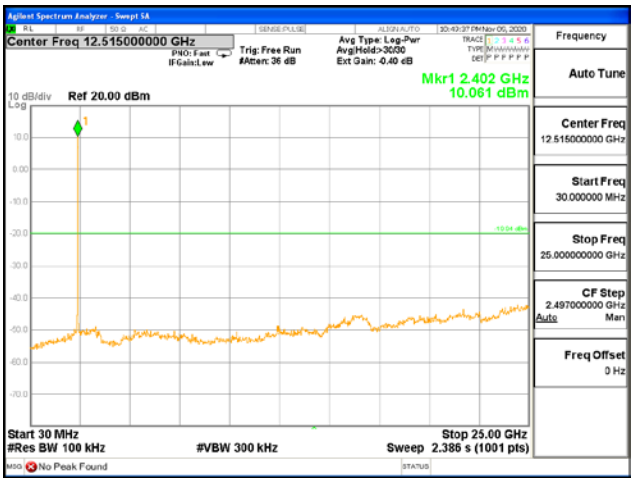
Test Data: Complies

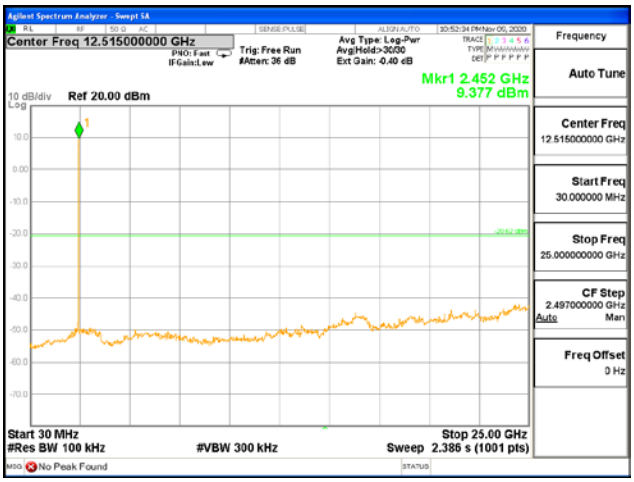
- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 30dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

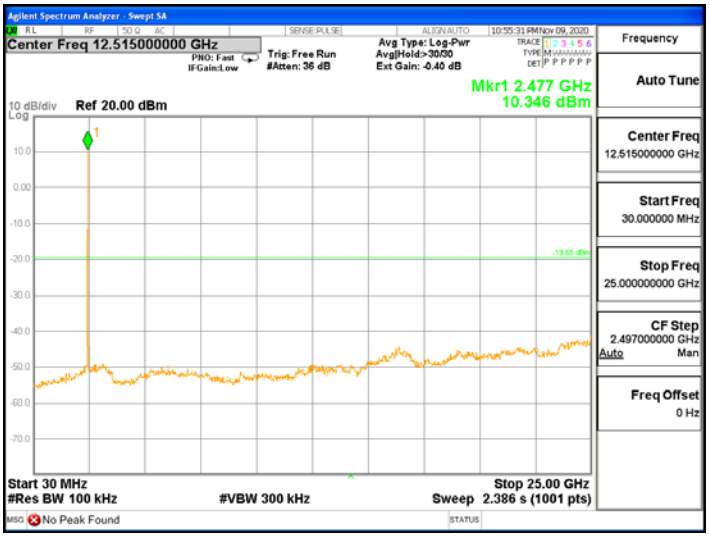
See next pages for actual measured spectrum plots.


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Mkr1 2.413 00 GHz
10.523 dBm
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)

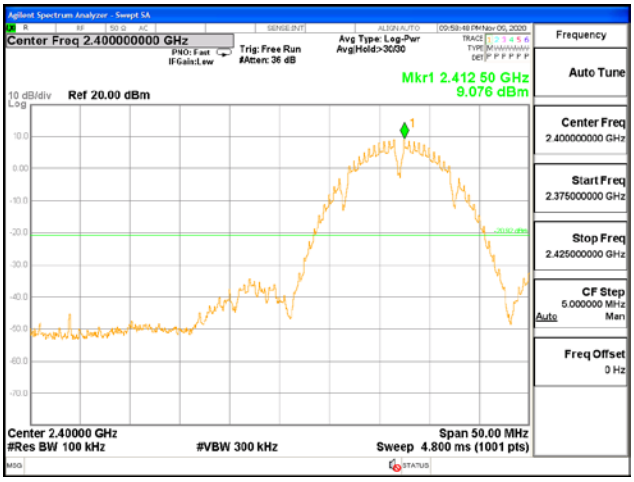

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Mkr1 2.471 45 GHz
10.238 dBm
Ref 20.00 dBm
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

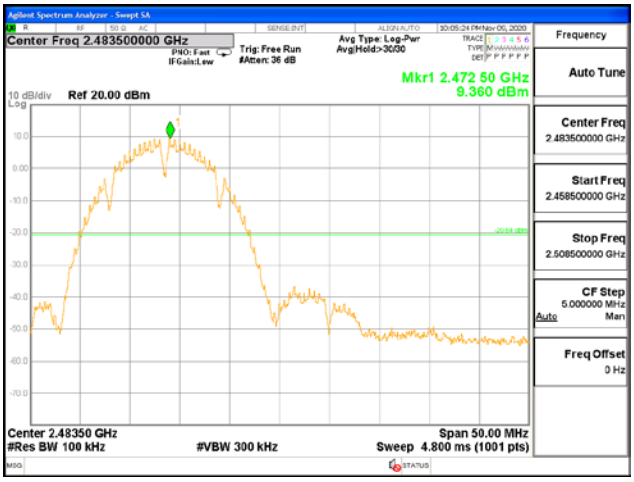

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Mkr1 2.402 GHz
10.061 dBm
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

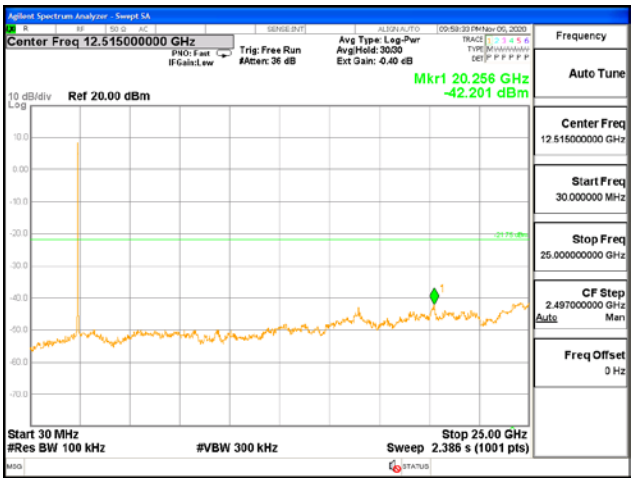

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Mkr1 2.452 GHz
9.377 dBm
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

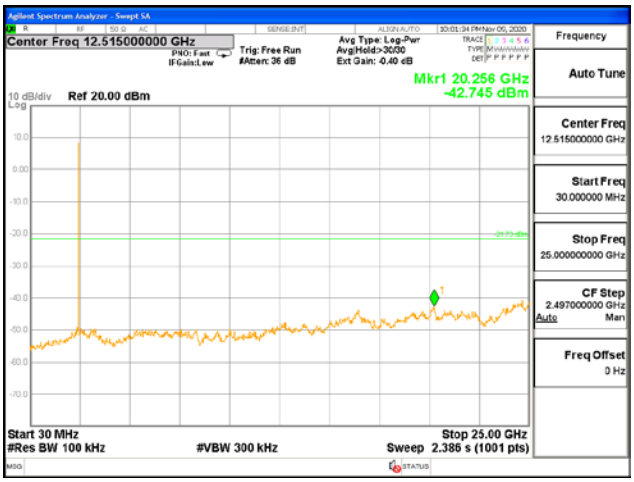

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Mkr1 2.477 GHz
10.346 dBm
Ref 20.00 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

