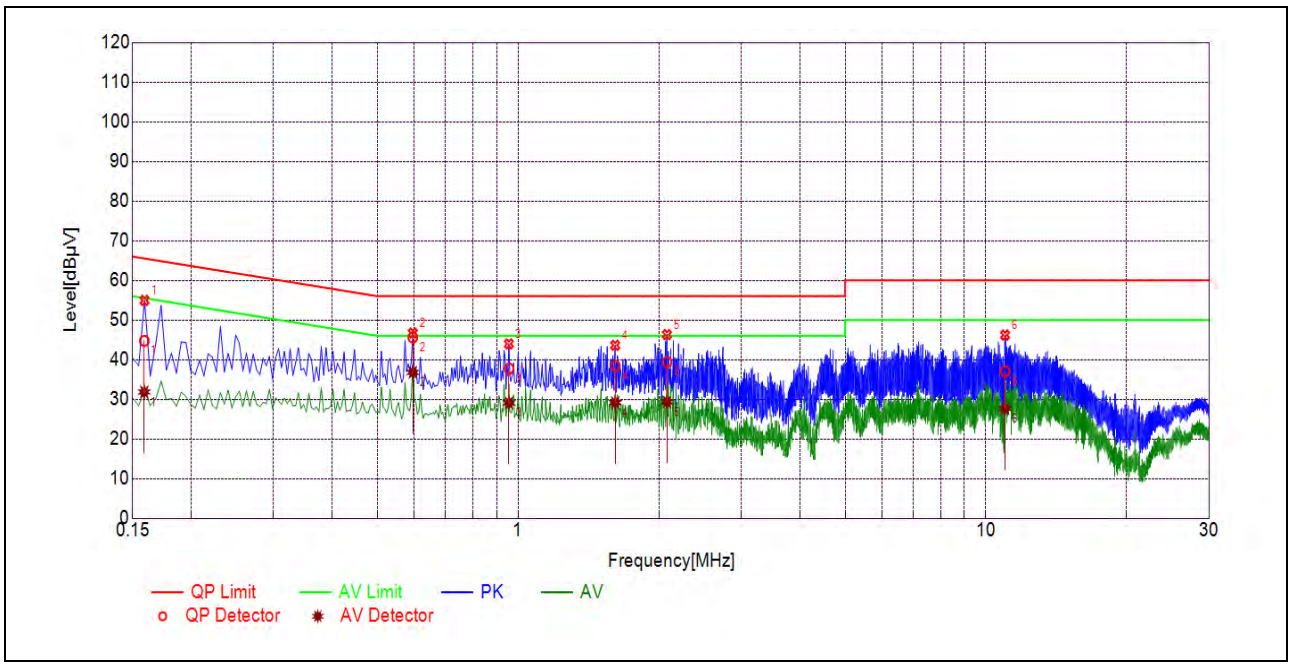
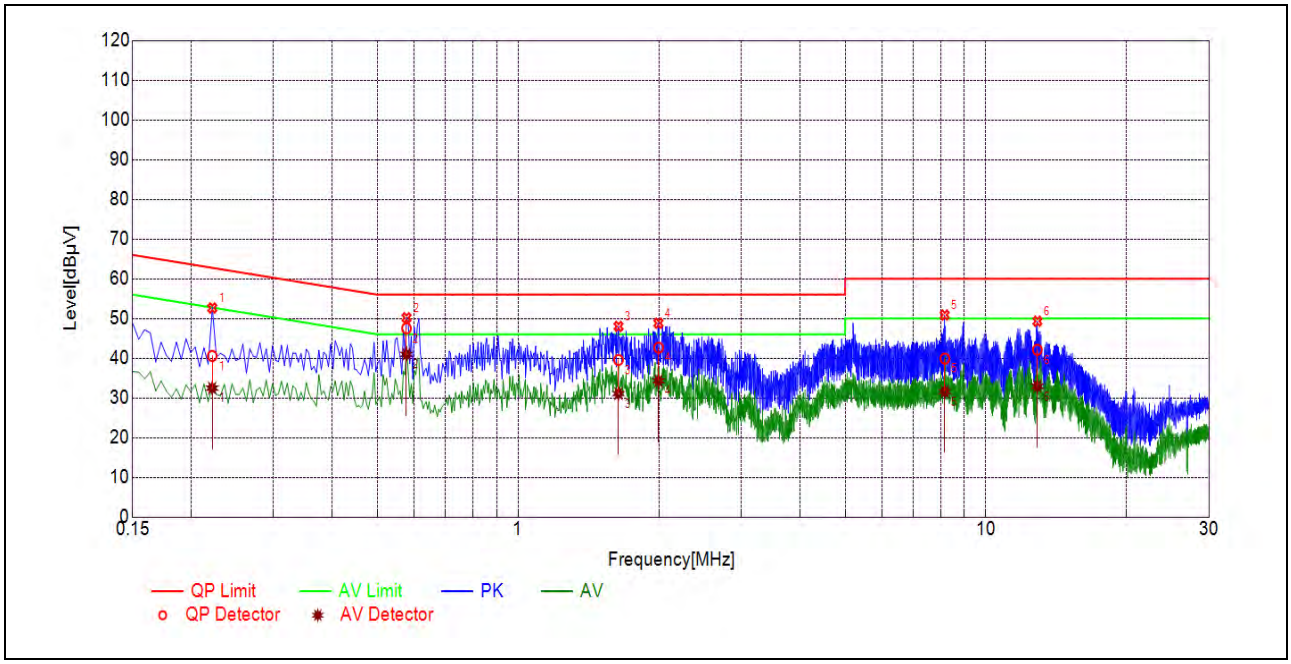
B. Test Plots:



(L Phase)

NO.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1588	44.74	31.86	65.52	55.52	Line	PASS
2	0.5954	45.57	36.79	56.00	46.00		PASS
3	0.9561	37.75	29.09	56.00	46.00		PASS
4	1.6137	38.45	29.13	56.00	46.00		PASS
5	2.0813	39.41	29.32	56.00	46.00		PASS
6	10.9912	37.02	27.68	60.00	50.00		PASS



(N Phase)

NO.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.2218	40.57	32.48	62.75	52.75	Neutral	PASS
2	0.5771	47.52	40.98	56.00	46.00		PASS
3	1.6388	39.57	31.09	56.00	46.00		PASS
4	1.9962	42.66	34.28	56.00	46.00		PASS
5	8.1686	39.90	31.59	60.00	50.00		PASS
6	12.8787	42.13	32.91	60.00	50.00		PASS

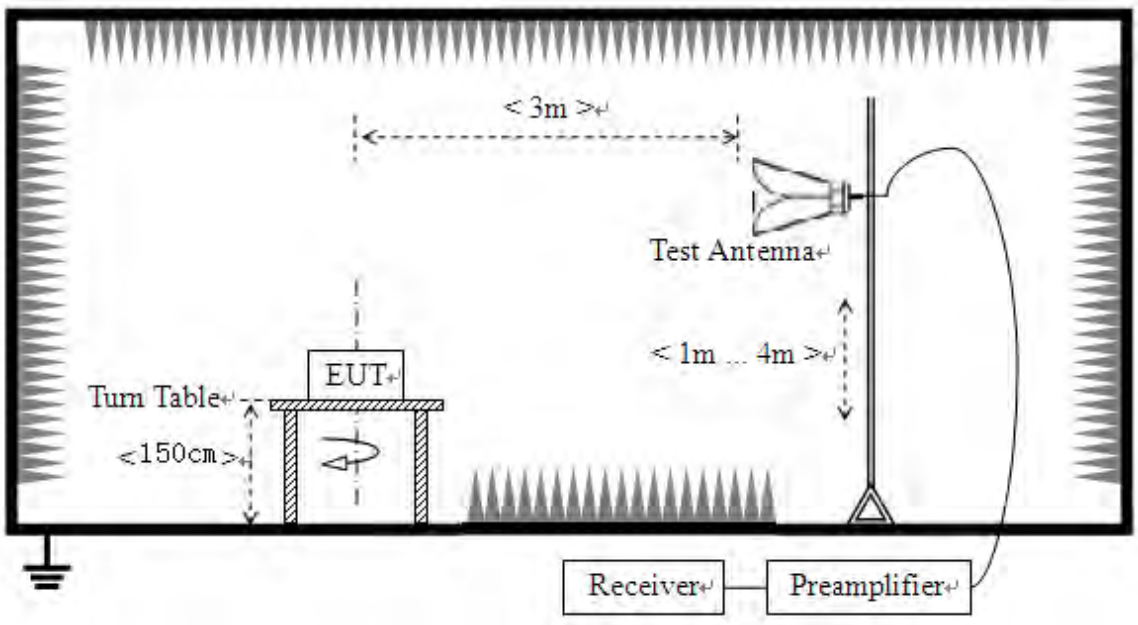
2.8. Restricted Frequency Bands

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

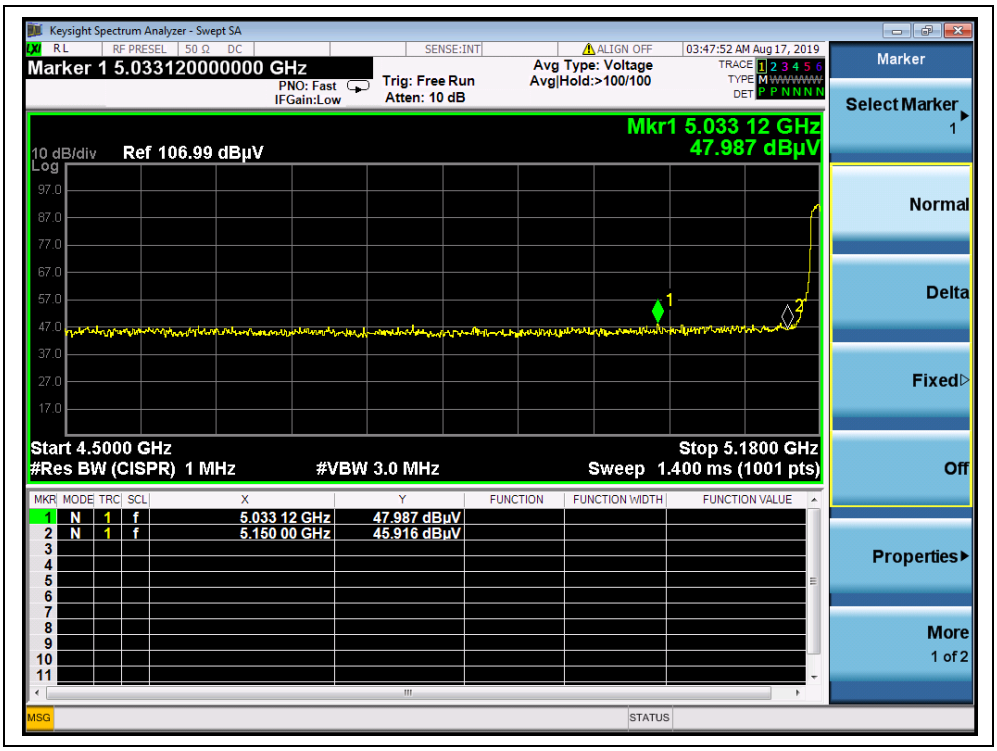
The lowest and highest channels are tested to verify Restricted Frequency Bands.
The measurement results are obtained as below:
E [dBμV/m] =U_R + A_T + A_{Factor} [dB]; A_T =$L_{Cable\ loss}$ [dB]-G_{preamp} [dB]
A_T: Total correction Factor except Antenna; U_R: Receiver Reading
G_{preamp}: Preamplifier Gain; A_{Factor}: Antenna Factor at 3m
Note: 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

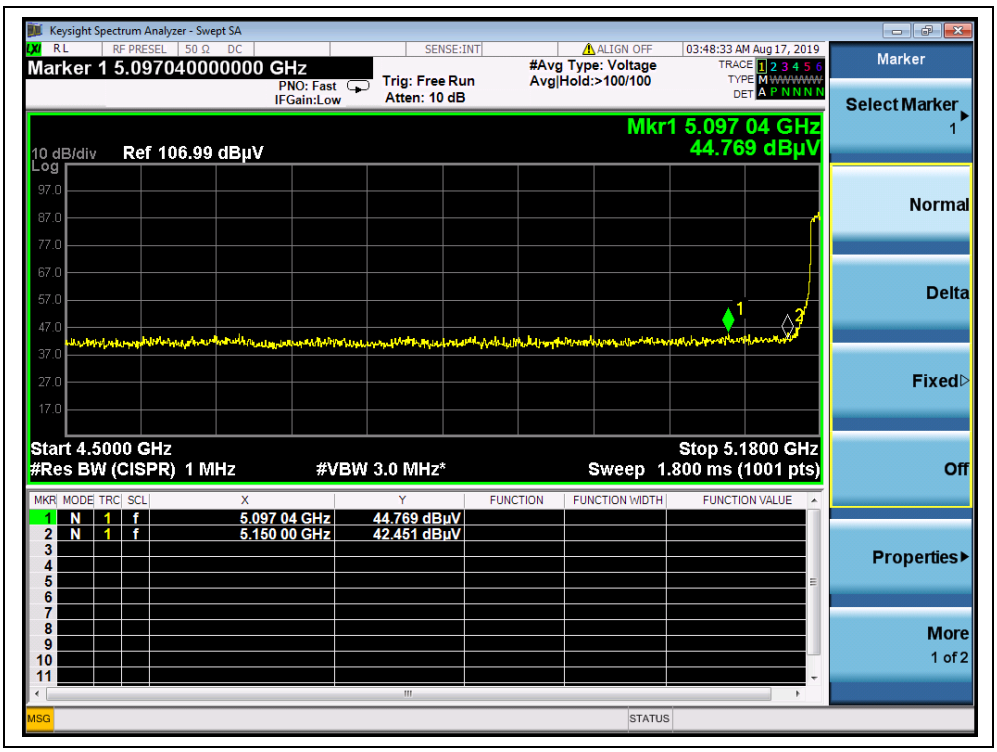
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5033.12	PK	47.99	-26.92	32.20	53.27	74	PASS
36	5097.04	AV	44.77	-26.92	32.20	50.05	54	PASS
48	5361.11	PK	44.34	-26.92	32.20	49.62	74	PASS
48	5379.33	AV	43.29	-26.92	32.20	48.57	54	PASS
149	5725.00	PK	44.28	-26.23	32.20	50.25	122.23	PASS
149	5725.00	AV	36.56	-26.23	32.20	42.53	54	PASS
165	5855.00	PK	44.38	-26.23	32.20	50.35	110.83	PASS
165	5855.00	AV	42.90	-26.23	32.20	48.87	54	PASS

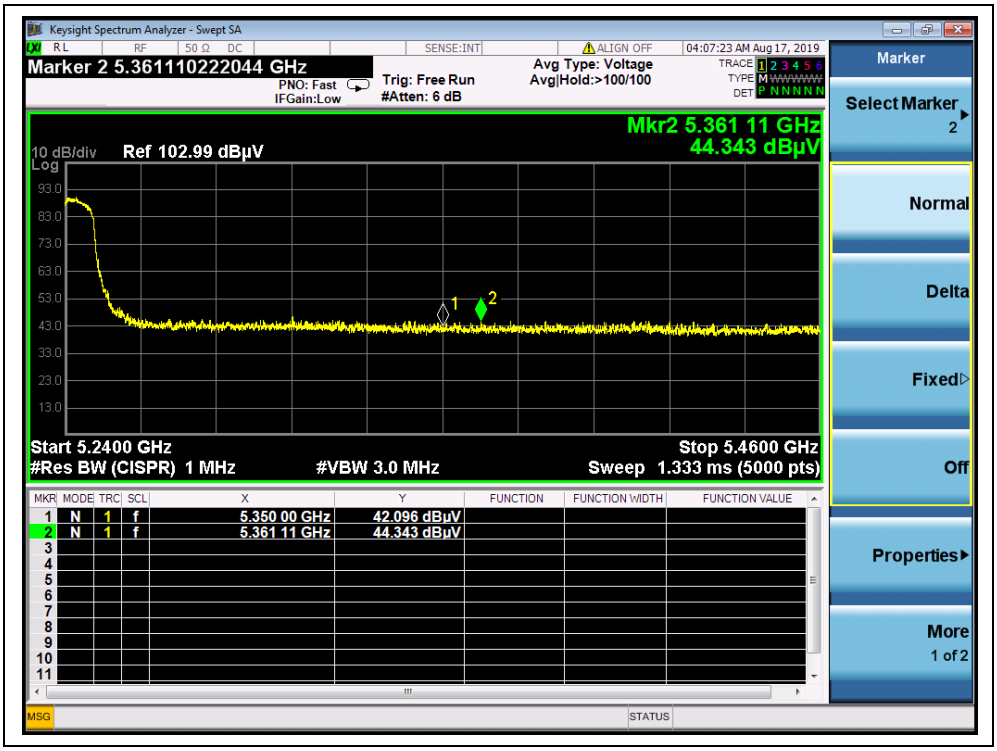
B. Test Plots:



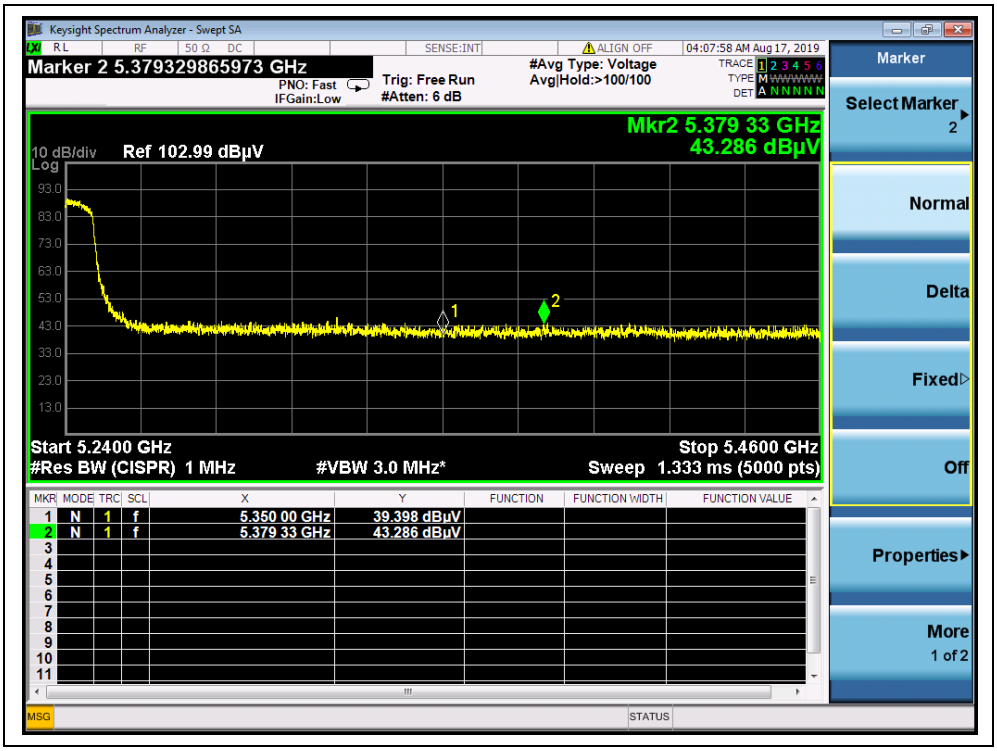
(Channel 36, PEAK, 802.11a)



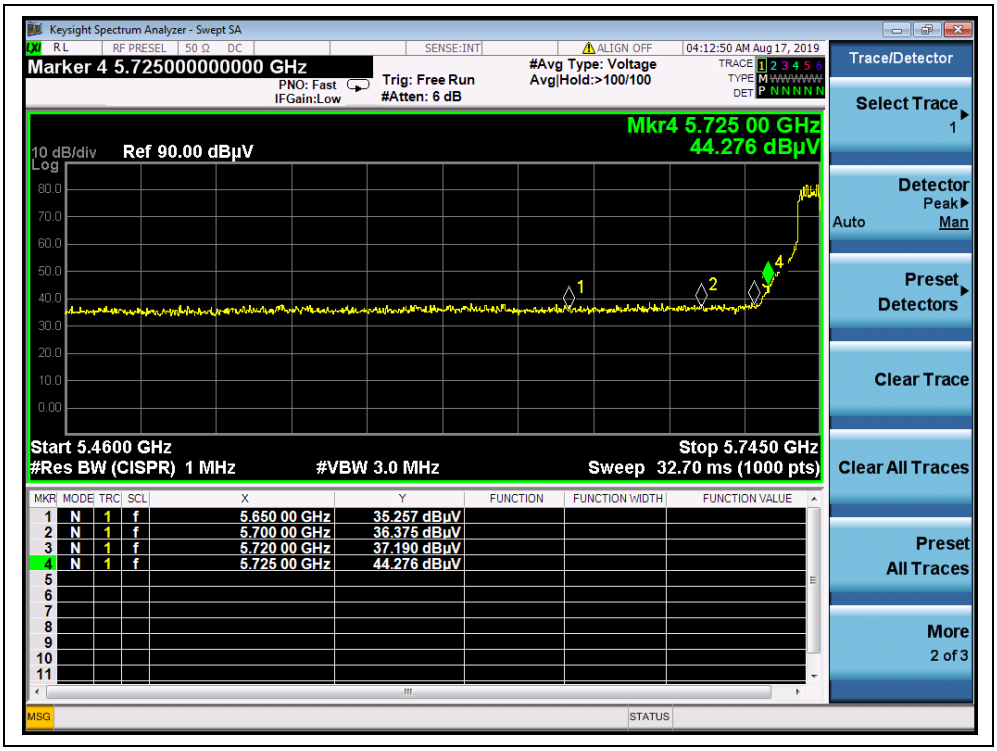
(Channel 36, AVG, 802.11a)



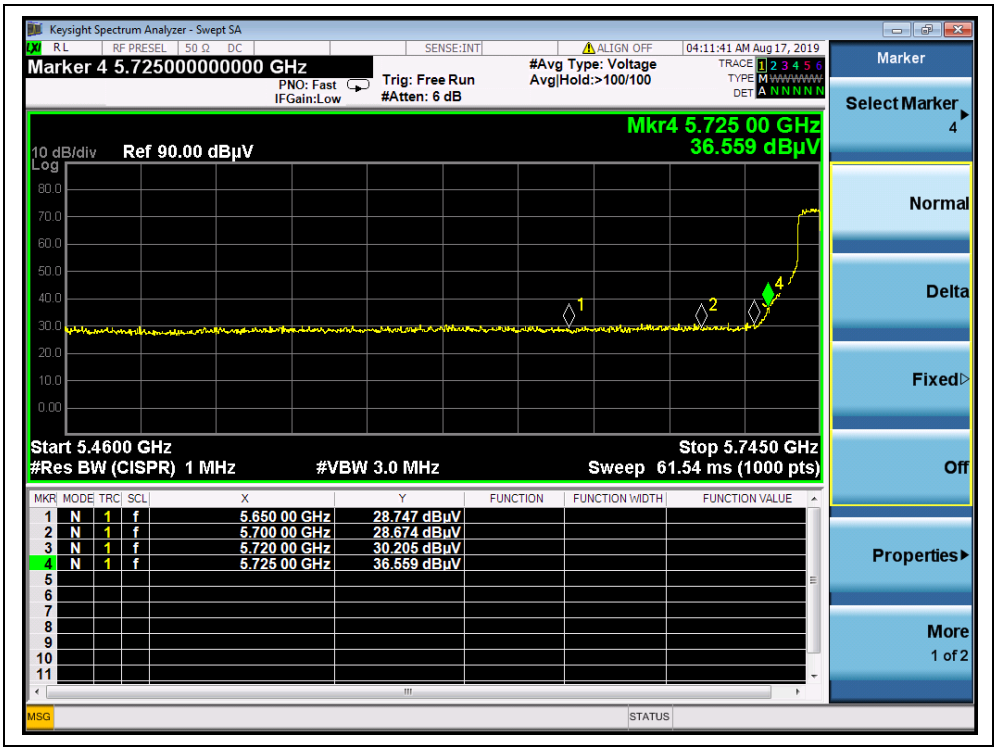
(Channel 48, PEAK, 802.11a)



