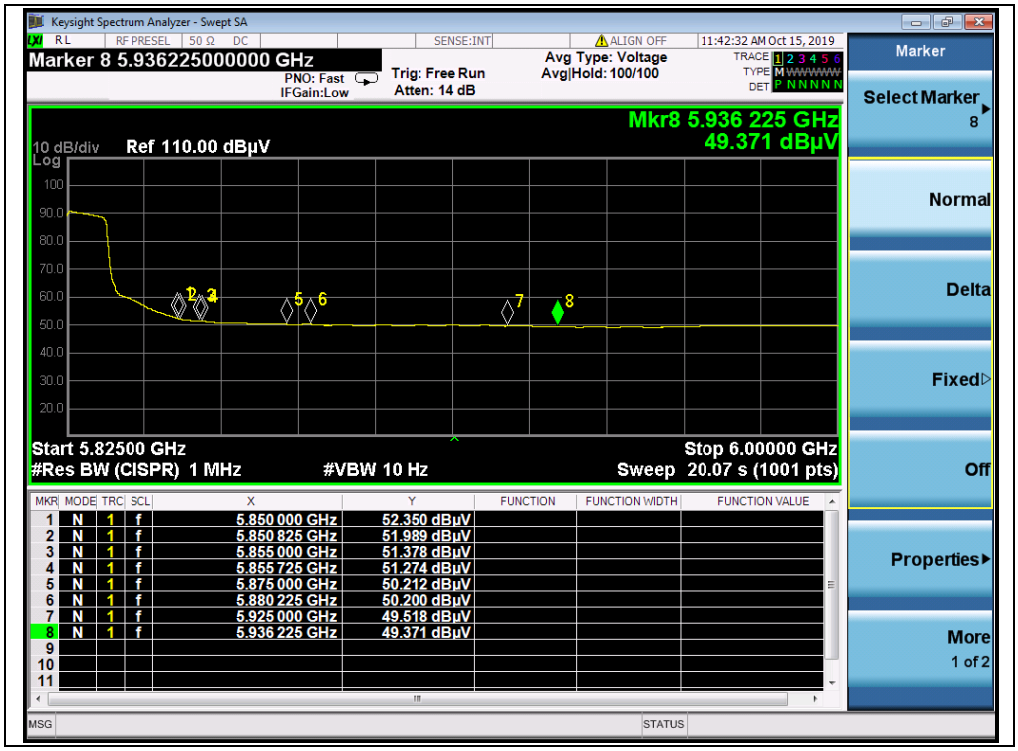
(Channel 165, PEAK, 802.11a)



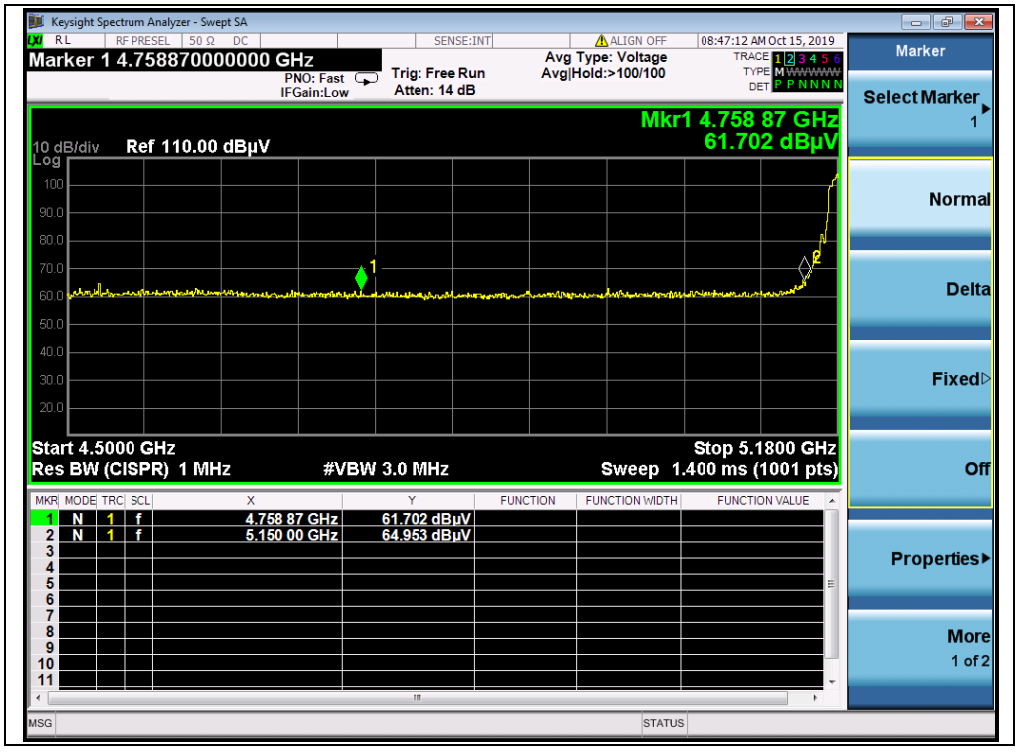
(Channel 165, AVG, 802.11a)

802.11n (HT20) Test mode

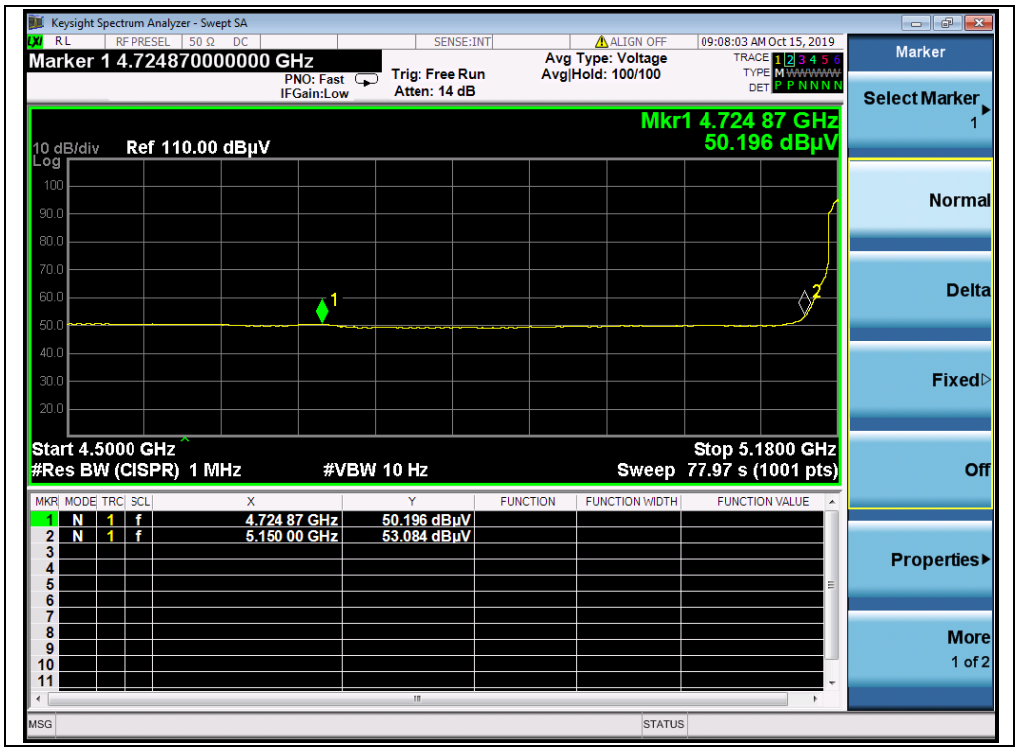
A. Test Verdict:

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	5150.00	PK	64.95	-41.55	31.70	55.10	74	PASS
36	5150.00	AV	53.08	-41.55	31.70	43.23	54	PASS
48	5361.76	PK	59.75	-41.55	31.70	49.90	74	PASS
48	5350.00	AV	48.63	-41.55	31.70	38.78	54	PASS
149	5721.92	PK	72.07	-42.15	32.50	62.42	115.21	PASS
149	5725.00	AV	58.79	-42.15	32.50	49.14	54	PASS
165	5851.43	PK	62.53	-42.15	32.50	52.88	118.97	PASS
165	5850.00	AV	52.14	-42.15	32.50	42.49	54	PASS

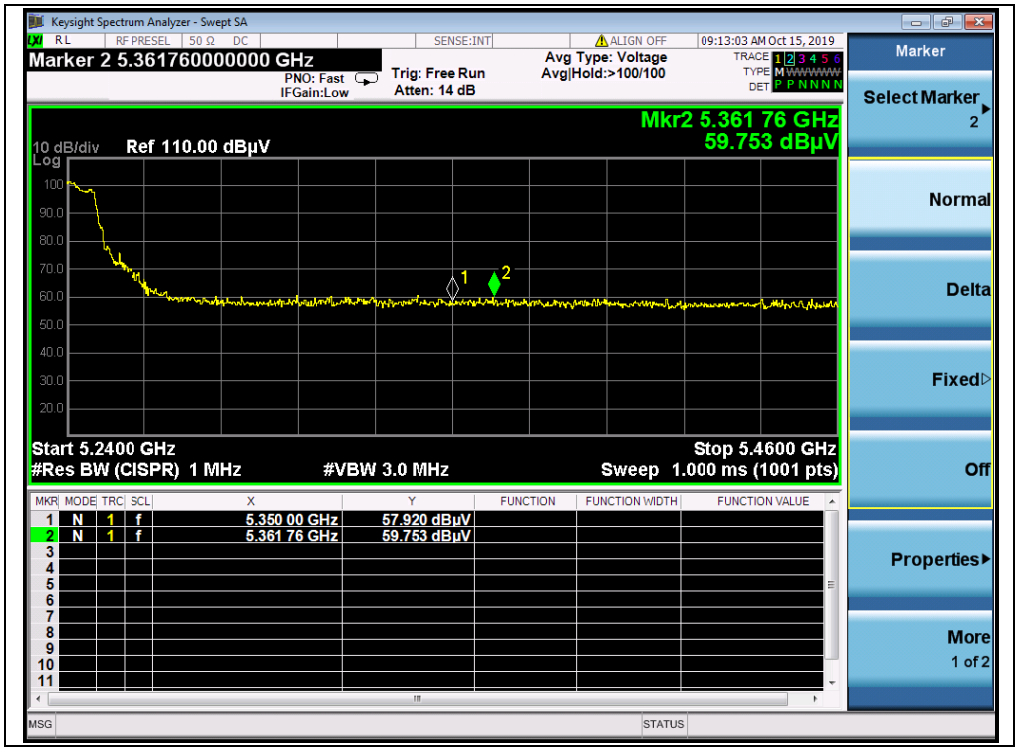
B. Test Plots:



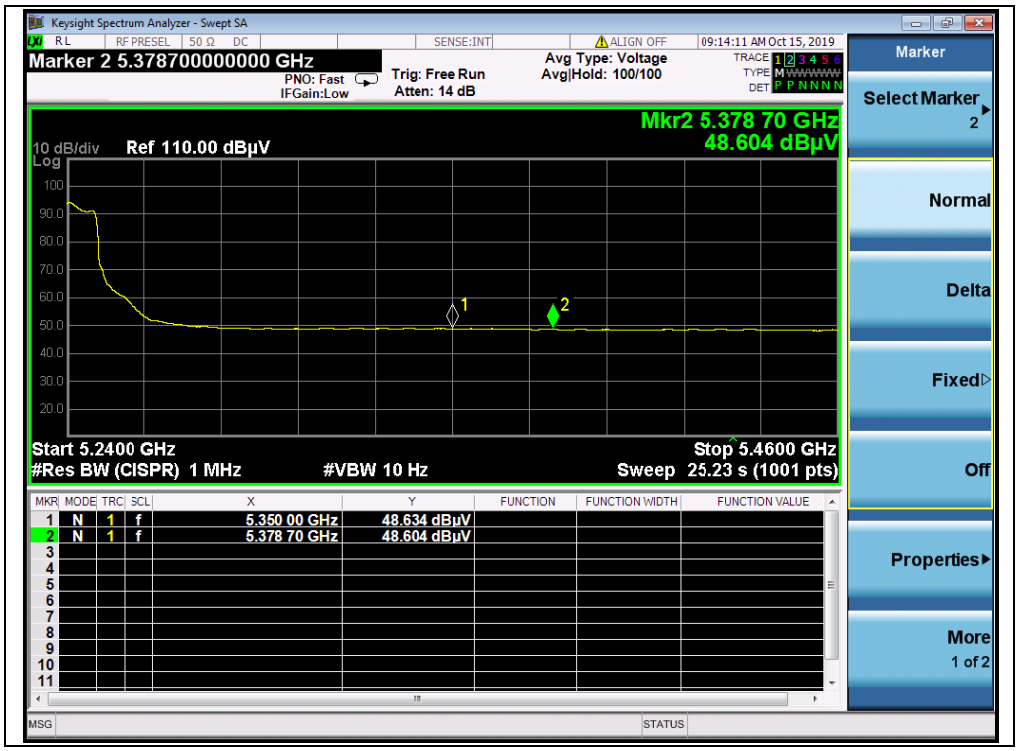
(Channel 36, PEAK, 802.11n (HT20))



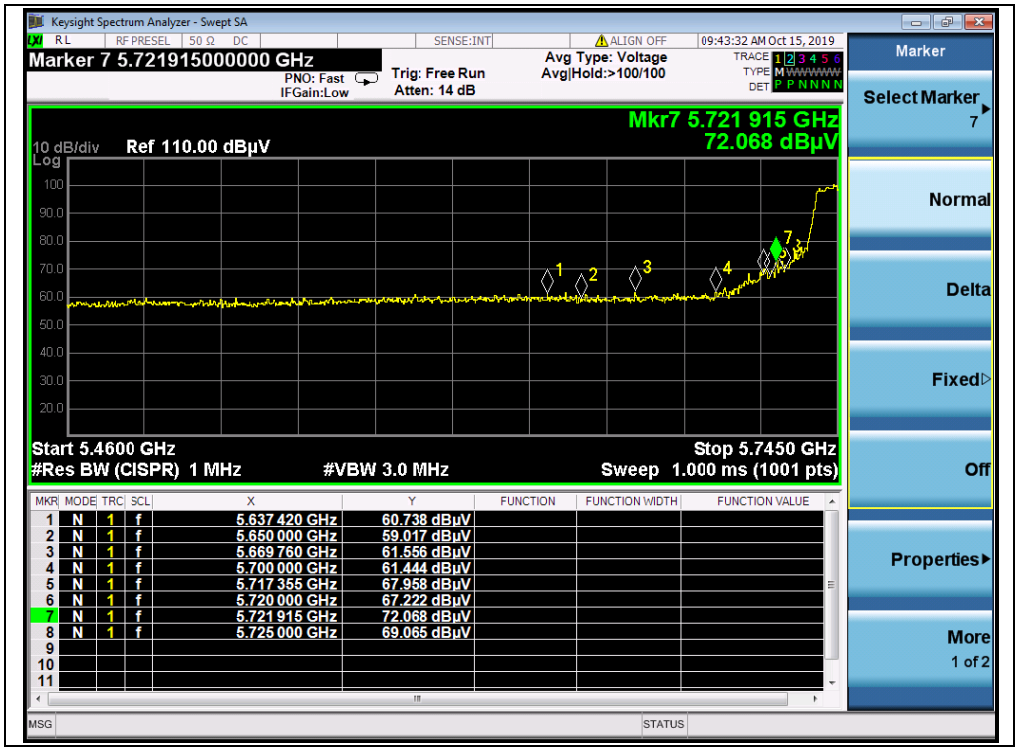
(Channel 36, AVG, 802.11 n (HT20))



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

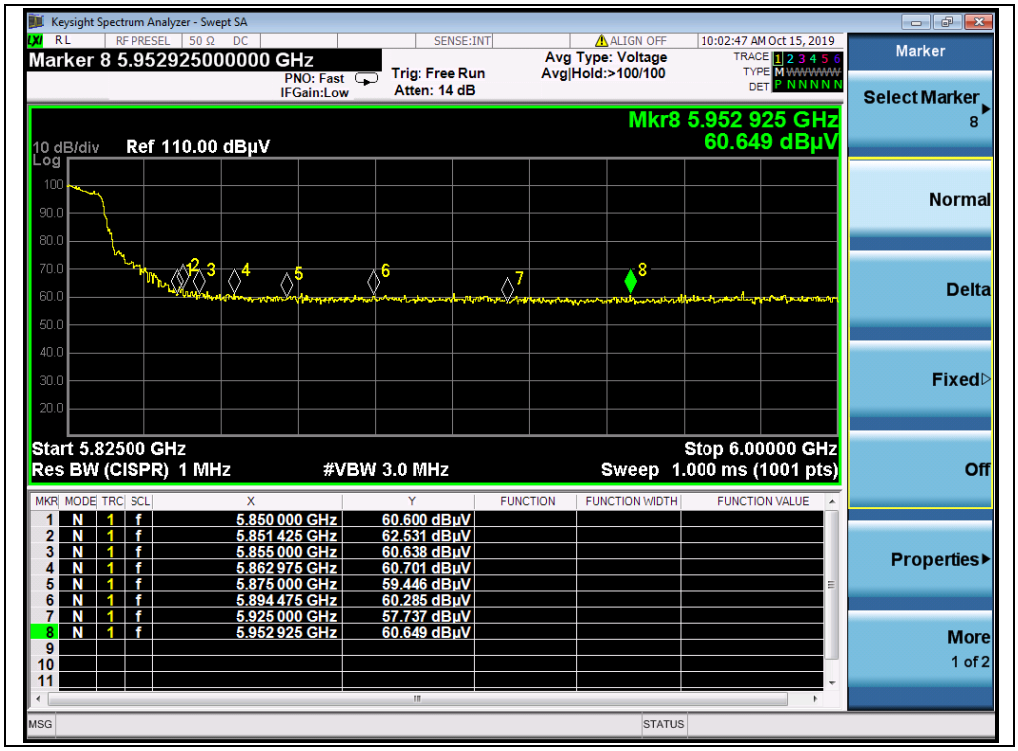


(Channel 48, AVG, 802.11n (HT20))



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

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



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

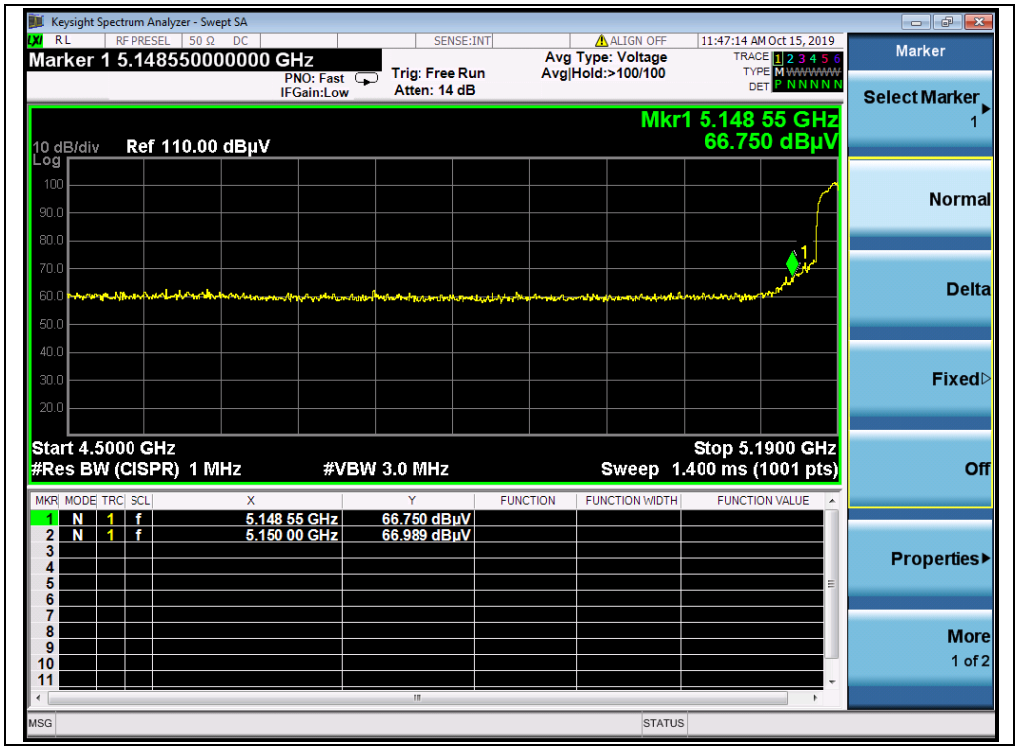
(Channel 165, AVG, 802.11n (HT20))