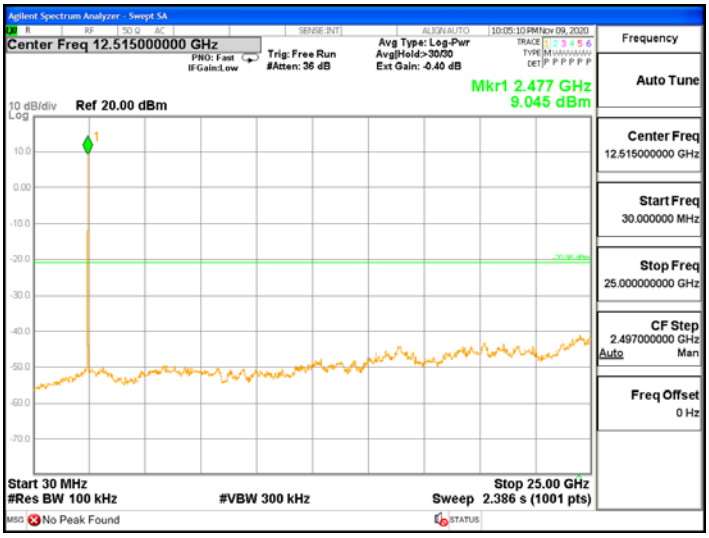
ANT1, 802.11b


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 36 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.412 50 GHz
9.076 dBm
10 dB/div
Ref 20.00 dBm
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
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

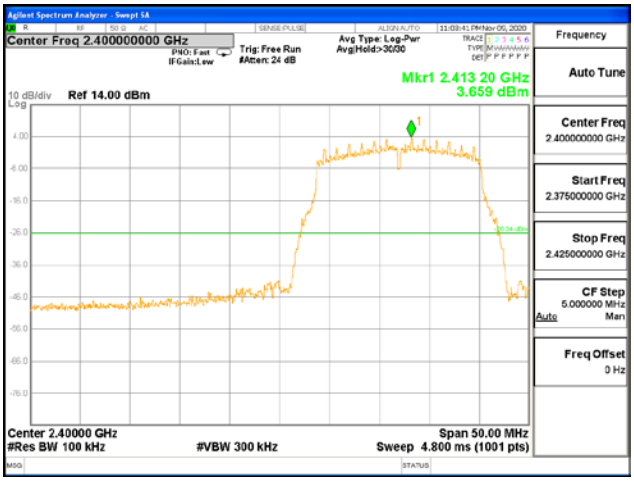

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Trig: Free Run
#Atten: 36 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.472 50 GHz
9.360 dBm
10 dB/div
Ref 20.00 dBm
Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.458500000 GHz
Stop Freq
2.508500000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

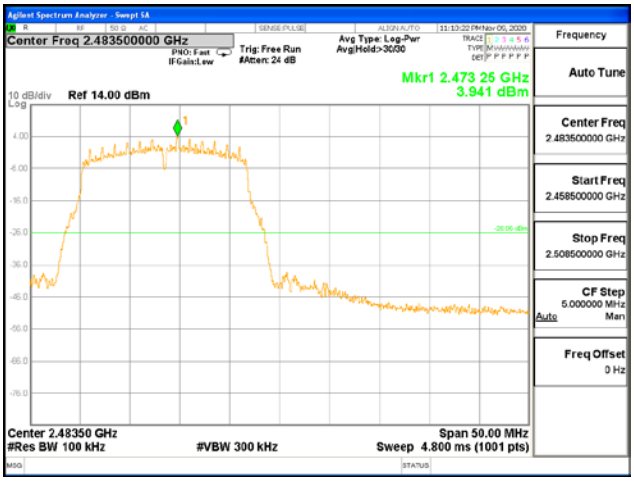

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 36 dB
Avg Type: Log-Pwr
Avg|Hold: 30/30
Ext Gain: 0.40 dB
Mkr1 20.256 GHz
-42.201 dBm
10 dB/div
Ref 20.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

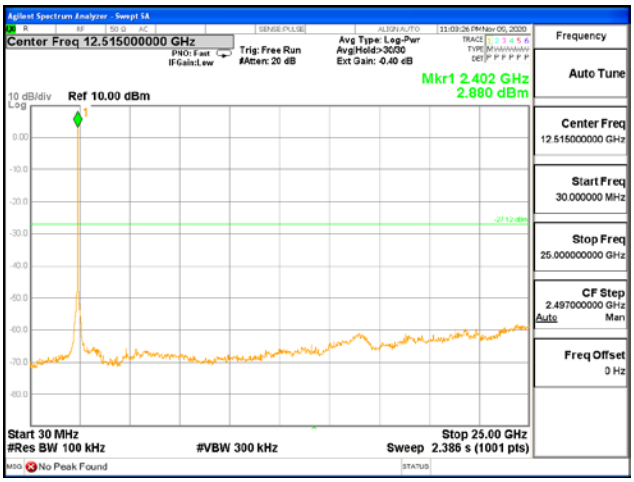

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 36 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: 0.40 dB
Mkr1 20.256 GHz
-42.745 dBm
10 dB/div
Ref 20.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

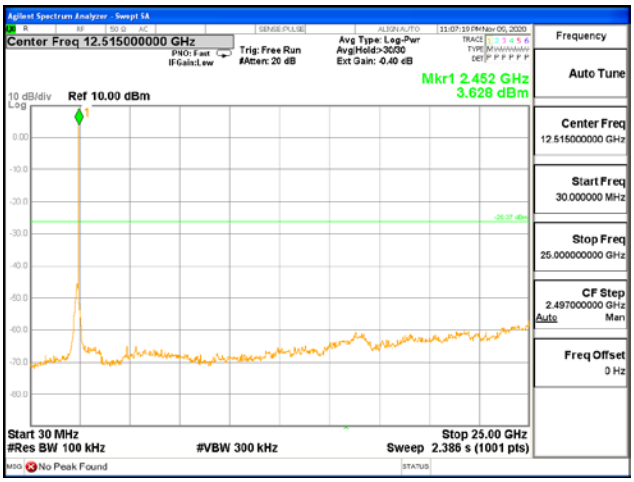

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 36 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.40 dB
Mkr1 2.477 GHz
9.045 dBm
10 dB/div
Ref 20.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

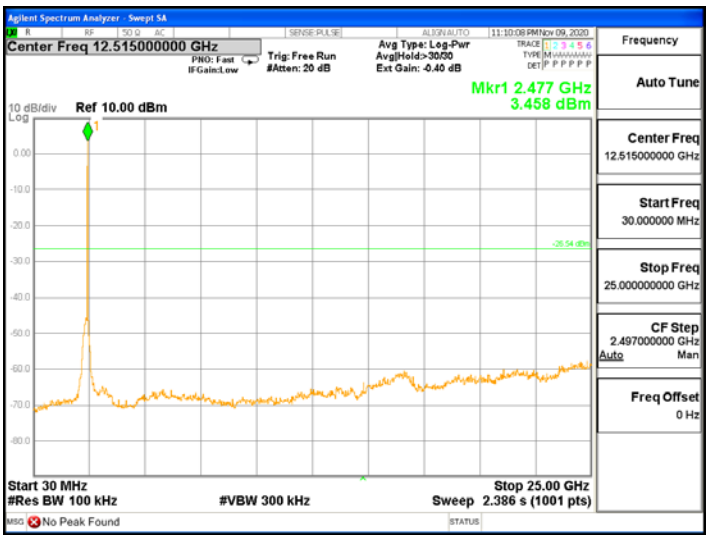
ANT2, 802.11b


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 24 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.413 20 GHz
3.659 dBm
10 dB/div
Ref 14.00 dBm
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
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

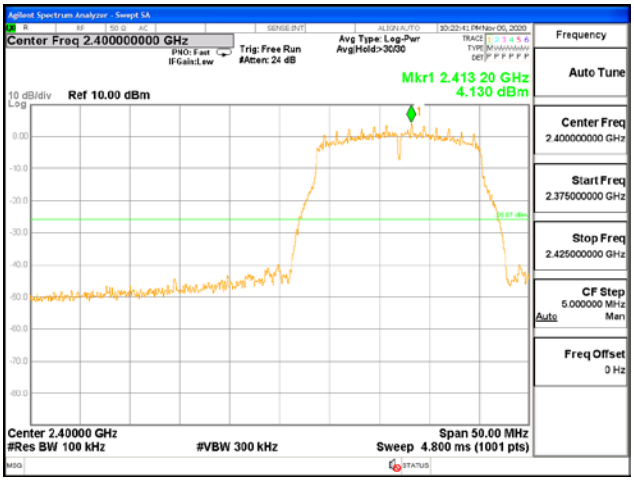

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Trig: Free Run
#Atten: 24 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.473 25 GHz
3.941 dBm
10 dB/div
Ref 14.00 dBm
Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.458500000 GHz
Stop Freq
2.508500000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

