



(Channel 165, 5825MHz, 802.11ax (HEW20) RU52, ANT0)

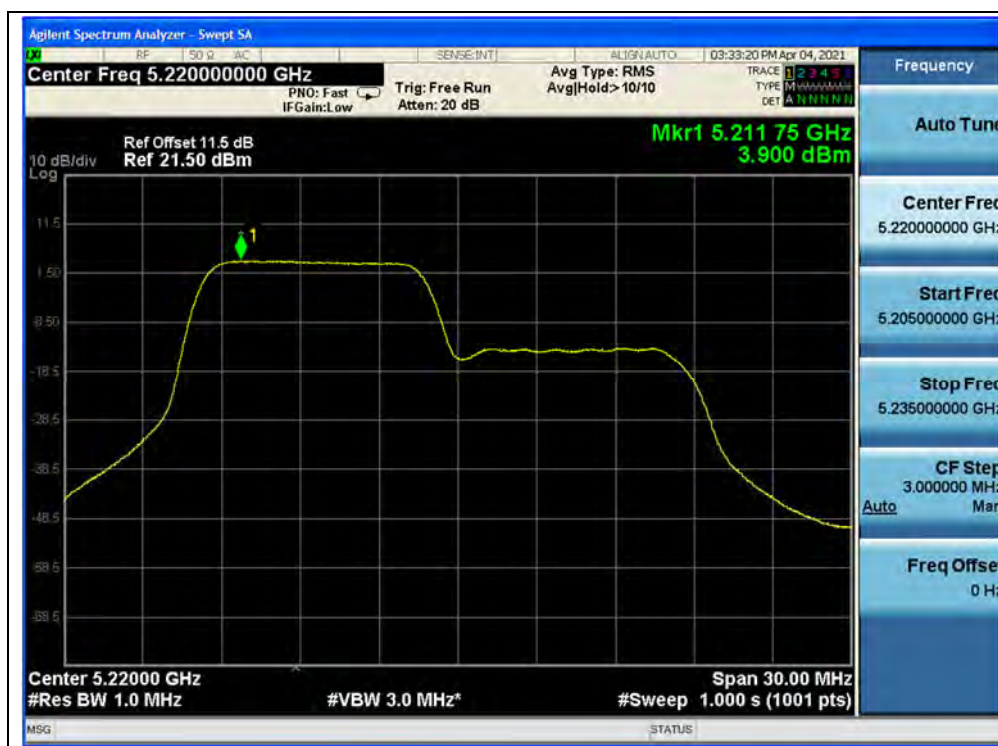
**802.11ax (HEW20) RU106 Mode****A.Test Verdict:**

Frequency (MHz)	Measured PPSD (dBm/MHz)		Duty Factor	Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
	ANT0	ANT1				
5180	3.63	3.89	0.00	6.77	11	PASS
5220	4.19	3.76		6.99		
5240	3.80	3.55		6.69		
Frequency (MHz)	Measured PPSD (dBm/500KHz)		Duty Factor	Total PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
	ANT0	ANT1				
5745	-0.50	1.38	0.00	3.55	30	PASS
5785	0.08	1.31		3.75		
5825	0.01	1.47		3.81		

Note: Directional gain = $1.90\text{dBi} + 10\log(2) = 4.91\text{dBi} < 6\text{dBi}$, so the limit shall be 11 dBm/MHz for 5.18-5.24 GHz band and 30 dBm/500KHz for 5.745-5.825 GHz band.

B.Test Plot:

(Channel 36, 5180MHz, 802.11ax (HEW20) RU106, ANT0)



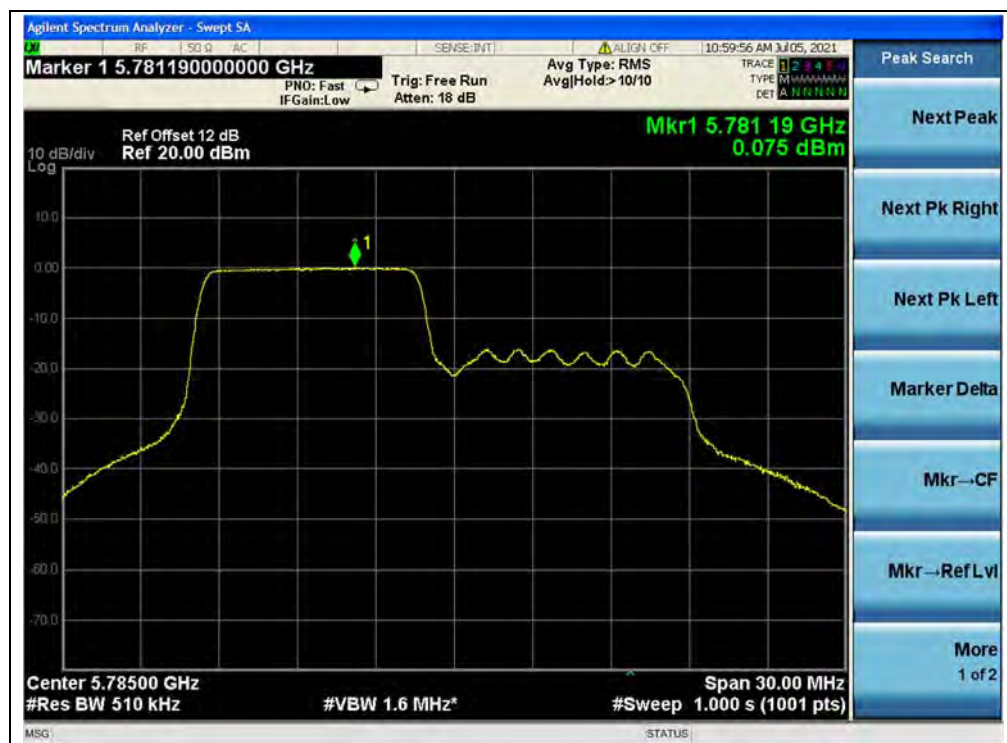
(Channel 44, 5220MHz, 802.11ax (HEW20) RU106, ANT0)



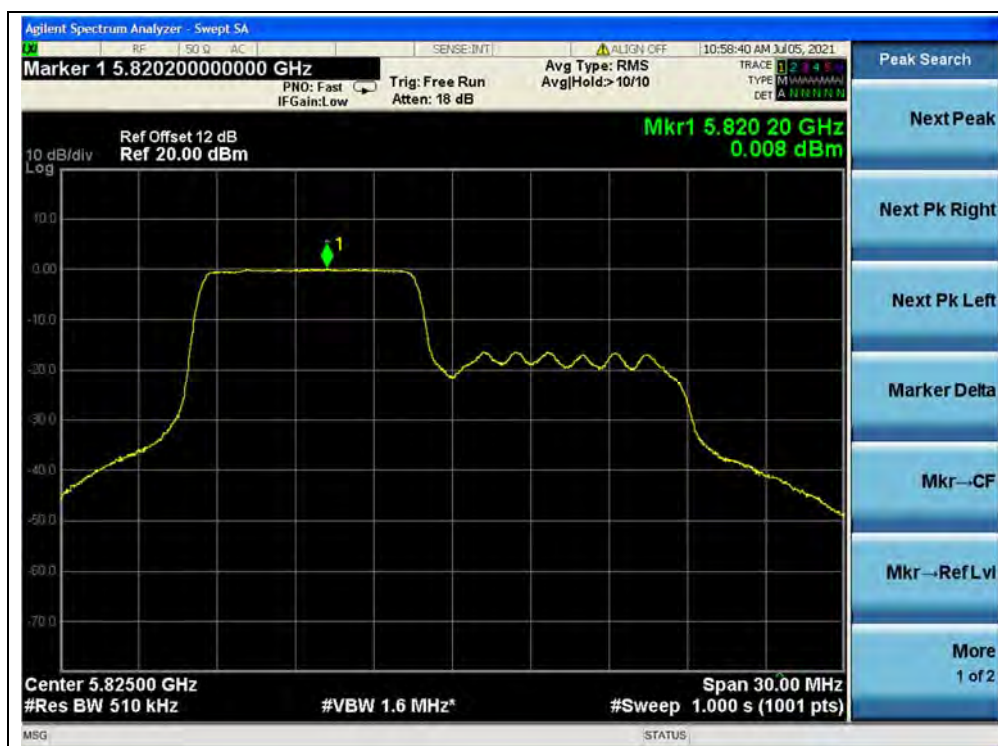
(Channel 48, 5240MHz, 802.11ax (HEW20) RU106, ANT0)



(Channel 149, 5745MHz, 802.11ax (HEW20) RU106, ANT0)



(Channel 157, 5785MHz, 802.11ax (HEW20) RU106, ANT0)



(Channel 165, 5825MHz, 802.11ax (HEW20) RU106, ANT0)



802.11ax (HEW40) Mode

A.Test Verdict:

Frequency (MHz)	Measured PPSP (dBm/MHz)		Duty Factor	Total PPSP (dBm/MHz)	Limit (dBm/MHz)	Verdict
	ANT0	ANT1				
5190	-2.24	-1.45	0.00	1.18	11	PASS
5230	-2.34	-2.99		0.36		
Frequency (MHz)	Measured PPSP (dBm/500KHz)		Duty Factor	Total PPSP (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
	ANT0	ANT1				
5755	-5.71	-5.29	0.00	-2.48	30	PASS
5795	-5.42	-5.10		-2.25		

Note: Directional gain = $1.90\text{dBi} + 10\log(2) = 4.91\text{dBi} < 6\text{dBi}$, so the limit shall be 11 dBm/MHz for 5.18-5.24 GHz band and 30 dBm/500KHz for 5.745-5.825 GHz band.

B.Test Plot:



(Channel 38, 5190MHz, 802.11ax (HEW40), ANT0)



(Channel 46, 5230MHz, 802.11ax (HEW40), ANT0)



(Channel 151, 5755MHz, 802.11ax (HEW40), ANT0)



(Channel 159, 5795MHz, 802.11ax (HEW40), ANT0)



802.11ax (HEW80) Mode

A.Test Verdict:

Frequency (MHz)	Measured PPSD (dBm/MHz)		Duty Factor	Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
	ANT0	ANT1				
5210	-5.18	-5.87	0.00	-2.50	11	PASS
Frequency (MHz)	Measured PPSD (dBm/500KHz)		Duty Factor	Total PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
	ANT0	ANT1				
5775	-8.49	-8.20	0.00	-5.33	30	PASS

Note: Directional gain = $1.90\text{dBi} + 10\log(2) = 4.91\text{dBi} < 6\text{dBi}$, so the limit shall be 11 dBm/MHz for 5.18-5.24 GHz band and 30 dBm/500KHz for 5.745-5.825 GHz band.

B.Test Plot:



(Channel 42, 5210MHz, 802.11ax (HEW80), ANT0)



(Channel 155, 5775MHz, 802.11ax (HEW80), ANT0)



2.6. Frequency Stability

2.6.1. Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

2.6.2. Test Procedure

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between 5°C to 40°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

2.6.3. Test Result

U-NII-1 (Ch. 36) 5180MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	3.80	+20(Ref)	33	6.371
100%		-30	28	5.405
100%		-20	30	5.792
100%		-10	29	5.598
100%		0	25	4.826
100%		+10	22	4.247
100%		+20	27	5.212
100%		+30	32	6.178
100%		+40	41	7.915
100%		+50	42	8.108
115%	3.23	+20	25	4.826
85%	4.37	+20	30	5.792





2.7. Conducted Emission

2.7.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

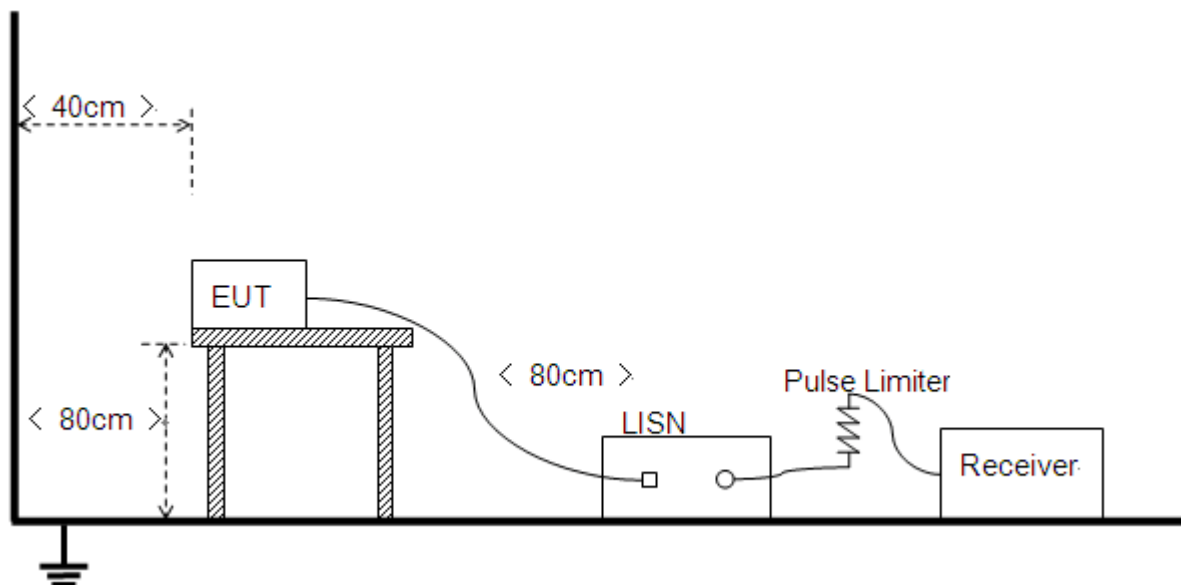
Frequency Range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

2.7.2. Test Description

Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.



2.7.3. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and Plot below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT +ADAPTER +WIFI TX

Test Voltage: AC 120V/60Hz

The measurement results are obtained as below:

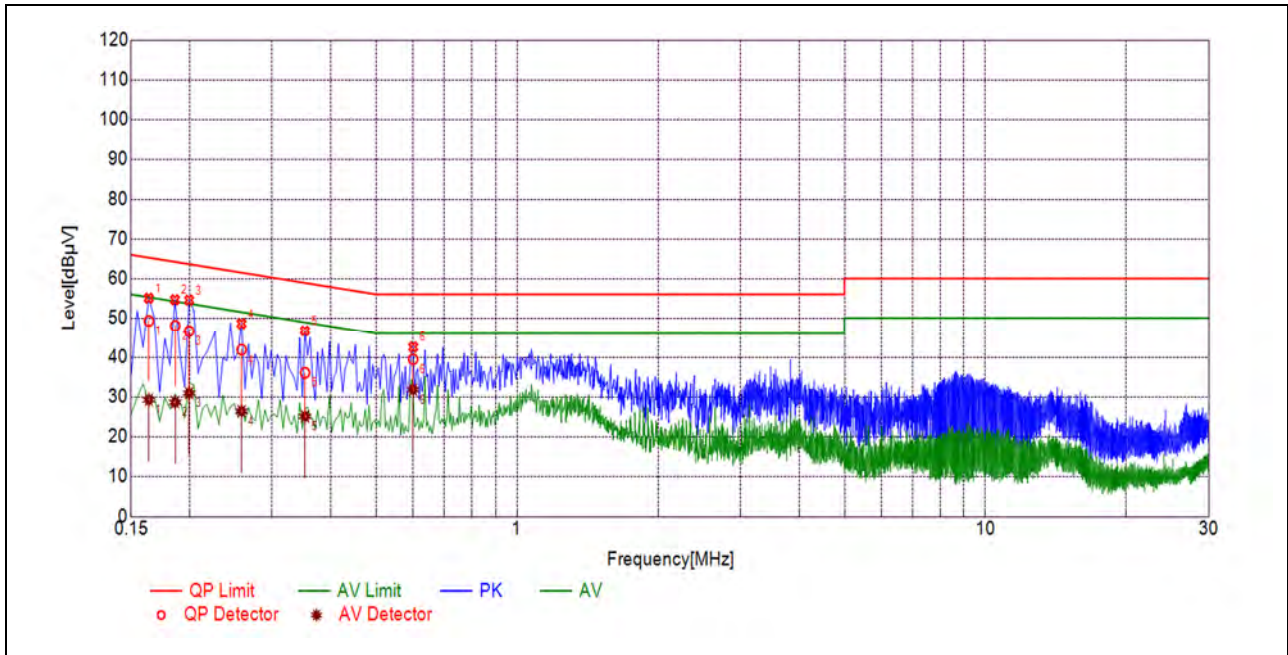
$$E [\text{dB}\mu\text{V}] = U_R + L_{\text{Cable loss}} [\text{dB}] + A_{\text{Factor}}$$

U_R : Receiver Reading

A_{Factor} : Voltage division factor of LISN

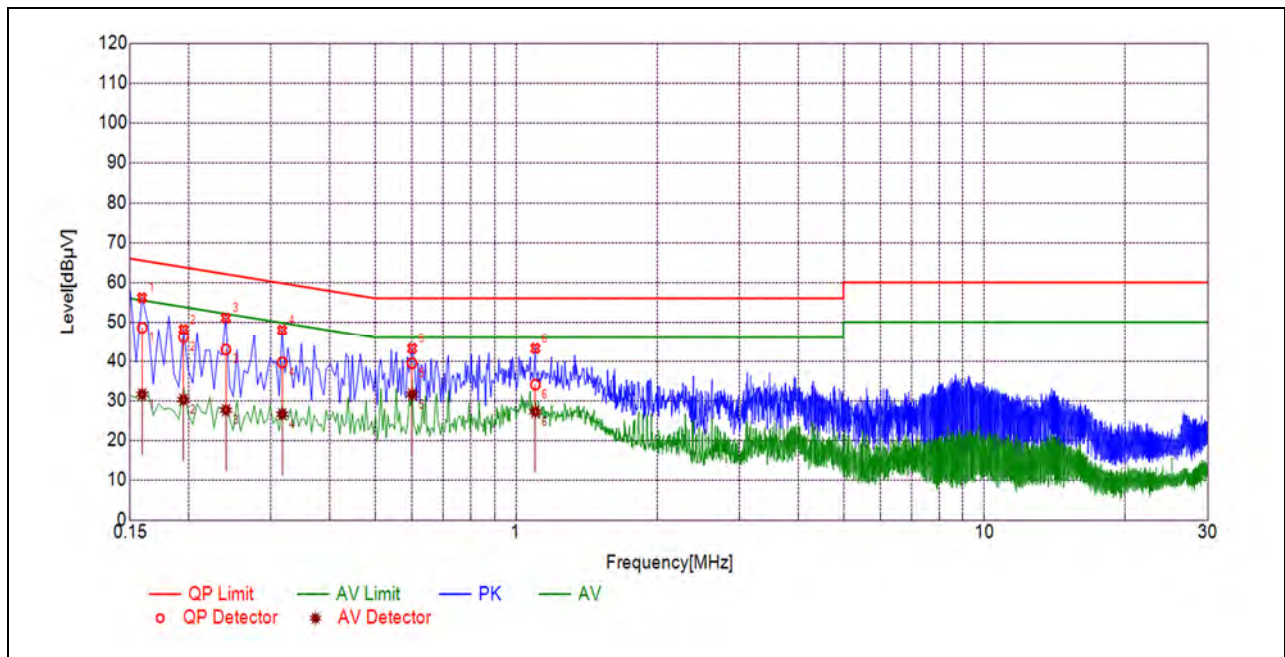


B.Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1636	49.28	29.22	65.28	55.28	Line	PASS
2	0.1862	48.03	28.61	64.21	54.21		PASS
3	0.1994	46.63	30.90	63.64	53.64		PASS
4	0.2581	41.87	26.37	61.49	51.49		PASS
5	0.3527	36.02	25.05	58.90	48.90		PASS
6	0.5997	39.45	31.78	56.00	46.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1591	48.56	31.60	65.51	55.51	Neutral	PASS
2	0.1949	46.07	30.23	63.83	53.83		PASS
3	0.2402	42.92	27.62	62.09	52.09		PASS
4	0.3167	39.63	26.58	59.79	49.79		PASS
5	0.5997	39.45	31.58	56.00	46.00		PASS
6	1.0996	34.02	27.19	56.00	46.00		PASS

2.8. Restricted Frequency Bands

2.8.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \mu\text{V/m}$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

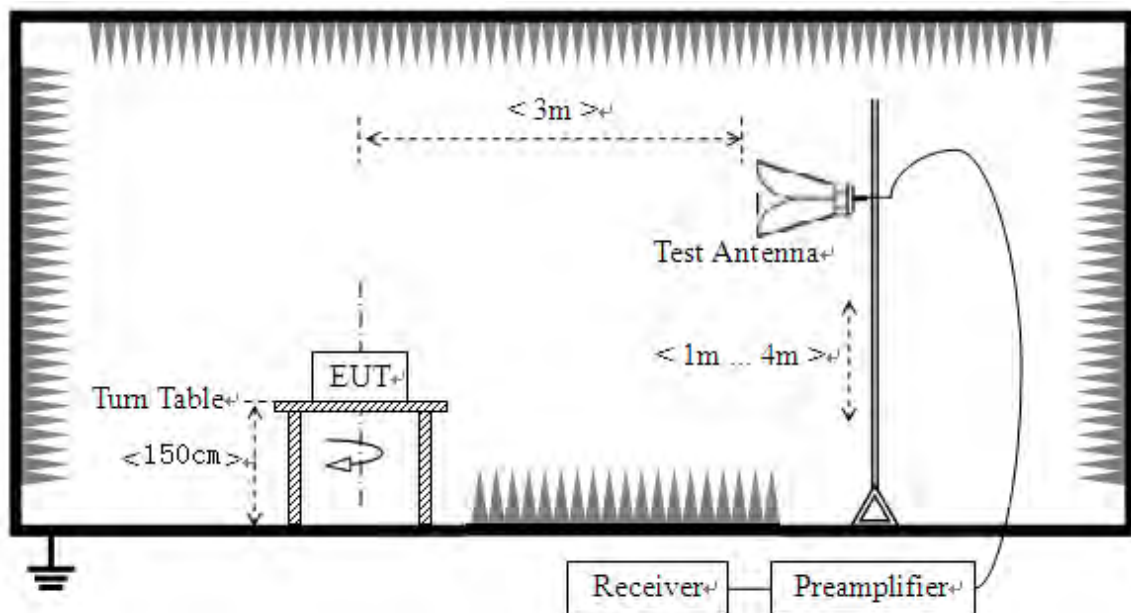
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	$2400/F(\text{kHz})$	300
0.490 - 1.705	$24000/F(\text{kHz})$	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

2.8.2. Test Description

Test Setup





The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

2.8.3. Test Result

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

$E [dB\mu V/m] = U_R + A_T + A_{Factor} [dB]; A_T = L_{Cable loss} [dB] - G_{preamp} [dB]$

A_T : Total correction Factor except Antenna; U_R : Receiver Reading

G_{preamp} : Preamplifier Gain; A_{Factor} : Antenna Factor at 3m

Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

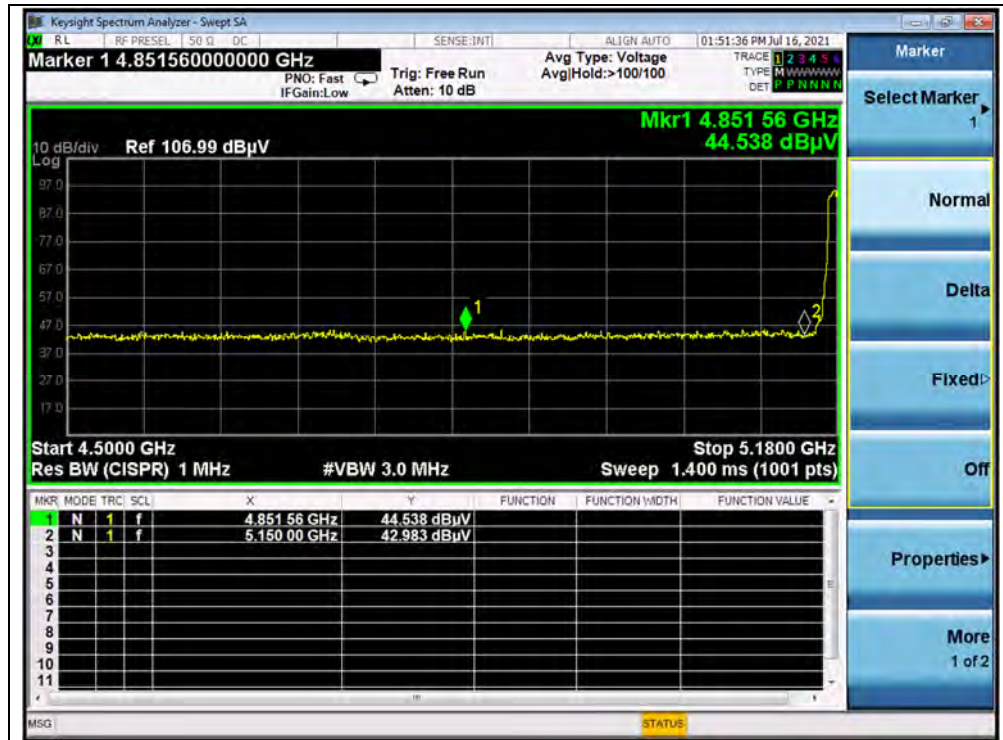
Note 2 All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11a Mode

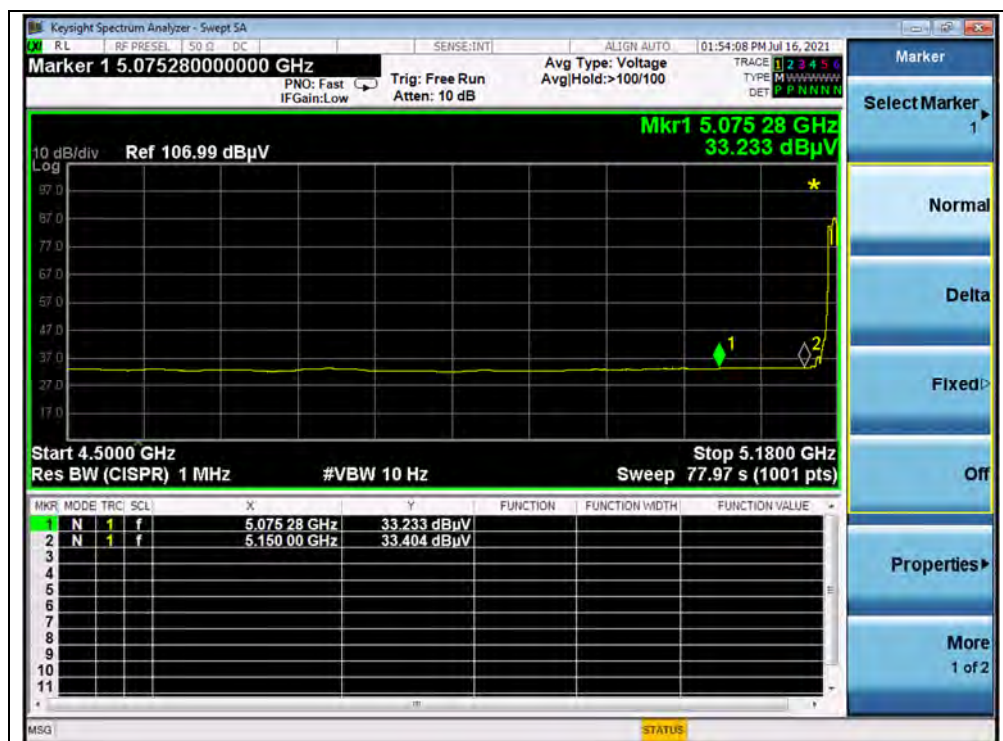
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dB μ V)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
36	4851.56	PK	44.54	-19.54	32.20	57.20	74	PASS
36	5150.00	AV	33.40	-19.54	32.20	46.06	54	PASS
48	5352.42	PK	42.40	-19.54	32.20	55.06	74	PASS
48	5350.00	AV	31.41	-19.54	32.20	44.07	54	PASS
149	5725.00	PK	45.98	-19.01	32.20	59.17	122.23	PASS
165	5850.00	PK	42.81	-19.01	32.20	56.00	122.23	PASS

