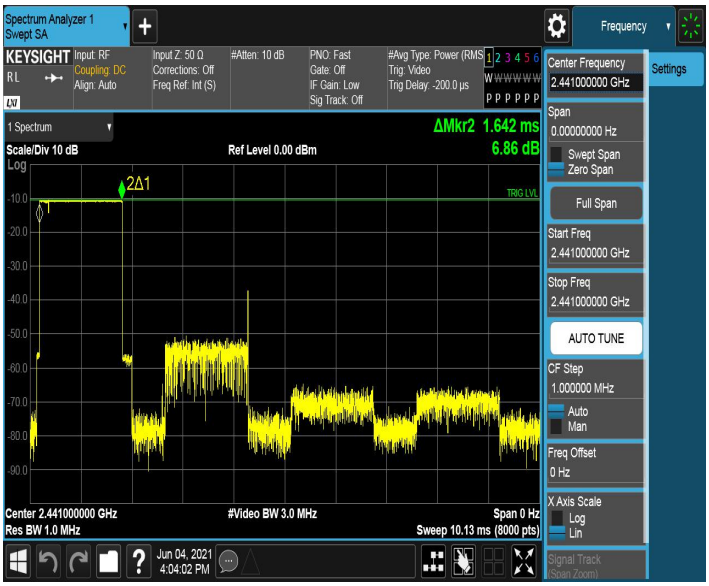
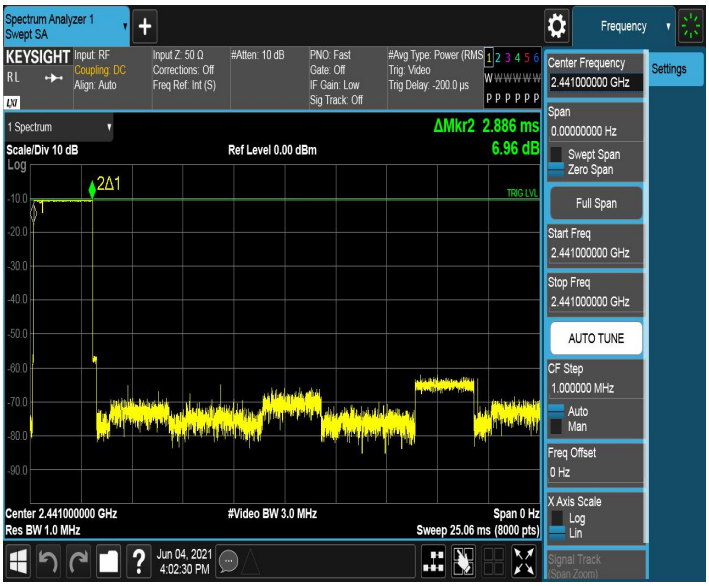
Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Video
Trig Delay: 0.000 s
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
1 Spectrum
Scale/Div 10 dB
Ref Level 0.00 dBm
Log
TRIG LVL
Center 2.441000000 GHz
Res BW 510 kHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
Jun 04, 2021
4:03:08 PM

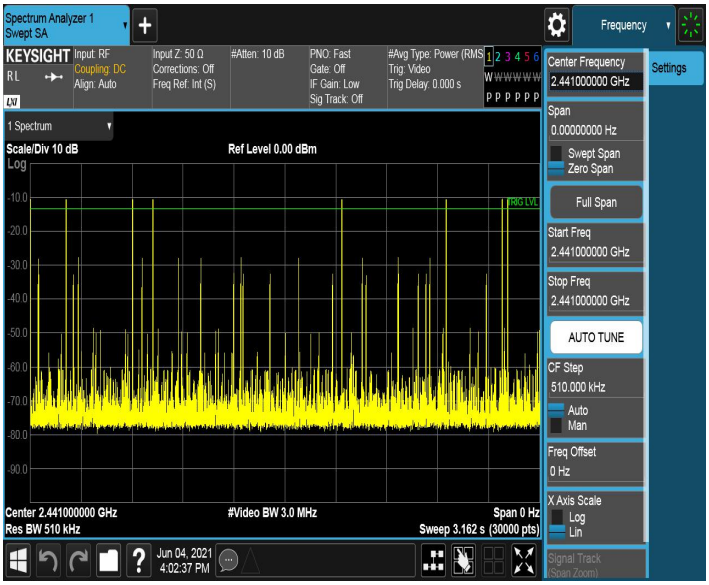
DH3_Ant1_Hop


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Video
Trig Delay: -200.0 µs
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
1 Spectrum
ΔMkr2 1.642 ms
6.86 dB
Scale/Div 10 dB
Ref Level 0.00 dBm
Log
2Δ1
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
Jun 04, 2021
4:04:02 PM

