Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:

1. For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Sweep time = auto, trigger set to “free run”.
d) Trace average at least 100 traces in power averaging mode.
e) Record the max value and add 10 log (1/duty cycle)

2. For U-NII-3 band:

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
d) Sweep time = auto, trigger set to “free run”.
e) Trace average at least 100 traces in power averaging mode.
f) Record the max value and add 10 log (1/duty cycle)

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

Antenna gain and the maximum output power limit.

Frequency Band	Antenna Gain (dBi))	PSD Limits (dBm/MHz or dBm/500kHz)
U-NII-1	0.43	11.00
U-NII-2A	0.45	11.00
U-NII-2C	0.42	11.00
U-NII-3	0.41	30.00

For U-NII-1 Band:

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Corr’d PSD		
IEEE 802.11a	36 (5180)	0.863	0.993	11	Pass
	44 (5220)	1.518	1.648	11	Pass
	48 (5240)	1.616	1.746	11	Pass
IEEE 802.11n-HT20	36 (5180)	-0.188	-0.068	11	Pass
	44 (5220)	1.867	1.987	11	Pass
	48 (5240)	1.789	1.909	11	Pass
IEEE 802.11n-HT40	38 (5190)	-3.773	-3.493	11	Pass
	46 (5230)	-3.704	-3.424	11	Pass

Remark:

1. Corr’d PSD = Meas PSD + Duty Cycle Factor

For U-NII-2A Band:

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Meas PSD		
IEEE 802.11a	52 (5260)	0.555	0.685	11	Pass
	60 (5300)	1.063	1.193	11	Pass
	64 (5320)	0.991	1.121	11	Pass
IEEE 802.11n-HT20	52 (5260)	-1.648	-1.528	11	Pass
	60 (5300)	-1.149	-1.029	11	Pass
	64 (5320)	-1.176	-1.056	11	Pass
IEEE 802.11n-HT40	54 (5270)	-4.578	-4.298	11	Pass
	62 (5310)	-4.495	-4.215	11	Pass

Remark:

1. Corr'd PSD = Meas PSD + Duty Cycle Factor

For U-NII-2C Band:

Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/MHz)		Limit (dBm/MHz)	Pass / Fail
		Meas PSD	Meas PSD		
IEEE 802.11a	100 (5500)	-0.778	-0.648	11	Pass
	116 (5580)	-0.708	-0.578	11	Pass
	140 (5700)	-1.143	-1.013	11	Pass
IEEE 802.11n-HT20	100 (5500)	0.821	0.941	11	Pass
	116 (5580)	1.114	1.234	11	Pass
	140 (5700)	0.583	0.703	11	Pass
IEEE 802.11n-HT40	102 (5510)	-6.728	-6.448	11	Pass
	110 (5550)	-7.134	-6.854	11	Pass
	134 (5670)	-7.256	-6.976	11	Pass

Remark:

1. Corr'd PSD = Meas PSD + Duty Cycle Factor

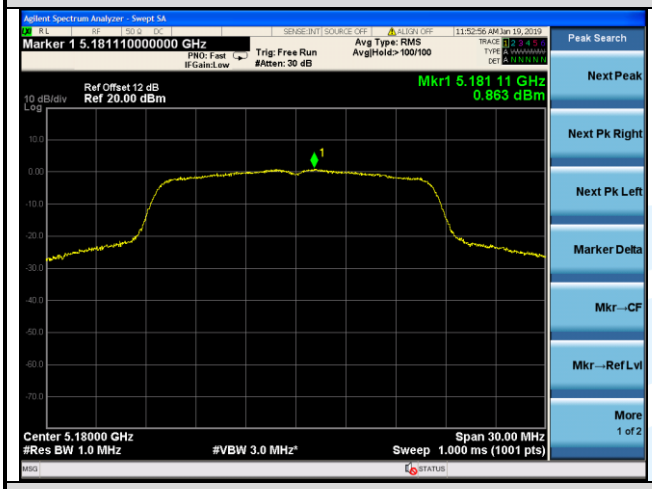
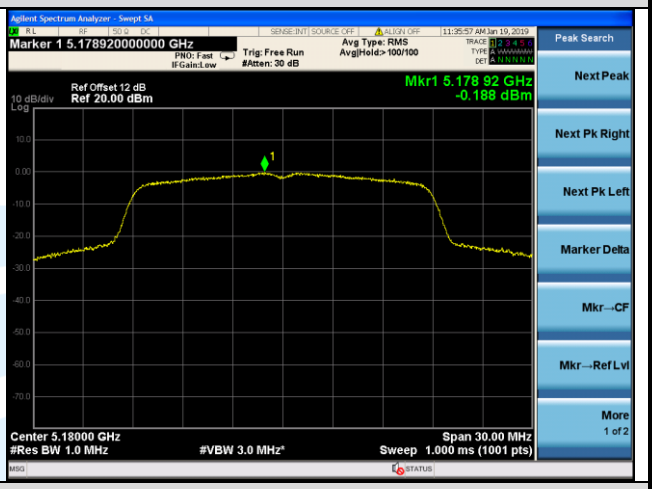
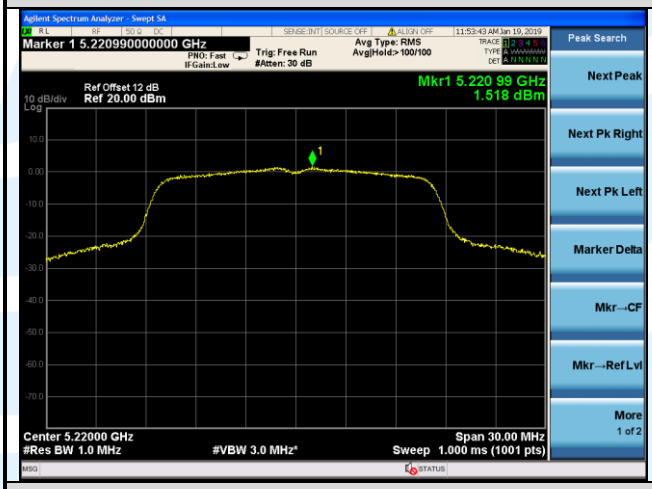
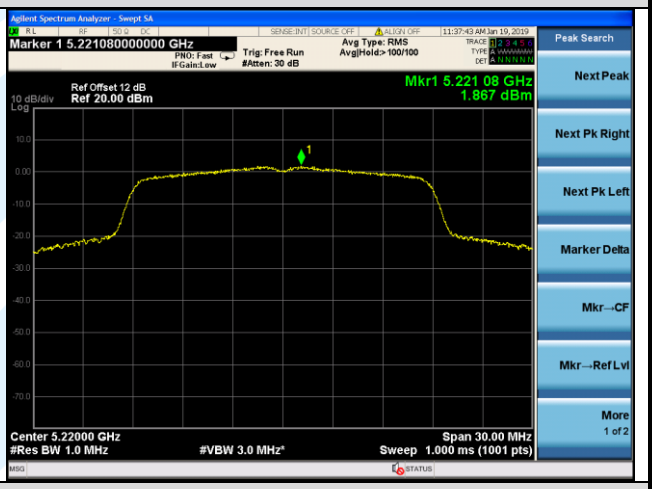
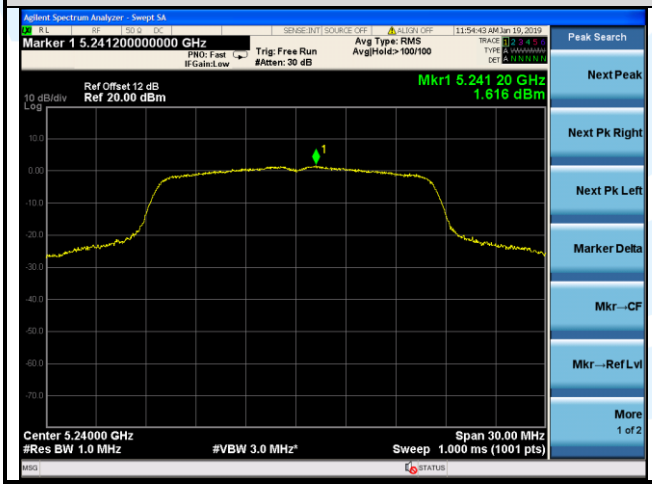
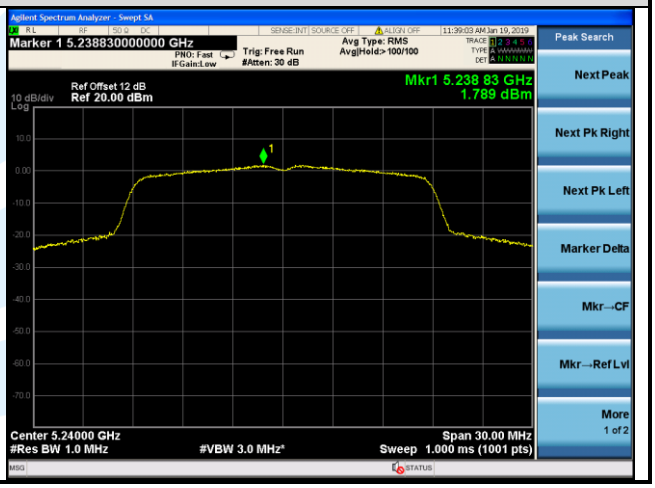
For U-NII-3 Band:

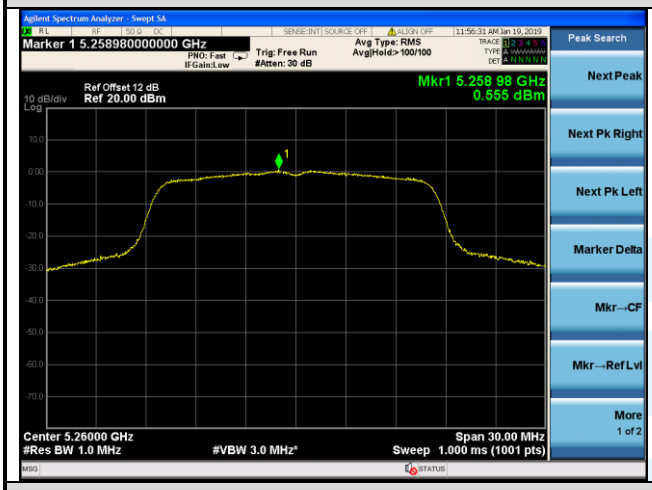
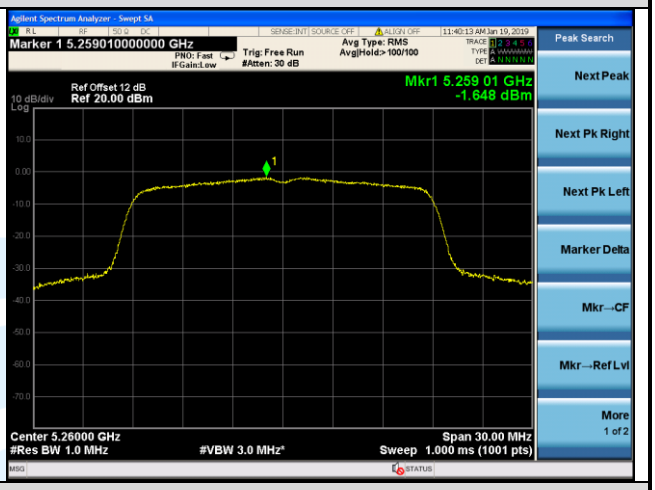
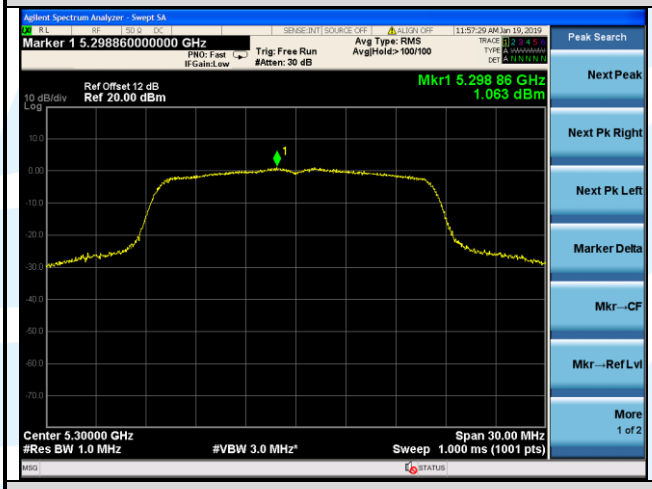
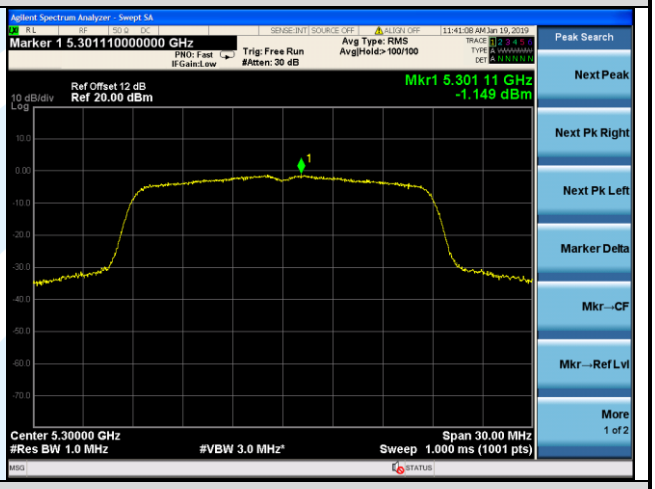
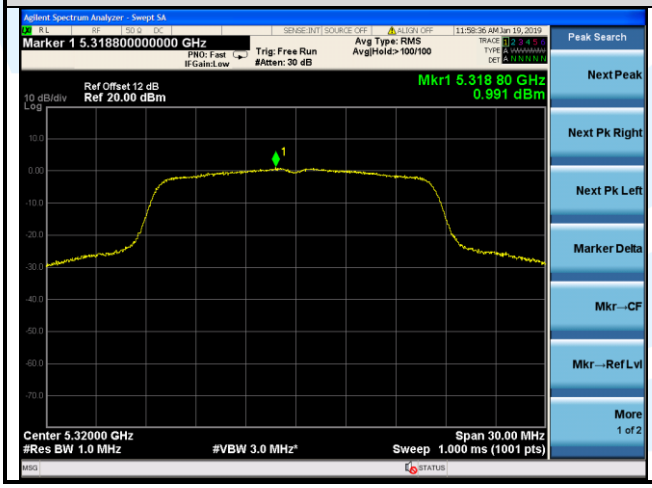
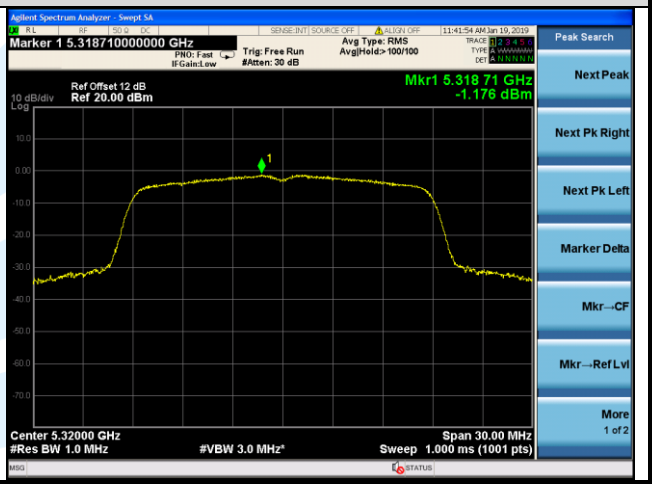
Mode	Channel/ Frequency (MHz)	Power spectral density (dBm/500KHz)		Limit (dBm/500KHz)	Pass / Fail
		Meas PSD	Meas PSD		
IEEE 802.11a	149 (5745)	-1.136	-1.006	30	Pass
	157 (5785)	-1.532	-1.402	30	Pass
	165 (5825)	-1.798	-1.668	30	Pass
IEEE 802.11n-HT20	149 (5745)	-2.184	-2.064	30	Pass
	157 (5785)	-2.736	-2.616	30	Pass
	165 (5825)	-2.961	-2.841	30	Pass
IEEE 802.11n-HT40	151 (5755)	-6.873	-6.593	30	Pass
	159 (5795)	-6.959	-6.679	30	Pass

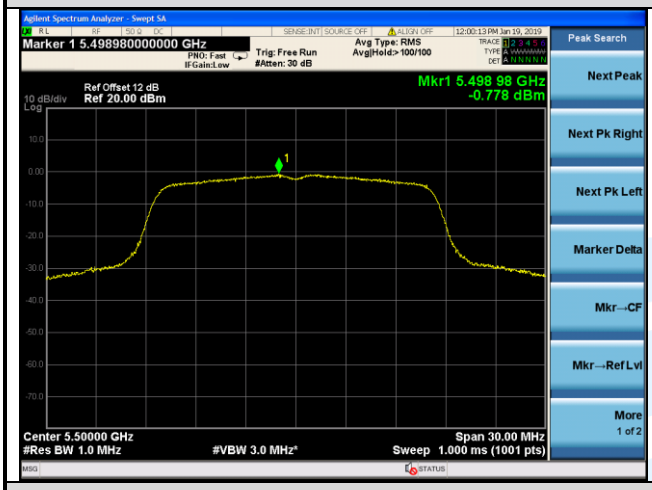
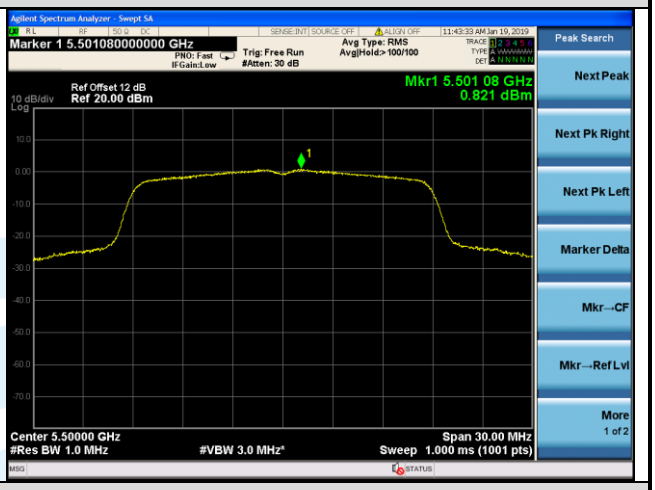
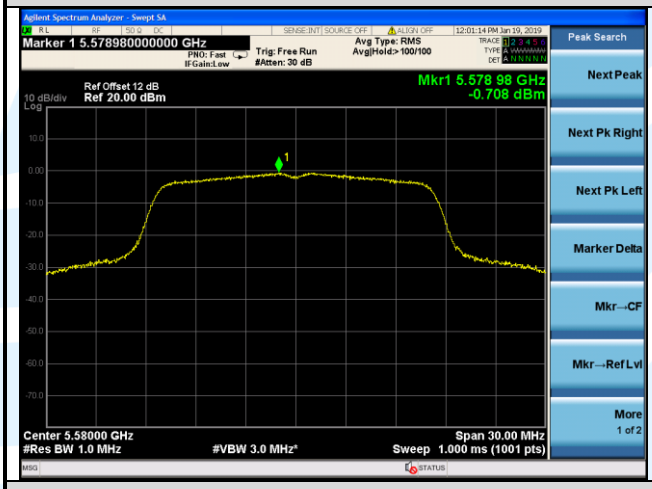
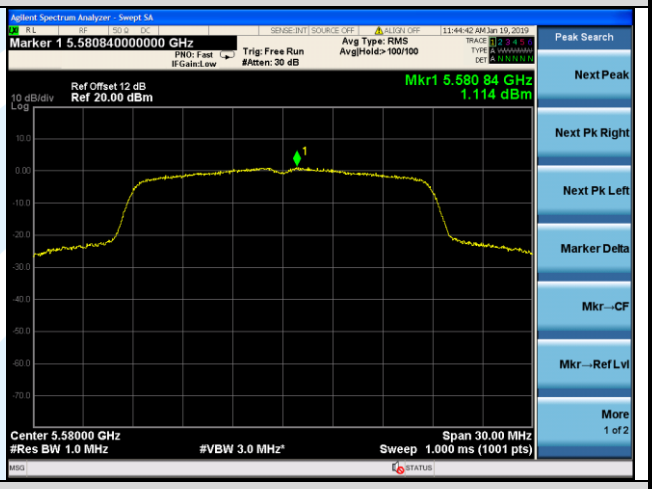
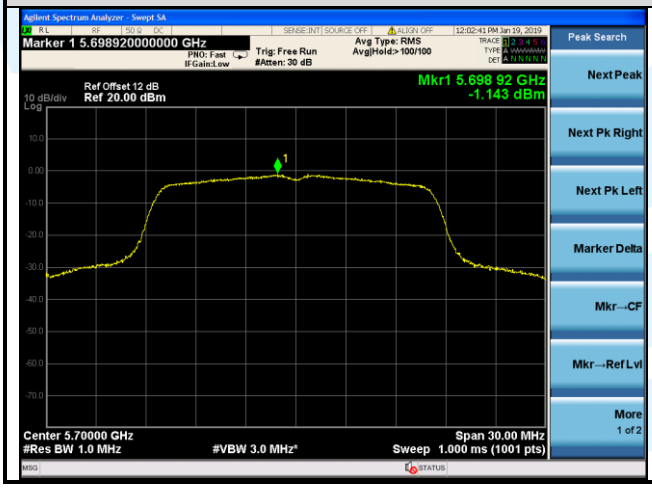
Remark:

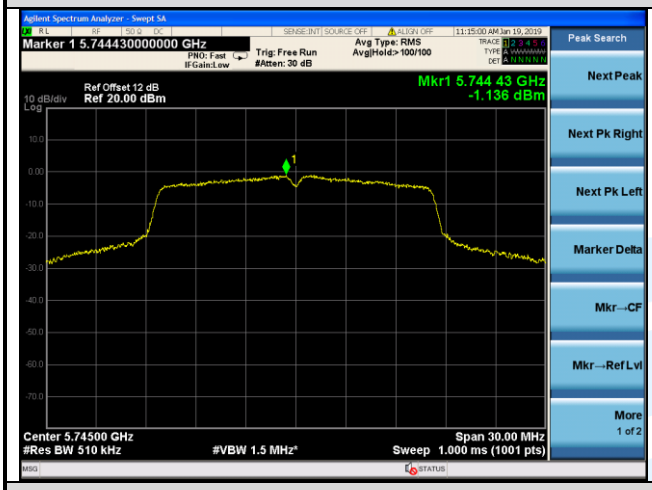
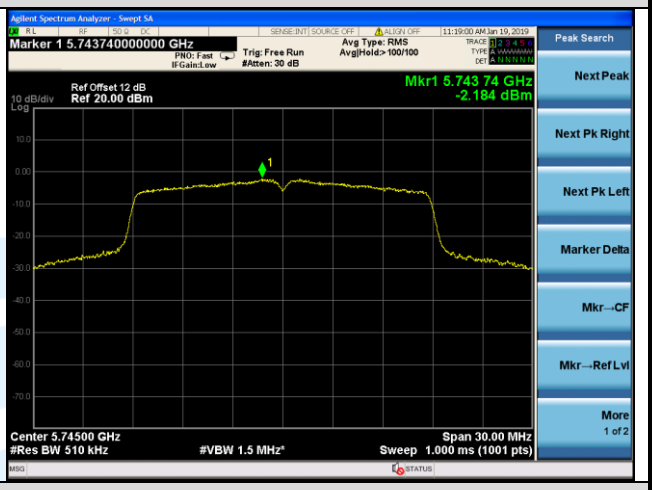
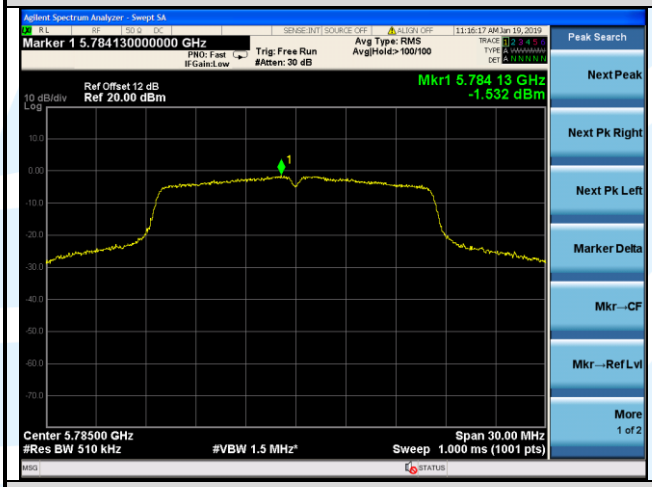
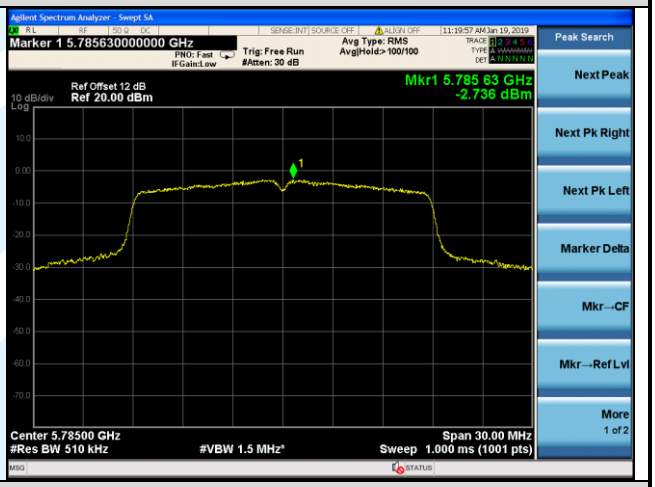
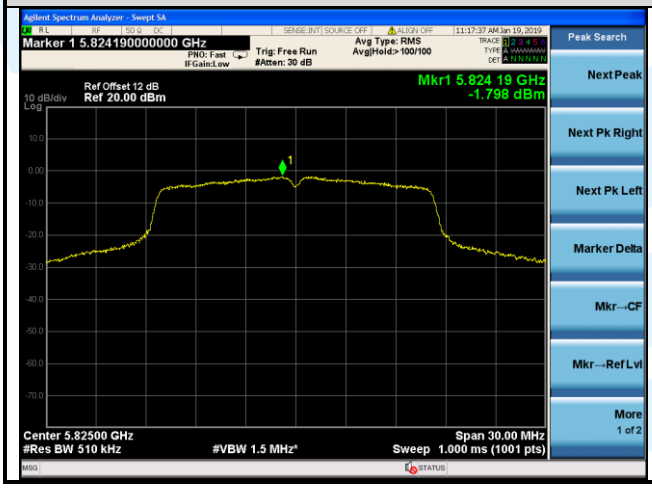
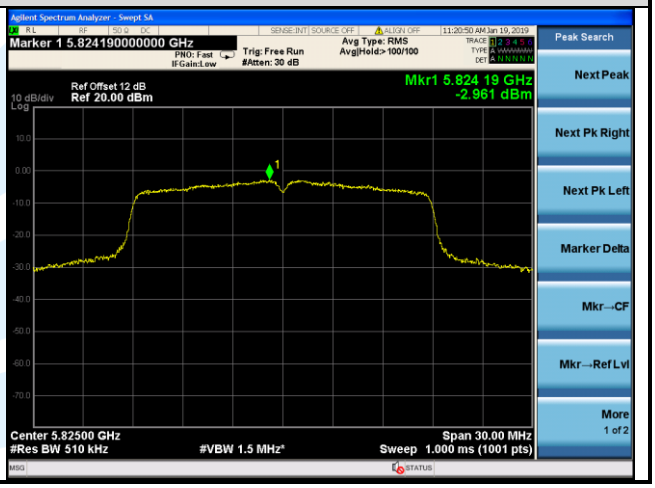
1. Corr'd PSD = Meas PSD + Duty Cycle Factor