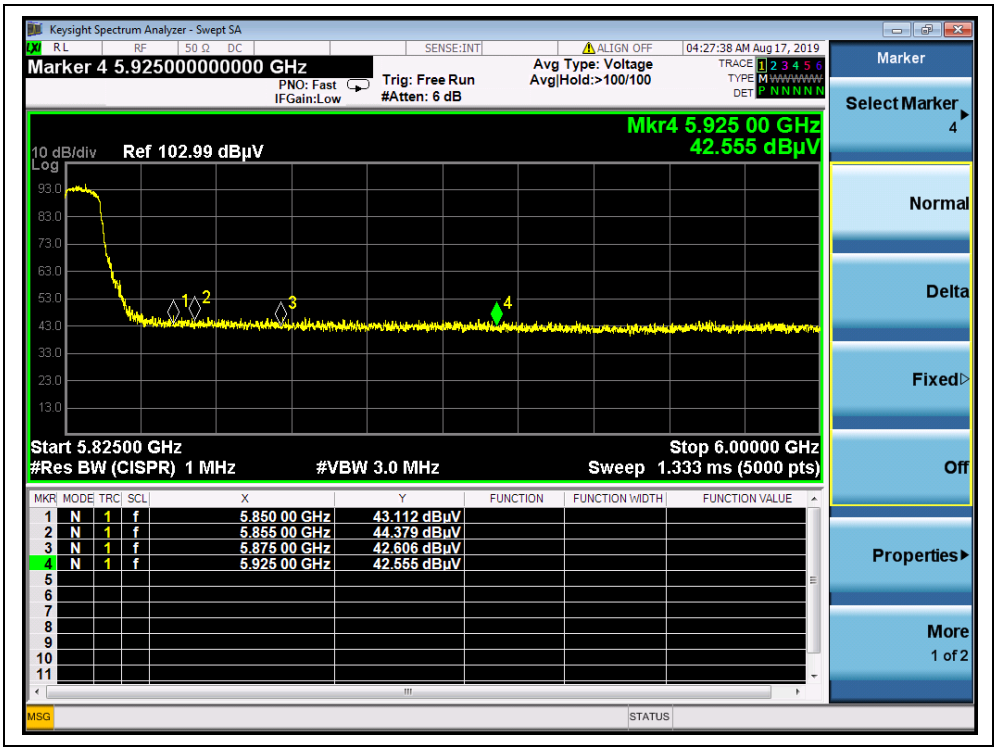
(Channel 48, AVG, 802.11a)



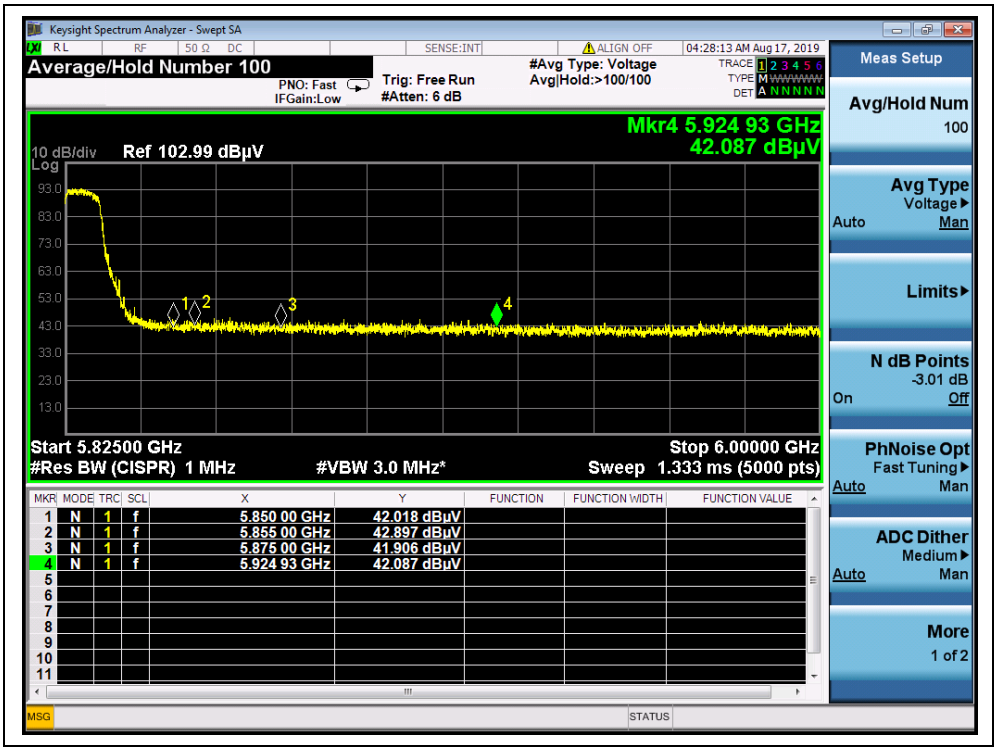
(Channel 149, PEAK, 802.11a)



(Channel 149, AVG, 802.11a)



(Channel 165, PEAK, 802.11a)



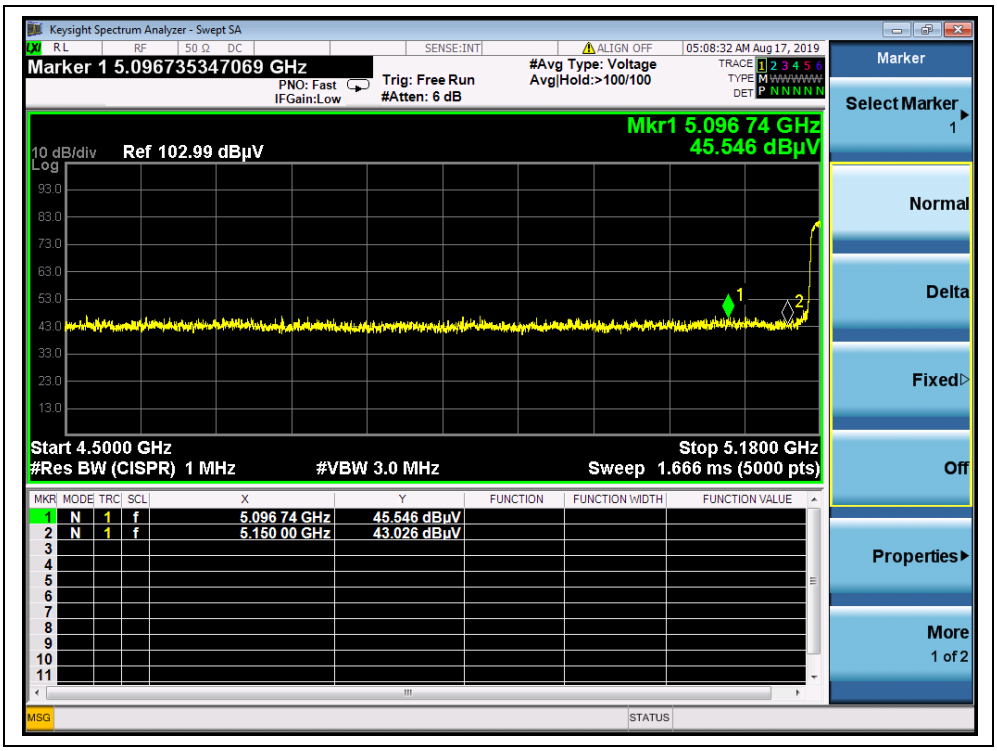
(Channel 165, AVG, 802.11a)

802.11n (HT20) Test mode

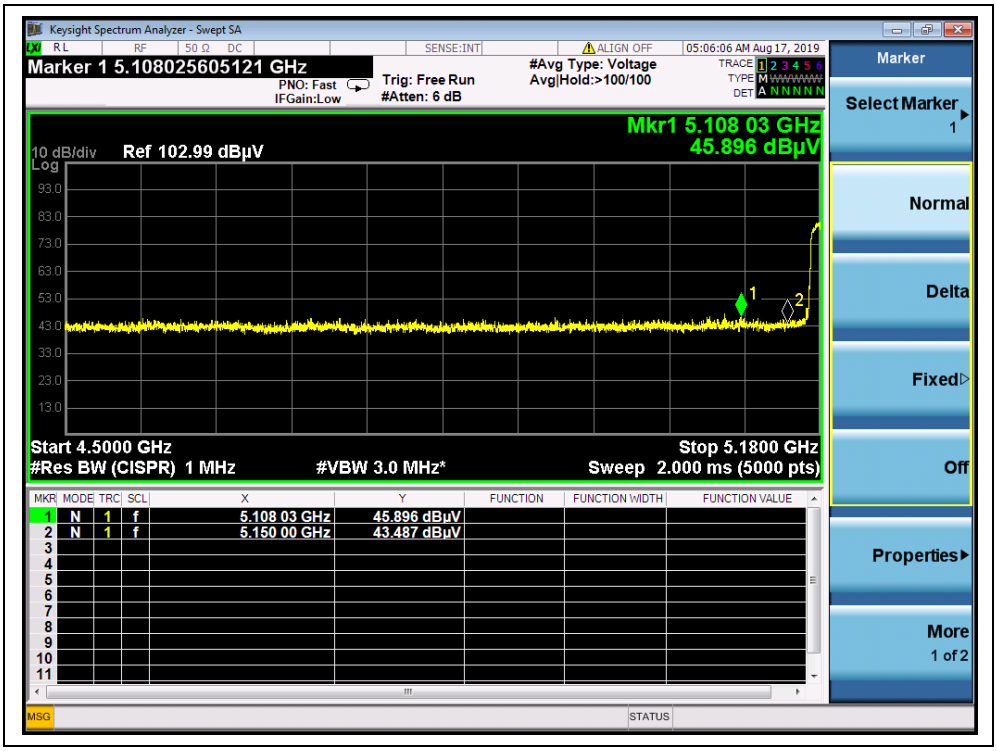
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5096.74	PK	45.55	-26.92	32.20	50.83	74	PASS
36	5108.03	AV	45.90	-26.92	32.20	51.18	54	PASS
48	5382.46	PK	43.22	-26.92	32.20	48.50	74	PASS
48	5370.09	AV	45.25	-26.92	32.20	50.53	54	PASS
149	5725.00	PK	49.32	-26.23	32.20	55.29	122.23	PASS
149	5725.00	AV	39.47	-26.23	32.20	45.44	54	PASS
165	5850.00	PK	44.83	-26.23	32.20	50.80	122.23	PASS
165	5855.00	AV	43.48	-26.23	32.20	49.45	54	PASS

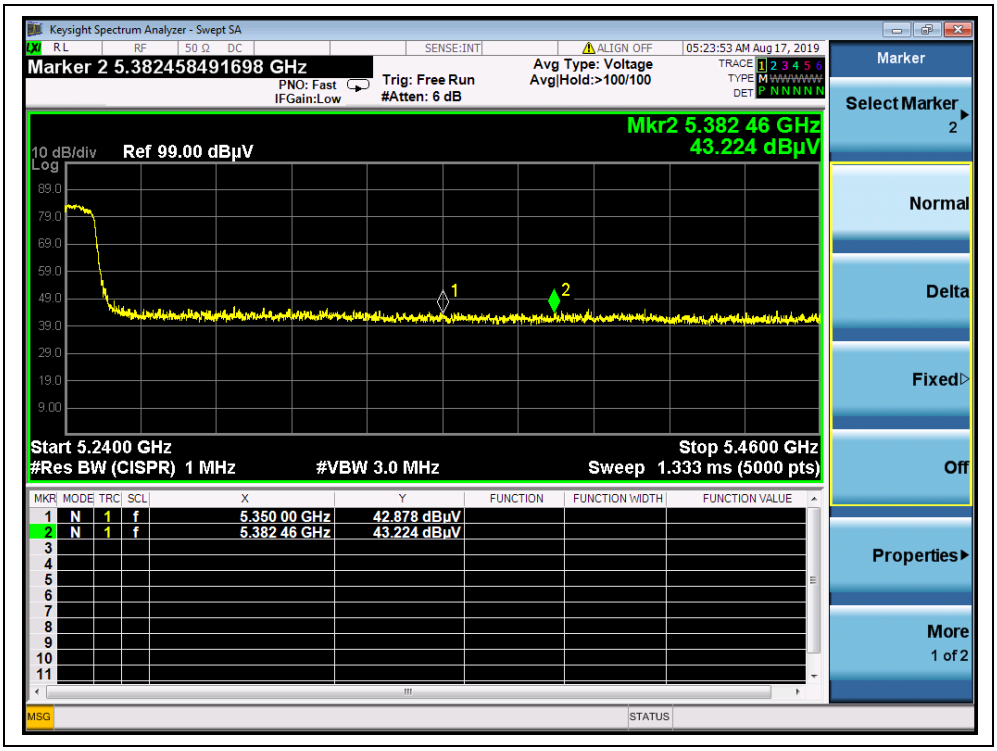
B. Test Plots:



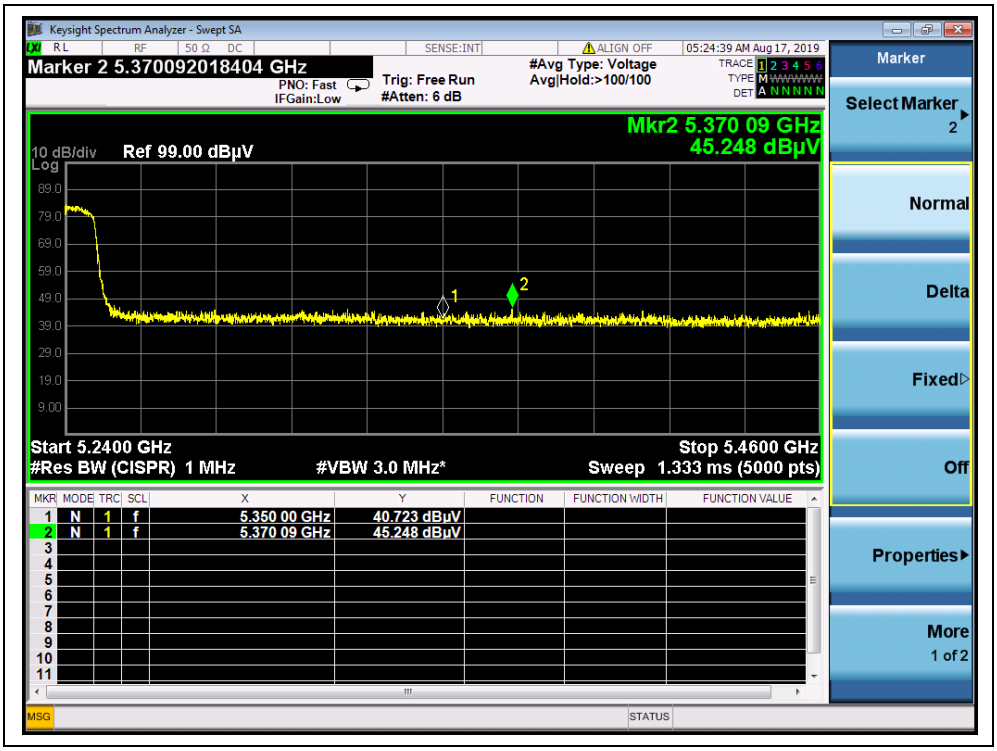
(Channel 36, PEAK, 802.11n (HT20))



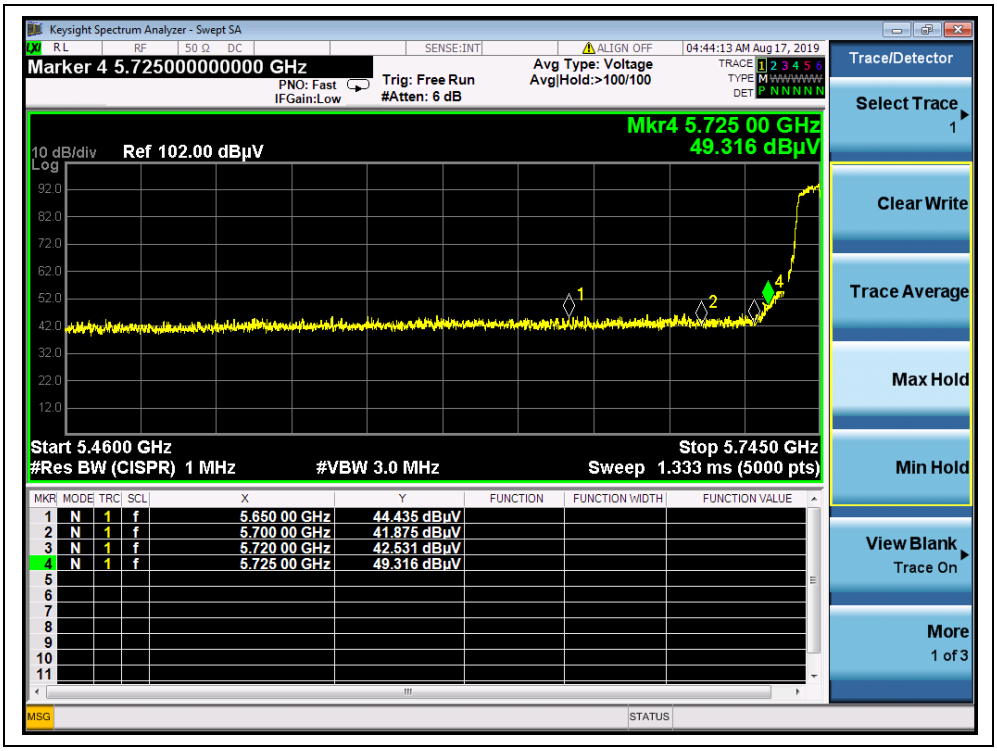
(Channel 36, AVG, 802.11 n (HT20))



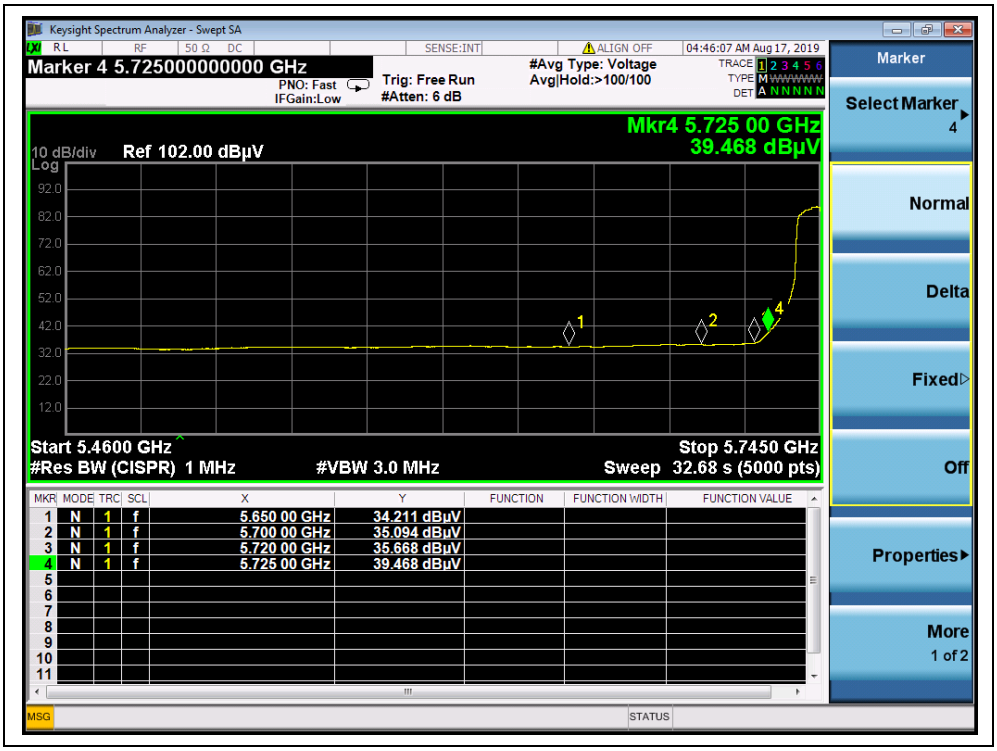
(Channel 48, PEAK, 802.11 n (HT20))



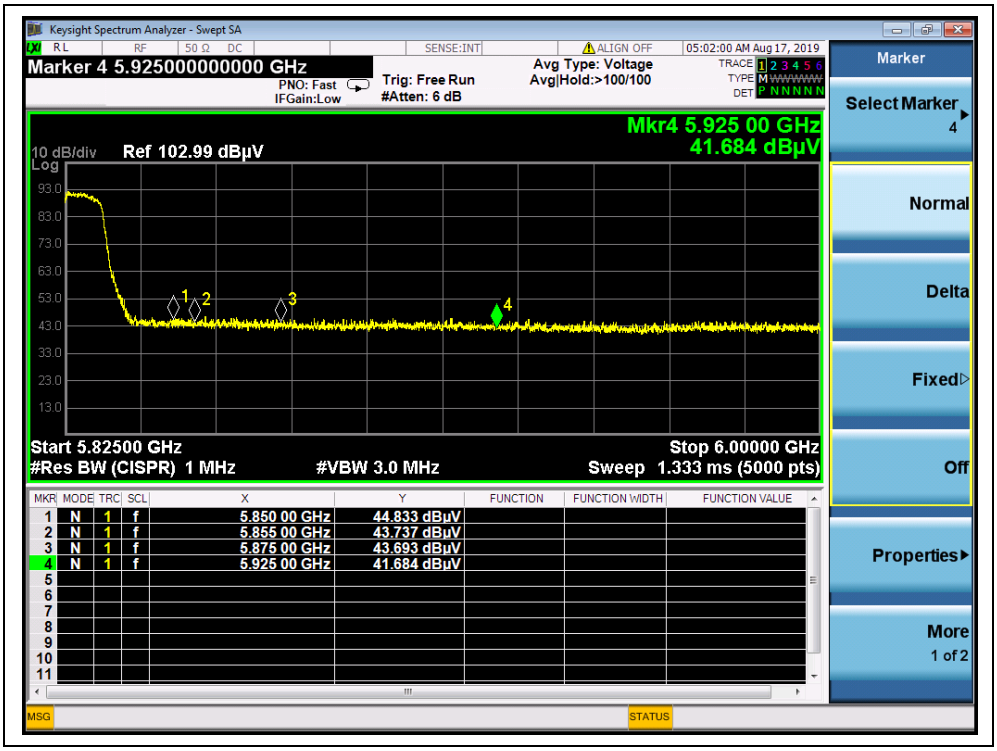
(Channel 48, AVG, 802.11n (HT20))