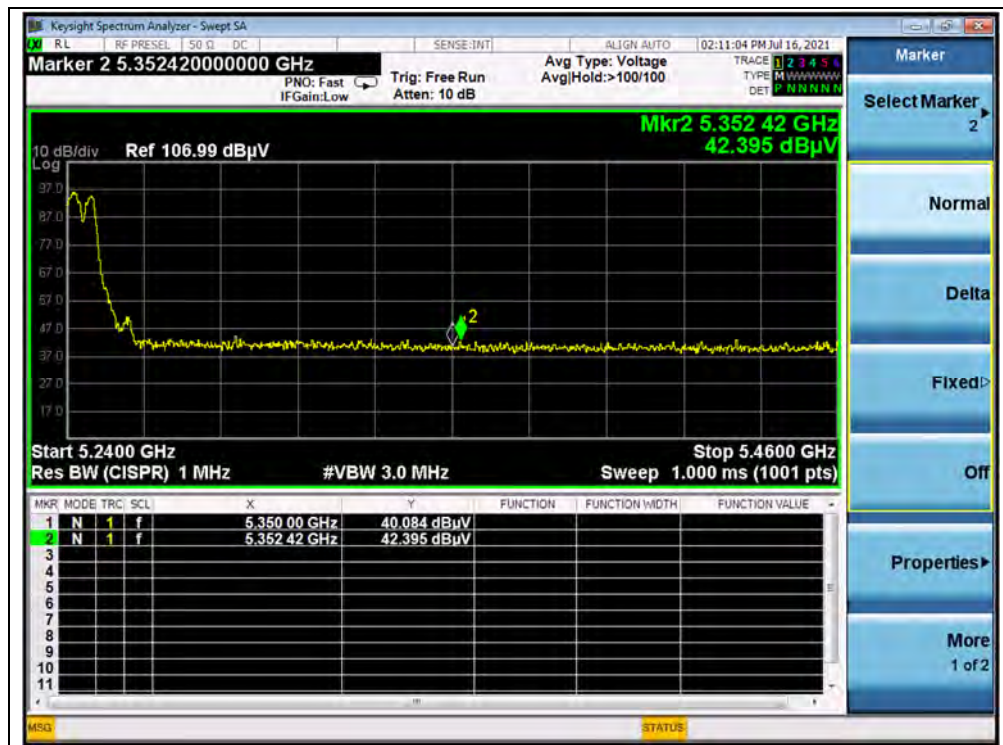
B.Test Plot:



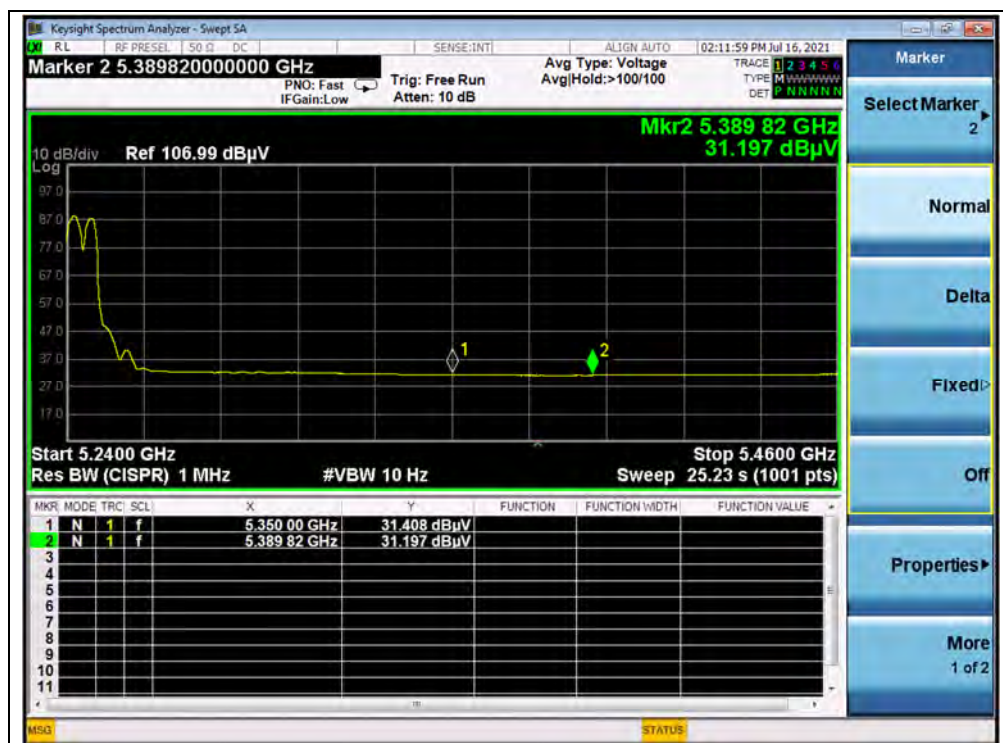
(PEAK, Channel 36, 802.11a)



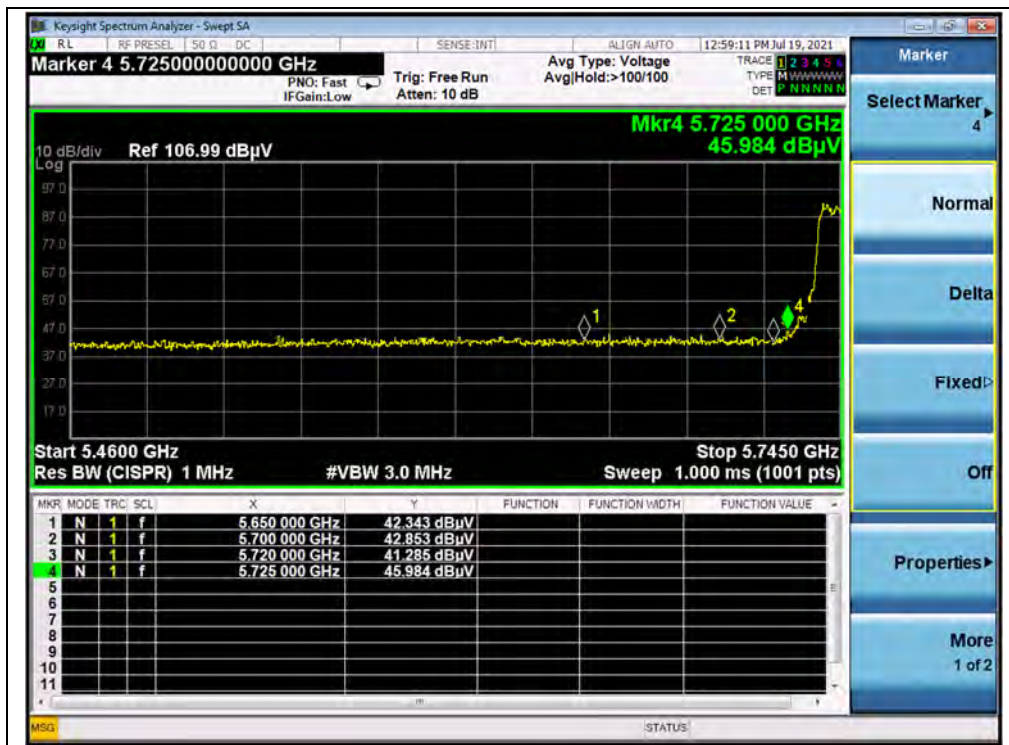
(AVERAGE, Channel 36, 802.11a)



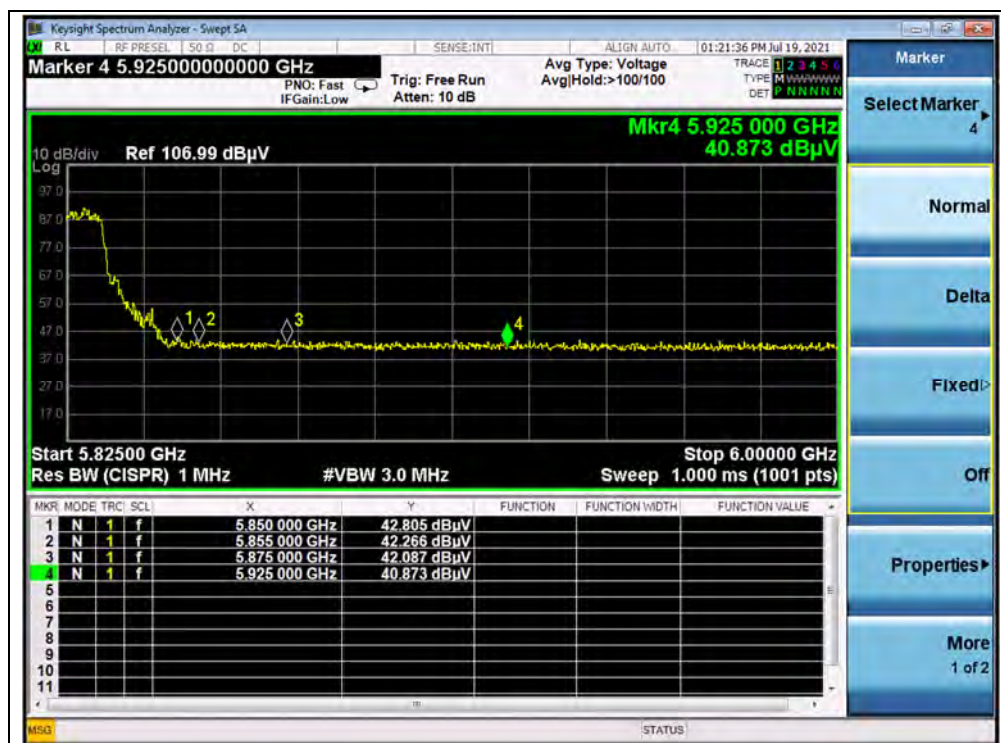
(PEAK, Channel 48, 802.11a)



(AVERAGE, Channel 48, 802.11a)



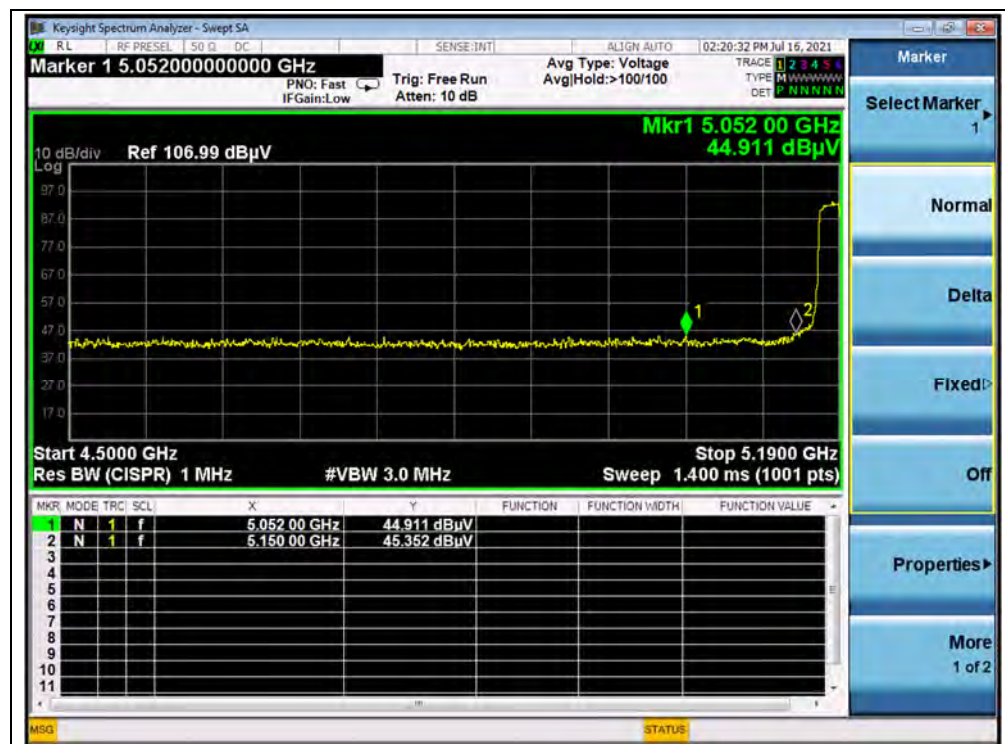
(PEAK, Channel 149, 802.11a)



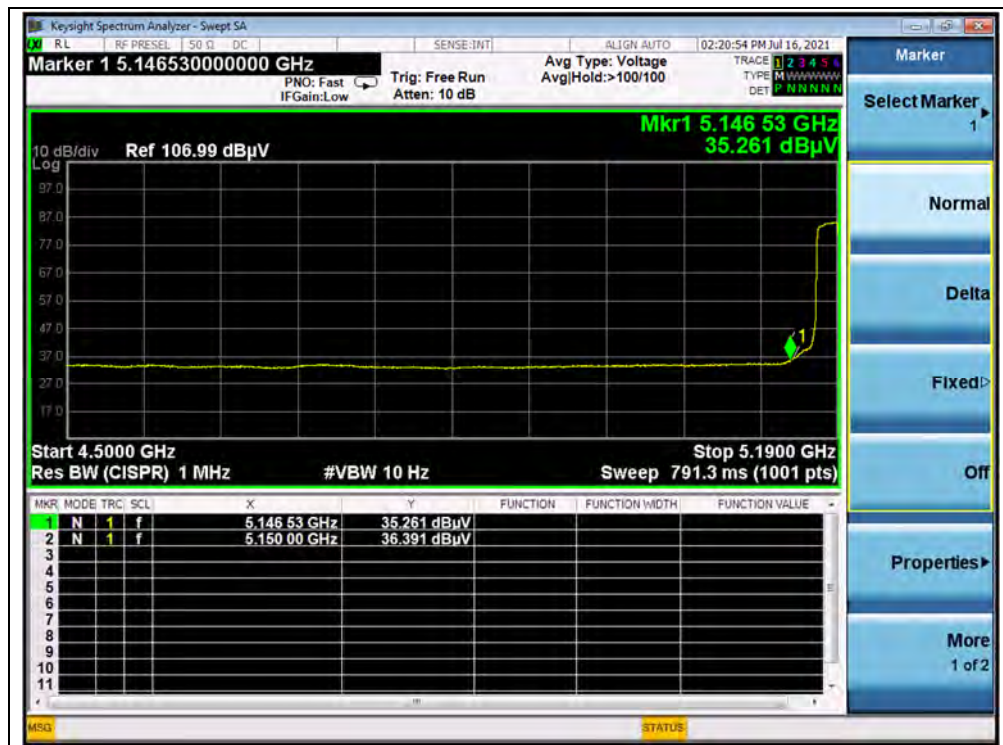
(PEAK, Channel 165, 802.11a)

**802.11ac (VHT40) Mode****A.Test Verdict:**

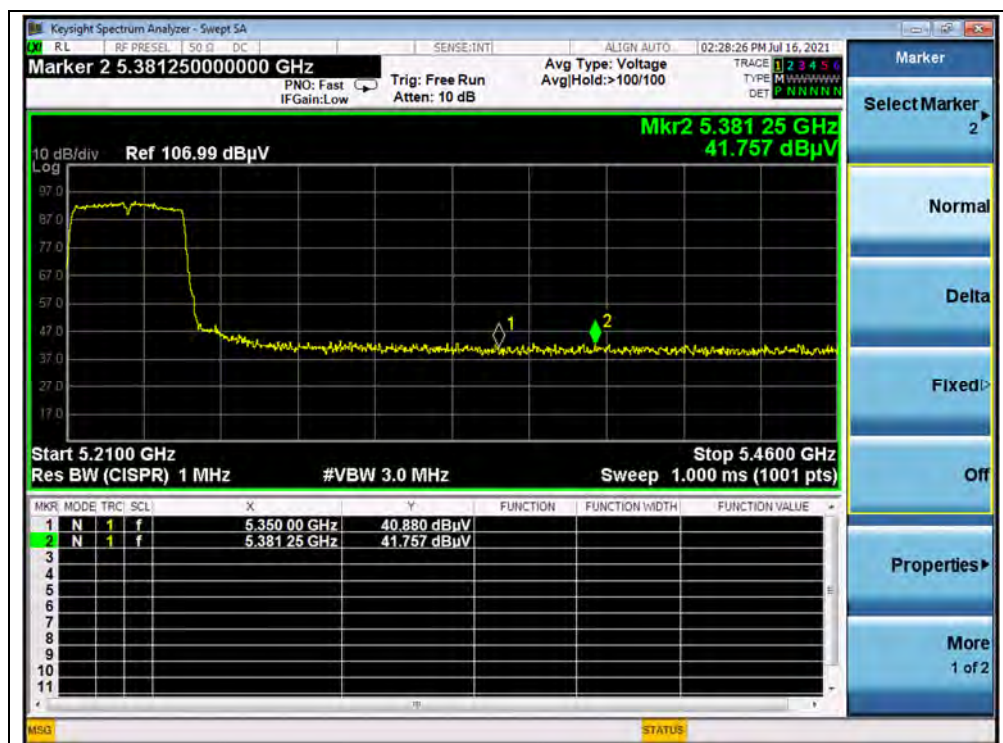
Channel	Frequency (MHz)	Detector	Receiver Reading U _R (dBμV)	A _T (dB)	A _{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	45.35	-19.54	32.20	58.01	74	PASS
38	5150.00	AV	36.39	-19.54	32.20	49.05	54	PASS
46	5381.25	PK	41.76	-19.54	32.20	54.42	74	PASS
46	5352.00	AV	32.09	-19.54	32.20	44.75	54	PASS
151	5725.00	PK	46.91	-19.01	32.20	60.1	122.23	PASS
159	5855.00	PK	42.90	-19.01	32.20	56.09	110.83	PASS

B.Test Plot:

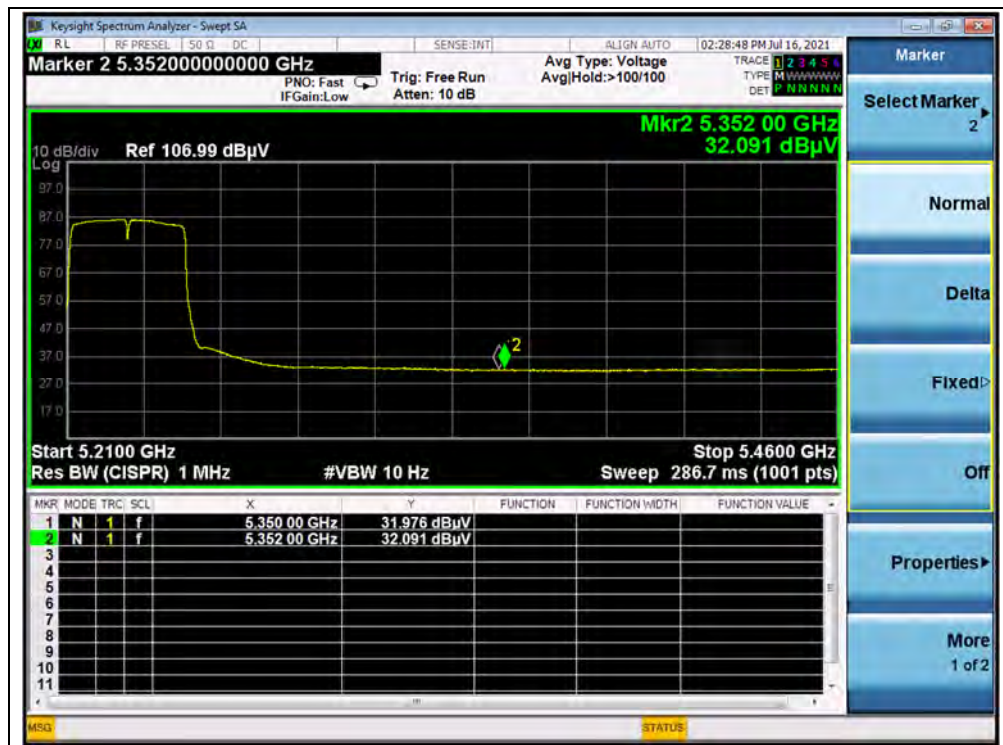
(PEAK, Channel 38, 802.11ac (VHT40))



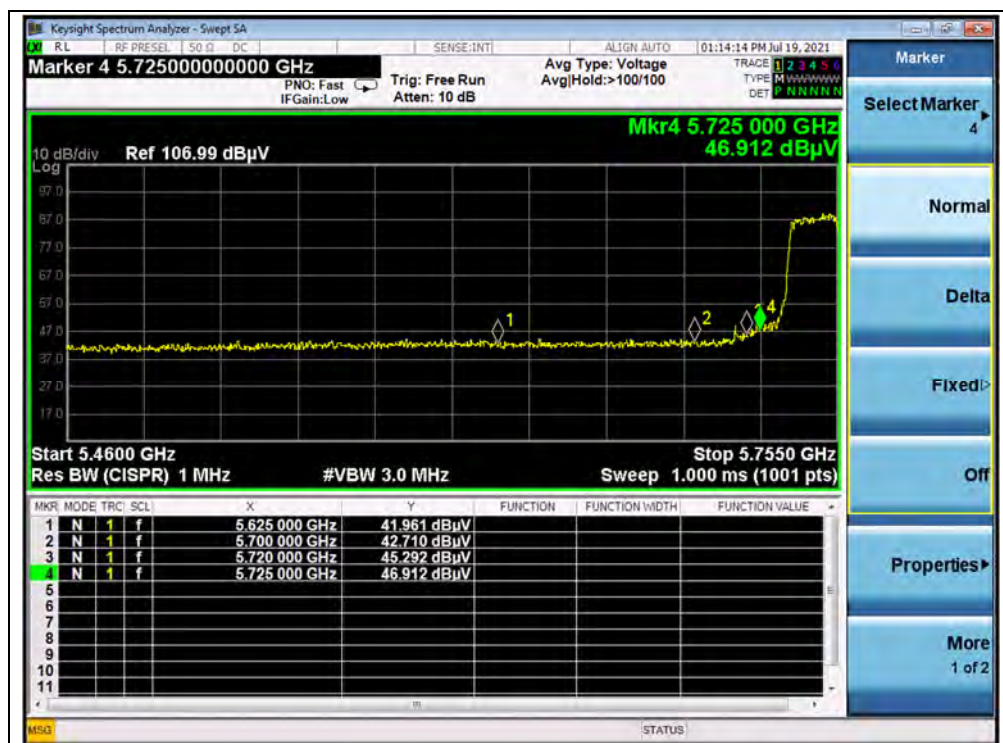
(AVERAGE, Channel 38, 802.11ac (VHT40))



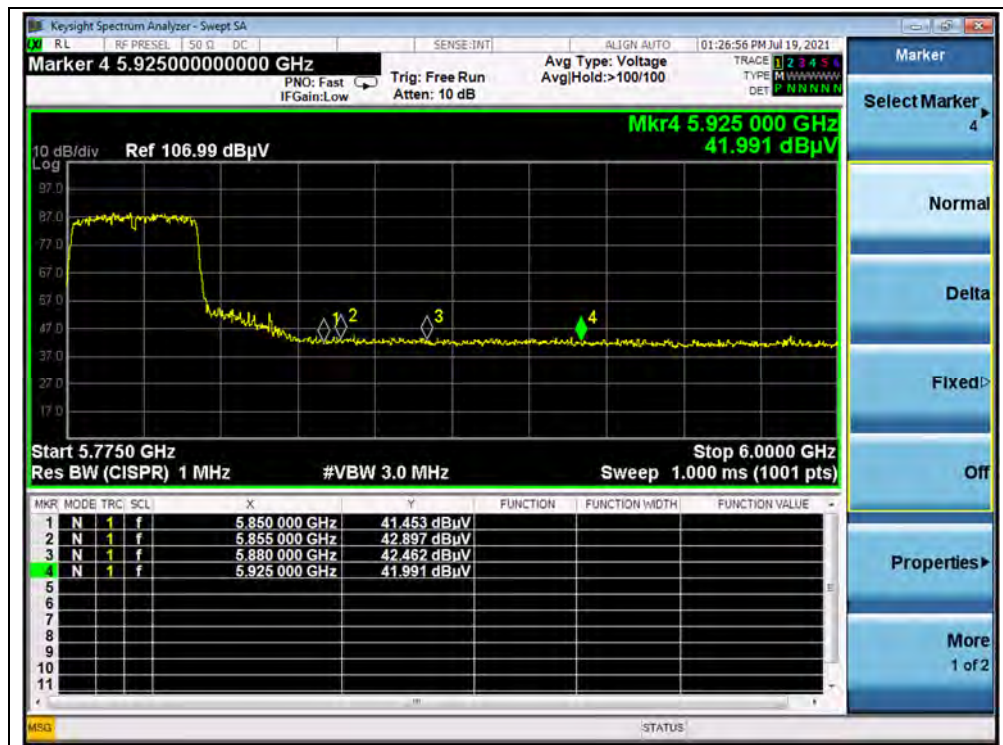
(PEAK, Channel 46, 802.11ac (VHT40))



(AVERAGE, Channel 46, 802.11ac (VHT40))



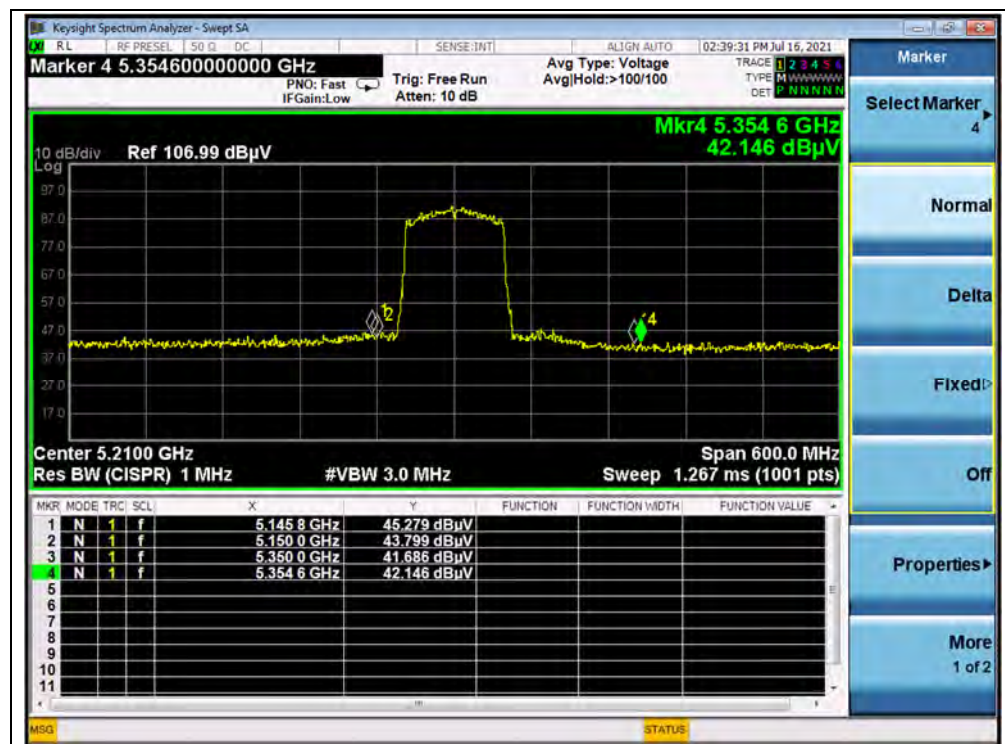
(PEAK, Channel 151, 802.11ac (VHT40))



