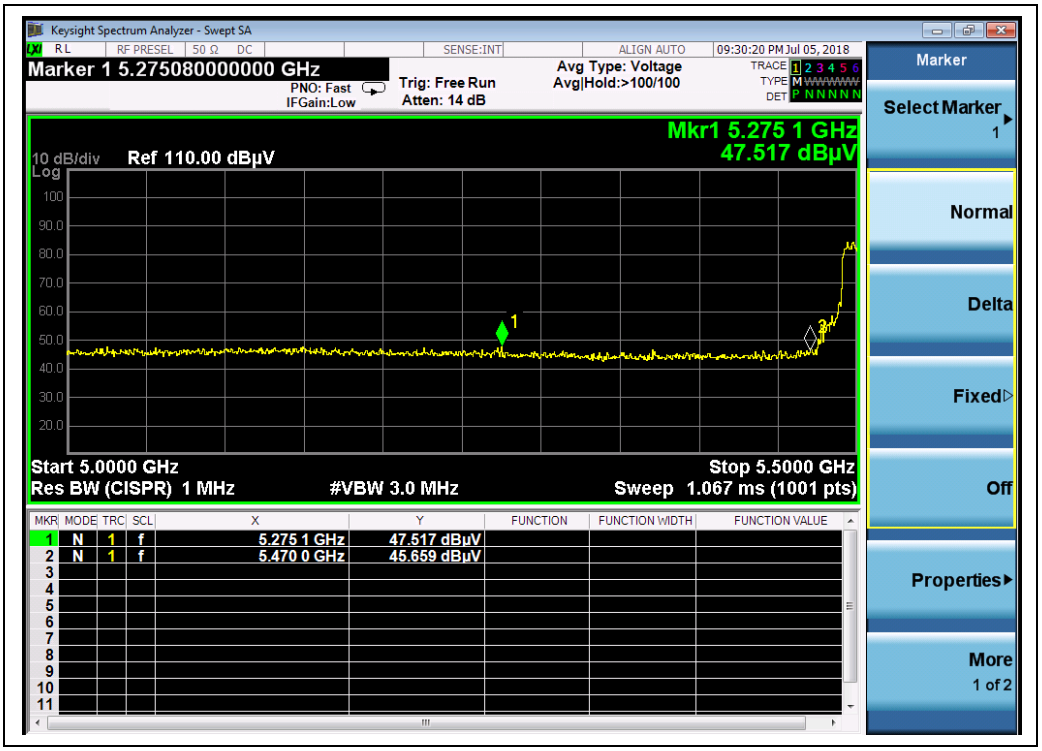
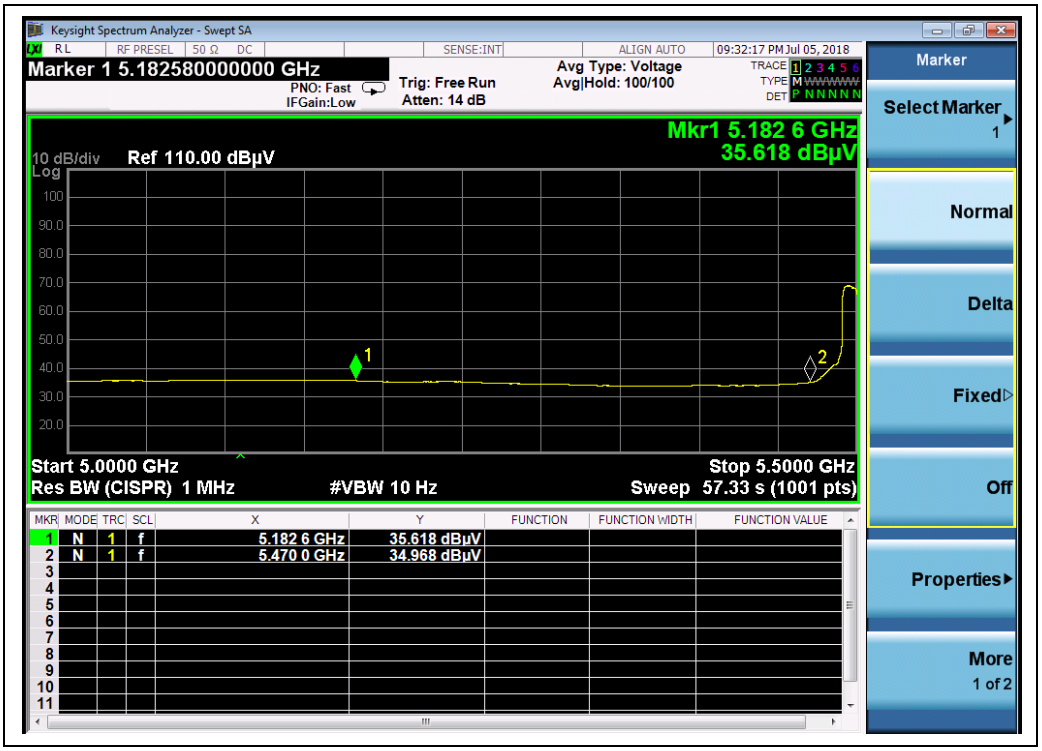
(Channel 64, PEAK, 802.11a)

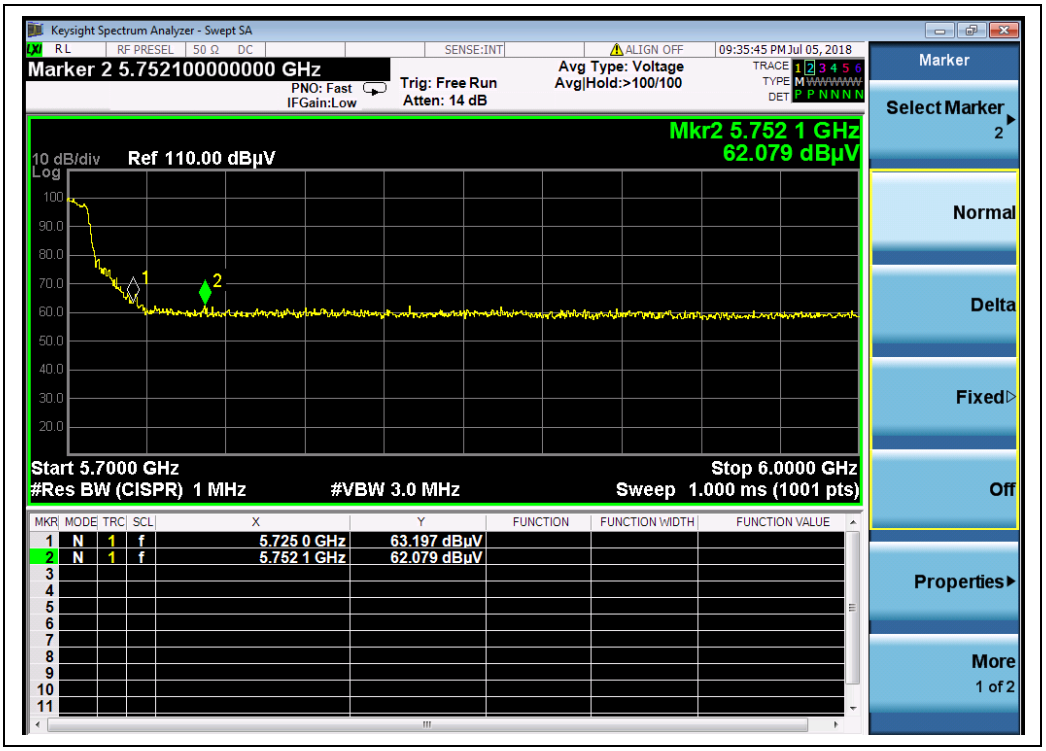
(Channel 64, AVG, 802.11a)



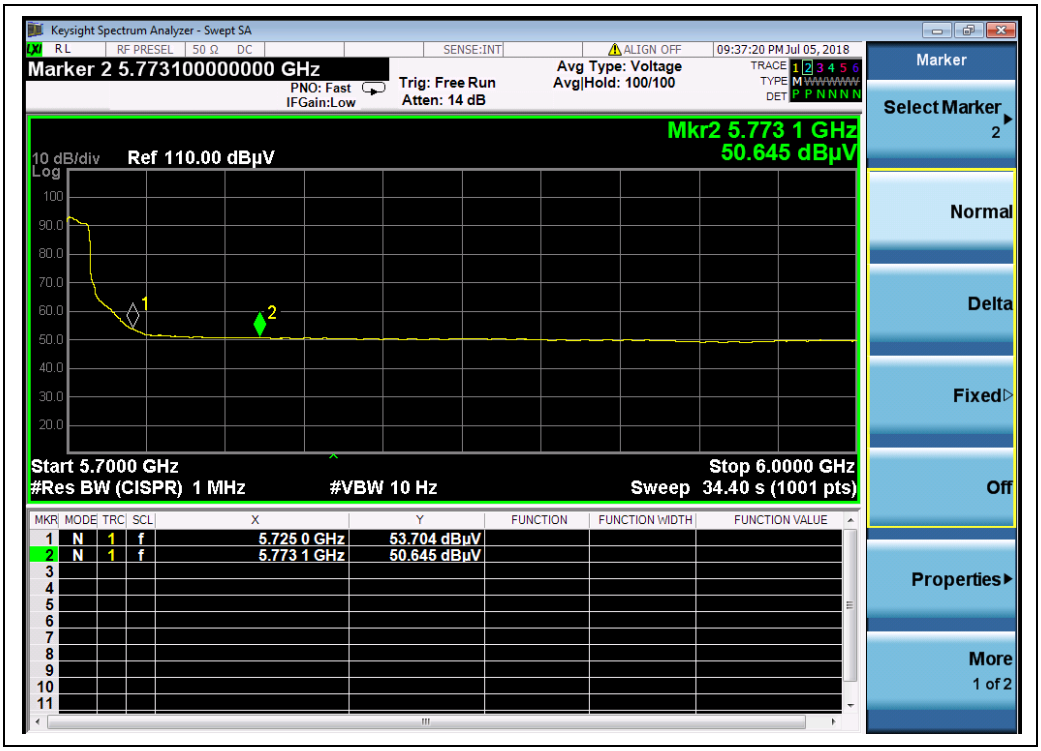
(Channel 100, PEAK, 802.11a)



(Channel 100, AVG, 802.11a)



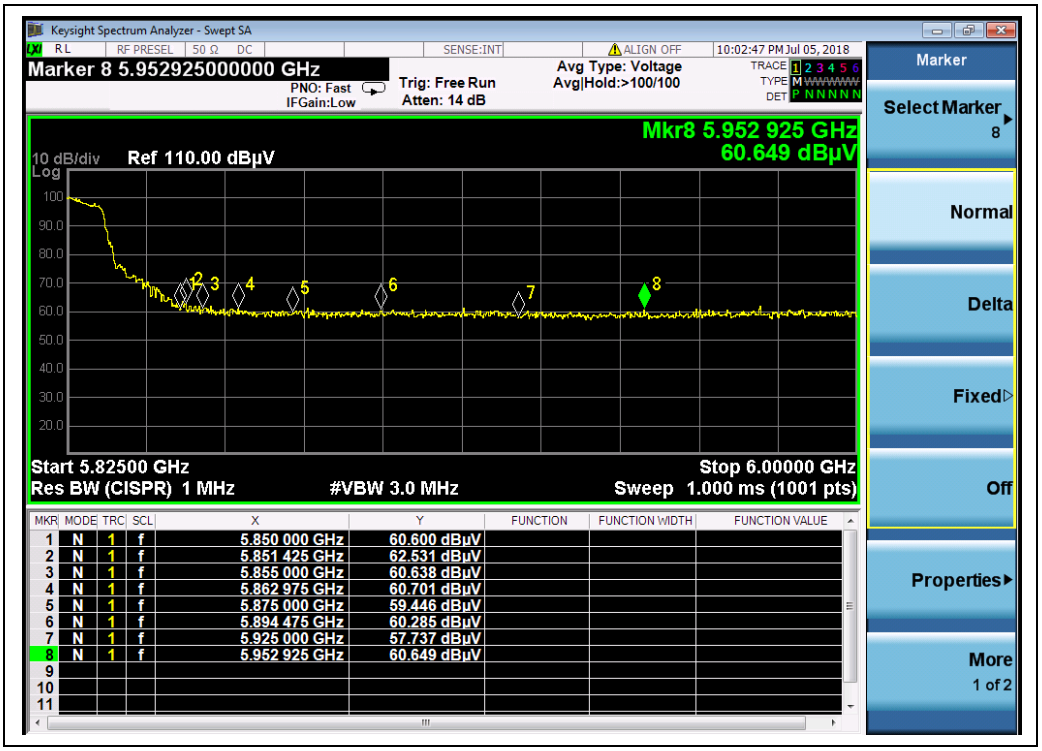
(Channel 144, PEAK, 802.11a)



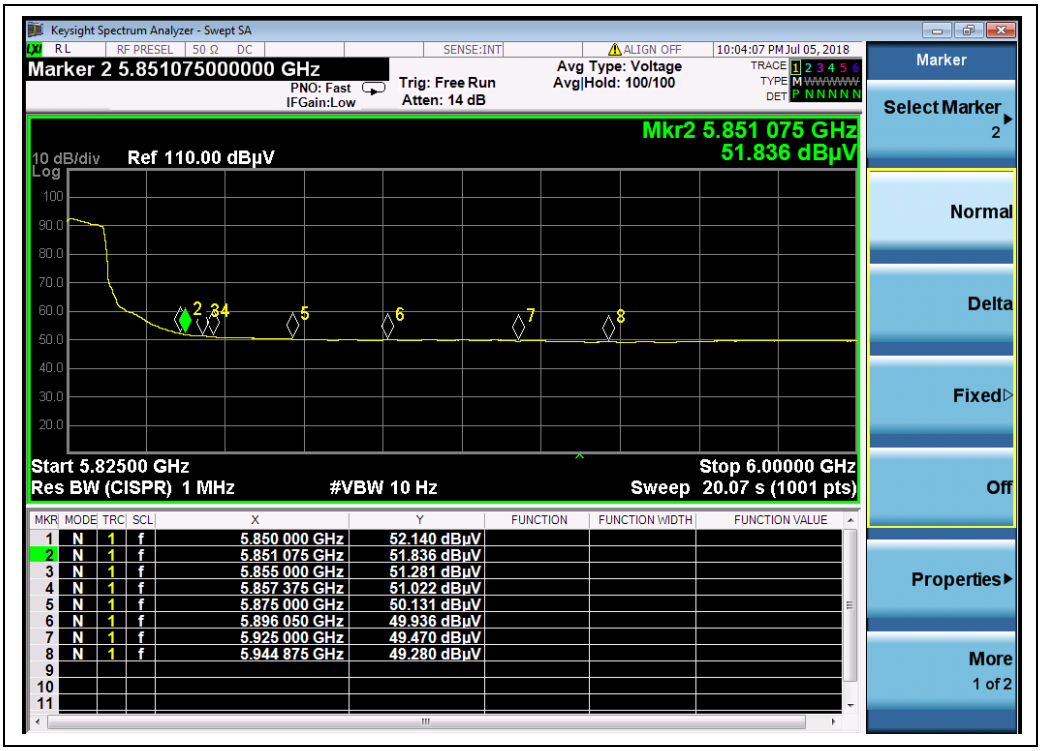
(Channel 144, AVG, 802.11a)

(Channel 149, PEAK, 802.11a)

(Channel 149, AVG, 802.11a)



(Channel 165, PEAK, 802.11a)



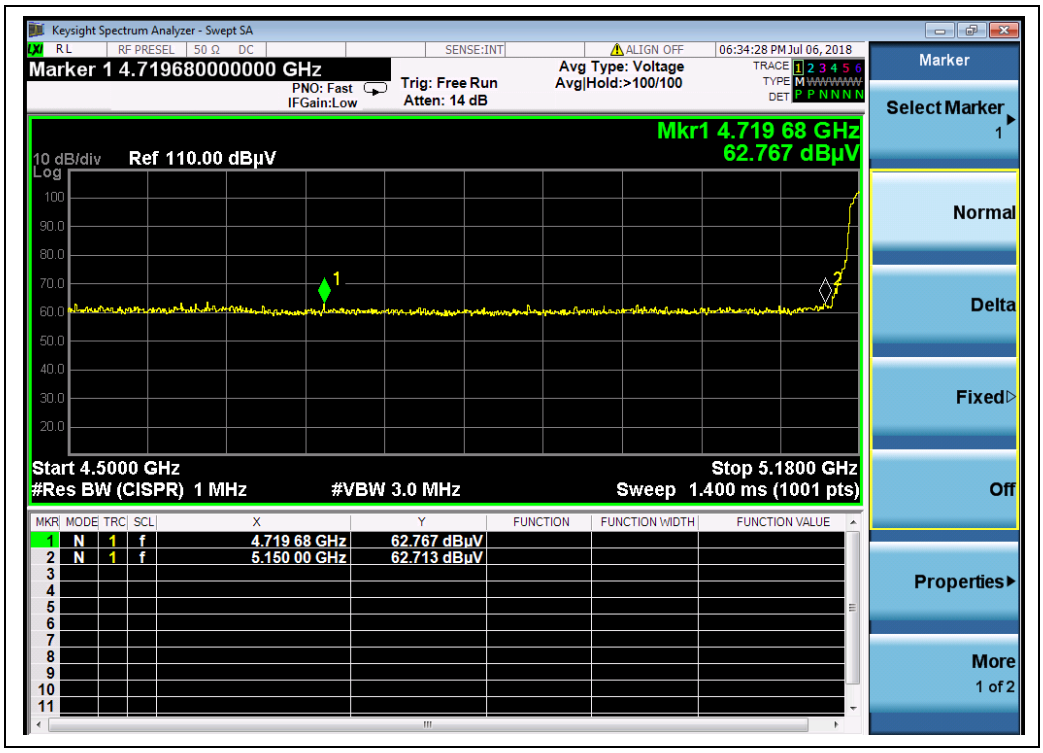
(Channel 165, AVG, 802.11a)

802.11n (HT20) Test mode

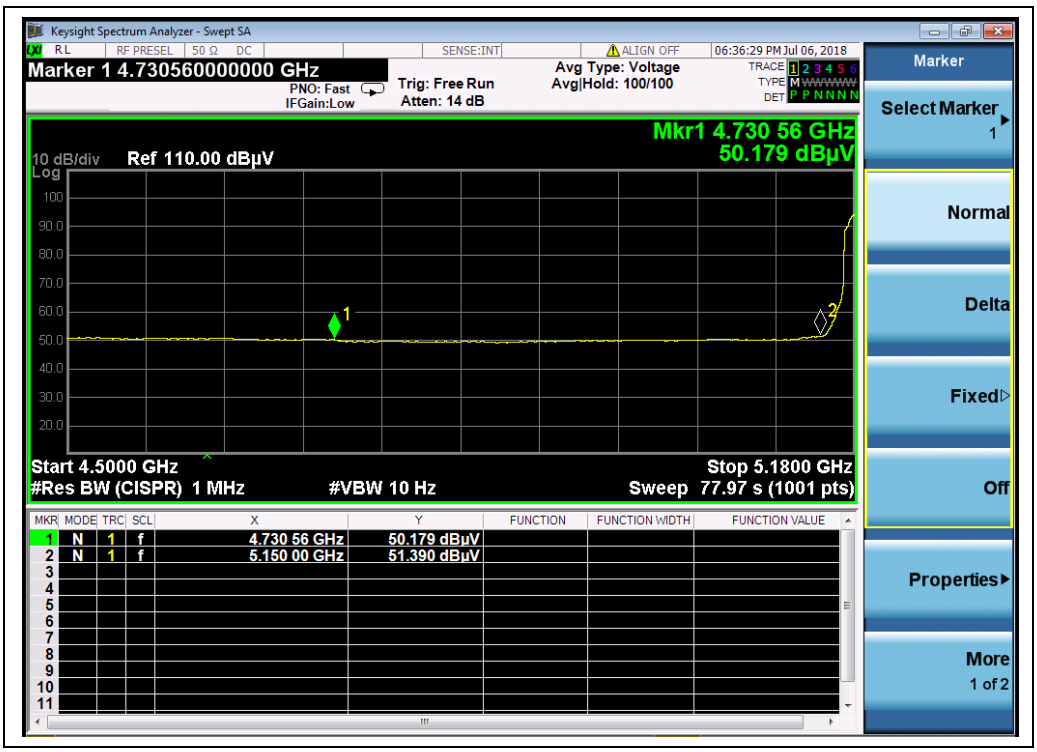
A. Test Verdict:

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	4719.68	PK	62.77	-50.65	32.11	44.23	74	PASS
36	4730.56	AV	50.18	-50.65	32.11	31.64	54	PASS
64	5402.40	PK	60.54	-50.65	32.11	42.00	74	PASS
64	5402.825	AV	48.74	-50.65	32.11	30.20	54	PASS
100	5199.49	PK	62.56	-50.65	32.11	44.02	68.23	PASS
100	5244.37	AV	49.21	-50.65	32.11	30.67	54	PASS
144	5848.80	PK	62.02	-50.65	32.11	43.48	68.23	PASS
144	5852.70	AV	50.47	-50.65	32.11	31.93	54	PASS
149	5724.77	PK	65.08	-50.65	32.11	46.54	121.70	PASS
149	5724.48	AV	54.26	-50.65	32.11	35.72	54	PASS
165	5852.40	PK	62.21	-50.65	32.11	43.67	116.76	PASS
165	5852.59	AV	51.32	-50.65	32.11	32.78	54	PASS

B. Test Plots:

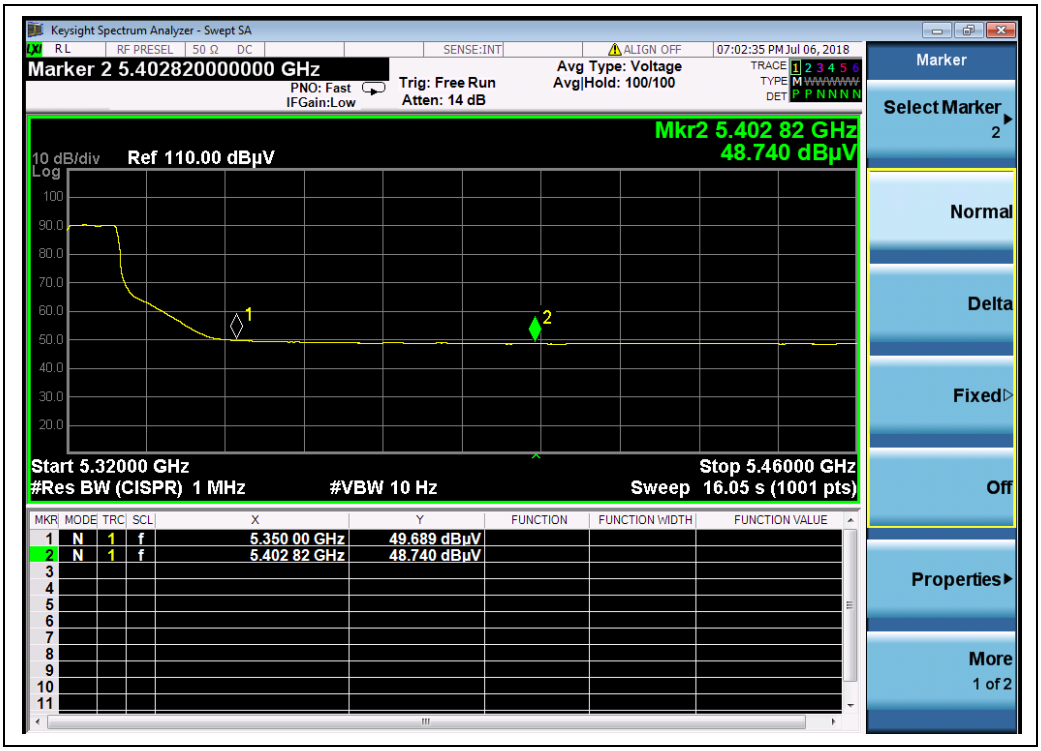


(Channel 36, PEAK, 802.11n (HT20))

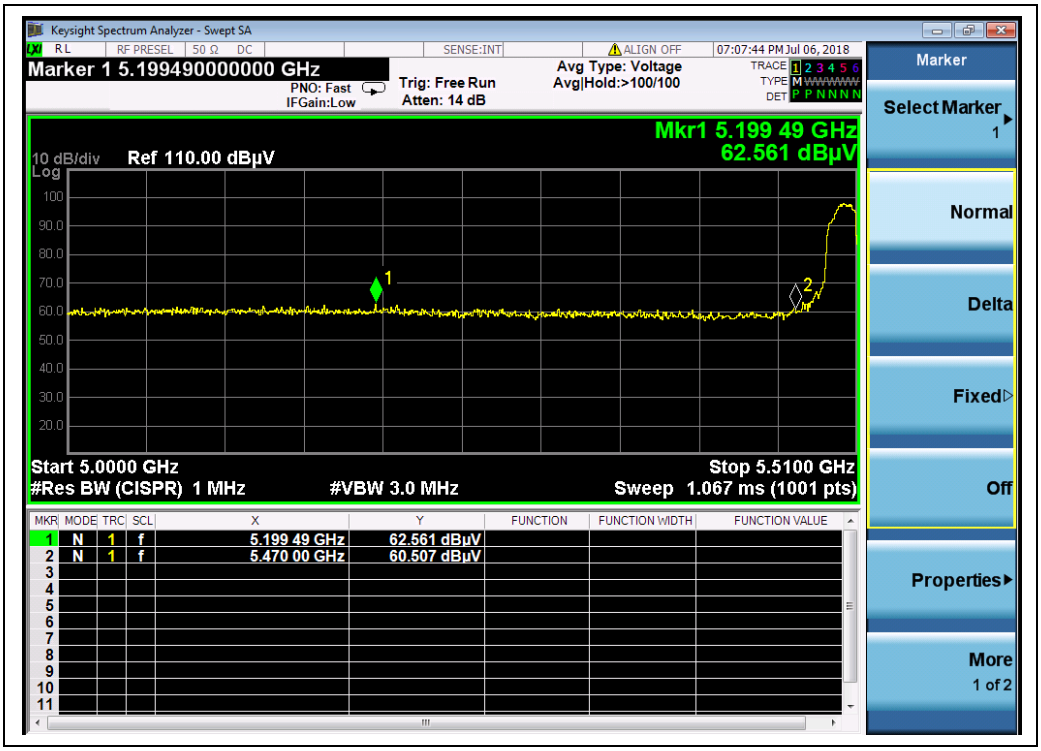


(Channel 36, AVG, 802.11 n (HT20))

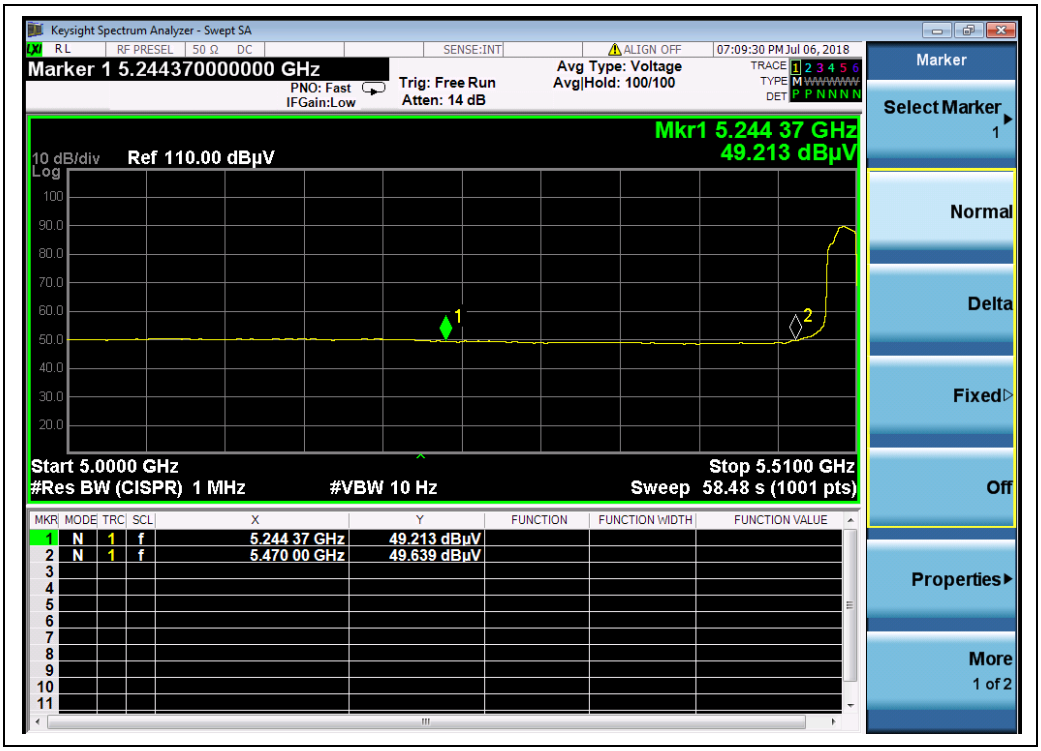
(Channel 64, PEAK, 802.11 n (HT20))



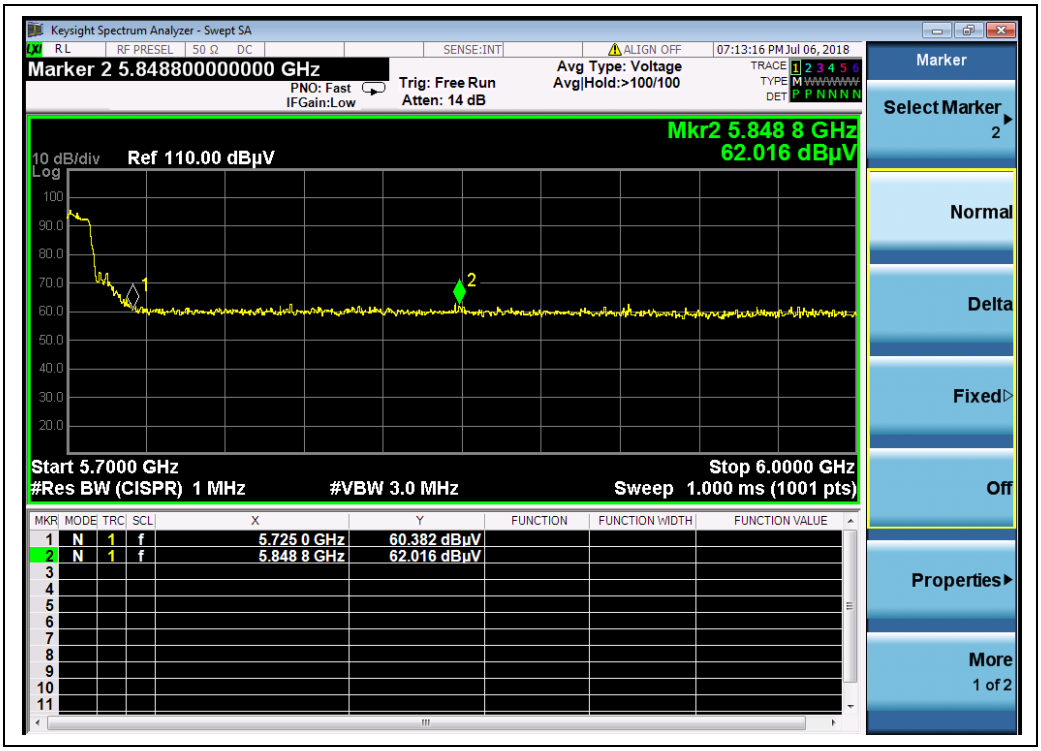
(Channel 64, AVG, 802.11n (HT20))



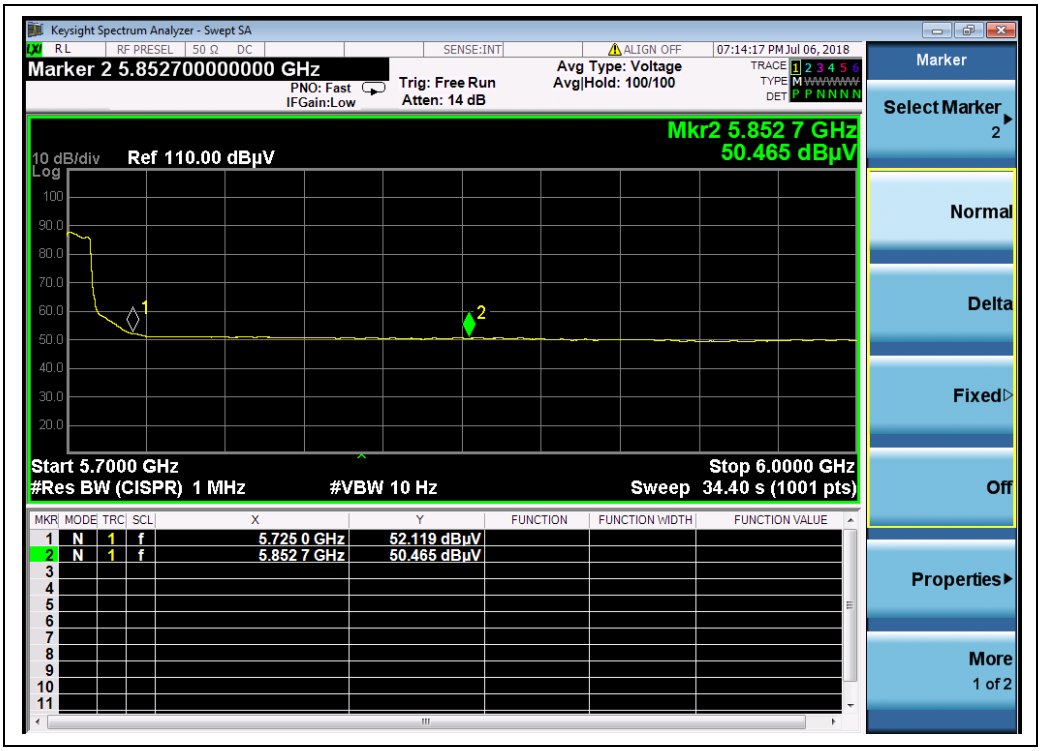
(Channel 100, PEAK, 802.11 n (HT20))



(Channel 100, AVG, 802.11n (HT20))

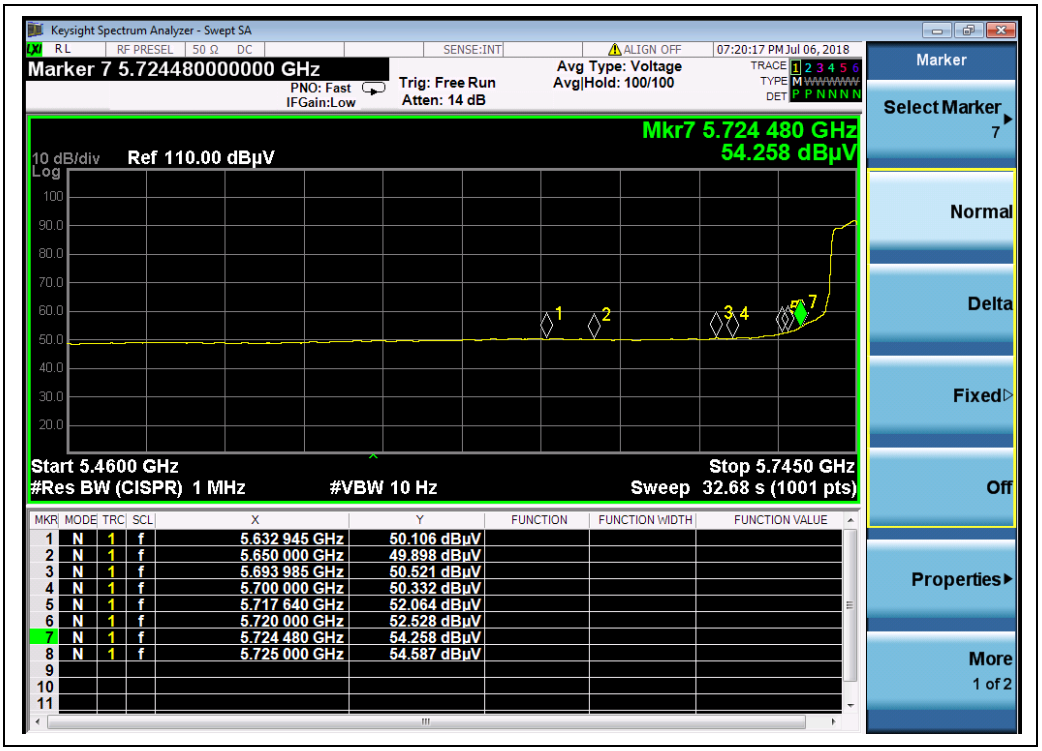


(Channel 144, PEAK, 802.11 n (HT20))



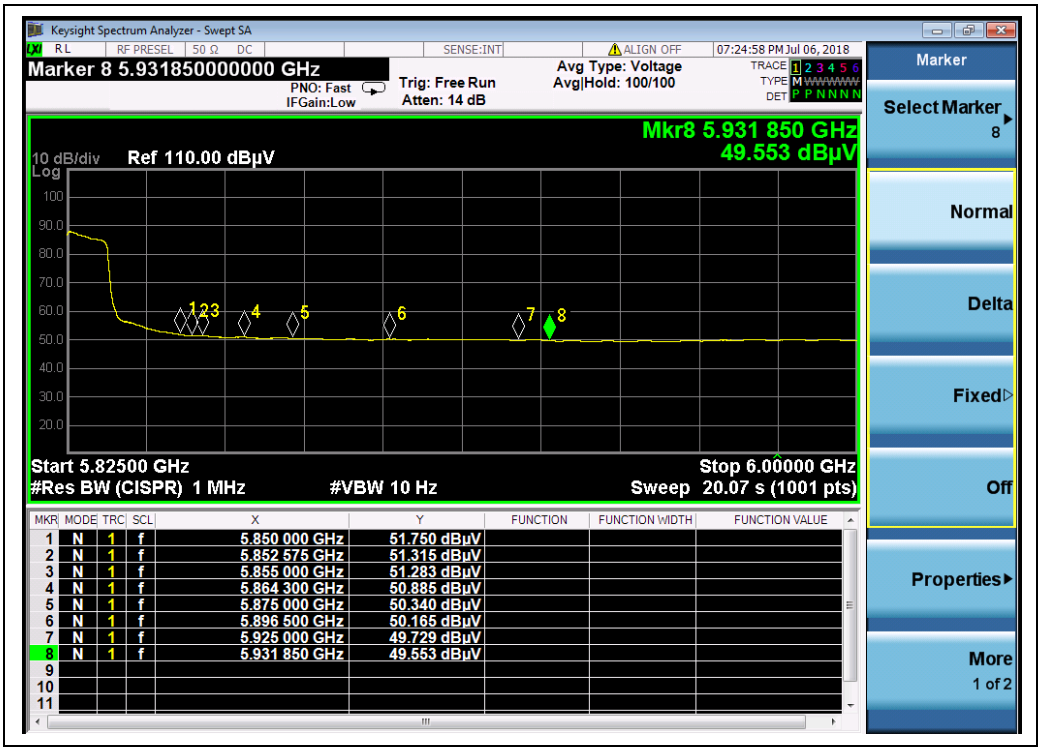
(Channel 144, AVG, 802.11n (HT20))