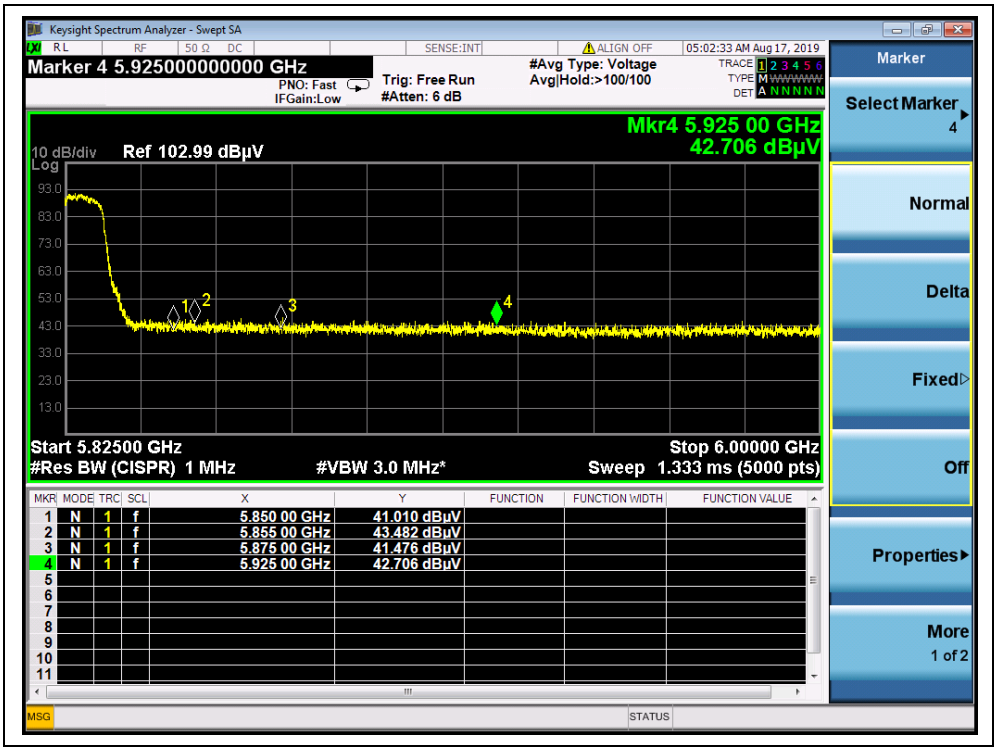
(Channel 149, PEAK, 802.11 n (HT20))



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



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



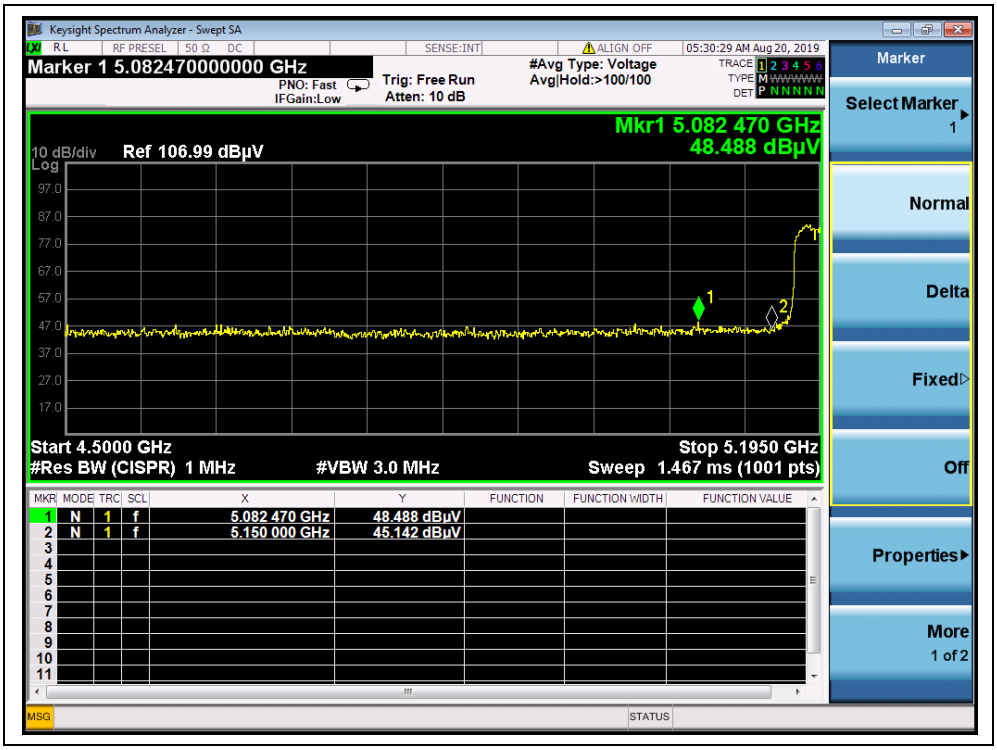
(Channel 165, AVG, 802.11n (HT20))

802.11n (HT40) Test mode

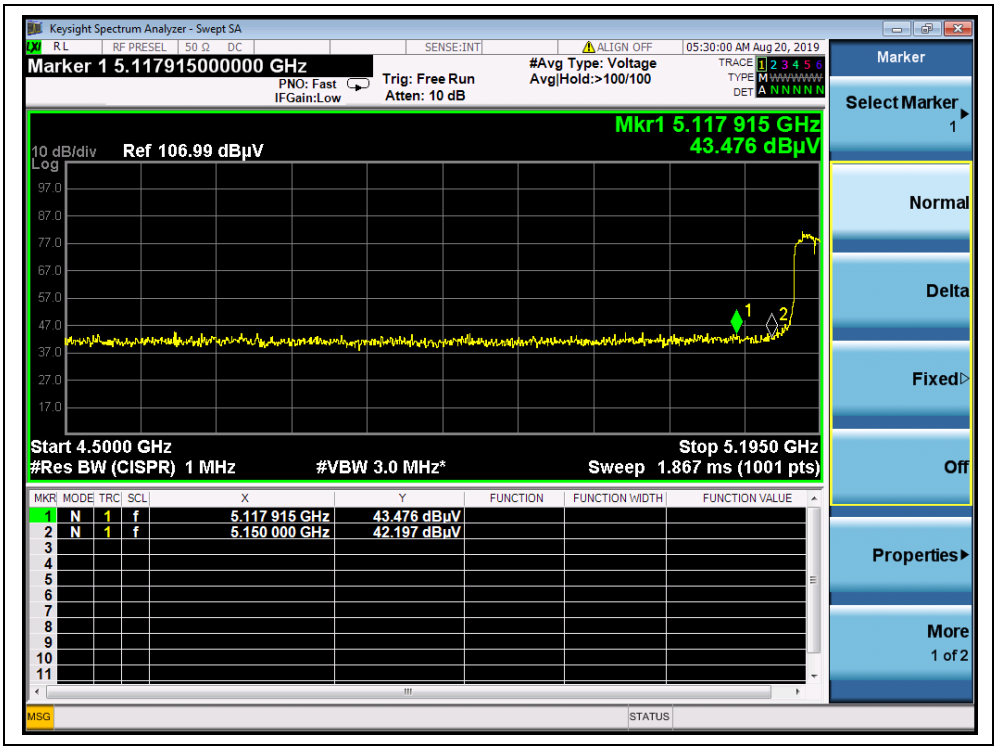
A. Test Verdict:

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBµV/m)	Limit (dBµV/m)	Verdict
38	5082.47	PK	48.49	-26.92	32.20	53.77	74	PASS
38	5117.92	AV	43.48	-26.92	32.20	48.76	54	PASS
46	5361.95	PK	44.27	-26.92	32.20	49.55	74	PASS
46	5372.53	AV	42.93	-26.92	32.20	48.21	54	PASS
151	5725.00	PK	58.23	-26.23	32.20	64.20	122.23	PASS
151	5725.00	AV	42.46	-26.23	32.20	48.43	54	PASS
159	5855.00	PK	45.42	-26.23	32.20	51.39	110.83	PASS
159	5852.00	AV	46.72	-26.23	32.20	52.69	54	PASS

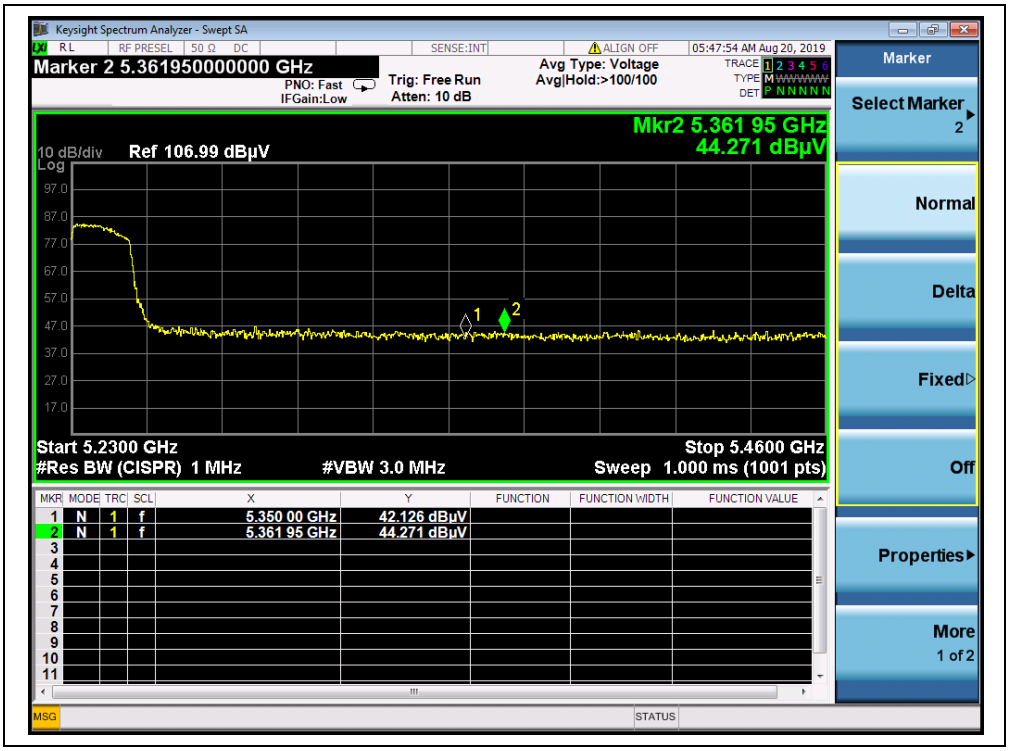
B. Test Plots:



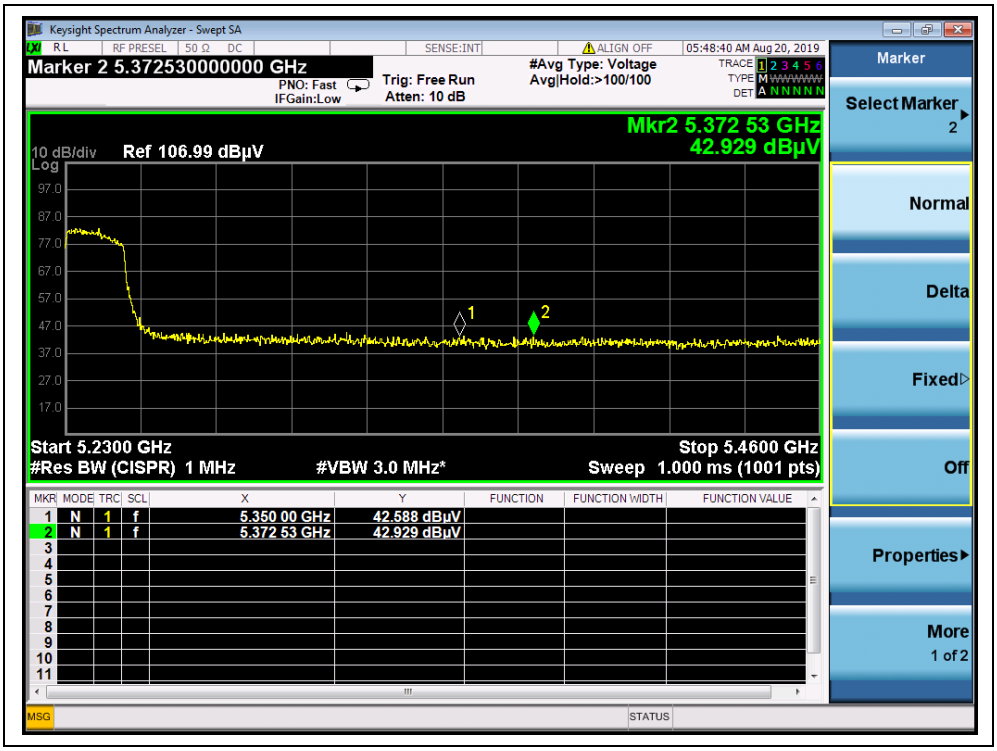
(Channel 38, PEAK, 802.11n (HT40))



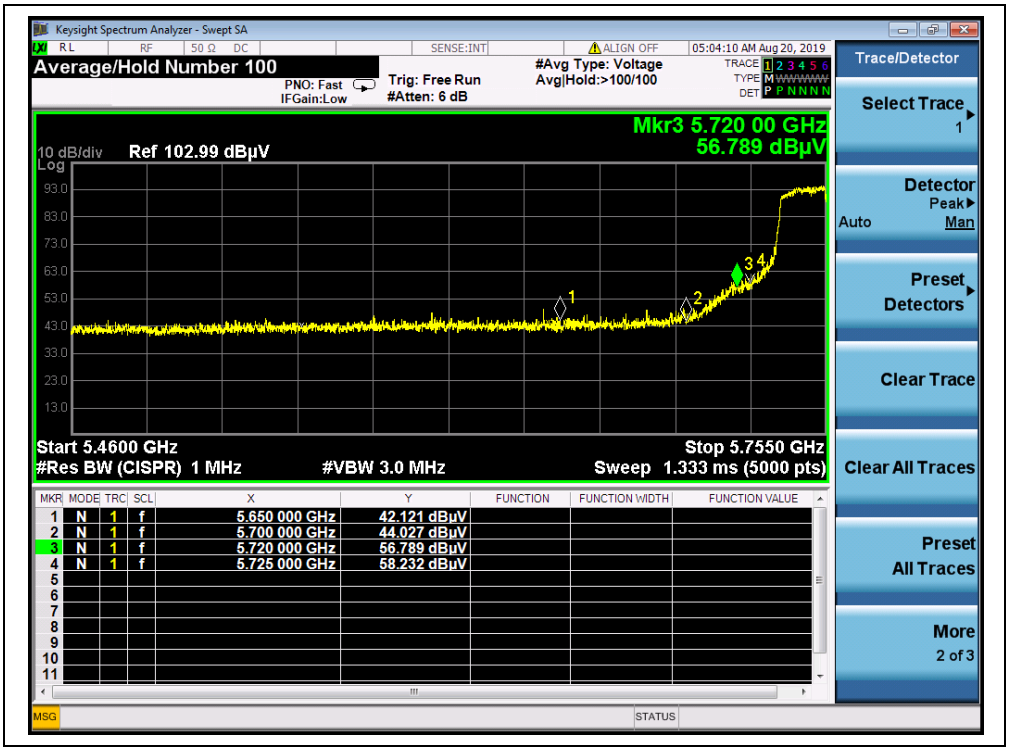
(Channel 38, AVG, 802.11n (HT40))



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

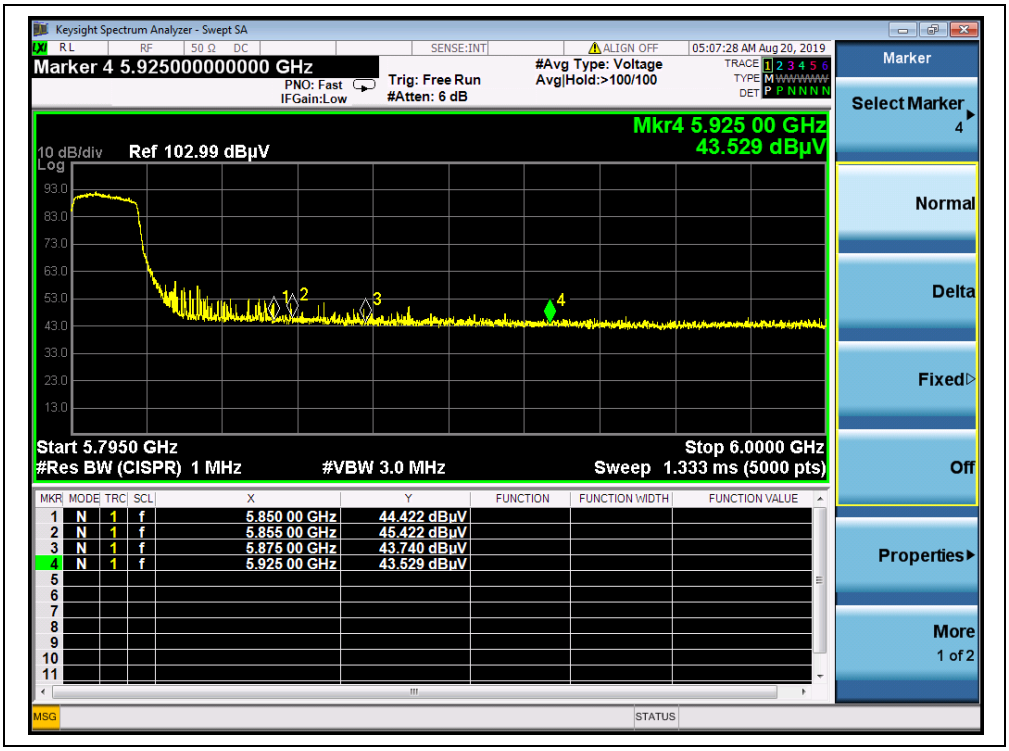


(Channel 46, AVG, 802.11n (HT40))

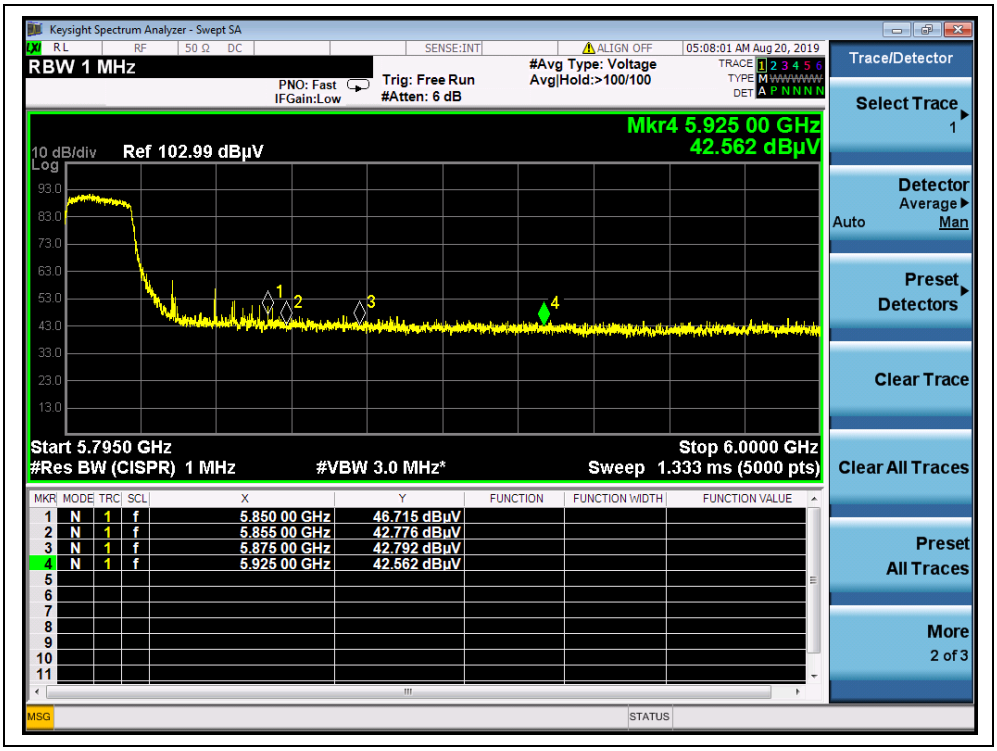


(Channel 151, PEAK, 802.11n (HT40))

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



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



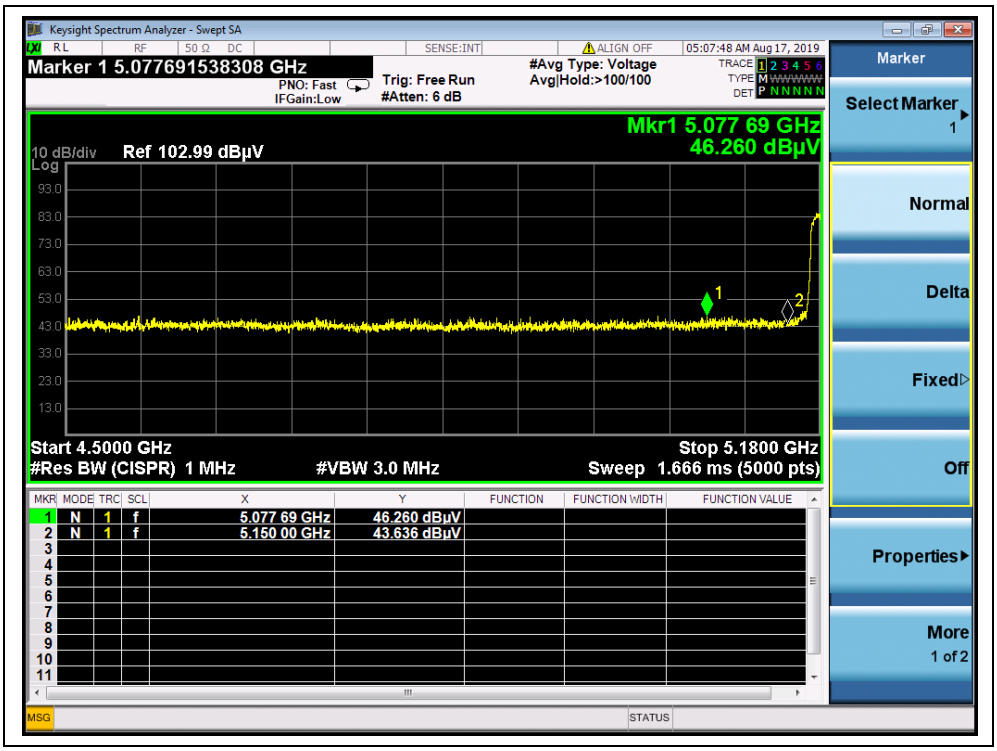
(Channel 159, AVG, 802.11n (HT40))

802.11 ac (VHT20) Test mode

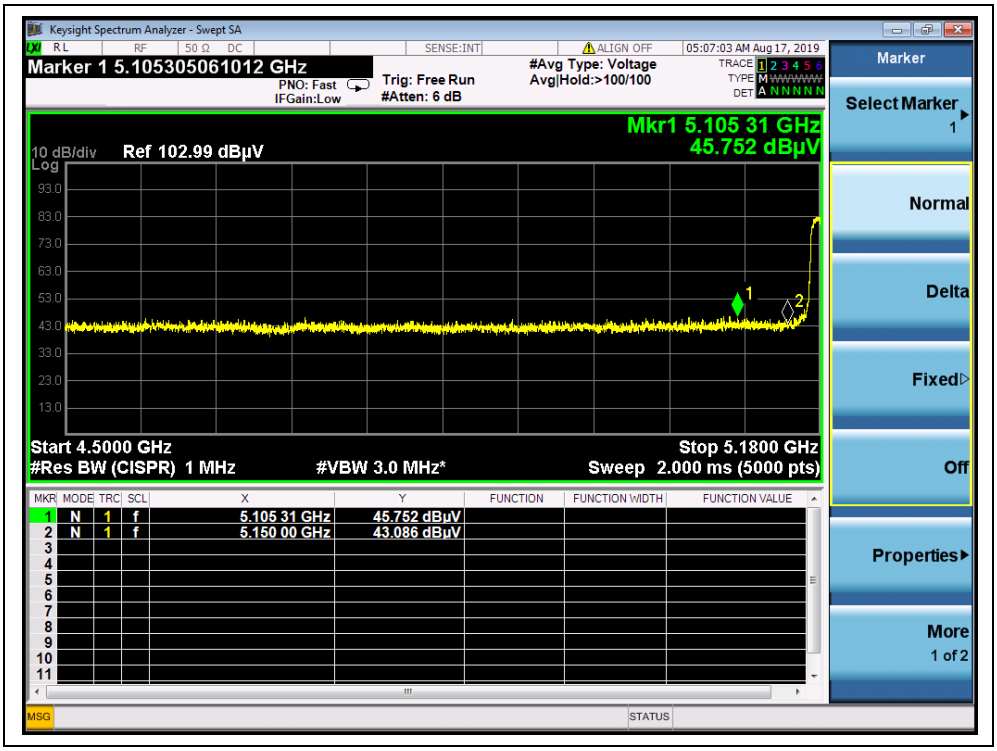
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5077.69	PK	46.26	-26.92	32.20	51.54	74	PASS
36	5105.31	AV	45.75	-26.92	32.20	51.03	54	PASS
48	5363.36	PK	43.93	-26.92	32.20	49.21	74	PASS
48	5375.20	AV	43.73	-26.92	32.20	49.01	54	PASS
149	5725.00	PK	51.30	-26.23	32.20	57.27	122.23	PASS
149	5725.00	AV	41.22	-26.23	32.20	47.19	54	PASS
165	5925.00	PK	44.50	-26.23	32.20	50.47	68.23	PASS
165	5850.00	AV	43.58	-26.23	32.20	49.55	54	PASS