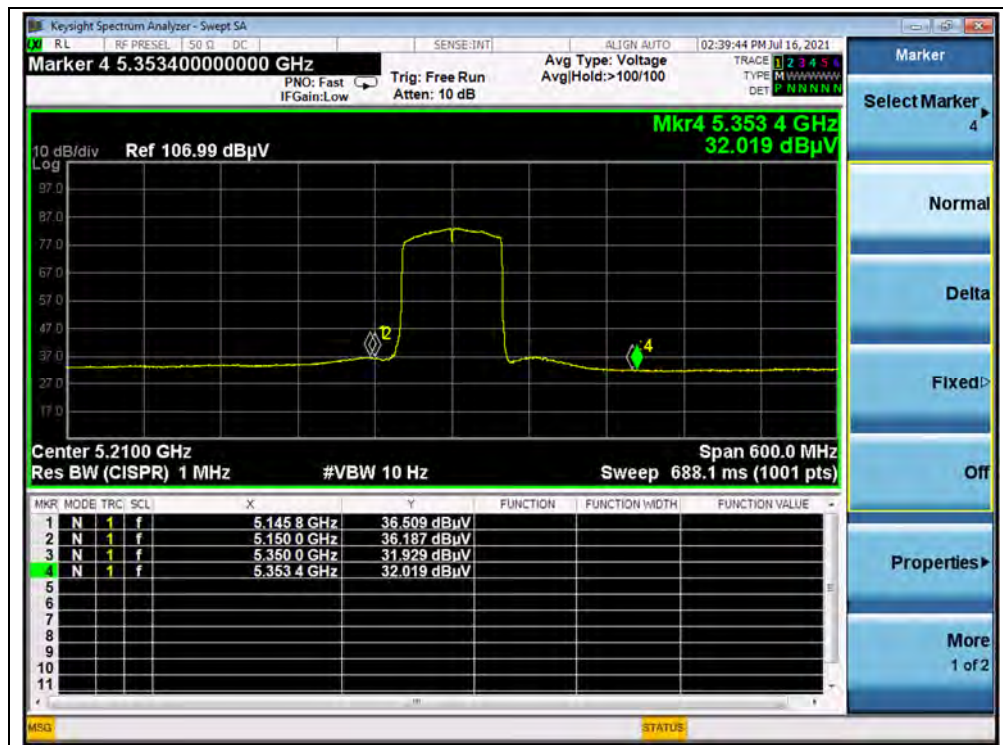
(PEAK, Channel 159, 802.11ac (VHT40))

**802.11ac (VHT80) Mode****A.Test Verdict:**

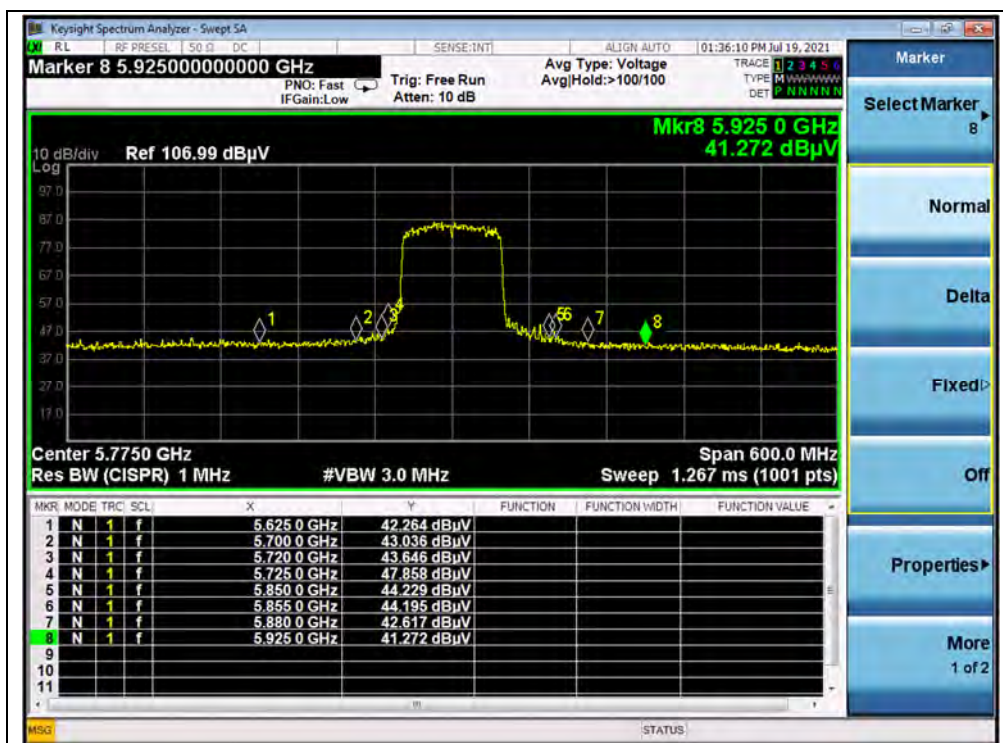
Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
42	5145.80	PK	45.28	-19.54	32.20	57.94	74	PASS
42	5145.80	AV	36.51	-19.54	32.20	49.17	54	PASS
42	5354.60	PK	42.15	-19.54	32.20	54.81	74	PASS
42	5353.40	AV	32.02	-19.54	32.20	44.68	54	PASS
155	5725.00	PK	47.86	-19.01	32.20	61.05	122.23	PASS
155	5850.00	PK	44.23	-19.01	32.20	57.42	122.23	PASS

B.Test Plot:

(PEAK, Channel 42, 802.11ac (VHT80))



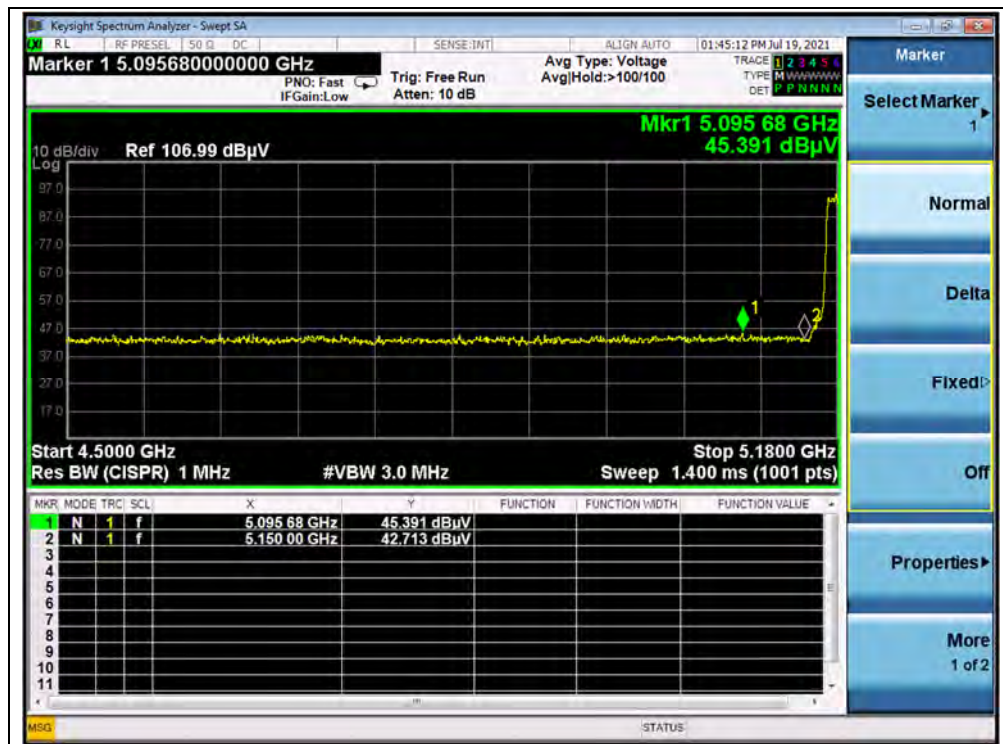
(AVERAGE, Channel 42, 802.11ac (VHT80))



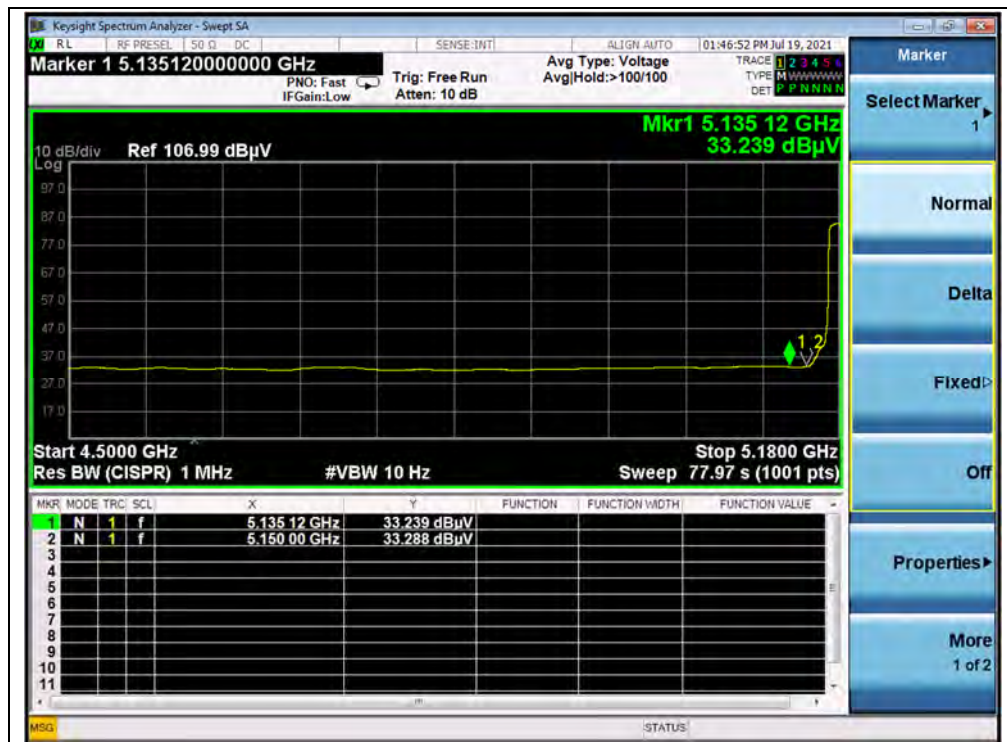
(PEAK, Channel 155, 802.11ac (VHT80))

**802.11ax (HEW20) Mode****A.Test Verdict:**

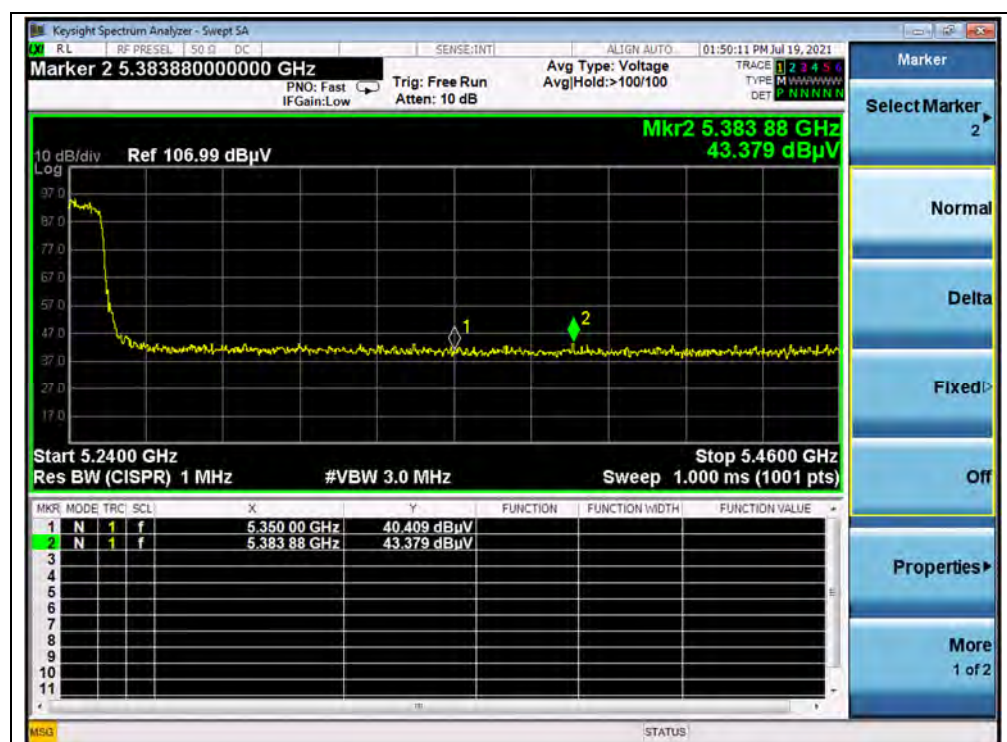
Channel	Frequency (MHz)	Detector	Receiver Reading U _R (dBμV)	A _T (dB)	A _{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5095.68	PK	45.39	-19.54	32.20	58.05	74	PASS
36	5150.00	AV	33.29	-19.54	32.20	45.95	54	PASS
48	5383.88	PK	43.38	-19.54	32.20	56.04	74	PASS
48	5350.00	AV	31.34	-19.54	32.20	44.00	54	PASS
149	5725.00	PK	48.38	-19.01	32.20	61.57	122.23	PASS
165	5850.00	PK	42.52	-19.01	32.20	55.71	122.23	PASS

B.Test Plot:

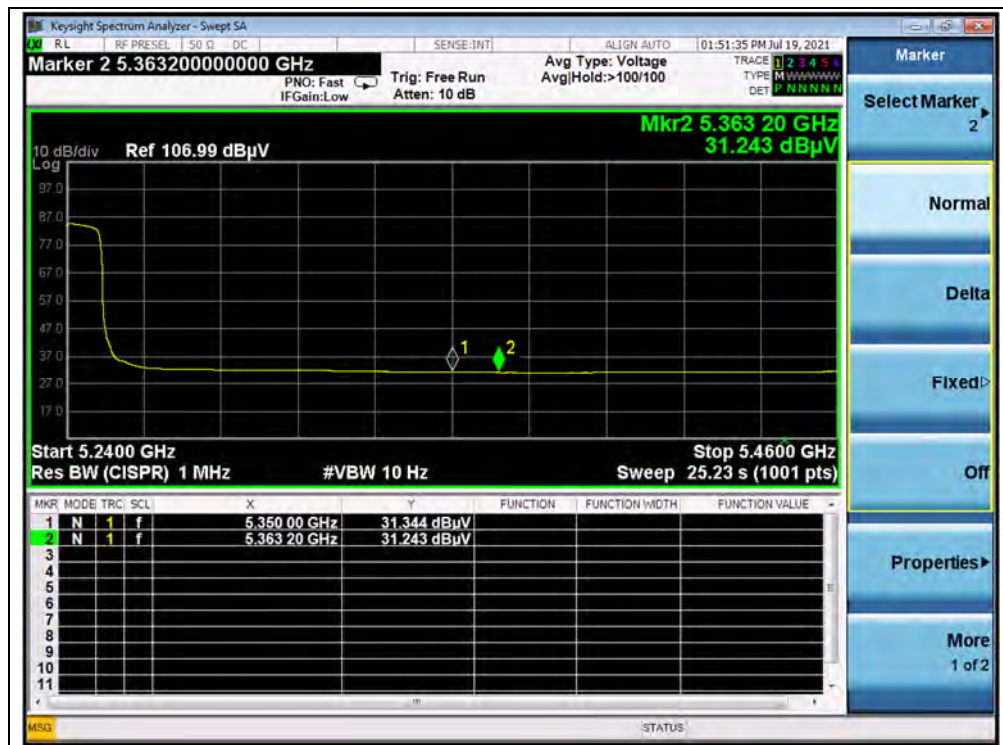
(PEAK, Channel 36, 802.11ax (HEW20))



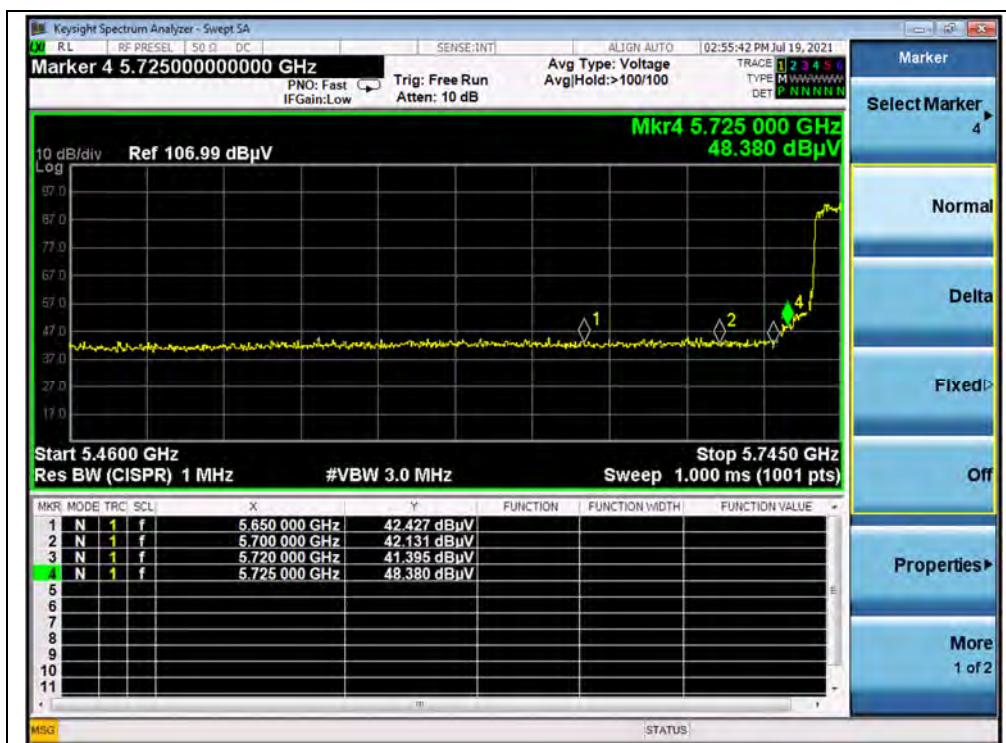
(AVERAGE, Channel 36, 802.11ax (HEW20))



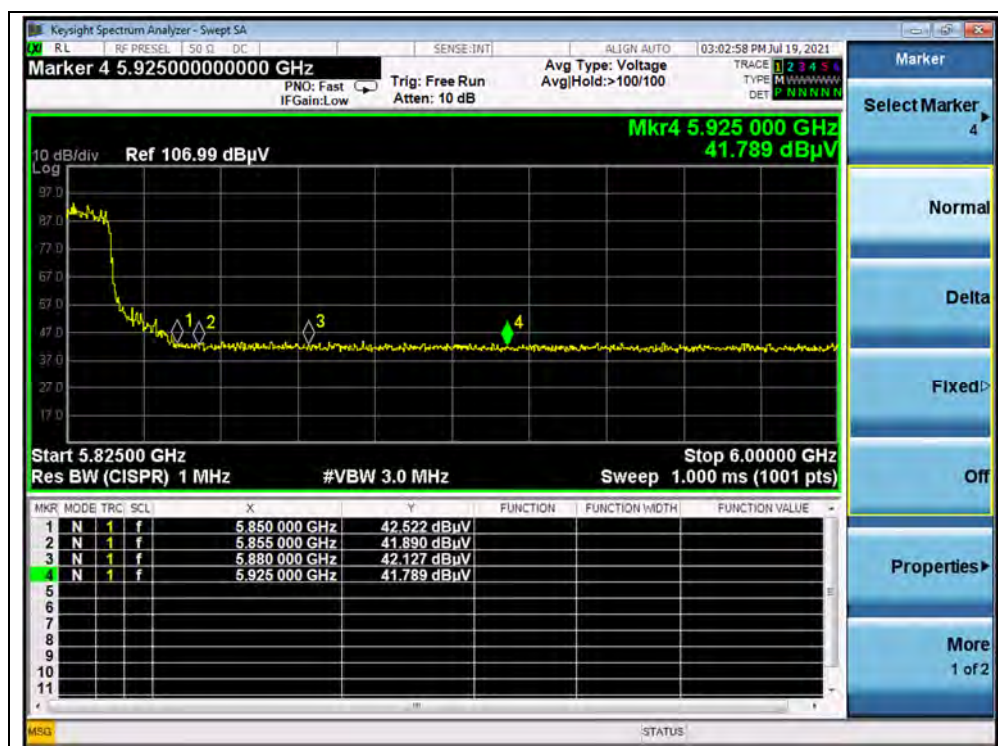
(PEAK, Channel 48, 802.11ax (HEW20))



(AVERAGE, Channel 48, 802.11ax (HEW20))



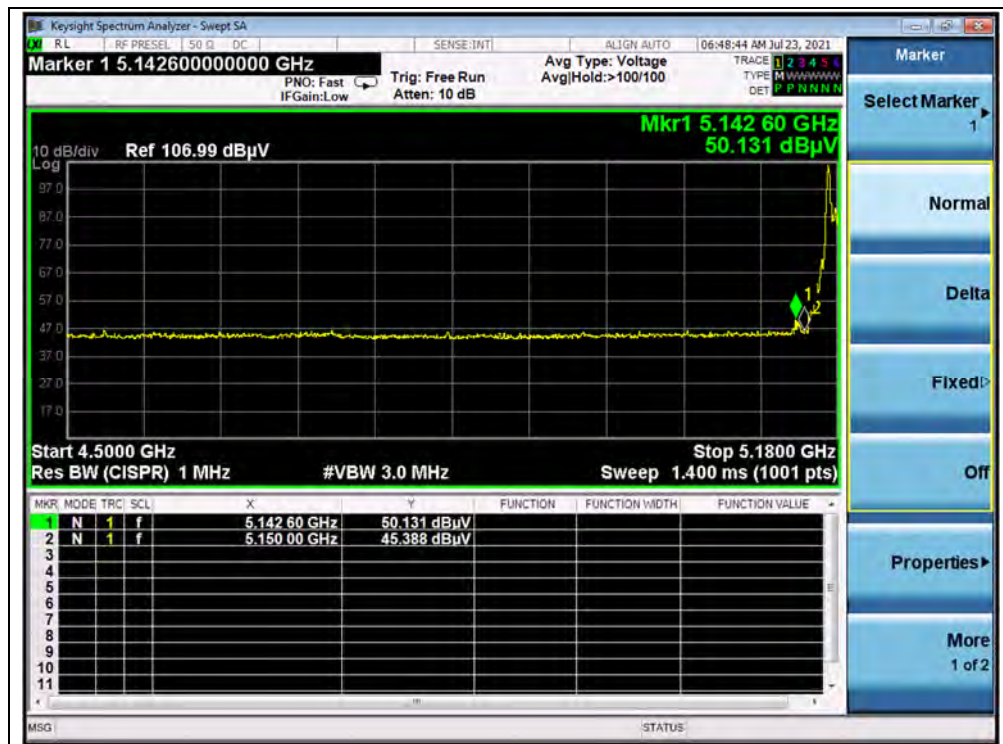
(PEAK, Channel 149, 802.11ax (HEW20))



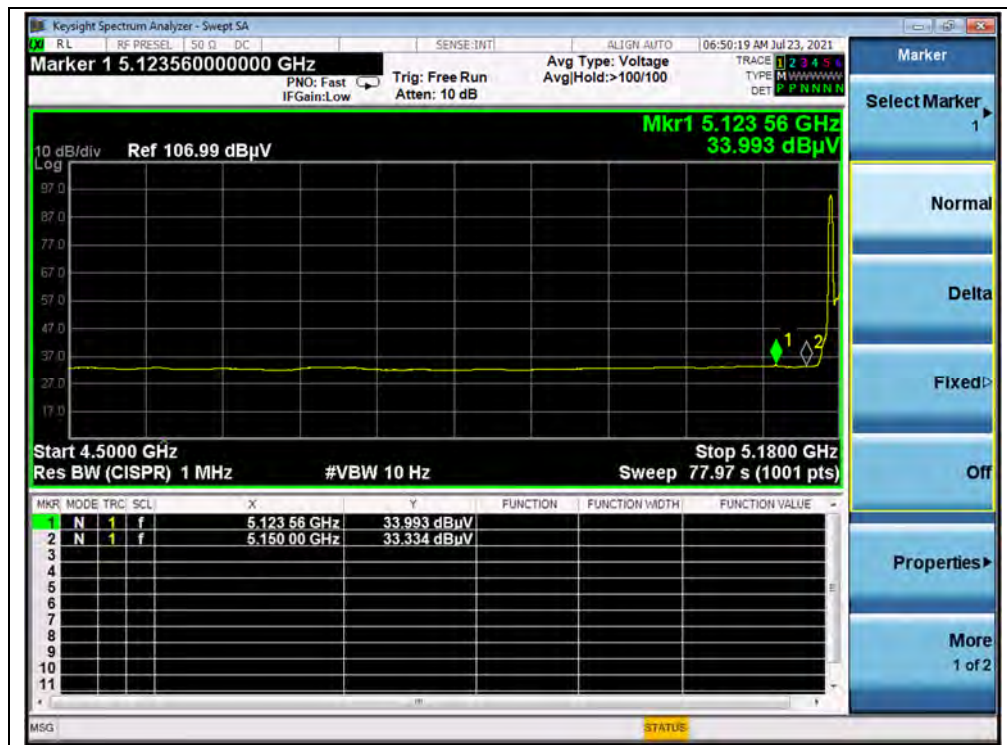
(PEAK, Channel 165, 802.11ax (HEW20))

**802.11ax (HEW20) RU26 Mode****A.Test Verdict:**

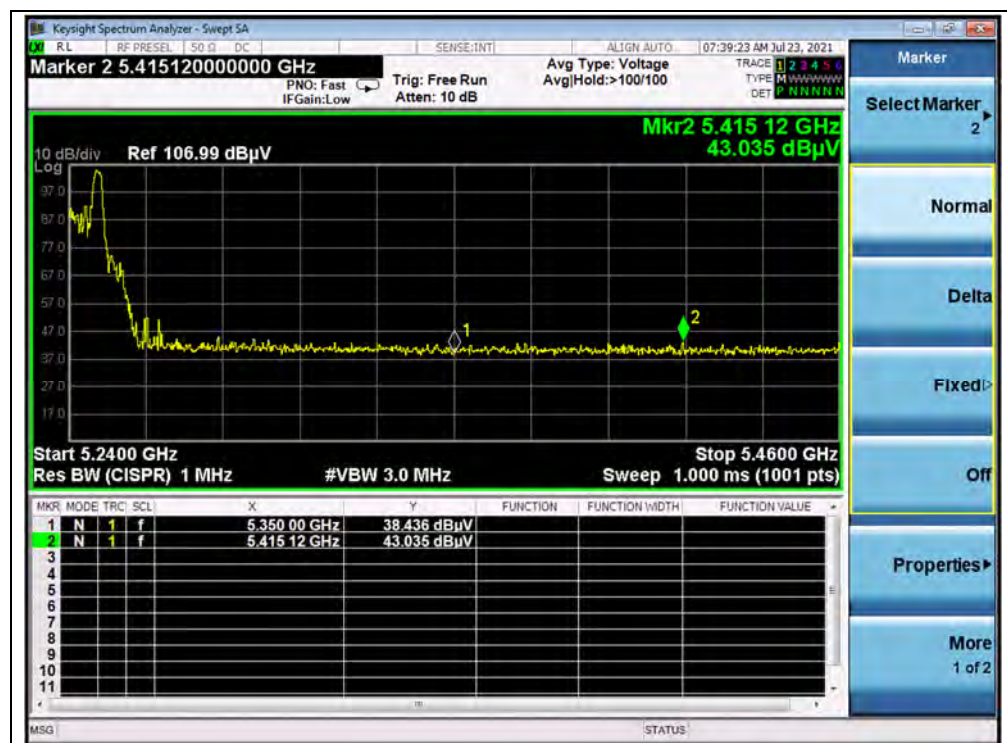
Channel	Frequency (MHz)	Detector	Receiver Reading U _R (dBμV)	A _T (dB)	A _{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5142.60	PK	50.13	-19.54	32.20	62.79	74	PASS
36	5123.56	AV	33.99	-19.54	32.20	46.65	54	PASS
48	5415.12	PK	43.04	-19.54	32.20	55.70	74	PASS
48	5350.00	AV	31.23	-19.54	32.20	43.89	54	PASS
149	5725.00	PK	43.47	-19.01	32.20	56.66	122.23	PASS
165	5850.00	PK	41.96	-19.01	32.20	55.15	122.23	PASS

