



## 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)	Freq Dev. (Hz)	Deviation (ppm)
100%	110	+20(Ref)	22	0.004
100%		-30	50	0.010
100%		-20	45	0.009
100%		-10	38	0.007
100%		0	3	0.001
100%		+10	25	0.005
100%		+20	27	0.005
100%		+30	29	0.006
100%		+40	42	0.008
100%		+50	28	0.005
85%		93.5	+20	54
115%	126.5	+20	50	0.010



<b>U-NII-3 (Ch. 149)</b>				
<b>5745MHz</b>				
<b>VOLTAGE (%)</b>	<b>POWER (VDC)</b>	<b>TEMP (°C)</b>	<b>Freq Dev. (Hz)</b>	<b>Deviation (ppm)</b>
100%	110	+20(Ref)	23	0.004
100%		-30	50	0.009
100%		-20	51	0.009
100%		-10	38	0.007
100%		0	33	0.006
100%		+10	24	0.004
100%		+20	30	0.005
100%		+30	31	0.005
100%		+40	39	0.007
100%		+50	24	0.004
85%		93.5	+20	45
115%	126.5	+20	36	0.006

## 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).

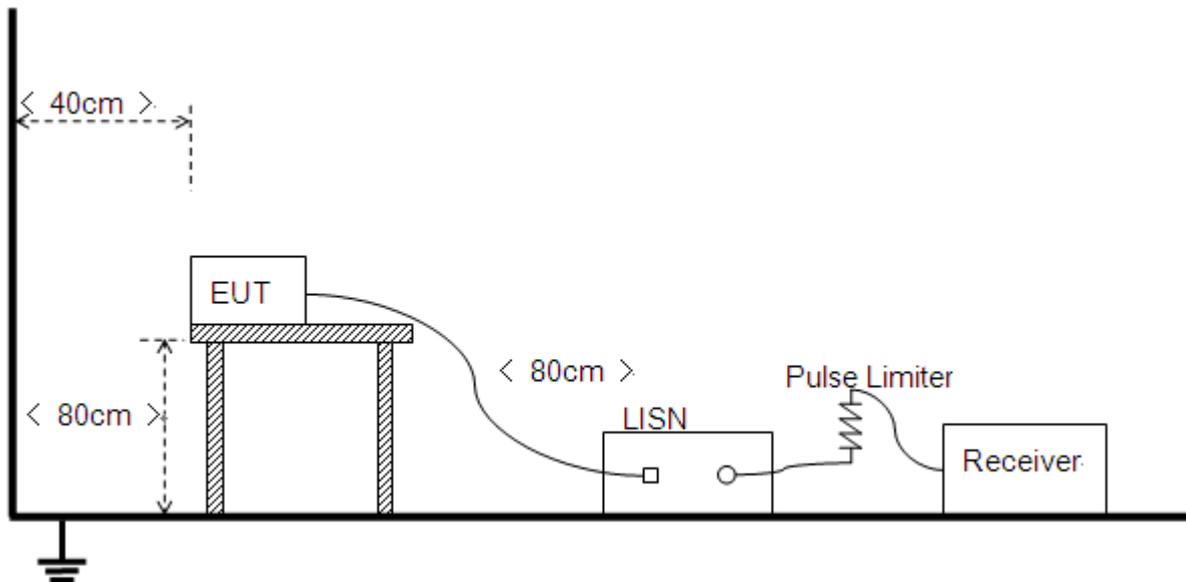
Frequency range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

**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

#### A. 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. 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+ ADAPTOR + WIFI TX

Test Voltage: AC 120V/60Hz

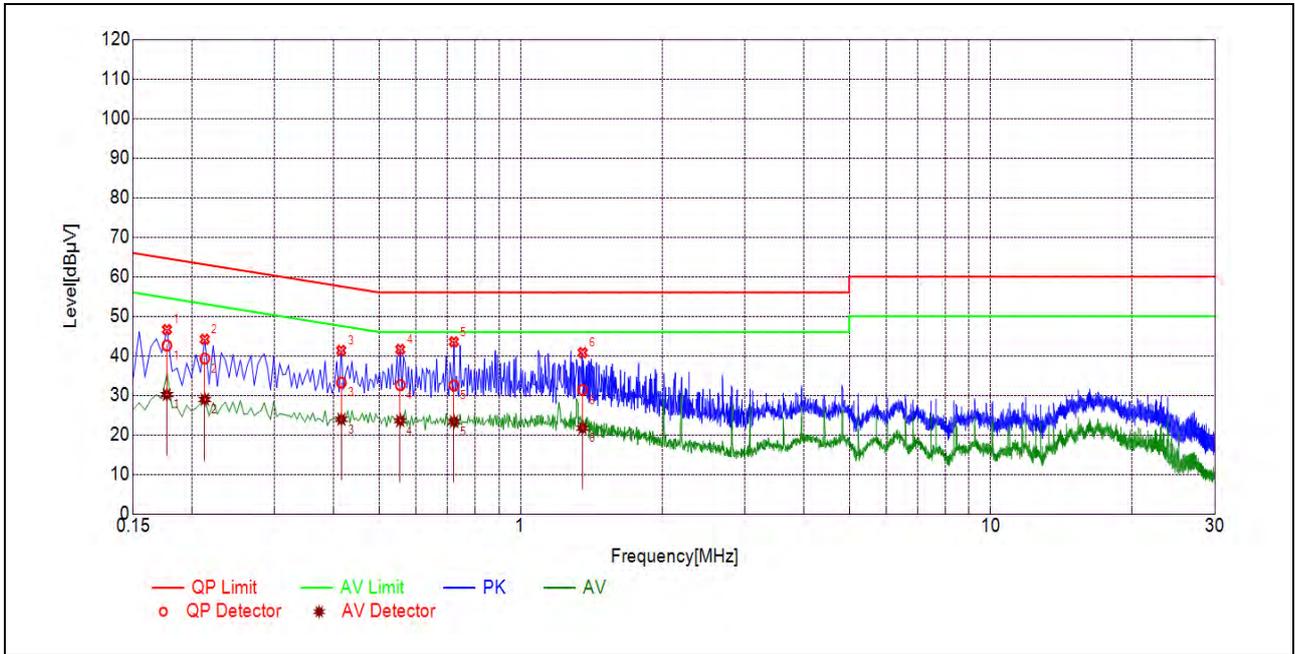
The measurement results are obtained as below:

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

$U_R$ : Receiver Reading

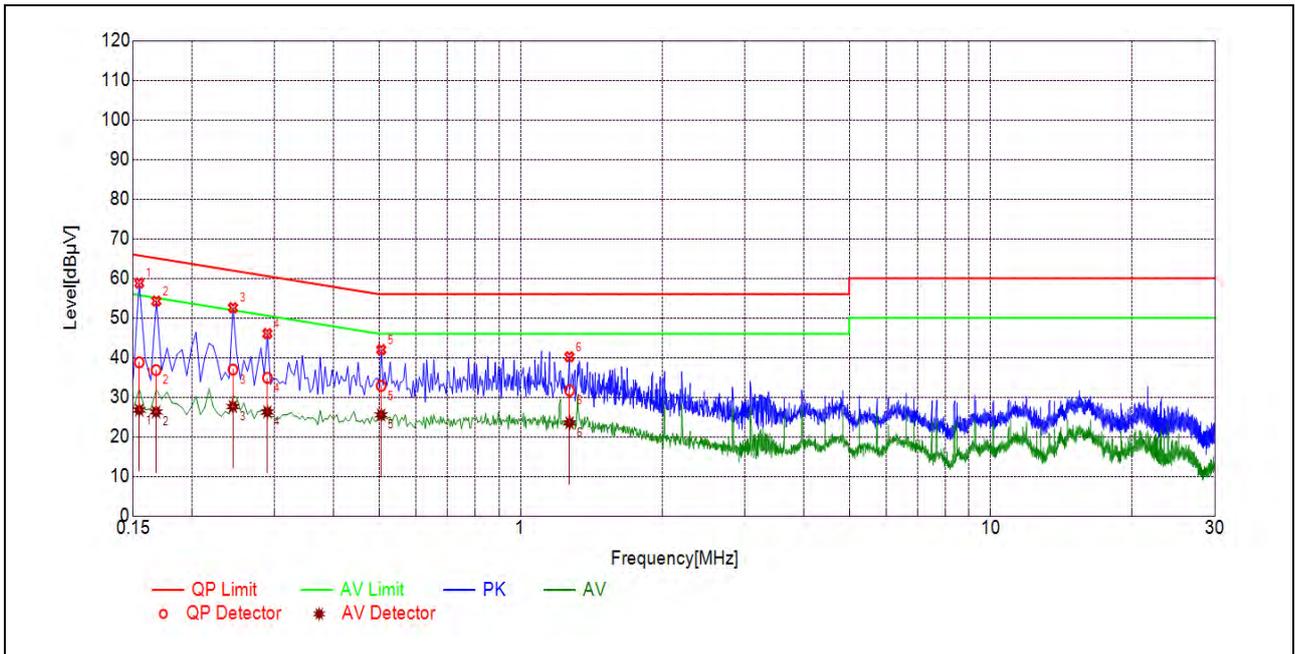
$A_{\text{Factor}}$ : Voltage division factor of LISN

**B. Test Plots:**



(L Phase)

NO.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1769	42.59	30.18	64.63	54.63	Line	PASS
2	0.2130	39.29	28.95	63.09	53.09		PASS
3	0.4159	33.20	23.94	57.53	47.53		PASS
4	0.5548	32.58	23.59	56.00	46.00		PASS
5	0.7218	32.52	23.37	56.00	46.00		PASS
6	1.3548	31.37	21.71	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	0.1545	38.78	26.76	65.75	55.75	Neutral	PASS
2	0.1678	36.83	26.27	65.07	55.07		PASS
3	0.2445	36.97	27.64	61.94	51.94		PASS
4	0.2895	34.88	26.26	60.54	50.54		PASS
5	0.5053	32.87	25.52	56.00	46.00		PASS
6	1.2715	31.67	23.51	56.00	46.00		PASS

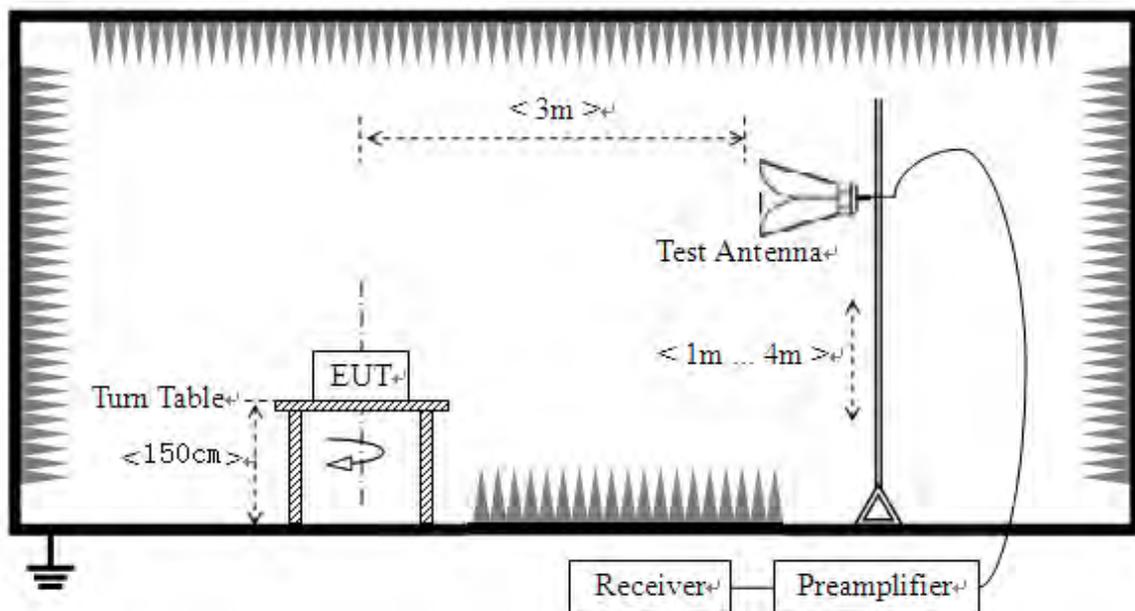
## 2.8. Restricted Frequency Bands

### 2.8.1. Requirement

According to FCC section 15.407(b)(7), 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

#### A. Test Setup



The Module 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:

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

$A_T$ : 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.

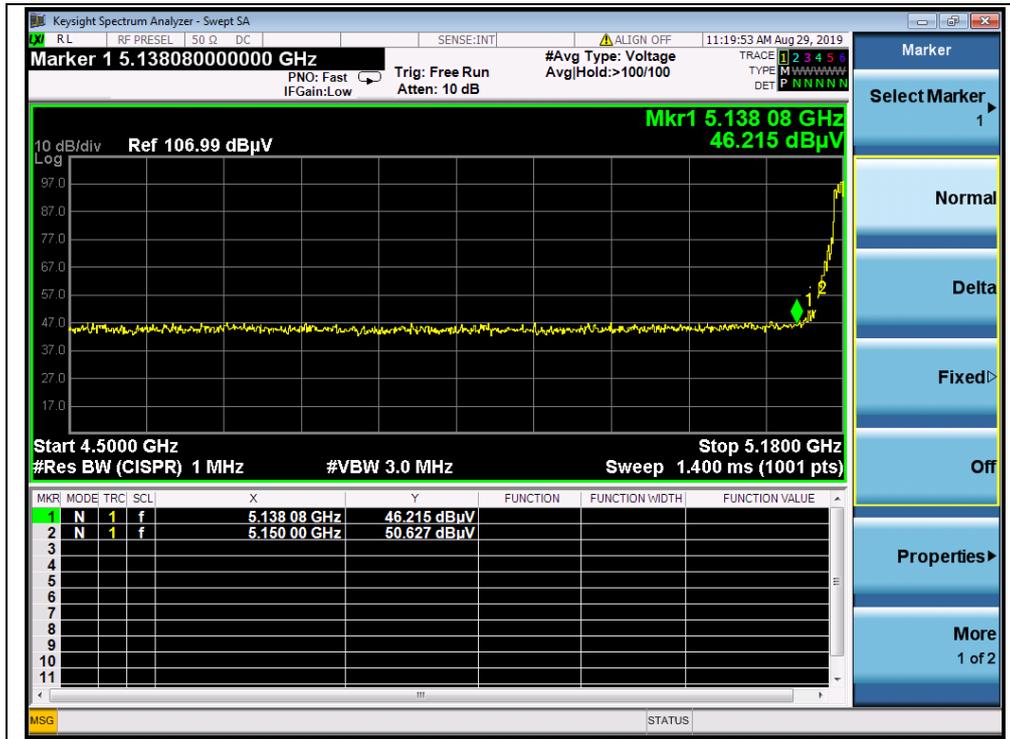
### 802.11a Test mode

#### A. Test Verdict:

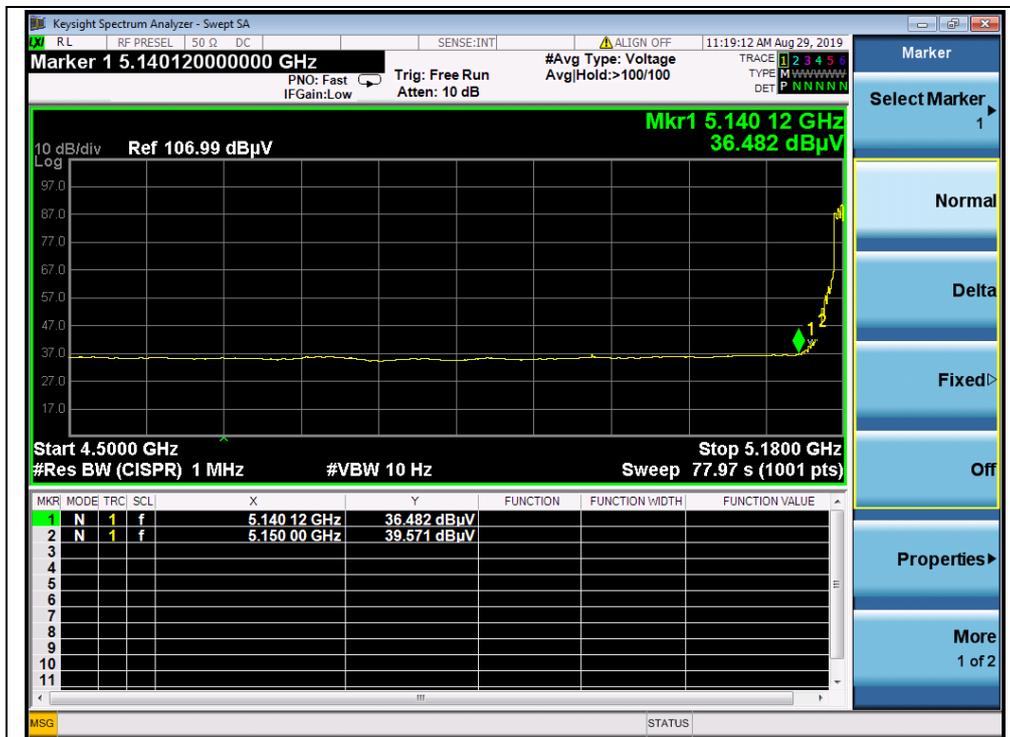
Channel	Frequency (MHz)	Detector	Receiver Reading	$A_T$ (dB)	$A_{\text{Factor}}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV	$U_R$ (dBuV)					
36	5150.00	PK	50.63	-26.92	32.20	55.91	74	PASS
36	5150.00	AV	39.57	-26.92	32.20	44.85	54	PASS
48	5360.22	PK	46.57	-26.92	32.20	51.85	74	PASS
48	5352.30	AV	35.07	-26.92	32.20	40.35	54	PASS
149	5725.00	PK	55.21	-26.23	32.20	61.18	122.23	PASS
149	5725.00	AV	42.74	-26.23	32.20	48.71	54	PASS
165	5850.00	PK	51.46	-26.23	32.20	57.43	122.23	PASS
165	5850.00	AV	39.13	-26.23	32.20	45.10	54	PASS



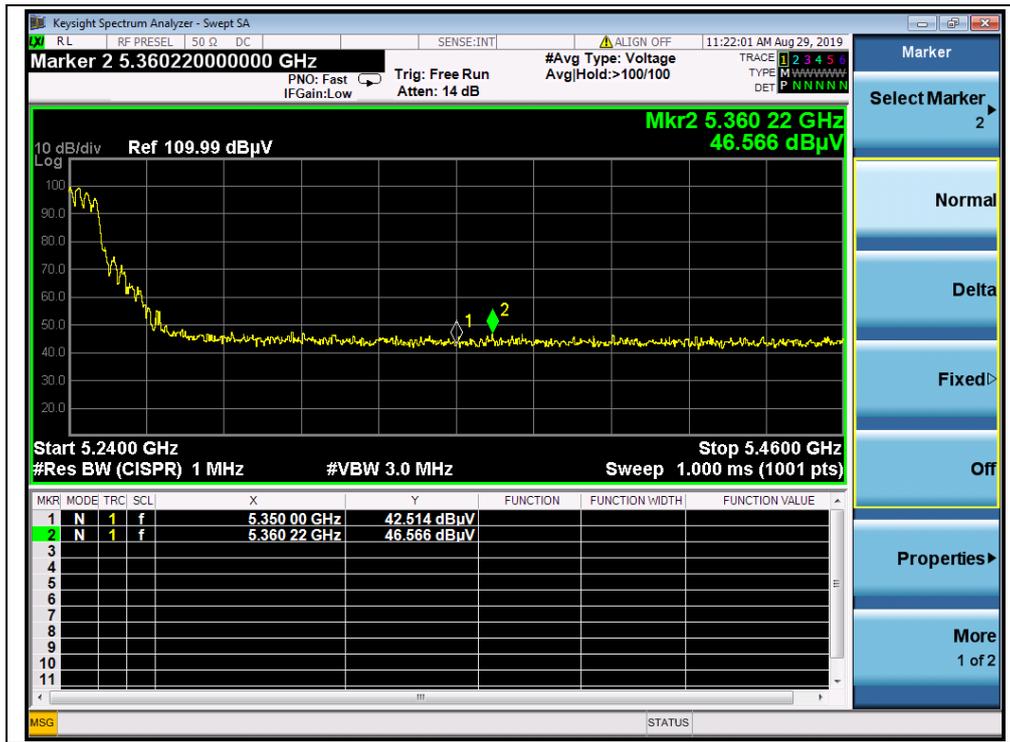
B. Test Plots:



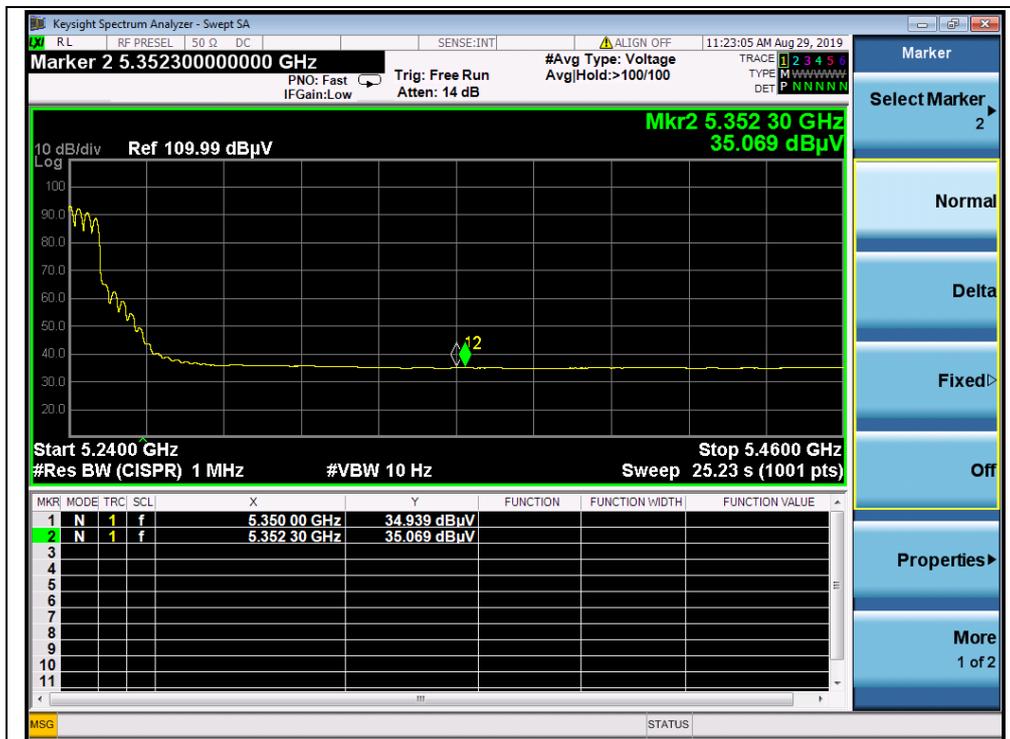
(Channel 36, PEAK, 802.11a)



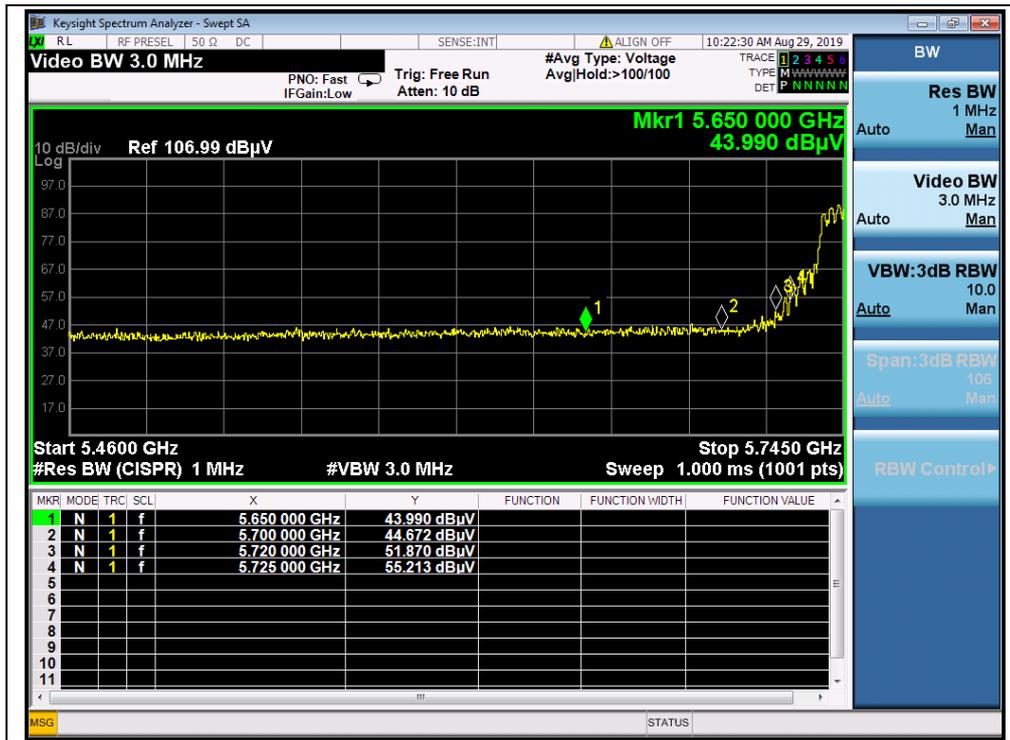
(Channel 36, AVG, 802.11a)



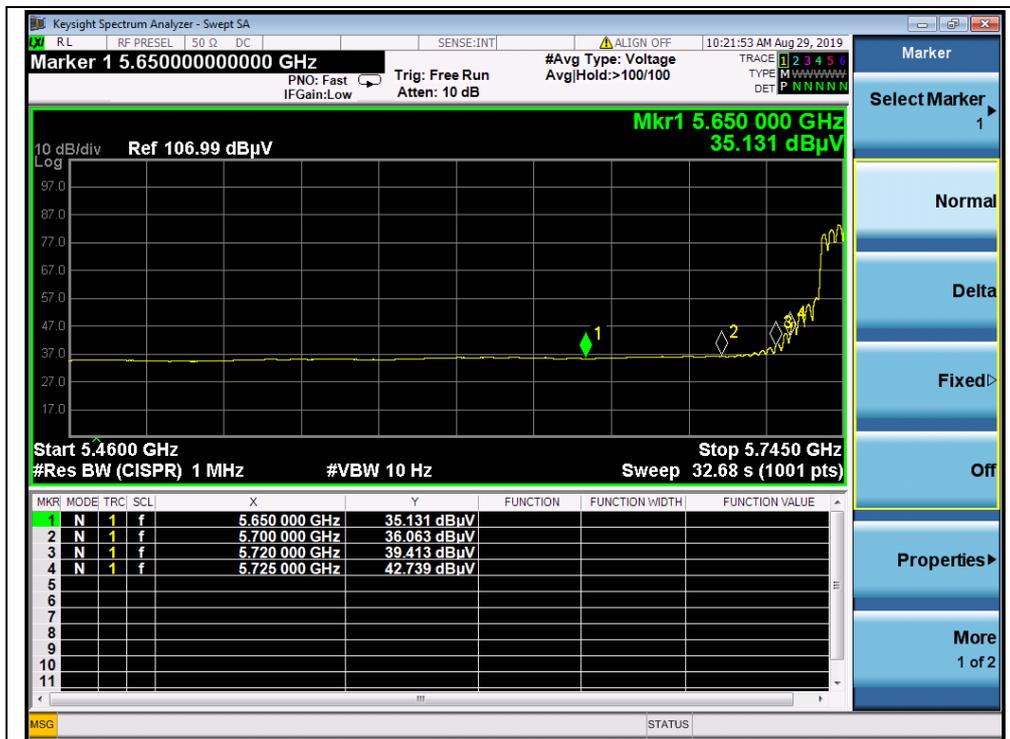
(Channel 48, PEAK, 802.11a)



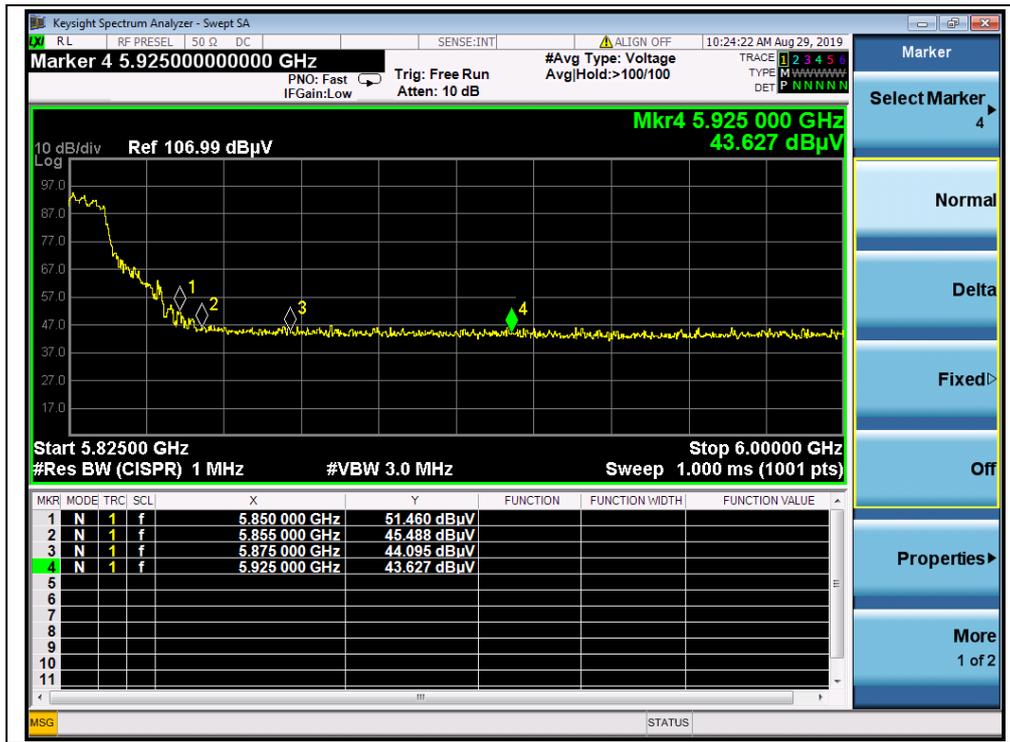
(Channel 48, AVG, 802.11a)



(Channel 149, PEAK, 802.11a)



(Channel 149, AVG, 802.11a)



(Channel 165, PEAK, 802.11a)



(Channel 165, AVG, 802.11a)