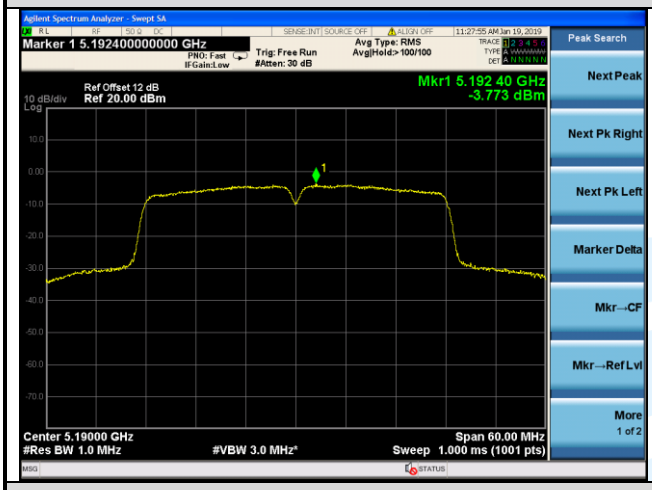
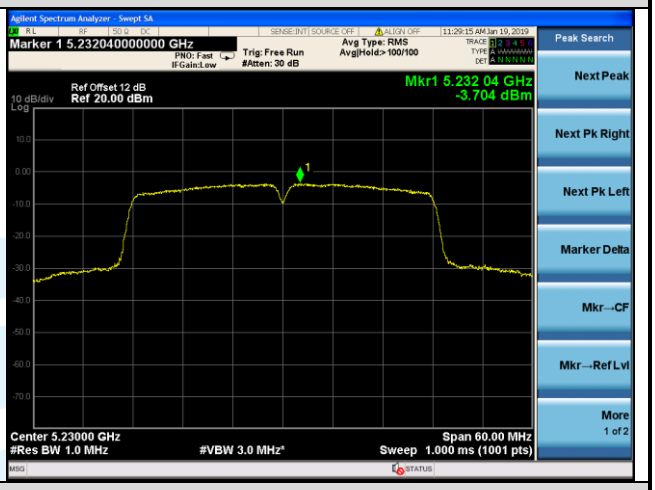
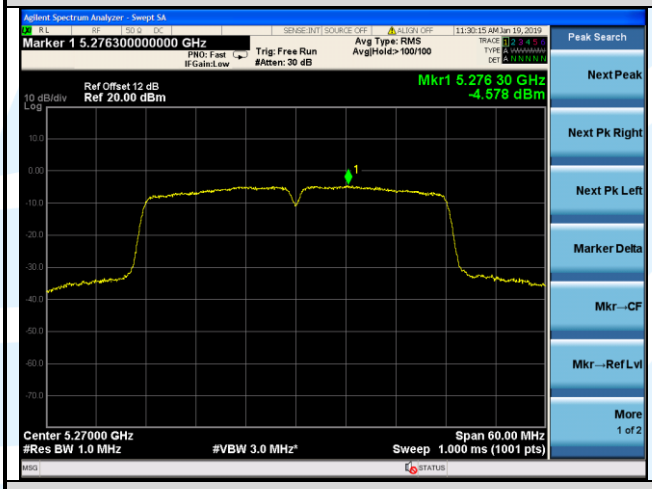
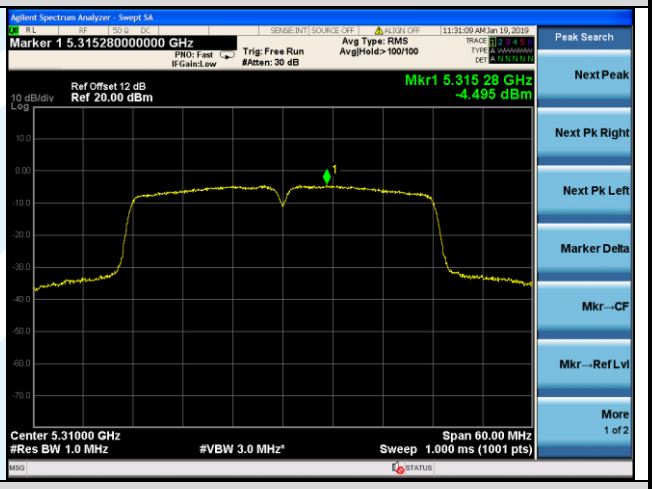
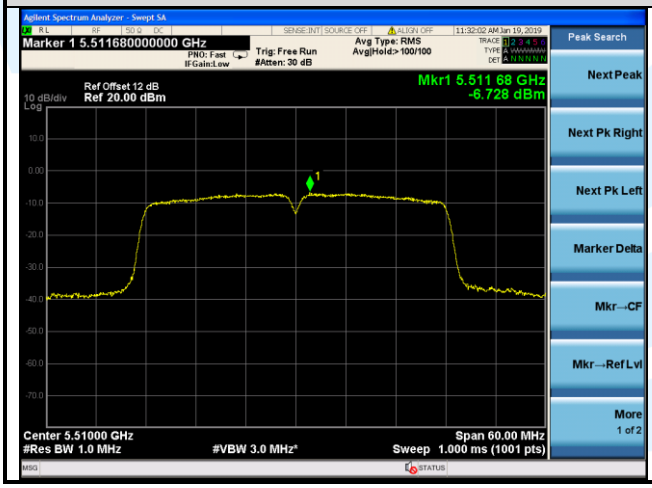
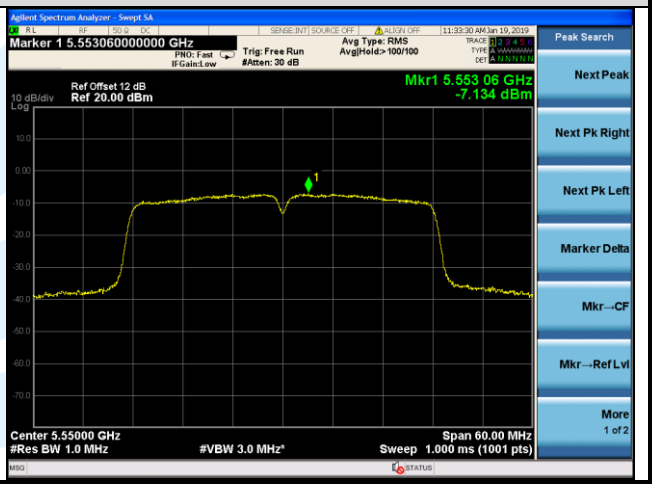
The test plots as follows:

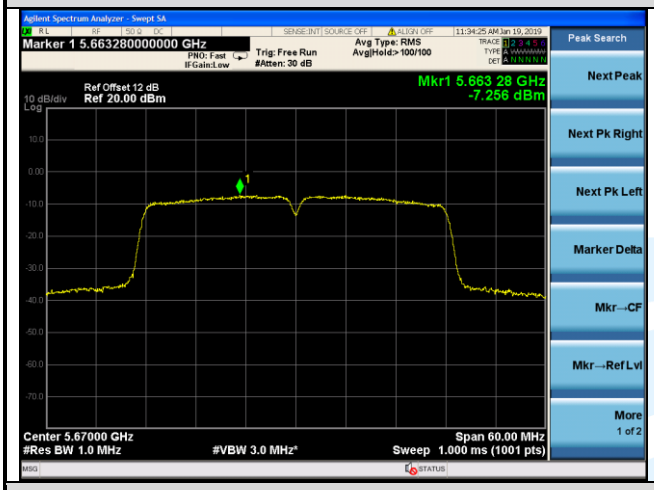
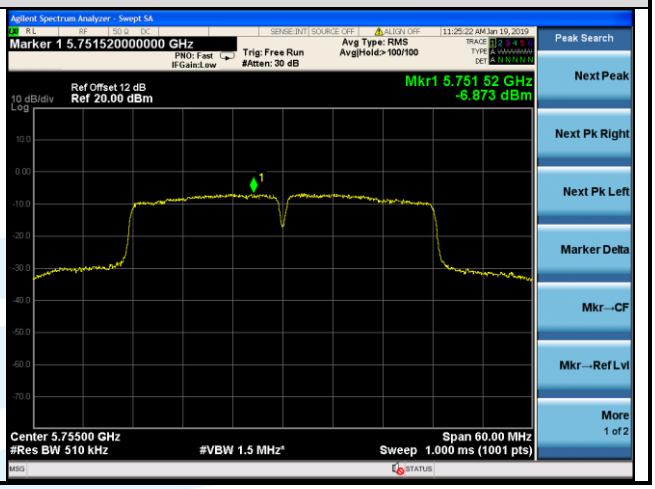
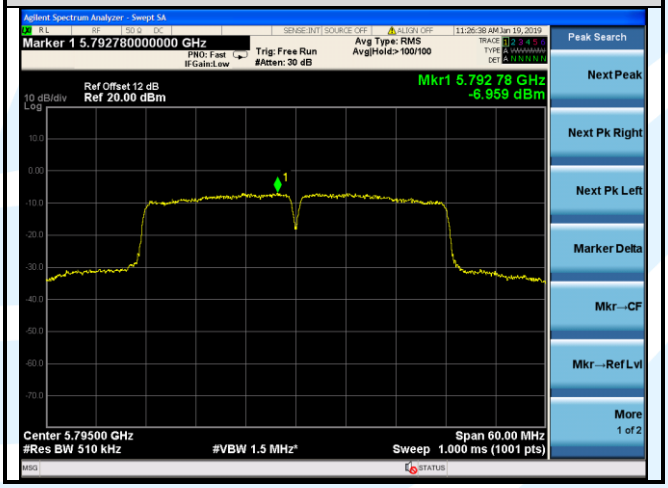
IEEE 802.11a	IEEE 802.11n-HT20
Channel 36	
	
Channel 44	
	
Channel 48	
	

IEEE 802.11a	IEEE 802.11n-HT20
Channel 52	
	
Channel 60	
	
Channel 64	
	

IEEE 802.11a	IEEE 802.11n-HT20
Channel 100	
	
Channel 116	
	
Channel 140	
	

IEEE 802.11a	IEEE 802.11n-HT20
Channel 149	
	
Channel 157	
	
Channel 165	
	

IEEE 802.11n-HT40	
Channel 38	Channel 46
	
Channel 54	Channel 62
	
Channel 102	Channel 110
	

IEEE 802.11n-HT40	
Channel 134	Channel 151
	
Channel 159	
	

5.7 RADIATED EMISSIONS AND BAND EDGE MEASUREMENT

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6)
FCC 47 CFR Part 15 Subpart C Section 15.209/205

Test Method: KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6

Receiver Setup:

Frequency	RBW
0.009 MHz-0.150 MHz	200/300 kHz
0.150 MHz -30 MHz	9/10 kHz
30 MHz-1 GHz	100/120 kHz
Above 1 GHz	1 MHz

Limits:

1. Limits of Radiated Emission and Band edge Measurement

Radiated emissions that fall in the restricted bands must comply with the general emissions limits in 15.209(a) as below table. Other emissions shall be at least 20 dB below the highest level of the desired power.

Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009 MHz-0.490 MHz	2400/F(kHz)	--	--	300
0.490 MHz-1.705 MHz	24000/F(kHz)	--	--	30
1.705 MHz-30 MHz	30	--	--	30
30 MHz-88 MHz	100	40.0	Quasi-peak	3
88 MHz-216 MHz	150	43.5	Quasi-peak	3
216 MHz-960 MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1 GHz	500	54.0	Average	3

Remark:

a. The lower limit shall apply at the transition frequencies.
b. Emission level (dBuV/m) = 20 log Emission level (uV/m).
c. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

2. Limits of Unwanted Emission Out of the Restricted Bands

Applicable To	Limit	
789033 D02 General U-NII Test Procedures New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
FCC Part 15.407 (b)(1)	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
FCC Part 15.407 (b)(2)	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
FCC Part 15.407 (b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
FCC Part 15.407 (b)(4)	27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;	PK: 68.2 (dBμV/m)
	15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;	
	10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges;	

	-27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.	

Test Setup: Refer to section 4.5.1 for details.

Test Procedures:

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Remark:

a) The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
b) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
c) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
d) The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) or ≥ 1/T(duty cycle is < 98%) for Average detection (AV) at frequency above 1 GHz.
e) All modes of operation were investigated and the worst-case emissions are reported.

Equipment Used: Refer to section 3 for details.

Test Result: Pass

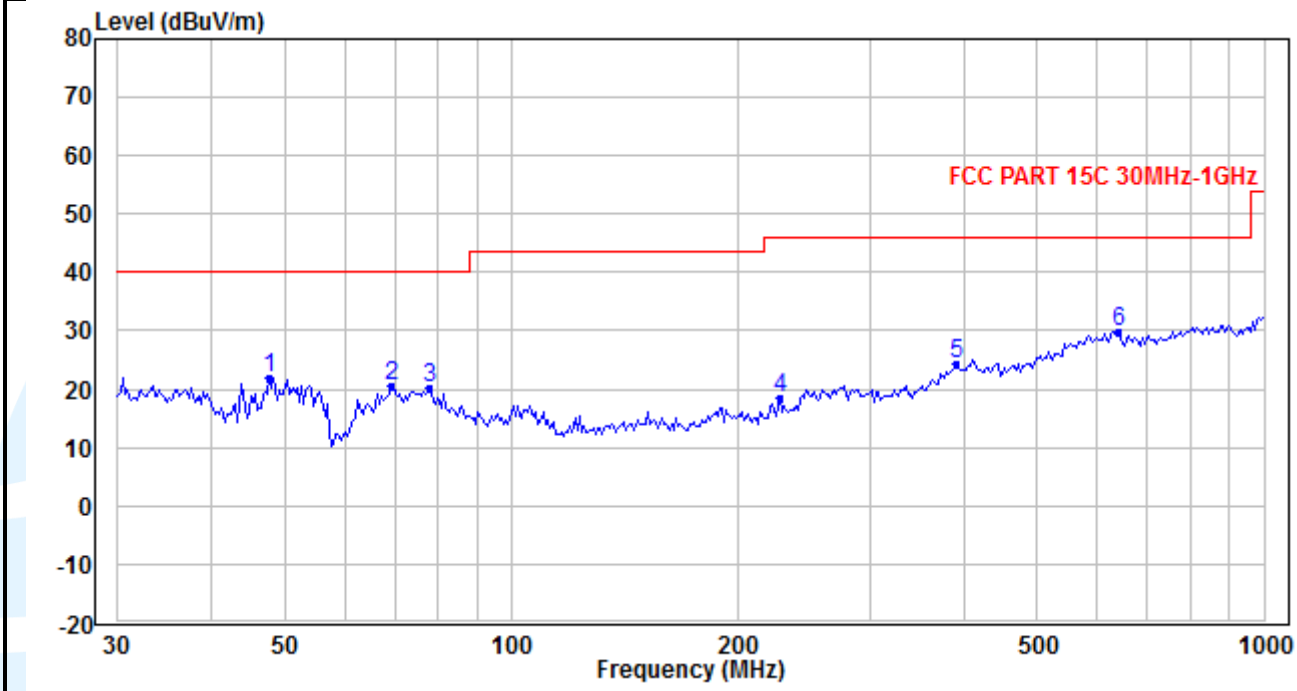
The measurement data as follows:

Radiated Emission Test Data (9 KHz ~ 30 MHz):
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Radiated Emission Test Data (30 MHz ~ 1 GHz):

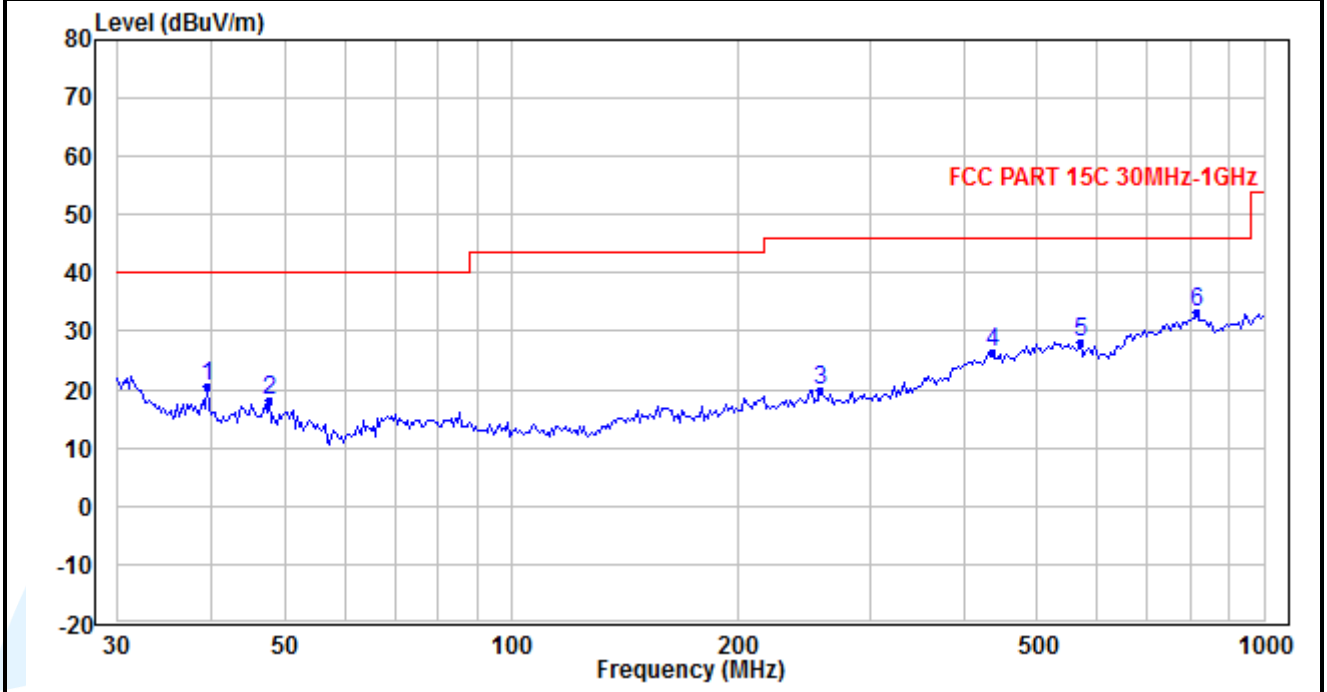
Worst-Case Configuration

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.703	35.36	-13.40	21.96	40.00	-18.04	Peak
2	69.230	34.37	-13.78	20.59	40.00	-19.41	Peak
3	78.014	33.67	-13.44	20.23	40.00	-19.77	Peak
4	227.016	26.49	-7.83	18.66	46.00	-27.34	Peak
5	389.987	27.01	-2.55	24.46	46.00	-21.54	Peak
6	642.292	27.00	2.95	29.95	46.00	-16.05	Peak

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	39.459	30.73	-10.33	20.40	40.00	-19.60	Peak
2	47.703	31.55	-13.40	18.15	40.00	-21.85	Peak
3	257.627	26.14	-6.28	19.86	46.00	-26.14	Peak
4	436.396	27.63	-1.11	26.52	46.00	-19.48	Peak
5	569.969	26.52	1.68	28.20	46.00	-17.80	Peak
6	815.635	28.27	4.83	33.10	46.00	-12.90	Peak

Radiated Emission Test Data (Above 1GHz):

IEEE 802.11a_Channel 36

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	57.18	74.00	-16.82	Peak	Horizontal
2	10360.00	43.35	54.00	-10.65	Average	Horizontal
3	15540.00	55.65	74.00	-18.35	Peak	Horizontal
4	15540.00	35.02	54.00	-18.98	Average	Horizontal
5	10360.00	59.07	74.00	-14.93	Peak	Vertical
6	10360.00	43.20	54.00	-10.80	Average	Vertical
7	15540.00	58.49	74.00	-15.51	Peak	Vertical
8	15540.00	39.13	54.00	-14.87	Average	Vertical

IEEE 802.11a_Channel 44

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	56.00	74.00	-18.00	Peak	Horizontal
2	10440.00	43.46	54.00	-10.54	Average	Horizontal
3	15660.00	52.24	74.00	-21.76	Peak	Horizontal
4	15660.00	36.19	54.00	-17.81	Average	Horizontal
5	10440.00	56.05	74.00	-17.95	Peak	Vertical
6	10440.00	41.96	54.00	-12.04	Average	Vertical
7	15660.00	55.52	74.00	-18.48	Peak	Vertical
8	15660.00	36.46	54.00	-17.54	Average	Vertical

IEEE 802.11a_Channel 48

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	55.70	74.00	-18.30	Peak	Horizontal
2	10480.00	41.73	54.00	-12.27	Average	Horizontal
3	15720.00	52.99	74.00	-21.01	Peak	Horizontal
4	15720.00	36.15	54.00	-17.85	Average	Horizontal
5	10480.00	57.78	74.00	-16.22	Peak	Vertical
6	10480.00	41.00	54.00	-13.00	Average	Vertical
7	15720.00	55.36	74.00	-18.64	Peak	Vertical
8	15720.00	38.03	54.00	-15.97	Average	Vertical

IEEE 802.11a_Channel 52

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	55.90	74.00	-18.10	Peak	Horizontal
2	10520.00	41.86	54.00	-12.14	Average	Horizontal
3	15780.00	48.78	74.00	-25.22	Peak	Horizontal
4	15780.00	36.47	54.00	-17.53	Average	Horizontal
5	10520.00	57.21	74.00	-16.79	Peak	Vertical
6	10520.00	40.33	54.00	-13.67	Average	Vertical
7	15780.00	50.79	74.00	-23.21	Peak	Vertical
8	15780.00	36.21	54.00	-17.79	Average	Vertical

IEEE 802.11a_Channel 60

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	60.12	74.00	-13.88	Peak	Horizontal
2	10600.00	43.90	54.00	-10.10	Average	Horizontal
3	15900.00	54.16	74.00	-19.84	Peak	Horizontal
4	15900.00	35.24	54.00	-18.76	Average	Horizontal
5	10600.00	57.03	74.00	-16.97	Peak	Vertical
6	10600.00	40.52	54.00	-13.48	Average	Vertical
7	15900.00	54.14	74.00	-19.86	Peak	Vertical
8	15900.00	36.00	54.00	-18.00	Average	Vertical

IEEE 802.11a_Channel 64

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	61.89	74.00	-12.11	Peak	Horizontal
2	10640.00	45.62	54.00	-8.38	Average	Horizontal
3	15960.00	57.30	74.00	-16.70	Peak	Horizontal
4	15960.00	40.63	54.00	-13.37	Average	Horizontal
5	10640.00	57.13	74.00	-16.87	Peak	Vertical
6	10640.00	40.71	54.00	-13.29	Average	Vertical
7	15960.00	55.19	74.00	-18.81	Peak	Vertical
8	15960.00	37.02	54.00	-16.98	Average	Vertical

IEEE 802.11a_Channel 100

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	57.11	74.00	-16.89	Peak	Horizontal
2	11000.00	42.86	54.00	-11.14	Average	Horizontal
3	16500.00	59.36	74.00	-14.64	Peak	Horizontal
4	16500.00	39.67	54.00	-14.33	Average	Horizontal
5	11000.00	59.38	74.00	-14.62	Peak	Vertical
6	11000.00	42.59	54.00	-11.41	Average	Vertical
7	16500.00	57.28	74.00	-16.72	Peak	Vertical
8	16500.00	36.37	54.00	-17.63	Average	Vertical

IEEE 802.11a_Channel 116

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	59.81	74.00	-14.19	Peak	Horizontal
2	11160.00	39.58	54.00	-14.42	Average	Horizontal
3	16740.00	57.13	74.00	-16.87	Peak	Horizontal
4	16740.00	39.36	54.00	-14.64	Average	Horizontal
5	11160.00	56.51	74.00	-17.49	Peak	Vertical
6	11160.00	38.59	54.00	-15.41	Average	Vertical
7	16740.00	54.21	74.00	-19.79	Peak	Vertical
8	16740.00	38.20	54.00	-15.80	Average	Vertical

IEEE 802.11a_Channel 140

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	61.94	74.00	-12.06	Peak	Horizontal
2	11400.00	45.21	54.00	-8.79	Average	Horizontal
3	17100.00	52.26	74.00	-21.74	Peak	Horizontal
4	11400.00	61.30	74.00	-12.70	Peak	Vertical
5	11400.00	43.31	54.00	-10.69	Average	Vertical
6	17100.00	49.87	74.00	-24.13	Peak	Vertical
7	17100.00	36.62	54.00	-17.38	Average	Vertical

IEEE 802.11a_Channel 149

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	61.48	74.00	-12.52	Peak	Horizontal
2	11490.00	41.54	54.00	-12.46	Average	Horizontal
3	17235.00	52.22	74.00	-21.78	Peak	Horizontal
4	17235.00	39.61	54.00	-14.39	Average	Horizontal
5	11490.00	60.63	74.00	-13.37	Peak	Vertical
6	11490.00	40.11	54.00	-13.89	Average	Vertical
7	17235.00	50.83	74.00	-23.17	Peak	Vertical
8	17235.00	38.77	54.00	-15.23	Average	Vertical

