



(Channel 142, 5710MHz, 802.11ax (HEW40), ANT0)



(Channel 142, 5710MHz, 802.11ax (HEW40), ANT0)



(Channel 151, 5755MHz, 802.11ax (HEW40), ANT0)



(Channel 159, 5795MHz, 802.11ax (HEW40), ANT0)



802.11ax (HEW80) Mode

A. Test Verdict:

Frequency (MHz)	Measured PPSD (dBm/MHz)		Duty Factor	Total PPSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
	ANT0	ANT1				
5210	-6.46	-6.25	0.01	-3.33	11	PASS
5290	-6.16	-6.42				
5530	-6.99	-7.53				
5610	-6.60	-7.56				
5690	-6.24	-7.03				
Frequency (MHz)	Measured PPSD (dBm/500KHz)		Duty Factor	Total PPSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
	ANT0	ANT1				
5690	-9.04	-9.04	0.01	-6.55	30	PASS
5775	-9.76	-9.76				

Note: Directional gain = $-0.50\text{dBi} + 10\log(2) = 2.51\text{dBi} < 6\text{dBi}$, so the limit shall be 11dBm/MHz for 5.18-5.24GHz, 5.260-5.320GHz, 5.500-5.720GHz band and 30dBm/500KHz for 5.745-5.825GHz band.

B. Test Plot:



(Channel 42, 5210MHz, 802.11ax (HEW80), ANT0)



(Channel 58, 5290MHz, 802.11ax (HEW80), ANT0)



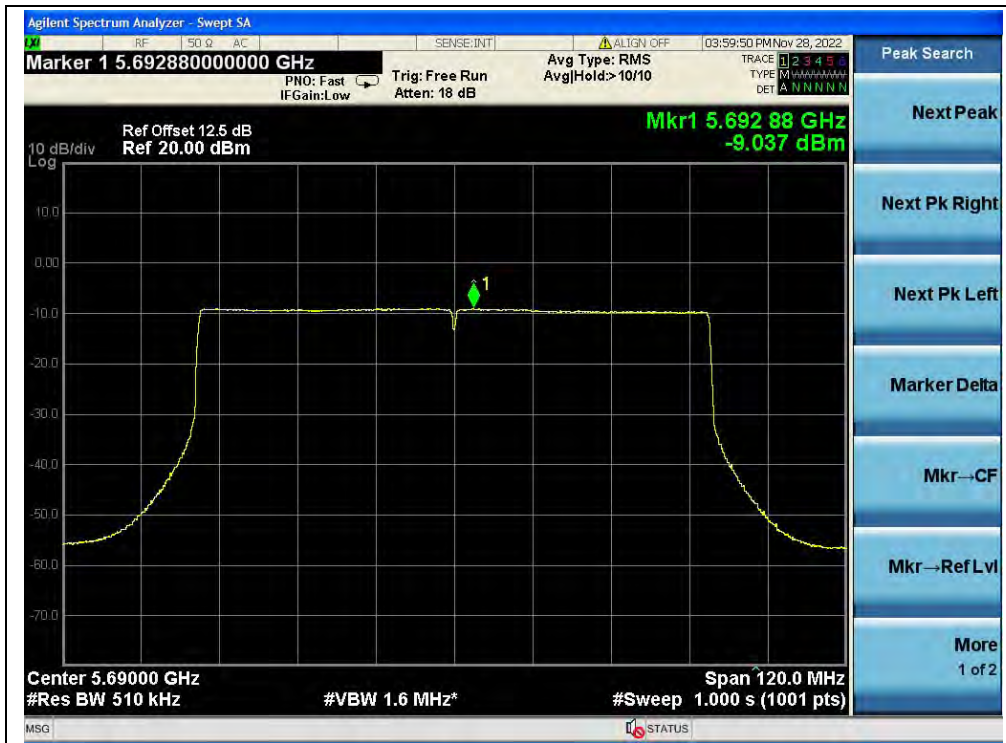
(Channel 106, 5530MHz, 802.11ax (HEW80), ANT0)



(Channel 122, 5610MHz, 802.11ax (HEW80), ANT0)



(Channel 138, 5690MHz, 802.11ax (HEW80), ANT0)



(Channel 138, 5690MHz, 802.11ax (HEW80), ANT0)



(Channel 155, 5775MHz, 802.11ax (HEW80), ANT0)



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%	7.78	+20(Ref)	24	4.633
100%		-30	30	5.792
100%		-20	28	5.405
100%		-10	25	4.826
100%		0	24	4.633
100%		+10	20	3.861
100%		+20	19	3.668
100%		+30	22	4.247
100%		+40	25	4.826
100%		+50	22	4.247
115%	8.90	+20	27	5.212
85%	7.00	+20	29	5.598



U-NII-2A (Ch. 52)				
5260MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	7.78	+20(Ref)	19	3.612
100%		-30	23	4.373
100%		-20	26	4.943
100%		-10	28	5.323
100%		0	20	3.802
100%		+10	18	3.422
100%		+20	22	4.183
100%		+30	27	5.133
100%		+40	31	5.894
100%		+50	26	4.943
115%	8.90	+20	20	3.802
85%	7.00	+20	22	4.183

U-NII-2C (Ch. 100)				
5500MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	7.78	+20(Ref)	22	4.000
100%		-30	24	4.364
100%		-20	31	5.636
100%		-10	28	5.091
100%		0	21	3.818
100%		+10	18	3.273
100%		+20	22	4.000
100%		+30	30	5.455
100%		+40	31	5.636
100%		+50	24	4.364
115%	8.90	+20	26	4.727
85%	7.00	+20	29	5.273



U-NII-3 (Ch. 149) 5745MHz				
VOLTAGE (%)	POWER (VDC)	TEMP (°C)	Fre. Dev. (kHz)	Deviation (ppm)
100%	7.78	+20(Ref)	20	3.481
100%		-30	24	4.178
100%		-20	25	4.352
100%		-10	20	3.481
100%		0	29	5.048
100%		+10	24	4.178
100%		+20	25	4.352
100%		+30	26	4.526
100%		+40	27	4.700
100%		+50	28	4.874
115%		8.90	+20	30
85%	7.00	+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).

