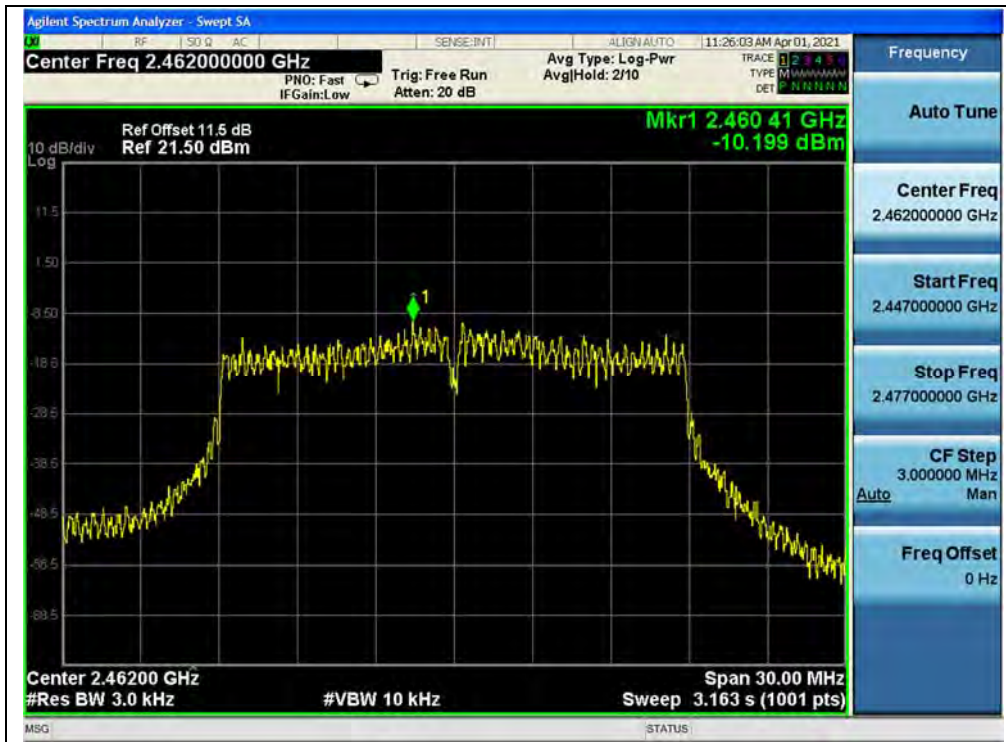
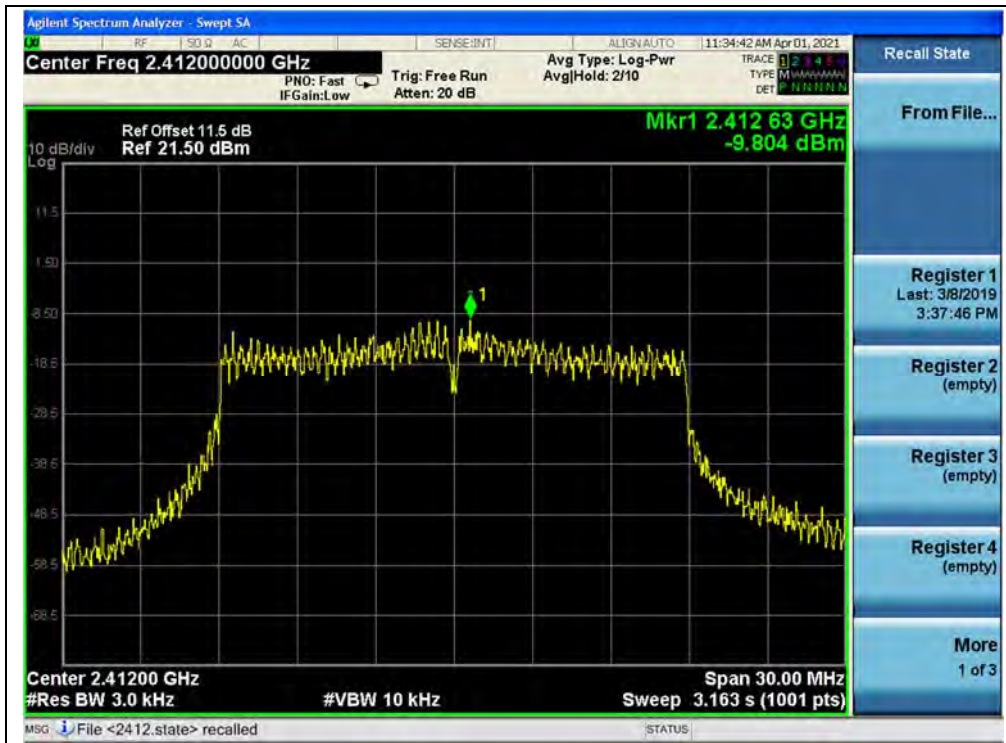


(Channel 6, 802.11n (HT20), ANT 0)



(Channel 11, 802.11n (HT20), ANT 0)



(Channel 1, 802.11n (HT20), ANT 1)



(Channel 6, 802.11n (HT20), ANT 1)



(Channel 11, 802.11n (HT20), ANT 1)



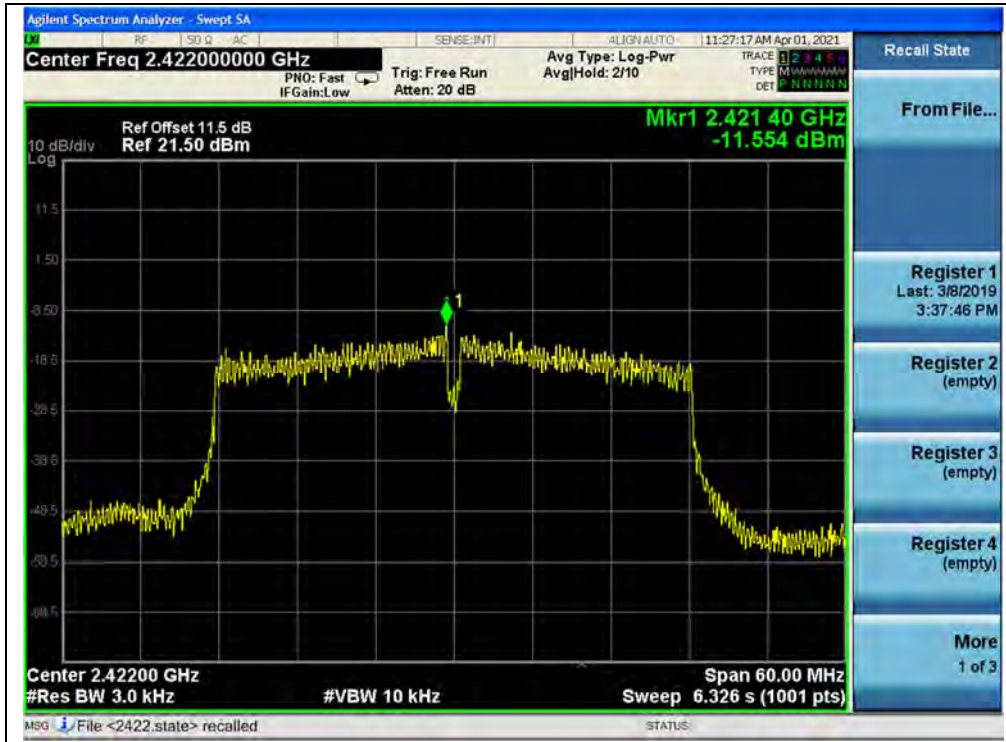
802.11n (HT40) Mode

A. Test Verdict:

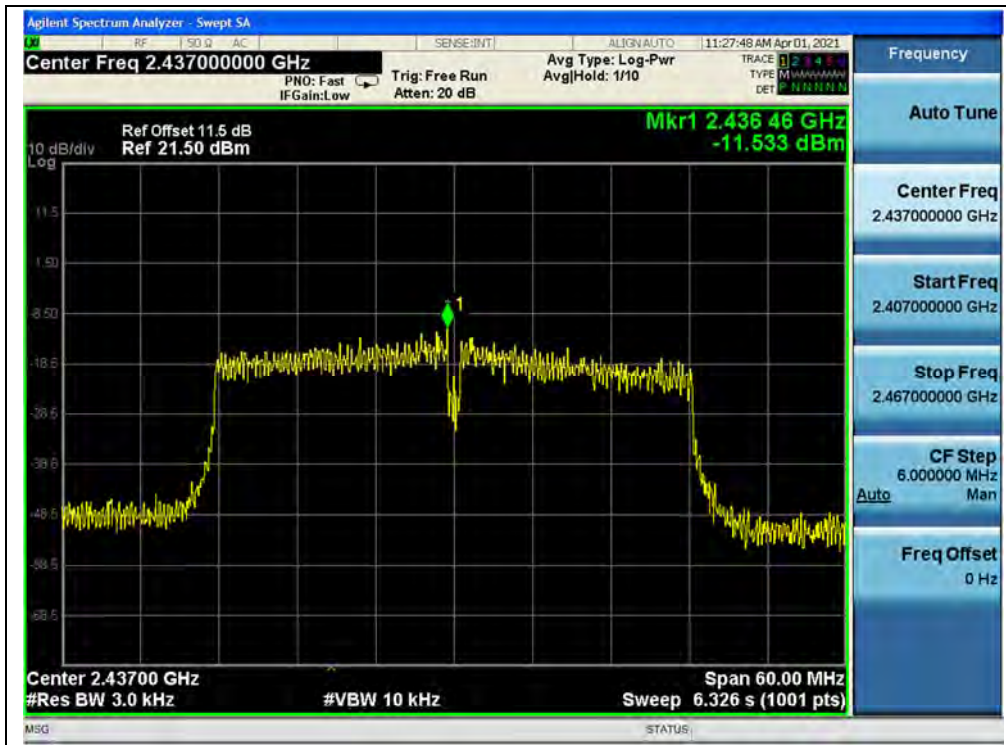
Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
3	2422	-11.55	-13.27	-9.32	8	PASS
6	2437	-11.53	-12.35	-8.91	8	PASS
9	2452	-12.12	-13.45	-9.72	8	PASS

**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

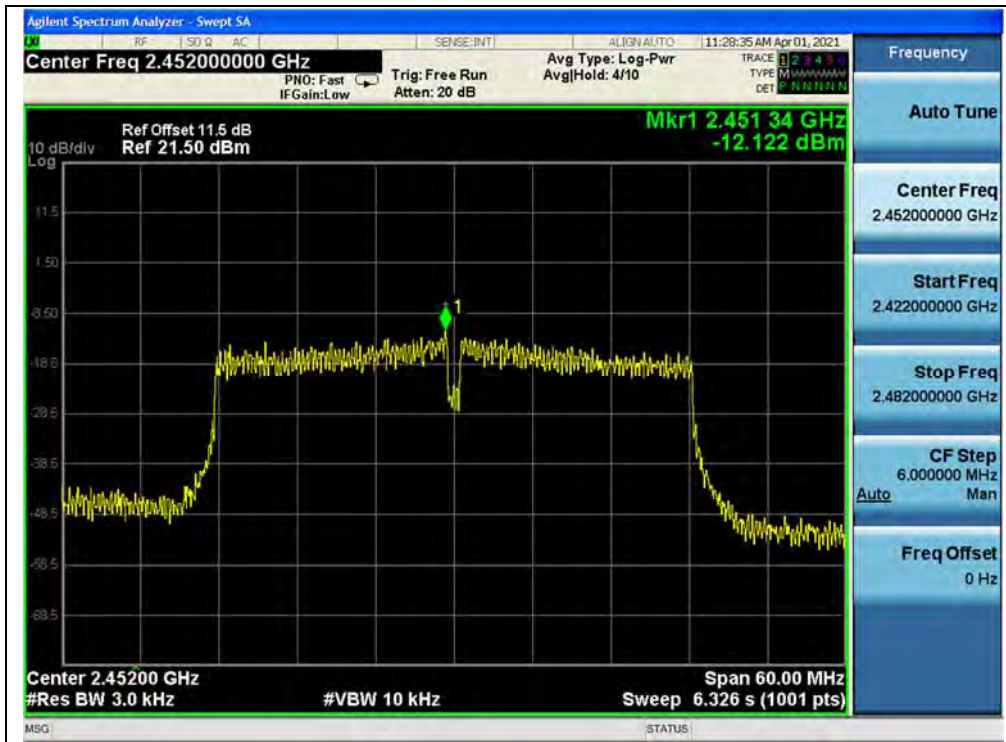
B. Test Plot:



(Channel 3, 802.11n (HT40), ANT 0)



(Channel 6, 802.11n (HT40), ANT 0)



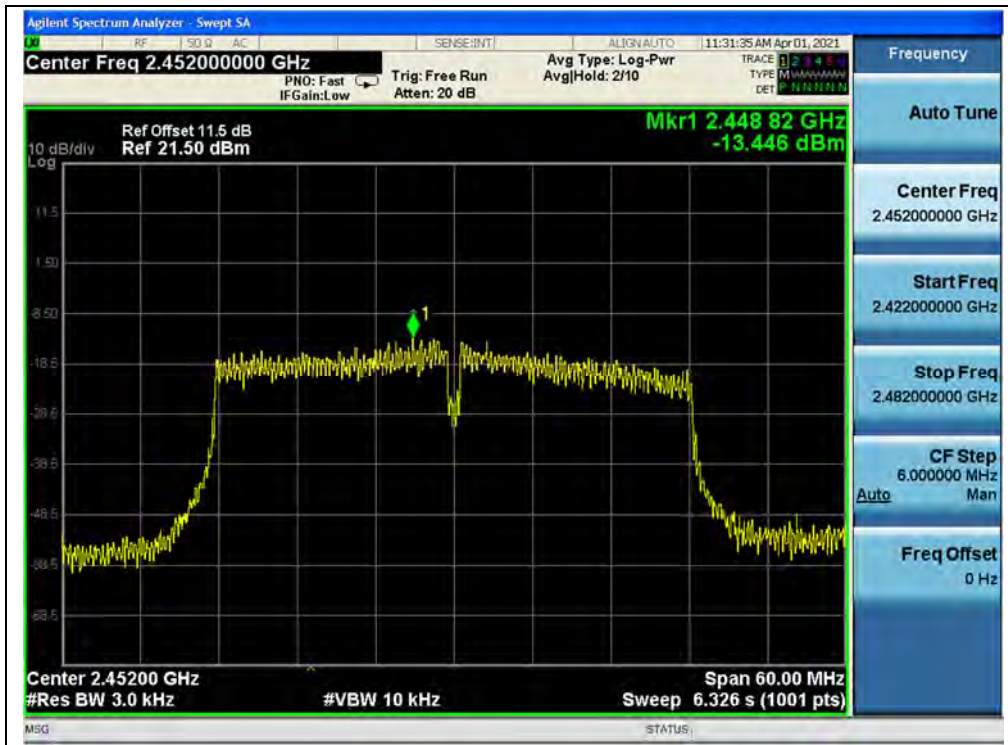
(Channel 9, 802.11n (HT40), ANT 0)



(Channel 3, 802.11n (HT40), ANT 1)



(Channel 6, 802.11n (HT40), ANT 1)



(Channel 9, 802.11n (HT40), ANT 1)



802.11ax (HEW20) Mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
1	2412	-9.45	-8.47	-5.92	8	PASS
6	2437	-10.01	-8.37	-6.10	8	PASS
11	2462	-9.85	-9.44	-6.63	8	PASS

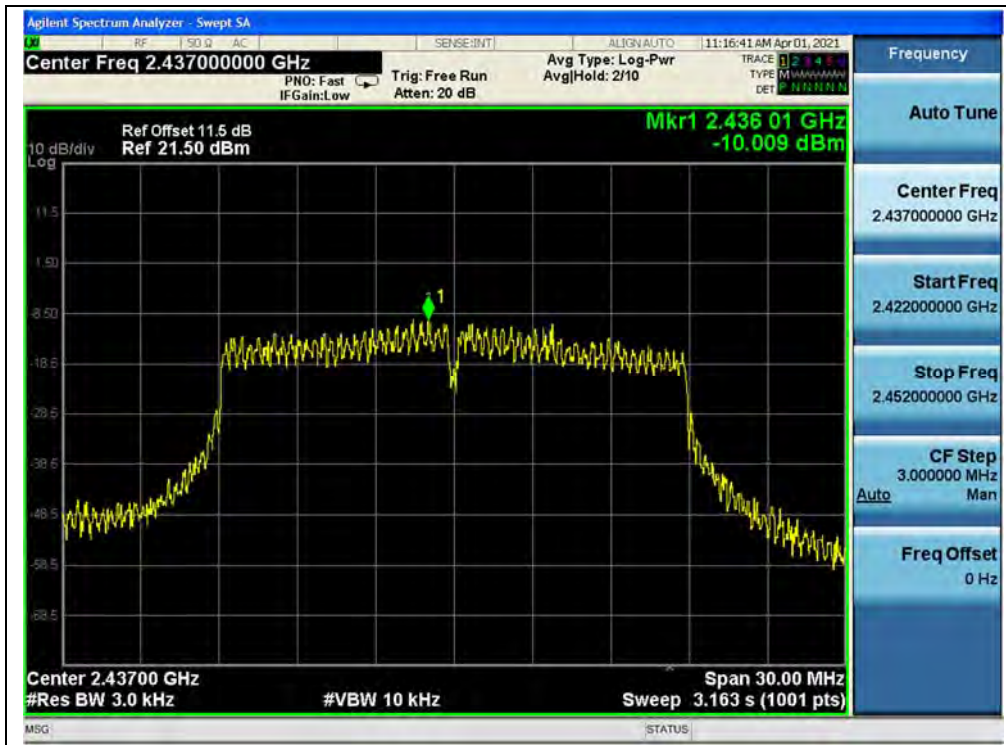
**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

B. Test Plot:

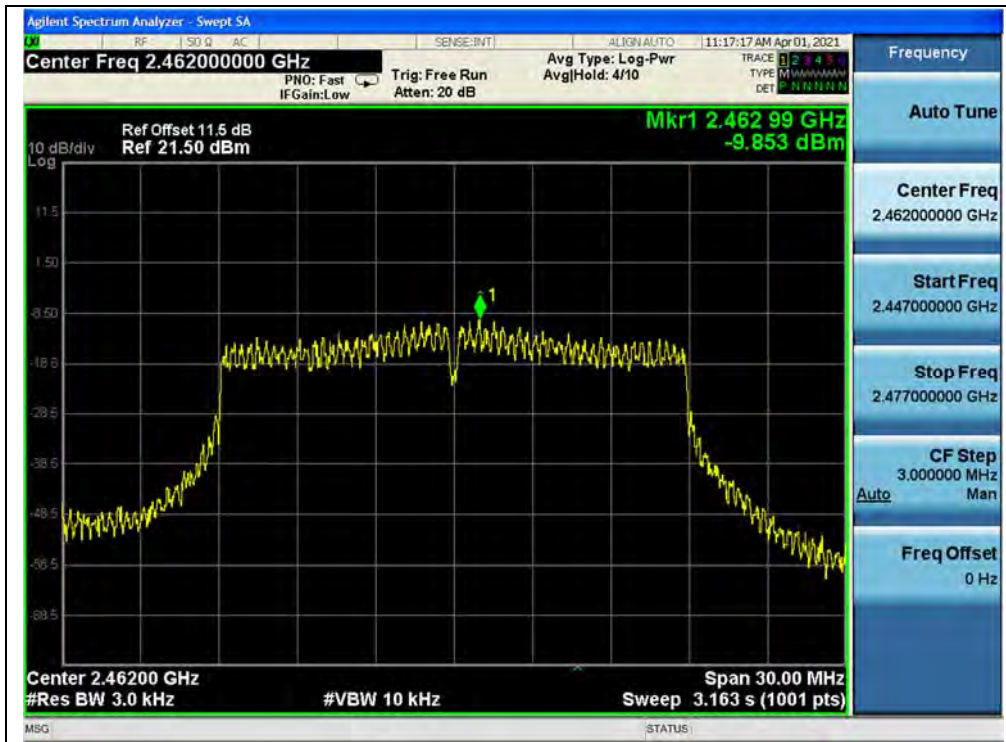


(Channel 1, 802.11ax (HEW20), ANT 0)





(Channel 6, 802.11ax (HEW20), ANT 0)



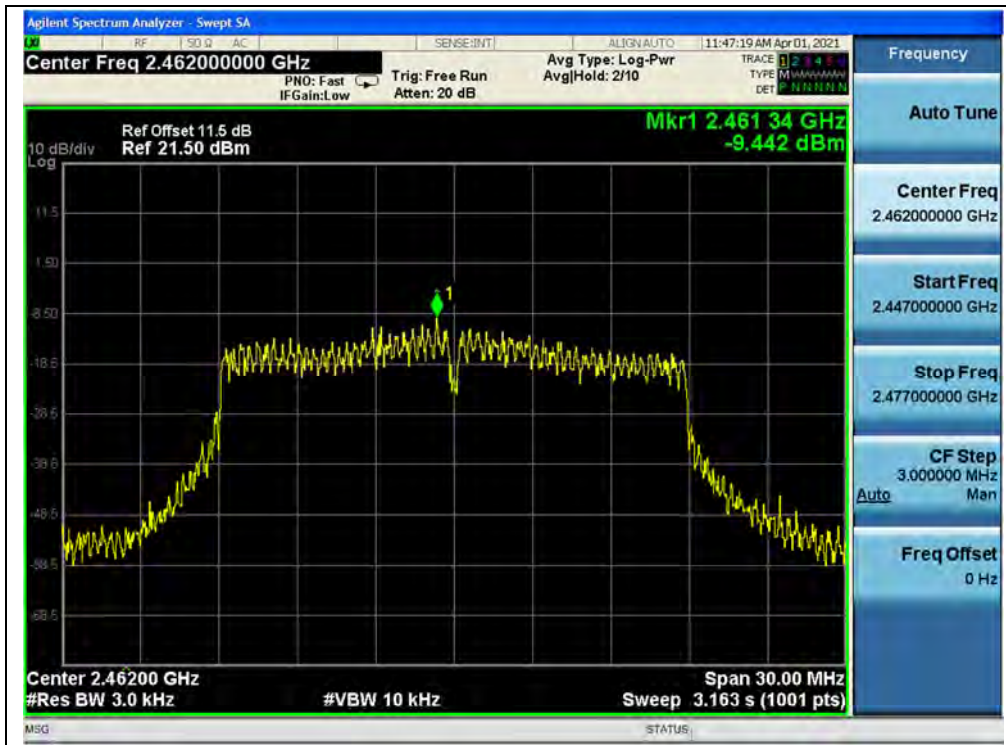
(Channel 11, 802.11ax (HEW20), ANT 0)



(Channel 1, 802.11ax (HEW20), ANT 1)



(Channel 6, 802.11ax (HEW20), ANT 1)



(Channel 11, 802.11ax (HEW20), ANT 1)

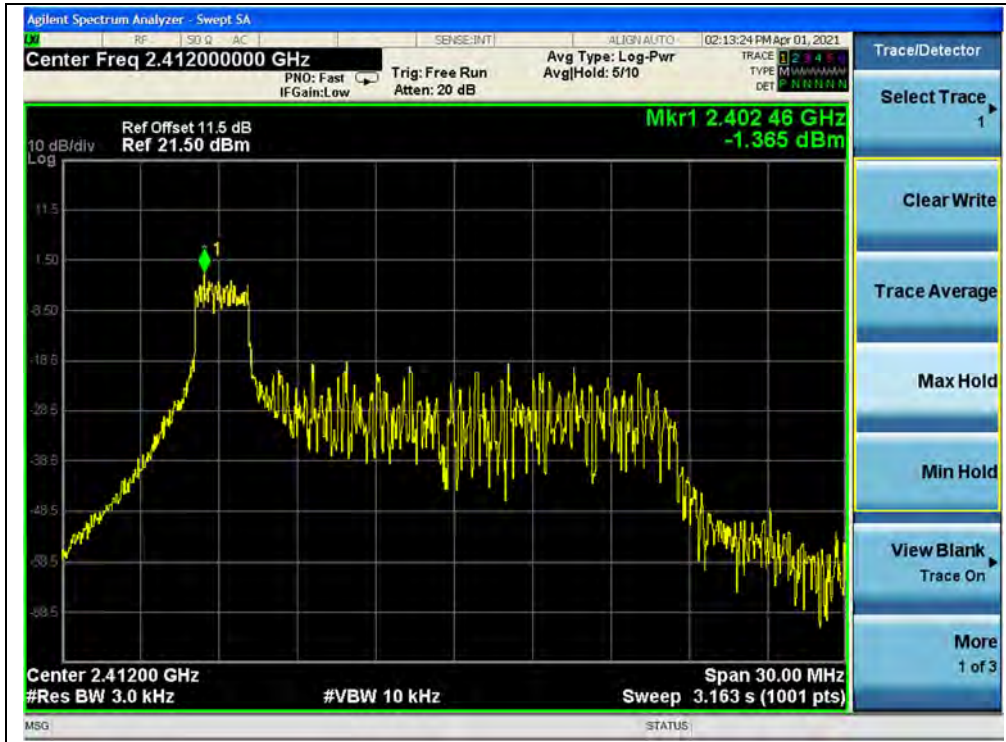
**802.11ax (HEW20) RU26 Mode**

**A.Test Verdict:**

Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
1	2412	-1.37	-2.43	1.14	8	PASS
6	2437	-2.27	-1.24	1.29	8	PASS
11	2462	-1.10	-2.71	1.18	8	PASS

**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

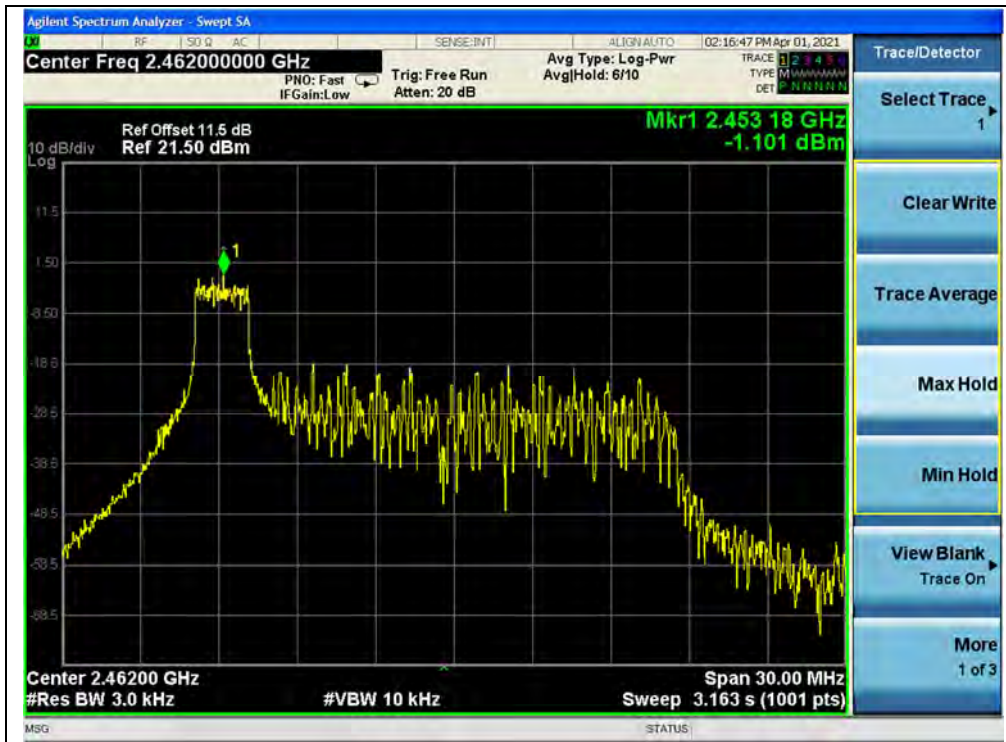
**B.Test Plot:**



(Channel 1, 802.11ax (HEW20) RU26, ANT 0)