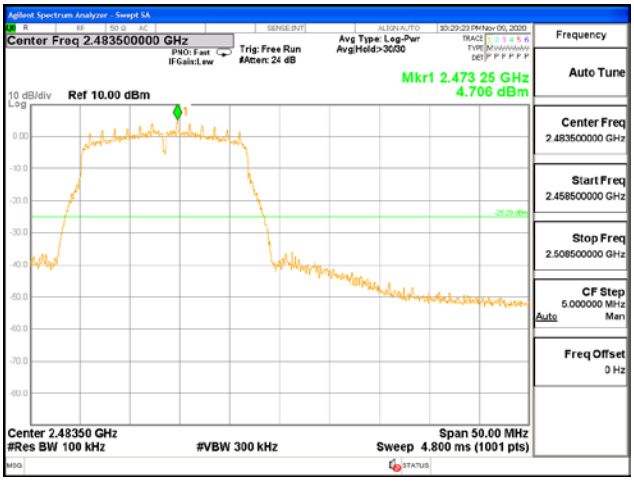

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.40 dB
Mkr1 2.402 GHz
2.880 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

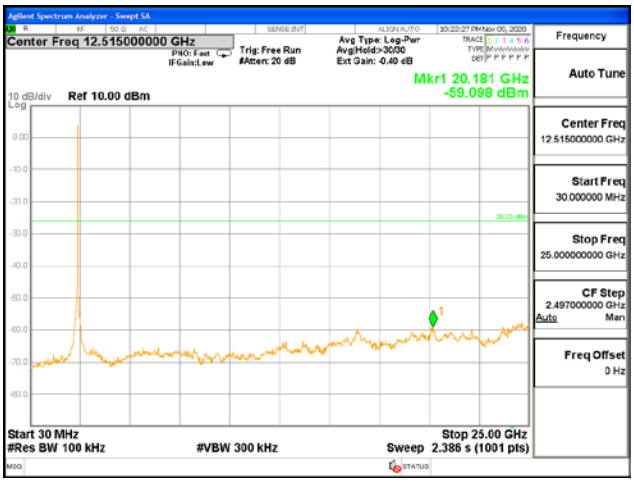

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.40 dB
Mkr1 2.452 GHz
3.628 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

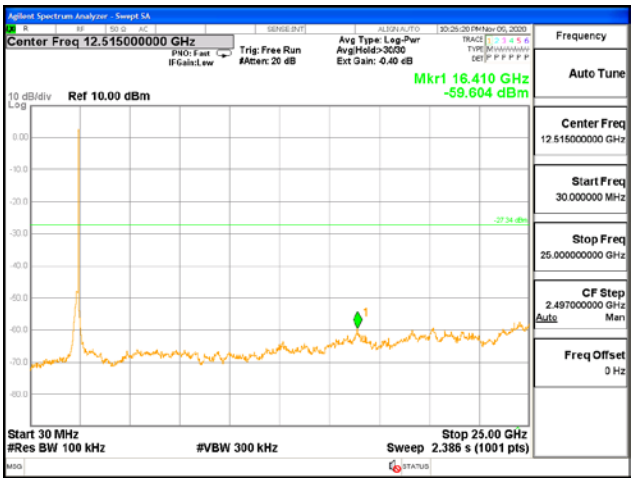

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.40 dB
Mkr1 2.477 GHz
3.458 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

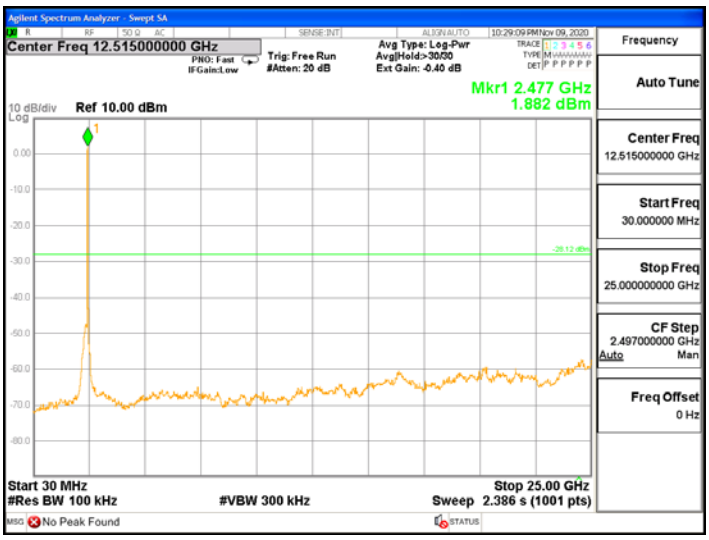
ANT1, 802.11g


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.400000000 GHz
Trig: Free Run
#Atten: 24 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.413 20 GHz
4.130 dBm
10 dB/div
Ref 10.00 dBm
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
Center 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

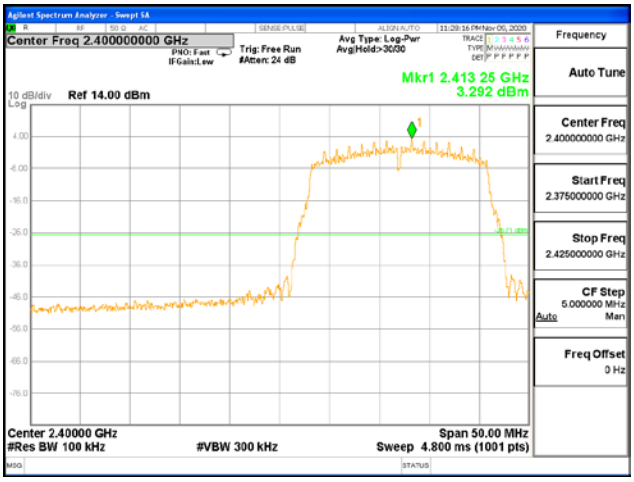

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.483500000 GHz
Trig: Free Run
#Atten: 24 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Mkr1 2.473 25 GHz
4.706 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.458500000 GHz
Stop Freq
2.508500000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 50.00 MHz
Sweep 4.800 ms (1001 pts)

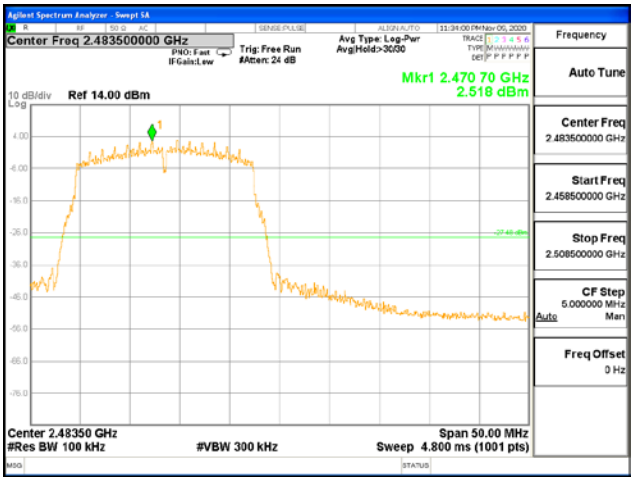

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: 0.40 dB
Mkr1 20.181 GHz
-59.098 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

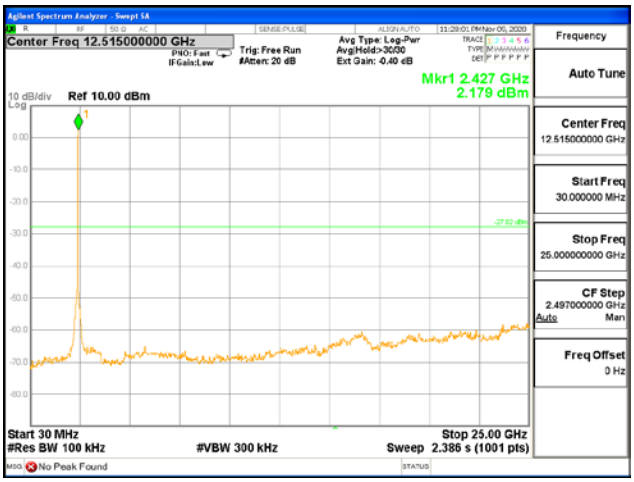

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: 0.40 dB
Mkr1 16.410 GHz
-59.604 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)