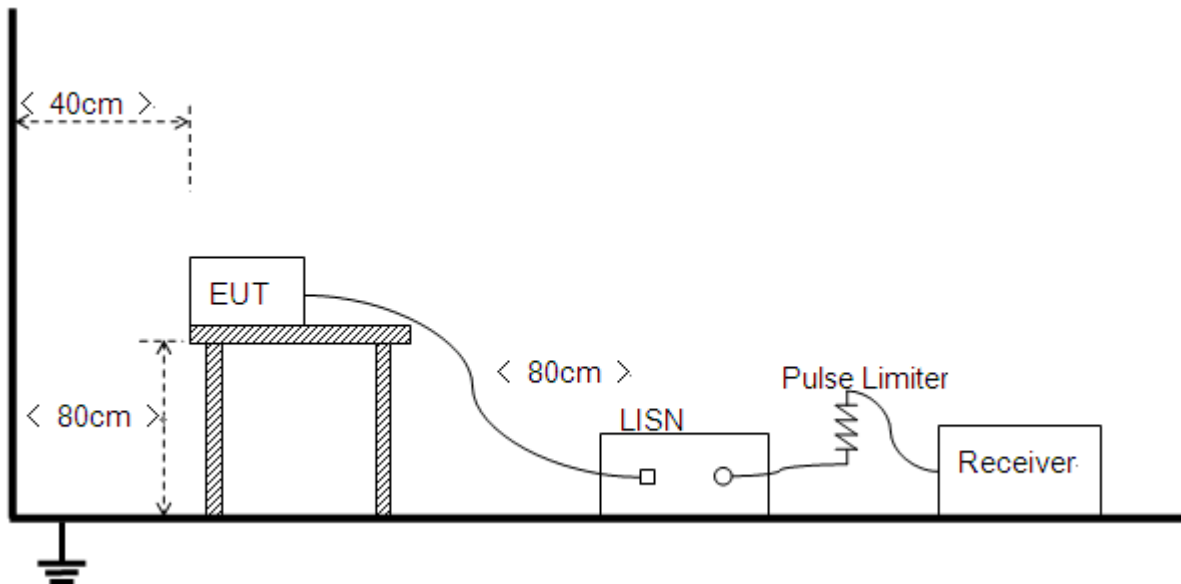
Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

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+ Adaptor + Earphone + WIFI TX

Test Voltage: AC 120V/60Hz

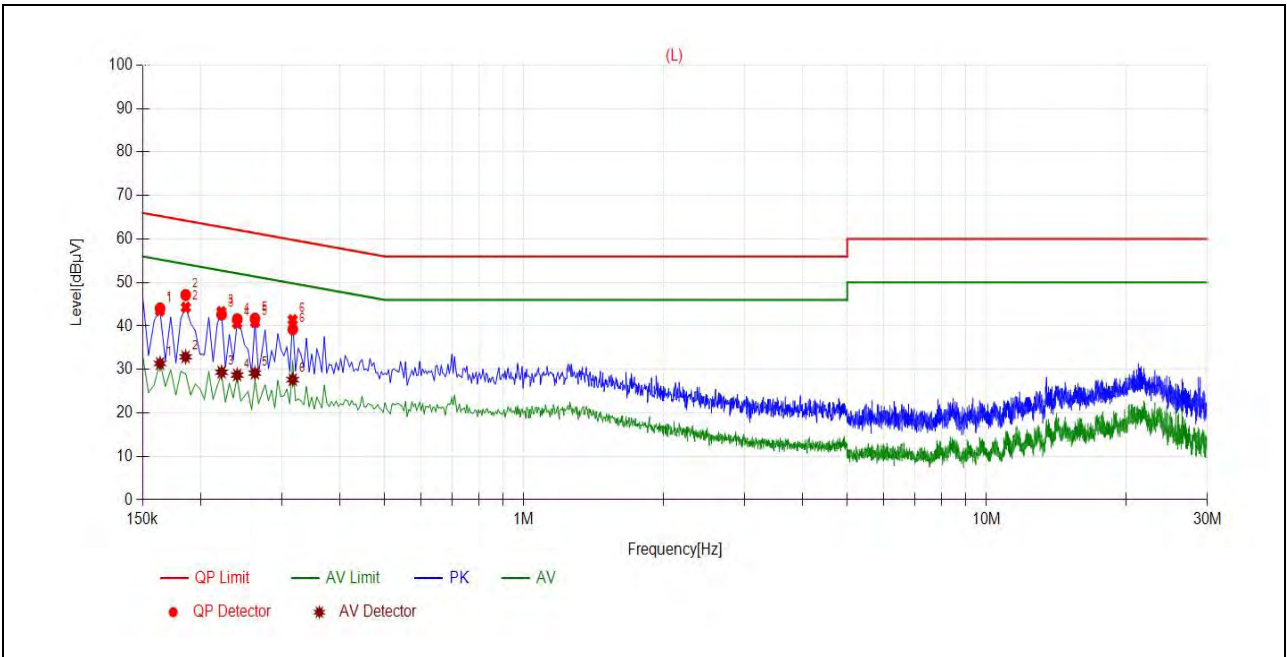
The measurement results are obtained as below:

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

U_R : Receiver Reading

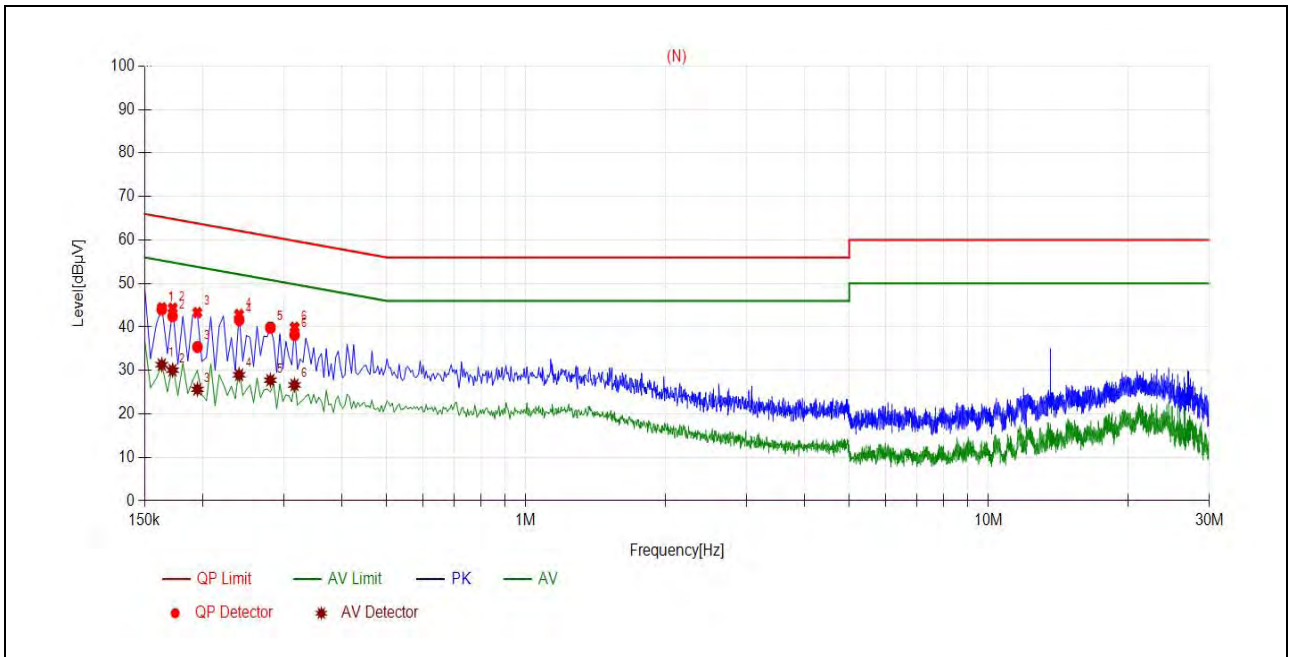
A_{Factor} : Voltage division factor of LISN

B.Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1636	44.02	31.37	65.28	55.28	Line	PASS
2	0.1858	47.12	32.88	64.22	54.22		PASS
3	0.2222	42.62	29.36	62.74	52.74		PASS
4	0.2402	41.55	28.71	62.09	52.09		PASS
5	0.2623	41.67	29.15	61.36	51.36		PASS
6	0.3167	39.25	27.65	59.79	49.79		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1634	44.04	31.32	65.29	55.29	Neutral	PASS
2	0.1724	42.48	30.06	64.85	54.85		PASS
3	0.1951	35.39	25.65	63.82	53.82		PASS
4	0.2401	41.59	29.00	62.09	52.09		PASS
5	0.2805	39.84	27.76	60.80	50.80		PASS
6	0.3163	38.16	26.66	59.80	49.80		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

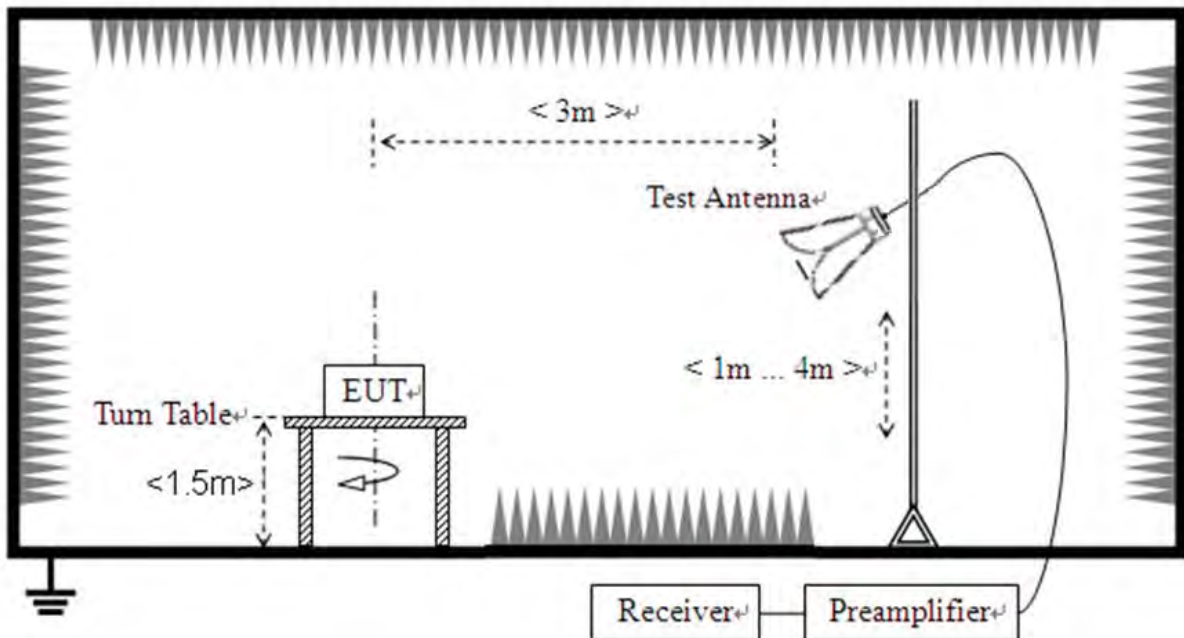
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following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