B.Test Plot:

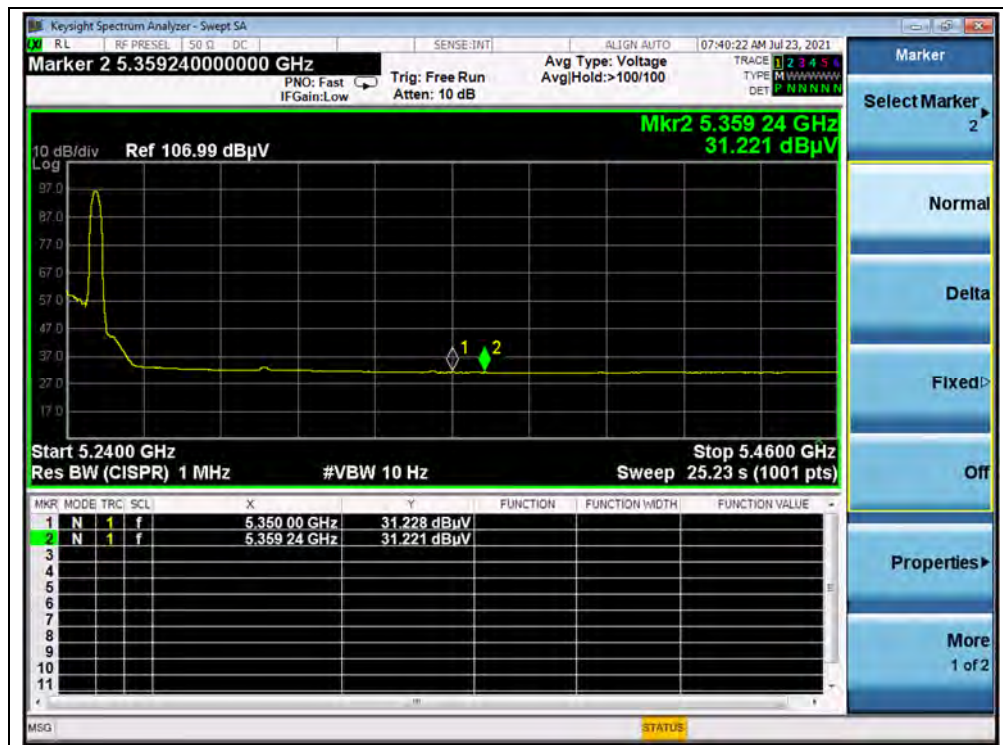
(PEAK, Channel 36, 802.11ax (HEW20) RU26)



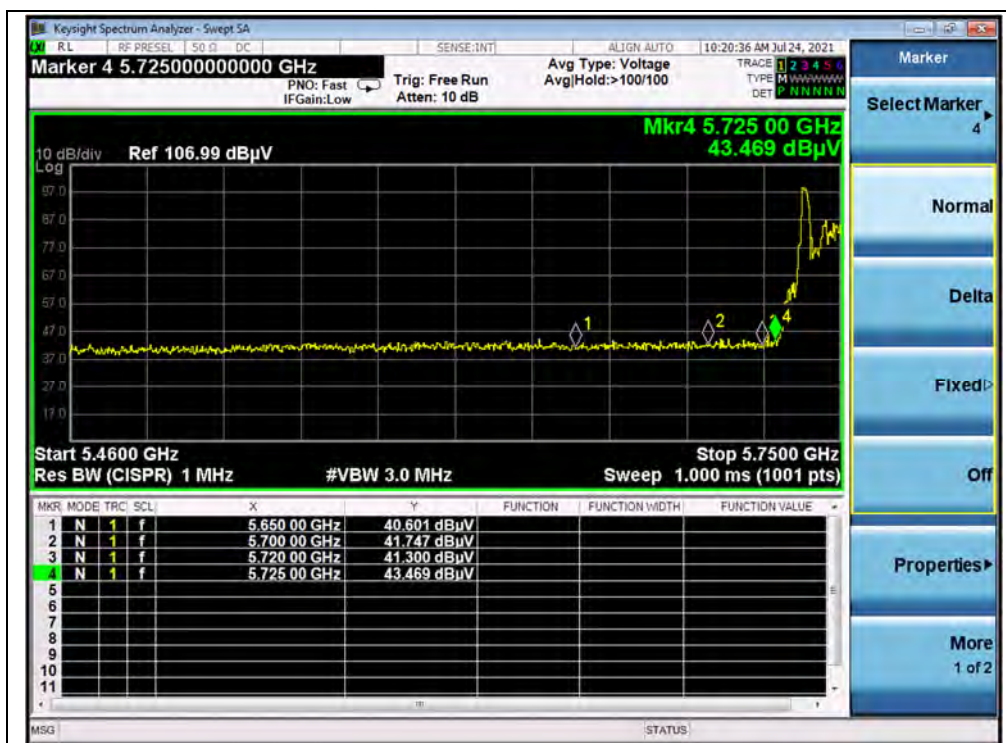
(AVERAGE, Channel 36, 802.11ax (HEW20) RU26)



(PEAK, Channel 48, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 48, 802.11ax (HEW20) RU26)



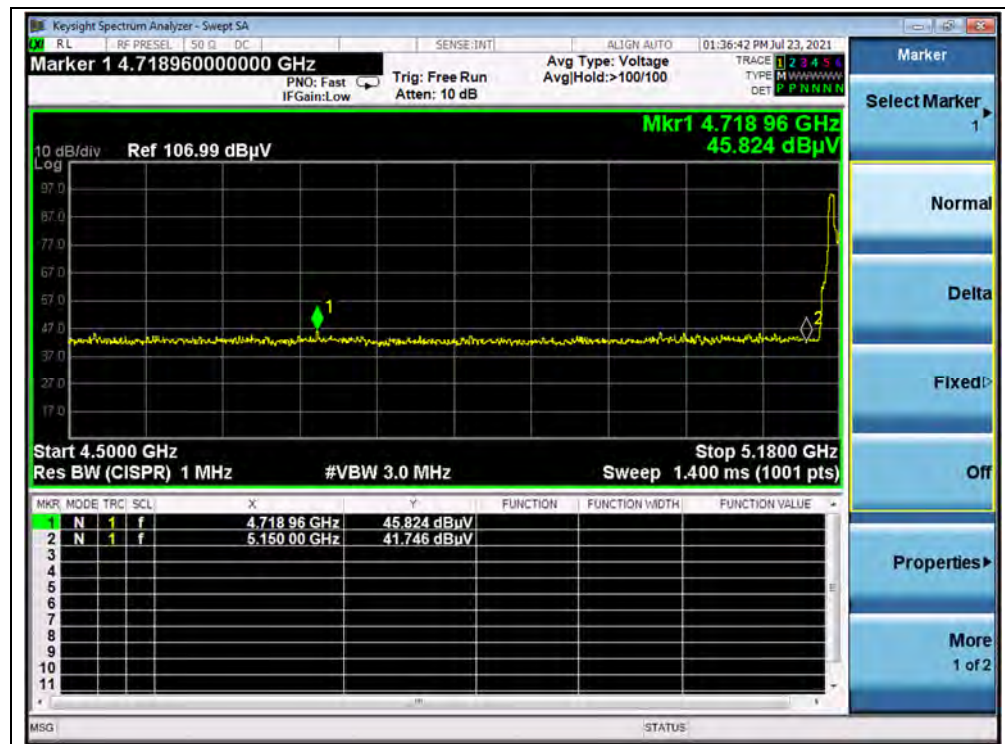
(PEAK, Channel 149, 802.11ax (HEW20) RU26)



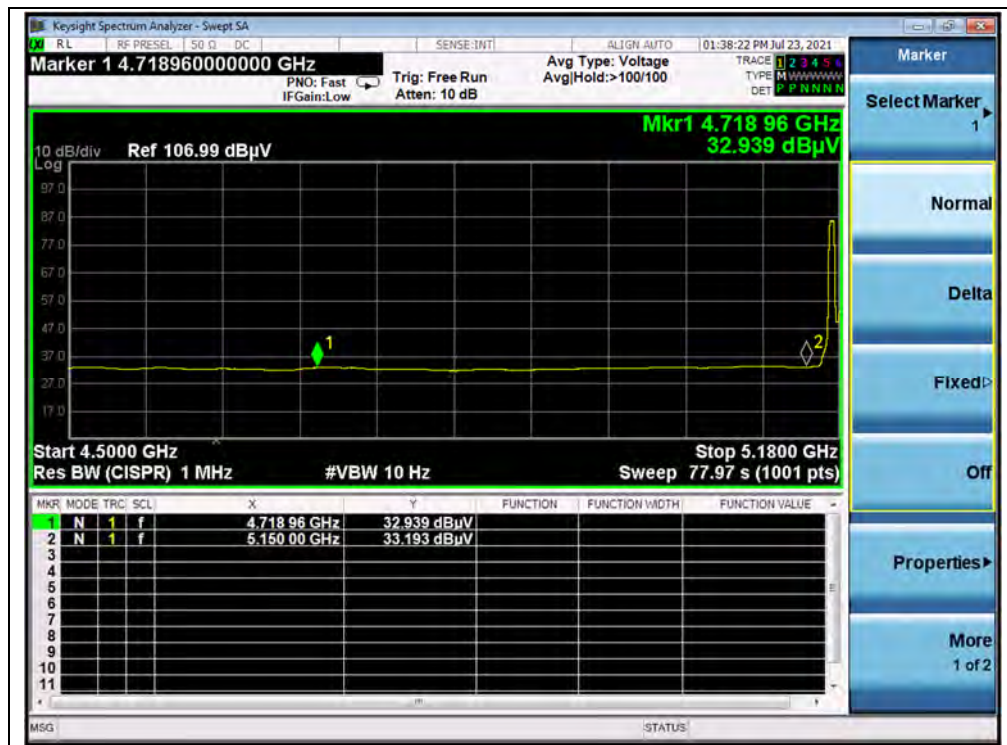
(PEAK, Channel 165, 802.11ax (HEW20) RU26)

**802.11ax (HEW20) RU52 Mode****A.Test Verdict:**

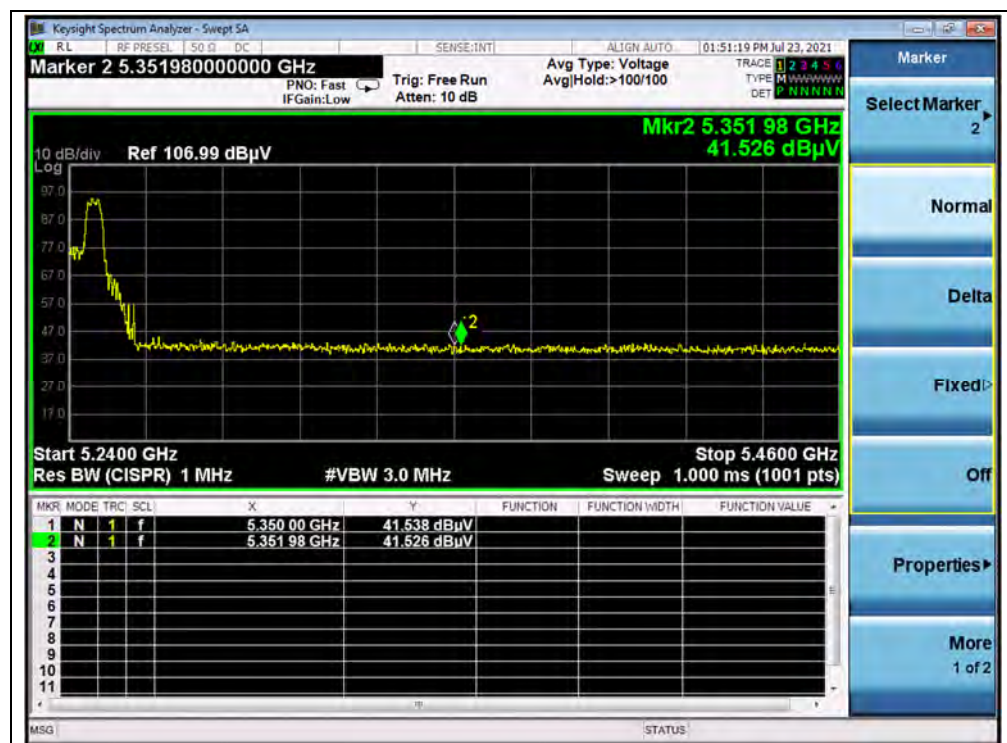
Channel	Frequency (MHz)	Detector	Receiver Reading U _R (dBμV)	A _T (dB)	A _{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	4718.96	PK	45.82	-19.54	32.20	58.48	74	PASS
36	5150.00	AV	33.19	-19.54	32.20	45.85	54	PASS
48	5350.00	PK	41.54	-19.54	32.20	54.20	74	PASS
48	5350.00	AV	31.25	-19.54	32.20	43.91	54	PASS
149	5725.00	PK	43.26	-19.01	32.20	56.45	122.23	PASS
165	5850.00	PK	41.65	-19.01	32.20	54.84	122.23	PASS

B.Test Plot:

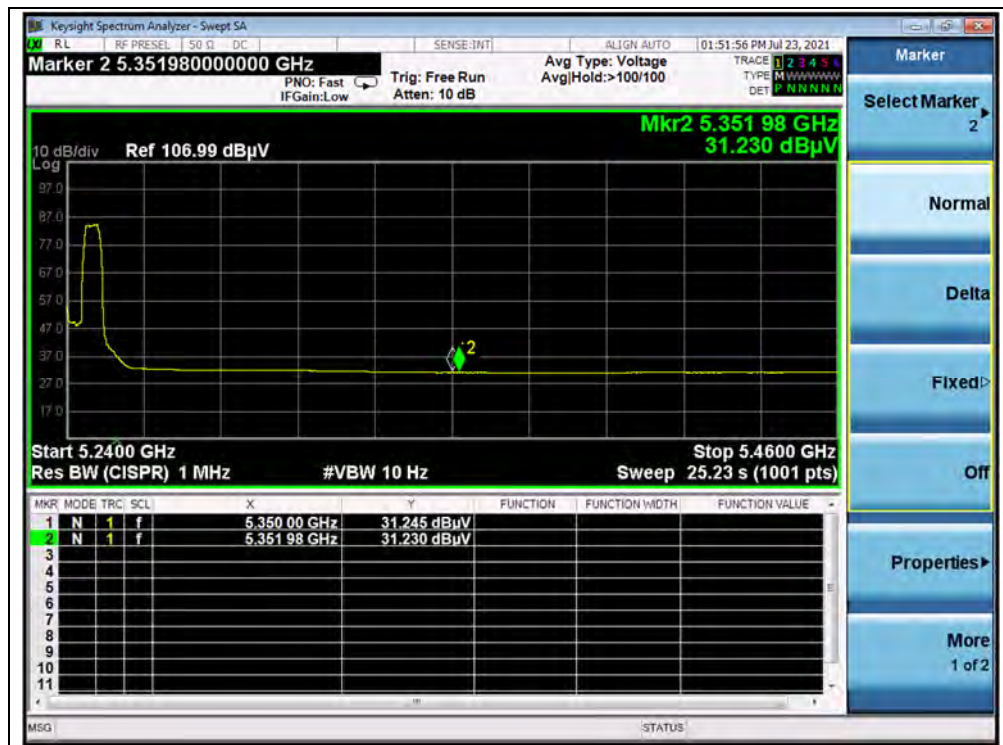
(PEAK, Channel 36, 802.11ax (HEW20) RU52)



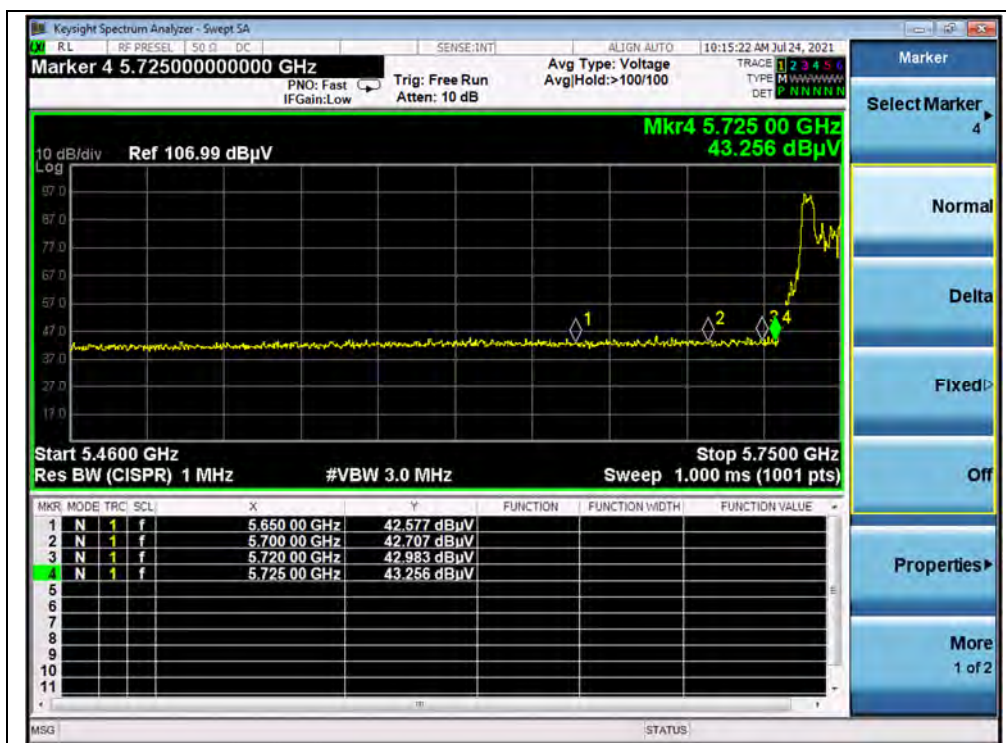
(AVERAGE, Channel 36, 802.11ax (HEW20) RU52)



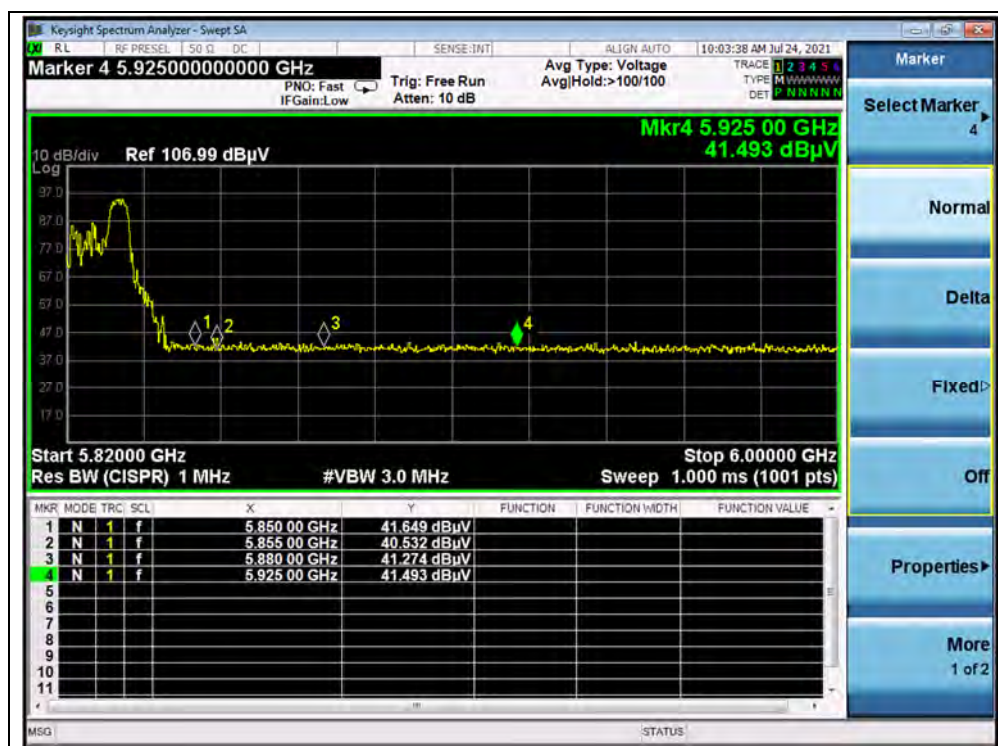
(PEAK, Channel 48, 802.11ax (HEW20) RU52)



(AVERAGE, Channel 48, 802.11ax (HEW20) RU52)



(PEAK, Channel 149, 802.11ax (HEW20) RU52)



(PEAK, Channel 165, 802.11ax (HEW20) RU52)

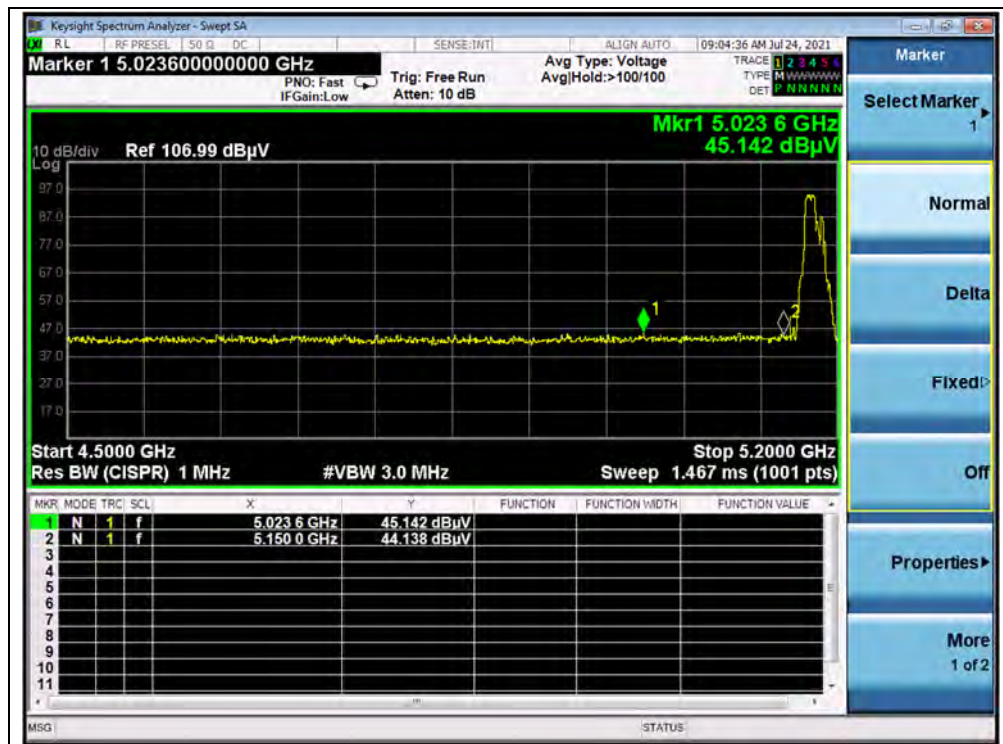


802.11ax (HEW20) RU106 Mode

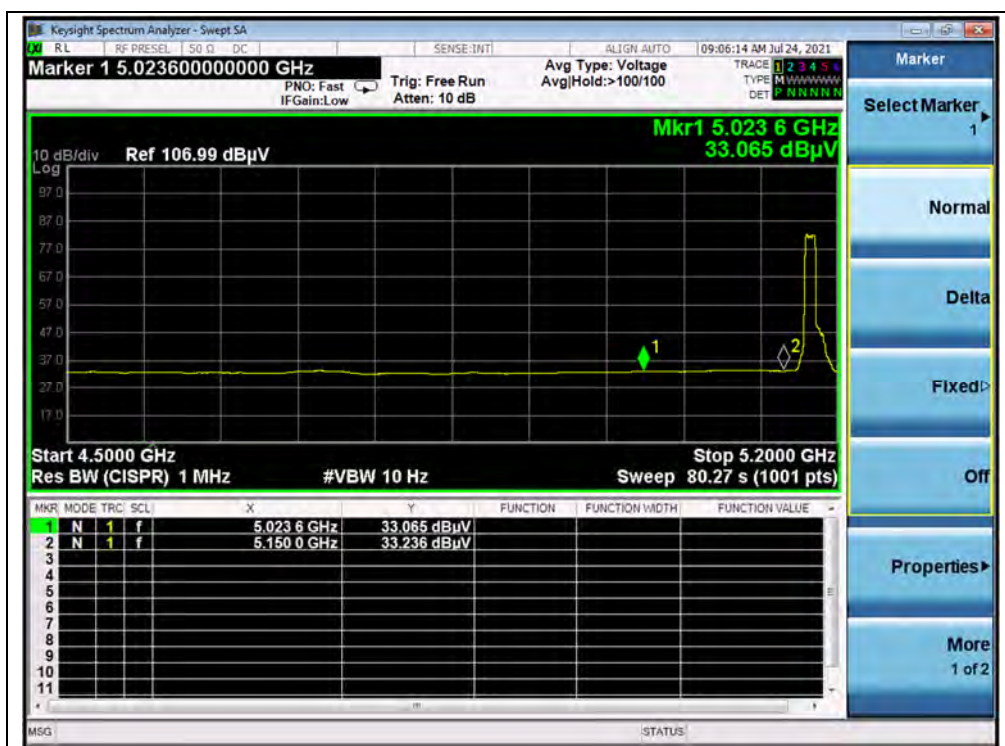
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dB μ V)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
36	5023.60	PK	45.14	-19.54	32.20	57.80	74	PASS
36	5150.00	AV	33.24	-19.54	32.20	45.90	54	PASS
48	5408.16	PK	41.83	-19.54	32.20	54.49	74	PASS
48	5350.00	AV	31.33	-19.54	32.20	43.99	54	PASS
149	5650.00	PK	41.99	-19.01	32.20	55.18	68.23	PASS
165	5855.00	PK	43.28	-19.01	32.20	56.47	110.83	PASS