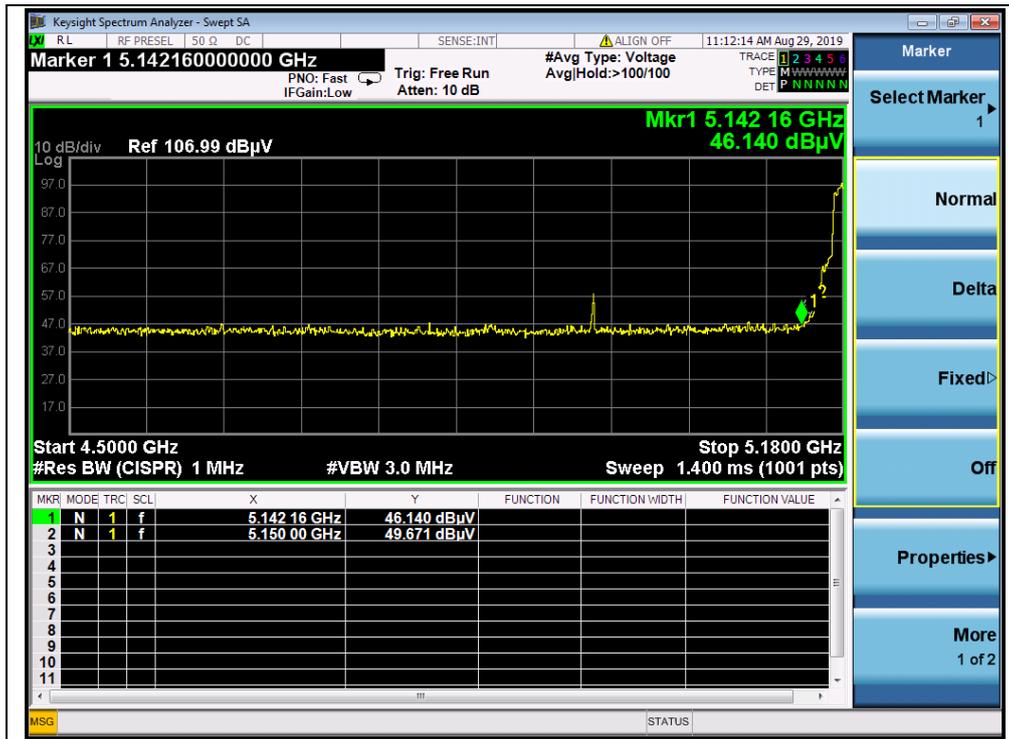


802.11n (HT20) Test mode

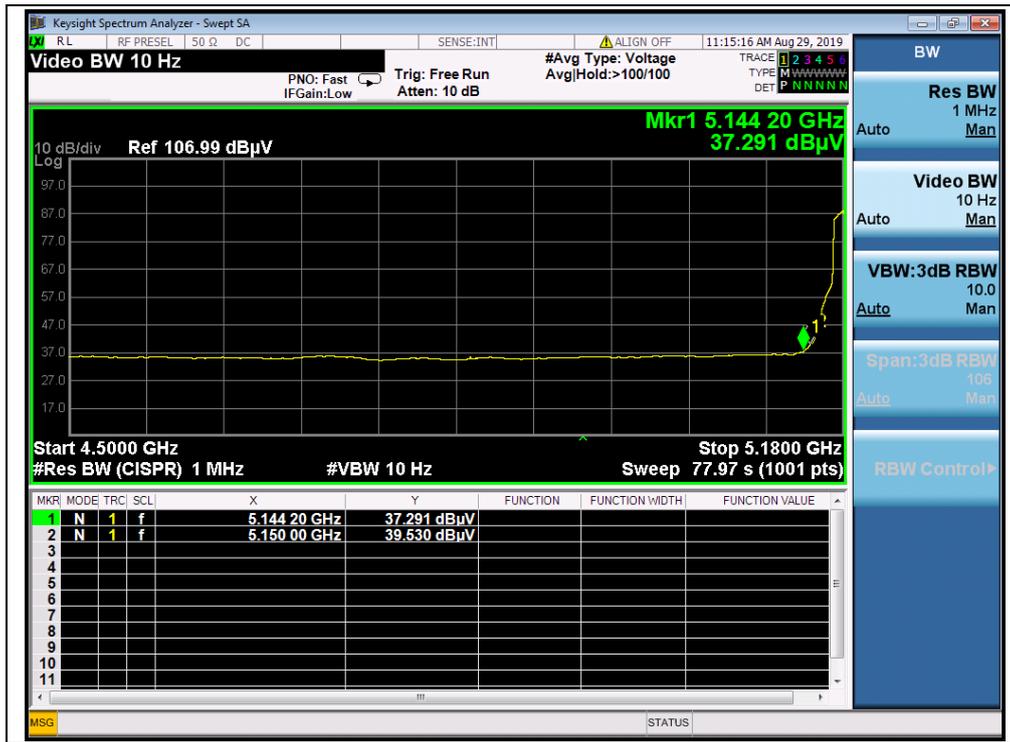
A. Test Verdict:

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> (dBuV)					
36	5150.00	PK	49.67	-26.92	32.20	54.95	74	PASS
36	5150.00	AV	39.53	-26.92	32.20	44.81	54	PASS
48	5403.34	PK	47.13	-26.92	32.20	52.41	74	PASS
48	5350.00	AV	34.76	-26.92	32.20	40.04	54	PASS
149	5725.00	PK	51.97	-26.23	32.20	57.94	122.23	PASS
149	5725.00	AV	44.82	-26.23	32.20	50.79	54	PASS
165	5850.00	PK	50.05	-26.23	32.20	56.02	122.23	PASS
165	5850.00	AV	39.08	-26.23	32.20	45.05	54	PASS

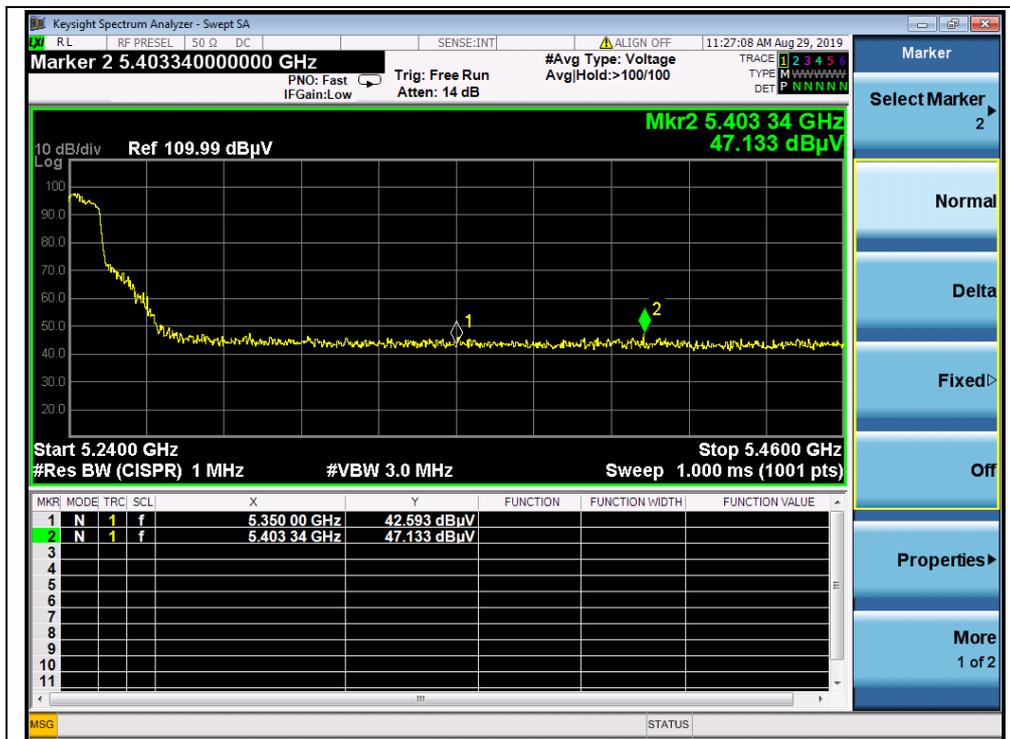
B. Test Plots:



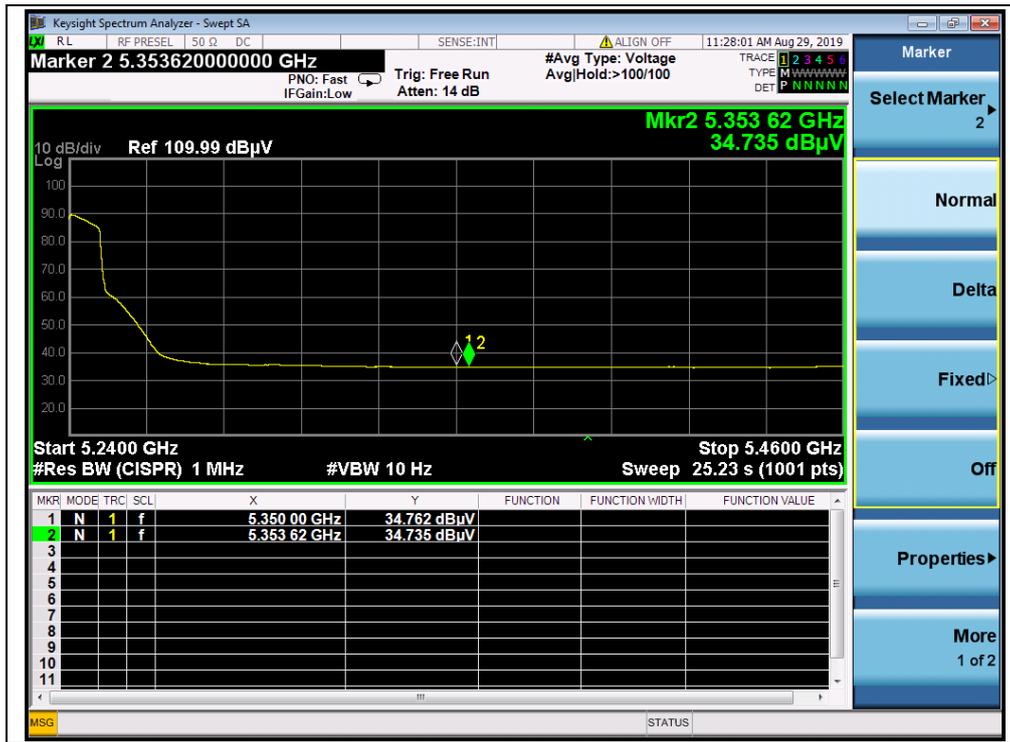
(Channel 36, PEAK, 802.11n (HT20))



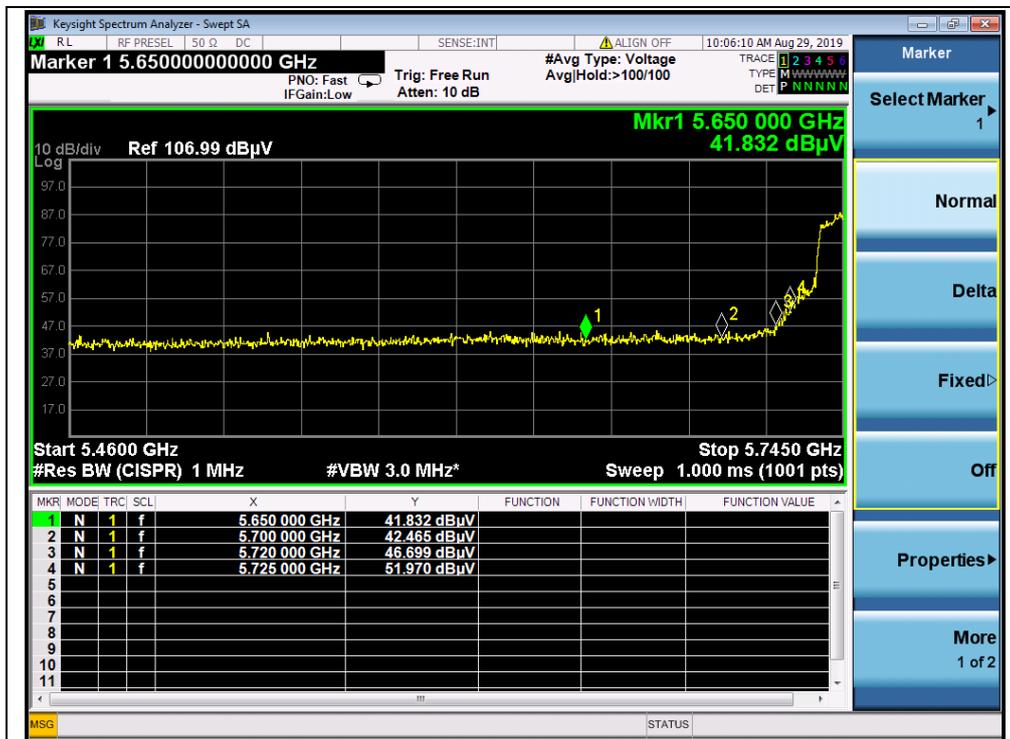
(Channel 36, AVG, 802.11 n (HT20))



(Channel 48, PEAK, 802.11 n (HT20))



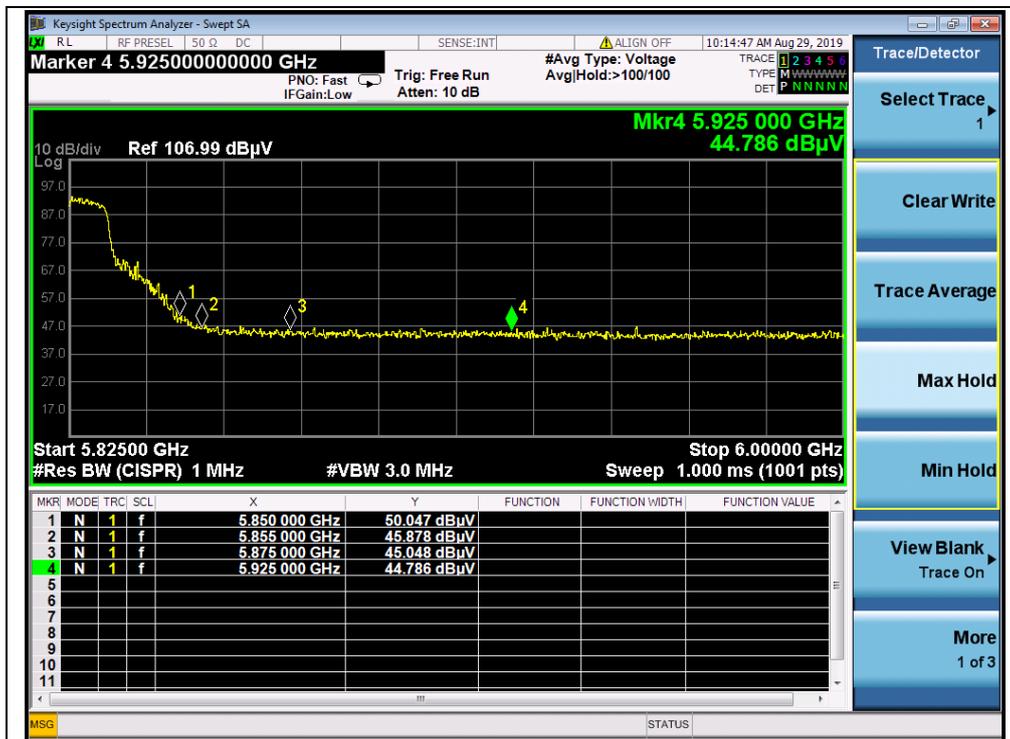
(Channel 48, AVG, 802.11n (HT20))



(Channel 149, PEAK, 802.11 n (HT20))



(Channel 149, AVG, 802.11n (HT20))



(Channel 165, PEAK, 802.11 n (HT20))



(Channel 165, AVG, 802.11n (HT20))

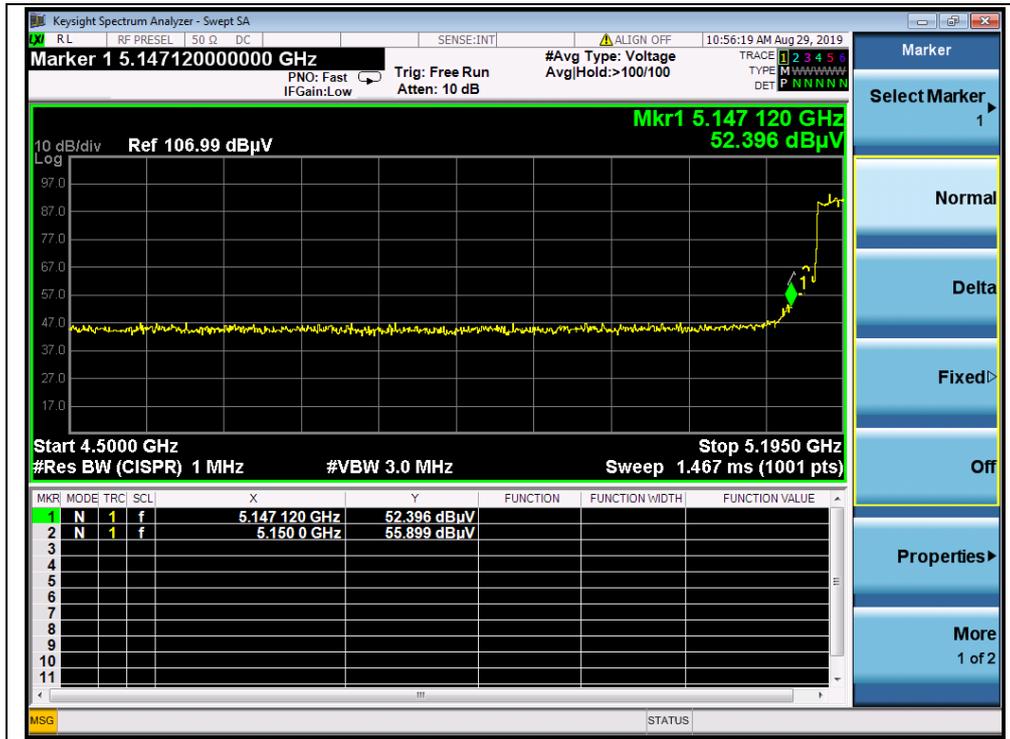
**802.11n (HT40) Test mode**

**A. Test Verdict:**

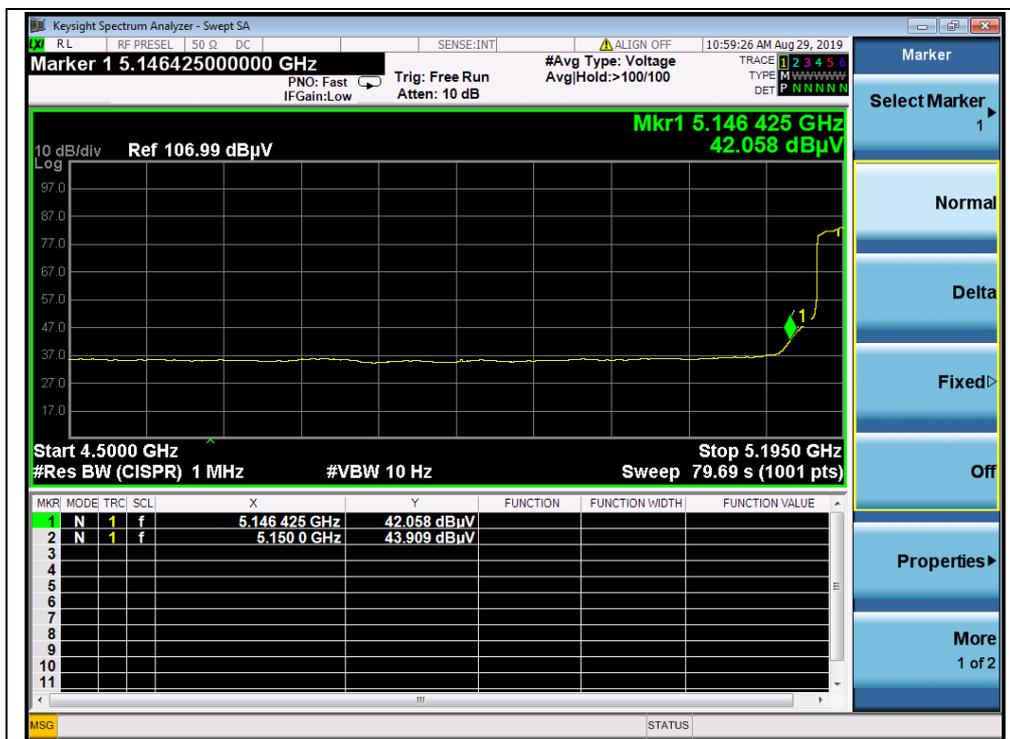
Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dBμV)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	55.90	-26.92	32.20	61.18	74	PASS
38	5150.00	AV	43.91	-26.92	32.20	49.19	54	PASS
46	5354.01	PK	44.66	-26.92	32.20	49.94	74	PASS
46	5362.06	AV	34.44	-26.92	32.20	39.72	54	PASS
151	5725.00	PK	51.87	-26.23	32.20	57.84	122.23	PASS
151	5725.00	AV	43.11	-26.23	32.20	49.08	54	PASS
159	5855.00	PK	42.70	-26.23	32.20	48.67	110.83	PASS
159	5850.00	AV	35.47	-26.23	32.20	41.44	54	PASS



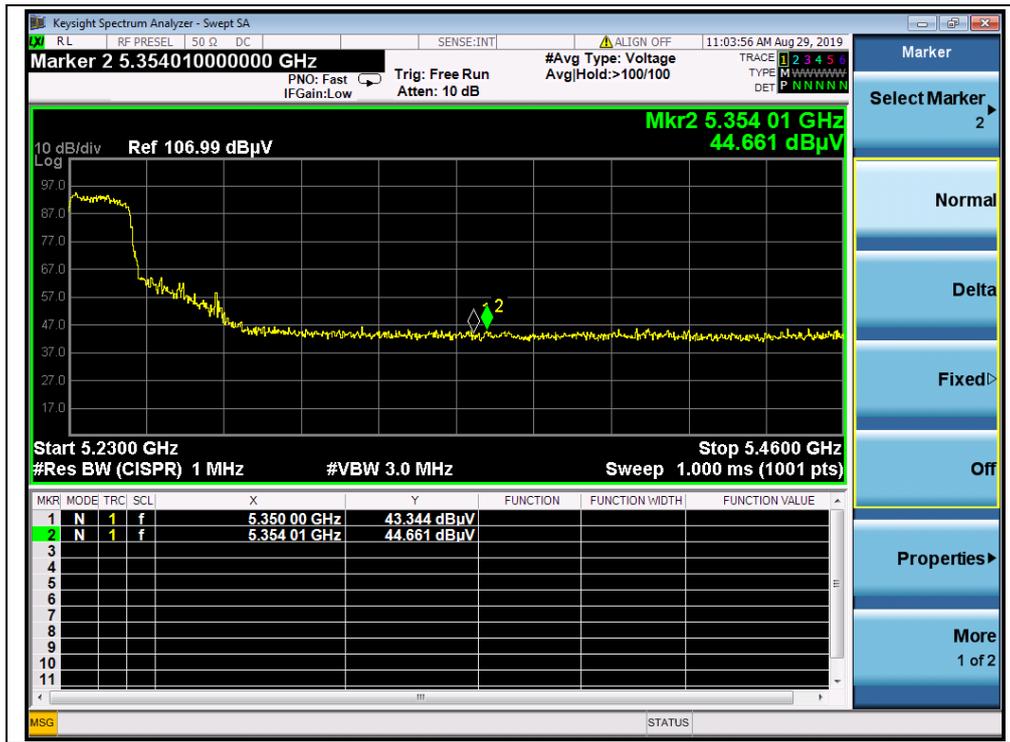
B. Test Plots:



(Channel 38, PEAK, 802.11n (HT40))



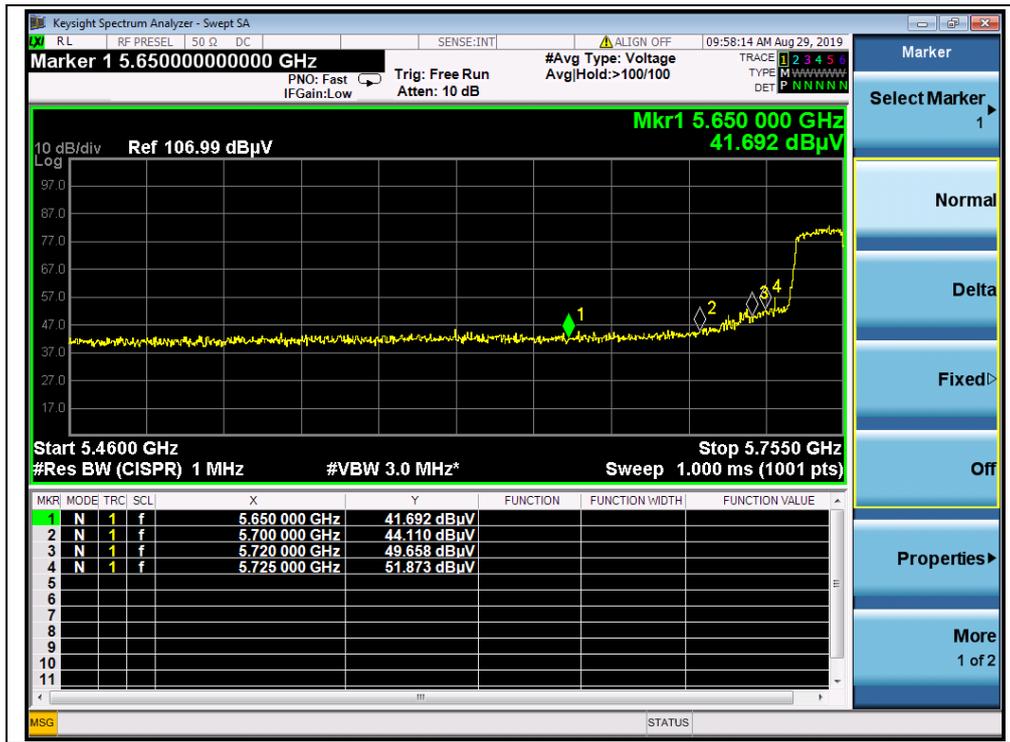
(Channel 38, AVG, 802.11n (HT40))



(Channel 46, PEAK, 802.11n (HT40))



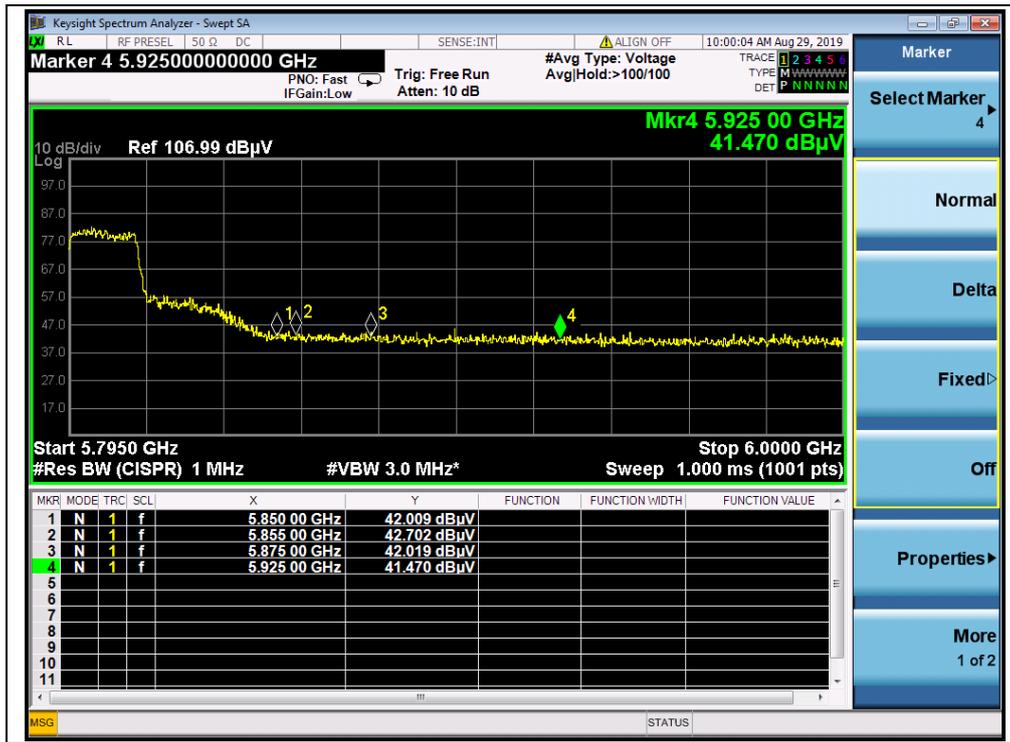
(Channel 46, AVG, 802.11n (HT40))



(Channel 151, PEAK, 802.11n (HT40))



(Channel 151, AVG, 802.11n (HT40))



(Channel 159, PEAK, 802.11n (HT40))



(Channel 159, AVG, 802.11n (HT40))

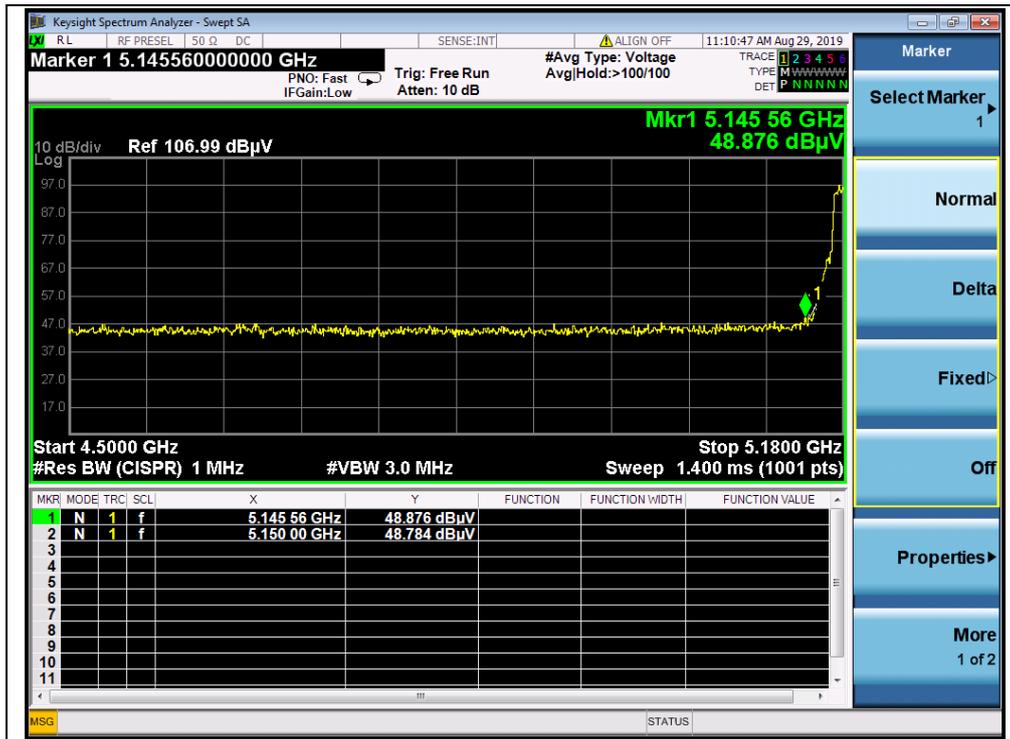


802.11 ac (VHT20) Test mode

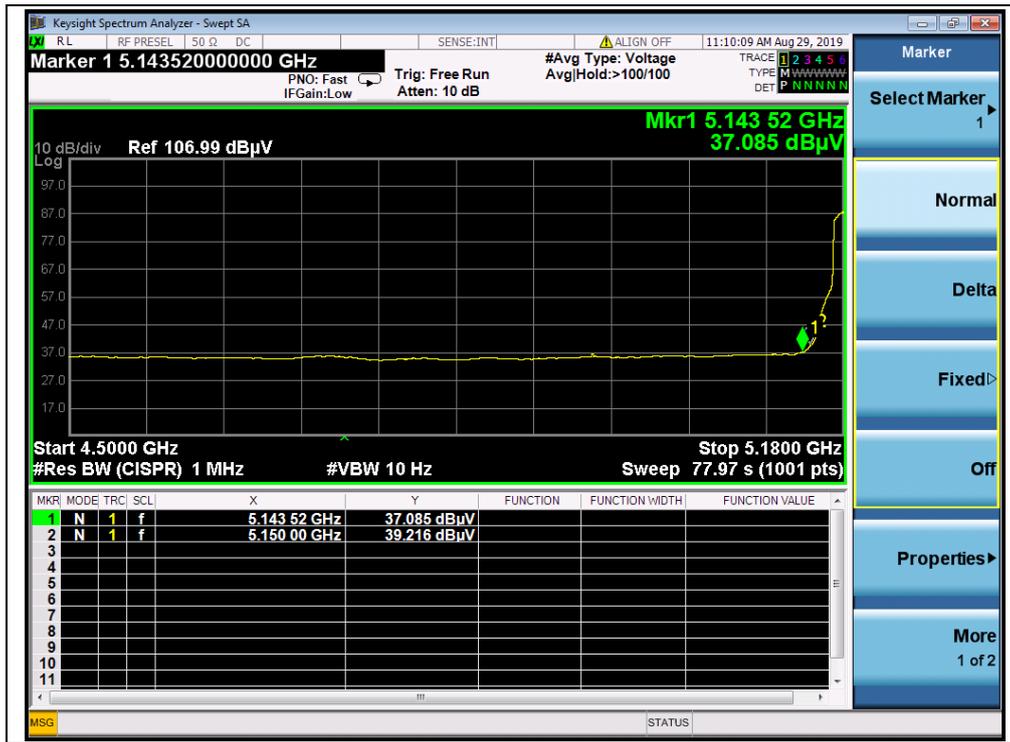
A. Test Verdict:

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> (dBuV)					
36	5145.56	PK	48.88	-26.92	32.20	54.16	74	PASS
36	5150.00	AV	39.22	-26.92	32.20	44.50	54	PASS
48	5372.76	PK	45.42	-26.92	32.20	50.70	74	PASS
48	5351.64	AV	35.09	-26.92	32.20	40.37	54	PASS
149	5725.00	PK	52.69	-26.23	32.20	58.66	122.23	PASS
149	5725.00	AV	44.70	-26.23	32.20	50.67	54	PASS
165	5850.00	PK	49.13	-26.23	32.20	55.10	122.23	PASS
165	5850.00	AV	39.15	-26.23	32.20	45.12	54	PASS

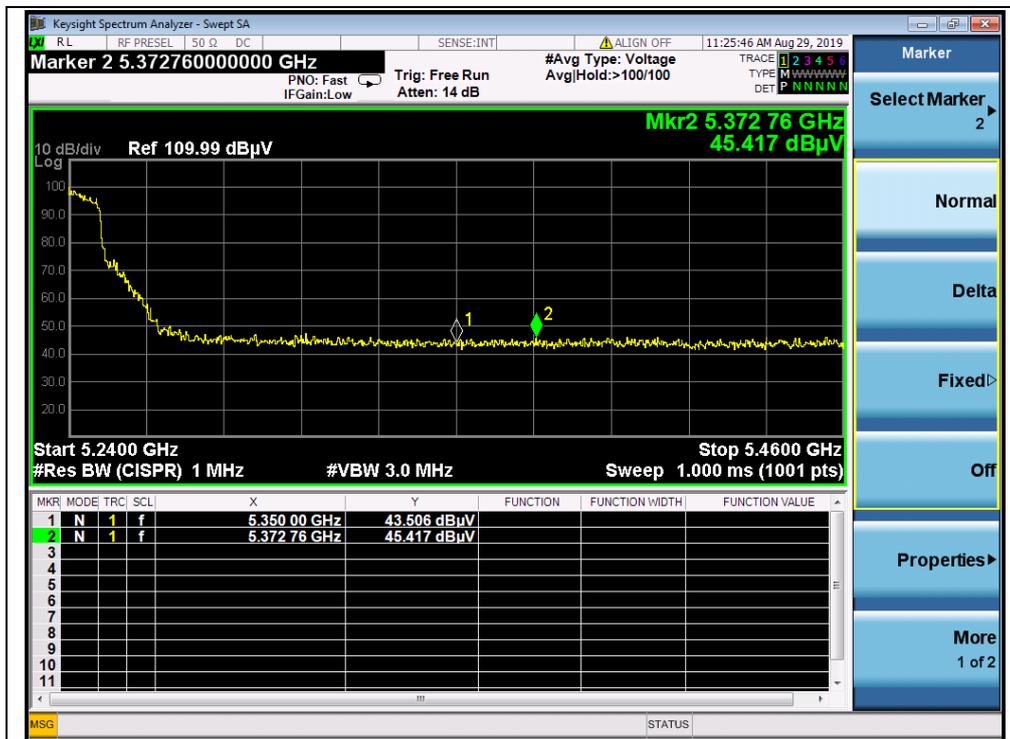
B. Test Plots:



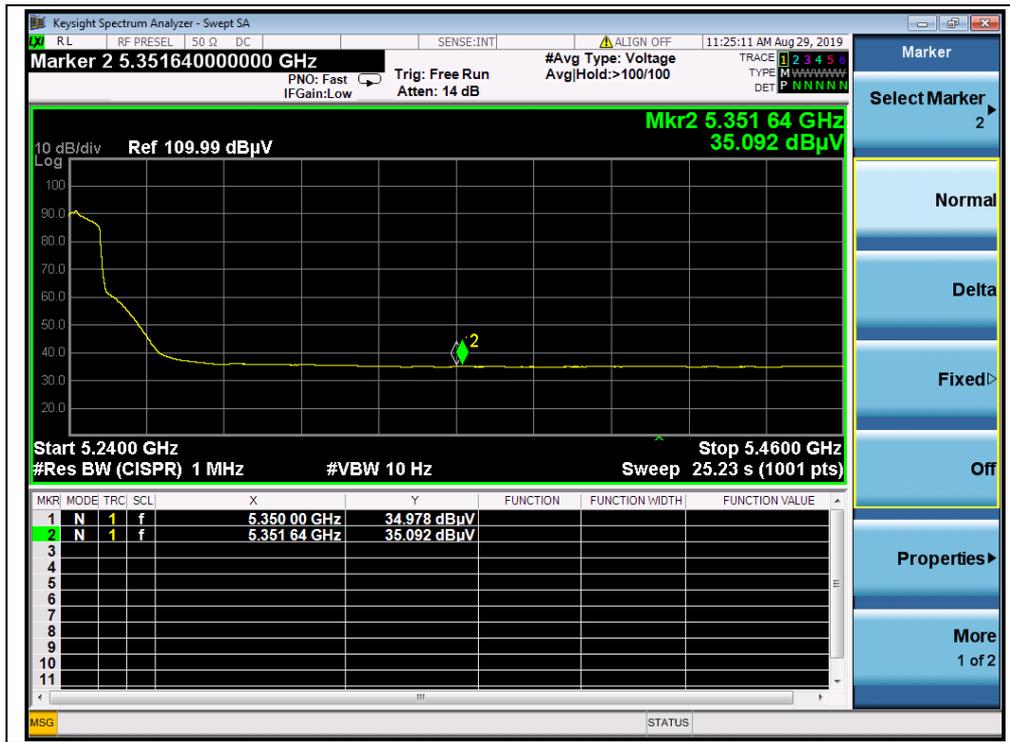
(Channel 36, PEAK, 802.11 ac (VHT20))



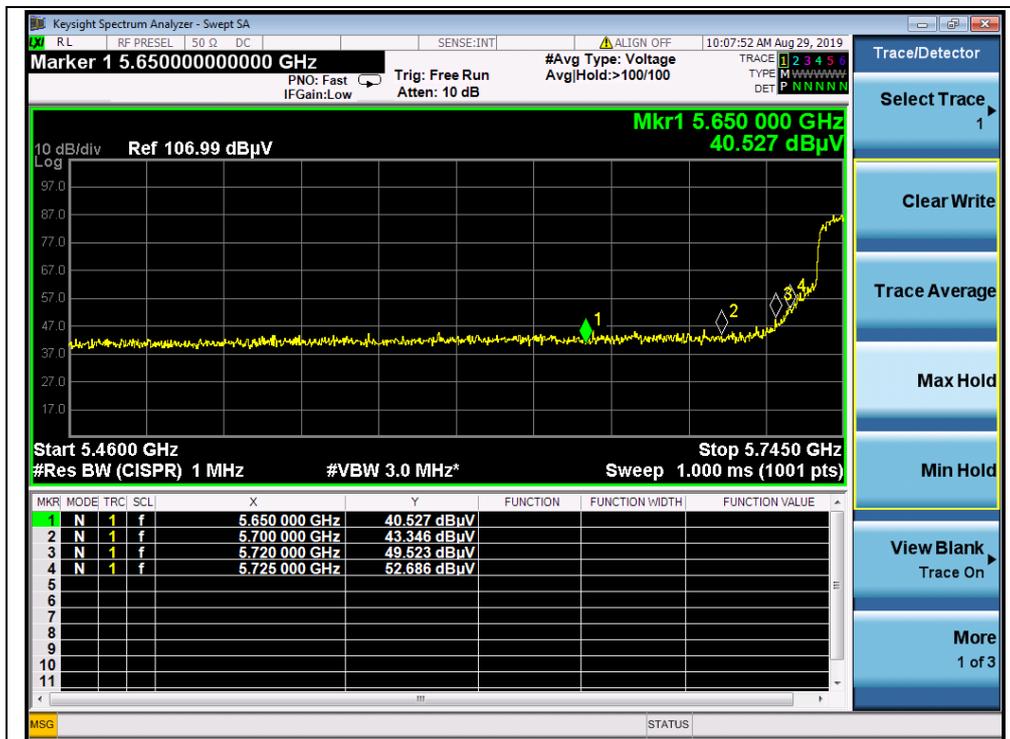
(Channel 36, AVG, 802.11 ac (VHT20))



(Channel 48, PEAK, 802.11 ac (VHT20))



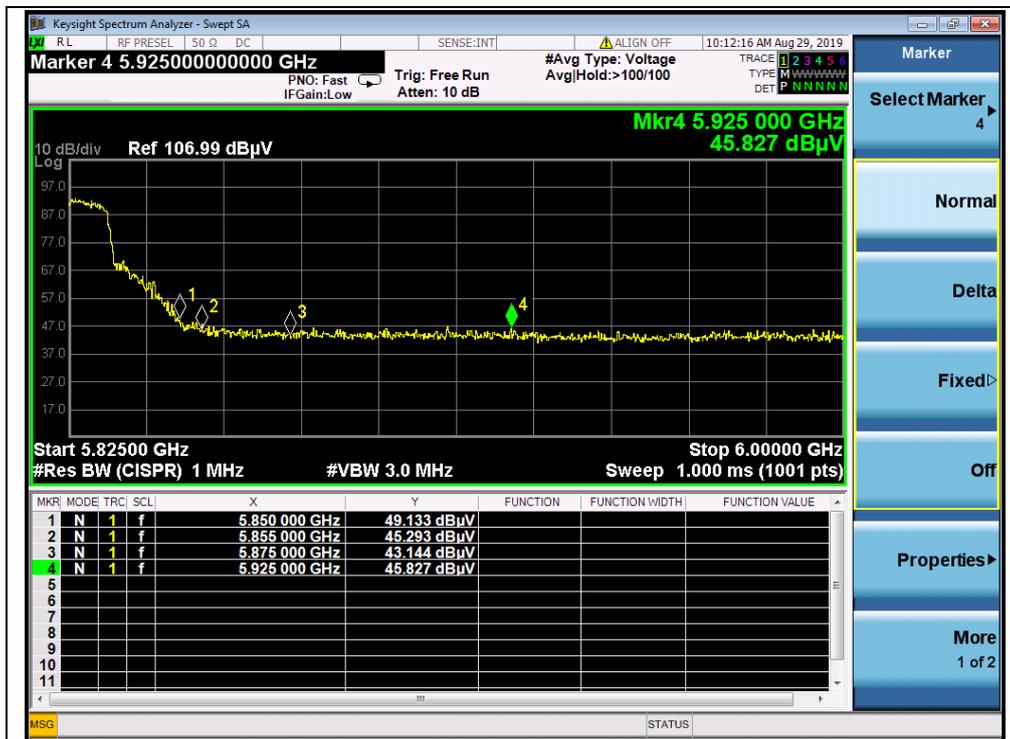
(Channel 48, AVG, 802.11 ac (VHT20))



(Channel 149, PEAK, 802.11 ac (VHT20))



(Channel 149, AVG, 802.11 ac (VHT20))



(Channel 165, PEAK, 802.11 ac (VHT20))



(Channel 165, AVG, 802.11ac (VHT20))

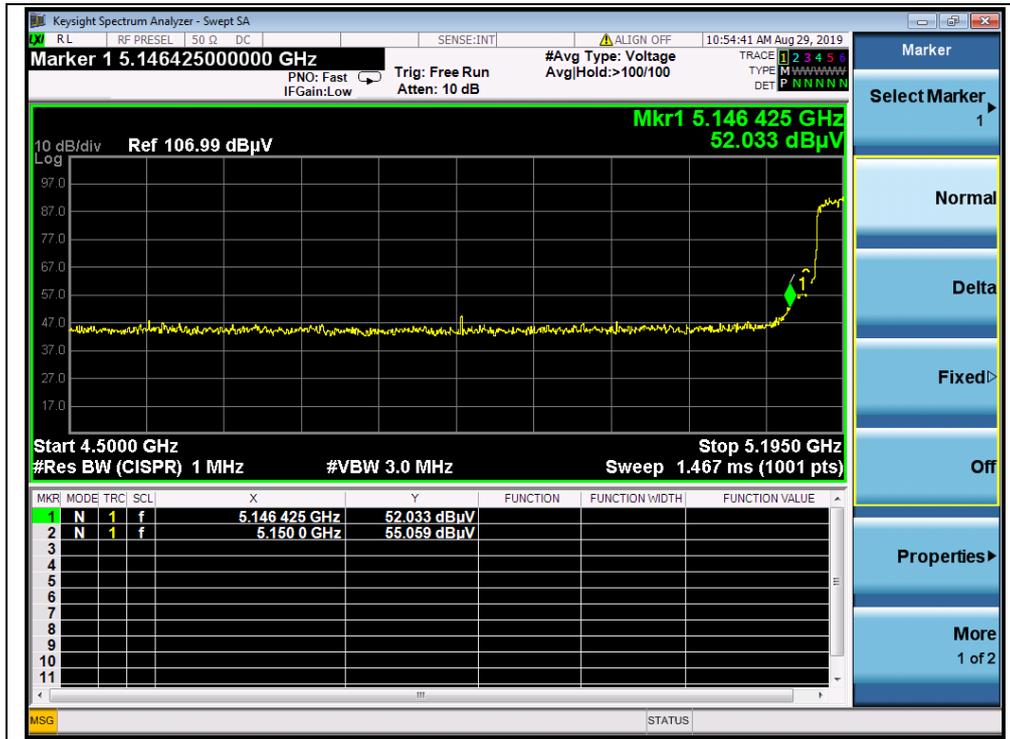
**802.11 ac (VHT40) Test mode**

**A. Test Verdict:**

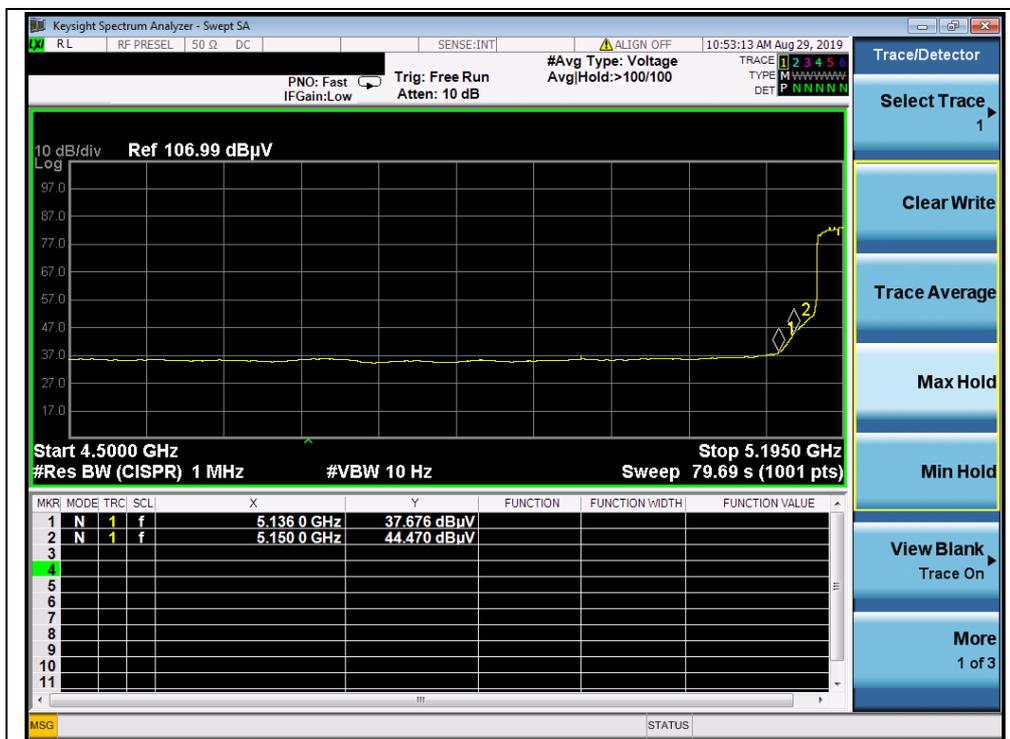
Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dBuV)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	55.06	-26.92	32.20	60.34	74	PASS
38	5150.00	AV	44.47	-26.92	32.20	49.75	54	PASS
46	5368.50	PK	46.27	-26.92	32.20	51.55	74	PASS
46	5352.17	AV	34.41	-26.92	32.20	39.69	54	PASS
151	5725.00	PK	51.79	-26.23	32.20	57.76	122.23	PASS
151	5725.00	AV	42.91	-26.23	32.20	48.88	54	PASS
159	5875.00	PK	46.29	-26.23	32.20	52.26	54.83	PASS
159	5875.00	AV	44.64	-26.23	32.20	50.61	54	PASS



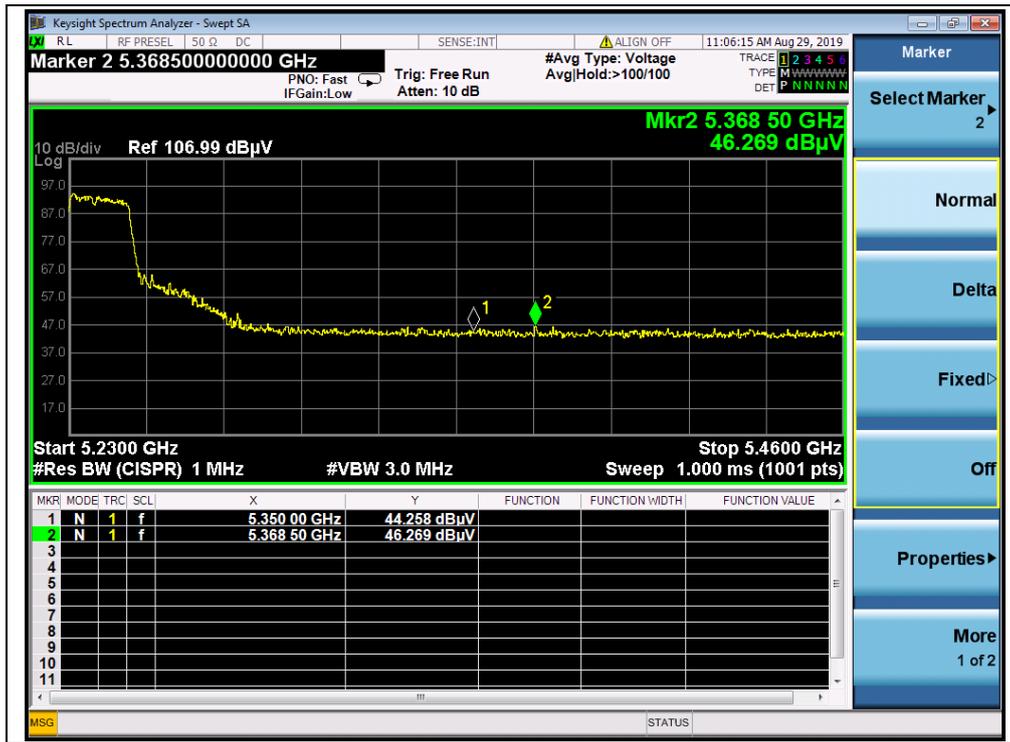
B. Test Plots:



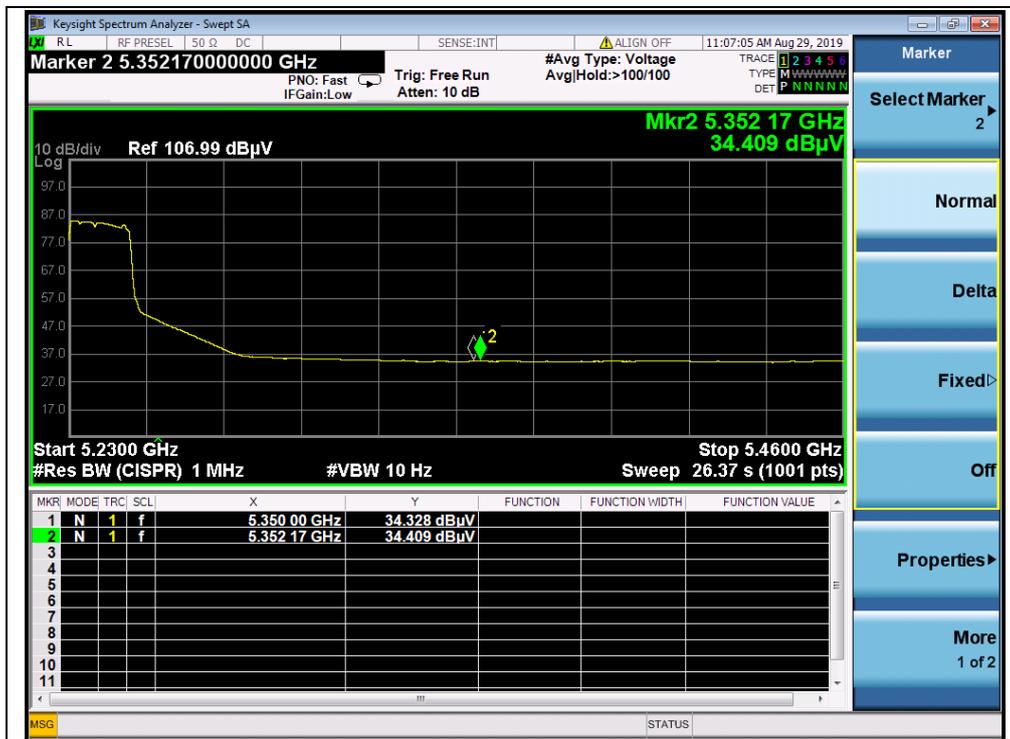
(Channel 38, PEAK, 802.11 ac (VHT40))



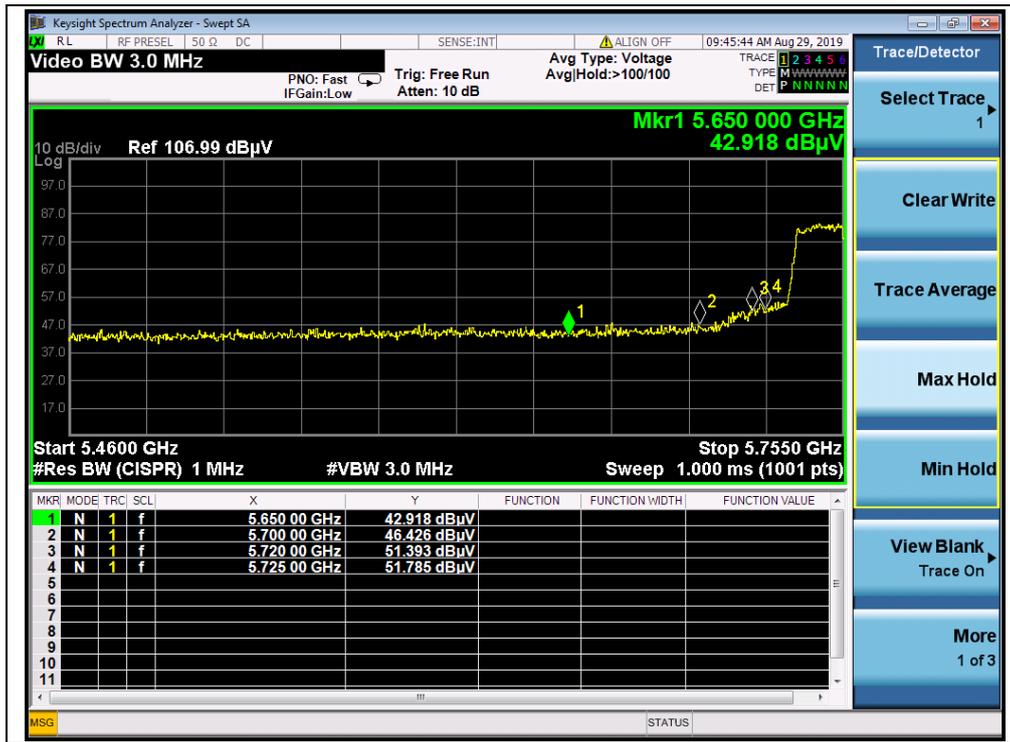
(Channel 38, AVG, 802.11 ac (VHT40))



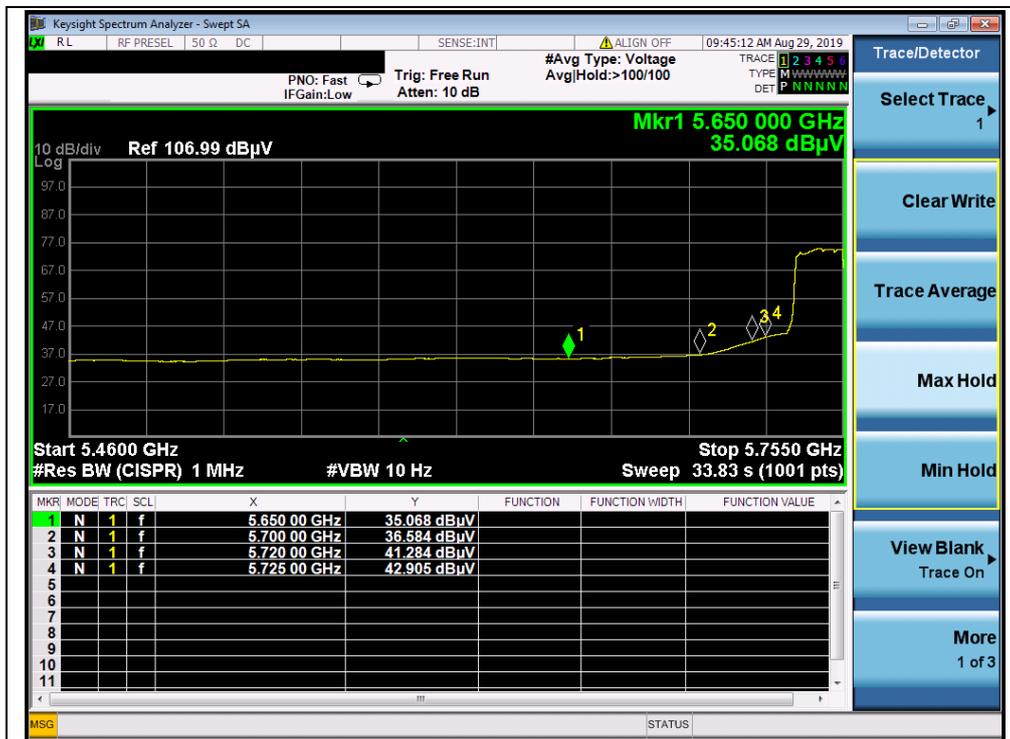
(Channel 46, PEAK, 802.11 ac (VHT40))



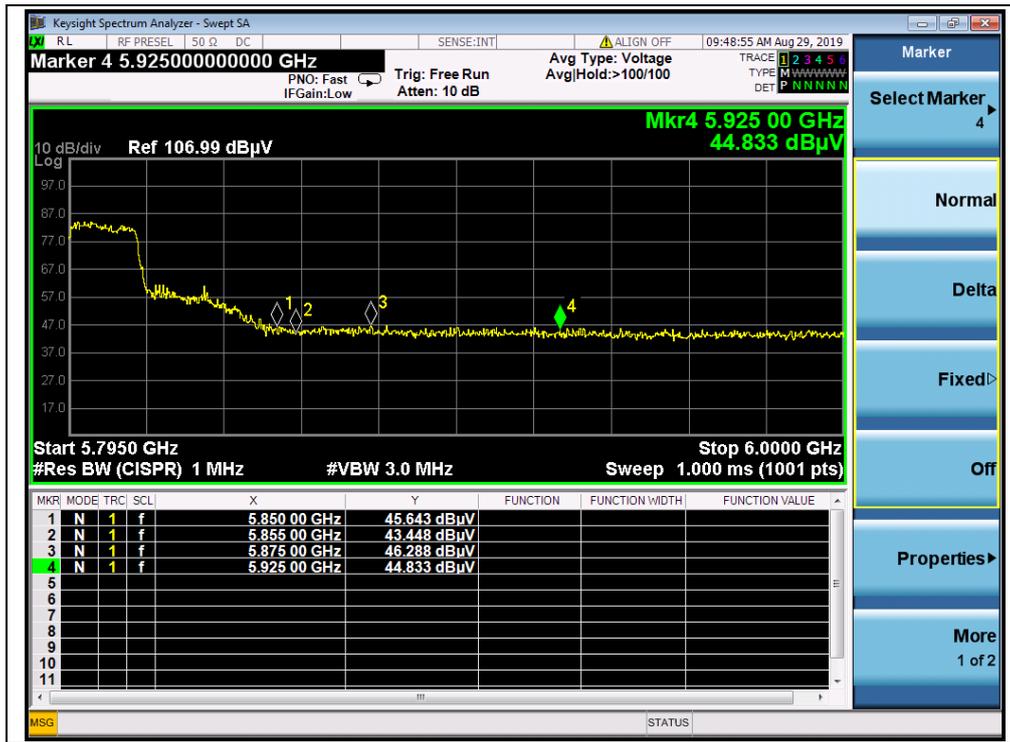
(Channel 46, AVG, 802.11 ac (VHT40))



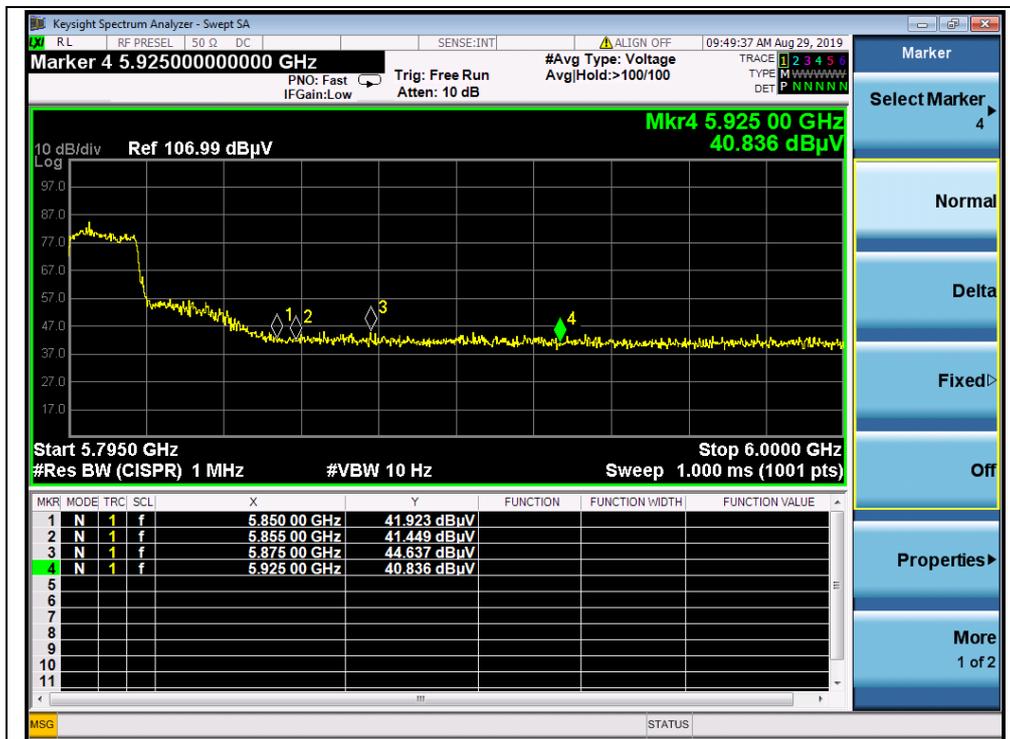
(Channel 151, PEAK, 802.11 ac (VHT40))