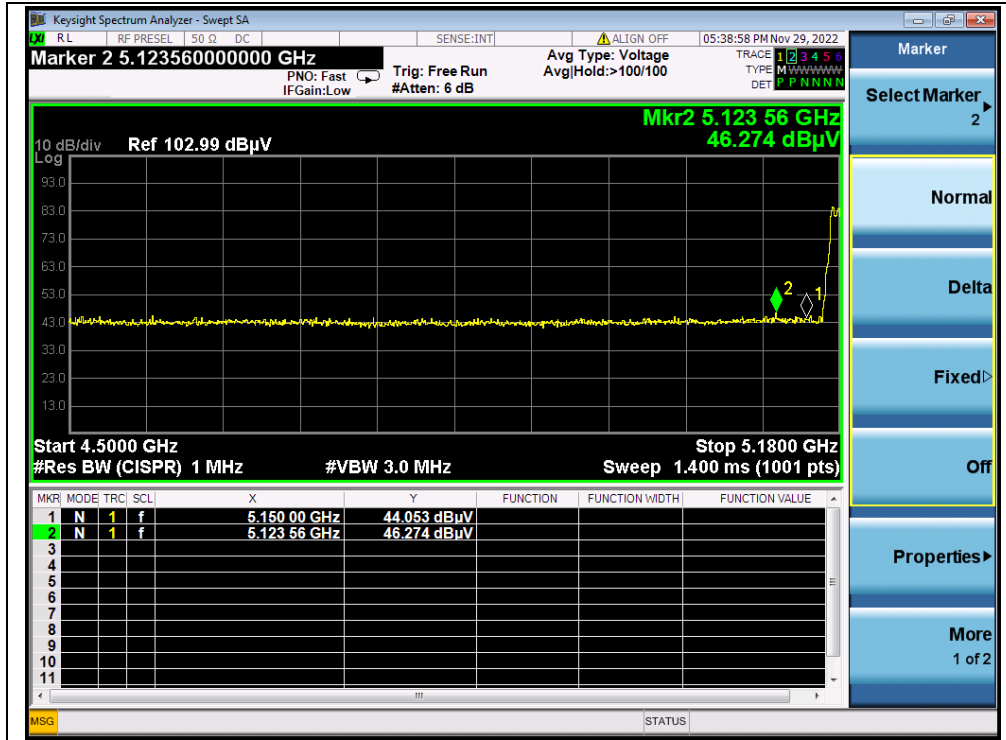
802.11a Mode

A.Test Verdict:

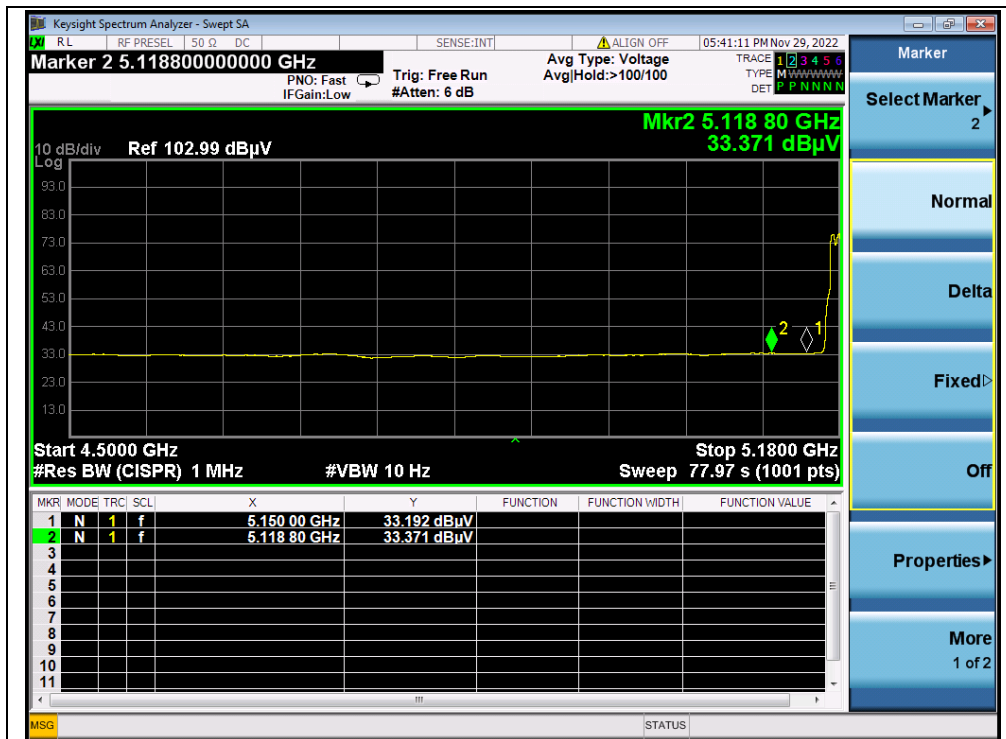
Channel	Frequency (MHz)	Detector	Receiver Reading	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)					
36	5123.56	PK	46.27	-19.54	32.20	58.93	74	PASS
36	5118.80	AV	33.37	-19.54	32.20	46.03	54	PASS
64	5388.98	PK	42.88	-18.80	32.20	56.28	74	PASS
64	5357.34	AV	31.49	-18.80	32.20	44.89	54	PASS
100	5247.41	PK	44.80	-19.20	32.20	57.80	68.23	PASS
100	5171.93	AV	33.38	-19.20	32.20	46.38	54	PASS
144	5844.30	PK	45.62	-19.20	32.20	58.62	68.23	PASS
149	5725.00	PK	43.68	-19.01	32.20	56.87	122.23	PASS
165	5925.00	PK	43.18	-19.01	32.20	56.37	68.23	PASS



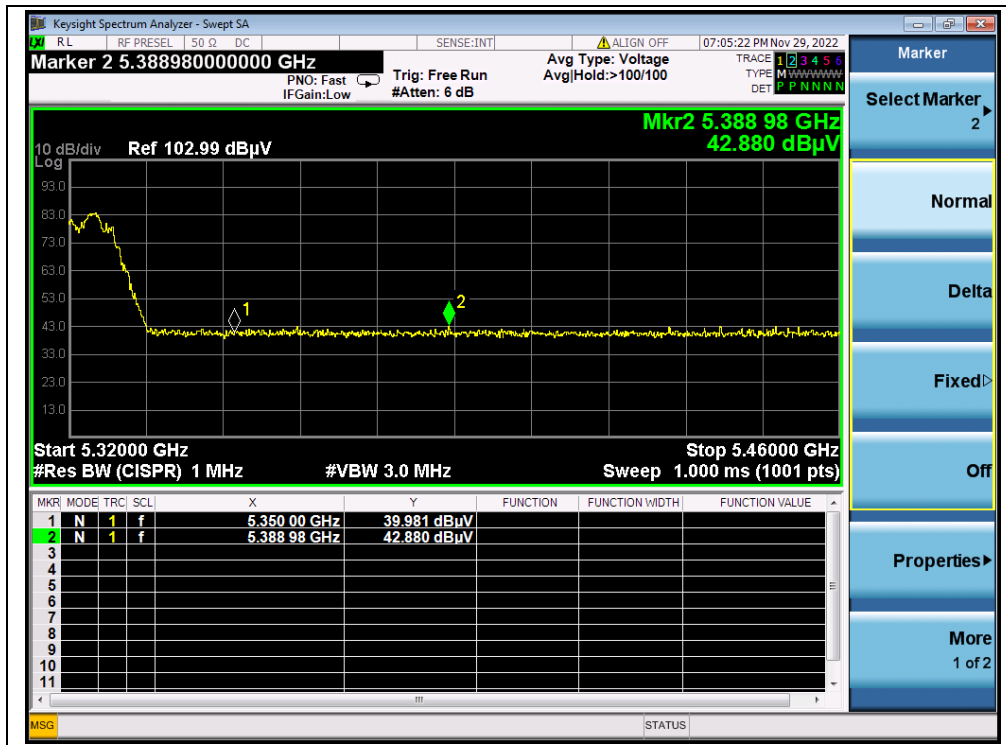
B.Test Plot:



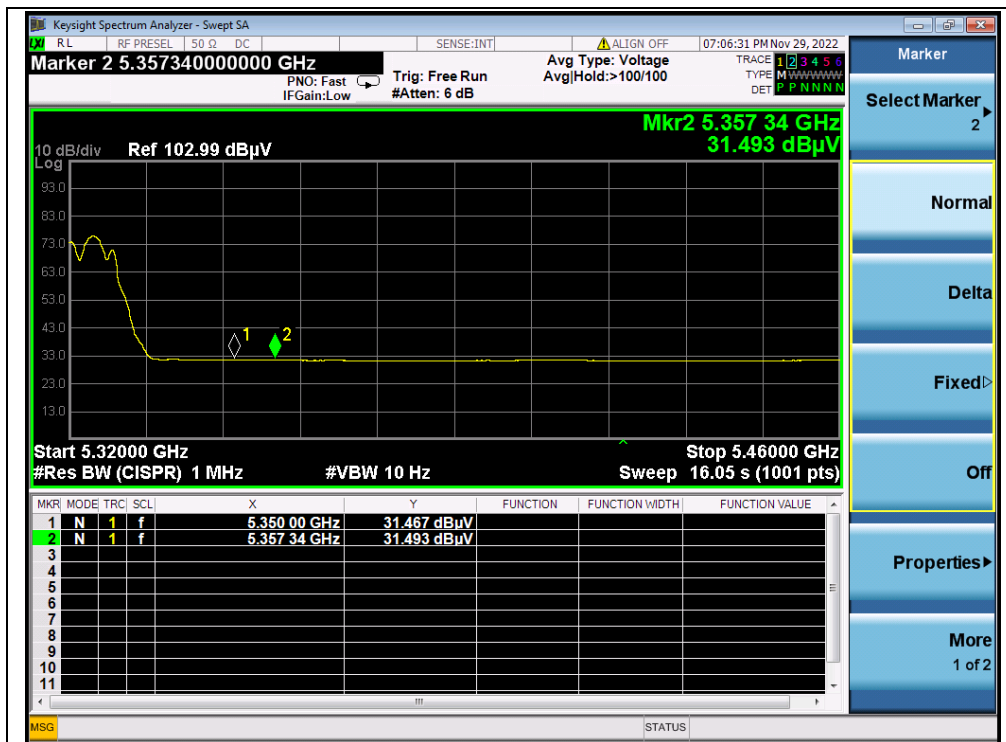
(PEAK, Channel 36, 802.11a)



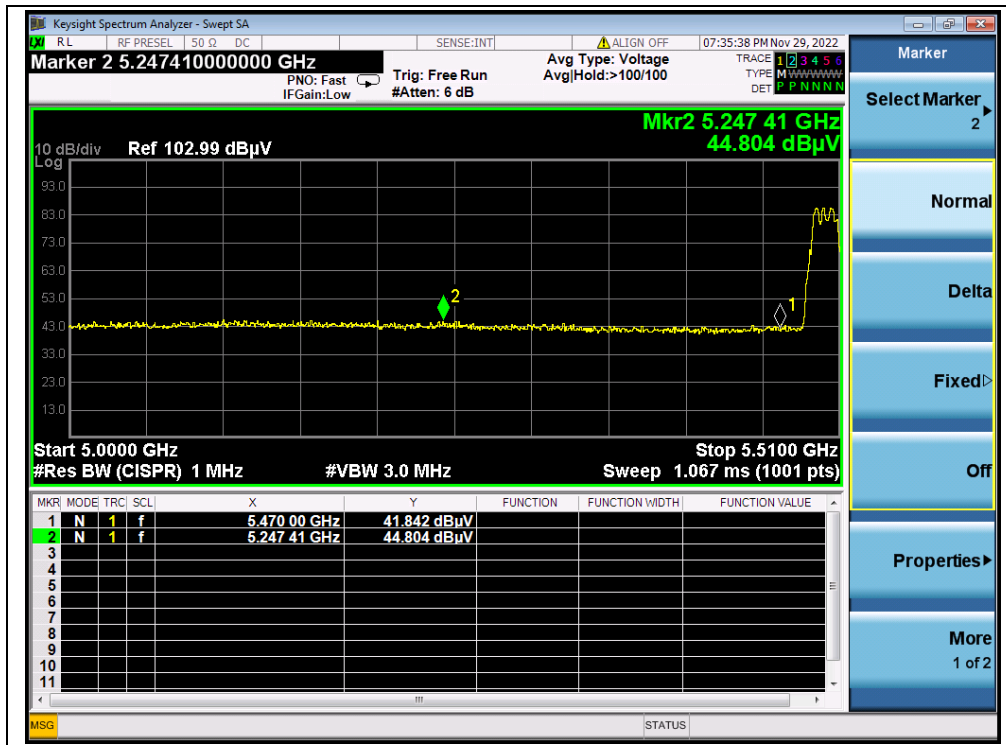
(AVERAGE, Channel 36, 802.11a)