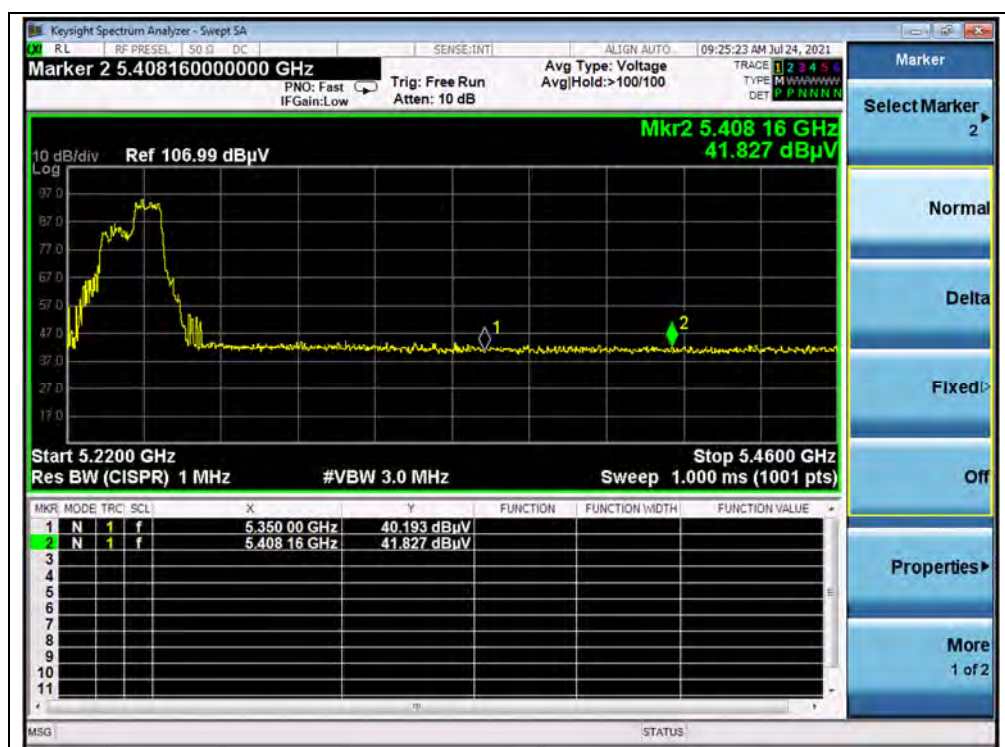
B.Test Plot:



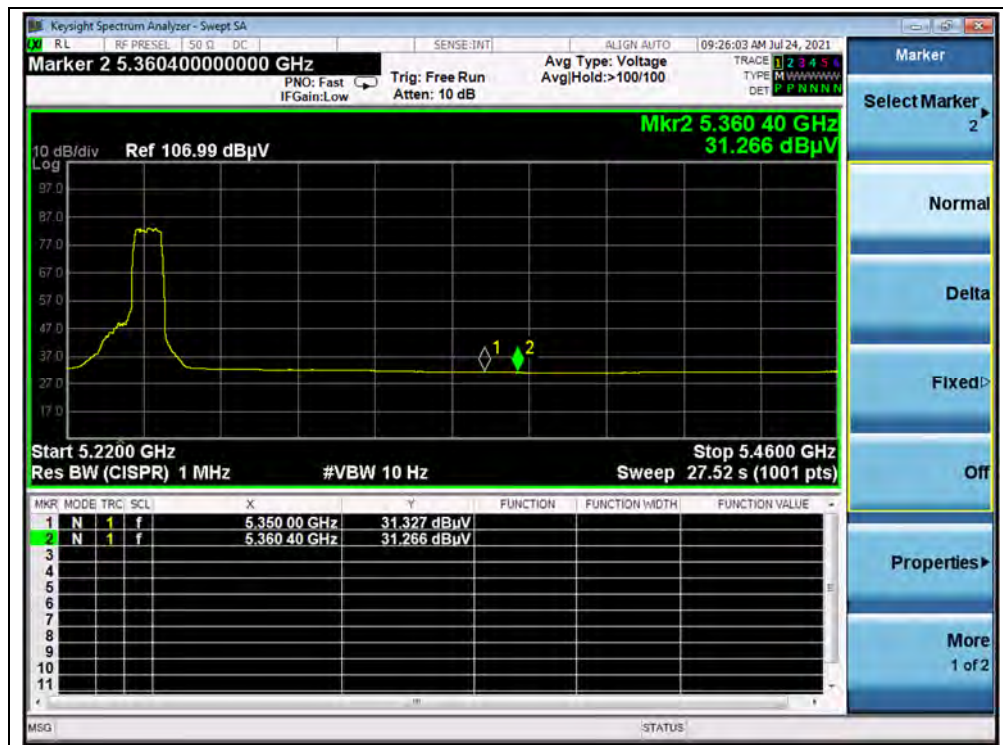
(PEAK, Channel 36, 802.11ax (HEW20) RU106)



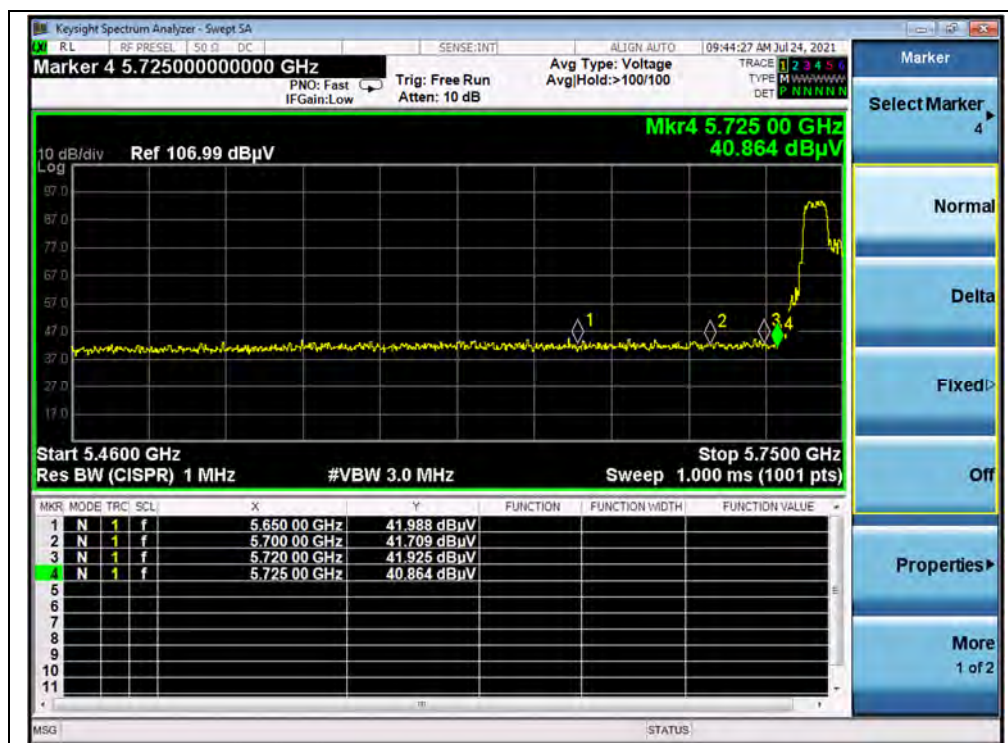
(AVERAGE, Channel 36, 802.11ax (HEW20) RU106)



(PEAK, Channel 48, 802.11ax (HEW20) RU106)



(AVERAGE, Channel 48, 802.11ax (HEW20) RU106)



(PEAK, Channel 149, 802.11ax (HEW20) RU106)



(PEAK, Channel 165, 802.11ax (HEW20) RU106)

2.9. Radiated Emission

2.9.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \mu\text{V/m}$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

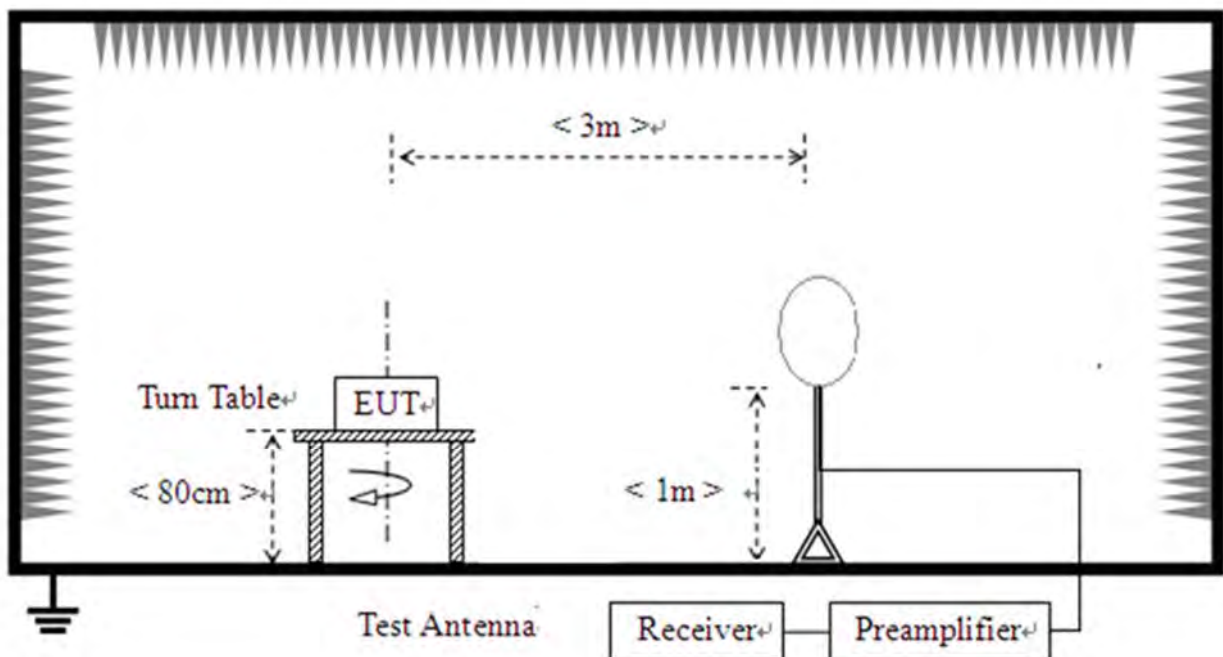
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table).

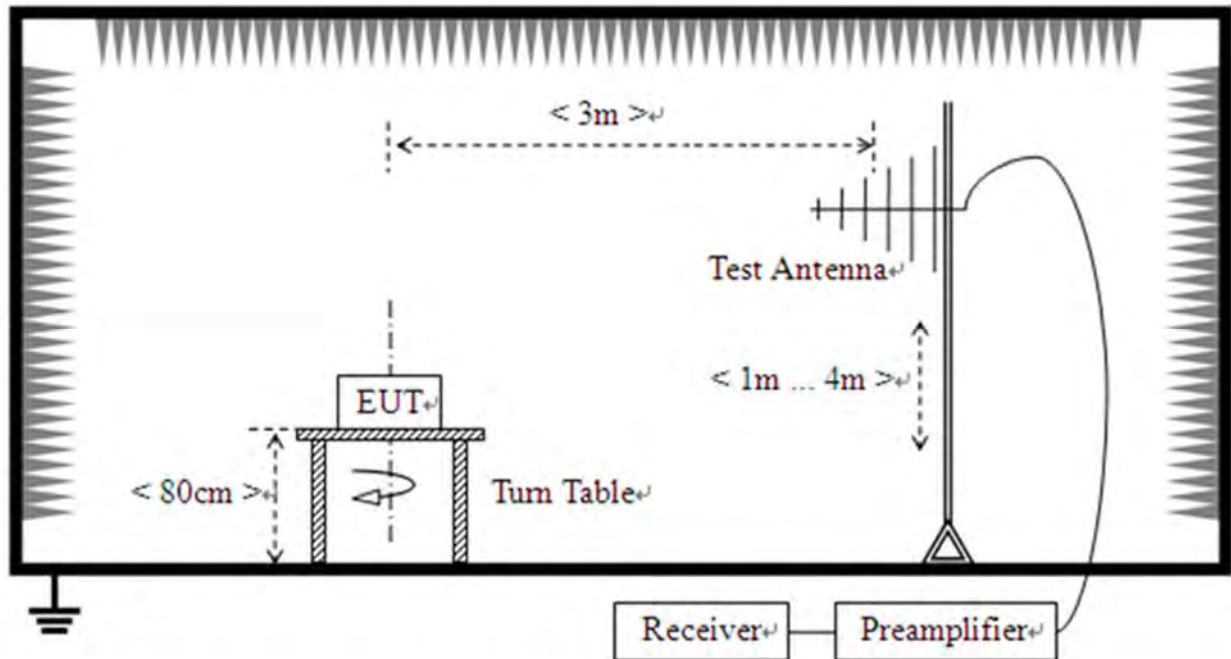
2.9.2. Test Description

Test Setup:

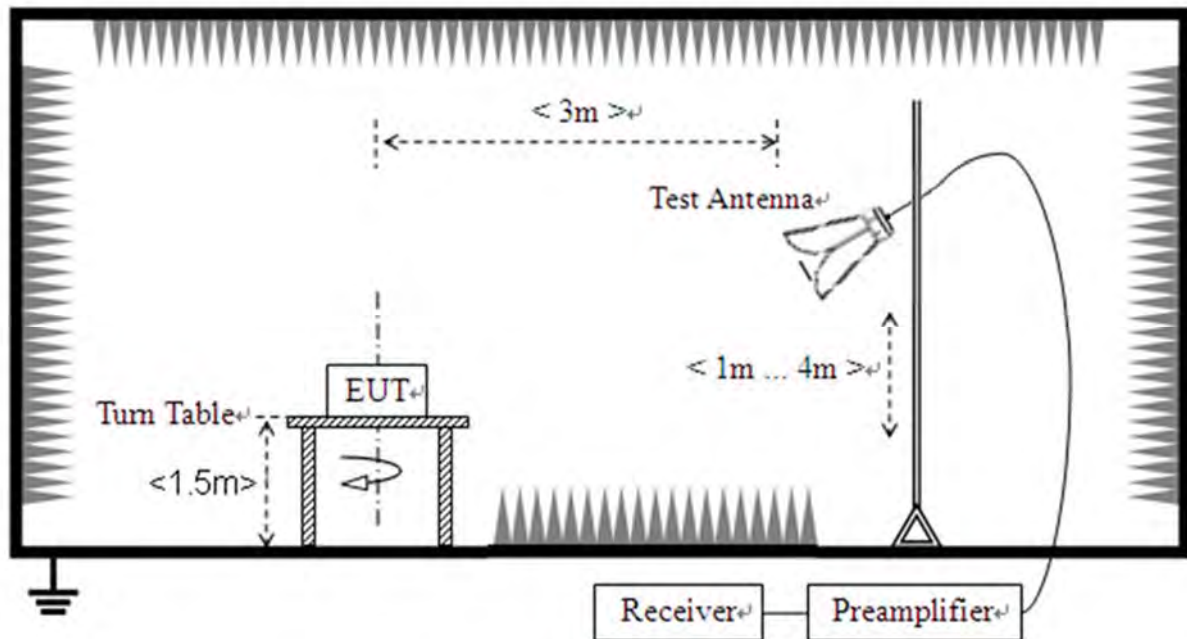
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.



For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

2.9.3. Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note 1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

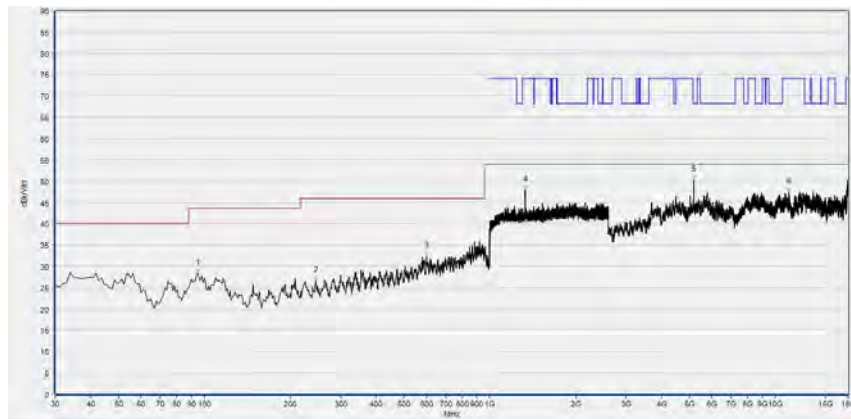
Note 2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

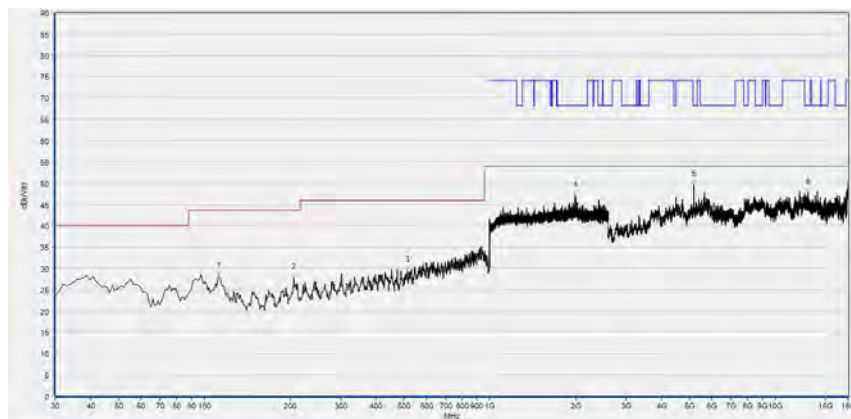
**802.11a Mode**

Plot for Channel 36



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.990	28.25	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
245.340	26.65	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
601.330	32.38	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1331.200	47.92	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5184.120	50.33	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
11143.920	47.38	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

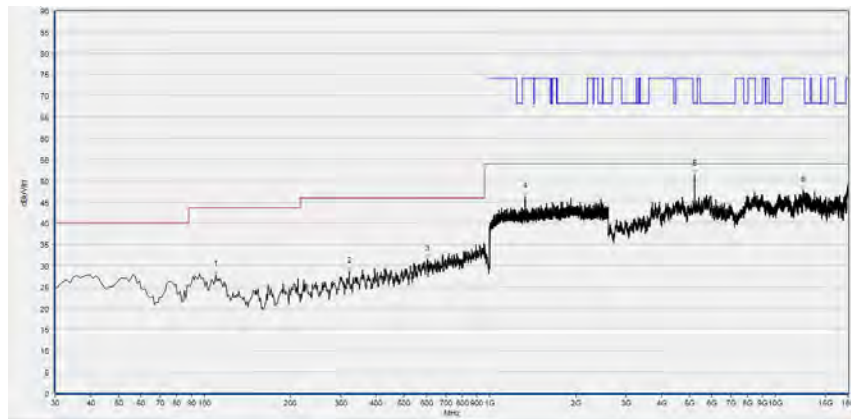
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
112.450	28.22	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
205.570	27.79	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
513.060	29.44	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1994.667	47.10	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5187.200	49.66	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13065.840	47.74	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

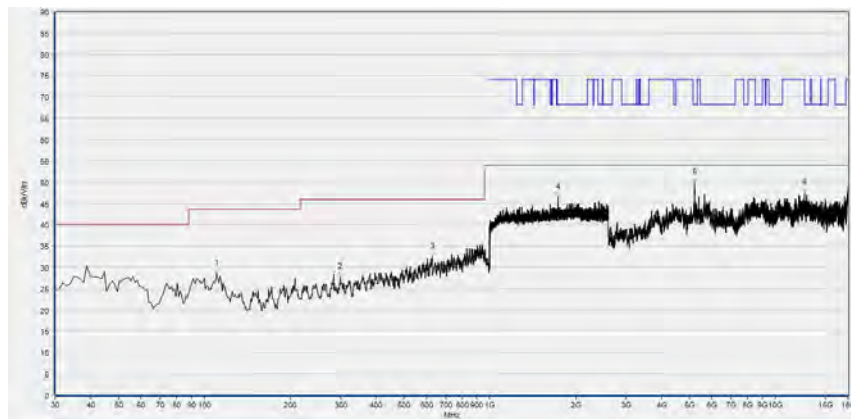
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	27.79	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
321.970	28.71	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
603.270	31.51	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1328.000	46.20	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5214.920	51.50	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12483.720	47.80	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

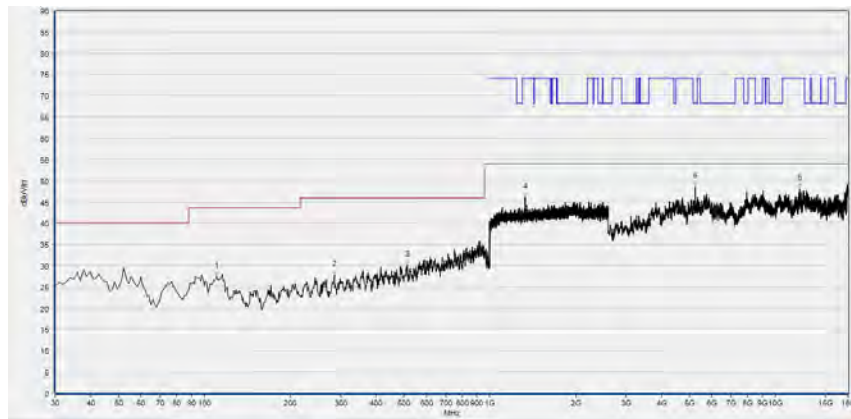
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
110.510	28.44	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
299.660	27.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
627.520	32.40	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1734.400	46.35	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5218.000	49.79	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12696.240	47.44	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

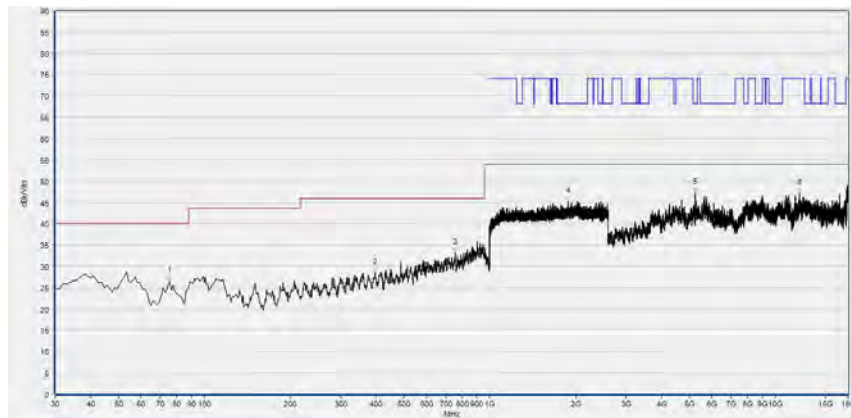
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
110.510	27.44	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
285.110	27.90	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
515.000	30.16	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1327.467	46.02	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5236.480	48.54	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12157.240	48.09	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

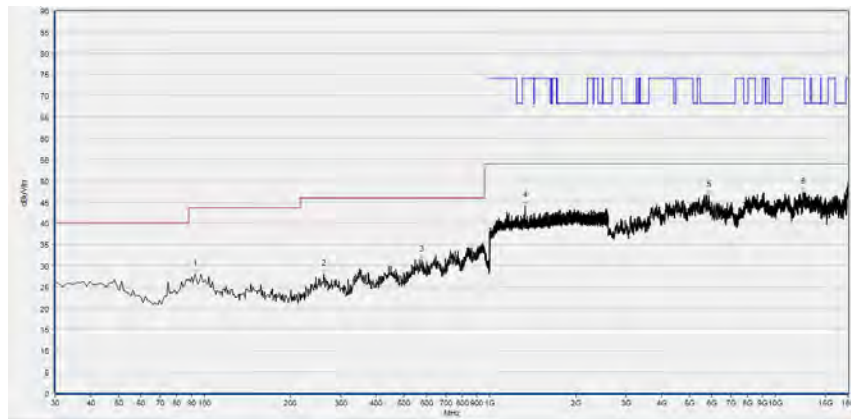
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
75.590	26.49	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
396.660	28.50	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
755.560	33.25	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1881.067	45.32	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5233.400	47.32	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12129.520	47.12	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

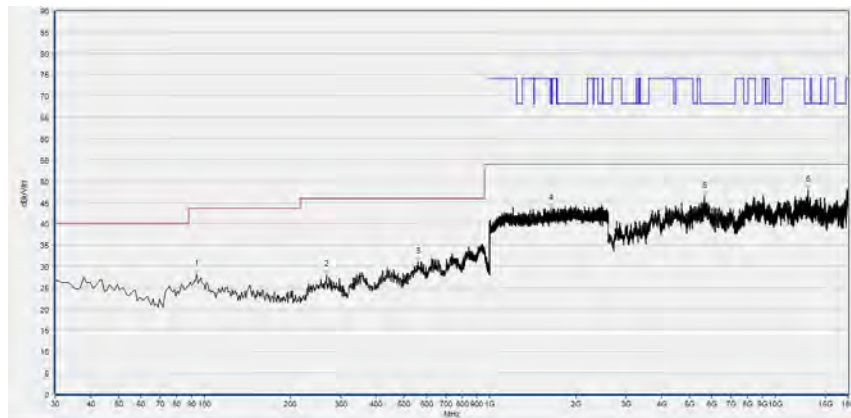
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	28.00	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
261.830	27.98	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
576.110	31.35	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1329.067	44.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5855.560	46.56	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12496.040	47.33	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

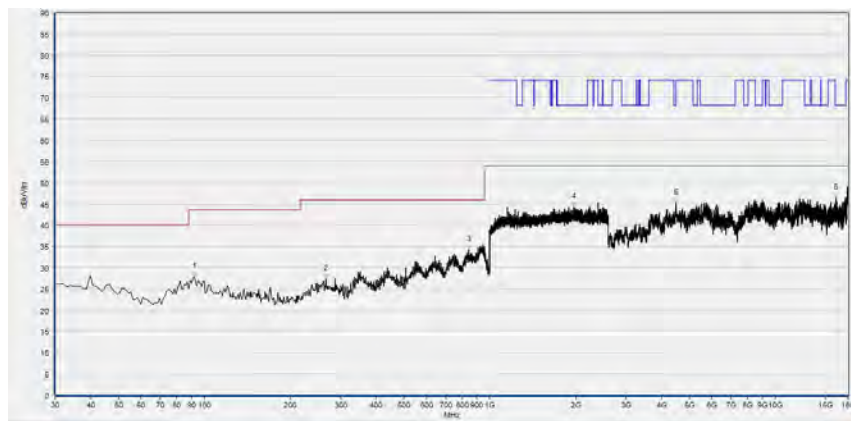
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	28.22	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
267.650	27.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
560.590	31.00	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1641.067	43.58	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5636.880	46.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13047.360	47.99	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

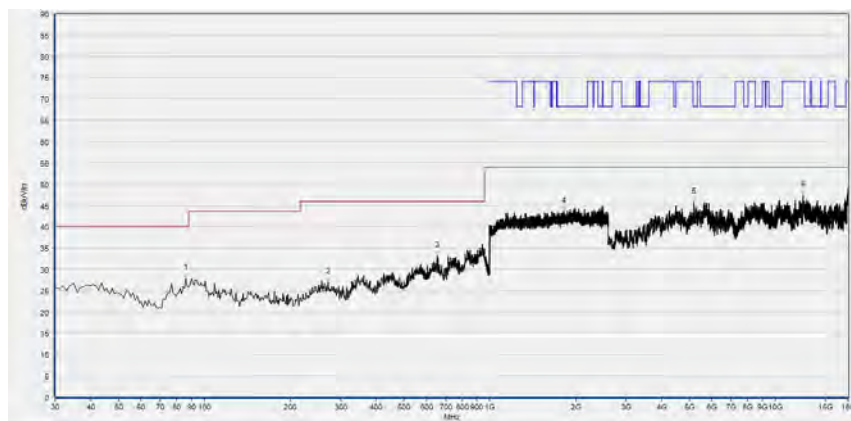
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
92.080	27.86	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
266.680	27.27	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
844.800	34.27	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1971.200	44.30	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
4488.040	45.27	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
16312.160	46.46	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