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



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



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

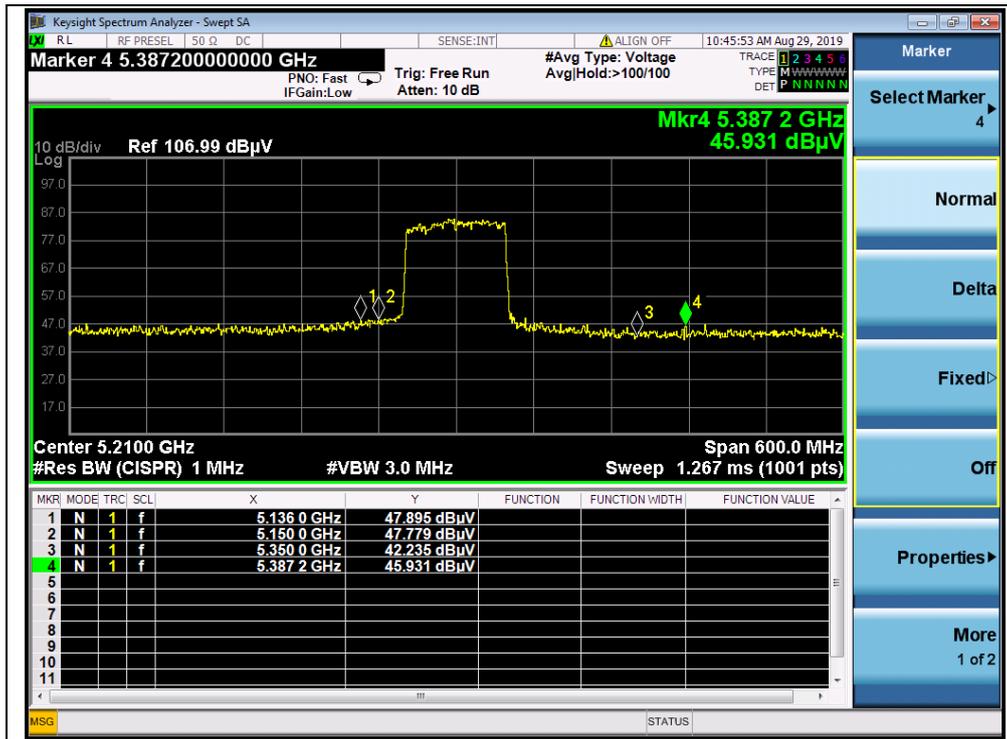


**802.11 ac (VHT80) Test mode**

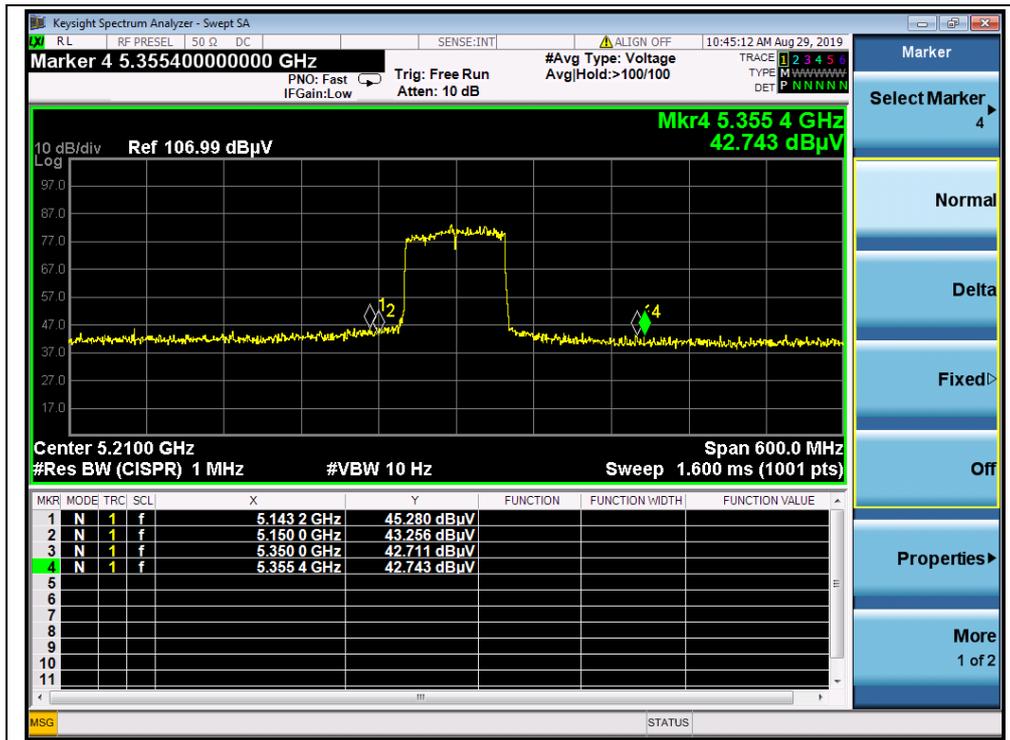
**A. Test Verdict:**

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dBuV)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
42	5136.00	PK	47.90	-26.92	32.20	53.18	74	PASS
42	5143.20	AV	45.28	-26.92	32.20	50.56	54	PASS
42	5387.20	PK	45.93	-26.92	32.20	51.21	74	PASS
42	5355.40	AV	42.74	-26.92	32.20	48.02	54	PASS
155	5720.60	PK	56.24	-26.23	32.20	62.21	112.20	PASS
155	5725.00	AV	42.76	-26.23	32.20	48.73	54	PASS
155	5850.00	PK	52.96	-26.23	32.20	58.93	122.23	PASS
155	5850.00	AV	40.91	-26.23	32.20	46.88	54	PASS

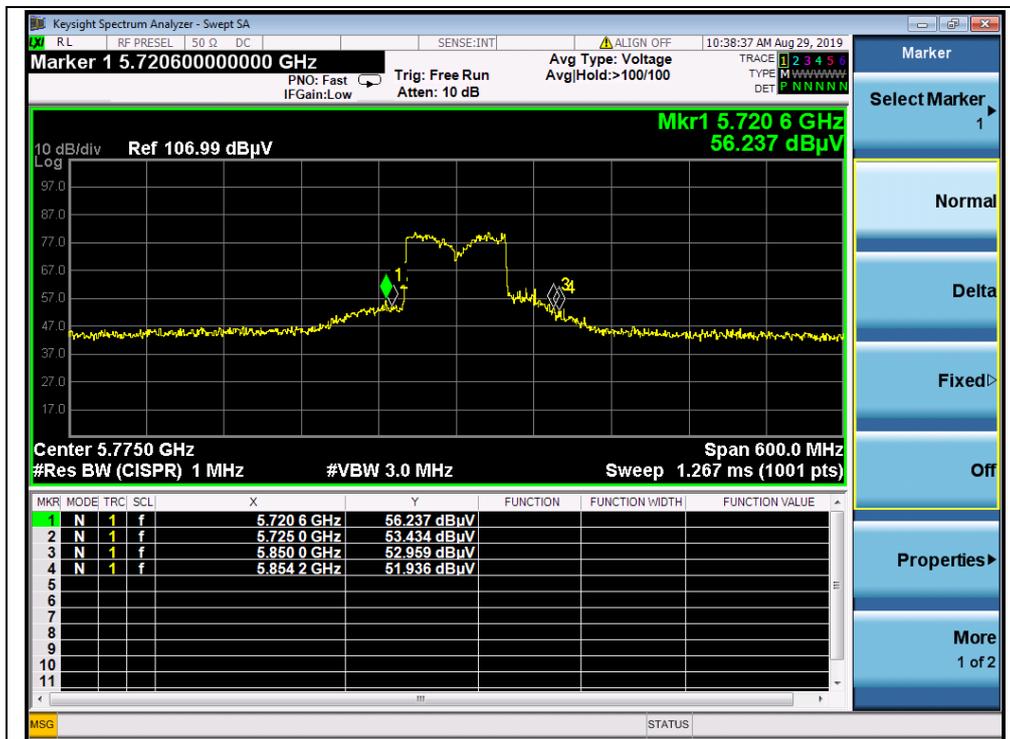
**B. Test Plots:**



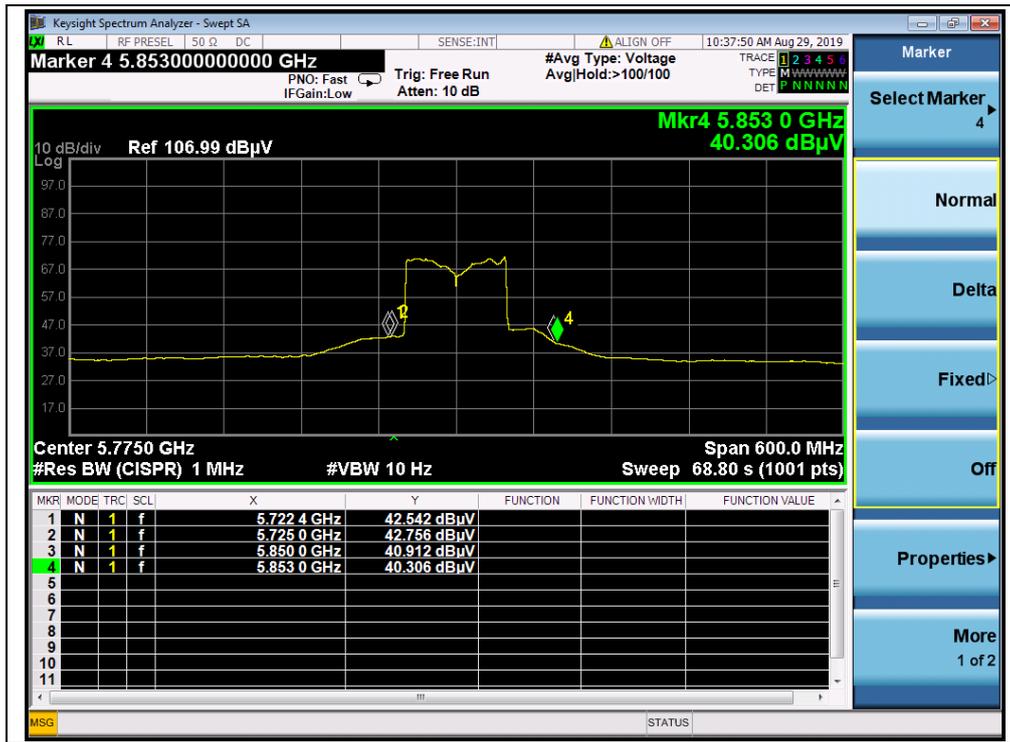
(Channel 42, PEAK, 802.11 ac (VHT80))



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



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



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



## 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(eirp) 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

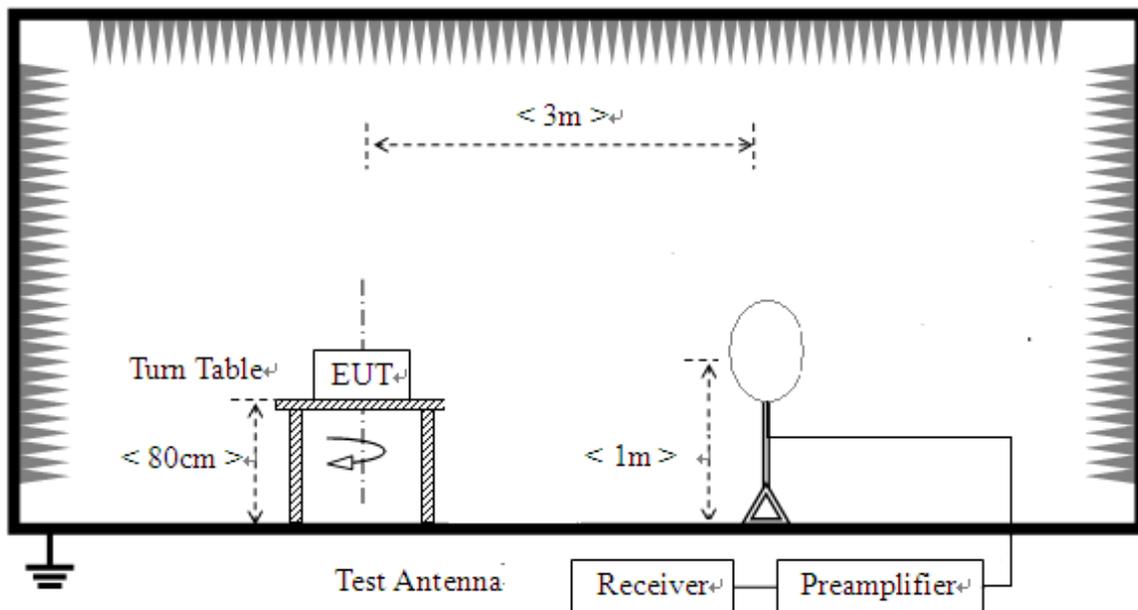
**Note:**

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.

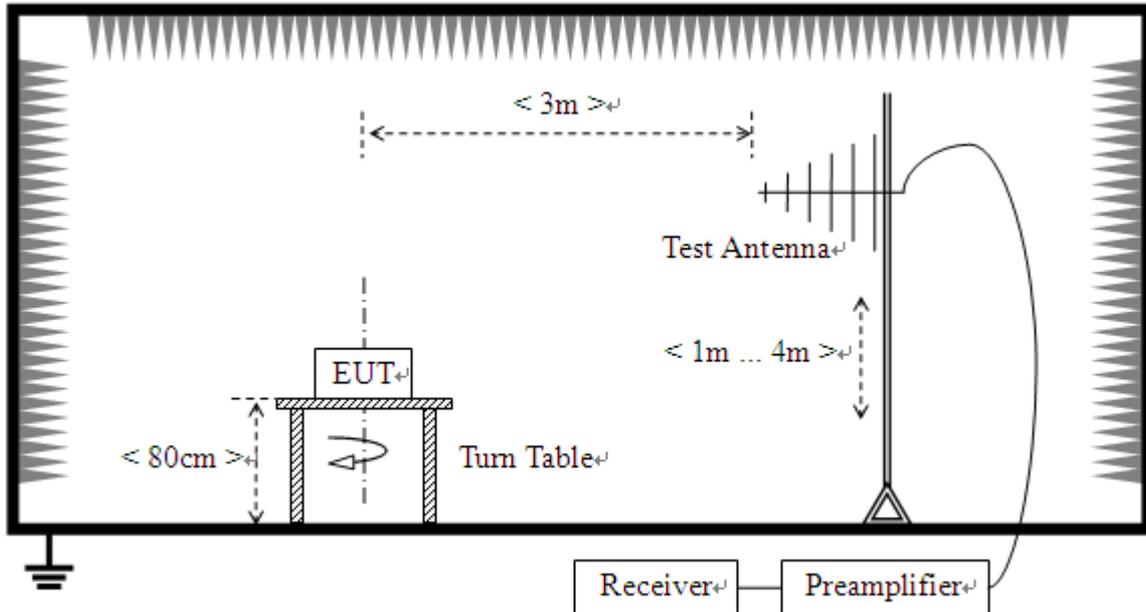
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

**2.9.2. Test Description****A. Test Setup:**

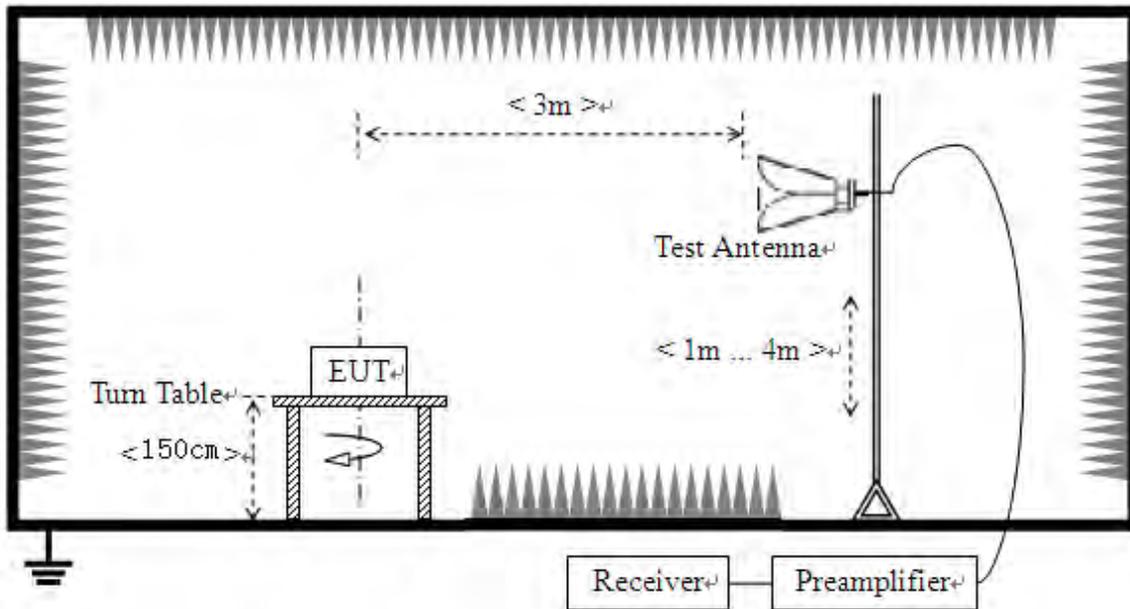
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The RF absorbing material used on the reference ground plane and on the turntable have a maximum height (thickness) of 30 cm (12 in) and have a minimum-rated attenuation of 20 dB at all frequencies from 1 GHz to 18 GHz.

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10 (2013). For radiated emissions below or equal to 1GHz, The EUT was set-up on insulator 80cm above the Ground Plane, For radiated emissions above 1GHz, The EUT



was set-up on insulator 150cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

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:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Place the test antenna at 3m away from area of the EUT, while keeping the test antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The test antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final test antenna elevation shall be that which maximizes the emissions. The test antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. The emission levels at both horizontal and vertical polarizations should be tested.



### 2.9.3. Test Result

According to ANSI C63.4 selection 4.2.2, 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 limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

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

$A_T$ : 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.

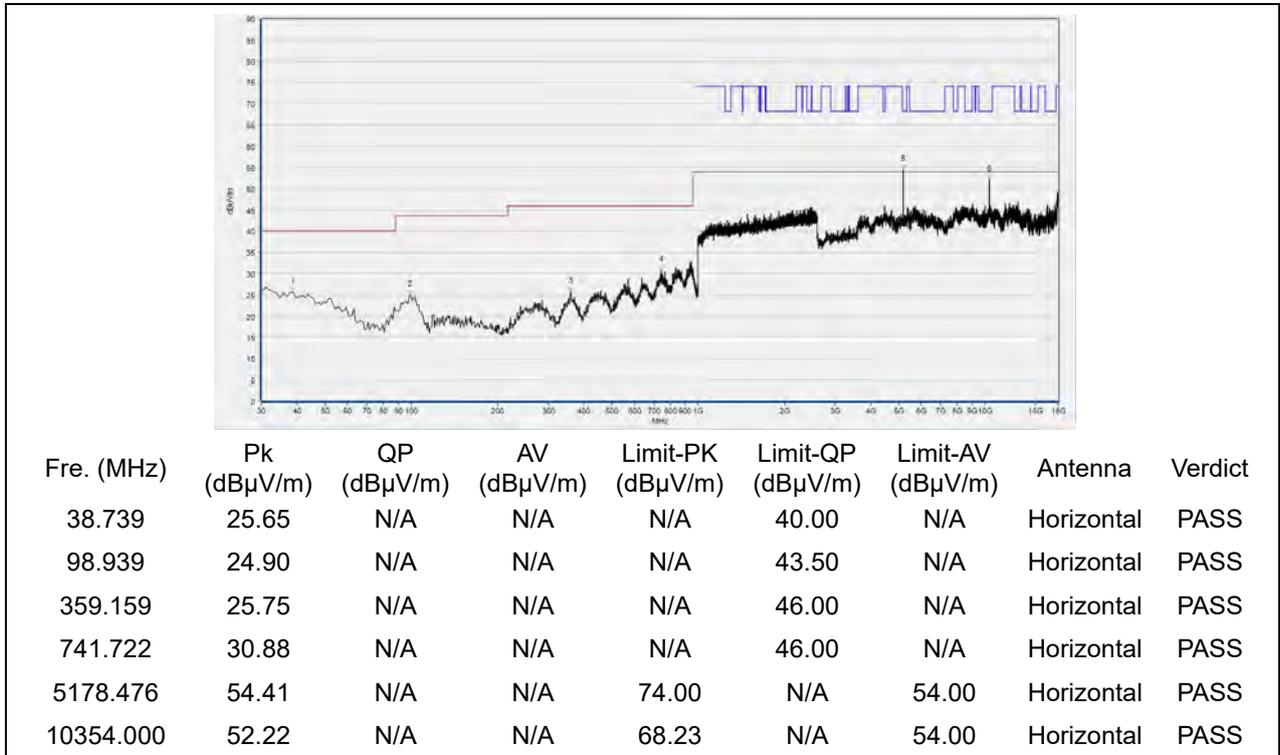
**Note2:** For the frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note3:** For the frequency, which started from 25GHz to 40GHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

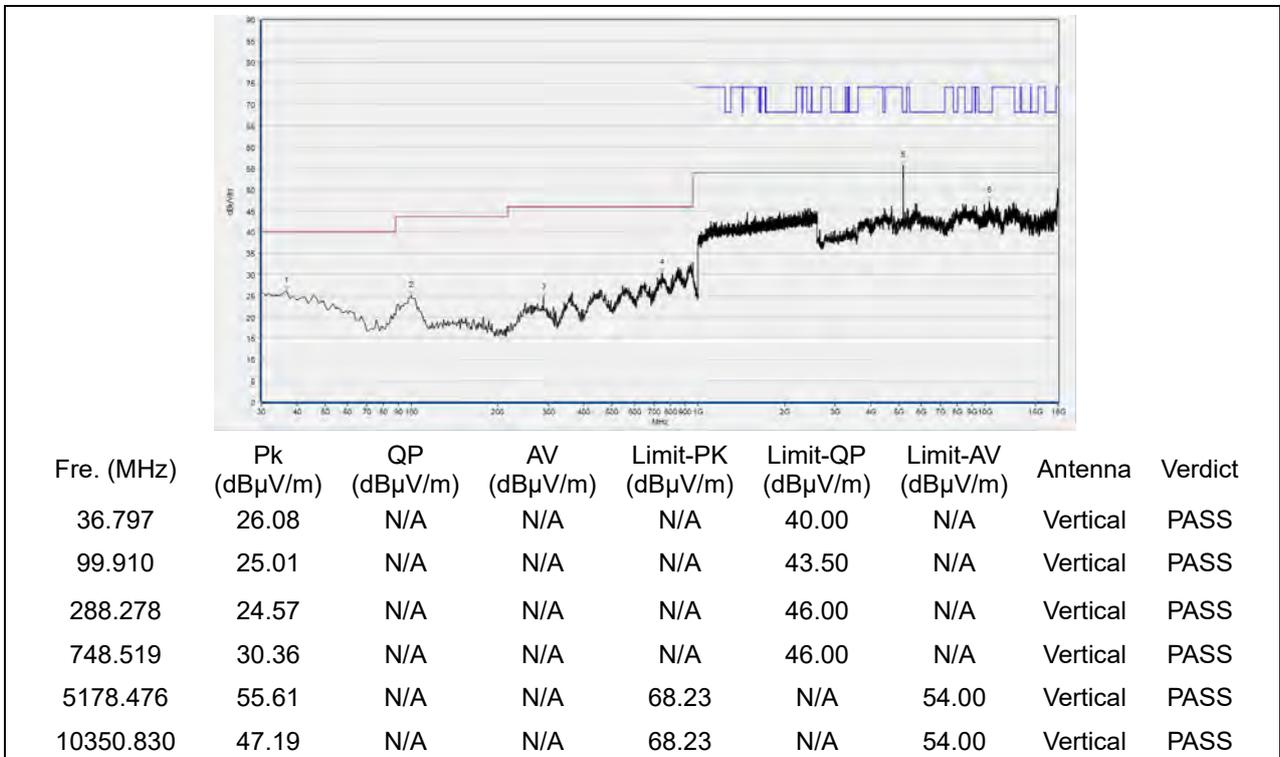


**802.11a Test mode**

**Plots for Channel = 36**

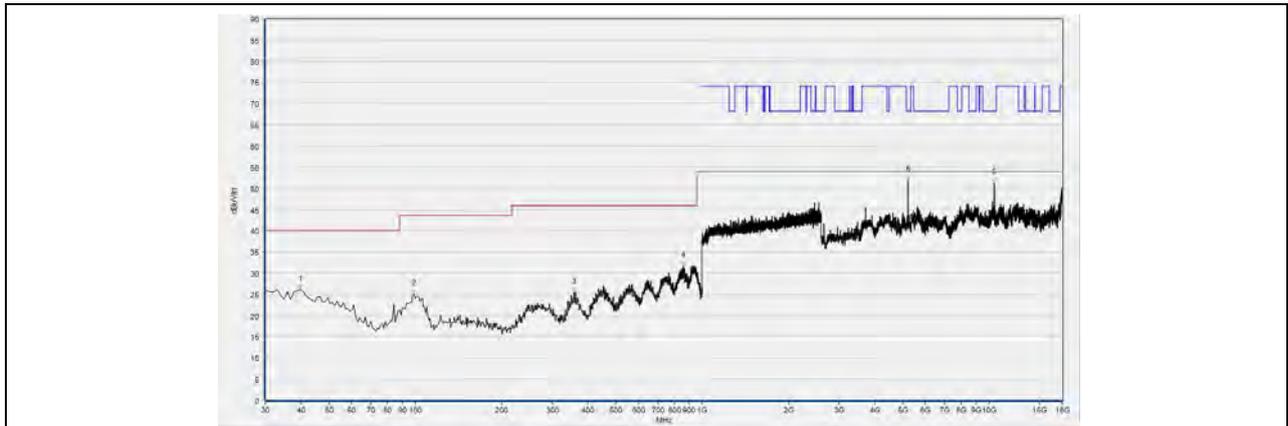


(Antenna Horizontal, 30MHz to 25GHz)



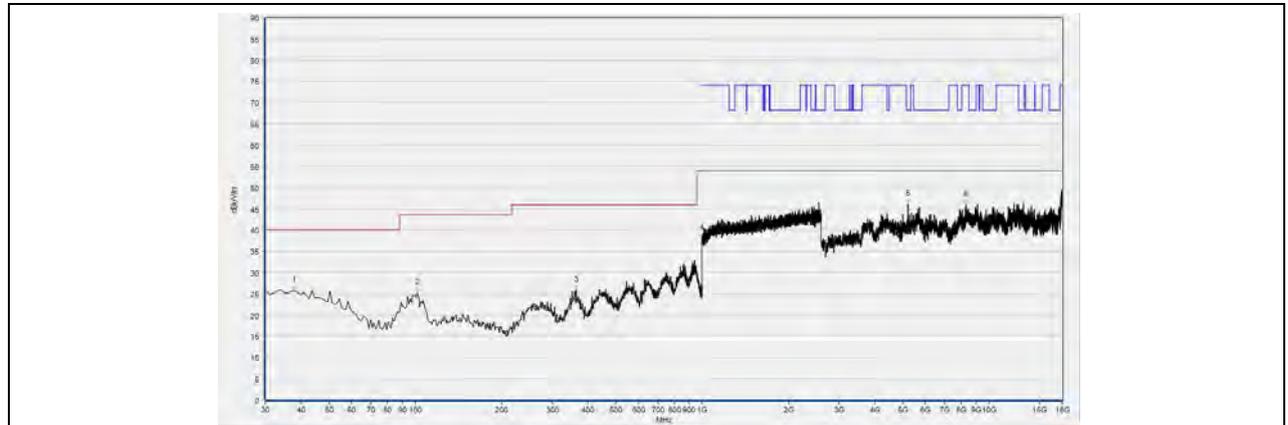
(Antenna Vertical, 30MHz to 25GHz)

Plots 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
39.710	26.19	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
98.939	25.12	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
357.217	25.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
856.296	31.63	N/A	N/A	N/A &gt;           <td 46.00	N/A	Horizontal	PASS	
5221.604	51.99	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10440.168	51.25	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

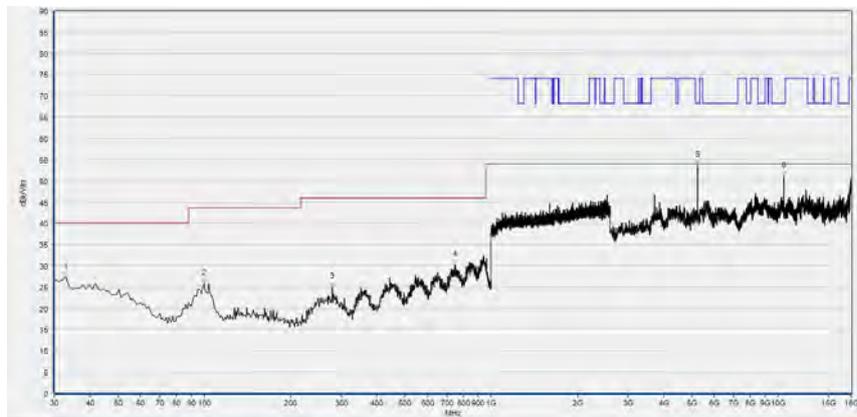
(Antenna Horizontal, 30MHz to 25GHz)



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
37.768	25.83	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
101.852	25.07	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
364.014	25.81	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1000.000	37.97	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5218.524	46.13	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8308.382	45.98	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

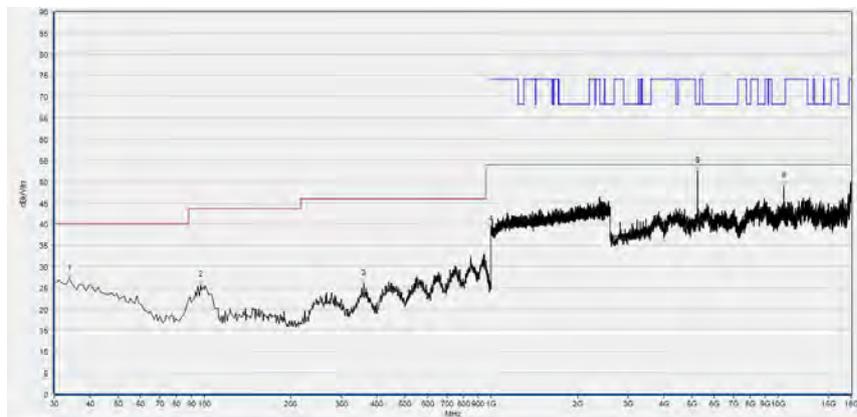
(Antenna Vertical, 30MHz to 25GHz)

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
32.913	27.40	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	25.76	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
279.540	25.05	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
746.577	30.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5237.007	53.63	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10477.135	51.04	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