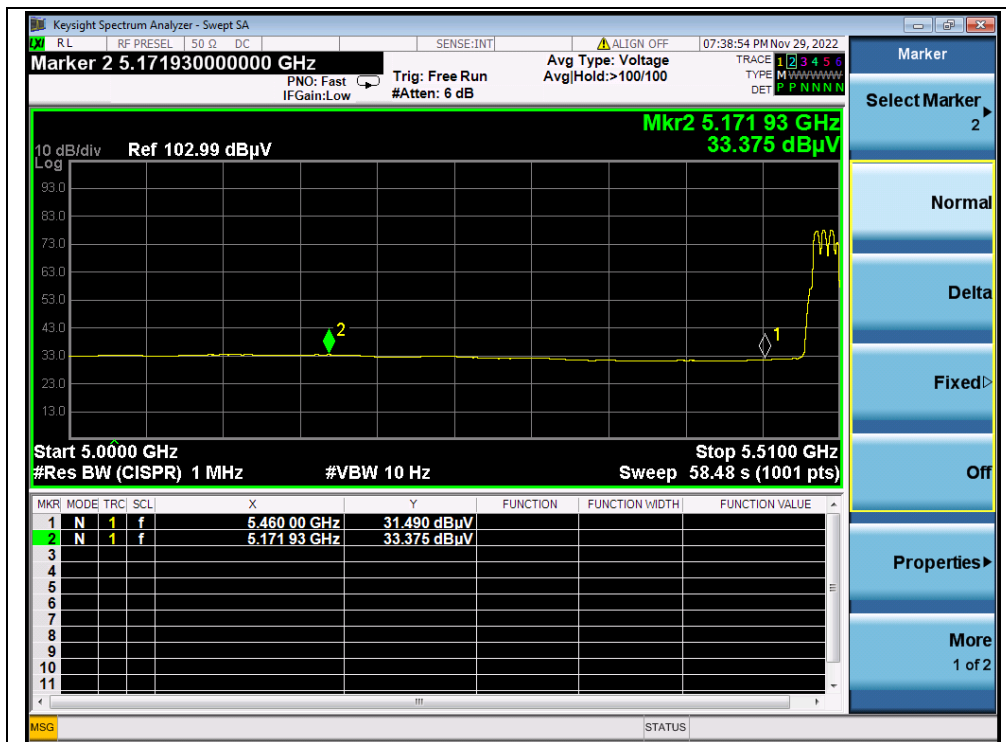
(PEAK, Channel 64, 802.11a)



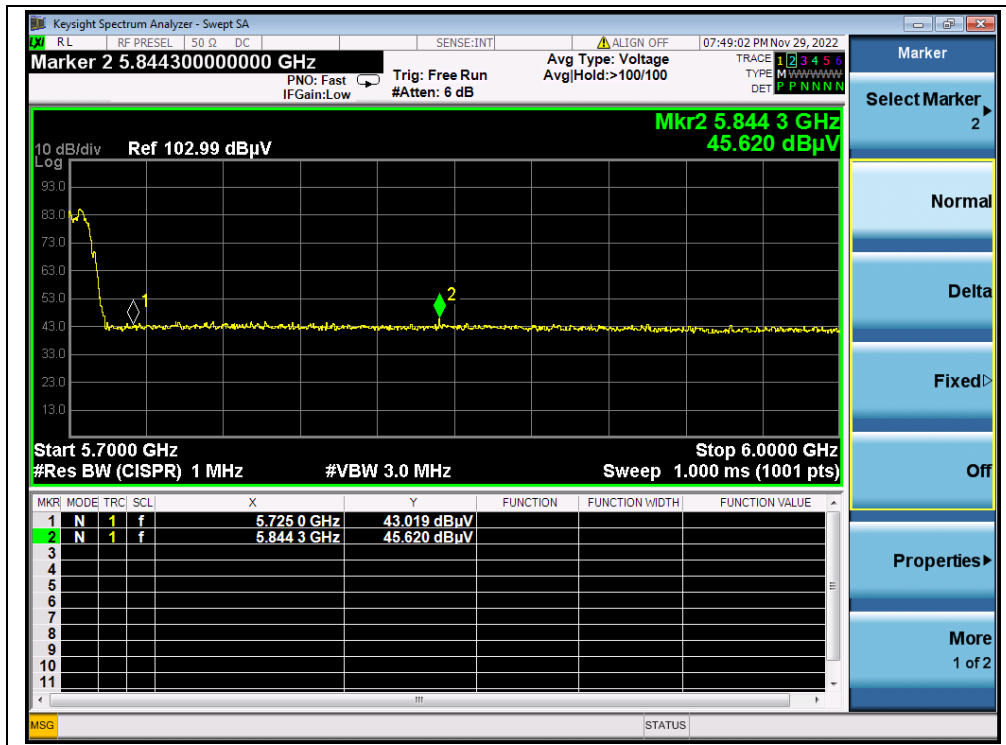
(AVERAGE, Channel 64, 802.11a)