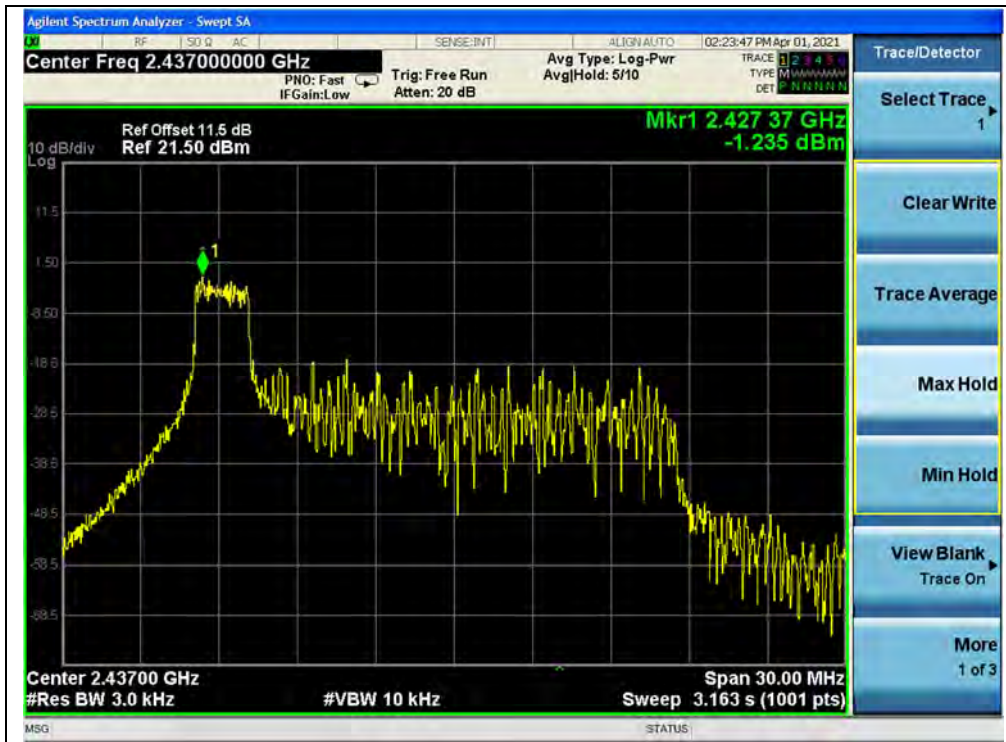
(Channel 6, 802.11ax (HEW20) RU26, ANT 0)



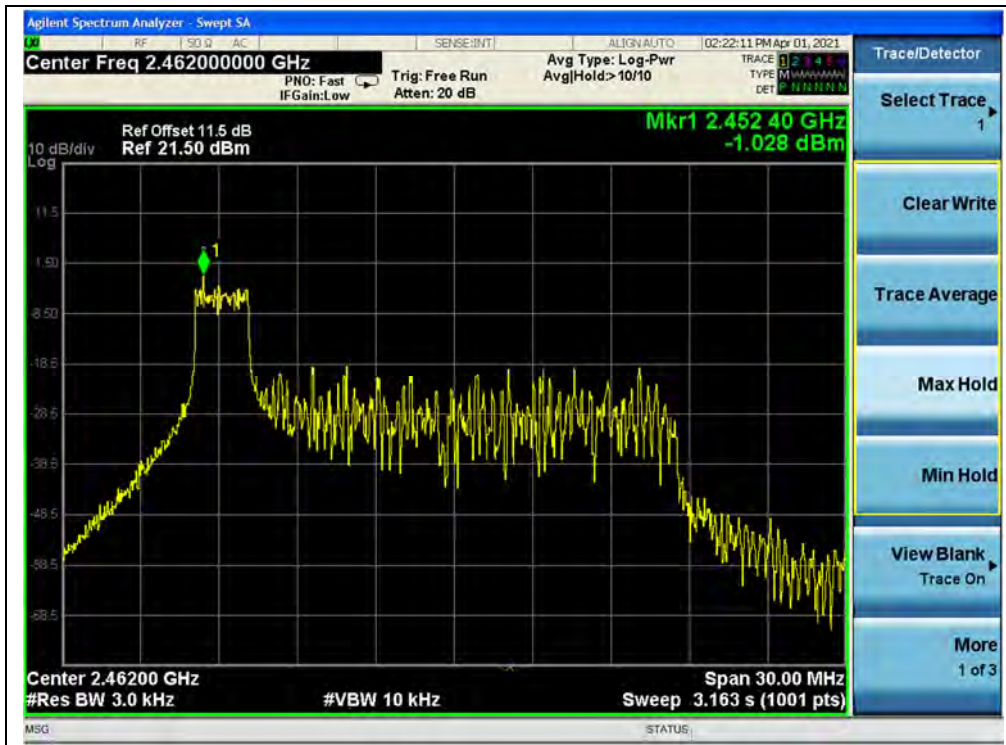
(Channel 11, 802.11ax (HEW20) RU26, ANT 0)



(Channel 1, 802.11ax (HEW20) RU26, ANT 1)



(Channel 6, 802.11ax (HEW20) RU26, ANT 1)



(Channel 11, 802.11ax (HEW20) RU26, ANT 1)



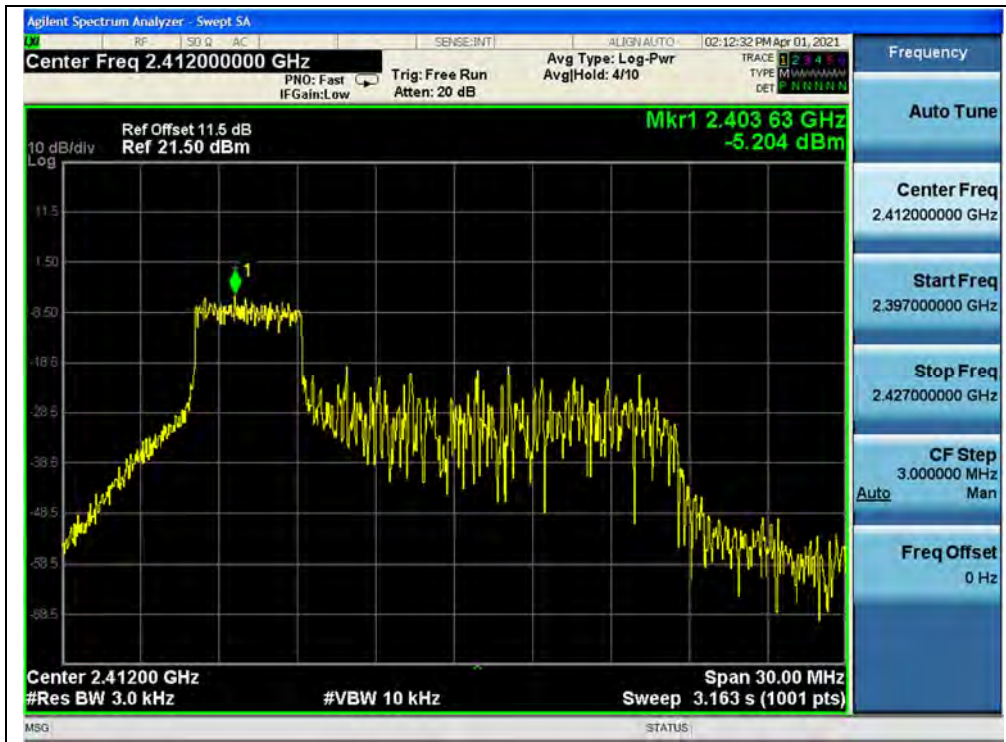
802.11ax (HEW20) RU52 Mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
1	2412	-5.20	-4.22	-1.67	8	PASS
6	2437	-5.85	-4.69	-2.22	8	PASS
11	2462	-4.79	-4.94	-1.85	8	PASS

**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

B. Test Plot:

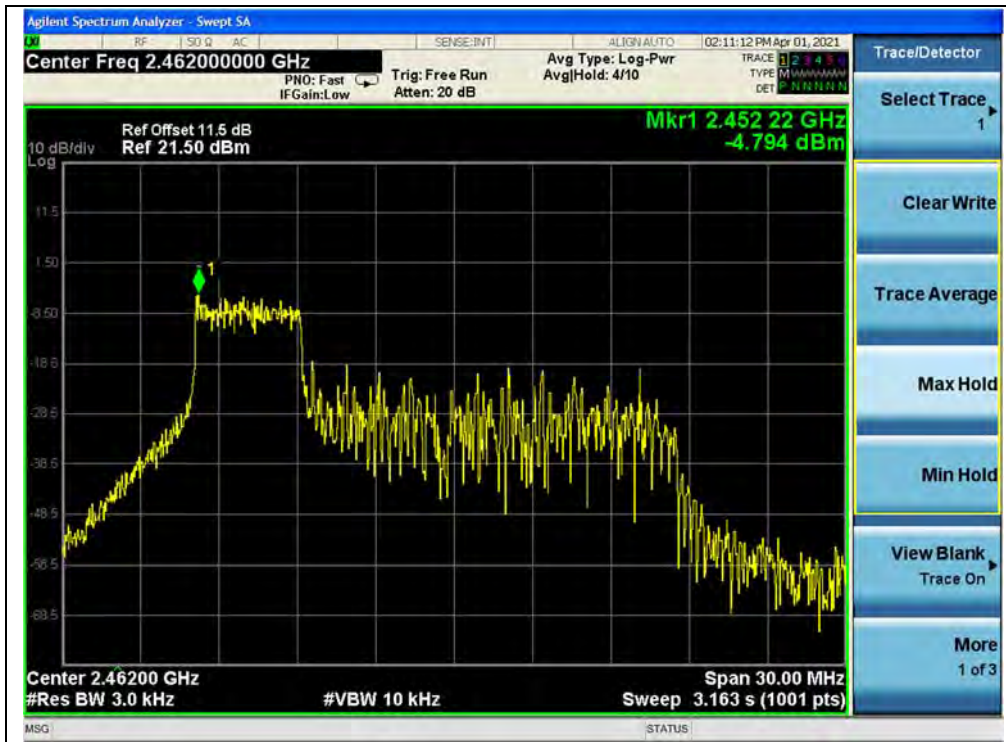


(Channel 1, 802.11ax (HEW20) RU52, ANT 0)

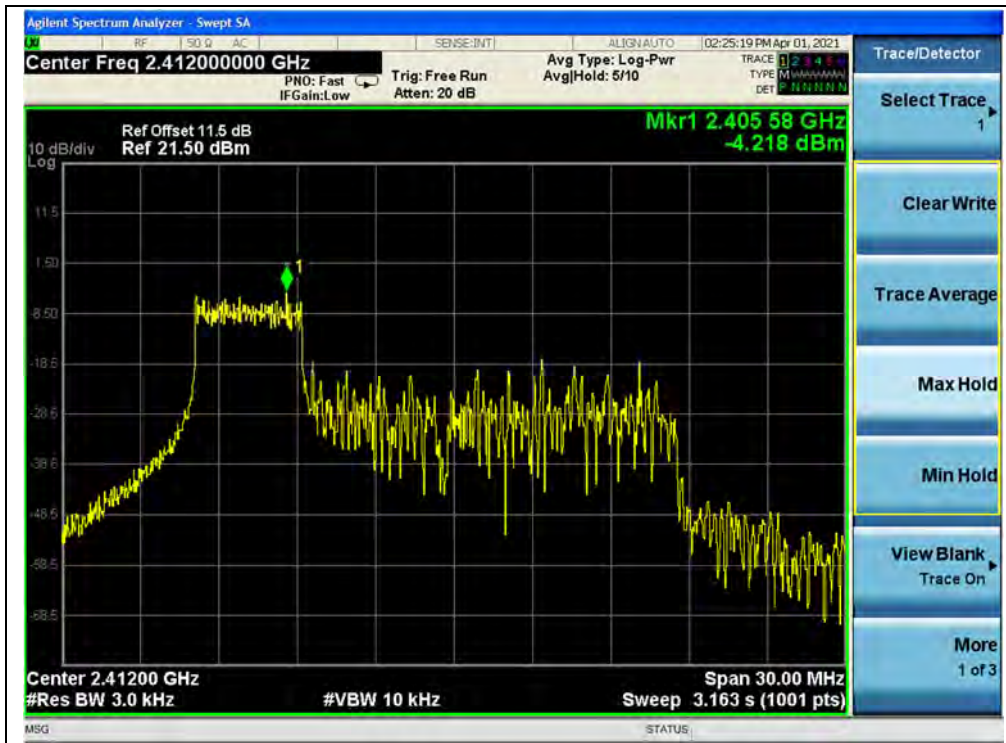




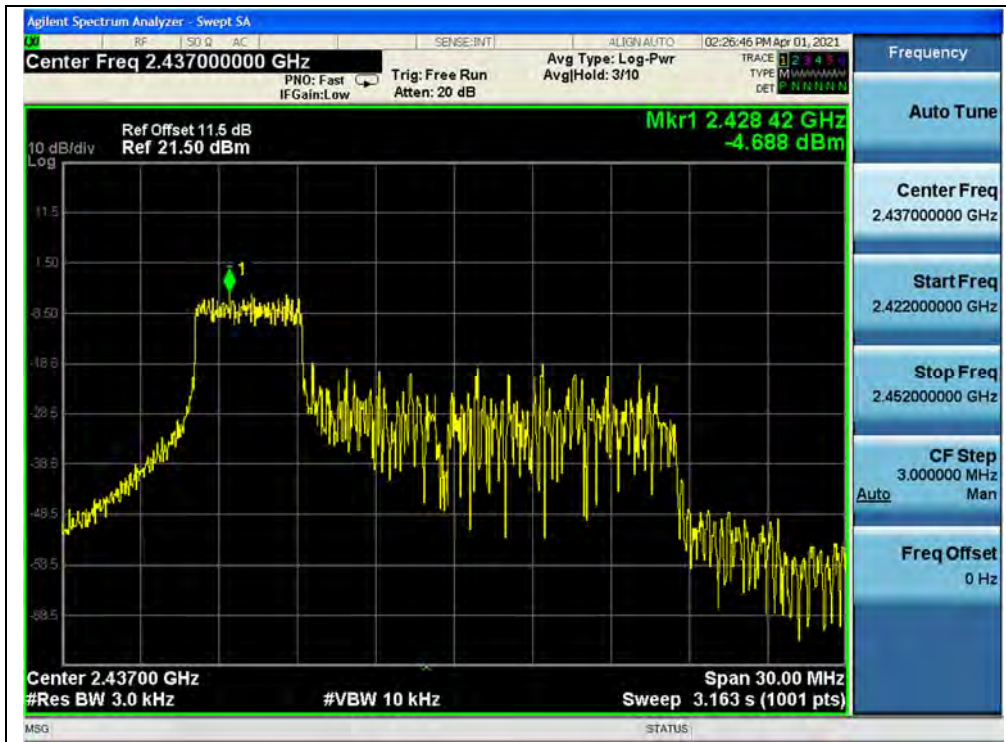
(Channel 6, 802.11ax (HEW20) RU52, ANT 0)



(Channel 11, 802.11ax (HEW20) RU52, ANT 0)



(Channel 1, 802.11ax (HEW20) RU52, ANT 1)



(Channel 6, 802.11ax (HEW20) RU52, ANT 1)



(Channel 11, 802.11ax (HEW20) RU52, ANT 1)

**802.11ax (HEW20) RU106 Mode**

**A.Test Verdict:**

Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
1	2412	-8.55	-7.04	-4.72	8	PASS
6	2437	-8.95	-7.72	-5.28	8	PASS
11	2462	-7.76	-7.60	-4.67	8	PASS

**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

**B.Test Plot:**



(Channel 1, 802.11ax (HEW20) RU106, ANT 0)



(Channel 6, 802.11ax (HEW20) RU106, ANT 0)



(Channel 11, 802.11ax (HEW20) RU106, ANT 0)



(Channel 1, 802.11ax (HEW20) RU106, ANT 1)



(Channel 6, 802.11ax (HEW20) RU106, ANT 1)



(Channel 11, 802.11ax (HEW20) RU106, ANT 1)



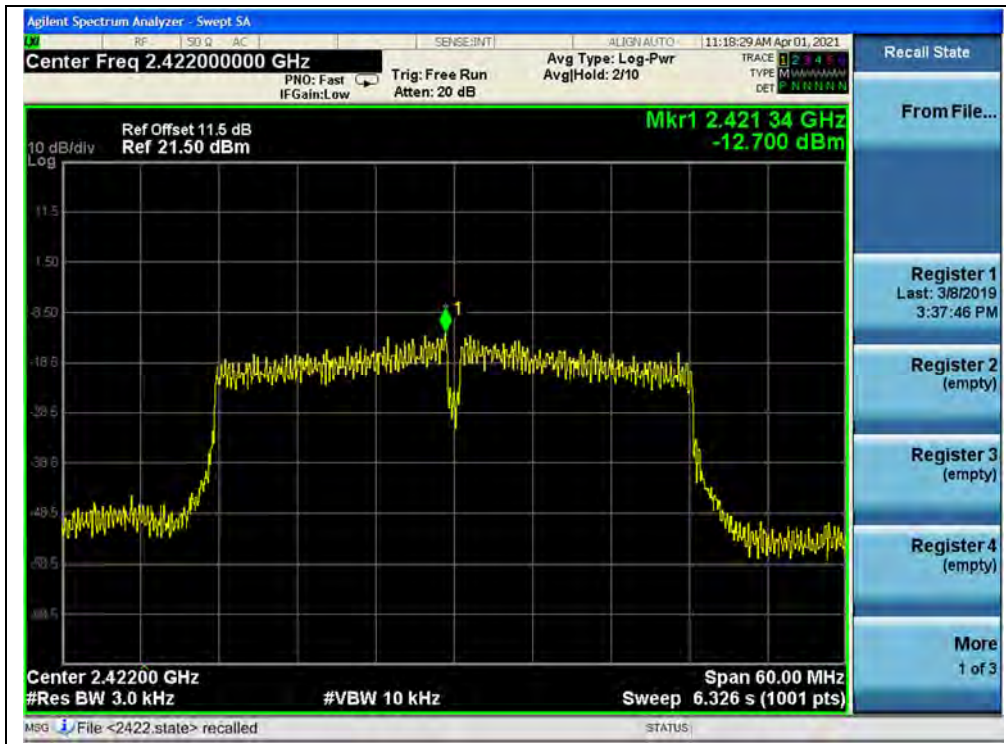
802.11ax (HEW40) Mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
		ANT 0	ANT 1			
3	2422	-12.70	-14.06	-10.32	8	PASS
6	2437	-11.76	-13.41	-9.50	8	PASS
9	2452	-12.77	-13.49	-10.10	8	PASS

**Note:** Directional gain =  $-6.5\text{dBi} + 10\log(2) = -3.49\text{dBi} < 6\text{dBi}$ , so the power density limit is 8 dBm/3kHz.

B. Test Plot:

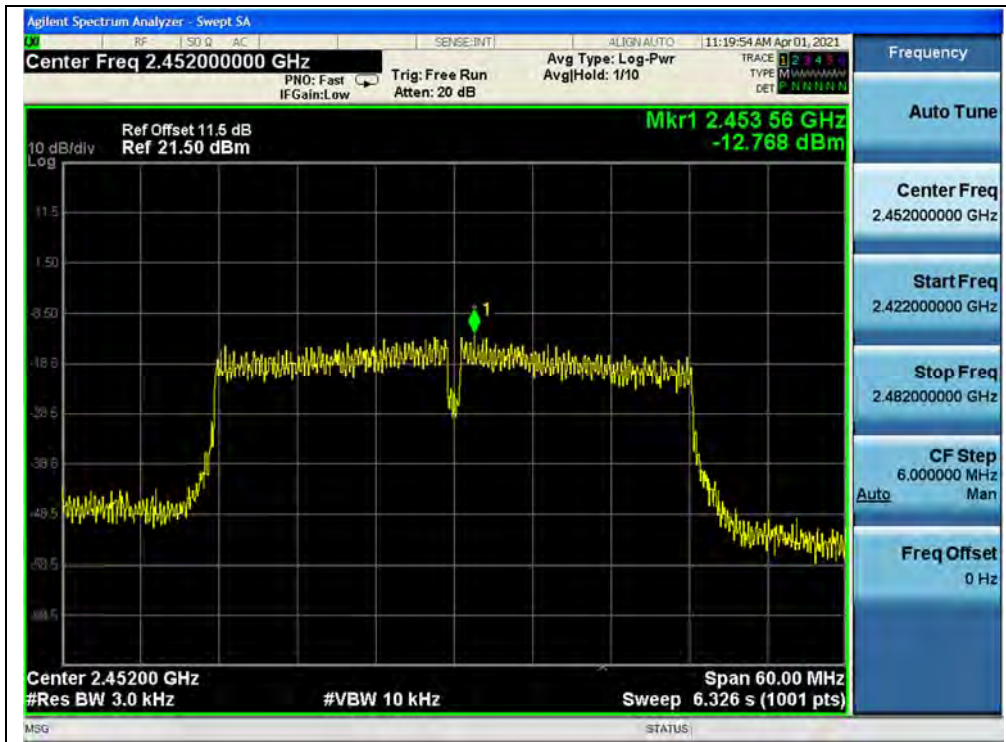


(Channel 3, 802.11ax (HEW40), ANT 0)

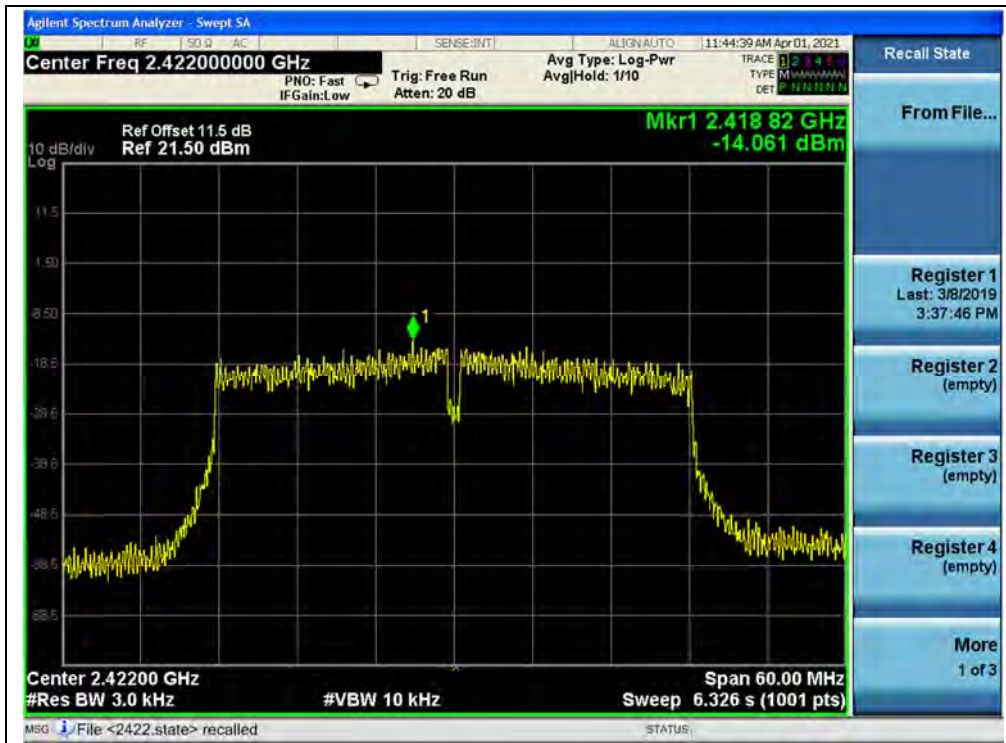




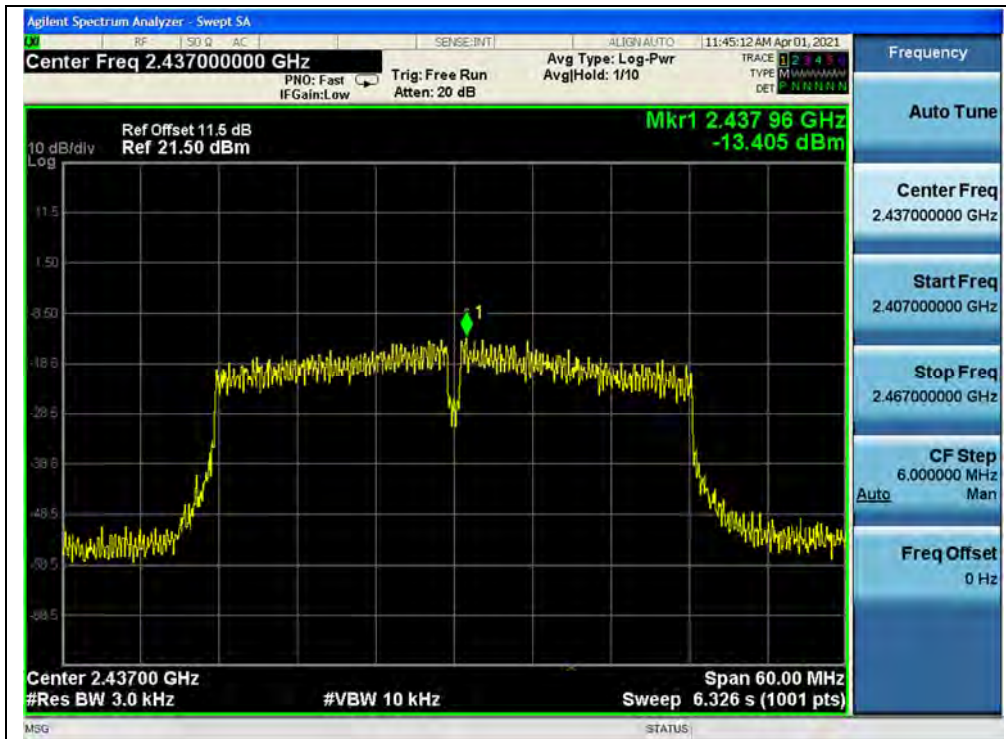
(Channel 6, 802.11ax (HEW40), ANT 0)



(Channel 9, 802.11ax (HEW40), ANT 0)



(Channel 3, 802.11ax (HEW40), ANT 1)



(Channel 6, 802.11ax (HEW40), ANT 1)



(Channel 9, 802.11ax (HEW40), ANT 1)

## 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 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

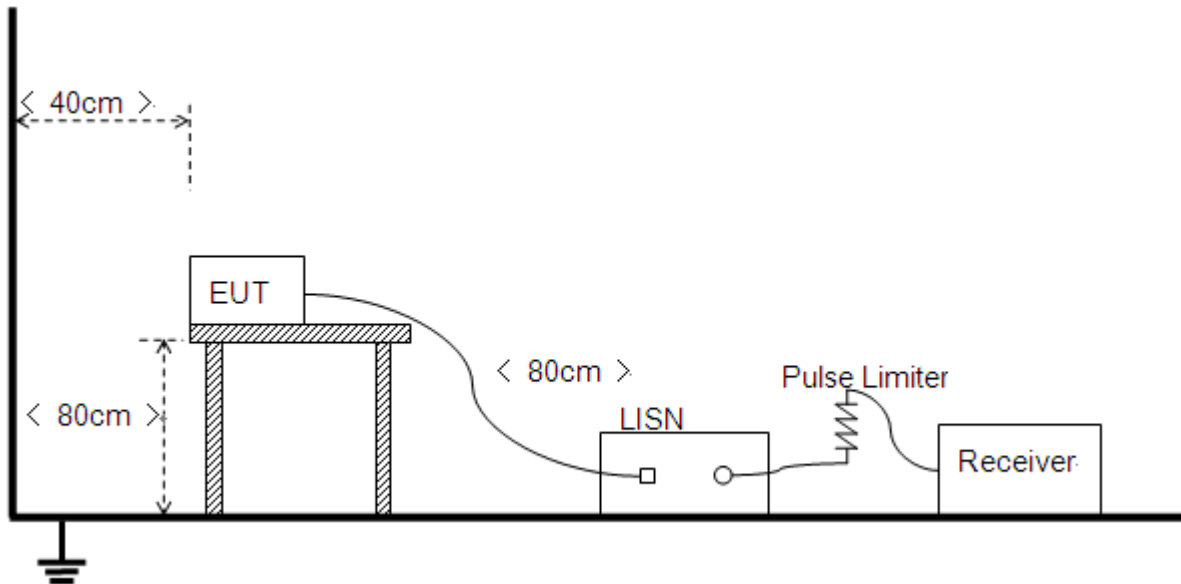
Frequency Range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

**Note:**

- (a) The lower limit shall apply at the band edges.
- (b) 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 plots 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

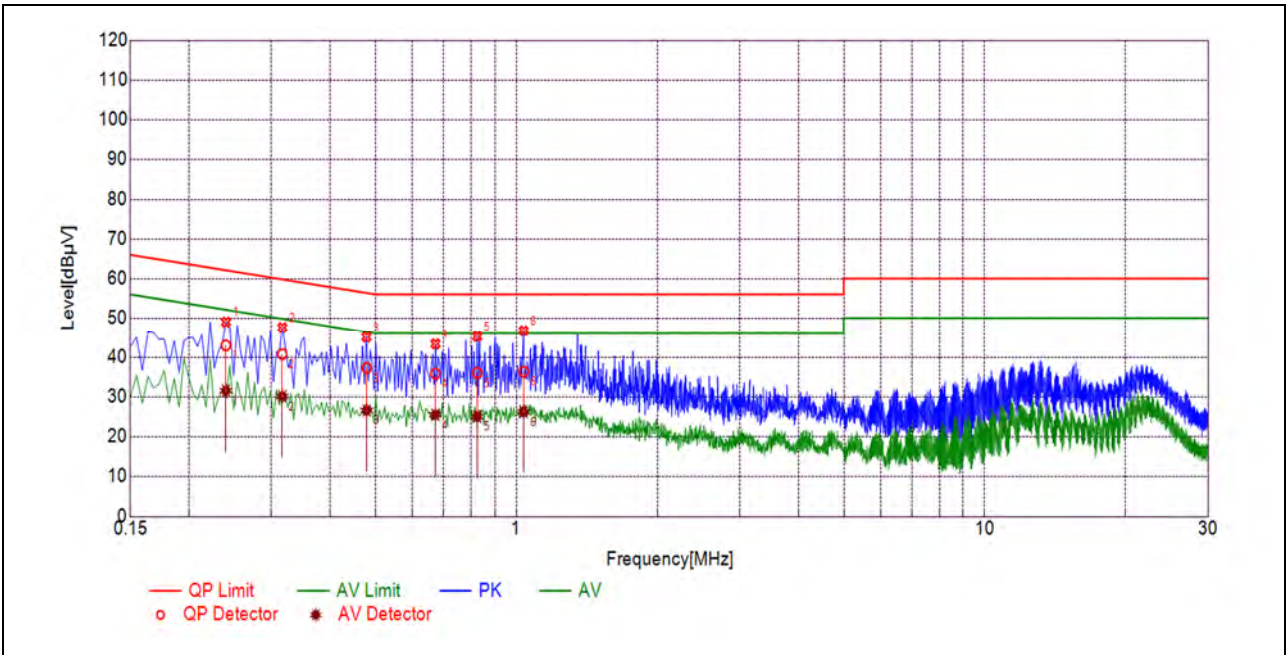
The measurement results are obtained as below:

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

$U_R$ : Receiver Reading

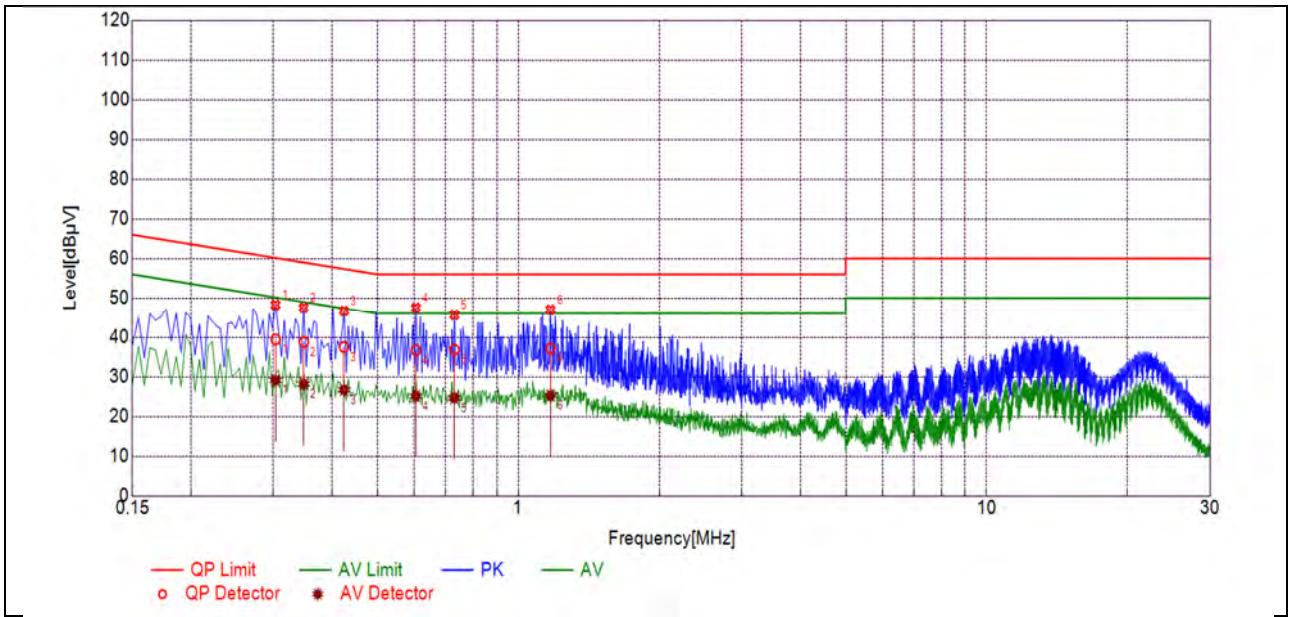
$A_{\text{Factor}}$ : Voltage division factor of LISN

**B.Test Plot:**



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.2398	42.94	31.53	62.10	52.10	Line	PASS
2	0.3163	40.73	30.07	59.80	49.80		PASS
3	0.4790	37.21	26.56	56.36	46.36		PASS
4	0.6715	35.79	25.48	56.00	46.00		PASS
5	0.8247	35.99	24.98	56.00	46.00		PASS
6	1.0364	36.30	26.17	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	0.3031	39.44	29.11	60.16	50.16	Neutral	PASS
2	0.3483	38.73	28.18	59.00	49.00		PASS
3	0.4243	37.51	26.71	57.36	47.36		PASS
4	0.6044	36.66	25.14	56.00	46.00		PASS
5	0.7302	36.86	24.65	56.00	46.00		PASS
6	1.1713	37.13	25.28	56.00	46.00		PASS

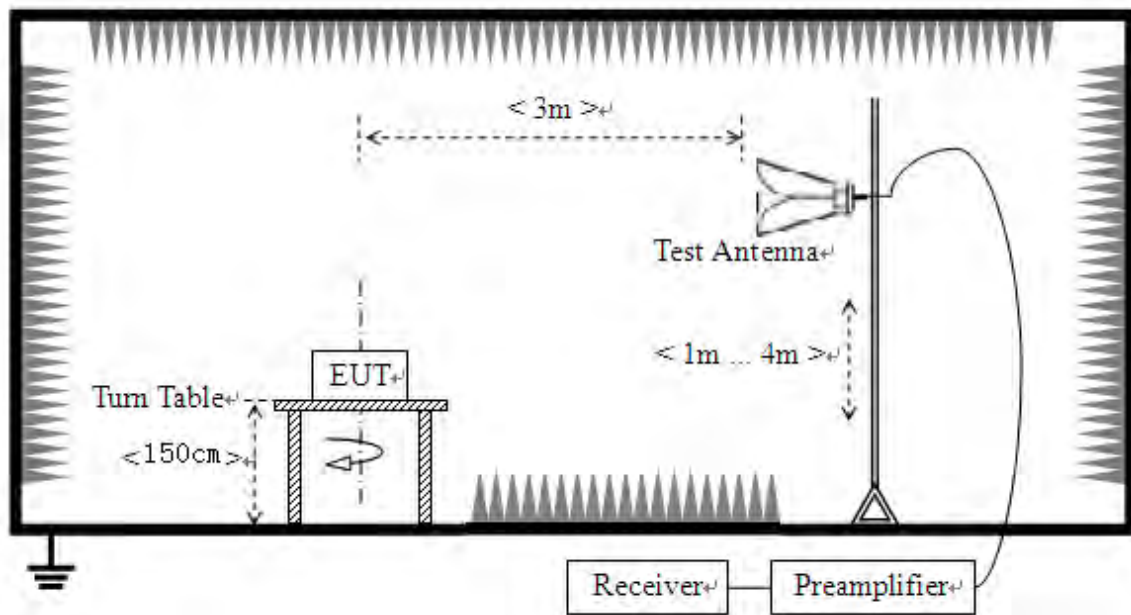
## 2.8. Restricted Frequency Bands

### 2.8.1. Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 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.

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 Procedure

KDB 558074 Section 8.6 and 8.7 was used in order to prove compliance.

### 2.8.4. Test Result

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

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

$G_{\text{preamp}}$ : Preamplifier Gain

$A_{\text{Factor}}$ : Antenna Factor at 3m

**Note:** 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.

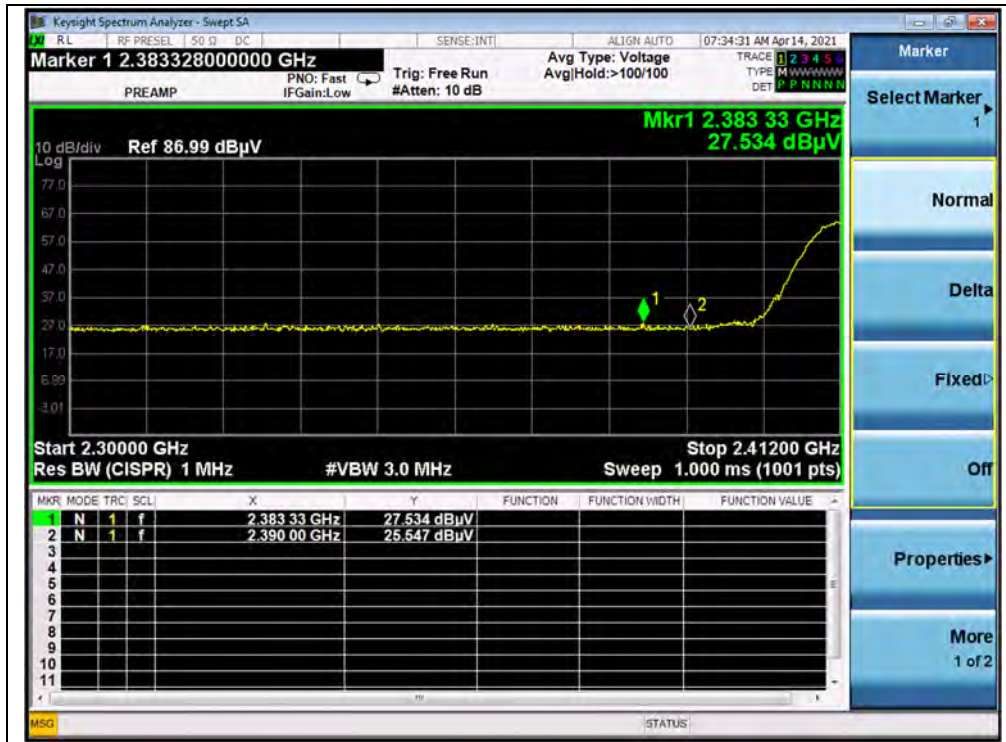
### 802.11b Mode

#### A. Test Verdict:

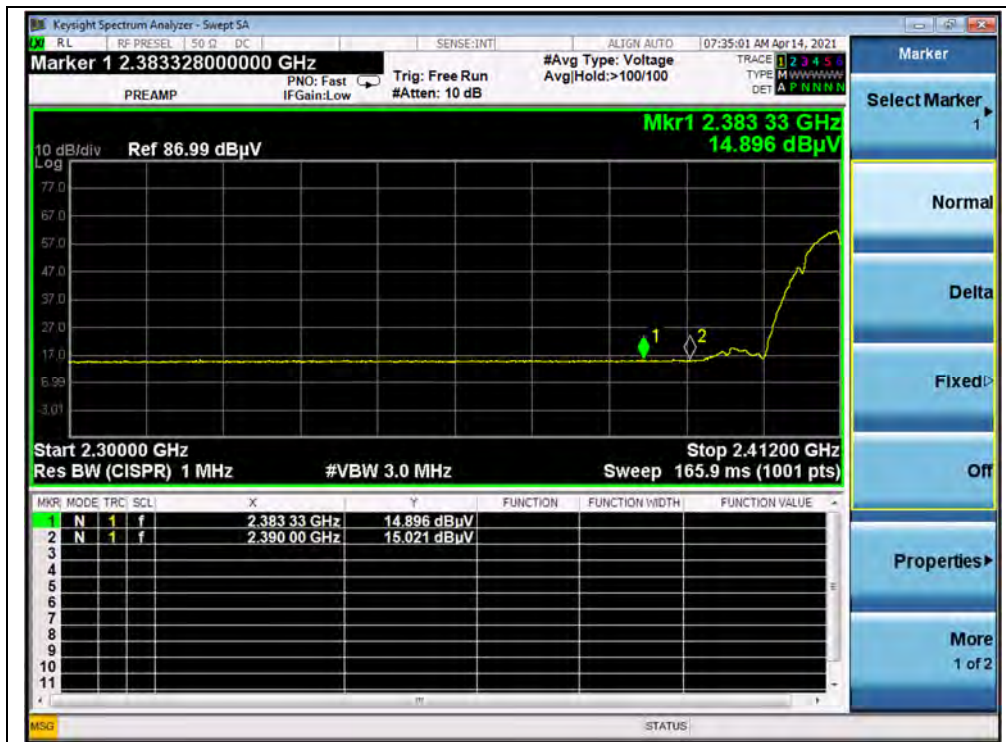
Channel	Frequency (MHz)	Detector	Receiver Reading	$A_T$ (dB)	$A_{\text{Factor}}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV	$U_R$ (dB $\mu$ V)					
1	2383.33	PK	27.53	6.74	27.20	61.47	74	PASS
1	2390.00	AV	15.02	6.74	27.20	48.96	54	PASS
11	2489.32	PK	26.97	6.74	27.20	60.91	74	PASS
11	2485.29	AV	15.44	6.74	27.20	49.38	54	PASS



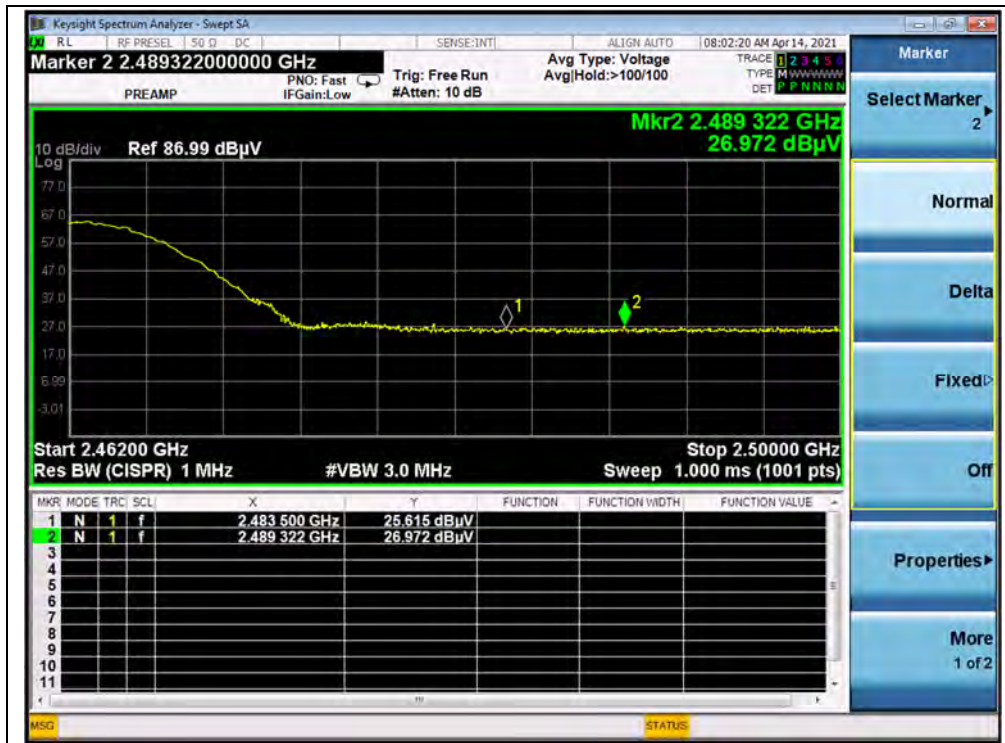
B.Test Plot:



(PEAK, Channel 1, 802.11b)



(AVERAGE, Channel 1, 802.11b)



(PEAK, Channel 11, 802.11b)



(AVERAGE, Channel 11, 802.11b)



802.11g Mode

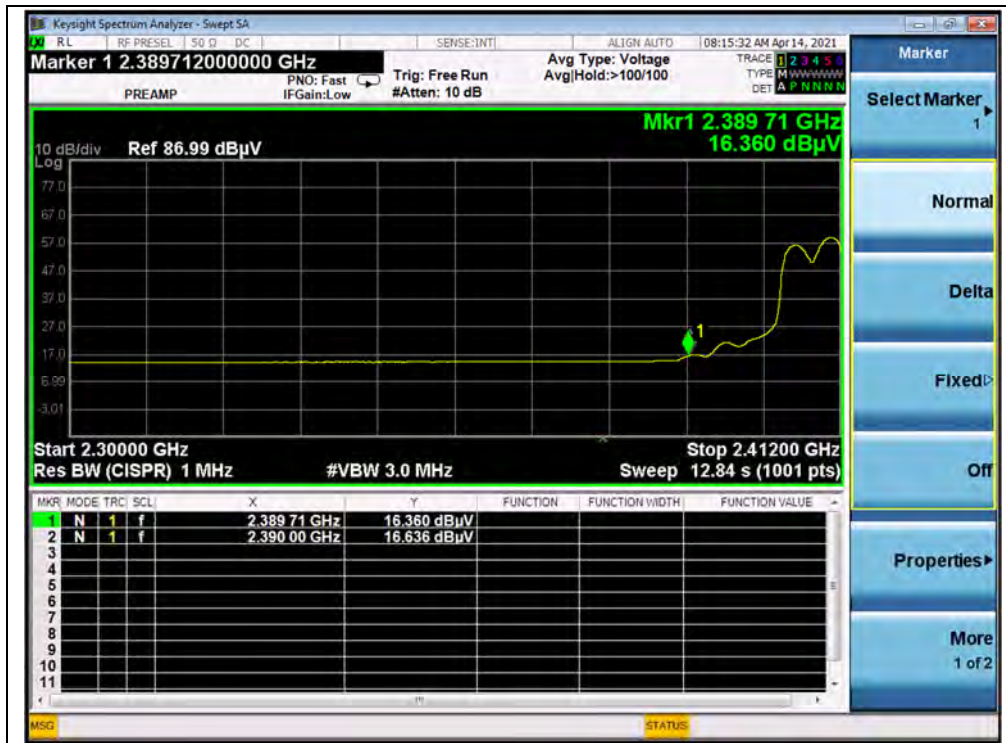
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U <sub>R</sub> (dBμV)	A <sub>T</sub> (dB)	A <sub>Factor</sub> (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2390.00	PK	28.38	6.74	27.20	62.32	74	PASS
1	2390.00	AV	16.64	6.74	27.20	50.58	54	PASS
11	2483.70	PK	27.38	6.74	27.20	61.32	74	PASS
11	2483.50	AV	15.10	6.74	27.20	49.04	54	PASS

B.Test Plot:



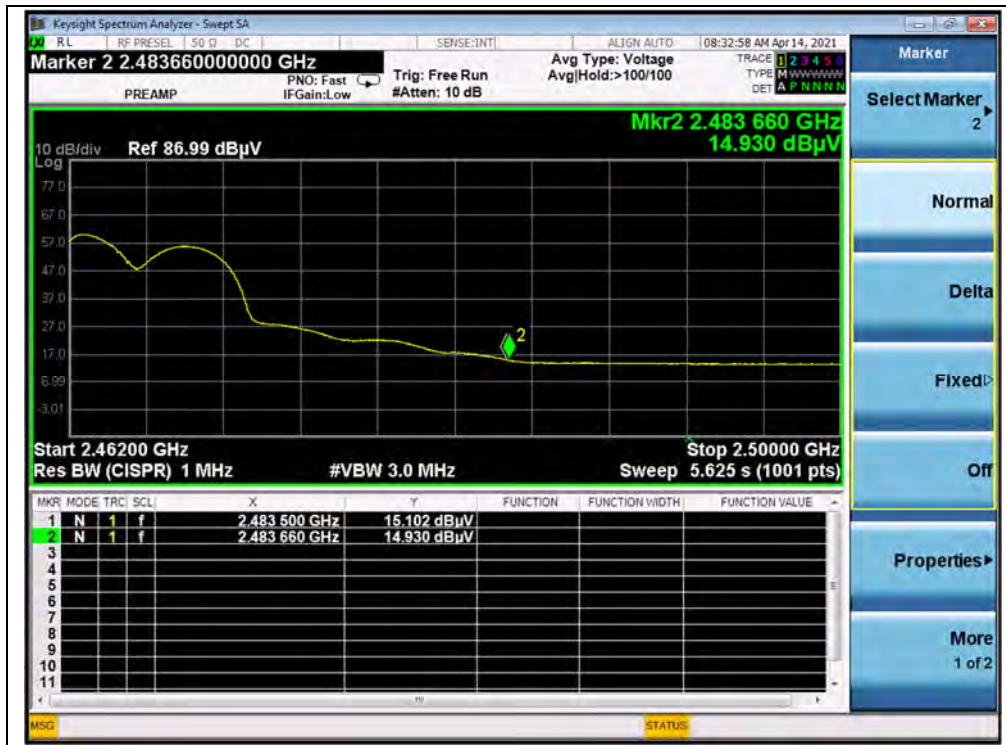
(PEAK, Channel 1, 802.11g)



(AVERAGE, Channel 1, 802.11g)



(PEAK, Channel 11, 802.11g)



(AVERAGE, Channel 11, 802.11g)



802.11n (HT20) Mode

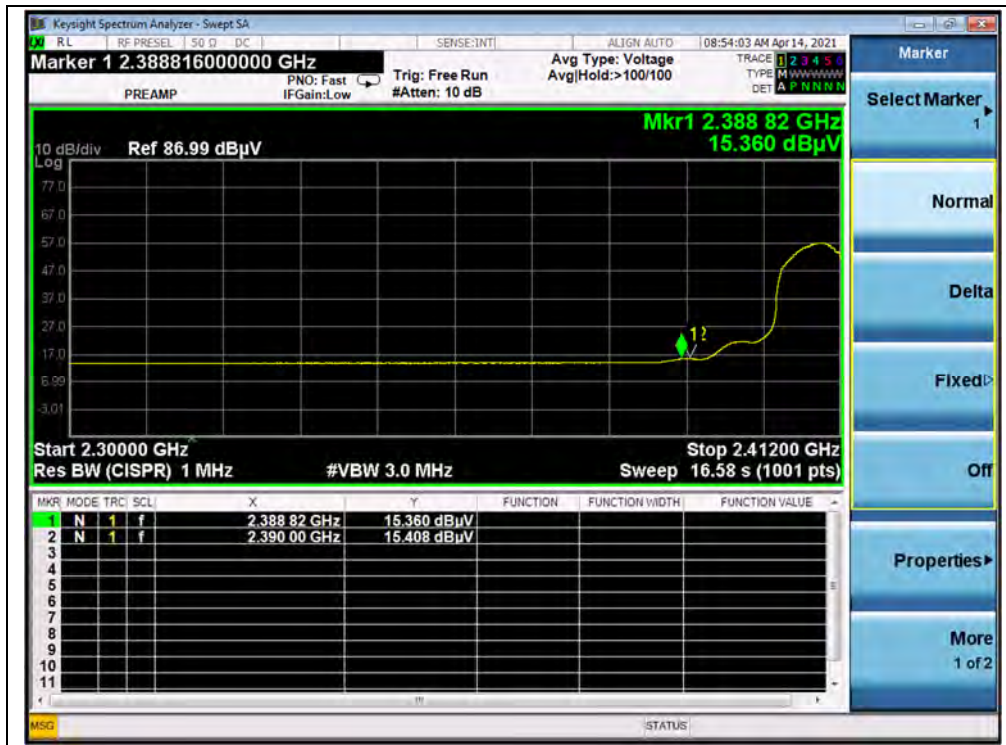
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
1	2388.82	PK	28.76	6.74	27.20	62.70	74	PASS
1	2390.00	AV	15.41	6.74	27.20	49.35	54	PASS
11	2483.70	PK	28.26	6.74	27.20	62.20	74	PASS
11	2483.50	AV	15.22	6.74	27.20	49.16	54	PASS

B. Test Plot:



(PEAK, Channel 1, 802.11n (HT20))

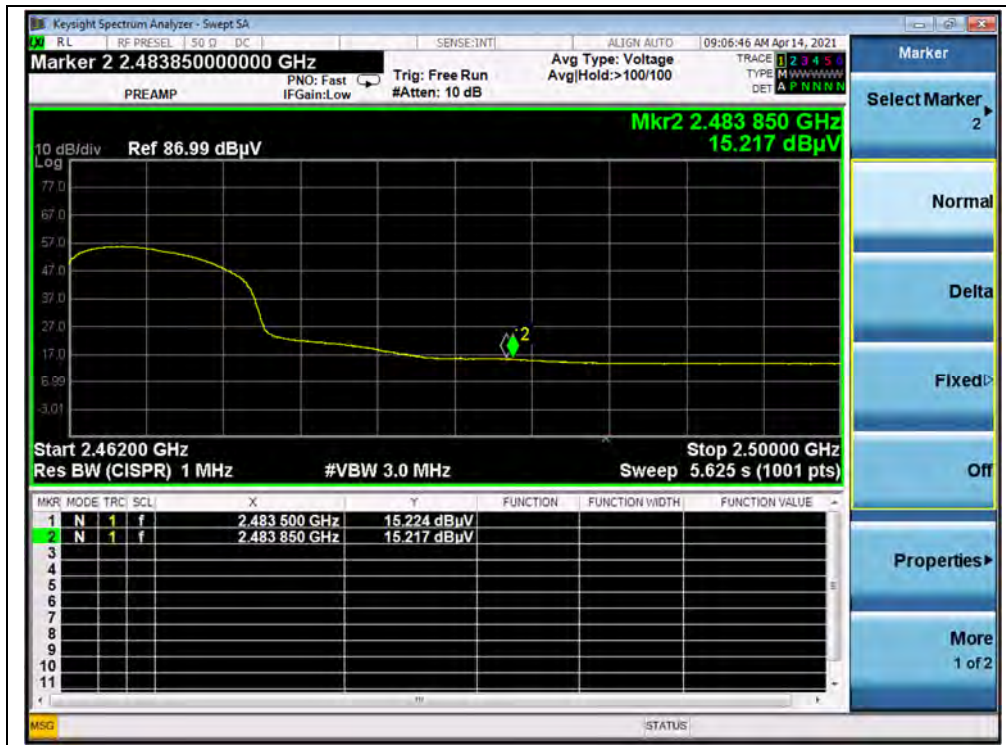


(AVERAGE, Channel 1, 802.11n (HT20))



(PEAK, Channel 11, 802.11n (HT20))





(AVERAGE, Channel 11, 802.11n (HT20))



802.11n (HT40) Mode

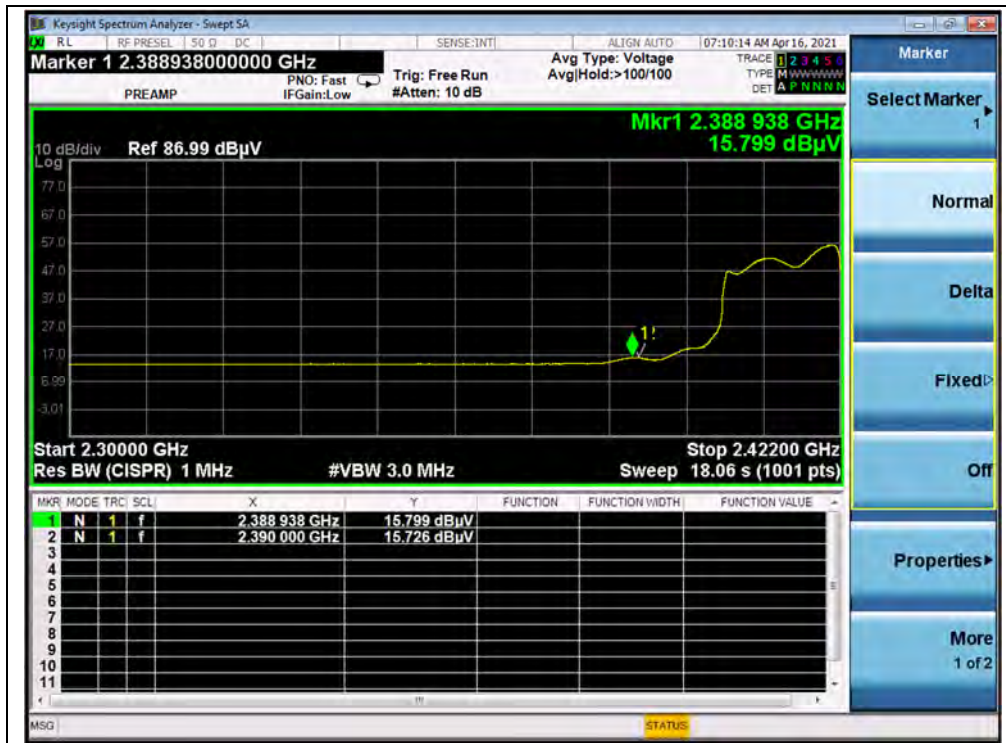
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A <sub>T</sub> (dB)	A <sub>Factor</sub> (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV	U <sub>R</sub> (dBμV)					
3	2389.18	PK	31.54	6.74	27.20	65.48	74	PASS
3	2388.94	AV	15.80	6.74	27.20	49.74	54	PASS
9	2484.30	PK	29.88	6.74	27.20	63.82	74	PASS
9	2483.50	AV	16.51	6.74	27.20	50.45	54	PASS

B.Test Plot:



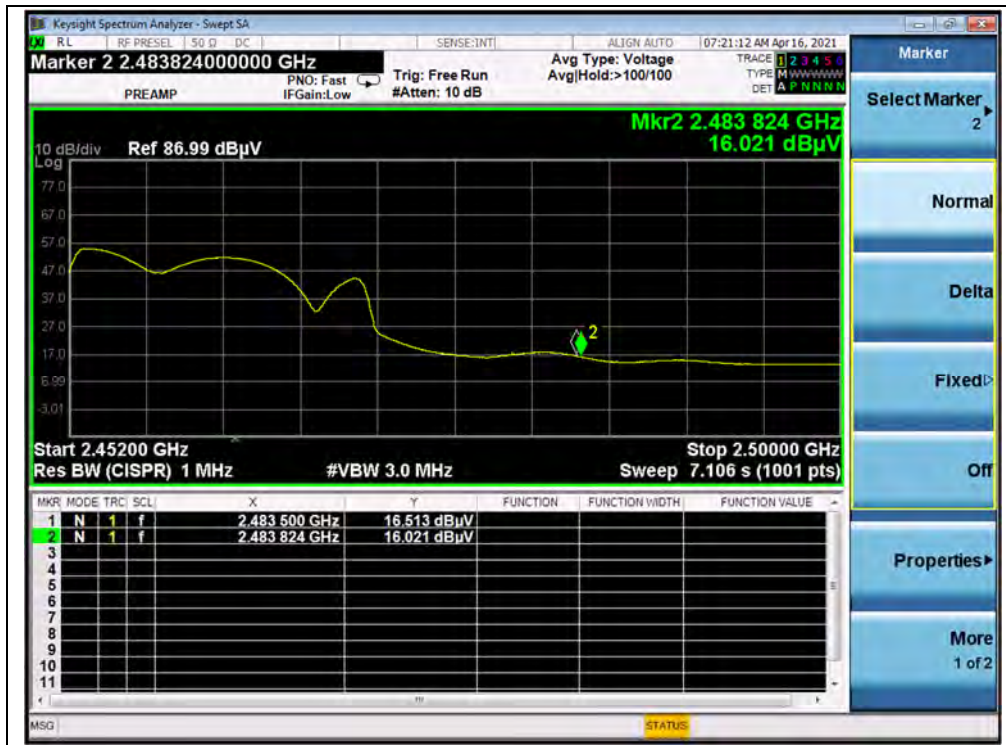
(PEAK, Channel 3, 802.11n (HT40))



(AVERAGE, Channel 3, 802.11n (HT40))



(PEAK, Channel 9, 802.11n (HT40))



(AVERAGE, Channel 9, 802.11n (HT40))

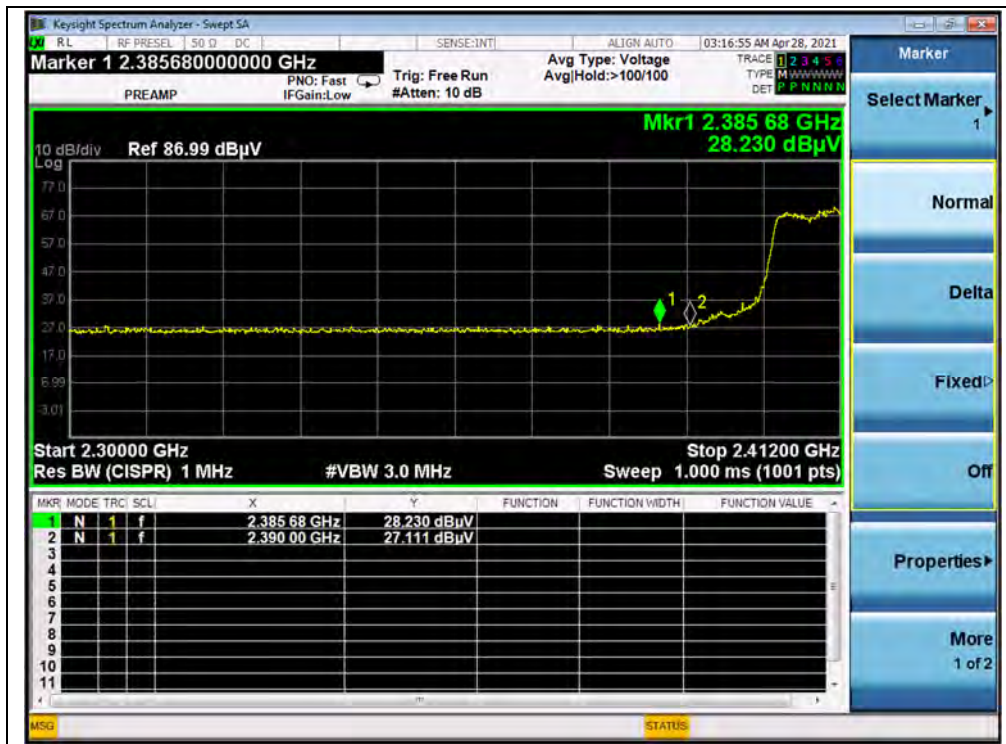


**802.11ax (HEW20) Mode**

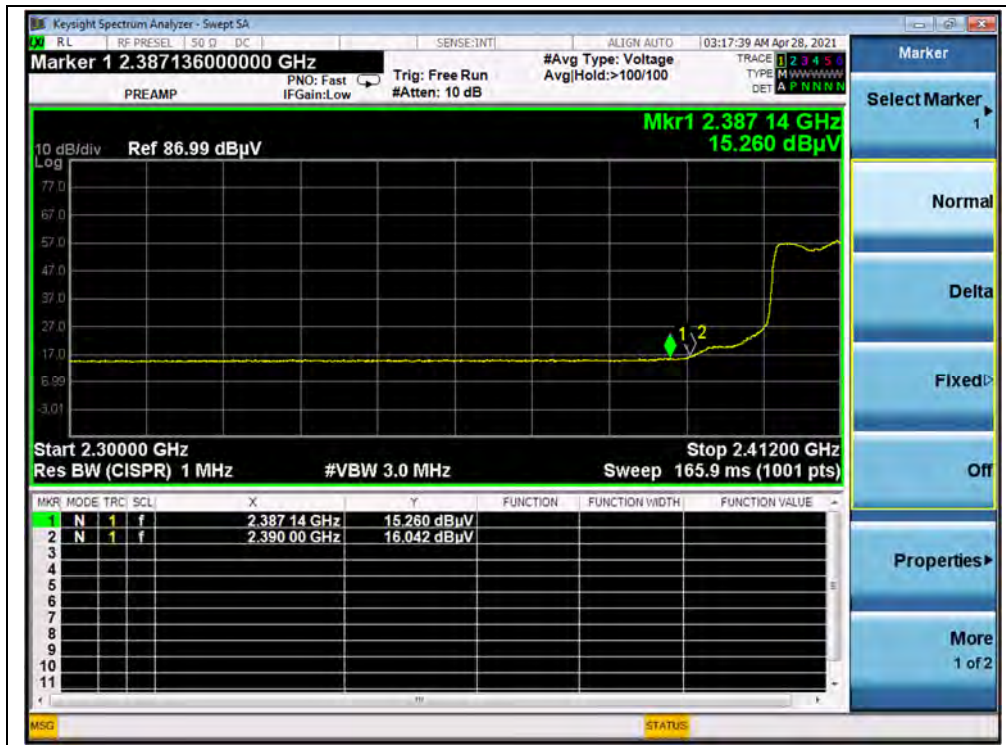
**A.Test Verdict:**

Channel	Frequency (MHz)	Detector	Receiver Reading	A <sub>T</sub> (dB)	A <sub>Factor</sub> (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV	U <sub>R</sub> (dBμV)					
1	2385.68	PK	28.23	6.74	27.20	62.17	74	PASS
1	2390.00	AV	16.04	6.74	27.20	49.98	54	PASS
11	2483.50	PK	28.31	6.74	27.20	62.25	74	PASS
11	2483.50	AV	15.89	6.74	27.20	49.83	54	PASS

**B.Test Plot:**



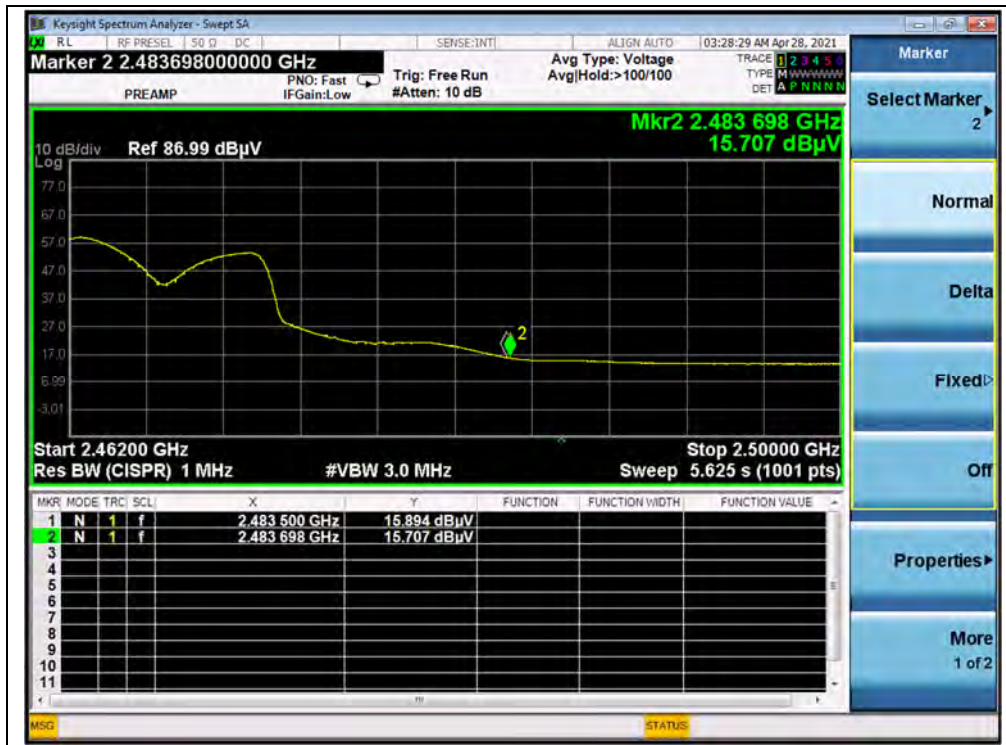
(PEAK, Channel 1, 802.11ax (HEW20))



(AVERAGE, Channel 1, 802.11ax (HEW20))



(PEAK, Channel 11, 802.11ax (HEW20))



(AVERAGE, Channel 11, 802.11ax (HEW20))

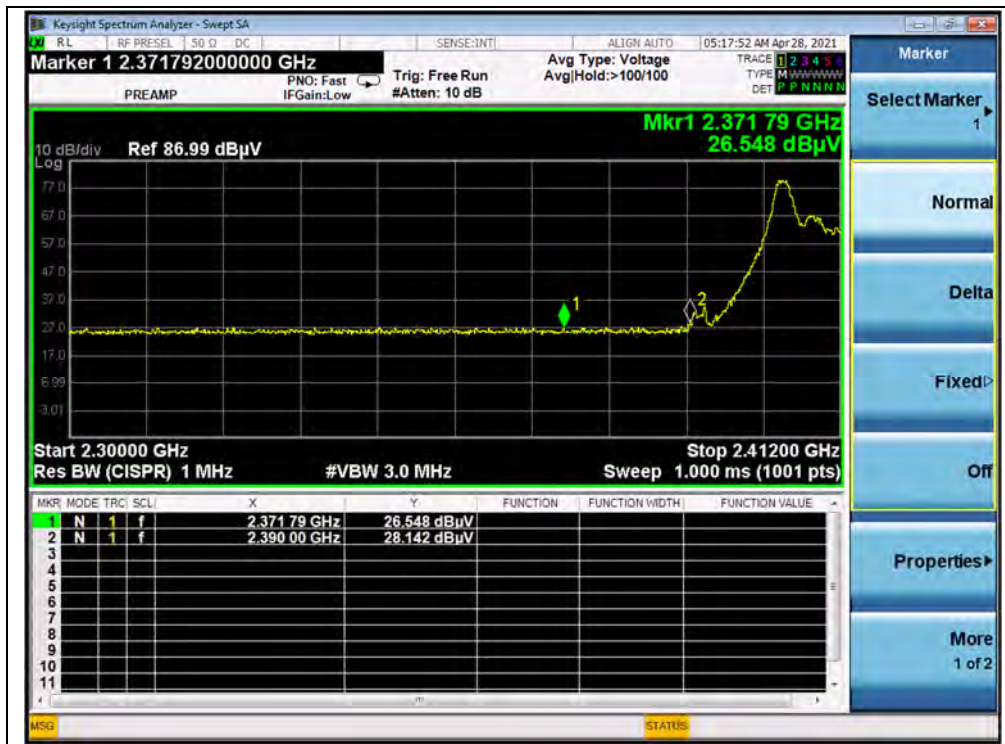


802.11ax (HEW20) RU26 Mode

A.Test Verdict:

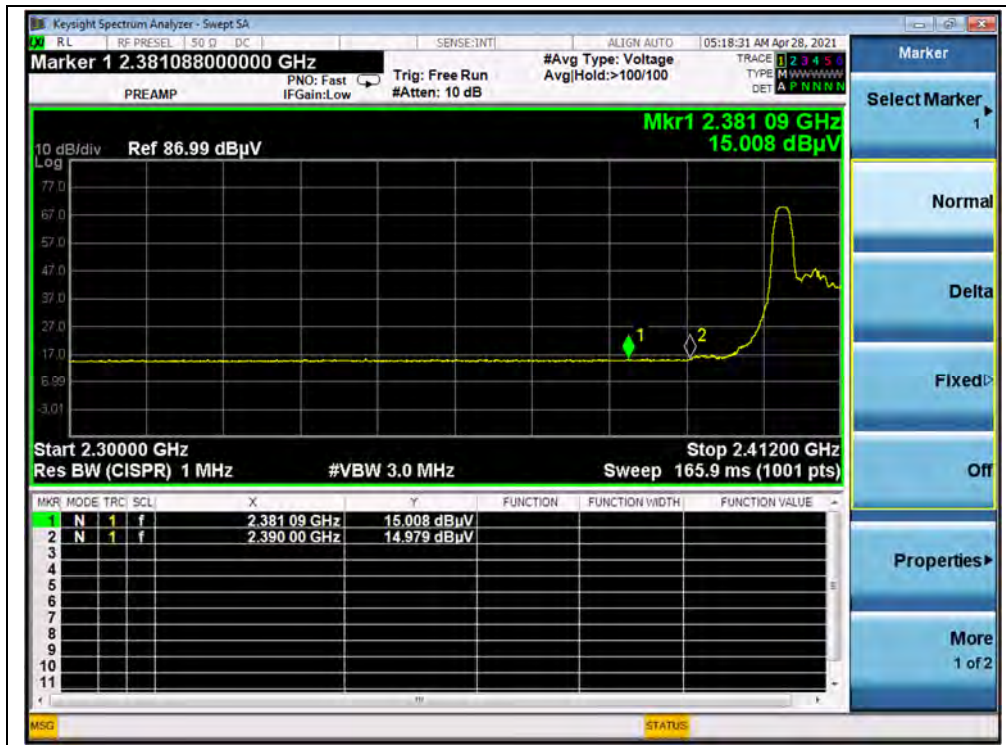
Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
1	2390.00	PK	28.14	6.74	27.20	62.08	74	PASS
1	2381.09	AV	15.01	6.74	27.20	48.95	54	PASS
11	2485.60	PK	26.68	6.74	27.20	60.62	74	PASS
11	2484.53	AV	15.51	6.74	27.20	49.45	54	PASS

B.Test Plot:



(PEAK, Channel 1, 802.11ax (HEW20) RU26)

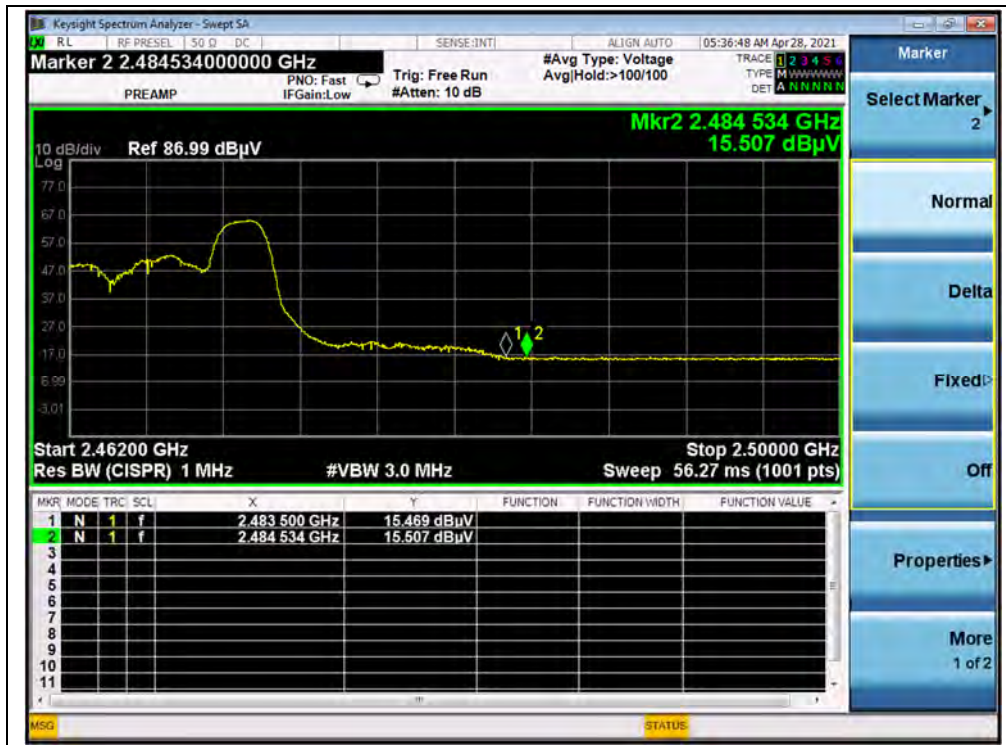




(AVERAGE, Channel 1, 802.11ax (HEW20) RU26)



(PEAK, Channel 11, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 11, 802.11ax (HEW20) RU26)

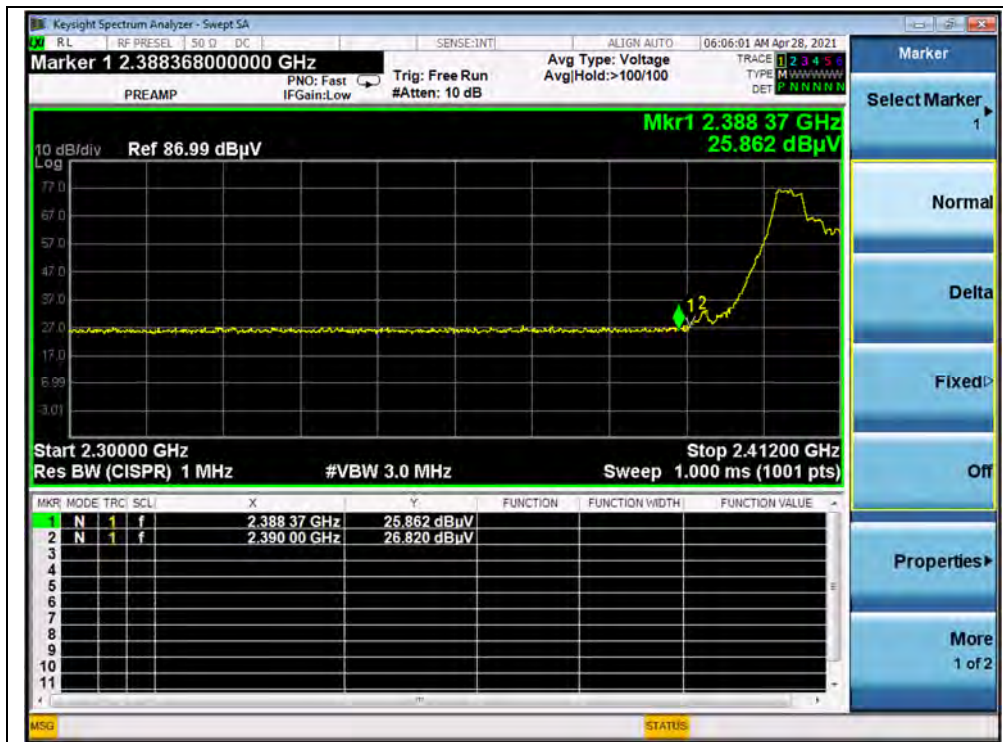


802.11ax (HEW20) RU52 Mode

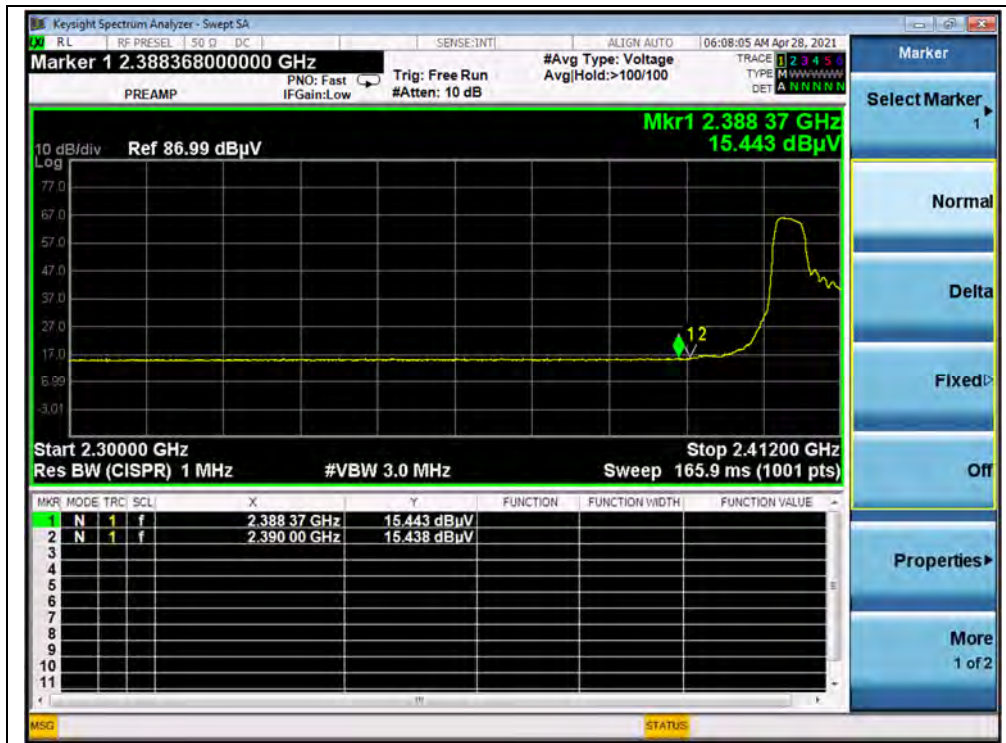
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
1	2390.00	PK	26.82	6.74	27.20	60.76	74	PASS
1	2388.37	AV	15.44	6.74	27.20	49.38	54	PASS
11	2483.28	PK	26.63	6.74	27.20	60.57	74	PASS
11	2487.27	AV	16.06	6.74	27.20	50.00	54	PASS

B.Test Plot:



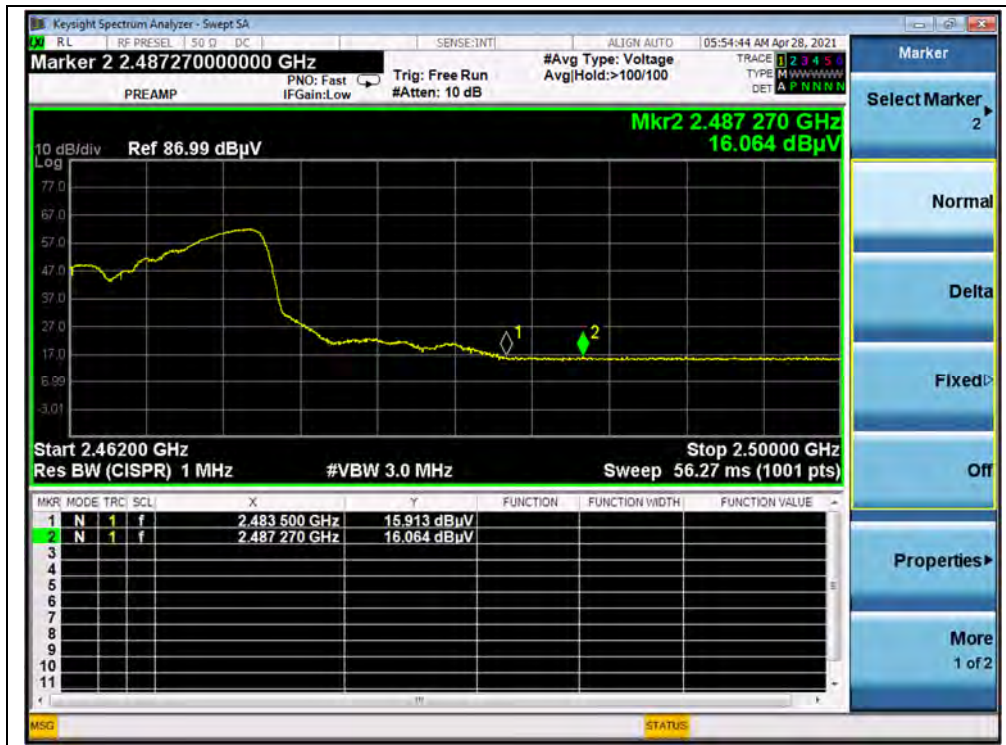
(PEAK, Channel 1, 802.11ax (HEW20) RU52)



(AVERAGE, Channel 1, 802.11ax (HEW20) RU52)



(PEAK, Channel 11, 802.11ax (HEW20) RU52)



(AVERAGE, Channel 11, 802.11ax (HEW20) RU52)



802.11ax (HEW20) RU106 Mode

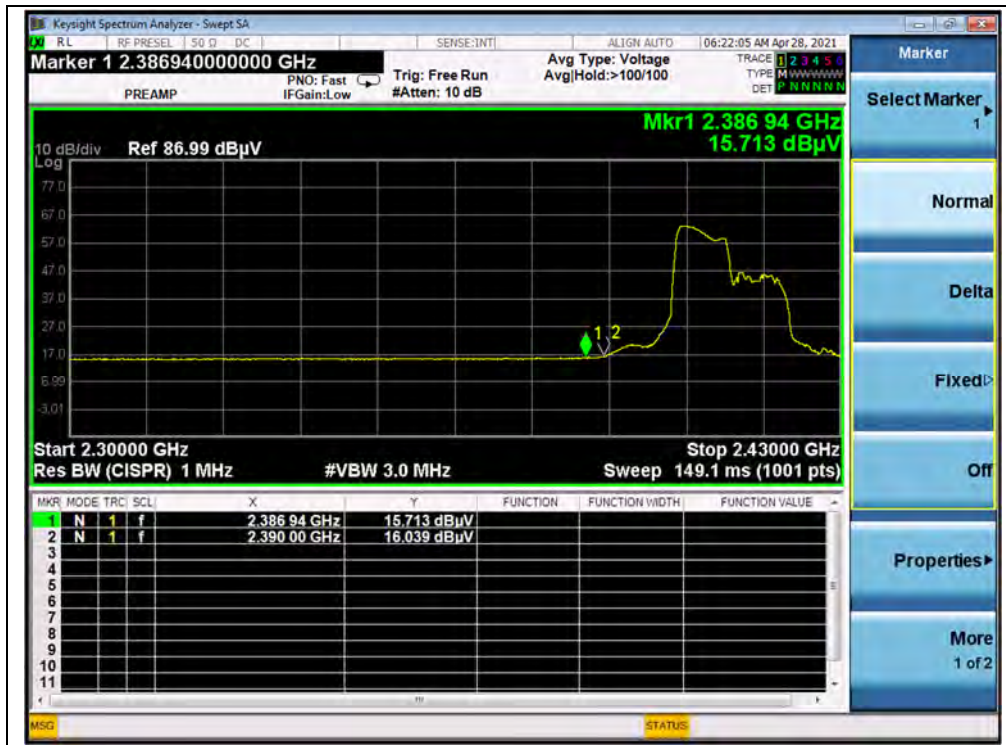
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
1	2390.00	PK	26.86	6.74	27.20	60.80	74	PASS
1	2390.00	AV	16.04	6.74	27.20	49.98	54	PASS
11	2483.50	PK	28.13	6.74	27.20	62.07	74	PASS
11	2484.54	AV	15.16	6.74	27.20	49.10	54	PASS

B.Test Plot:



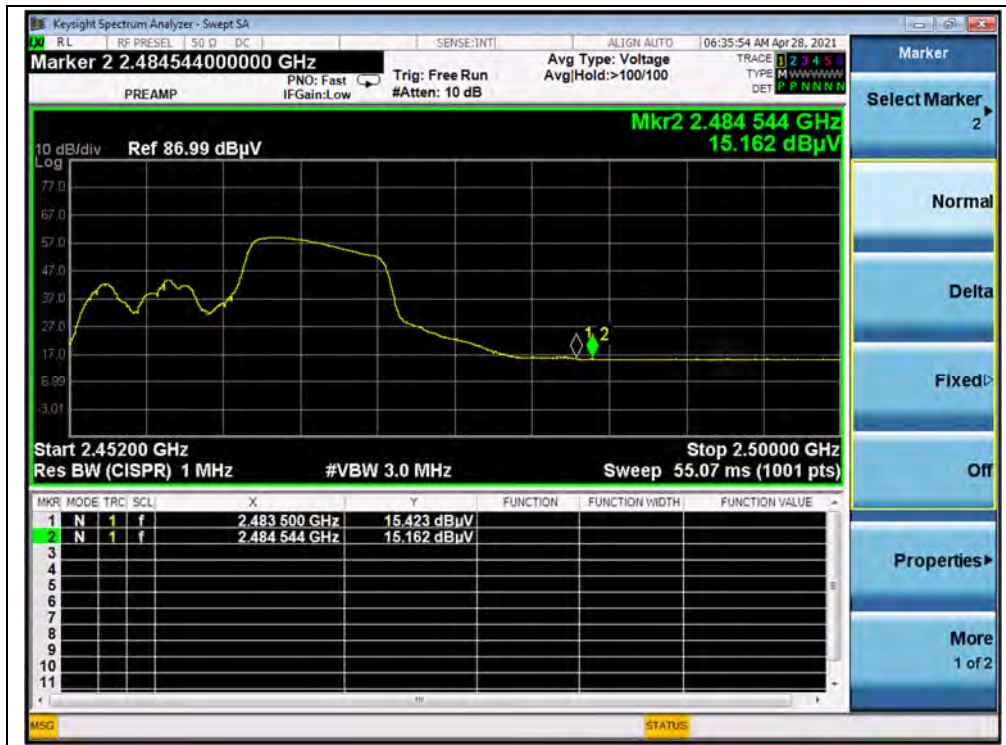
(PEAK, Channel 1, 802.11ax (HEW20) RU106)



(AVERAGE, Channel 1, 802.11ax (HEW20) RU106)



(PEAK, Channel 11, 802.11ax (HEW20) RU106)



(AVERAGE, Channel 11, 802.11ax (HEW20) RU106)



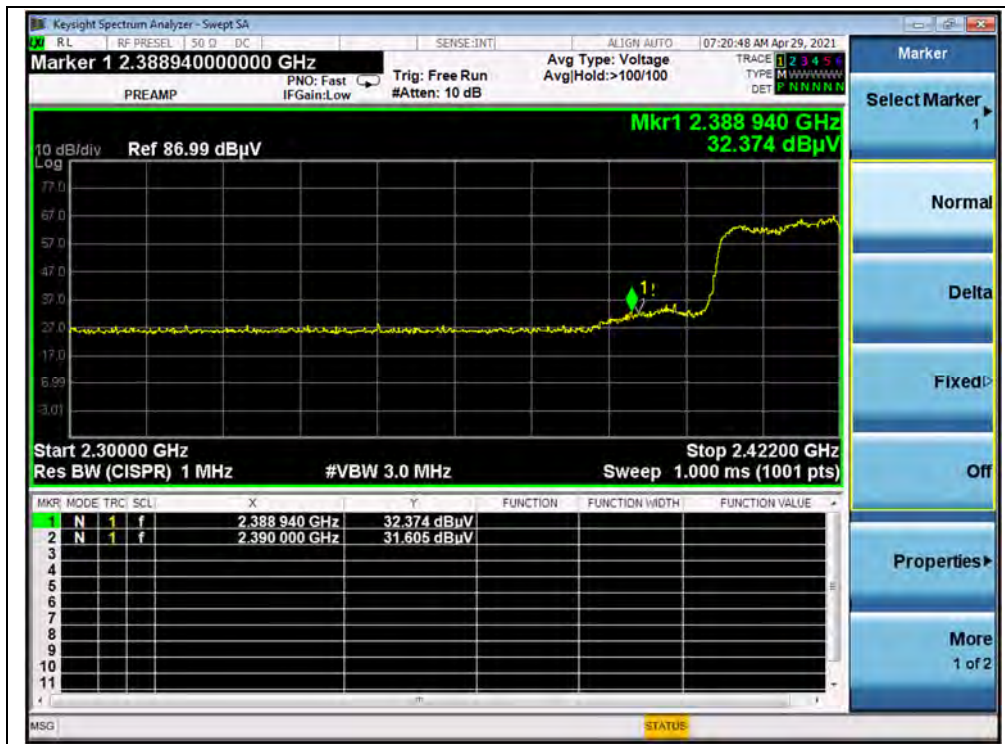


802.11ax (HEW40) Mode

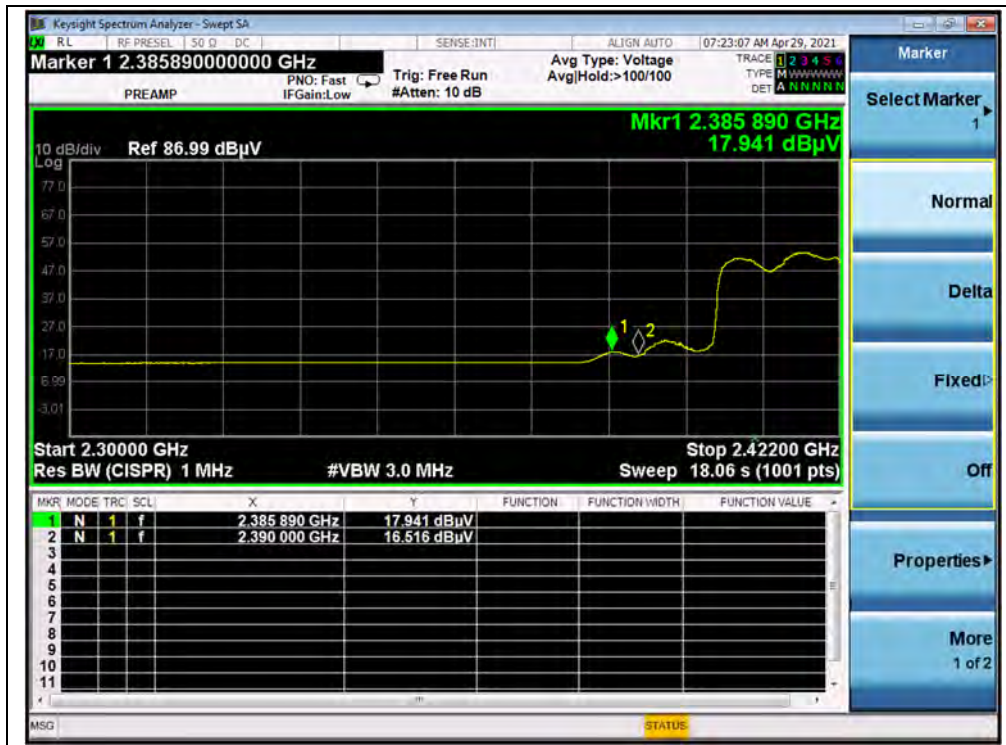
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A <sub>T</sub> (dB)	A <sub>Factor</sub> (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV	U <sub>R</sub> (dBμV)					
3	2388.94	PK	32.37	6.74	27.20	66.31	74	PASS
3	2385.89	AV	17.94	6.74	27.20	51.88	54	PASS
9	2487.47	PK	27.82	6.74	27.20	61.76	74	PASS
9	2483.50	AV	16.80	6.74	27.20	50.74	54	PASS

B.Test Plot:



((PEAK, Channel 3, 802.11ax (HEW40)))



(AVERAGE, Channel 3, 802.11ax (HEW40))



(PEAK, Channel 9, 802.11ax (HEW40))



(AVERAGE, Channel 9, 802.11ax (HEW40))



## 2.9. Radiated Emission

### 2.9.1. Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

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 ( $\mu\text{V}/\text{m}$ )	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

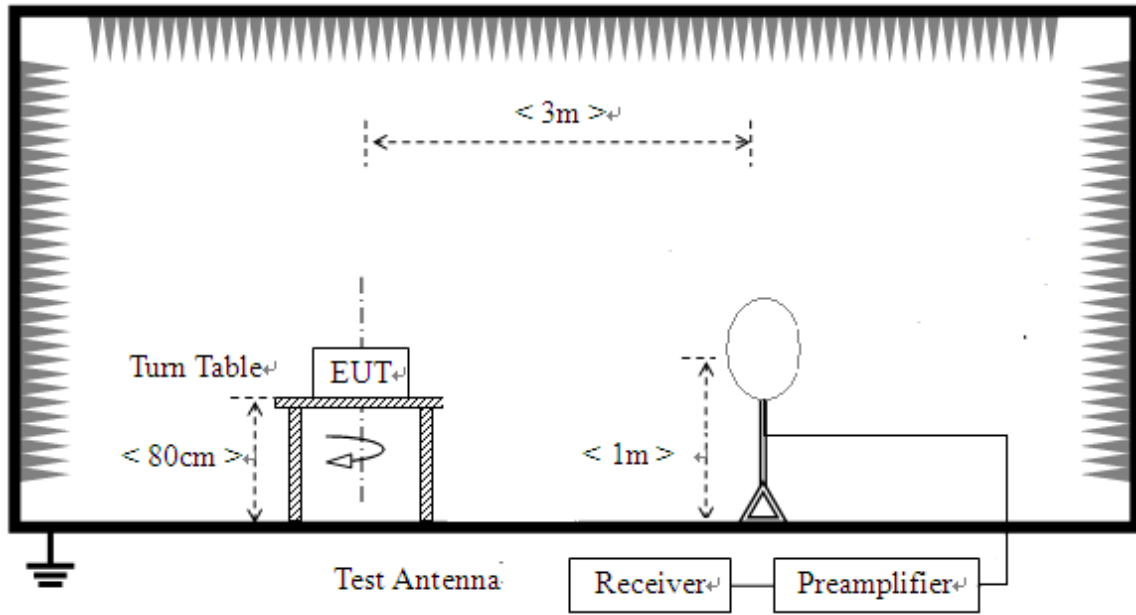
**Note1:** For above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

**Note2:** For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK). 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).

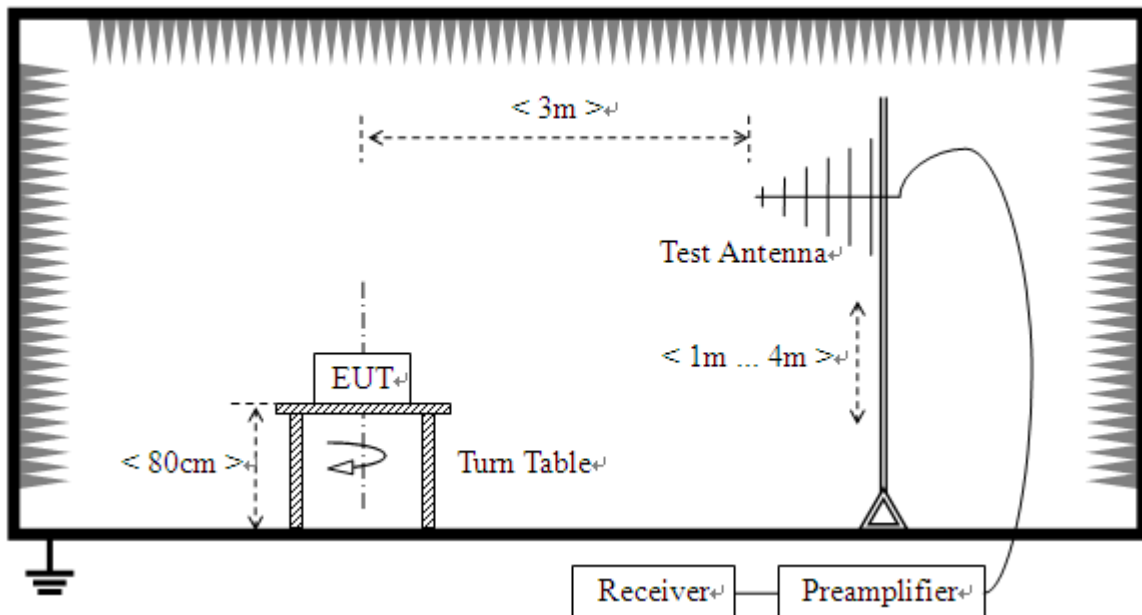
**2.9.2. Test Description**

**Test Setup:**

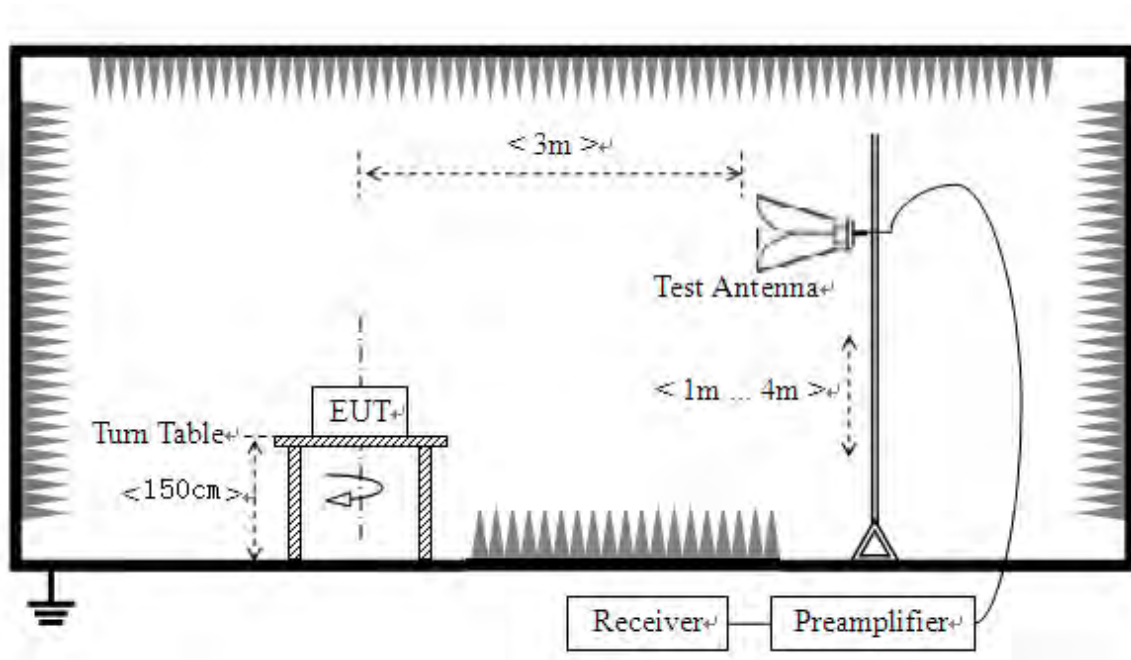
- 1) For radiated emissions from 9kHz to 30MHz



- 2) For radiated emissions from 30MHz to 1GHz



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 3 meters. 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 frequency range of interest is monitored at a fixed antenna height and EUT azimuth. 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.



### 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

$G_{\text{preamp}}$ : Preamplifier Gain

$A_{\text{Factor}}$ : Antenna Factor at 3m

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

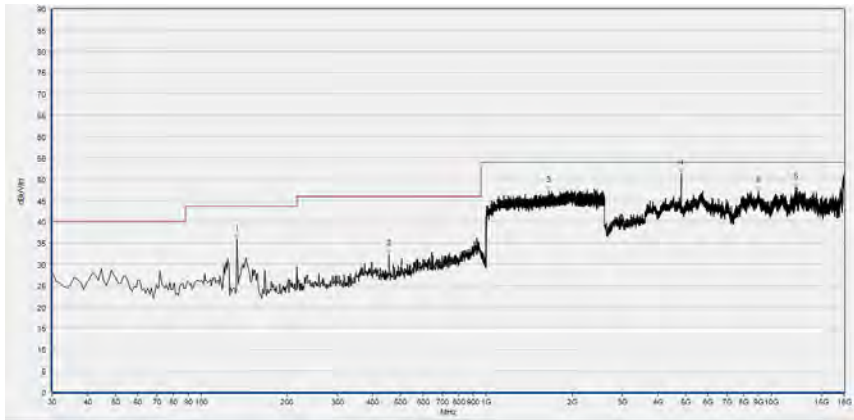
**Note1:** All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

**Note2:** 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.

**Note3:** For the frequency, which started from 18GHz to 40GHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

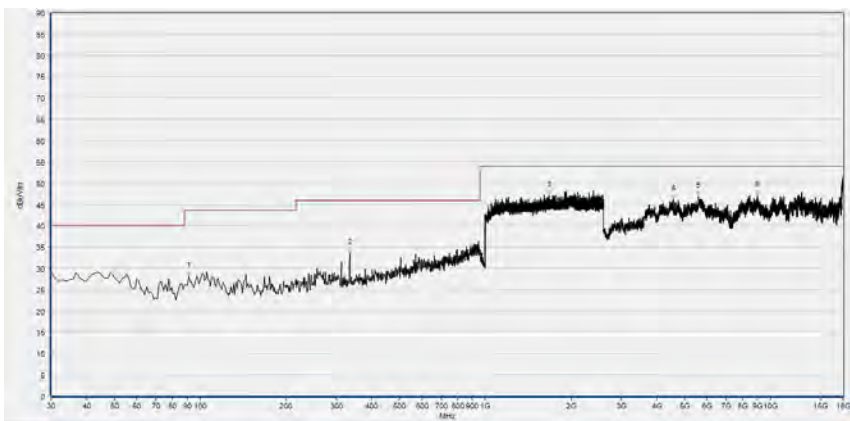
**802.11b Mode**

**Plot for Channel 1**



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
133.790	35.83	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
455.830	32.34	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1659.200	47.20	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4824.100	51.49	N/A	46.96	74.00	N/A	54.00	Horizontal	PASS
9009.480	47.13	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12188.040	48.11	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

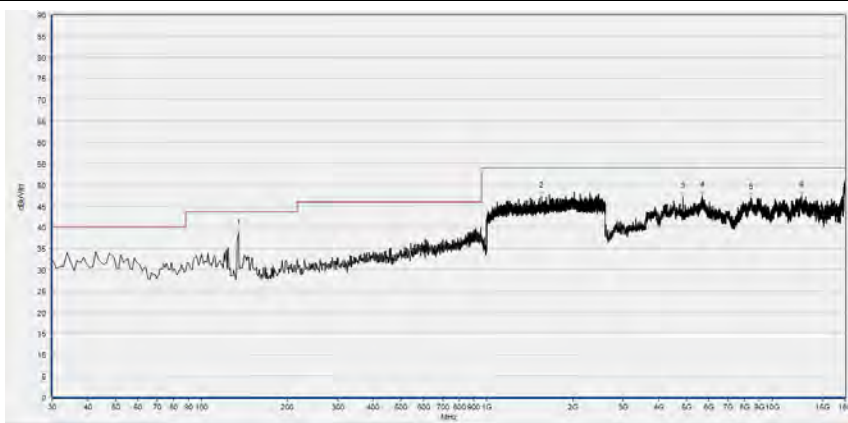


Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
91.110	28.14	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
335.550	33.44	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1677.867	47.05	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4558.880	46.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5603.000	46.97	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9000.240	47.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

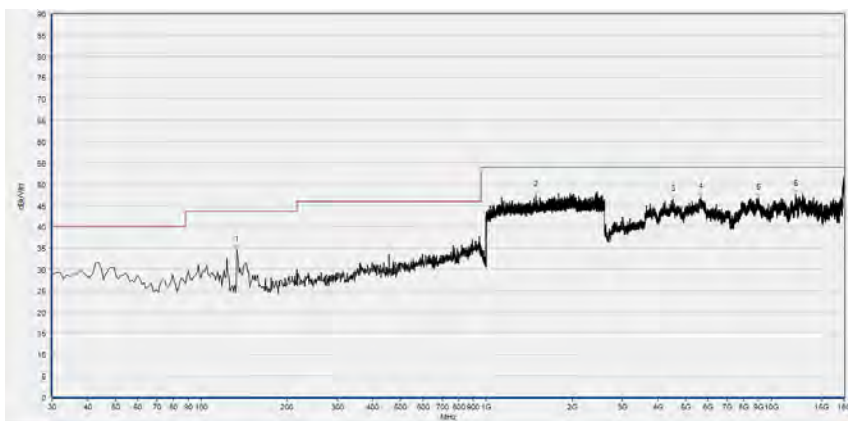


Plot for Channel 6



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
134.760	38.48	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1555.733	47.19	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4873.040	47.16	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5686.160	47.35	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8405.800	46.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12677.760	47.41	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

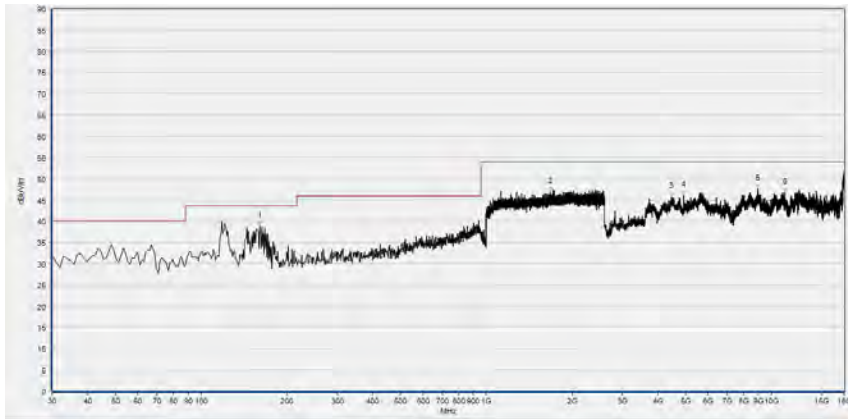
(Antenna Horizontal, 30MHz to 18GHz)



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
133.790	34.61	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1492.800	47.50	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4509.600	46.50	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5655.360	46.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9021.800	46.78	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12148.000	47.61	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

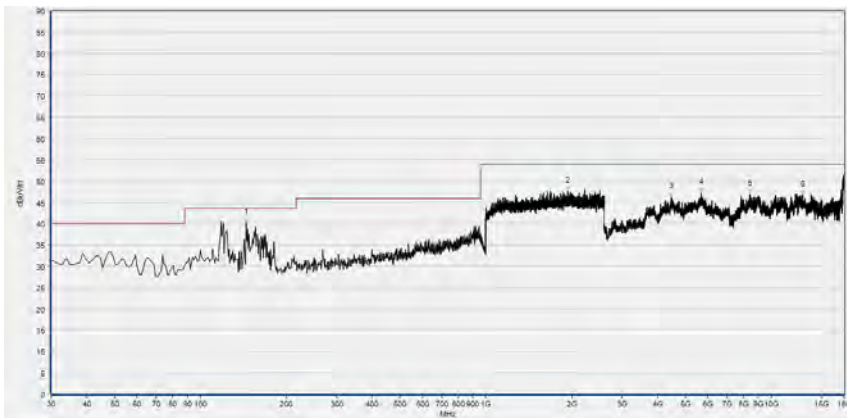
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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
160.950	38.91	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1676.267	46.92	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4463.400	45.80	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4925.400	46.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8944.800	47.64	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11147.000	46.72	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

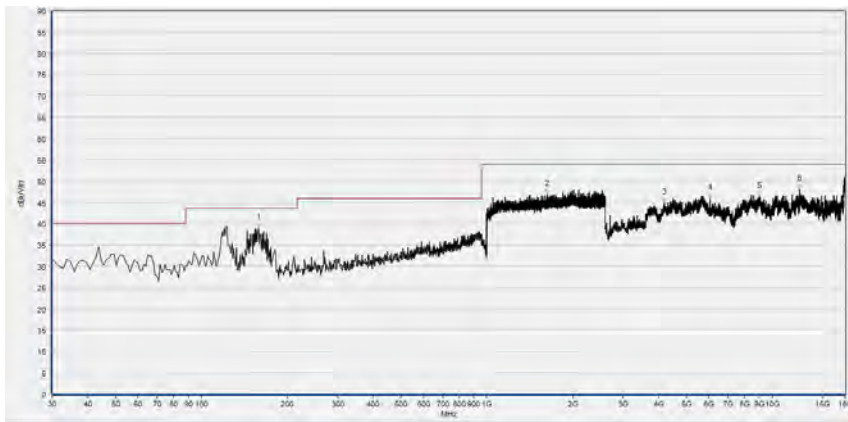


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
144.460	40.15	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1930.133	47.61	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4457.240	46.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5670.760	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8399.640	46.92	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12884.120	46.75	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

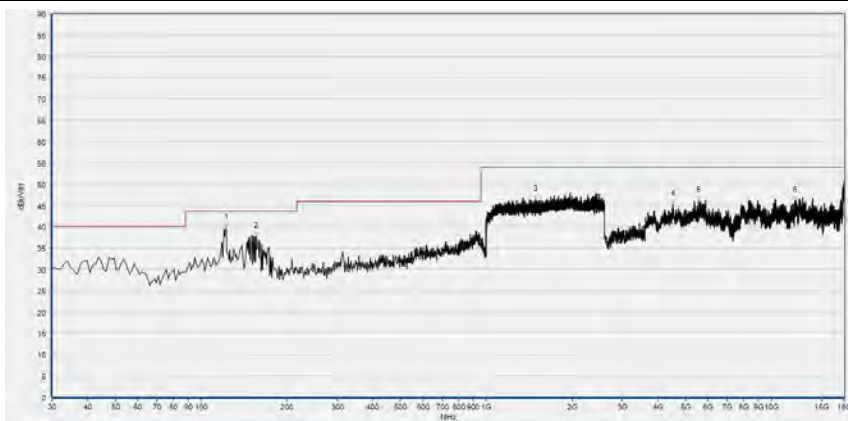
**802.11g Mode**

**Plot for Channel 1**



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
159.010	39.07	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1625.067	46.89	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4176.960	44.92	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6046.520	45.94	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
9009.480	46.44	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12480.640	48.16	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

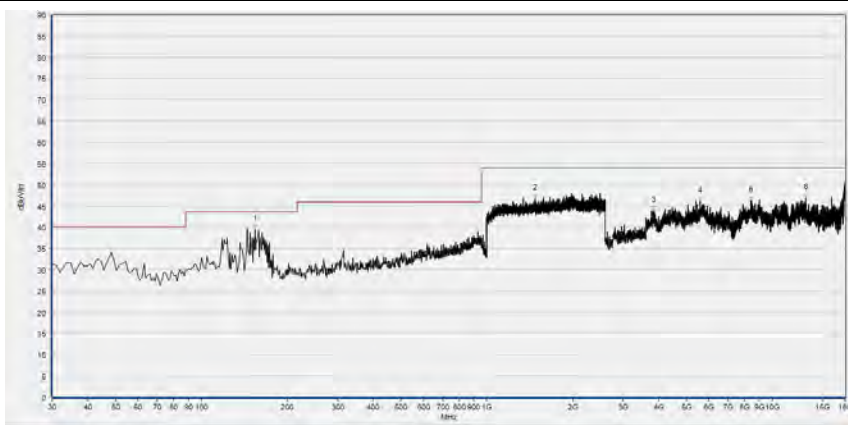
(Antenna Horizontal, 30MHz to 18GHz)



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
122.150	39.76	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
156.100	37.69	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1486.933	46.43	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4521.920	45.28	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5541.400	46.13	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12101.800	46.11	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

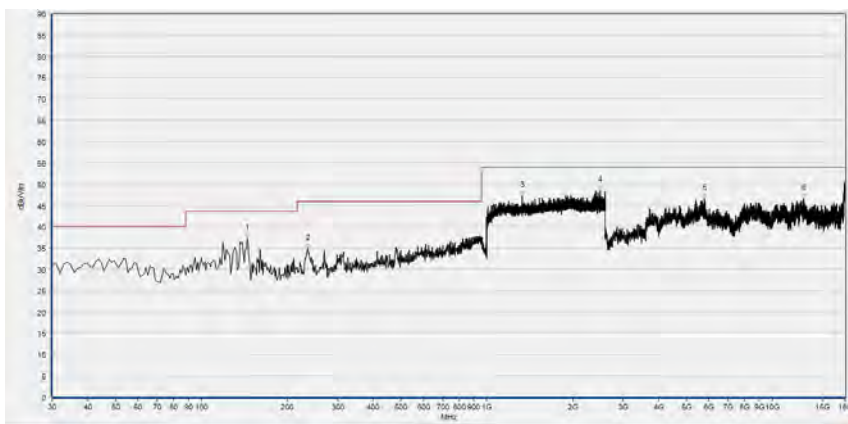
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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
154.160	39.63	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1475.733	46.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3841.240	43.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5575.280	46.10	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8399.640	46.26	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
13090.480	46.89	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

