



(Channel 142, 5710MHz, 802.11n (HT40))



(Channel 151, 5755MHz, 802.11n (HT40))



(Channel 159, 5795MHz, 802.11n (HT40))



**802.11ac (VHT20) Mode**

**A. Test Verdict:**

Channel	Frequency (MHz)	Measured PPSD (dBm/MHz)	Duty Factor	Corrected PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
36	5180	-1.70	0.07	-1.63	11	PASS
44	5220	-1.72		-1.65		
48	5240	-2.02		-1.95		
52	5260	-2.45		-2.38		
60	5300	-2.69		-2.62		
64	5320	-2.74		-2.67		
100	5500	<b>-1.60</b>		-1.53		
120	5600	-2.16		-2.09		
144	5720	-3.07		-3.00		
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Duty Factor	Corrected (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
144	5720	-2.95	0.07	-2.88	30	PASS
149	5745	-5.27		-5.20		
157	5785	-4.38		-4.31		
165	5825	-4.91		-4.84		



B. Test Plot:



(Channel 36, 5180MHz, 802.11ac (VHT20))



(Channel 44, 5220MHz, 802.11ac (VHT20))



(Channel 48, 5240MHz, 802.11ac (VHT20))



(Channel 52, 5260MHz, 802.11ac (VHT20))



(Channel 60, 5300MHz, 802.11ac (VHT20))



(Channel 64, 5320MHz, 802.11ac (VHT20))



(Channel 100, 5500MHz, 802.11ac (VHT20))



(Channel 120, 5600MHz, 802.11ac (VHT20))



(Channel 144, 5720MHz, 802.11ac (VHT20))



(Channel 144, 5720MHz, 802.11ac(VHT20))





(Channel 149, 5745MHz, 802.11ac (VHT20))



(Channel 157, 5785MHz, 802.11ac (VHT20))



(Channel 165, 5825MHz, 802.11ac (VHT20))



802.11ac (VHT40) Mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD (dBm/MHz)	Duty Factor	Corrected PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
38	5190	-1.84	0.09	-1.75	11	PASS
46	5230	-2.23		-2.14		
54	5270	-2.79		-2.70		
62	5310	-2.81		-2.72		
102	5510	<b>-1.30</b>		-1.21		
126	5630	-2.41		-2.32		
142	5710	-3.15		-3.06		
Channel	Frequency (MHz)	Measured PPSD (dBm/500KHz)	Duty Factor	Corrected (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
142	5710	-5.98	0.09	-5.89	30	PASS
151	5755	-8.22		-8.13		
155	5795	-7.79		-7.70		

B. Test Plot:



(Channel 38, 5190MHz, 802.11ac (VHT40))



(Channel 46, 5230MHz, 802.11ac (VHT40))



(Channel 54, 5270MHz, 802.11ac (VHT40))



(Channel 62, 5310MHz, 802.11ac (VHT40))



(Channel 102, 5510MHz, 802.11ac (VHT40))



(Channel 126, 5630MHz, 802.11ac (VHT40))



(Channel 142, 5710MHz, 802.11ac (VHT40))



(Channel 142, 5710MHz, 802.11ac (VHT40))



(Channel 151, 5755MHz, 802.11ac (VHT40))



(Channel 159, 5795MHz, 802.11ac (VHT40))





802.11ac (VHT80) Mode

A. Test Verdict:

Channel	Frequency (MHz)	Measured PSD (dBm/MHz)	Duty Factor	Corrected PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
42	5210	-4.17	0.19	-3.98	11	PASS
58	5290	<b>-3.47</b>		-3.28		
106	5530	-4.32		-4.13		
122	5610	-4.38		-4.19		
138	5690	-3.84		-3.65		
Channel	Frequency (MHz)	Measured PSD (dBm/500KHz)	Duty Factor	Corrected (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
138	5690	-6.60	0.19	-6.41	30	PASS
155	5775	-6.48		-6.29		

B. Test Plot:



(Channel 42, 5210MHz, 802.11ac (VHT80))



(Channel 58, 5290MHz, 802.11ac (VHT80))



(Channel 106, 5530MHz, 802.11ac (VHT80))



(Channel 122, 5610MHz, 802.11ac (VHT80))



(Channel 138, 5690MHz, 802.11ac (VHT80))



(Channel 138, 5690MHz, 802.11ac (VHT80))



(Channel 155, 5775MHz, 802.11ac (VHT80))



## 2.6. Frequency Stability

### 2.6.1. Requirement

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user’s manual.

### 2.6.2. Test Procedure

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between 5°C to 40°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel’s center frequency was recorded. Data for the worst case channel is shown below.

### 2.6.3. Test Result

U-NII-1 (Ch. 36) 5180MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	5	+20(Ref)	23	4.440
100%		-30	31	5.985
100%		-20	29	5.598
100%		-10	26	5.019
100%		0	25	4.826
100%		+10	22	4.247
100%		+20	20	3.861
100%		+30	23	4.440
100%		+40	26	5.019
100%		+50	23	4.440
85%		4.25	+20	28
115%	5.75	+20	30	5.792



U-NII-2A (Ch. 52)				
5260MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	5	+20(Ref)	18	3.422
100%		-30	22	4.183
100%		-20	25	4.753
100%		-10	27	5.133
100%		0	19	3.612
100%		+10	17	3.232
100%		+20	21	3.992
100%		+30	26	4.943
100%		+40	30	5.703
100%		+50	25	4.753
85%	4.25	+20	19	3.612
115%	5.75	+20	21	3.992

U-NII-2C (Ch. 100)				
5500MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	5	+20(Ref)	21	3.818
100%		-30	25	4.545
100%		-20	30	5.455
100%		-10	29	5.273
100%		0	22	4.000
100%		+10	19	3.455
100%		+20	23	4.182
100%		+30	32	5.818
100%		+40	35	6.364
100%		+50	25	4.545
85%	4.25	+20	27	4.909
115%	5.75	+20	30	5.455



<b>U-NII-3 (Ch. 149)</b>				
<b>5745MHz</b>				
<b>VOLTAGE (%)</b>	<b>POWER (VDC)</b>	<b>TEMP (°C)</b>	<b>Fre. Dev. (kHz)</b>	<b>Deviation (ppm)</b>
100%	5	+20(Ref)	22	3.829
100%		-30	26	4.526
100%		-20	27	4.700
100%		-10	21	3.655
100%		0	30	5.222
100%		+10	25	4.352
100%		+20	26	4.526
100%		+30	26	4.526
100%		+40	28	4.874
100%		+50	27	4.700
85%		4.25	+20	31
115%	5.75	+20	29	5.048

## 2.7. Conducted Emission

### 2.7.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

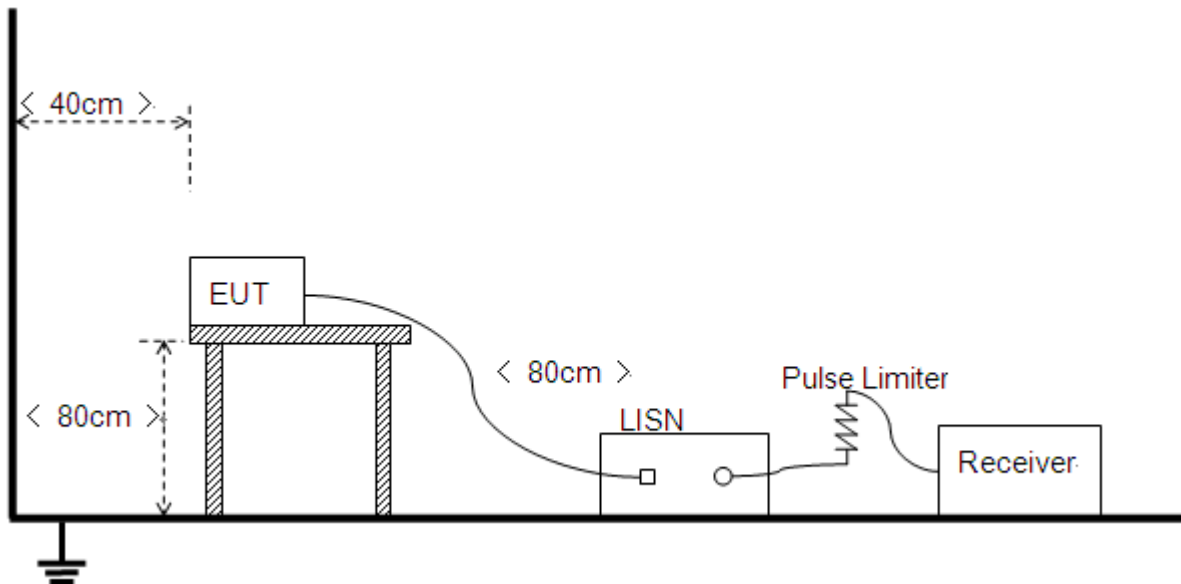
Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

**Note:**

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

### 2.7.2. Test Description

**Test Setup:**



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.





### 2.7.3. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and Plot below.

**Note:** Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

#### A. Test Setup:

Test Mode: EUT+ ADAPTER+WIFI TX

Test Voltage: AC 120V/60Hz

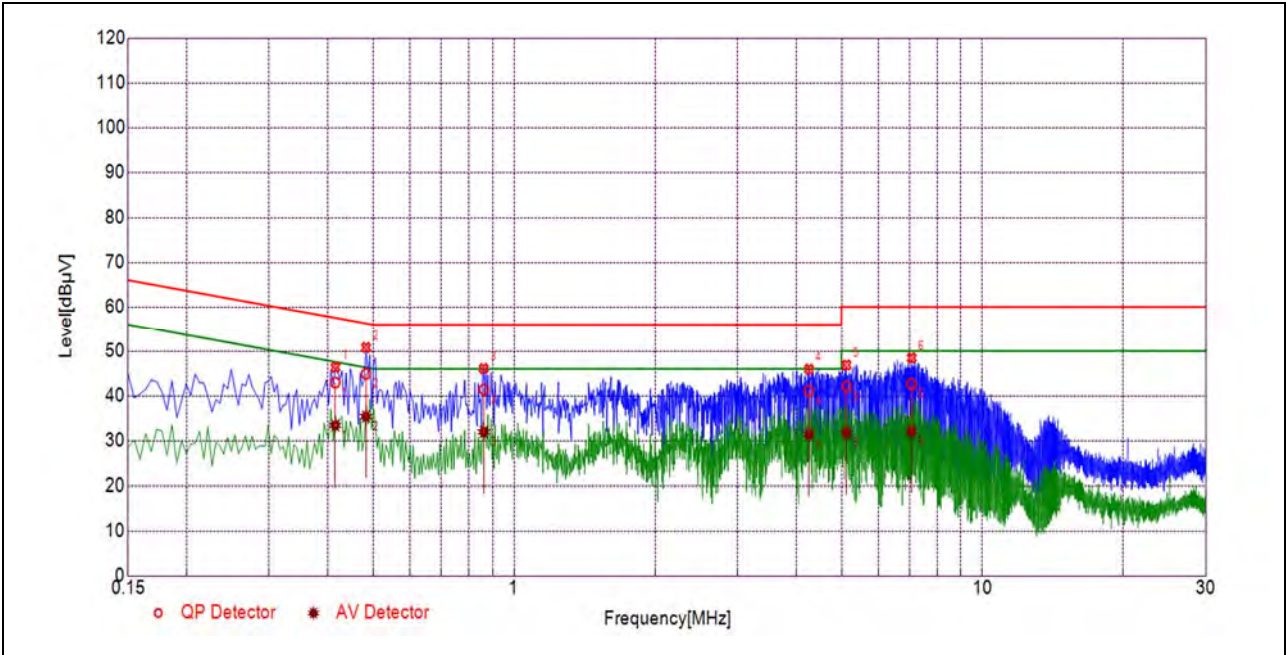
The measurement results are obtained as below:

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

$U_R$ : Receiver Reading

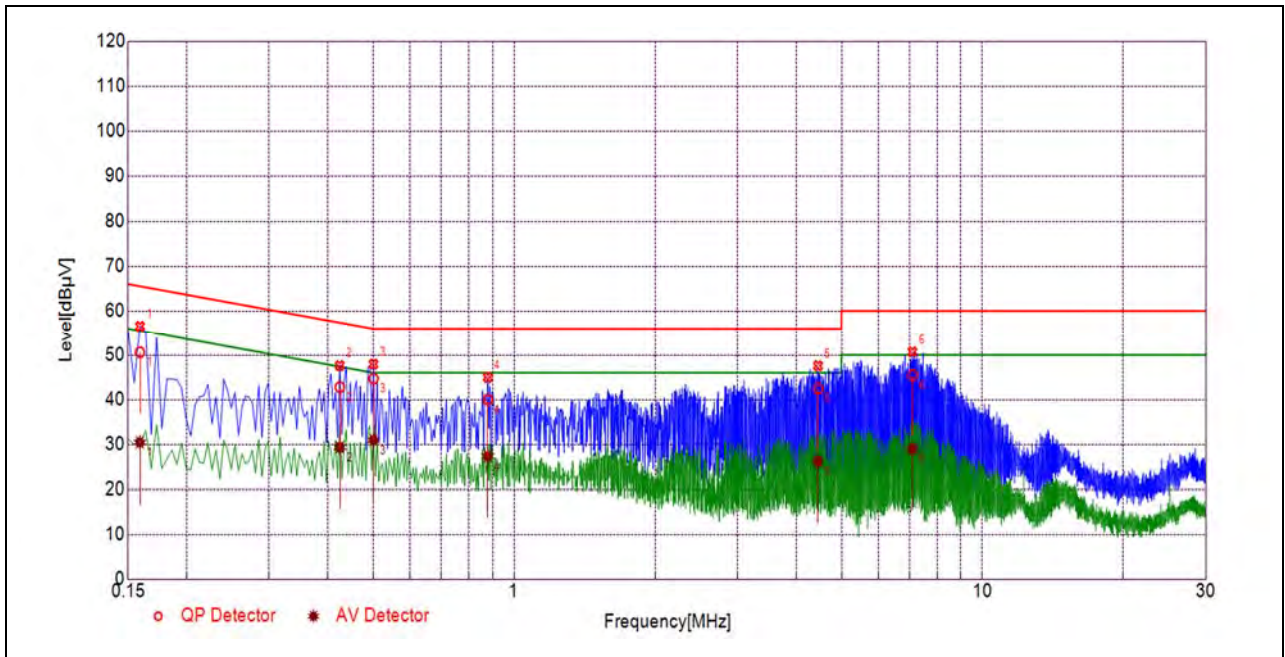
$A_{\text{Factor}}$ : Voltage division factor of LISN

**B. Test Plot:**



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.4152	42.92	33.39	57.54	47.54	Line	PASS
2	0.4828	44.89	35.34	56.29	46.29		PASS
3	0.8618	41.38	31.94	56.00	46.00		PASS
4	4.2664	41.14	31.36	56.00	46.00		PASS
5	5.1248	42.10	31.71	60.00	50.00		PASS
6	7.0567	42.61	32.03	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1589	50.58	30.42	65.52	55.52	Neutral	PASS
2	0.4246	42.79	29.34	57.36	47.36		PASS
3	0.5010	44.67	30.93	56.00	46.00		PASS
4	0.8791	40.00	27.33	56.00	46.00		PASS
5	4.4548	42.41	26.18	56.00	46.00		PASS
6	7.0918	45.45	28.94	60.00	50.00		PASS

## 2.8. Restricted Frequency Bands

### 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:
  - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

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

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

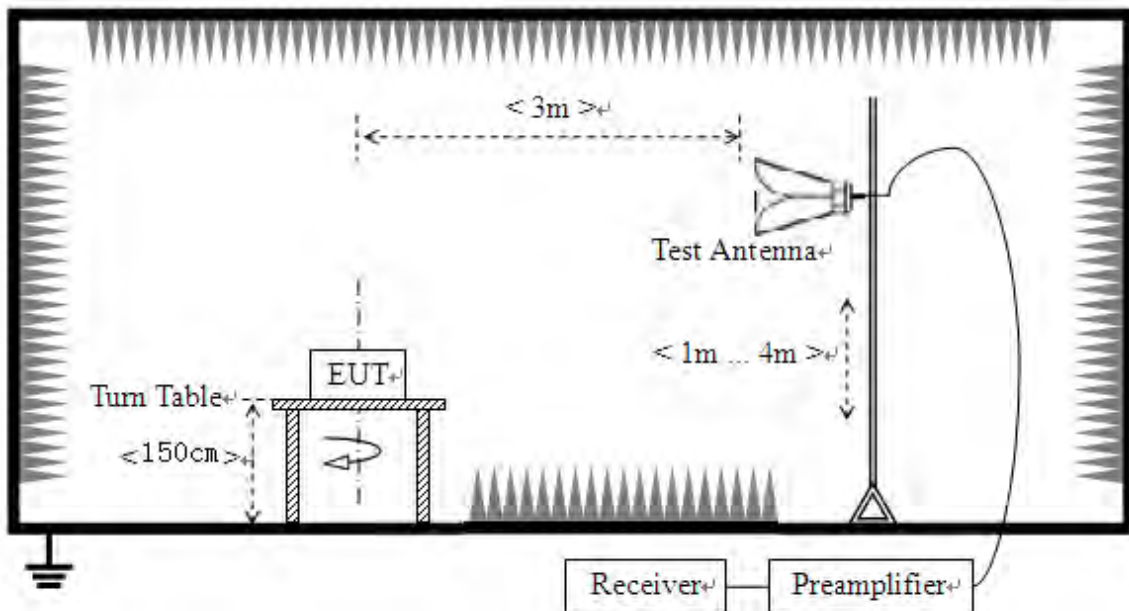
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ( $\mu\text{V}/\text{m}$ )	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

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

#### Test Setup





The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

### 2.8.3. Test Result

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

The measurement results are obtained as below:

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

$A_T$ : Total correction Factor except Antenna;  $U_R$ : Receiver Reading

$G_{\text{preamp}}$ : Preamplifier Gain;  $A_{\text{Factor}}$ : Antenna Factor at 3m

**Note 1:** Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

**Note 2** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

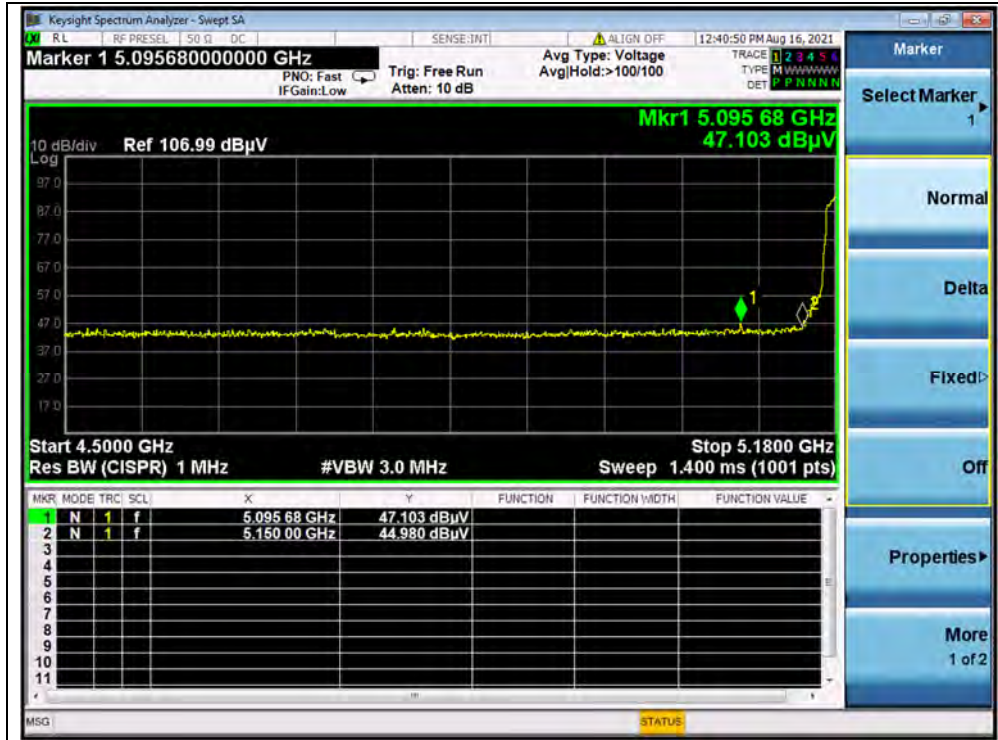
### 802.11a Mode

#### A.Test Verdict:

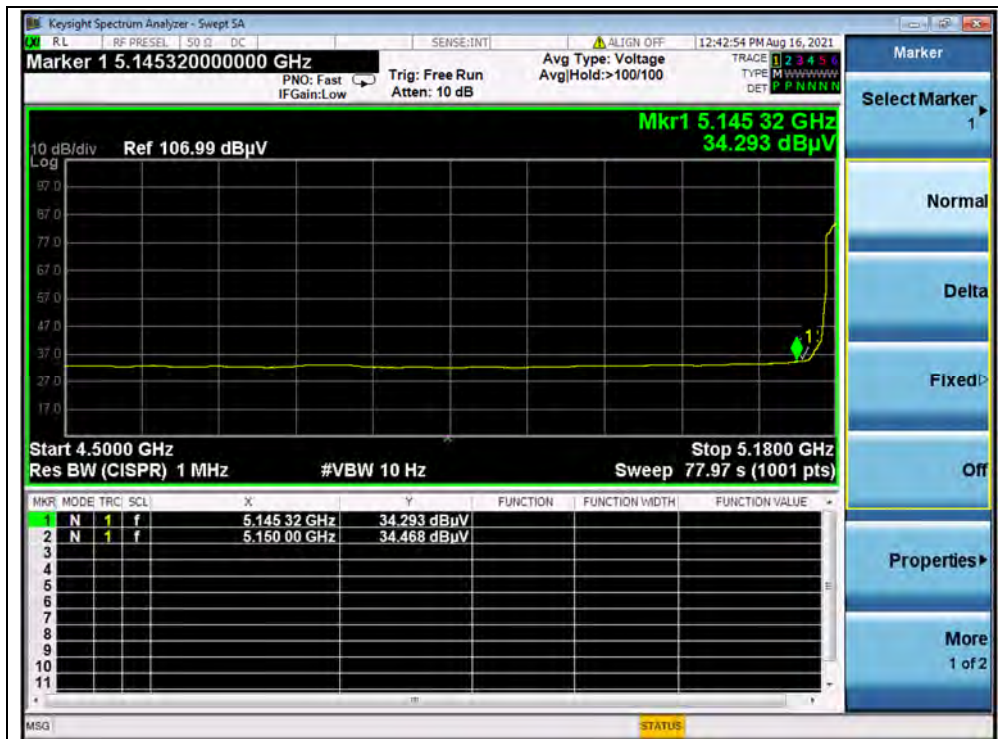
Channel	Frequency (MHz)	Detector	Receiver Reading	$A_T$ (dB)	$A_{\text{Factor}}$ (dB@3m)	Max. Emission E (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV	$U_R$ (dB $\mu$ V)					
36	5059.68	PK	47.10	-19.54	32.20	59.76	74	PASS
36	5150.00	AV	34.47	-19.54	32.20	47.13	54	PASS
64	5353.08	PK	43.40	-18.80	32.20	56.8	74	PASS
64	5350.00	AV	32.35	-18.80	32.20	45.75	54	PASS
100	5469.20	PK	49.57	-19.20	32.20	62.57	68.23	PASS
100	5470.00	AV	34.15	-19.20	32.20	47.15	54	PASS
144	5751.30	PK	43.33	-19.20	32.20	56.33	68.23	PASS
144	5725.00	AV	33.43	-19.20	32.20	46.43	54	PASS
149	5725.00	PK	48.73	-19.01	32.20	61.92	122.23	PASS
165	5850.00	PK	42.80	-19.01	32.20	55.99	122.23	PASS