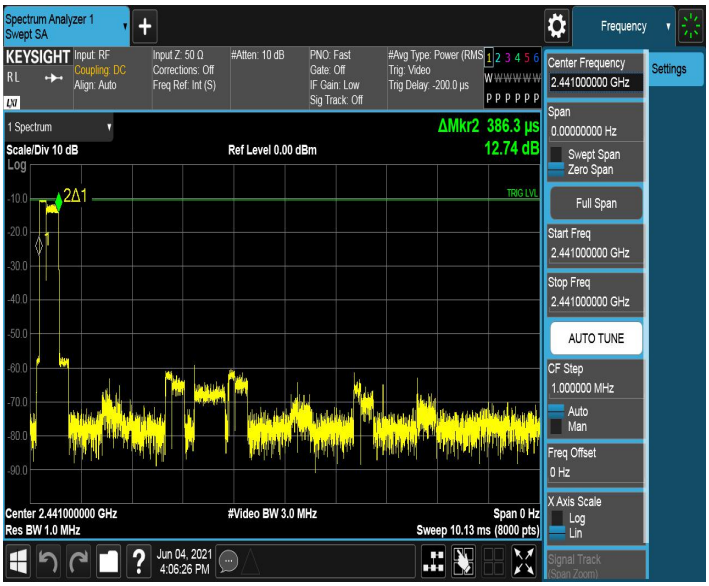
Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Video
Trig Delay: 0.000 s
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
1 Spectrum
Scale/Div 10 dB
Ref Level 0.00 dBm
Log
TRIG LVL
Center 2.441000000 GHz
Res BW 510 kHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
Jun 04, 2021
4:04:09 PM

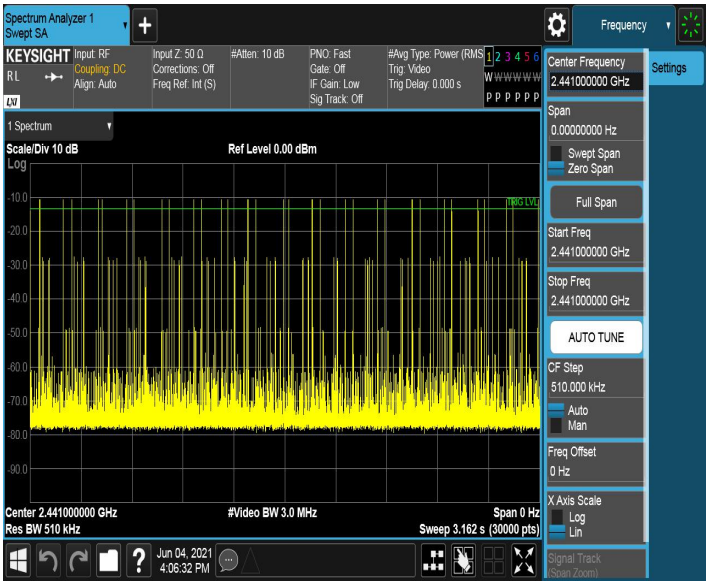
DH5_Ant1_Hop


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Video
Trig Delay: -200.0 µs
Frequency
Center Frequency
2.441000000 GHz
Settings
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)
1 Spectrum
ΔMkr2 2.886 ms
6.96 dB
Scale/Div 10 dB
Ref Level 0.00 dBm
Log
2Δ1
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 25.06 ms (8000 pts)
Jun 04, 2021
4:02:30 PM