IEEE 802.11a_Channel 157

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	58.79	74.00	-15.21	Peak	Horizontal
2	11570.00	42.55	54.00	-11.45	Average	Horizontal
3	17355.00	58.12	74.00	-15.88	Peak	Horizontal
4	17355.00	40.85	54.00	-13.15	Average	Horizontal
5	11570.00	56.06	74.00	-17.94	Peak	Vertical
6	11570.00	40.53	54.00	-13.47	Average	Vertical
7	17355.00	58.95	74.00	-15.05	Peak	Vertical
8	17355.00	39.95	54.00	-14.05	Average	Vertical

IEEE 802.11a_Channel 165

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	62.18	74.00	-11.82	Peak	Horizontal
2	11650.00	43.85	54.00	-10.15	Average	Horizontal
3	17475.00	57.96	74.00	-16.04	Peak	Horizontal
4	17475.00	38.44	54.00	-15.56	Average	Horizontal
5	11650.00	59.96	74.00	-14.04	Peak	Vertical
6	11650.00	42.22	54.00	-11.78	Average	Vertical
7	17475.00	59.26	74.00	-14.74	Peak	Vertical
8	17475.00	37.25	54.00	-16.75	Average	Vertical

IEEE 802.11n-HT20_Channel 36

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	57.24	74.00	-16.76	Peak	Horizontal
2	10360.00	42.87	54.00	-11.13	Average	Horizontal
3	15540.00	52.93	74.00	-21.07	Peak	Horizontal
4	15540.00	39.66	54.00	-14.34	Average	Horizontal
5	10360.00	59.29	74.00	-14.71	Peak	Vertical
6	10360.00	43.18	54.00	-10.82	Average	Vertical
7	15540.00	56.19	74.00	-17.81	Peak	Vertical
8	15540.00	39.13	54.00	-14.87	Average	Vertical

IEEE 802.11n-HT20_Channel 44

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	53.76	74.00	-20.24	Peak	Horizontal
2	10440.00	42.11	54.00	-11.89	Average	Horizontal
3	15660.00	48.60	74.00	-25.40	Peak	Horizontal
4	15660.00	36.58	54.00	-17.42	Average	Horizontal
5	10440.00	54.62	74.00	-19.38	Peak	Vertical
6	10440.00	39.75	54.00	-14.25	Average	Vertical
7	15660.00	53.56	74.00	-20.44	Peak	Vertical
8	15660.00	36.37	54.00	-17.63	Average	Vertical

IEEE 802.11n-HT20_Channel 48

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	53.10	74.00	-20.90	Peak	Horizontal
2	10480.00	40.79	54.00	-13.21	Average	Horizontal
3	15720.00	51.76	74.00	-22.24	Peak	Horizontal
4	15720.00	35.90	54.00	-18.10	Average	Horizontal
5	10480.00	59.63	74.00	-14.37	Peak	Vertical
6	10480.00	38.74	54.00	-15.26	Average	Vertical
7	15720.00	54.44	74.00	-19.56	Peak	Vertical
8	15720.00	36.03	54.00	-17.97	Average	Vertical

IEEE 802.11n-HT20_Channel 52

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	56.89	74.00	-17.11	Peak	Horizontal
2	10520.00	42.45	54.00	-11.55	Average	Horizontal
3	15780.00	55.49	74.00	-18.51	Peak	Horizontal
4	15780.00	36.93	54.00	-17.07	Average	Horizontal
5	10520.00	56.00	74.00	-18.00	Peak	Vertical
6	10520.00	42.05	54.00	-11.95	Average	Vertical
7	15780.00	53.37	74.00	-20.63	Peak	Vertical
8	15780.00	36.39	54.00	-17.61	Average	Vertical

IEEE 802.11n-HT20_Channel 60

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	56.31	74.00	-17.69	Peak	Horizontal
2	10600.00	40.60	54.00	-13.40	Average	Horizontal
3	15900.00	50.60	74.00	-23.40	Peak	Horizontal
4	15900.00	34.66	54.00	-19.34	Average	Horizontal
5	10600.00	49.88	74.00	-24.12	Peak	Vertical
6	10600.00	38.24	54.00	-15.76	Average	Vertical
7	15900.00	47.09	74.00	-26.91	Peak	Vertical
8	15900.00	34.75	54.00	-19.25	Average	Vertical

IEEE 802.11n-HT20_Channel 64

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	55.91	74.00	-18.09	Peak	Horizontal
2	10640.00	41.80	54.00	-12.20	Average	Horizontal
3	15960.00	49.85	74.00	-24.15	Peak	Horizontal
4	15960.00	35.33	54.00	-18.67	Average	Horizontal
5	10640.00	55.29	74.00	-18.71	Peak	Vertical
6	10640.00	40.67	54.00	-13.33	Average	Vertical
7	15960.00	51.24	74.00	-22.76	Peak	Vertical
8	15960.00	35.29	54.00	-18.71	Average	Vertical

IEEE 802.11n-HT20_Channel 100

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	55.09	74.00	-18.91	Peak	Horizontal
2	11000.00	42.22	54.00	-11.78	Average	Horizontal
3	16500.00	48.10	74.00	-25.90	Peak	Horizontal
4	16500.00	35.95	54.00	-18.05	Average	Horizontal
5	11000.00	53.06	74.00	-20.94	Peak	Vertical
6	11000.00	41.53	54.00	-12.47	Average	Vertical
7	16500.00	49.59	74.00	-24.41	Peak	Vertical
8	16500.00	38.63	54.00	-15.37	Average	Vertical

IEEE 802.11n-HT20_Channel 116

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	57.57	74.00	-16.43	Peak	Horizontal
2	11160.00	38.40	54.00	-15.60	Average	Horizontal
3	16740.00	50.56	74.00	-23.44	Peak	Horizontal
4	16740.00	37.53	54.00	-16.47	Average	Horizontal
5	11160.00	56.16	74.00	-17.84	Peak	Vertical
6	11160.00	36.28	54.00	-17.72	Average	Vertical
7	16740.00	50.66	74.00	-23.34	Peak	Vertical
8	16740.00	35.03	54.00	-18.97	Average	Vertical

IEEE 802.11n-HT20_Channel 140

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	56.27	74.00	-17.73	Peak	Horizontal
2	11400.00	43.28	54.00	-10.72	Average	Horizontal
3	17100.00	48.34	74.00	-25.66	Peak	Horizontal
4	17100.00	36.60	54.00	-17.40	Average	Horizontal
5	11400.00	56.32	74.00	-17.68	Peak	Vertical
6	11400.00	44.26	54.00	-9.74	Average	Vertical
7	17100.00	46.17	74.00	-27.83	Peak	Vertical
8	17100.00	34.06	54.00	-19.94	Average	Vertical

IEEE 802.11n-HT20_Channel 149

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	56.96	74.00	-17.04	Peak	Horizontal
2	11490.00	40.88	54.00	-13.12	Average	Horizontal
3	17235.00	51.22	74.00	-22.78	Peak	Horizontal
4	17235.00	38.63	54.00	-15.37	Average	Horizontal
5	11490.00	58.26	74.00	-15.74	Peak	Vertical
6	11490.00	40.90	54.00	-13.10	Average	Vertical
7	17235.00	46.52	74.00	-27.48	Peak	Vertical
8	17235.00	33.71	54.00	-20.29	Average	Vertical

IEEE 802.11n-HT20_Channel 157

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	56.22	74.00	-17.78	Peak	Horizontal
2	11570.00	40.76	54.00	-13.24	Average	Horizontal
3	17355.00	55.40	74.00	-18.60	Peak	Horizontal
4	17355.00	39.56	54.00	-14.44	Average	Horizontal
5	11570.00	59.09	74.00	-14.91	Peak	Vertical
6	11570.00	42.18	54.00	-11.82	Average	Vertical
7	17355.00	50.20	74.00	-23.80	Peak	Vertical
8	17355.00	35.95	54.00	-18.05	Average	Vertical

IEEE 802.11n-HT20_Channel 165

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	59.16	74.00	-14.84	Peak	Horizontal
2	11650.00	42.00	54.00	-12.00	Average	Horizontal
3	17475.00	50.26	74.00	-23.74	Peak	Horizontal
4	11650.00	62.20	74.00	-11.80	Peak	Vertical
5	11650.00	43.78	54.00	-10.22	Average	Vertical
6	17475.00	46.14	74.00	-27.86	Peak	Vertical
7	17475.00	33.11	54.00	-20.89	Average	Vertical

IEEE 802.11n-HT40_Channel 38

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10380.00	57.64	74.00	-16.36	Peak	Horizontal
2	10380.00	45.37	54.00	-8.63	Average	Horizontal
3	15570.00	47.98	74.00	-26.02	Peak	Horizontal
4	15570.00	35.20	54.00	-18.80	Average	Horizontal
5	10380.00	54.74	74.00	-19.26	Peak	Vertical
6	10380.00	42.50	54.00	-11.50	Average	Vertical
7	15570.00	56.20	74.00	-17.80	Peak	Vertical
8	15570.00	40.97	54.00	-13.03	Average	Vertical

IEEE 802.11n-HT40_Channel 46

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	60.21	74.00	-13.79	Peak	Horizontal
2	10460.00	44.66	54.00	-9.34	Average	Horizontal
3	15690.00	53.12	74.00	-20.88	Peak	Horizontal
4	15690.00	38.11	54.00	-15.89	Average	Horizontal
5	10460.00	54.28	74.00	-19.72	Peak	Vertical
6	10460.00	40.95	54.00	-13.05	Average	Vertical
7	15690.00	54.88	74.00	-19.12	Peak	Vertical
8	15690.00	39.89	54.00	-14.11	Average	Vertical

IEEE 802.11n-HT40_Channel 54

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10540.00	57.80	74.00	-16.20	Peak	Horizontal
2	10540.00	44.18	54.00	-9.82	Average	Horizontal
3	15810.00	48.75	74.00	-25.25	Peak	Horizontal
4	15810.00	35.24	54.00	-18.76	Average	Horizontal
5	10540.00	52.86	74.00	-21.14	Peak	Vertical
6	10540.00	40.28	54.00	-13.72	Average	Vertical
7	15810.00	55.25	74.00	-18.75	Peak	Vertical
8	15810.00	41.04	54.00	-12.96	Average	Vertical

IEEE 802.11n-HT40_Channel 62

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10620.00	57.38	74.00	-16.62	Peak	Horizontal
2	10620.00	44.43	54.00	-9.57	Average	Horizontal
3	15930.00	46.92	74.00	-27.08	Peak	Horizontal
4	15930.00	35.05	54.00	-18.95	Average	Horizontal
5	10620.00	53.95	74.00	-20.05	Peak	Vertical
6	10620.00	41.06	54.00	-12.94	Average	Vertical
7	15930.00	48.24	74.00	-25.76	Peak	Vertical
8	15930.00	35.91	54.00	-18.09	Average	Vertical

IEEE 802.11n-HT40_Channel 102

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11020.00	52.46	74.00	-21.54	Peak	Horizontal
2	11020.00	41.85	54.00	-12.15	Average	Horizontal
3	16530.00	48.60	74.00	-25.40	Peak	Horizontal
4	16530.00	37.87	54.00	-16.13	Average	Horizontal
5	11020.00	56.73	74.00	-17.27	Peak	Vertical
6	11020.00	41.06	54.00	-12.94	Average	Vertical
7	16530.00	54.73	74.00	-19.27	Peak	Vertical
8	16530.00	38.14	54.00	-15.86	Average	Vertical

IEEE 802.11n-HT40_Channel 110

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11100.00	53.39	74.00	-20.61	Peak	Horizontal
2	11100.00	39.86	54.00	-14.14	Average	Horizontal
3	16650.00	50.31	74.00	-23.69	Peak	Horizontal
4	16650.00	37.07	54.00	-16.93	Average	Horizontal
5	11100.00	52.92	74.00	-21.08	Peak	Vertical
6	11100.00	38.37	54.00	-15.63	Average	Vertical
7	16650.00	49.66	74.00	-24.34	Peak	Vertical
8	16650.00	36.81	54.00	-17.19	Average	Vertical

IEEE 802.11n-HT40_Channel 134

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11340.00	58.38	74.00	-15.62	Peak	Horizontal
2	11340.00	44.78	54.00	-9.22	Average	Horizontal
3	17010.00	50.30	74.00	-23.70	Peak	Horizontal
4	17010.00	35.76	54.00	-18.24	Average	Horizontal
5	11340.00	56.34	74.00	-17.66	Peak	Vertical
6	11340.00	42.18	54.00	-11.82	Average	Vertical
7	17010.00	51.33	74.00	-22.67	Peak	Vertical

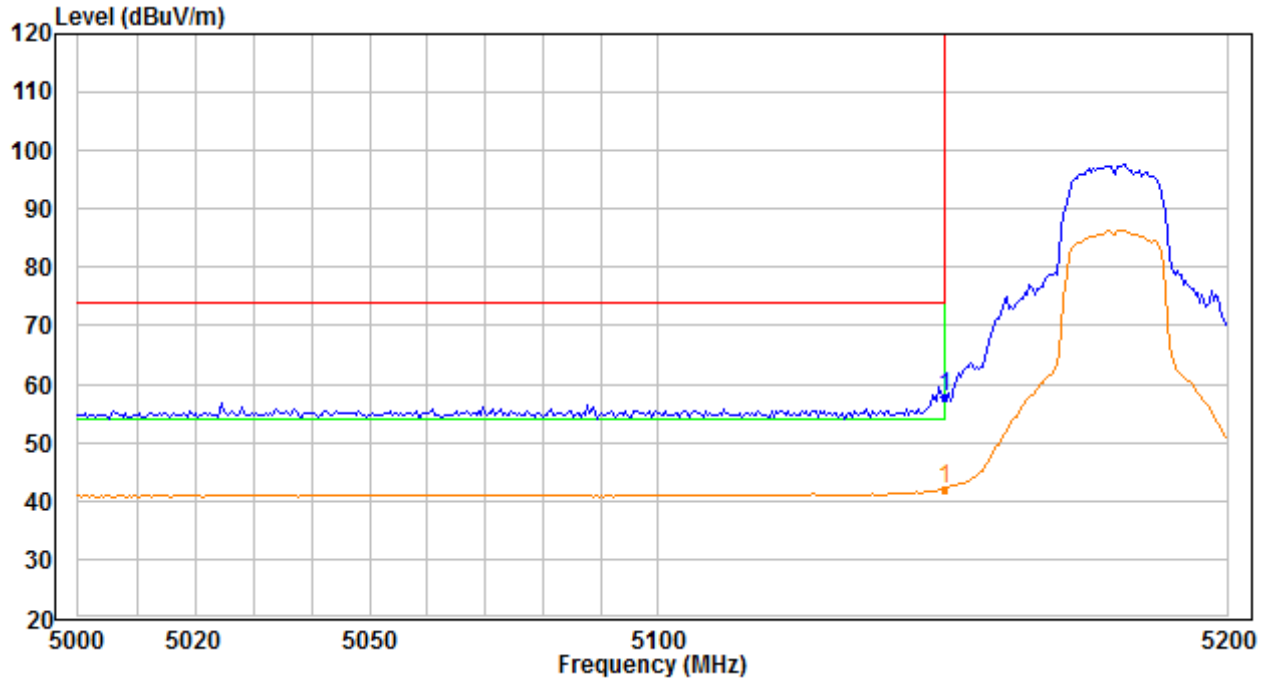
IEEE 802.11n-HT40_Channel 151

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11510.00	58.85	74.00	-15.15	Peak	Horizontal
2	11510.00	44.65	54.00	-9.35	Average	Horizontal
3	17265.00	51.85	74.00	-22.15	Peak	Horizontal
4	17265.00	39.54	54.00	-14.46	Average	Horizontal
5	11510.00	55.99	74.00	-18.01	Peak	Vertical
6	11510.00	42.84	54.00	-11.16	Average	Vertical
7	17265.00	51.50	74.00	-22.50	Peak	Vertical
8	17265.00	38.69	54.00	-15.31	Average	Vertical

Band Edge Measurements (Radiated)

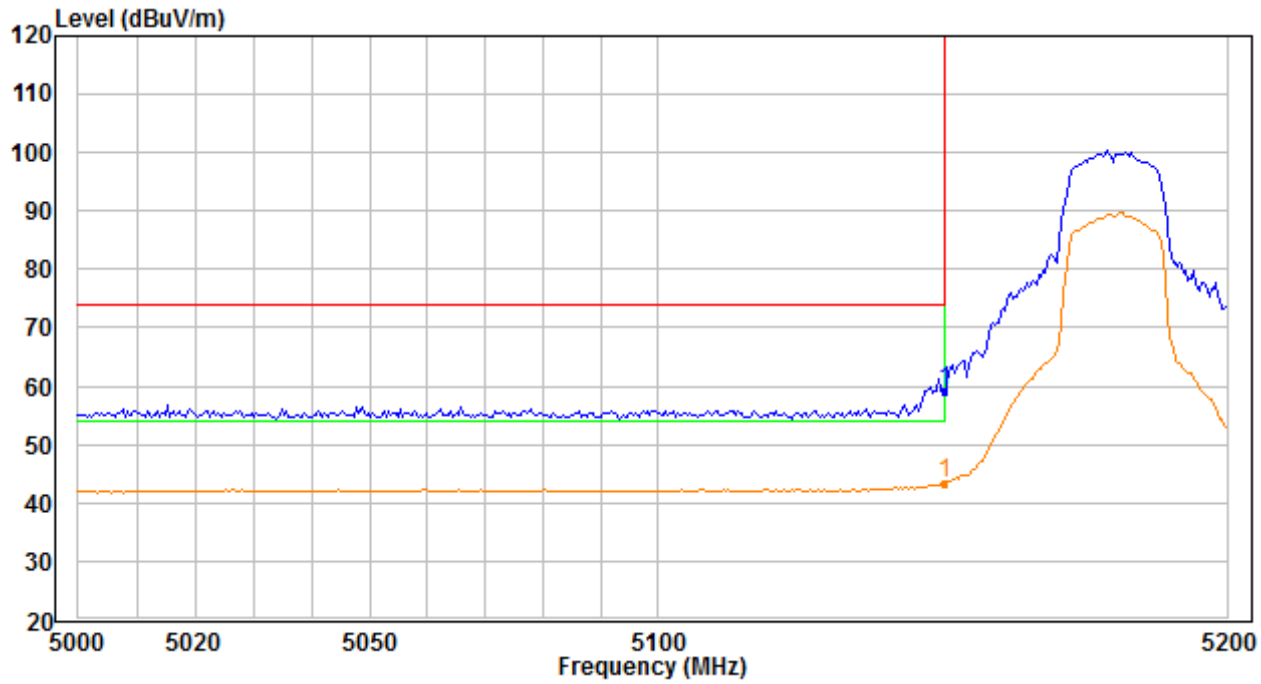
IEEE 802.11a

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



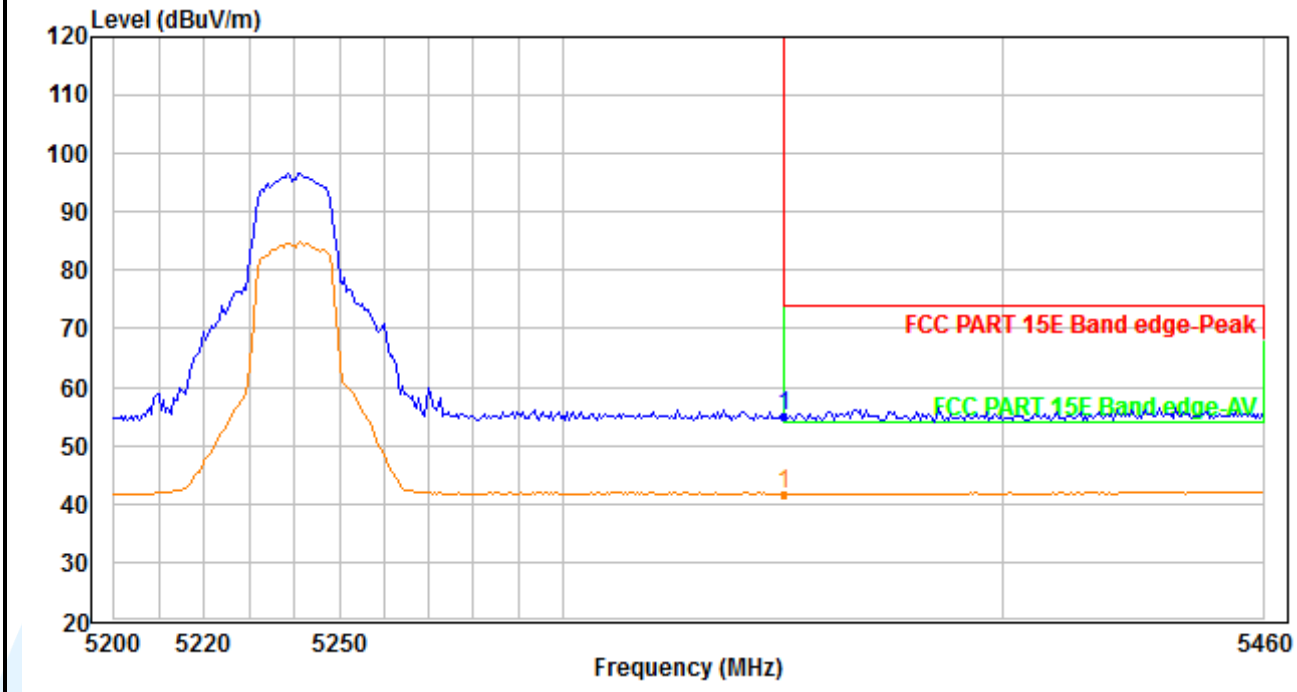
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	57.96	74.00	42.10	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



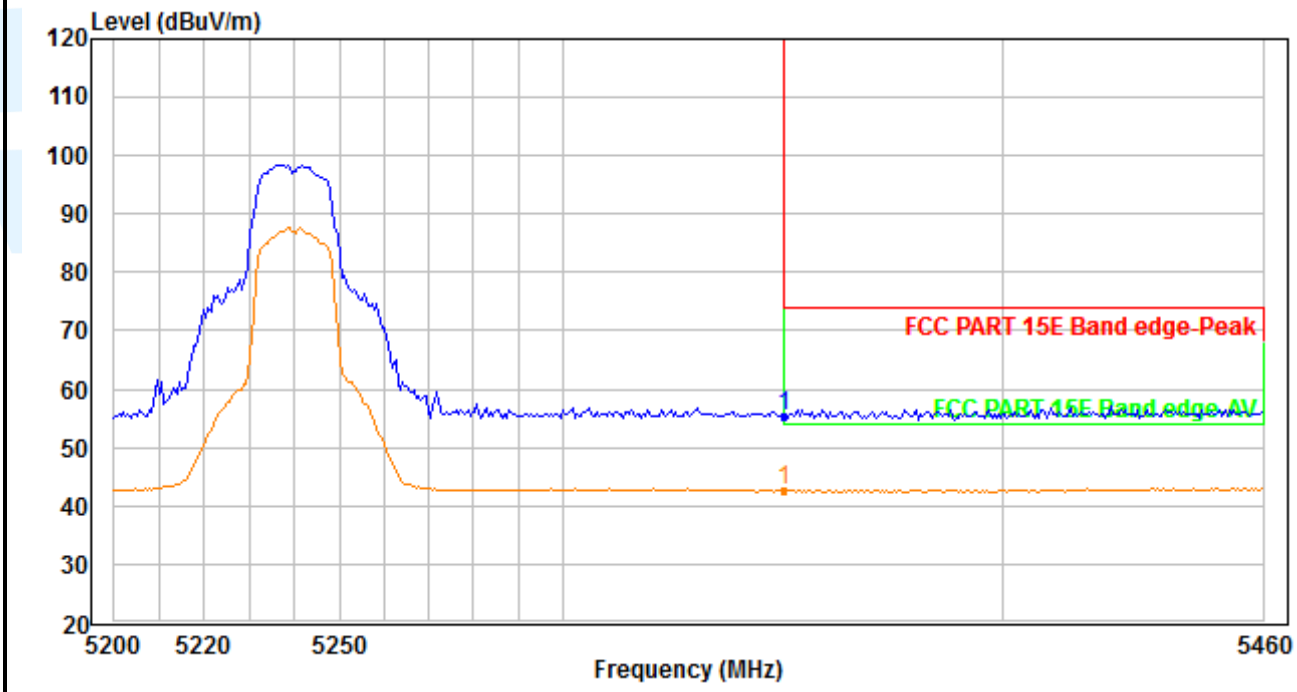
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	59.28	74.00	43.33	54.00	Pass