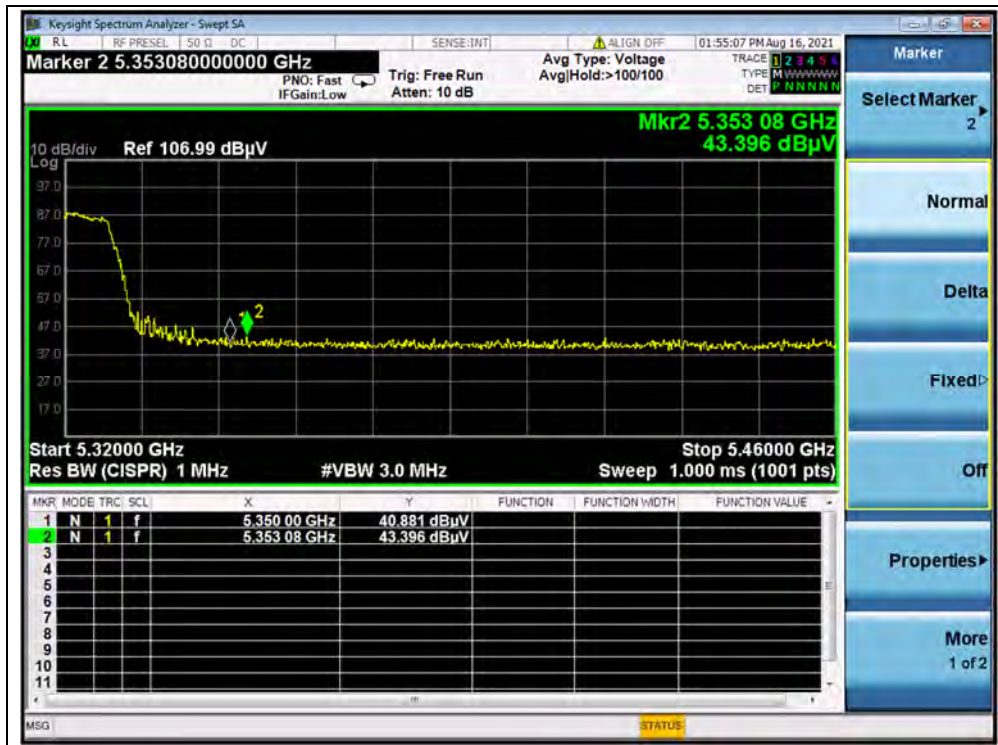
B.Test Plot:



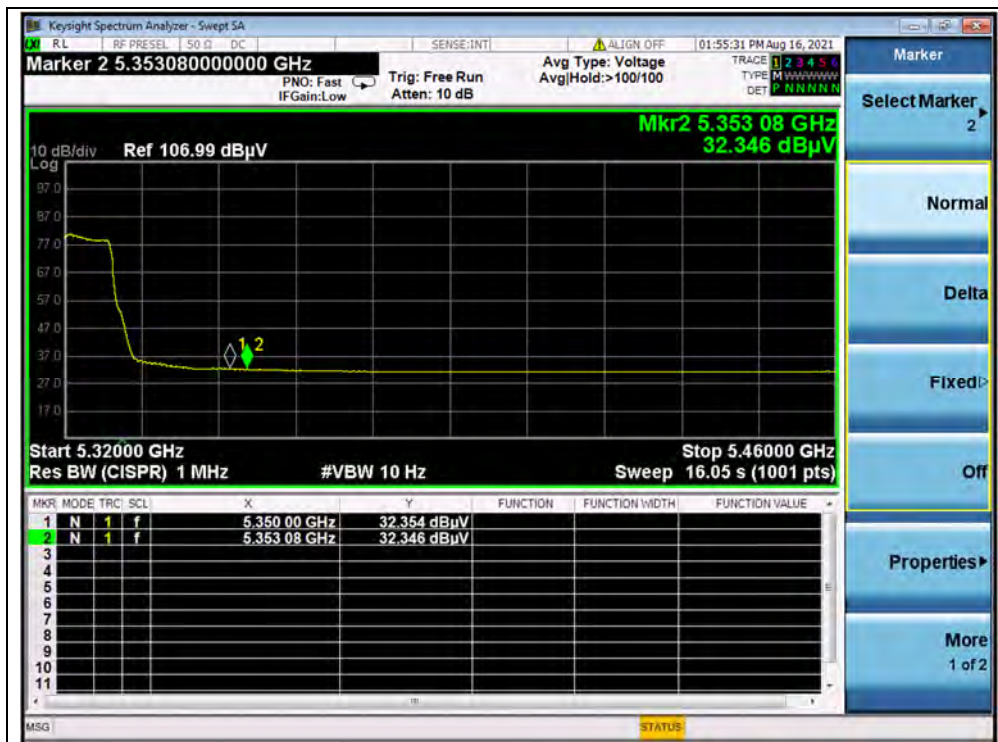
(PEAK, Channel 36, 802.11a)



(AVERAGE, Channel 36, 802.11a)

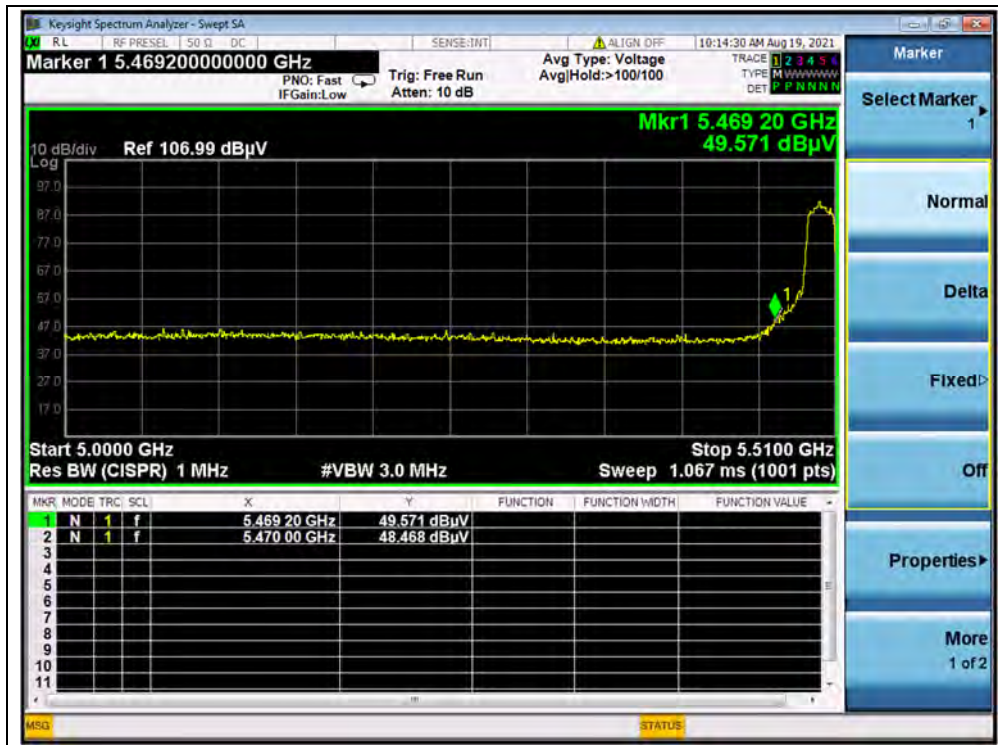


(PEAK, Channel 64, 802.11a)

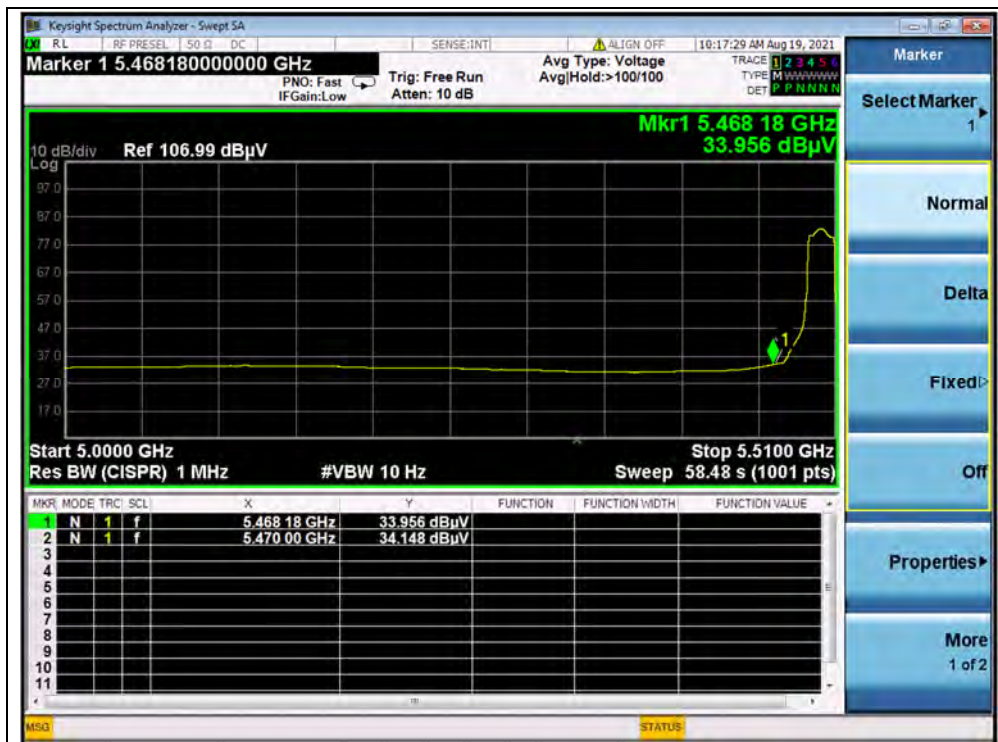


(AVERAGE, Channel 64, 802.11a)

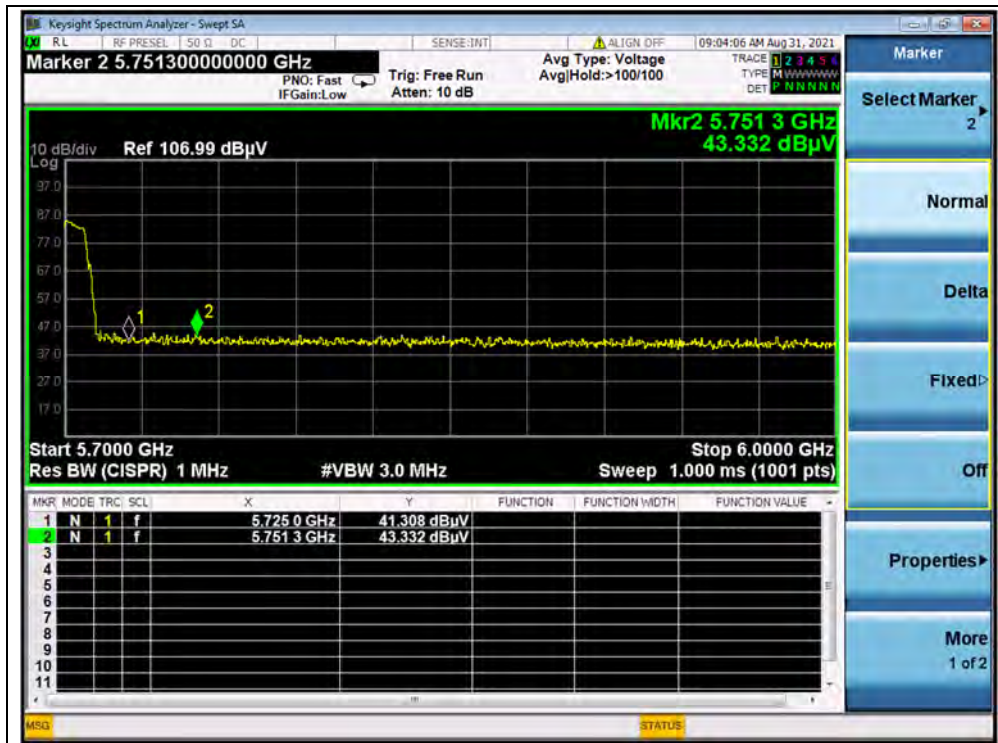




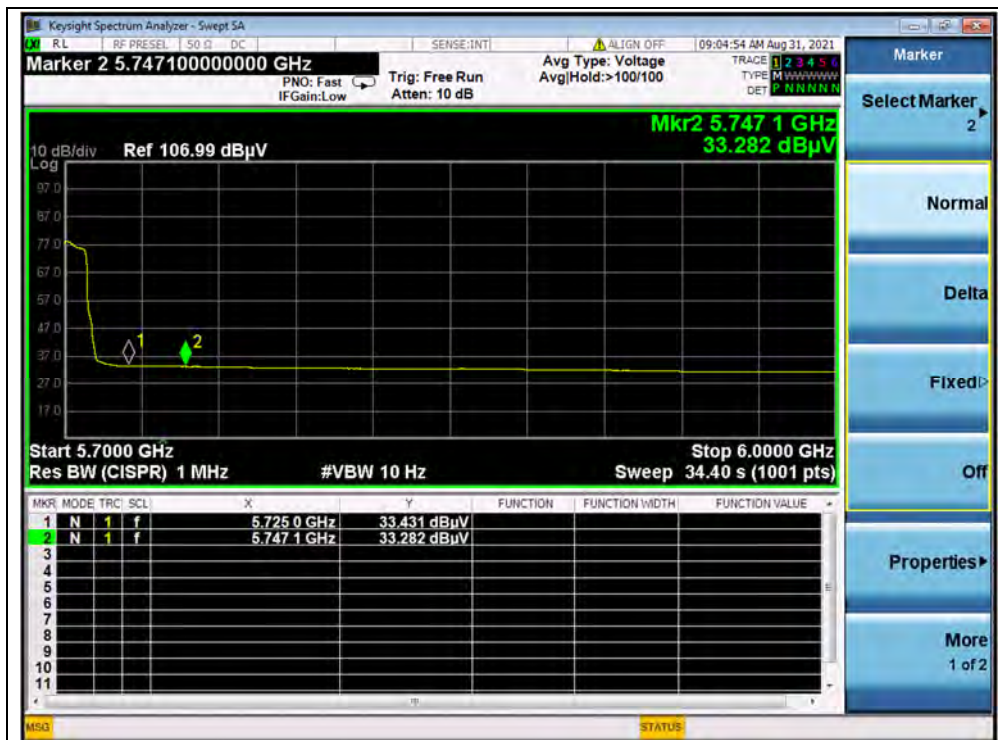
(PEAK, Channel 100, 802.11a)



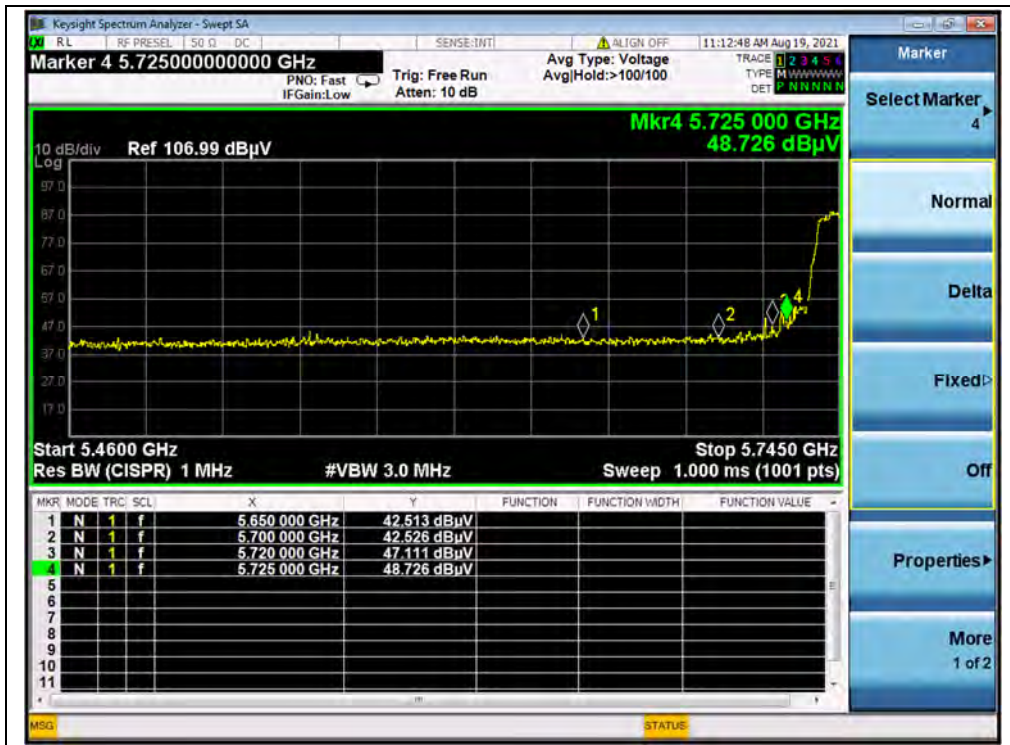
(AVERAGE, Channel 100, 802.11a)



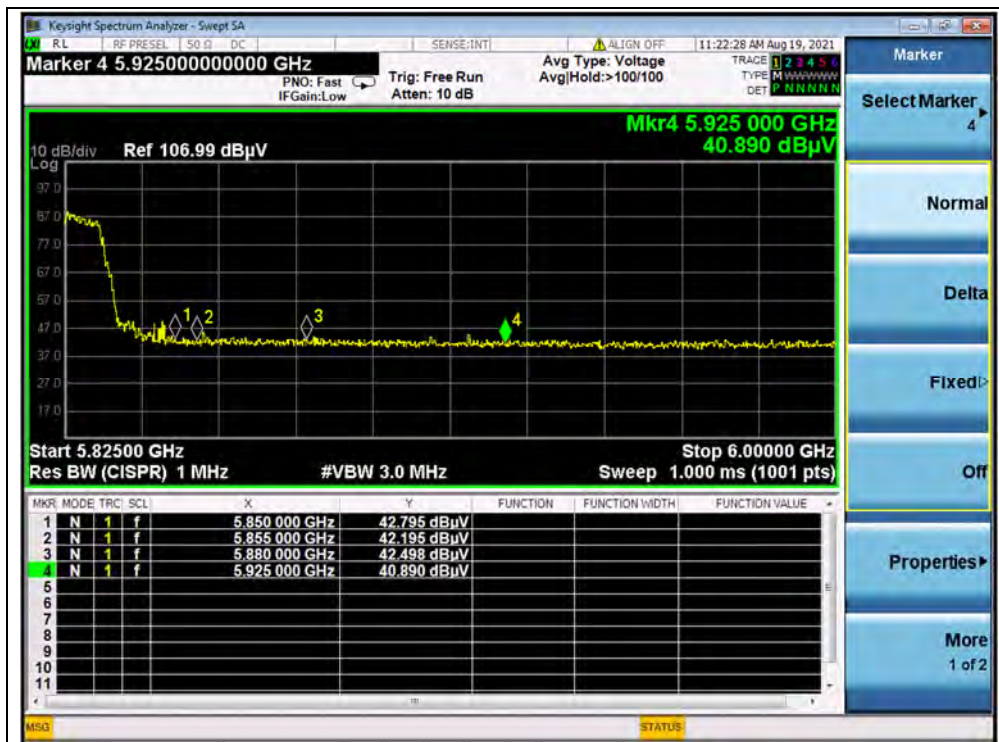
(PEAK, Channel 144, 802.11a)



(AVERAGE, Channel 144, 802.11a)



(PEAK, Channel 149, 802.11a)