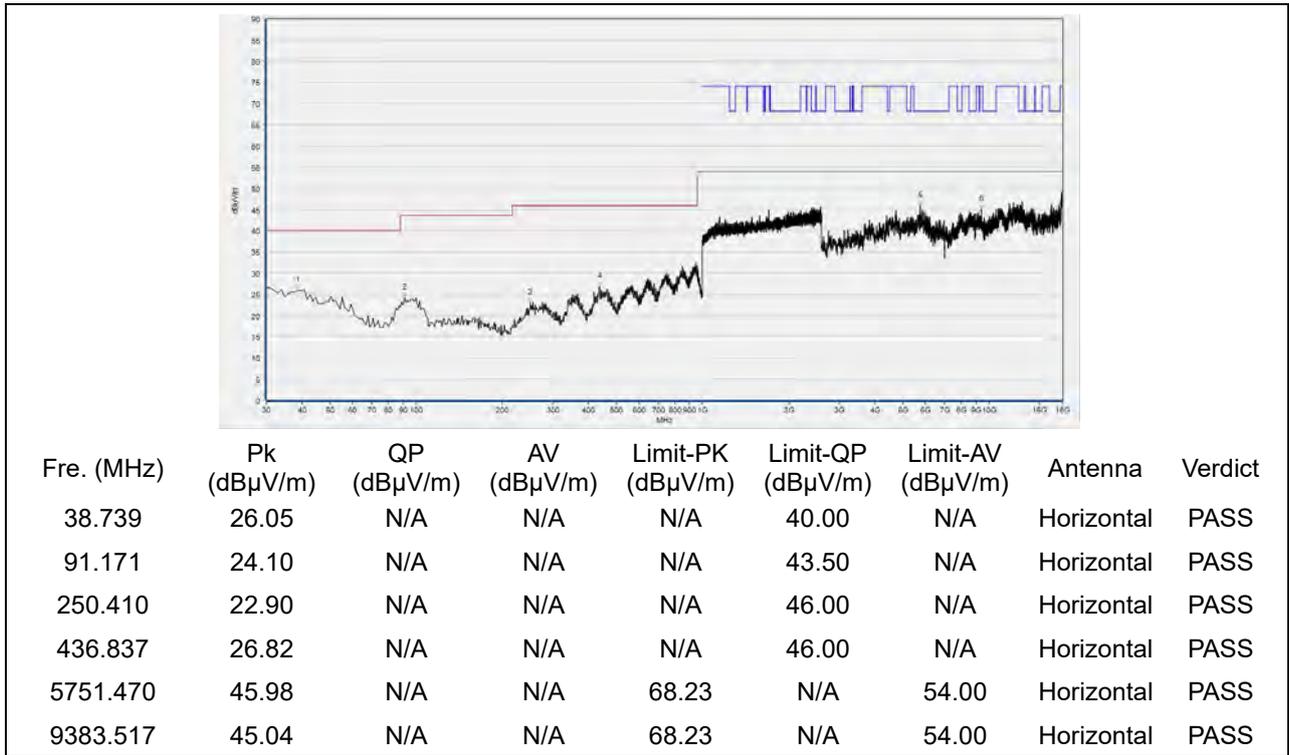
(Antenna Horizontal, 30MHz to 25GHz)



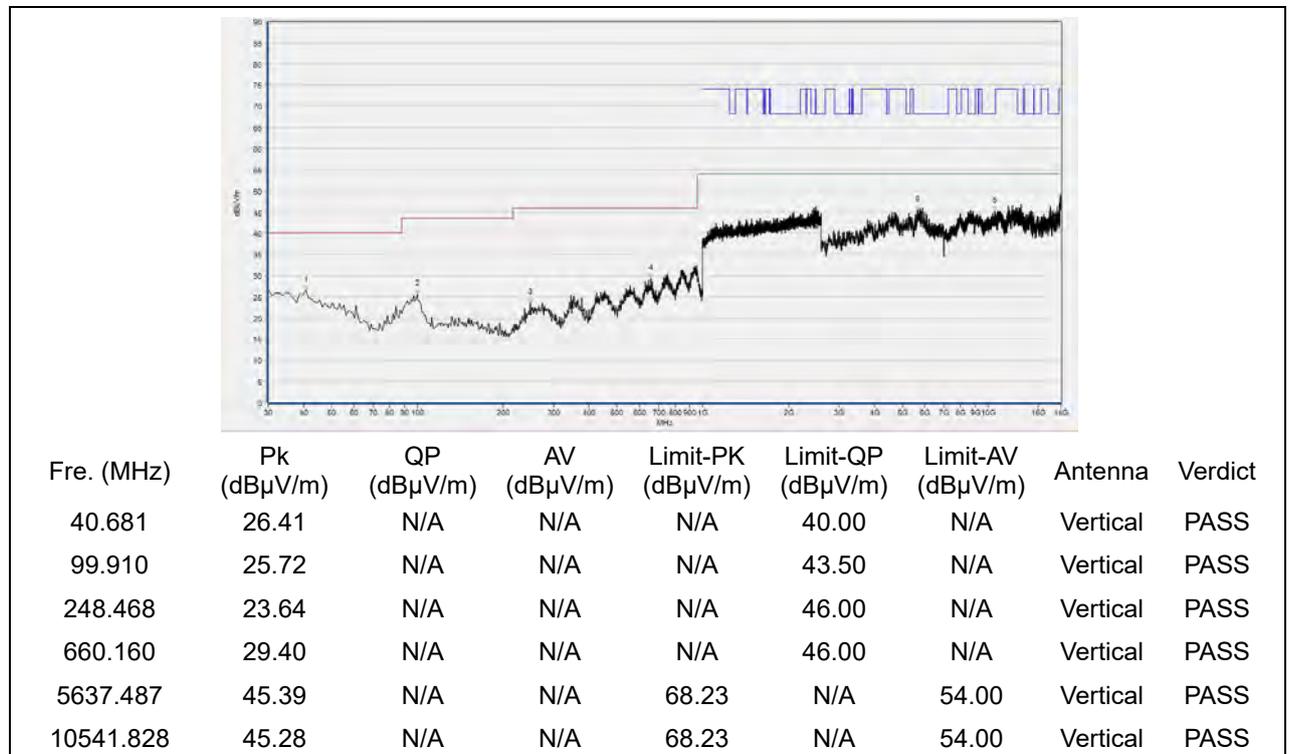
Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
33.884	27.20	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	25.68	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
359.159	25.92	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1000.000	38.65	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5243.169	52.51	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10480.216	48.93	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149

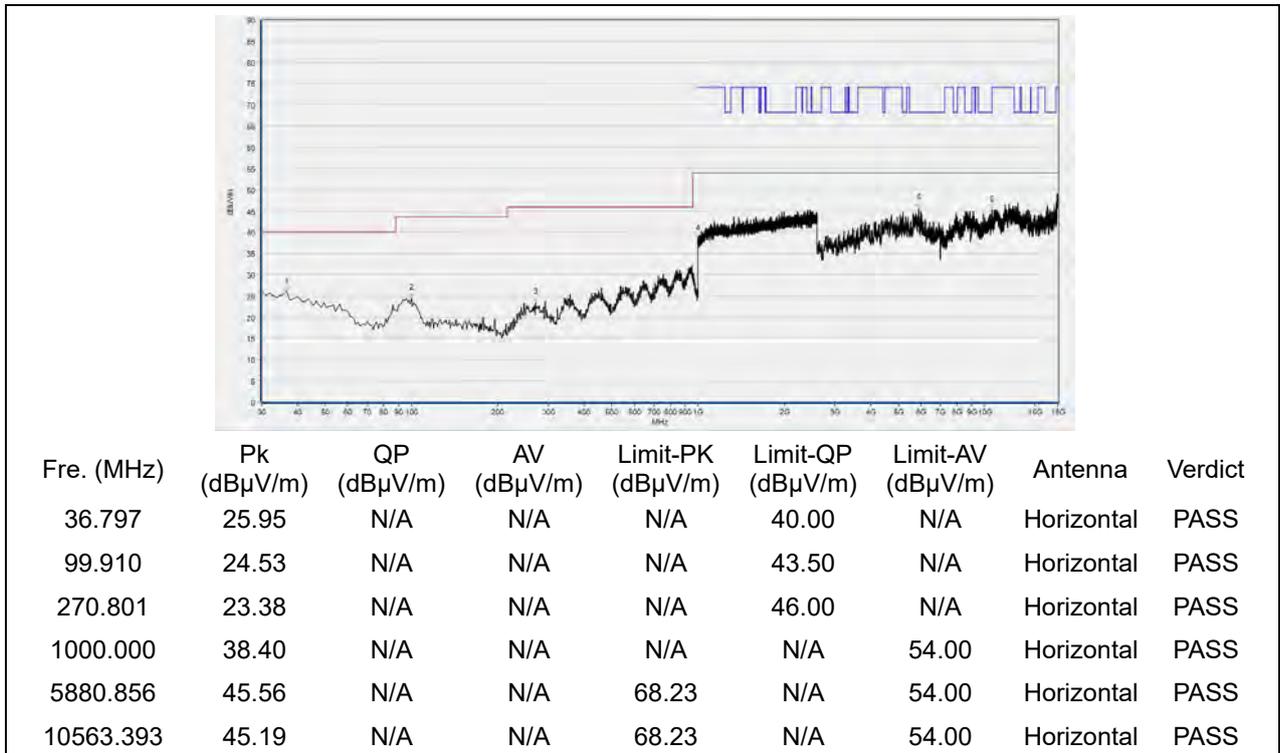


(Antenna Horizontal, 30MHz to 25GHz)

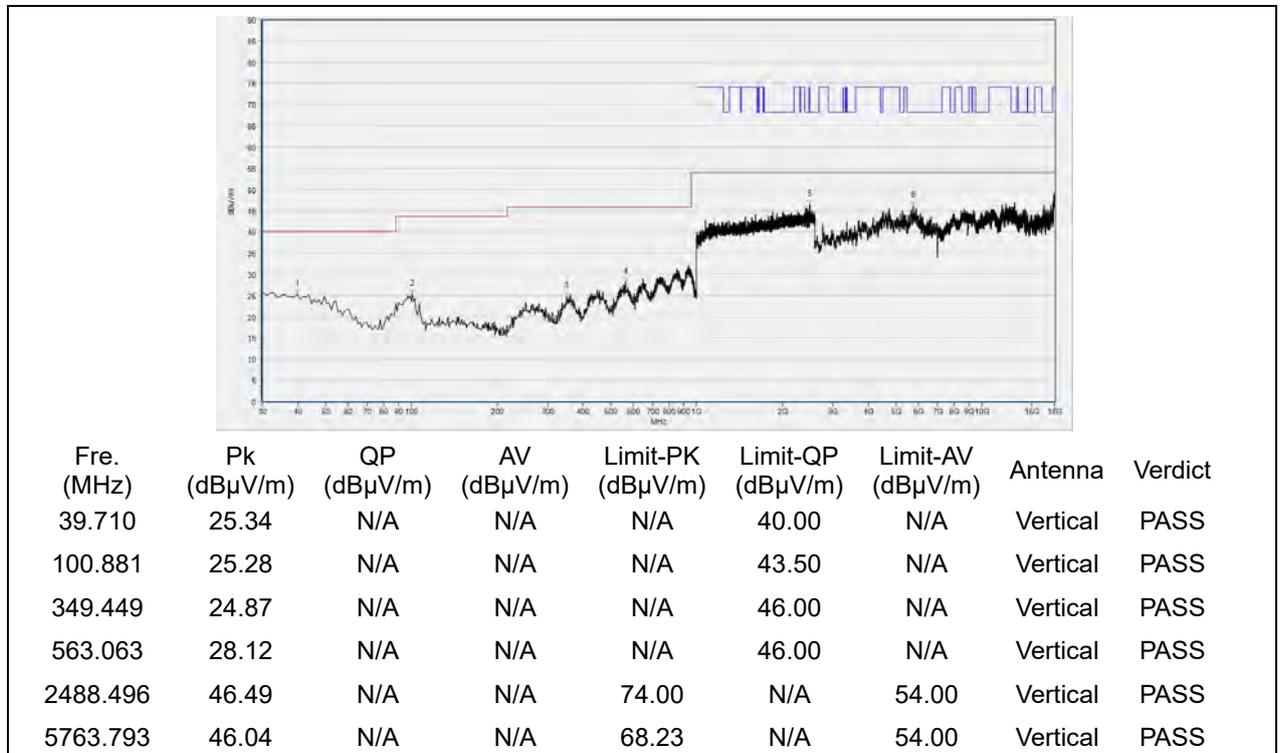


(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 157

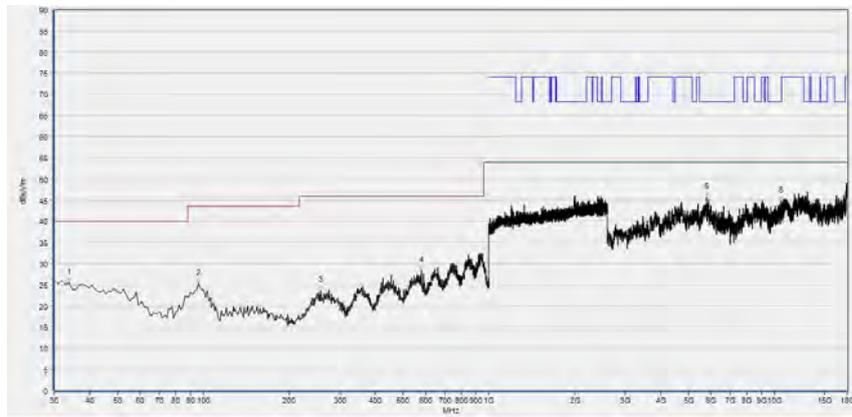


(Antenna Horizontal, 30MHz to 25GHz)



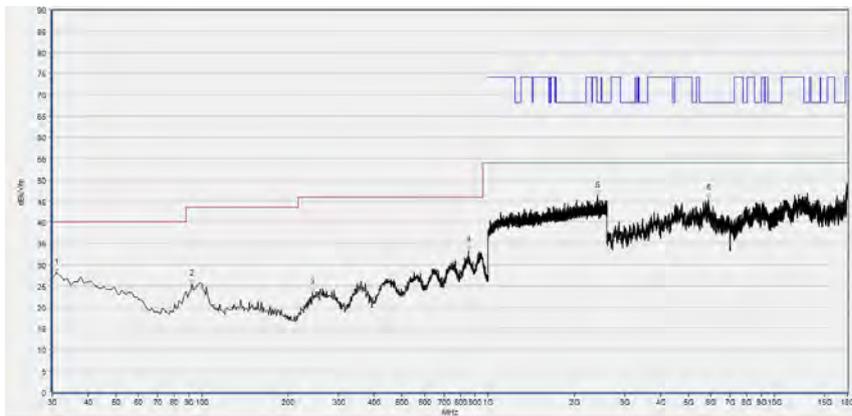
(Antenna Vertical, 30MHz to 25GHz)

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
33.884	25.40	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	25.35	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
258.178	23.58	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
579.570	28.38	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5732.357	45.73	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10541.828	44.81	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 25GHz)

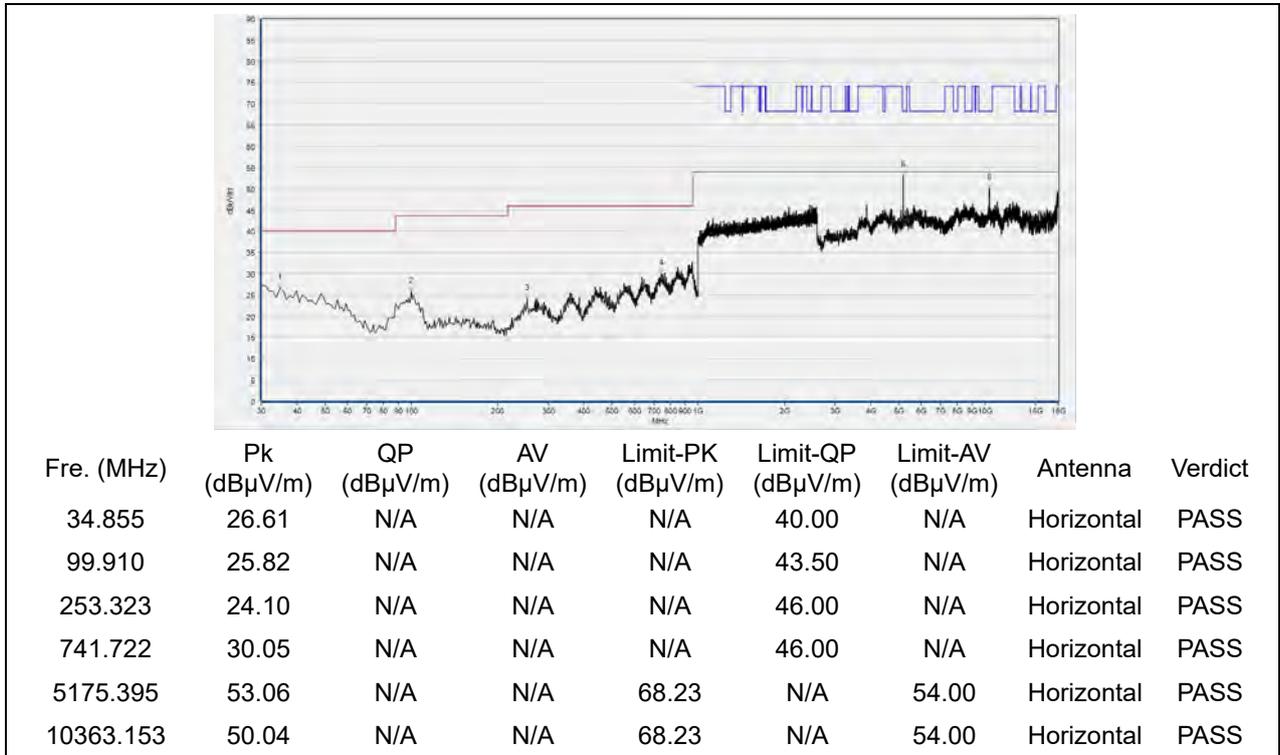


Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
30.971	28.12	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
92.142	25.55	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
243.614	23.50	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
855.325	33.37	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2406.869	46.21	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5871.614	45.52	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

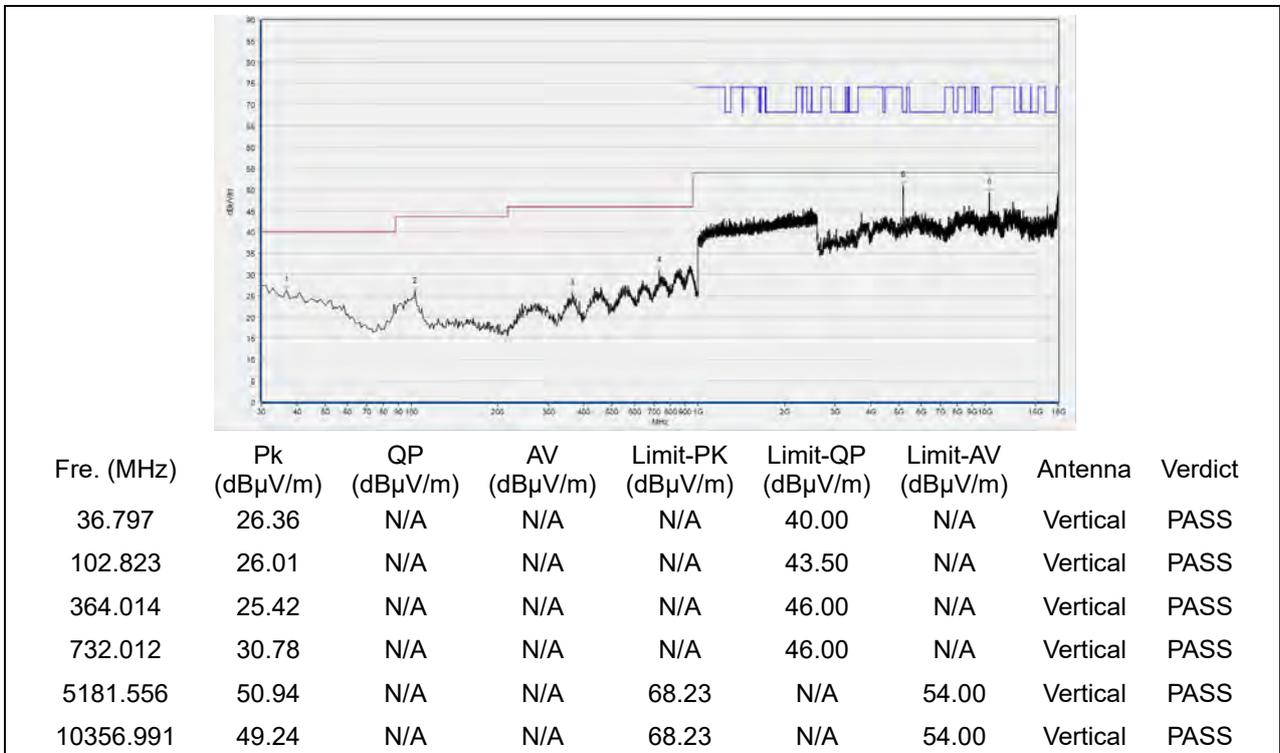
(Antenna Vertical, 30MHz to 25GHz)

**802.11n (HT20) Test mode**

Plots for Channel = 36

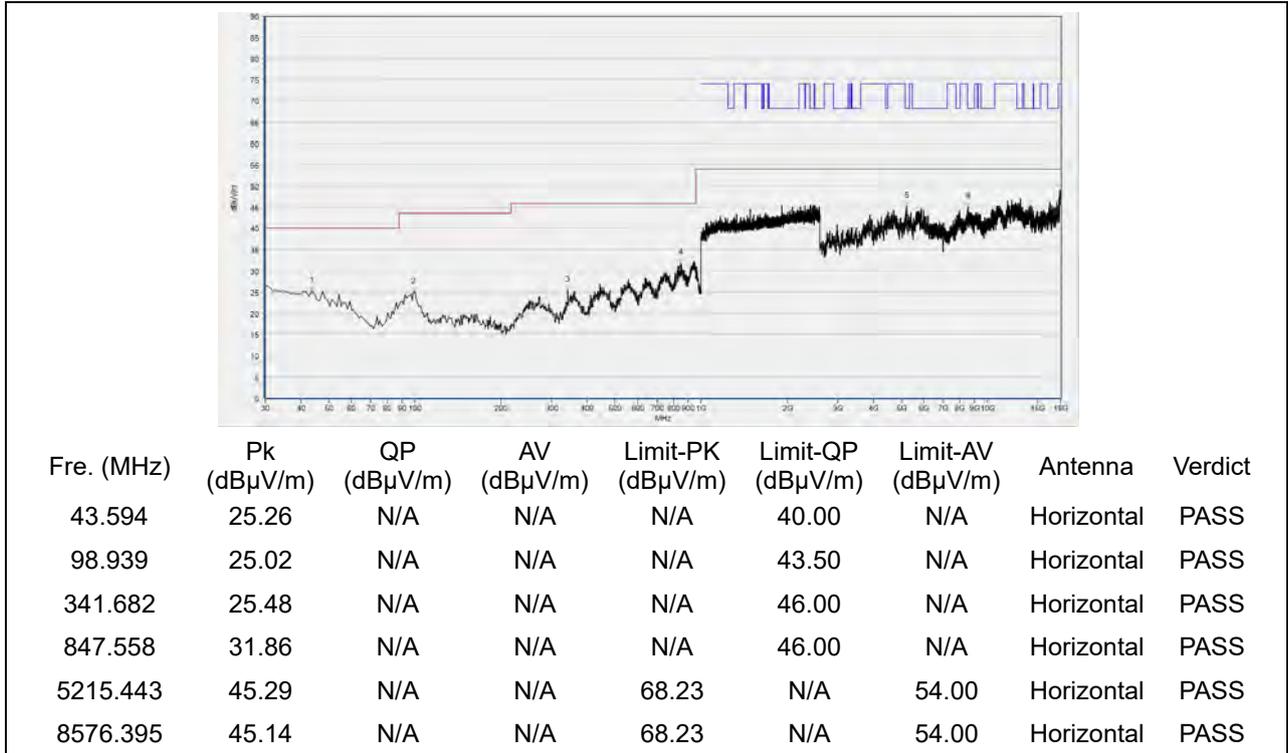


(Antenna Horizontal, 30MHz to 25GHz)

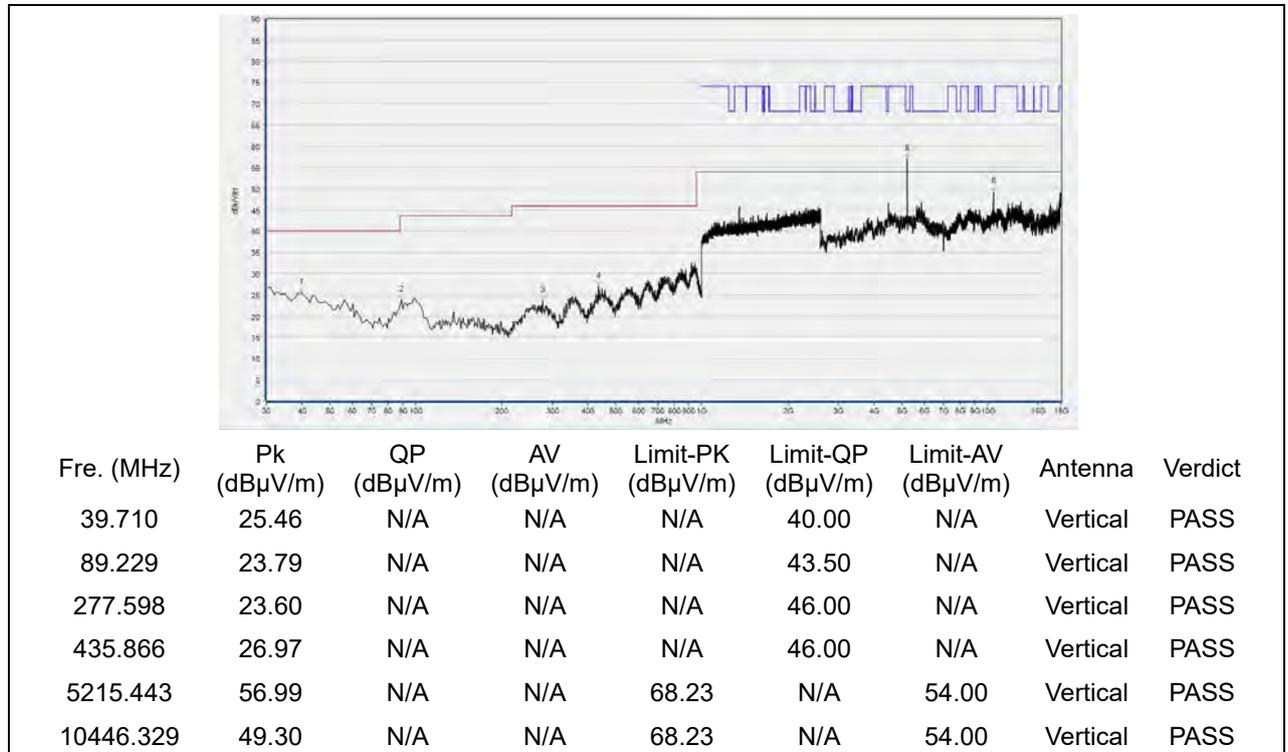


(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 44

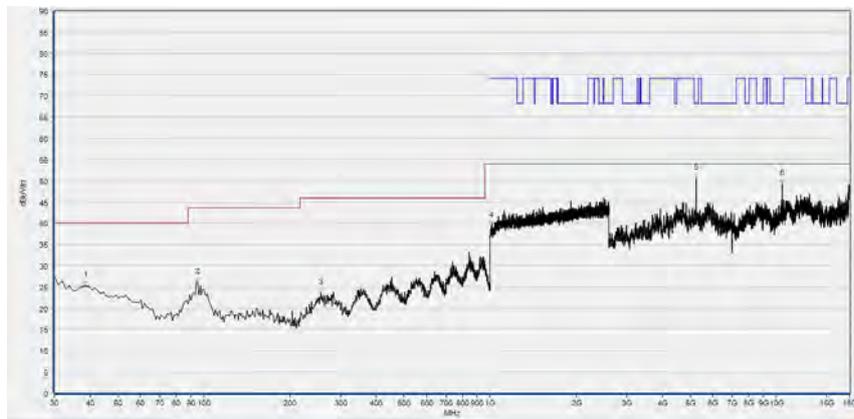


(Antenna Horizontal, 30MHz to 25GHz)



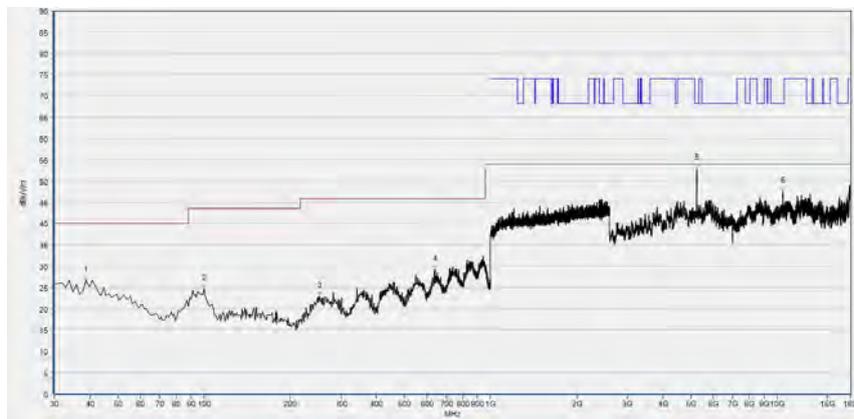
(Antenna Vertical, 30MHz to 25GHz)

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
38.739	25.25	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
95.055	26.11	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
256.236	23.71	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1007.469	39.41	N/A	N/A	N/A	N/A	54.00	Horizontal	PASS
5233.927	50.55	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10477.135	49.30	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

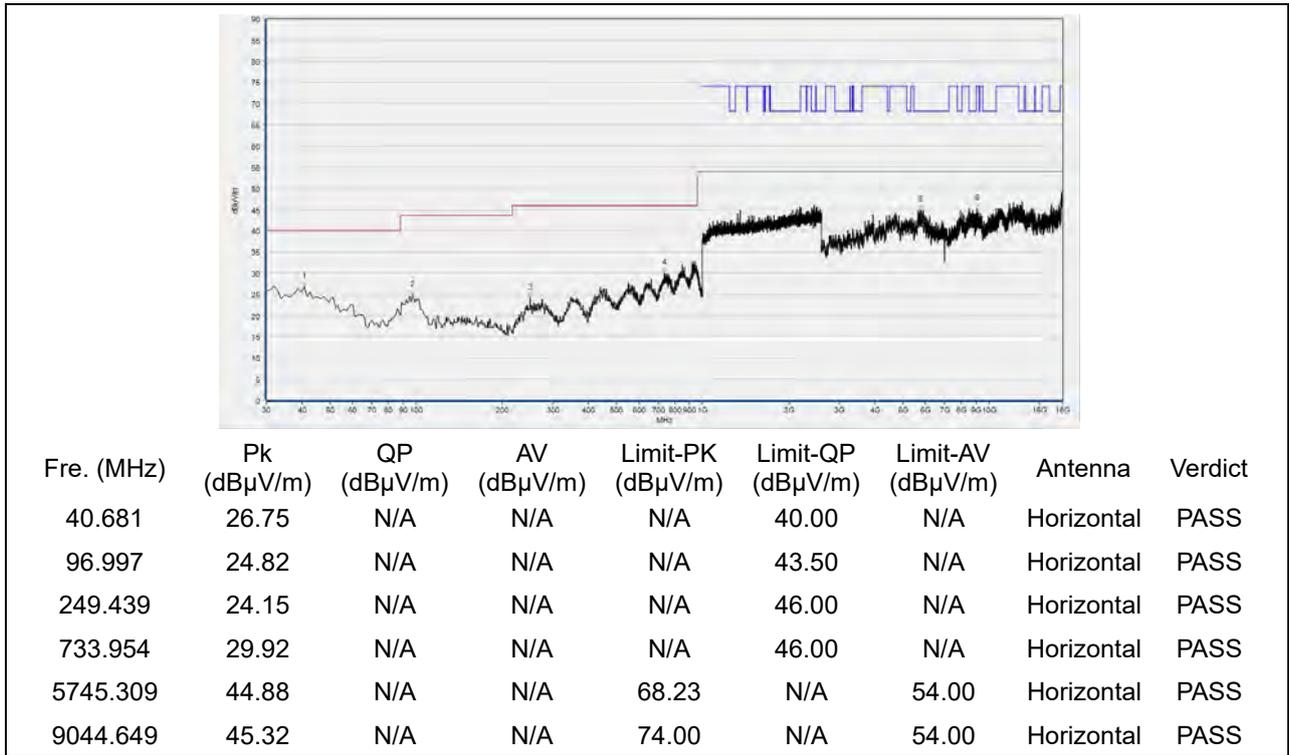
(Antenna Horizontal, 30MHz to 25GHz)