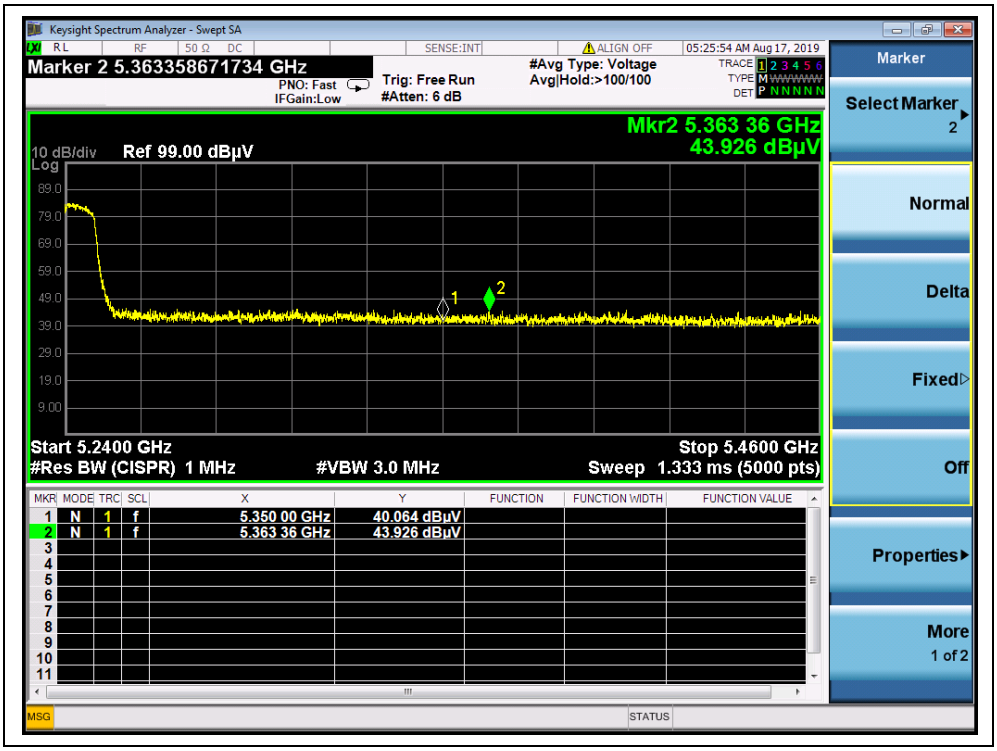
B. Test Plots:



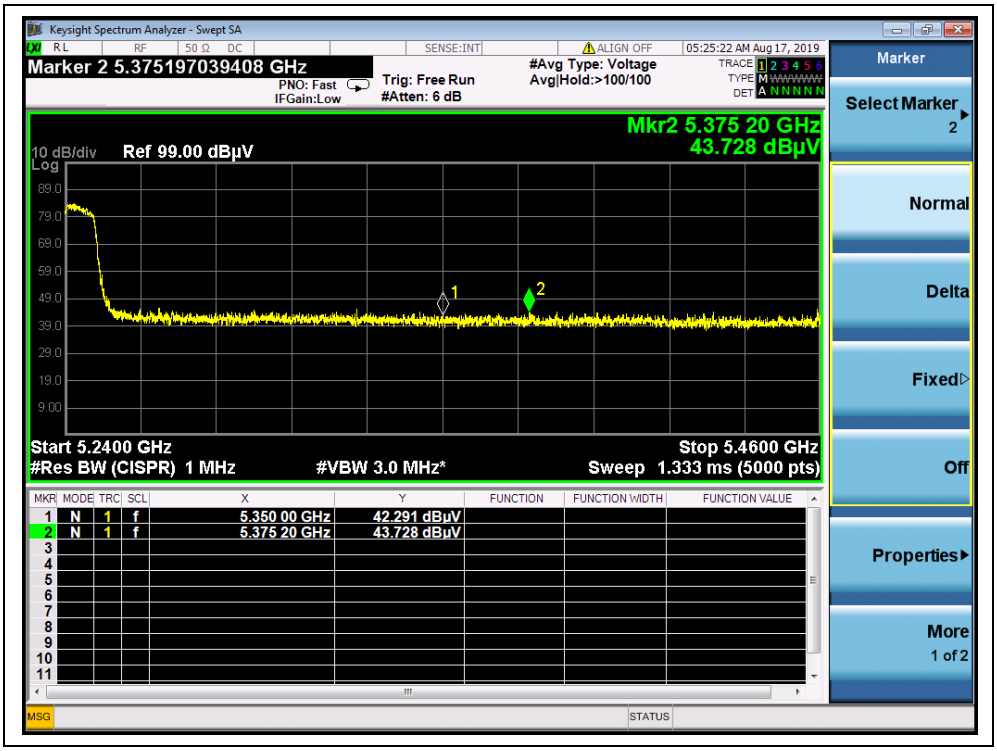
(Channel 36, PEAK, 802.11 ac (VHT20))



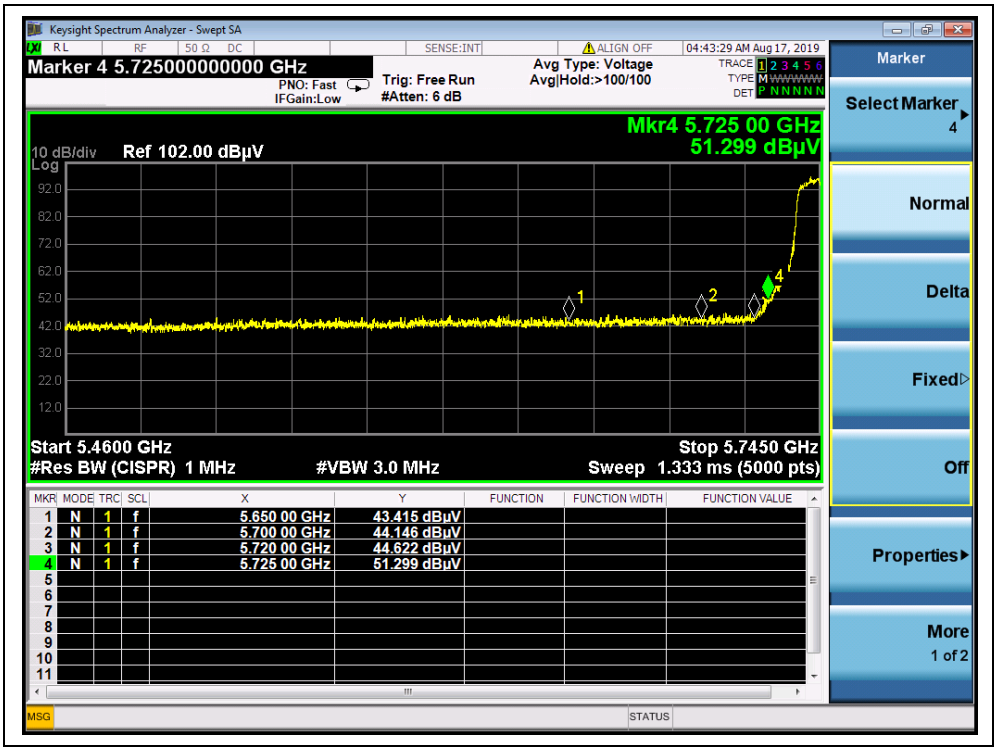
(Channel 36, AVG, 802.11 ac (VHT20))



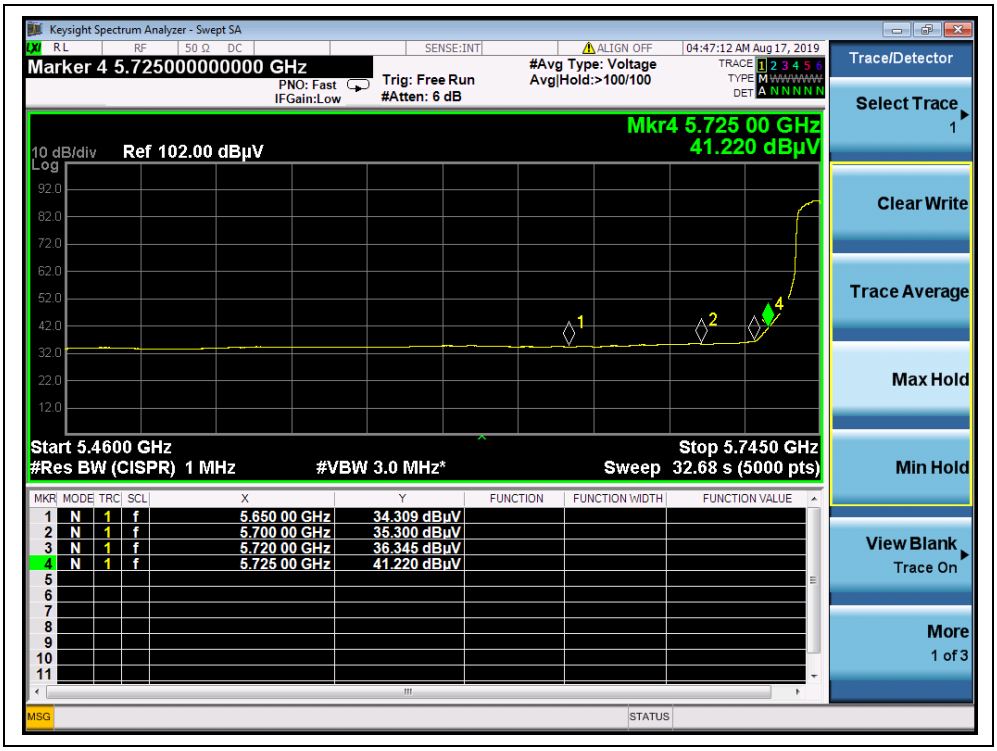
(Channel 48, PEAK, 802.11 ac (VHT20))



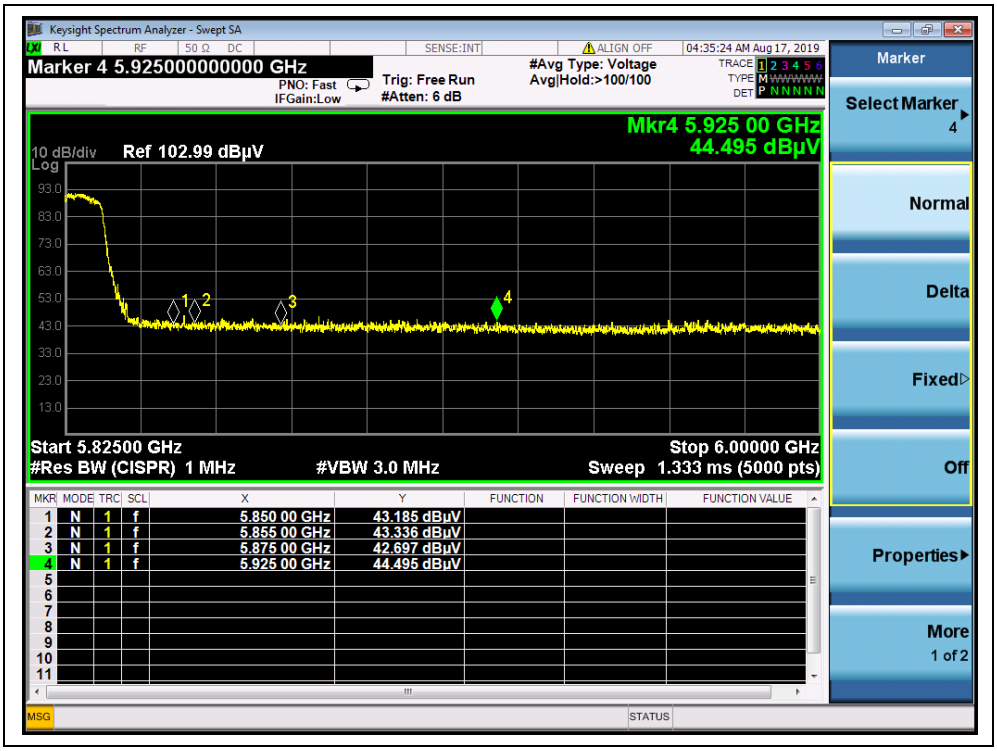
(Channel 48, AVG, 802.11 ac (VHT20))



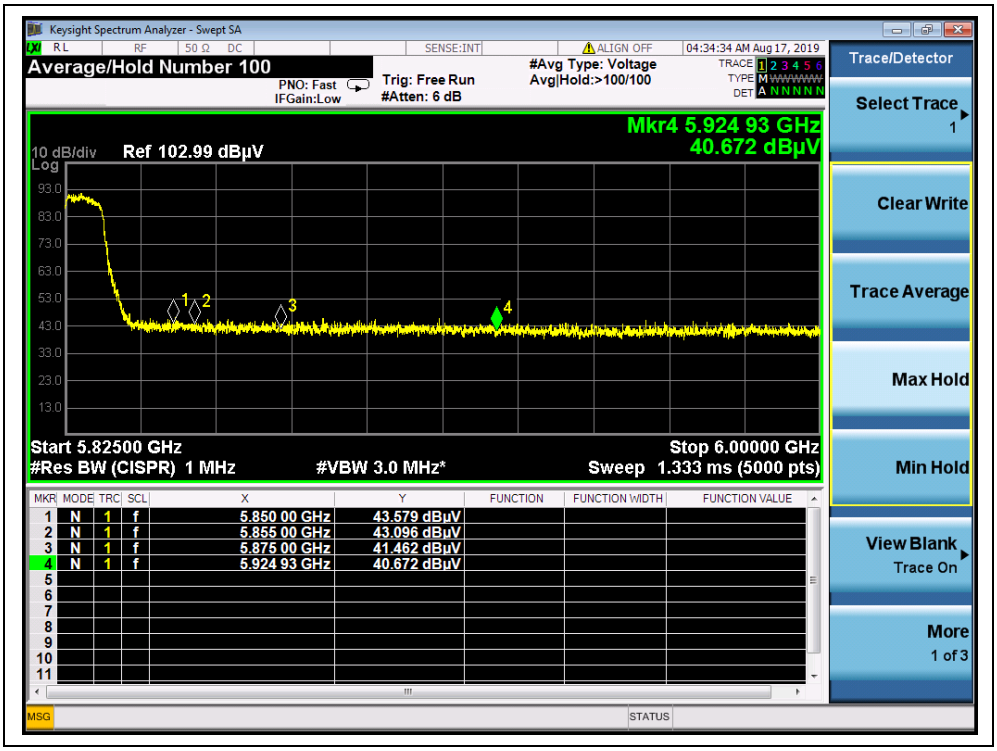
(Channel 149, PEAK, 802.11 ac (VHT20))



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



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



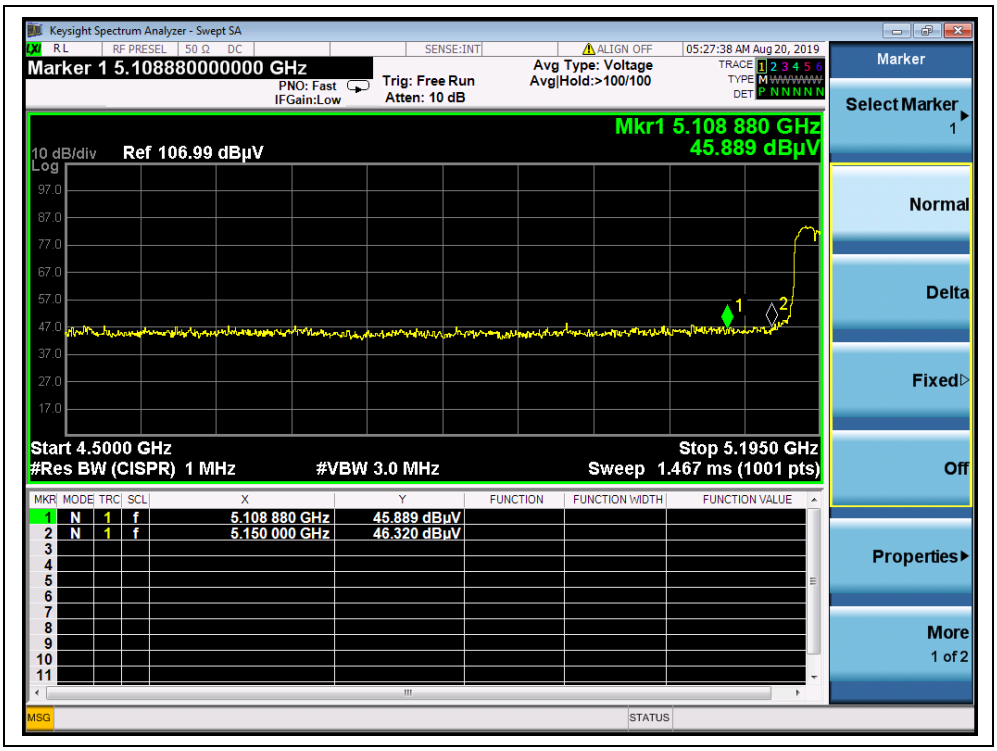
(Channel 165, AVG, 802.11ac (VHT20))

802.11 ac (VHT40) Test mode

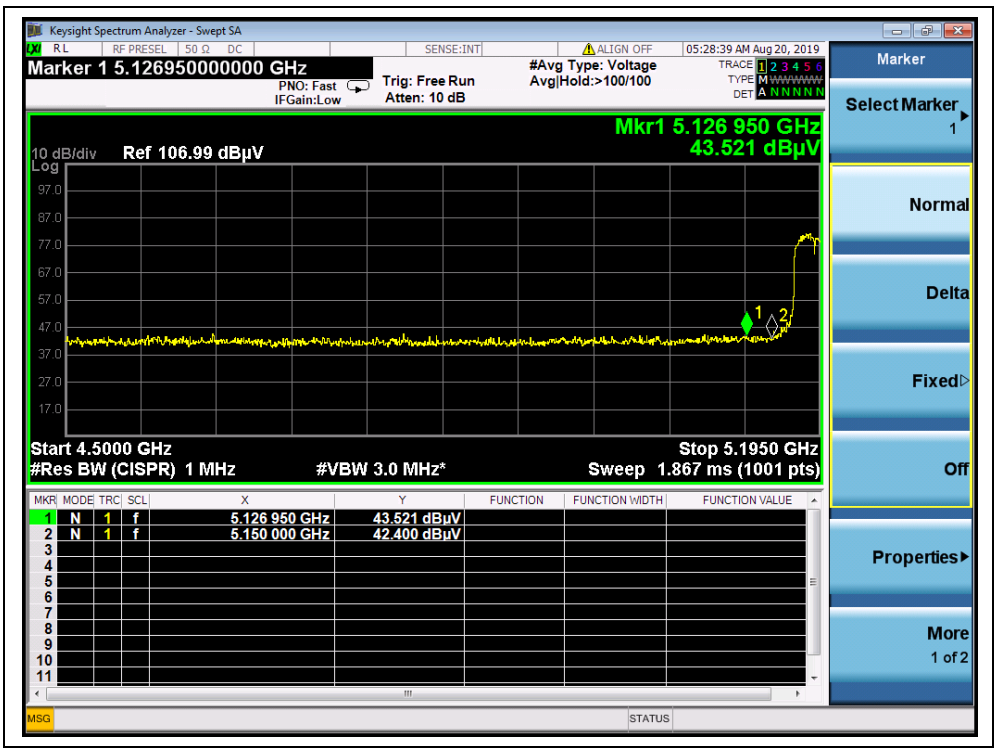
A. Test Verdict:

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBµV/m)	Limit (dBµV/m)	Verdict
38	5150.00	PK	46.32	-26.92	32.20	51.6	74	PASS
38	5126.95	AV	43.52	-26.92	32.20	48.8	54	PASS
46	5363.68	PK	45.30	-26.92	32.20	50.58	74	PASS
46	5394.27	AV	44.34	-26.92	32.20	49.62	54	PASS
151	5725.00	PK	60.78	-26.23	32.20	66.75	122.23	PASS
151	5725.00	AV	42.36	-26.23	32.20	48.33	54	PASS
159	5855.00	PK	44.44	-26.23	32.20	50.41	110.83	PASS
159	5850.00	AV	43.64	-26.23	32.20	49.61	54	PASS

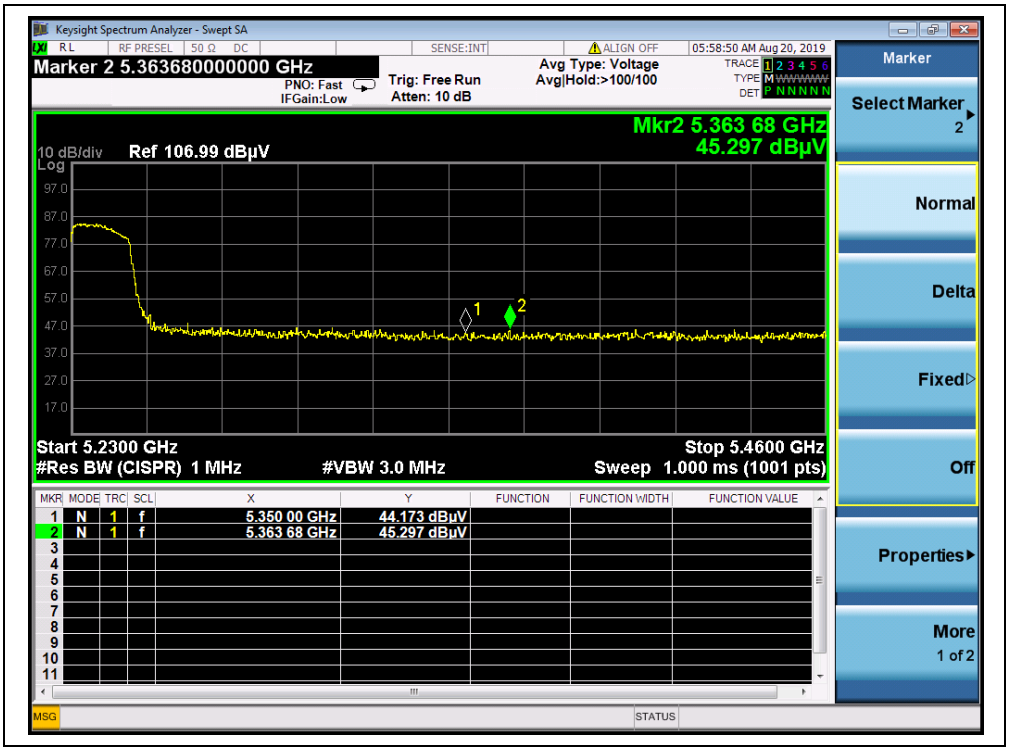
B. Test Plots:



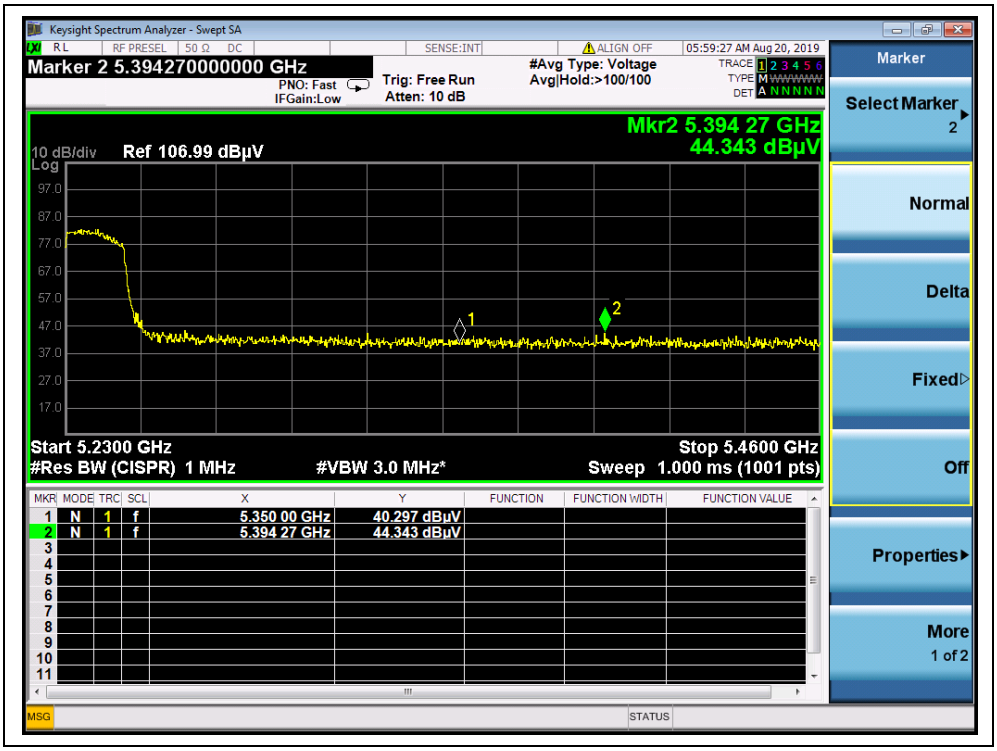
(Channel 38, PEAK, 802.11 ac (VHT40))



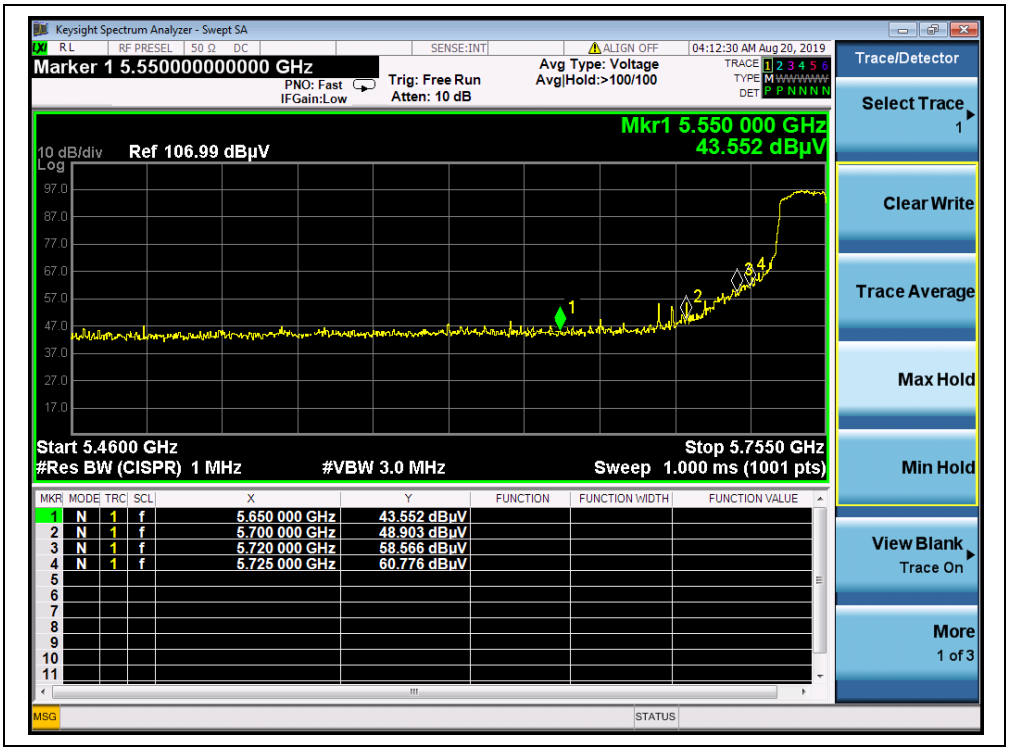
(Channel 38, AVG, 802.11 ac (VHT40))



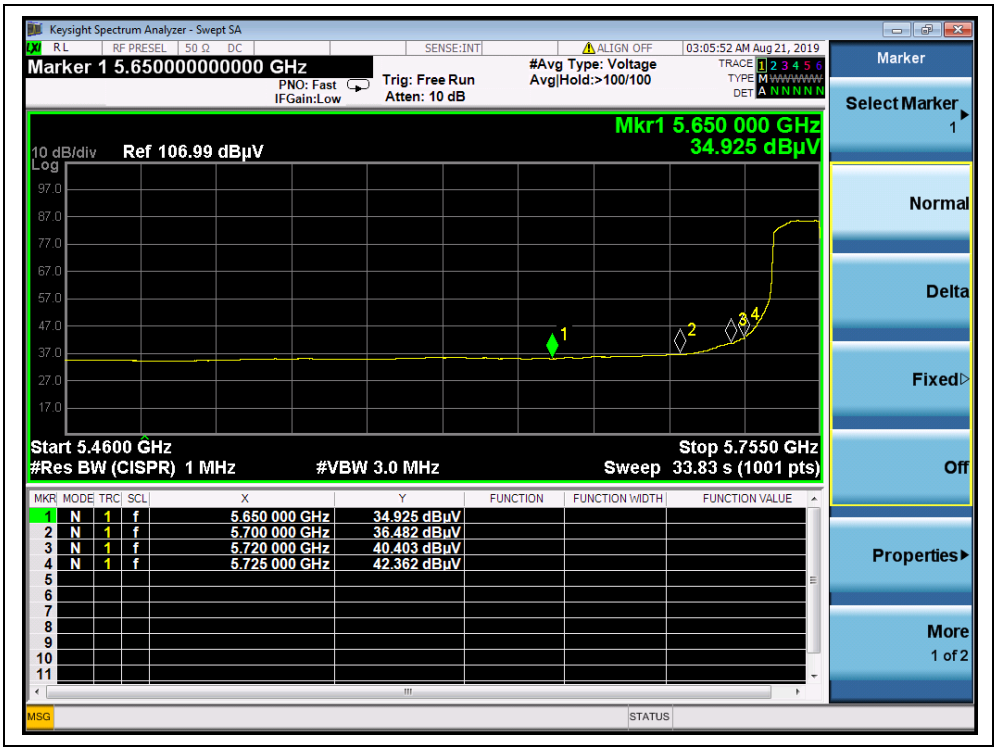
(Channel 46, PEAK, 802.11 ac (VHT40))



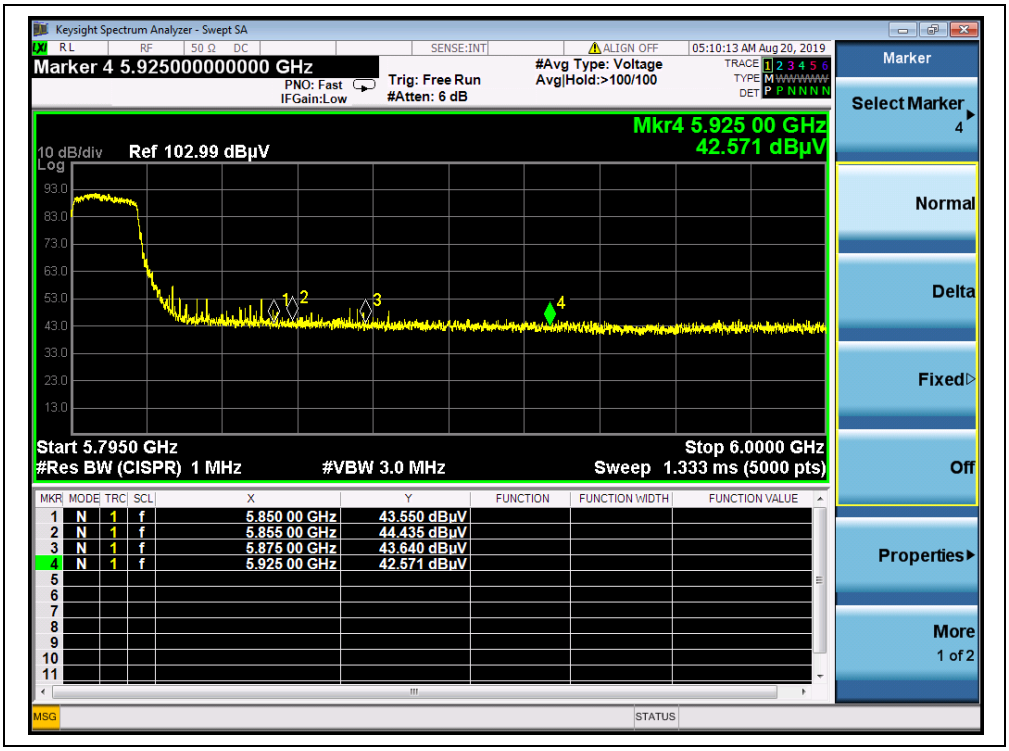
(Channel 46, AVG, 802.11 ac (VHT40))



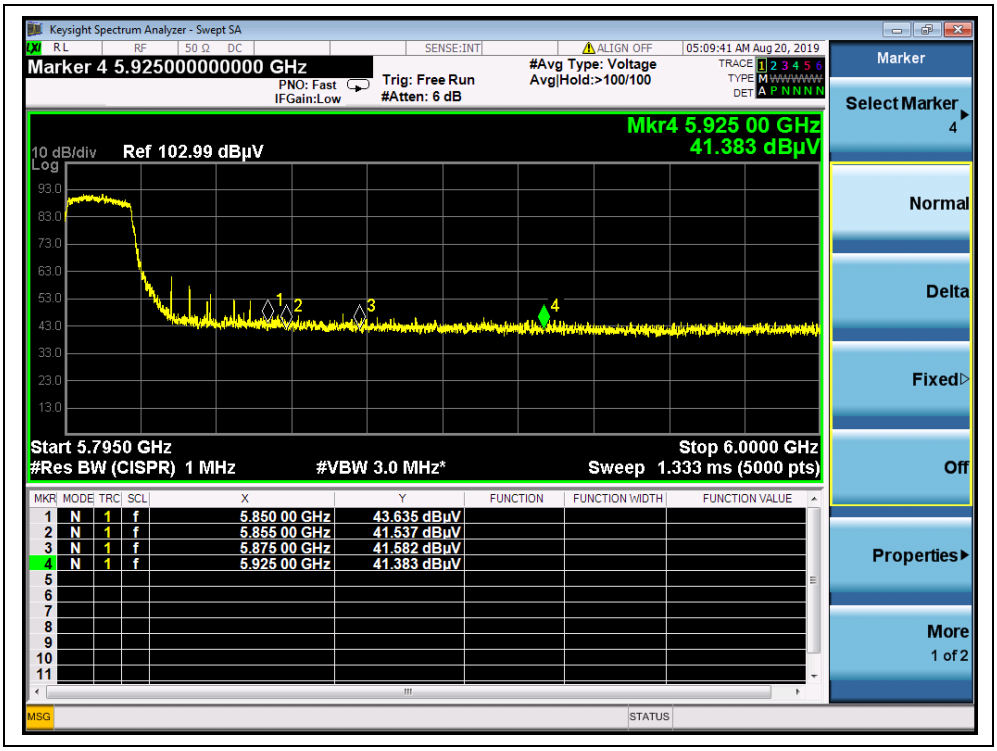
(Channel 151, PEAK, 802.11 ac (VHT40))



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



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



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

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);

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

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:

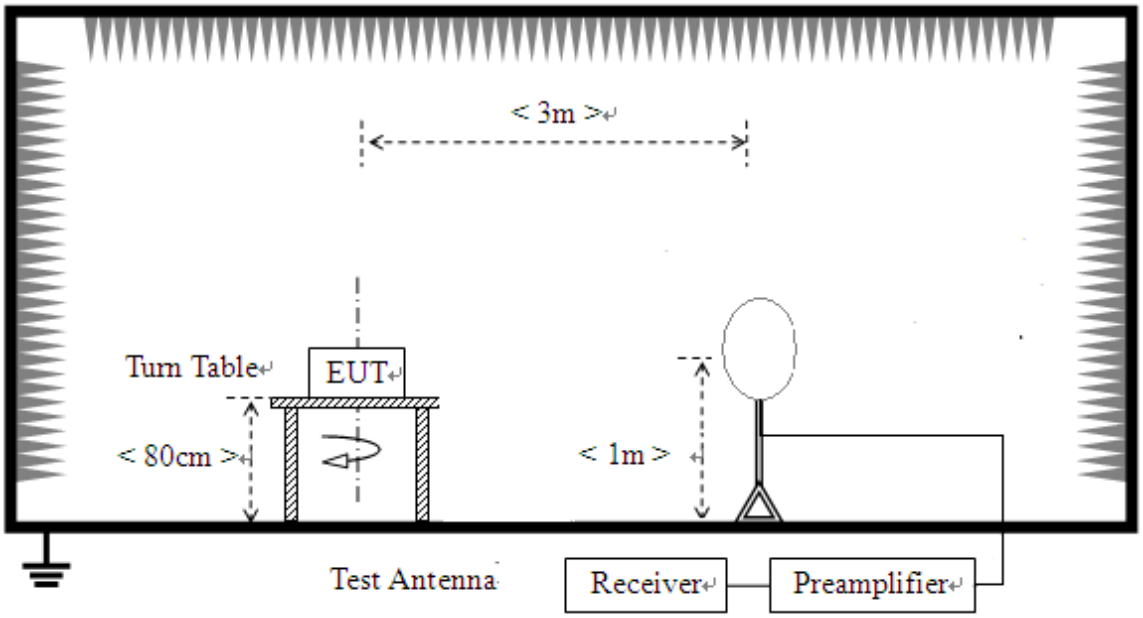
For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

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)

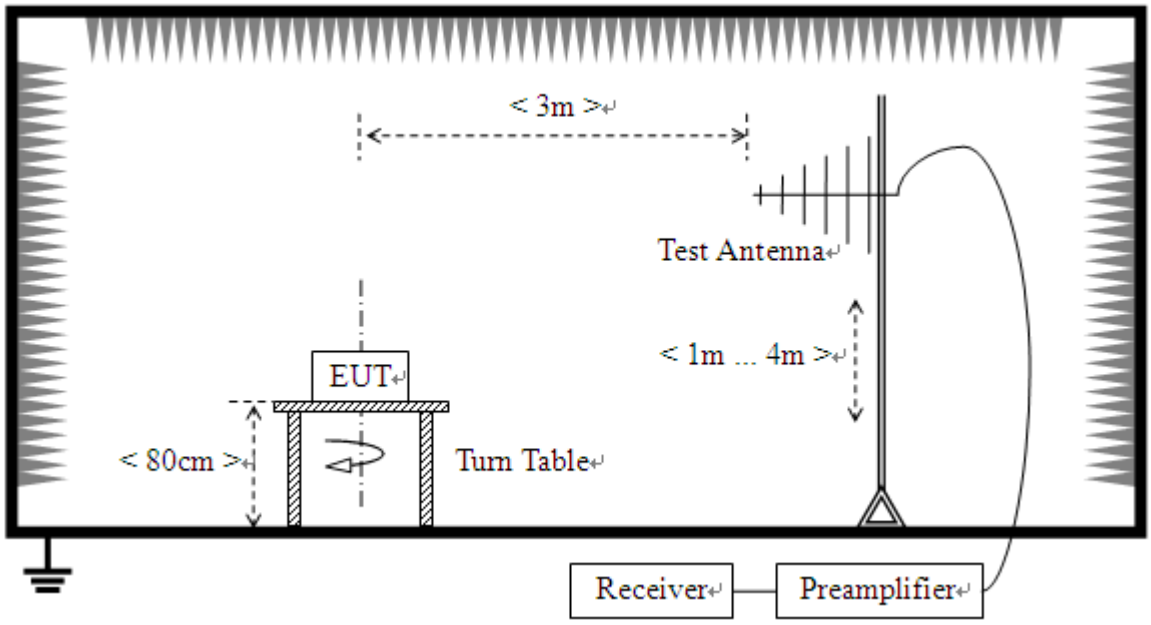
2.9.2. Test Description

A. Test Setup:

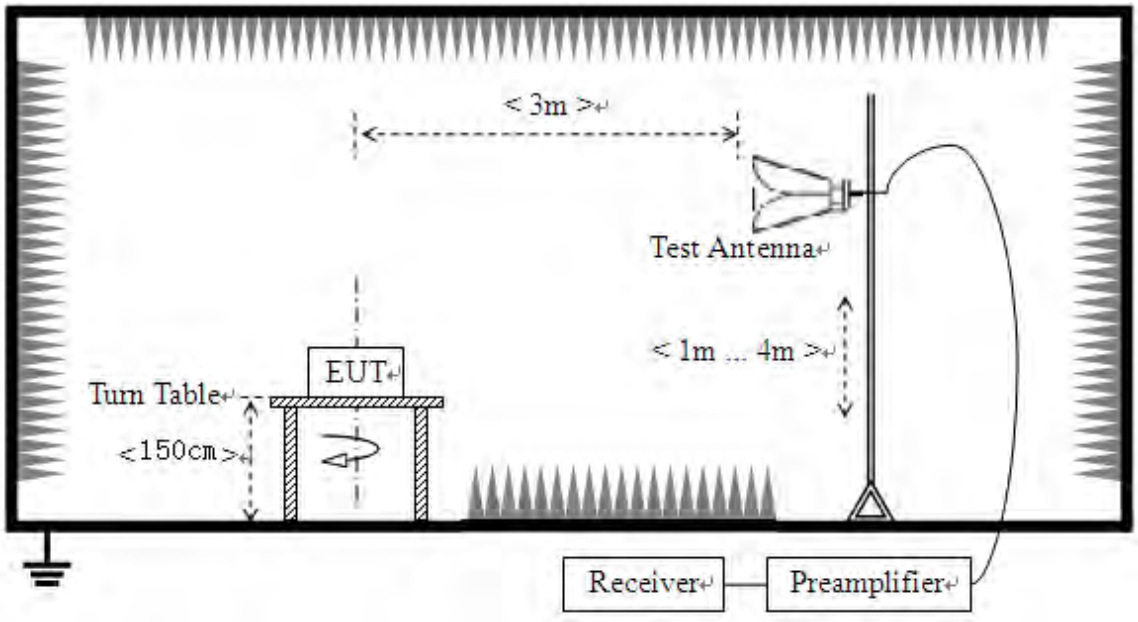
1) For radiated emissions from 9kHz to 30MHz



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:

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

A_T: Total correction Factor except Antenna

U_R: Receiver Reading

G_{preamp}: Preamplifier Gain

A_{Factor}: Antenna Factor at 3m

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

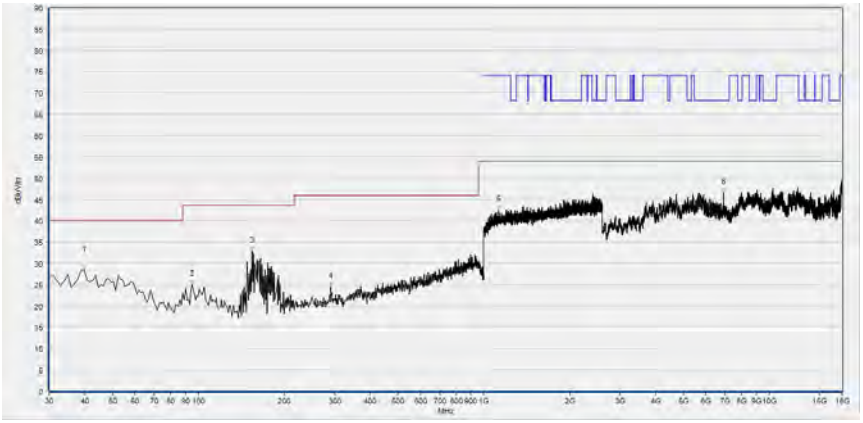
Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

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.