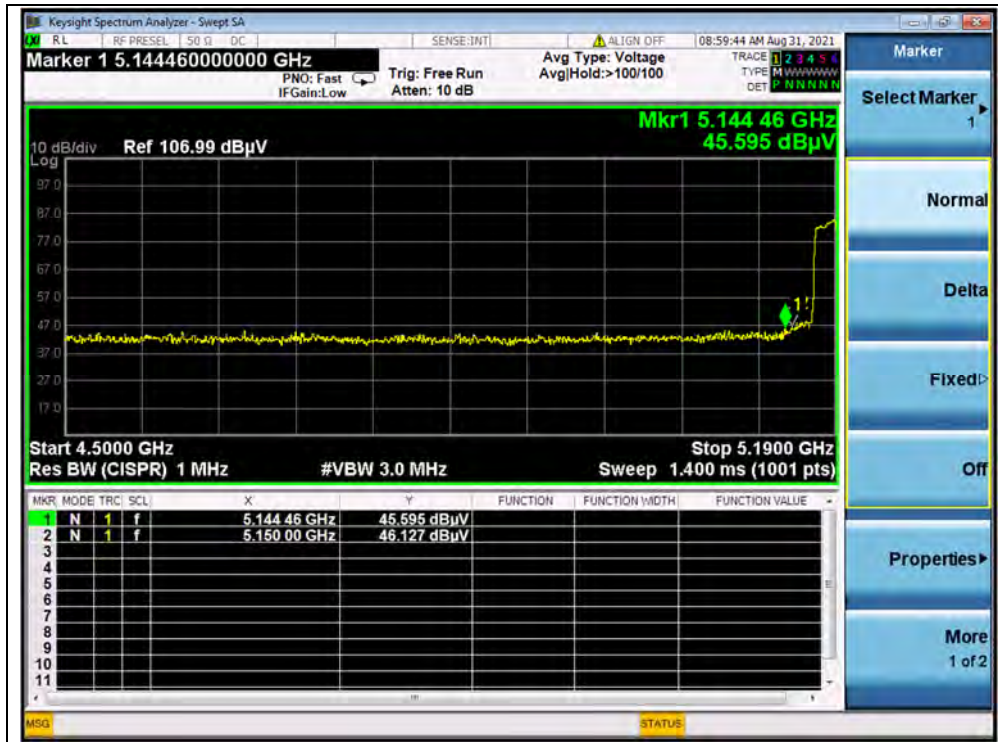


(PEAK, Channel 165, 802.11a)

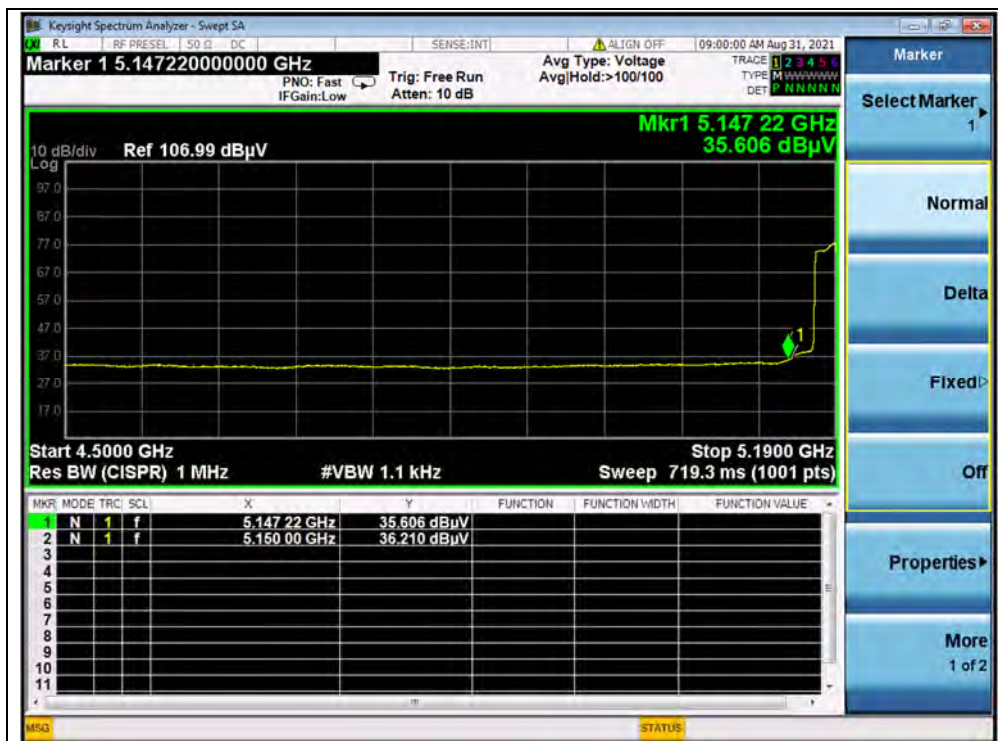
**802.11n (HT40) Mode****A.Test Verdict:**

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission $E$ (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
38	5150.00	PK	46.13	-19.54	32.20	58.79	74	PASS
38	5150.00	AV	36.21	-19.54	32.20	48.87	54	PASS
62	5350.50	PK	44.97	-18.80	32.20	58.37	74	PASS
62	5350.00	AV	34.99	-18.80	32.20	48.39	54	PASS
102	5466.65	PK	48.16	-19.20	32.20	61.16	68.23	PASS
102	5470.00	AV	37.67	-19.20	32.20	50.67	54	PASS
142	5734.68	PK	44.61	-19.20	32.20	57.61	68.23	PASS
142	5725.00	AV	35.23	-19.20	32.20	48.23	54	PASS
151	5720.00	PK	48.05	-19.01	32.20	61.24	110.83	PASS
159	5855.00	PK	42.96	-19.01	32.20	56.15	110.83	PASS

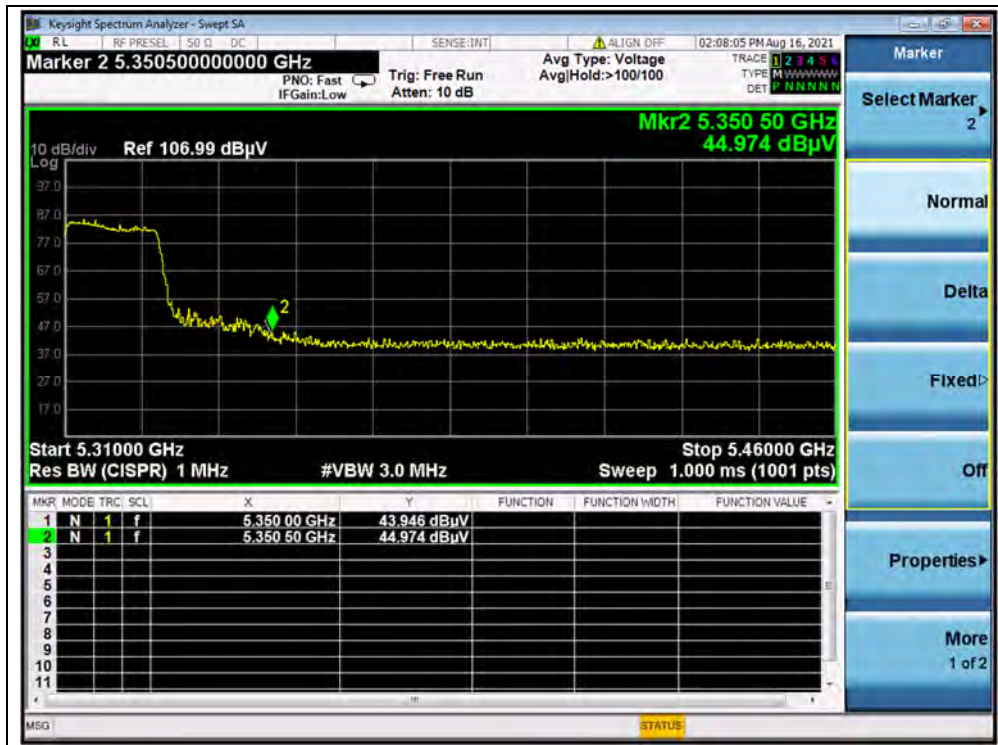
B.Test Plot:



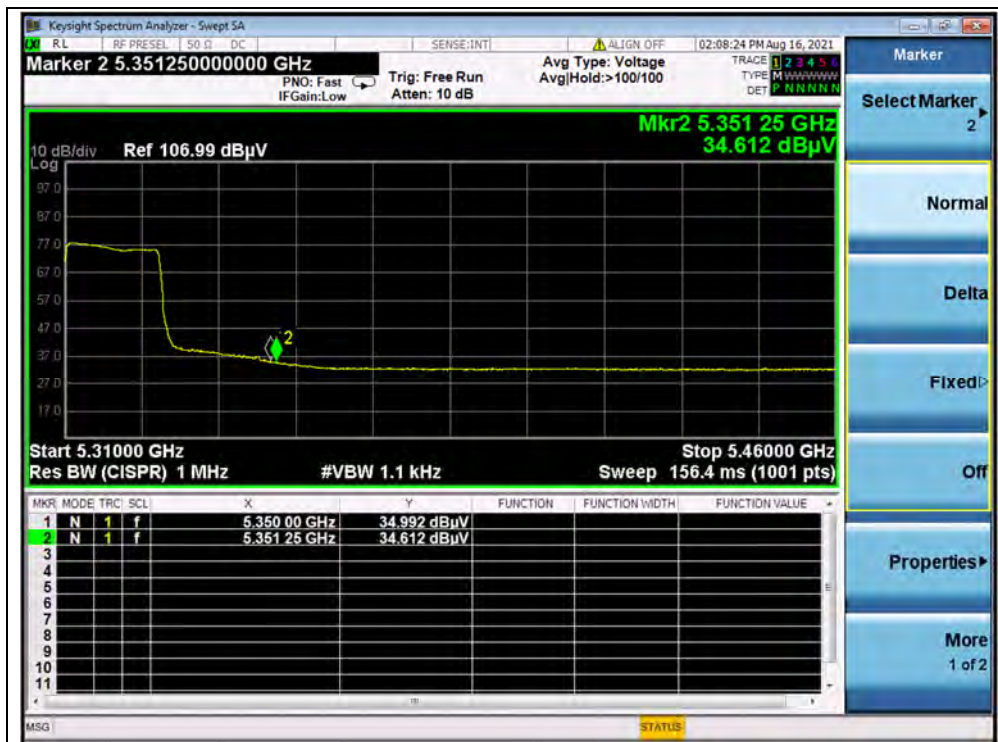
(PEAK, Channel 38, 802.11n (HT40))



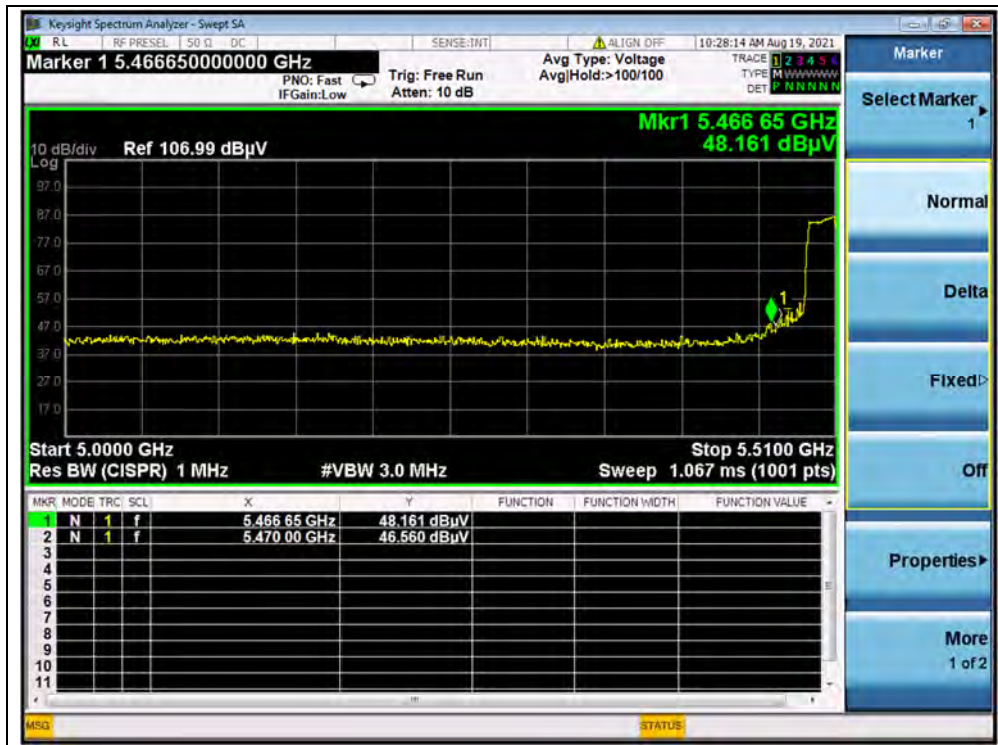
(AVERAGE, Channel 38, 802.11n (HT40))



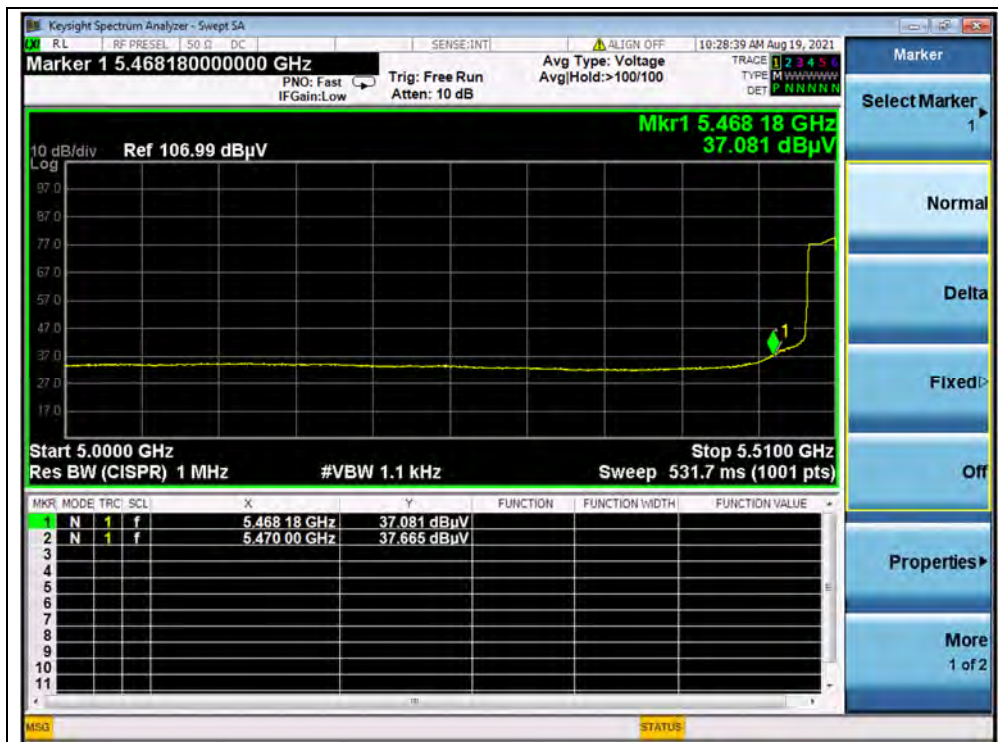
(PEAK, Channel 62, 802.11n (HT40))



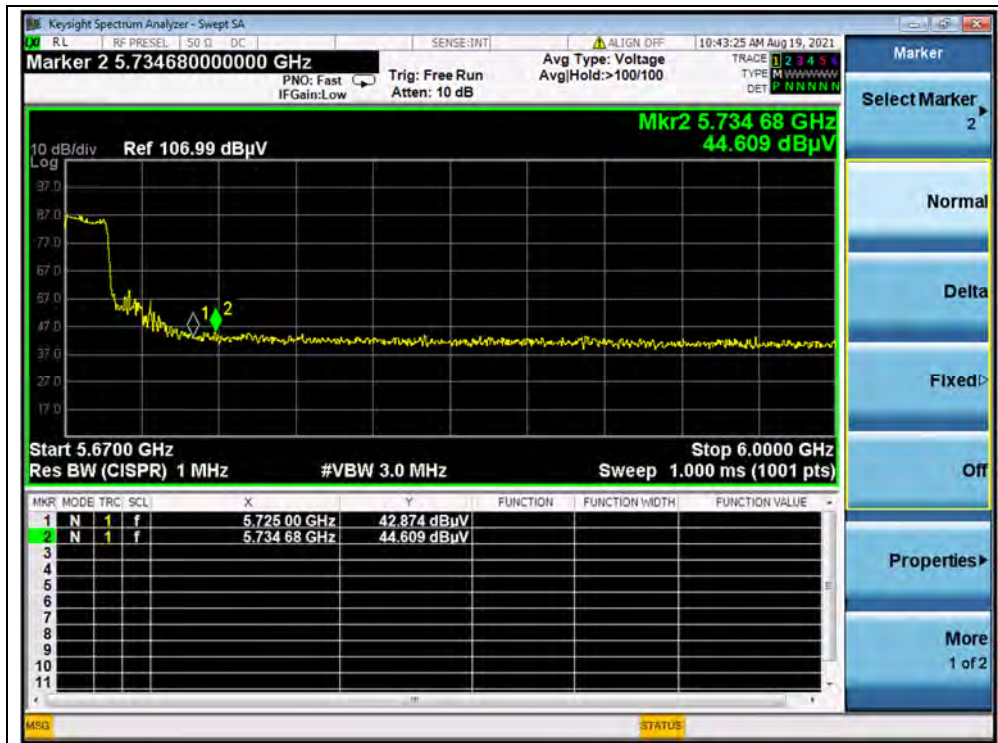
(AVERAGE, Channel 62, 802.11n (HT40))



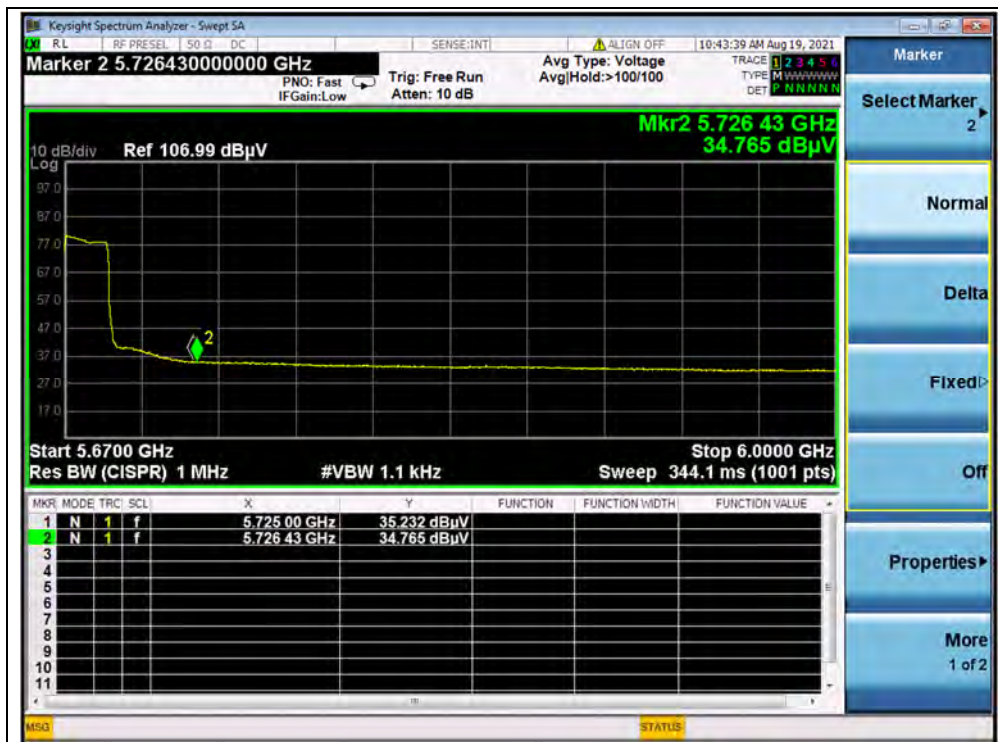
(PEAK, Channel 102, 802.11n (HT40))



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

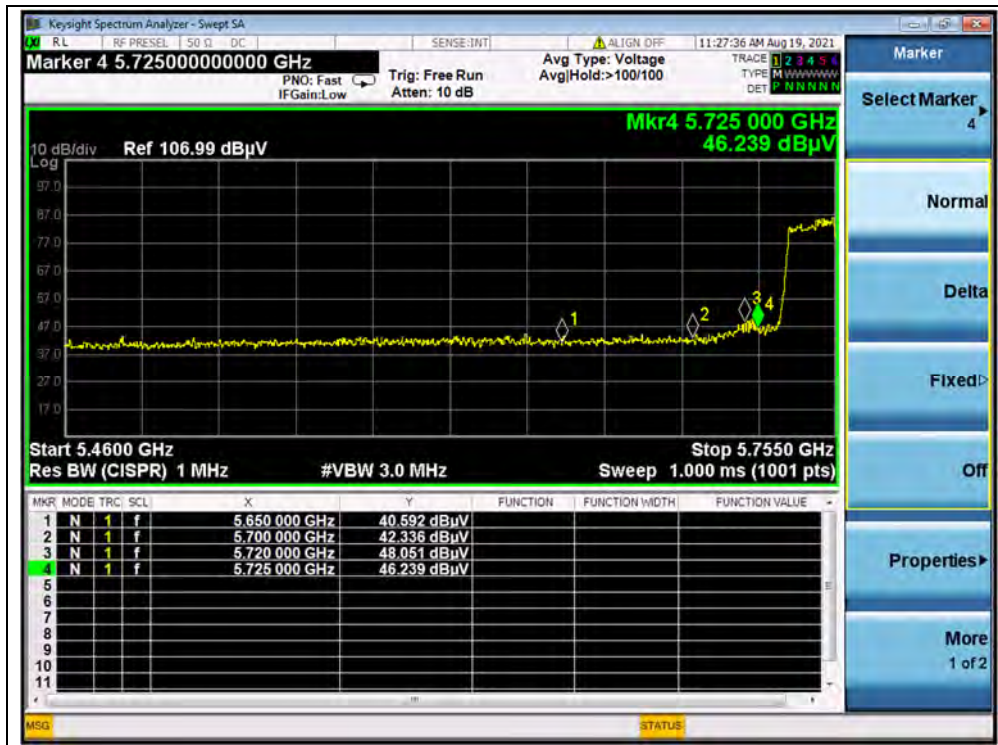


(PEAK, Channel 142, 802.11n (HT40))