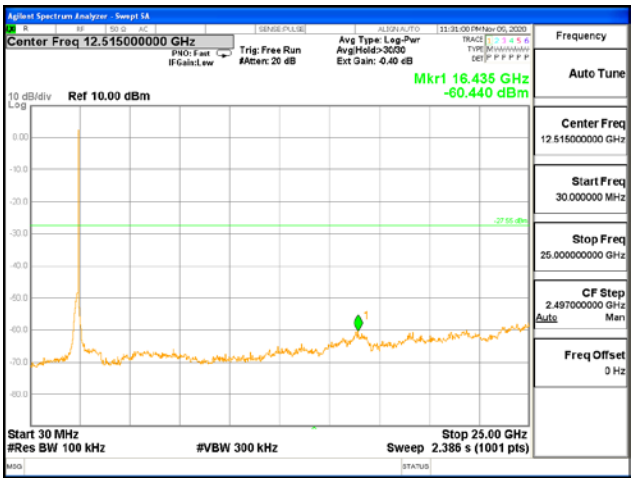

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>30/30
Ext Gain: -0.40 dB
Mkr1 2.477 GHz
1.882 dBm
10 dB/div
Ref 10.00 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.386 s (1001 pts)
No Peak Found

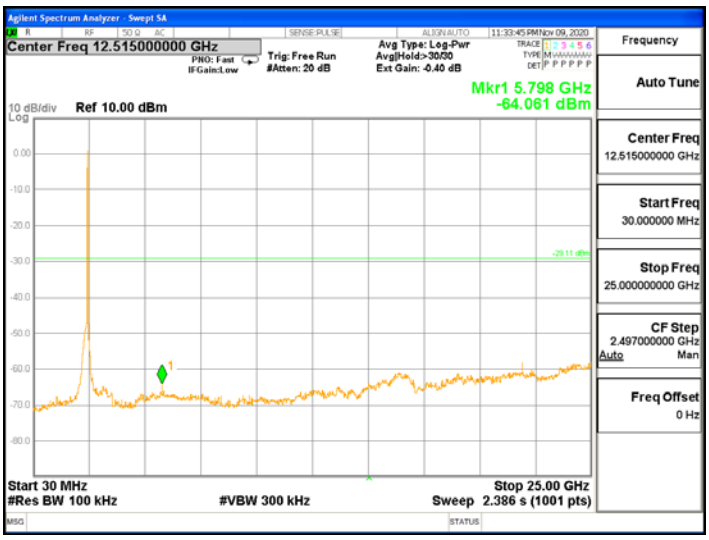
ANT2, 802.11g



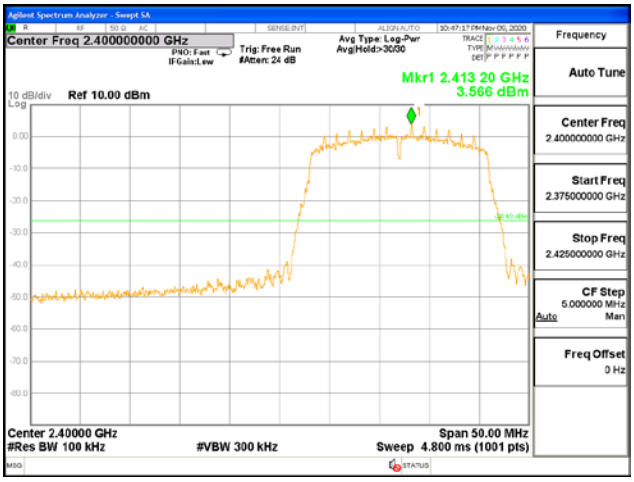


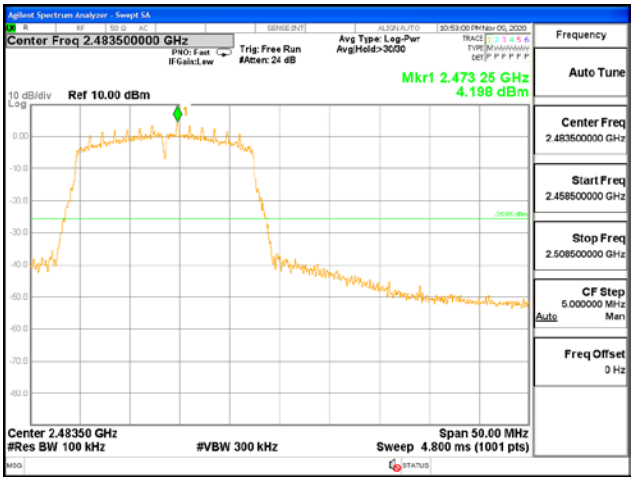