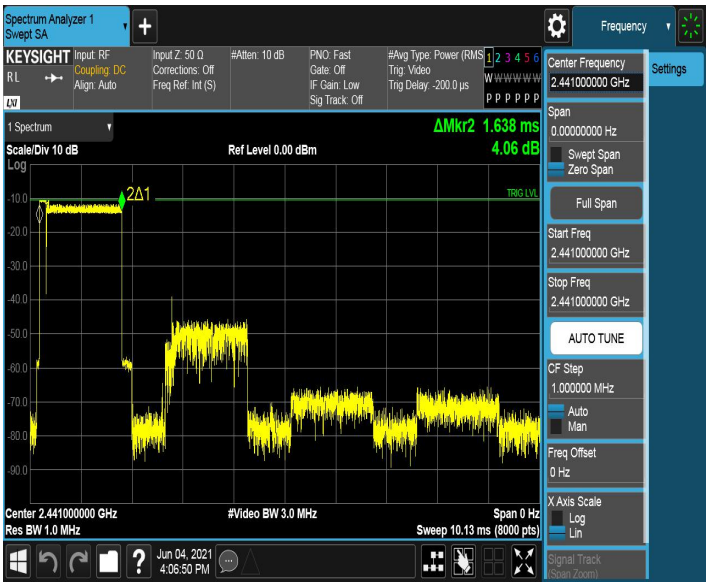


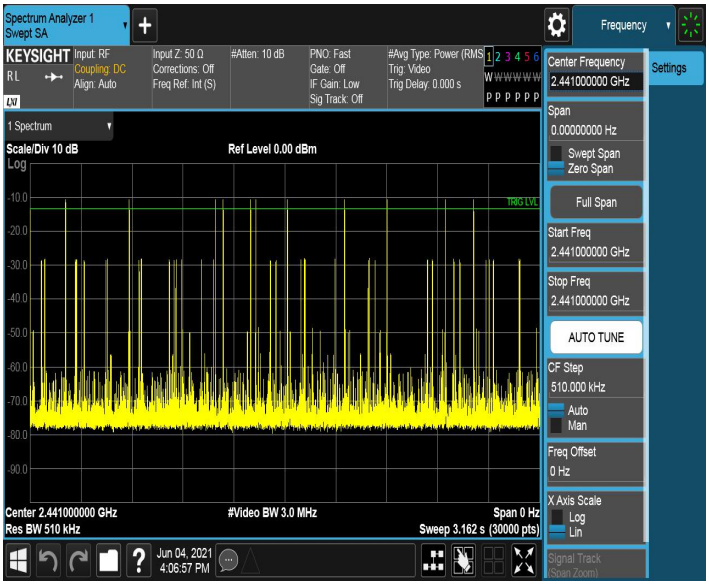
2DH1_Ant1_Hop



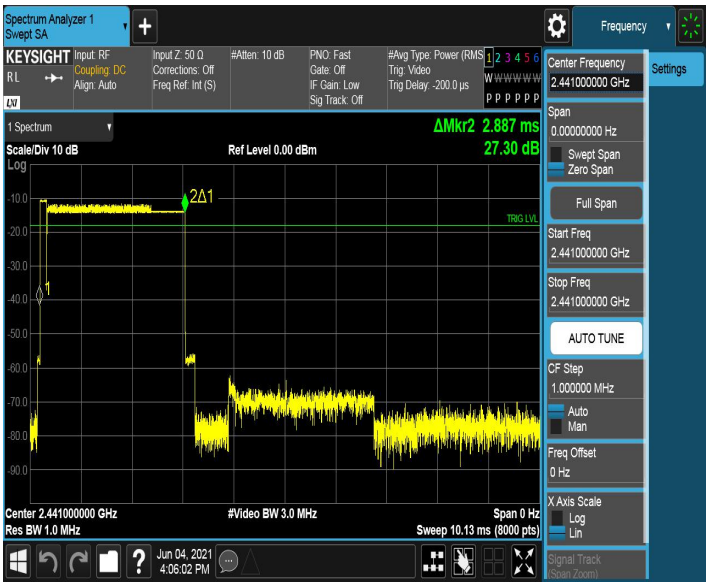


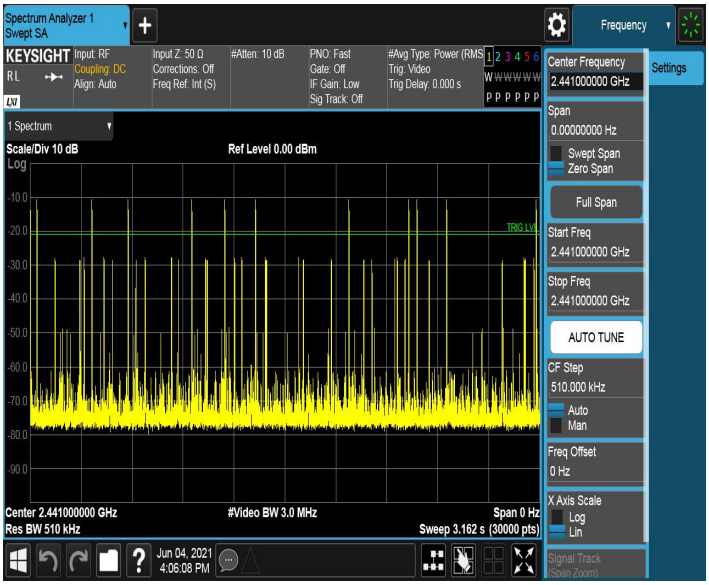
2DH3_Ant1_Hop



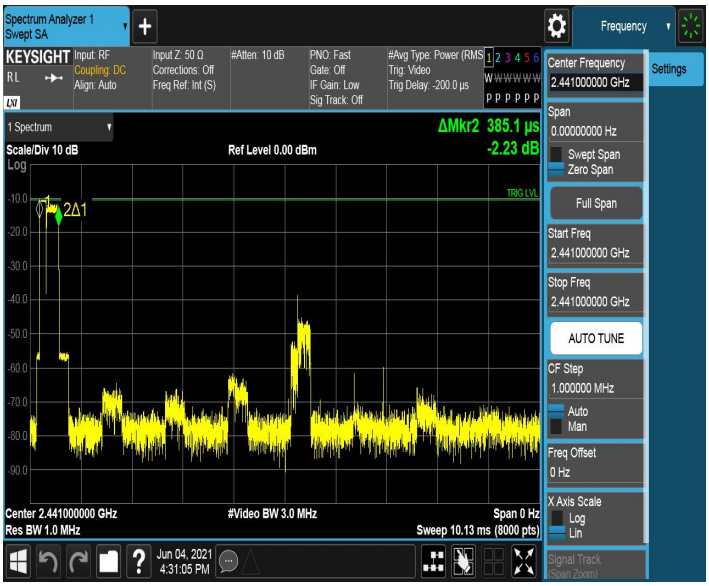


2DH5_Ant1_Hop

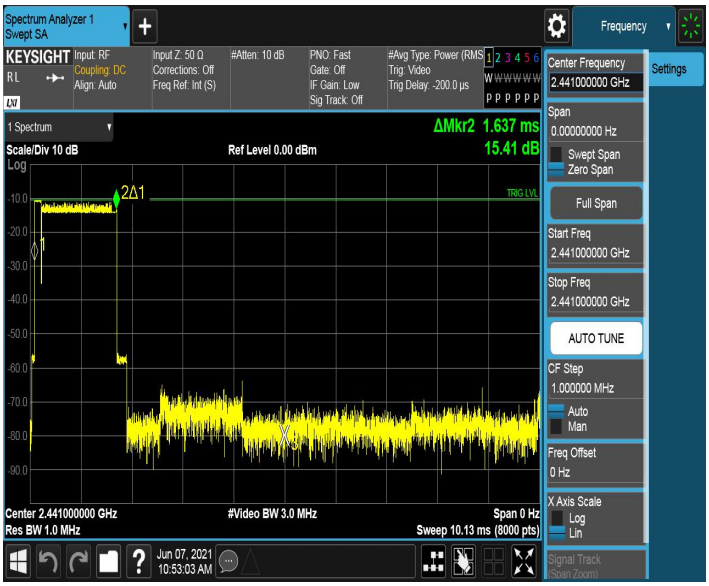




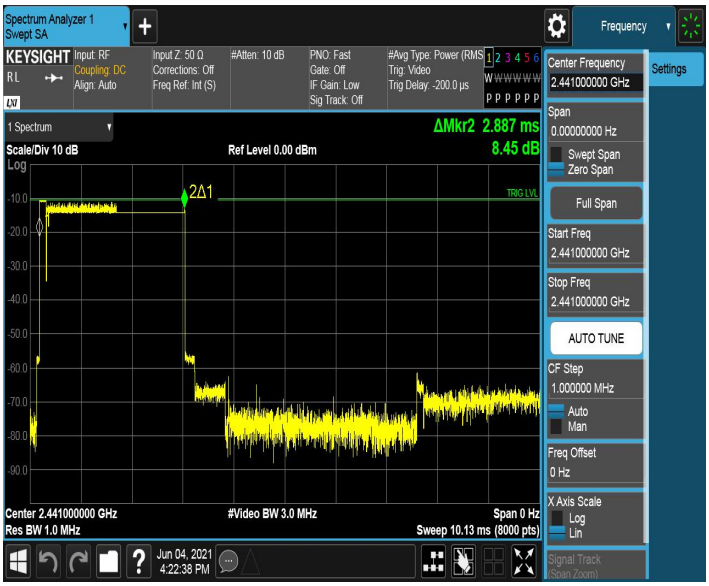
3DH1_Ant1_Hop

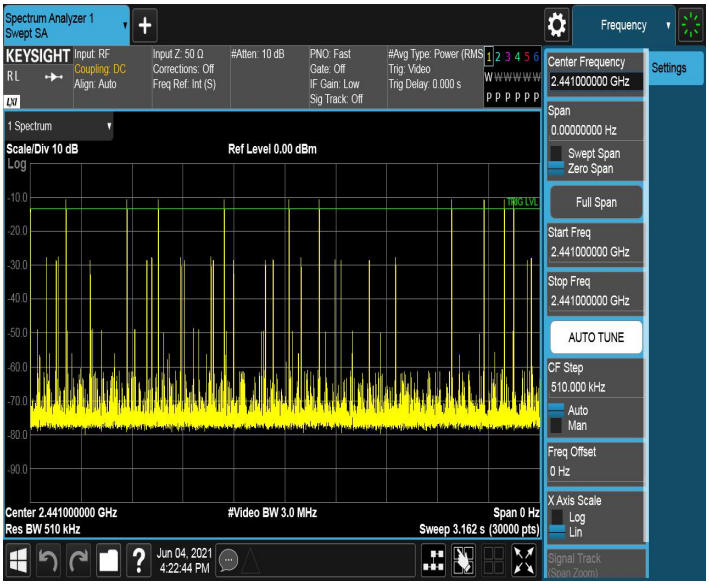


3DH3_Ant1_Hop



3DH5_Ant1_Hop




Spectrum Analyzer 1
Swept SA
KEYSIGHT
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)