802.11n (HT40) Test mode

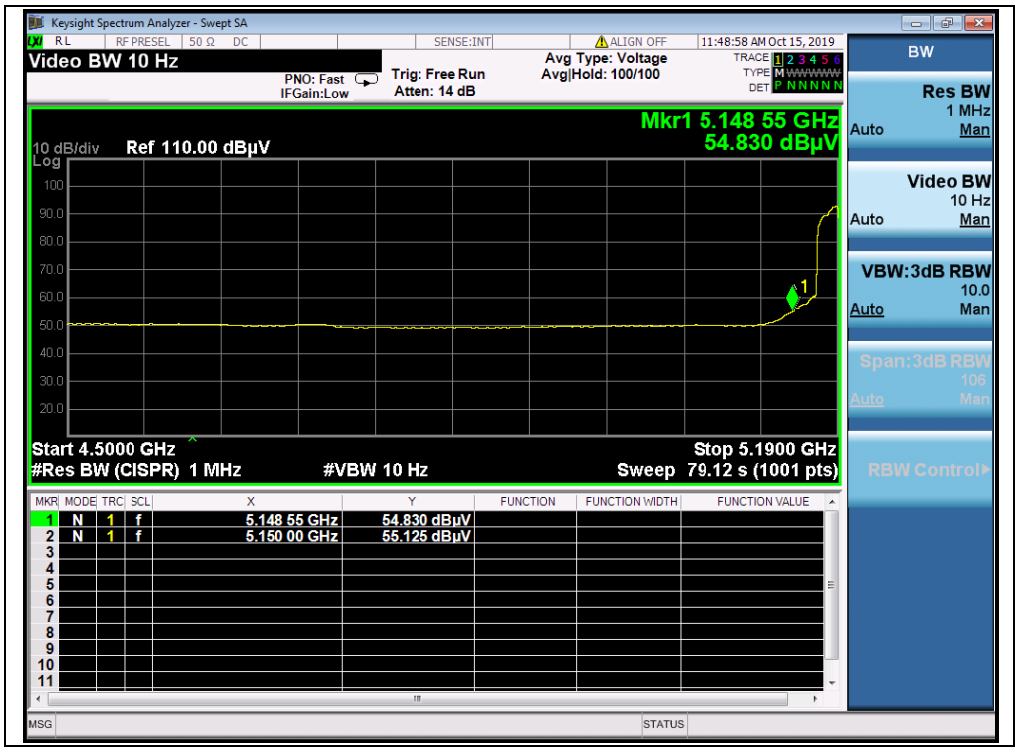
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	66.99	-41.55	31.70	57.14	74	PASS
38	5150.00	AV	55.13	-41.55	31.70	45.28	54	PASS
46	5379.30	PK	59.46	-41.55	31.70	49.61	74	PASS
46	5361.13	AV	48.85	-41.55	31.70	39.00	54	PASS
151	5716.36	PK	69.23	-42.15	32.50	59.58	109.81	PASS
151	5725.00	AV	56.81	-42.15	32.50	47.16	54	PASS
159	5866.38	PK	62.17	-42.15	32.50	52.52	78.96	PASS
159	5850.00	AV	51.14	-42.15	32.50	41.49	54	PASS

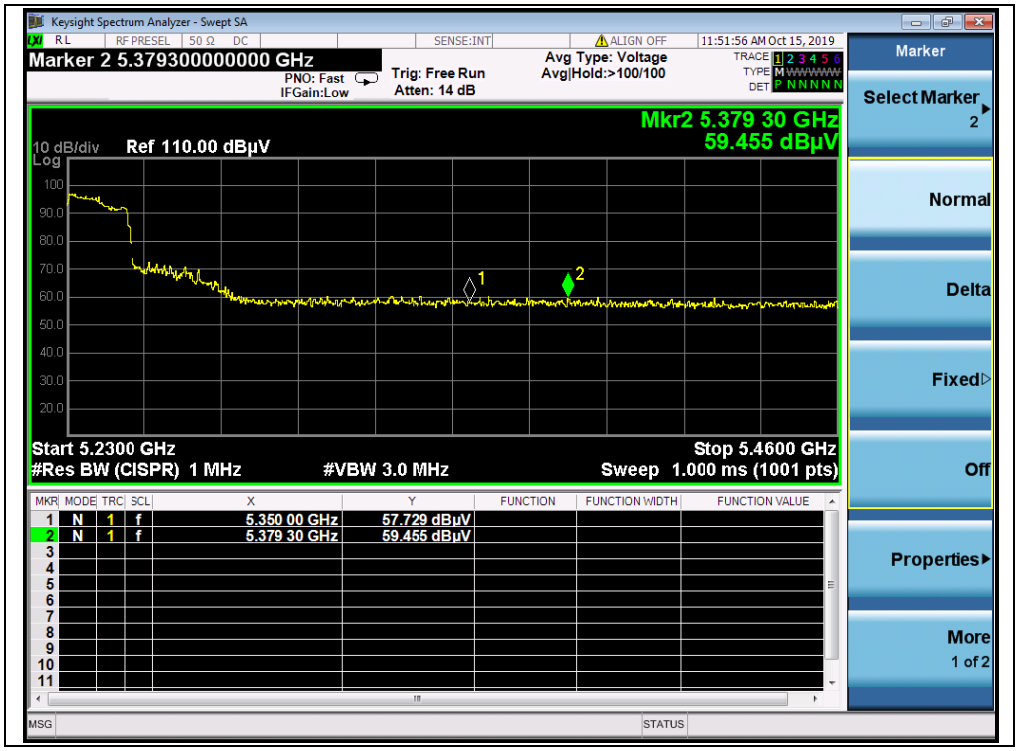
B. Test Plots:



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

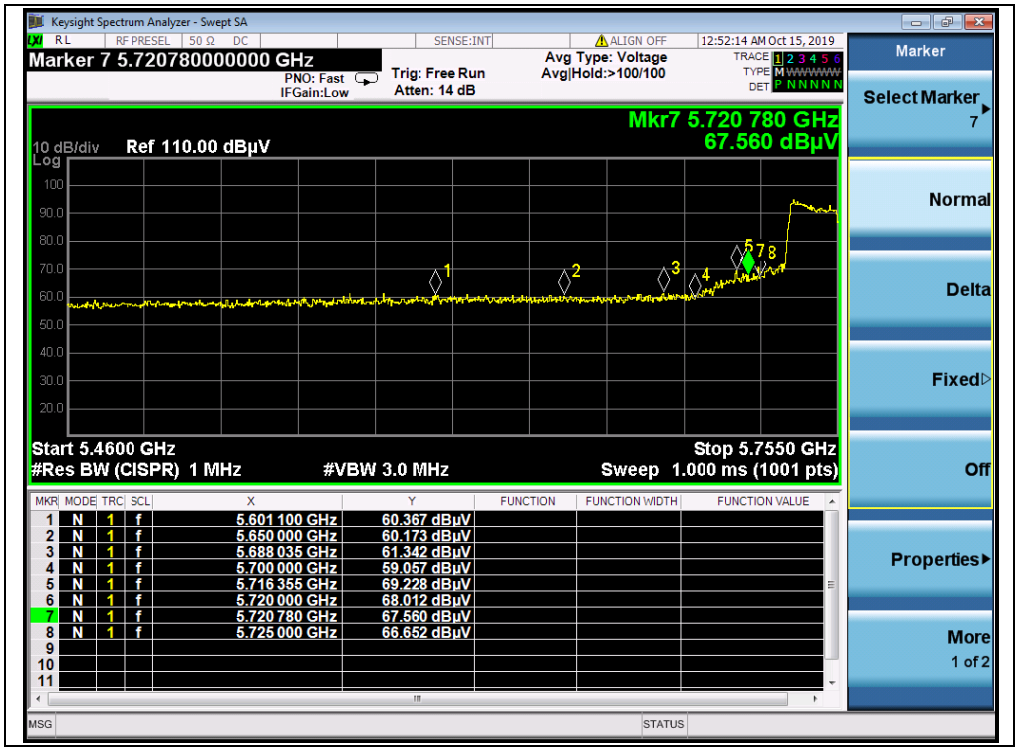


(Channel 38, AVG, 802.11n (HT40))

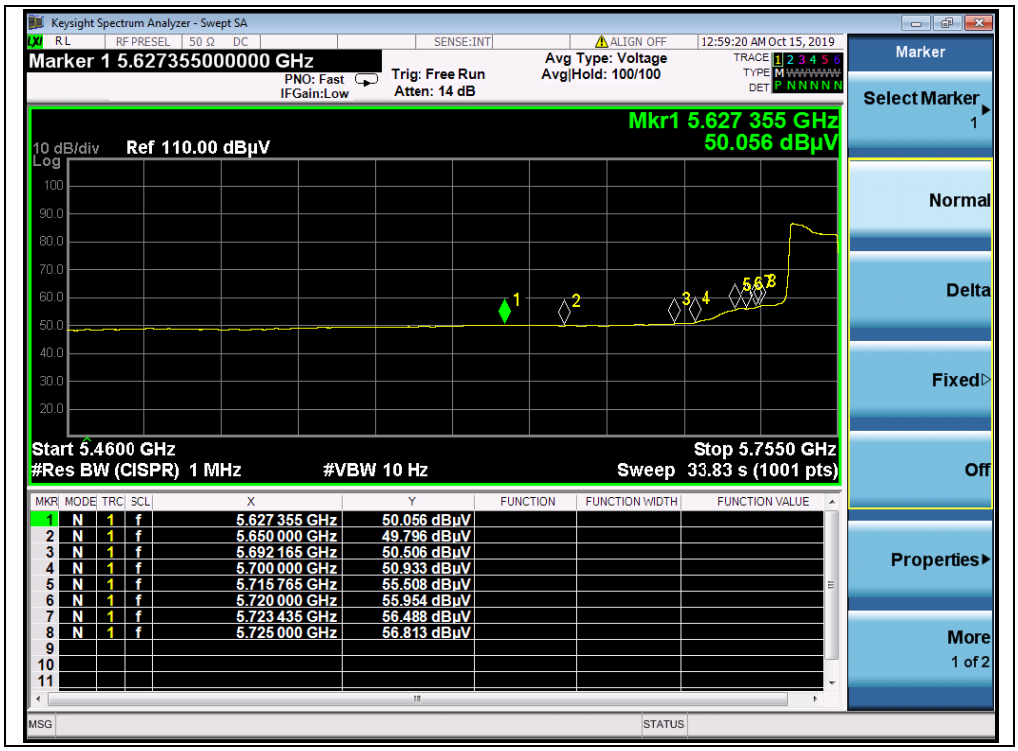


(Channel 46, PEAK, 802.11n (HT40))

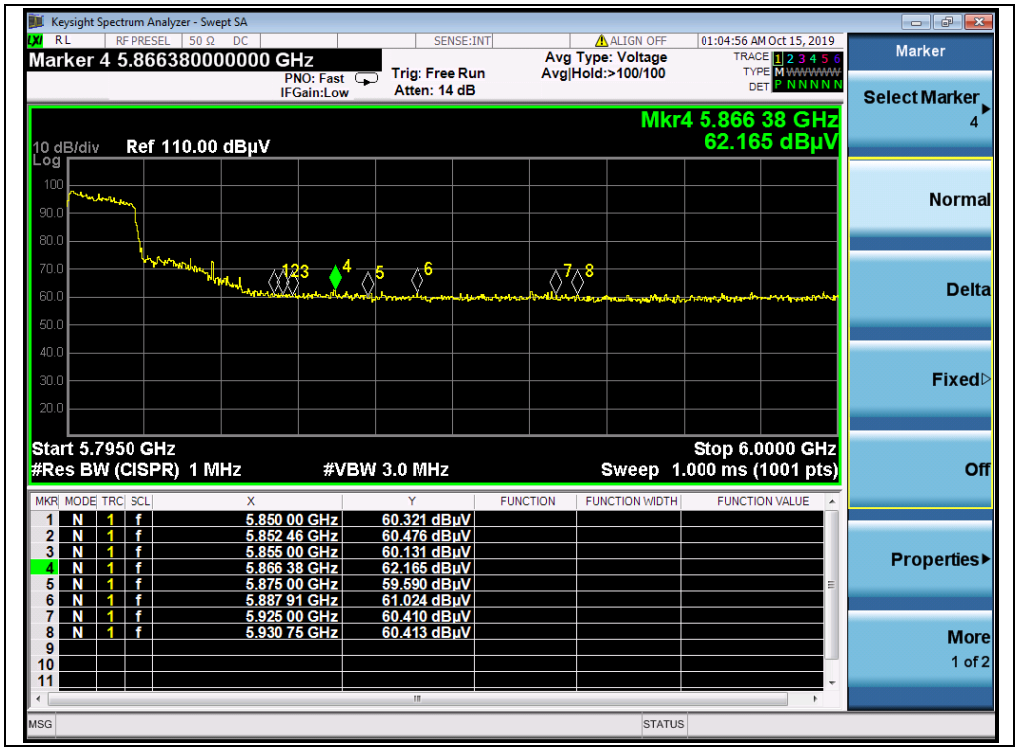
(Channel 46, AVG, 802.11n (HT40))



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



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



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

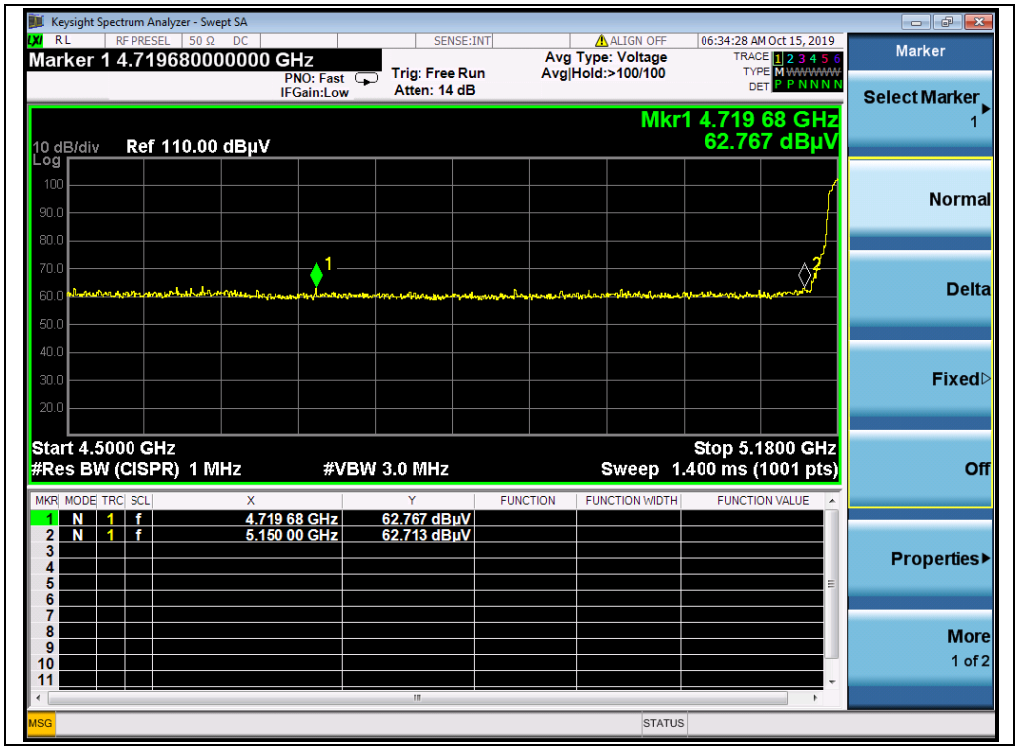
(Channel 159, AVG, 802.11n (HT40))

802.11 ac (VHT20) Test mode

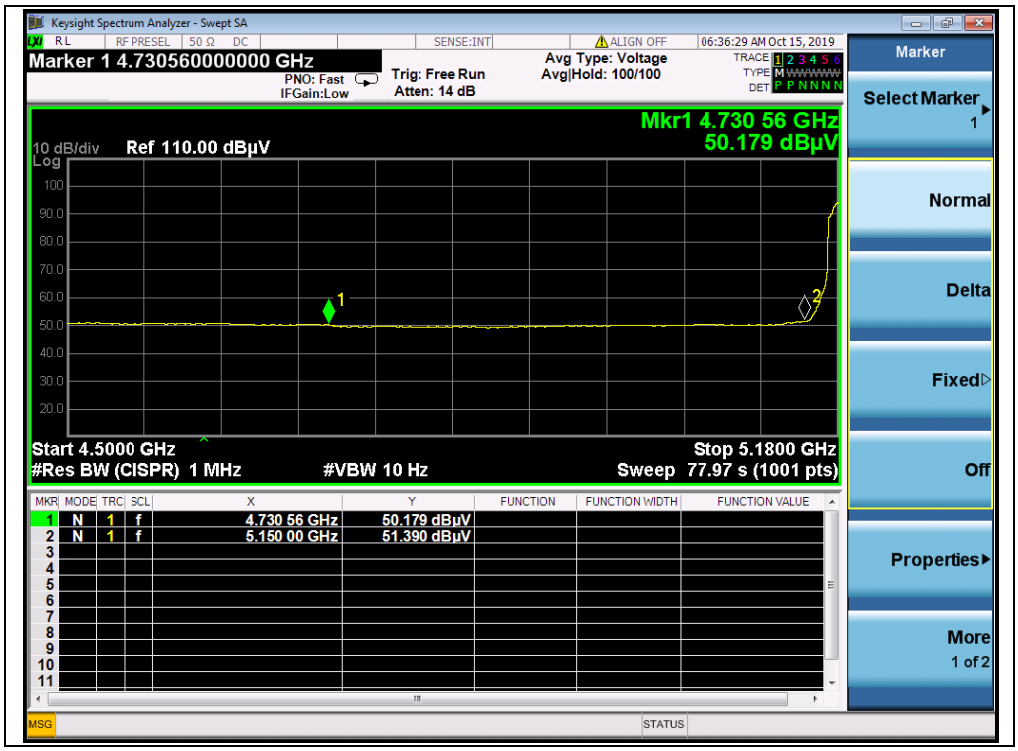
A. Test Verdict:

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	4719.48	PK	62.77	-41.55	31.70	52.92	74	PASS
36	5150.00	AV	51.39	-41.55	31.70	41.54	54	PASS
48	5374.26	PK	60.01	-41.55	31.70	50.16	74	PASS
48	5350.00	AV	48.87	-41.55	31.70	39.02	54	PASS
149	5724.77	PK	65.08	-42.15	32.50	55.43	121.70	PASS
149	5725.00	AV	54.59	-42.15	32.50	44.94	54	PASS
165	5852.40	PK	62.21	-42.15	32.50	52.56	116.76	PASS
165	5850.00	AV	51.75	-42.15	32.50	42.10	54	PASS

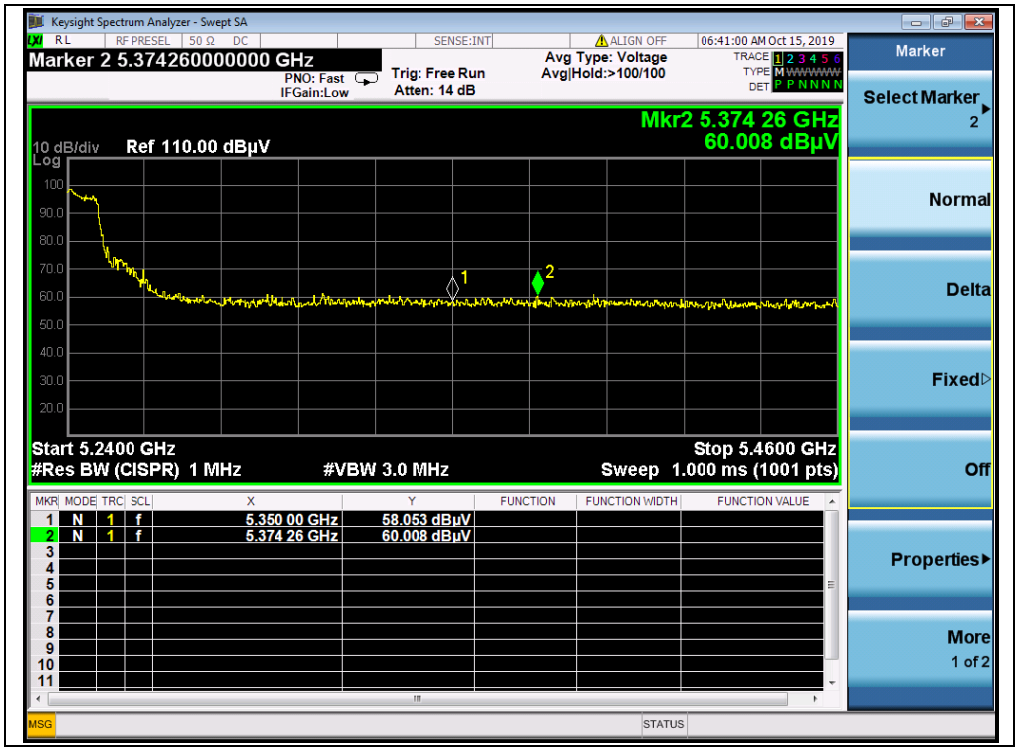
B. Test Plots:



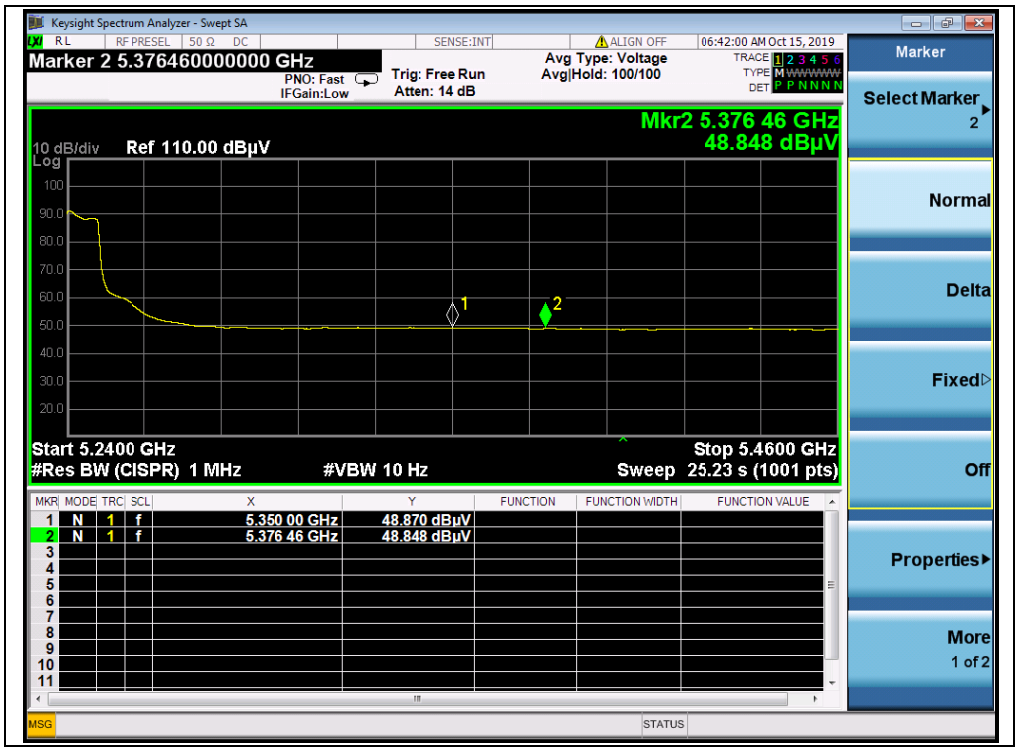
(Channel 36, PEAK, 802.11 ac (VHT20))



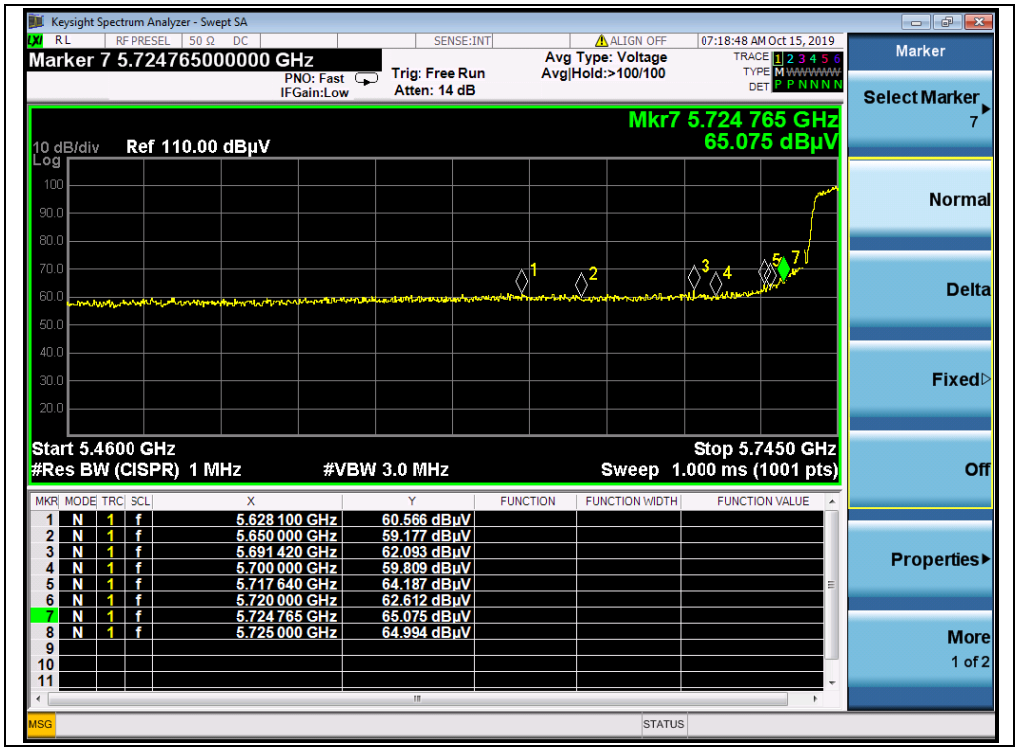
(Channel 36, AVG, 802.11 ac (VHT20))



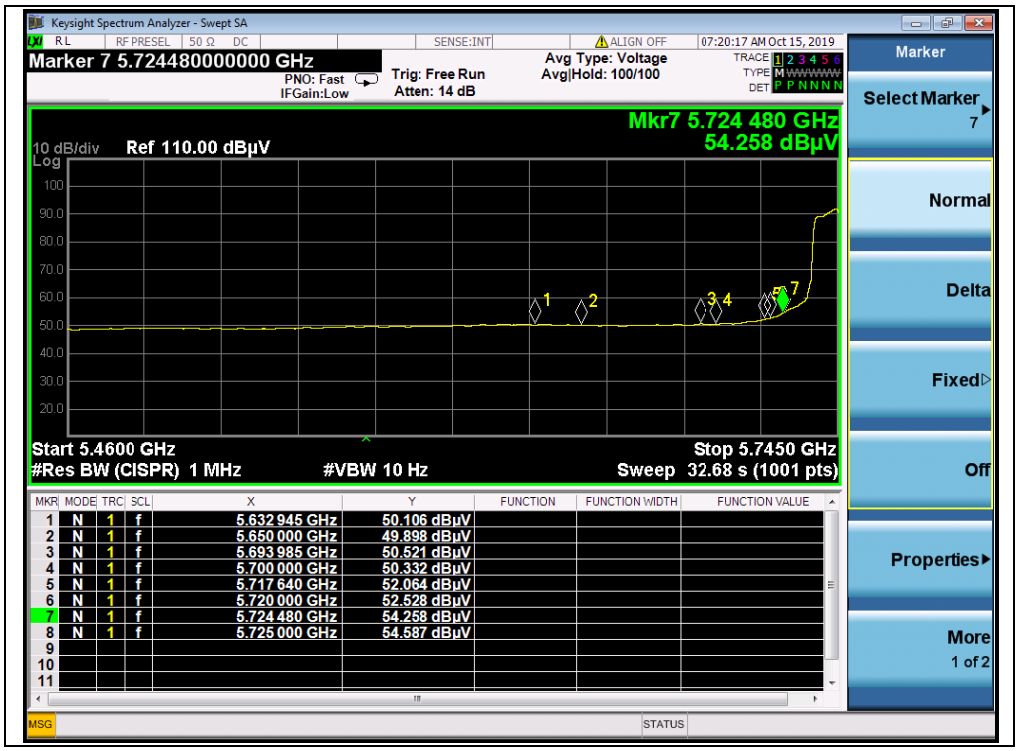
(Channel 48, PEAK, 802.11 ac (VHT20))



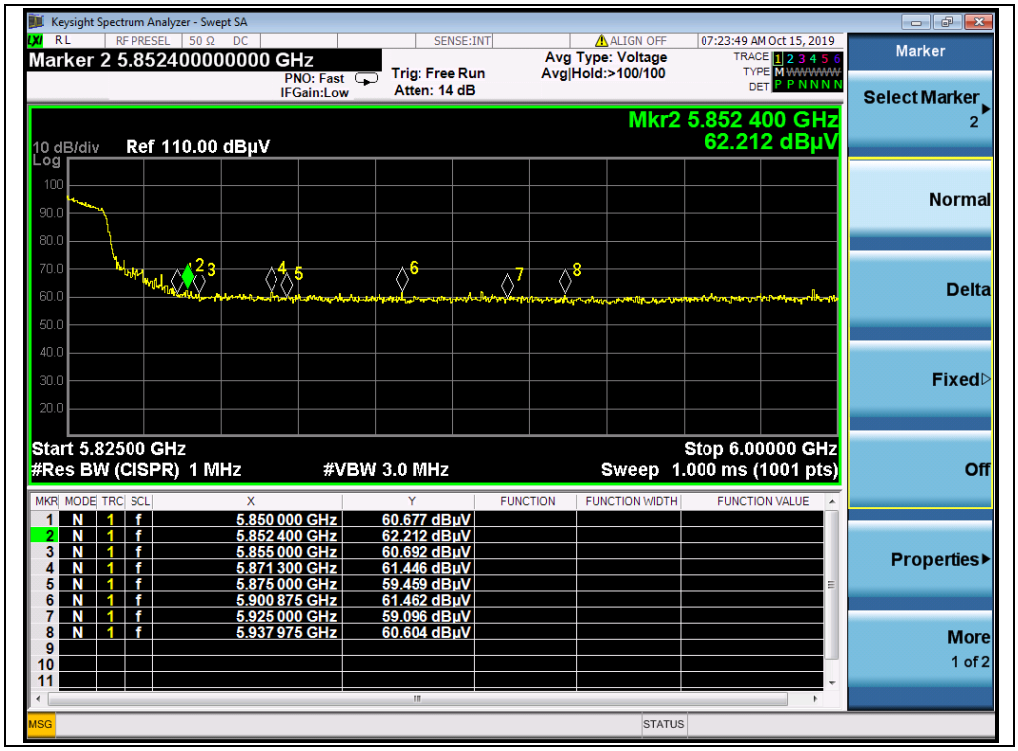
(Channel 48, AVG, 802.11 ac (VHT20))



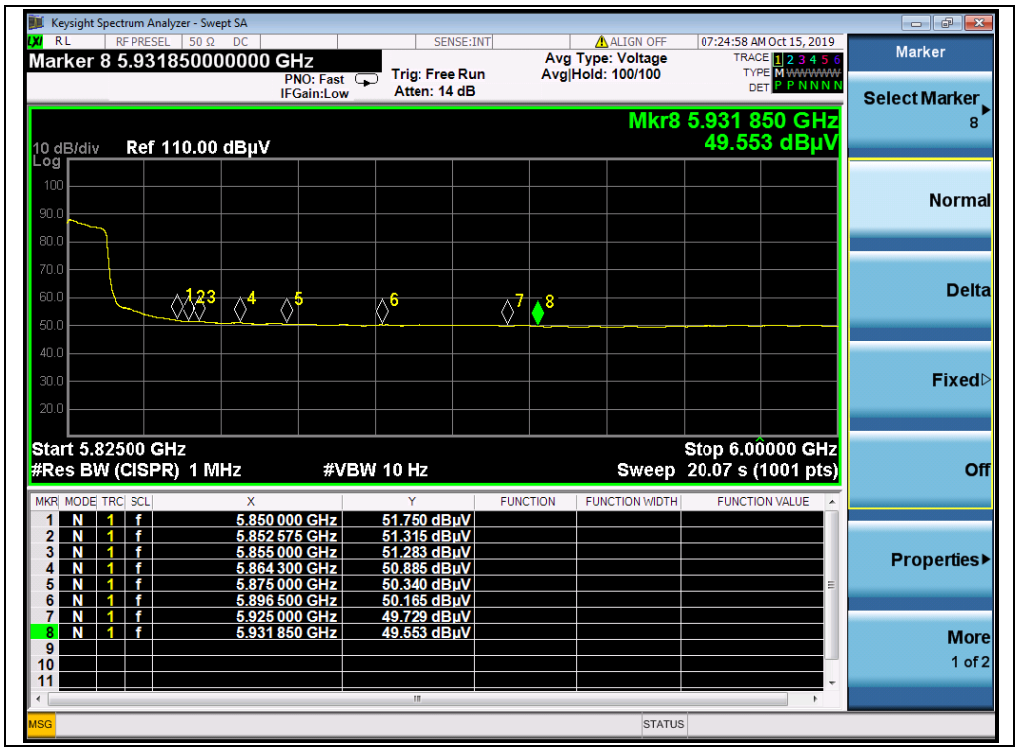
(Channel 149, PEAK, 802.11 ac (VHT20))



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



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



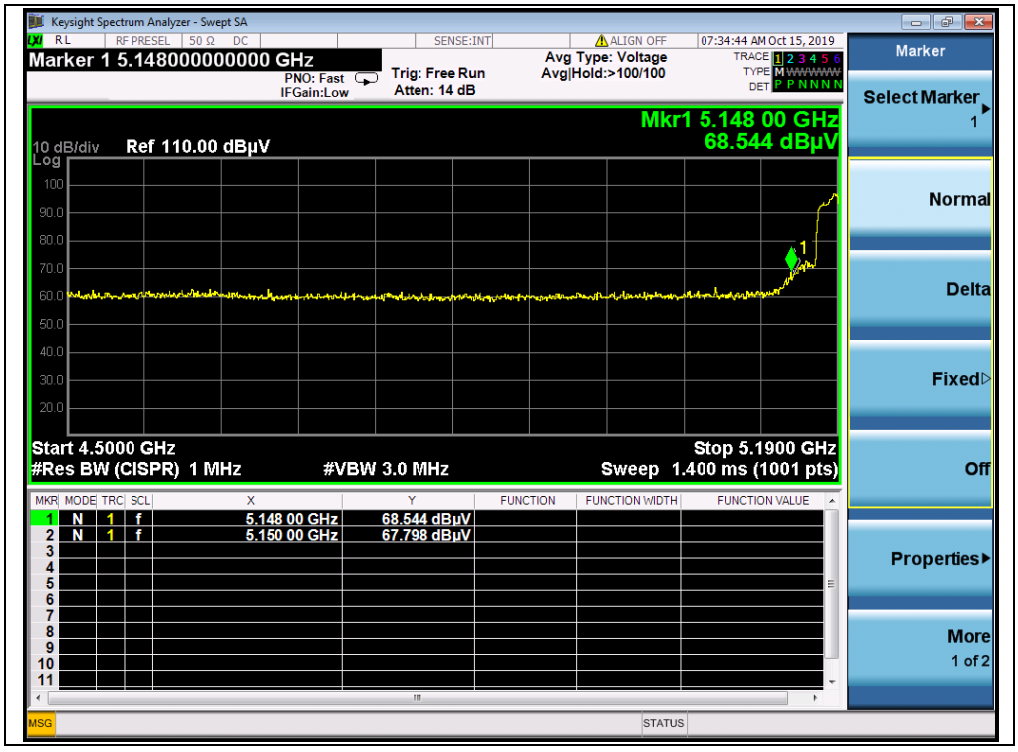
(Channel 165, AVG, 802.11ac (VHT20))

802.11 ac (VHT40) Test mode

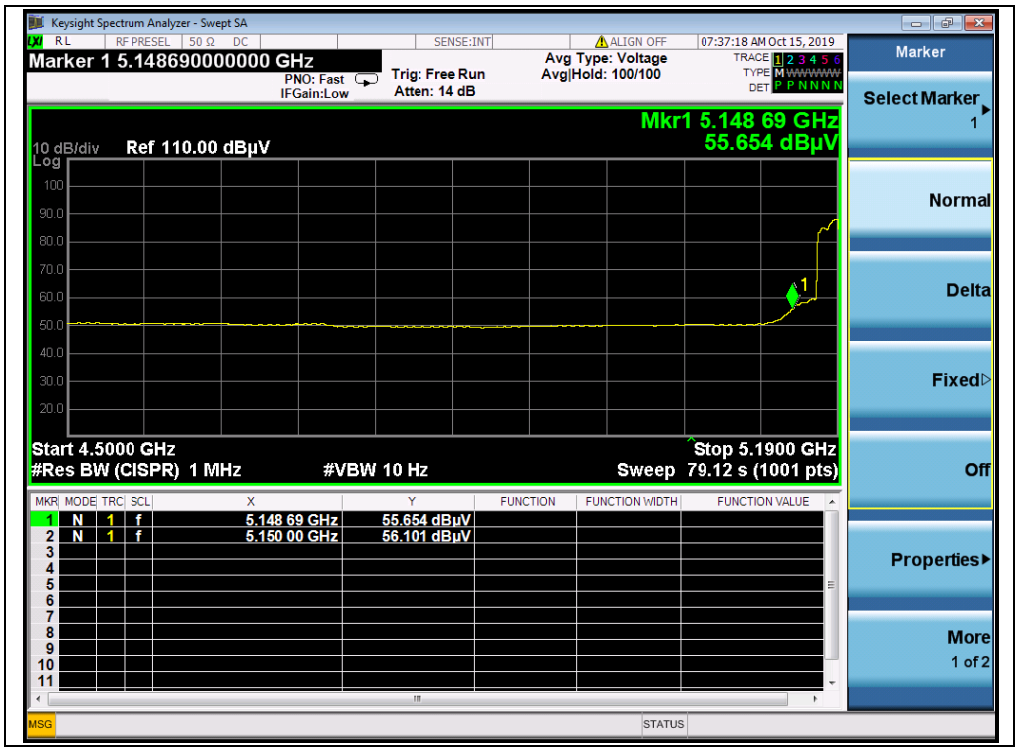
A. Test Verdict:

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	5148.00	PK	68.54	-41.55	31.70	58.69	74	PASS
38	5150.00	AV	56.10	-41.55	31.70	46.25	54	PASS
46	5438.34	PK	60.73	-41.55	31.70	50.88	74	PASS
46	5350.00	AV	48.93	-41.55	31.70	39.08	54	PASS
151	5725.00	PK	65.50	-42.15	32.50	55.85	122.23	PASS
151	5725.00	AV	54.70	-42.15	32.50	45.05	54	PASS
159	5863.31	PK	61.68	-42.15	32.50	52.03	87.56	PASS
159	5850.00	AV	51.04	-42.15	32.50	41.39	54	PASS

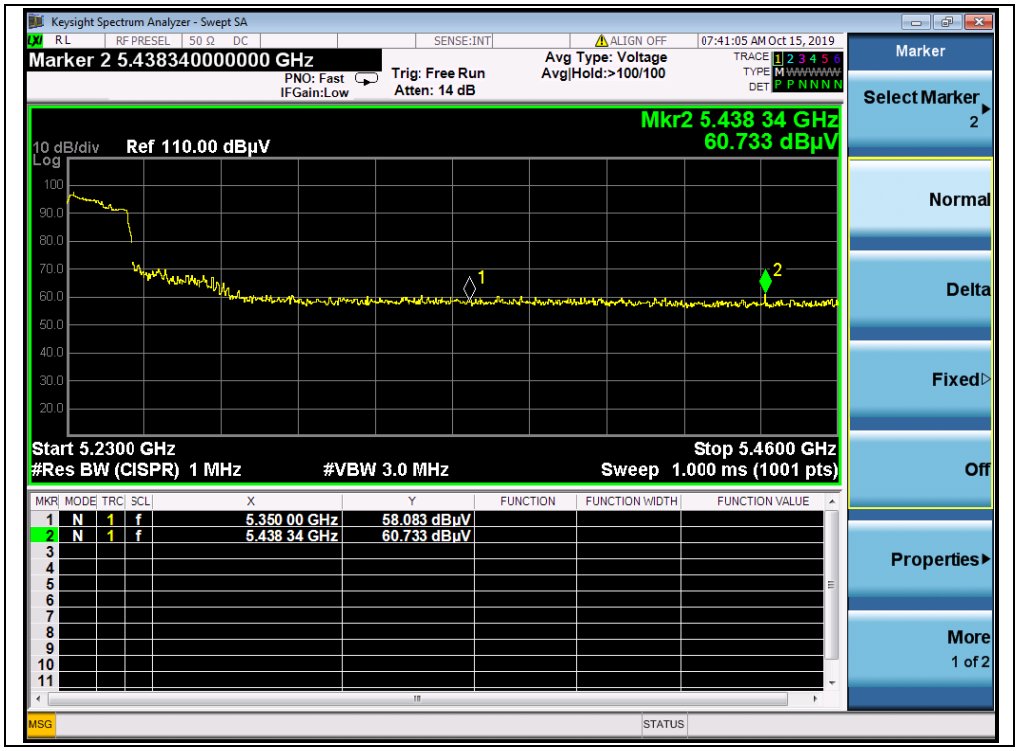
B. Test Plots:



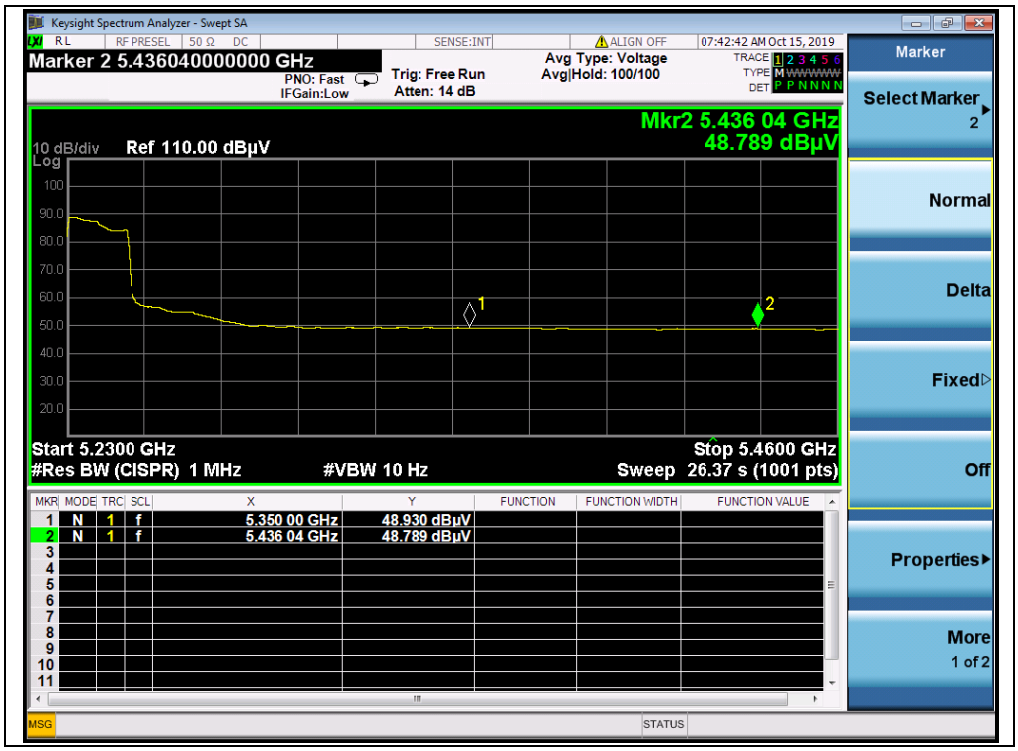
(Channel 38, PEAK, 802.11 ac (VHT40))



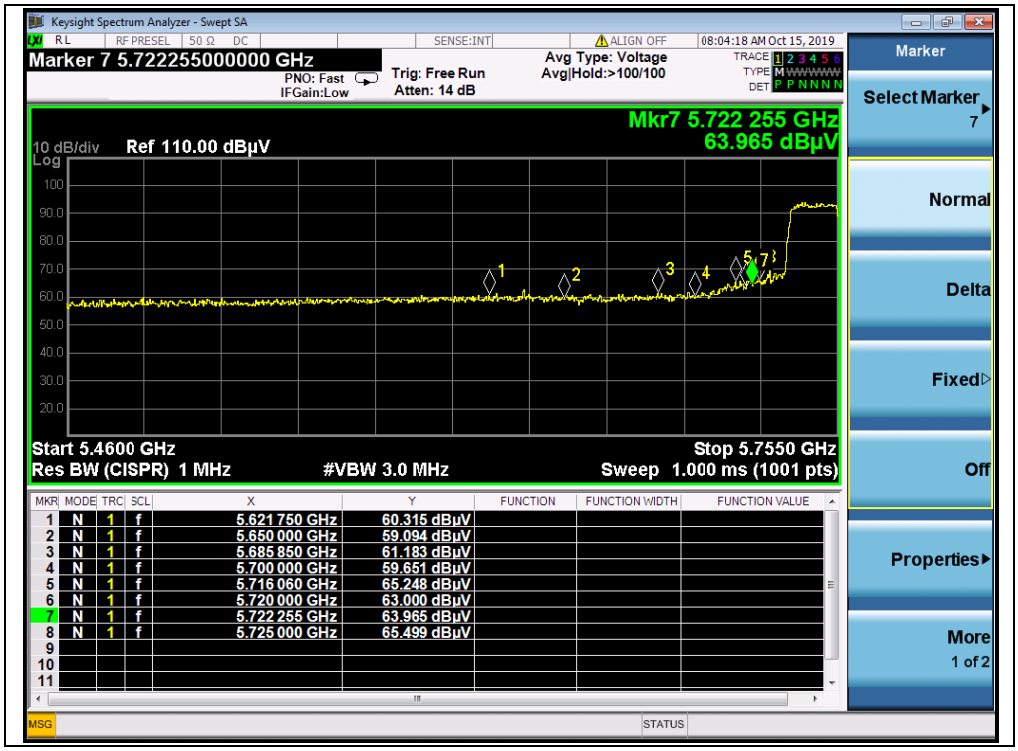
(Channel 38, AVG, 802.11 ac (VHT40))



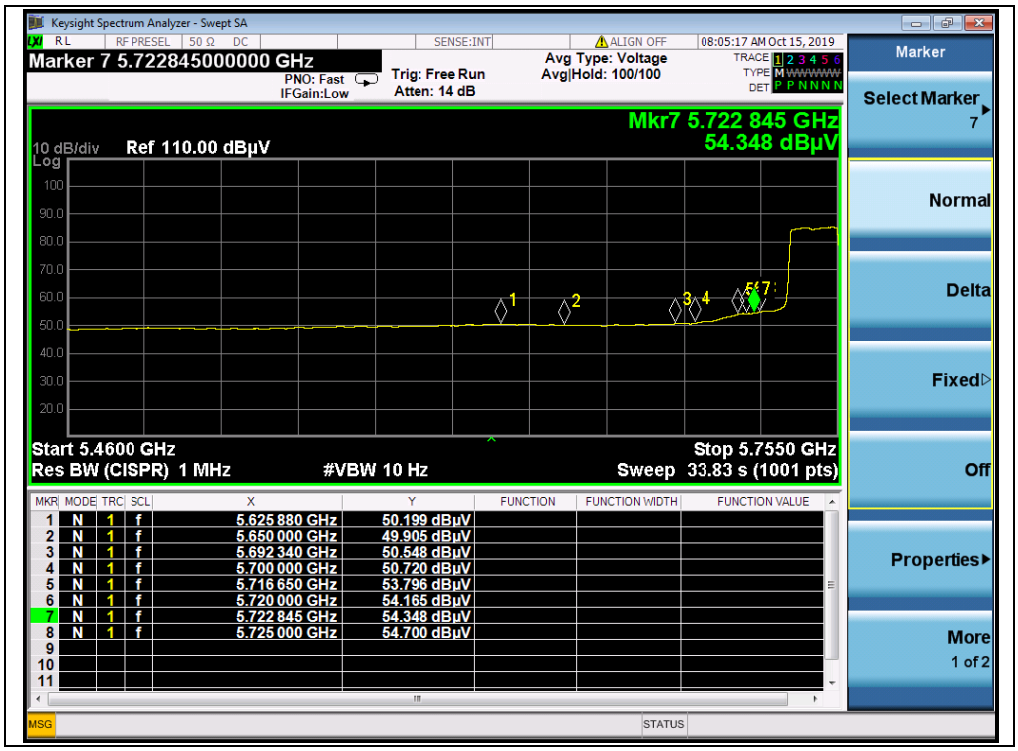
(Channel 46, PEAK, 802.11 ac (VHT40))



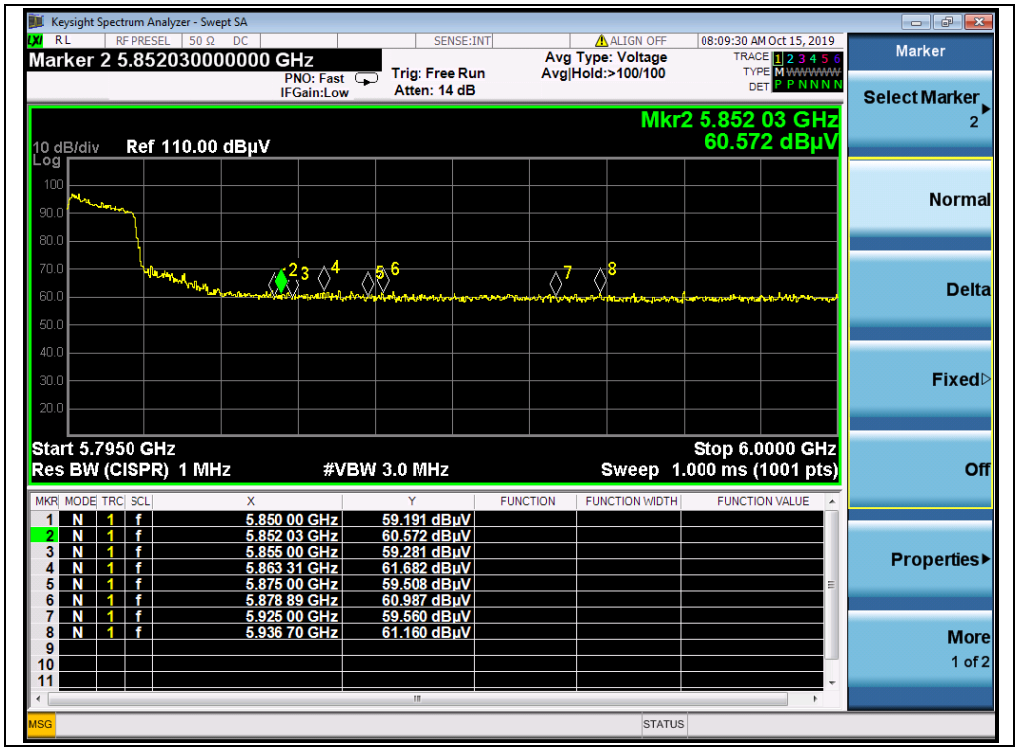
(Channel 46, AVG, 802.11 ac (VHT40))



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



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



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

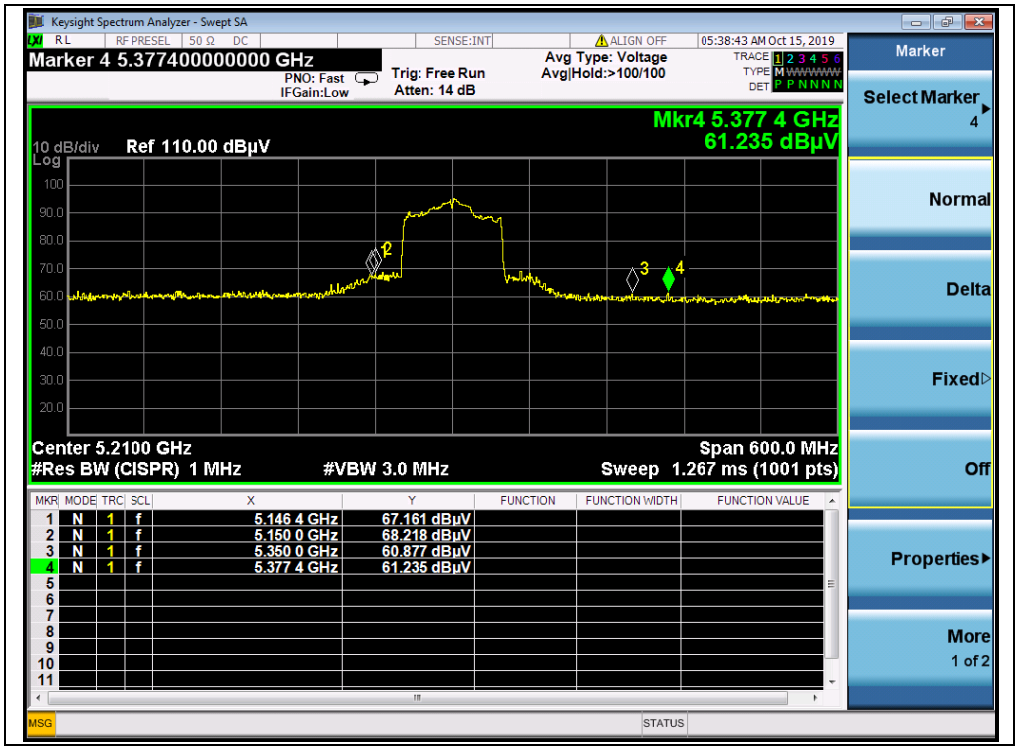
(Channel 159, AVG, 802.11ac (VHT40))

802.11 ac (VHT80) Test mode

A. Test Verdict:

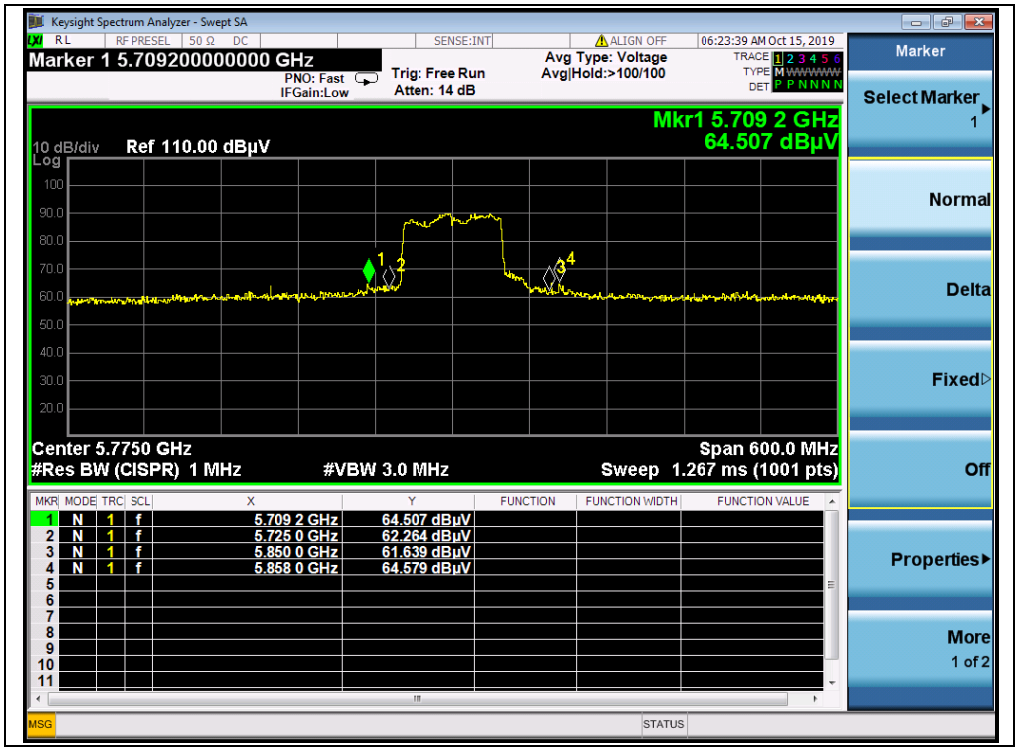
Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
42	5150.00	PK	68.22	-41.55	31.70	58.37	74	PASS
42	5150.00	AV	55.70	-41.55	31.70	45.85	54	PASS
42	5377.40	PK	61.24	-41.55	31.70	51.39	74	PASS
42	5350.00	AV	48.91	-41.55	31.70	39.06	54	PASS
155	5709.20	PK	64.51	-42.15	32.50	54.86	107.80	PASS
155	5725.00	AV	52.98	-42.15	32.50	43.33	54	PASS
155	5858.00	PK	64.58	-42.15	32.50	54.93	122.23	PASS
155	5850.00	AV	51.74	-42.15	32.50	42.09	54	PASS

B. Test Plots:

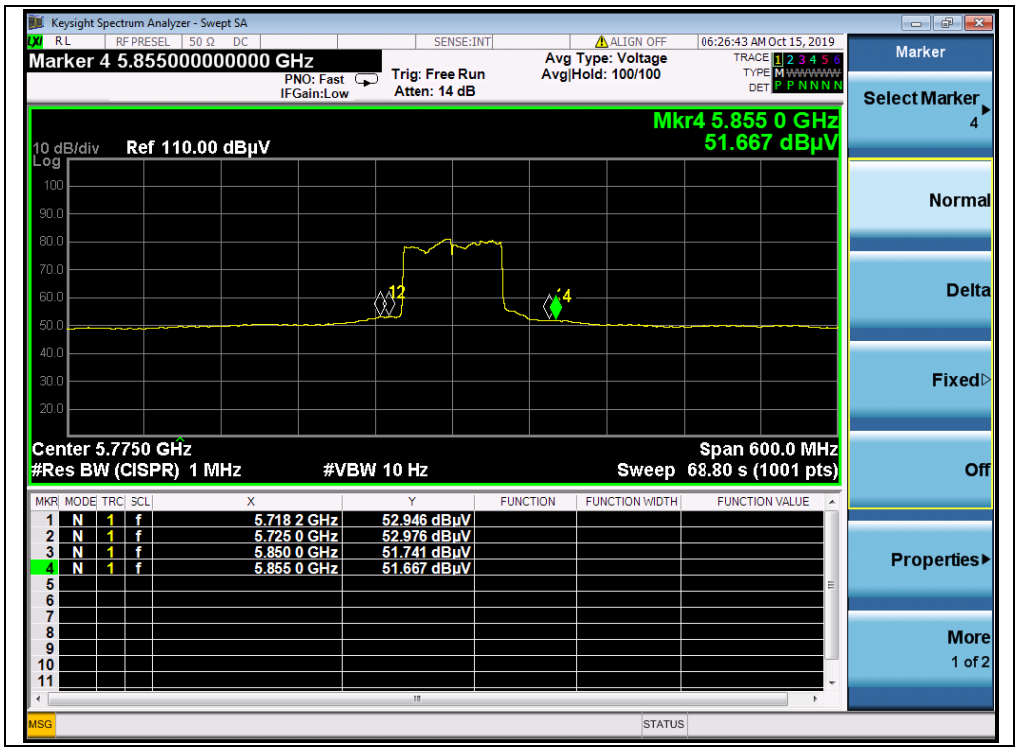


(Channel 42, PEAK, 802.11 ac (VHT80))

(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);

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

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:

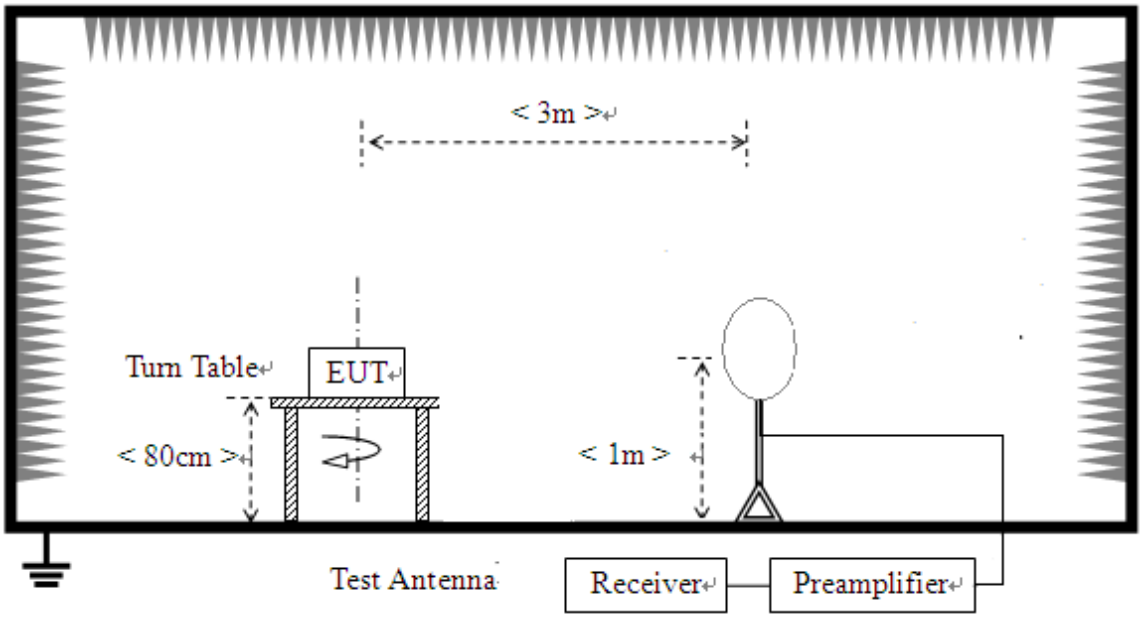
For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

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)

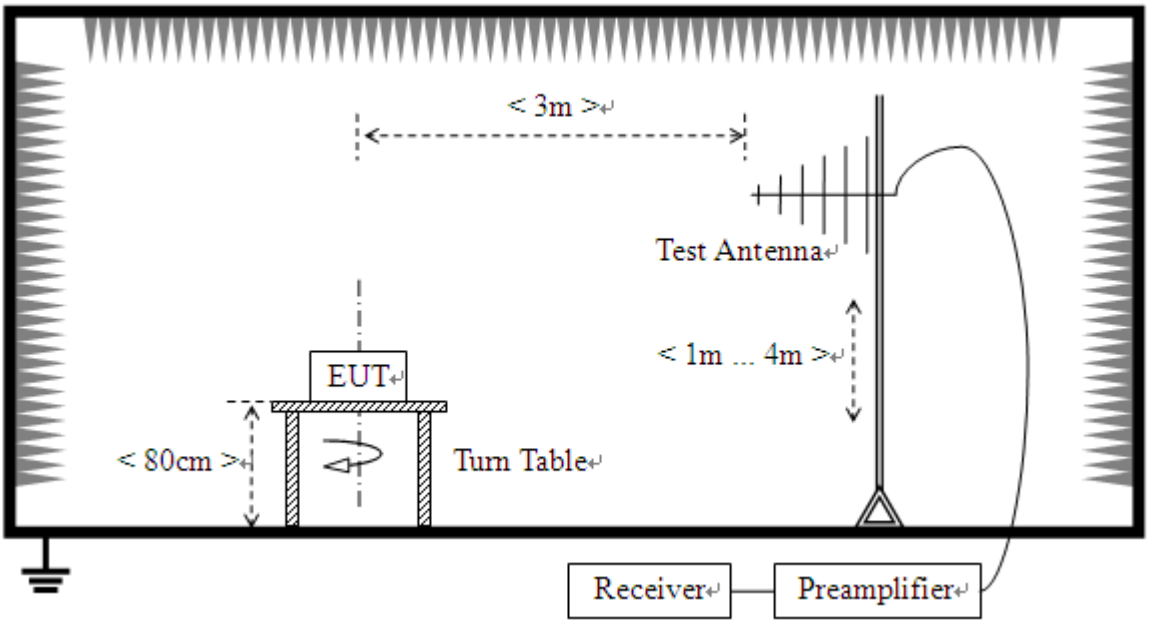
2.9.2. Test Description

Test Setup:

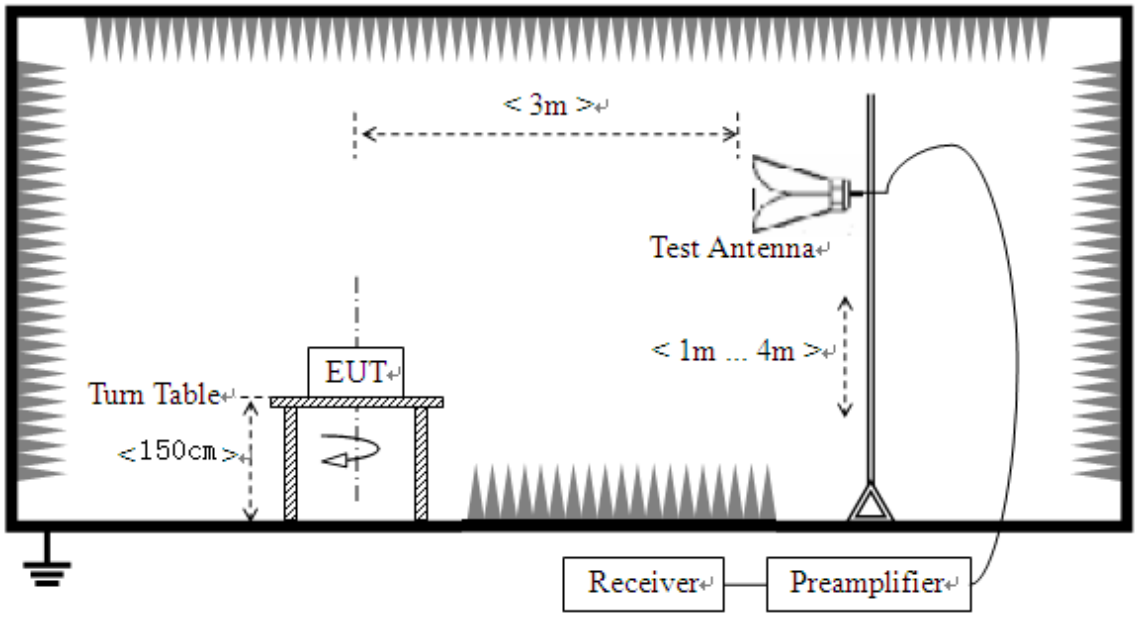
1) For radiated emissions from 9kHz to 30MHz



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.

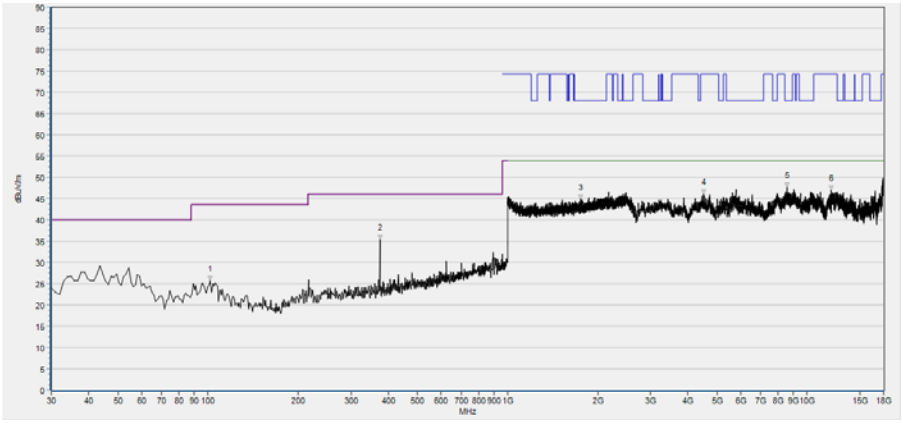
Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

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

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

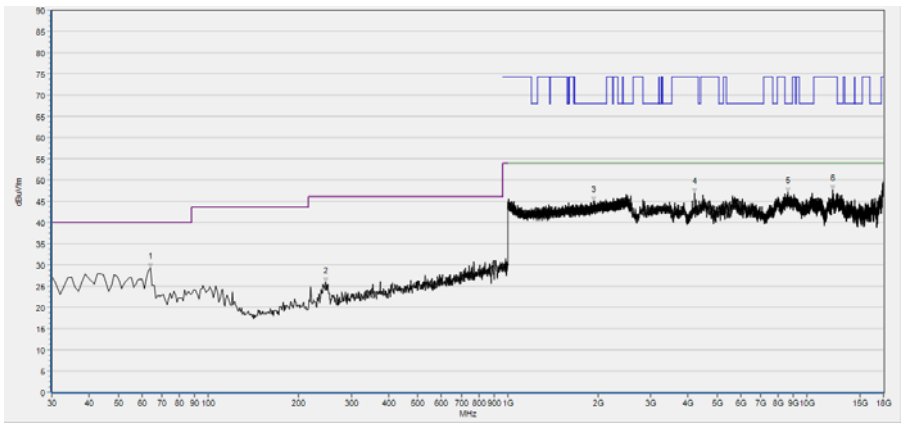
802.11a Test mode

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
101.852	25.74	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	35.39	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1754.918	44.78	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4519.224	46.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8557.912	47.63	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12066.733	47.03	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

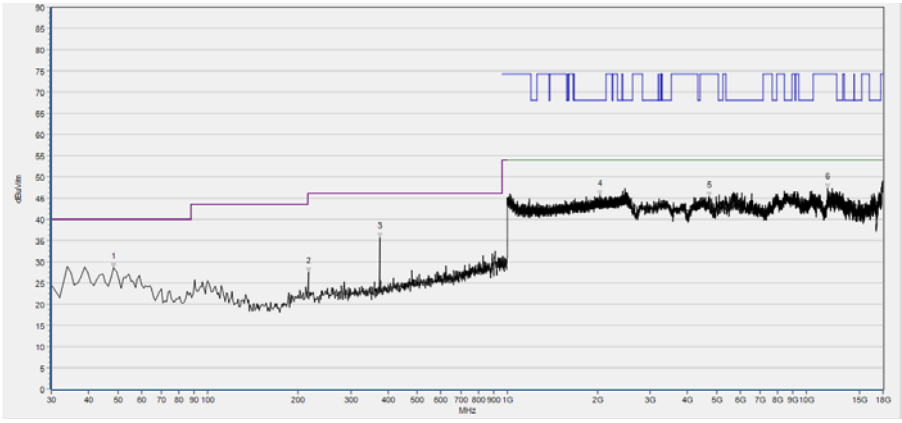
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
63.984	29.23	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
246.527	25.93	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1935.245	44.94	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
4208.082	47.01	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8616.443	47.14	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12162.232	47.69	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

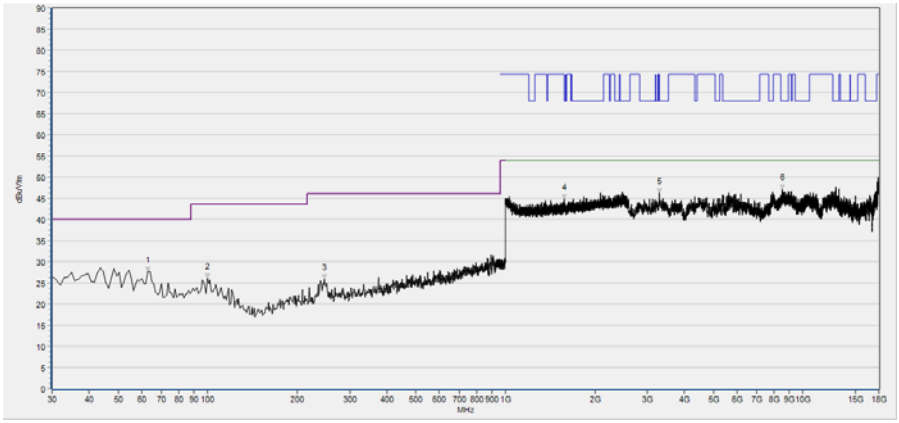
(Antenna Vertical, 30MHz to 18GHz)

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
48.448	28.63	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
216.426	27.52	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	35.68	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2041.414	45.66	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4722.545	45.32	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11780.236	47.23	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

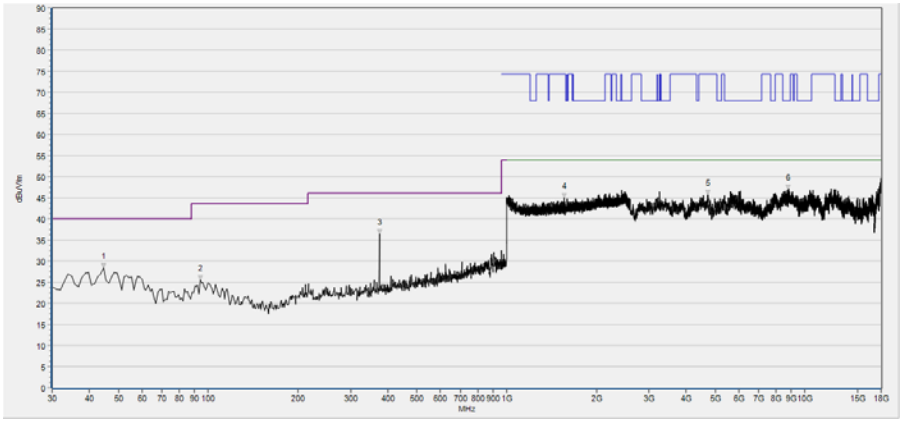
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
63.013	27.76	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	26.13	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.527	25.87	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1575.125	44.84	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3296.219	46.28	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8539.428	47.10	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

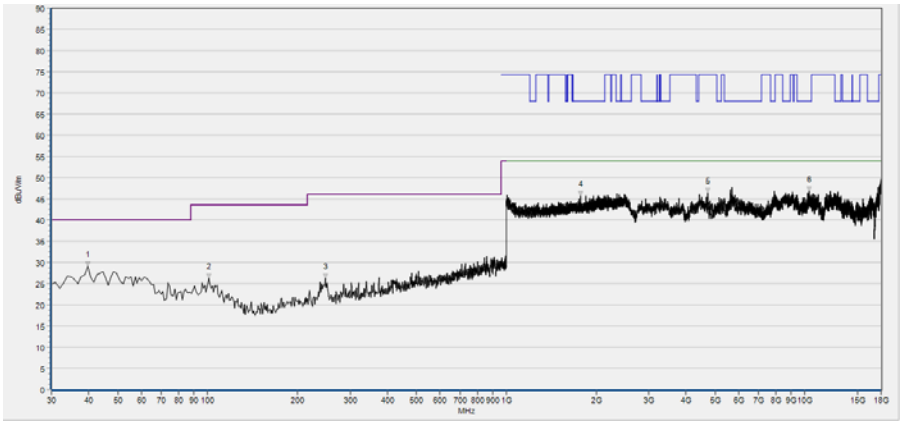
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 48



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
44.565	28.45	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
94.084	25.62	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	36.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1557.519	45.08	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4716.383	45.74	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8804.361	46.91	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

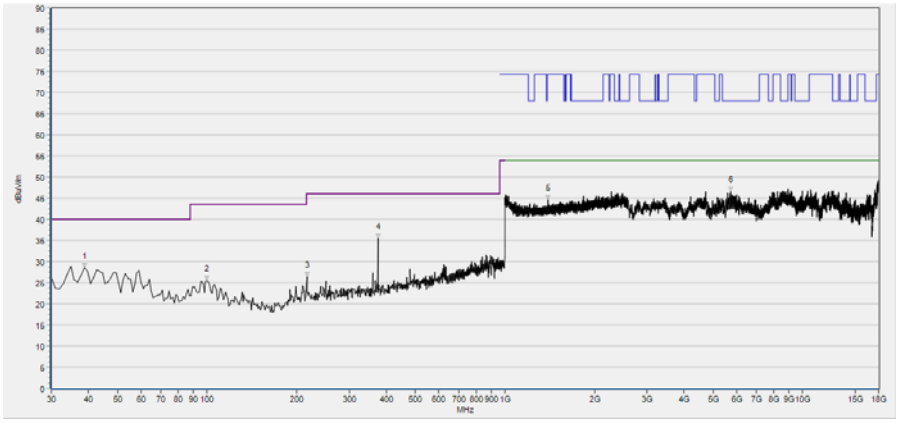
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
39.710	29.17	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
100.881	26.26	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
247.497	26.33	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1769.857	45.65	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
4719.464	46.35	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
10350.830	46.71	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

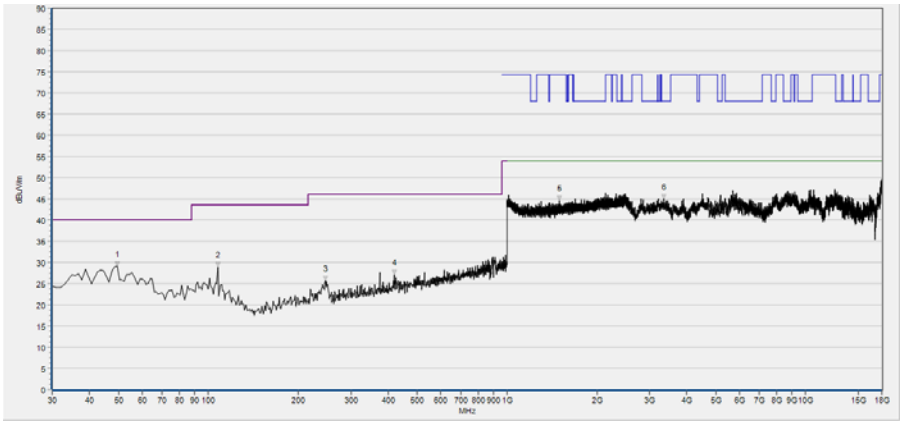
(Antenna Vertical, 30MHz to 18GHz)

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
38.739	28.61	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	25.53	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
216.426	26.37	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	35.54	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1393.731	44.61	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5723.745	46.58	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

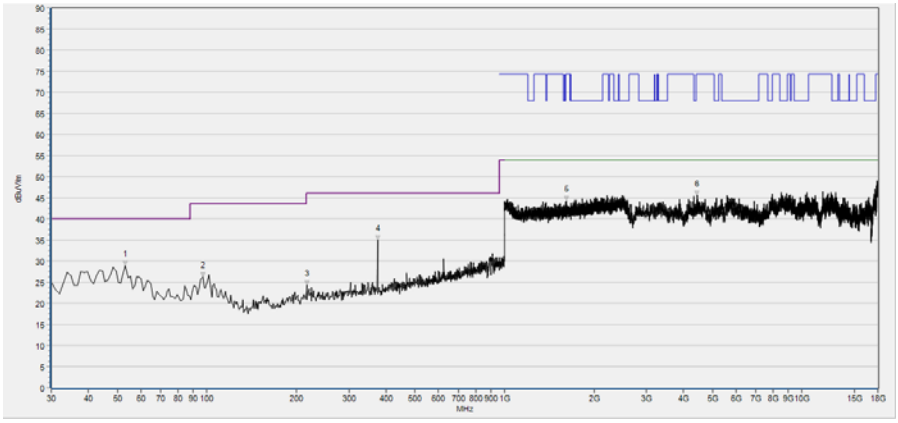
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
49.419	29.16	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
107.678	28.88	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.527	25.79	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
419.359	27.20	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1499.900	44.57	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3354.751	44.94	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

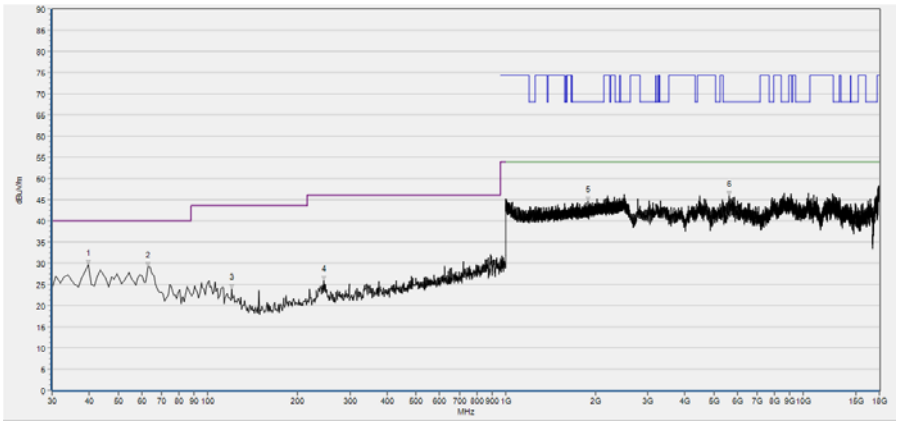
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 157



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
53.303	28.94	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.997	26.17	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
216.426	24.29	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	35.08	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1615.138	44.20	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4445.289	45.46	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

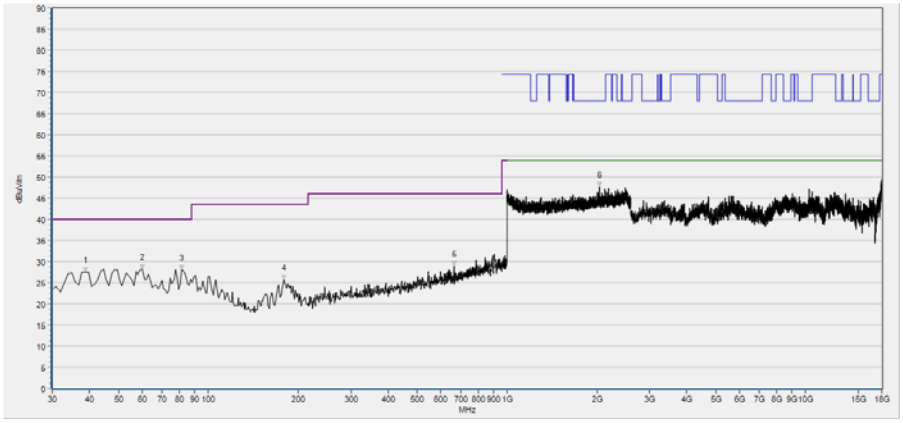
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
39.710	29.56	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
63.013	29.11	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	23.93	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
244.585	25.90	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1887.763	44.63	N/A	N/A	68.32	N/A	54.00	Vertical	PASS
5628.246	45.82	N/A	N/A	68.32	N/A	54.00	Vertical	PASS

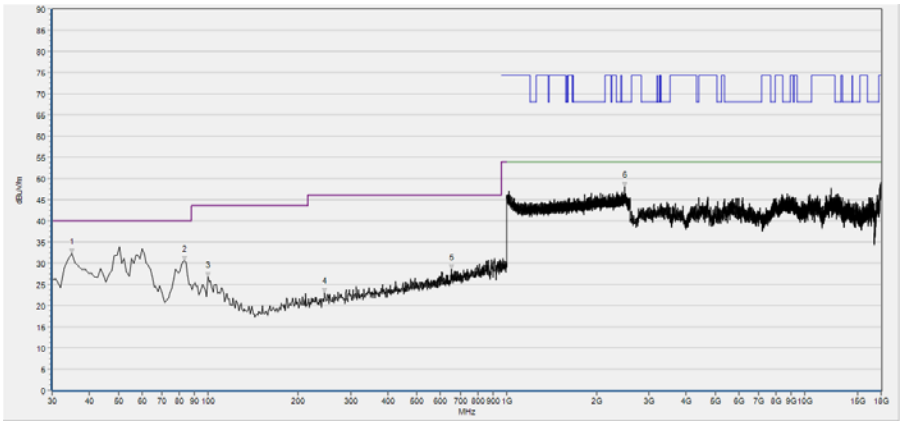
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 165



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
38.739	27.58	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
60.100	28.28	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
81.461	28.08	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
178.559	25.63	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
664.044	28.97	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2043.548	47.60	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