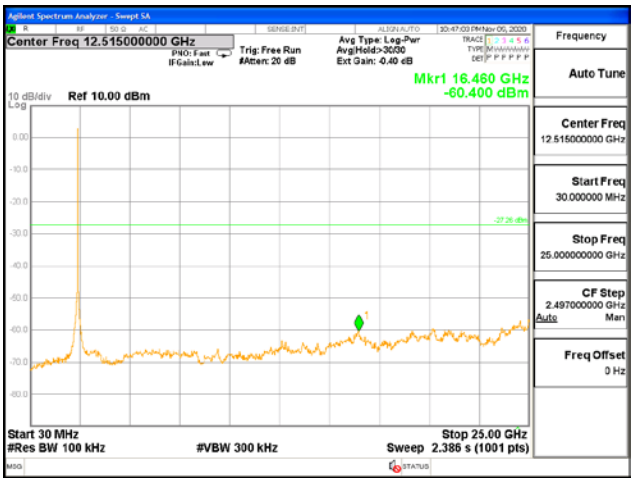


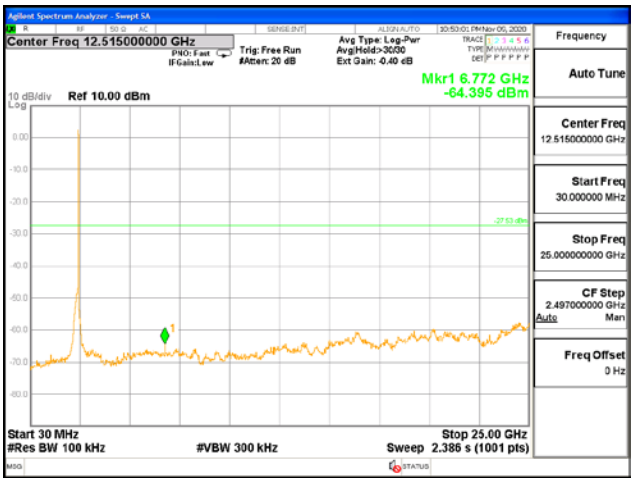


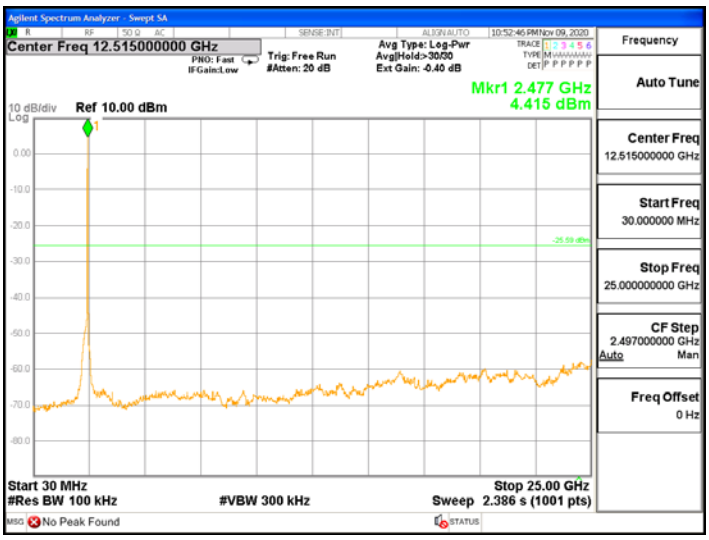
ANT1, 802.11n_HT20



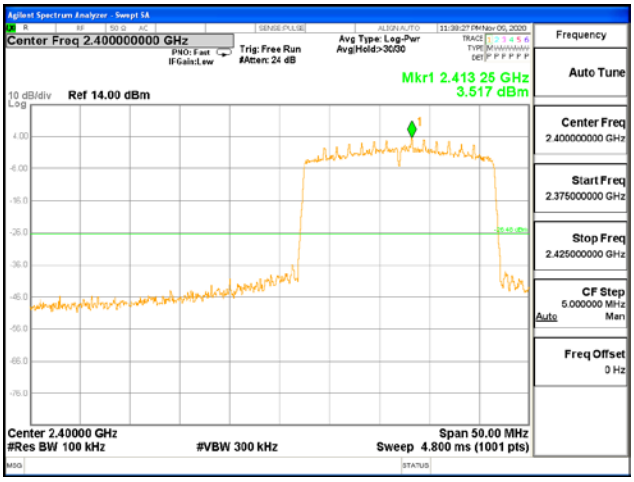


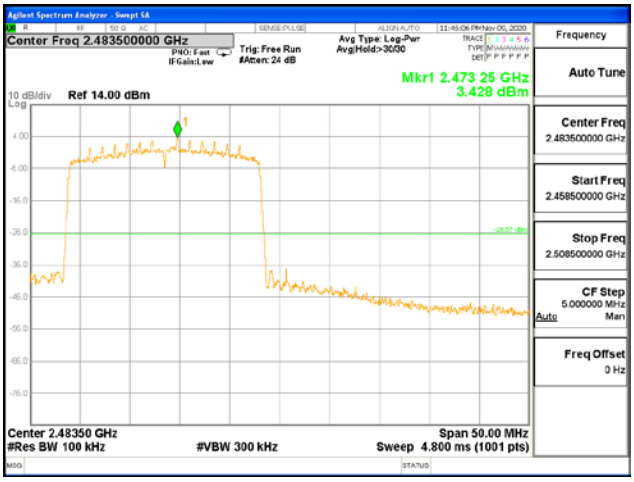


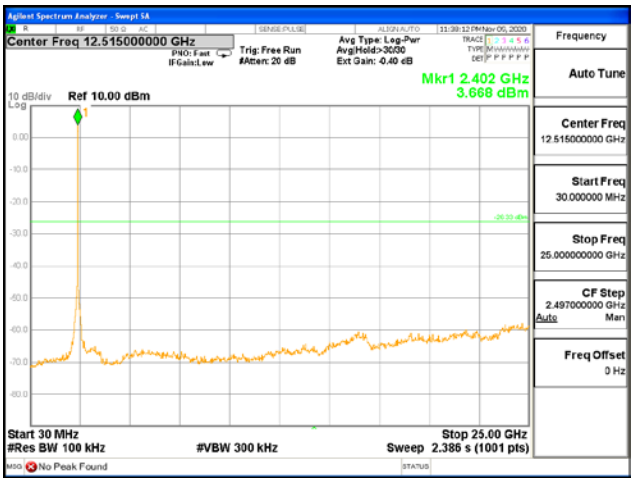


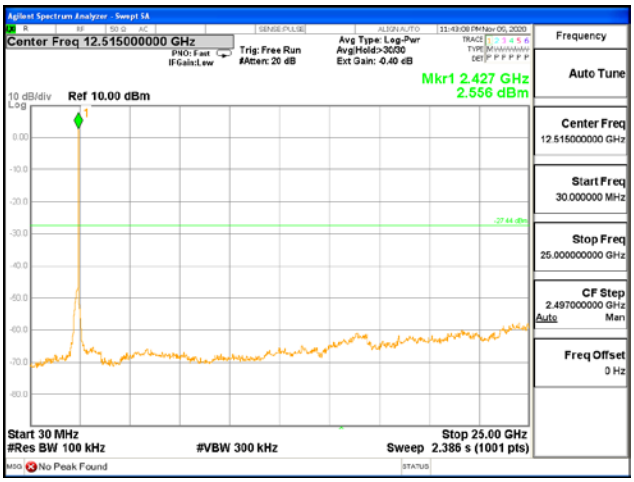


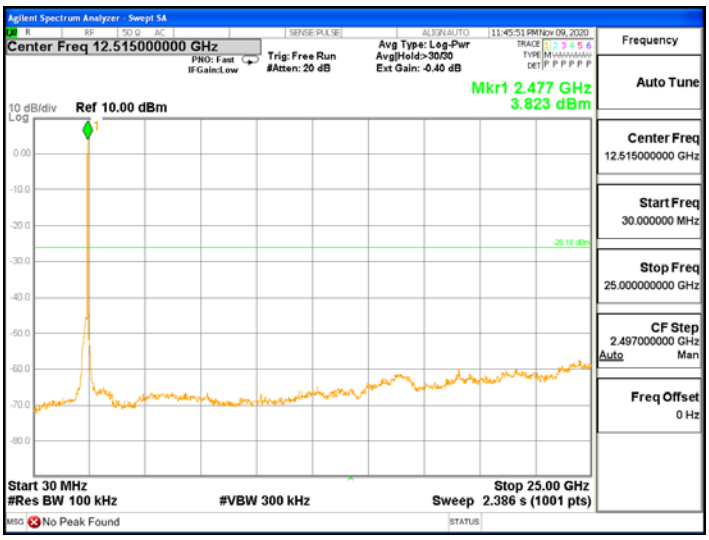
ANT2, 802.11n_HT20



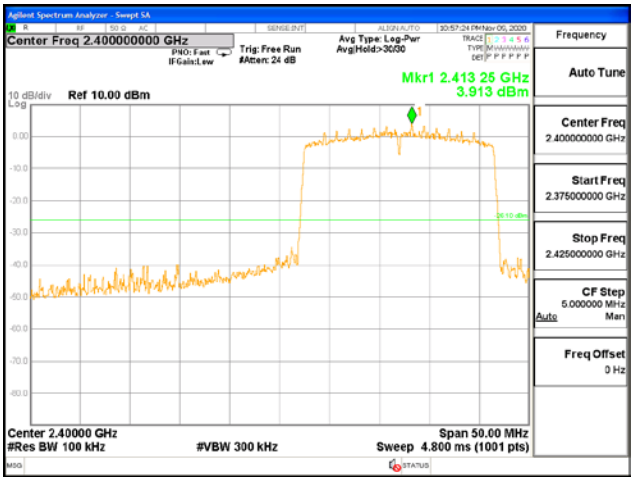