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



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

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



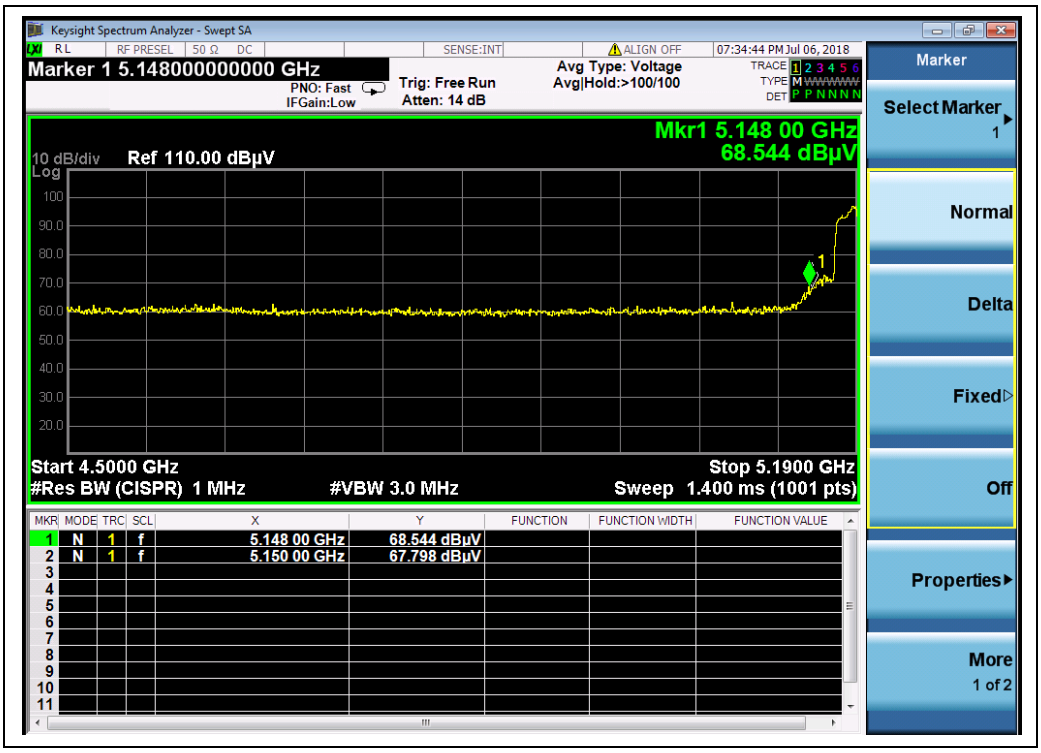
(Channel 165, AVG, 802.11n (HT20))

802.11n (HT40) Test mode

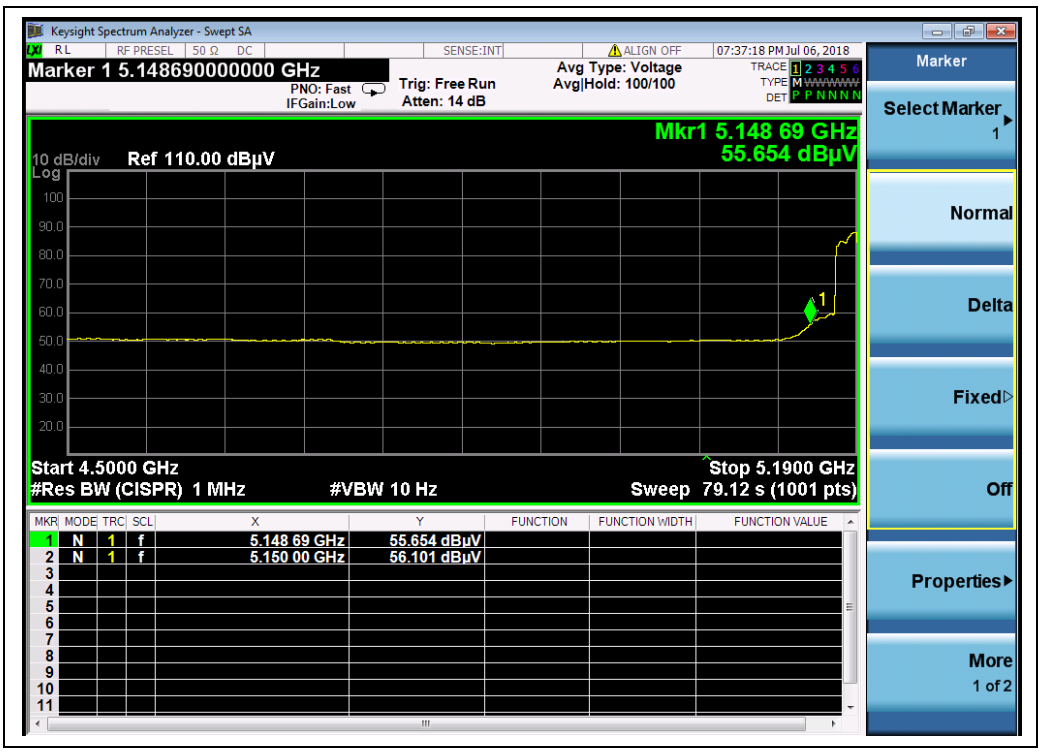
A. Test Verdict:

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	5148.00	PK	68.54	-50.65	32.11	50.00	74	PASS
38	5148.69	AV	55.65	-50.65	32.11	37.11	54	PASS
62	5352.75	PK	67.89	-50.65	32.11	49.35	74	PASS
62	5350.80	AV	54.56	-50.65	32.11	36.02	54	PASS
102	5467.30	PK	61.88	-50.65	32.11	43.34	68.23	PASS
102	5467.30	AV	51.67	-50.65	32.11	33.13	54	PASS
142	5748.53	PK	61.52	-50.65	32.11	42.98	68.23	PASS
142	5727.41	AV	51.29	-50.65	32.11	32.75	54	PASS
151	5722.26	PK	63.97	-50.65	32.11	45.43	115.98	PASS
151	5722.85	AV	54.35	-50.65	32.11	35.81	54	PASS
159	5863.31	PK	61.68	-50.65	32.11	43.14	87.56	PASS
159	5855.00	AV	51.03	-50.65	32.11	32.49	54	PASS

B. Test Plots:



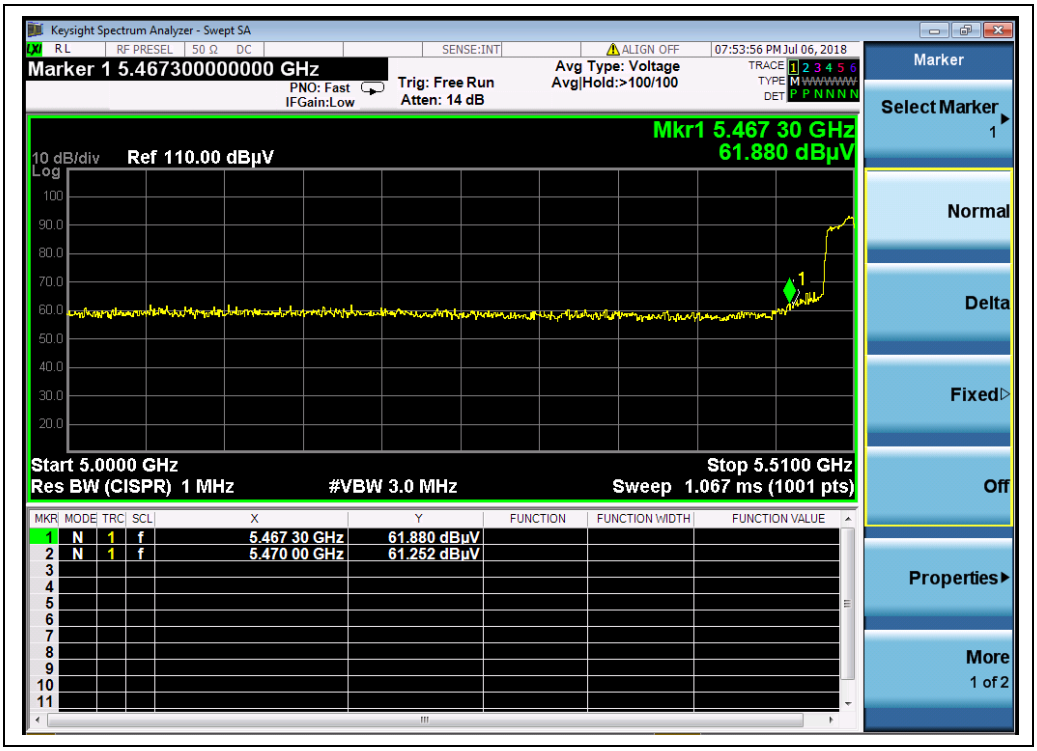
(Channel 38, PEAK, 802.11n (HT40))



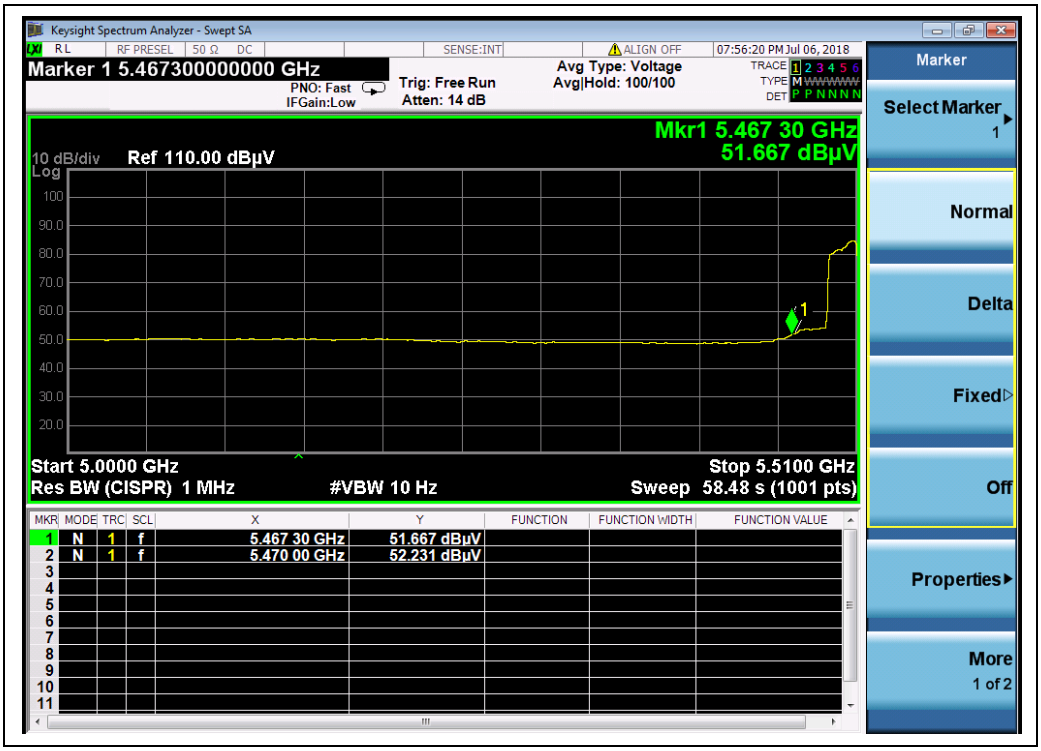
(Channel 38, AVG, 802.11n (HT40))

(Channel 62, PEAK, 802.11n (HT40))

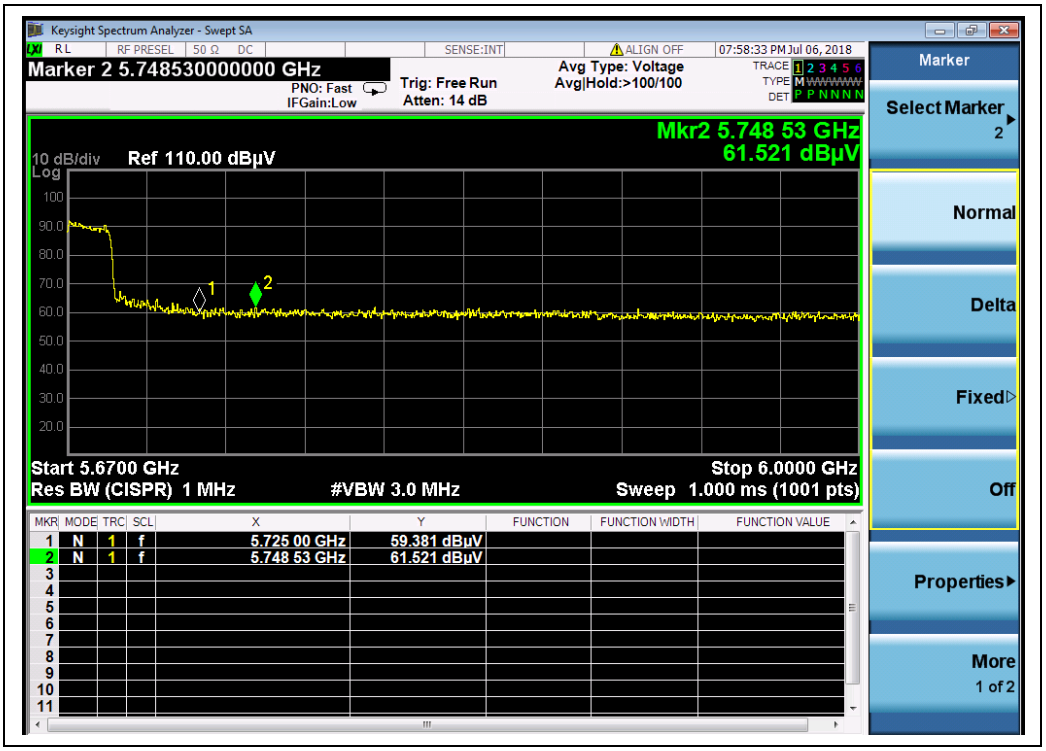
(Channel 62, AVG, 802.11n (HT40))



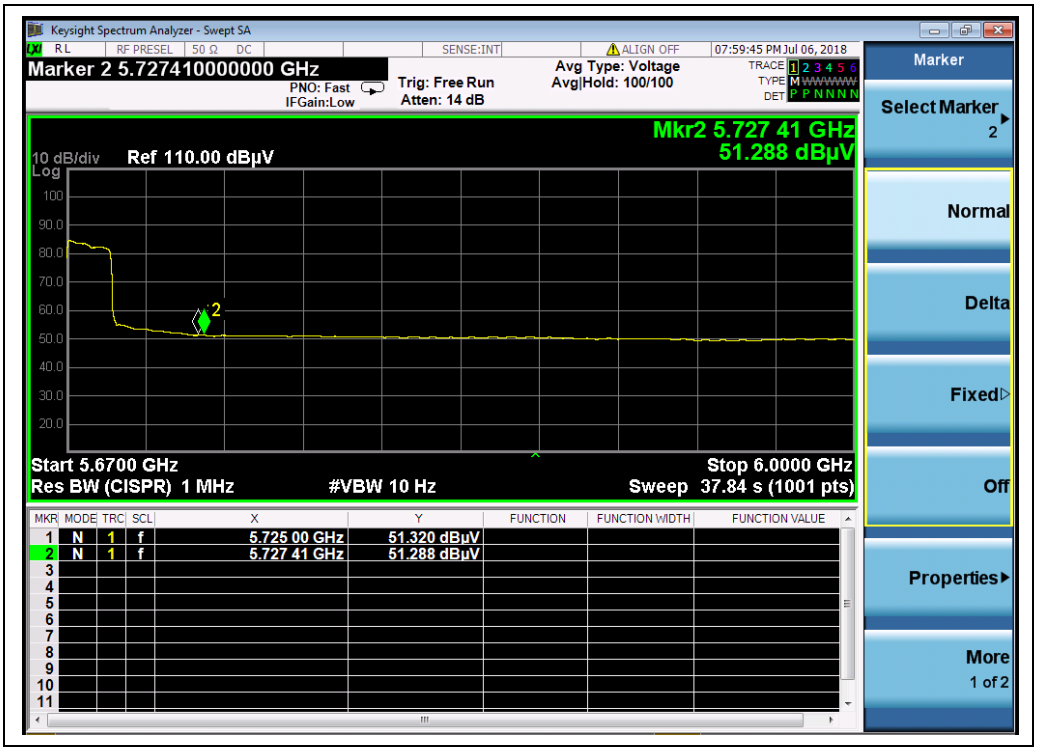
(Channel 102, PEAK, 802.11n (HT40))



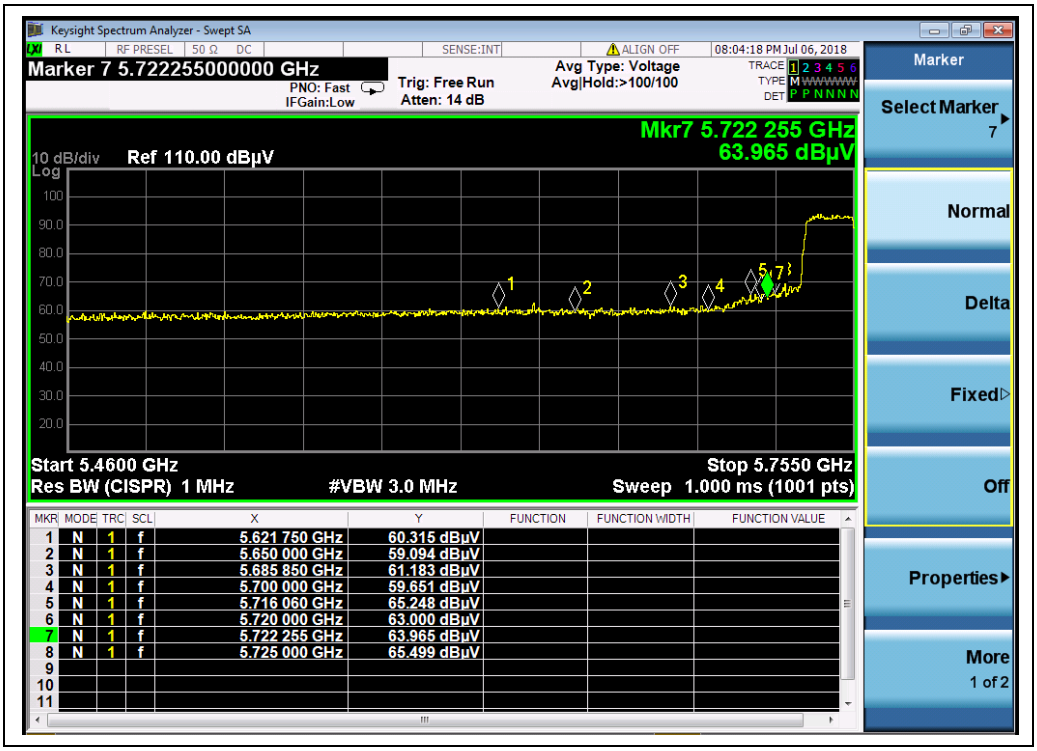
(Channel 102, AVG, 802.11n (HT40))



(Channel 142, PEAK, 802.11n (HT40))