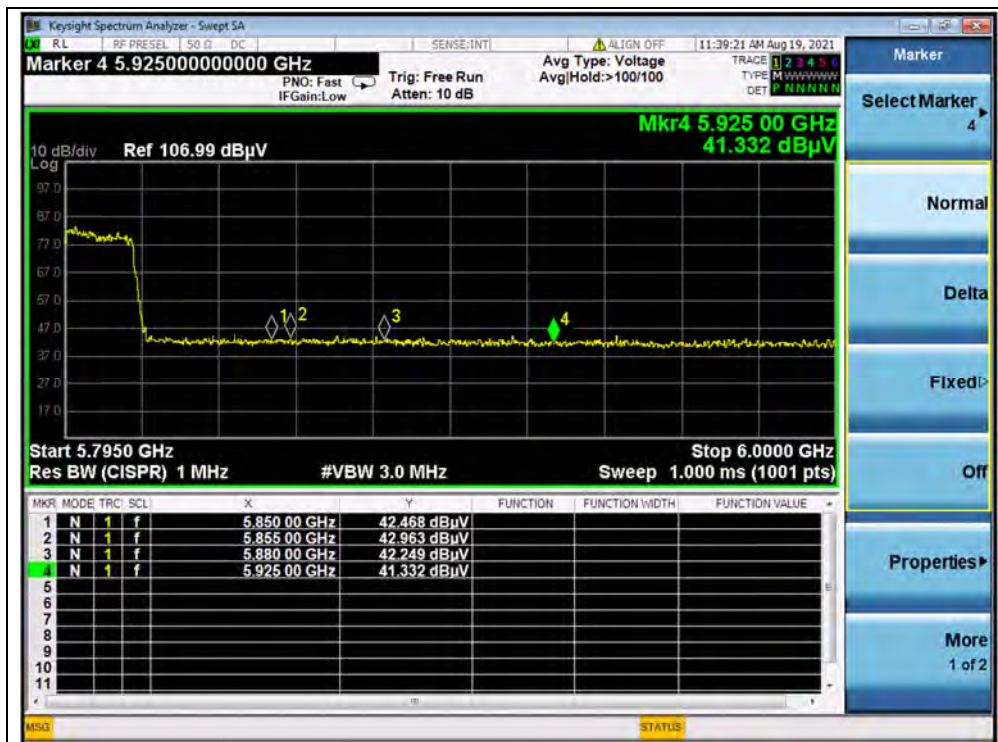


(AVERAGE, Channel 142, 802.11n (HT40))





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

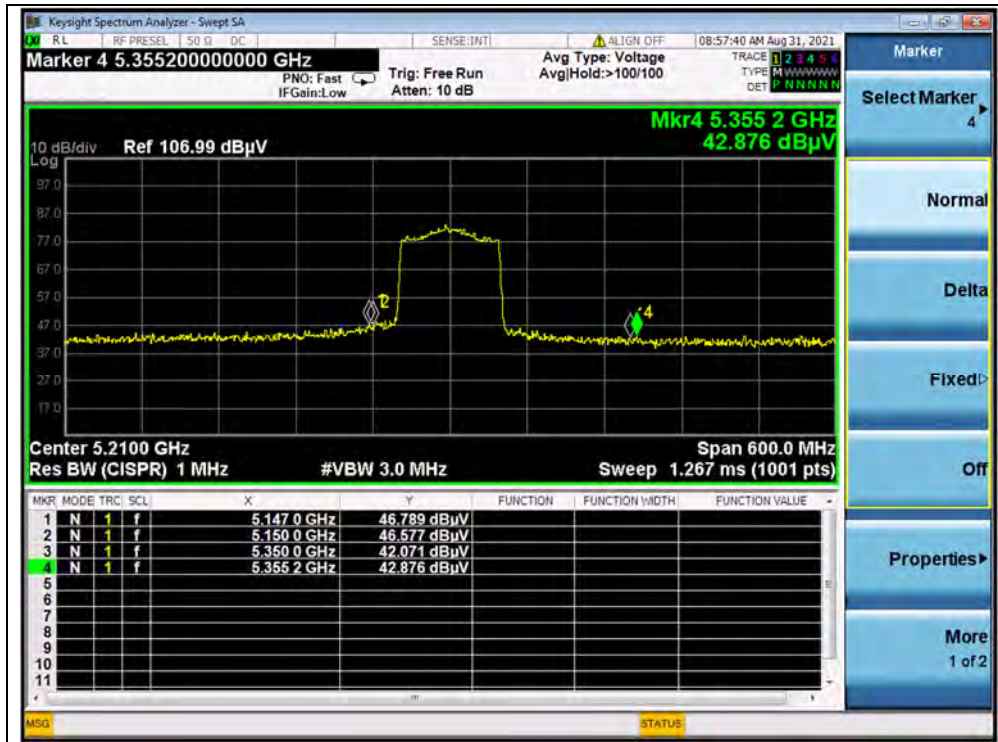


(PEAK, Channel 159, 802.11n (HT40))

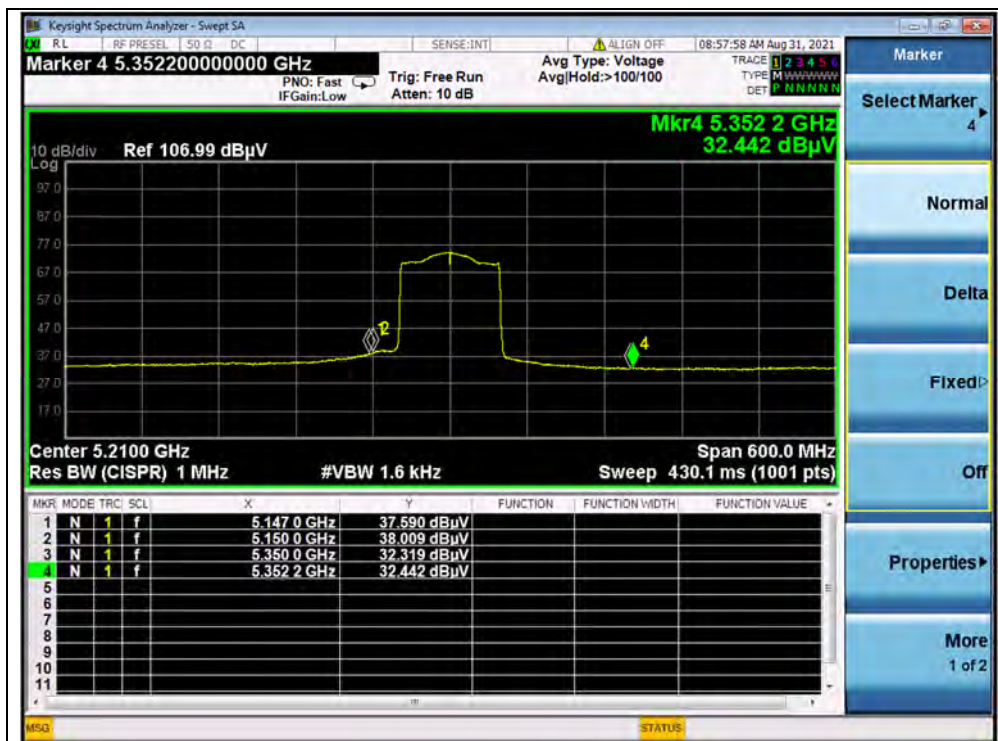
**802.11ac (VHT80) Mode****A.Test Verdict:**

Channel	Frequency (MHz)	Detector	Receiver Reading $U_R$ (dB $\mu$ V)	$A_T$ (dB)	$A_{Factor}$ (dB@3m)	Max. Emission $E$ (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Verdict
		PK/ AV						
42	5147.00	PK	46.79	-19.54	32.20	59.45	74	PASS
42	5150.00	AV	38.01	-19.54	32.20	50.67	54	PASS
58	5352.40	PK	46.65	-18.80	32.20	60.05	74	PASS
58	5350.00	AV	36.89	-18.80	32.20	50.29	54	PASS
106	5467.99	PK	45.77	-19.20	32.20	58.77	68.23	PASS
106	5468.52	AV	35.91	-19.20	32.20	48.91	54	PASS
138	5750.00	PK	44.06	-19.20	32.20	57.06	68.23	PASS
138	5725.00	AV	34.87	-19.20	32.20	47.87	54	PASS
155	5720.00	PK	47.05	-19.01	32.20	60.24	110.83	PASS
155	5855.00	PK	43.54	-19.01	32.20	56.73	110.83	PASS

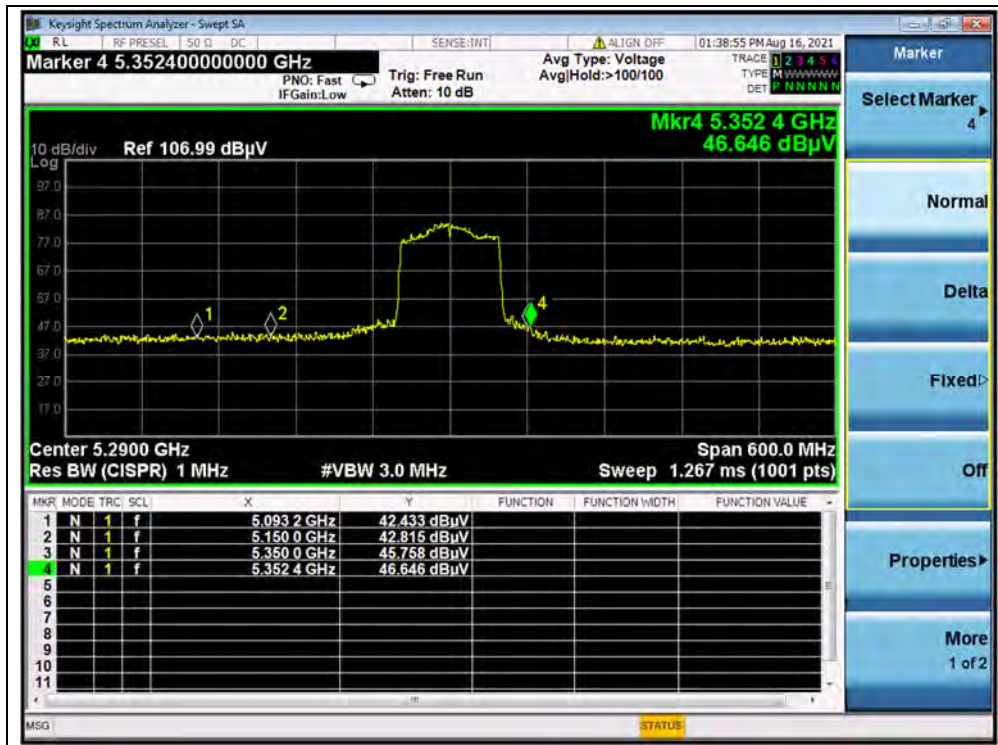
B.Test Plot:



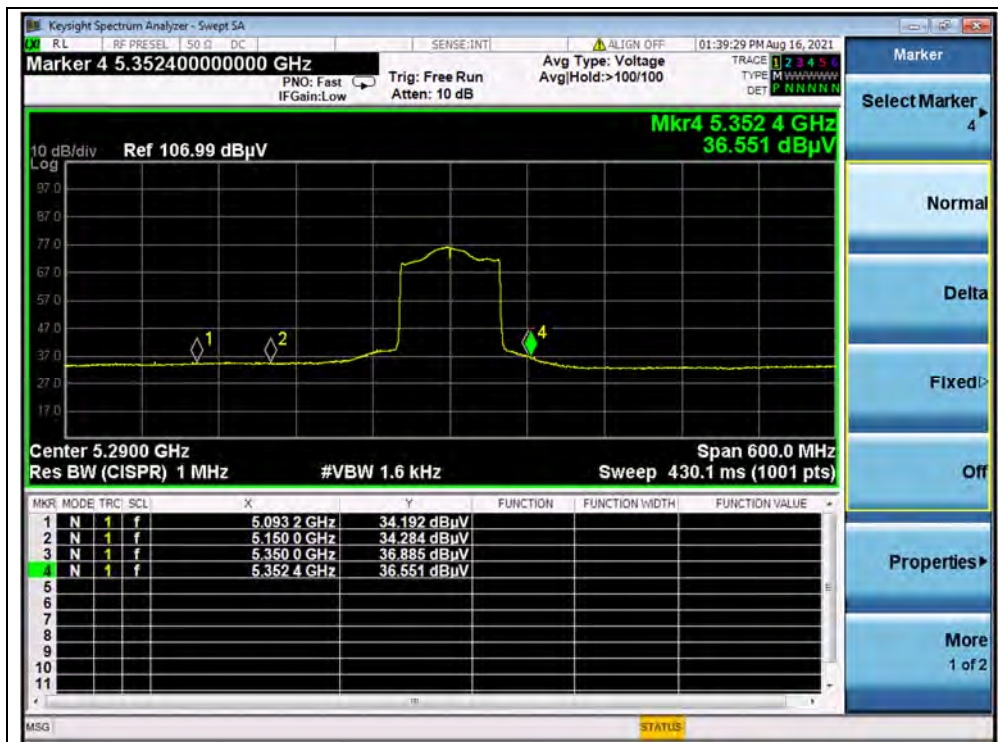
(PEAK, Channel 42, 802.11ac (VHT80))



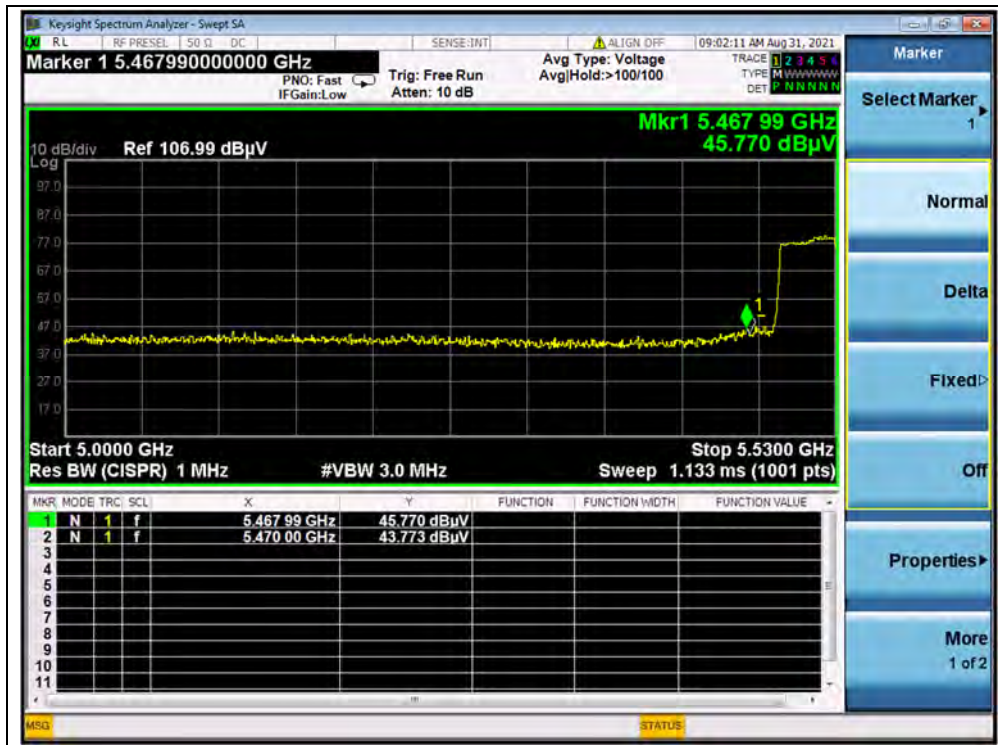
(AVERAGE, Channel 42, 802.11ac (VHT80))



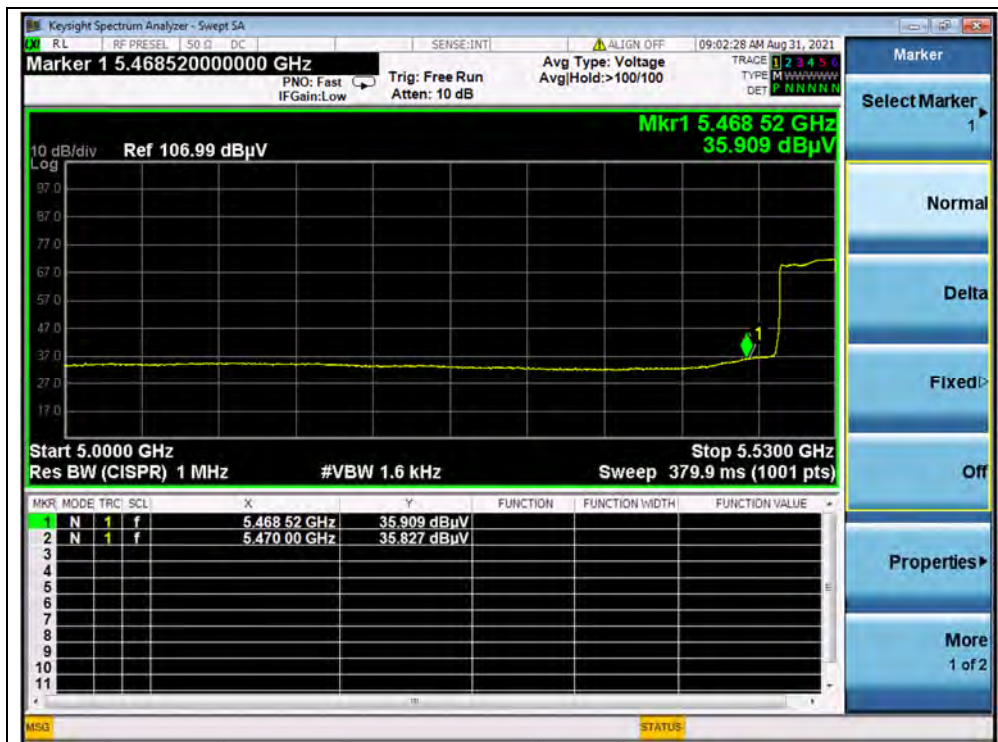
(PEAK, Channel 58, 802.11ac (VHT80))



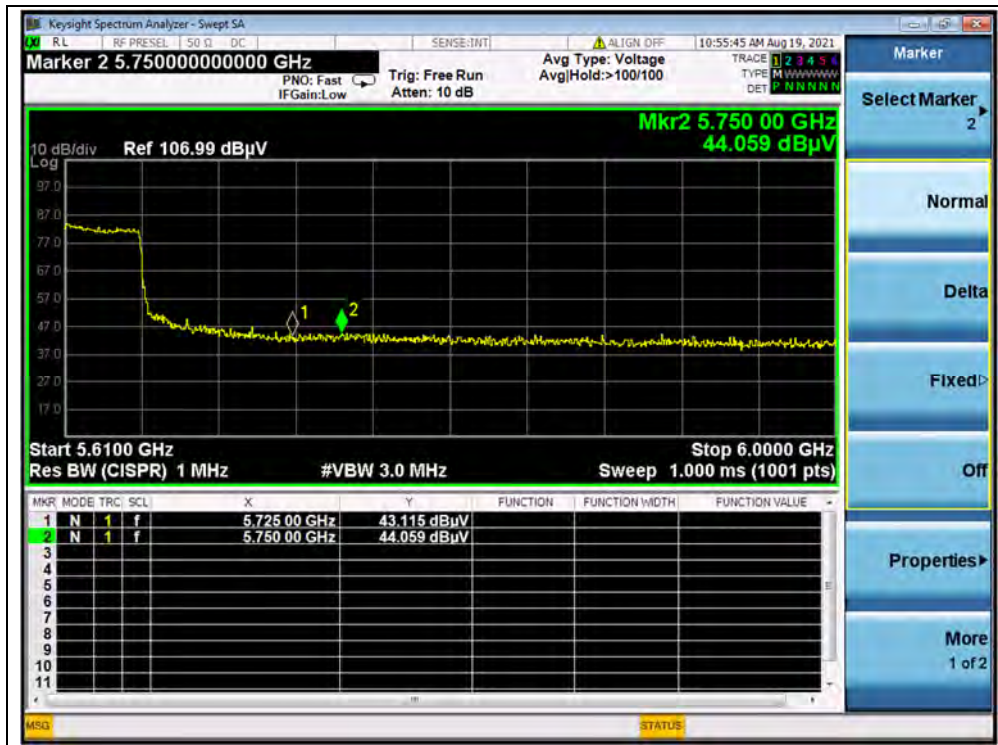
(AVERAGE, Channel 58, 802.11ac (VHT80))