Test Channel:	Channel 48	Ant. Polar. :	Horizontal



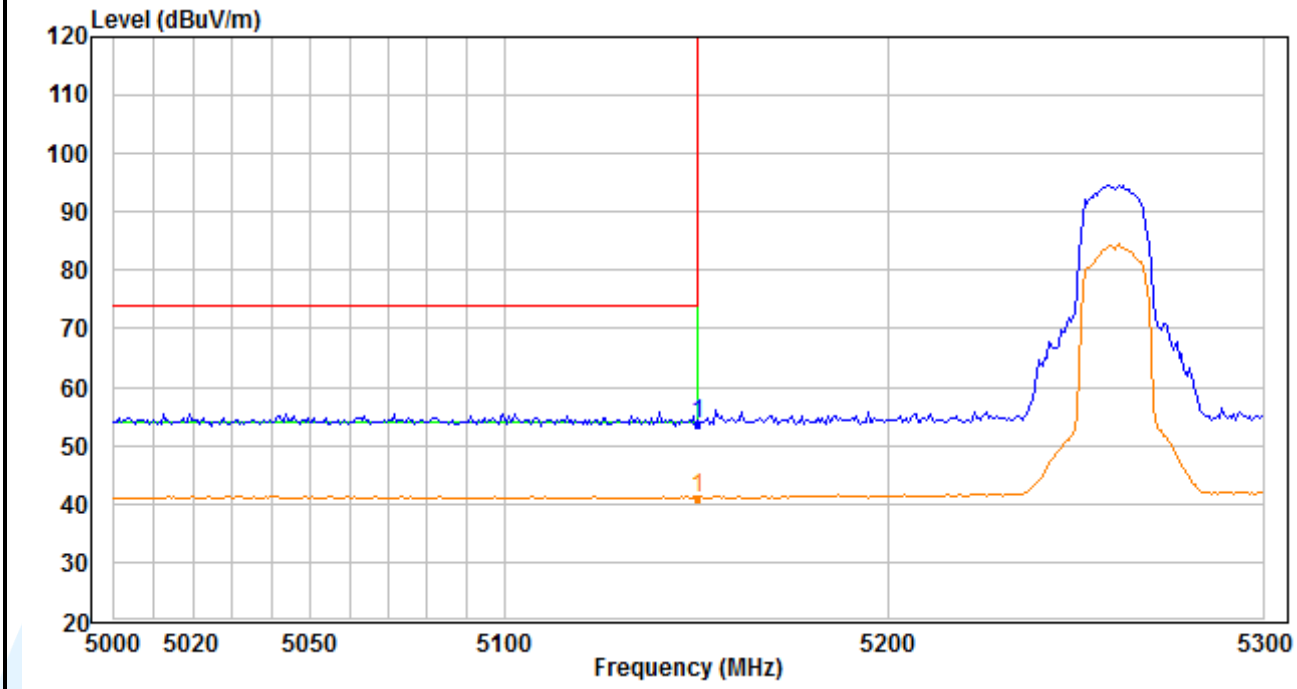
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	54.89	74.00	41.61	54.00	Pass

Test Channel:	Channel 48	Ant. Polar. :	Vertical



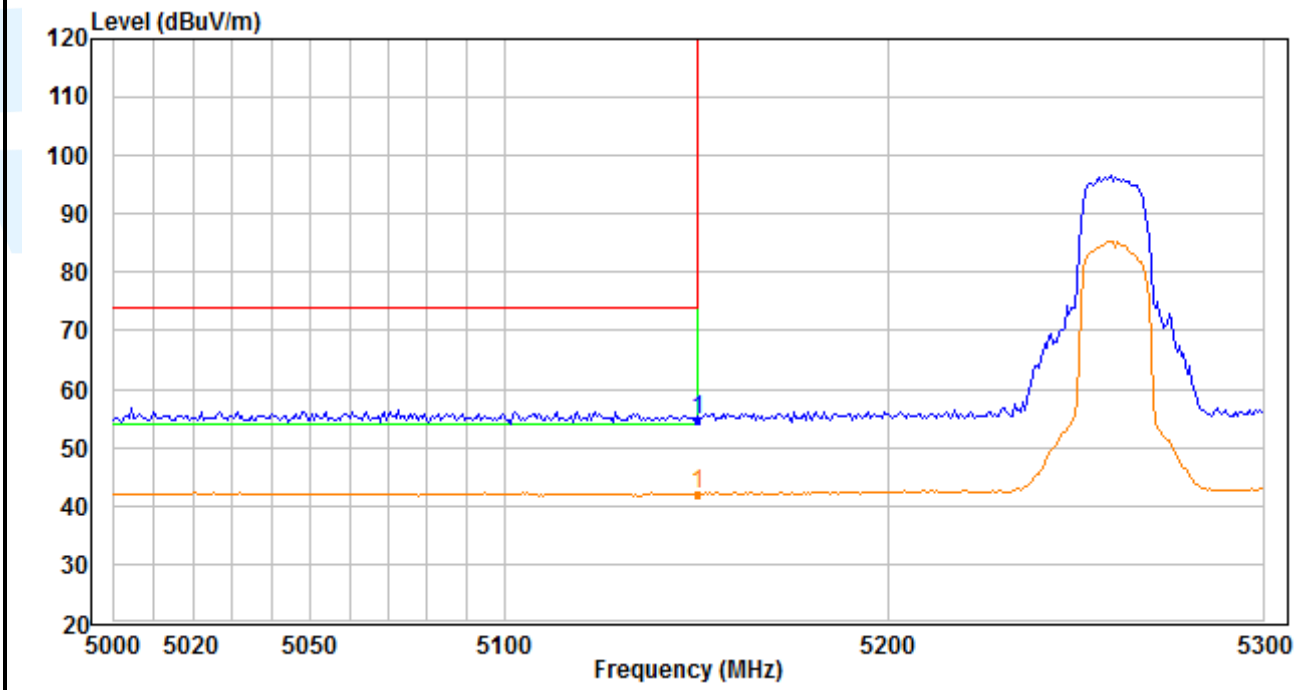
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	55.45	74.00	42.68	54.00	Pass

Test Channel:	Channel 52	Ant. Polar. :	Horizontal



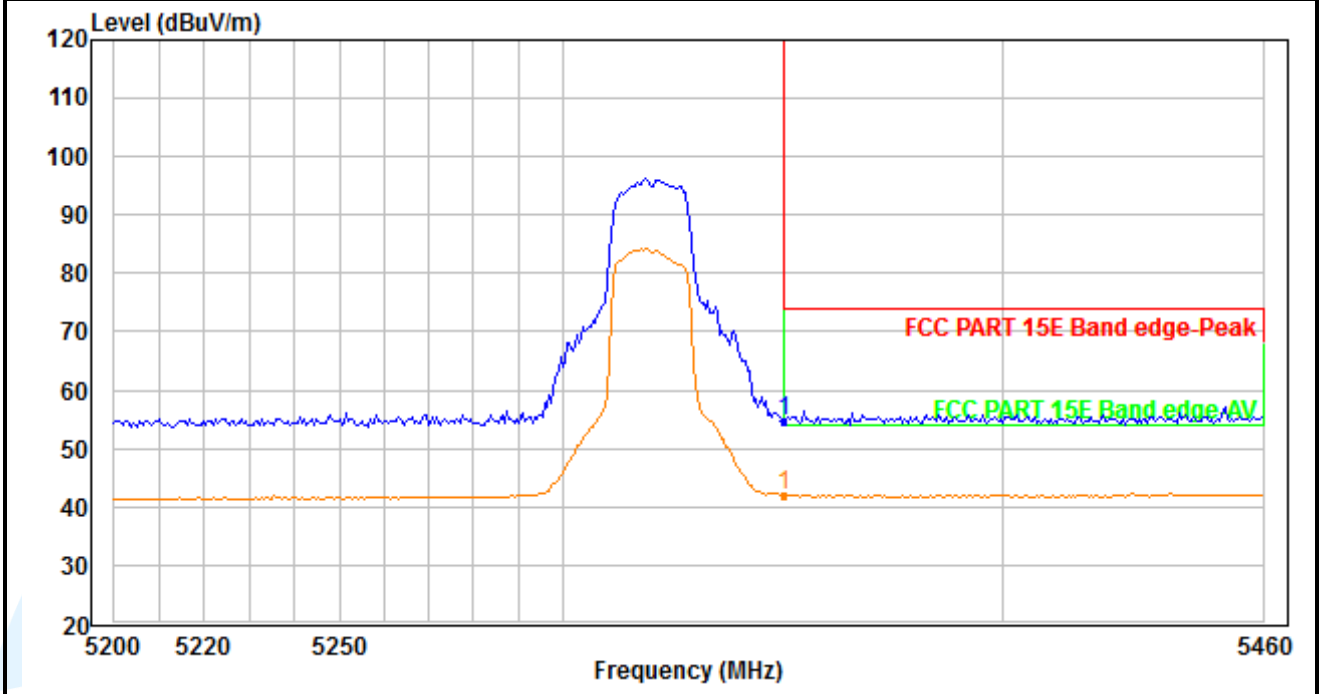
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	53.66	74.00	41.01	54.00	Pass

Test Channel:	Channel 52	Ant. Polar. :	Vertical



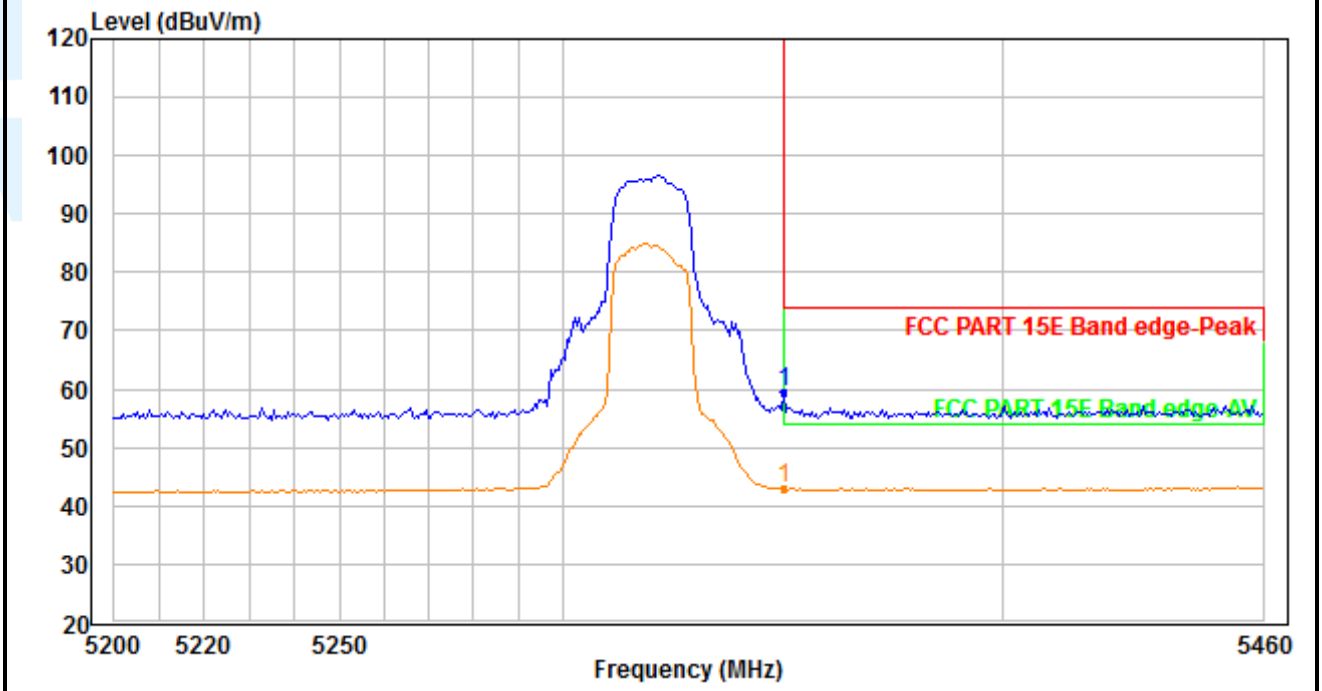
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	54.70	74.00	42.05	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



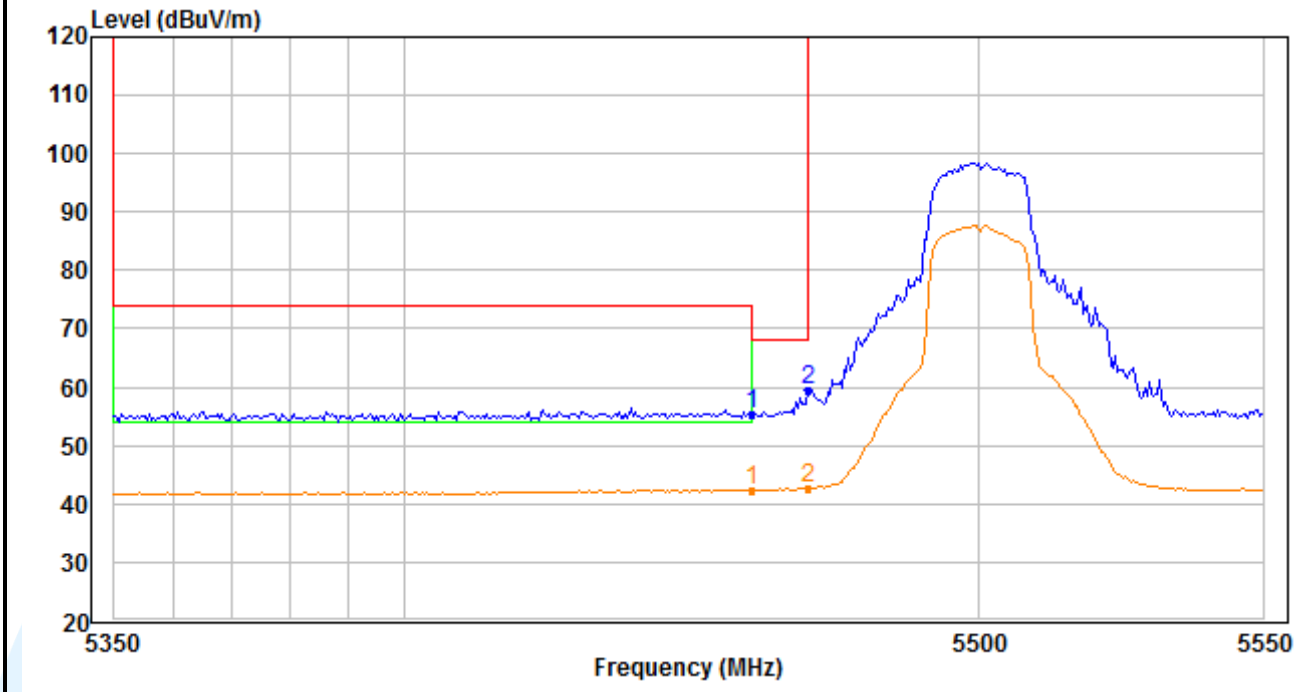
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	54.65	74.00	41.89	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



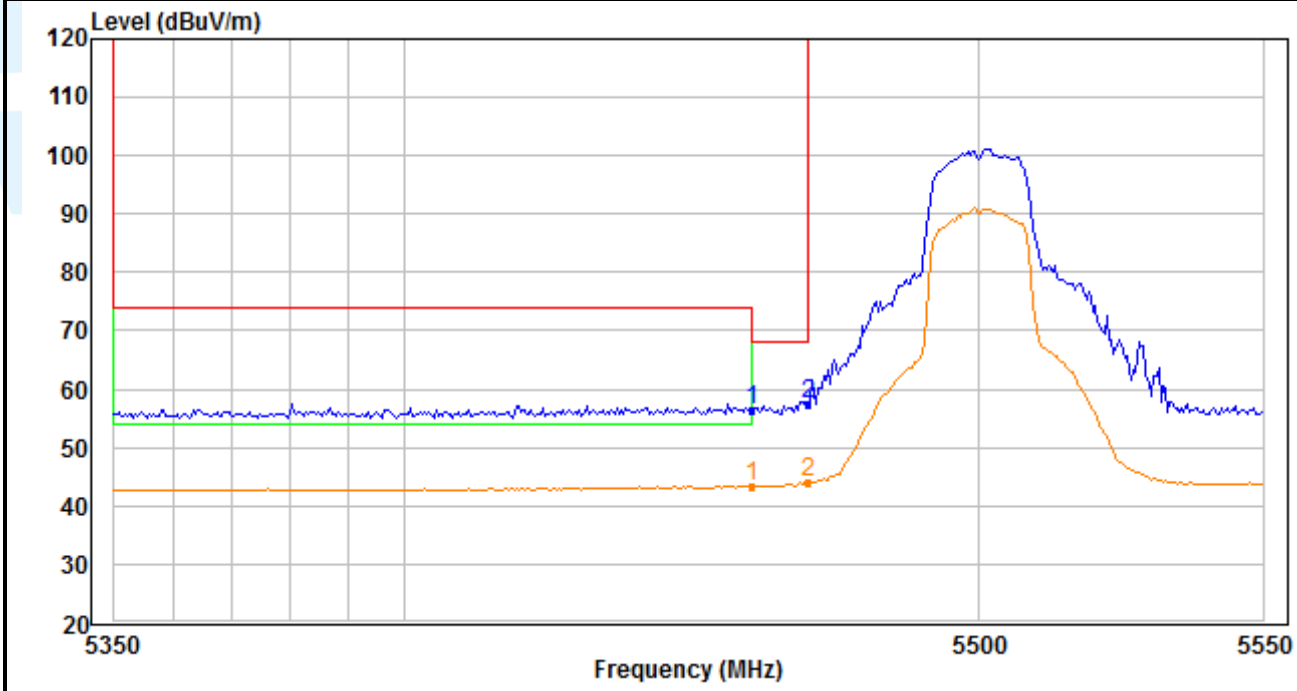
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	59.50	74.00	42.95	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



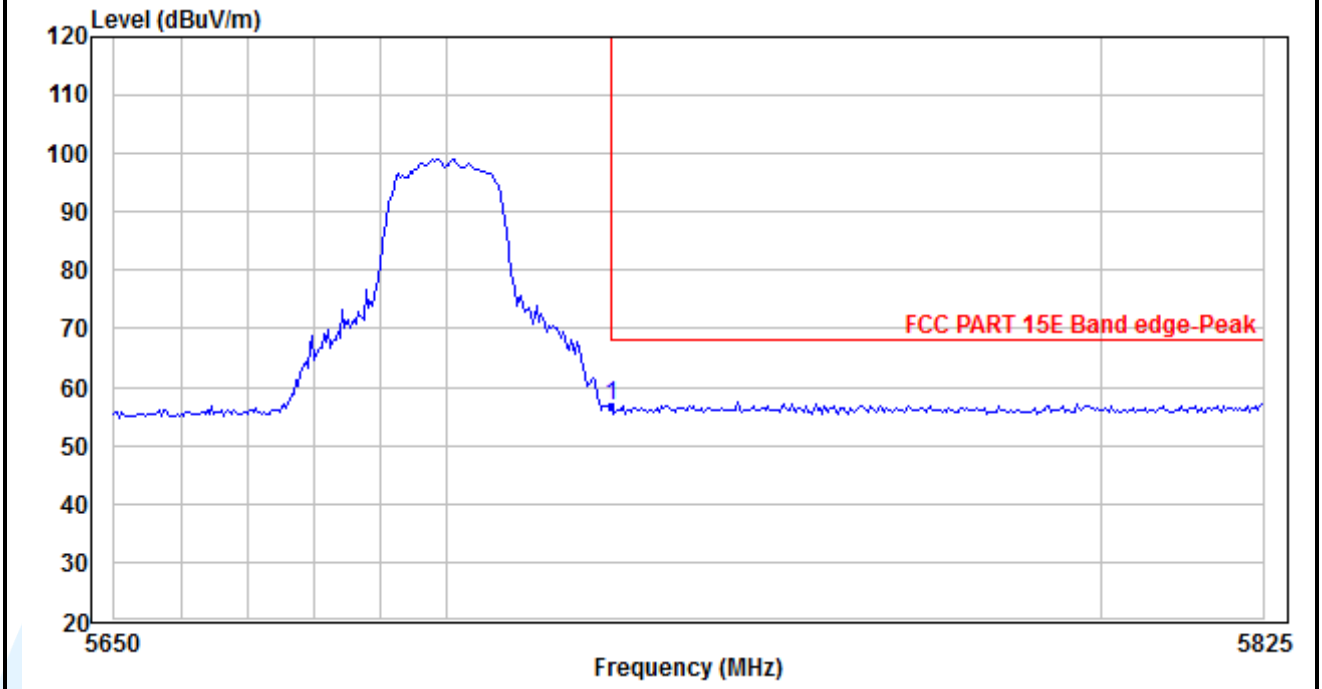
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	55.33	74.00	42.42	54.00	Pass
5470.0000	59.43	74.00	42.55	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



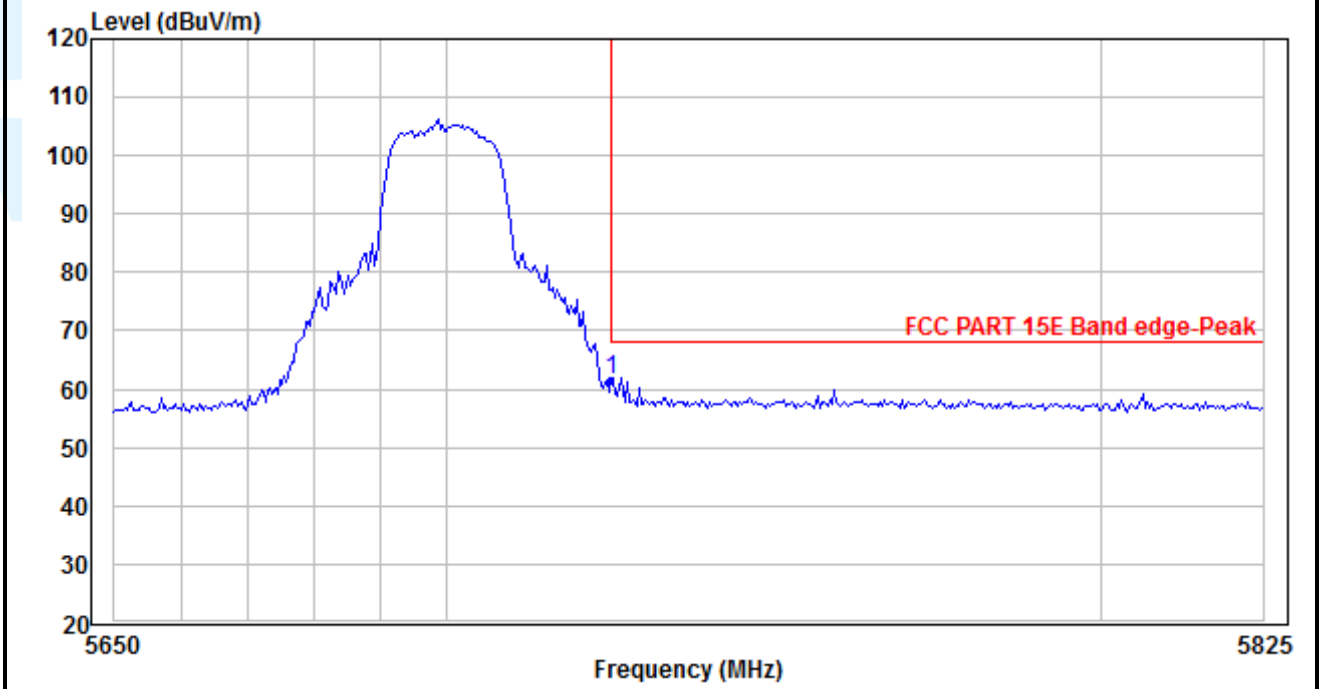
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	56.30	74.00	43.26	54.00	Pass
5470.0000	57.38	74.00	43.95	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



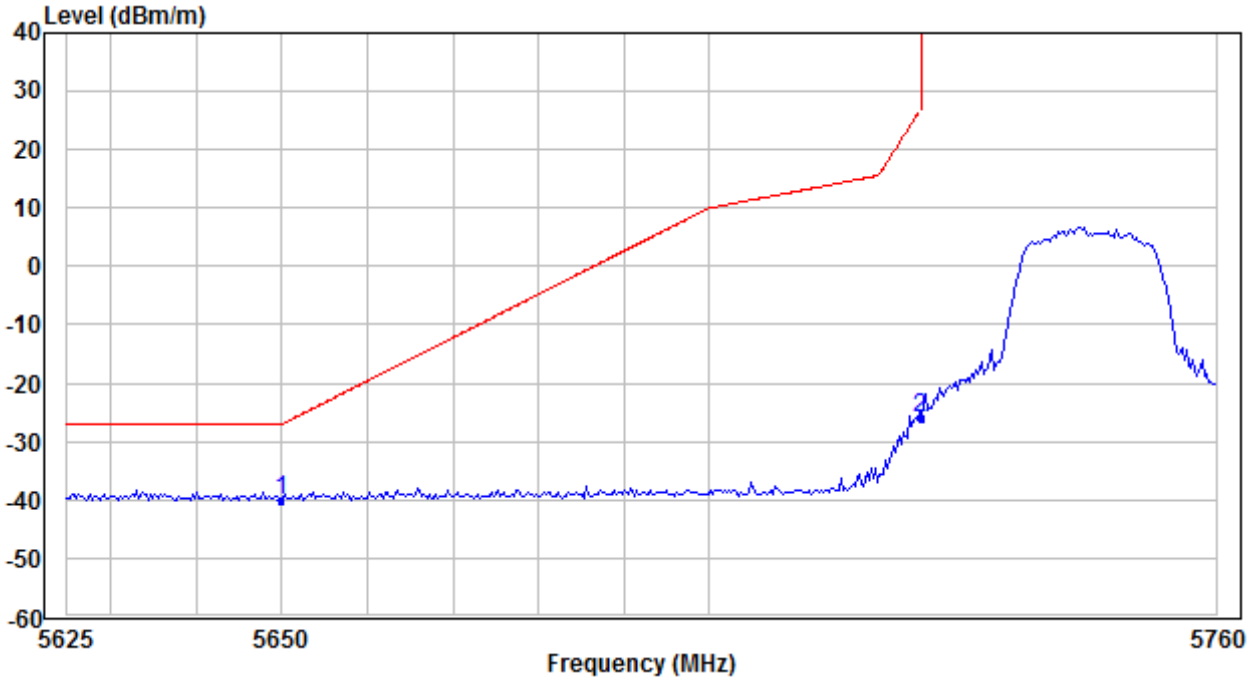
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	56.65	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