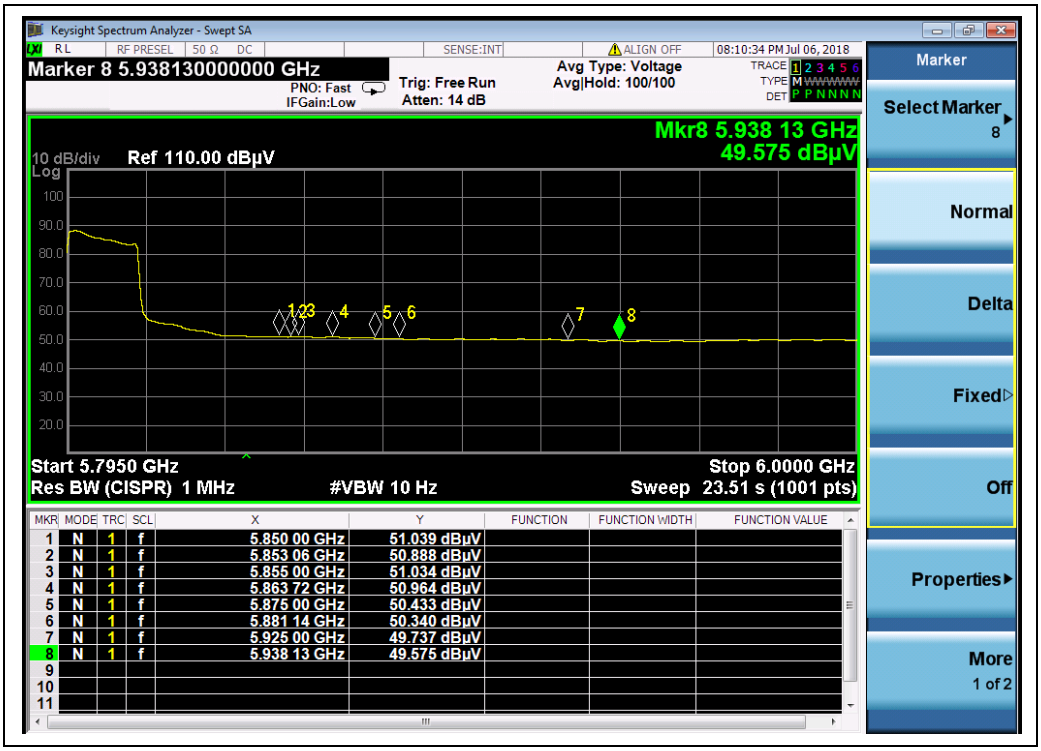
(Channel 142, AVG, 802.11n (HT40))



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

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

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



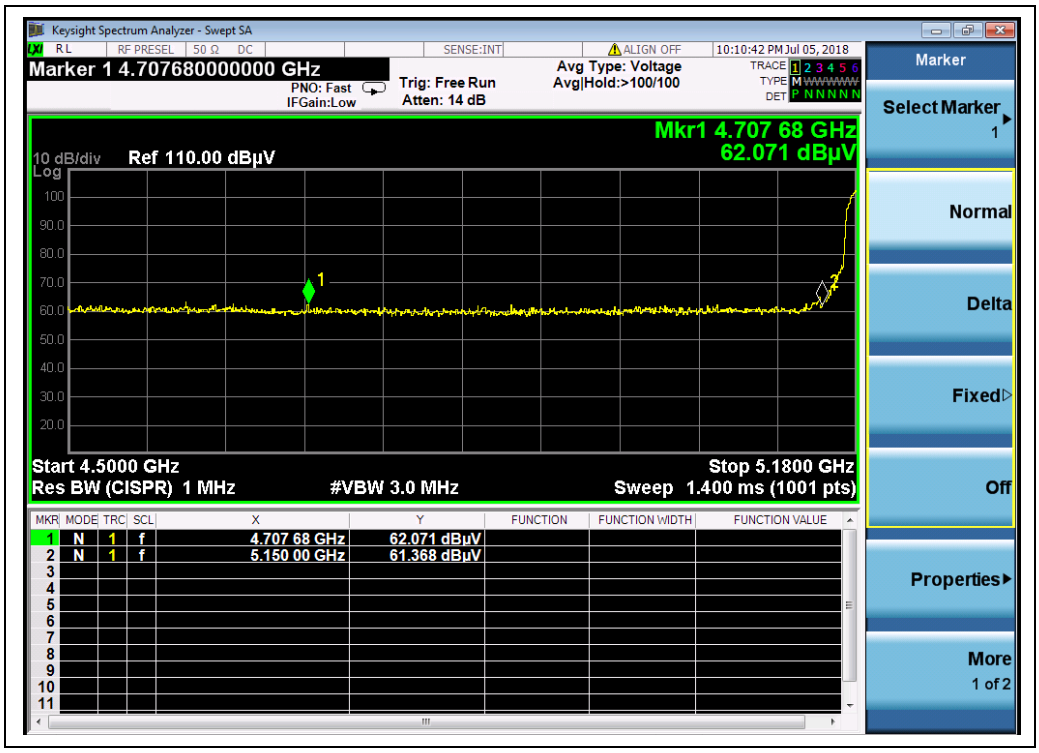
(Channel 159, AVG, 802.11n (HT40))

802.11ac (VHT20) Test mode

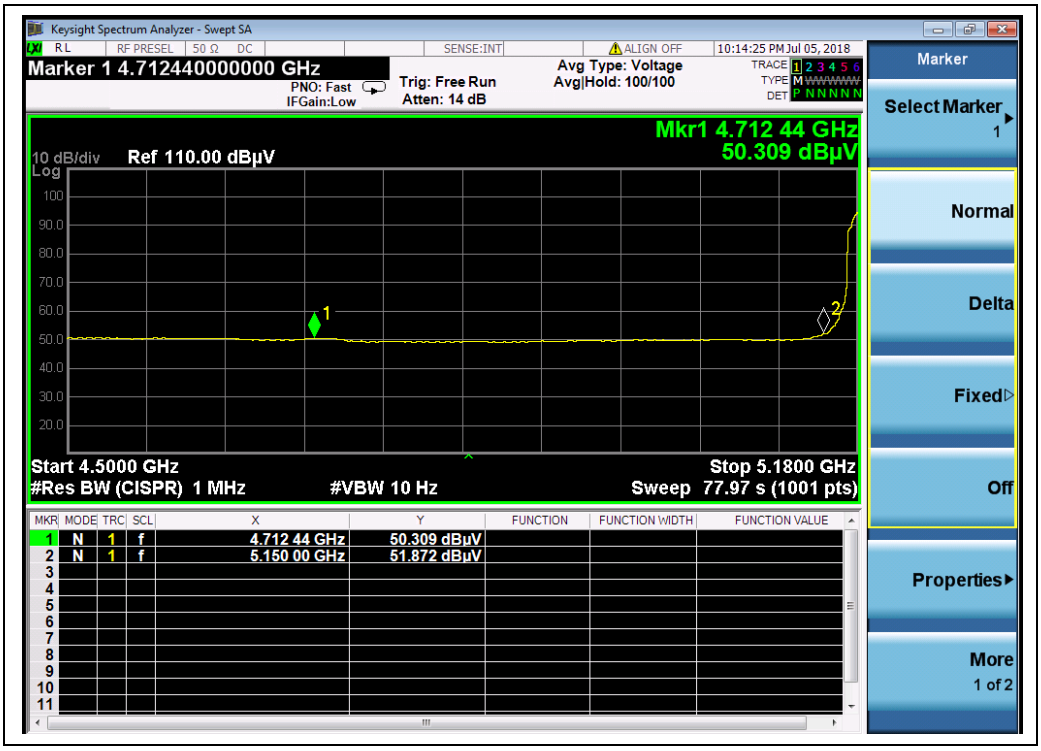
A. Test Verdict:

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	4707.68	PK	62.07	-50.65	32.11	43.53	74	PASS
36	4712.44	AV	50.31	-50.65	32.11	31.77	54	PASS
64	5367.84	PK	59.366	-50.65	32.11	40.826	74	PASS
64	5353.28	AV	50.28	-50.65	32.11	31.74	54	PASS
100	5211.28	PK	61.72	-50.65	32.11	43.18	68.23	PASS
100	5136.82	AV	50.00	-50.65	32.11	31.46	54	PASS
144	5808.80	PK	61.36	-50.65	32.11	42.82	68.23	PASS
144	5727.20	AV	53.22	-50.65	32.11	34.68	54	PASS
149	5724.20	PK	69.92	-50.65	32.11	51.38	120.40	PASS
149	5724.20	AV	57.39	-50.65	32.11	38.85	54	PASS
165	5850.48	PK	62.74	-50.65	32.11	44.20	121.13	PASS
165	5850.83	AV	51.99	-50.65	32.11	33.45	54	PASS

B. Test Plots:



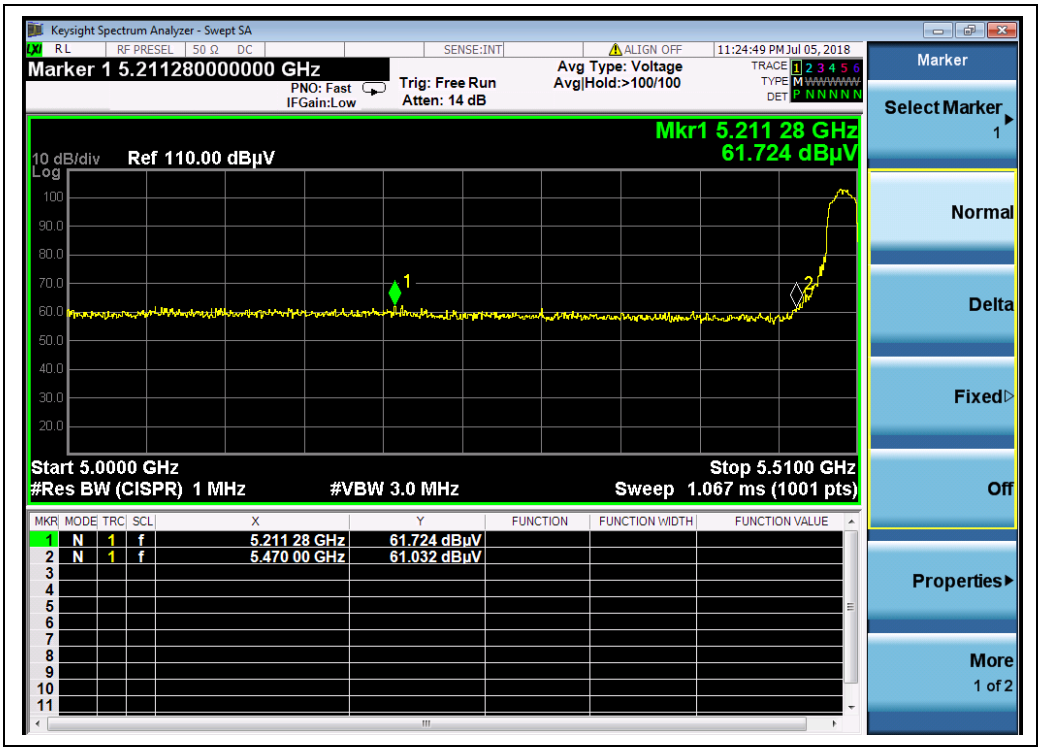
(Channel 36, PEAK, 802.11 ac (VHT20))



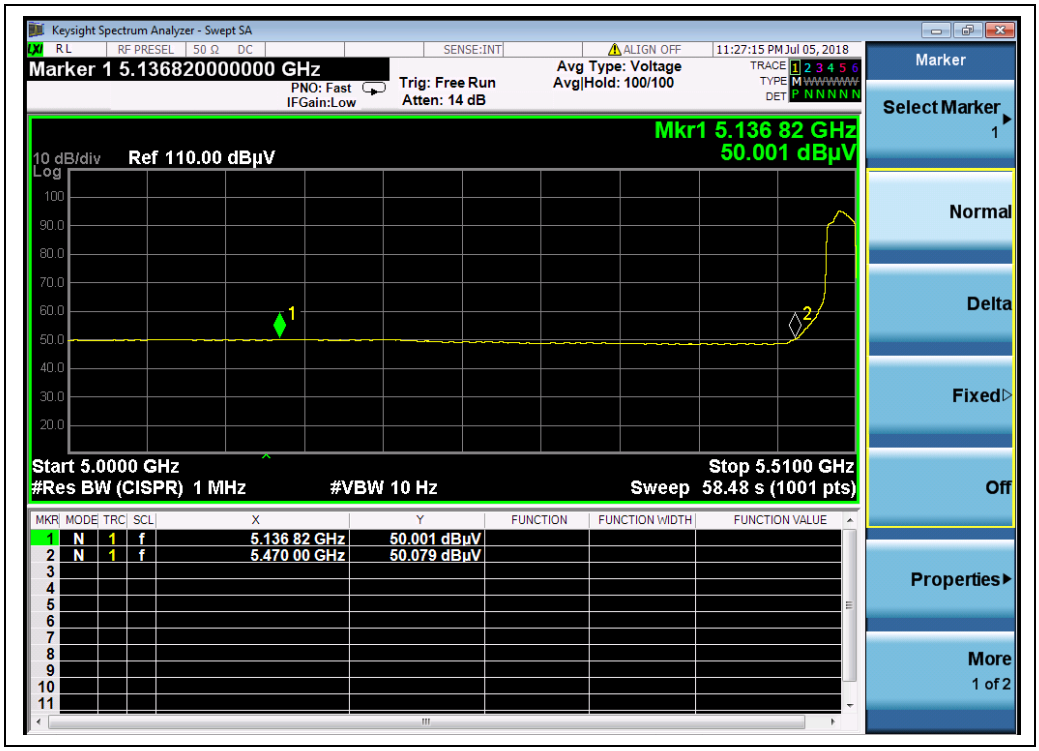
(Channel 36, AVG, 802.11 ac (VHT20))

(Channel 64, PEAK, 802.11 ac (VHT20))

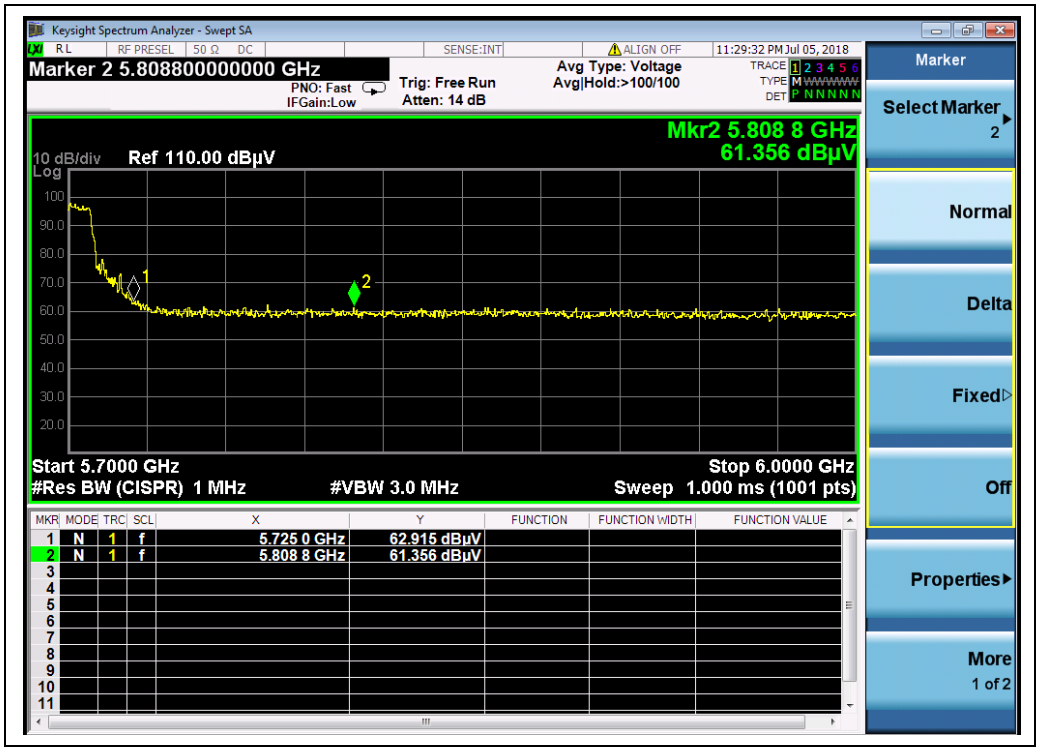
(Channel 64, AVG, 802.11 ac (VHT20))



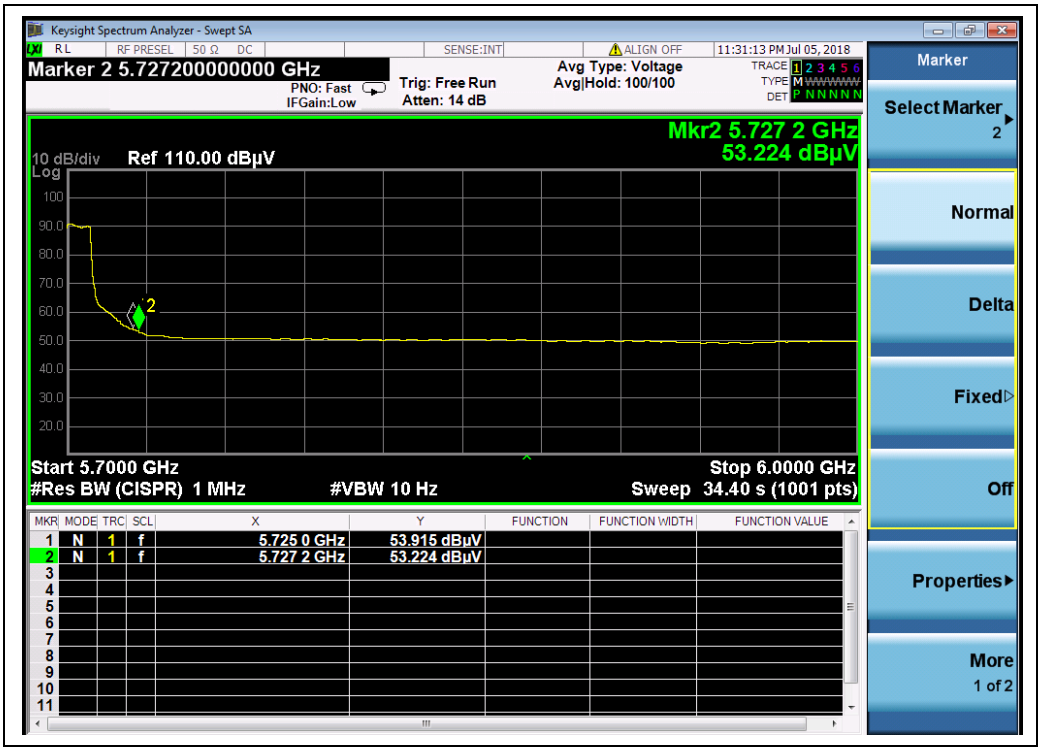
(Channel 100, PEAK, 802.11 ac (VHT20))



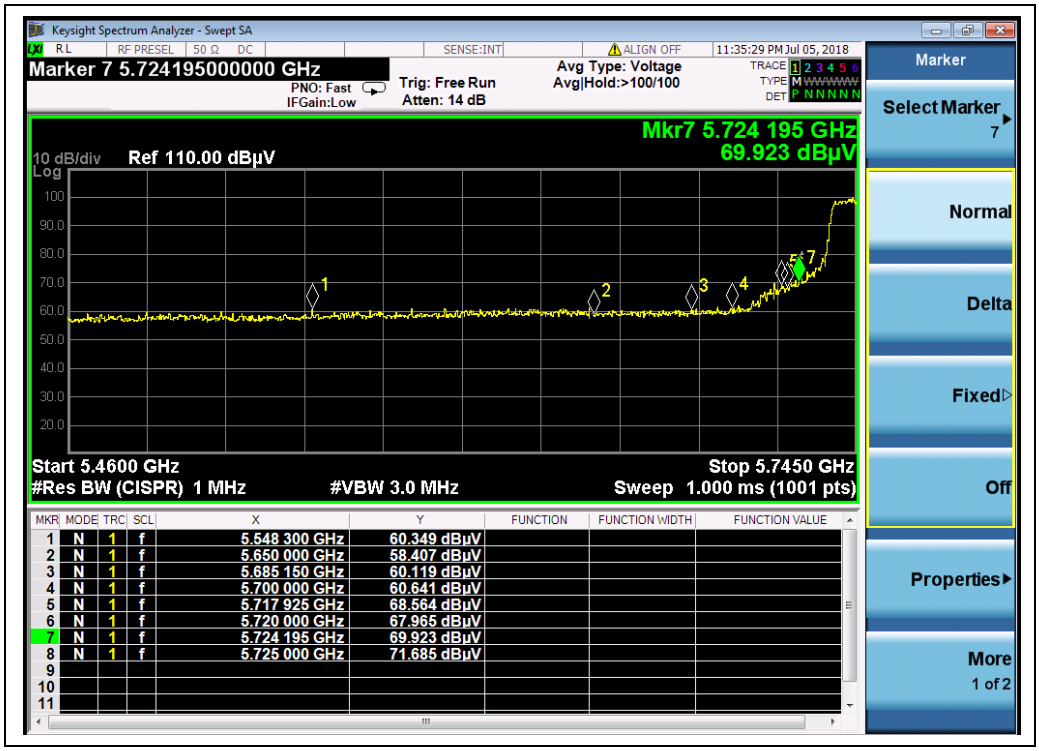
(Channel 100, AVG, 802.11 ac (VHT20))