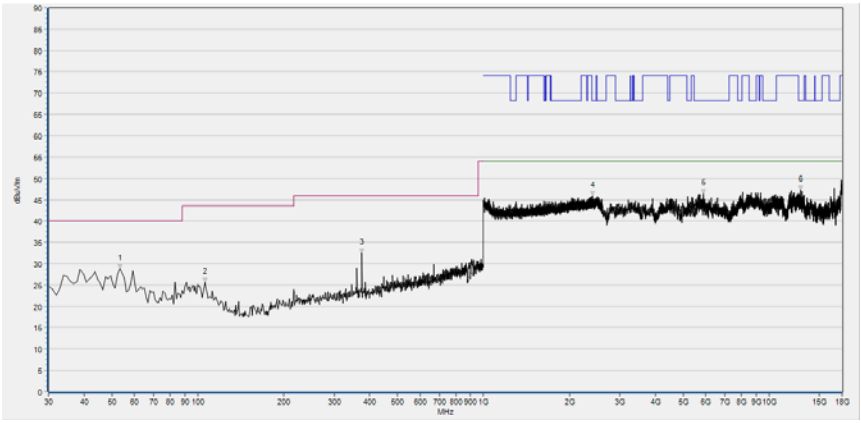


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
34.855	32.30	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
83.403	30.54	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
99.910	26.85	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
245.556	23.00	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
652.392	28.49	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2482.094	48.03	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

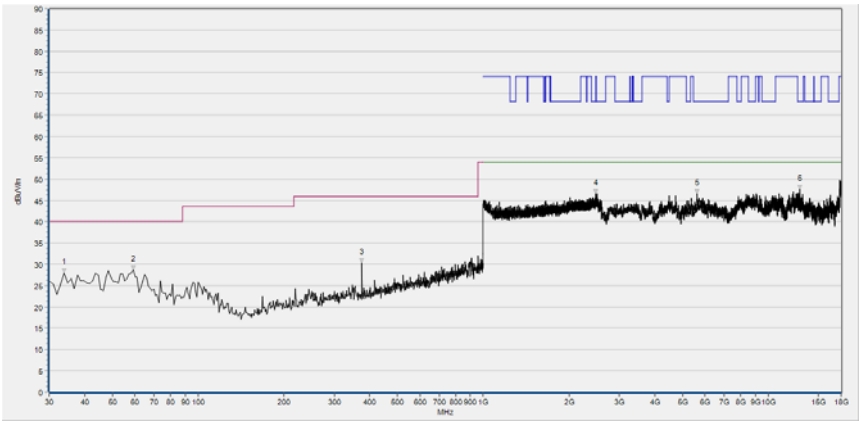
802.11n (HT20) Test mode

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
53.303	28.87	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
105.736	25.59	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	32.54	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2404.201	45.84	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5880.856	46.51	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12889.258	47.27	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

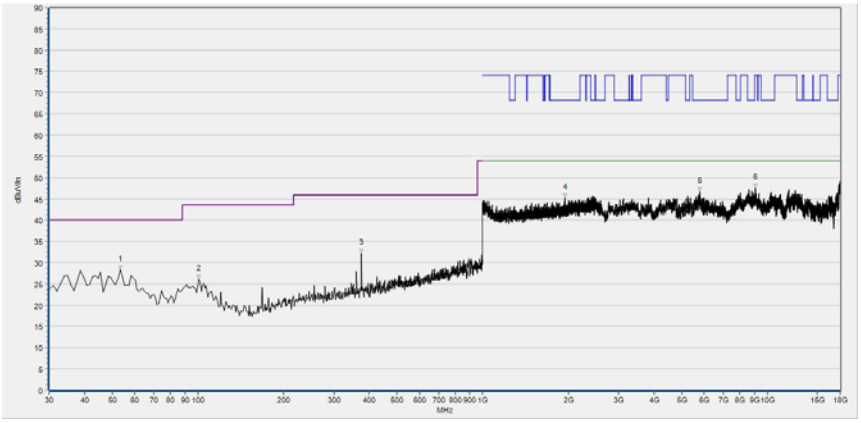
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
33.884	28.00	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
59.129	28.62	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
374.695	30.41	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2476.759	46.57	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
5634.407	46.57	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12907.742	47.66	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

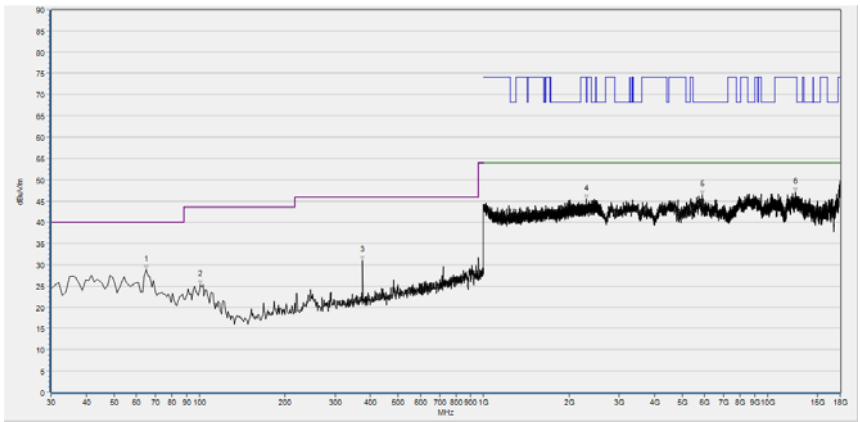
(Antenna Vertical, 30MHz to 18GHz)

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
53.303	28.28	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	26.11	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	32.13	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1950.183	45.25	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5797.680	46.77	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
9056.971	47.61	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

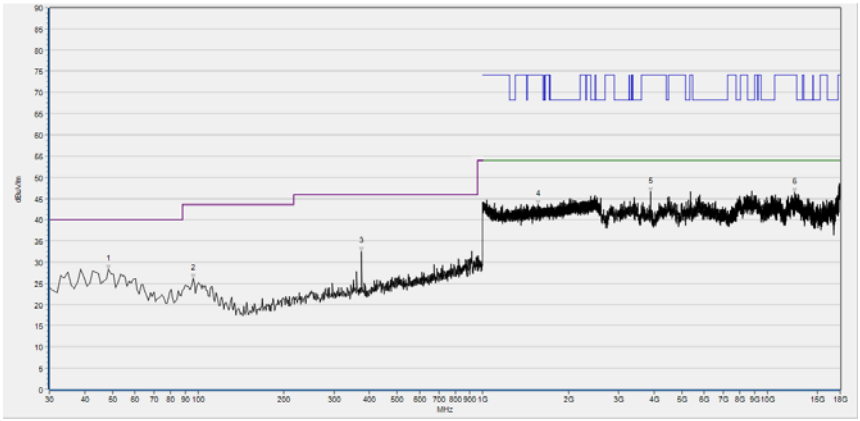
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
64.955	28.87	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
100.881	25.33	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	31.04	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2299.633	45.42	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5877.776	46.49	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12528.826	47.15	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

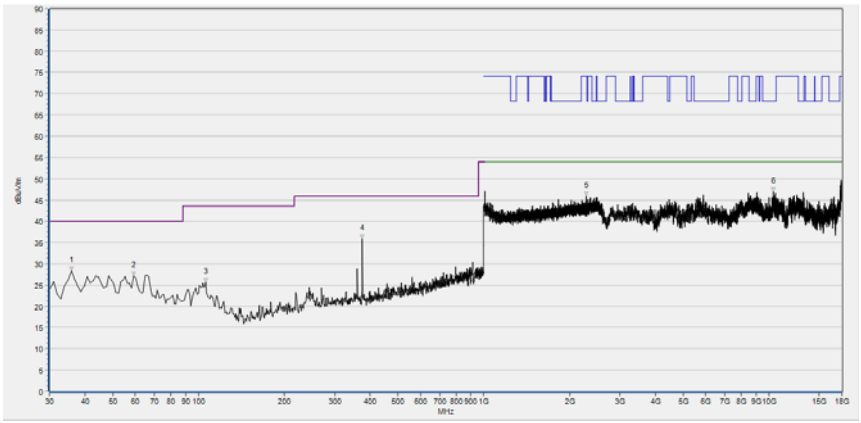
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 48



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
48.448	28.38	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	26.11	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	32.53	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1567.122	43.65	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
3893.859	46.61	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12430.246	46.37	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

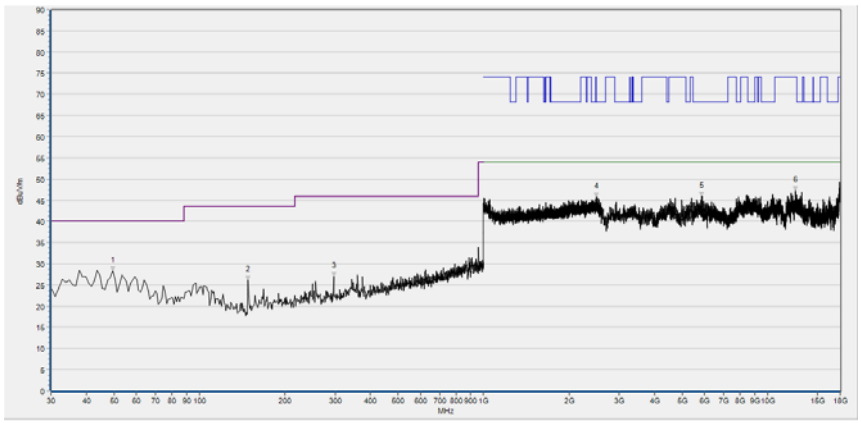
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
35.826	28.28	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
59.129	27.09	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
105.736	25.65	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	35.80	N/A	N/A	46.00	46.00	N/A	Vertical	PASS
2290.030	45.94	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
10353.911	46.88	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

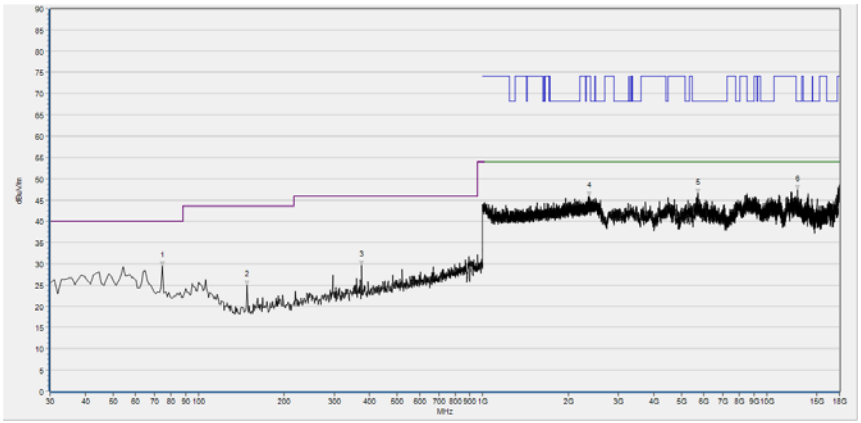
(Antenna Vertical, 30MHz to 18GHz)

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
49.419	28.40	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
148.458	26.06	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
297.017	26.98	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2486.896	45.79	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5865.453	45.93	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12513.423	47.25	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

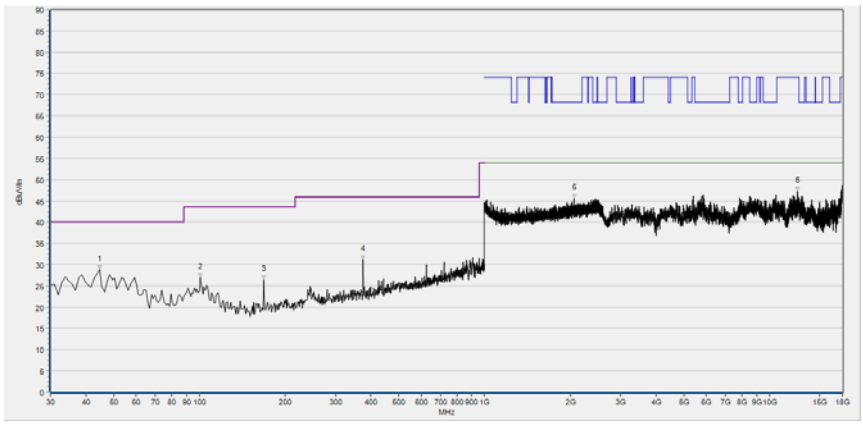
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.665	29.57	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	24.99	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	29.65	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2372.191	45.91	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5723.745	46.61	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
12787.598	47.37	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

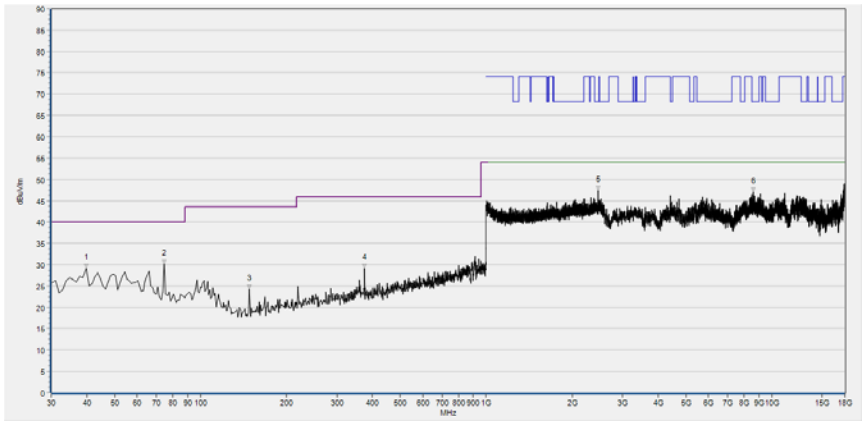
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 157



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
44.565	28.91	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	27.05	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
167.878	26.40	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	31.24	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2059.020	45.55	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12528.826	47.31	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

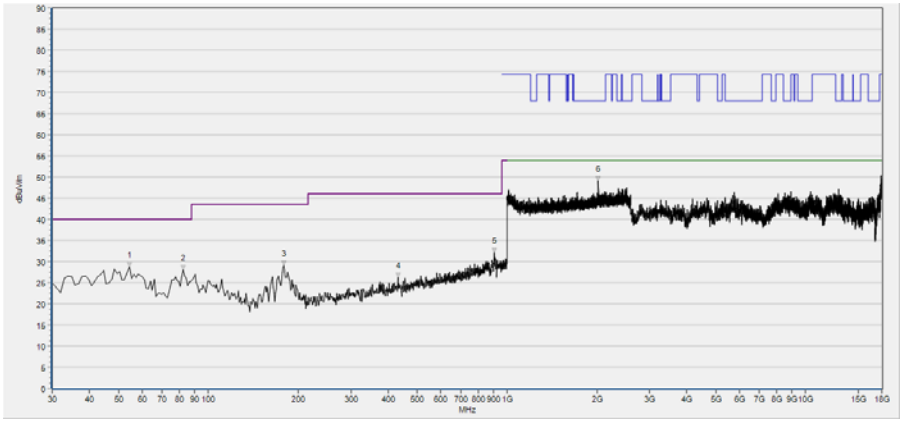
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
39.710	29.08	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
74.665	30.10	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	24.33	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	29.14	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2462.888	47.42	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8622.605	47.08	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

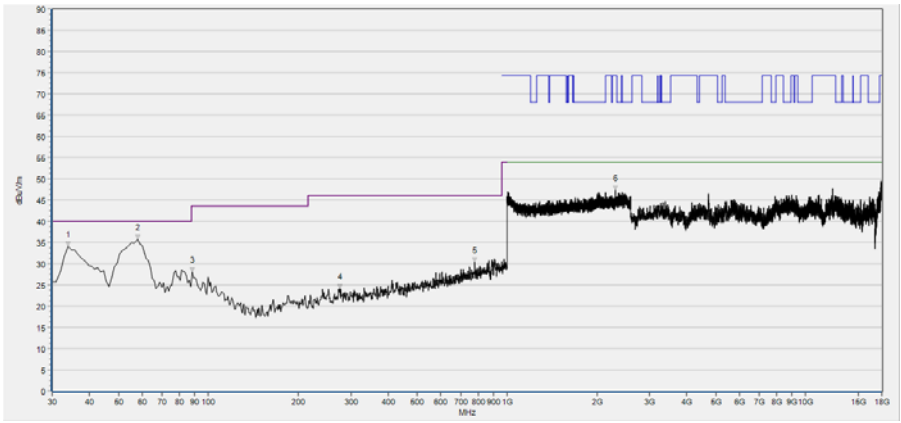
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 165



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
54.274	28.83	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
82.432	28.03	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
178.559	29.02	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
431.011	26.34	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
907.758	32.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2022.207	49.15	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

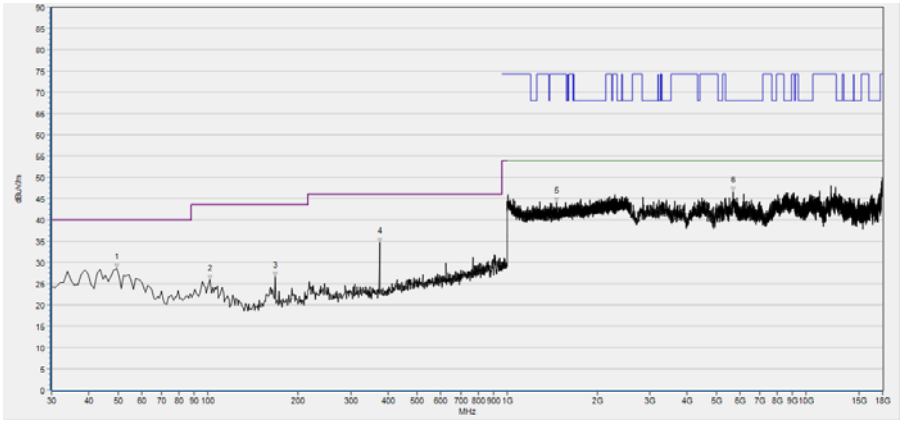


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
33.884	34.11	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
58.158	35.70	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
88.258	27.96	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
275.656	24.05	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
780.561	30.34	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2310.837	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

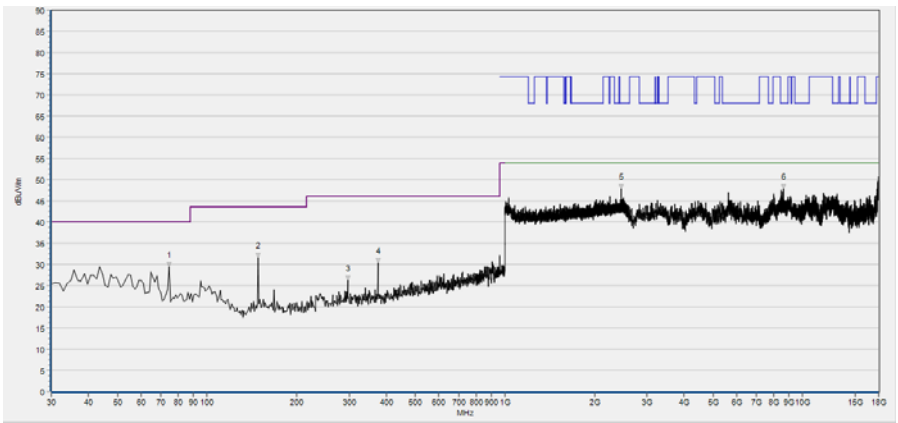
802.11n (HT40) Test mode

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
49.419	28.50	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
101.852	25.98	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
167.878	26.67	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	34.72	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1465.755	44.03	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5708.342	46.66	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

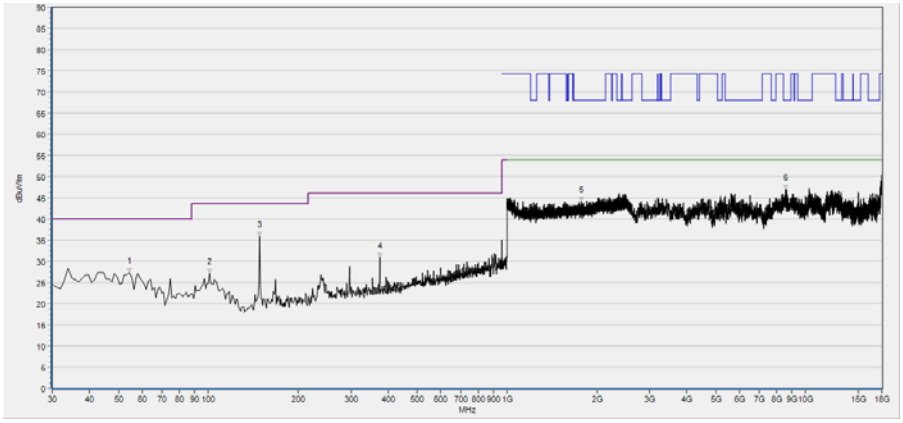
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
74.665	29.44	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	31.66	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
297.017	26.30	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	30.42	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2455.952	47.79	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8641.088	47.93	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