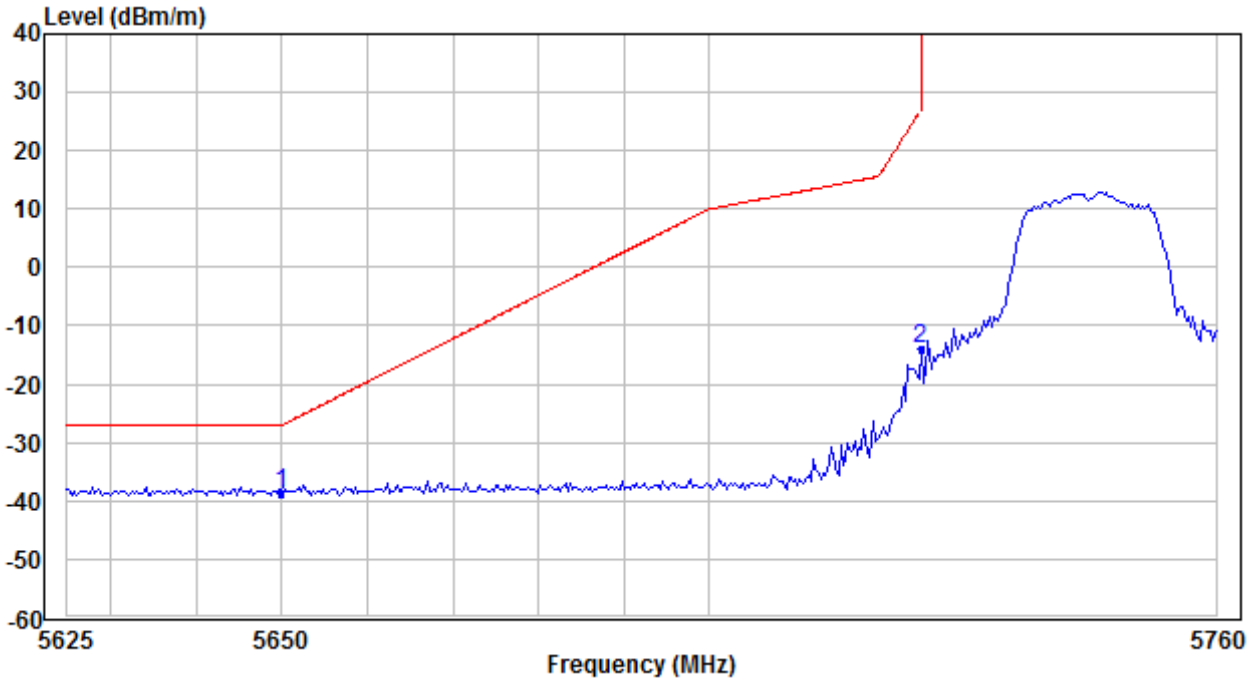
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	61.66	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



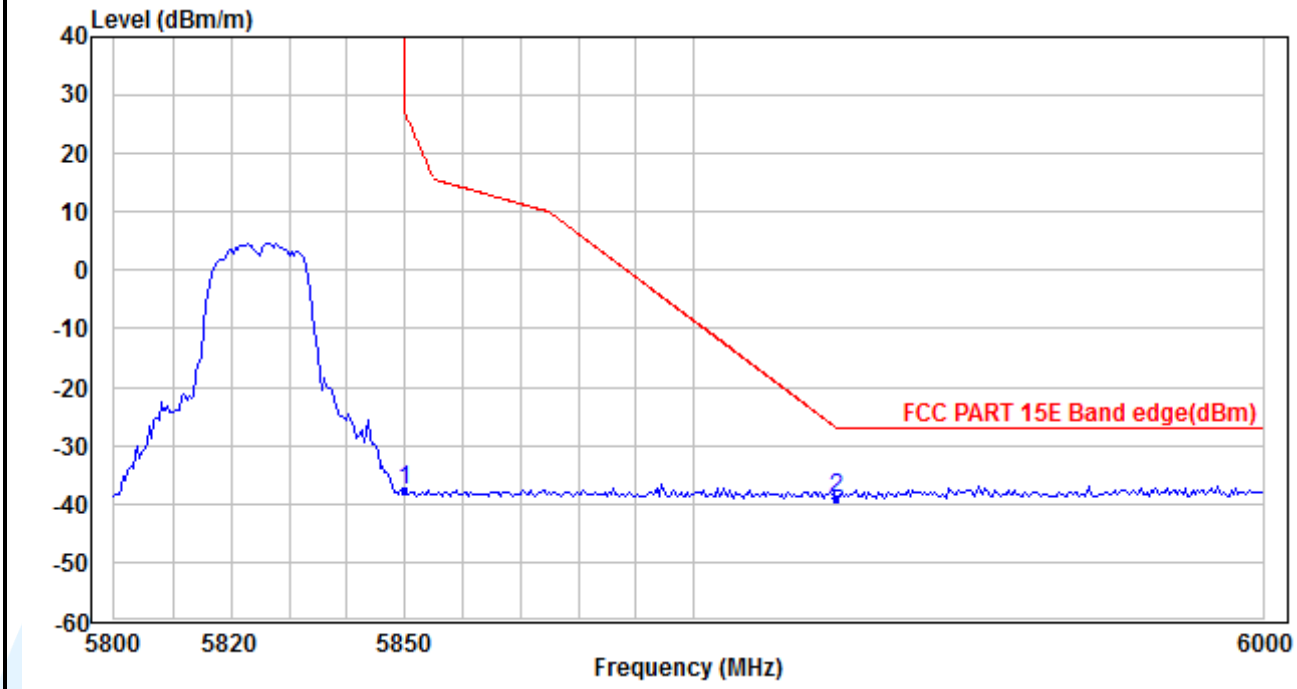
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-40.04	-27.00	Pass
5725.0000	-26.04	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



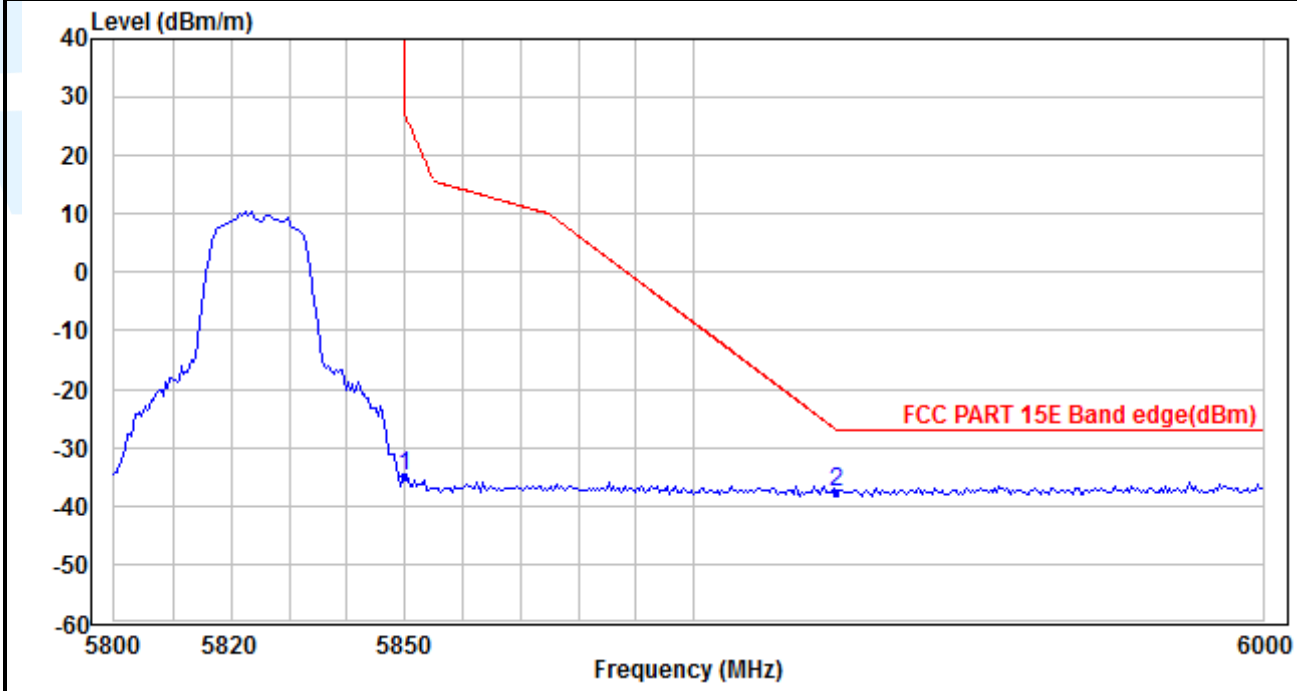
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-38.71	-27.00	Pass
5725.0000	-13.85	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-37.77	26.94	Pass
5925.0000	-38.93	-27.00	Pass

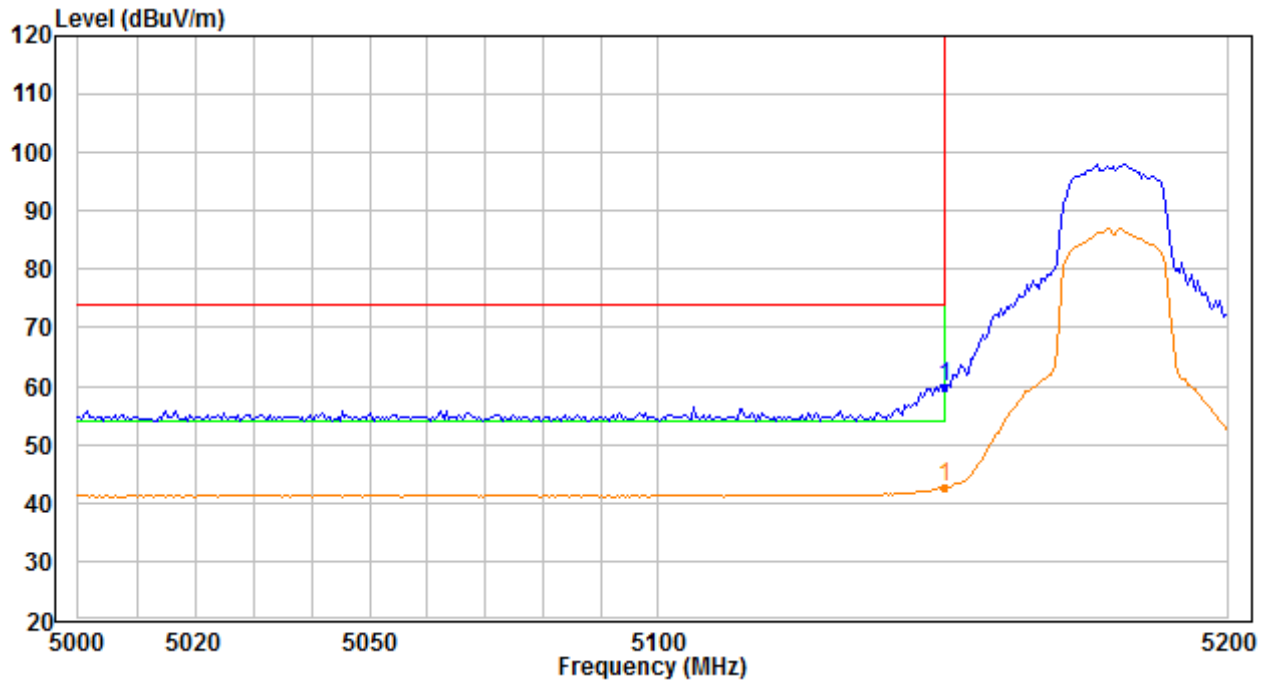
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-35.08	26.94	Pass
5925.0000	-37.77	-27.00	Pass

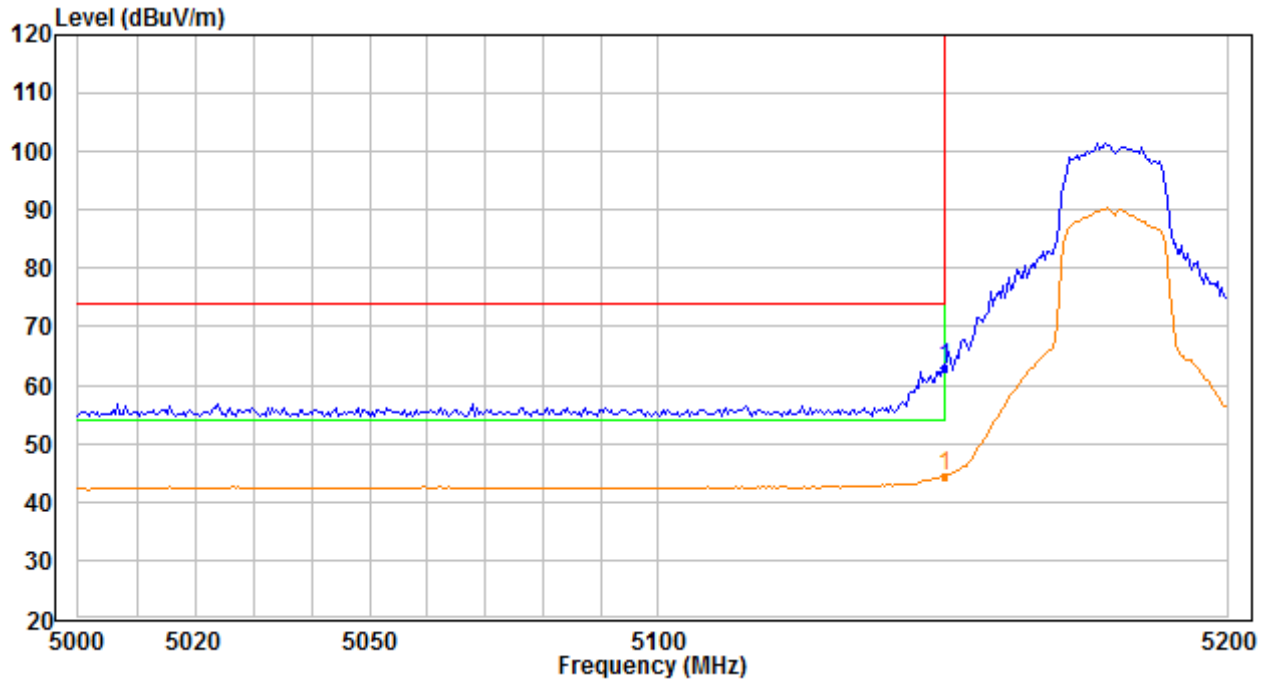
IEEE 802.11n-HT20

Test Channel:	Channel 36	Ant. Polar. :	Horizontal



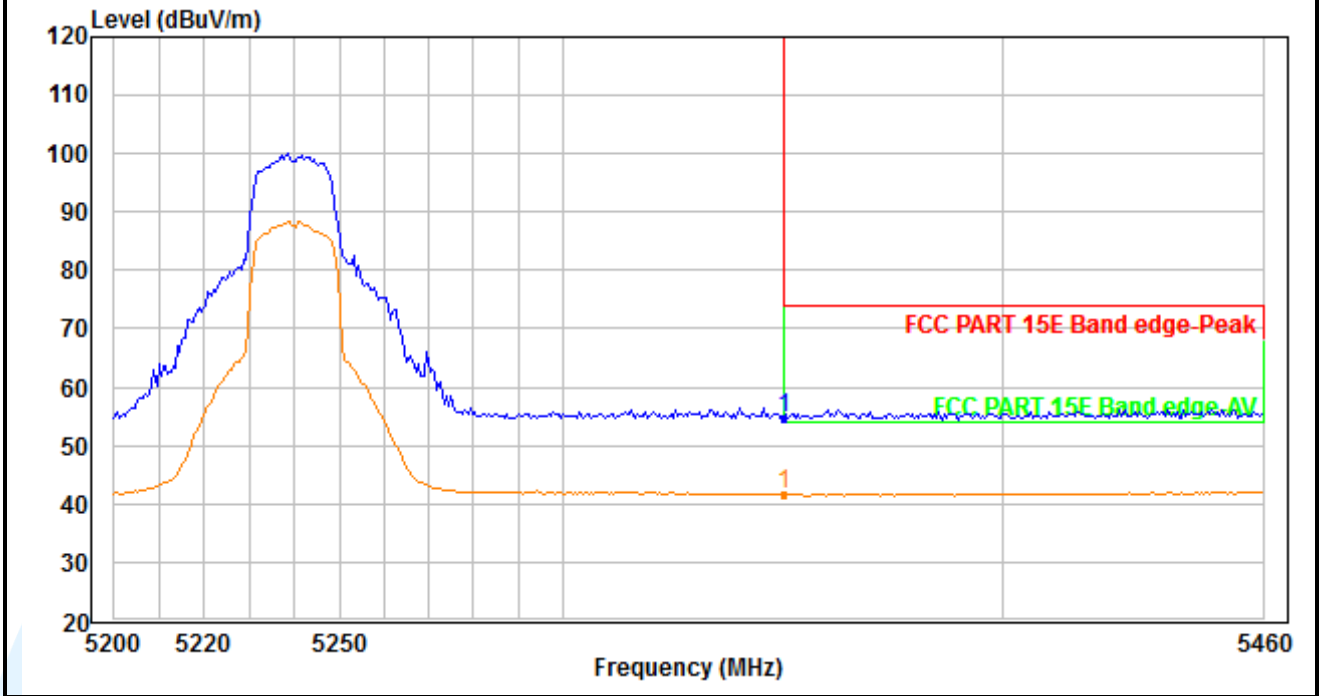
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	59.74	74.00	42.74	54.00	Pass

Test Channel:	Channel 36	Ant. Polar. :	Vertical



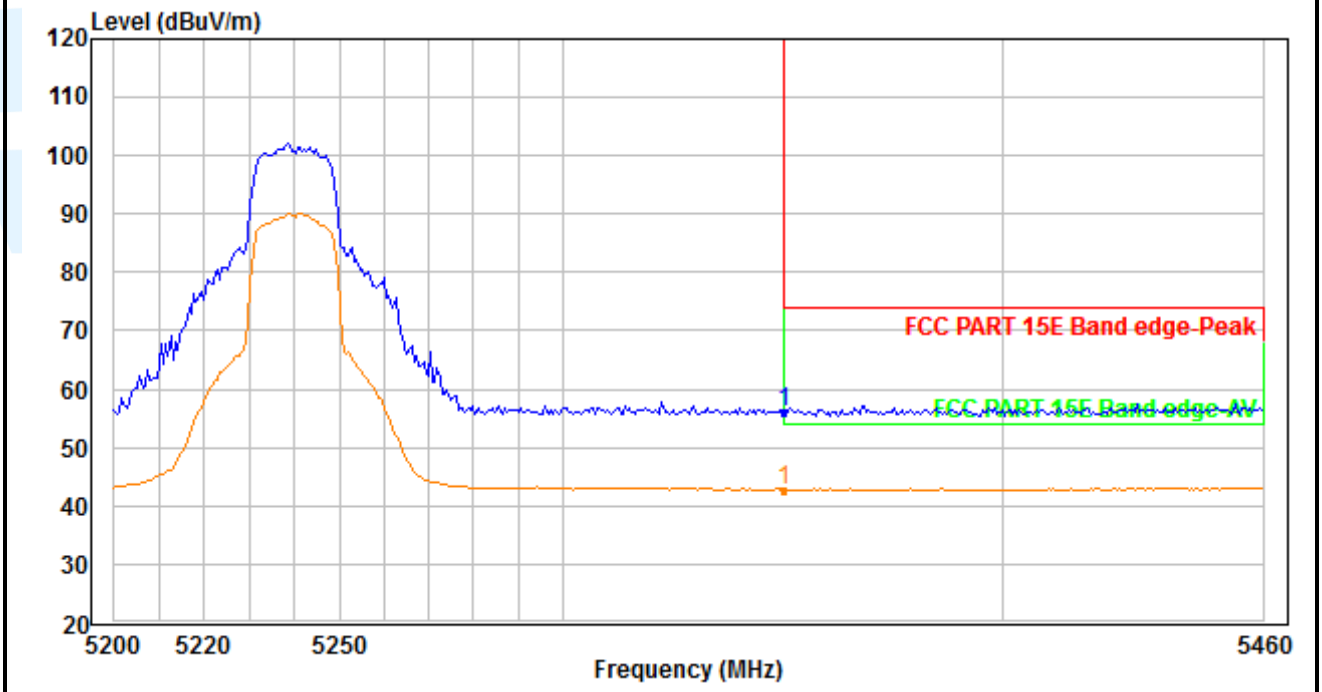
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	62.88	74.00	44.37	54.00	Pass

Test Channel:	Channel 48	Ant. Polar. :	Horizontal



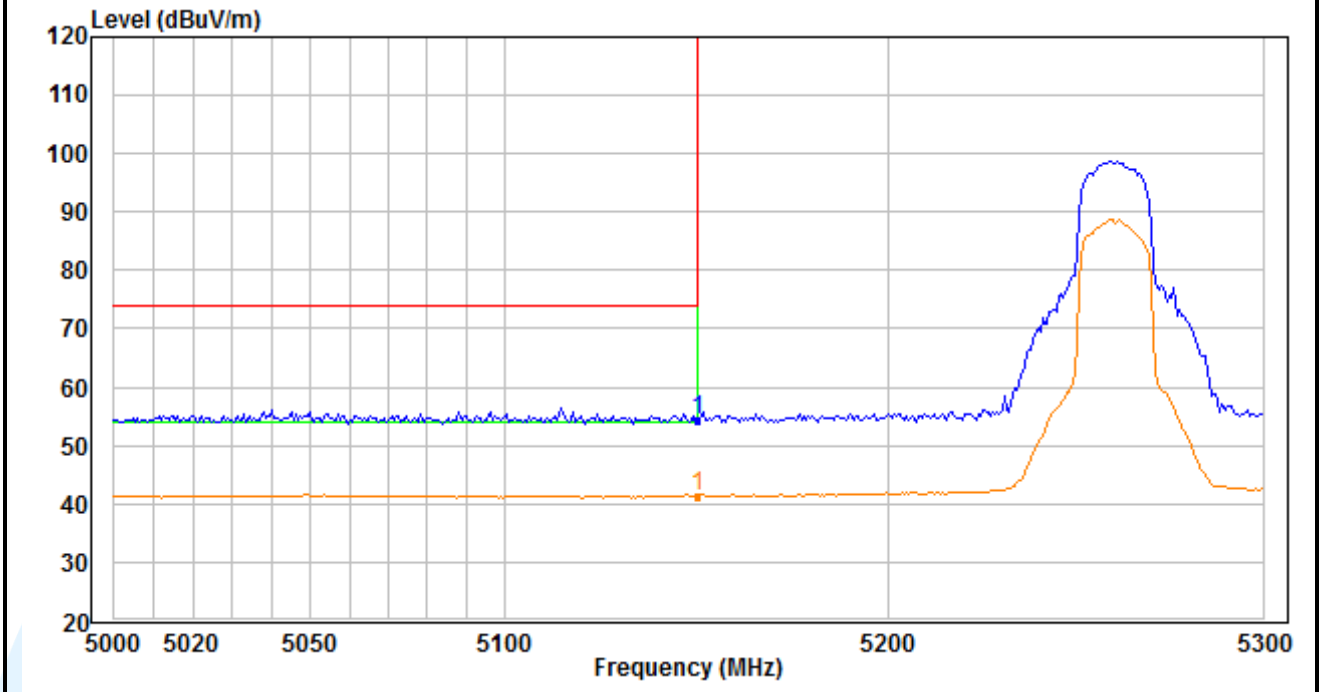
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	54.87	74.00	41.57	54.00	Pass

Test Channel:	Channel 48	Ant. Polar. :	Vertical



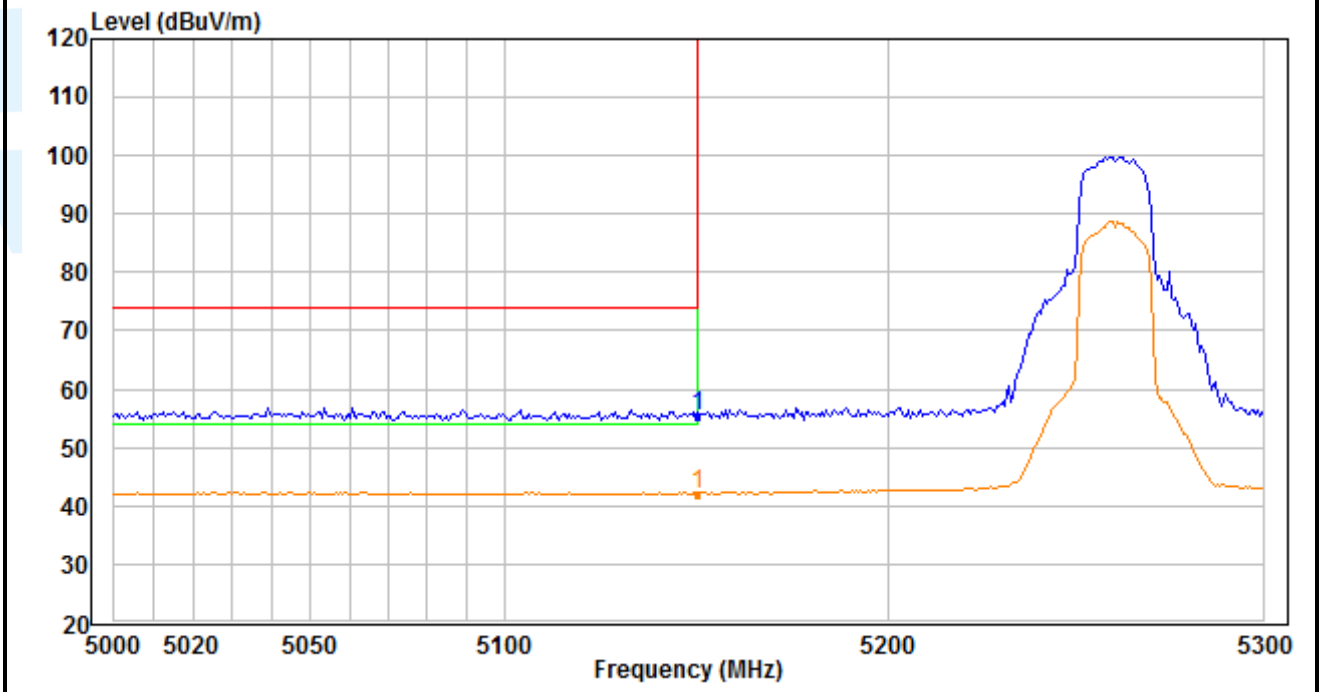
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	55.95	74.00	42.62	54.00	Pass