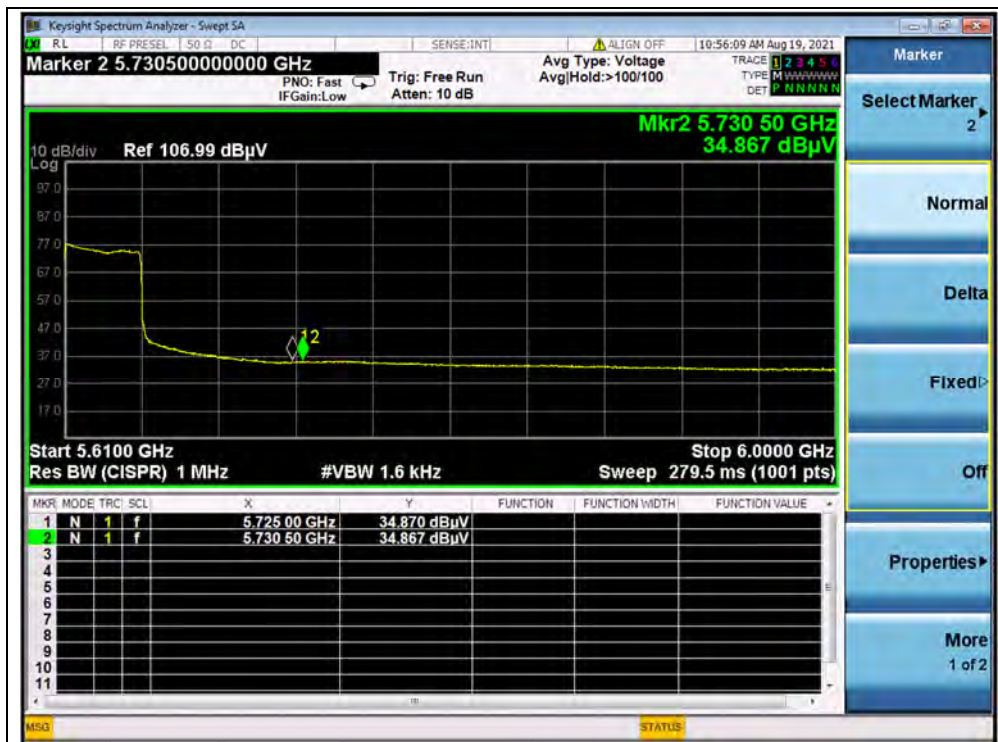
(PEAK, Channel 106, 802.11ac (VHT80))



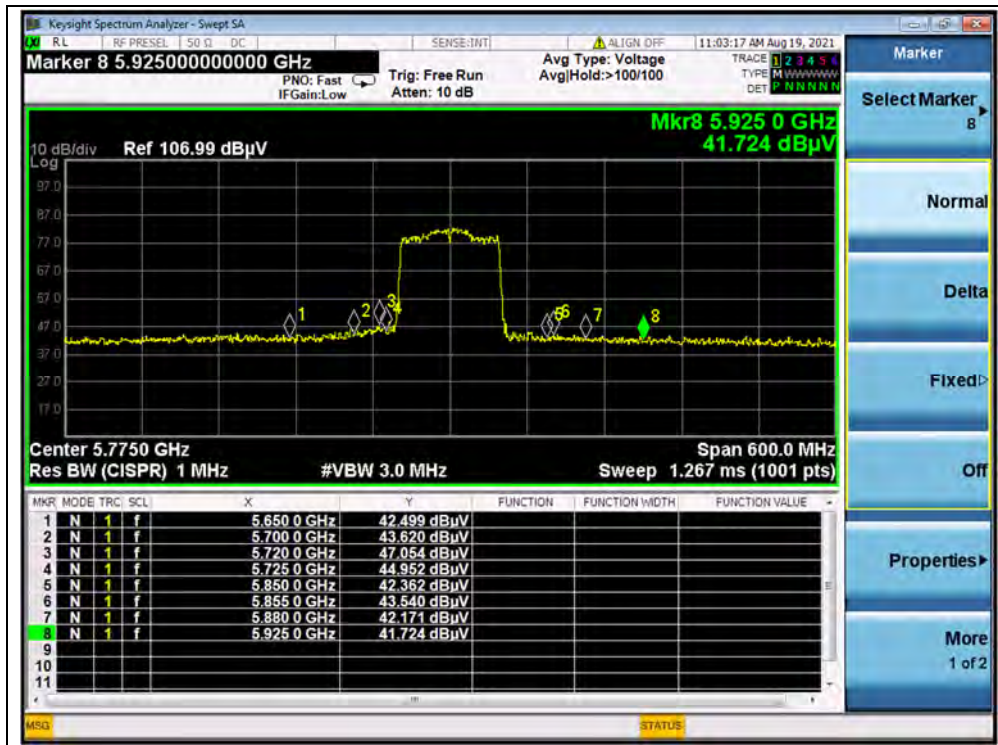
(AVERAGE, Channel 106, 802.11ac (VHT80))



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



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



(PEAK, Channel 155, 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(e.i.r.p.) to field strength (dBμV/m);

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

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

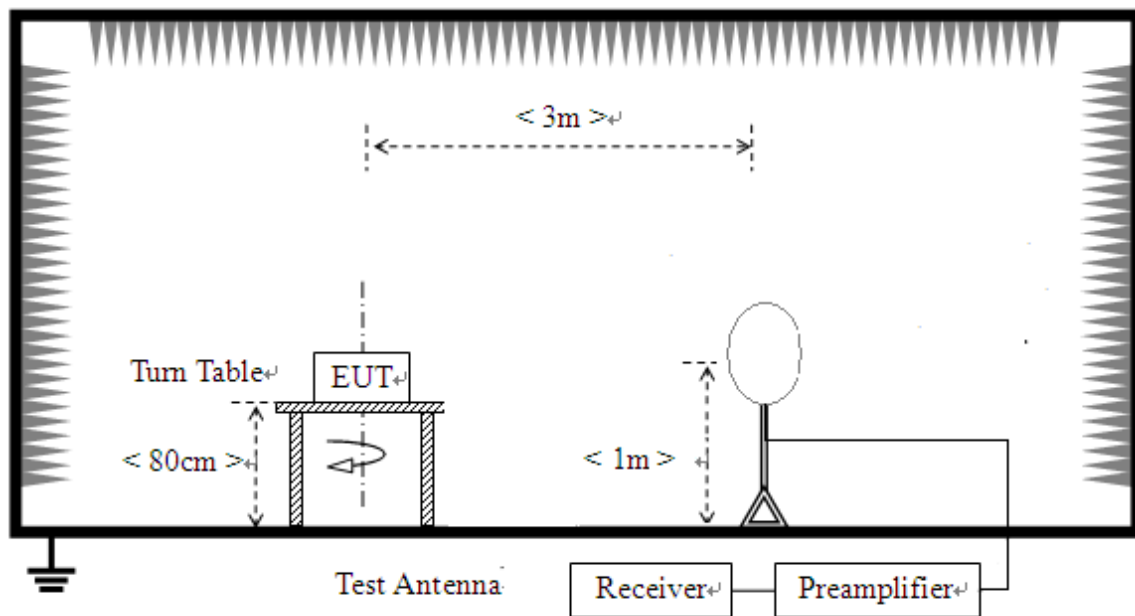


For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit. In addition, radiated emissions which fall in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

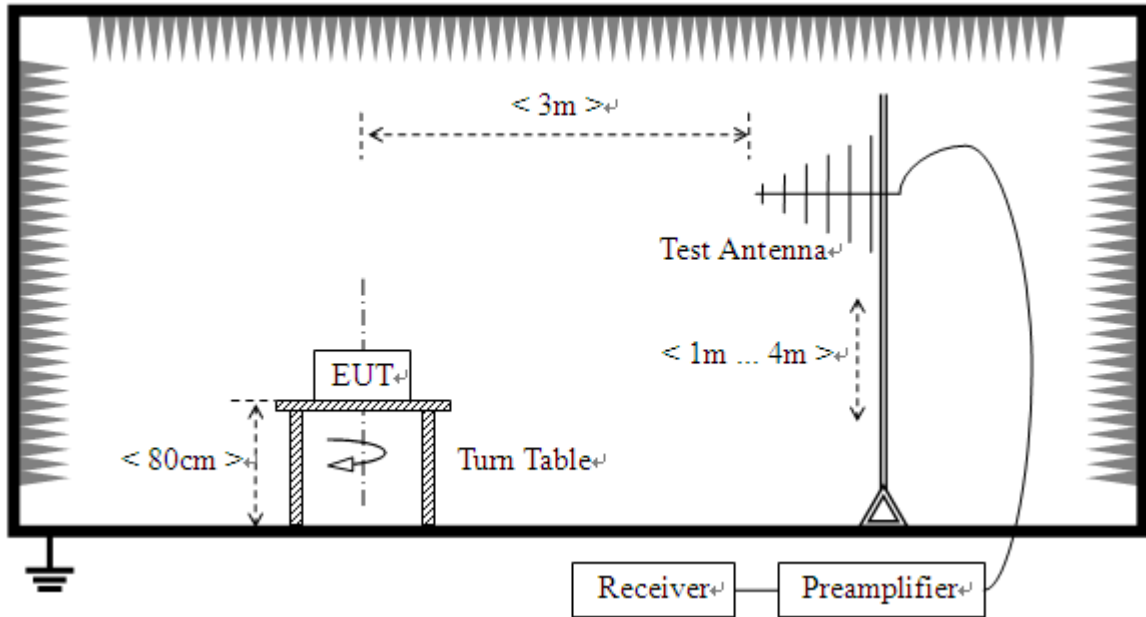
### 2.9.2. Test Description

#### Test Setup:

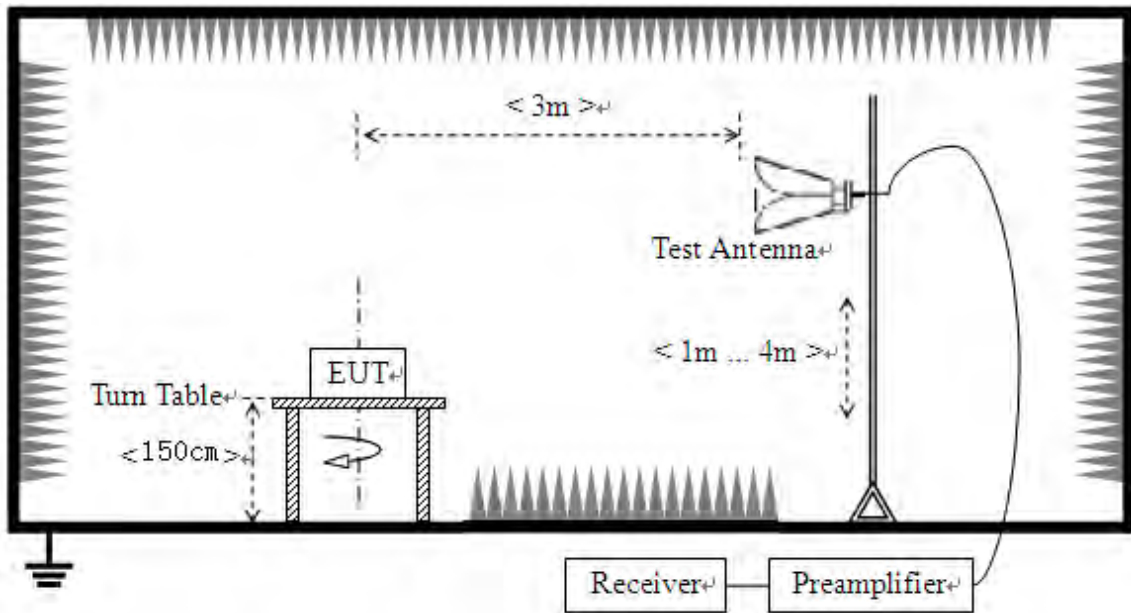
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.



For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

### 2.9.3. Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform a quasi-peak measurement (or average).

The measurement results are obtained as below:

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

$A_T$ : Total correction Factor except Antenna

$U_R$ : Receiver Reading

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

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

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

**Note 1:** 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.

**Note 2:** 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.

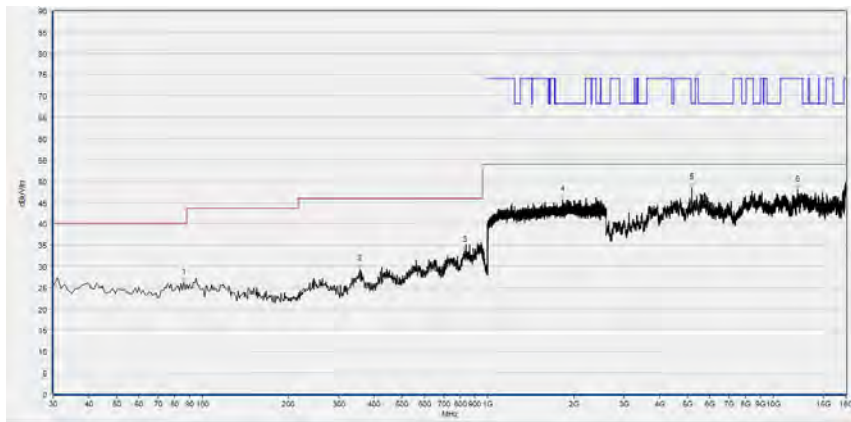
**Note 3:** For the frequency, which started from 18GHz to 40GHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

**Note 4:** All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.



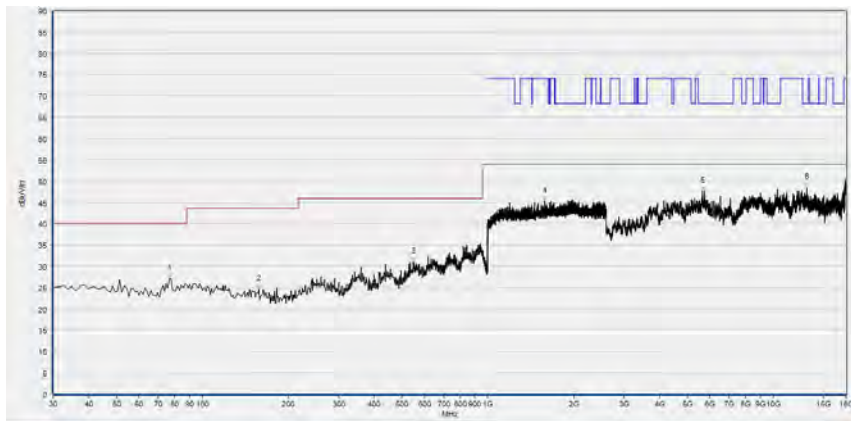
**802.11a Mode**

**Plot 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
86.260	26.12	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
355.920	29.29	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
828.310	33.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1829.867	45.64	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5181.040	48.42	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12184.960	47.91	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

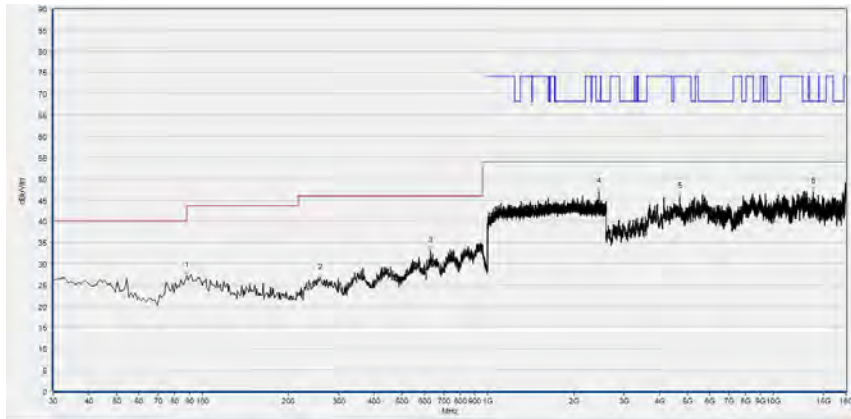
(Antenna Horizontal, 30MHz to 18GHz)



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
76.560	27.20	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
158.040	24.62	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
547.980	31.01	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1585.067	45.17	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5649.200	47.52	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13087.400	48.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

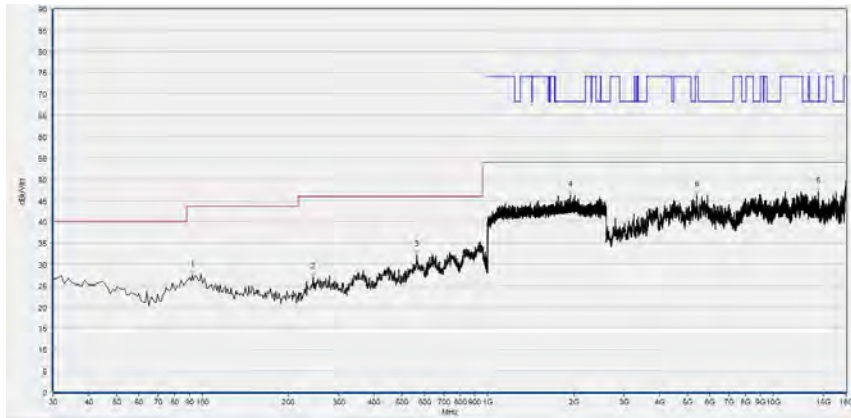
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
88.200	27.11	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
258.920	26.70	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
628.490	33.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2455.467	46.96	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
4709.800	45.73	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
13835.840	46.91	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

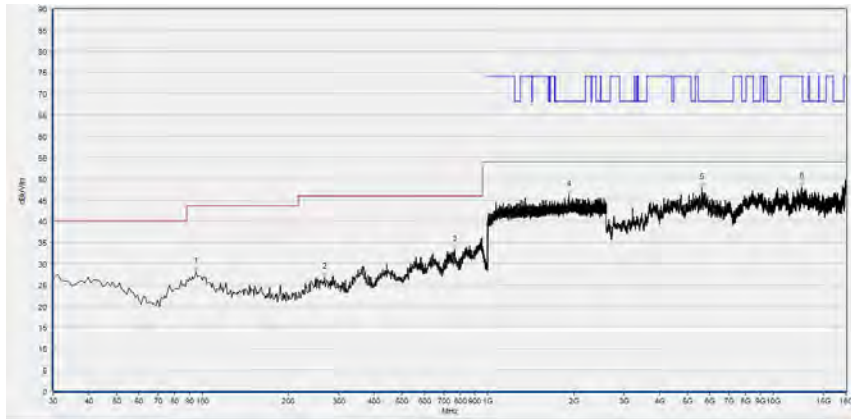
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
92.080	27.43	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
244.370	26.91	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
564.470	32.16	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1943.467	46.23	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5399.720	46.23	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
14408.720	47.02	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

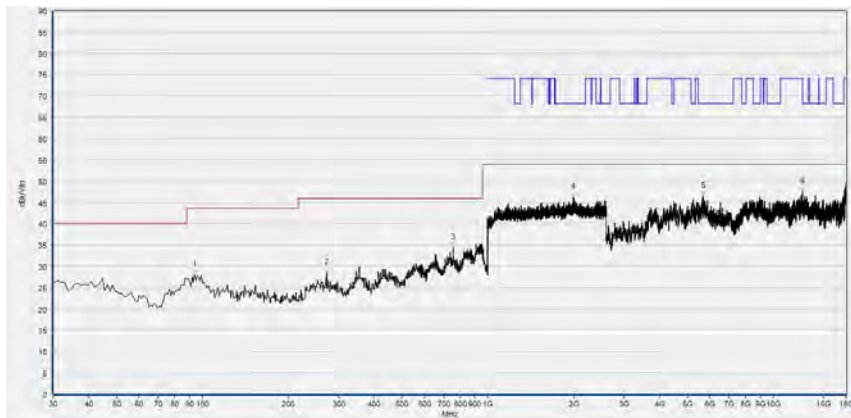
(Antenna Vertical, 30MHz to 18GHz)

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
94.990	28.19	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
268.620	26.86	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
765.260	33.27	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1924.800	46.30	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5618.400	48.00	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12613.080	48.16	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

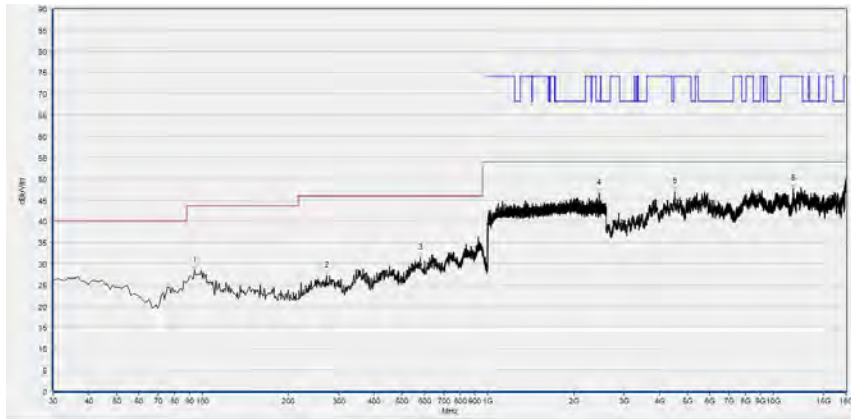
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
94.020	27.93	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
273.470	28.47	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
757.500	34.40	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1993.600	46.27	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5686.160	46.39	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12628.480	47.51	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

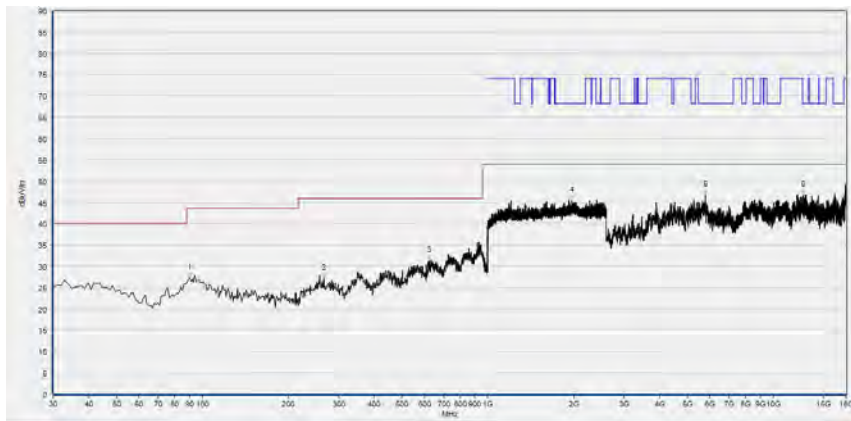
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
94.020	28.40	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
272.500	27.20	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
580.960	31.40	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2457.600	46.56	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
4506.520	46.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
11741.440	47.54	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