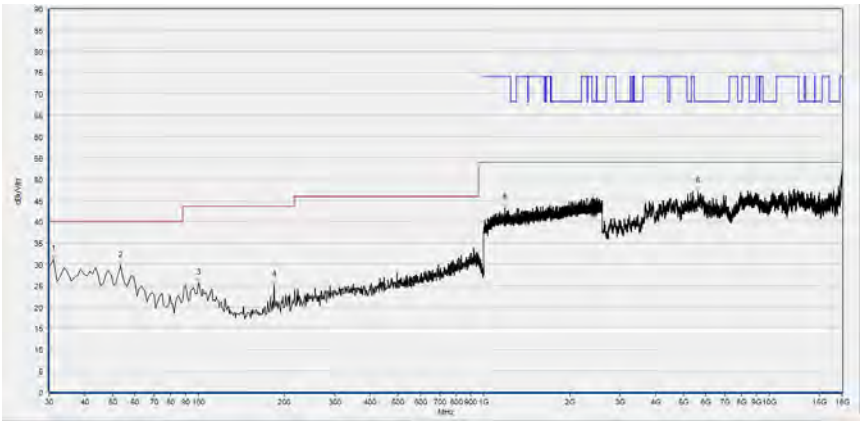
802.11a Test mode

Plots for Channel = 36



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	28.43	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
95.055	24.94	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	32.82	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
291.191	24.49	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1126.976	42.58	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6906.701	46.62	N/A	N/A	63.23	N/A	54.00	Horizontal	PASS

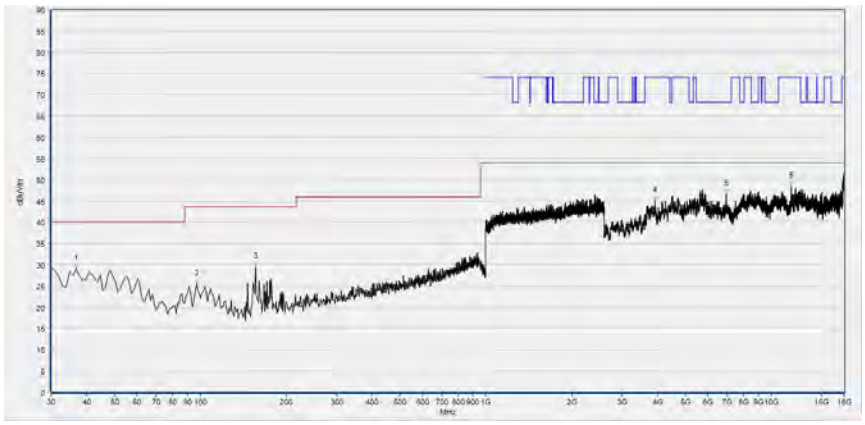
(Antenna Horizontal, 30MHz to 25GHz)



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	31.16	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
53.303	29.71	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.58	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
184.384	25.14	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1186.729	43.24	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5631.326	47.03	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

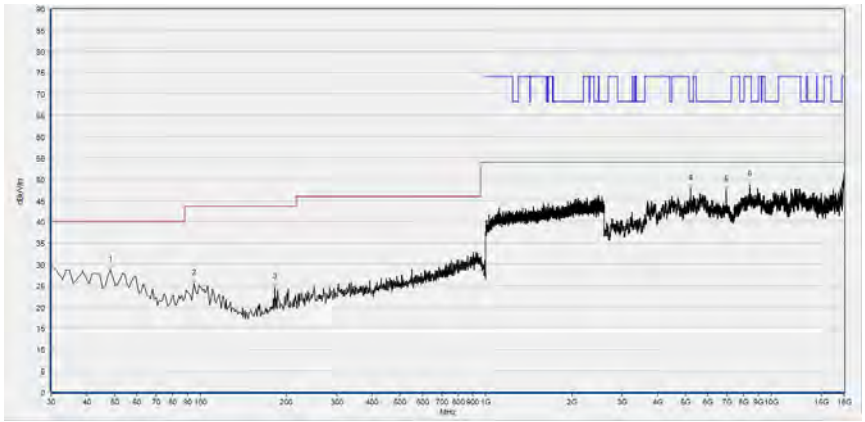
(Antenna Vertical, 30MHz to 25GHz)

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
36.797	28.97	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.997	25.44	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
156.226	29.53	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
3918.504	45.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6959.072	46.66	N/A	N/A	68.32	N/A	54.00	Horizontal	PASS
11740.188	48.42	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

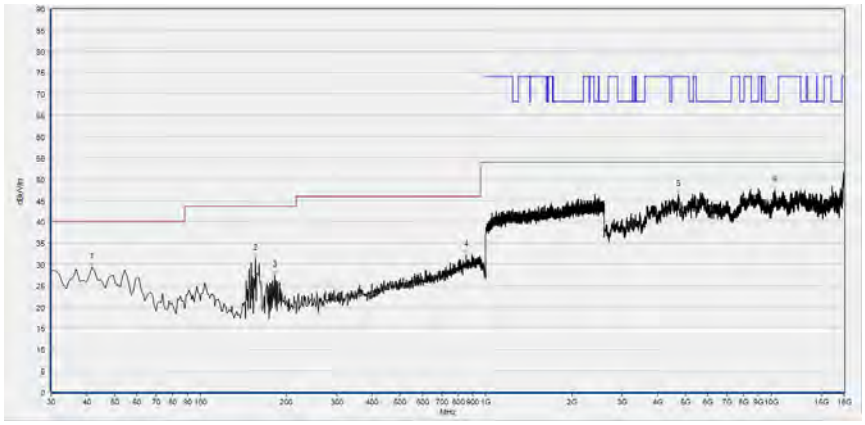
(Antenna Horizontal, 30MHz to 25GHz)



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
48.448	28.72	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
95.055	25.40	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
182.442	24.56	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
5212.362	47.70	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
6959.072	47.43	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8428.526	48.58	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

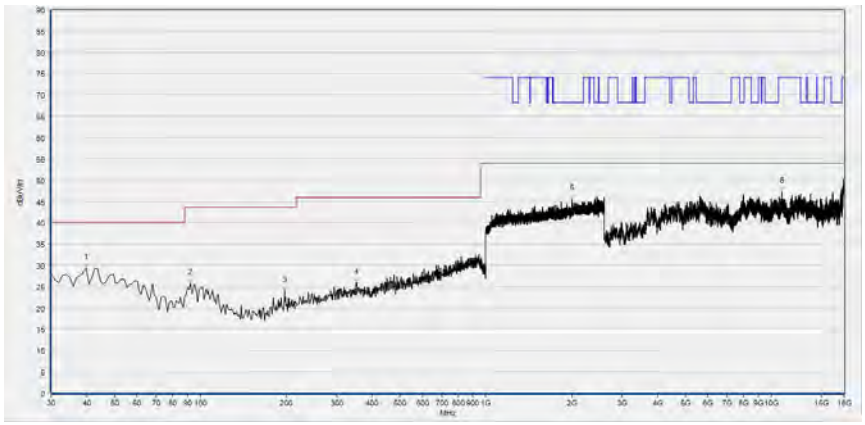
(Antenna Vertical, 30MHz to 25GHz)

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
41.652	29.33	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
156.226	31.30	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
182.442	27.52	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
854.354	32.15	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
4722.545	46.43	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
10320.024	47.49	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

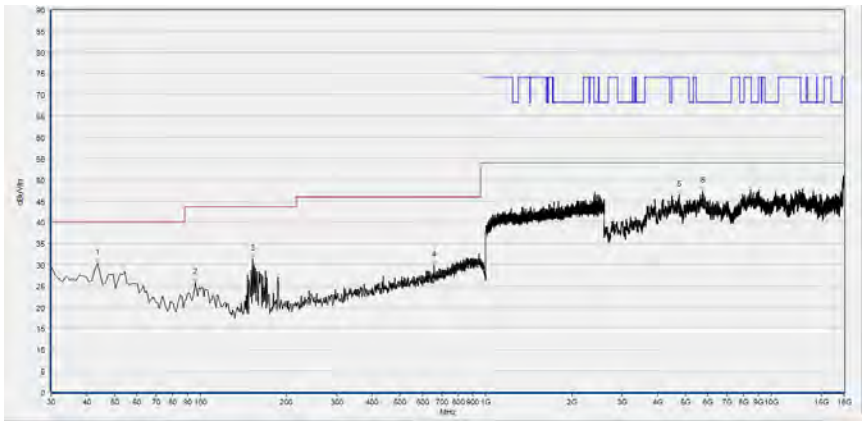
(Antenna Horizontal, 30MHz to 25GHz)



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	29.32	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
92.142	25.86	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
197.007	24.02	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
351.391	25.95	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2007.803	45.64	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10896.099	47.32	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

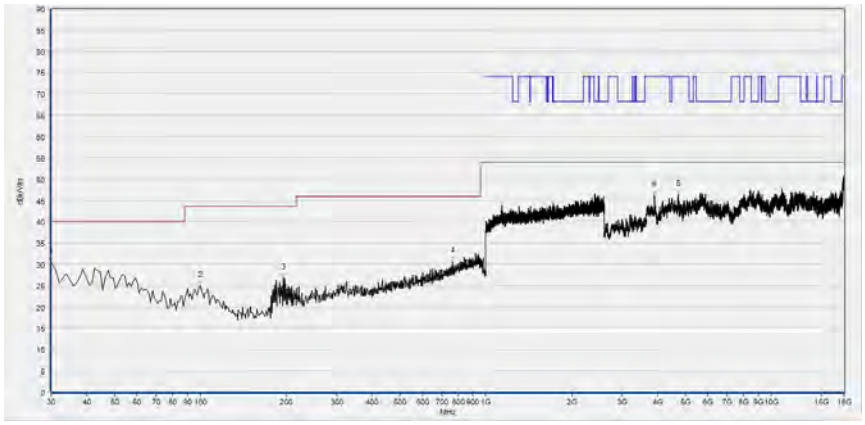
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
43.594	30.37	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	25.85	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
152.342	31.27	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
660.160	29.88	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
4762.593	46.39	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5754.551	47.25	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

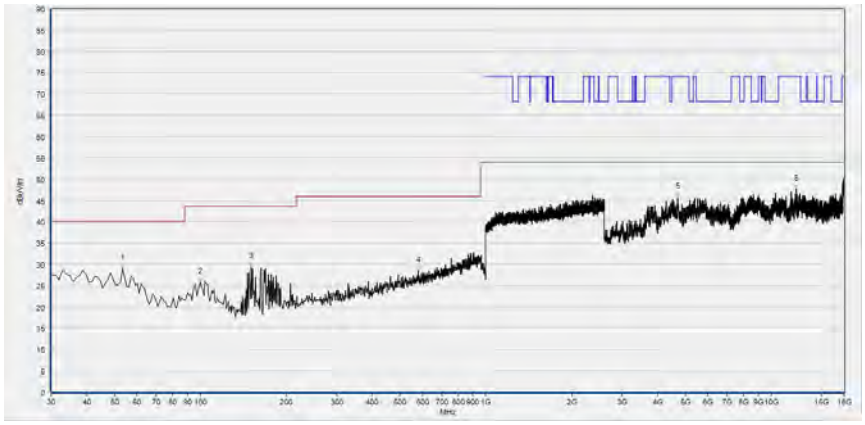
(Antenna Horizontal, 30MHz to 25GHz)



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
30.000	30.52	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.02	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
195.065	26.83	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
764.054	30.75	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
3896.939	46.19	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4722.545	46.40	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

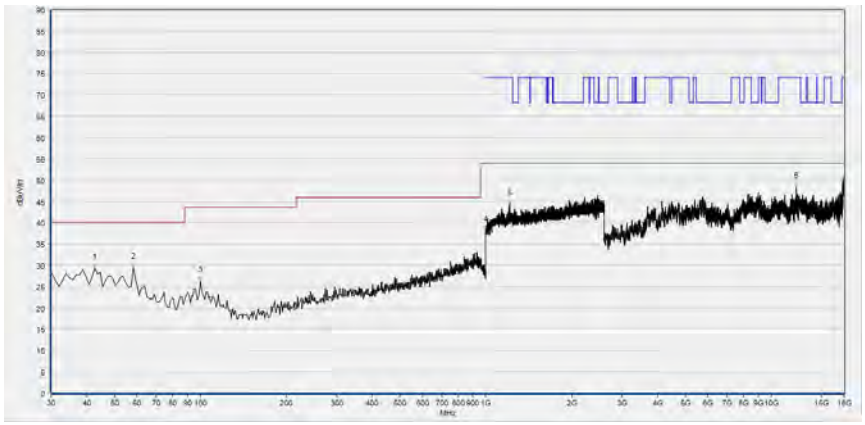
(Antenna Vertical, 30MHz to 25GHz)

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
53.303	29.07	N/A	N/A	N/A	53.303	N/A	Horizontal	PASS
99.910	25.89	N/A	N/A	N/A	99.910	N/A	Horizontal	PASS
150.400	29.28	N/A	N/A	N/A	150.400	N/A	Horizontal	PASS
580.541	28.43	N/A	N/A	N/A	580.541	N/A	Horizontal	PASS
4707.141	45.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12208.442	47.56	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

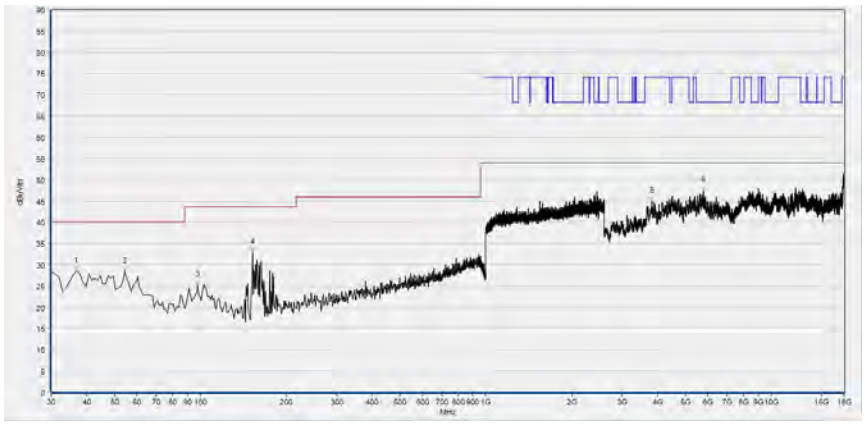
(Antenna Horizontal, 30MHz to 25GHz)



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
42.623	29.36	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
58.158	29.45	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	26.34	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1000.000	38.22	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1215.005	44.35	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12202.280	48.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

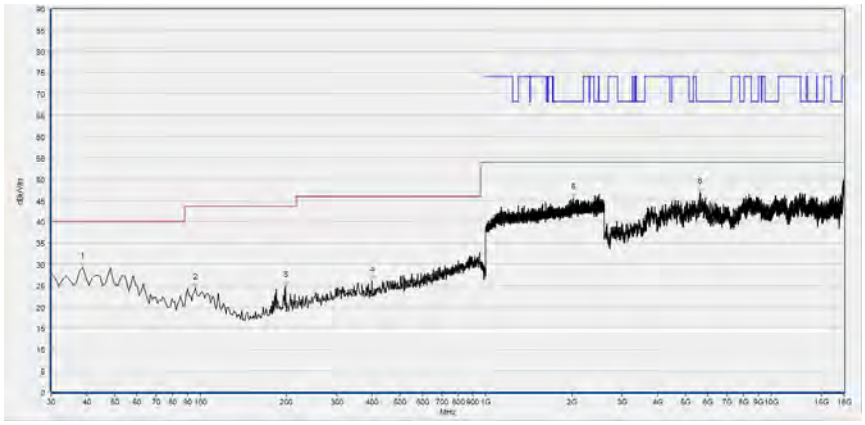
(Antenna Vertical, 30MHz to 25GHz)

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
36.797	28.44	N/A	N/A	N/A	36.797	N/A	Horizontal	PASS
54.274	28.37	N/A	N/A	N/A	54.274	N/A	Horizontal	PASS
97.968	25.18	N/A	N/A	N/A	97.968	N/A	Horizontal	PASS
152.342	32.87	N/A	N/A	N/A	152.342	N/A	Horizontal	PASS
3819.924	44.86	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5776.115	47.39	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 25GHz)

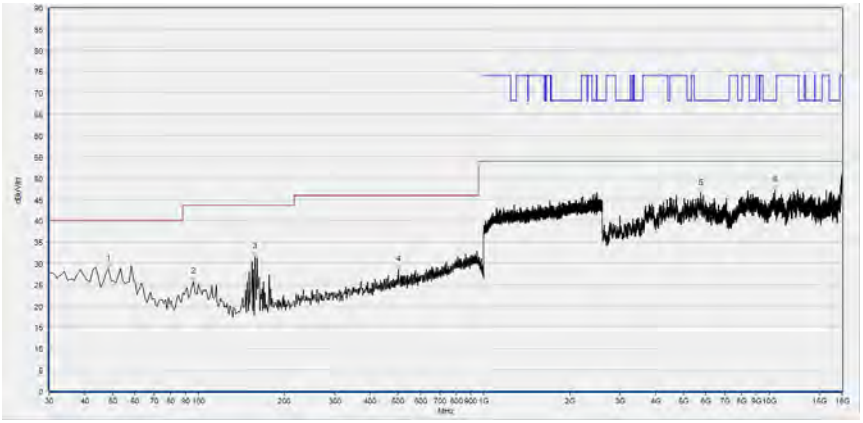


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
38.739	29.29	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.026	24.48	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
198.949	24.98	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
398.969	26.19	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2029.677	45.55	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5631.326	46.88	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

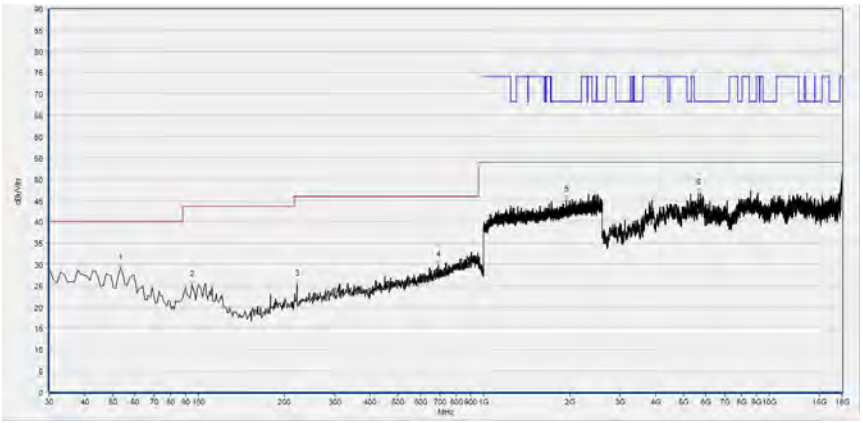
802.11n (HT20) Test mode

Plots for Channel = 36



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
48.448	28.58	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	25.71	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
158.168	31.45	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
501.892	28.52	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5760.712	46.50	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10480.216	47.04	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

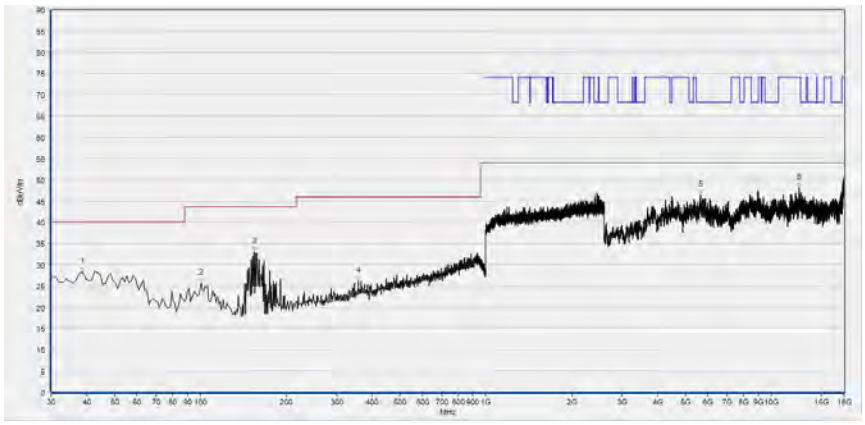
(Antenna Horizontal, 30MHz to 25GHz)



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
53.303	29.05	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
95.055	25.21	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
221.281	25.33	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
694.144	29.78	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1946.982	45.11	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5652.891	46.68	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

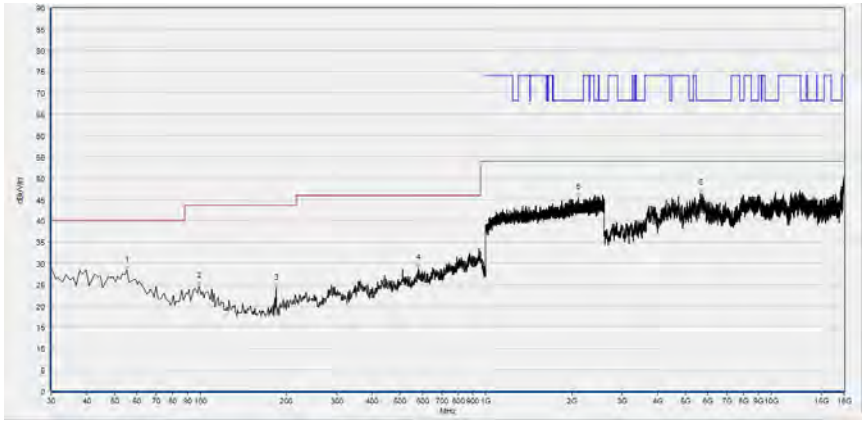
(Antenna Vertical, 30MHz to 25GHz)

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
38.739	28.39	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	25.60	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	32.98	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
358.188	26.08	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5649.810	46.44	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12531.906	48.05	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

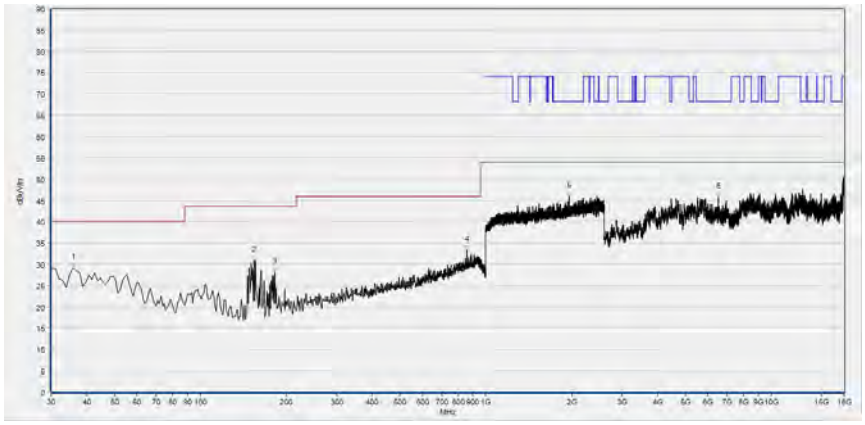
(Antenna Horizontal, 30MHz to 25GHz)



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
55.245	28.24	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
98.939	24.57	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
184.384	24.18	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
579.570	28.81	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2104.368	45.34	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5655.971	46.48	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

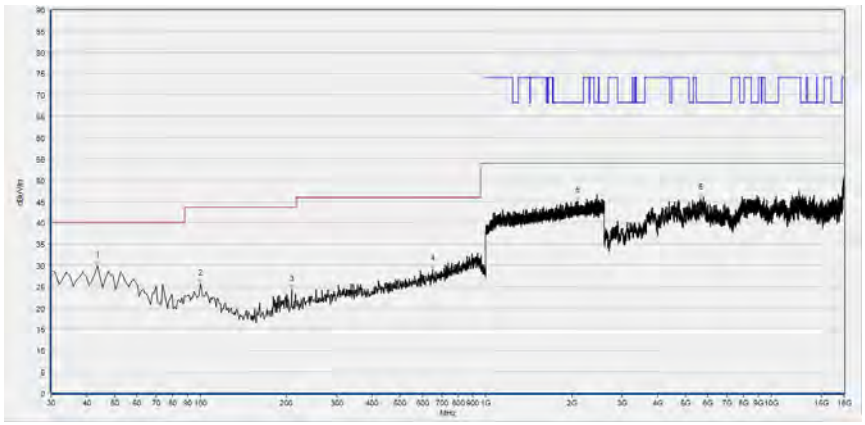
(Antenna Vertical, 30MHz to 25GHz)

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
35.826	29.16	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
154.284	30.90	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
182.442	28.13	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
857.267	33.38	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1957.119	46.00	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
6524.705	45.72	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

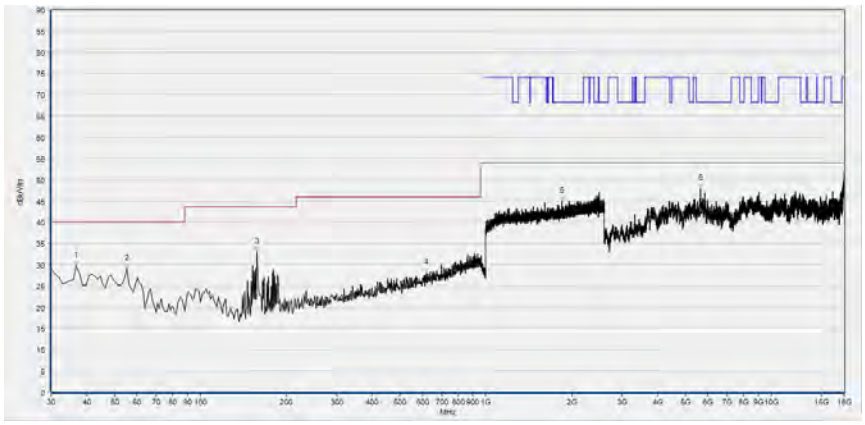
(Antenna Horizontal, 30MHz to 25GHz)



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
43.594	29.88	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.64	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
208.659	24.29	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
650.450	29.05	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2094.765	45.10	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5643.649	45.77	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