Test Channel:	Channel 52	Ant. Polar. :	Horizontal



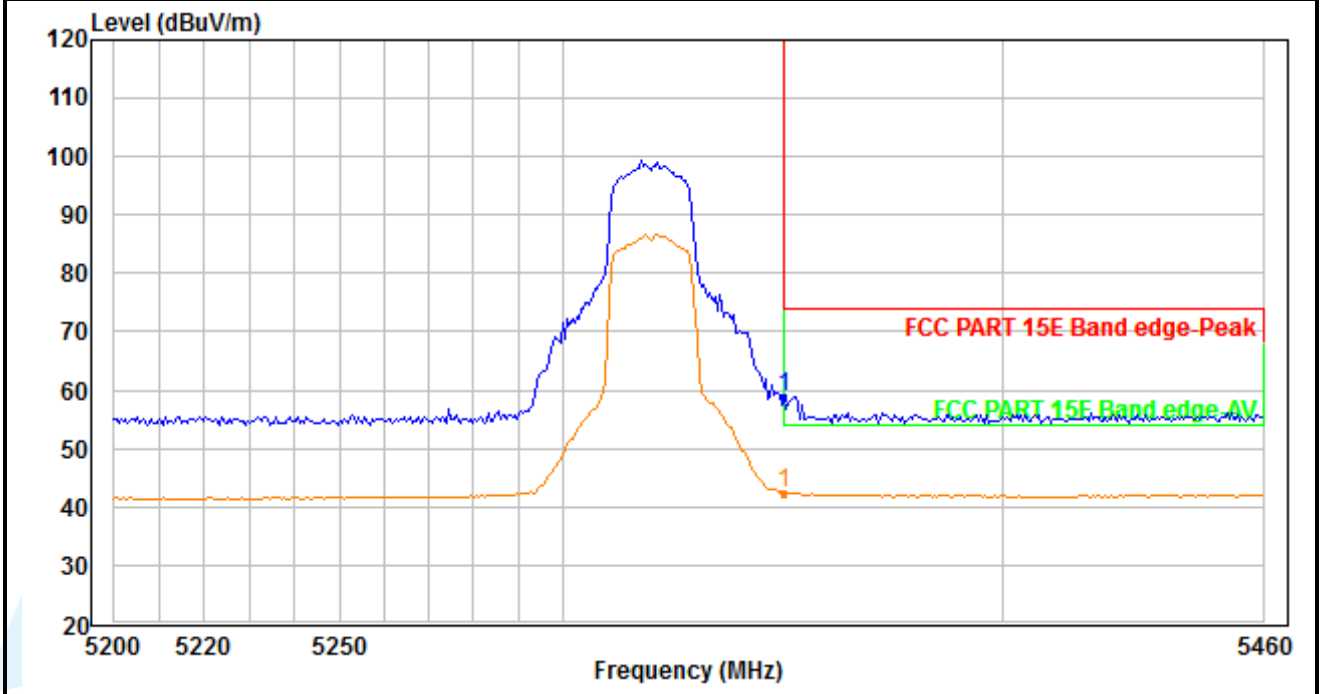
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	54.35	74.00	41.47	54.00	Pass

Test Channel:	Channel 52	Ant. Polar. :	Vertical



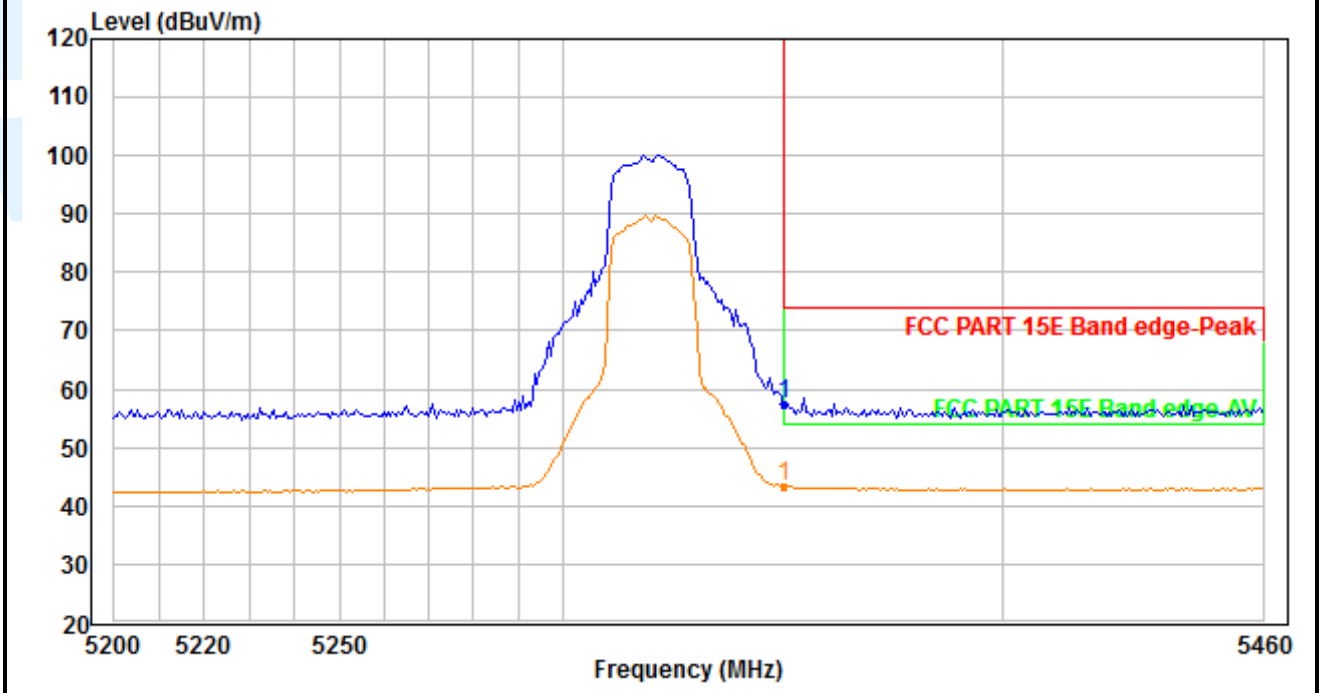
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	55.42	74.00	42.16	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Horizontal



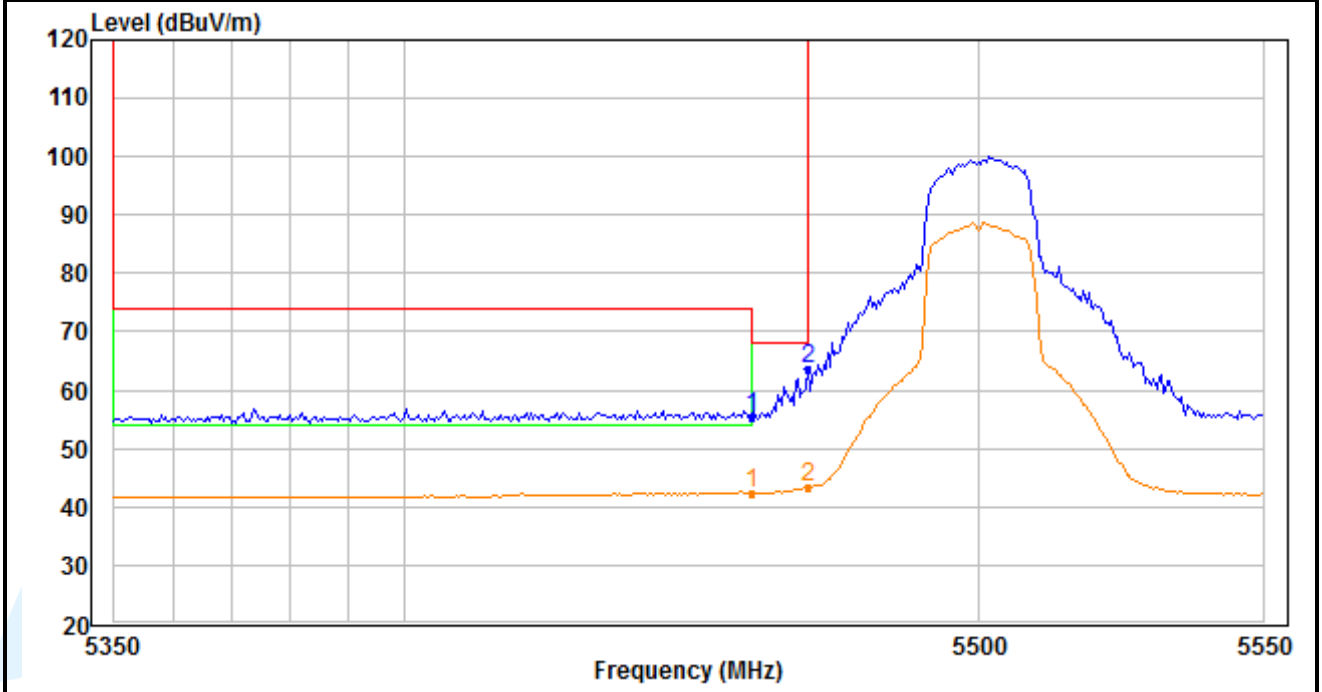
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	58.87	74.00	42.49	54.00	Pass

Test Channel:	Channel 64	Ant. Polar. :	Vertical



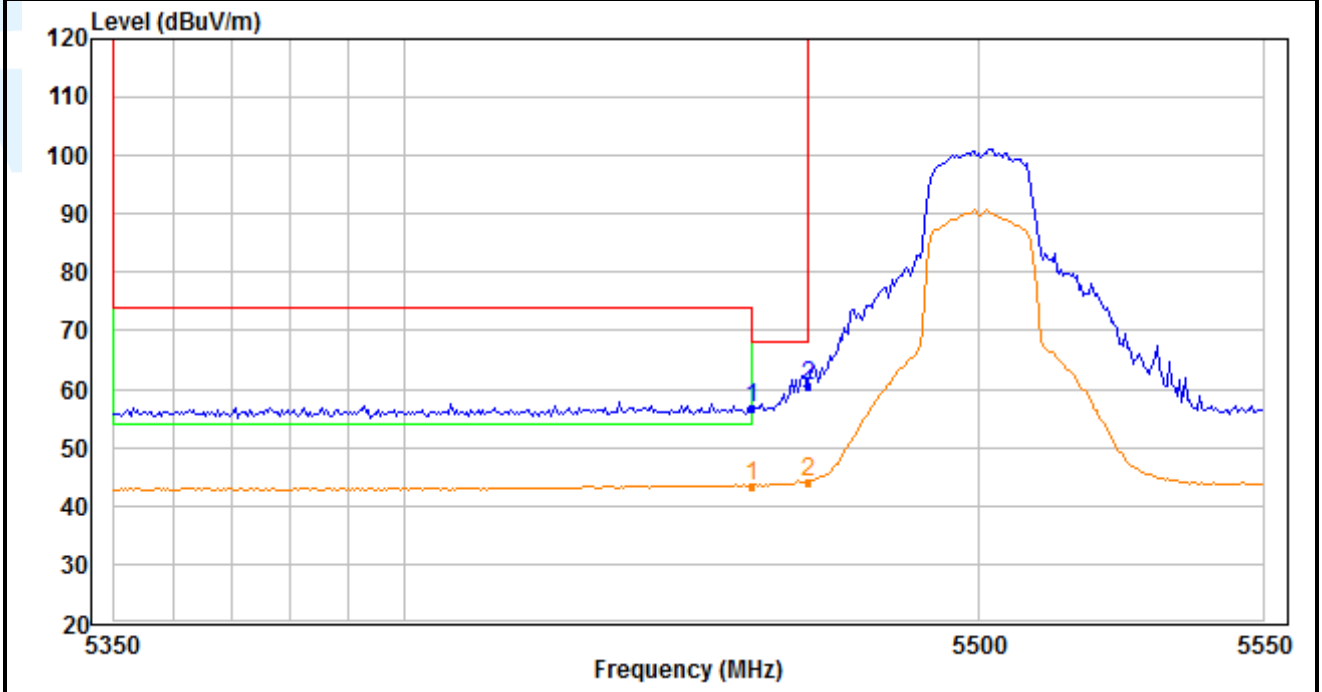
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	57.48	74.00	43.42	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Horizontal



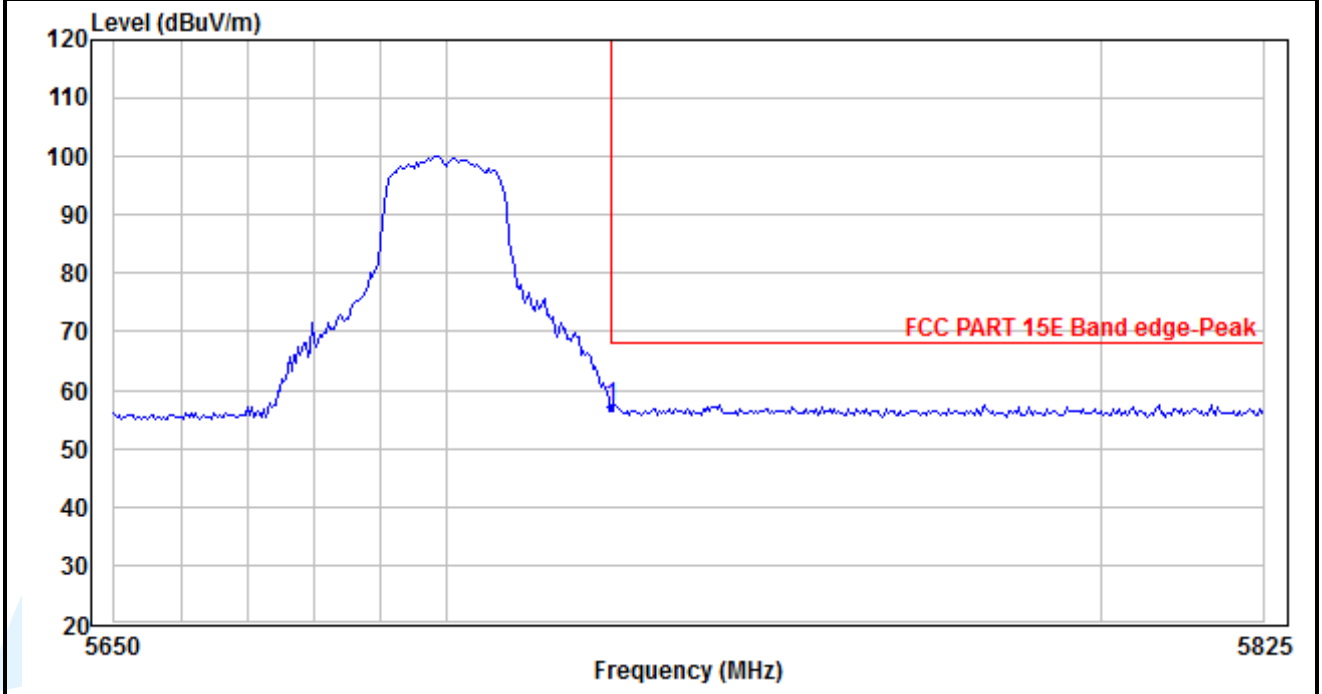
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	55.45	74.00	42.37	54.00	Pass
5470.0000	63.60	74.00	43.37	54.00	Pass

Test Channel:	Channel 100	Ant. Polar. :	Vertical



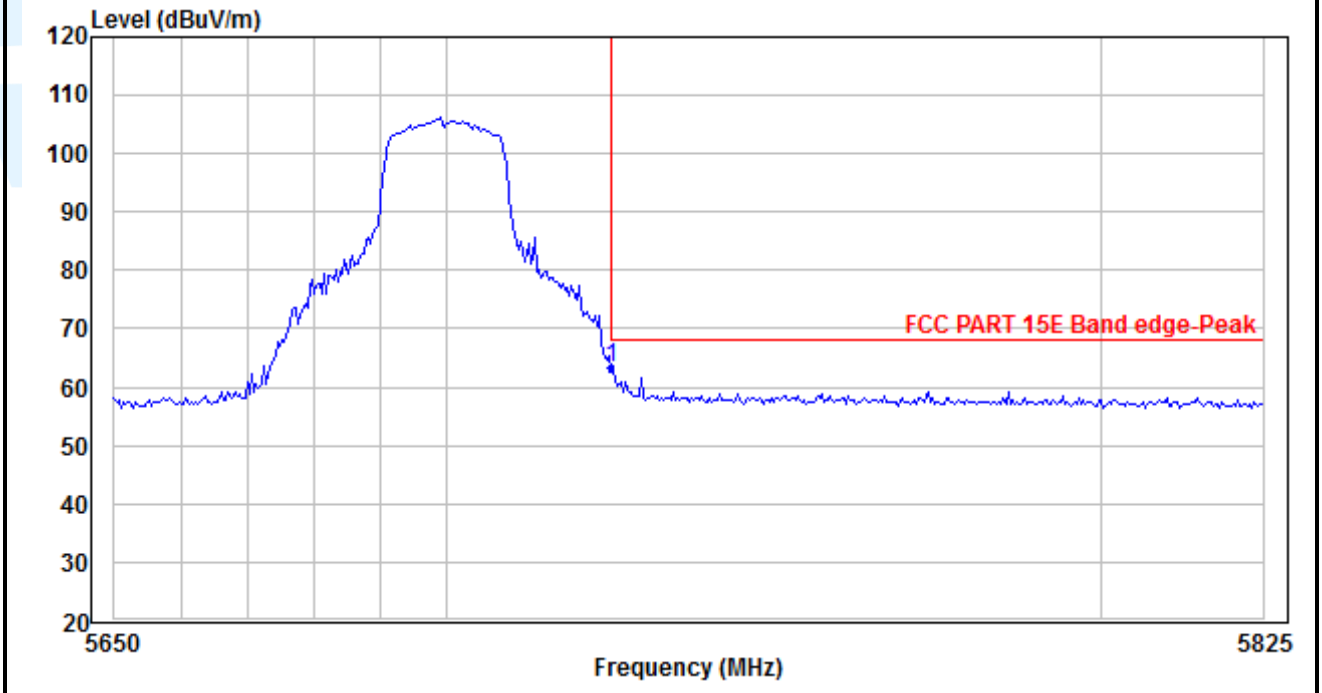
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	56.65	74.00	43.51	54.00	Pass
5470.0000	60.54	74.00	44.22	54.00	Pass

Test Channel:	Channel 140	Ant. Polar. :	Horizontal



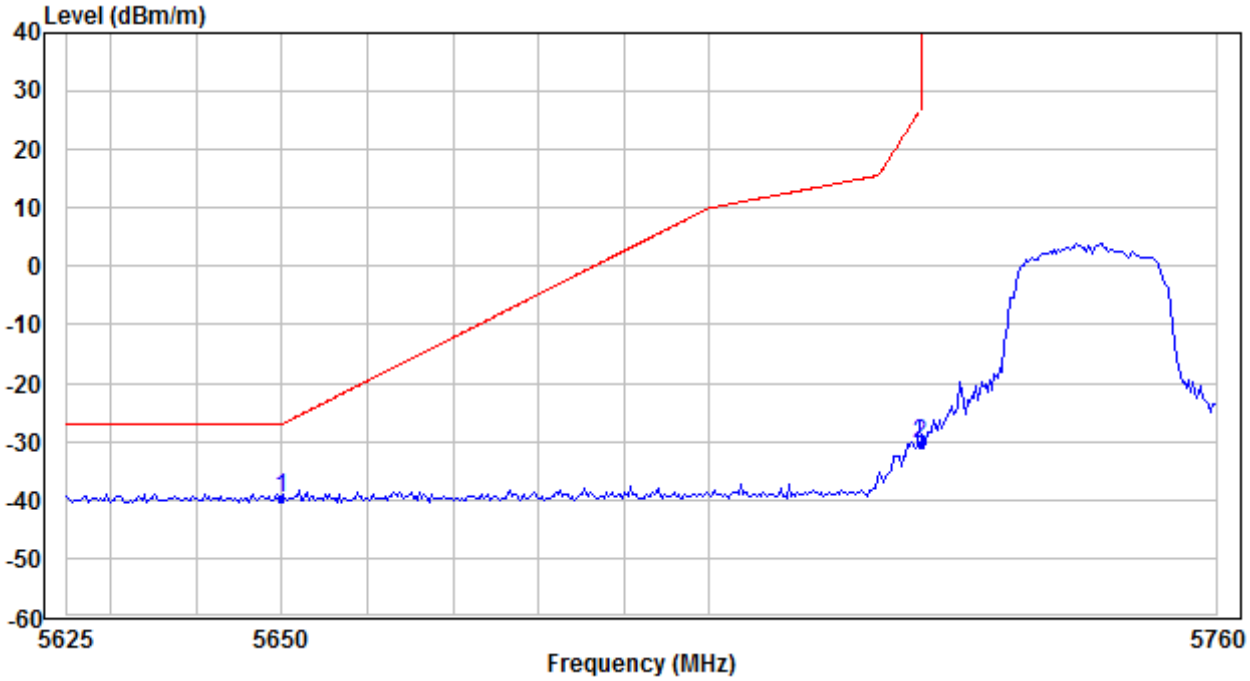
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	57.26	68.20	Pass

Test Channel:	Channel 140	Ant. Polar. :	Vertical



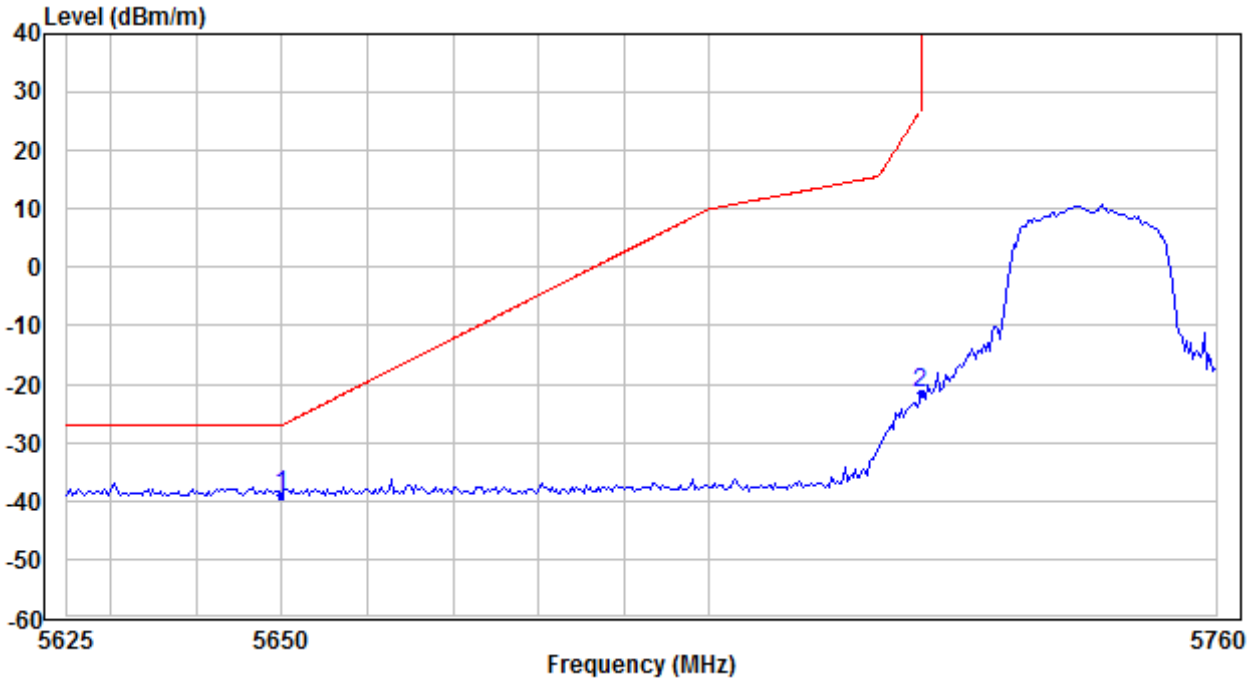
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	63.22	68.20	Pass

Test Channel:	Channel 149	Ant. Polar. :	Horizontal



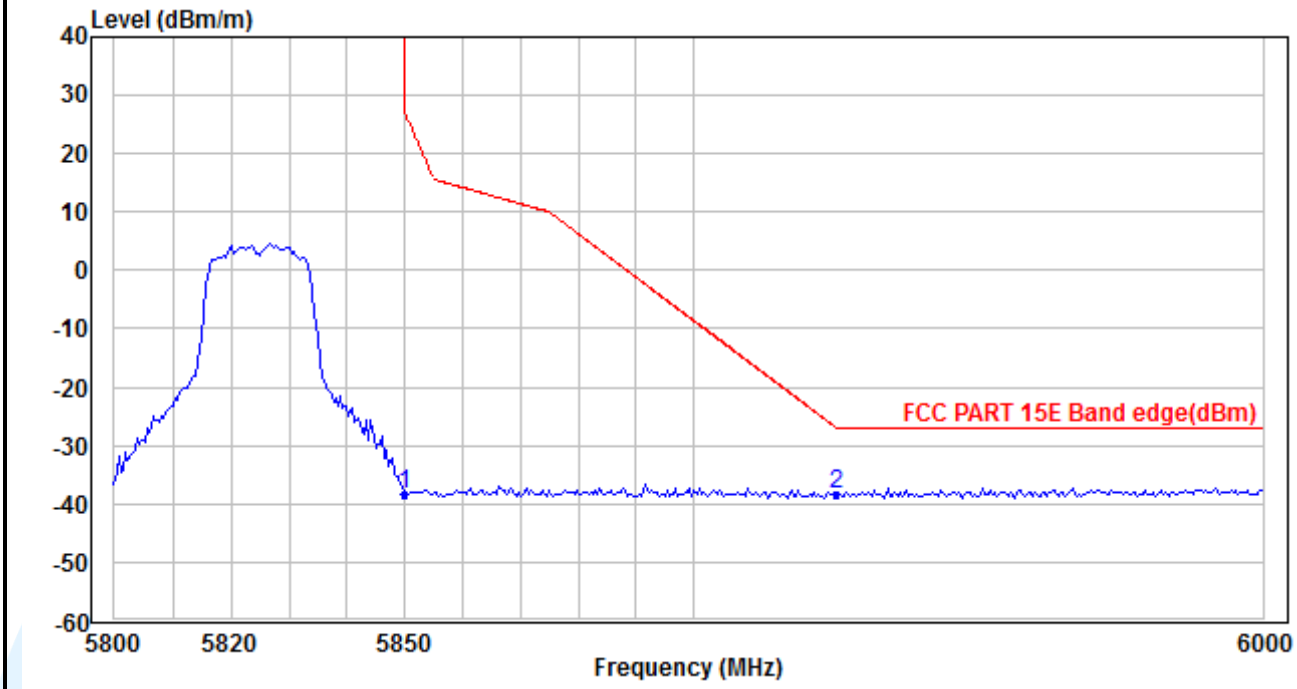
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-39.70	-27.00	Pass
5725.0000	-30.51	26.97	Pass