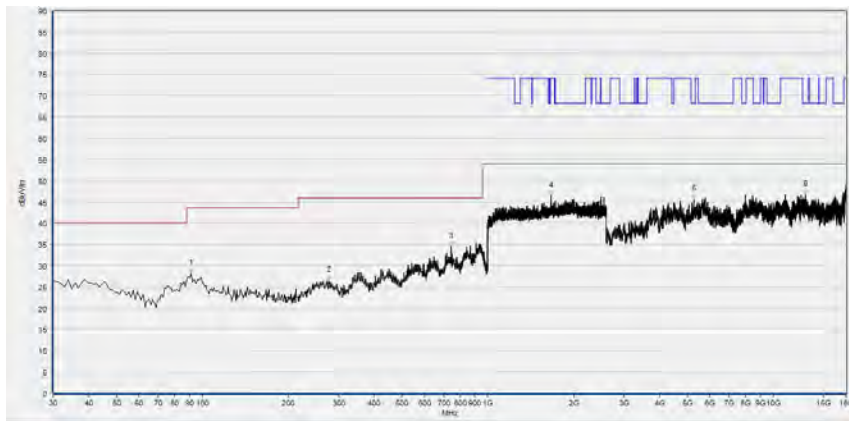
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
90.140	27.35	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
266.680	27.09	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
622.670	31.27	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1965.867	45.43	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5775.480	46.74	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12736.280	46.77	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

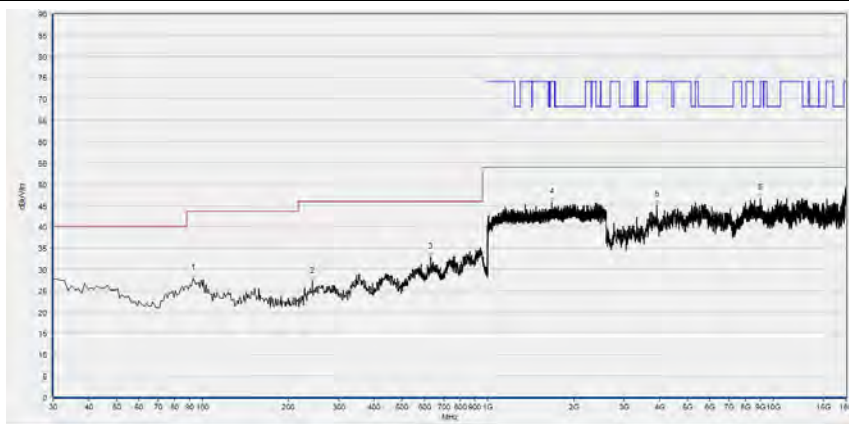
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
91.110	28.24	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
277.350	26.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
744.890	34.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1668.800	46.48	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5261.120	45.52	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12995.000	46.81	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

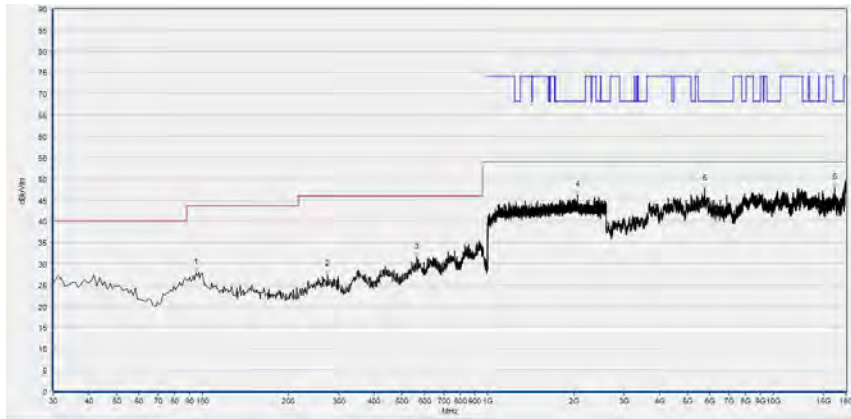


Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
93.050	27.84	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
242.430	27.17	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
630.430	32.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1678.933	45.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3909.000	45.10	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9031.040	46.81	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

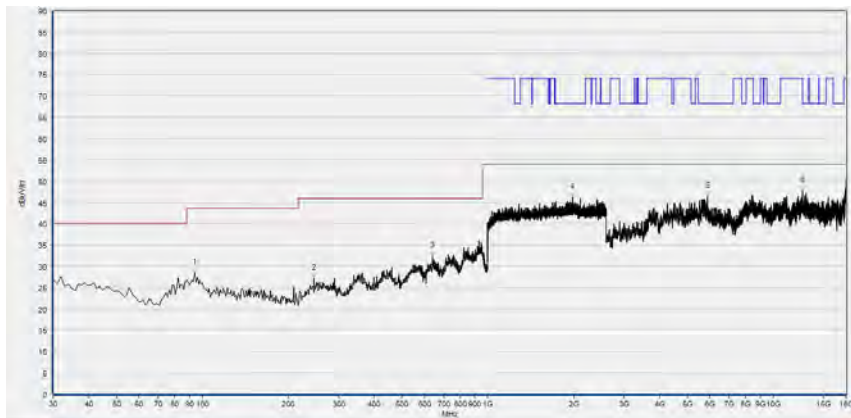


Plot for Channel 64



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
94.990	27.85	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
274.440	27.53	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
563.500	31.50	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2066.133	46.28	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5750.840	47.57	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
16407.640	47.90	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

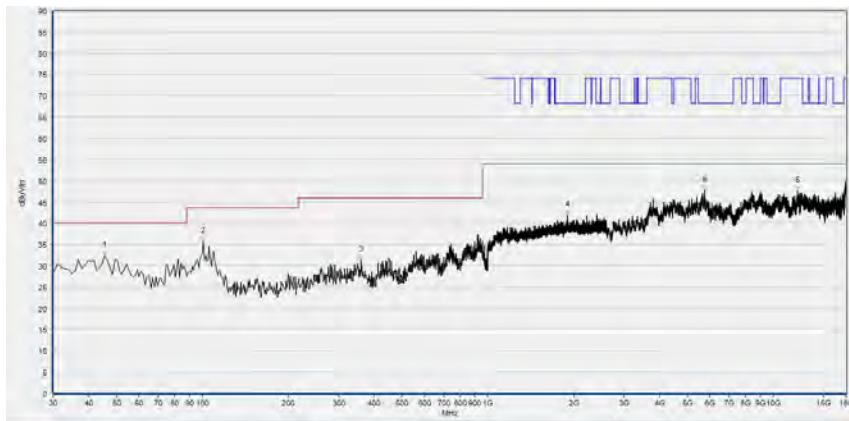
(Antenna Horizontal, 30MHz to 18GHz)



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
94.020	28.53	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.310	27.07	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
640.130	32.36	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1980.267	46.23	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5880.200	46.41	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12680.840	47.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

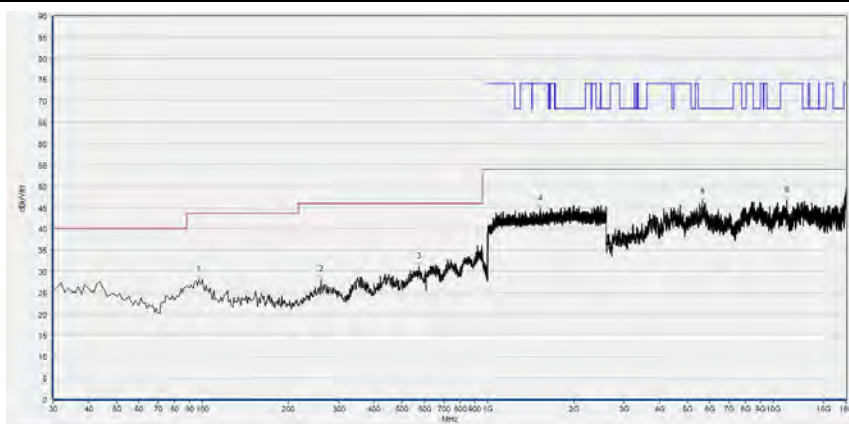
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
45.520	32.38	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
100.810	35.73	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
359.800	31.42	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1906.133	41.87	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5750.840	47.68	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12188.040	47.63	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

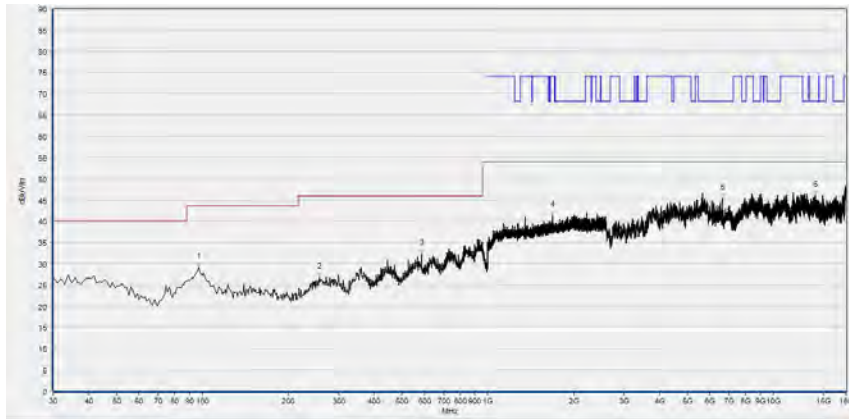
(Antenna Horizontal, 30MHz to 18GHz)



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
96.930	28.02	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
259.890	28.06	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
575.140	30.94	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1528.000	44.51	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5636.880	46.19	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
11150.080	46.52	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

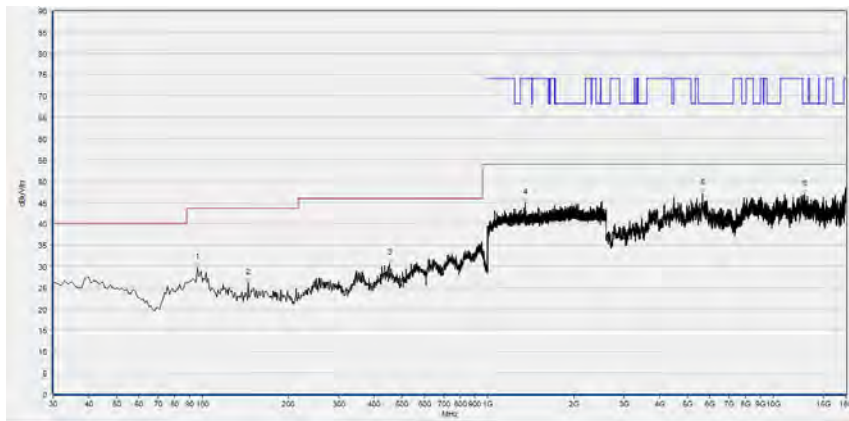
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
96.930	29.23	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
256.980	26.83	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
585.810	32.35	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1682.133	41.46	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6631.720	45.48	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
14057.600	46.06	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

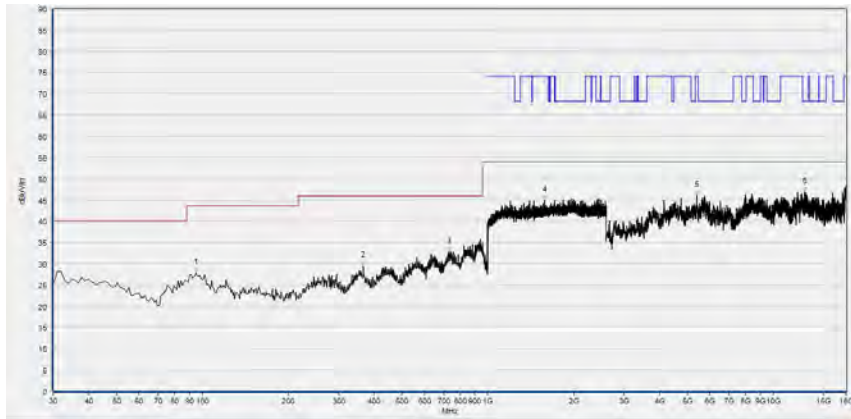
(Antenna Horizontal, 30MHz to 18GHz)



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
95.960	29.63	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
144.460	26.09	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
451.950	30.71	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1349.867	44.97	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5649.200	47.03	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12877.960	46.86	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

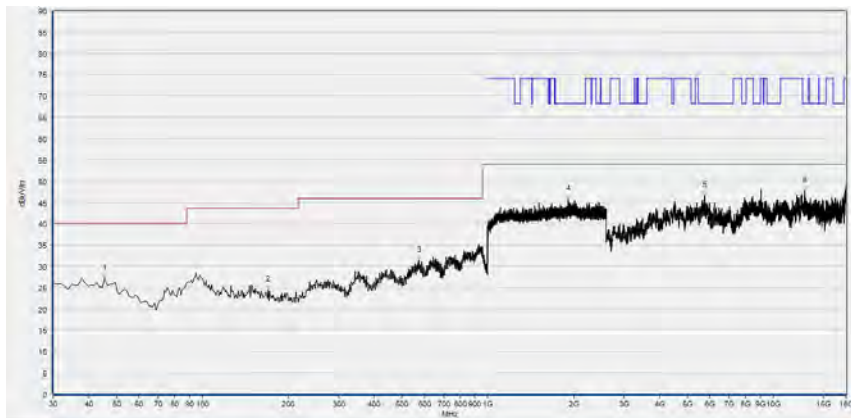
(Antenna Vertical, 30MHz to 18GHz)

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
94.990	27.75	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
366.590	29.55	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
729.370	32.68	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1577.600	45.00	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5399.720	46.04	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12862.560	46.96	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

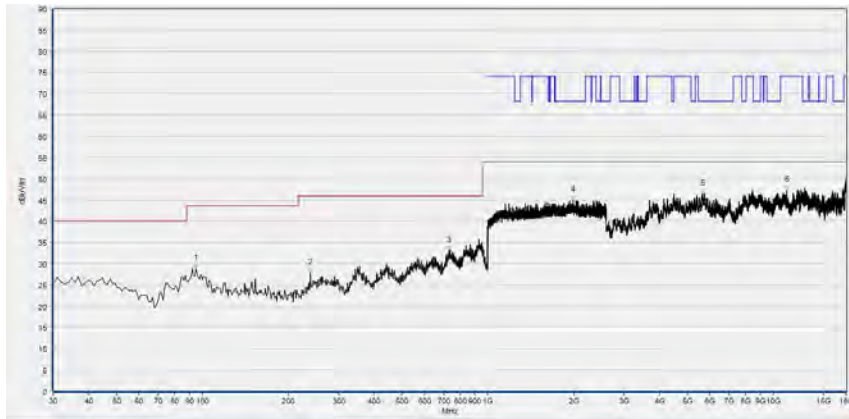
(Antenna Horizontal, 30MHz to 18GHz)



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
45.520	27.09	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
169.680	24.45	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
573.200	31.34	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1908.800	45.68	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5744.680	46.62	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12893.360	47.70	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

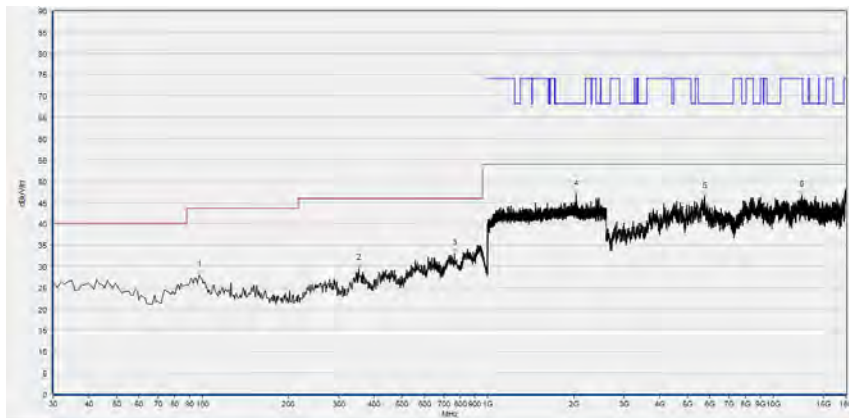
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
94.990	28.74	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
239.520	27.82	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
732.280	32.98	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1992.000	44.99	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5646.120	46.37	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
11165.480	47.27	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

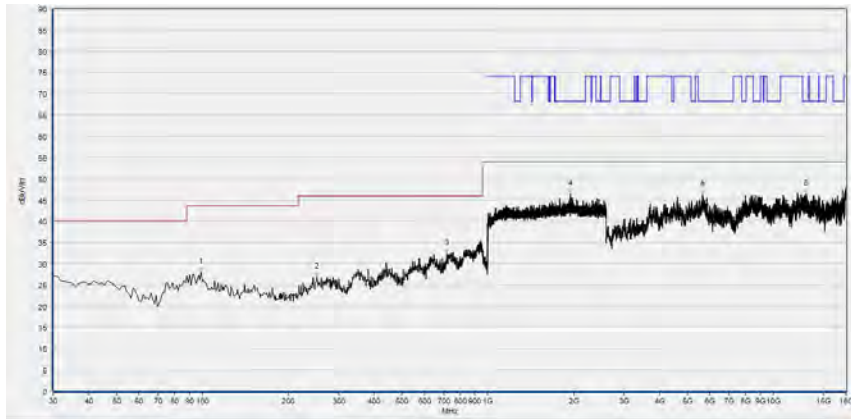
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	28.03	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
353.010	29.44	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
763.320	32.94	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2037.867	46.85	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5750.840	46.50	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12613.080	46.79	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

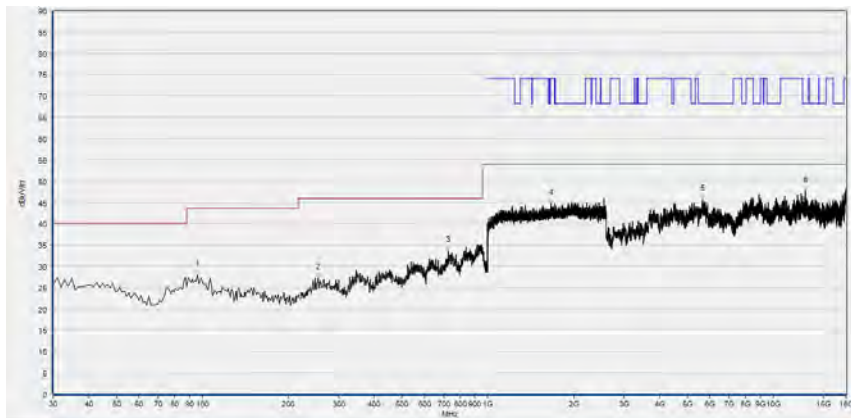
(Antenna Vertical, 30MHz to 18GHz)

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
98.870	28.04	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
252.130	26.90	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
719.670	32.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1946.133	46.39	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5639.960	46.29	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
13050.440	46.35	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

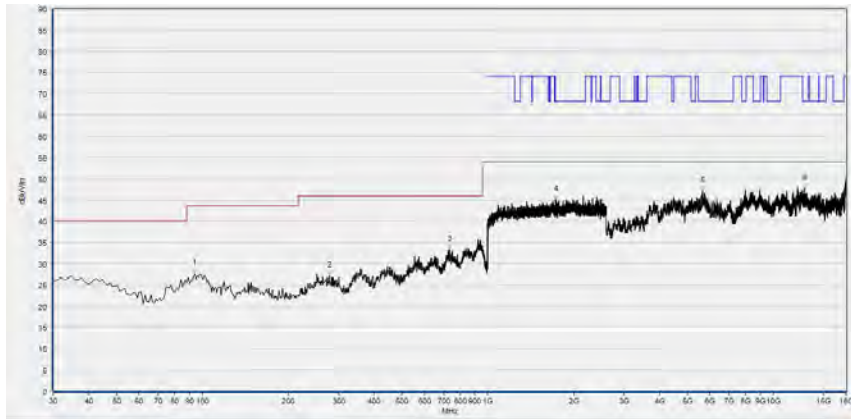
(Antenna Horizontal, 30MHz to 18GHz)



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
95.960	27.91	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
255.040	27.37	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
728.400	33.75	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1664.533	44.78	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5652.280	45.73	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12930.320	47.71	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

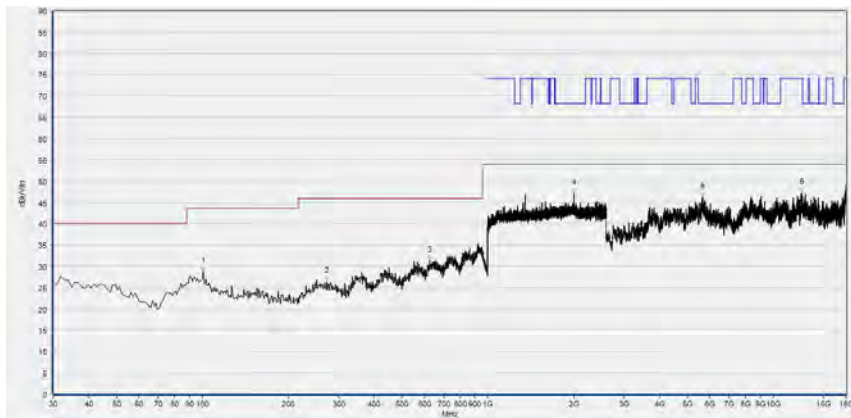
(Antenna Vertical, 30MHz to 18GHz)

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
94.020	27.61	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
278.320	27.07	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
733.250	33.32	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1738.133	45.06	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5658.440	47.10	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12881.040	47.83	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