#Atten: 10 dB
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
#Avg Type: Power (RMS)
Trig: Video
Trig Delay: 0.000 s
1 Spectrum
Scale/Div 10 dB
Ref Level 0.00 dBm
Log
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
THRS LVL
Center 2.441000000 GHz
Res BW 510 kHz
#Video BW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
Jun 04, 2021
4:22:44 PM
Frequency
Settings
Center Frequency
2.441000000 GHz
Span
0.00000000 Hz
Swept Span
Zero Span
Full Span
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
AUTO TUNE
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
X Axis Scale
Log
Lin
Signal Track
(Span Zoom)

8.7. Band-edge Compliance Measurement

8.7.1. Test Limit

The maximum permissible emission level is 20dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

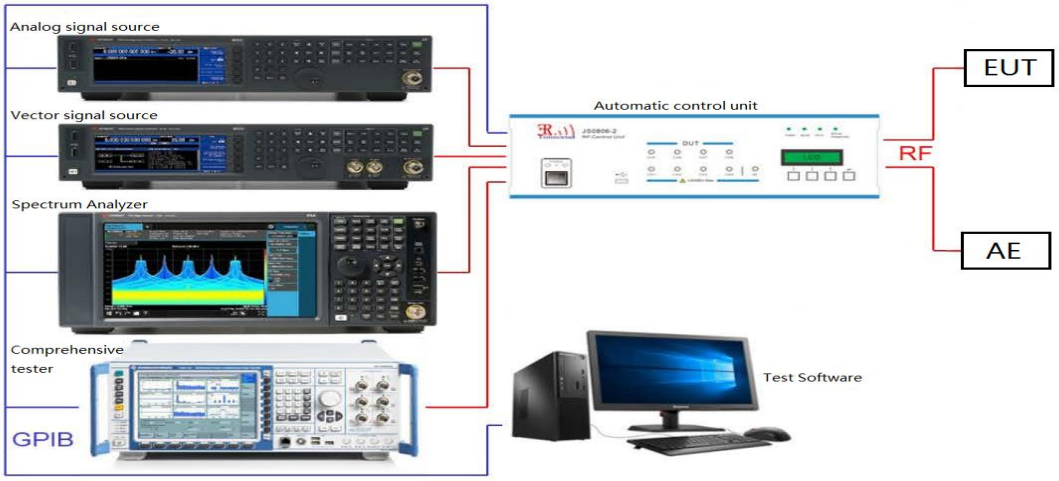
8.7.2. Test Procedure Used

ANSI C63.10-2013 - Section 6.10.4

8.7.3. Test Setting

1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, than use the marker-to-peak function to move the marker to the peak of the in-band emission.