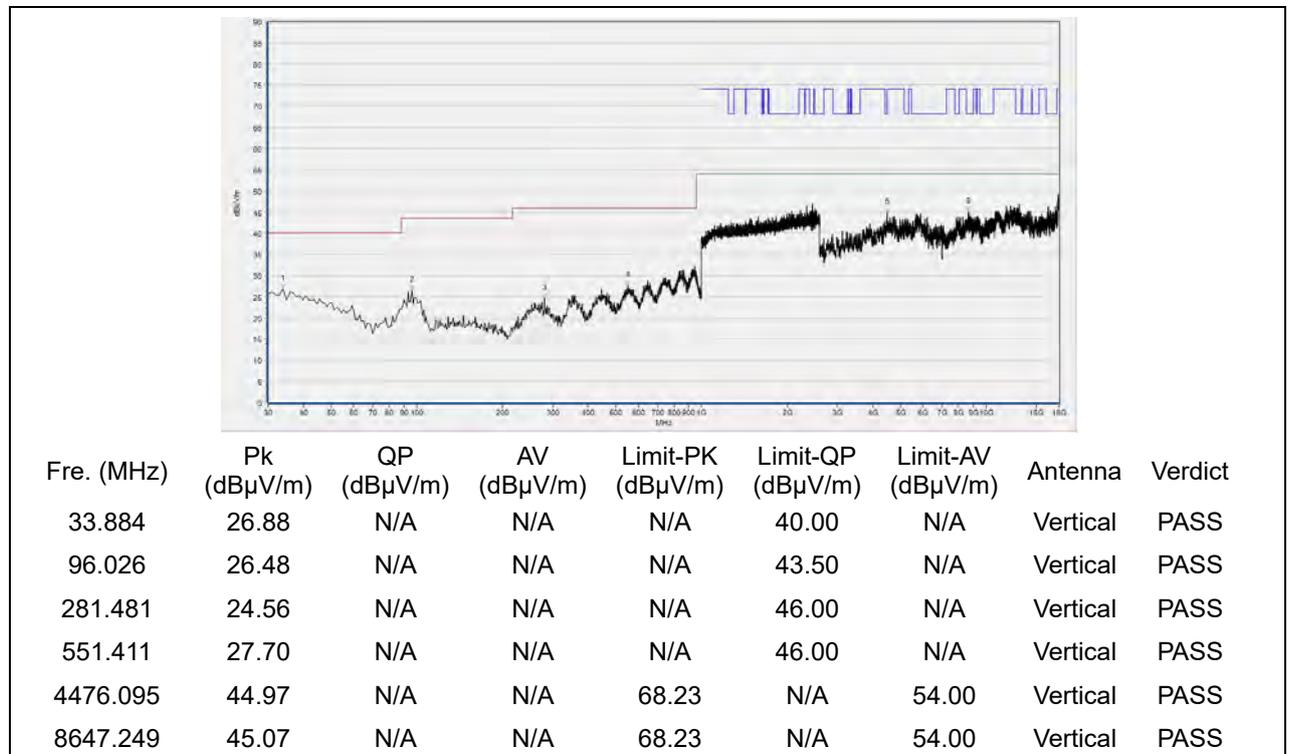
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
38.739	26.69	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	24.70	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
252.352	22.89	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
640.741	29.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5237.007	52.92	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10480.216	47.62	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149

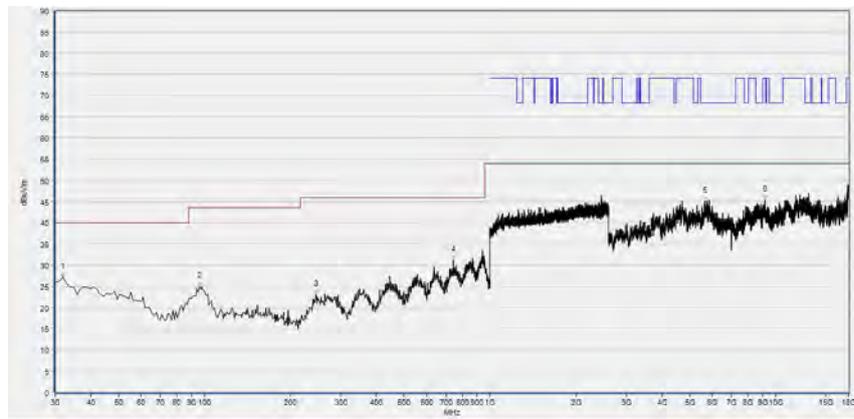


(Antenna Horizontal, 30MHz to 25GHz)



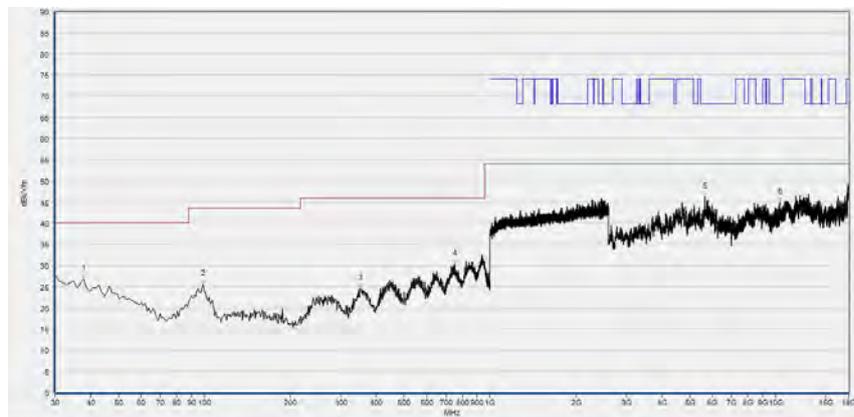
(Antenna Vertical, 30MHz to 25GHz)

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
31.942	27.13	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	25.00	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
245.556	23.10	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
743.664	31.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5649.810	45.07	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
9195.599	45.46	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

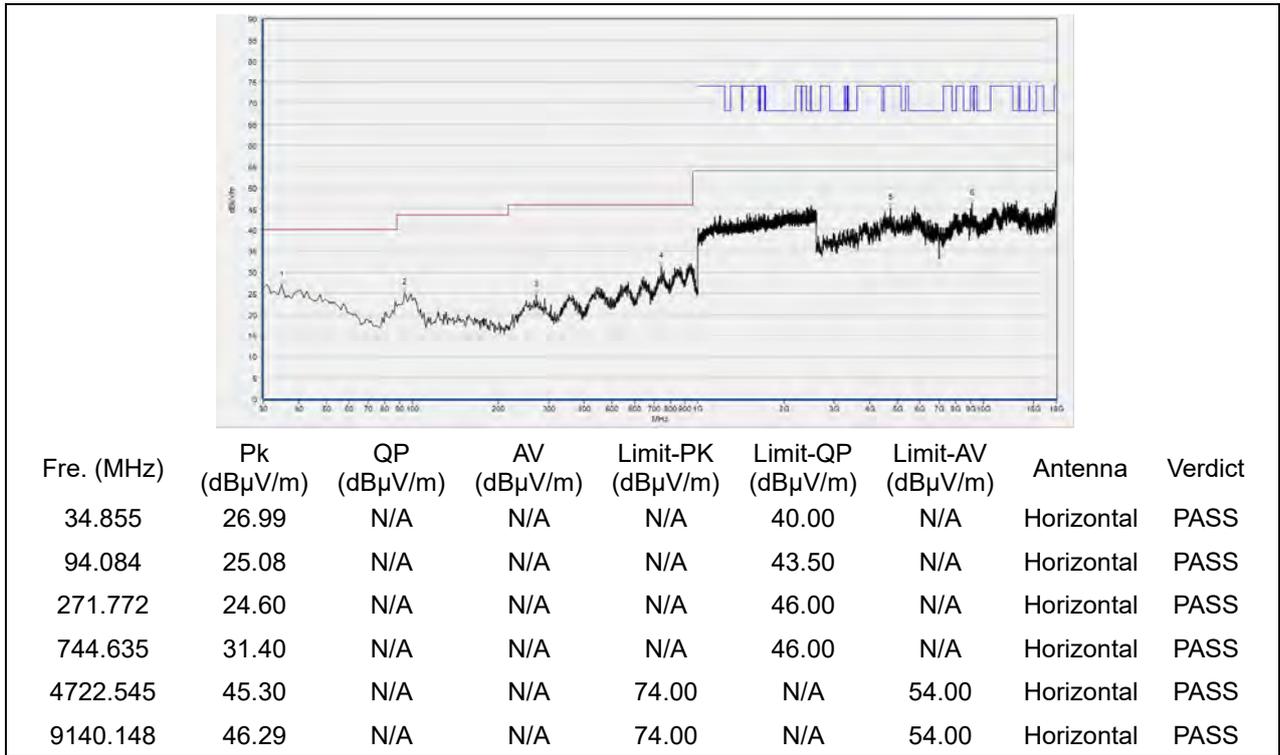
(Antenna Horizontal, 30MHz to 25GHz)



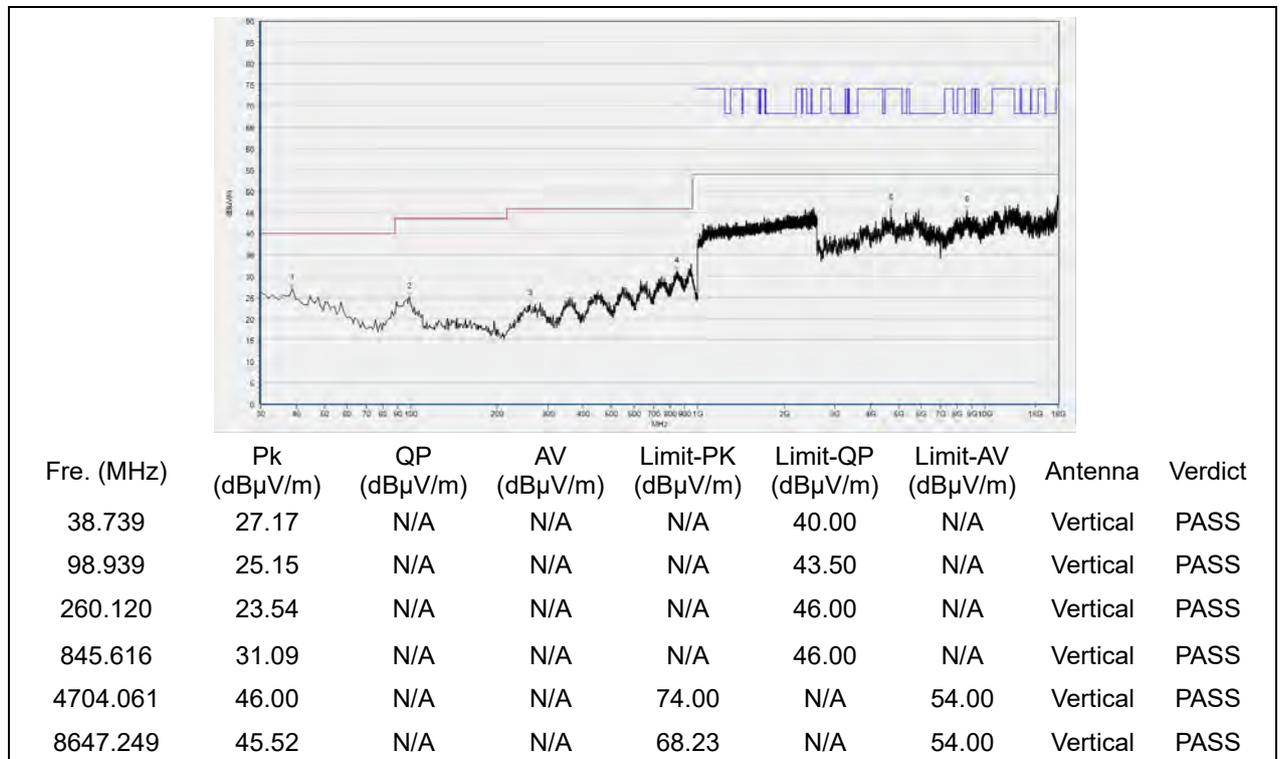
Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
37.768	26.86	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
98.939	25.59	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
350.420	24.69	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
751.431	30.39	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5643.649	46.22	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10323.105	44.97	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 165



(Antenna Horizontal, 30MHz to 25GHz)

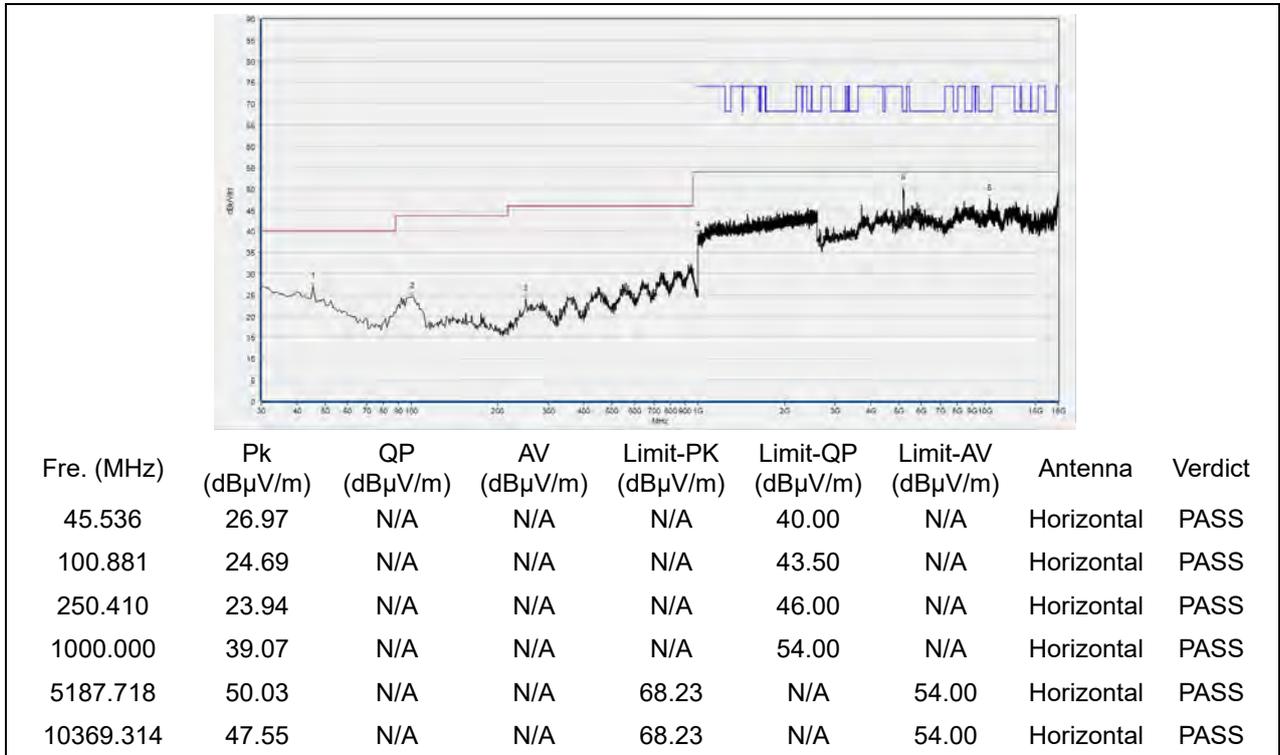


(Antenna Vertical, 30MHz to 25GHz)

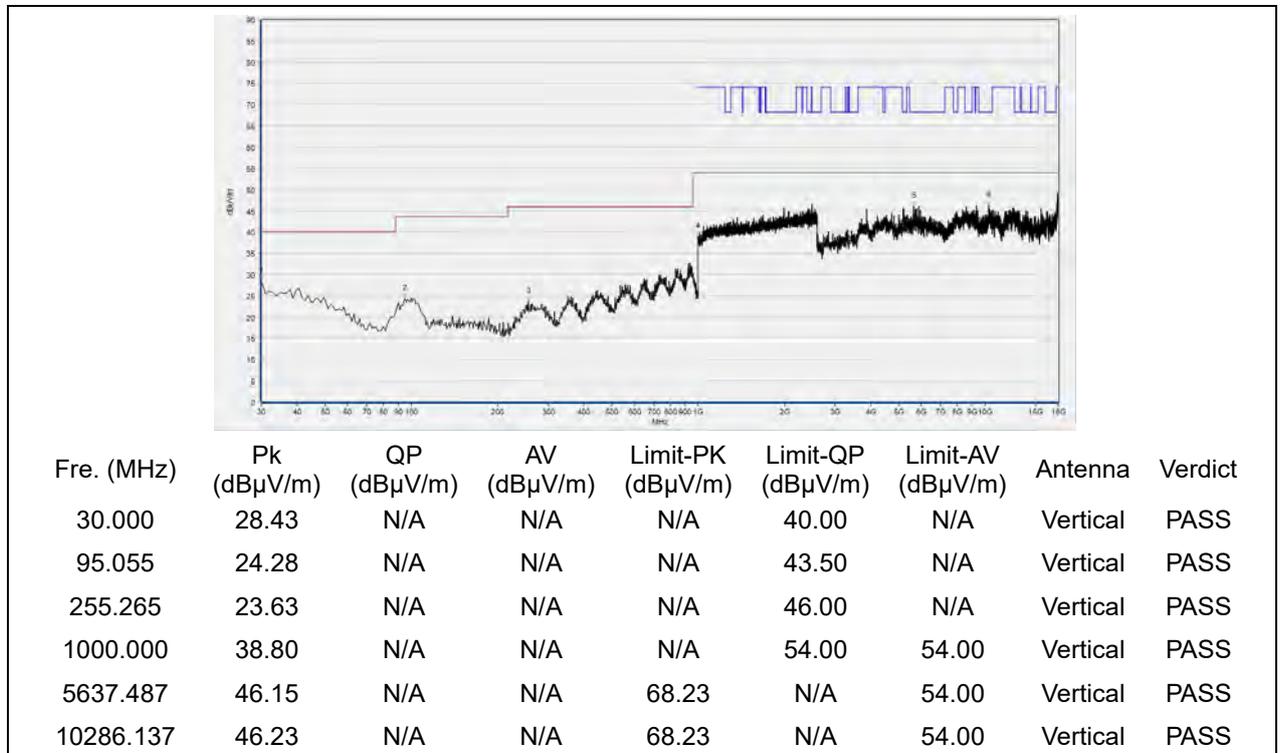


**802.11n (HT40) Test mode**

Plots for Channel = 38

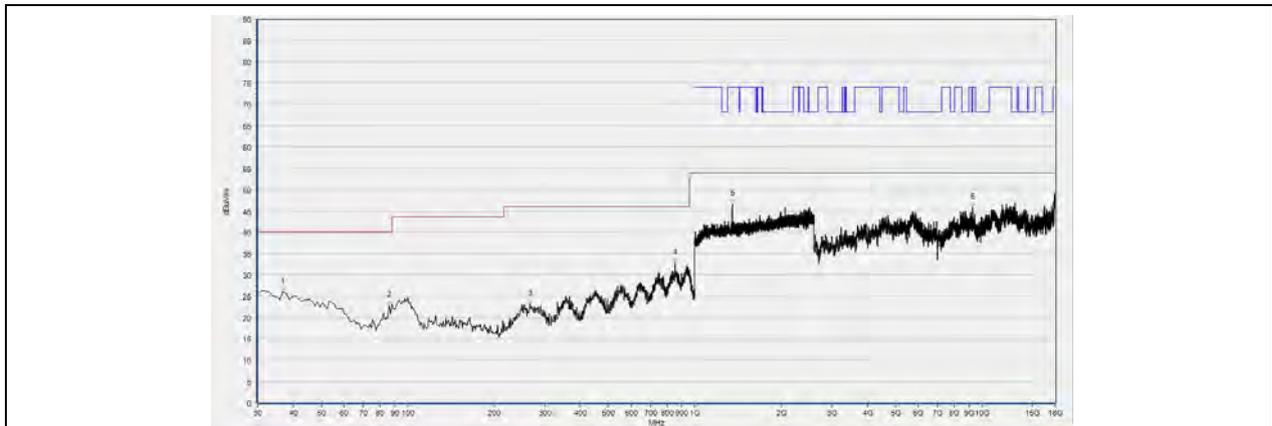


(Antenna Horizontal, 30MHz to 25GHz)



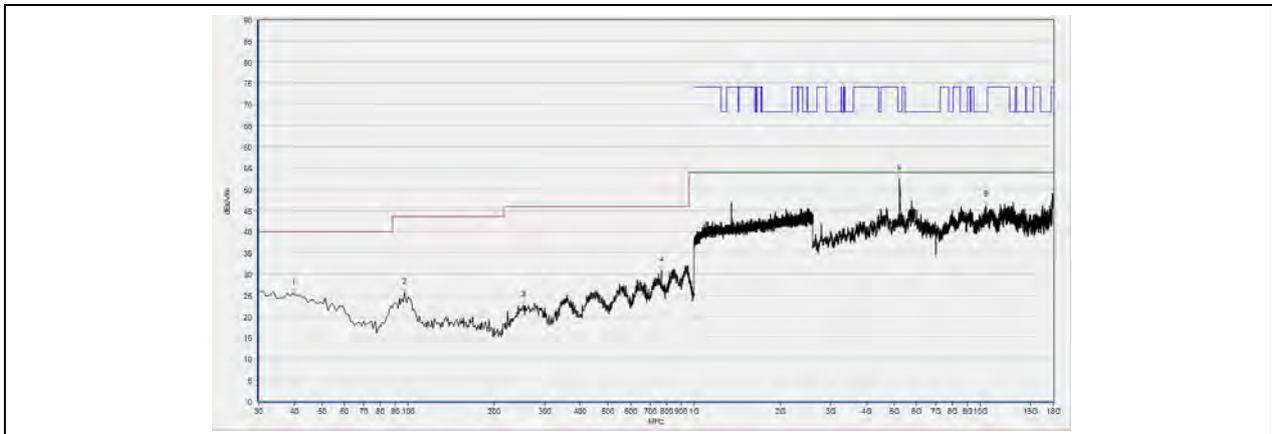
(Antenna Vertical, 30MHz to 25GHz)

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
36.797	25.99	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
86.316	22.79	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
266.917	23.07	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
851.441	32.71	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1349.983	46.67	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
9303.421	45.82	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

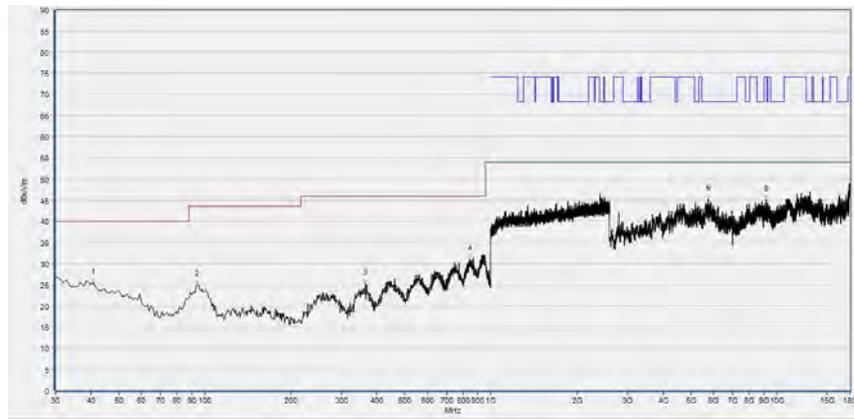
(Antenna Horizontal, 30MHz to 25GHz)



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
39.710	25.51	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	25.61	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
252.352	22.60	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
767.938	30.90	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5224.685	52.47	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10458.652	46.25	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

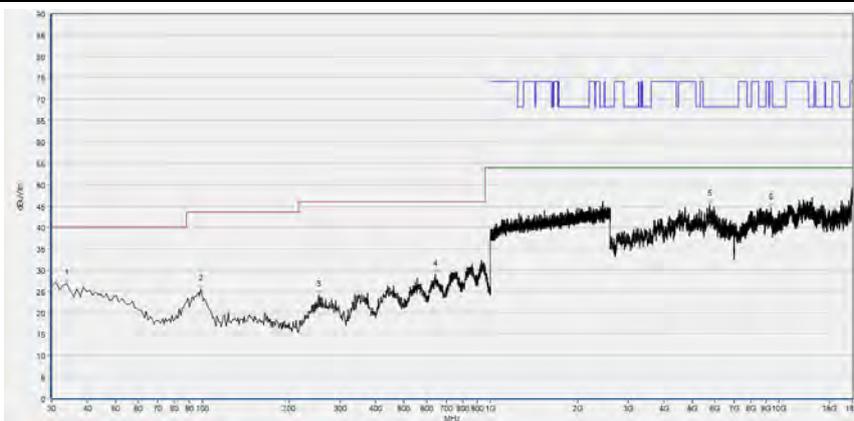
(Antenna Vertical, 30MHz to 25GHz)

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
40.681	25.43	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
94.084	24.91	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
364.014	25.23	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
842.703	30.96	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5760.712	45.19	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
9195.599	45.13	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

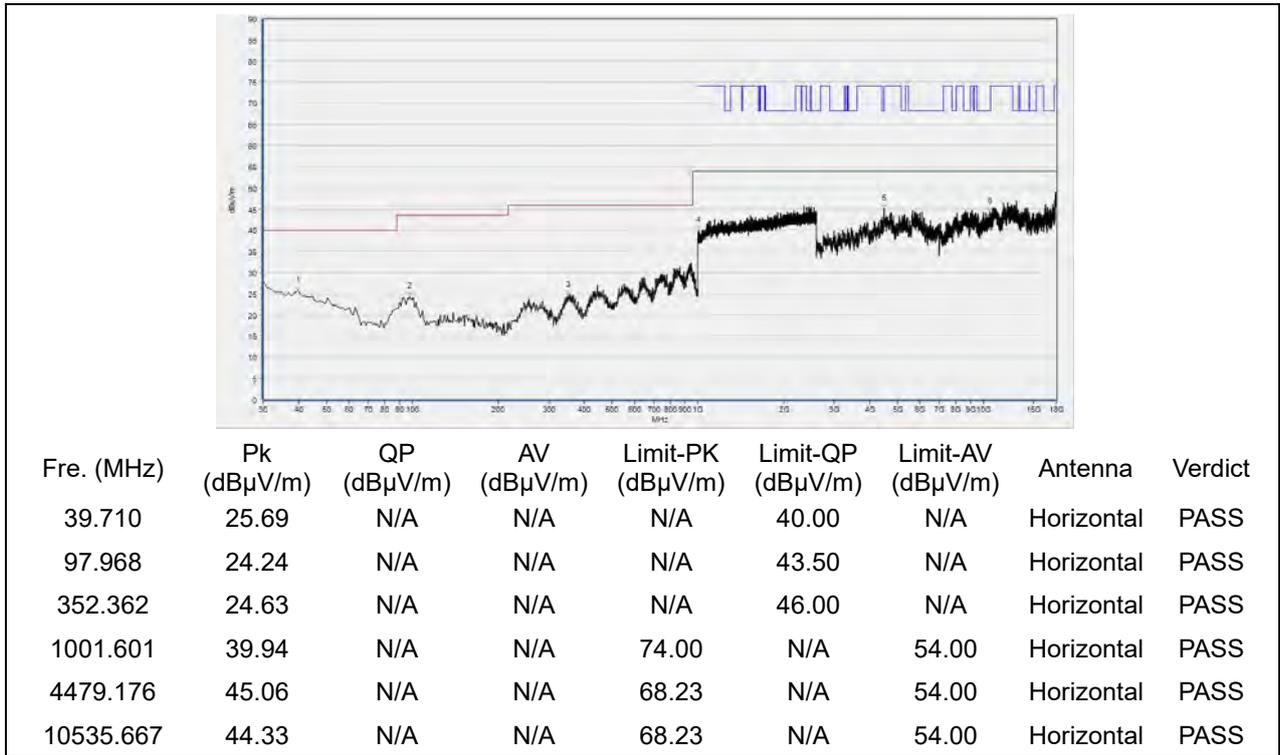
(Antenna Horizontal, 30MHz to 25GHz)



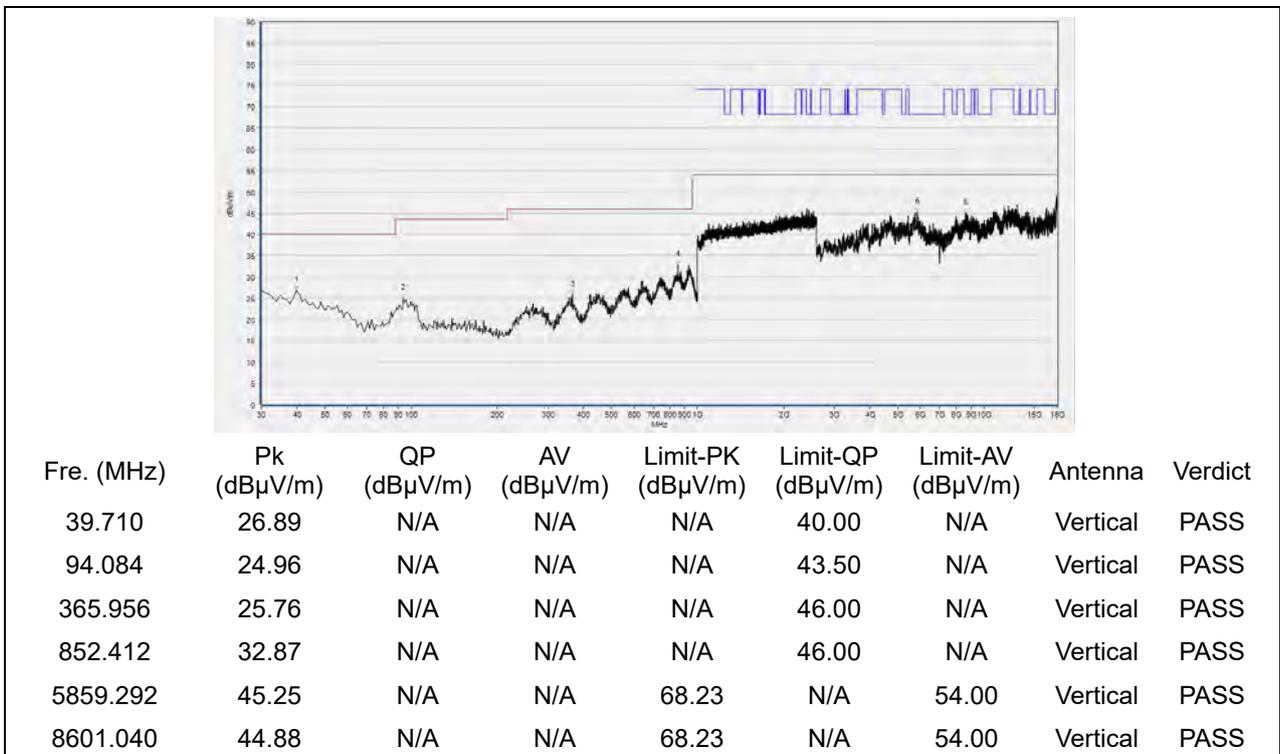
Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
33.884	26.74	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
98.939	25.53	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
252.352	24.20	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
642.683	28.94	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5766.873	45.44	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
9386.597	44.60	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 159