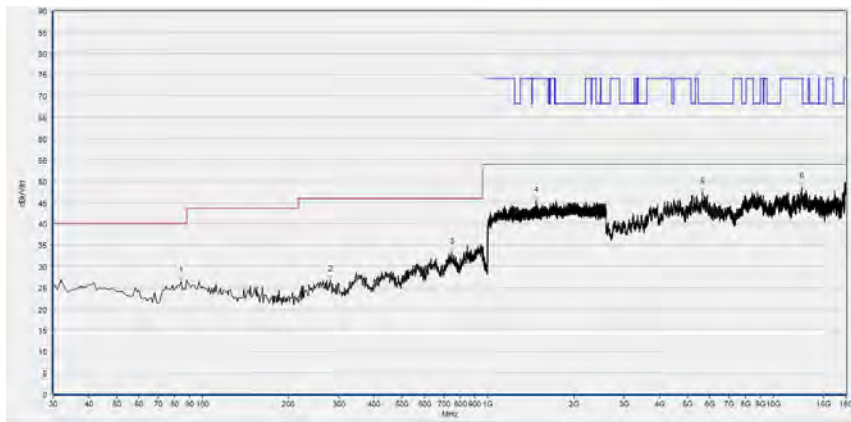
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
100.810	28.85	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
273.470	26.44	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.580	31.34	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1999.467	47.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5636.880	46.25	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12588.440	47.21	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)



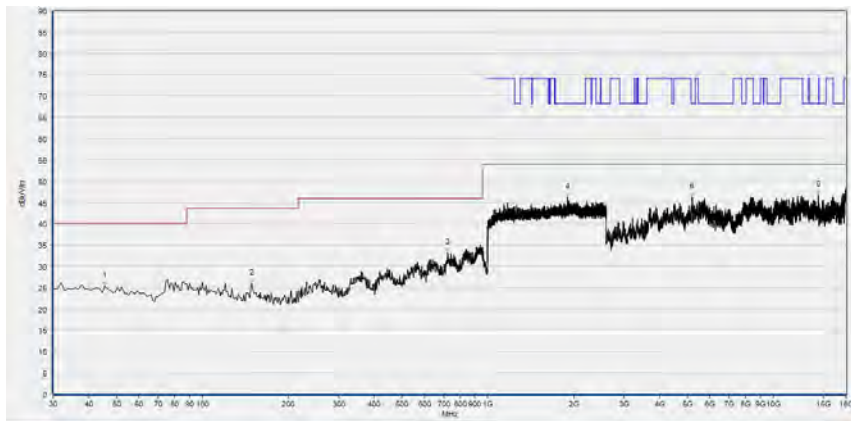
**802.11n (HT40) mode**

**Plot 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
84.320	26.54	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
280.260	26.87	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
747.800	33.42	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1476.800	45.43	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5652.280	47.41	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12613.080	48.54	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

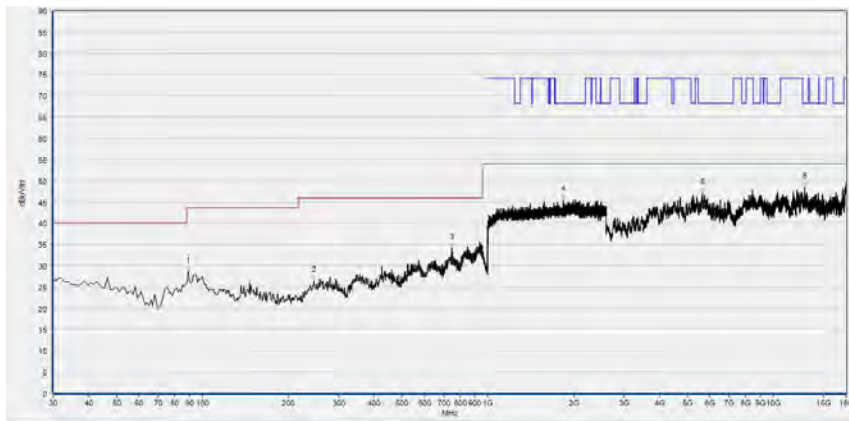


Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
45.520	25.25	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
149.310	25.90	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
723.550	33.23	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1898.133	46.18	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5196.440	46.33	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
14402.560	46.79	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

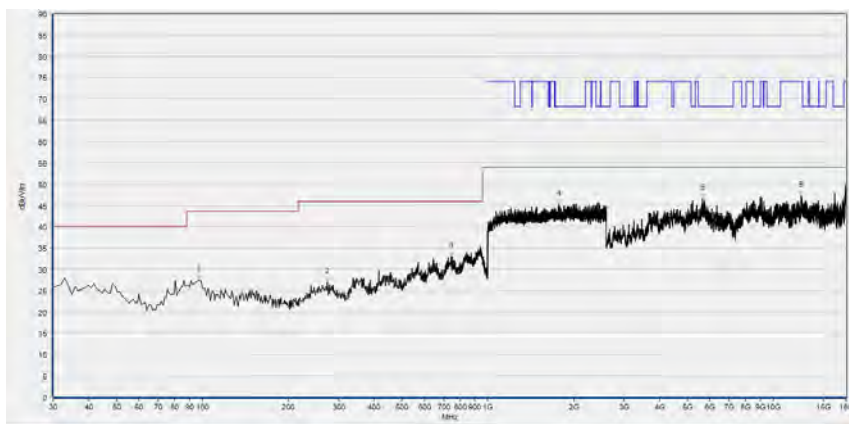


Plot for Channel 46



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
89.170	28.62	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
246.310	26.49	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
745.860	34.17	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1842.133	45.57	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5643.040	47.12	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12905.680	48.37	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

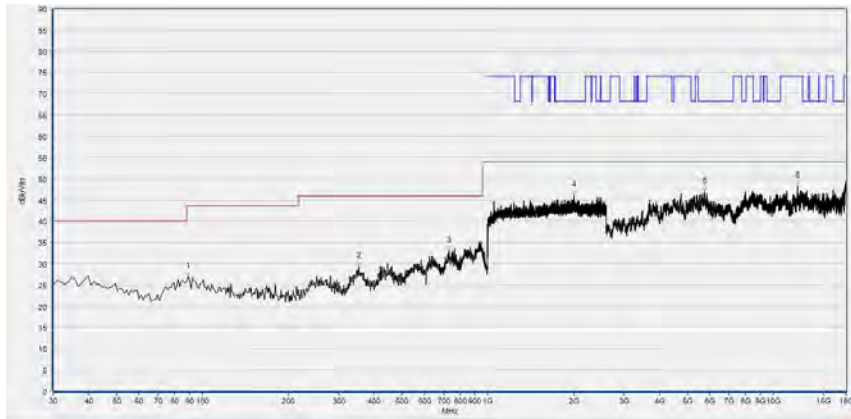
(Antenna Horizontal, 30MHz to 18GHz)



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
96.930	27.52	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
274.440	26.95	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
741.980	33.08	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1771.200	45.19	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5655.360	46.65	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12520.680	47.31	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

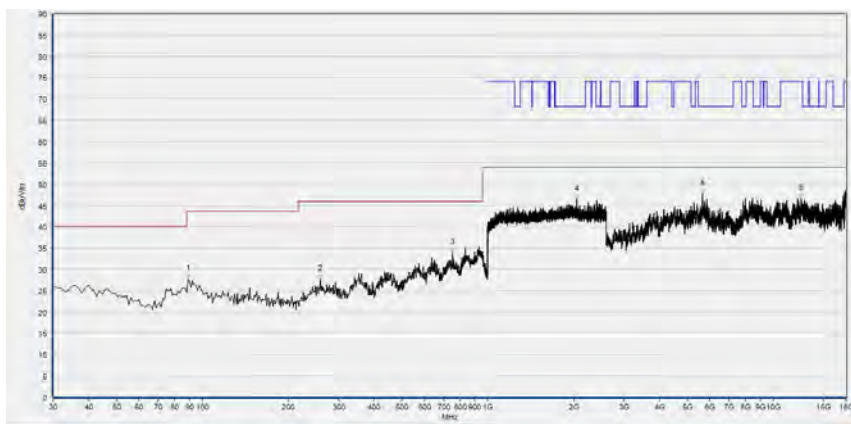
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 54



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
89.170	27.03	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
353.010	29.29	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
732.280	32.97	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2001.600	46.04	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5750.840	46.90	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12169.560	48.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

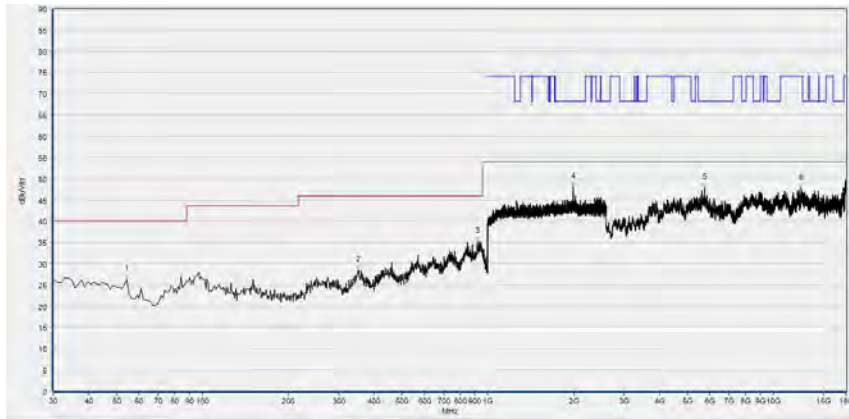
(Antenna Horizontal, 30MHz to 18GHz)



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
89.170	27.59	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
258.920	27.57	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
751.680	33.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2051.733	46.43	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5655.360	47.80	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12523.760	46.63	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

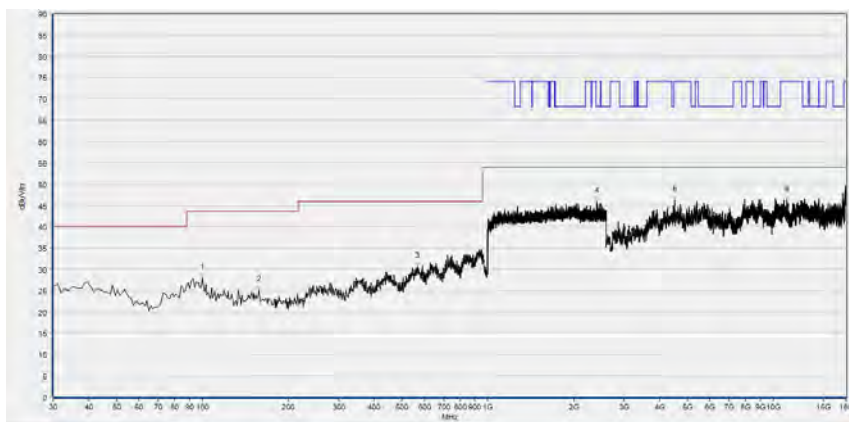
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 62



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
54.250	26.34	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
351.070	28.57	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
917.550	35.21	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1993.600	48.03	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5750.840	47.87	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12536.080	47.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

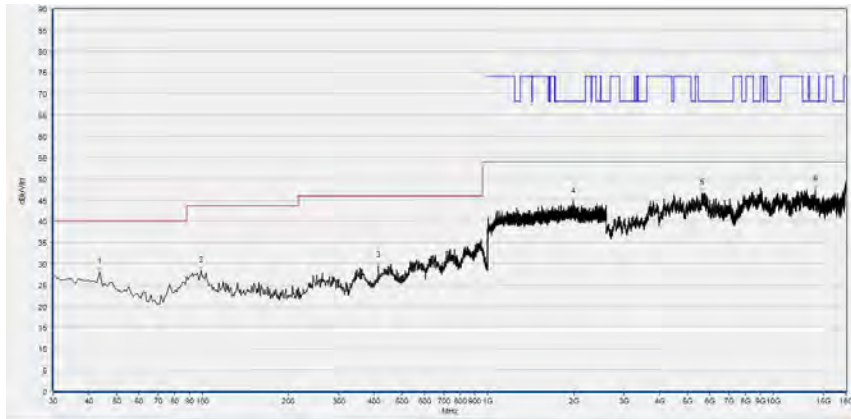
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
99.840	28.00	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
158.040	25.06	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
567.380	30.66	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2408.533	45.93	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4503.440	46.34	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
11143.920	46.19	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

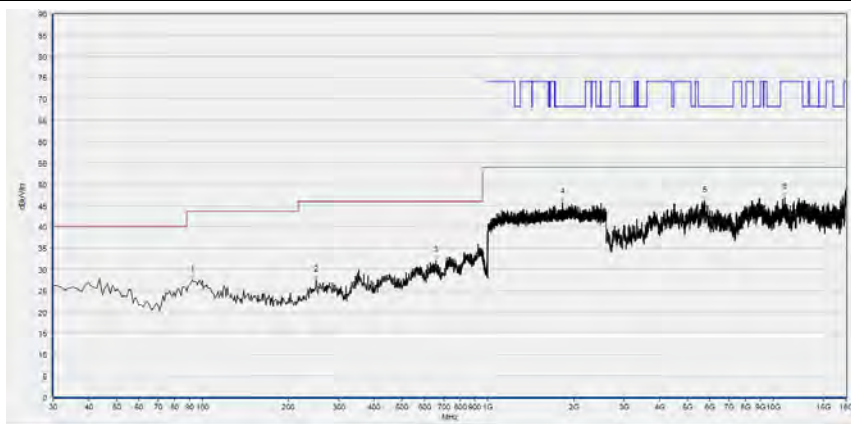
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 102



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
43.580	27.96	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
98.870	28.38	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
414.120	29.58	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1988.267	44.51	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5627.640	46.56	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
14017.560	47.42	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

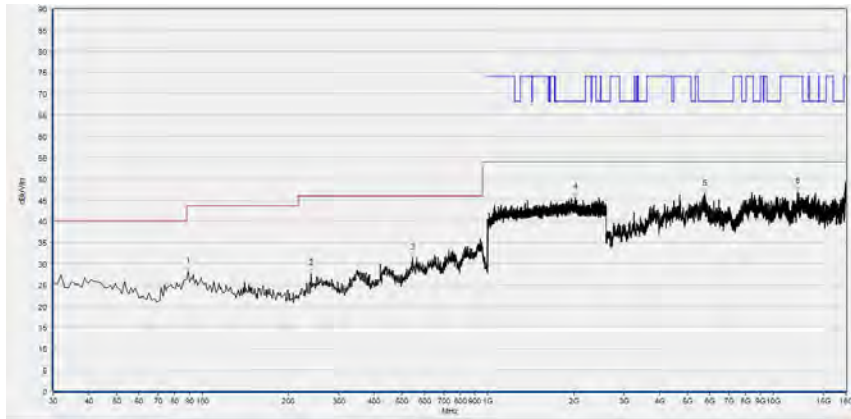
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
92.080	27.56	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
250.190	27.42	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
658.560	31.99	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1823.467	45.82	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5750.840	46.04	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
10977.600	46.84	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

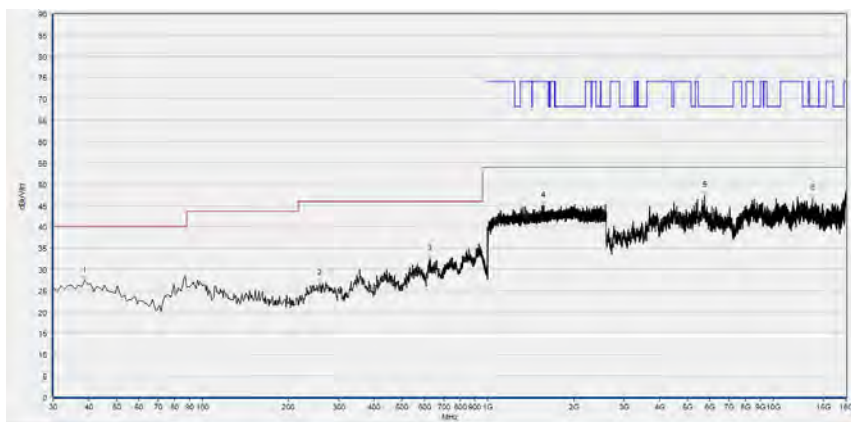
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 126



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
89.170	28.21	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
240.490	27.72	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
546.040	31.26	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2027.733	45.61	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5753.920	46.37	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12154.160	46.88	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

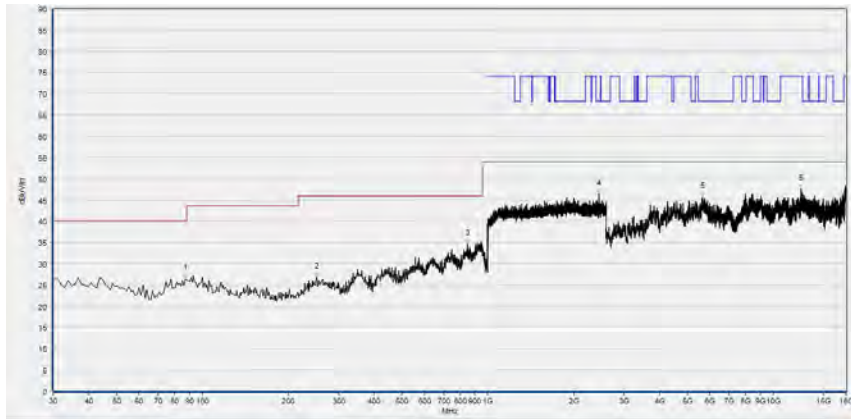
(Antenna Horizontal, 30MHz to 18GHz)



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
38.730	27.37	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
257.950	26.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
625.580	32.28	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1560.533	44.86	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5757.000	47.21	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13749.600	46.55	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

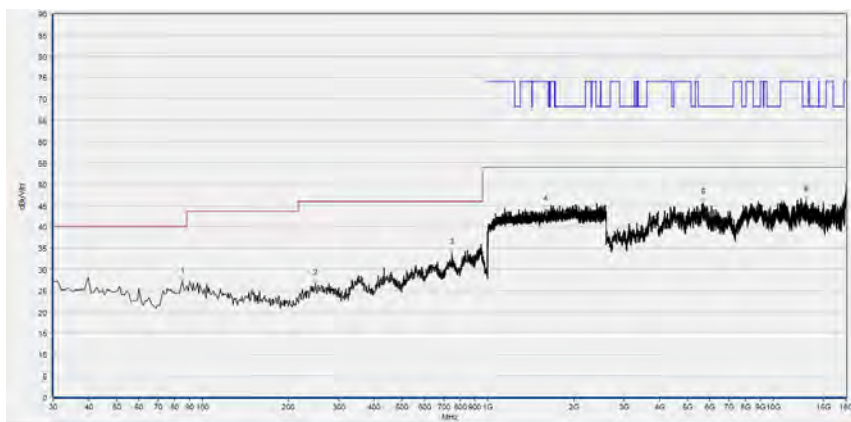
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 142



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
87.230	26.40	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
251.160	26.89	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
846.740	34.71	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2445.867	46.36	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5643.040	45.82	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12536.080	47.53	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

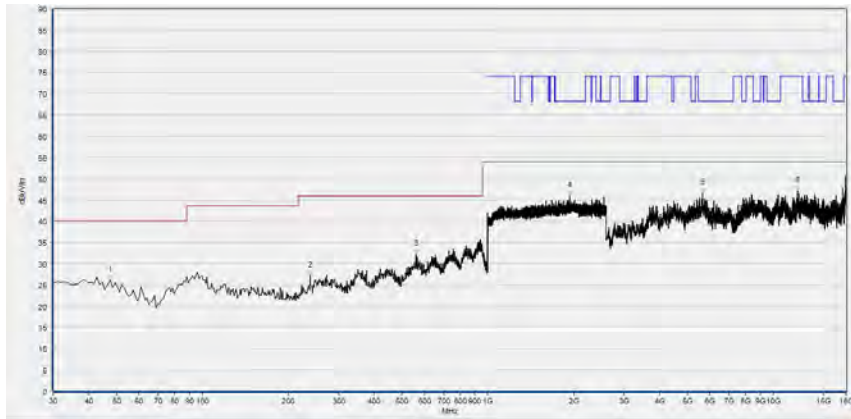
(Antenna Horizontal, 30MHz to 18GHz)



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
85.290	27.22	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
249.220	26.61	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
749.740	33.84	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1594.133	44.11	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5676.920	45.55	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
13068.920	46.30	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

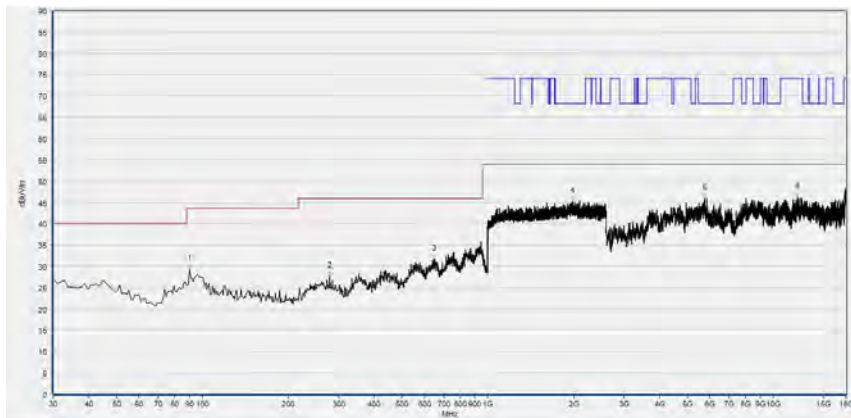
(Antenna Vertical, 30MHz to 18GHz)

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
47.460	26.11	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
238.550	27.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
560.590	32.19	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1930.133	45.91	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5639.960	46.67	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12151.080	47.10	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