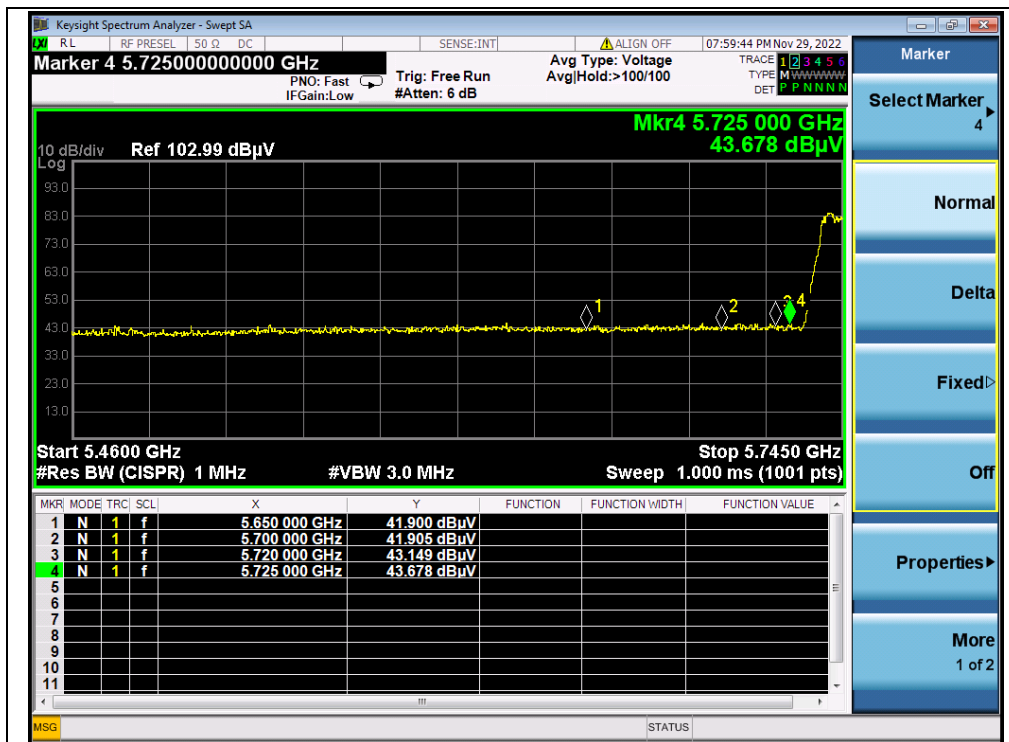
(PEAK, Channel100, 802.11a)



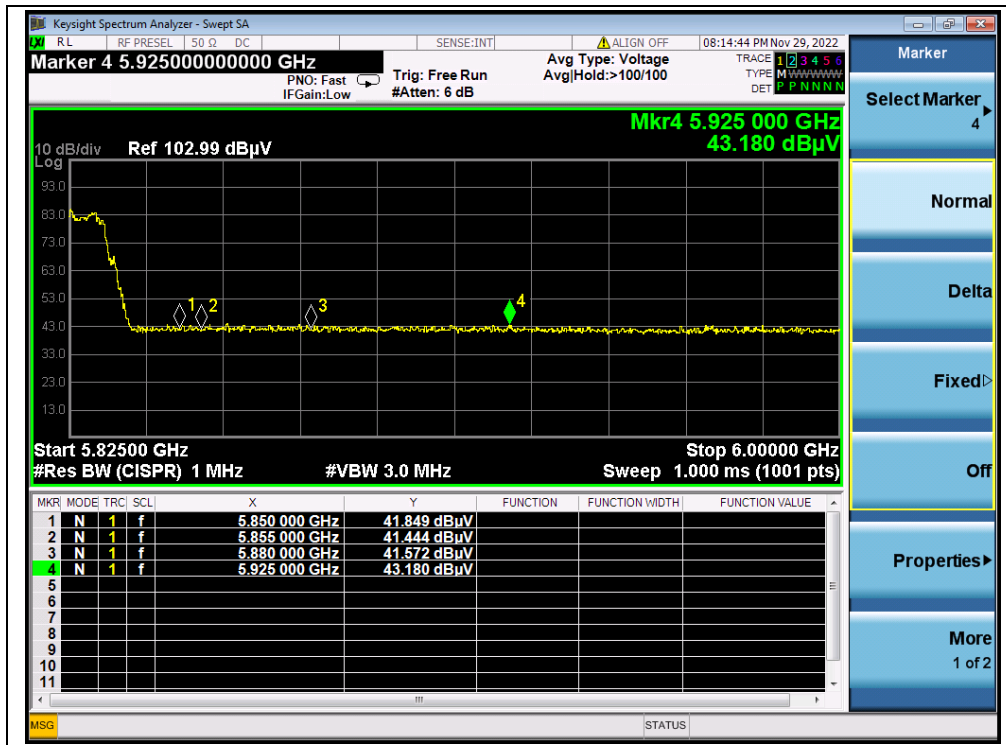
(AVERAGE, Channel 100, 802.11a)



(PEAK, Channel 144, 802.11a)



(PEAK, Channel 149, 802.11a)



(PEAK, Channel 165, 802.11a)