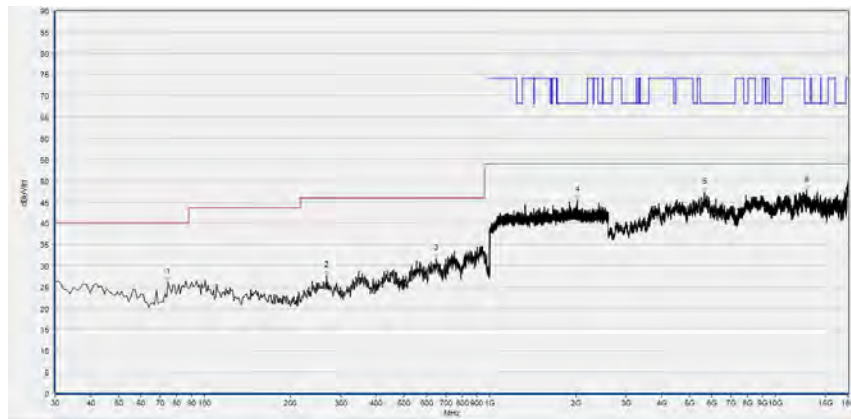
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
86.260	27.74	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
271.530	26.90	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
653.710	33.21	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1814.933	43.55	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5171.800	45.81	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12517.600	47.47	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

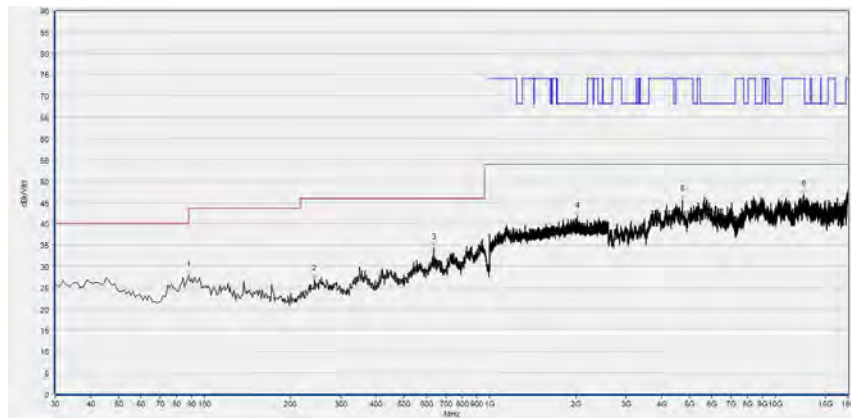
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.620	26.11	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
268.620	27.58	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
648.860	31.75	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2028.267	45.35	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5655.360	47.27	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12877.960	47.71	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

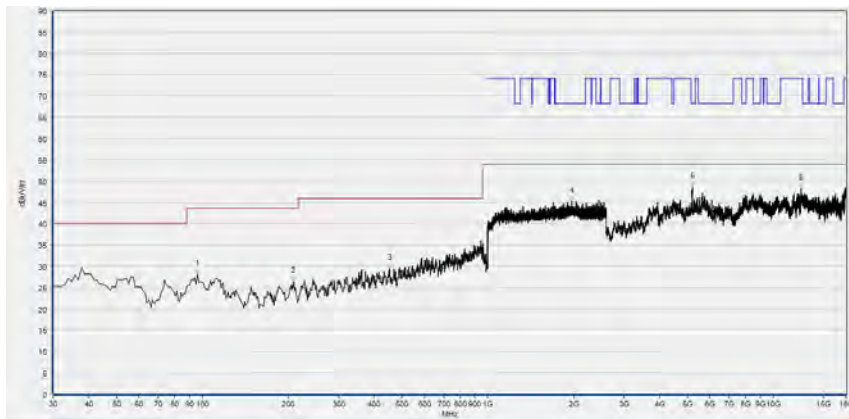


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
88.200	27.74	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
243.400	27.03	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
636.250	34.34	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2027.733	41.66	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4737.520	45.57	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12616.160	46.98	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

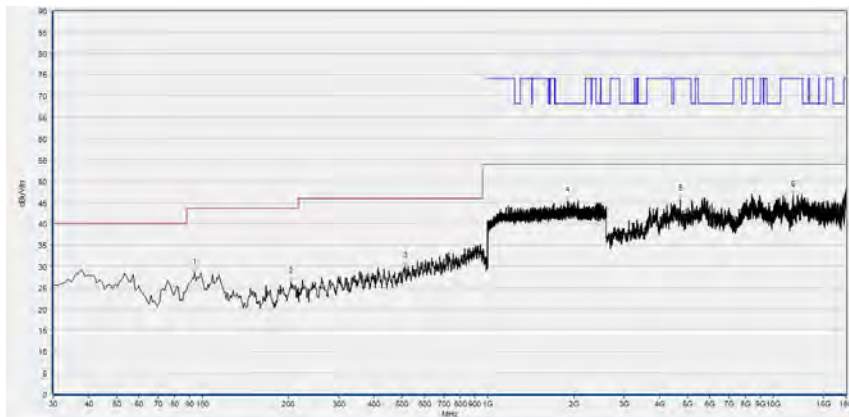
**802.11ac (VHT40) mode**

Plot for Channel 38



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
95.960	28.09	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
208.480	26.55	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
452.920	29.42	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1969.067	45.17	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5202.600	48.54	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12523.760	48.26	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

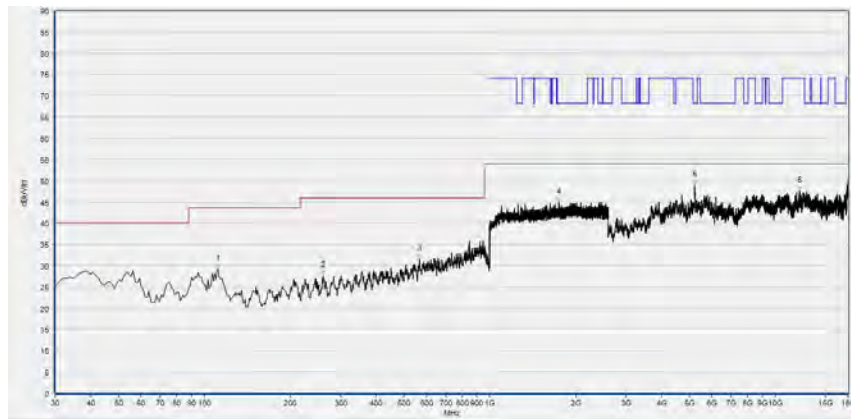
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	28.45	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
204.600	26.29	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
514.030	30.03	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1905.067	45.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4728.280	45.79	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
11741.440	46.82	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

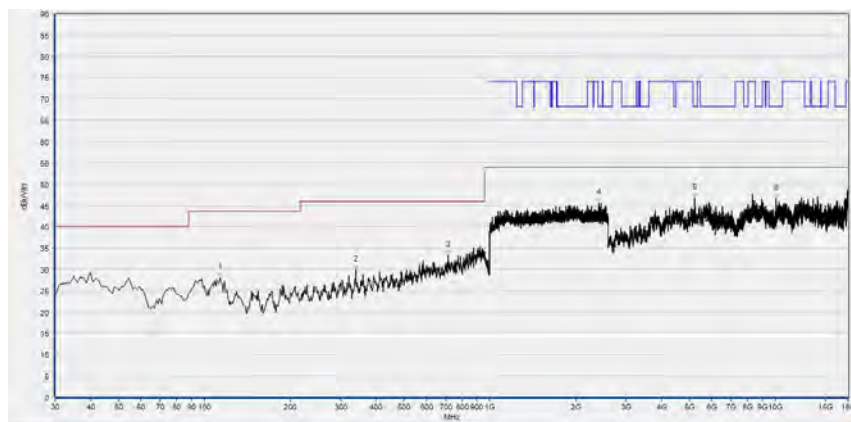
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 46



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
111.480	29.08	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
260.860	27.59	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
566.410	31.49	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1748.267	44.85	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5221.080	48.95	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12154.160	47.67	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

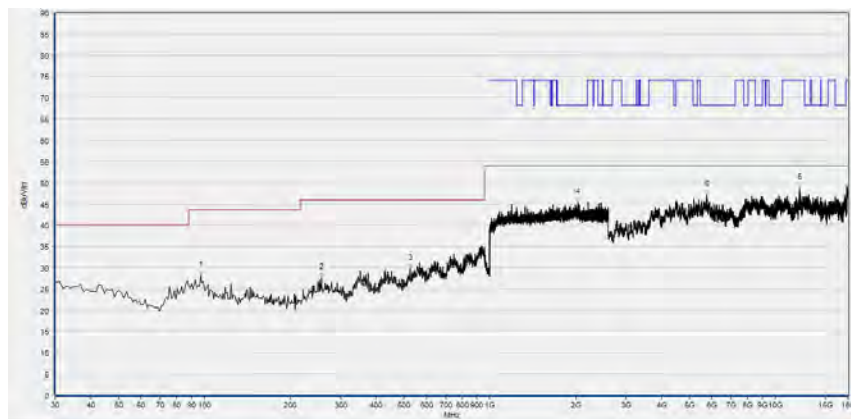


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
113.420	28.04	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
339.430	29.78	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
715.790	33.28	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2413.867	45.62	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5214.920	46.77	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
10081.320	46.65	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

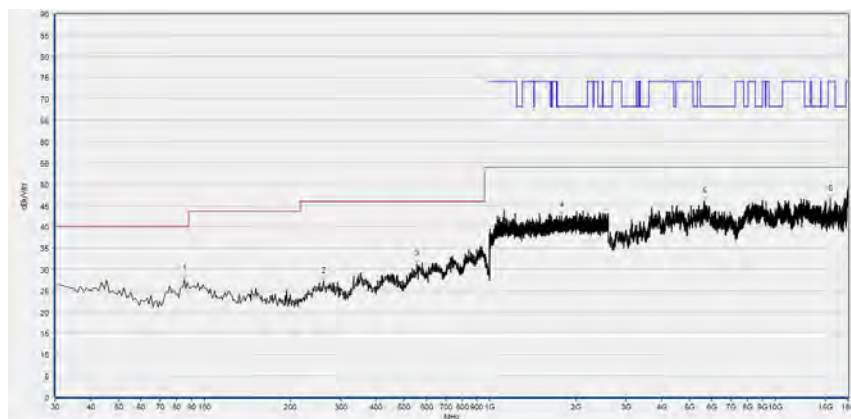


Plot for Channel 151



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
96.930	28.22	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
256.980	27.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
524.700	29.78	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2039.467	45.49	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5750.840	47.08	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12135.680	48.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

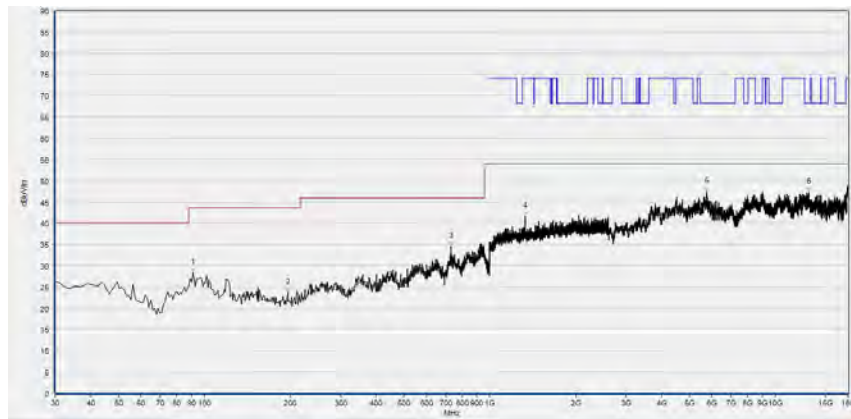


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
85.290	27.61	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
261.830	27.08	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
554.770	31.09	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1781.333	42.49	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5661.520	45.97	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
15551.400	46.38	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

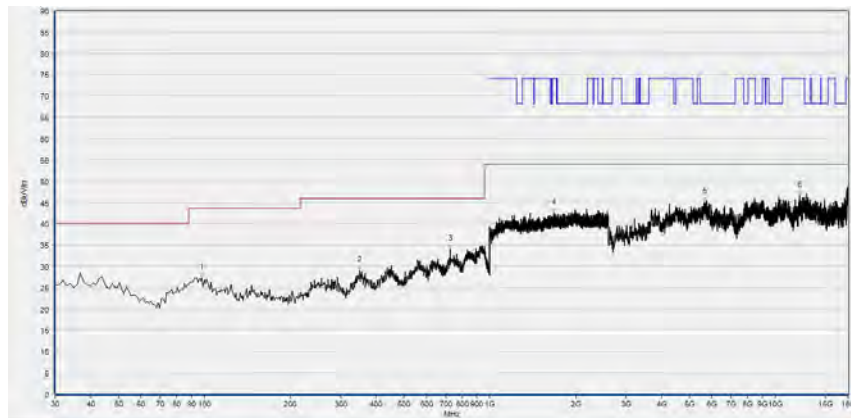


Plot for Channel 159



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
91.110	28.30	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
195.870	23.64	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
732.280	34.60	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1331.200	41.50	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5750.840	47.41	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
13142.840	47.18	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

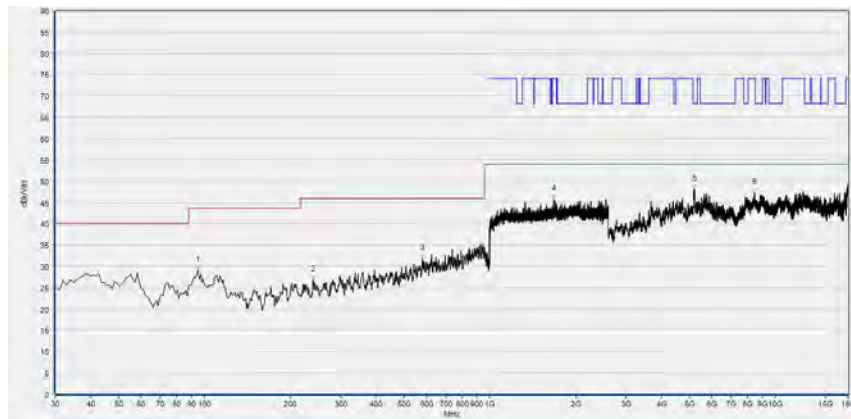


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	27.40	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
350.100	28.91	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
727.430	33.95	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1673.067	42.63	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5649.200	45.13	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12172.640	46.57	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

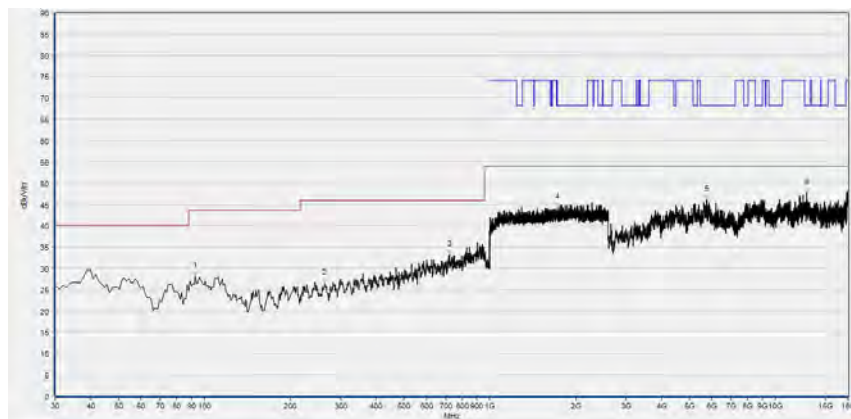
**802.11ac (VHT80) Mode**

Plot for Channel 42



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.990	28.95	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
240.490	26.84	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
579.020	31.79	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1672.000	45.70	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5202.600	48.11	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8458.160	47.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

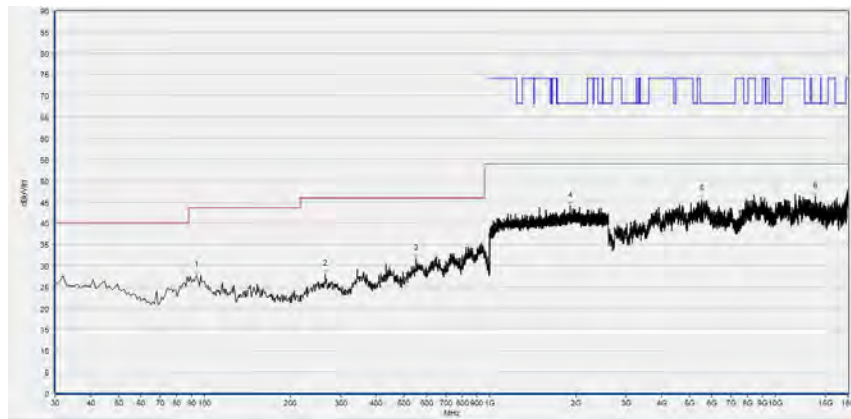
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	28.10	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
263.770	26.40	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
720.640	33.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1728.000	44.23	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5741.600	46.05	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12893.360	47.75	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

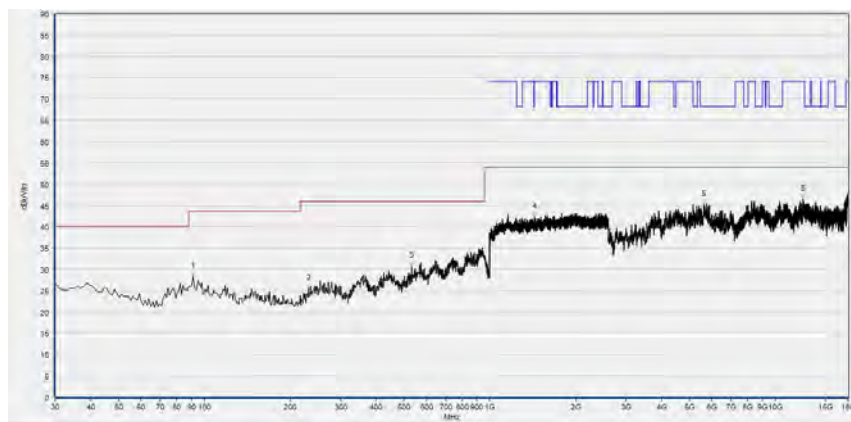
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 155



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	27.60	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
265.710	28.06	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
551.860	31.61	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1912.533	44.01	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5535.240	45.55	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
13829.680	46.30	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

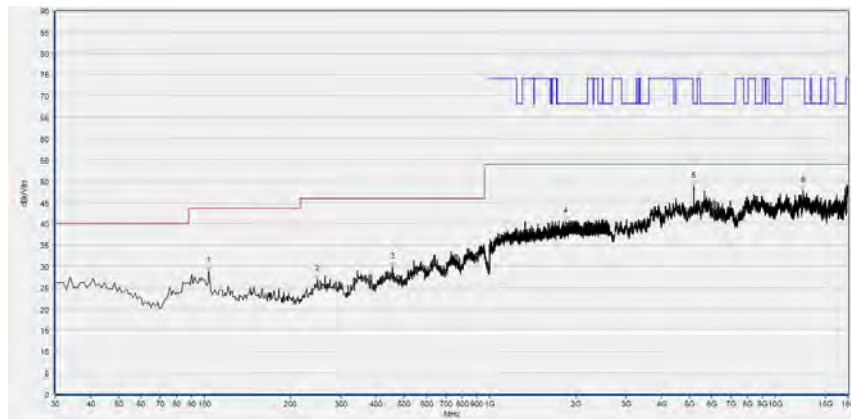


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
91.110	28.28	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
231.760	25.39	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
532.460	30.66	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1431.467	42.17	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5615.320	45.31	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12542.240	46.35	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

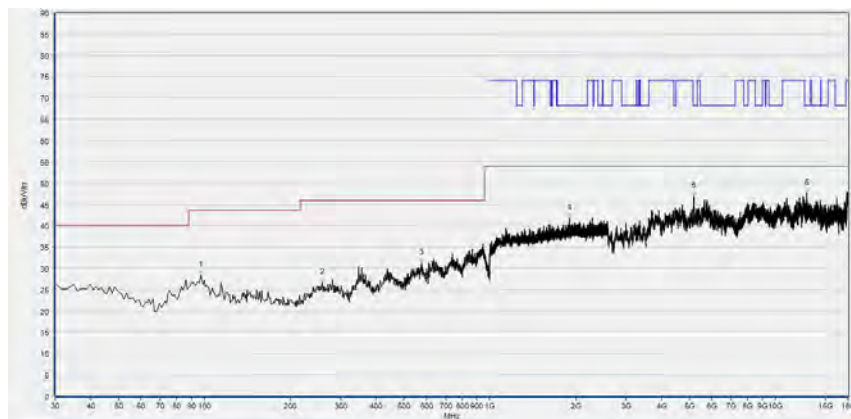
**802.11ax (HEW20) Mode**

Plot for Channel 36



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
103.720	28.89	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
249.220	26.97	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
455.830	29.89	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1842.133	40.58	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5181.040	48.83	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12520.680	47.76	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

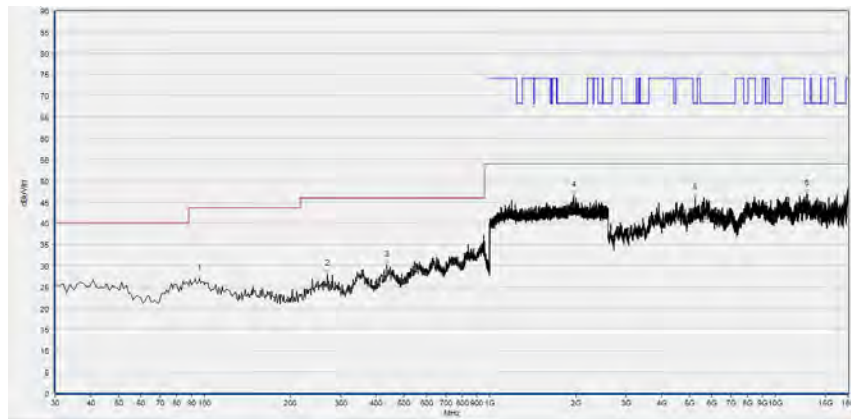
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
96.930	28.33	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
258.920	26.68	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
578.050	31.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1897.067	41.72	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5177.960	46.85	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12884.120	47.58	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

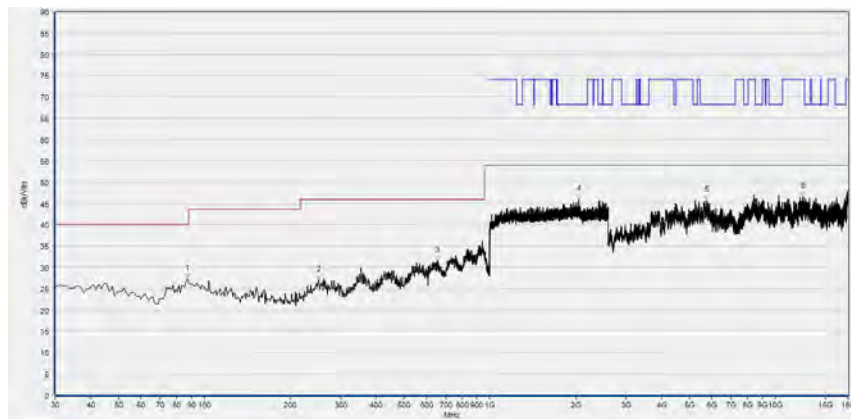
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
95.960	27.06	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
269.590	28.07	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
435.460	30.11	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1969.067	46.57	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5236.480	45.98	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12914.920	46.90	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

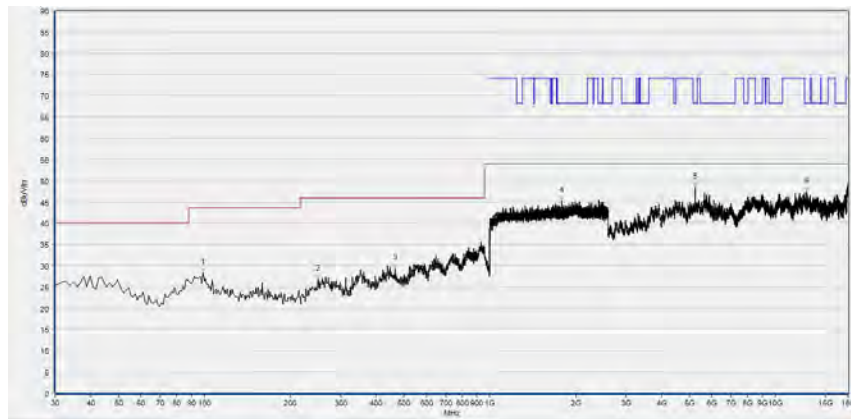
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
87.230	27.24	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
251.160	26.94	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
656.620	31.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2051.200	45.95	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5750.840	45.68	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12536.080	46.66	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

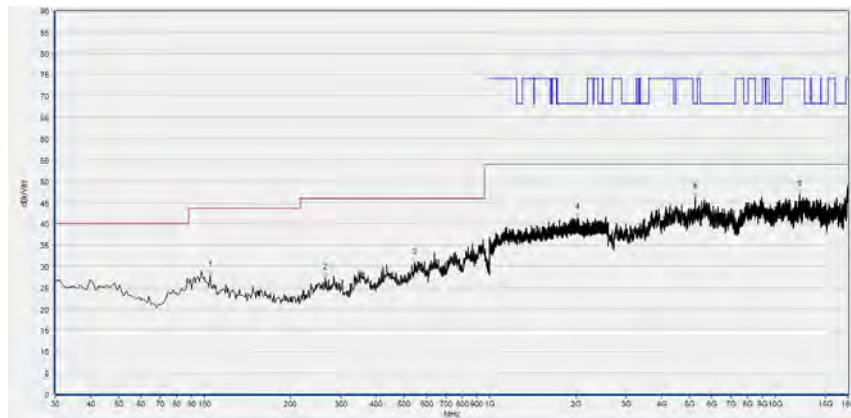
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
98.870	28.26	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
250.190	26.77	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
466.500	29.41	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1789.867	45.19	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5233.400	48.36	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12890.280	47.44	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

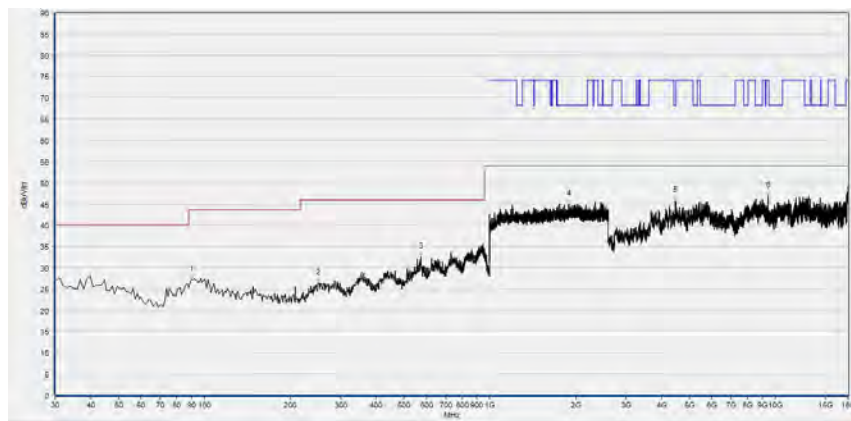


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
104.690	27.84	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
265.710	27.28	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
545.070	30.86	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2021.867	41.34	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5236.480	46.18	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12151.080	46.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