(Channel 144, PEAK, 802.11 ac (VHT20))



(Channel 144, 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))

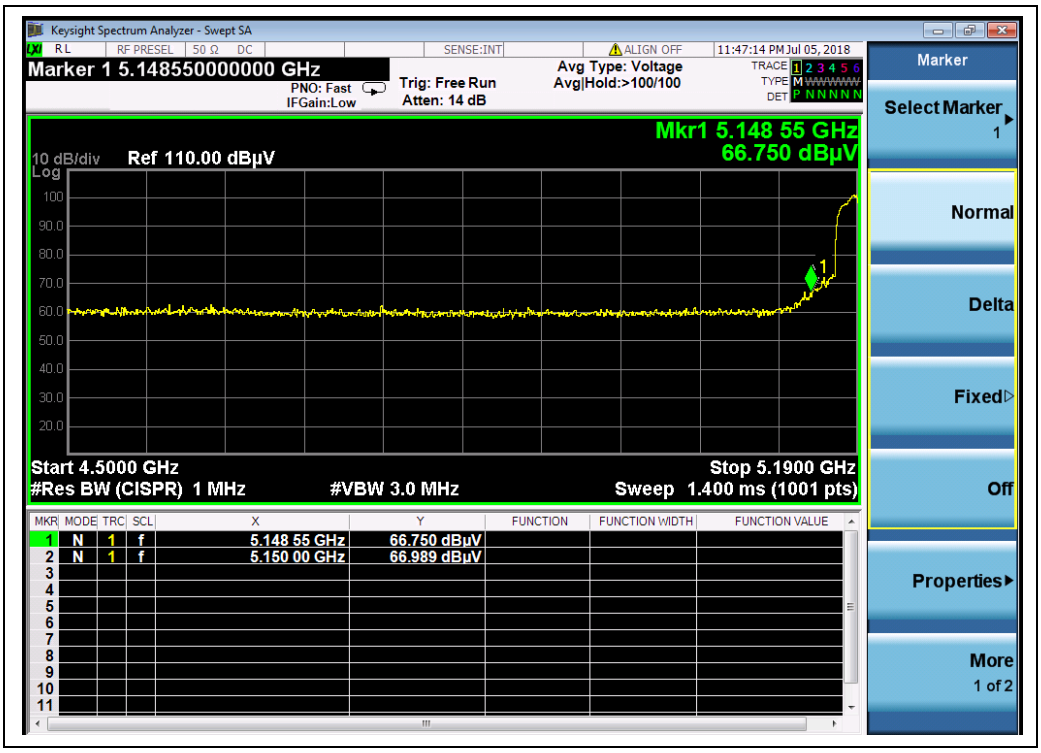
(Channel 165, AVG, 802.11 ac (VHT20))

802.11ac (VHT40) Test mode

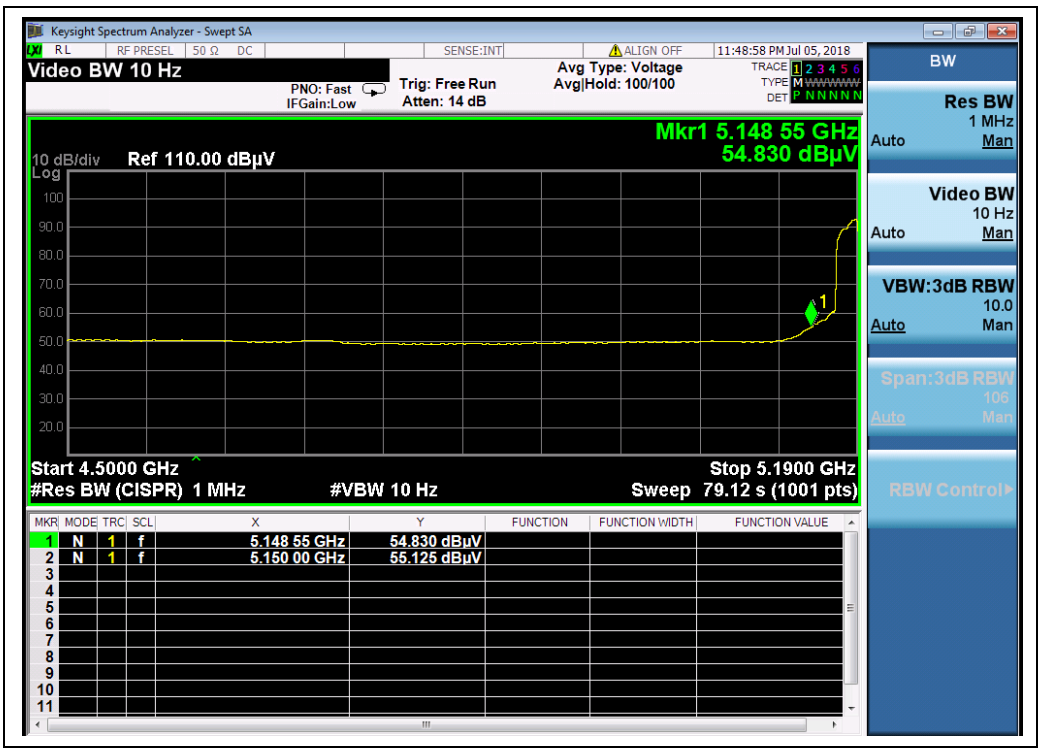
A. Test Verdict:

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	5148.55	PK	66.75	-50.65	32.11	48.21	74	PASS
38	5148.55	AV	54.83	-50.65	32.11	36.29	54	PASS
62	5352.45	PK	65.59	-50.65	32.11	47.05	74	PASS
62	5350.95	AV	53.90	-50.65	32.11	35.36	54	PASS
102	5467.81	PK	62.29	-50.65	32.11	43.75	68.23	PASS
102	5467.81	AV	51.75	-50.65	32.11	33.21	54	PASS
142	5829.71	PK	60.36	-50.65	32.11	41.82	68.23	PASS
142	5726.42	AV	51.63	-50.65	32.11	33.09	54	PASS
151	5720.78	PK	67.56	-50.65	32.11	49.02	112.61	PASS
151	5723.44	AV	56.49	-50.65	32.11	37.95	54	PASS
159	5866.38	PK	62.17	-50.65	32.11	43.63	78.96	PASS
159	5855.00	AV	50.99	-50.65	32.11	32.45	54	PASS

B. Test Plots:



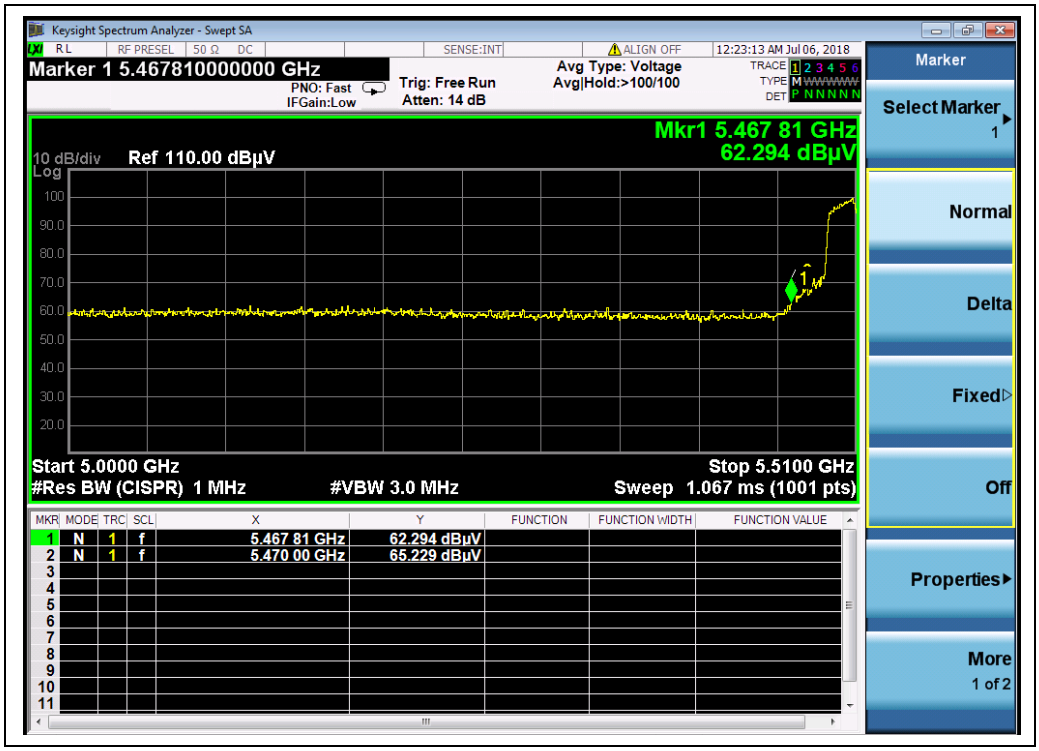
(Channel 38, PEAK, 802.11ac (VHT40))



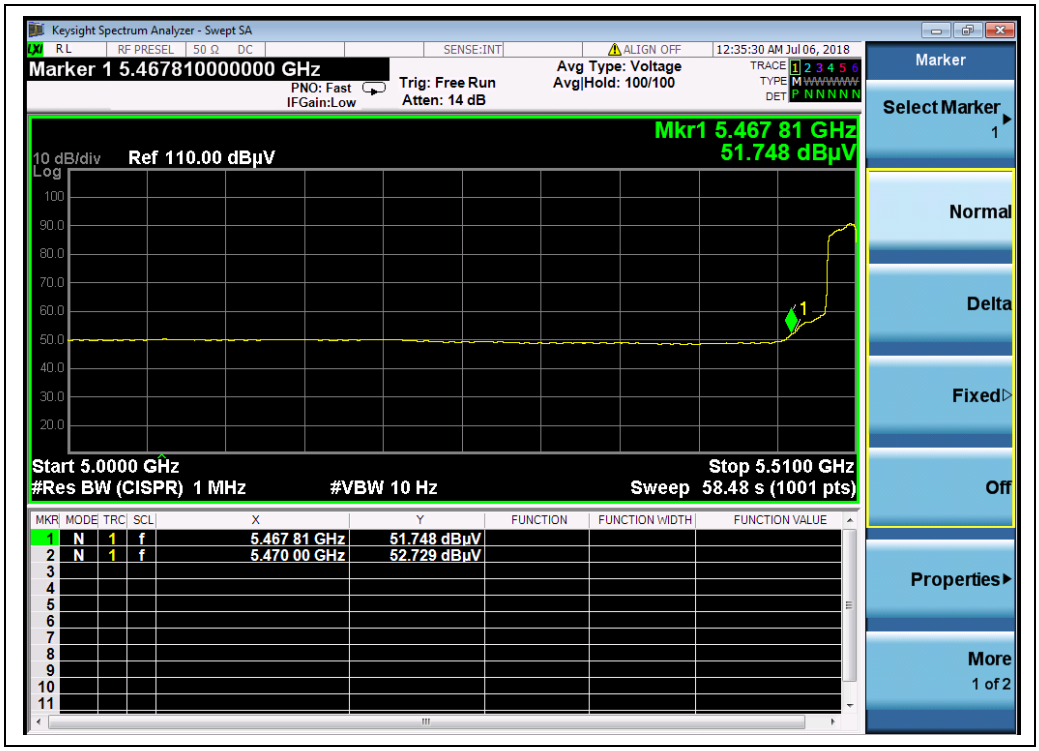
(Channel 38, AVG, 802.11ac (VHT40))

(Channel 62, PEAK, 802.11ac (VHT40))

(Channel 62, AVG, 802.11ac (VHT40))



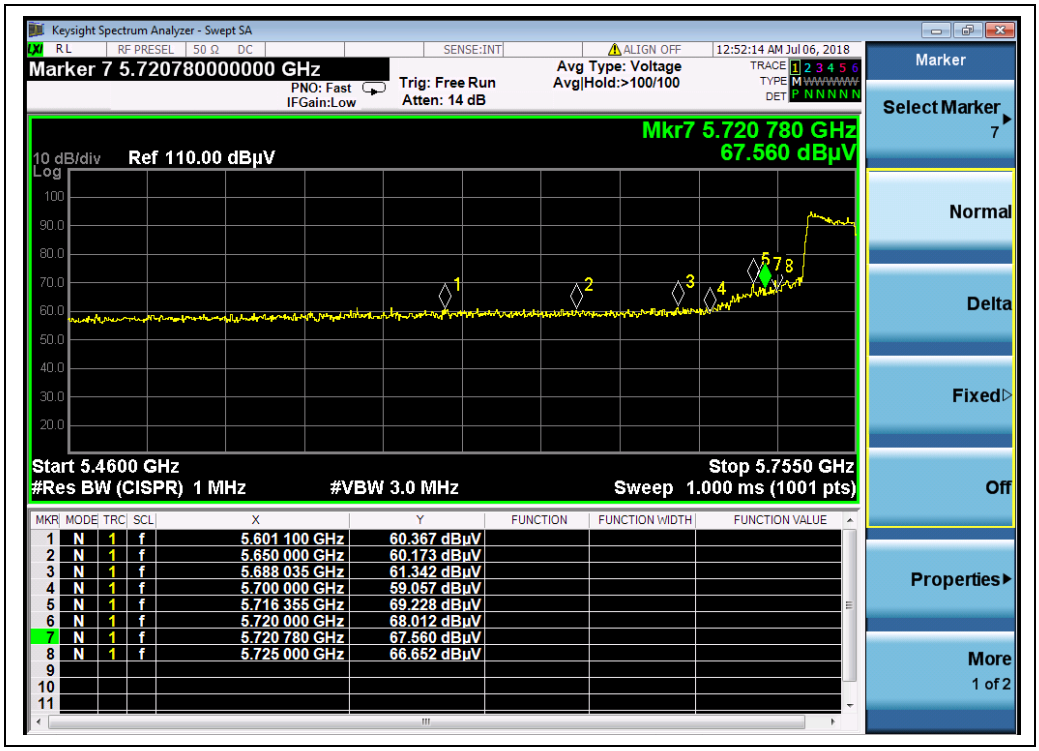
(Channel 102, PEAK, 802.11ac (VHT40))



(Channel 102, AVG, 802.11ac (VHT40))

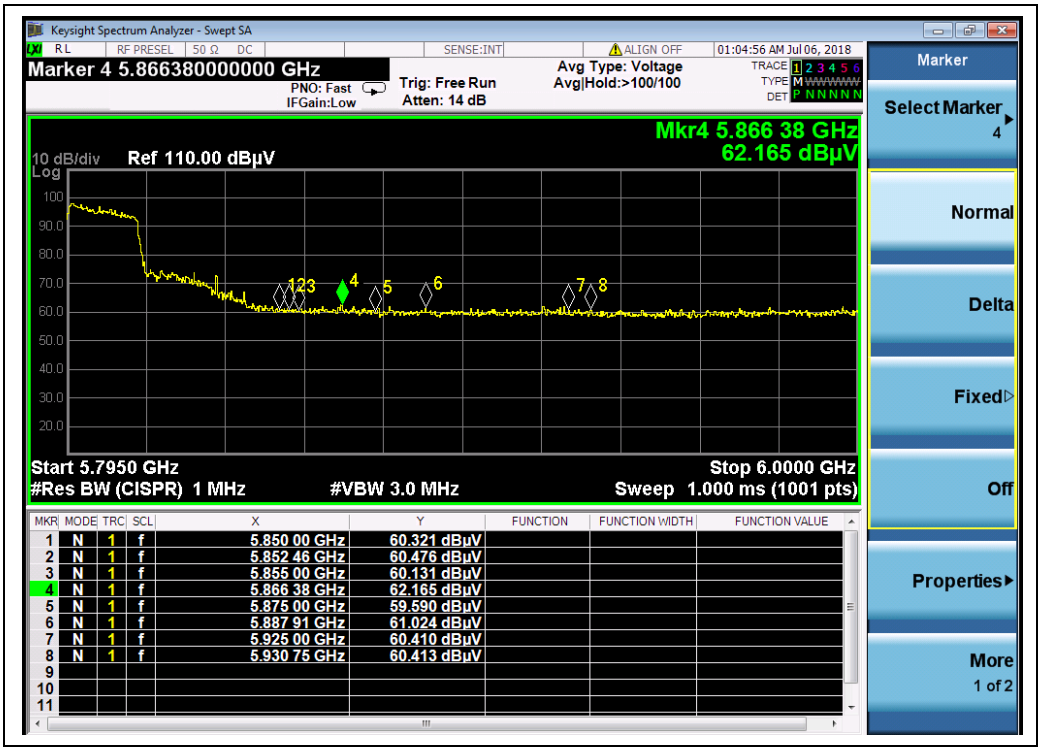
(Channel 142, PEAK, 802.11ac (VHT40))

(Channel 142, AVG, 802.11ac (VHT40))



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

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



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

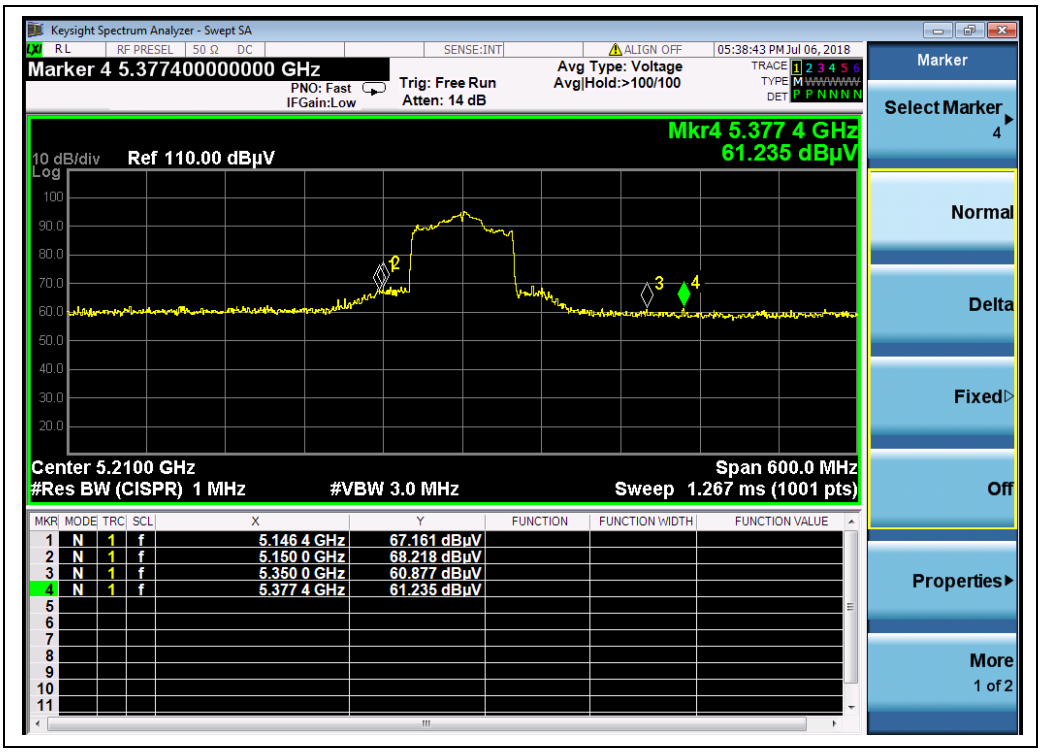
(Channel 159, AVG, 802.11ac (VHT40))