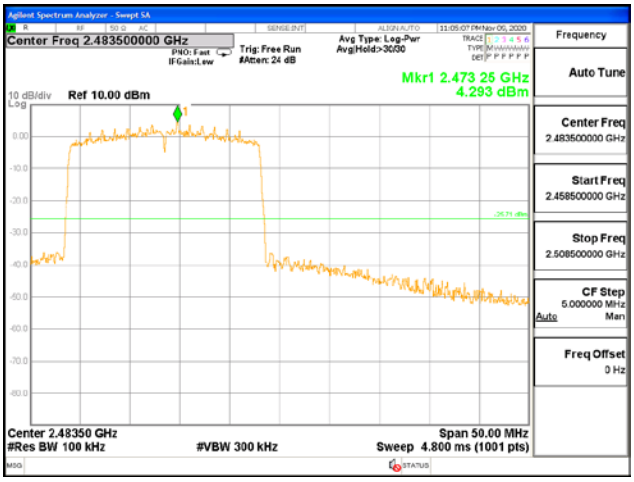


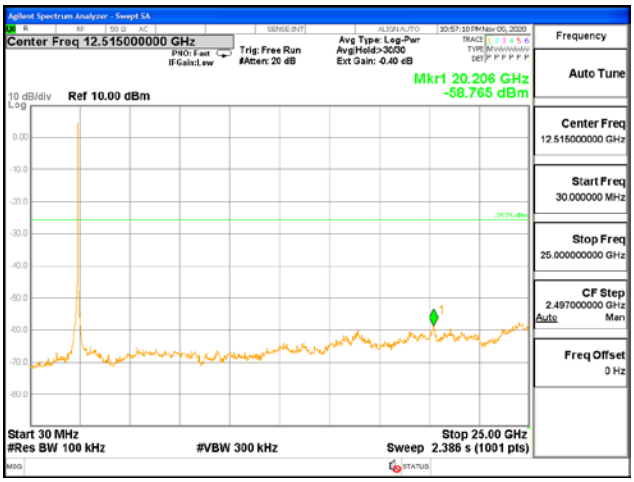


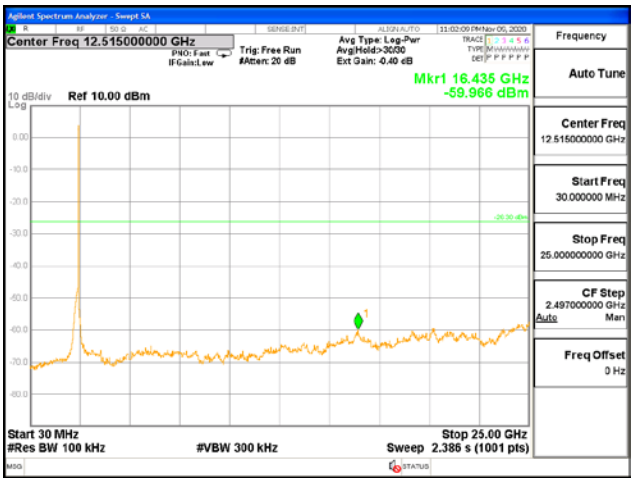


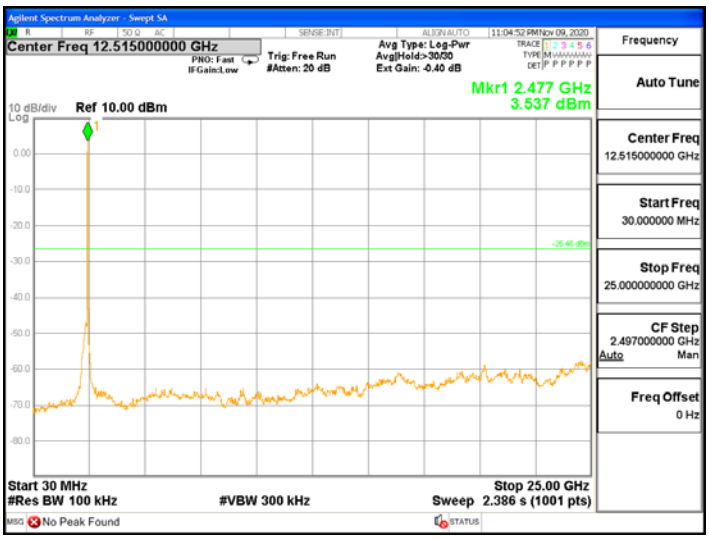
ANT1, 802.11ax_HE20_SU



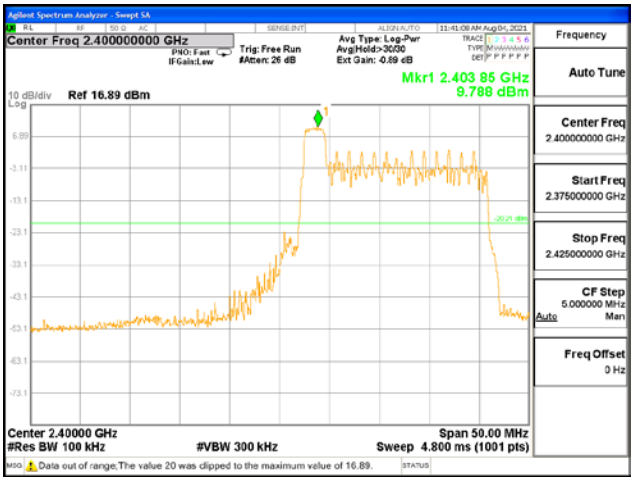


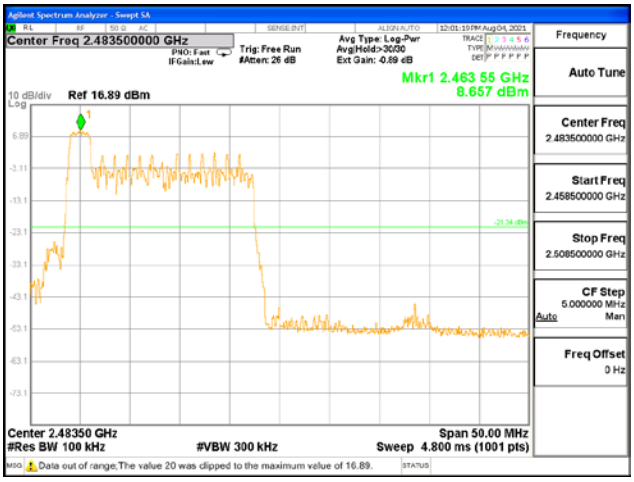


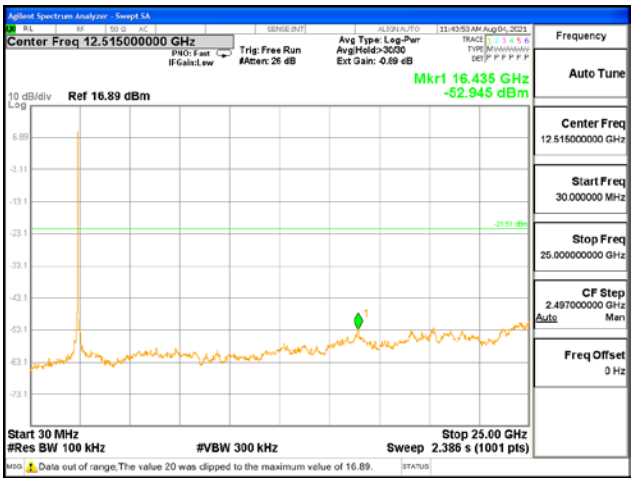


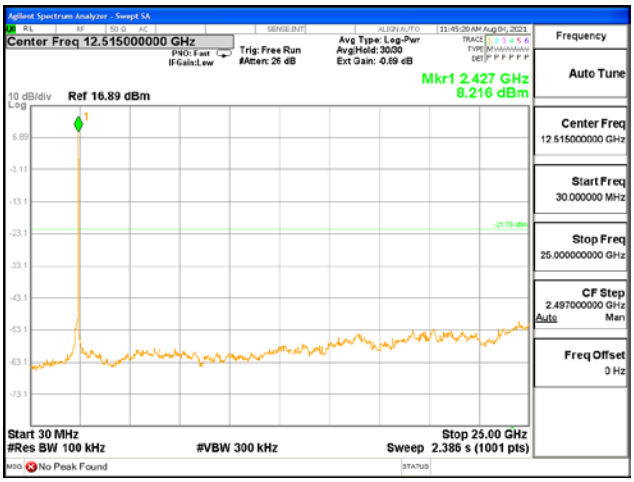


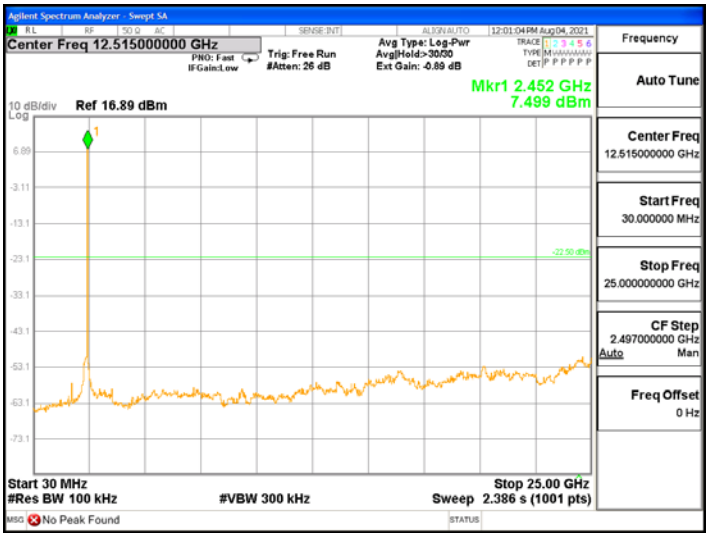