Test Channel:	Channel 149	Ant. Polar. :	Vertical



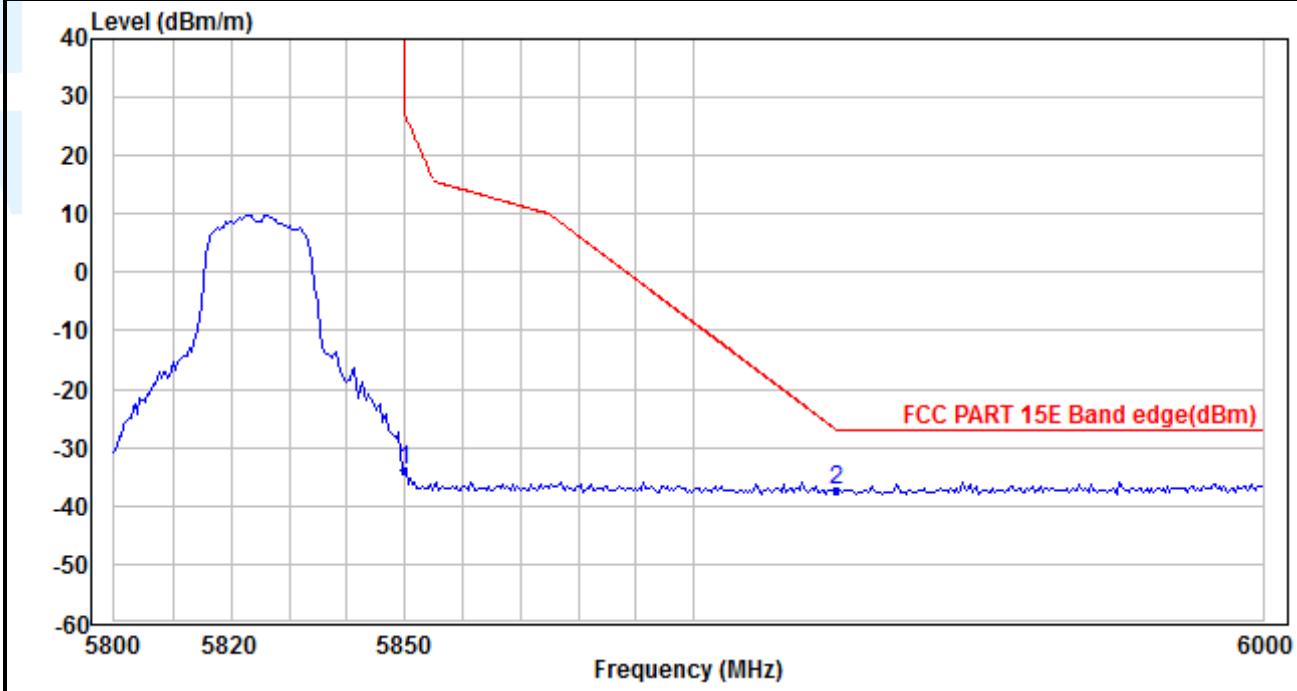
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-38.99	-27.00	Pass
5725.0000	-21.52	26.97	Pass

Test Channel:	Channel 165	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-38.37	26.94	Pass
5925.0000	-38.24	-27.00	Pass

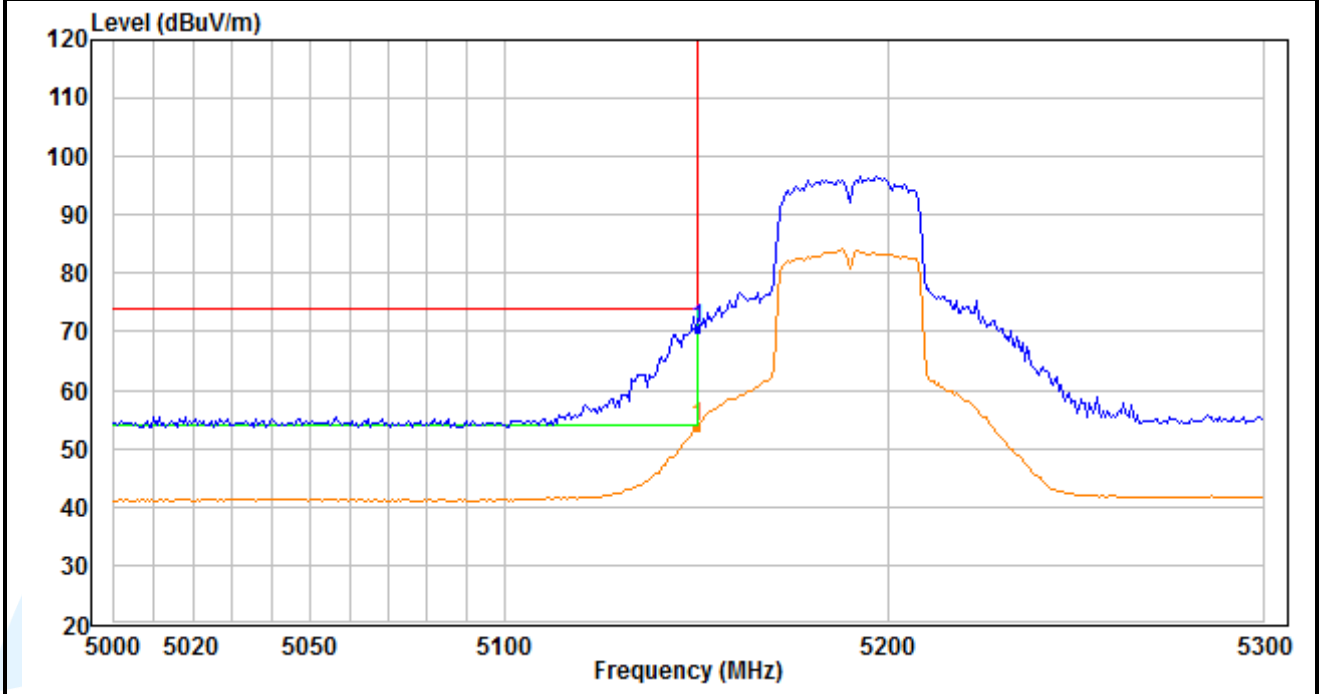
Test Channel:	Channel 165	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.0000	-33.77	26.94	Pass
5925.0000	-37.39	-27.00	Pass

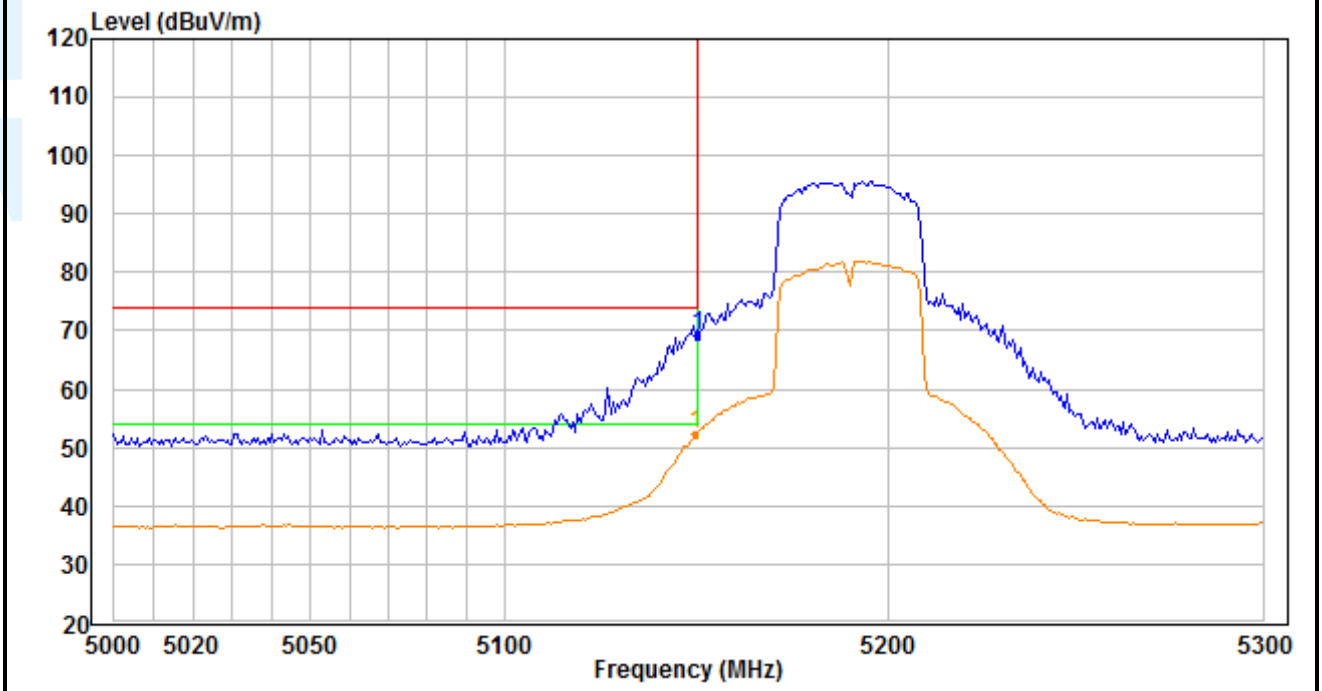
IEEE 802.11n-HT40

Test Channel:	Channel 38	Ant. Polar. :	Horizontal



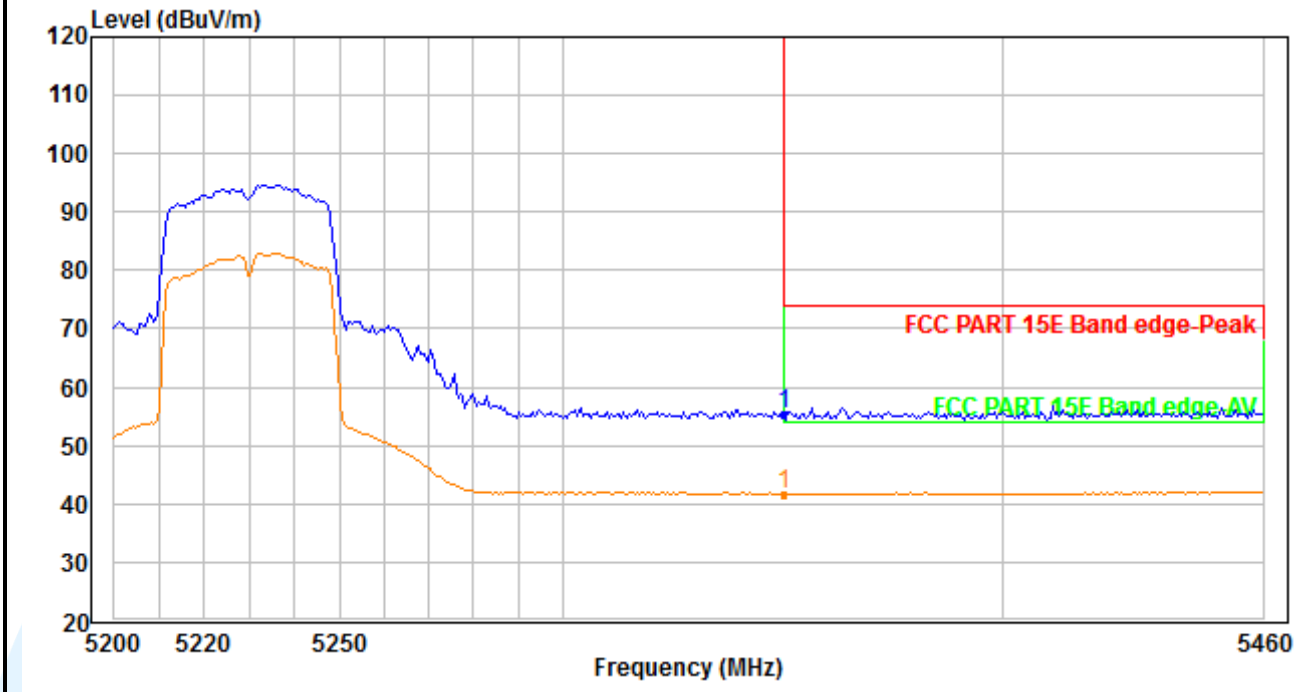
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	70.45	74.00	53.55	54.00	Pass

Test Channel:	Channel 38	Ant. Polar. :	Vertical



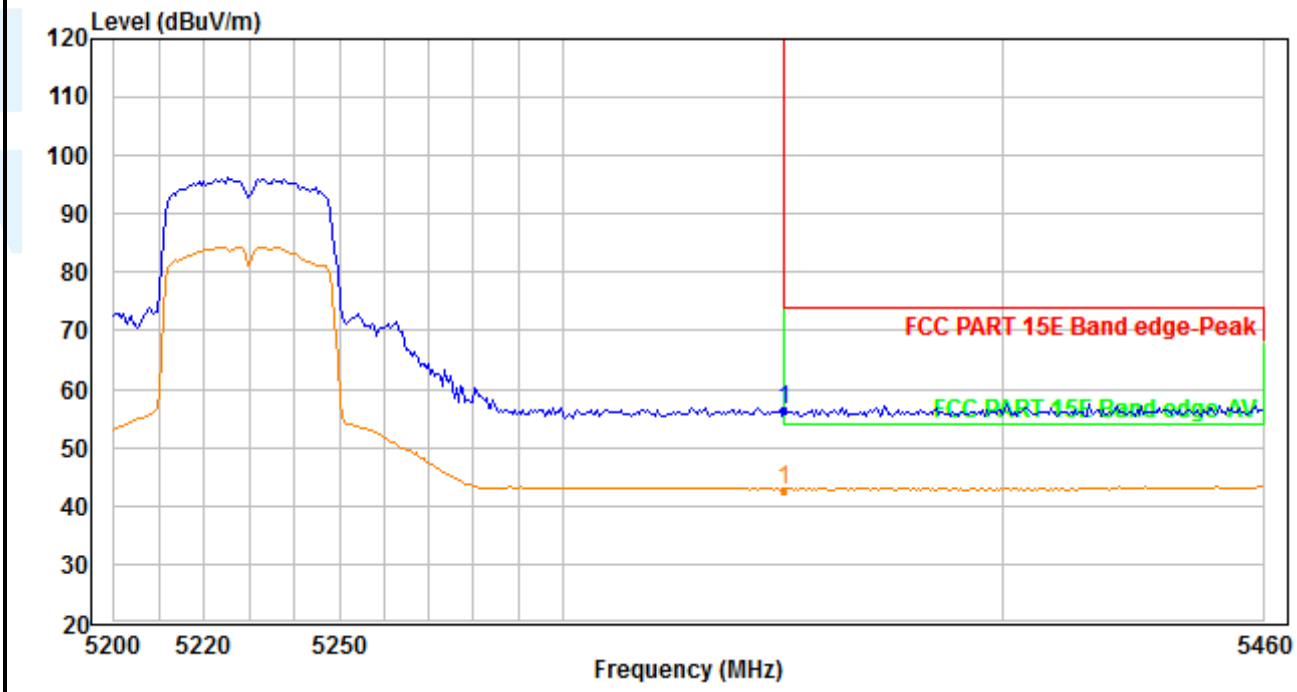
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	69.31	74.00	52.22	54.00	Pass

Test Channel:	Channel 46	Ant. Polar. :	Horizontal



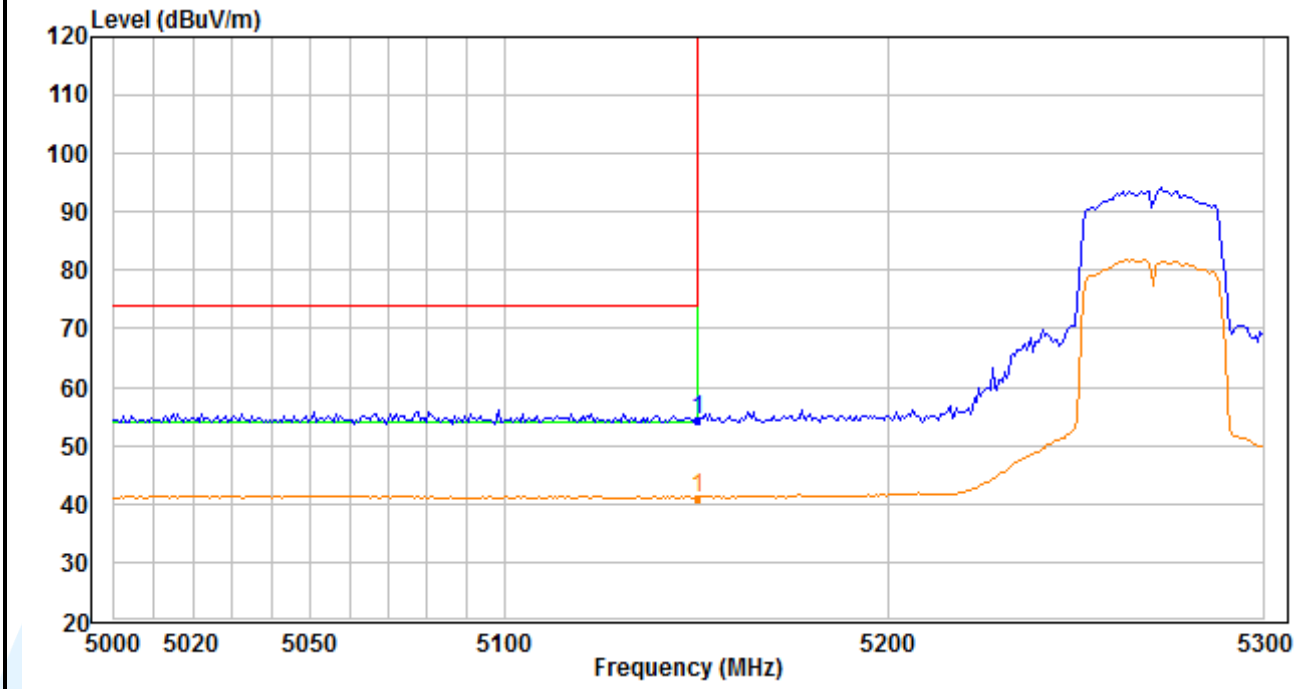
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	55.41	74.00	41.66	54.00	Pass

Test Channel:	Channel 46	Ant. Polar. :	Vertical



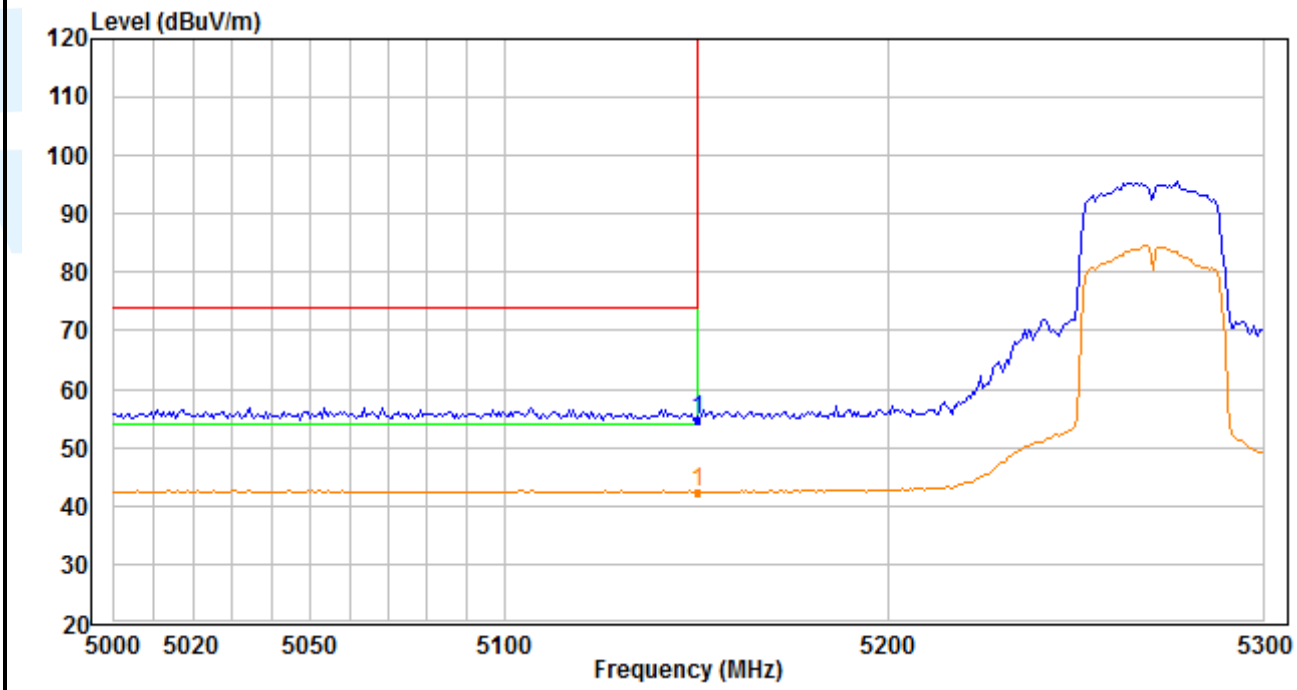
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	56.27	74.00	42.82	54.00	Pass

Test Channel:	Channel 54	Ant. Polar. :	Horizontal



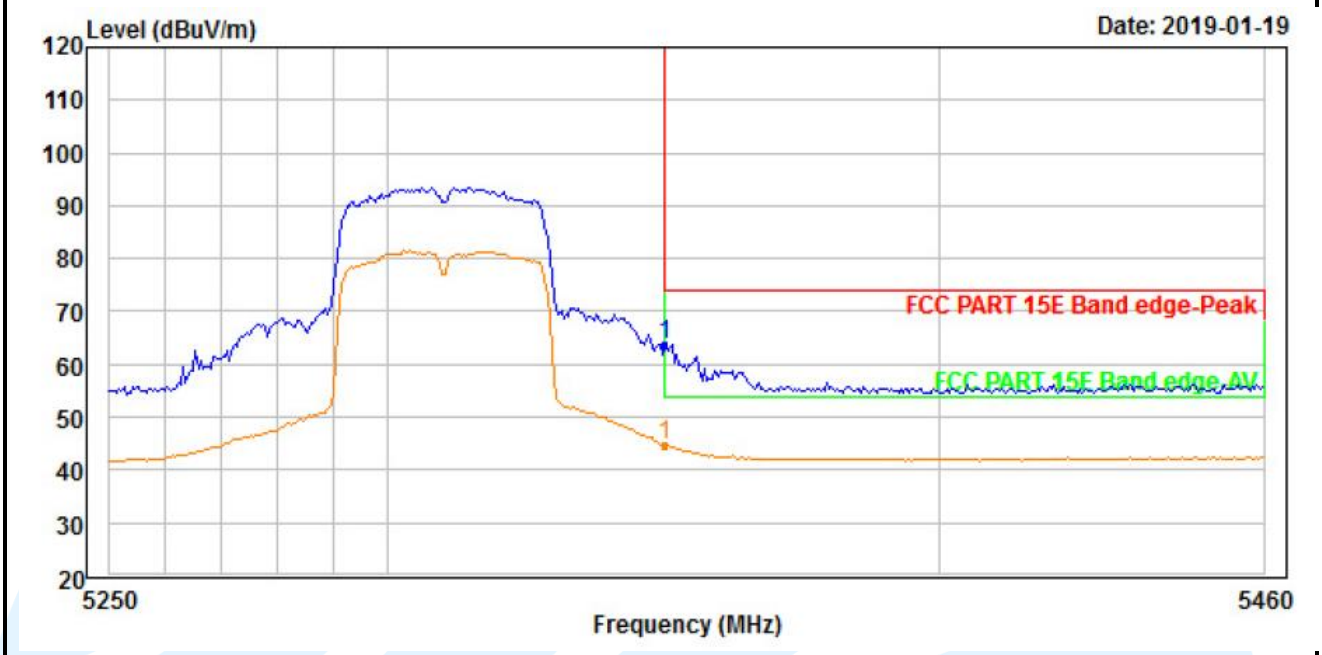
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	54.25	74.00	41.12	54.00	Pass

Test Channel:	Channel 54	Ant. Polar. :	Vertical



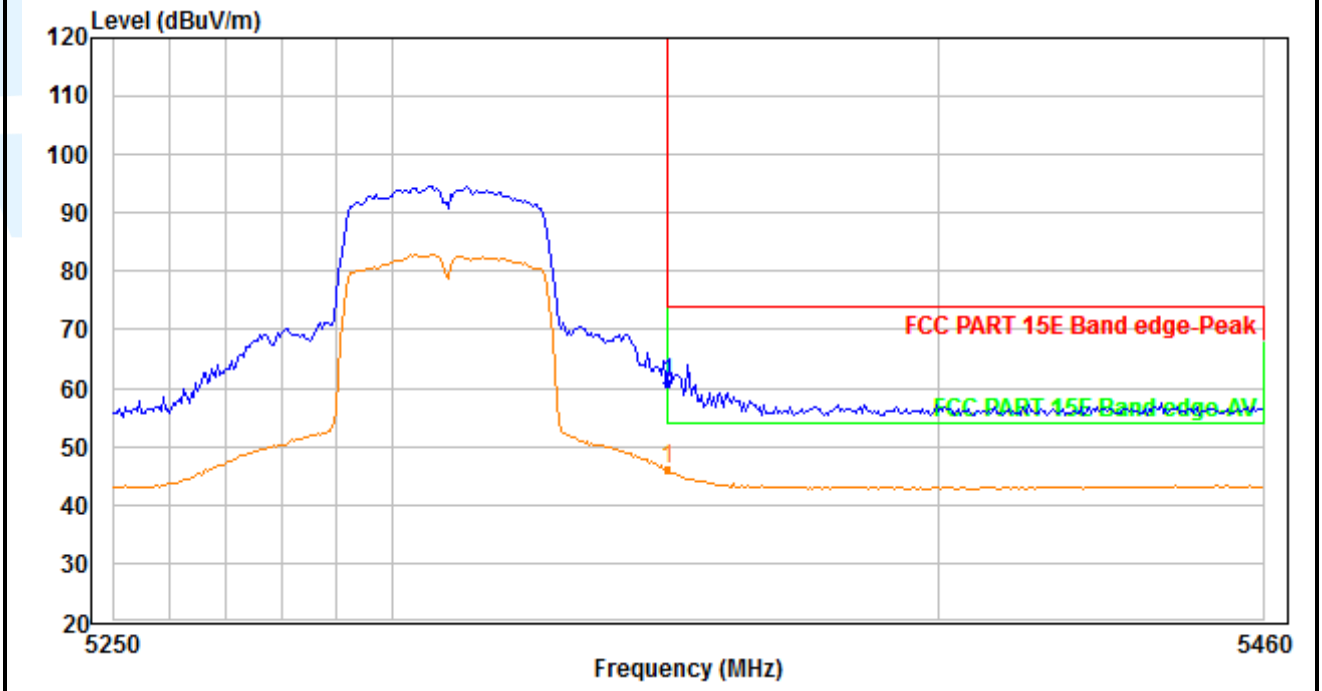
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5150.0000	54.86	74.00	42.44	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Horizontal