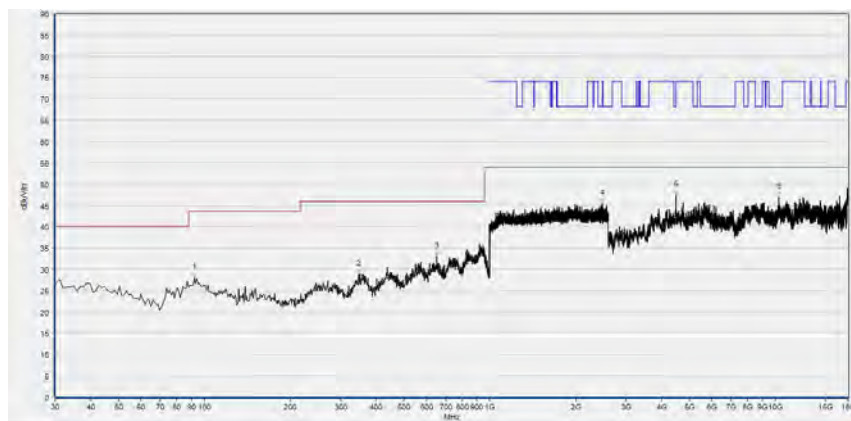


Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
90.140	27.16	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
250.190	26.28	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
572.230	32.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1890.667	44.86	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
4472.640	45.71	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
9428.360	46.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

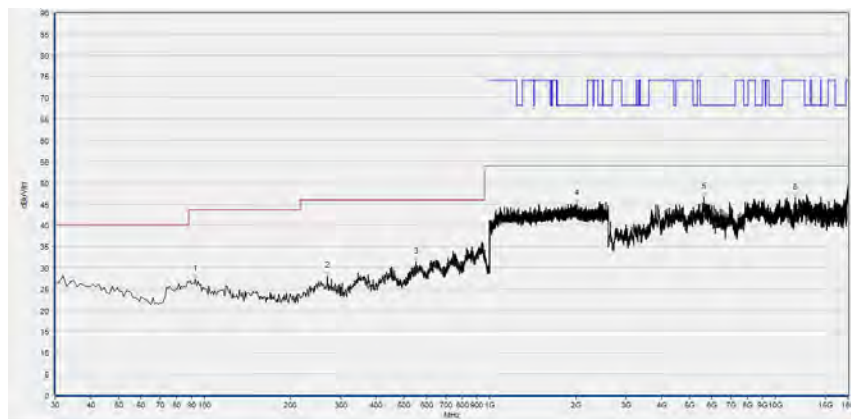


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
92.080	27.99	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
347.190	28.76	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
652.740	33.07	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2485.333	45.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4481.880	47.48	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
10303.080	46.96	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

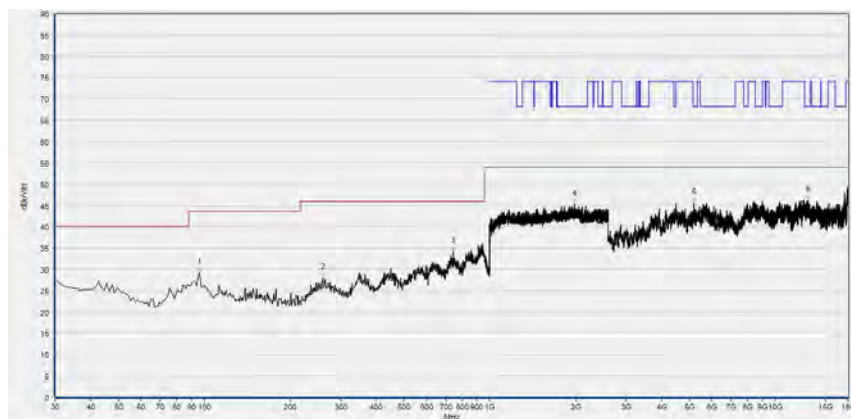


Plot for Channel 157



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	27.35	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
269.590	28.04	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
551.860	31.35	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2019.733	45.16	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5630.720	46.58	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
11735.280	46.39	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

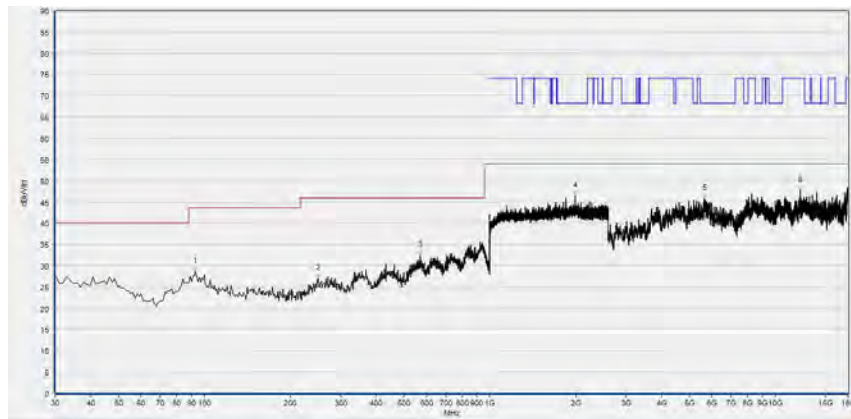
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
95.960	29.19	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
259.890	28.07	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
744.890	34.27	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1979.733	45.20	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5181.040	45.51	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13056.600	46.30	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

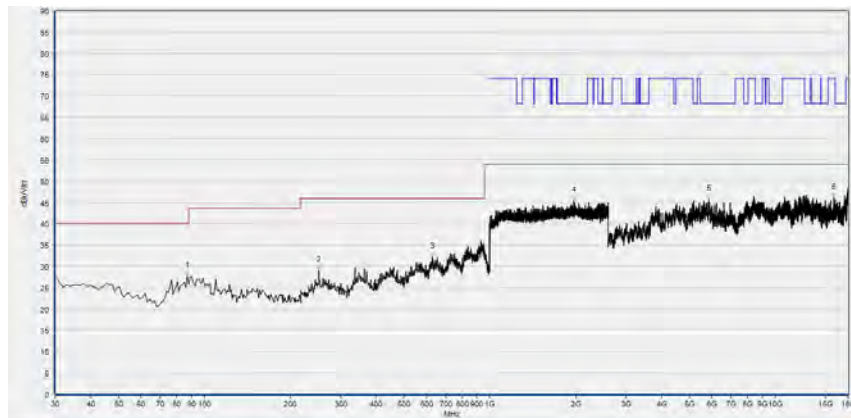
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	28.74	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
250.190	26.93	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
571.260	32.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1991.467	46.37	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5643.040	45.73	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12209.600	47.71	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

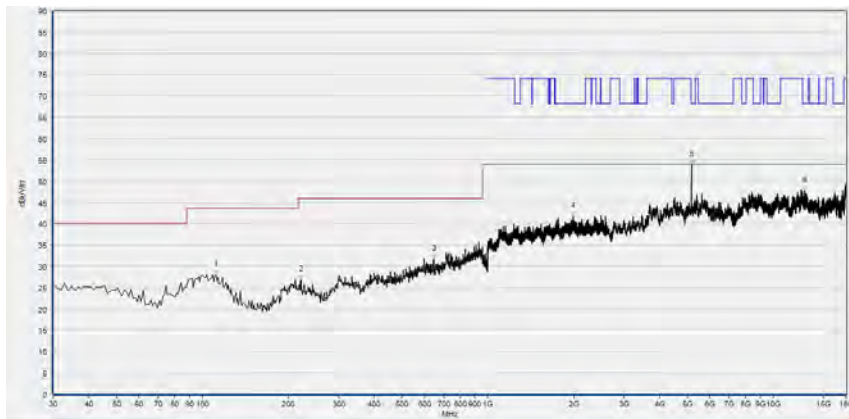


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
87.230	27.63	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
252.130	28.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
627.520	32.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1969.600	45.35	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5855.560	45.77	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
15998.000	46.10	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

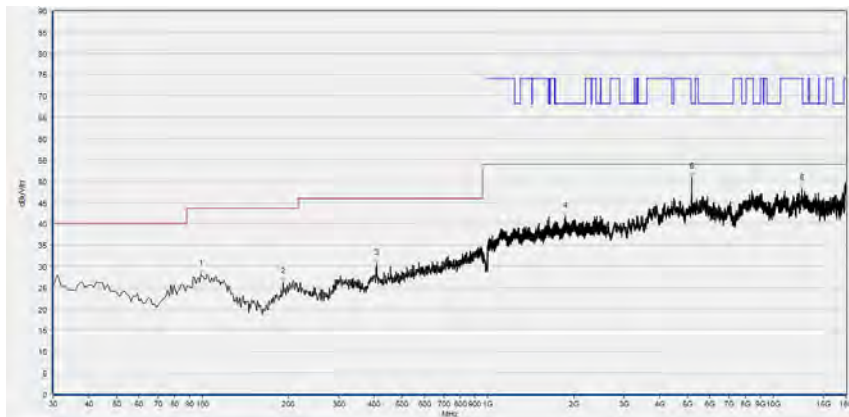
**802.11ax (HEW20) RU26 Mode**

Plot for Channel 36



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
111.480	27.92	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
222.060	26.83	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
646.920	31.65	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1992.533	41.67	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5171.800	53.75	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12881.040	47.74	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

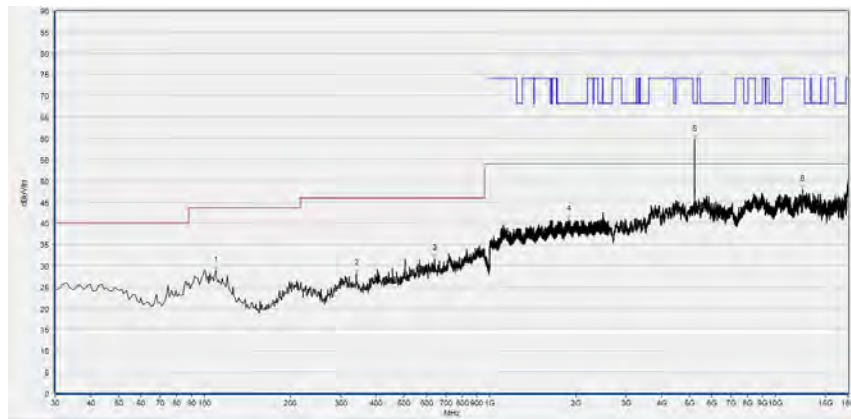
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
98.870	28.13	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
191.990	26.39	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
408.300	30.73	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1873.067	41.80	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5171.800	50.97	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12591.520	48.24	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

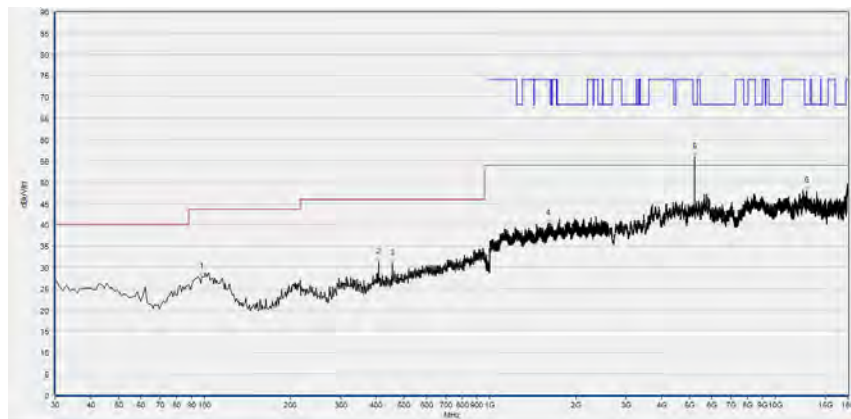
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	28.89	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
341.370	28.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
641.100	31.62	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1885.867	40.91	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5221.080	59.67	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12480.640	47.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

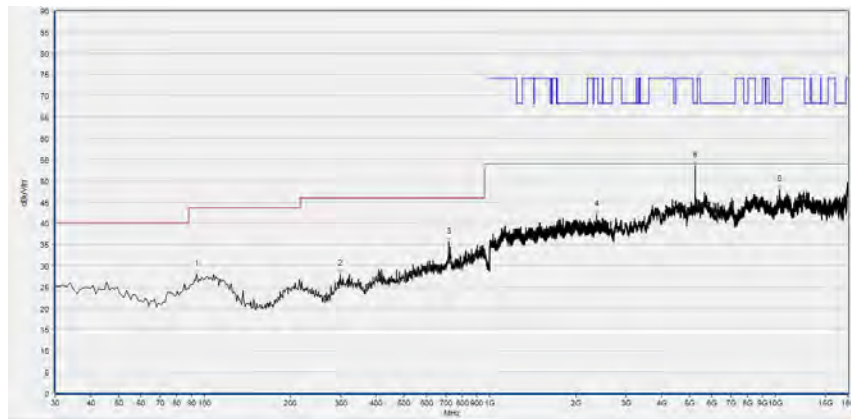
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	27.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
408.300	31.16	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
455.830	30.88	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1598.400	40.15	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5218.000	55.82	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12893.360	47.94	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

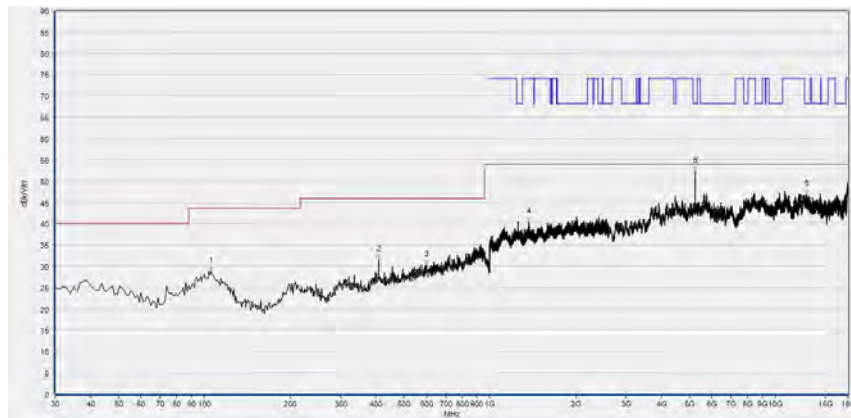
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	27.96	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
299.660	27.96	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
718.700	35.61	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2364.800	42.12	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5248.800	53.44	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
10333.880	47.87	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

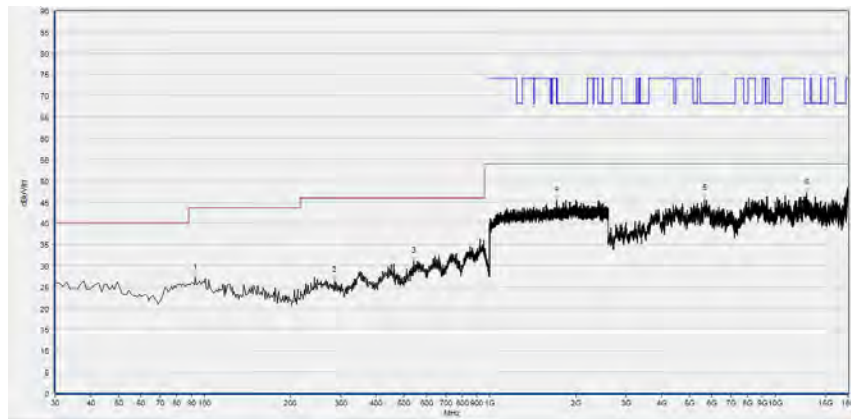


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
105.660	28.80	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
408.300	31.58	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
601.330	30.37	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1366.933	40.33	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5248.800	52.32	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12877.960	46.87	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

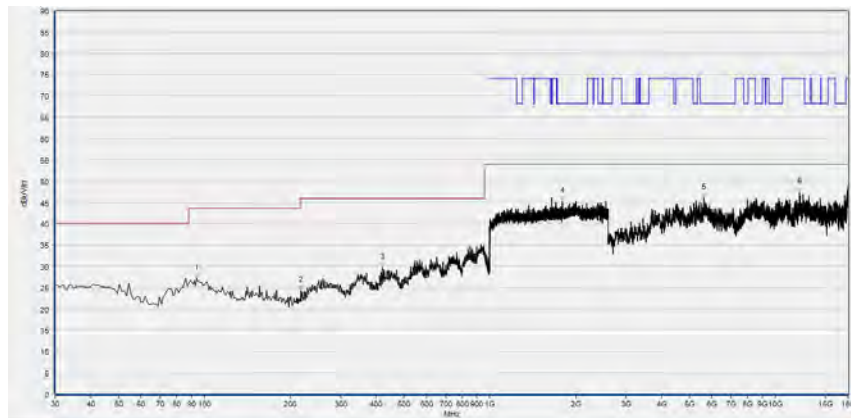


Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	27.14	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
286.080	26.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
540.220	31.02	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1710.933	45.46	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5639.960	45.73	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12881.040	47.02	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

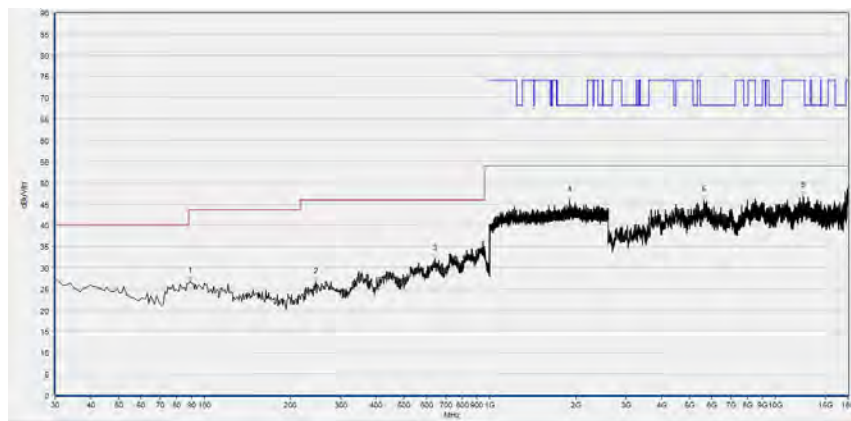


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	27.12	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
217.210	24.38	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
418.970	29.74	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1792.000	45.32	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5633.800	46.12	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12166.480	47.37	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

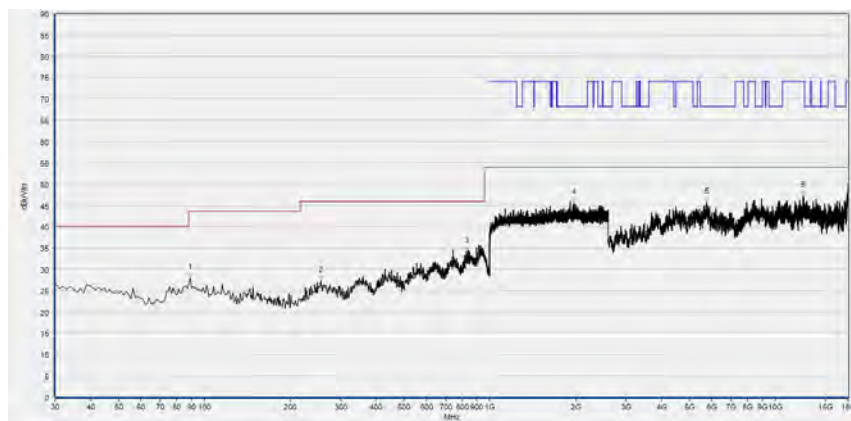


Plot for Channel 157



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
89.170	26.87	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
246.310	26.69	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
642.070	32.05	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1899.200	45.95	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5627.640	45.92	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12536.080	46.90	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

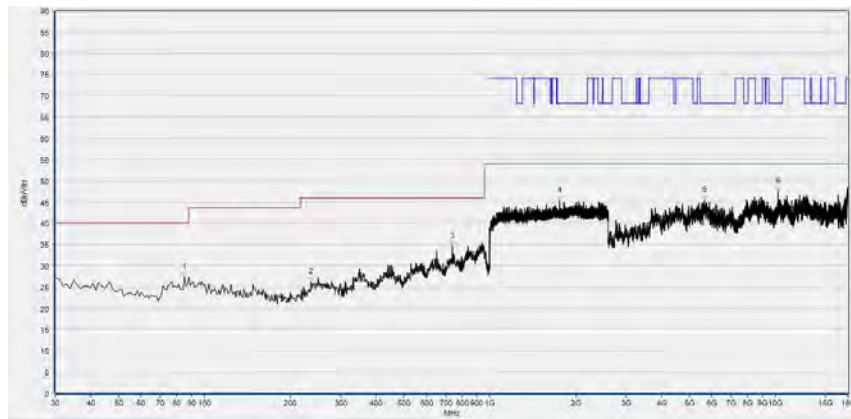
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
89.170	28.06	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
256.010	27.29	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
829.280	34.25	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1966.933	45.63	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5744.680	45.79	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12529.920	47.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

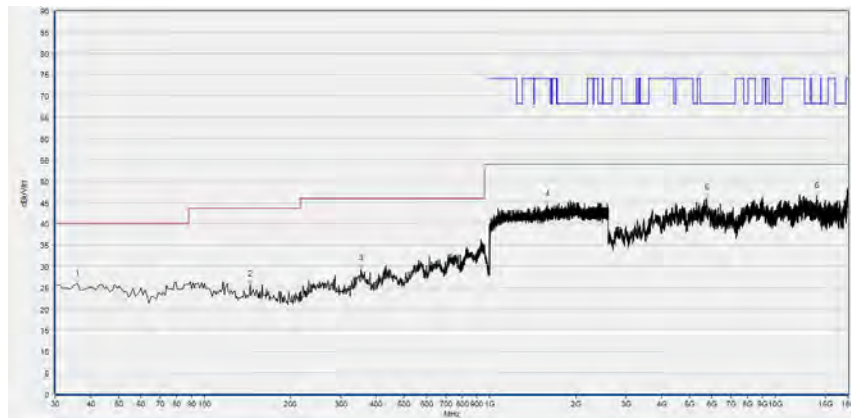
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
85.290	27.31	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
236.610	26.14	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
739.070	34.46	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1757.867	45.22	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5652.280	45.40	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
10223.000	47.41	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

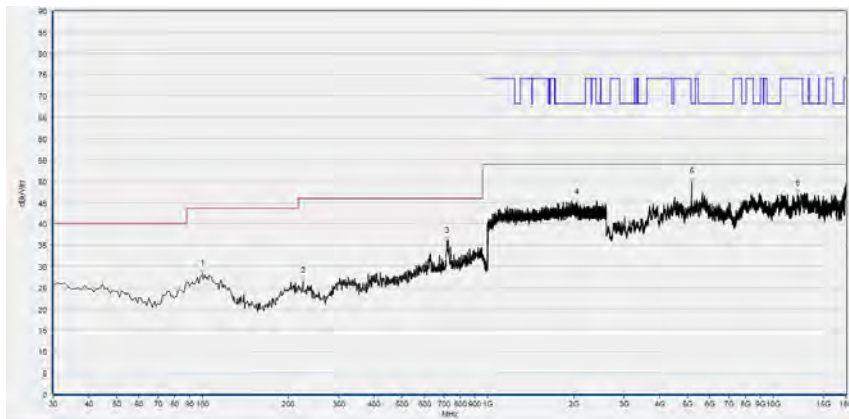


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
35.820	26.01	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
144.460	25.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
353.980	29.35	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1592.533	44.38	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5744.680	45.87	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13989.840	46.39	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

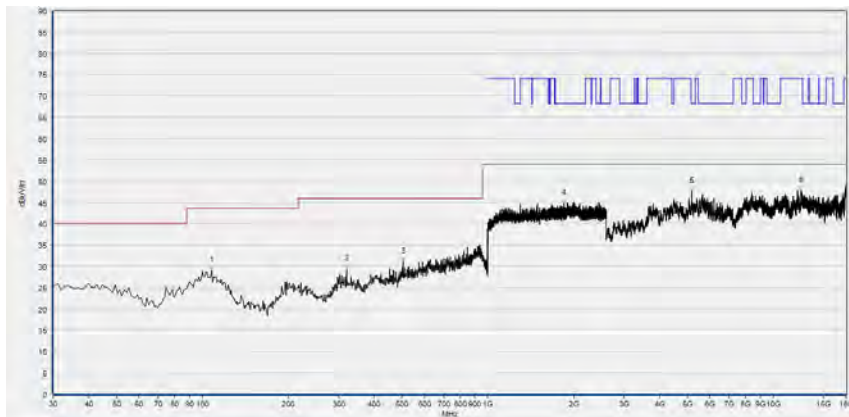
**802.11ax (HEW20) RU52 Mode**

Plot for Channel 36



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
99.840	28.20	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
224.970	26.47	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
719.670	35.91	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2050.133	44.89	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5174.880	49.79	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12157.240	46.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

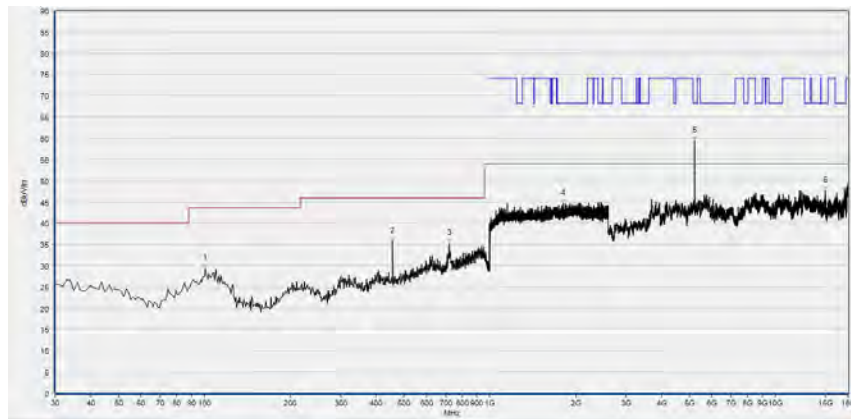
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
107.600	28.92	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
320.030	29.32	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
504.330	30.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1851.733	44.77	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5174.880	47.66	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12511.440	47.73	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

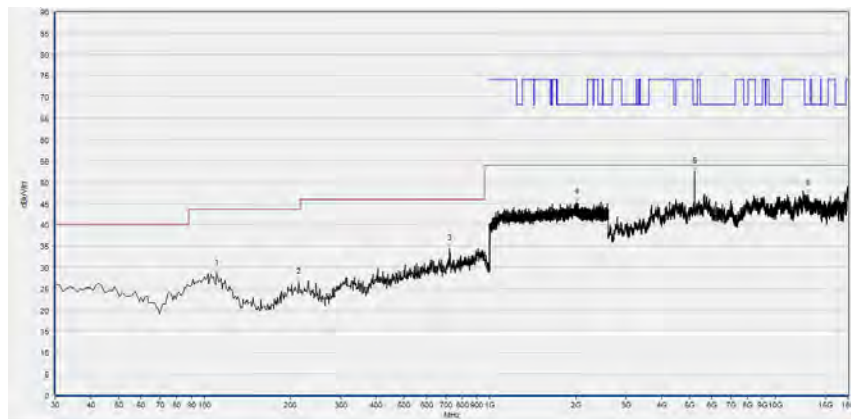
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
100.810	29.28	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
455.830	35.65	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
720.640	35.11	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1801.600	44.51	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5211.840	59.41	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
14993.920	47.65	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

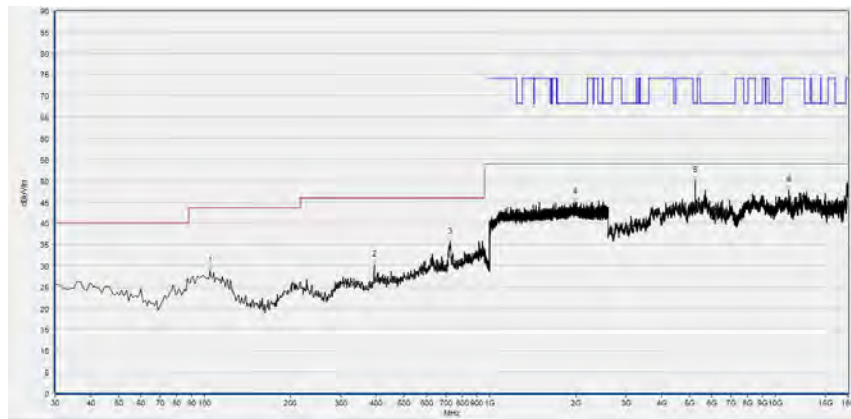
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
110.510	28.48	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
214.300	26.53	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
722.580	34.35	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2017.067	45.19	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5214.920	52.46	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13072.000	47.10	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