802.11ac (VHT80) Test mode

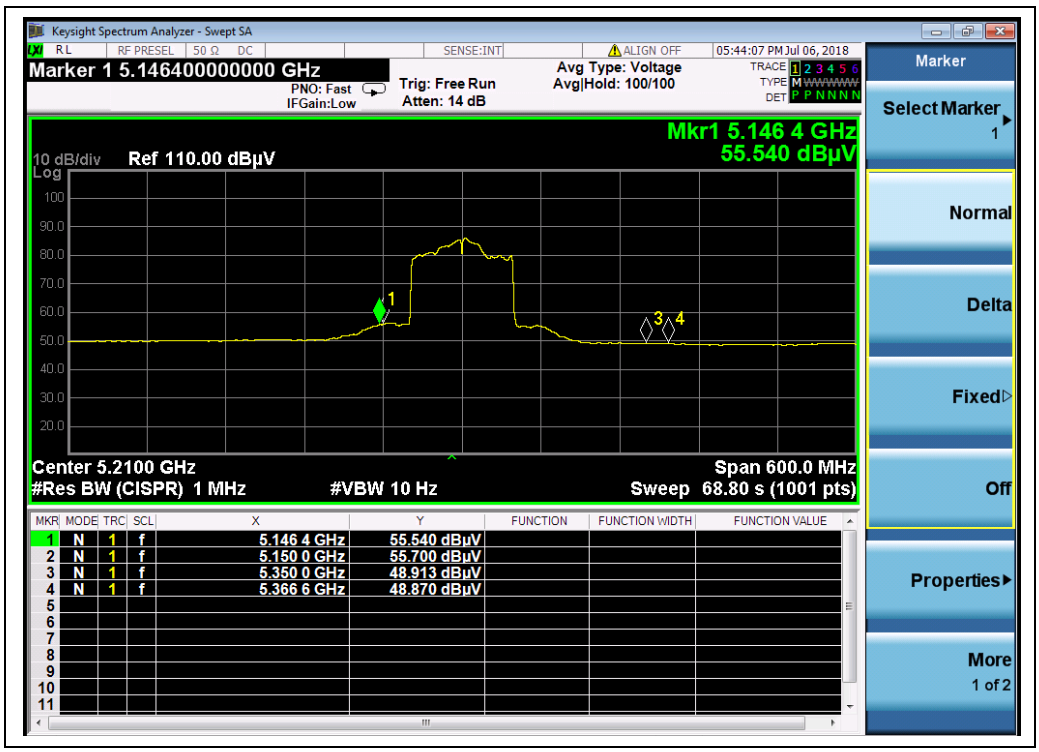
A. Test Verdict:

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	5146.40	PK	67.16	-50.65	32.11	48.62	74	PASS
42	5146.40	AV	55.54	-50.65	32.11	37.00	54	PASS
58	5357.00	PK	67.58	-50.65	32.11	49.04	74	PASS
58	5353.40	AV	54.02	-50.65	32.11	35.48	54	PASS
106	5454.80	PK	64.44	-50.65	32.11	45.90	74	PASS
106	5466.80	AV	52.00	-50.65	32.11	33.46	54	PASS
138	5741.60	PK	62.34	-50.65	32.11	43.80	68.23	PASS
138	5735.60	AV	50.85	-50.65	32.11	32.31	54	PASS
155	5709.20	PK	64.51	-50.65	32.11	45.97	107.80	PASS
155	5718.20	AV	52.95	-50.65	32.11	34.41	54	PASS
155	5858.00	PK	64.58	-50.65	32.11	46.04	102.43	PASS
155	5855.00	AV	51.67	-50.65	32.11	33.13	54	PASS

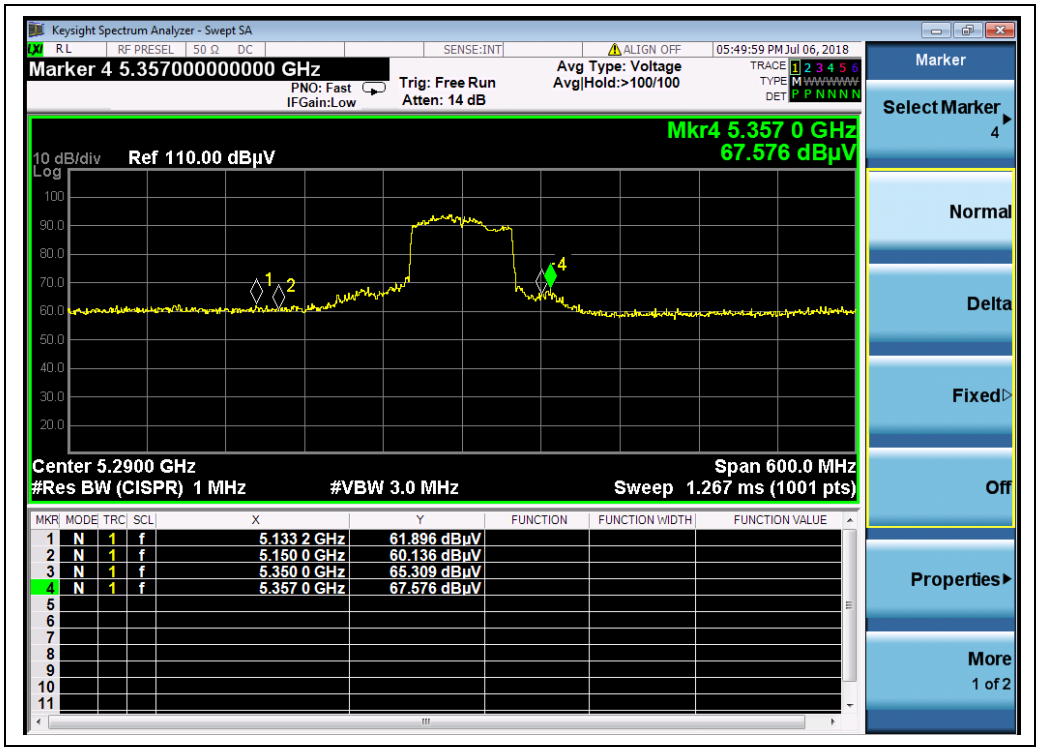
B. Test Plots:



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

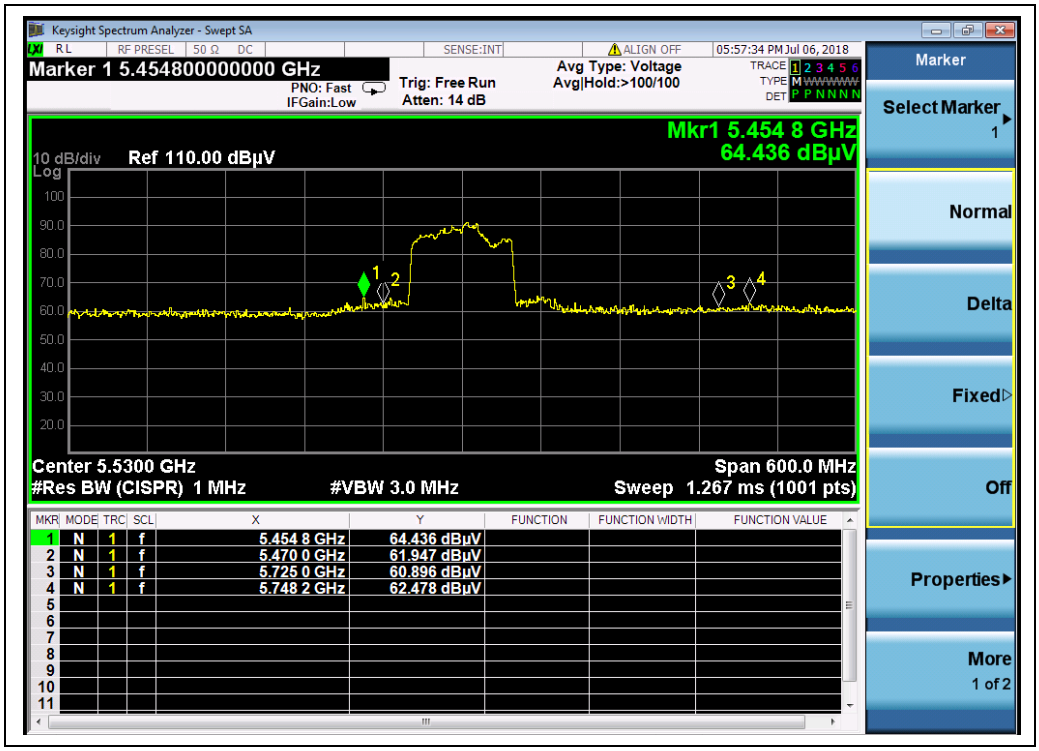


(Channel 42, AVG, 802.11ac (VHT80))

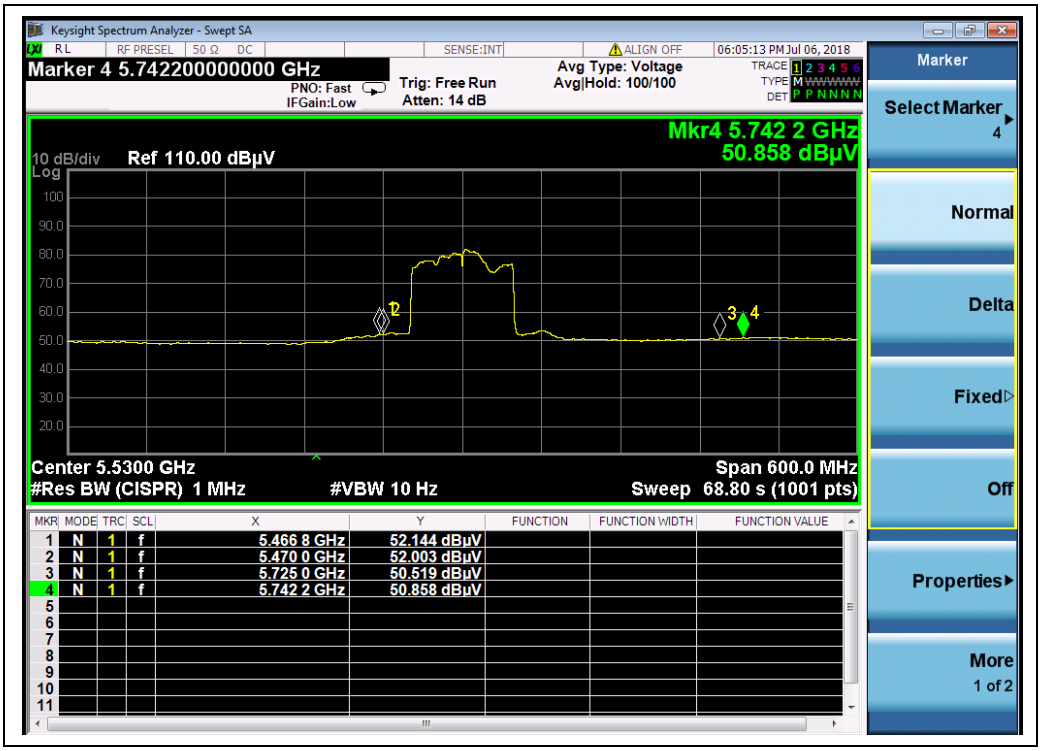


(Channel 58, PEAK, 802.11ac (VHT80))

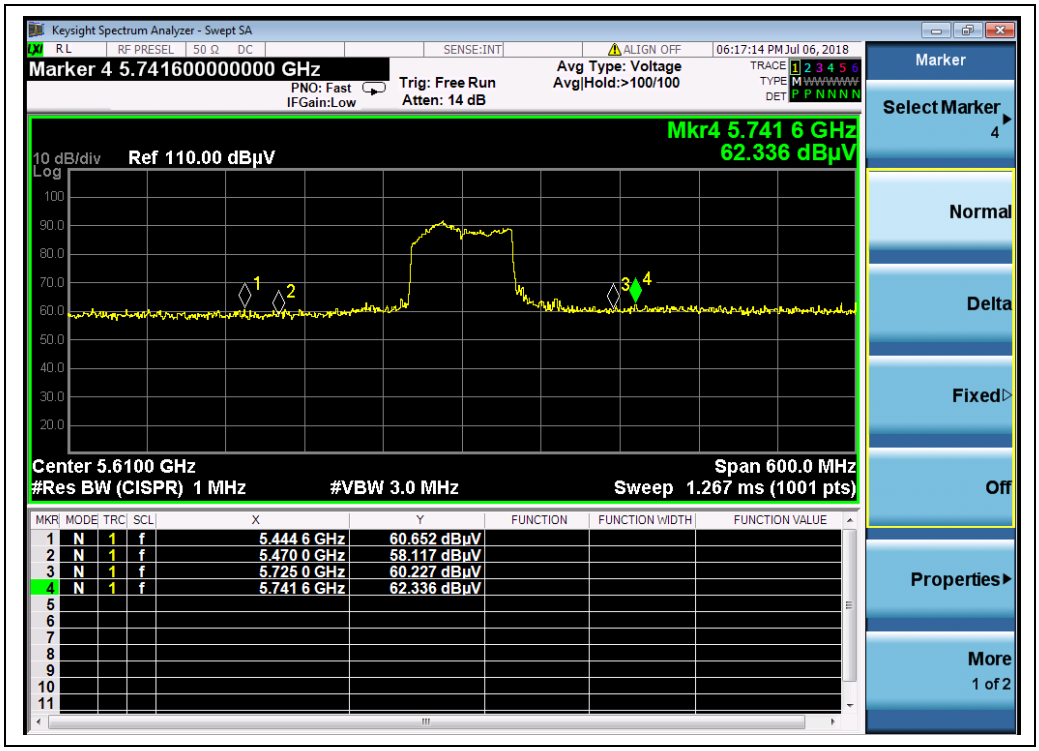
(Channel 58, AVG, 802.11ac (VHT80))



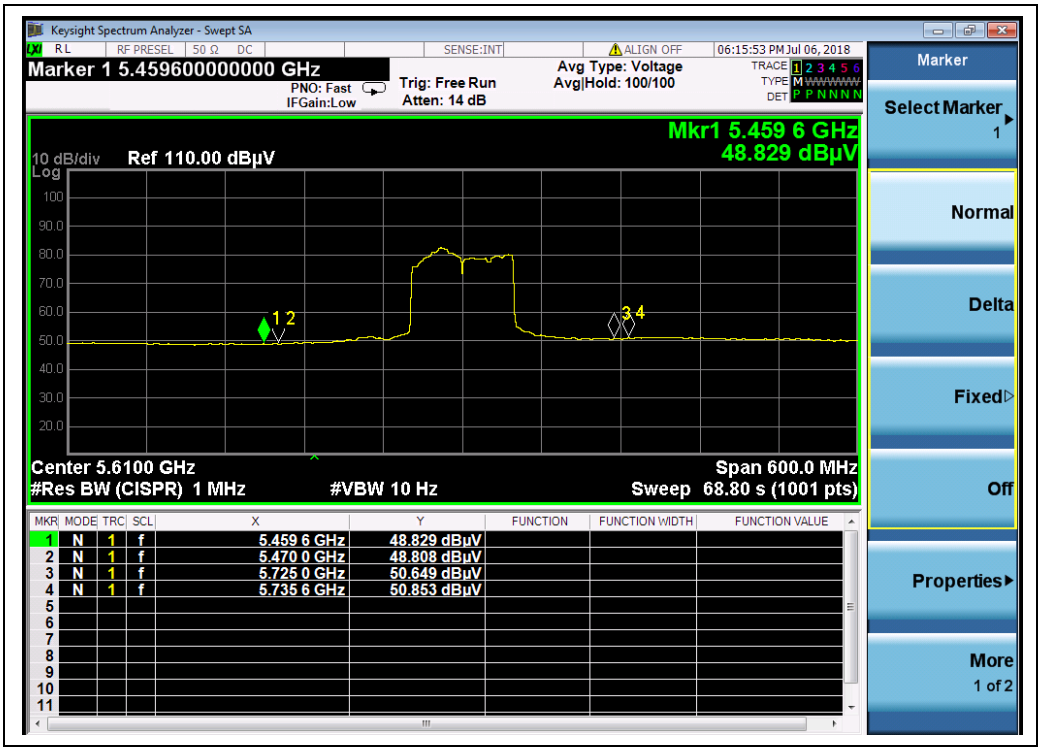
(Channel 106, PEAK, 802.11ac (VHT80))



(Channel 106, AVG, 802.11ac (VHT80))

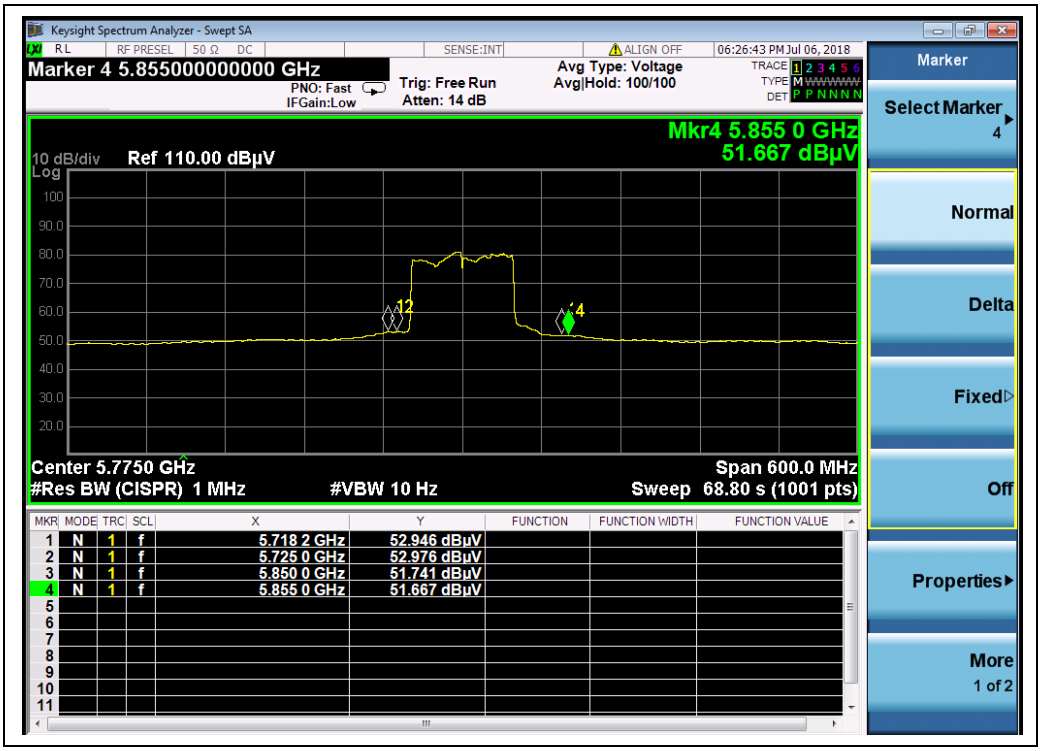


(Channel 138, PEAK, 802.11ac (VHT80))