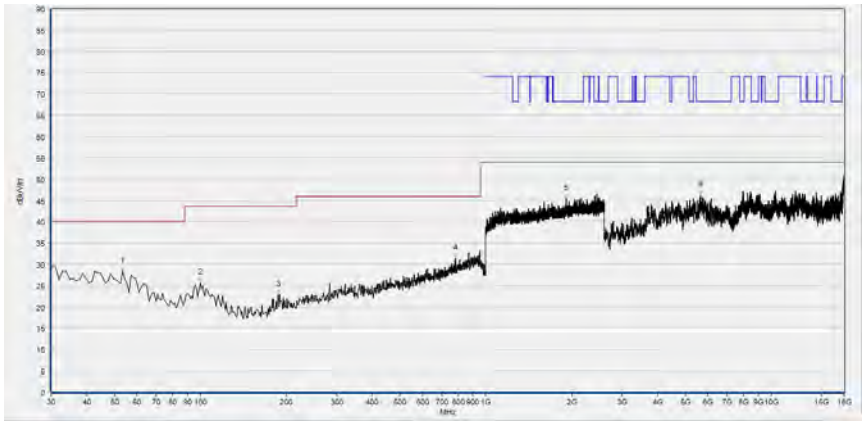
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
36.797	29.71	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
55.245	29.02	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
158.168	33.07	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
617.437	27.94	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1851.484	44.87	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5652.891	47.89	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

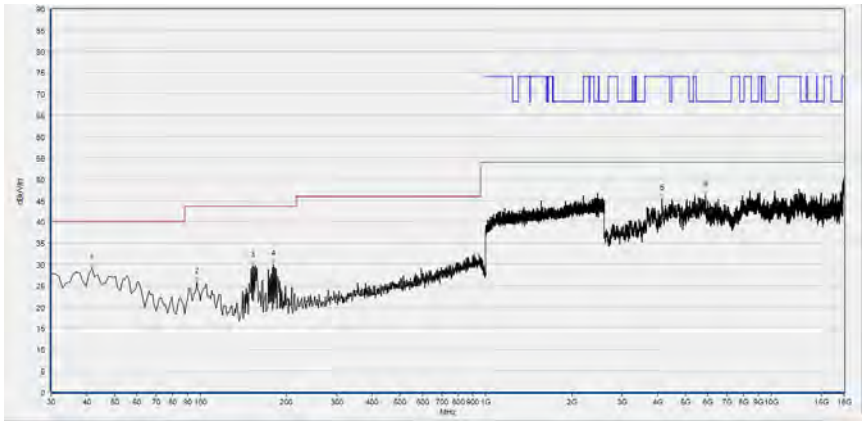
(Antenna Horizontal, 30MHz to 25GHz)



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
53.303	28.28	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
187.297	22.85	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
784.444	31.35	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1911.771	45.39	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5646.729	46.33	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

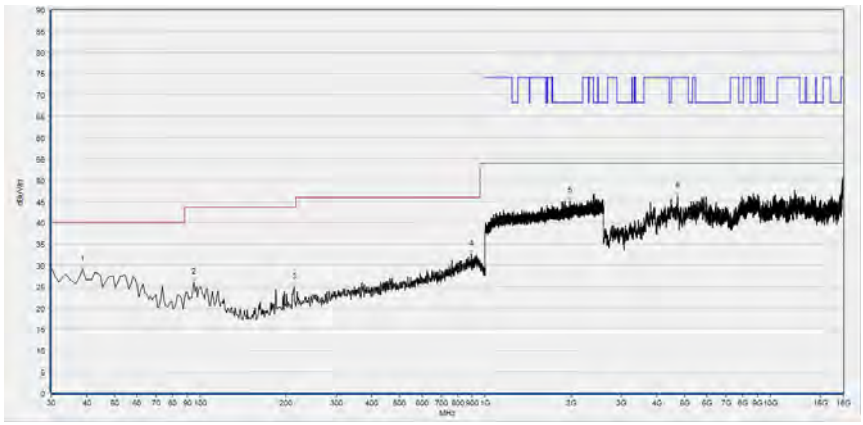
(Antenna Vertical, 30MHz to 25GHz)

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
41.652	28.96	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.997	25.82	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
152.342	29.71	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
180.501	29.96	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
4146.469	45.45	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5877.776	46.25	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

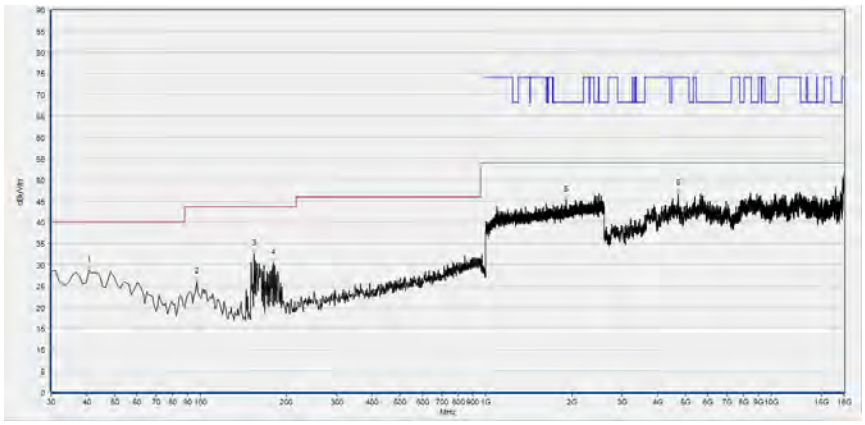
(Antenna Horizontal, 30MHz to 25GHz)



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
38.739	29.04	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
95.055	26.00	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
213.514	24.76	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
894.164	32.48	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1977.926	45.11	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
4722.545	46.31	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

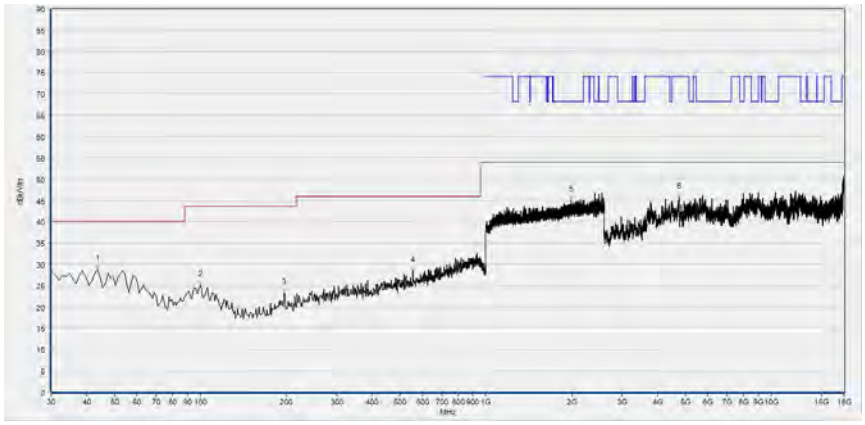
(Antenna Vertical, 30MHz to 25GHz)

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
40.681	28.61	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.997	25.95	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	32.50	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
180.501	30.35	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1909.637	45.26	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4716.383	46.74	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 25GHz)

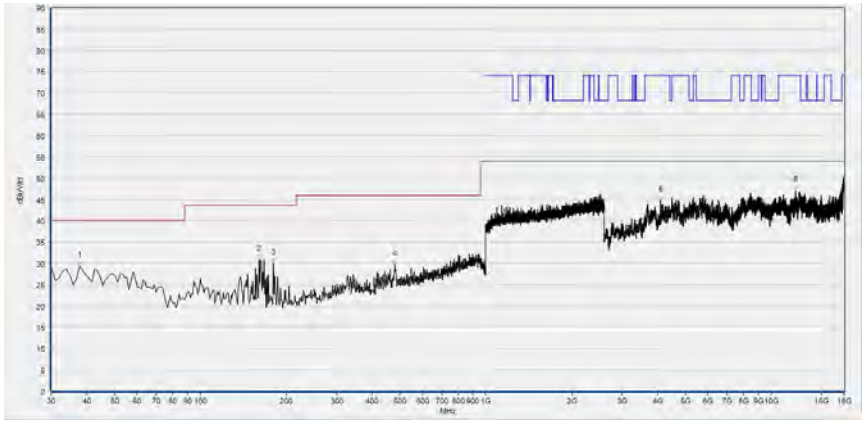


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
43.594	28.82	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.13	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
196.036	23.28	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
555.295	28.51	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1992.331	45.01	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
4747.189	45.69	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

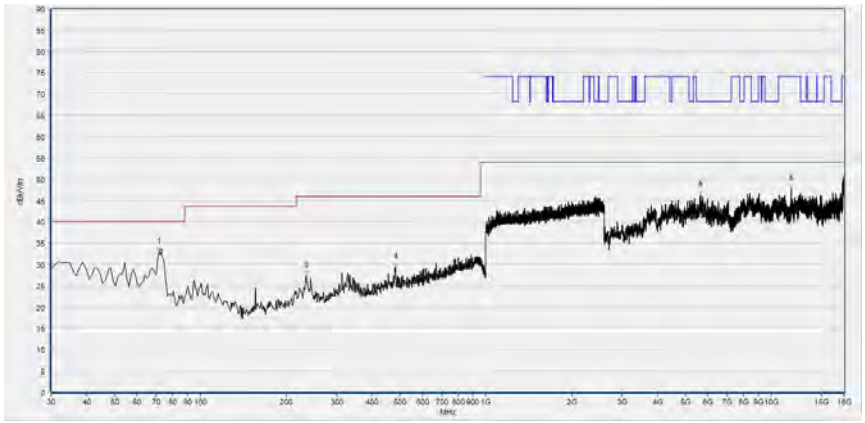
802.11n (HT40) Test mode

Plots for Channel = 38



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
37.768	29.28	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
160.110	30.90	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
180.501	29.94	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
480.531	29.61	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
4084.857	44.68	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12162.232	47.07	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

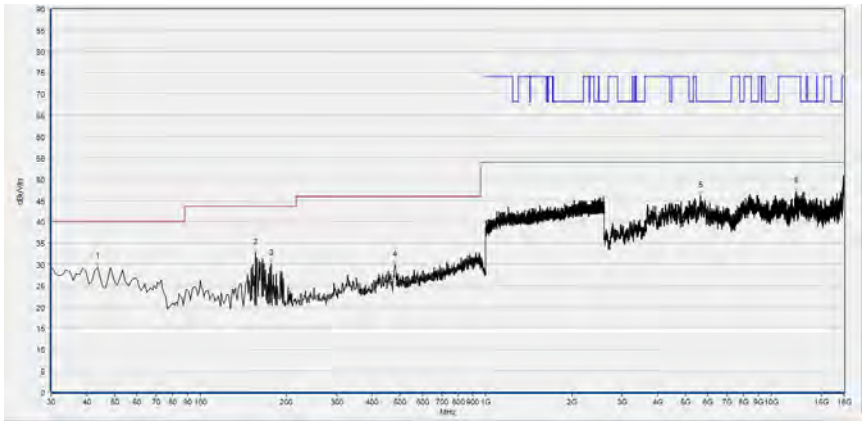
(Antenna Horizontal, 30MHz to 25GHz)



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
71.752	32.80	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
72.723	32.33	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
234.875	27.36	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
482.472	29.31	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5649.810	46.21	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
11743.269	47.75	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

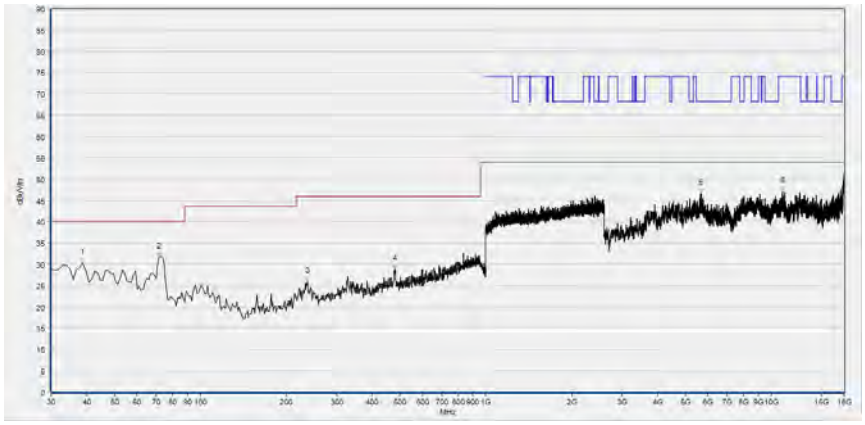
(Antenna Vertical, 30MHz to 25GHz)

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
43.594	29.34	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
156.226	32.74	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
176.617	30.13	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
480.531	29.80	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5646.729	46.03	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12202.280	47.13	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

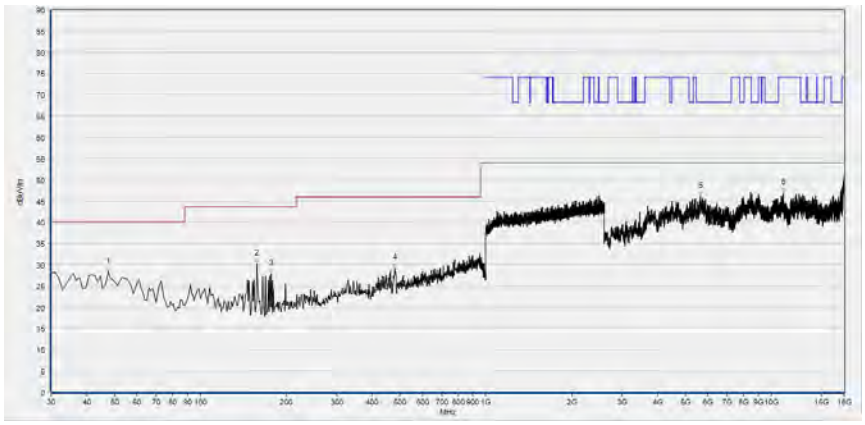
(Antenna Horizontal, 30MHz to 25GHz)



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
38.739	30.41	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
71.752	31.69	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
236.817	26.01	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
479.560	28.80	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5646.729	46.65	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10936.147	47.02	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

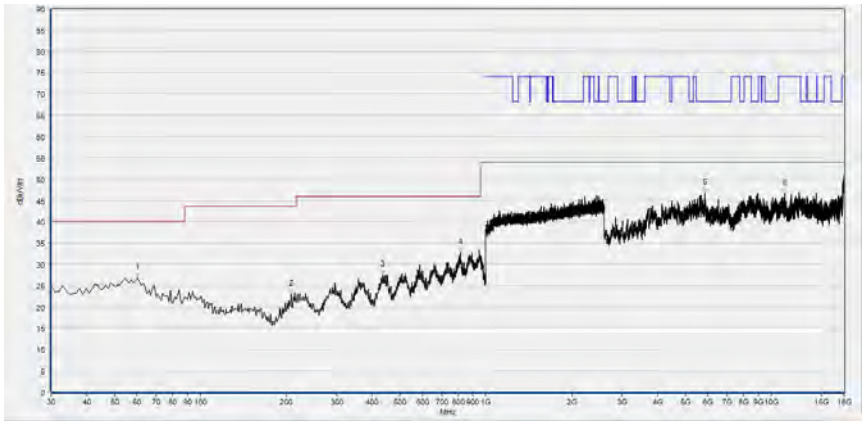
(Antenna Vertical, 30MHz to 25GHz)

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
47.477	28.40	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
158.168	30.21	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
176.617	27.89	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
479.560	29.20	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5643.649	46.02	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
11007.001	46.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

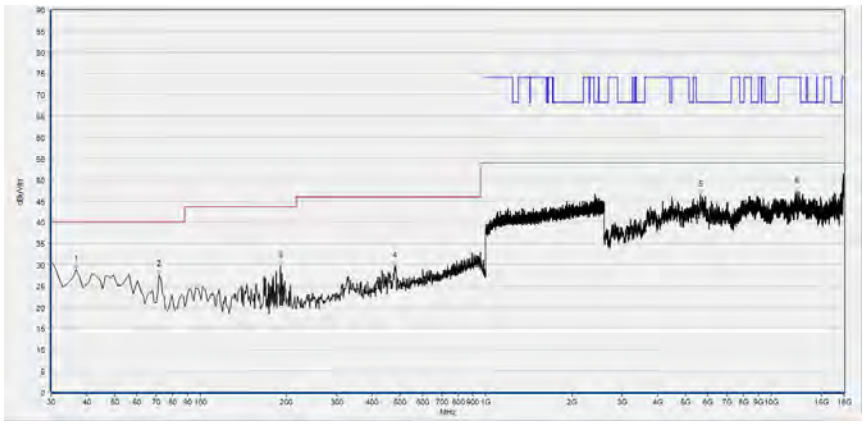
(Antenna Horizontal, 30MHz to 25GHz)



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
60.100	26.75	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
207.688	22.89	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
435.866	27.49	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
813.574	32.61	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5853.131	46.74	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
11139.468	46.61	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

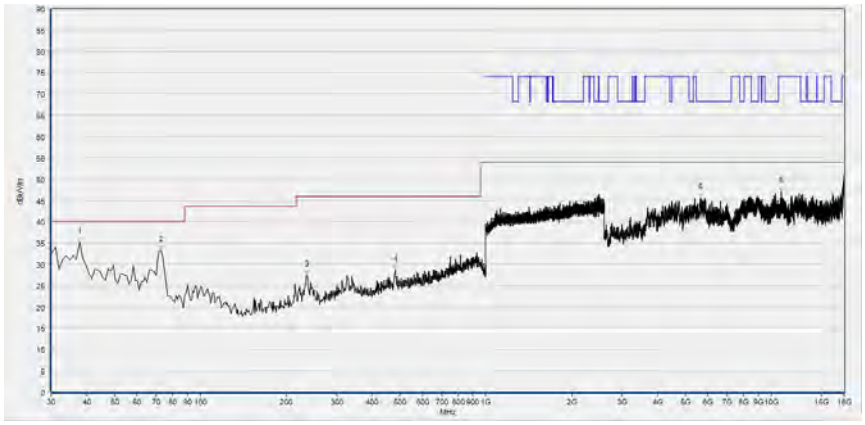
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 159



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
36.797	28.81	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
71.752	27.71	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
191.181	29.61	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
478.589	29.65	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5665.213	46.38	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12288.538	47.12	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 25GHz)

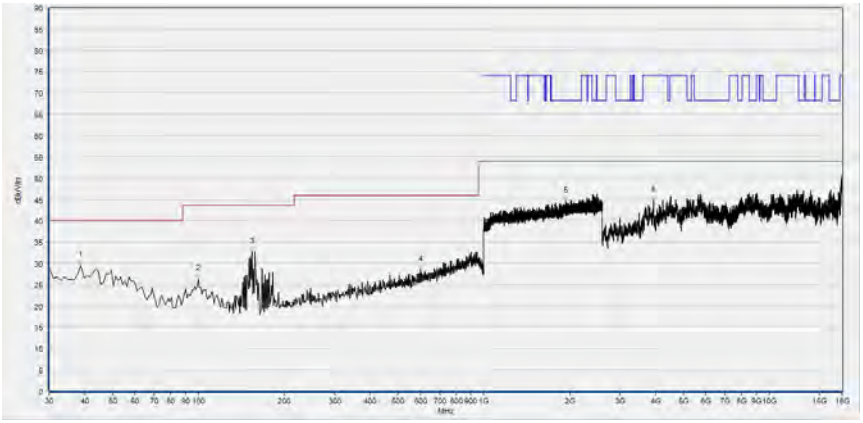


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
37.768	35.15	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
72.723	33.43	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
235.846	27.49	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
481.502	28.72	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5637.487	45.64	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10831.406	47.04	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

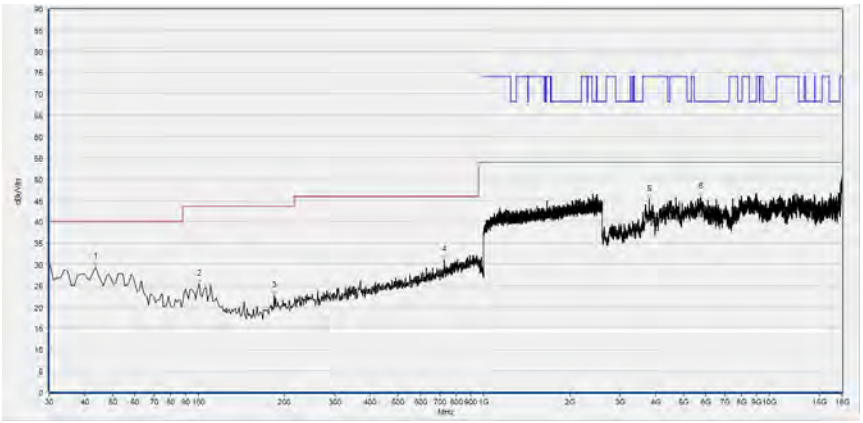
802.11ac (VHT20) Test mode

Plots for Channel = 36



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
38.739	29.42	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	26.26	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	32.61	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
599.960	28.57	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1936.312	44.55	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
3930.826	44.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

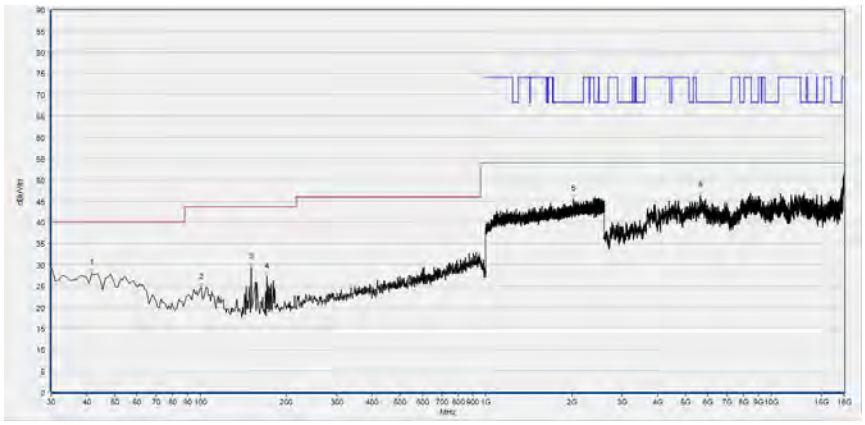
(Antenna Horizontal, 30MHz to 25GHz)



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
43.594	29.39	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
100.881	25.28	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
184.384	22.67	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
727.157	31.08	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
3801.440	45.30	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5745.309	45.78	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

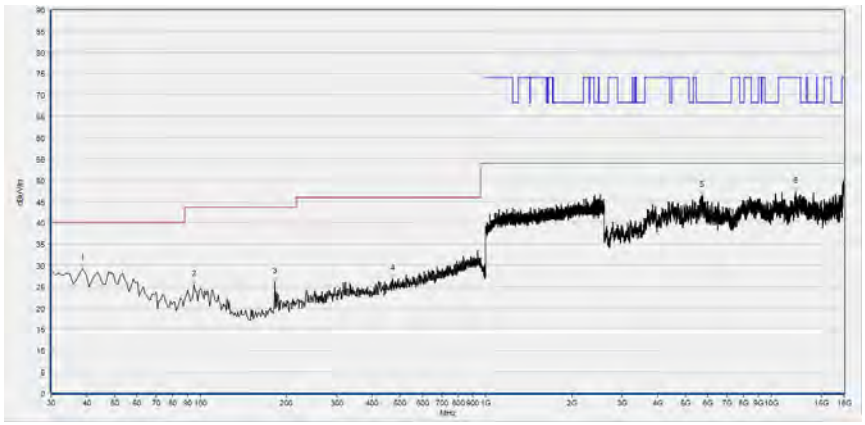
(Antenna Vertical, 30MHz to 25GHz)