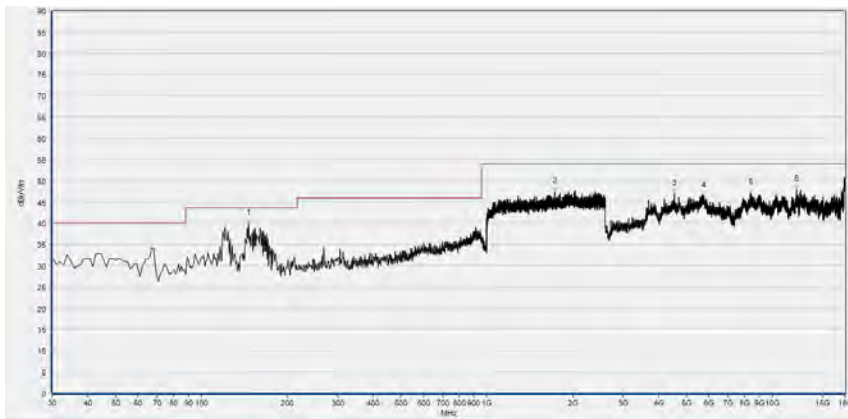
(Antenna Horizontal, 30MHz to 18GHz)



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
144.460	37.22	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
235.640	34.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1332.267	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2492.800	48.49	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5772.400	46.60	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12899.520	46.54	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

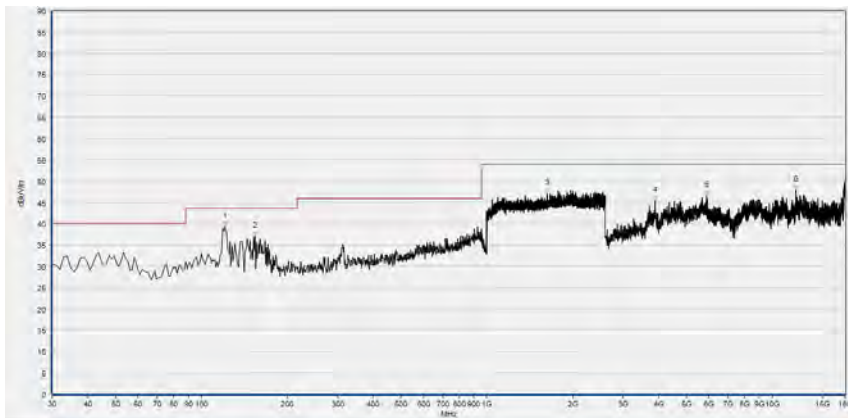
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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
146.400	39.84	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1729.600	47.38	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4540.400	46.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5744.680	46.49	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8424.280	47.06	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12175.720	47.99	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

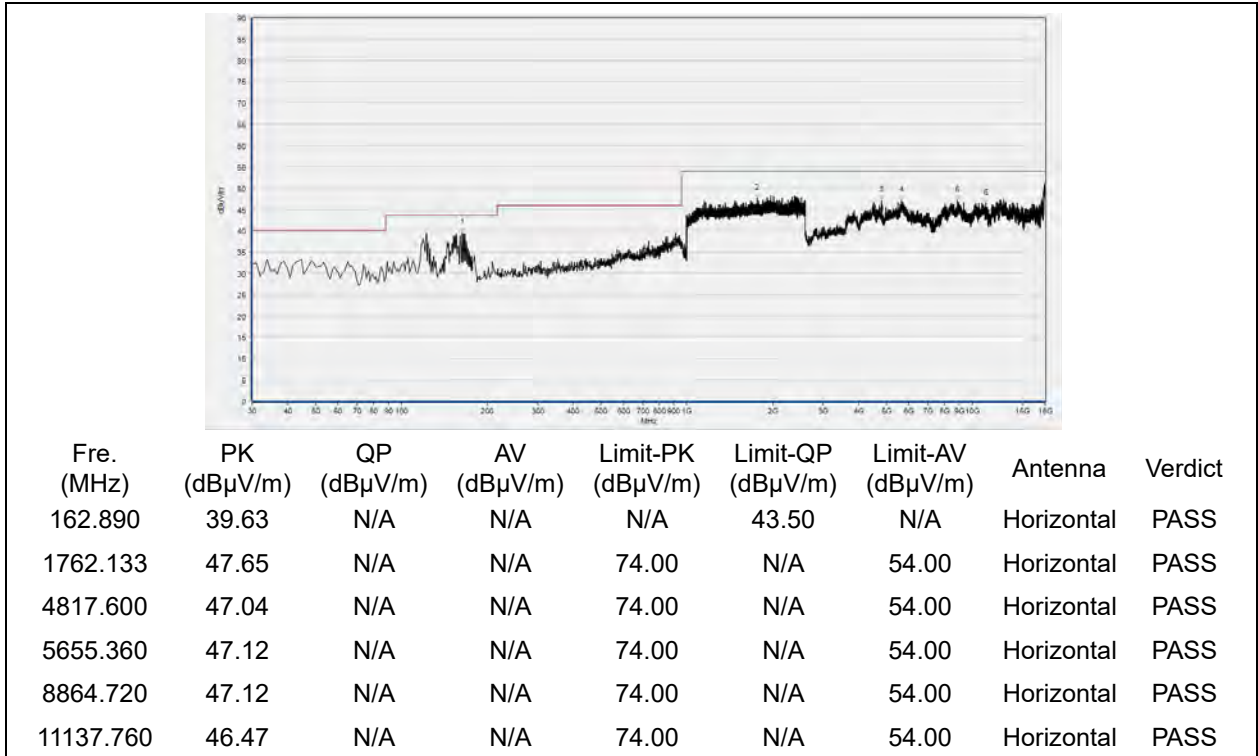


Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
121.180	39.38	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
154.160	37.10	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1627.200	47.05	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3881.280	45.37	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5886.360	46.60	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12114.120	47.99	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

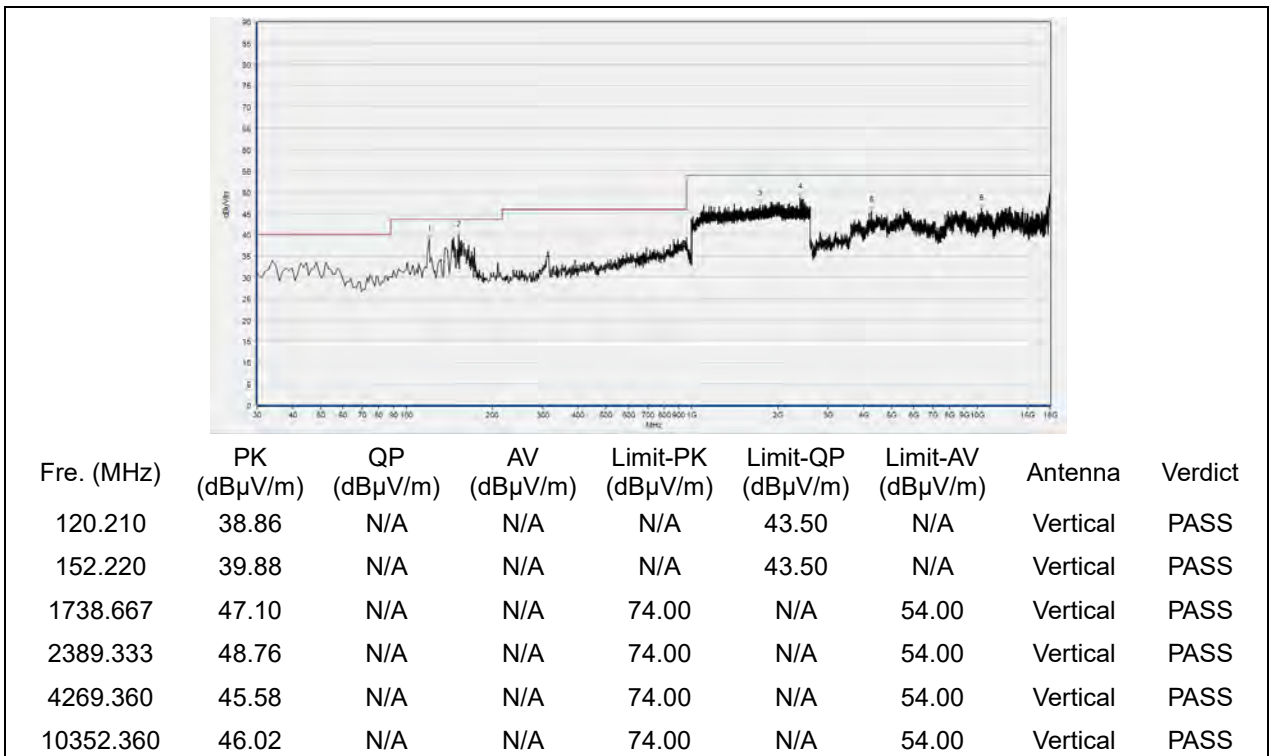
(Antenna Vertical, 30MHz to 18GHz)

**802.11n (HT20) Mode**

Plot for Channel 1

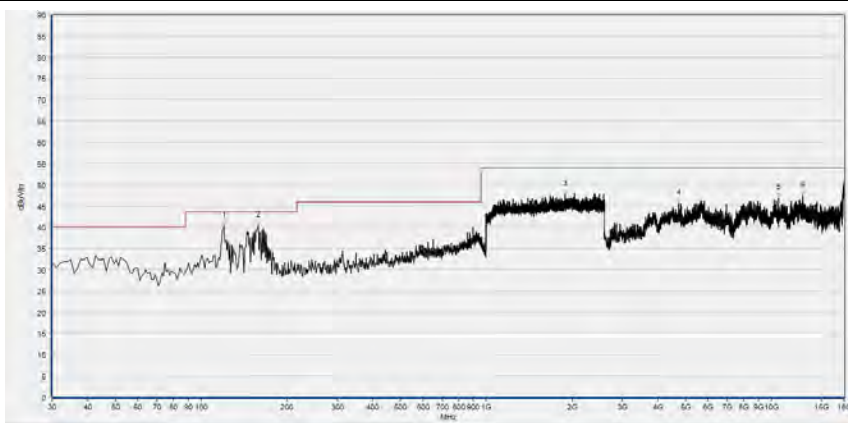


(Antenna Horizontal, 30MHz to 18GHz)



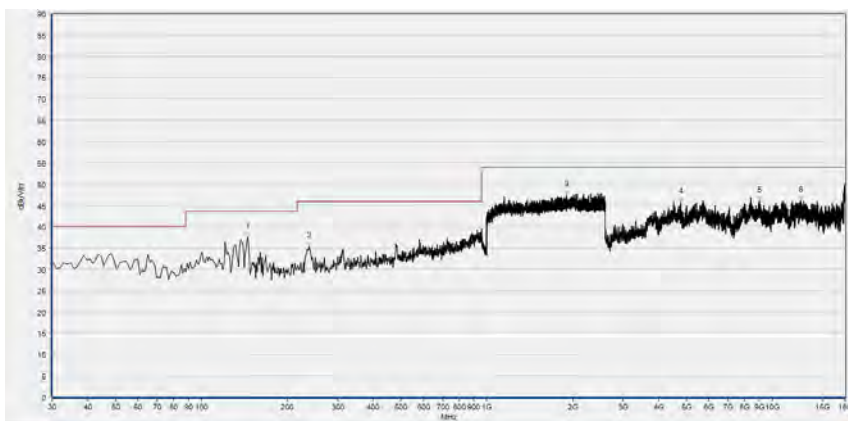
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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
120.210	40.14	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
159.010	40.46	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1896.000	47.79	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4731.360	45.51	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
10598.760	46.94	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12902.600	47.37	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

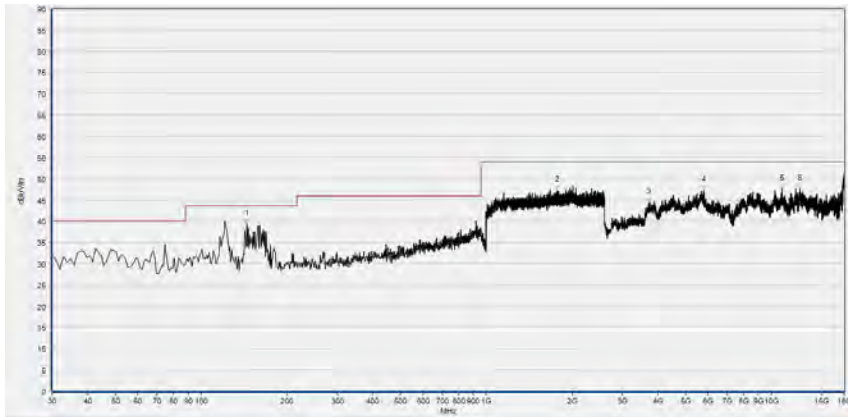
(Antenna Horizontal, 30MHz to 18GHz)



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
145.430	37.61	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
238.550	35.39	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1904.533	47.36	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4774.480	45.78	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8991.000	46.12	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12563.800	46.14	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

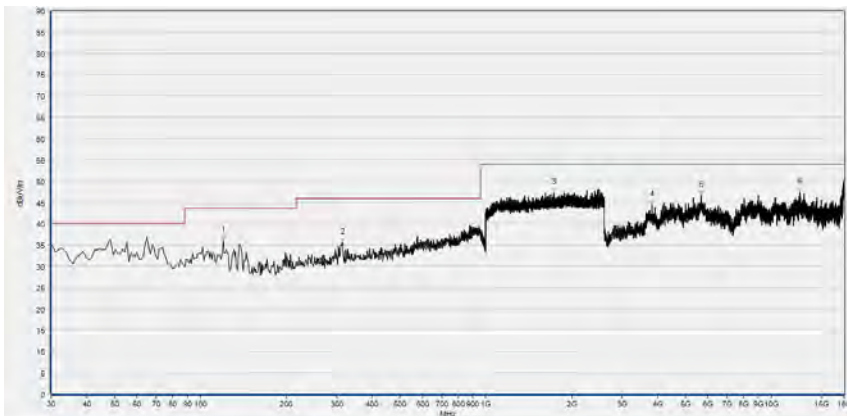
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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
144.460	39.42	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1774.400	47.35	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3705.720	44.43	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5769.320	47.30	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
10894.440	47.52	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12603.840	47.54	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
120.210	36.00	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
314.210	35.46	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1730.133	47.28	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3828.920	44.39	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5670.760	46.64	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12613.080	47.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

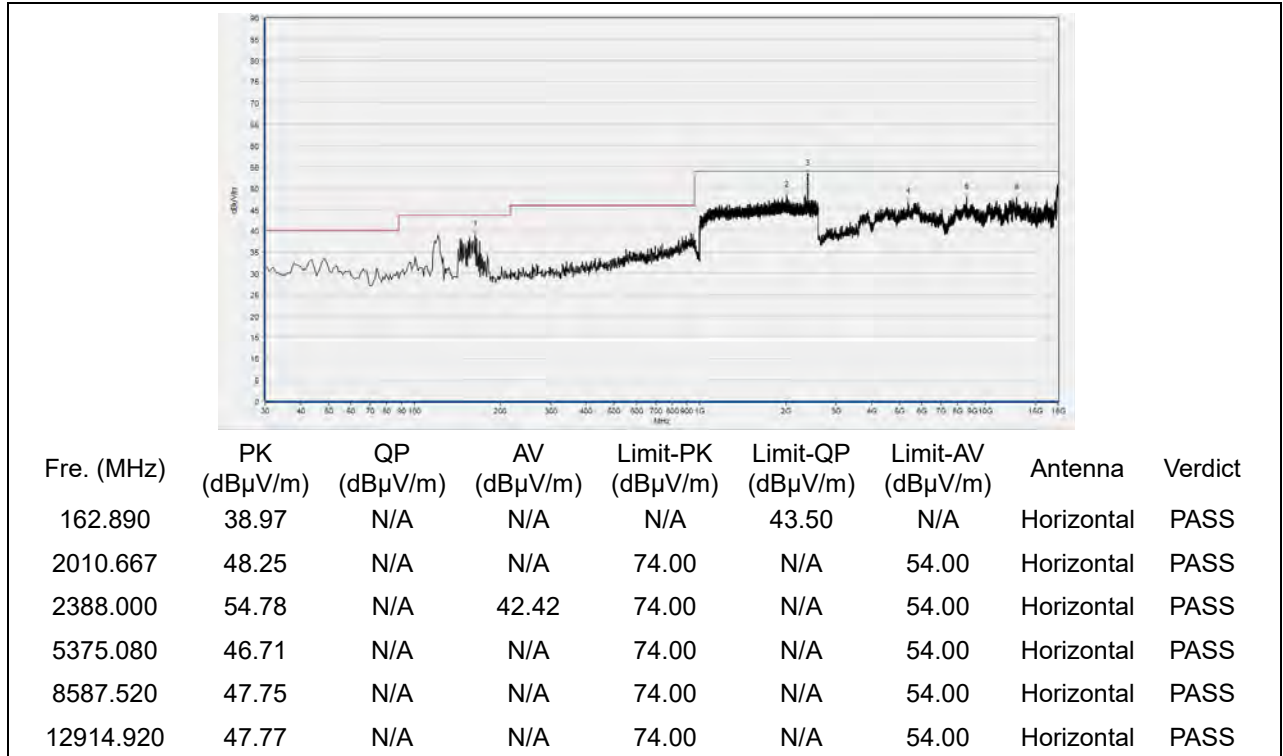
(Antenna Vertical, 30MHz to 18GHz)



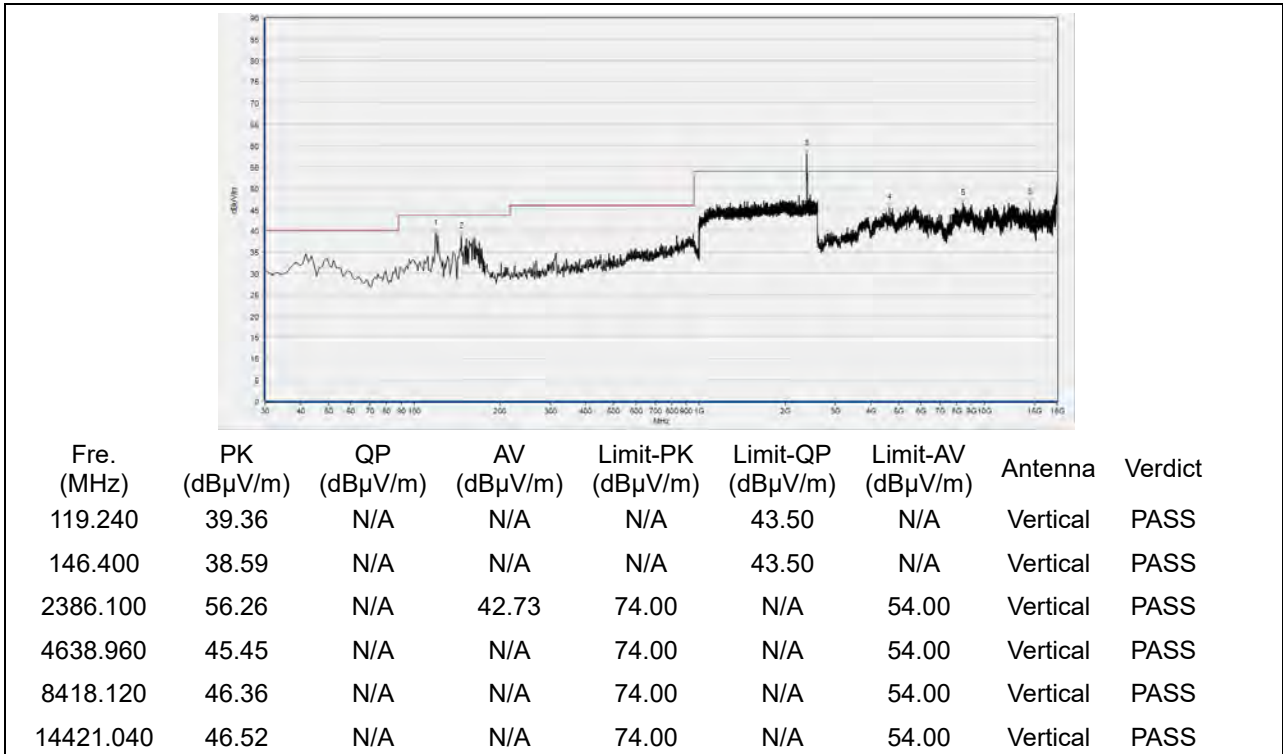


**802.11n (HT40) Mode**

Plot for Channel 3

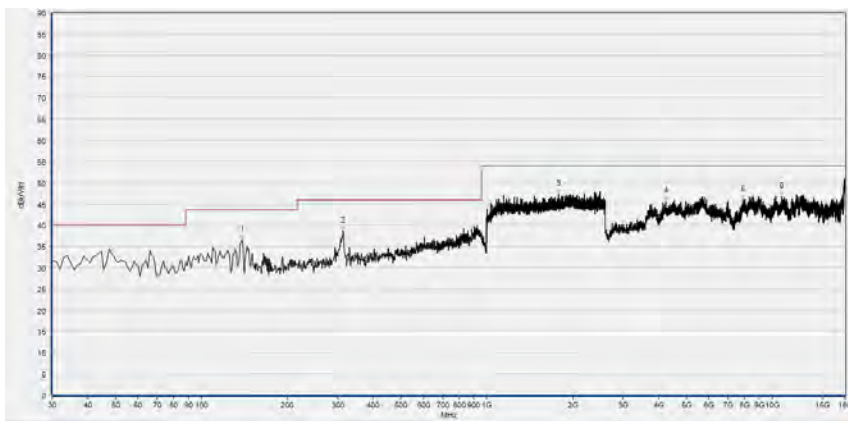


(Antenna Horizontal, 30MHz to 18GHz)



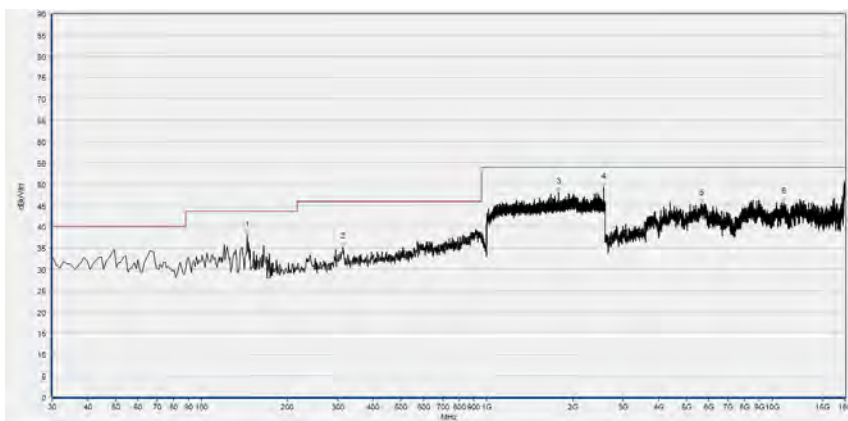
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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
138.640	36.48	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
313.240	38.52	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1785.067	47.22	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4235.480	45.64	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7872.960	45.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
10780.480	46.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

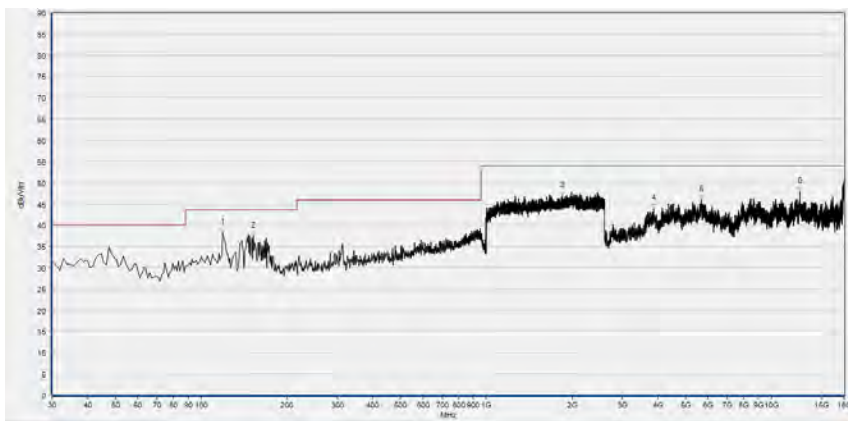
(Antenna Horizontal, 30MHz to 18GHz)



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
144.460	38.12	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
313.240	35.21	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1785.600	48.02	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2568.000	49.27	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5664.600	45.40	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
10965.280	45.70	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

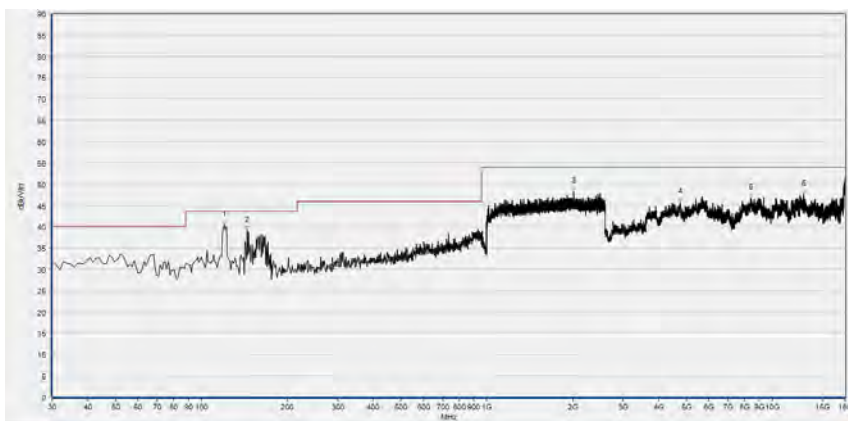
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 9



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
119.240	38.28	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
152.220	37.39	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1849.600	47.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3865.880	43.98	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5673.840	45.86	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12600.760	47.99	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

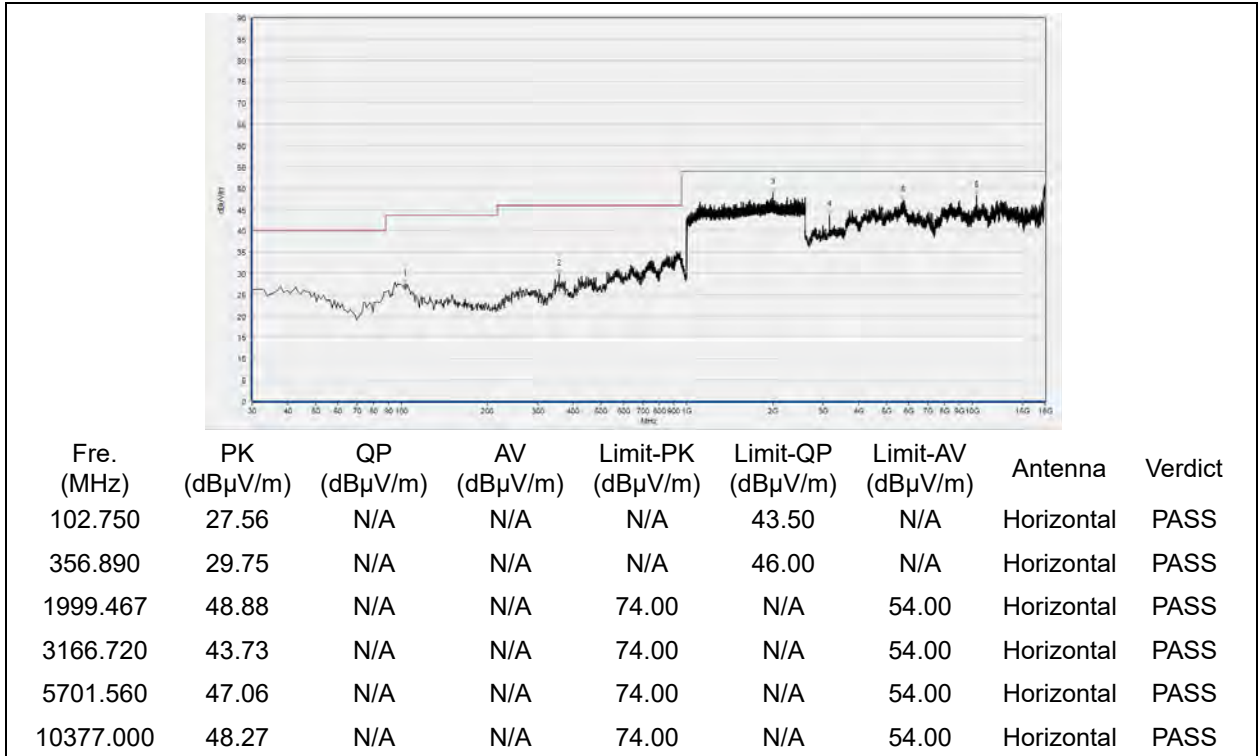


Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
120.210	40.34	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
144.460	39.09	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2010.133	48.23	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4768.320	45.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8411.960	46.70	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12877.960	47.63	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