(Channel 138, AVG, 802.11ac (VHT80))

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



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

2.8. Radiated Emission

2.8.1. Requirement

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

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: 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:

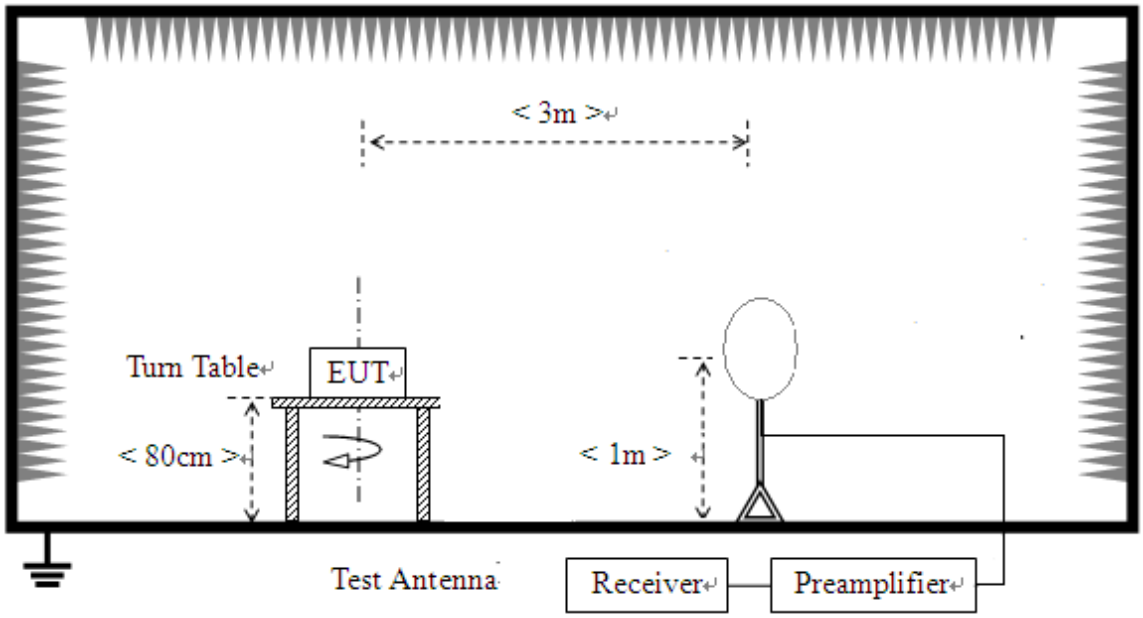
For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

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)

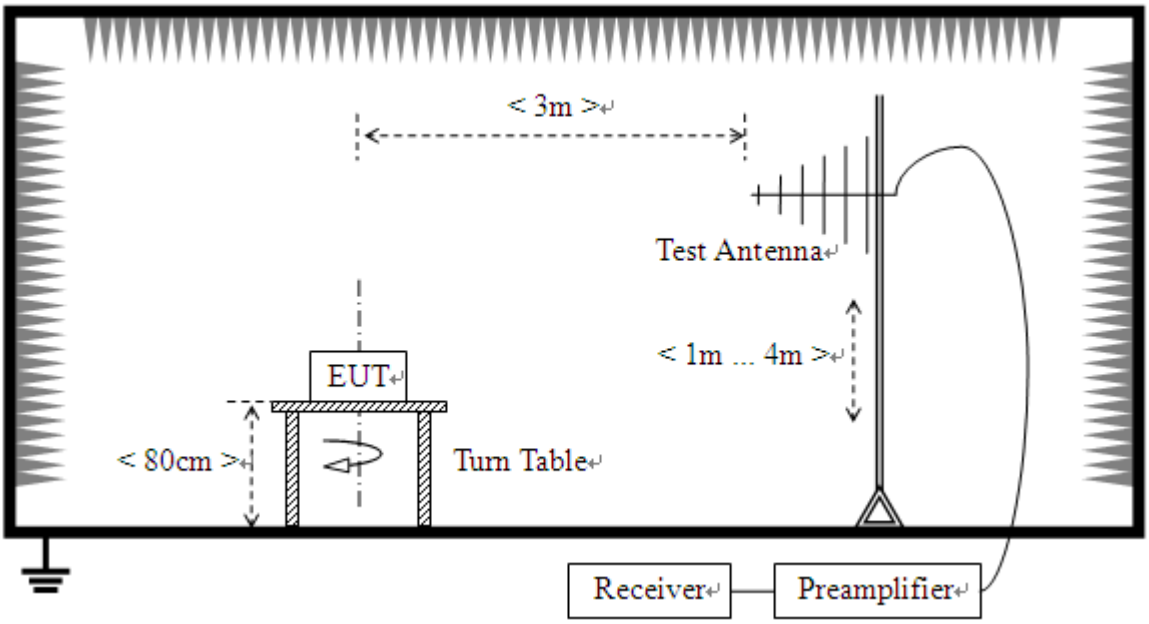
2.8.2. Test Description

A. Test Setup:

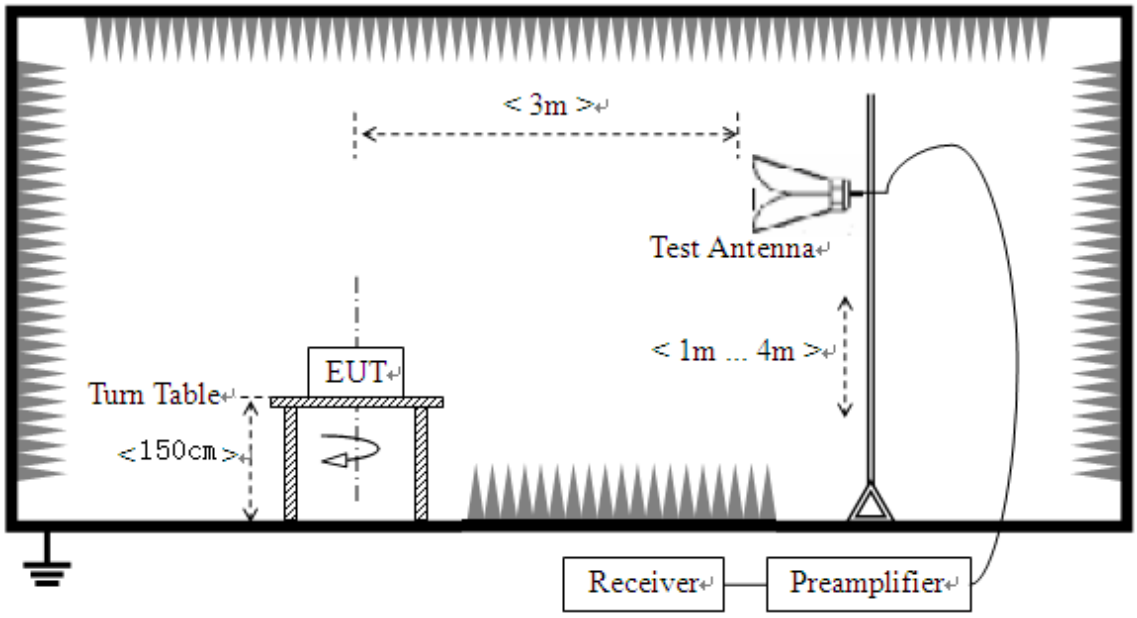
1) For radiated emissions from 9kHz to 30MHz



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.

2.8.3. 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.

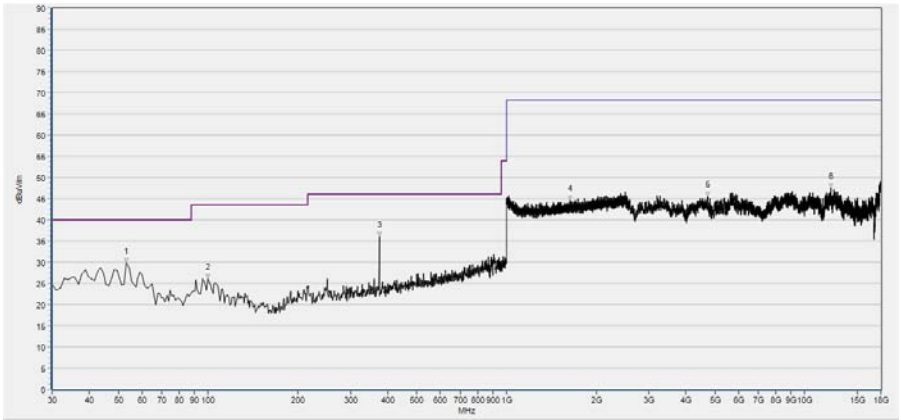
Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

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.

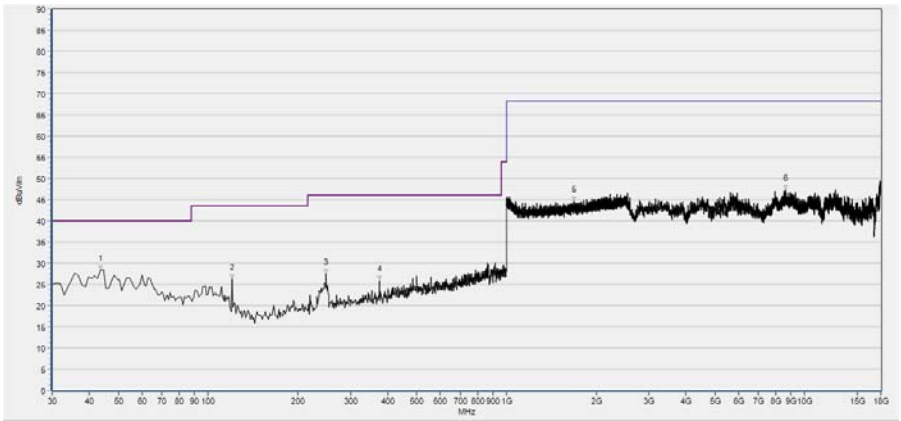
802.11a Test mode

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
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	N/A	Horizontal	PASS
4734.867	45.55	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS
12251.570	47.55	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS

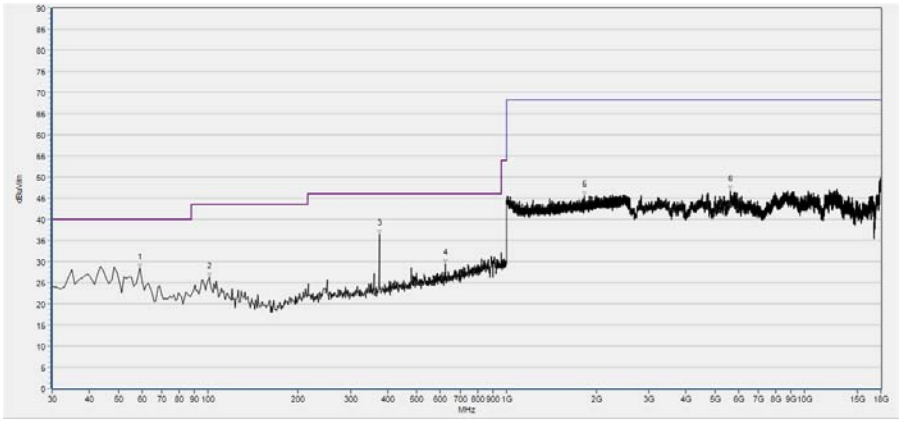
(Antenna Horizontal, 30MHz to 25GHz)



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	28.37	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	N/A	Vertical	PASS
8628.766	47.33	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

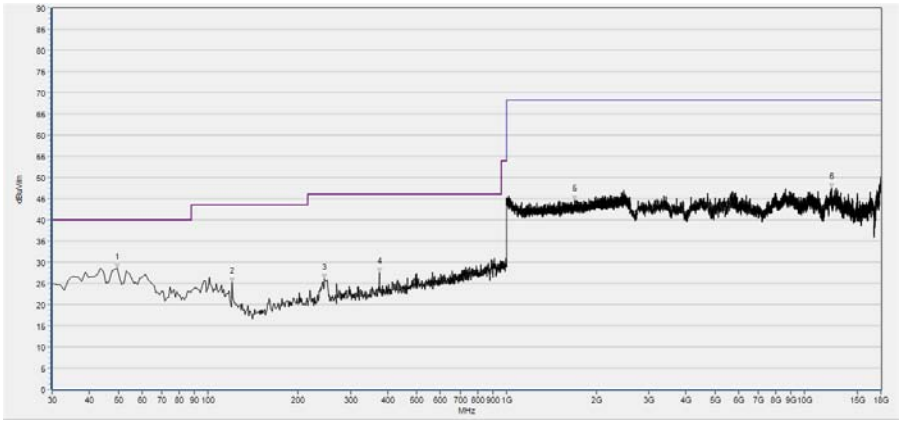
(Antenna Vertical, 30MHz to 25GHz)

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
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	N/A	Horizontal	PASS
5649.810	46.82	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

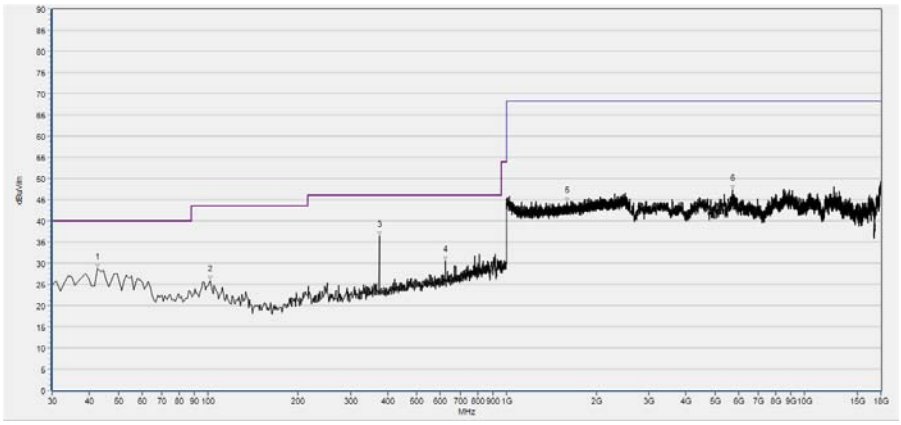
(Antenna Horizontal, 30MHz to 25GHz)



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
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	N/A	Vertical	PASS
12325.505	47.51	N/A	N/A	74.00	N/A	N/A	Vertical	PASS

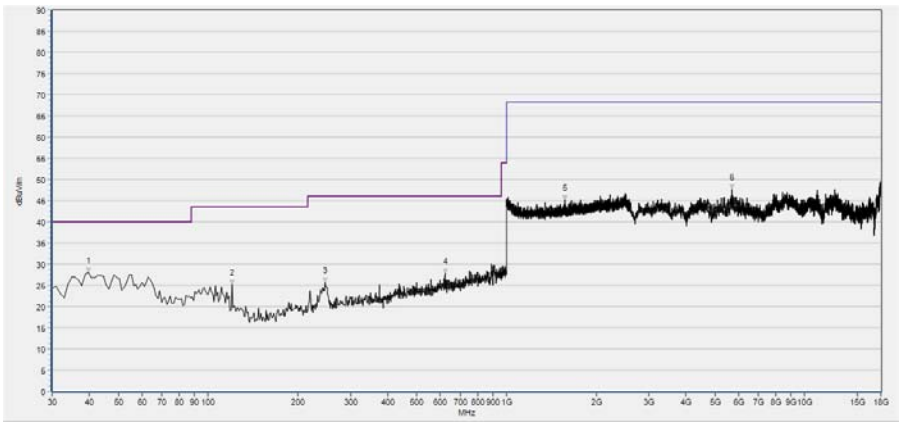
(Antenna Vertical, 30MHz to 25GHz)

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
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	N/A	Horizontal	PASS
5717.584	47.32	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

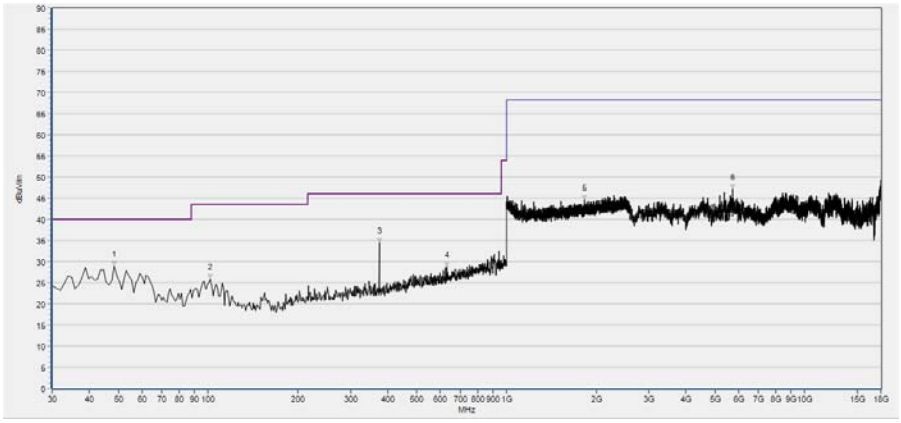
(Antenna Horizontal, 30MHz to 25GHz)



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	28.01	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	25.15	40.87	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	N/A	Vertical	PASS
5708.342	47.72	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

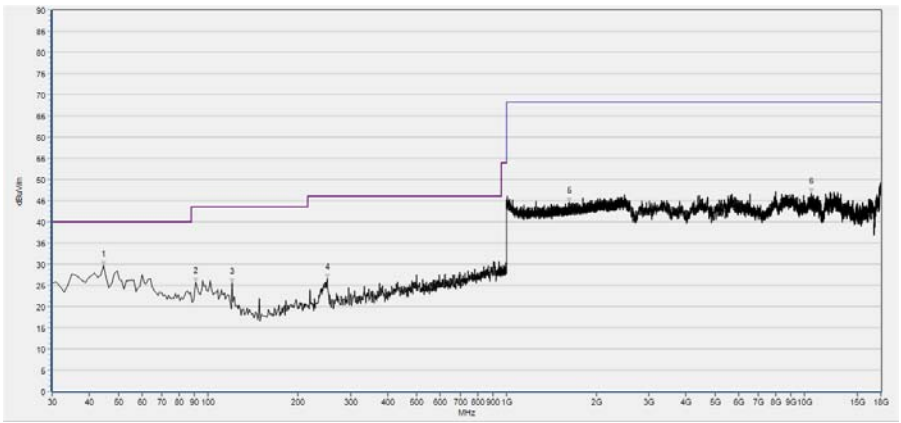
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 52



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	28.97	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
101.852	25.82	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	34.46	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
631.031	28.71	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1828.009	44.62	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5723.745	47.17	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

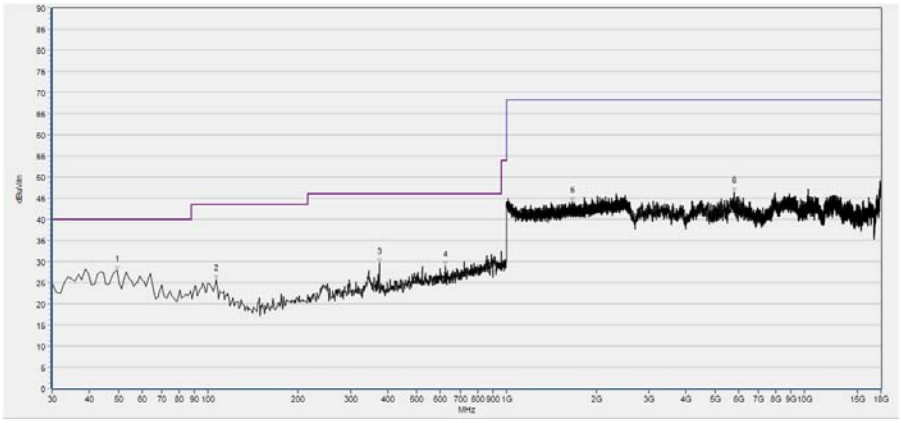
(Antenna Horizontal, 30MHz to 25GHz)