ANT2, 802.11ax_HE20_SU



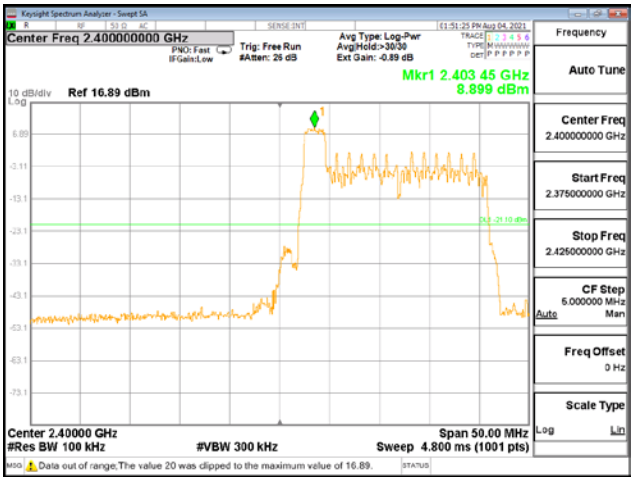


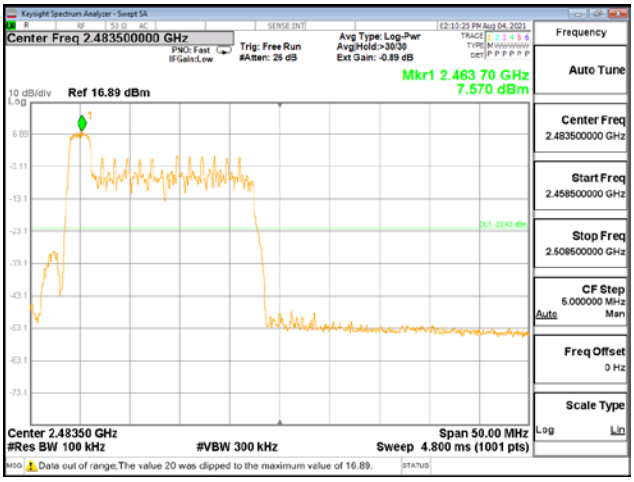


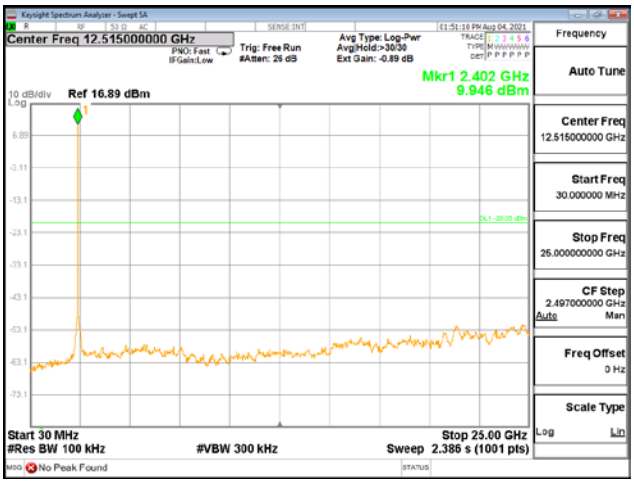


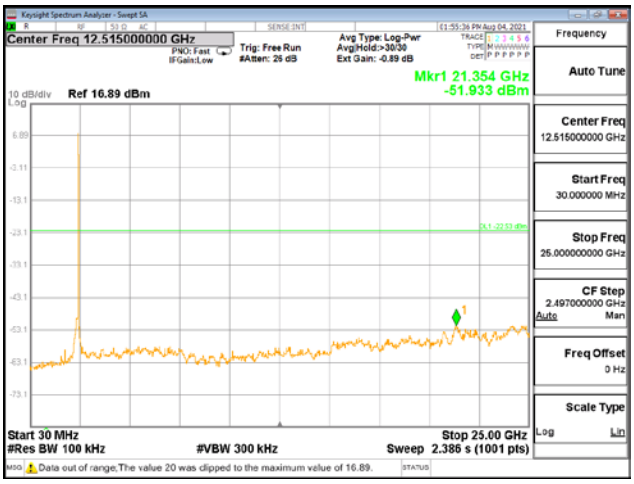


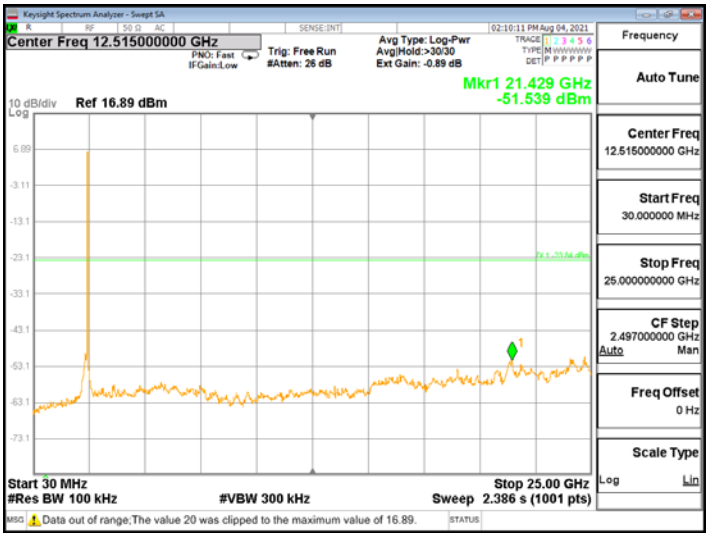
ANT1, 802.11ax_HE20_26T_Low



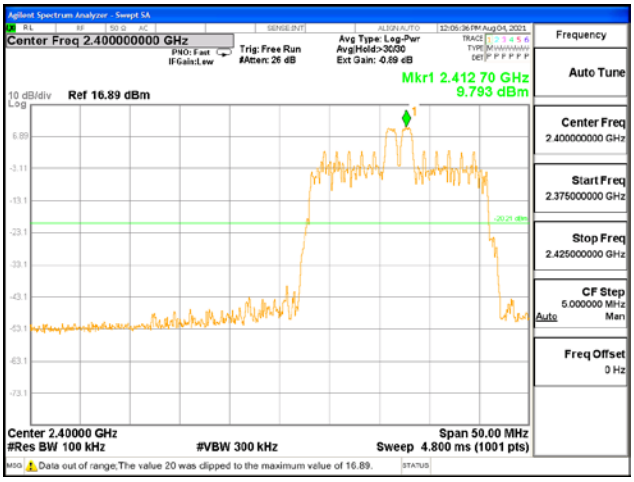


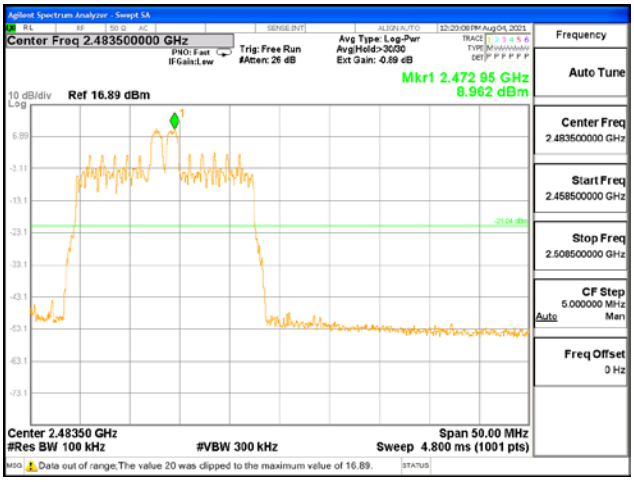


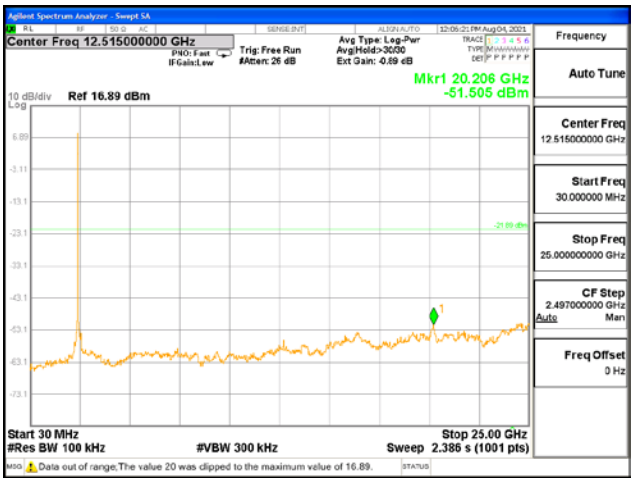