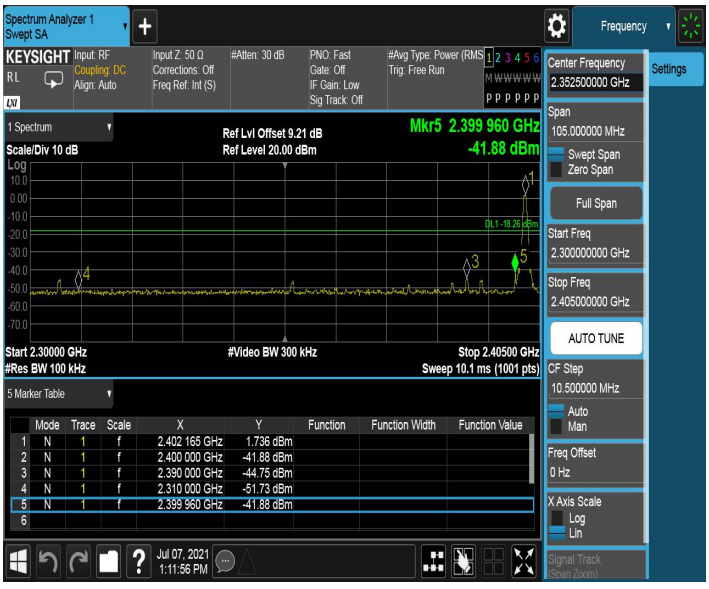
8.7.4. Test Setup



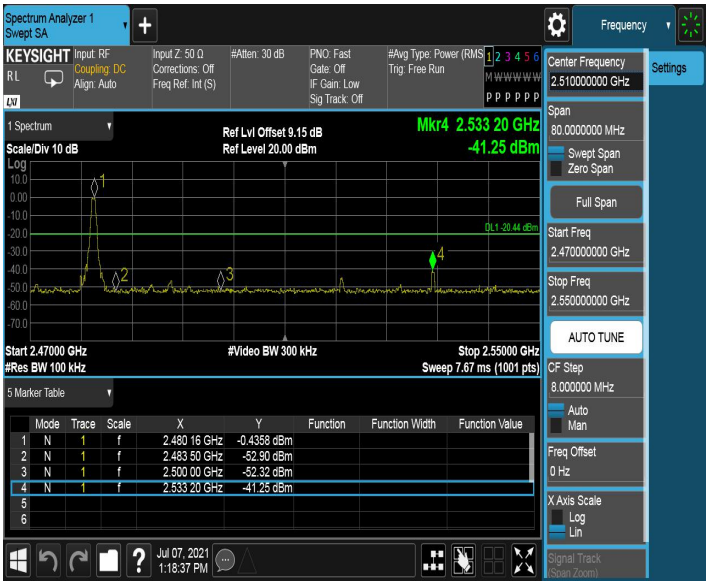
8.7.5. Test Result

Test Mode	Antenna	Ch Name	Channel	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.74	-41.88	≤-18.26	PASS
		High	2480	-0.44	-41.25	≤-20.44	PASS
		Low	Hop_2402	0.91	-46.12	≤-19.09	PASS
		High	Hop_2480	-0.39	-44.13	≤-20.39	PASS
2DH5	Ant1	Low	2402	1.65	-41.28	≤-18.35	PASS
		High	2480	-0.99	-48.56	≤-20.99	PASS
		Low	Hop_2402	-2.16	-45.72	≤-22.16	PASS
		High	Hop_2480	-0.86	-45.17	≤-20.86	PASS
3DH5	Ant1	Low	2402	1.63	-41.75	≤-18.38	PASS
		High	2480	-0.57	-41.98	≤-20.57	PASS
		Low	Hop_2402	-2.47	-46.5	≤-22.47	PASS
		High	Hop_2480	-1.10	-47.05	≤-21.1	PASS