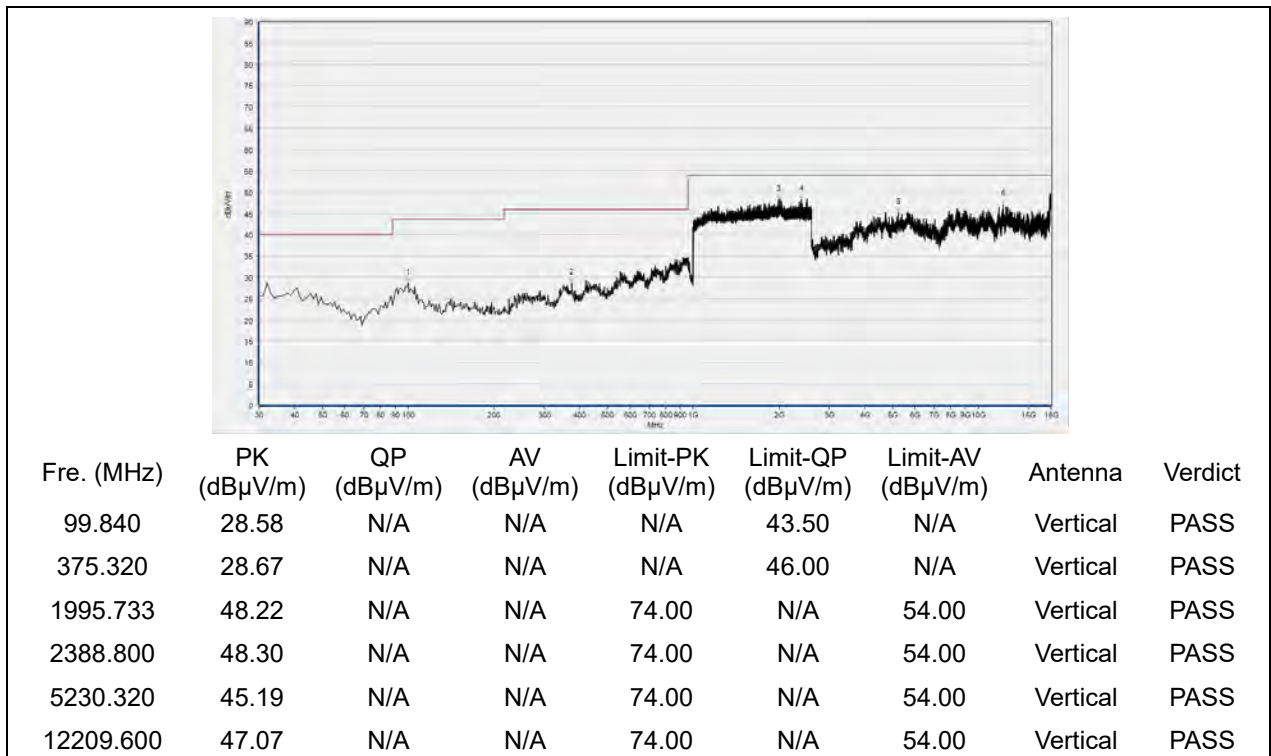
(Antenna Vertical, 30MHz to 18GHz)

**802.11ax (HEW20) Mode**

Plot for Channel 1

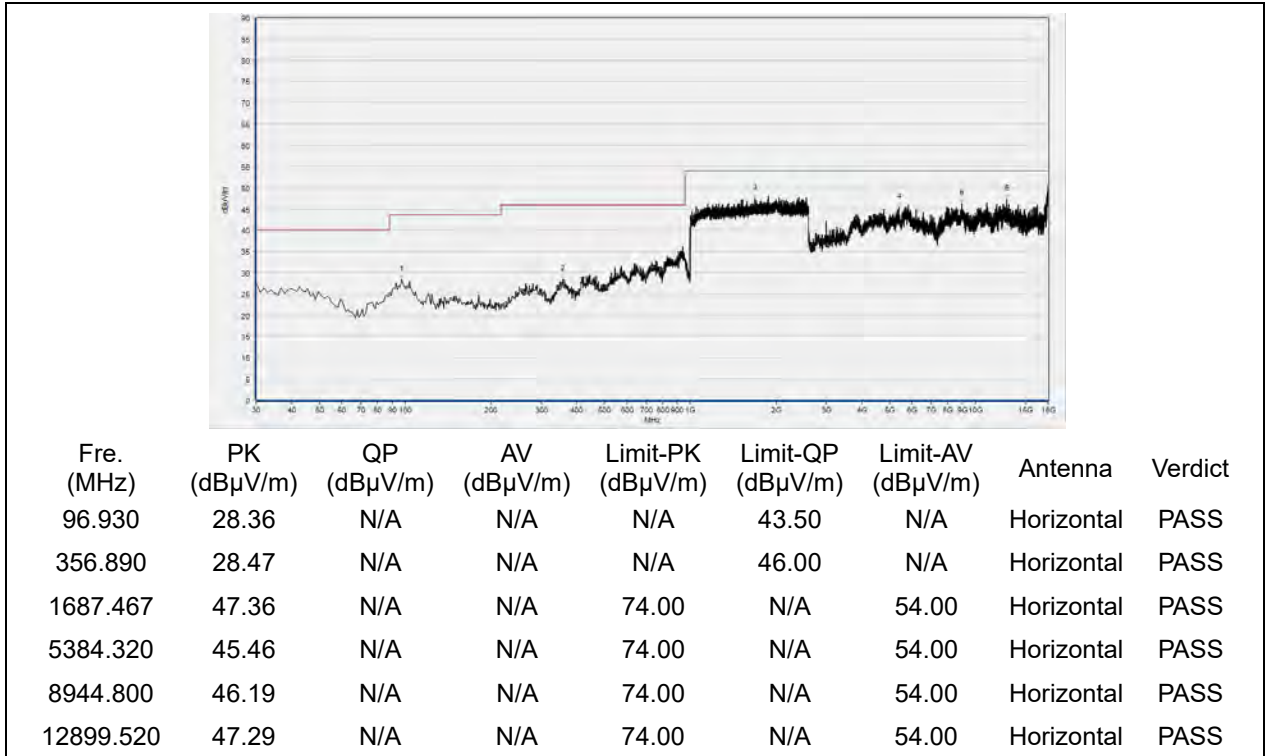


(Antenna Horizontal, 30MHz to 18GHz)

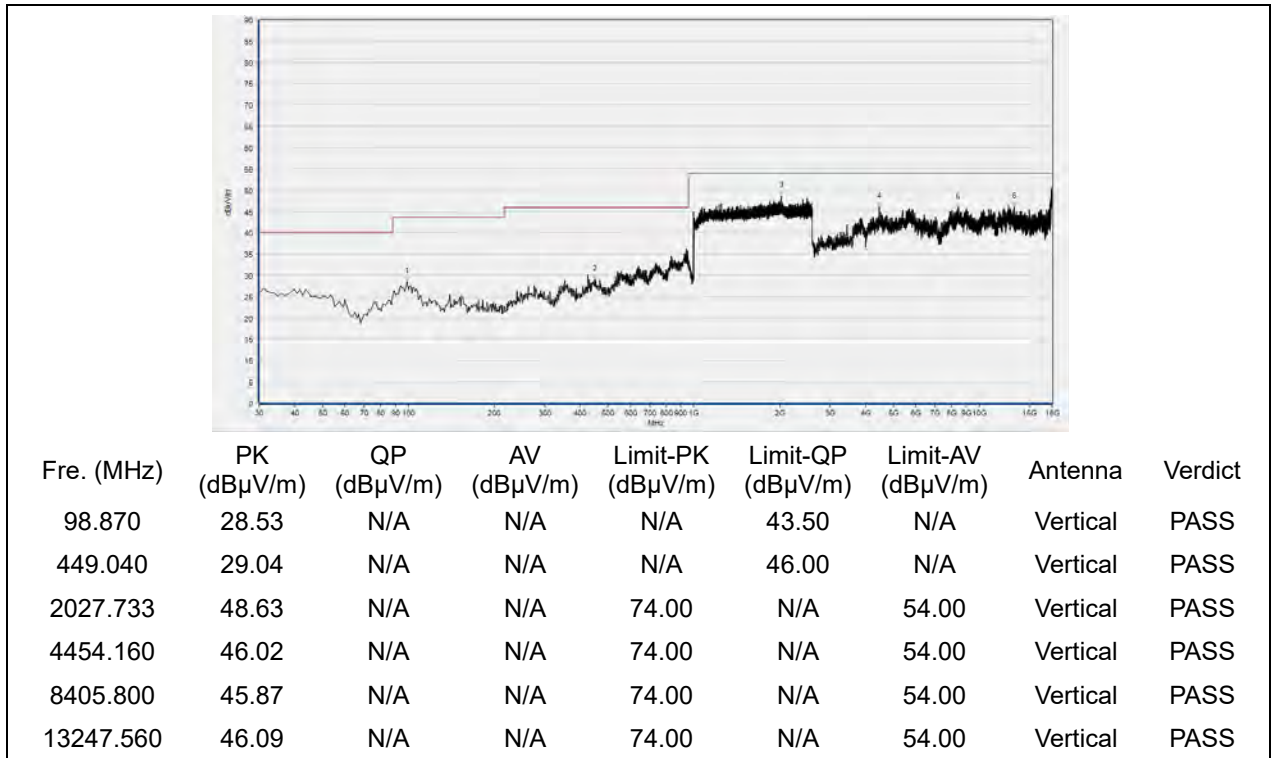


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6

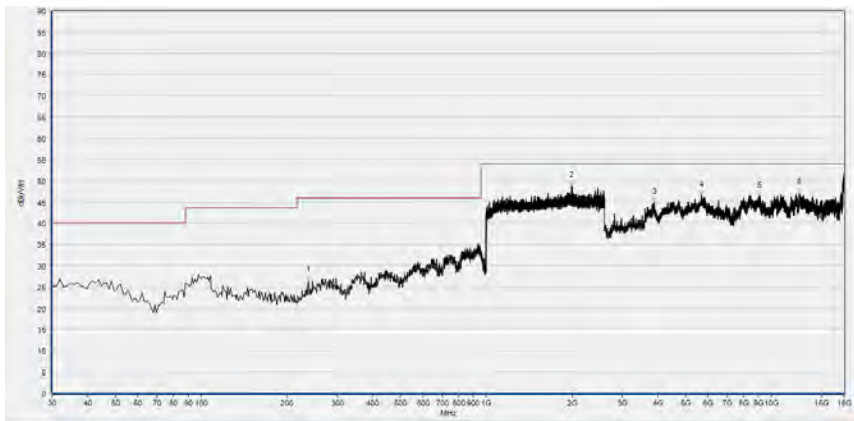


(Antenna Horizontal, 30MHz to 18GHz)



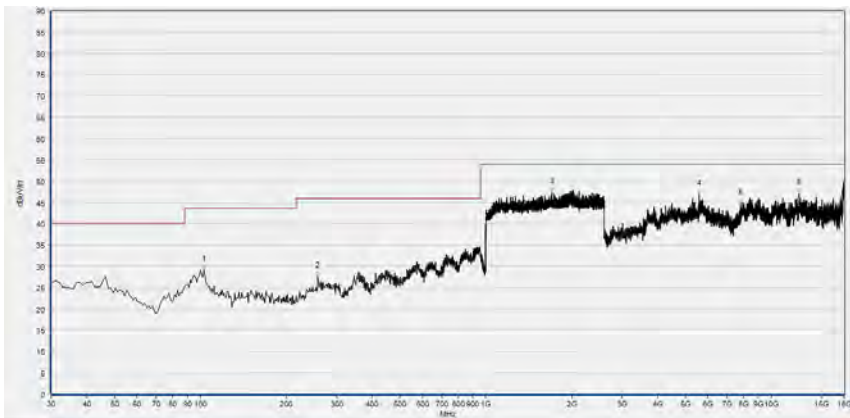
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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
237.580	26.53	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1995.733	48.70	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3881.280	44.98	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5680.000	46.60	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
9074.160	46.36	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12554.560	47.14	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

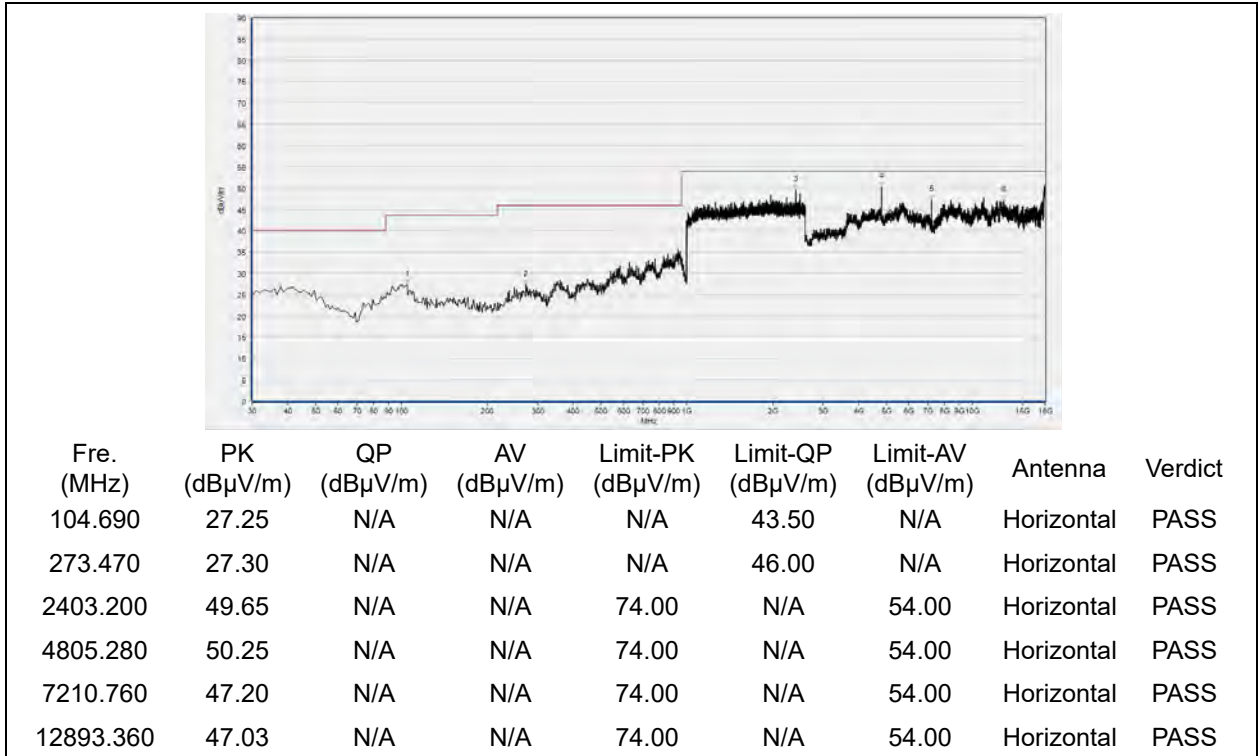


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
102.750	29.17	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
257.950	27.62	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1703.467	47.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5596.840	46.91	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7789.800	44.73	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12536.080	47.07	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

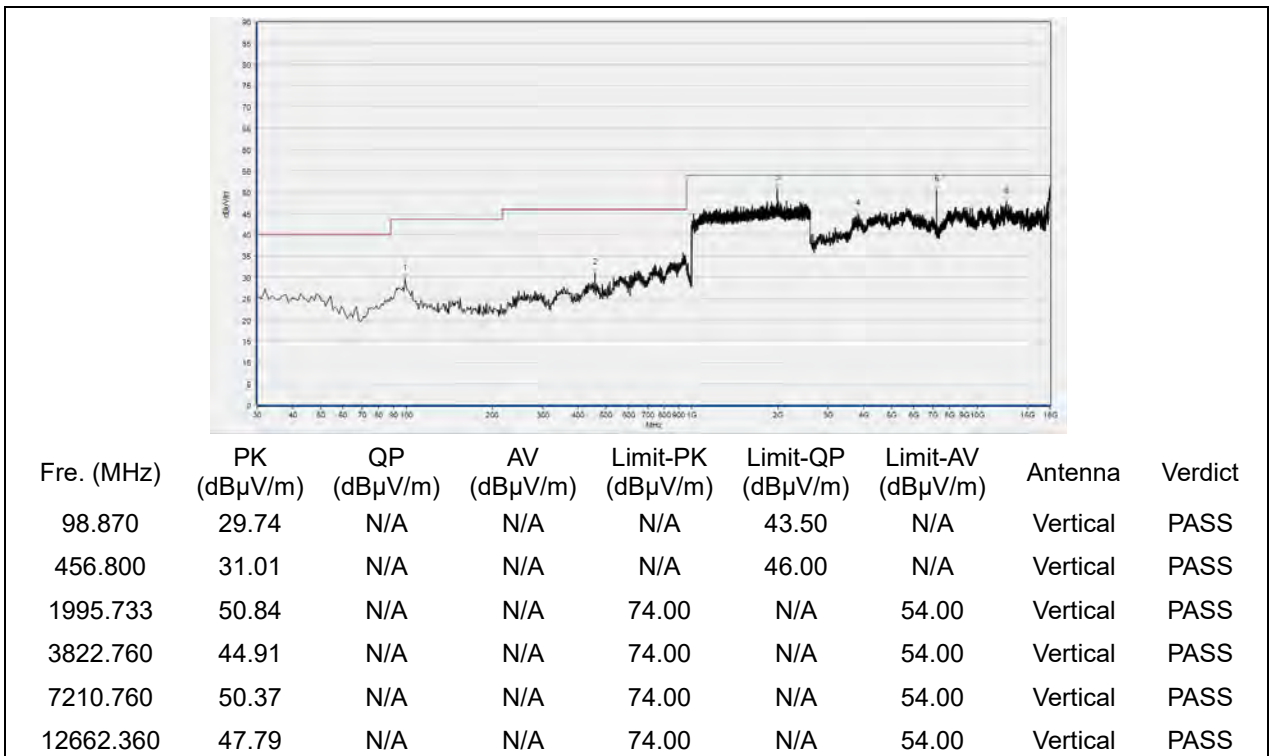
(Antenna Vertical, 30MHz to 18GHz)

**802.11ax (HEW20) RU26 Mode**

Plot for Channel 1



(Antenna Horizontal, 30MHz to 18GHz)



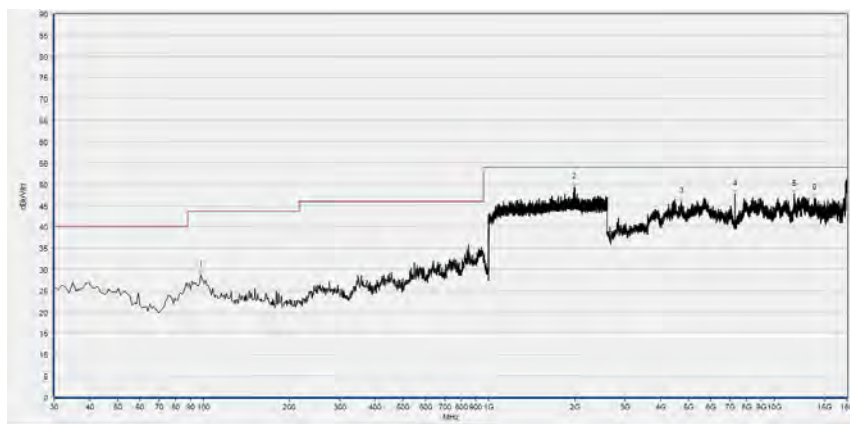
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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	28.50	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
266.680	26.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1995.733	49.00	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4709.800	46.23	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7284.680	45.05	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12212.680	47.07	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

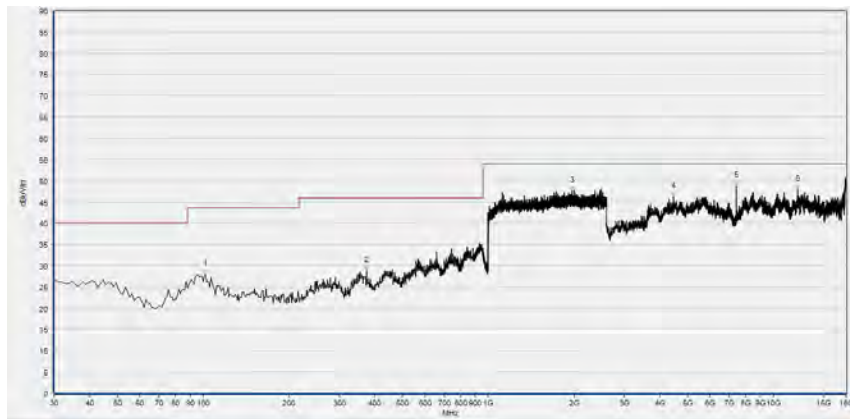


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	28.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1995.200	49.29	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4740.600	45.88	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7284.680	47.60	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
11735.280	47.59	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
13845.080	46.70	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

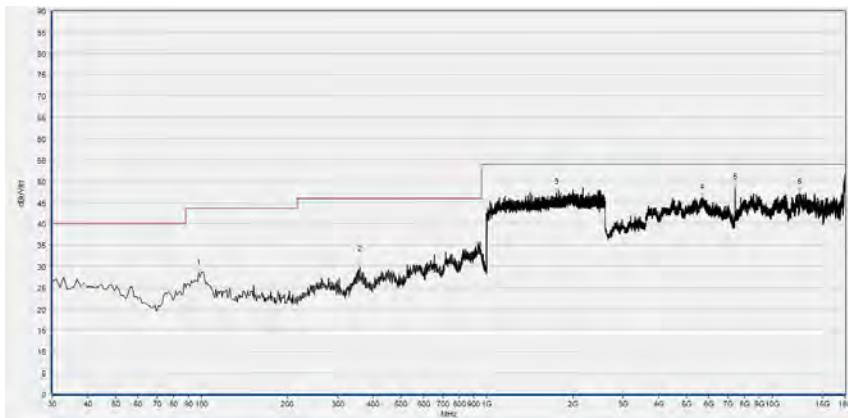


Plot for Channel 11



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	28.02	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
373.380	28.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1971.733	47.62	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4457.240	46.18	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7410.960	48.81	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12184.960	48.00	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



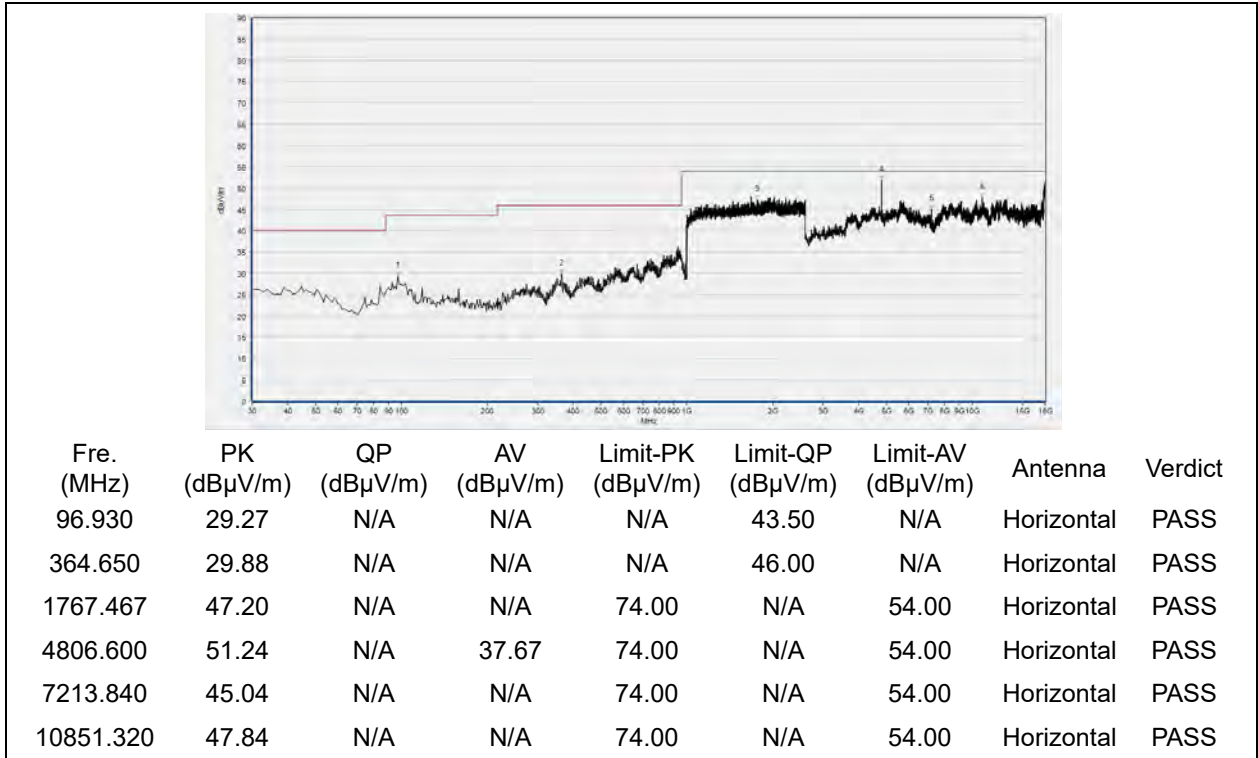
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
97.900	28.40	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
358.830	29.63	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1756.800	47.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5676.920	46.10	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7410.960	48.40	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12471.400	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

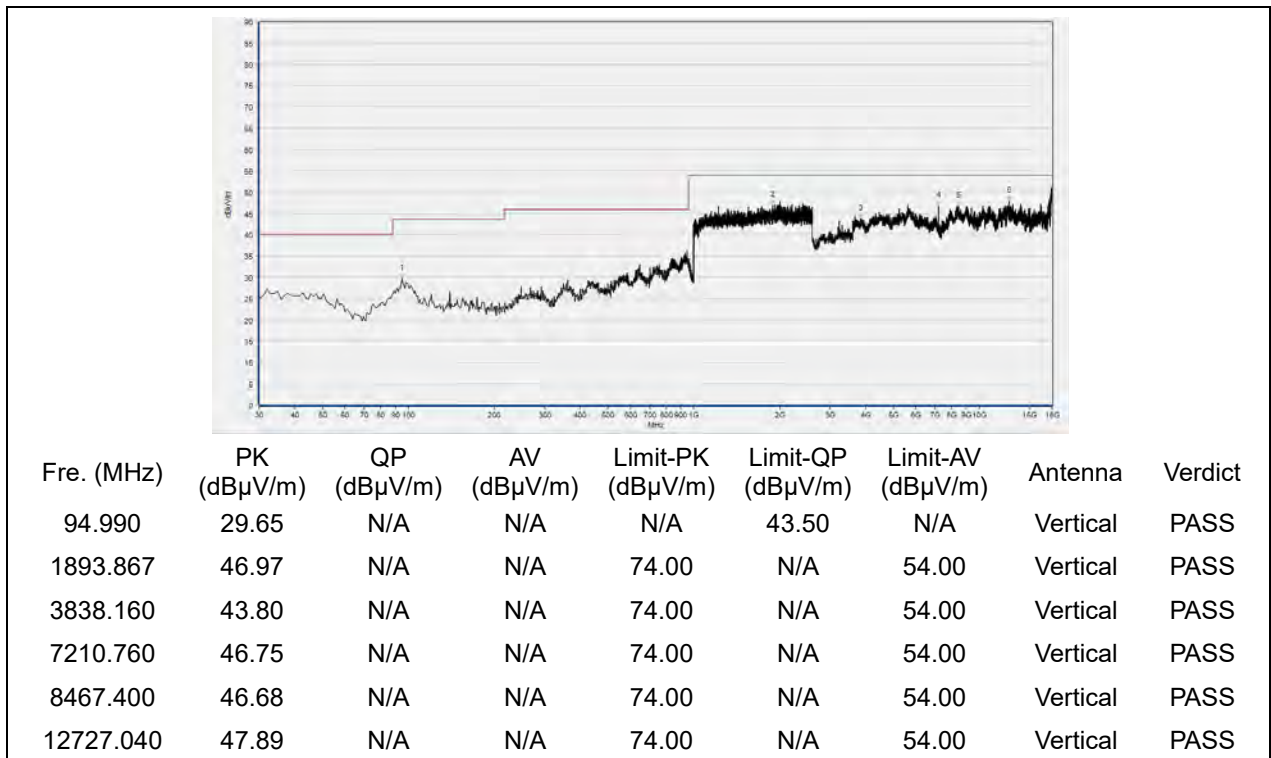


**802.11ax (HEW20) RU52 Mode**

Plot for Channel 1

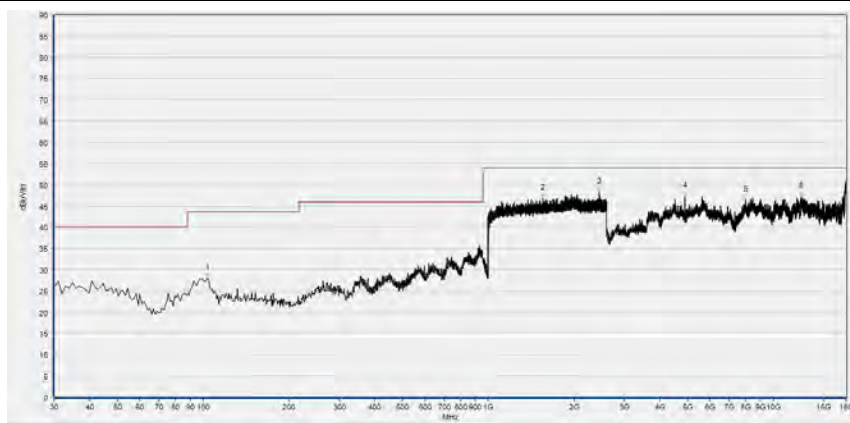


(Antenna Horizontal, 30MHz to 18GHz)