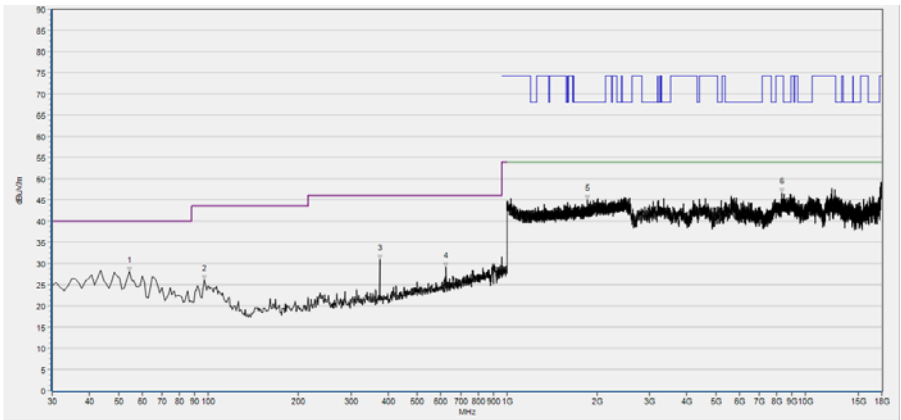
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 46



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
54.274	27.35	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	27.10	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
148.458	35.88	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	30.82	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1771.457	44.11	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
8576.395	46.94	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

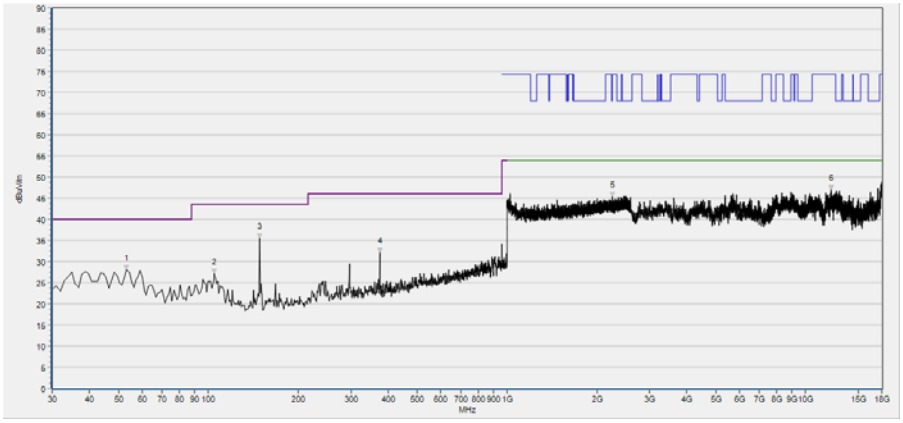
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
54.274	27.97	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	26.05	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	30.94	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.205	29.10	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1856.285	44.92	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8317.624	46.57	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

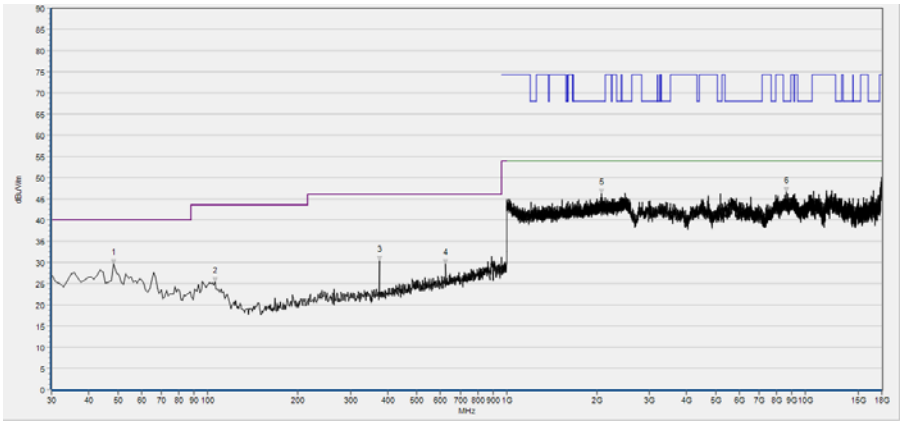
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 151



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
53.303	28.12	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
104.765	27.13	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
148.458	35.48	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	32.21	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2249.483	45.36	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12149.910	46.89	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

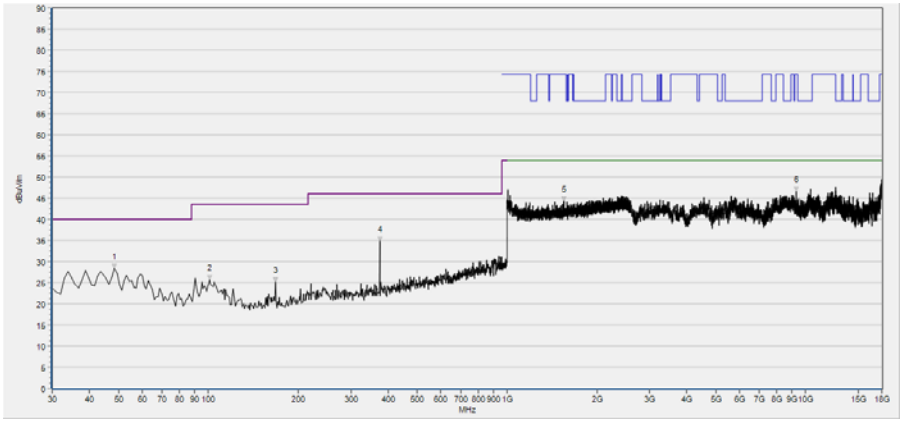
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
48.448	29.73	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
105.736	25.35	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	30.36	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.205	29.57	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2076.626	46.19	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8625.685	46.53	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

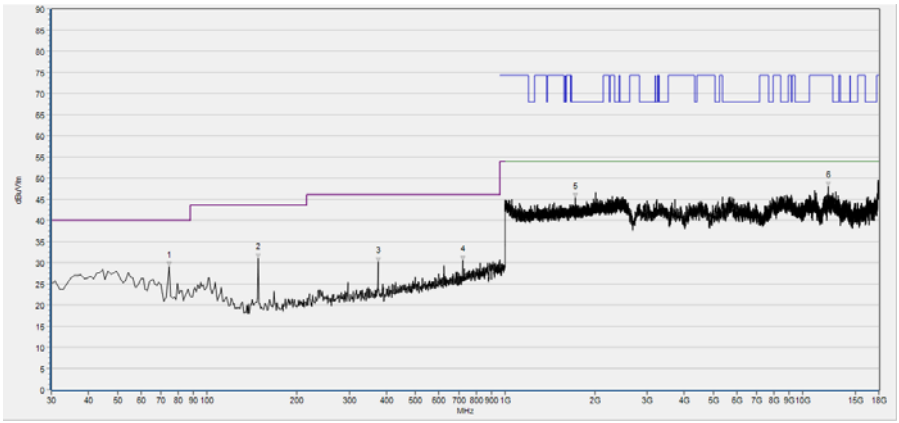
(Antenna Vertical, 30MHz to 18GHz)

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
48.448	28.32	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	25.72	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
167.878	25.25	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	34.88	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1548.449	44.36	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
9321.904	46.68	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

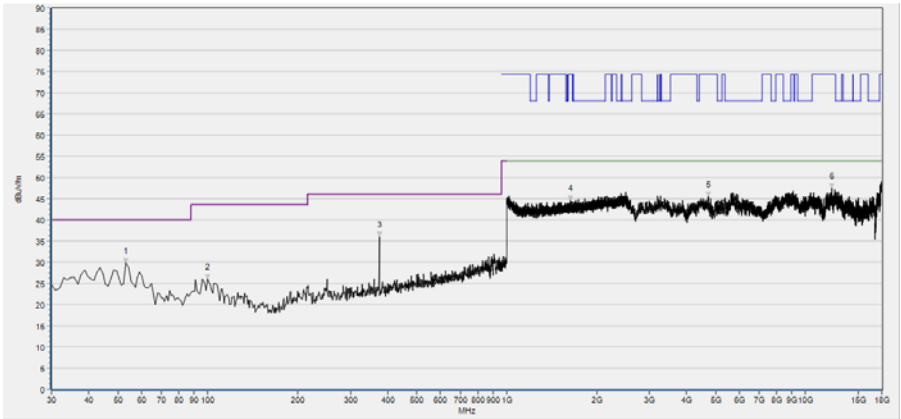


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.665	29.18	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	31.07	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	30.22	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
720.360	30.56	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1721.307	45.31	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12146.829	48.06	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

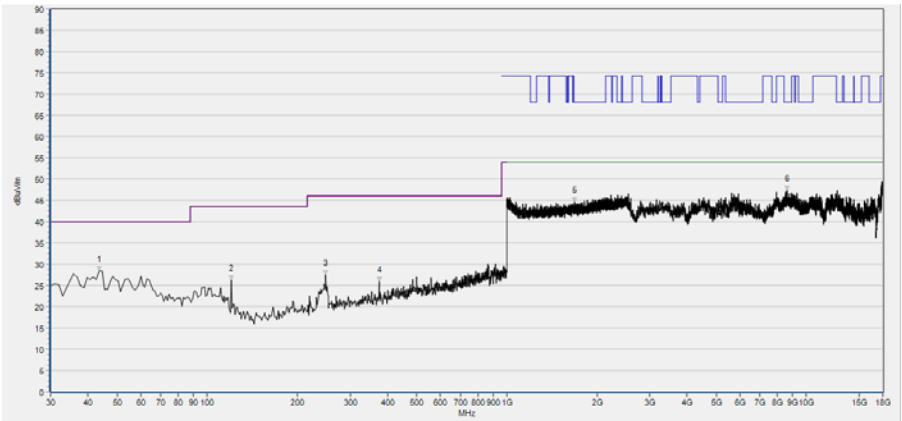
802.11ac (VHT20) Test mode

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
53.303	29.73	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	26.06	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	36.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1631.677	44.63	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4734.867	45.55	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12251.570	47.55	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

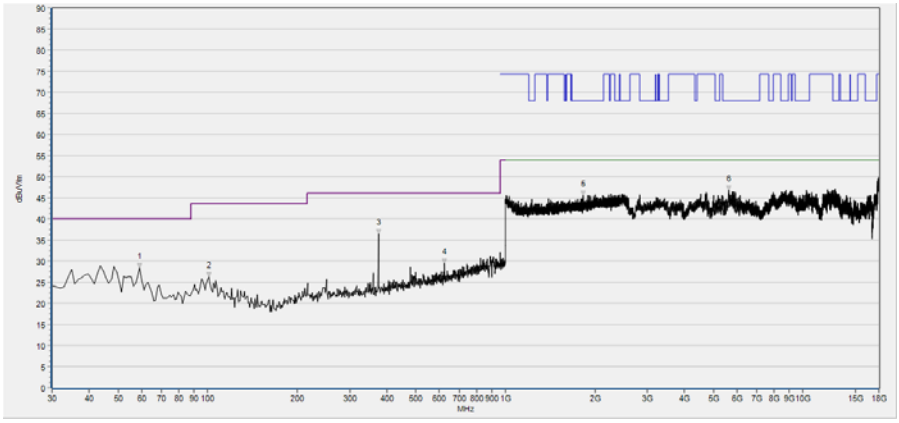
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
43.594	28.37	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	26.20	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
248.468	27.41	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	25.87	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1682.361	44.66	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8628.766	47.33	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

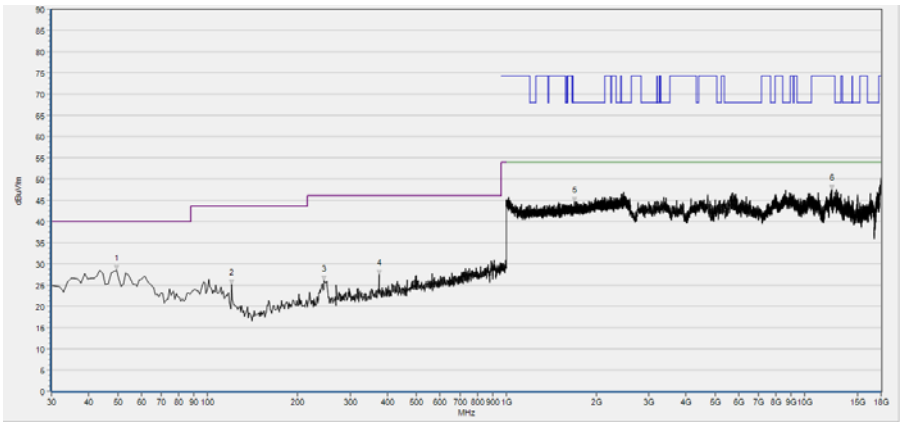
(Antenna Vertical, 30MHz to 18GHz)

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
59.129	28.44	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	26.29	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	36.38	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
625.205	29.46	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1826.409	45.45	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
5649.810	46.82	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

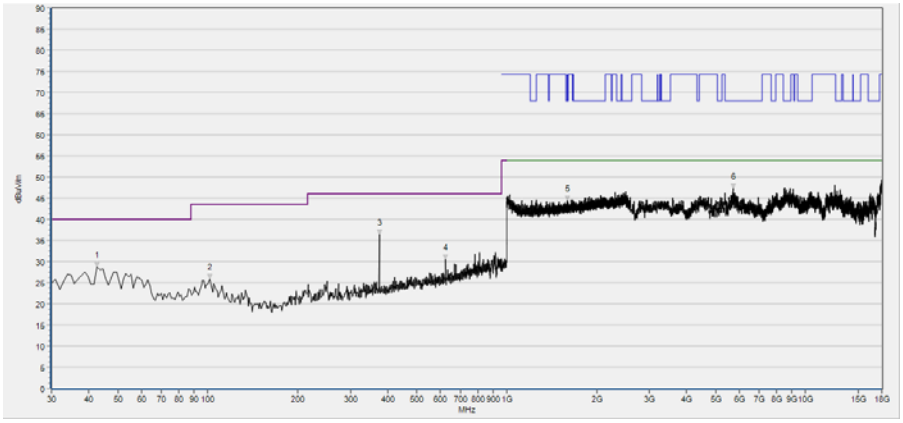
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
49.419	28.61	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	25.23	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
245.556	26.09	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	27.47	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1688.763	44.68	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12325.505	47.51	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

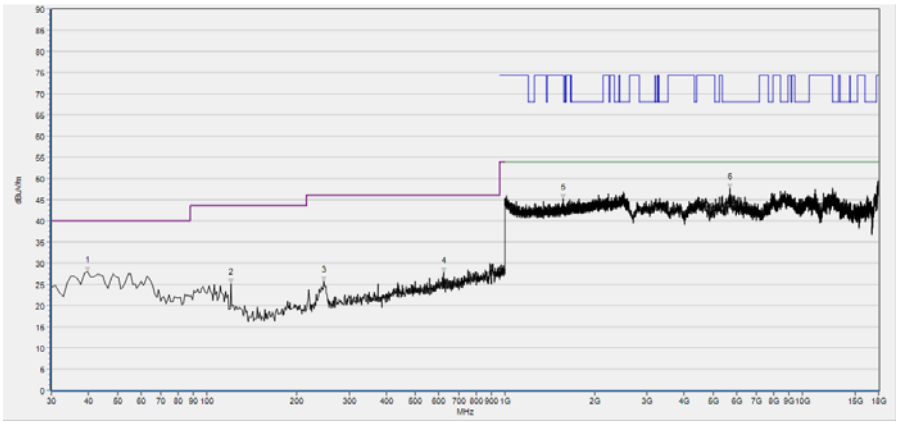
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 48



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
42.623	28.75	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
101.852	25.84	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	36.51	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
625.205	30.59	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1599.667	44.43	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5717.584	47.32	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

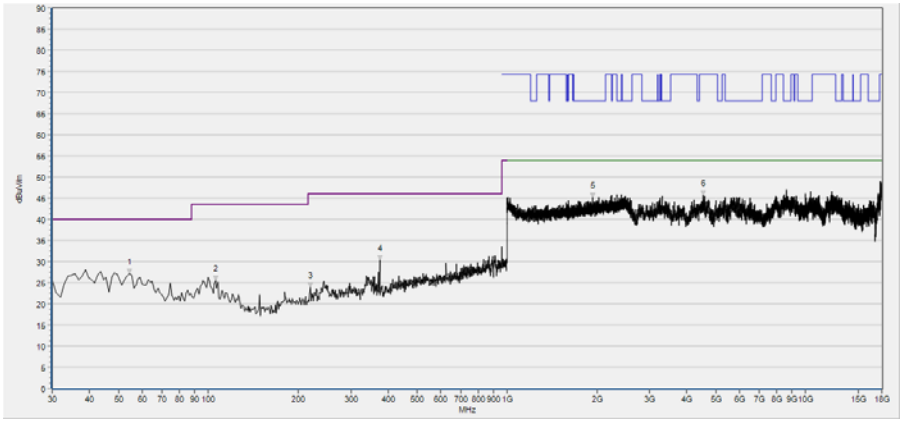
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
39.710	28.01	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	25.15	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.527	25.68	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
622.292	27.87	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1572.991	45.13	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5708.342	47.72	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

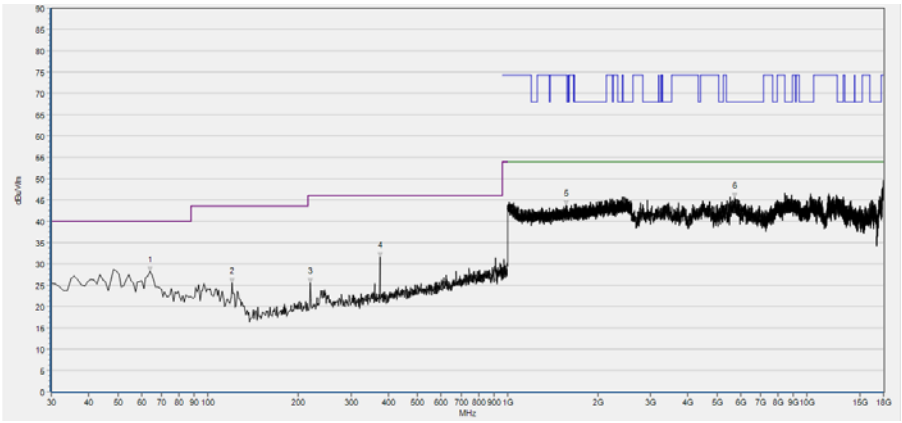
(Antenna Vertical, 30MHz to 18GHz)

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
54.274	27.13	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
105.736	25.56	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
219.339	23.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	30.28	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1936.312	45.14	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
4531.546	45.72	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

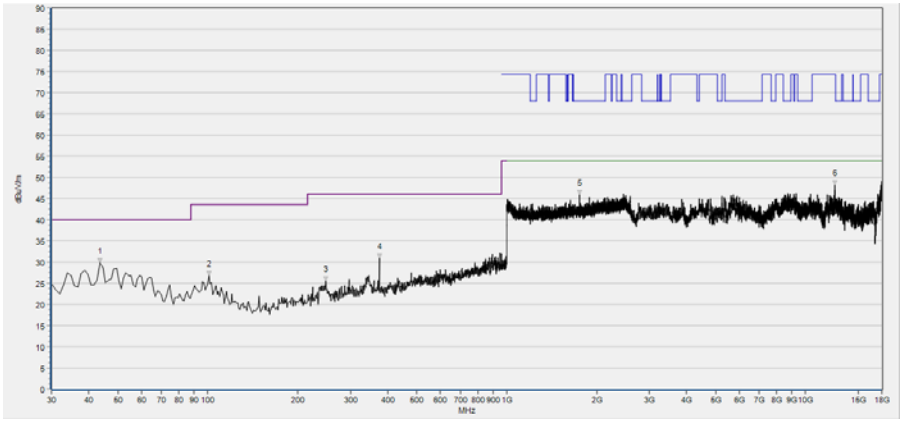
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
63.984	28.14	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	25.59	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
219.339	25.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	31.60	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1567.656	43.75	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5726.825	45.57	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

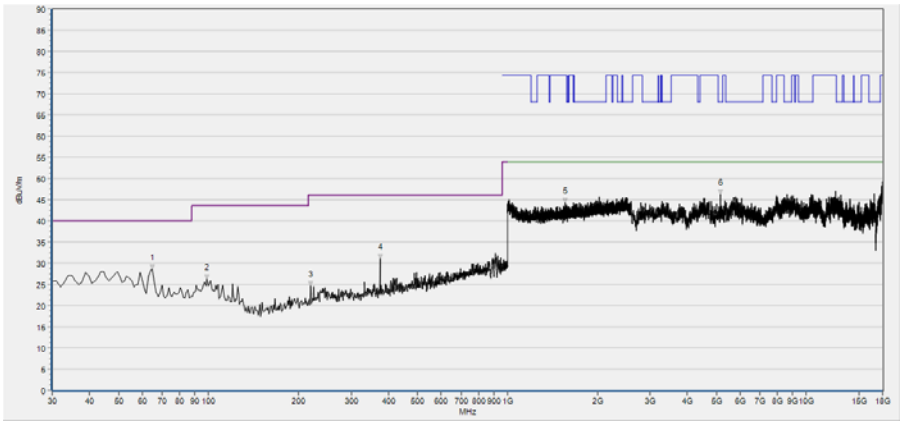
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 157



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
43.594	29.83	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	26.73	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
248.468	25.55	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	30.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1756.519	45.91	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12510.342	48.19	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