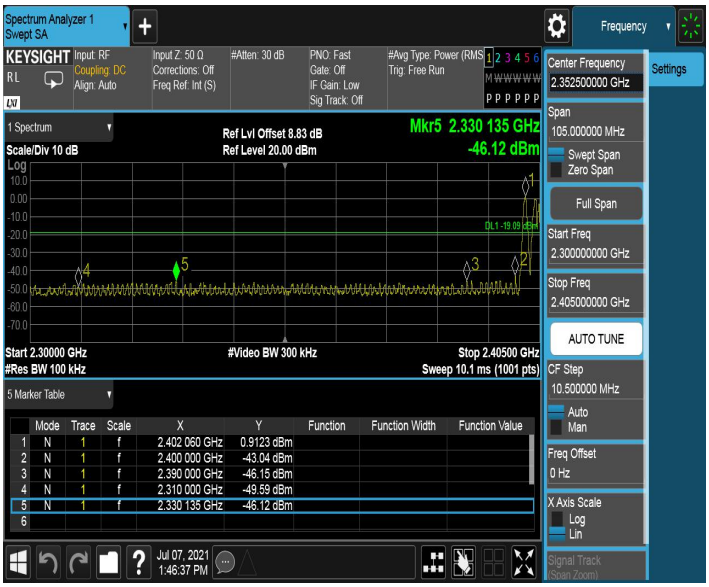
DH5_Ant1_Low_2402



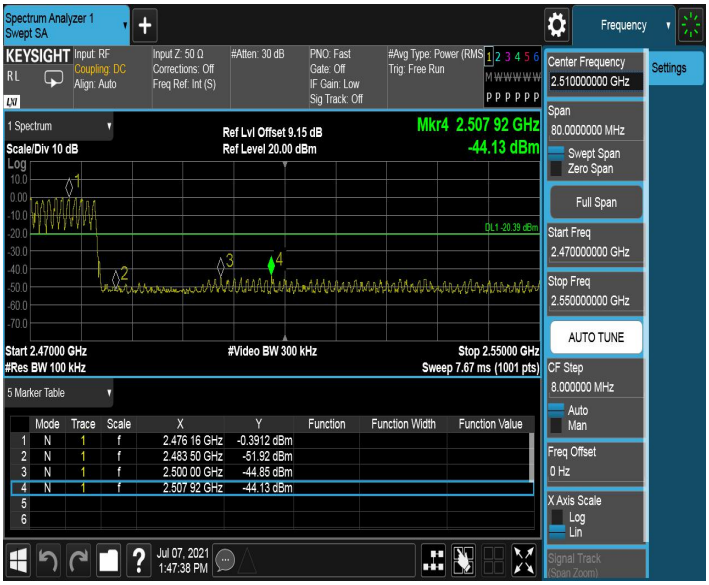
DH5_Ant1_High_2480



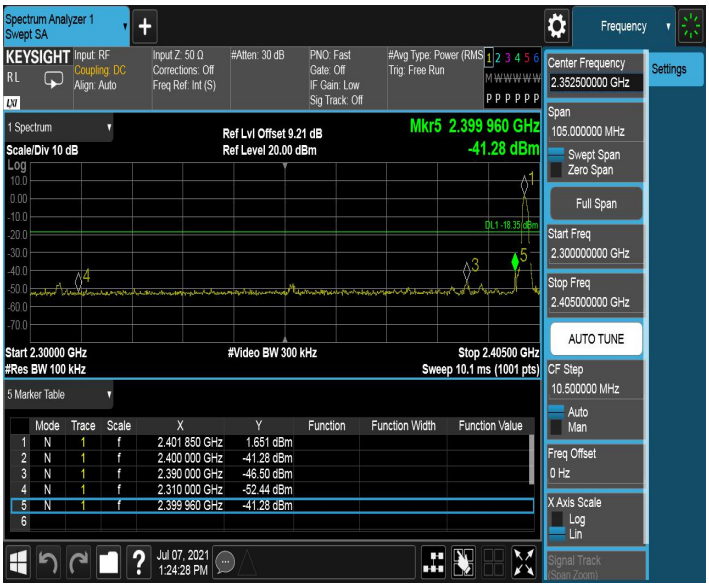
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