(Antenna Horizontal, 30MHz to 25GHz)

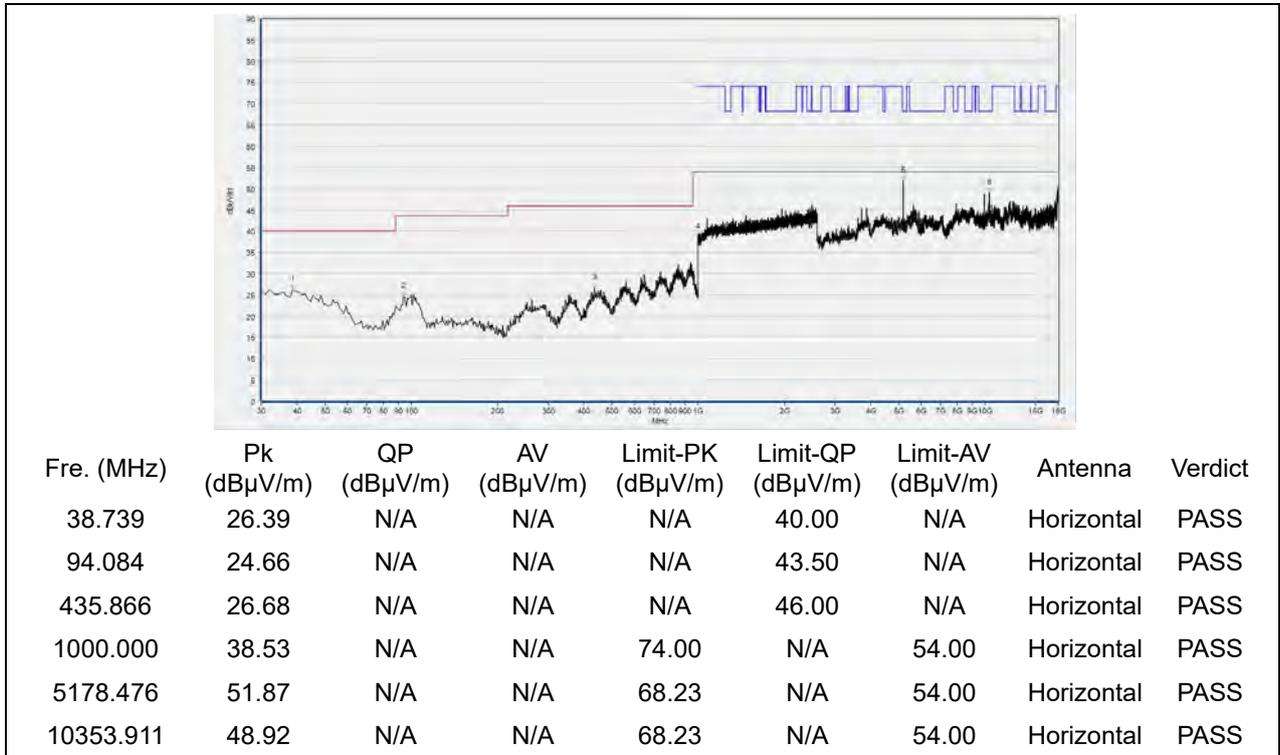


(Antenna Vertical, 30MHz to 25GHz)

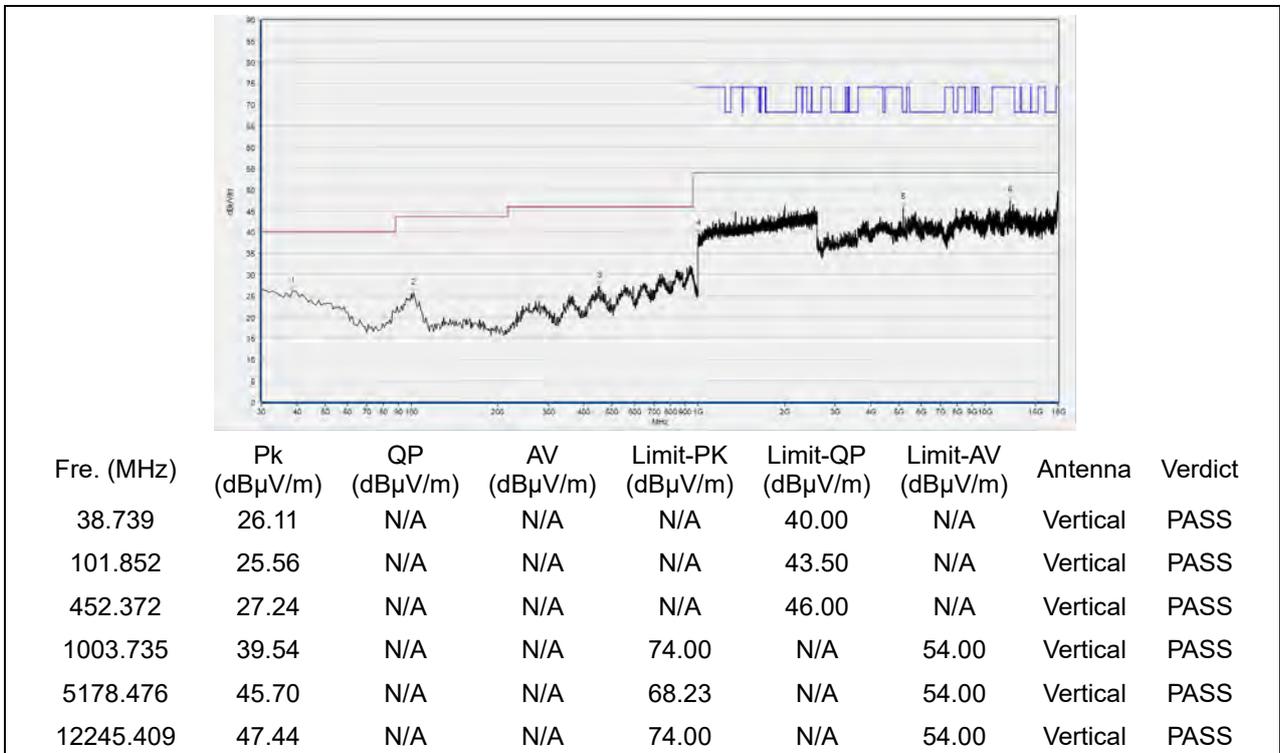


802.11ac (VHT20) Test mode

Plots for Channel = 36

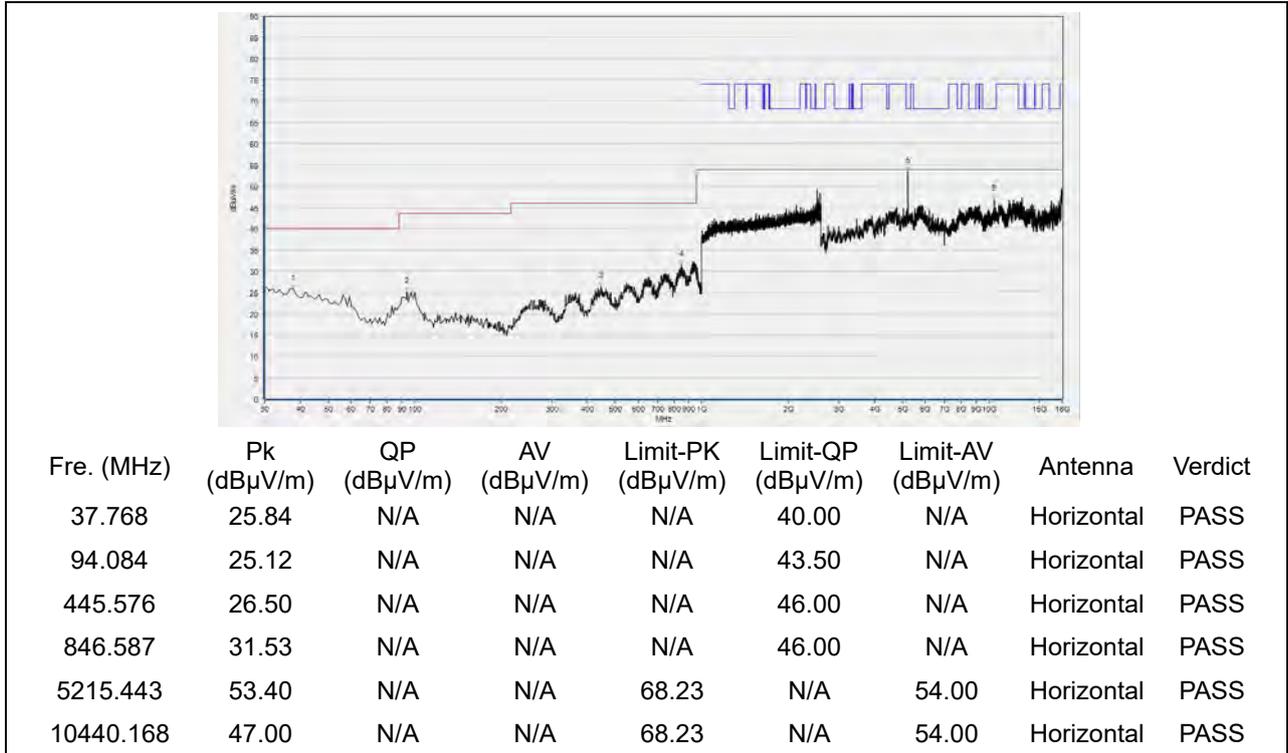


(Antenna Horizontal, 30MHz to 25GHz)

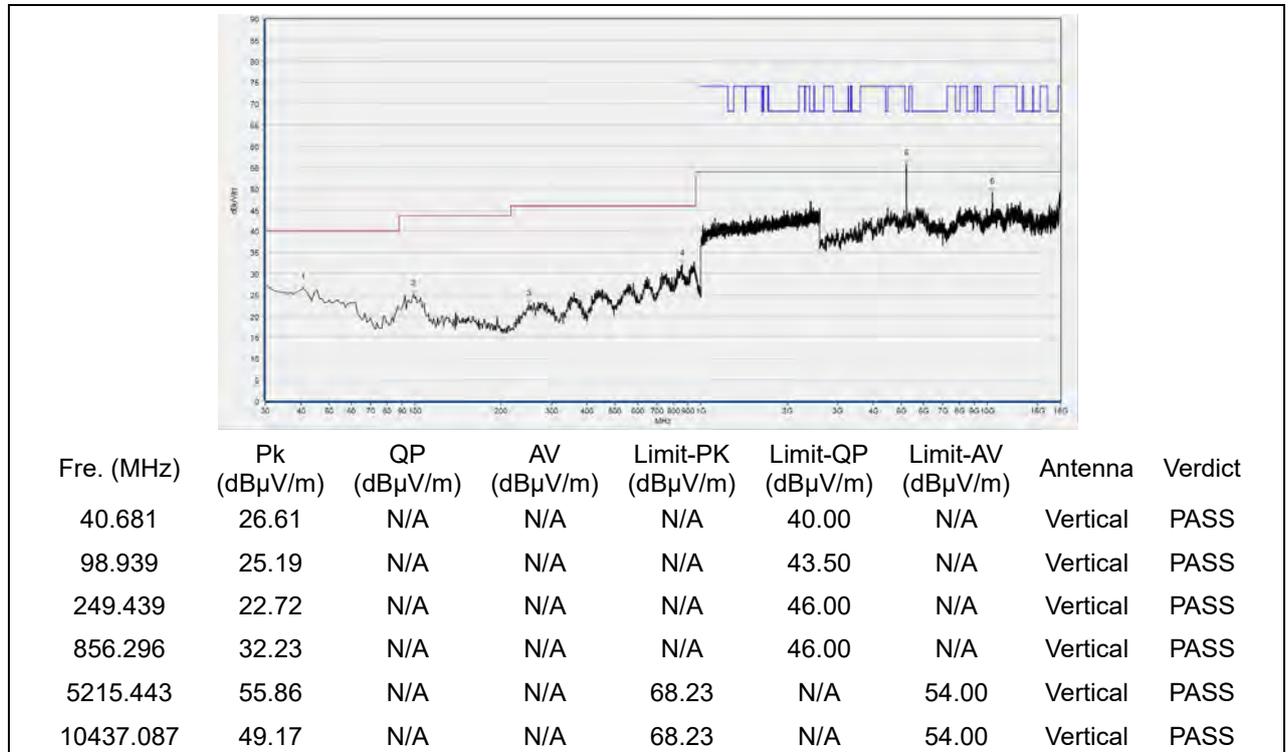


(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 44

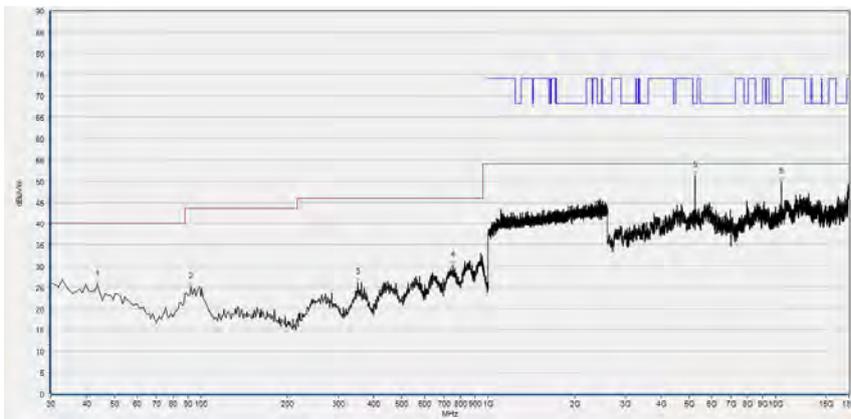


(Antenna Horizontal, 30MHz to 25GHz)



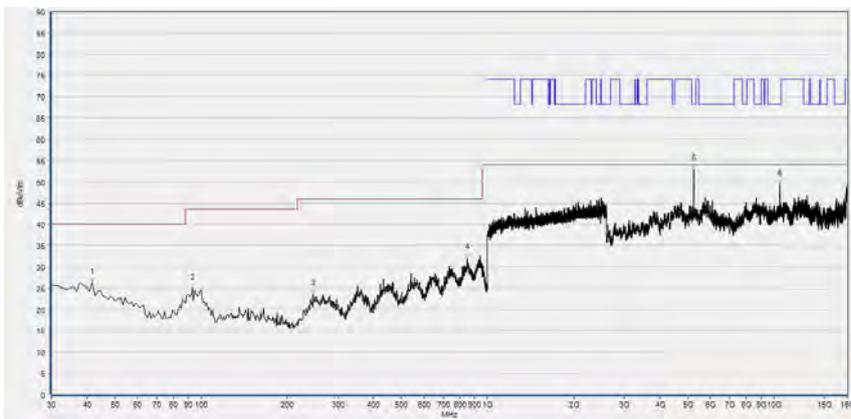
(Antenna Vertical, 30MHz to 25GHz)

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
43.594	25.57	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
92.142	25.10	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
352.362	26.11	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
751.431	30.22	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5237.007	51.36	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10480.216	49.84	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

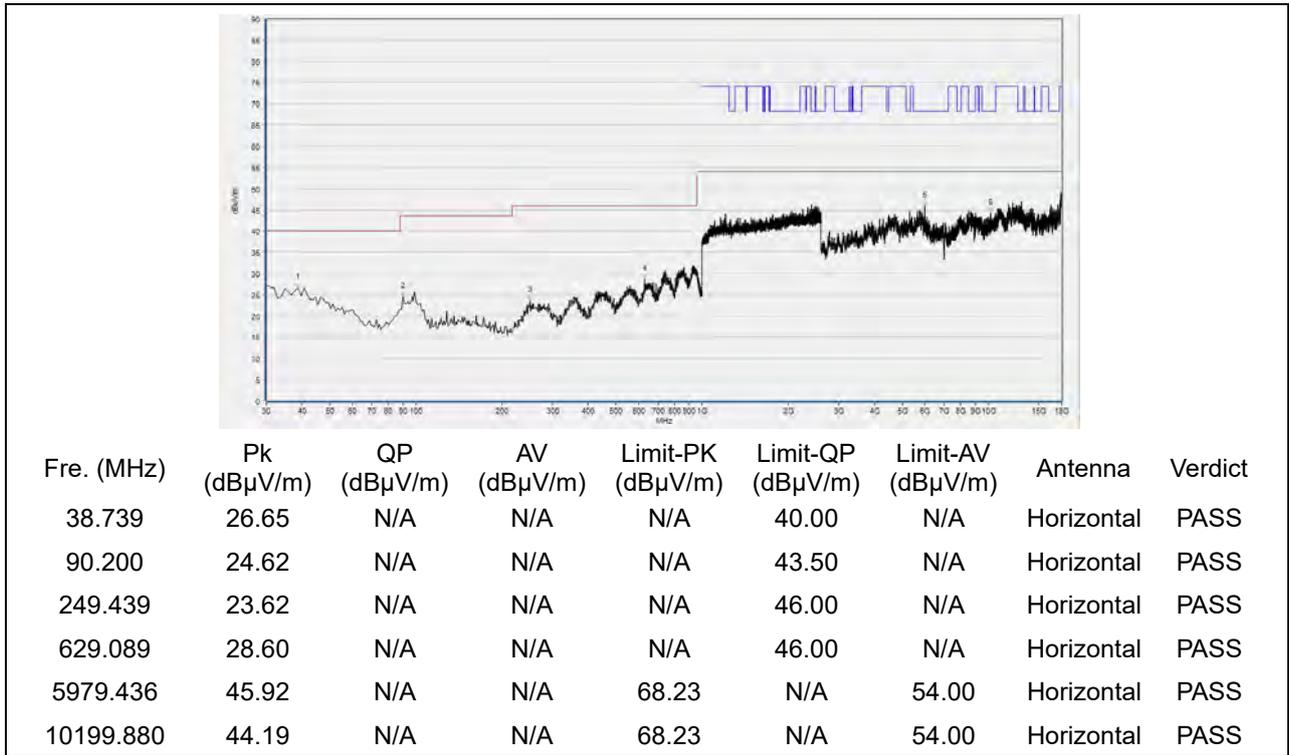
(Antenna Horizontal, 30MHz to 25GHz)



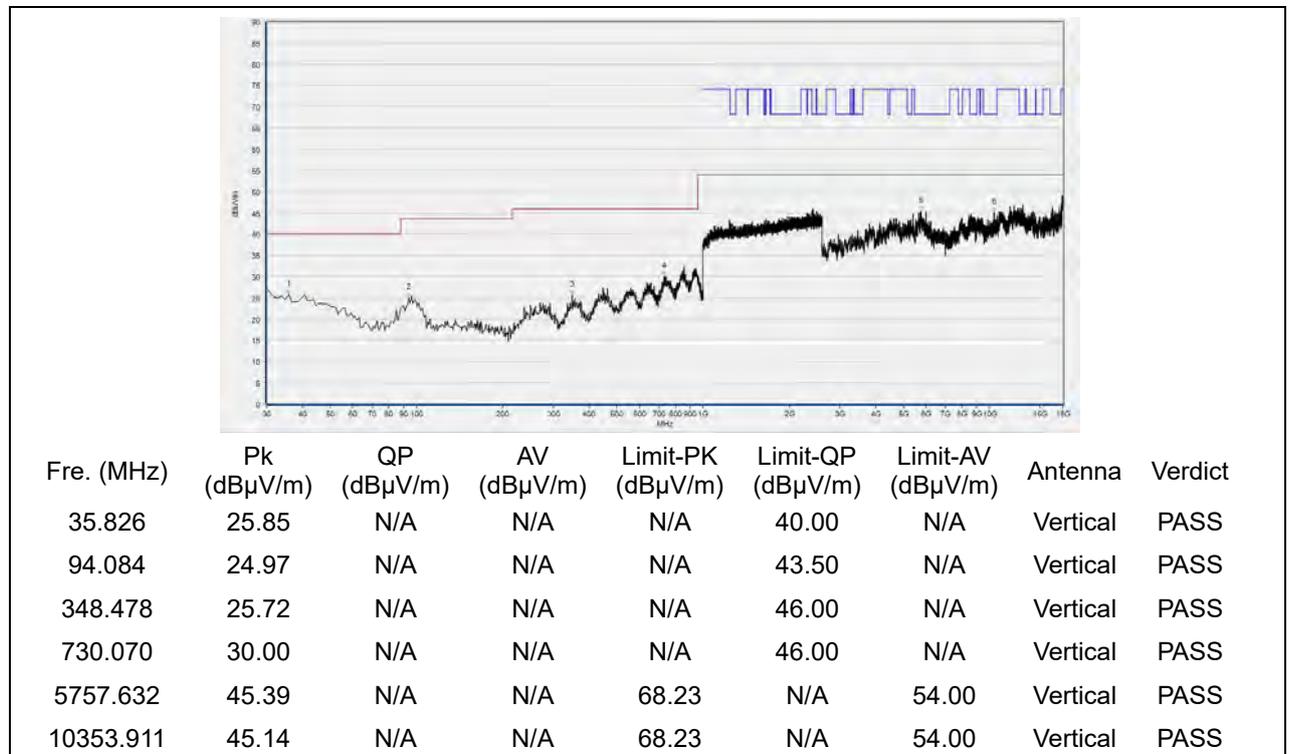
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
41.652	26.36	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
93.113	24.98	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.527	23.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
848.529	32.25	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5240.088	52.90	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10477.135	49.51	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149

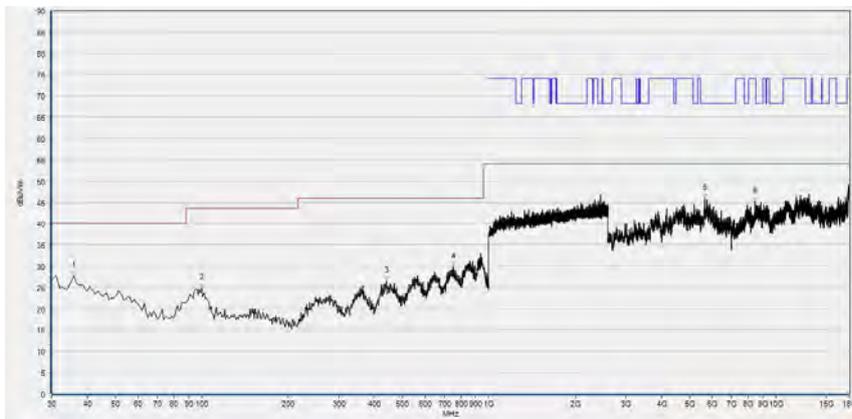


(Antenna Horizontal, 30MHz to 25GHz)



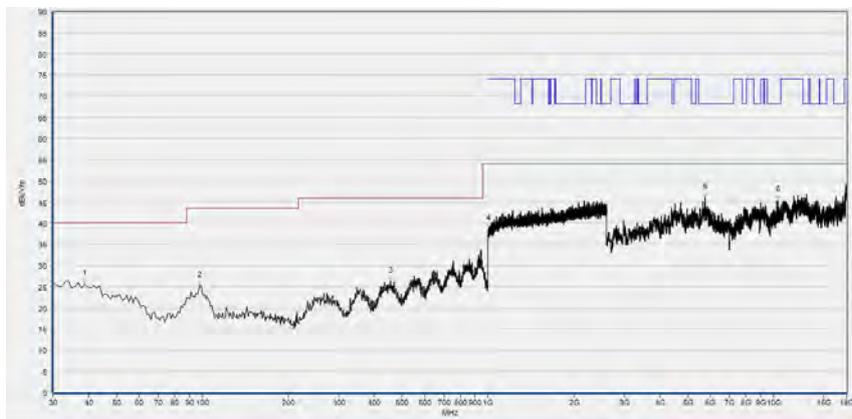
(Antenna Vertical, 30MHz to 25GHz)

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
35.826	27.61	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	24.85	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
438.779	26.46	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
751.431	29.76	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5643.649	45.95	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
8477.816	45.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

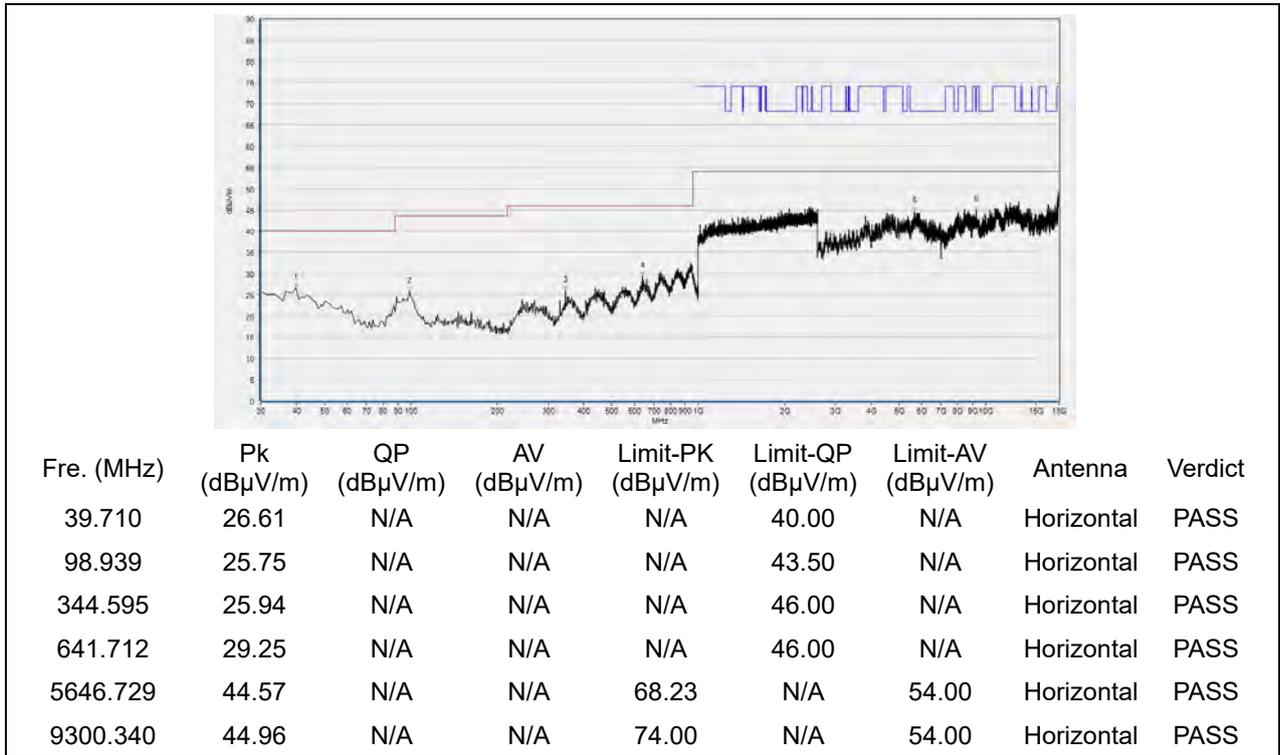
(Antenna Horizontal, 30MHz to 25GHz)



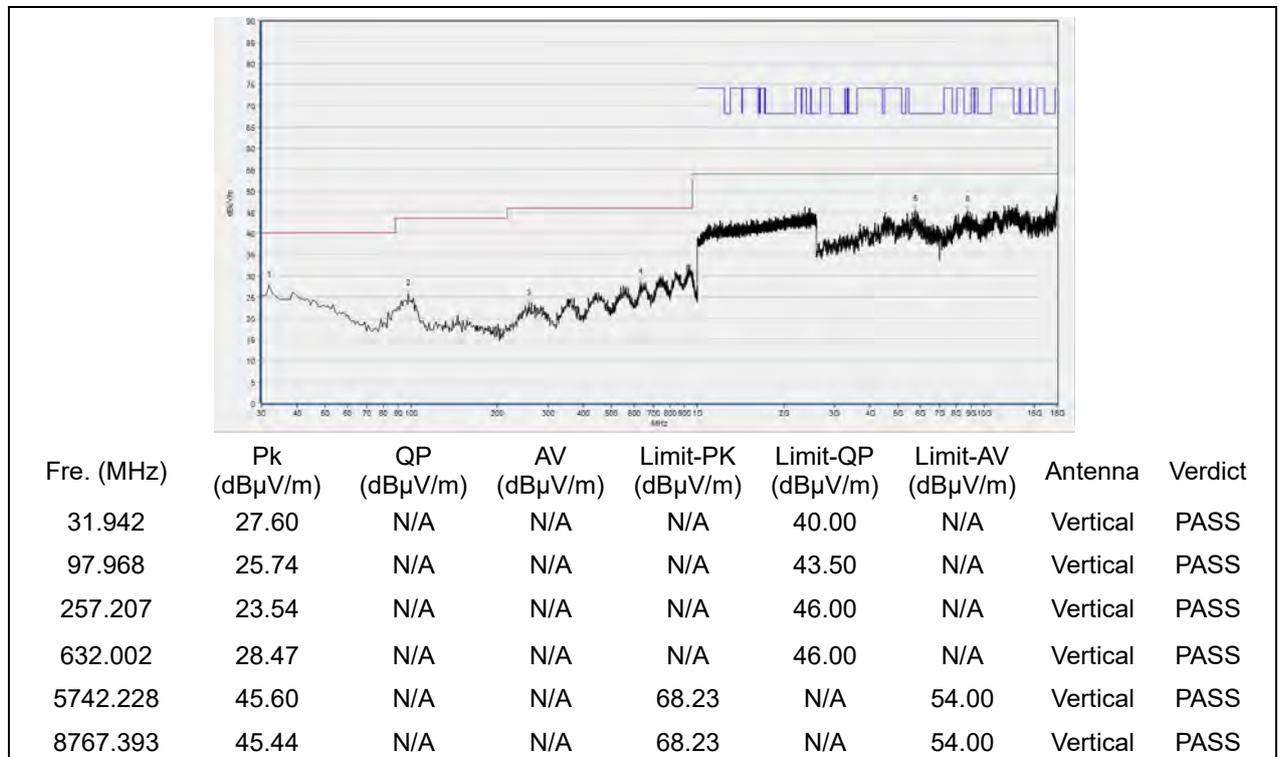
Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
38.739	25.66	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
97.968	25.22	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
455.285	26.38	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1005.869	38.65	N/A	N/A	N/A	N/A	54.00	Vertical	PASS
5719.228	46.09	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10335.427	45.44	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 165



(Antenna Horizontal, 30MHz to 25GHz)