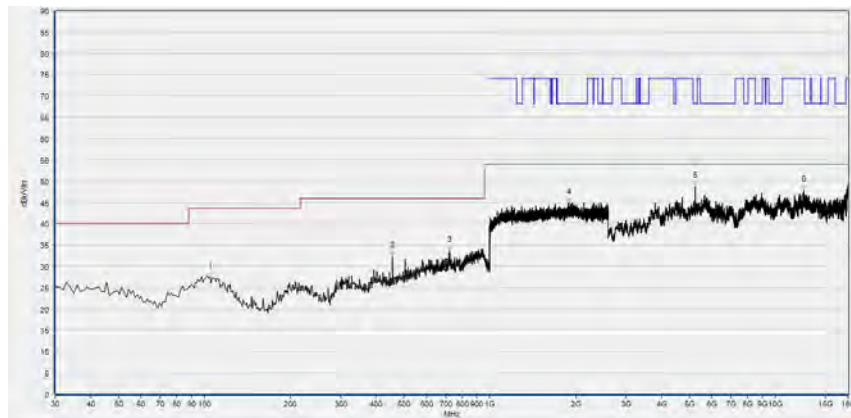
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
104.690	28.75	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
393.750	30.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
724.520	35.46	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1993.067	44.91	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5245.720	49.98	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
11137.760	47.68	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

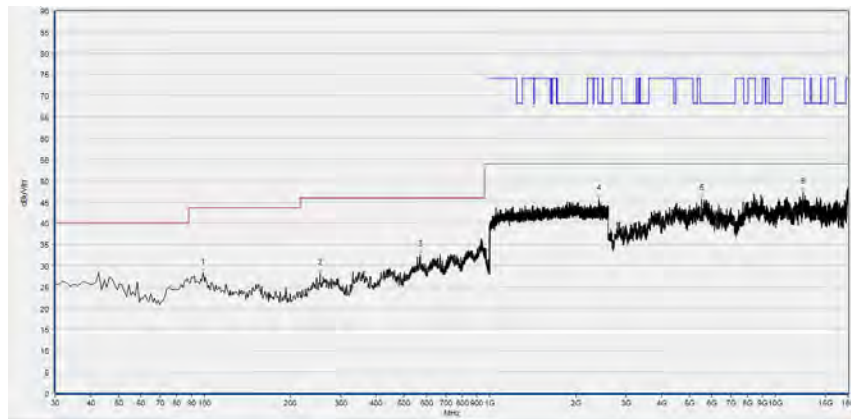
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
104.690	27.42	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
455.830	32.33	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
722.580	33.62	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1891.733	44.93	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5248.800	48.83	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12622.320	47.92	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

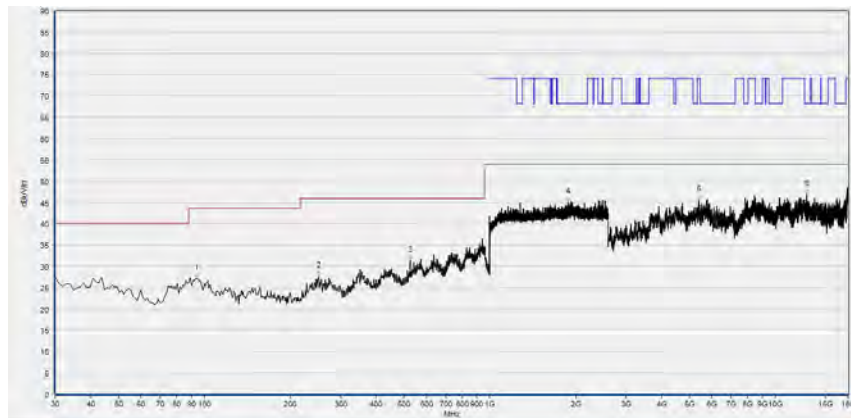
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
98.870	28.30	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
254.070	28.18	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
570.290	32.44	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2408.533	45.71	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5513.680	45.76	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12502.200	47.25	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

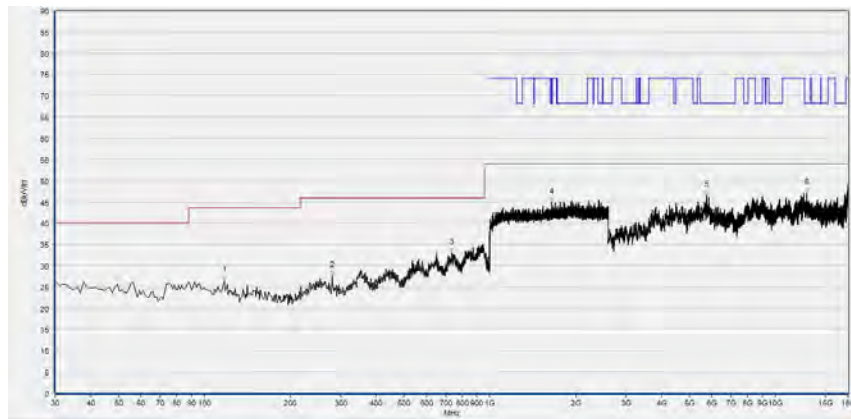
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
94.020	27.11	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
251.160	27.66	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
524.700	31.27	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1884.800	45.11	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5402.800	45.59	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12890.280	46.92	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

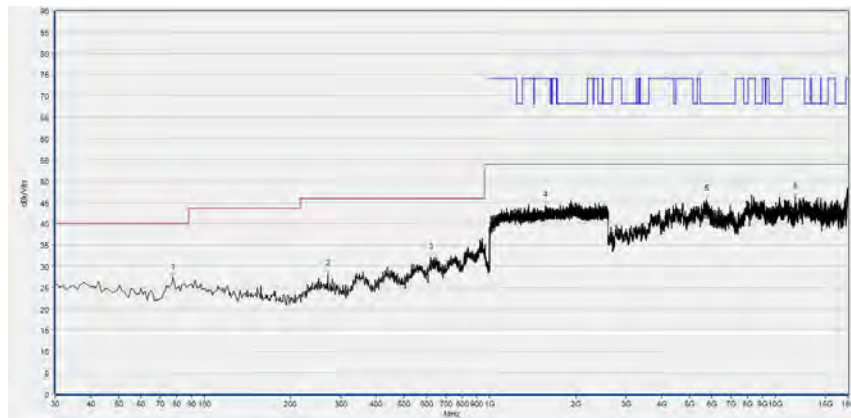
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
117.300	26.50	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
280.260	27.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
736.160	33.02	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1644.800	44.86	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5744.680	46.57	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12896.440	47.04	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

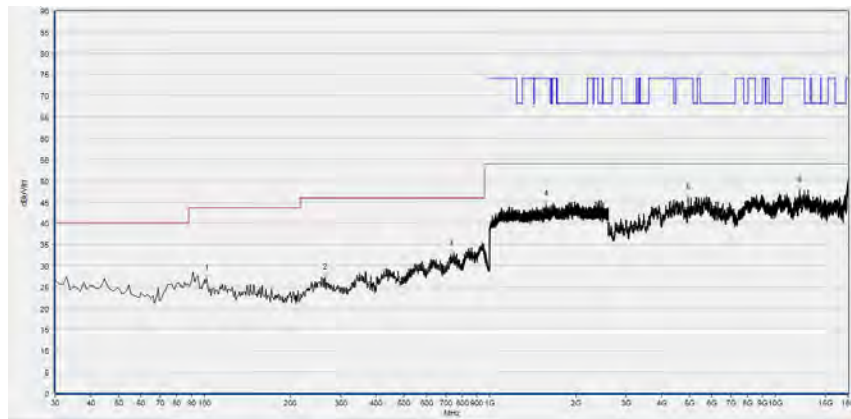
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
77.530	27.27	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
270.560	28.13	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
620.730	31.93	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1560.533	44.23	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5741.600	45.81	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
11732.200	46.30	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

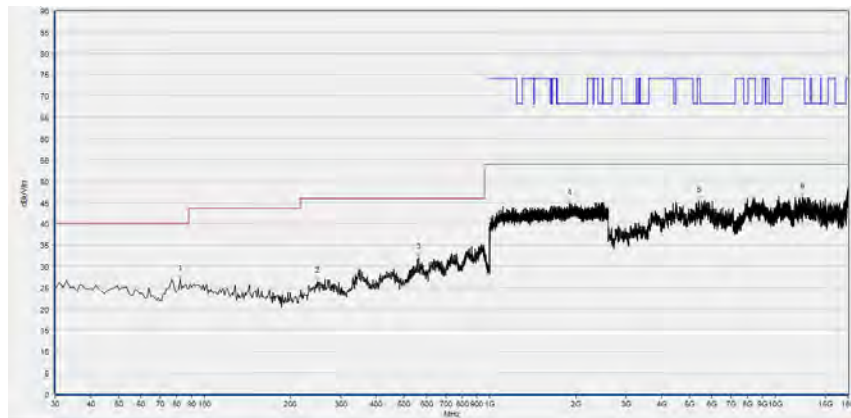
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
101.780	26.95	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
265.710	27.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
730.340	32.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1574.400	44.48	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4953.120	45.98	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12181.880	47.76	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

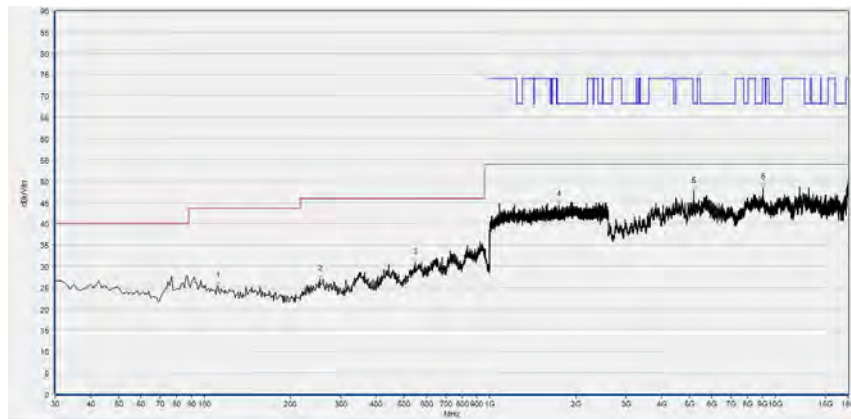


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
82.380	26.95	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
249.220	26.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
564.470	32.06	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1903.467	44.69	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5396.640	45.43	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12459.080	46.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

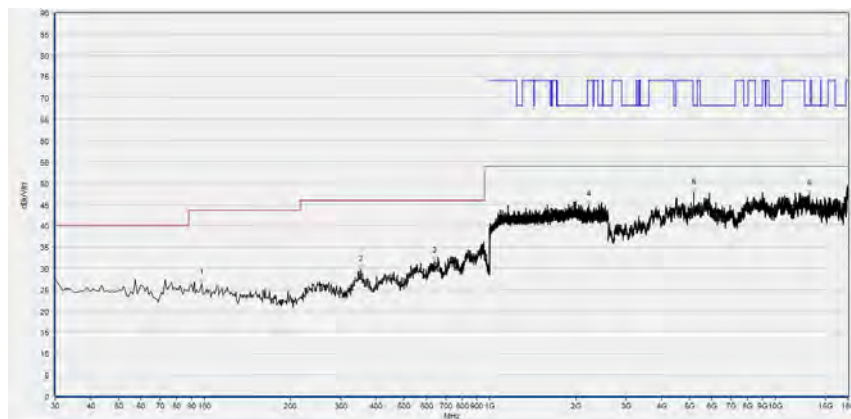
**802.11ax (HEW20) RU106 Mode**

Plot for Channel 36



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
111.480	25.25	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
254.070	27.01	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
548.950	30.87	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1744.000	44.36	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5174.880	47.66	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
9064.920	48.41	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

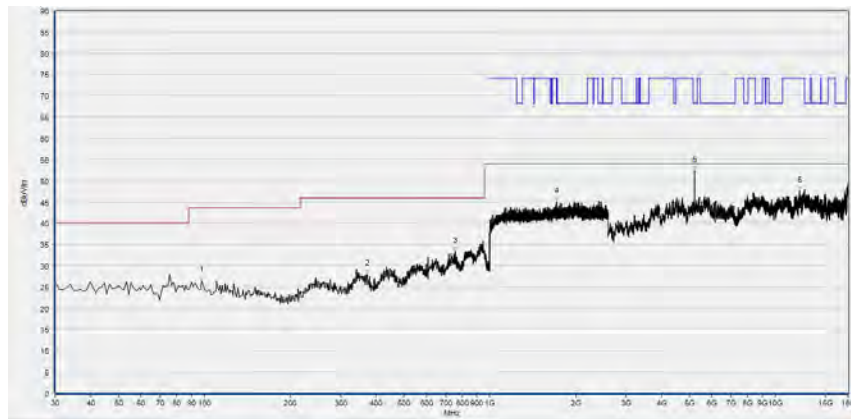
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	26.56	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
353.010	29.63	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
640.130	31.70	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2227.733	44.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5177.960	47.71	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13149.000	47.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

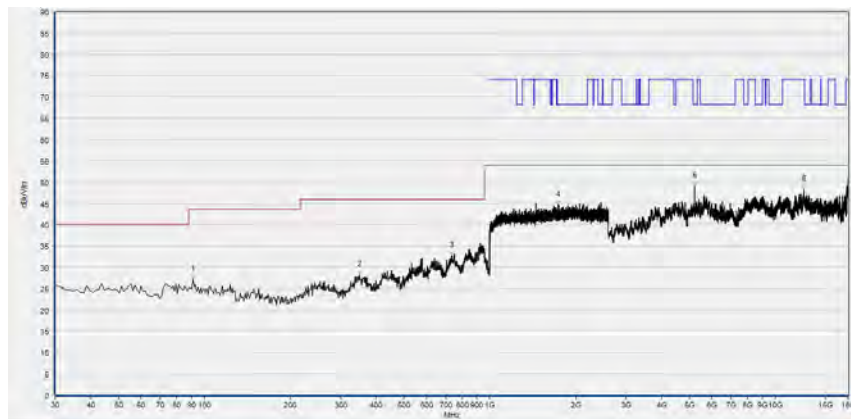
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	26.40	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
371.440	27.96	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
757.500	33.31	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1715.200	45.14	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5211.840	52.31	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12151.080	47.65	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

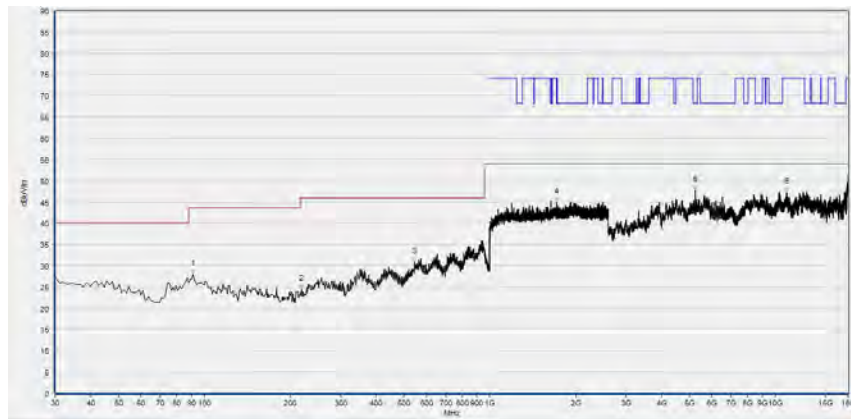


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
91.110	27.17	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
349.130	28.14	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
736.160	32.69	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1730.133	44.50	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5211.840	49.02	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12600.760	48.23	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

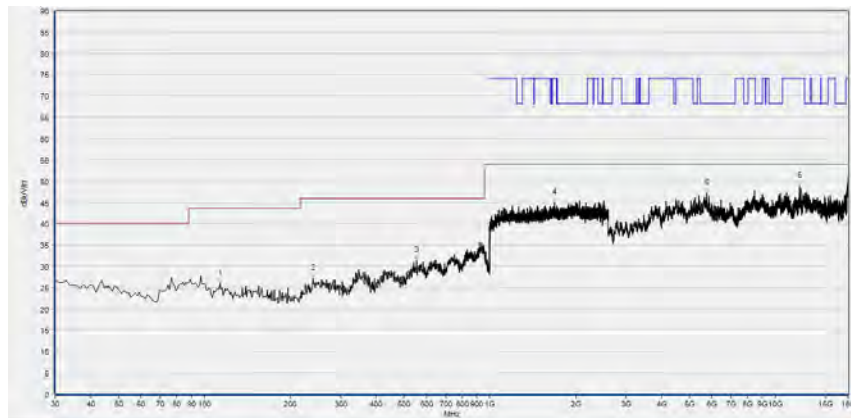


Plot for Channel 48



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
91.110	27.99	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
219.150	24.42	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
545.070	30.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1712.533	44.86	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5245.720	47.82	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
10940.640	47.20	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

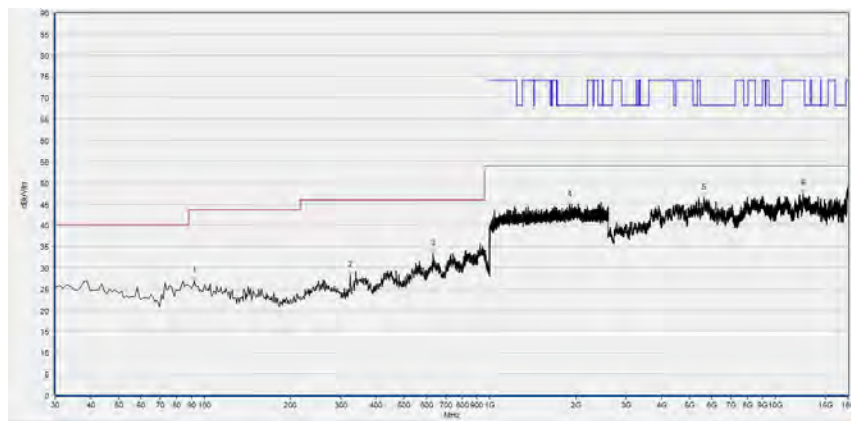
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
113.420	25.97	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
240.490	27.22	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
554.770	31.33	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1681.600	44.98	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5750.840	47.04	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12144.920	48.76	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

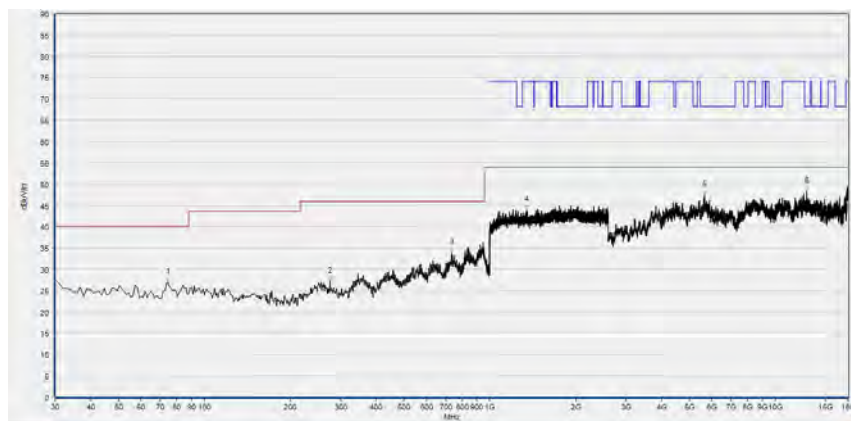
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
92.080	26.89	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
323.910	28.10	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
632.370	33.29	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1898.133	44.79	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5627.640	46.45	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12499.120	47.42	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

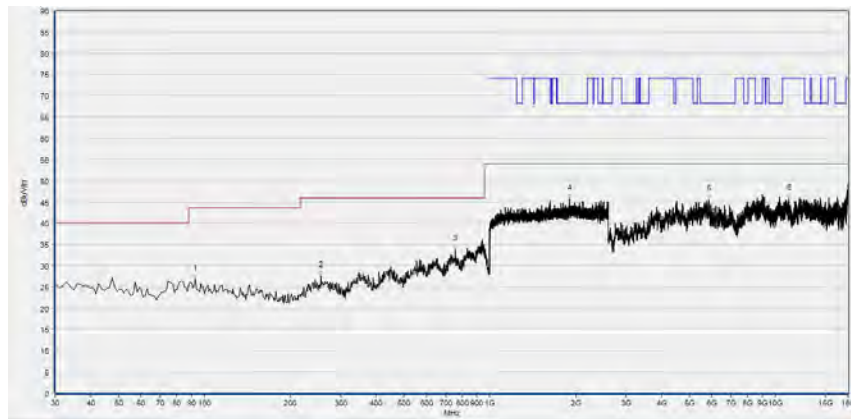


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.620	26.93	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
275.410	27.08	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
734.220	33.92	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1349.333	43.85	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5646.120	47.39	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12896.440	48.23	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

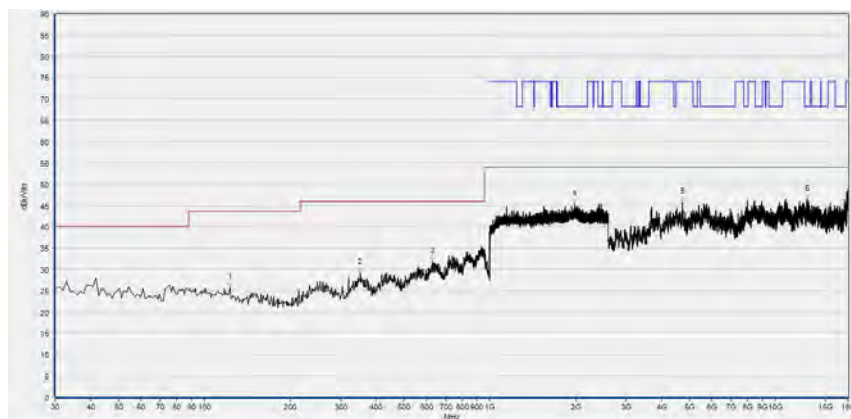


Plot for Channel 157



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
93.050	26.78	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
256.010	27.65	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
757.500	33.79	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1906.133	45.73	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5861.720	45.64	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
11134.680	45.70	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

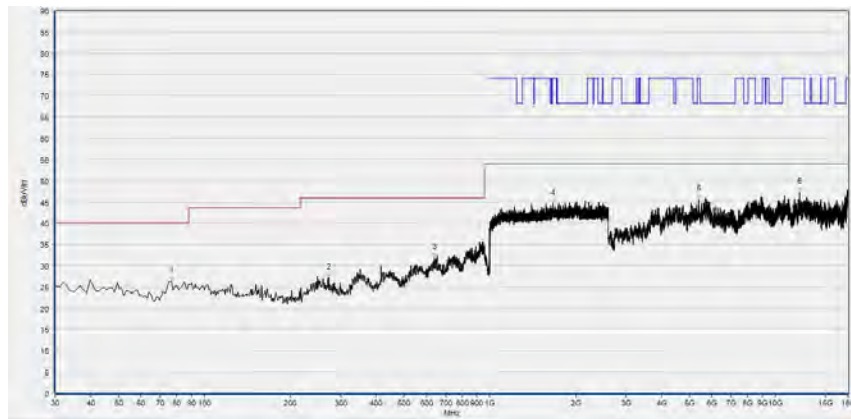
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
123.120	25.83	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
352.040	29.11	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
630.430	31.80	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1976.000	45.21	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4737.520	45.74	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12930.320	46.48	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

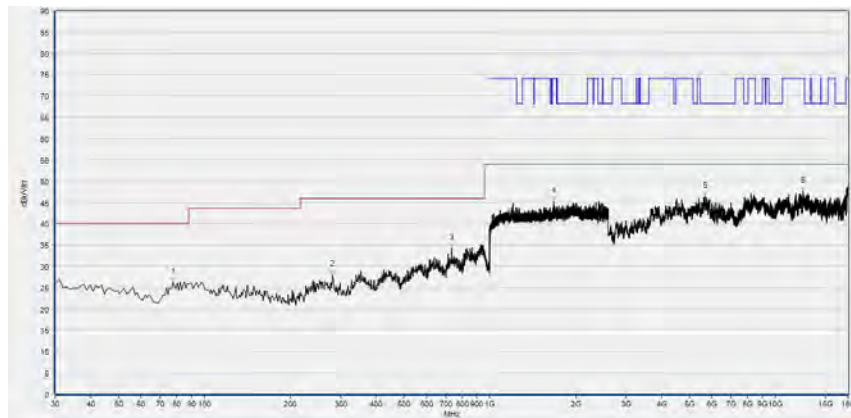
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
76.560	26.23	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
272.500	27.18	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
639.160	31.90	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1664.533	44.66	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5399.720	45.56	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12138.760	47.31	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
77.530	26.37	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
281.230	27.96	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
735.190	34.16	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1674.667	45.20	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5670.760	46.50	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12539.160	47.59	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test Items	Uncertainty
Peak Output Power	$\pm 2.22\text{dB}$
Power Spectral Density	$\pm 2.22\text{dB}$
Bandwidth	$\pm 5\%$
Restricted Frequency Bands	$\pm 5\%$
Radiated Emission	$\pm 2.95\text{dB}$
Conducted Emission	$\pm 2.44\text{dB}$

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.





Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.





4. Test Equipments Utilized

4.1 Conducted Test Equipments

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Attenuator 1	N/A	10dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2021.03.25	2022.03.24
USB Wideband Power Sensor	MY54210011	U2021XA	Agilent	2021.03.25	2022.03.24
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial Cable	CB02	RF02	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A
Temperature Chamber	12108015	DTL-003S101	YOMA	2020.10.26	2021.10.25

4.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2021.03.09	2022.03.08
LISN	812744	NSLK 8127	Schwarzbeck	2021.03.09	2022.03.08
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2020.07.24	2021.07.23
				2021.07.21	2022.07.20
Coaxial Cable(BNC) (30MHz-26GHz)	CB01	EMC01	Morlab	N/A	N/A

4.3 List of Software Used

Description	Manufacturer	Software Version
Test System	Tonscend	V2.6
Power Panel	Agilent	V3.8
MORLAB EMCR V1.2	MORLAB	V1.0
TS+ -[JS32-CE]	Tonscend	V2.5.0.0



4.4 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY54130016	N9038A	Agilent	2020.07.21	2021.07.20
				2021.07.16	2022.07.15
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.24	2022.05.23
Test Antenna - Horn	BBHA9170 #774	BBHA 9170	Schwarzbeck	2019.07.26	2022.07.25
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2019.02.14	2022.02.13
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2019.07.26	2022.07.25
Coaxial Cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-40GHz)	CB05	EMC05	Morlab	N/A	N/A
1-18GHz pre-Amplifier	61171/61172	S020180L32 03	Tonscend	2020.07.21	2021.07.20
				2021.07.15	2022.07.14
18-26.5GHz pre-Amplifier	46732	S10M100L38 02	Tonscend	2020.07.21	2021.07.20
				2021.07.15	2022.07.14
26-40GHz pre-Amplifier	56774	S40M400L40 02	Tonscend	2020.07.21	2021.07.20
				2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5150-5350	Wainwright	2020.07.21	2021.07.20
				2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5470-5725	Wainwright	2020.07.21	2021.07.20
				2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2020.07.21	2021.07.20
				2021.07.15	2022.07.14



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Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Anechoic Chamber	N/A	9m*6m*6m	CRT	2020.01.06	2023.01.05

_____ END OF REPORT _____