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
44.565	29.65	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
91.171	25.71	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
120.300	25.50	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
250.410	26.67	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1622.608	44.70	N/A	N/A	74.00	N/A	N/A	Vertical	PASS
10511.022	46.73	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

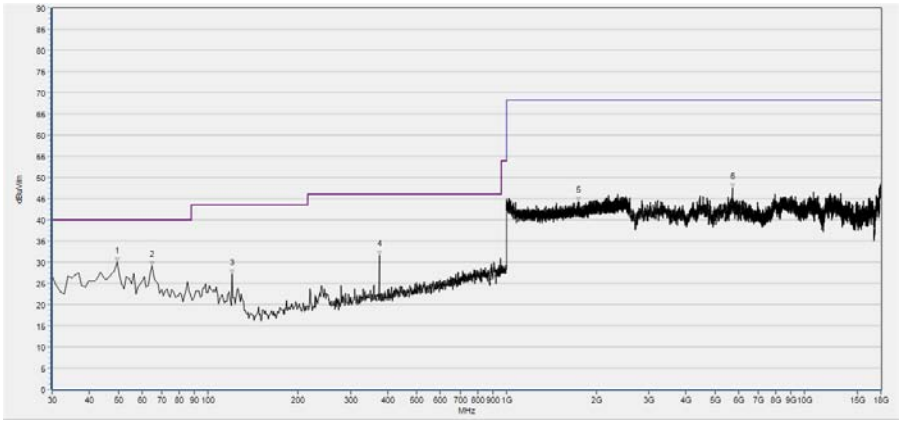
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 60



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	27.83	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
106.707	25.65	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	29.59	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
625.205	28.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1664.755	44.08	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5785.357	46.40	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS

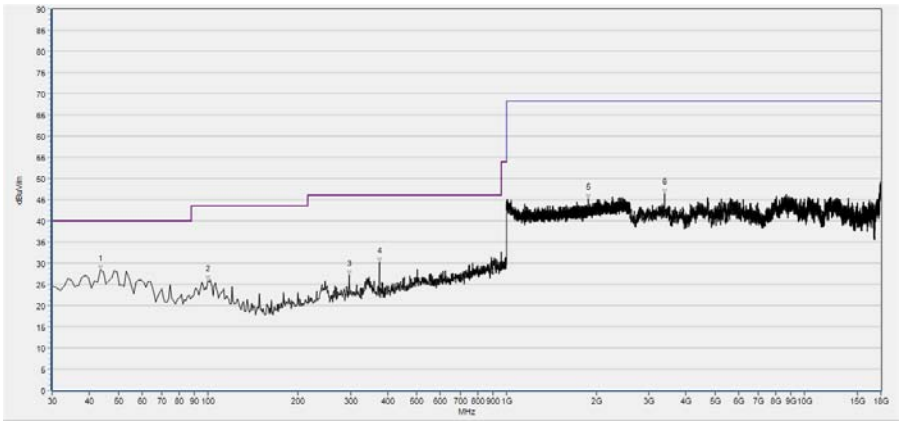
(Antenna Horizontal, 30MHz to 25GHz)



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
49.419	30.09	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
64.955	29.03	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	27.22	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
374.695	31.69	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1738.913	44.28	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5717.584	47.46	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

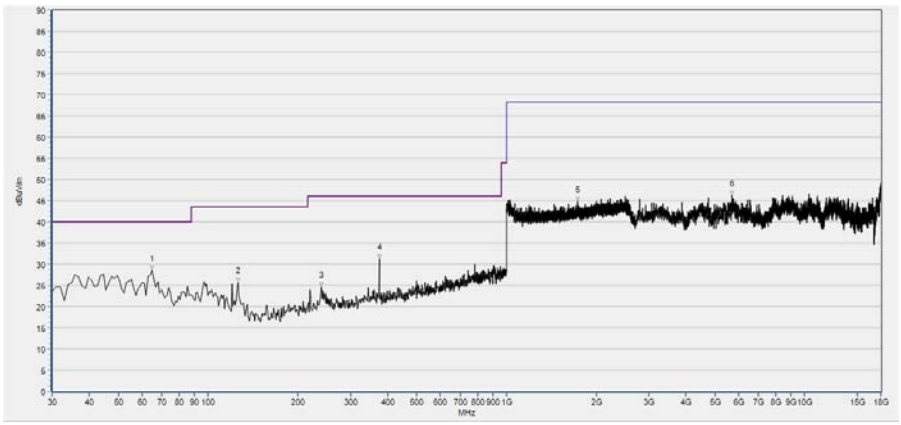
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 64



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	28.43	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
99.910	25.82	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
297.017	27.12	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	30.10	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1885.095	45.17	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
3391.718	46.49	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS

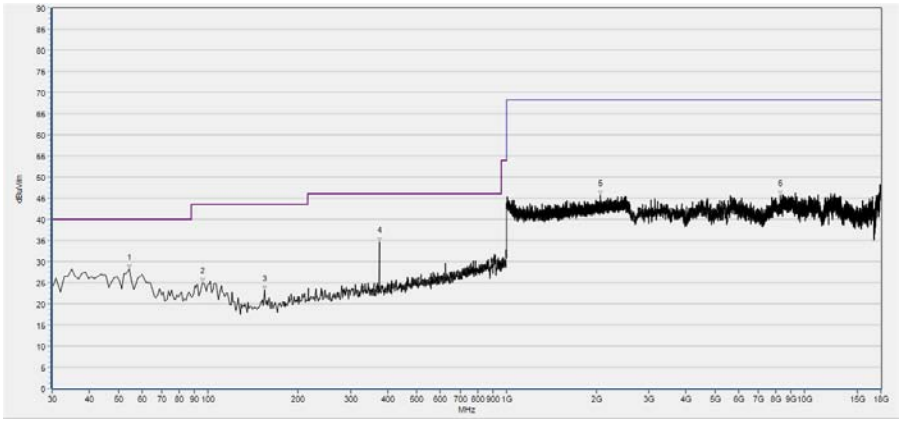
(Antenna Horizontal, 30MHz to 25GHz)



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
64.955	28.65	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
126.126	25.69	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
239.730	24.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	31.17	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1730.910	44.81	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5711.422	46.33	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

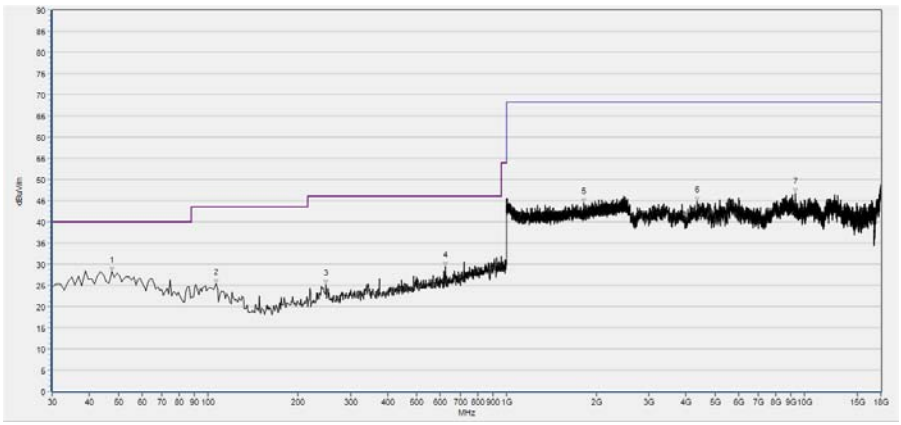
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 100



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	28.28	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
96.026	24.96	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
154.284	23.27	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	34.66	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2062.754	45.70	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8268.334	45.73	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS

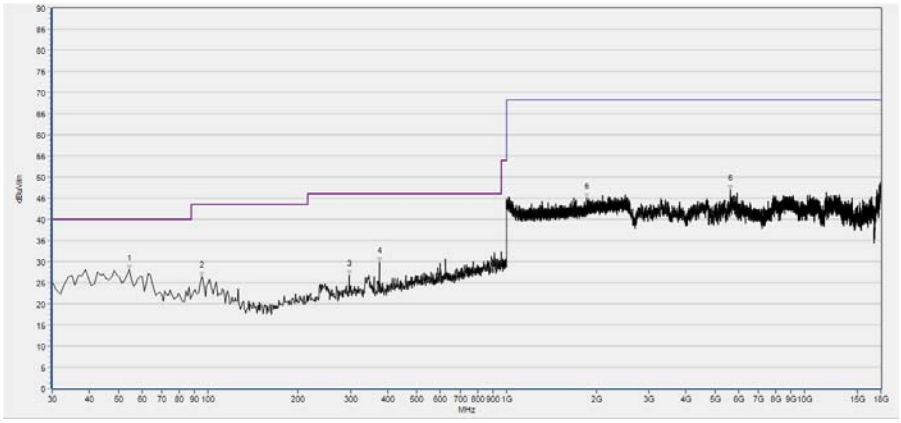
(Antenna Horizontal, 30MHz to 25GHz)



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
47.477	28.26	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
106.707	25.33	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
248.468	25.11	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.205	29.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1816.806	44.44	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4365.193	44.75	N/A	N/A	74.00	N/A	N/A	Vertical	PASS
9309.582	46.79	N/A	N/A	74.00	N/A	N/A	Vertical	PASS

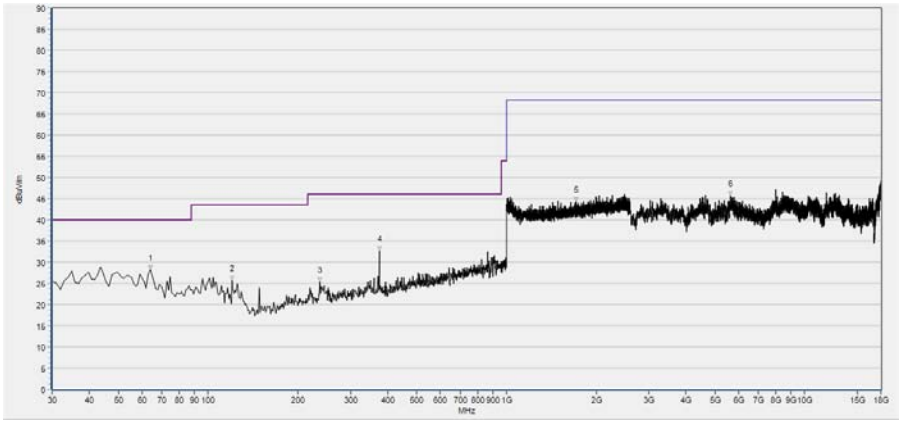
(Antenna Vertical, 30MHz to 25GHz)

Plots for Channel = 120



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	28.03	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
95.055	26.45	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
297.017	26.77	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
374.695	29.77	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1855.218	45.00	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5631.326	46.92	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

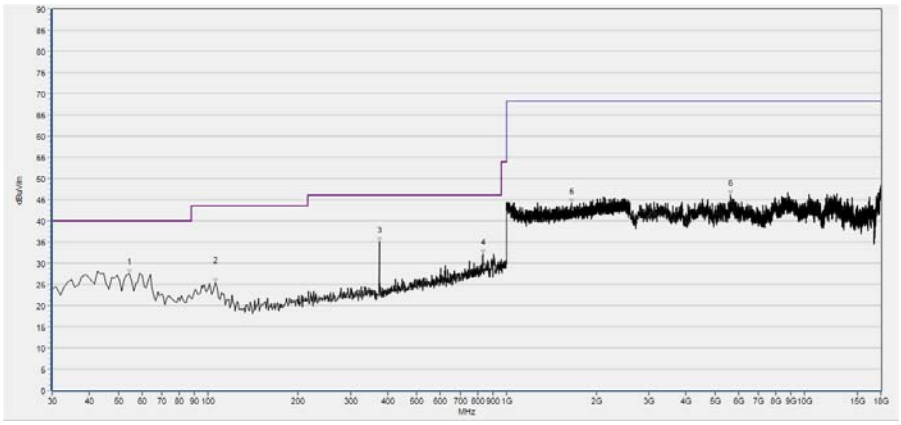
(Antenna Horizontal, 30MHz to 25GHz)



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
63.984	28.15	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
120.300	25.76	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
236.817	25.38	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
374.695	32.64	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1716.506	44.27	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5631.326	45.71	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

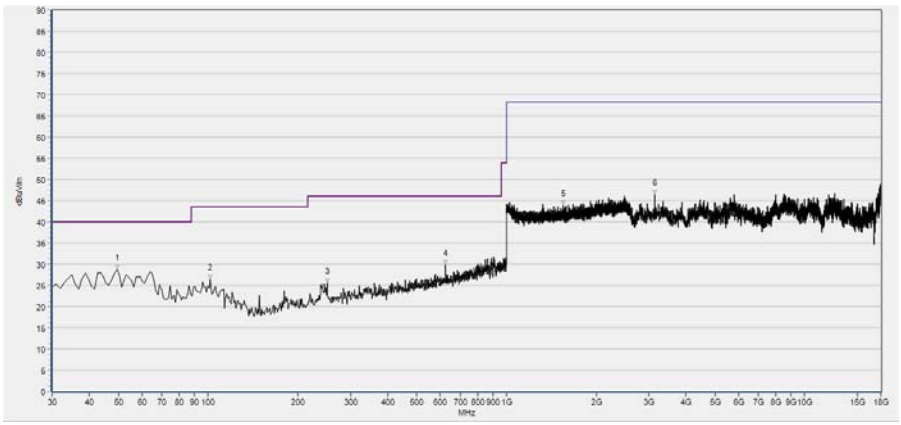
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 144



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	27.57	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
105.736	25.30	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
374.695	34.95	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
833.964	32.08	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1656.752	44.09	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5649.810	46.09	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

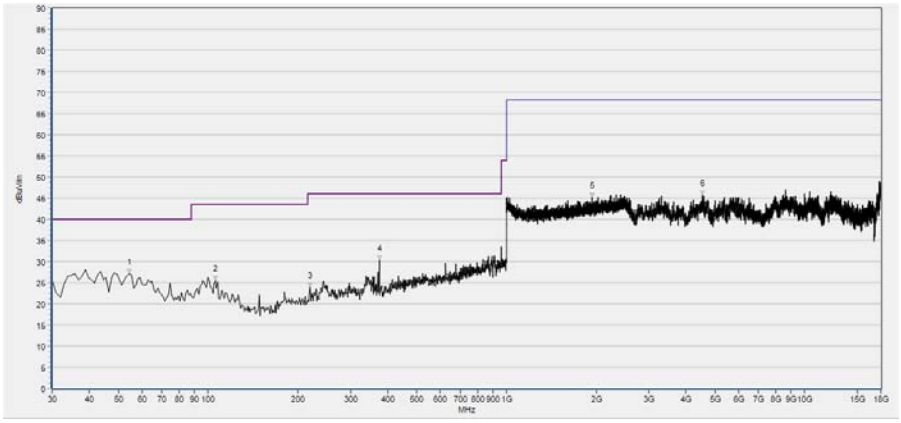
(Antenna Horizontal, 30MHz to 25GHz)



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
49.419	28.77	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
101.852	26.37	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
250.410	25.62	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.205	29.91	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1547.916	43.89	N/A	N/A	74.00	N/A	N/A	Vertical	PASS
3145.269	46.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

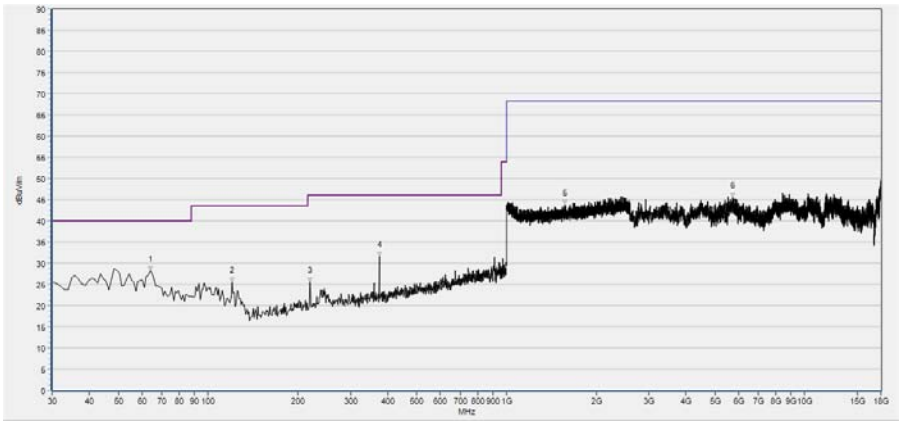
(Antenna Vertical, 30MHz to 25GHz)

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
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	N/A	Horizontal	PASS
4531.546	45.72	N/A	N/A	74.00	N/A	N/A	Horizontal	PASS

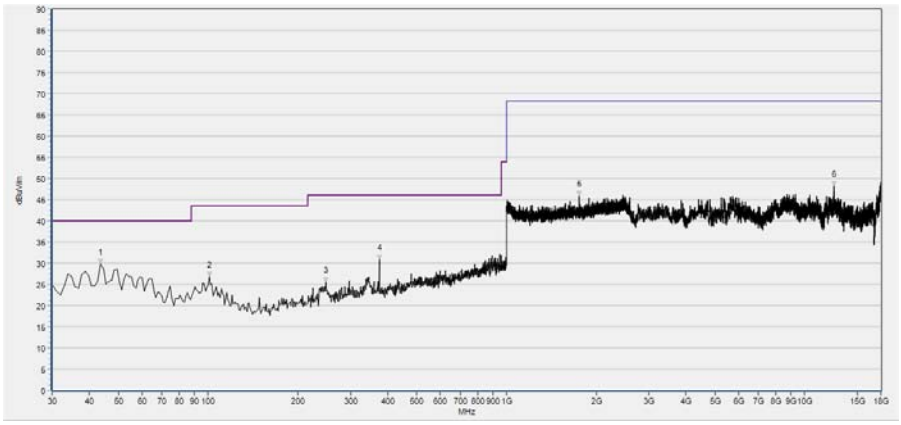
(Antenna Horizontal, 30MHz to 25GHz)



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
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	N/A	Vertical	PASS
5726.825	45.57	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

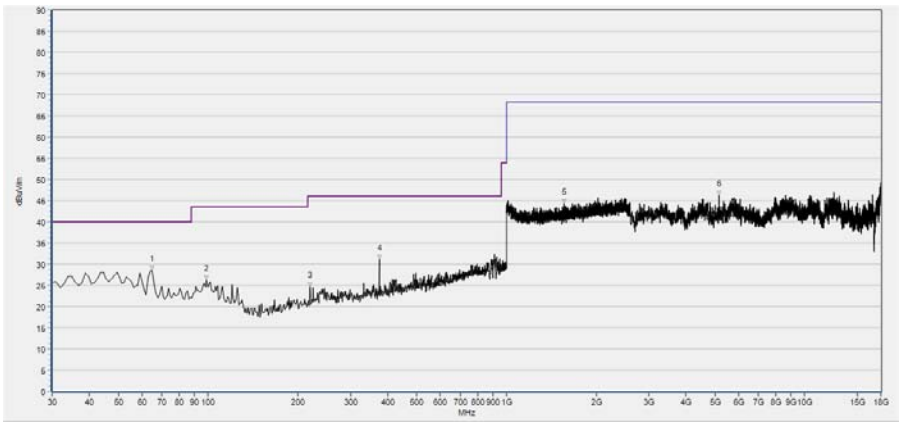
(Antenna Vertical, 30MHz to 25GHz)

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
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	N/A	Horizontal	PASS
12510.342	48.19	N/A	N/A	74.00	N/A	N/A	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
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	N/A	Vertical	PASS
5163.073	46.31	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 25GHz)