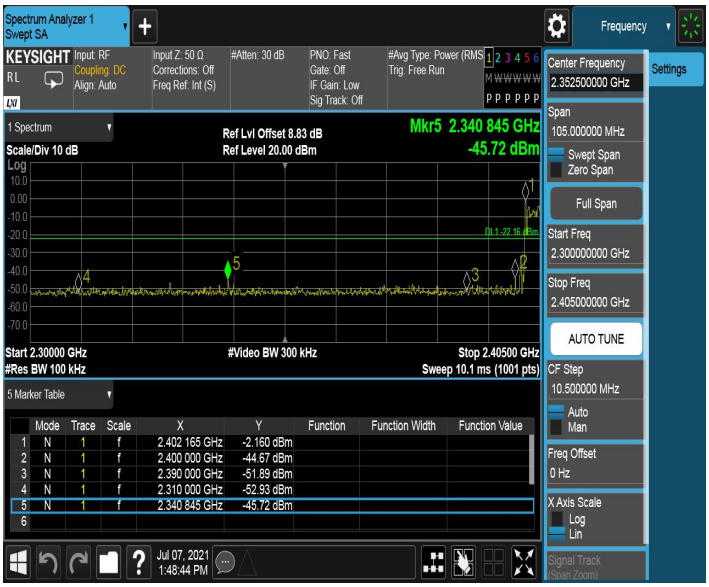


2DH5_Ant1_Low_2402

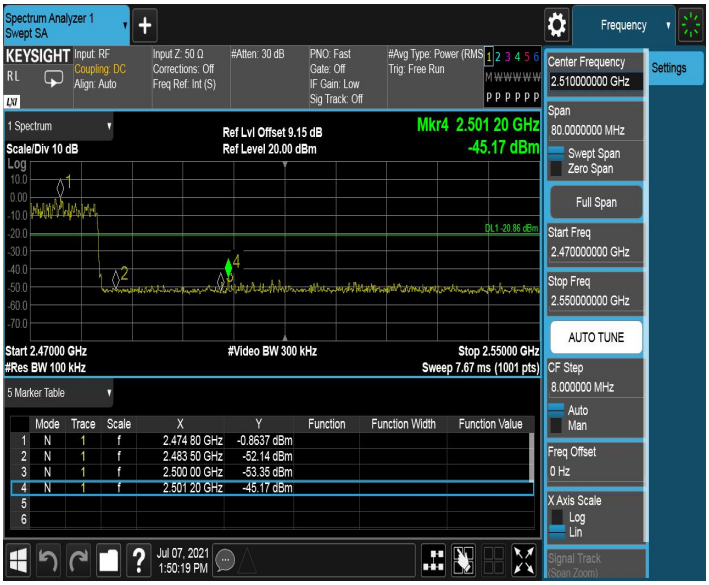
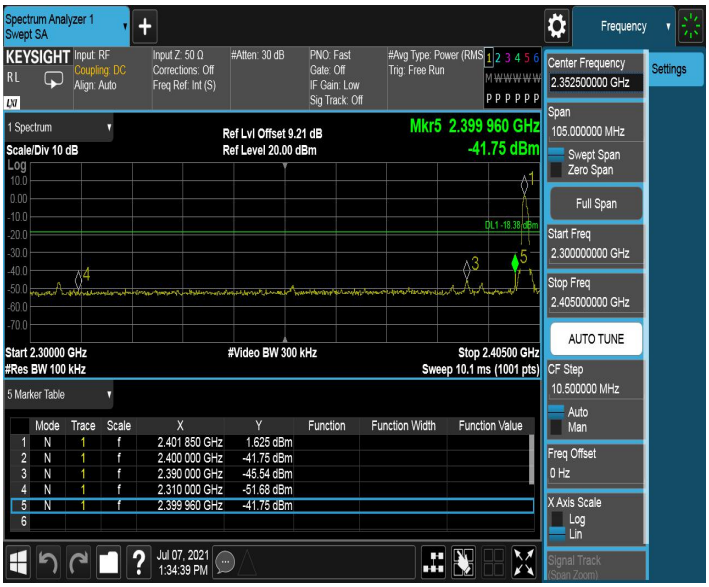


2DH5_Ant1_High_2480

2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402