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
41.652	27.92	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	24.60	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
150.400	29.35	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
170.791	27.14	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2030.210	45.36	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5637.487	46.18	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

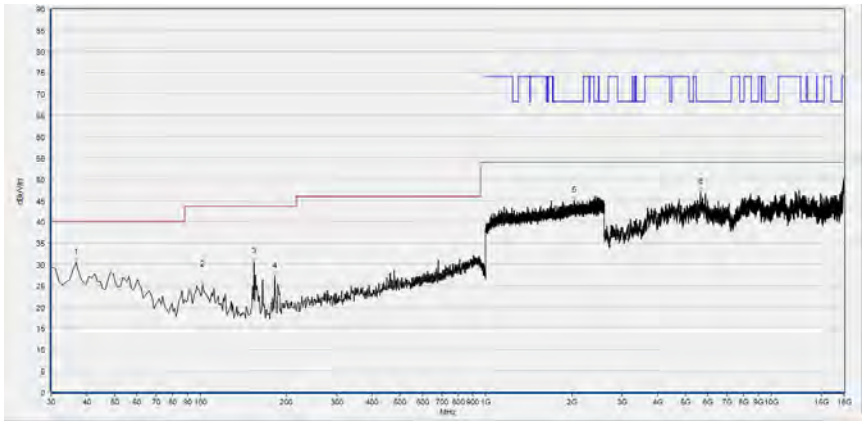
(Antenna Horizontal, 30MHz to 25GHz)



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	29.18	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
95.055	25.52	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
182.442	26.20	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
472.763	26.86	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5726.825	46.42	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12193.039	47.20	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

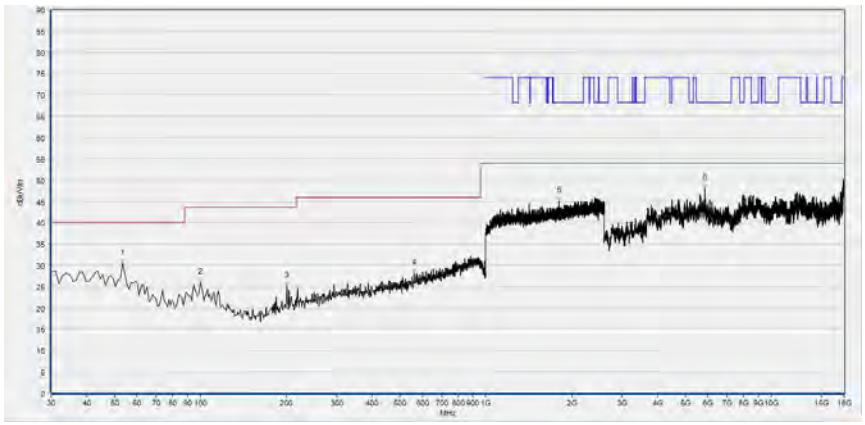
(Antenna Vertical, 30MHz to 25GHz)

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
36.797	30.34	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
101.852	25.14	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	30.53	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
182.442	27.18	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2034.478	44.93	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5646.729	46.95	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

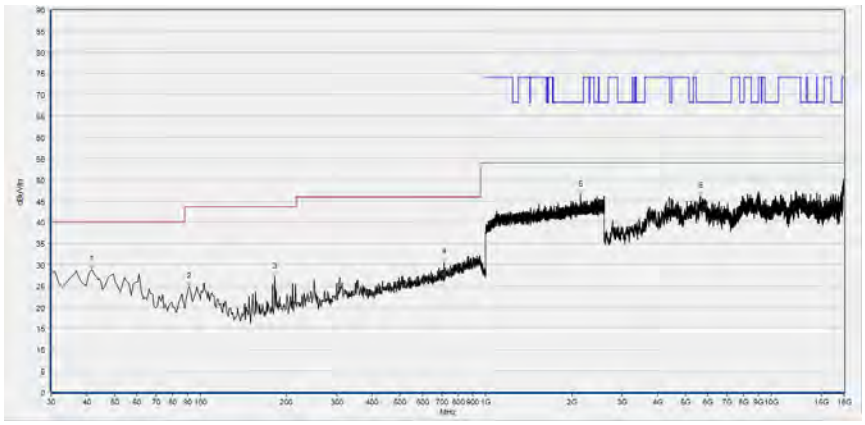
(Antenna Horizontal, 30MHz to 25GHz)



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
53.303	30.50	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.90	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
200.891	25.07	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
561.121	28.11	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1800.800	45.06	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5859.292	48.02	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

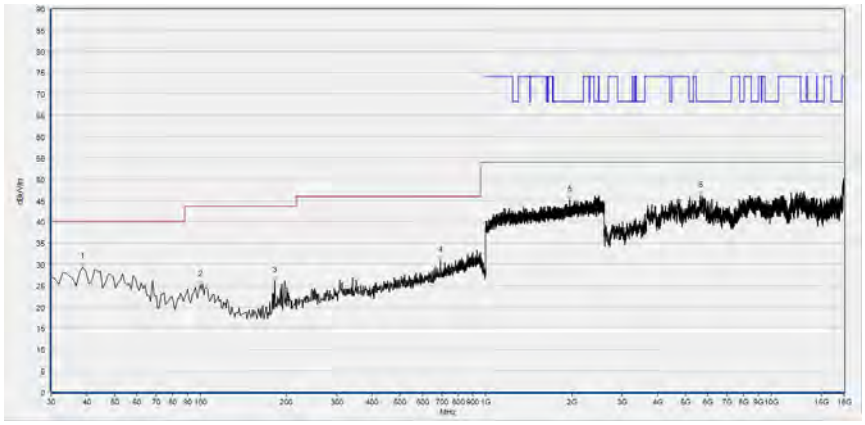
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 149



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
41.652	28.83	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
91.171	24.81	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
182.442	27.09	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
714.535	30.50	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2144.381	46.44	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5662.132	46.03	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

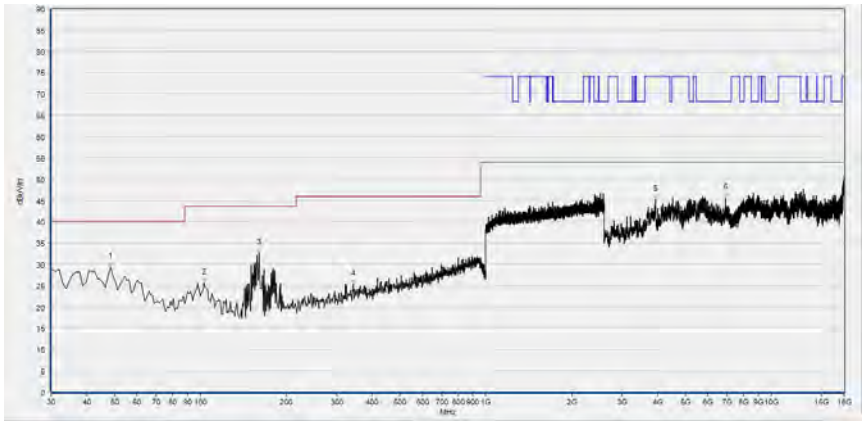
(Antenna Horizontal, 30MHz to 25GHz)



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	29.36	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.18	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
182.442	26.09	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
694.144	30.82	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1967.789	45.14	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5646.729	46.16	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

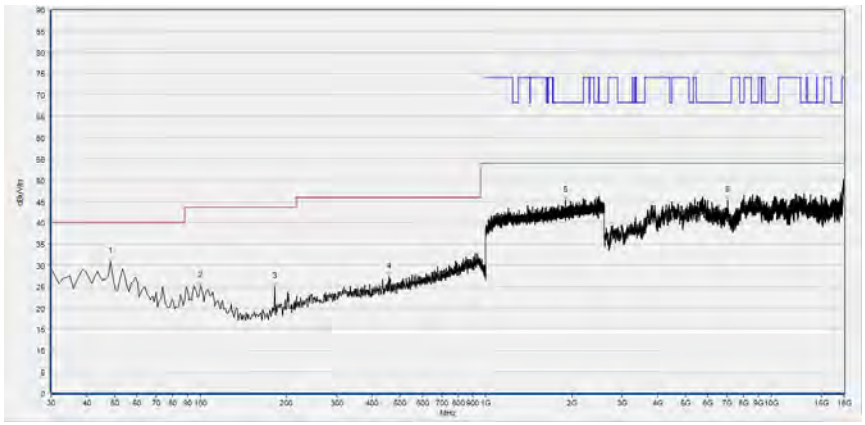
(Antenna Vertical, 30MHz to 25GHz)

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
48.448	29.36	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
102.823	25.67	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
160.110	32.70	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
342.653	25.26	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
3930.826	45.27	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6900.540	45.64	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

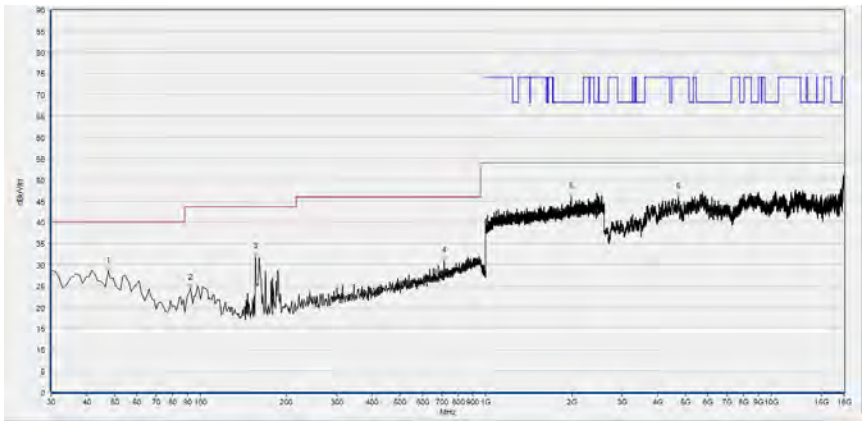
(Antenna Horizontal, 30MHz to 25GHz)



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
48.448	30.89	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	25.16	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
182.442	25.05	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
458.198	27.32	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1897.366	45.24	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
7029.926	45.24	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

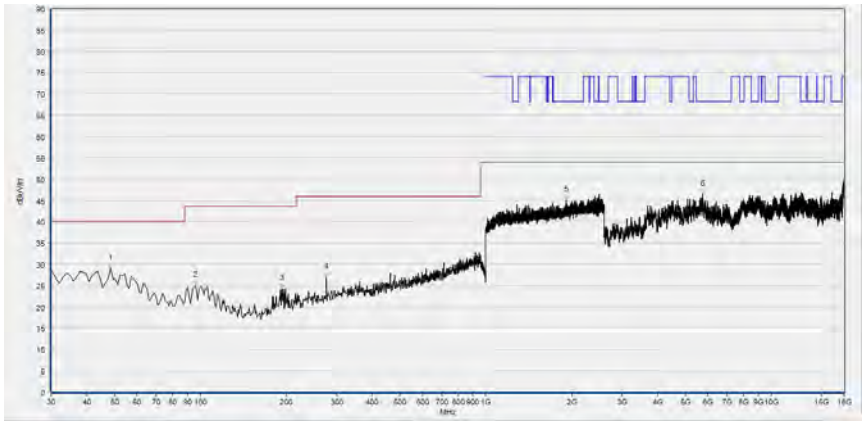
(Antenna Vertical, 30MHz to 25GHz)

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
47.477	28.57	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
92.142	24.39	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
156.226	31.83	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
715.506	30.86	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1990.197	45.93	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4716.383	46.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 25GHz)

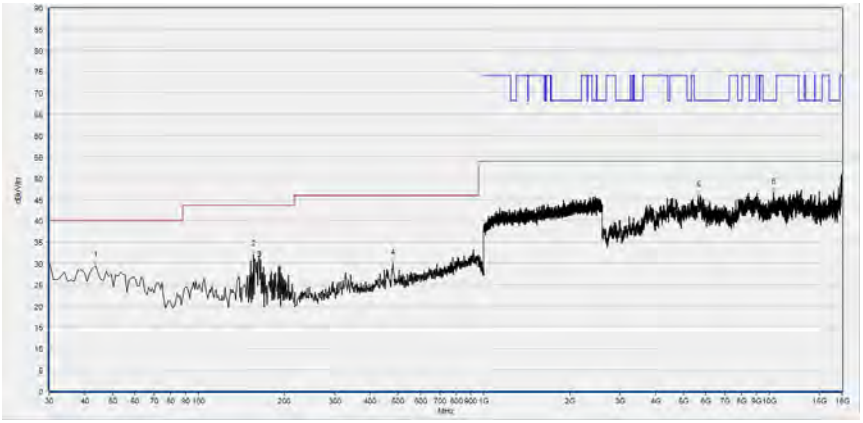


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
48.448	28.98	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.026	24.95	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
193.123	24.27	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
276.627	26.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1908.036	45.04	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5742.228	46.45	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)

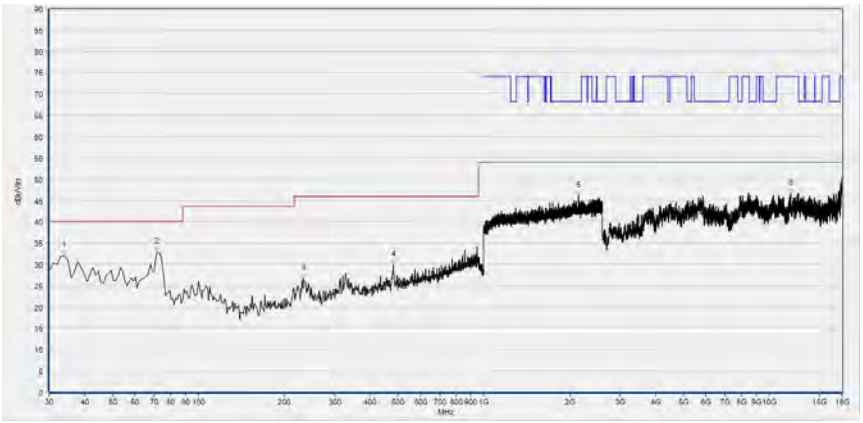
802.11ac (VHT40) Test mode

Plots for Channel = 38



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
43.594	29.45	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
156.226	32.09	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
163.023	31.43	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
479.560	30.00	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5643.649	45.89	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10353.911	46.54	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

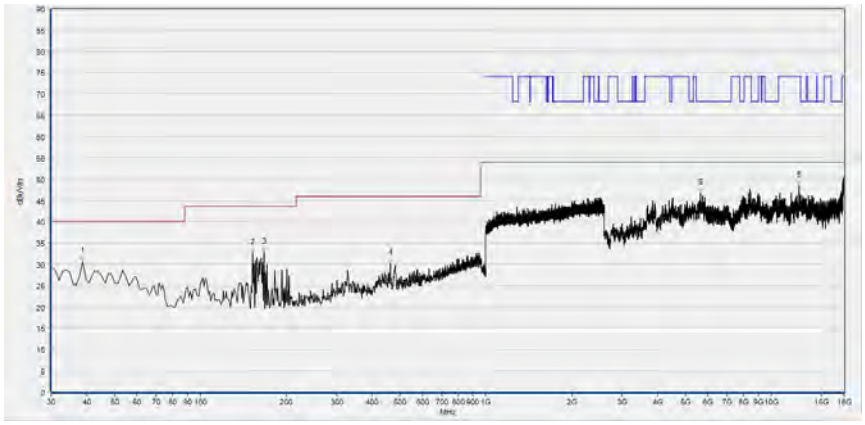
(Antenna Horizontal, 30MHz to 25GHz)



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	32.00	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
71.752	32.77	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
233.904	26.62	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
481.502	29.90	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2143.848	46.12	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
11866.493	46.52	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

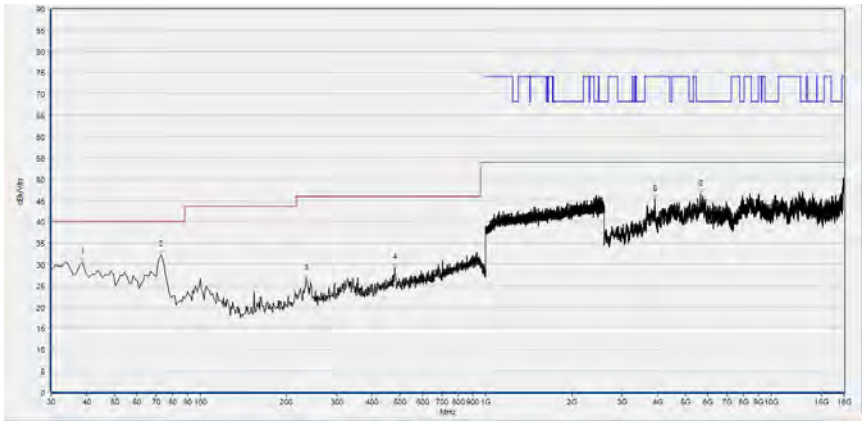
(Antenna Vertical, 30MHz to 25GHz)

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	30.63	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
152.342	32.61	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
166.907	32.86	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
463.053	30.15	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5640.568	46.72	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12528.826	48.42	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

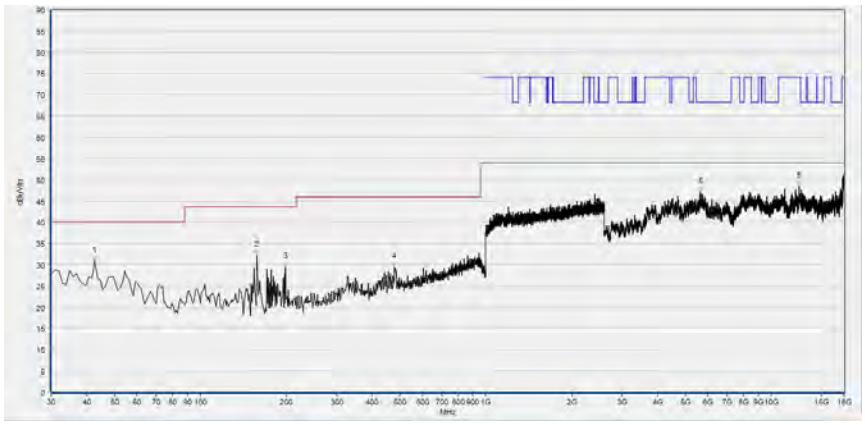
(Antenna Horizontal, 30MHz to 25GHz)



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	30.58	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
72.723	32.20	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
234.875	26.64	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
478.589	29.23	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
3918.504	45.19	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5652.891	46.35	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

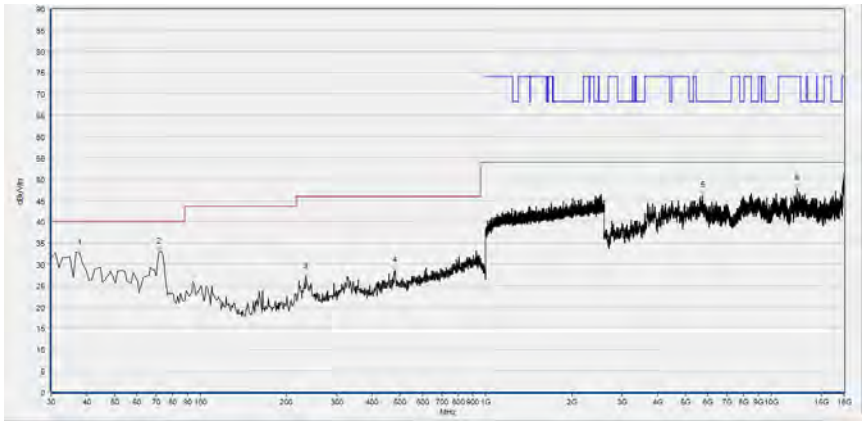
(Antenna Vertical, 30MHz to 25GHz)

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
42.623	30.77	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
158.168	32.12	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
198.949	29.54	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
477.618	29.56	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5649.810	47.04	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12528.826	48.47	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

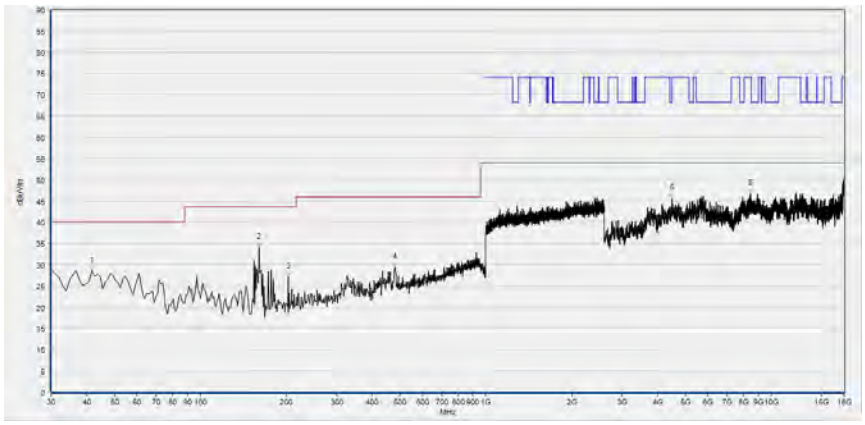
(Antenna Horizontal, 30MHz to 25GHz)



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	32.57	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
71.752	32.80	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
233.904	26.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
479.560	28.45	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5757.632	46.11	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12322.424	47.69	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

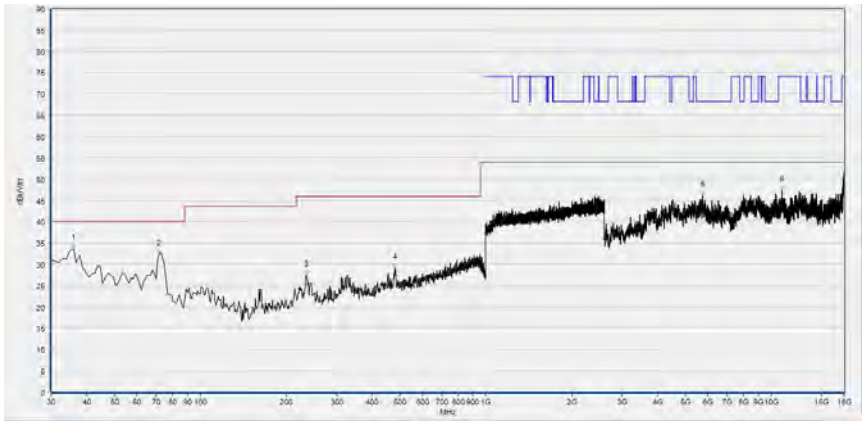
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 159



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
41.652	28.49	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
160.110	33.99	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
202.833	27.10	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
480.531	29.37	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
4497.660	45.57	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
8456.251	46.73	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
35.826	33.75	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
71.752	32.27	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
234.875	27.50	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
480.531	29.13	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5751.470	46.26	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
10914.583	47.38	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(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	±2.22dB
Power spectral density (PSD)	±2.22dB
Bandwidth	±5%
Restricted Frequency Bands	±5%
Radiated Emission	±2.95dB
Conducted Emission	±2.44dB

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

Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

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

2. Identification of the Responsible Testing Location

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

3. Facilities and Accreditations

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

4. Test Equipments Utilized

4.1 Conducted Test Equipments

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Attenuator 1	(N/A)	10dB	Resnet	N/A	N/A
EXA Signal Analzyer	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

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	2018.08.04	2019.08.03
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	2018.08.06	2019.08.05
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2018.08.02	2019.08.01
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-5470-5725	Wainwright	2018.12.01	2019.11.30
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2018.12.01	2019.11.30

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Anechoic Chamber	N/A	9m*6m*6m	CRT	2017.11.19	2020.11.18

END OF REPORT