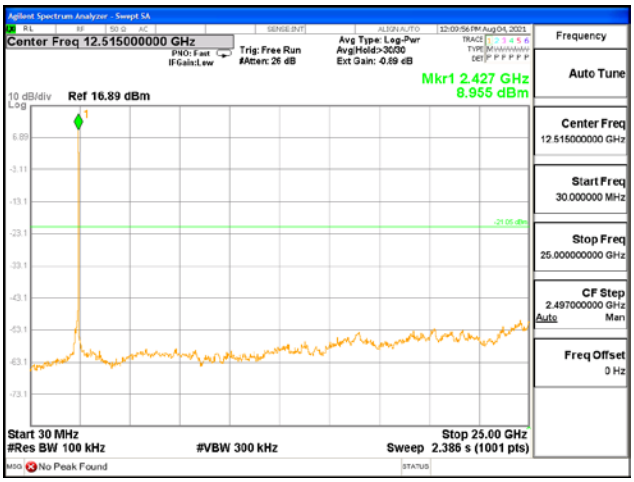


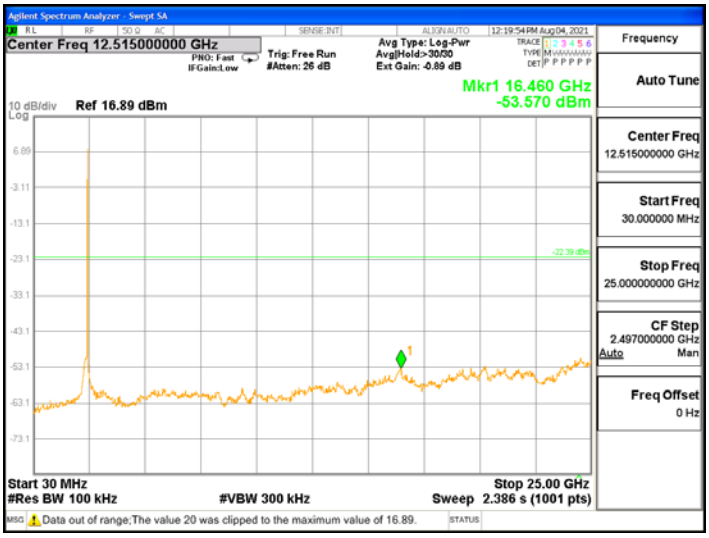
ANT2, 802.11ax_HE20_26T_Low



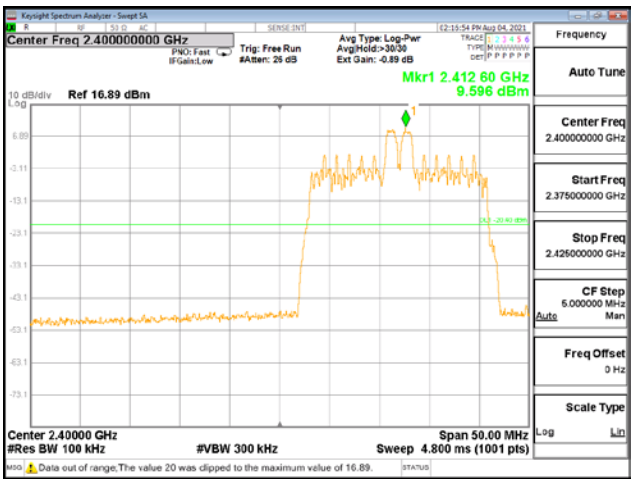


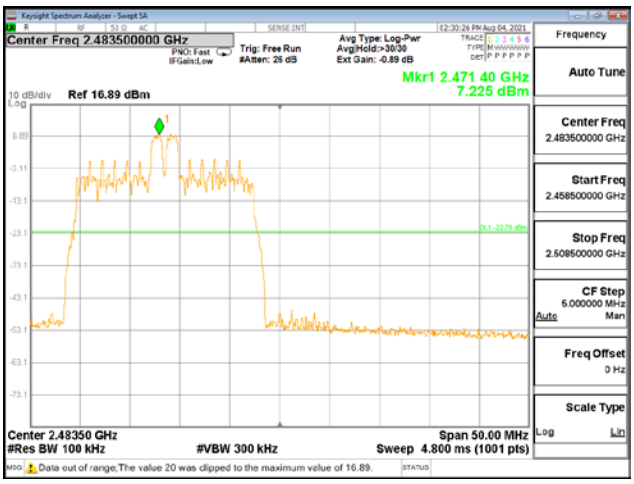


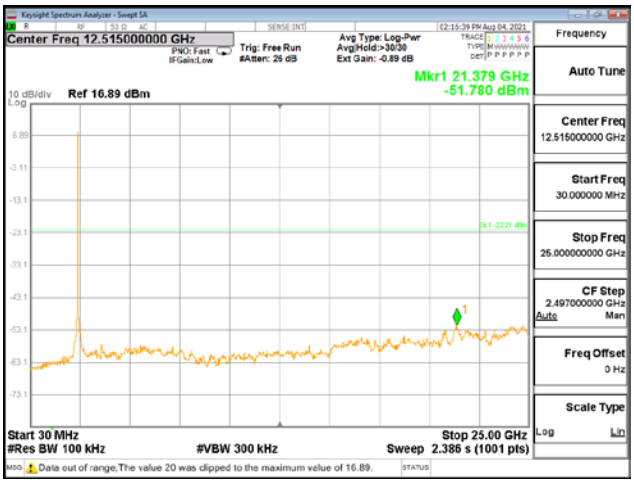


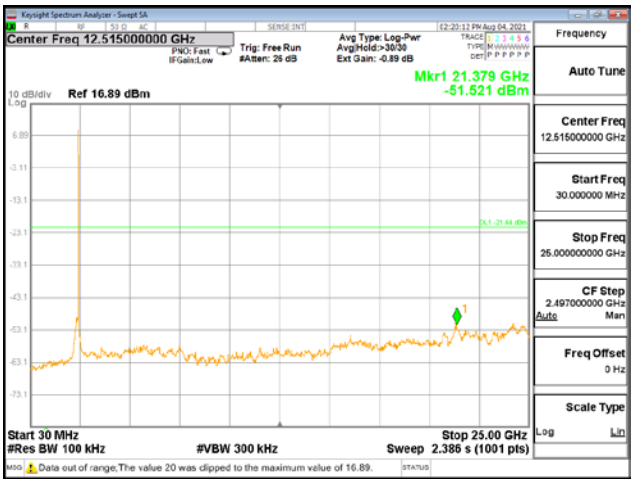


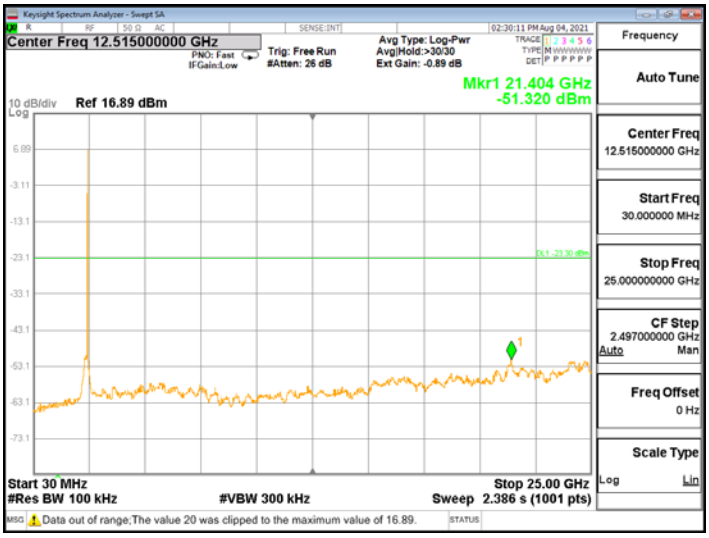
ANT1, 802.11ax_HE20_26T_Mid











ANT2, 802.11ax_HE20_26T_Mid