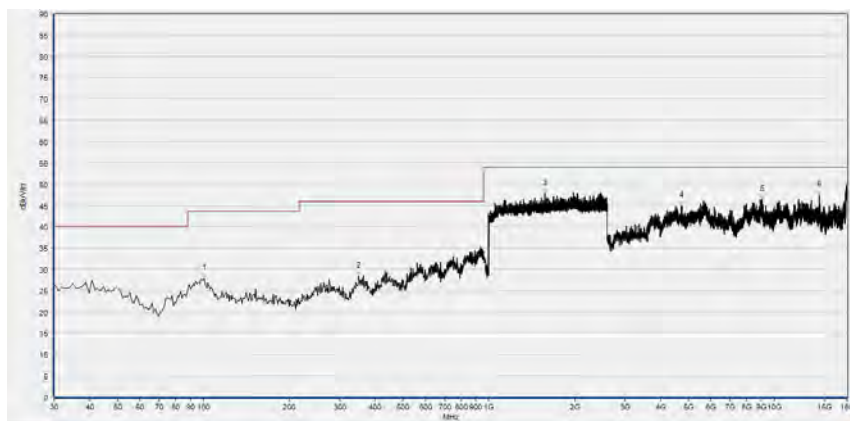
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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	27.91	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1558.400	46.75	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2457.067	48.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4888.440	47.22	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7993.080	46.47	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12529.920	47.14	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

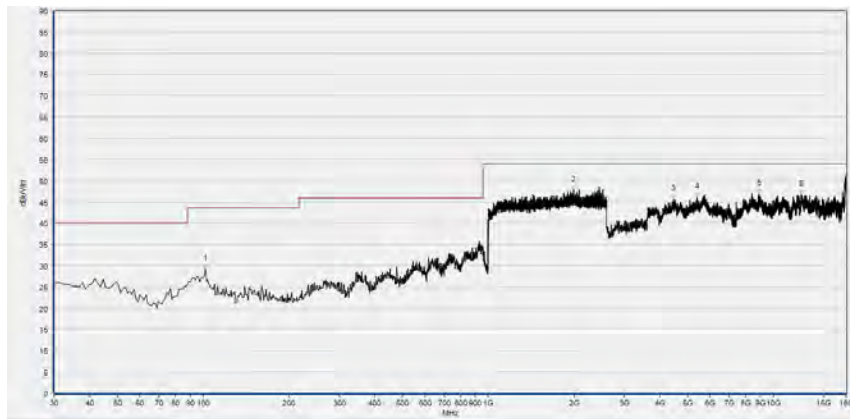
(Antenna Horizontal, 30MHz to 18GHz)



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
100.810	27.89	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
350.100	28.37	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1569.067	47.74	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4715.960	44.88	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9058.760	46.40	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
14411.800	47.38	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

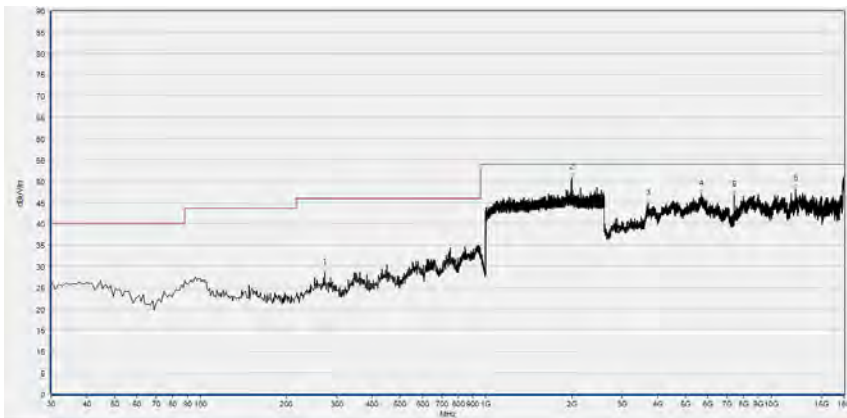
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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	29.13	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1992.000	47.73	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4469.560	45.56	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5412.040	46.07	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8929.400	46.96	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12499.120	46.82	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



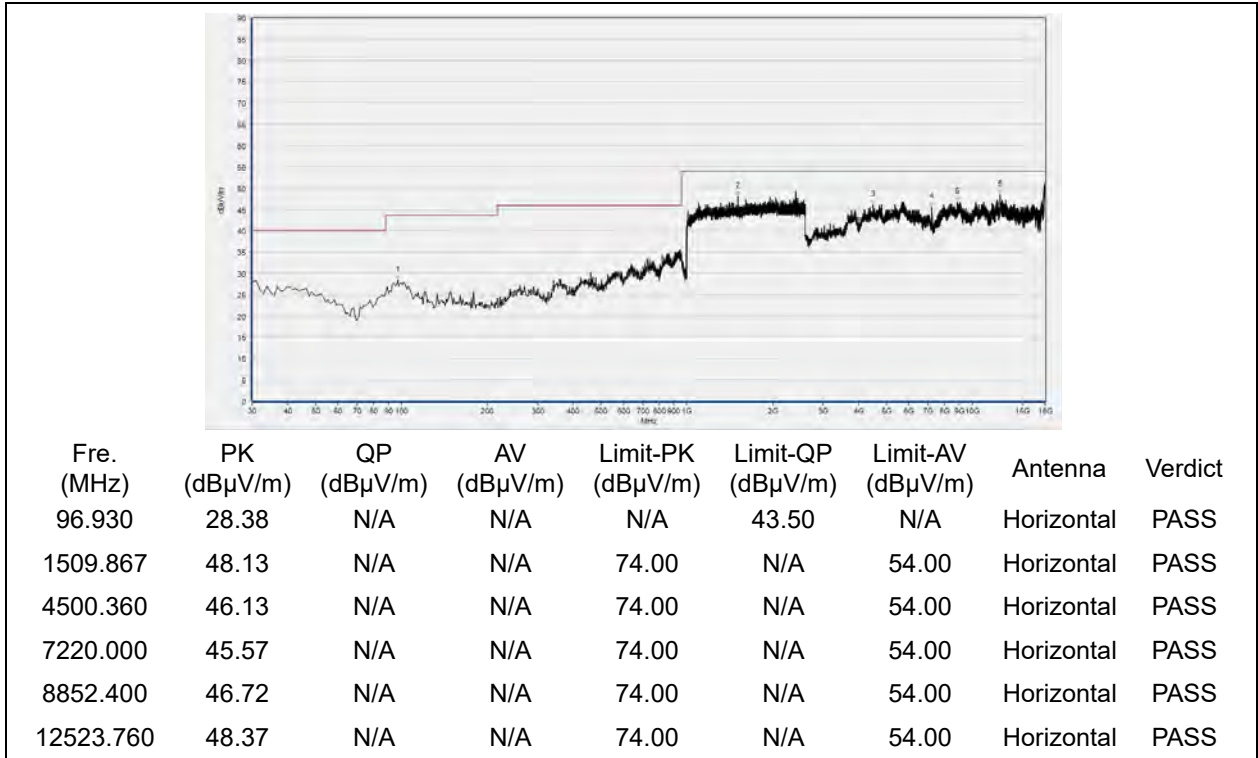
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
273.470	28.49	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1998.400	50.86	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3711.880	44.81	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5673.840	46.88	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7407.880	46.72	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12141.840	48.10	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

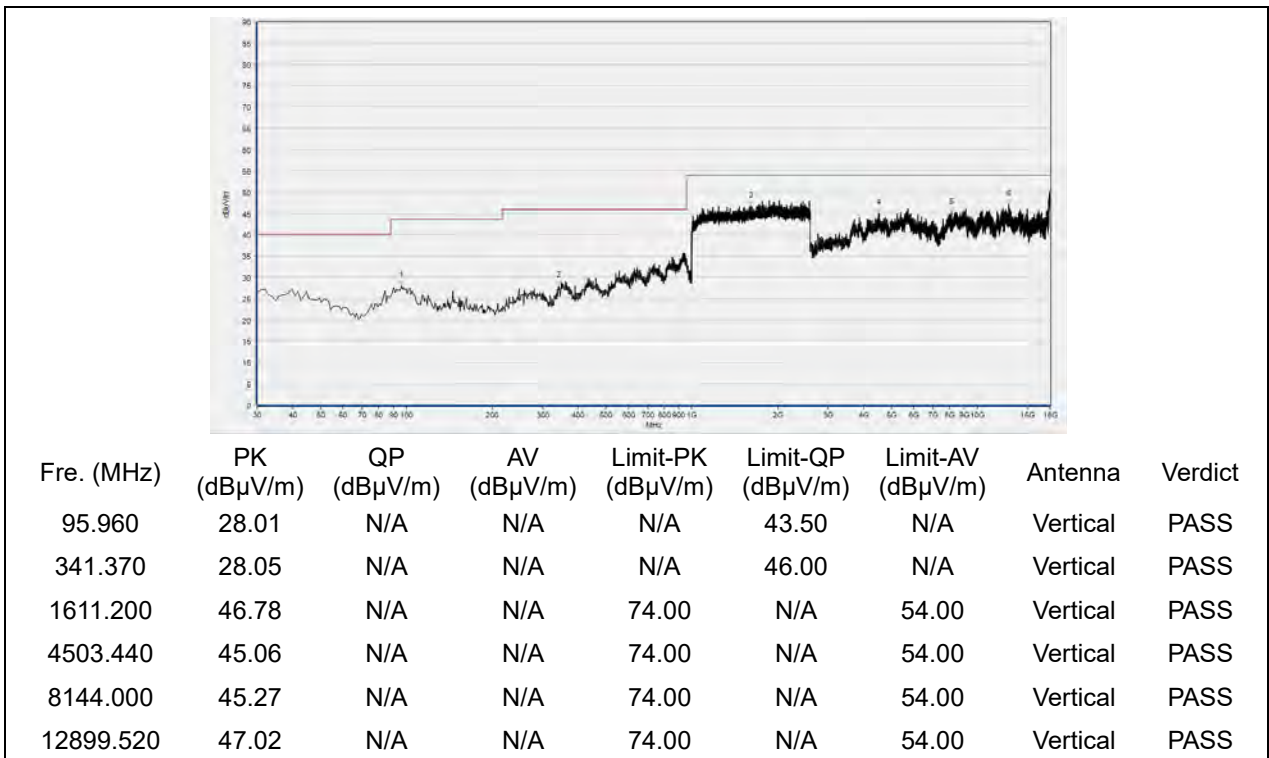


**802.11ax (HEW20) RU106 Mode**

Plot for Channel 1

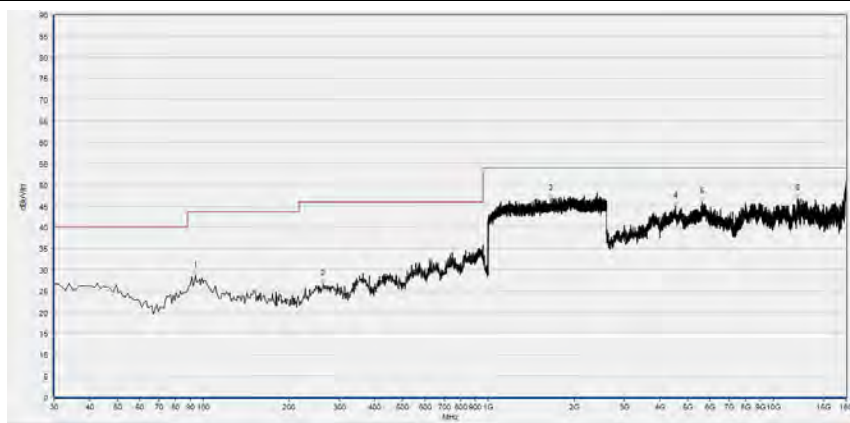


(Antenna Horizontal, 30MHz to 18GHz)



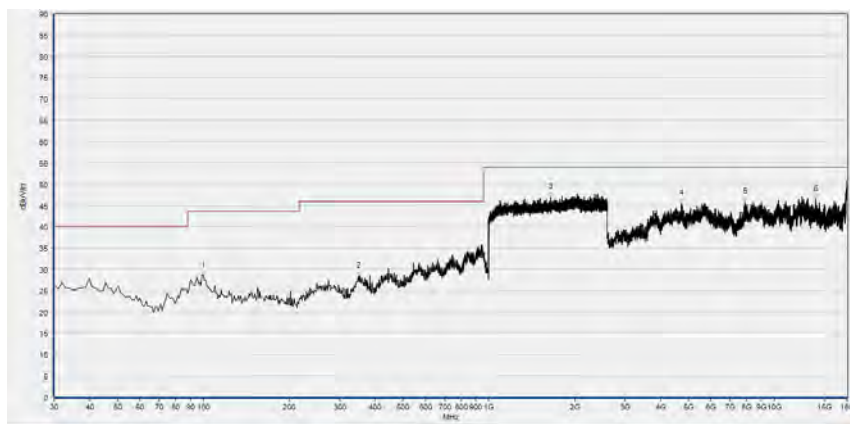
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 6



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	28.71	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
263.770	26.70	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1653.867	46.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4531.160	44.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5624.560	45.99	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12148.000	46.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

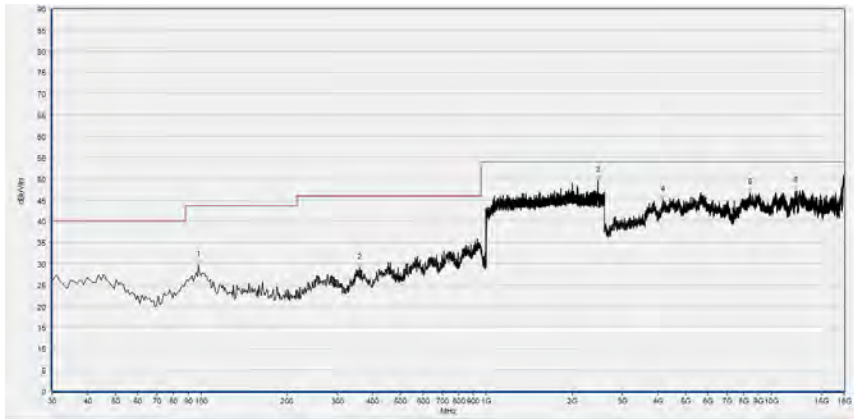
(Antenna Horizontal, 30MHz to 18GHz)



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
99.840	28.46	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
350.100	28.34	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1645.867	46.85	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4734.440	45.47	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7916.080	45.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
13959.040	46.43	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

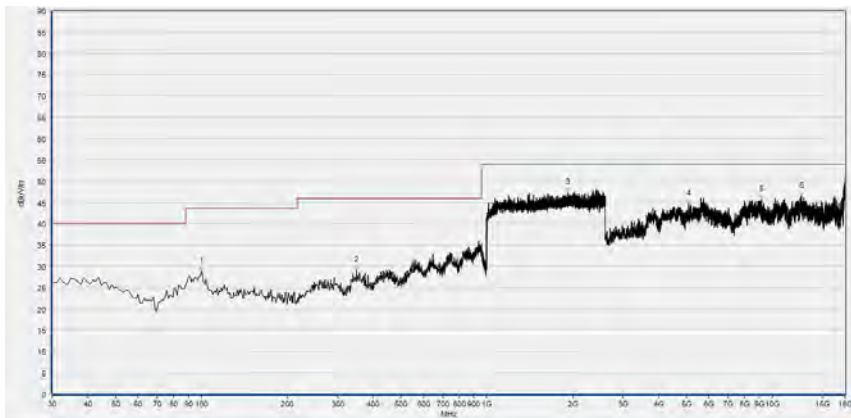
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 11



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	29.67	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
359.800	29.04	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2464.533	49.59	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4158.480	45.09	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8433.520	46.72	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12191.120	47.13	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



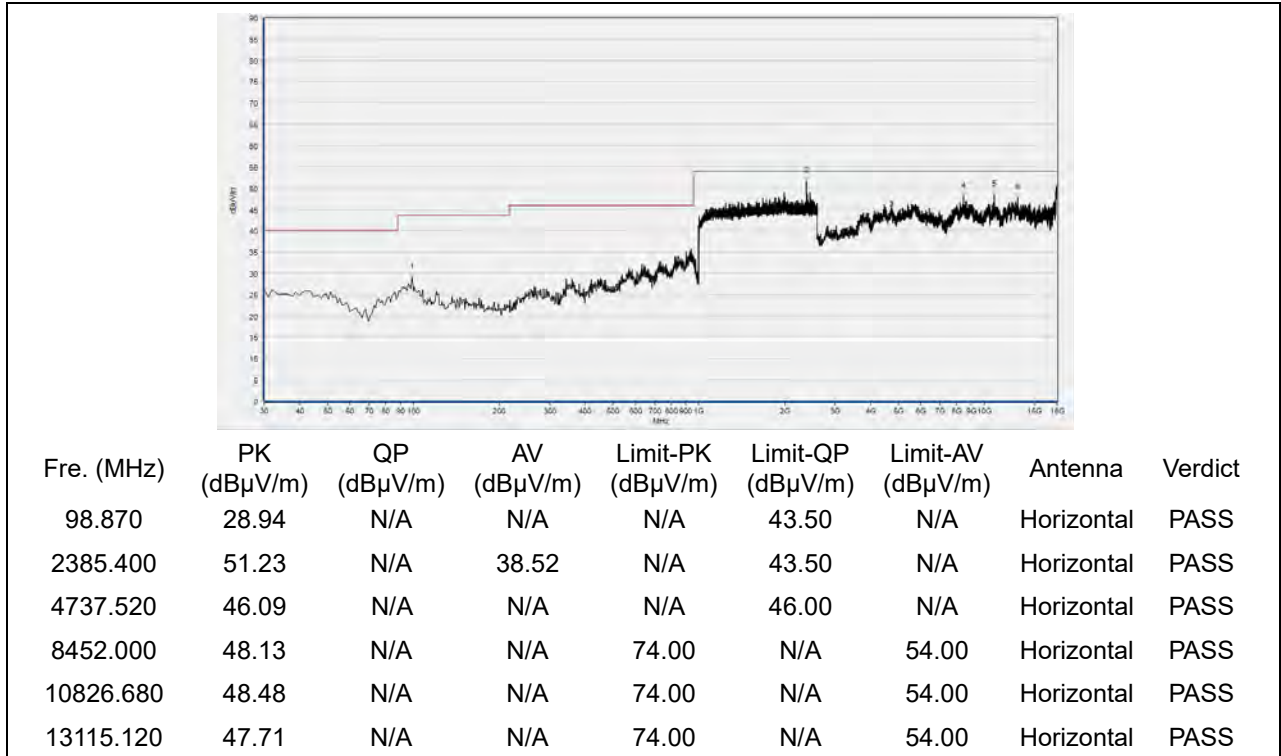
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
99.840	28.89	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
350.100	28.98	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1919.467	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5097.880	44.64	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9151.160	45.57	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12631.560	46.34	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

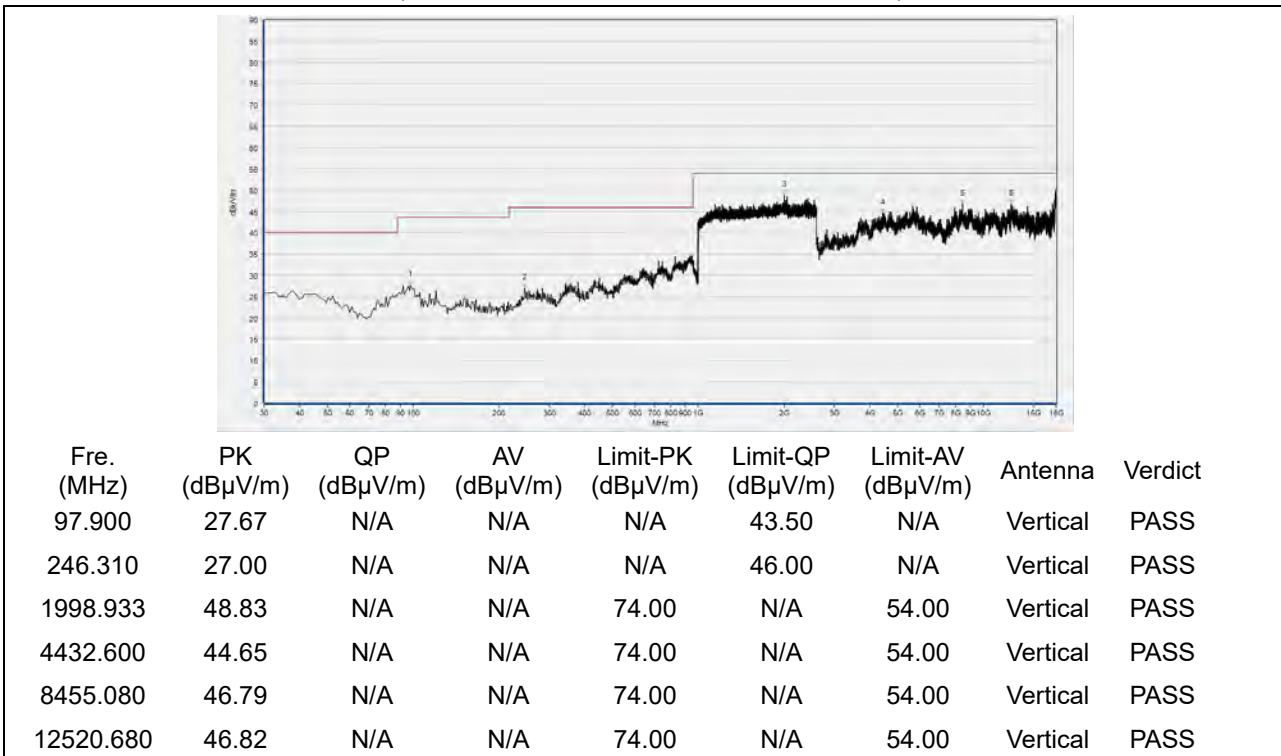


**802.11ax (HEW40) Mode**

Plot for Channel 3



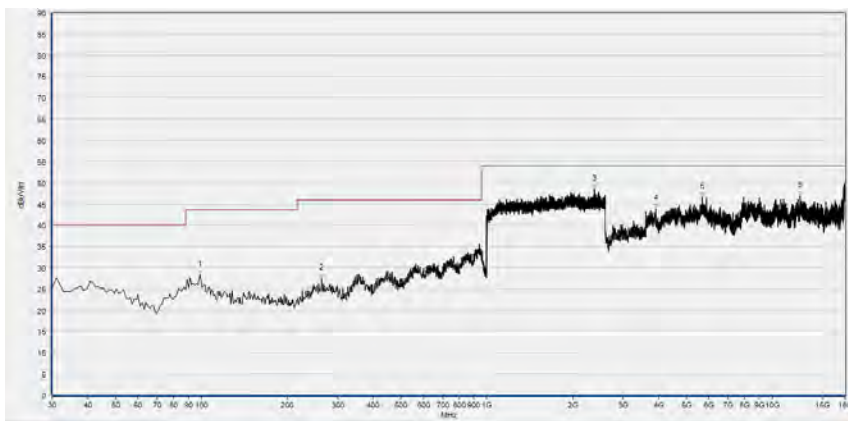
(Antenna Horizontal, 30MHz to 18GHz)



(Antenna Vertical, 30MHz to 18GHz)

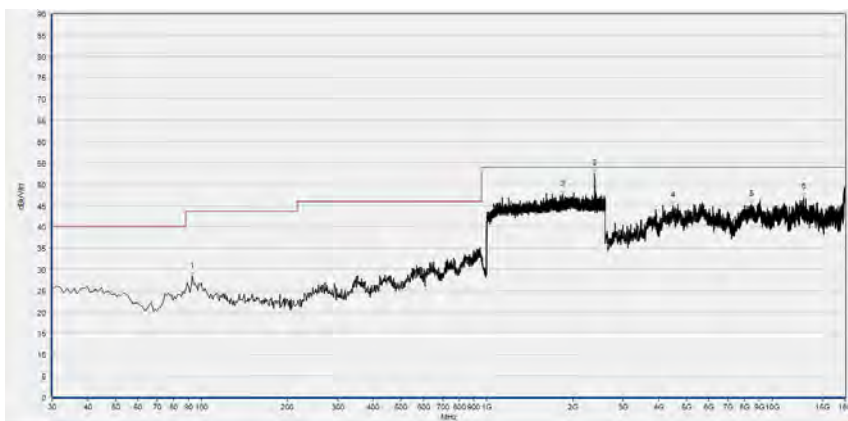


Plot for Channel 6



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
263.770	27.48	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2386.133	48.39	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3912.080	43.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5676.920	46.63	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12539.160	46.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

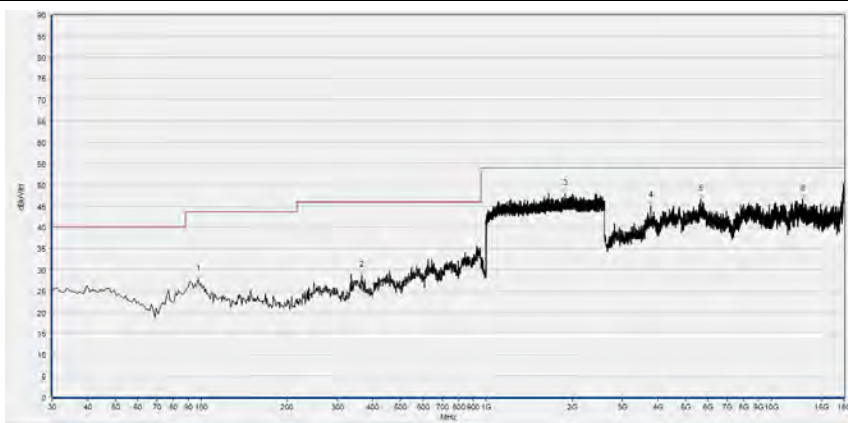
(Antenna Horizontal, 30MHz to 18GHz)



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
93.050	28.33	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1842.667	47.49	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2387.500	52.98	N/A	39.77	74.00	N/A	54.00	Vertical	PASS
4488.040	44.95	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8436.600	45.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12893.360	46.89	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

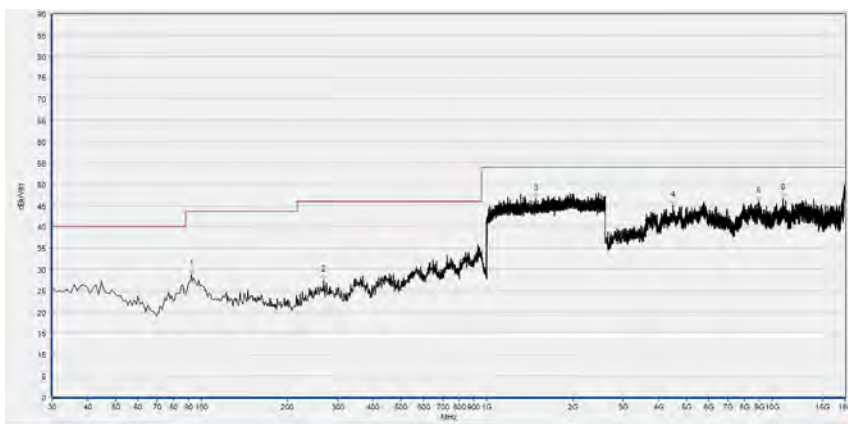
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 9



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	27.67	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
366.590	28.64	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1891.733	47.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3776.560	45.06	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5636.880	46.65	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12890.280	46.56	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	28.81	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
267.650	27.50	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1482.667	46.66	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4497.280	45.07	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8947.880	45.84	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
10879.040	46.76	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	$\pm 5\%$
Conducted Spurious Emission	$\pm 2.77\text{dB}$
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

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

### 2. Identification of the Responsible Testing Location

<b>Name:</b>	Morlab Laboratory of Shenzhen Morlab Communications Technology Co., Ltd.
<b>Address:</b>	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 Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Attenuator 1	(N/A.)	10dB	Resent	N/A	N/A
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2020.04.01	2021.03.31
				2021.03.25	2022.03.24
USB Wideband Power Sensor	MY54210011	U2021XA	Agilent	2020.04.01	2021.03.31
				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
Computer	T430i	Think Pad	Lenovo	N/A	N/A

##### 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
Coaxial cable(BNC) (30MHz-26GHz)	CB01	EMC01	Morlab	N/A	N/A

##### 4.3 List of Software Used

Description	Manufacturer	Software Version
Test System	Townsend	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
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.24	2022.05.23
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
Test Antenna – Horn	BBHA9170 #774	BBHA9170	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
18-26.5GHz pre-Amplifier	46732	S10M100L38 02	Tonscend	2020.07.21	2021.07.20
26-40GHz pre-Amplifier	56774	S40M400L40 02	Tonscend	2020.07.21	2021.07.20
Notch Filter	N/A	WRCG-2400-2483.5-60SS	Wainwright	2020.07.21	2021.07.20
Anechoic Chamber	N/A	9m*6m*6m	CRT	2020.01.06	2023.01.05

————— END OF REPORT —————