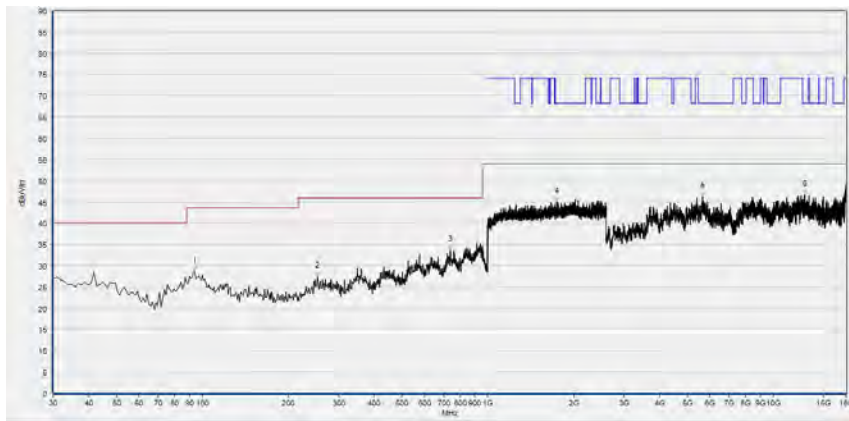
(Antenna Horizontal, 30MHz to 18GHz)



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
90.140	29.35	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
278.320	27.61	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
648.860	31.70	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1985.067	45.17	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5760.080	45.95	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12144.920	46.17	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

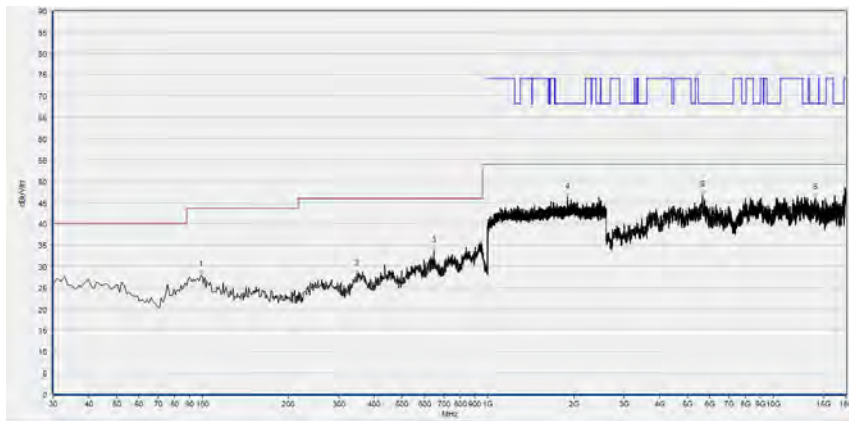
(Antenna Vertical, 30MHz to 18GHz)

Plot 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
94.020	28.64	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
253.100	27.41	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
737.130	33.67	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1744.000	45.07	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5643.040	46.28	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12884.120	46.69	N/A	N/A	68.23	N/A	N/A	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
98.870	27.99	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
348.160	28.15	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
646.920	33.46	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1902.400	46.29	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5667.680	46.83	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
14082.240	46.14	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

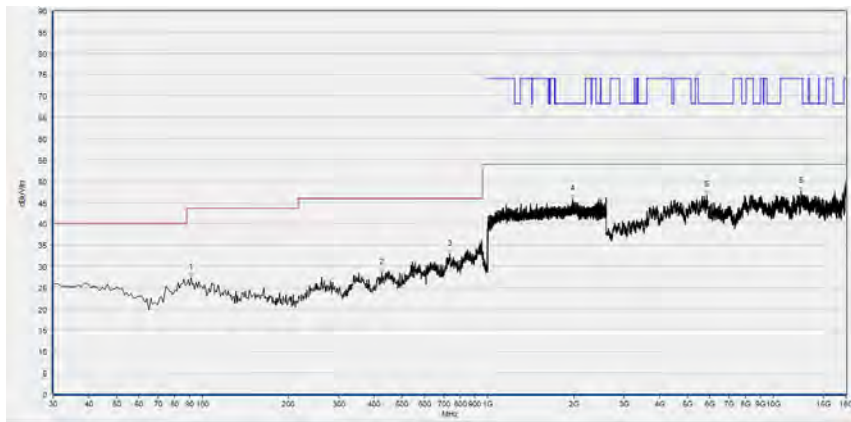
(Antenna Vertical, 30MHz to 18GHz)





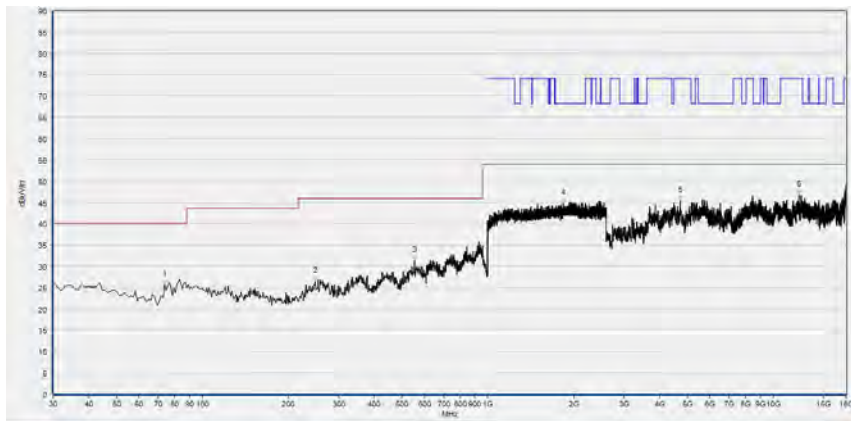
**802.11ac (VHT80) Mode**

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
91.110	27.26	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
424.790	28.55	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
735.190	32.89	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1980.800	45.72	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5846.320	46.70	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12520.680	47.62	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

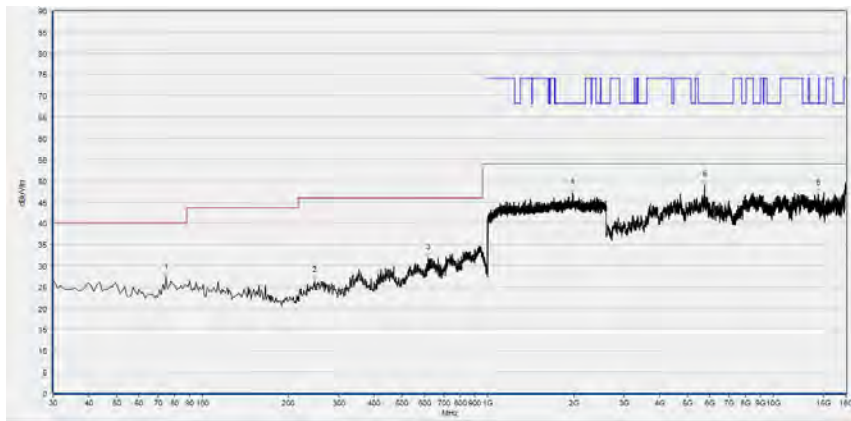
(Antenna Horizontal, 30MHz to 18GHz)



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
73.650	25.67	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
248.250	26.56	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
552.830	31.42	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1838.933	44.67	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4715.960	45.49	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12302.000	46.72	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

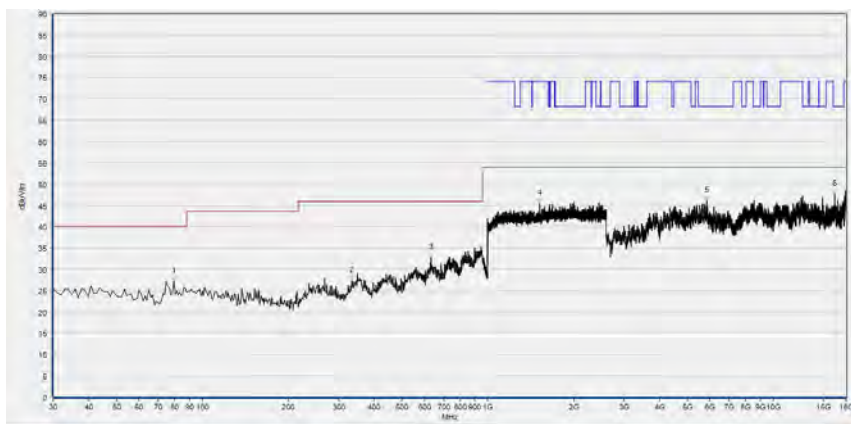
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 58



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
74.620	27.12	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
247.280	26.43	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
618.790	31.79	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1982.933	47.12	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5763.160	48.92	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
14408.720	46.87	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

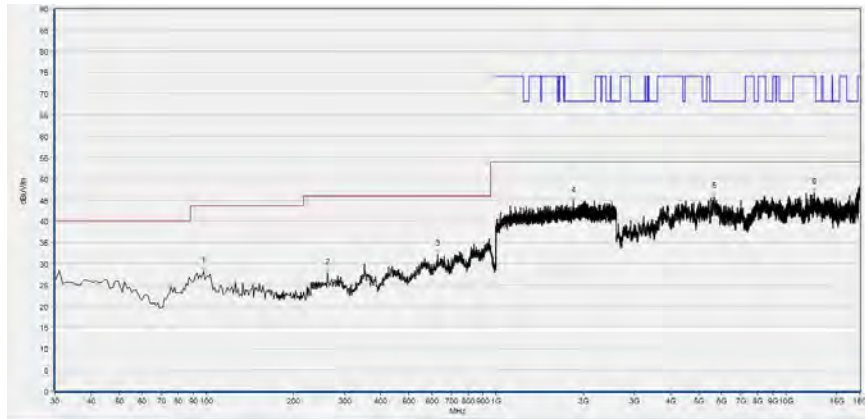
(Antenna Horizontal, 30MHz to 18GHz)



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
79.470	27.12	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
334.580	27.36	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
633.340	32.62	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1518.400	45.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5837.080	46.11	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
16389.160	47.56	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

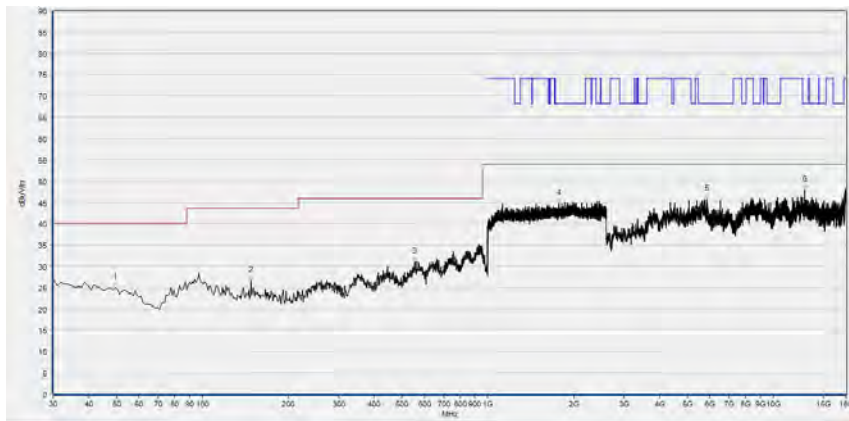
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 106



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.900	28.19	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
261.830	27.79	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
627.520	32.23	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1844.267	44.68	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5636.880	45.75	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12502.200	46.79	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

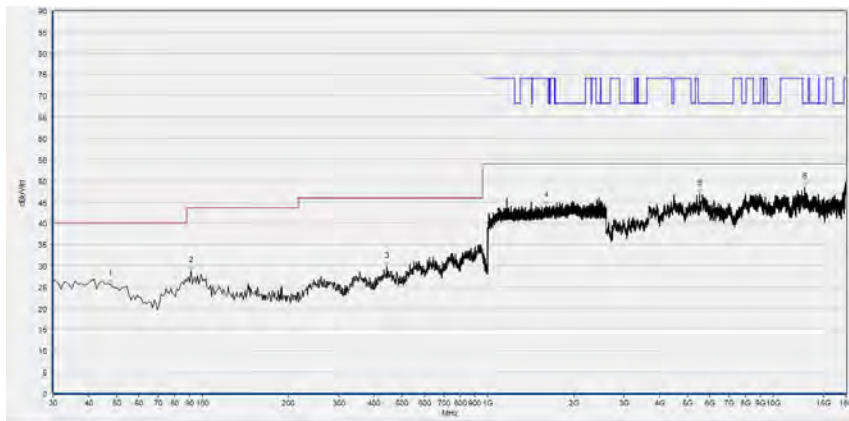
(Antenna Horizontal, 30MHz to 18GHz)



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
49.400	24.95	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
148.340	26.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
553.800	30.95	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1776.000	44.72	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5858.640	45.73	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12893.360	47.95	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

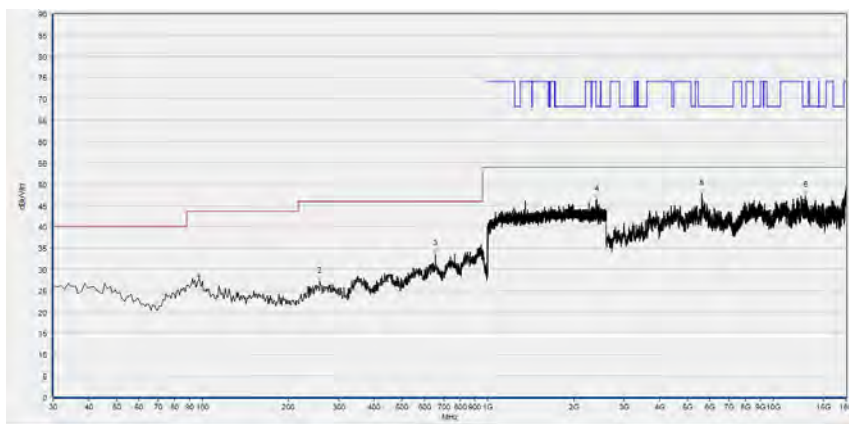
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 122



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
47.460	25.62	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
91.110	28.85	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
442.250	29.88	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1600.533	44.02	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5519.840	46.84	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12887.200	48.39	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

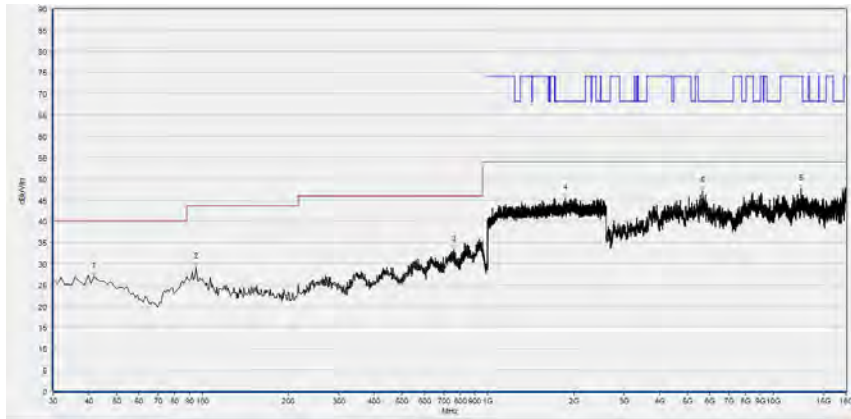
(Antenna Horizontal, 30MHz to 18GHz)



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
96.930	27.84	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
257.950	27.09	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
656.620	33.54	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2407.467	46.42	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5627.640	47.83	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12945.720	47.20	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

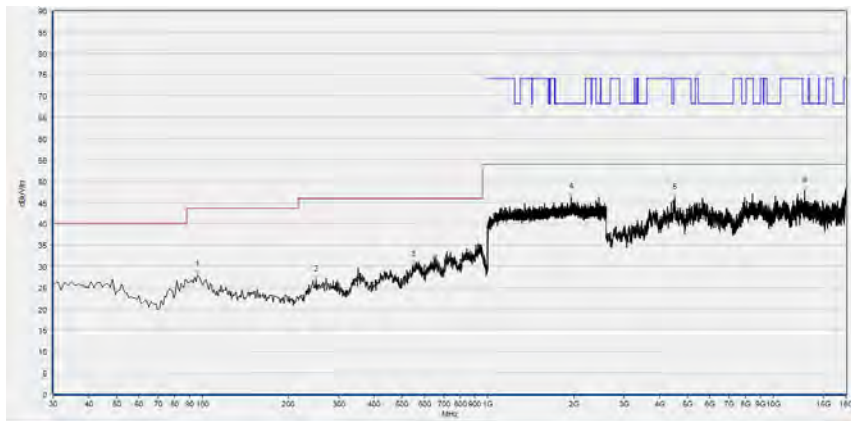
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 138



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
41.640	27.06	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
94.990	29.15	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
762.350	33.35	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1869.333	45.38	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5646.120	47.07	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12539.160	47.62	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

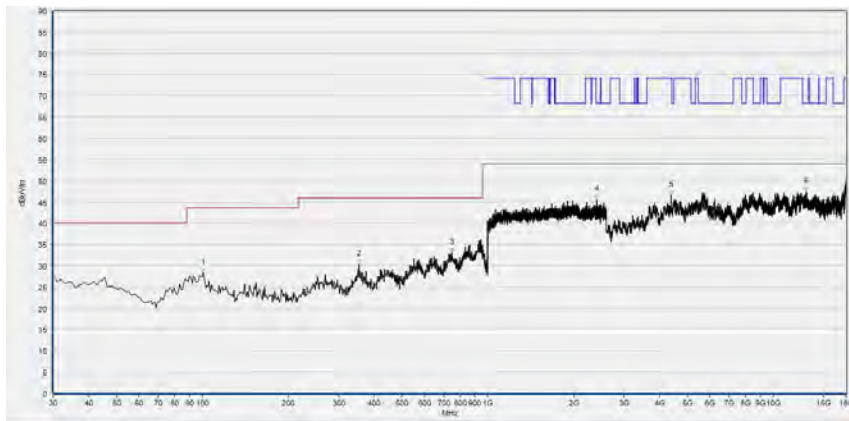
(Antenna Horizontal, 30MHz to 18GHz)



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
95.960	27.99	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
250.190	26.78	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
547.980	30.37	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1956.267	46.30	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
4512.680	46.07	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12877.960	47.83	N/A	N/A	68.23	N/A	N/A	Vertical	PASS

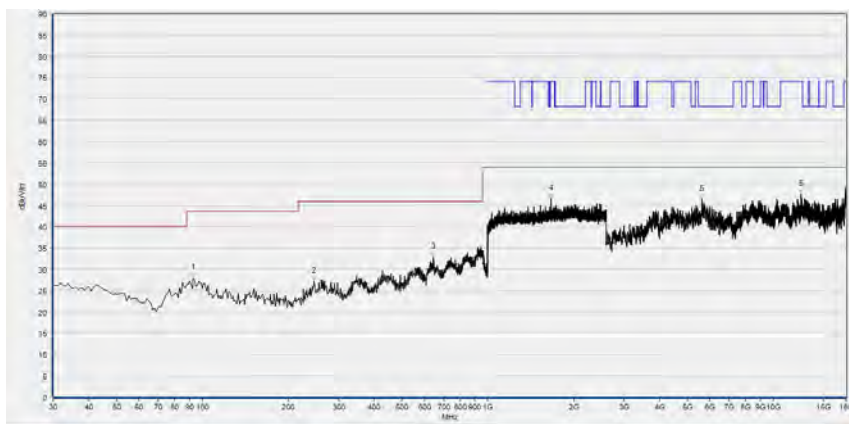
(Antenna Vertical, 30MHz to 18GHz)

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
100.810	28.24	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
353.980	30.31	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
749.740	33.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2412.267	45.66	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
4392.560	46.58	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
13059.680	47.36	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
93.050	28.01	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
246.310	27.16	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
643.040	32.88	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1666.133	46.55	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5633.800	46.48	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12514.520	47.65	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)



## Annex A Test Uncertainty

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

Test Items	Uncertainty
Peak Output Power	±2.22dB
Power Spectral Density	±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

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

### 2. Identification of the Responsible Testing Location

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

### 3. Facilities and Accreditations

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





#### 4. Test Equipments Utilized

##### 4.1 Conducted Test Equipments

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Attenuator 1	N/A	10dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2021.03.25	2022.03.24
USB Wideband Power Sensor	MY54210011	U2021XA	Agilent	2021.03.25	2022.03.24
RF Cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial Cable	CB02	RF02	Morlab	N/A	N/A
SMA Connector	CN01	RF03	HUBER-SUHNER	N/A	N/A
Temperature Chamber	12108015	DTL-003S101	YOMA	2020.10.26	2021.10.25

##### 4.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2021.03.09	2022.03.08
LISN	812744	NSLK 8127	Schwarzbeck	2021.03.09	2022.03.08
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2021.07.21	2022.07.20
Coaxial Cable(BNC) (30MHz-26GHz)	CB01	EMC01	Morlab	N/A	N/A

##### 4.3 List of Software Used

Description	Manufacturer	Software Version
Test System	Tonscend	V2.6
Power Panel	Agilent	V3.8
MORLAB EMCR V1.2	MORLAB	V1.0
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

**4.4 Radiated Test Equipments**

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY54130016	N9038A	Agilent	2021.07.16	2022.07.15
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.24	2022.05.23
Test Antenna - Horn	BBHA9170 #774	BBHA 9170	Schwarzbeck	2019.07.26	2022.07.25
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2019.02.14	2022.02.13
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2019.07.26	2022.07.25
Coaxial Cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
Coaxial Cable (N male) (30MHz-40GHz)	CB05	EMC05	Morlab	N/A	N/A
1-18GHz pre-Amplifier	61171/61172	S020180L32 03	Tonscend	2021.07.15	2022.07.14
18-26.5GHz pre-Amplifier	46732	S10M100L38 02	Tonscend	2021.07.15	2022.07.14
26-40GHz pre-Amplifier	56774	S40M400L40 02	Tonscend	2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5150-5350	Wainwright	2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5470-5725	Wainwright	2021.07.15	2022.07.14
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2021.07.15	2022.07.14



Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Anechoic Chamber	N/A	9m*6m*6m	CRT	2020.01.06	2023.01.05

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