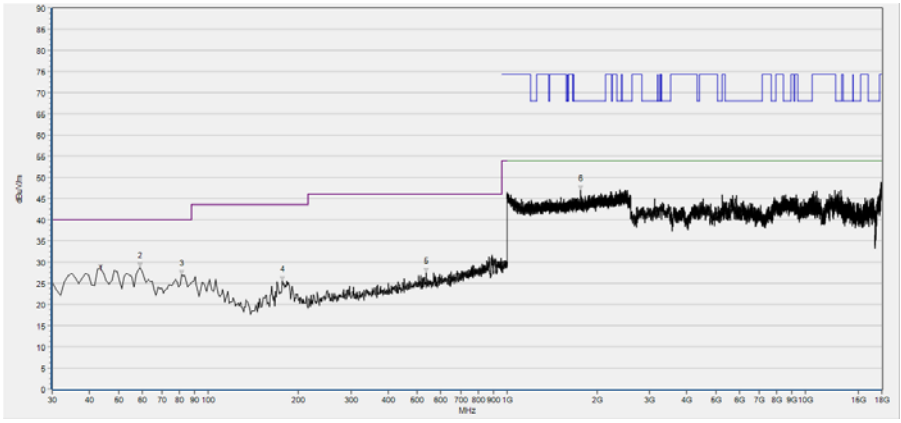
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
64.955	28.56	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
98.939	26.19	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
219.339	24.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	31.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1560.720	44.29	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5163.073	46.31	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

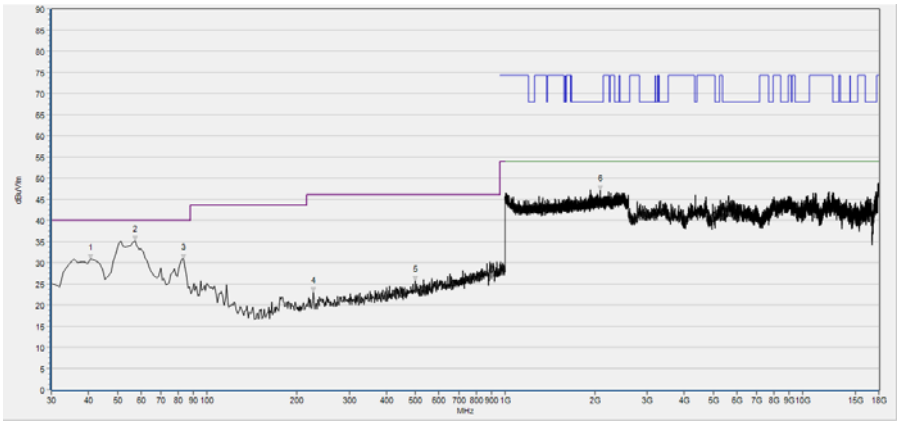
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 165



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
43.594	28.45	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
59.129	28.76	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
81.461	27.02	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
176.617	25.46	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
536.847	27.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1765.055	47.00	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

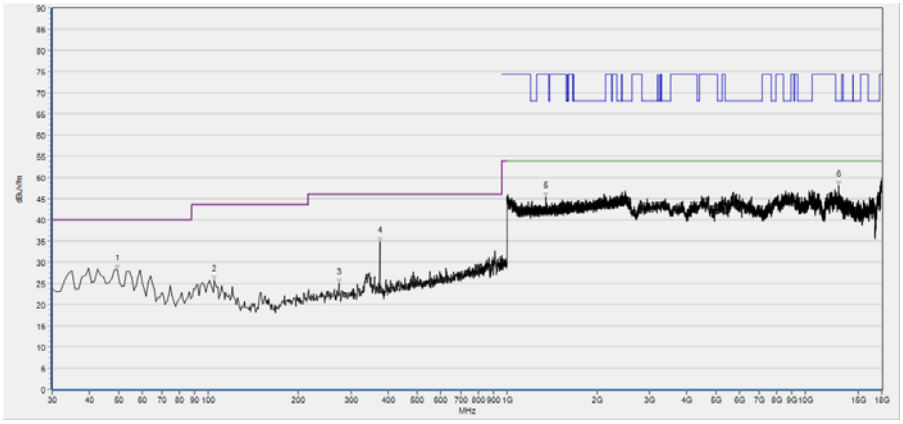


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
40.681	30.91	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
57.187	35.17	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
83.403	30.97	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
227.107	22.95	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
498.979	25.66	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2091.030	47.19	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

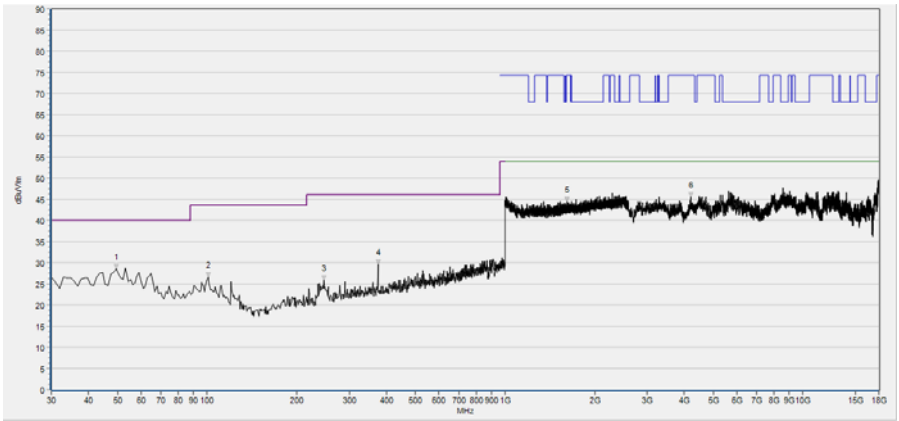
802.11ac (VHT40) Test mode

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
49.419	28.17	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
104.765	25.65	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
273.714	24.93	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	34.75	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1352.117	45.32	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12898.500	48.07	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

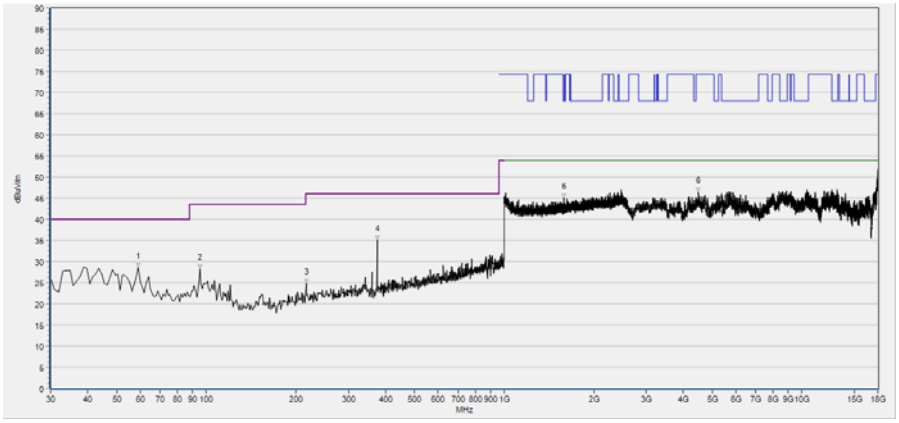
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
49.419	28.49	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
100.881	26.55	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.527	25.86	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	29.61	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1615.672	44.50	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4205.001	45.51	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

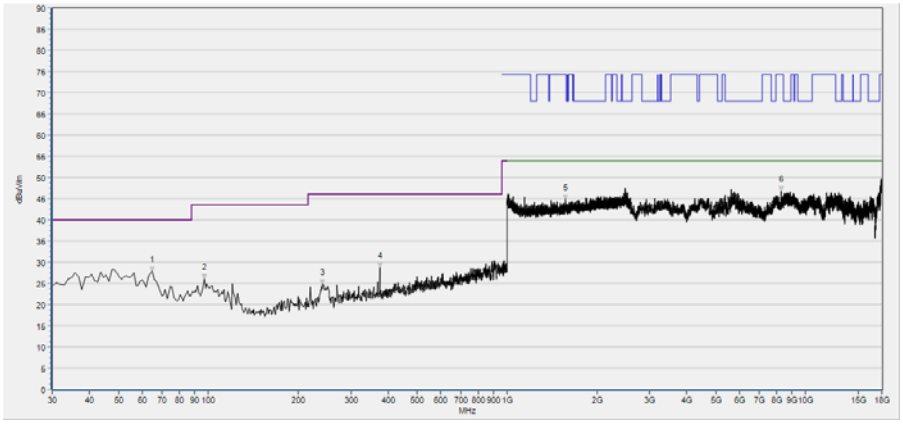
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 46



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
59.129	28.61	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
95.055	28.18	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
216.426	24.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	35.02	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1590.063	44.95	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4494.579	46.41	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

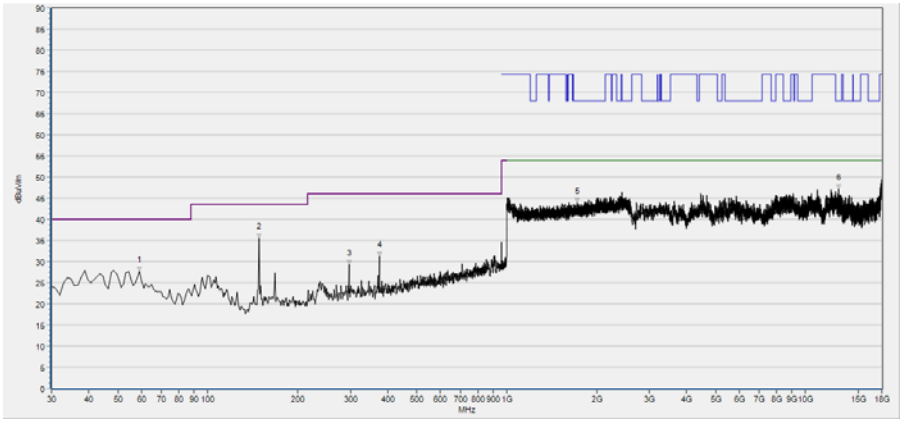
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
64.955	27.88	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	26.04	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
241.672	24.77	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	28.83	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1573.525	44.79	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8268.334	46.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

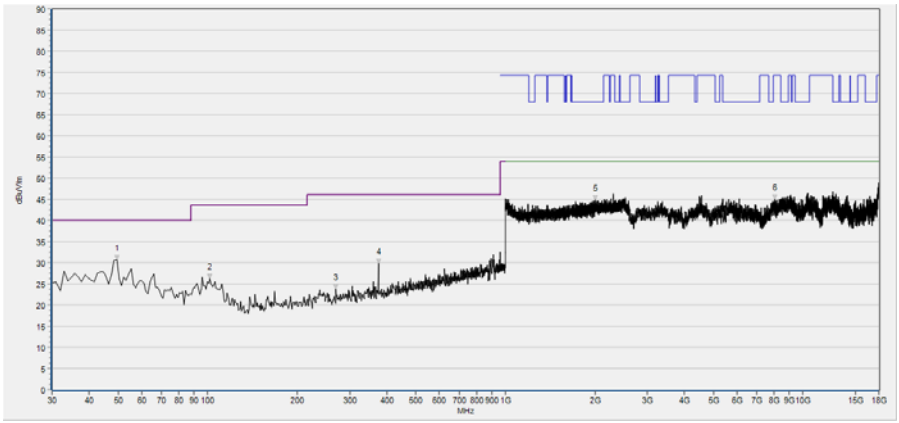
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 151



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
59.129	27.76	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
148.458	35.52	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
297.017	29.23	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	31.18	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1725.575	43.99	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
12898.500	47.09	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

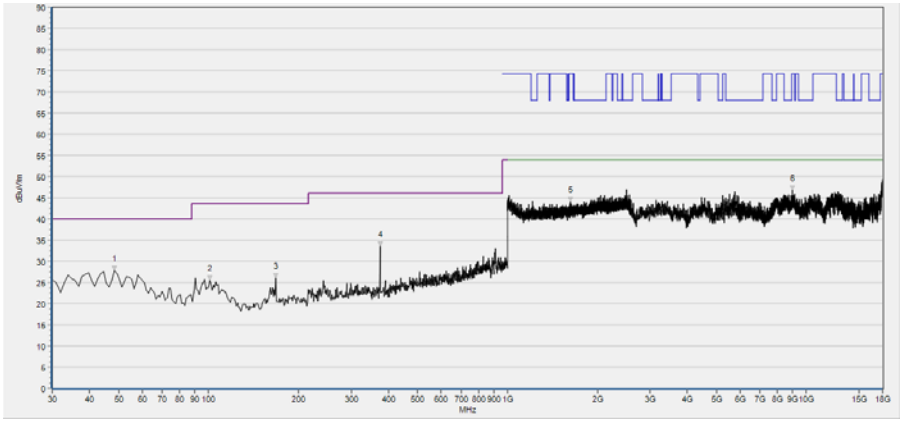
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
49.419	30.70	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
101.852	26.18	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
269.830	23.77	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	29.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2011.004	44.81	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8043.449	45.04	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

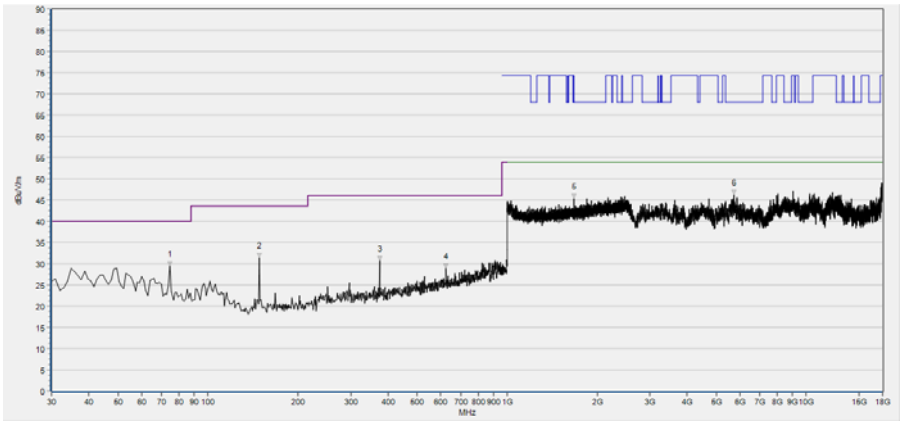
(Antenna Vertical, 30MHz to 18GHz)

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
48.448	27.82	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	25.56	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
167.878	26.15	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	33.57	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1623.141	44.12	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
8970.714	46.70	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

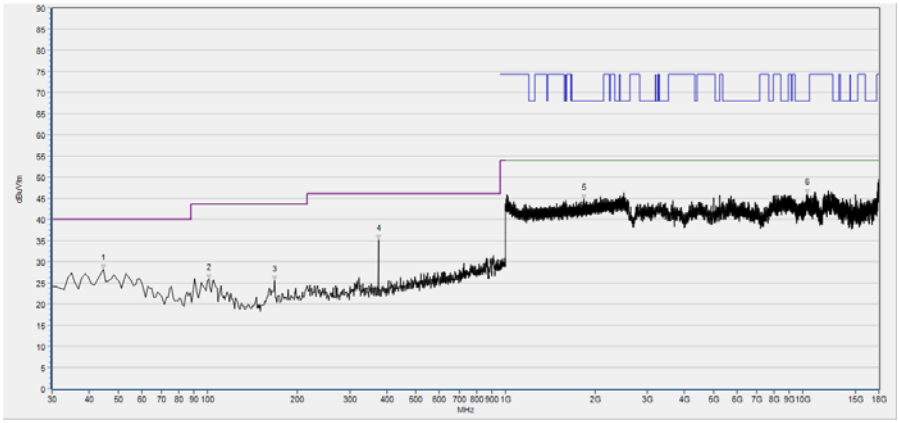


Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.665	29.38	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	31.37	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	30.77	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.205	28.97	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1673.825	45.43	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5720.664	46.23	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

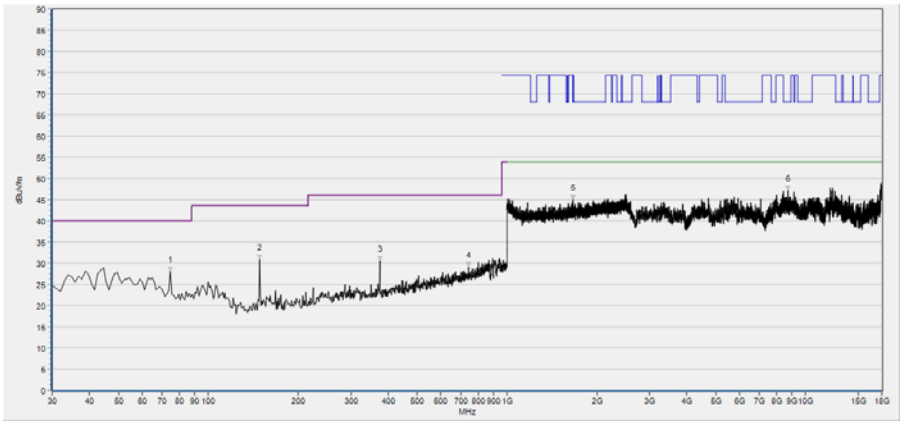
802.11ac (VHT80) Test mode

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
44.565	28.22	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.881	25.89	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
167.878	25.62	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	35.11	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1838.680	44.89	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10350.830	46.02	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

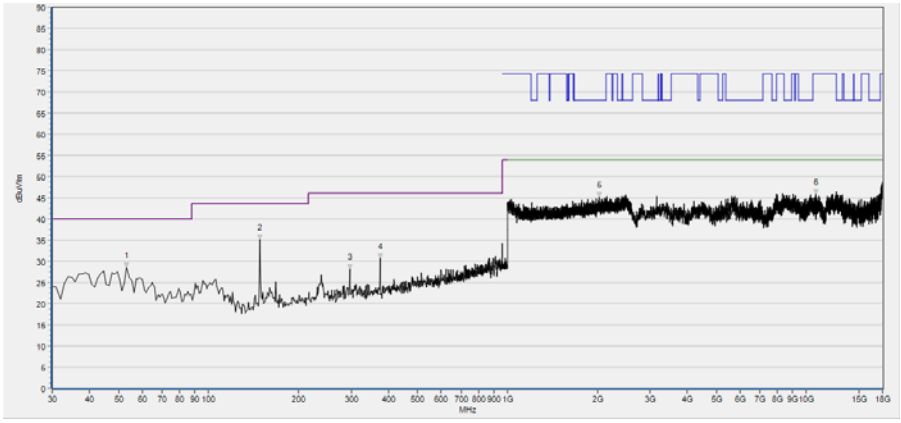
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
74.665	28.11	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.458	30.91	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	30.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
742.693	29.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1663.154	44.98	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
8745.829	47.09	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

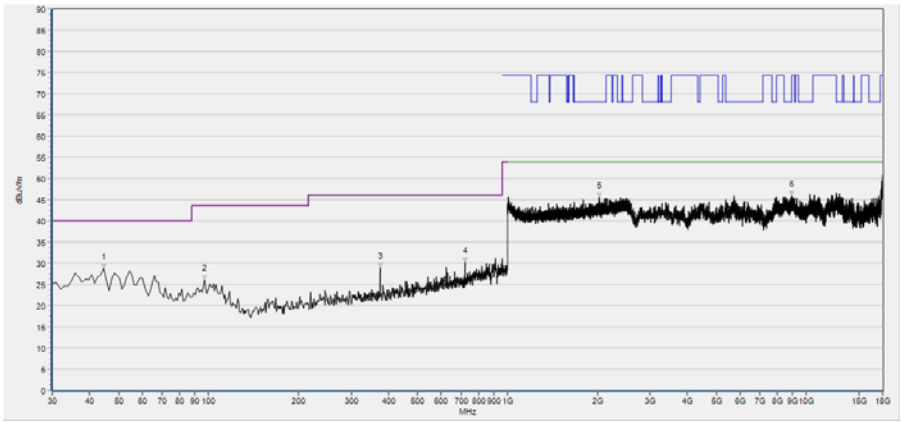
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel = 155



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
53.303	28.54	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
148.458	35.25	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
297.017	28.30	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	30.78	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2033.945	45.10	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS
10791.358	45.91	N/A	N/A	68.23	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	Pk (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
44.565	28.81	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
96.997	26.11	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	28.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
720.360	30.25	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2033.411	45.49	N/A	N/A	68.23	N/A	54.00	Vertical	PASS
8912.182	45.89	N/A	N/A	68.23	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Annex A Test Uncertainty

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

Test items	Uncertainty
Peak Output Power	±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
$\text{Adaptor}_{\text{Note}}$	N/A	NBS65A12 0500M2	N/A	N/A	N/A
Note: The equipment is provided by applicant.					

4.3 List of Software Used

Description	Manufacturer	Software Version
Test system	Tonscend	V2.6
Power Panel	Agilent	V3.8
MORLAB EMCR V1.2	MORLAB	V1.0

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	2019.12.01	2020.11.30
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2019.12.01	2020.11.30
Anechoic Chamber	N/A	9m*6m*6m	CRT	2017.11.19	2020.11.18

END OF REPORT