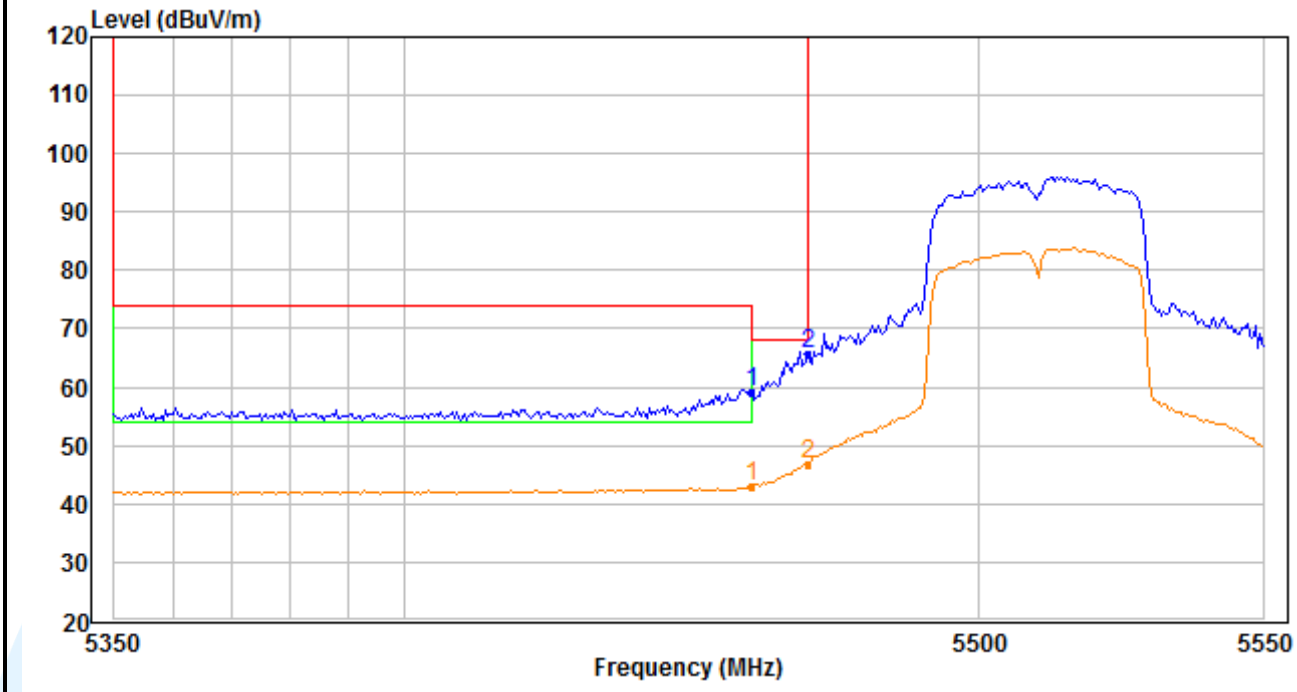
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	63.56	74.00	44.54	54.00	Pass

Test Channel:	Channel 62	Ant. Polar. :	Vertical



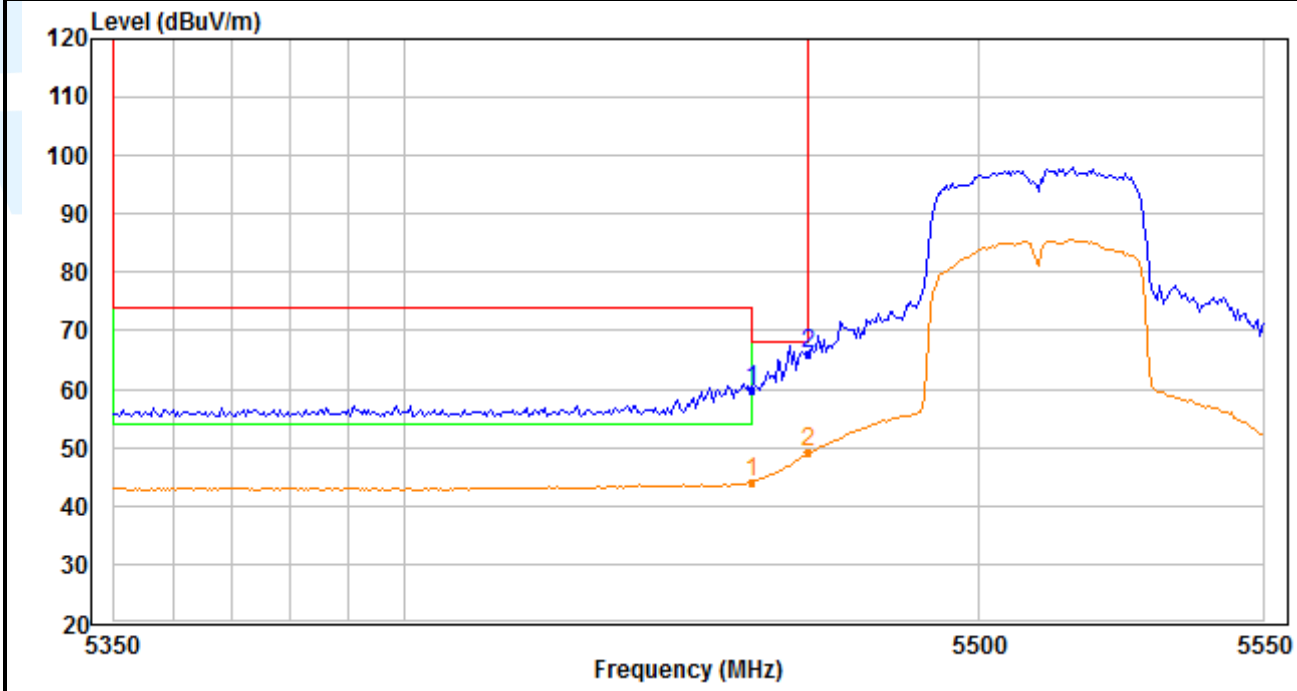
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5350.0000	60.92	74.00	46.00	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Horizontal



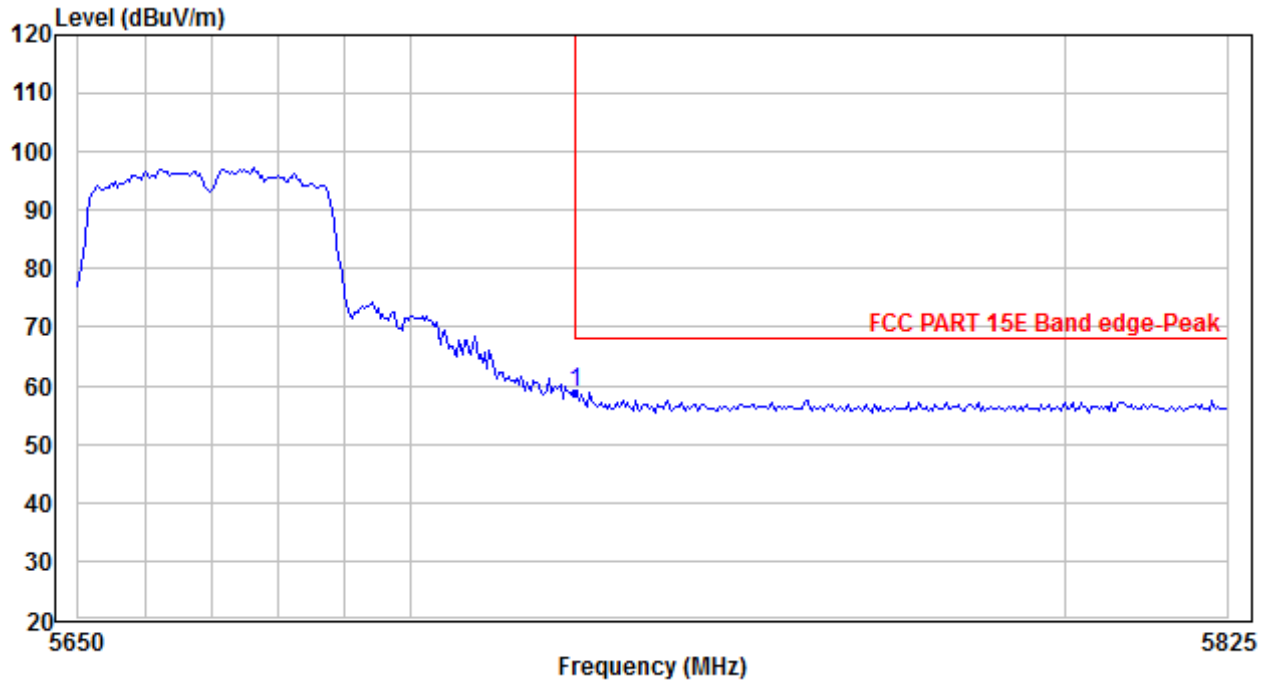
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	59.07	74.00	42.88	54.00	Pass
5470.0000	65.76	74.00	46.87	54.00	Pass

Test Channel:	Channel 102	Ant. Polar. :	Vertical



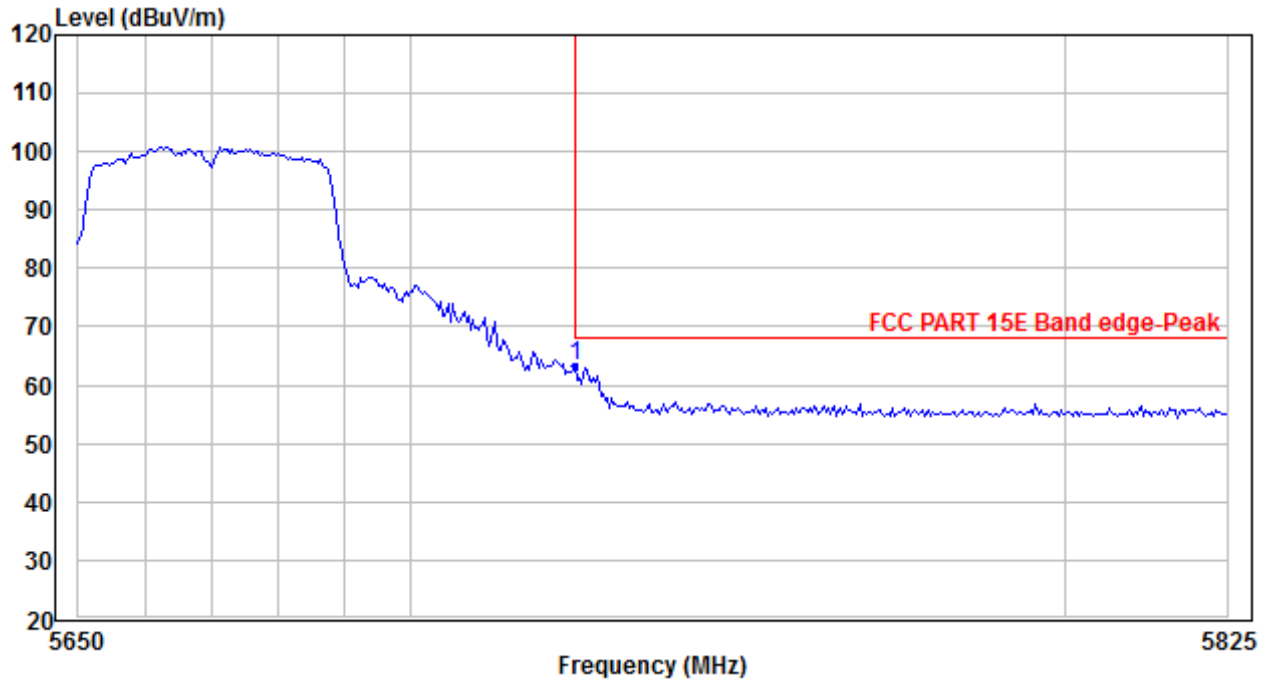
Frequency (MHz)	Peak level (dBuv/m)	Peak Limit (dBuv/m)	AV level (dBuv/m)	AV Limit (dBuv/m)	Conclusion
5460.0000	60.03	74.00	44.08	54.00	Pass
5470.0000	66.11	74.00	49.08	54.00	Pass

Test Channel:	Channel 134	Ant. Polar. :	Horizontal



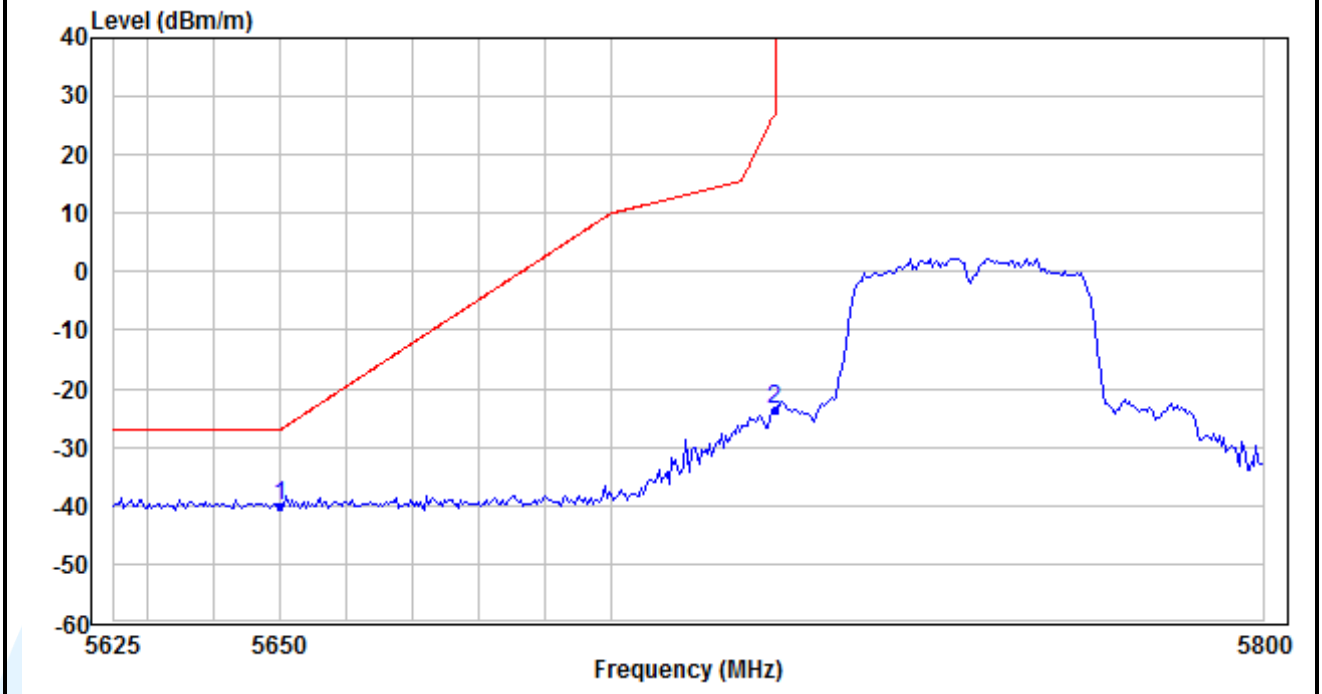
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	58.68	68.20	Pass

Test Channel:	Channel 134	Ant. Polar. :	Vertical



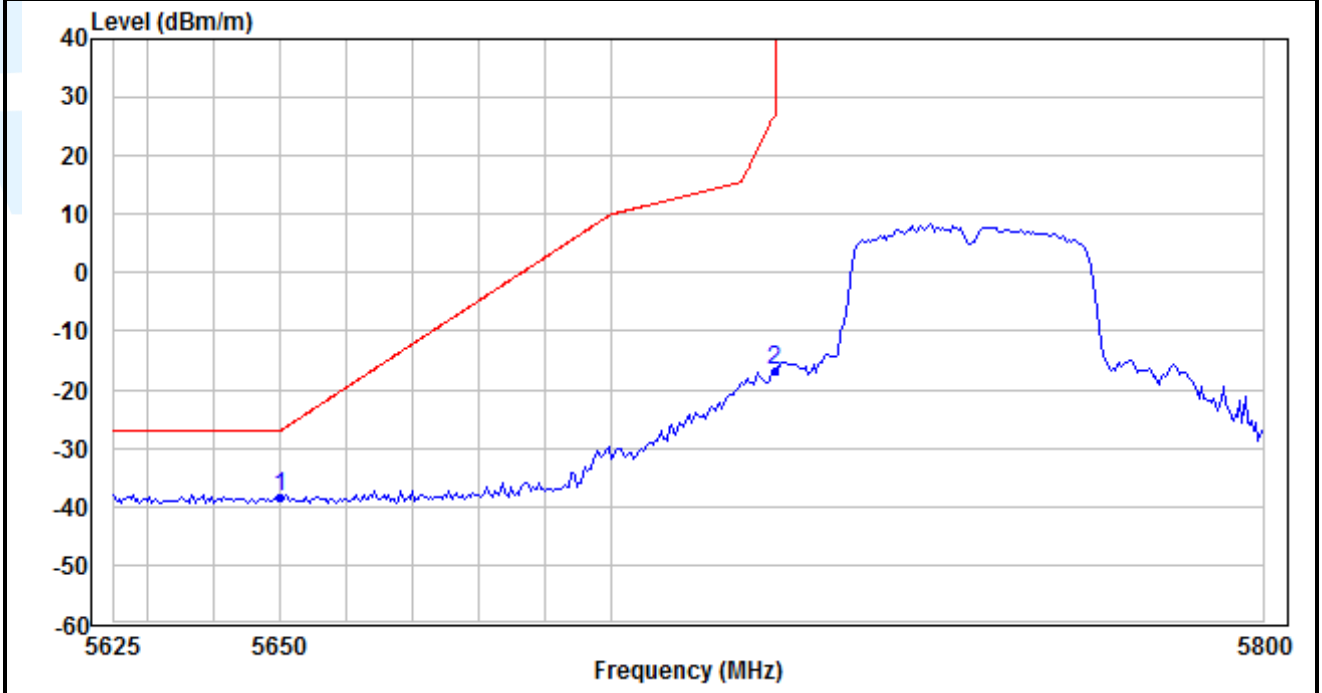
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5725.0000	63.27	68.20	Pass

Test Channel:	Channel 151	Ant. Polar. :	Horizontal



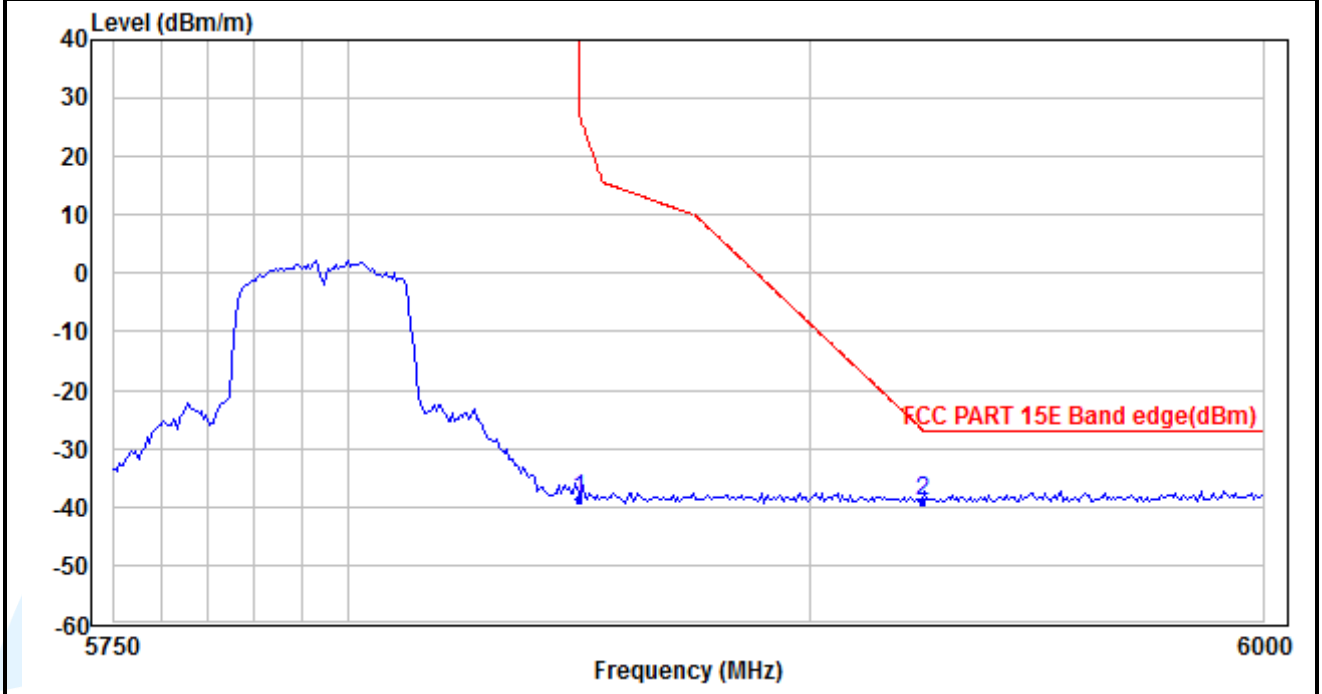
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-40.02	-27.00	Pass
5725.0000	-23.57	26.97	Pass

Test Channel:	Channel 151	Ant. Polar. :	Vertical



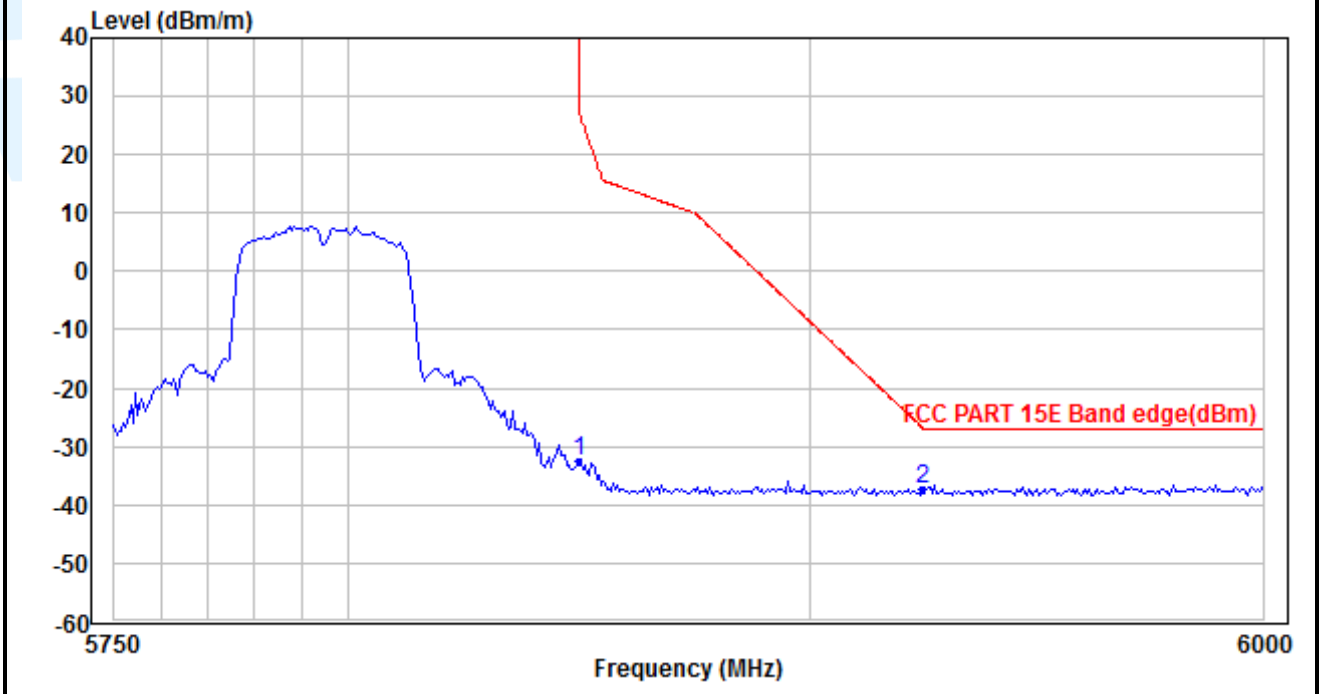
Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5650.0000	-38.39	-27.00	Pass
5725.0000	-16.67	26.97	Pass

Test Channel:	Channel 159	Ant. Polar. :	Horizontal



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.00	-38.79	26.94	Pass
5925.00	-38.99	-27.00	Pass

Test Channel:	Channel 159	Ant. Polar. :	Vertical



Frequency (MHz)	Peak level (dBm)	Peak Limit (dBm)	Conclusion
5850.00	-32.68	26.94	Pass
5925.00	-37.32	-27.00	Pass

5.8 DYNAMIC FREQUENCY SELECTION

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (h)

Test Method: KDB 905462 D03 Client Without DFS New Rules v01r02

EUT Operating Mode:

DFS Operational mode	Operating Frequency Range	
	5250 MHz to 5350 MHz	5470 MHz to 5725 MHz
Slave without radar Interference detection function	✓	✓

Applicability:

The following table from KDB905462 and the lists of the applicable requirements for the DFS testing.

Applicability of DFS Requirements Prior to Use of a Channel:

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	✓	Not required	Yes
DFS Detection Threshold	✓	Not required	Yes
Channel Availability Check Time	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	Yes

Applicability of DFS requirements during normal operation:

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required
Additional requirements for devices with multiple bandwidth modes	**Master Device or Client with Radar Detection**	**Client Without Radar Detection**
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection:

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.
Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

DFS Radar Signal Parameter Values:

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1.)
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. (See Notes 1 and 2.)
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3.)

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

DFS Radar Signal Parameter:

Radar Type 0 was used in the evaluation of the Client device for the purpose of measuring the Channel Move Time and the Channel Closing Transmission Time

Table 1-Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1.	See Note 1.
1	1	Test A Test B	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu sec}}\right)\right\}$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a
Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A
A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.
If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.