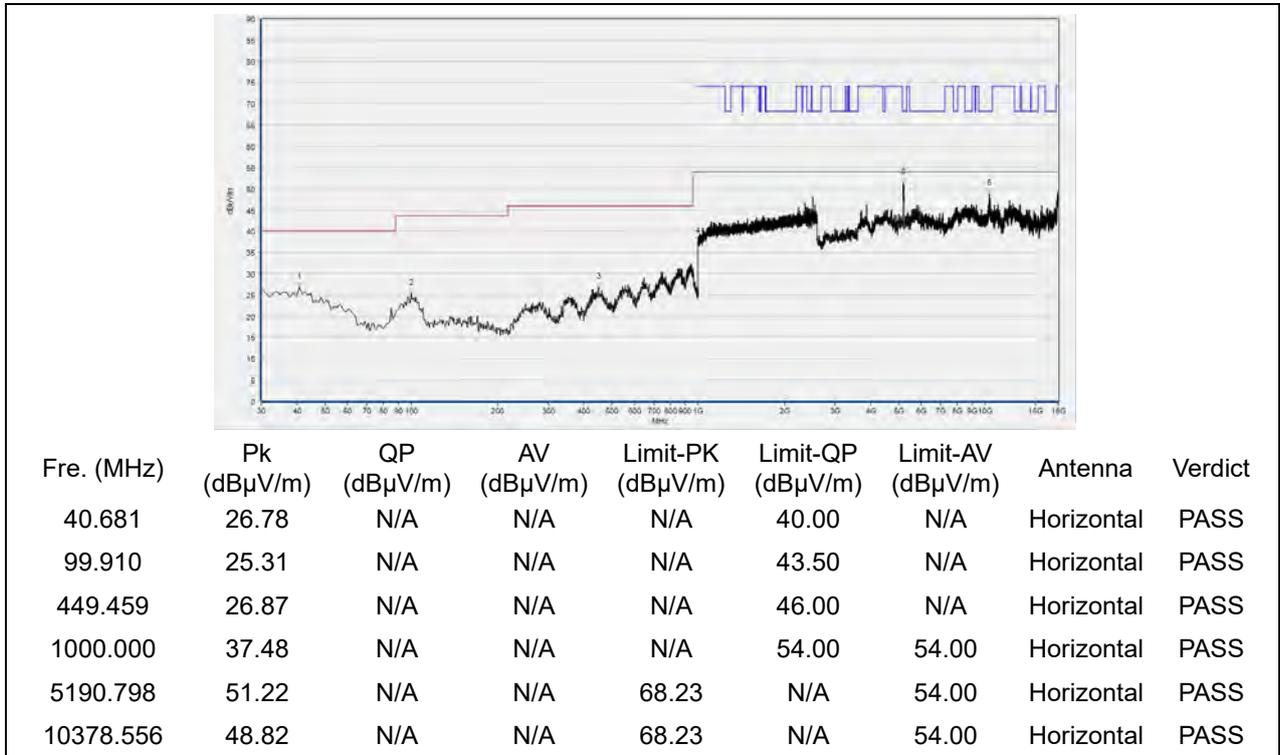


(Antenna Vertical, 30MHz to 25GHz)

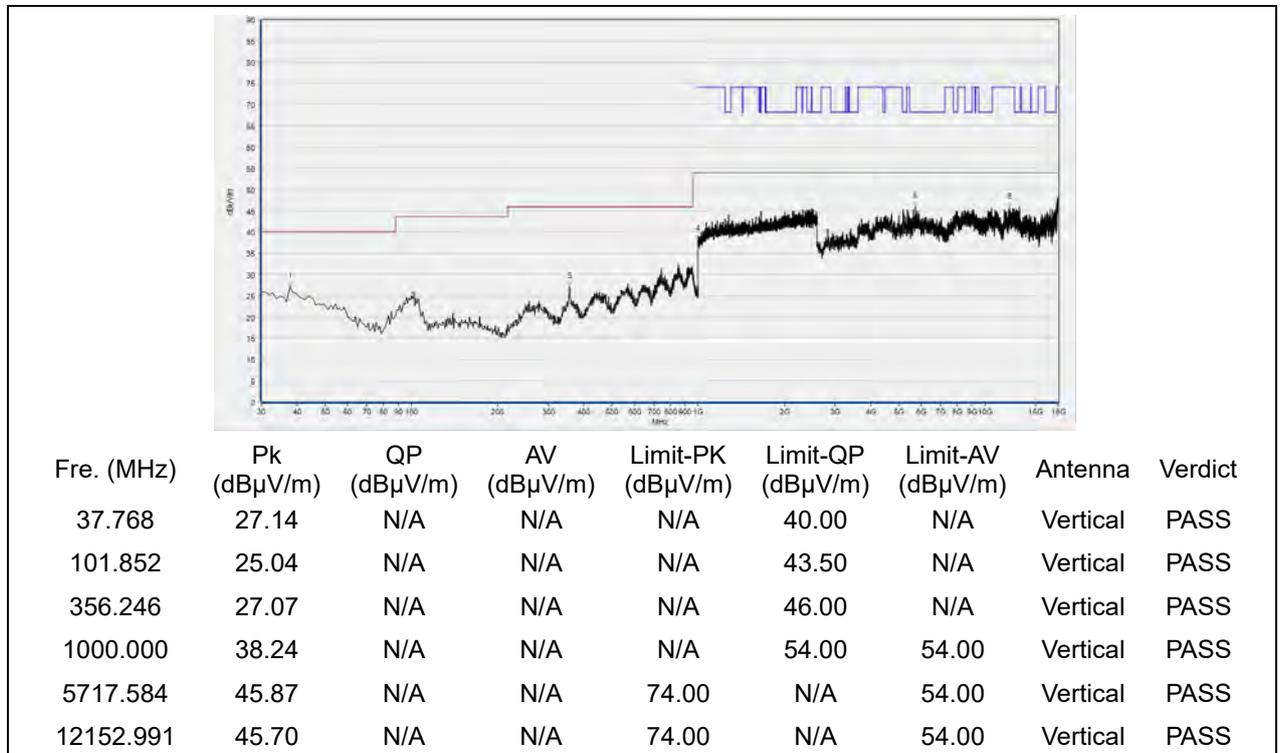


**802.11ac (VHT40) Test mode**

Plots for Channel = 38

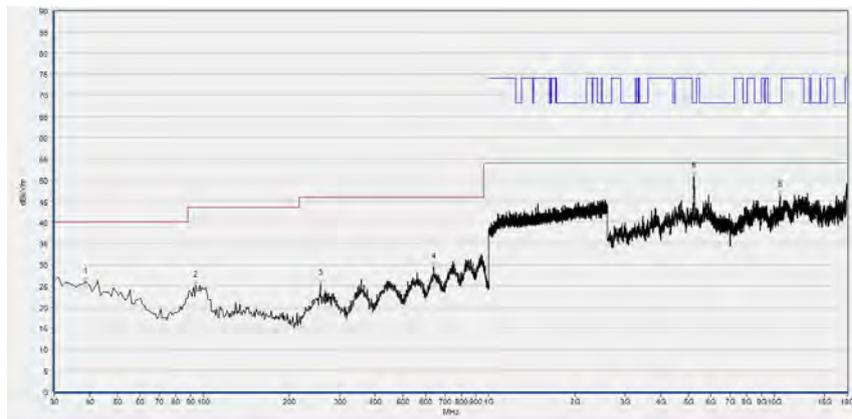


(Antenna Horizontal, 30MHz to 25GHz)



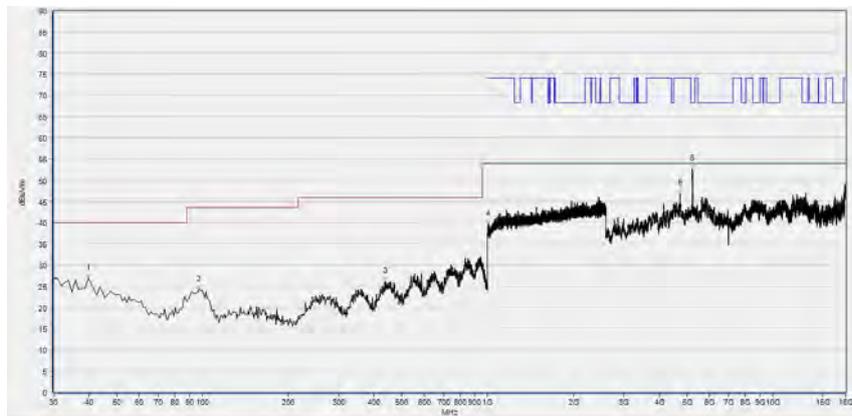
(Antenna Vertical, 30MHz to 25GHz)

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
38.739	25.91	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
94.084	25.12	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
257.207	25.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
641.712	29.50	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5221.604	51.03	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10477.135	46.35	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

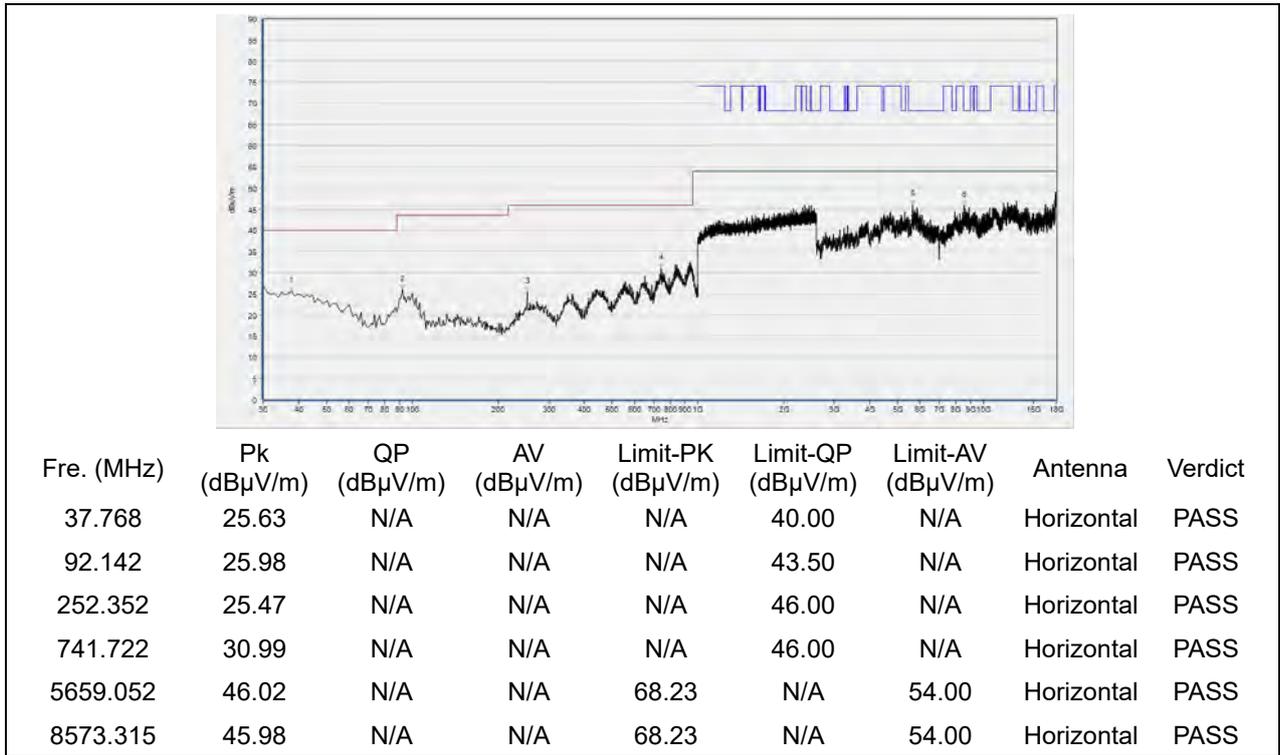
(Antenna Horizontal, 30MHz to 25GHz)



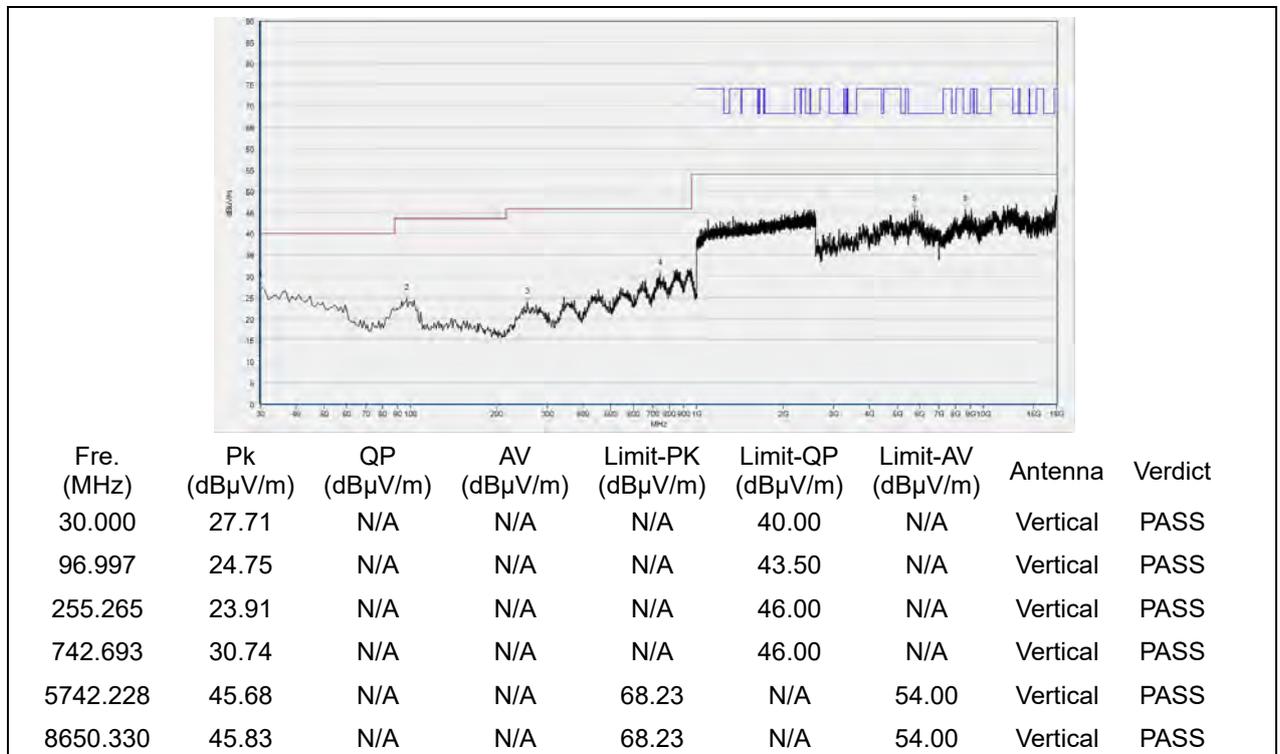
Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
39.710	26.90	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	24.13	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
437.808	26.17	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1001.067	39.53	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4725.625	46.75	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5224.685	52.60	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 151

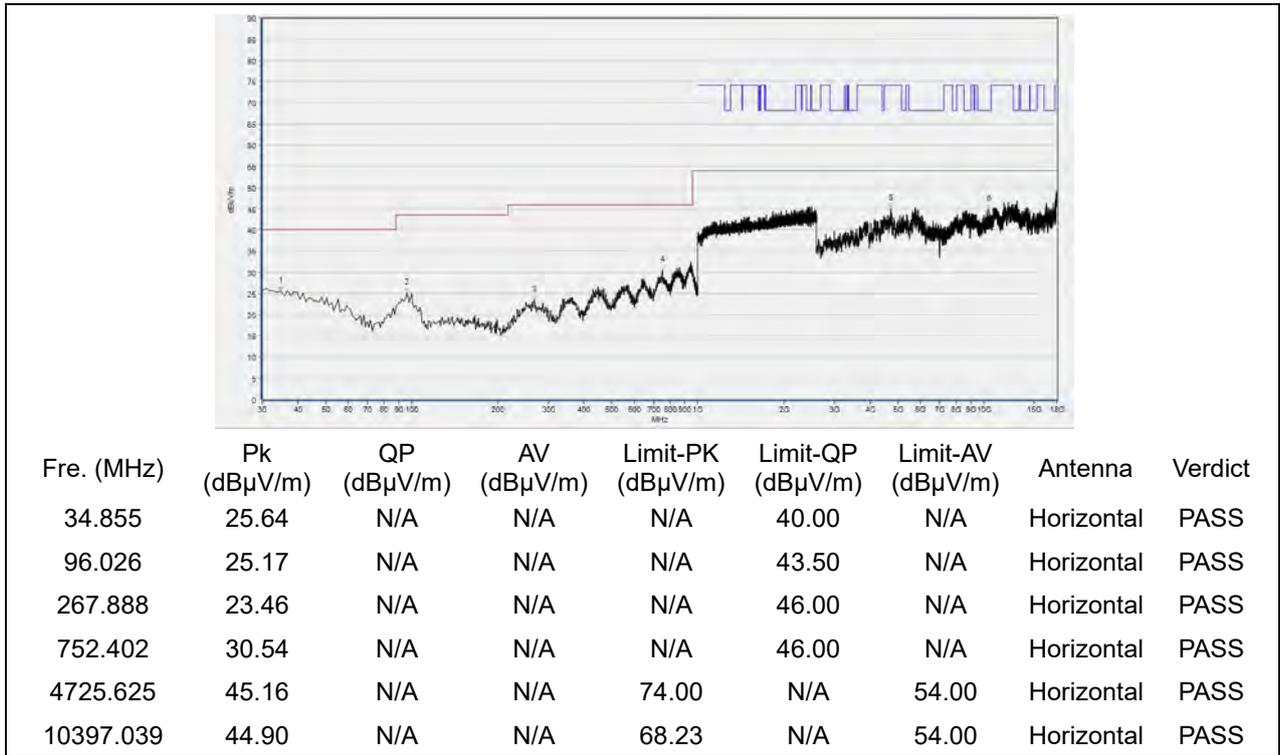


(Antenna Horizontal, 30MHz to 25GHz)

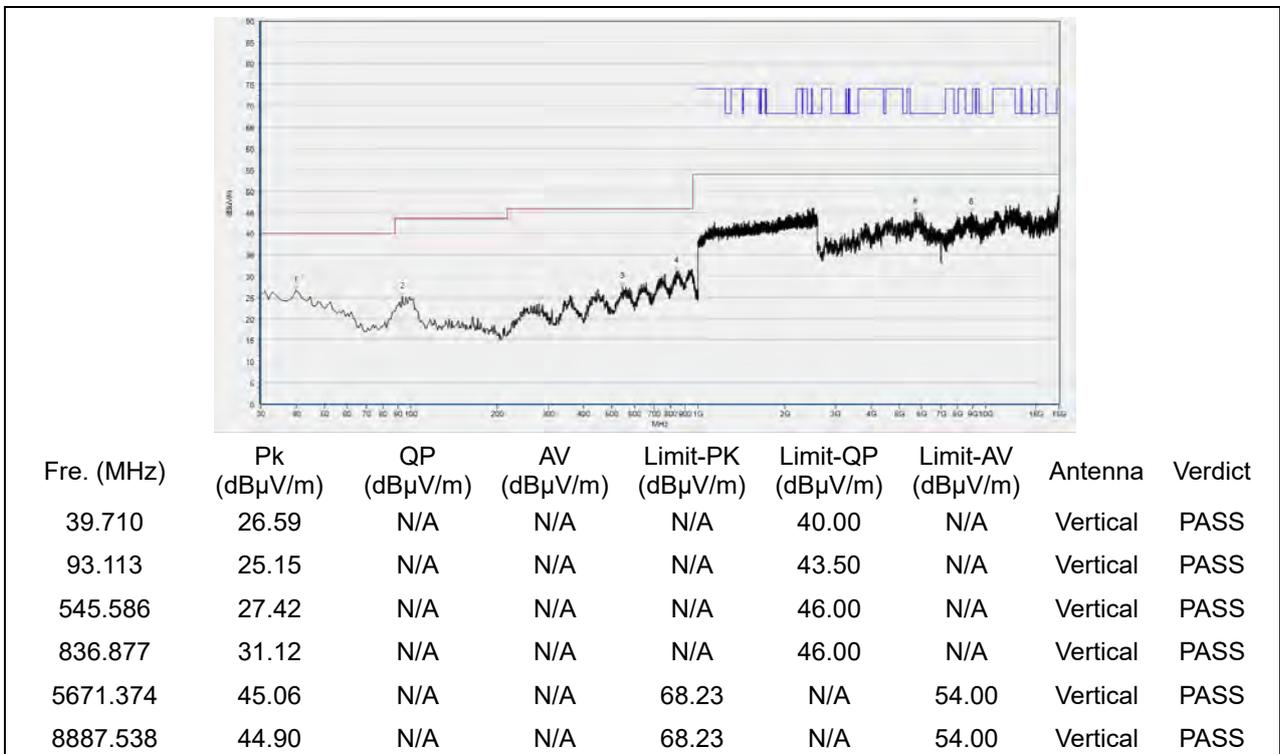


(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 159



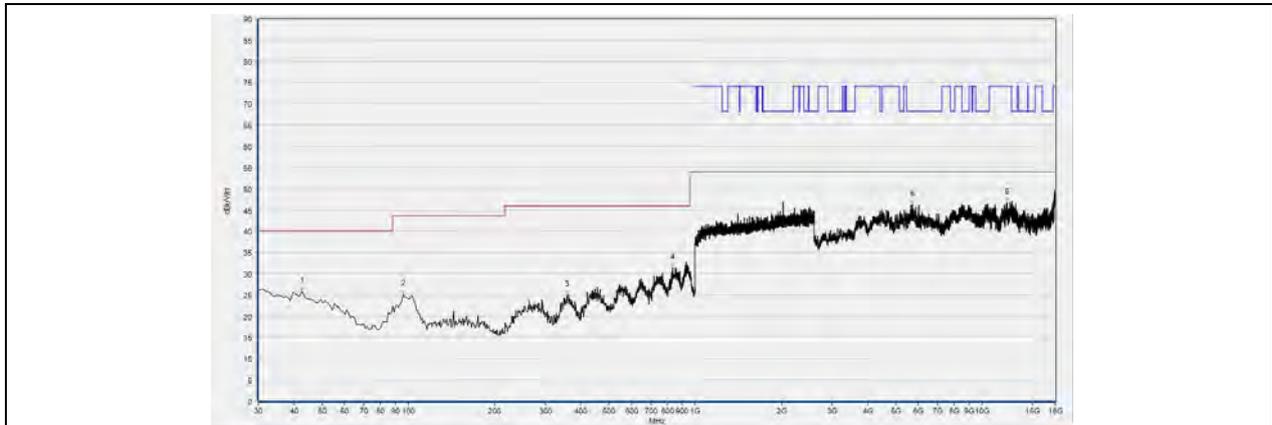
(Antenna Horizontal, 30MHz to 25GHz)



(Antenna Vertical, 30MHz to 25GHz)

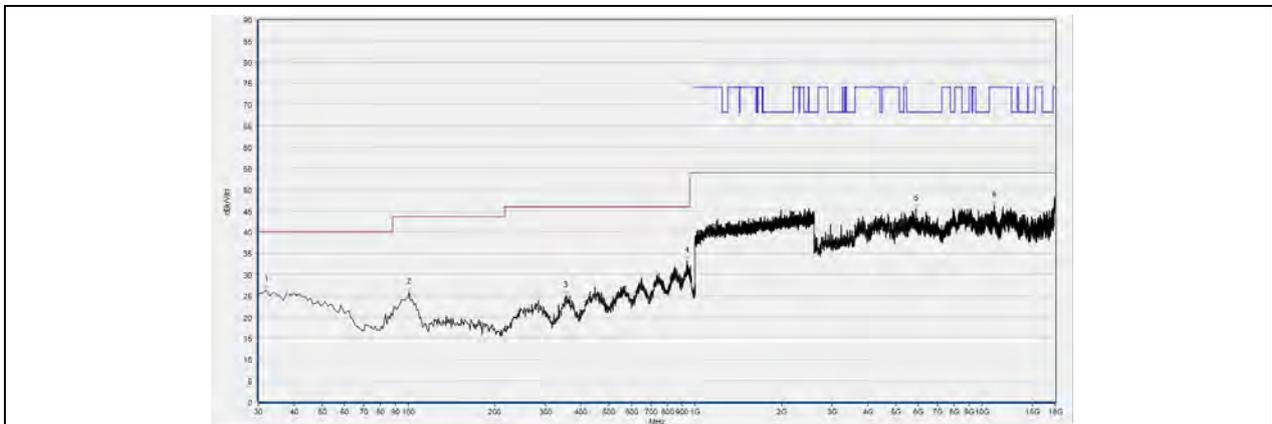
**802.11ac (VHT80) Test mode**

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
42.623	25.85	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	25.08	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
357.217	25.04	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
835.906	31.30	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5708.342	46.28	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12245.409	46.80	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

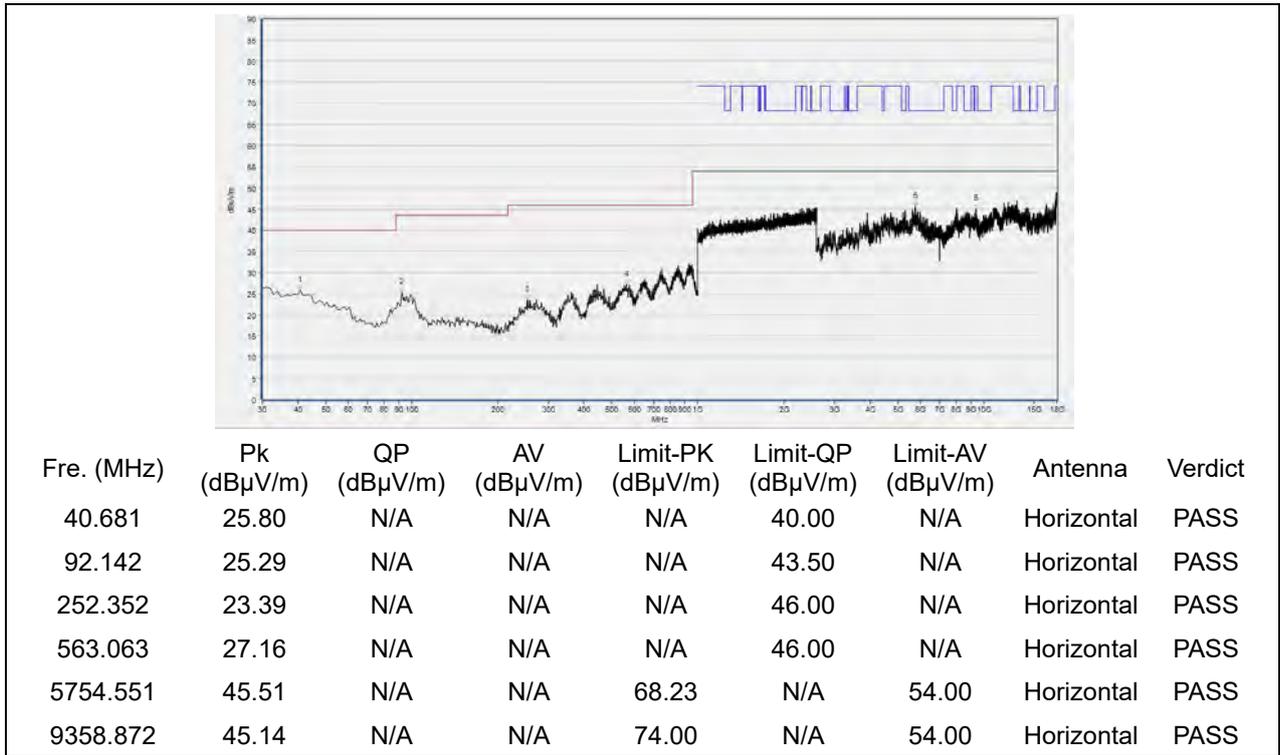
(Antenna Horizontal, 30MHz to 25GHz)



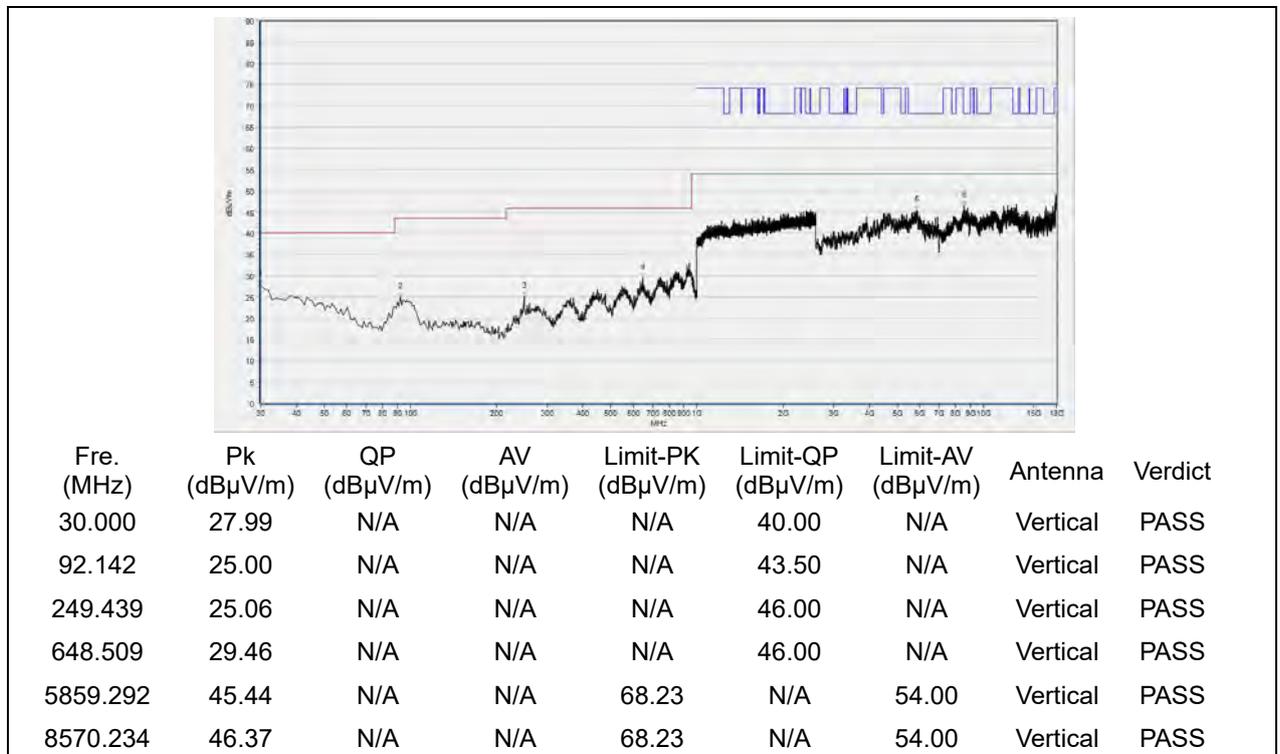
Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
31.942	26.34	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
100.881	25.84	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
353.333	24.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
937.858	33.12	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5877.776	45.34	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
11013.163	46.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 155



(Antenna Horizontal, 30MHz to 25GHz)



(Antenna Vertical, 30MHz to 25GHz)



## 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 (PSD)	$\pm 2.22\text{dB}$
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

<b>Laboratory Name:</b>	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
<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>	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
<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	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Attenuator 1	(N/A)	10dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2019.04.09	2020.04.08
USB Wideband Power Sensor	MY54210011	U2021XA	Agilent	2019.04.16	2020.04.15
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	YOMA	(N/A)	(N/A)	2019.01.22	2020.01.21
Computer	T430i	Think Pad	Lenovo	N/A	N/A

##### 4.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Receiver	MY56400093	N9038A	KEYSIGHT	2019.05.08	2020.05.09
LISN	812744	NSLK 8127	Schwarzbeck	2019.05.08	2020.05.09
Pulse Limiter (20dB)	9391	VTSD 9561-D	Schwarzbeck	2019.05.08	2020.05.09
Coaxial cable(BNC)	CB01	EMC01	Morlab	N/A	N/A
Adapter	N/A	HKC005501 0-3E	ViVo	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	V 1.0

**4.4 Radiated Test Equipments**

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Receiver	MY54130016	N9038A	Agilent	2019.07.26	2020.07.25
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.08	2020.05.09
Test Antenna - Horn	9170C-531	BBHA9170	Schwarzbeck	2019.02.15	2020.02.14
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2019.07.26	2020.07.25
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2019.07.26	2020.07.25
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	MA02	TS-PR18	Rohde& Schwarz	2019.05.08	2020.05.09
18-26.5GHz pre-Amplifier	MA03	TS-PR18	Rohde& Schwarz	2019.05.08	2020.05.09
26GHz -40GHz pre-Amplifier	MA05	BBV9721	Rohde& Schwarz	2019.05.08	2020.05.09
Notch Filter	N/A	WRCG-5150-5350	Wainwright	2018.12.01	2019.11.30
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2018.12.01	2019.11.30
Anechoic Chamber	N/A	9m*6m*6m	CRT	2017.11.19	2020.11.18

END OF REPORT