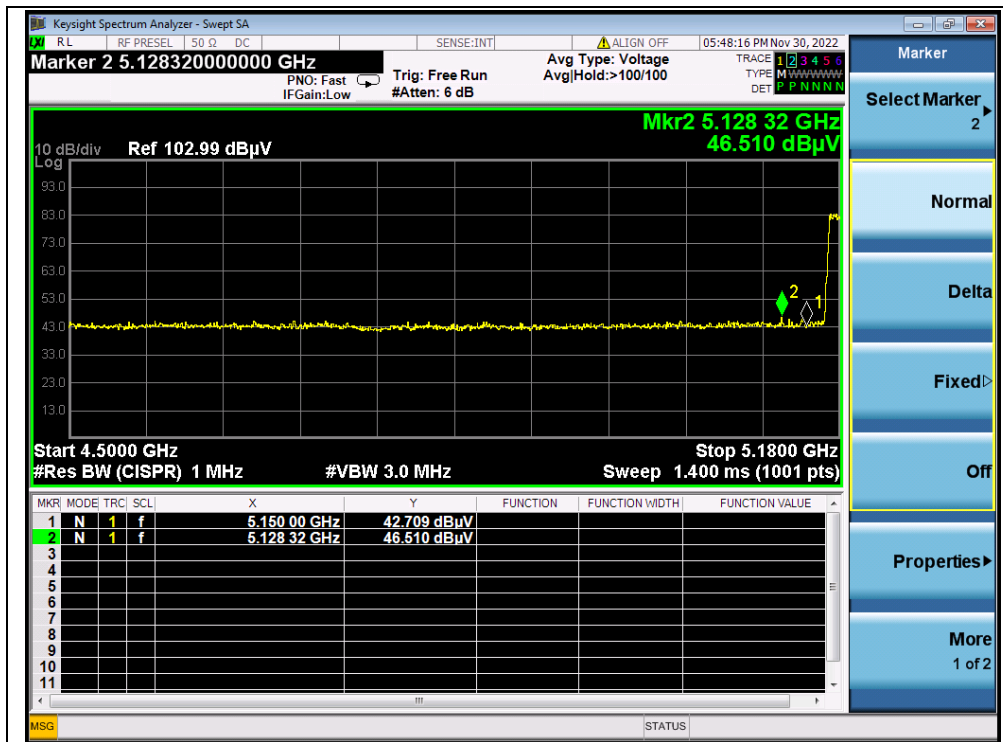


802.11ax (HEW20) Mode

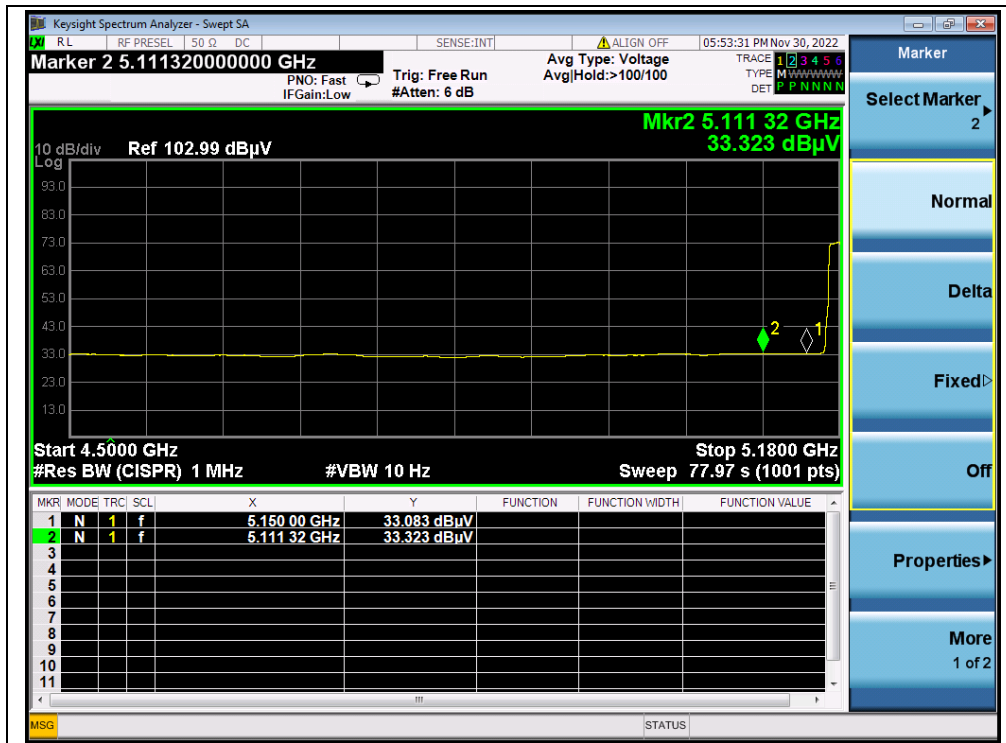
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A_T	A_{Factor}	Max. Emission	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)	(dB)	(dB@3m)	E (dB μ V/m)		
36	5128.32	PK	46.51	-19.54	32.20	59.17	74	PASS
36	5111.32	AV	33.32	-19.54	32.20	45.98	54	PASS
64	5388.98	PK	42.88	-18.80	32.20	56.28	74	PASS
64	5357.34	AV	31.49	-18.80	32.20	44.89	54	PASS
100	5119.34	PK	46.00	-19.20	32.20	59.00	74	PASS
100	5119.85	AV	33.36	-19.20	32.20	46.36	54	PASS
144	5804.00	PK	44.30	-19.20	32.20	57.30	68.23	PASS
149	5700.00	PK	43.02	-19.01	32.20	56.21	105.23	PASS
165	5855.00	PK	41.76	-19.01	32.20	54.95	110.83	PASS

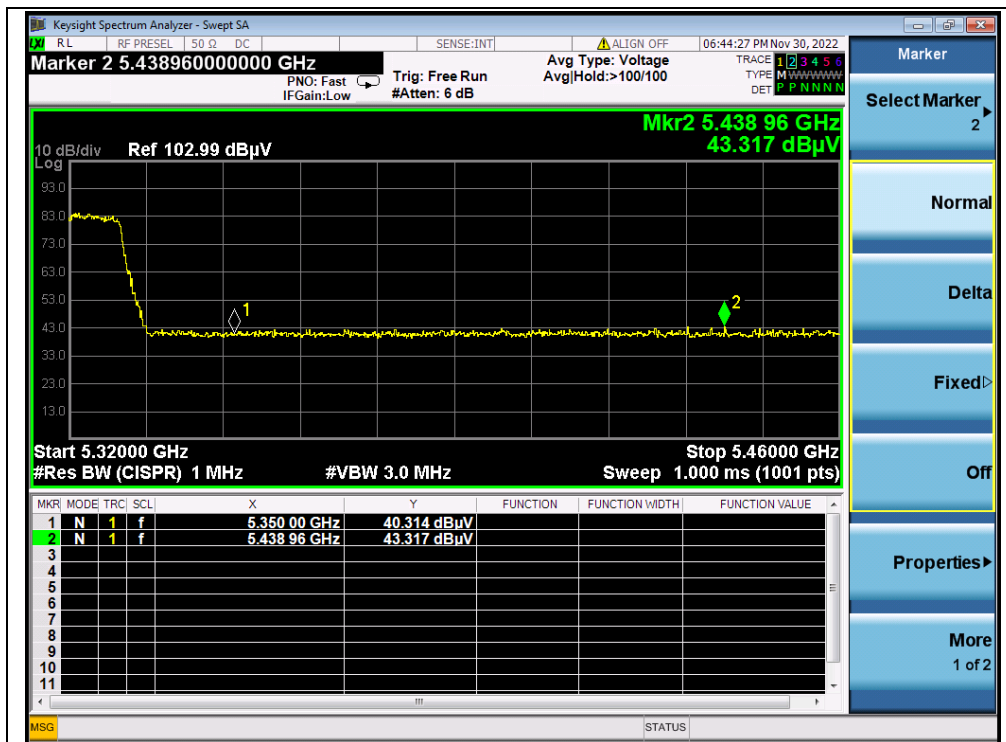
B. Test Plot:



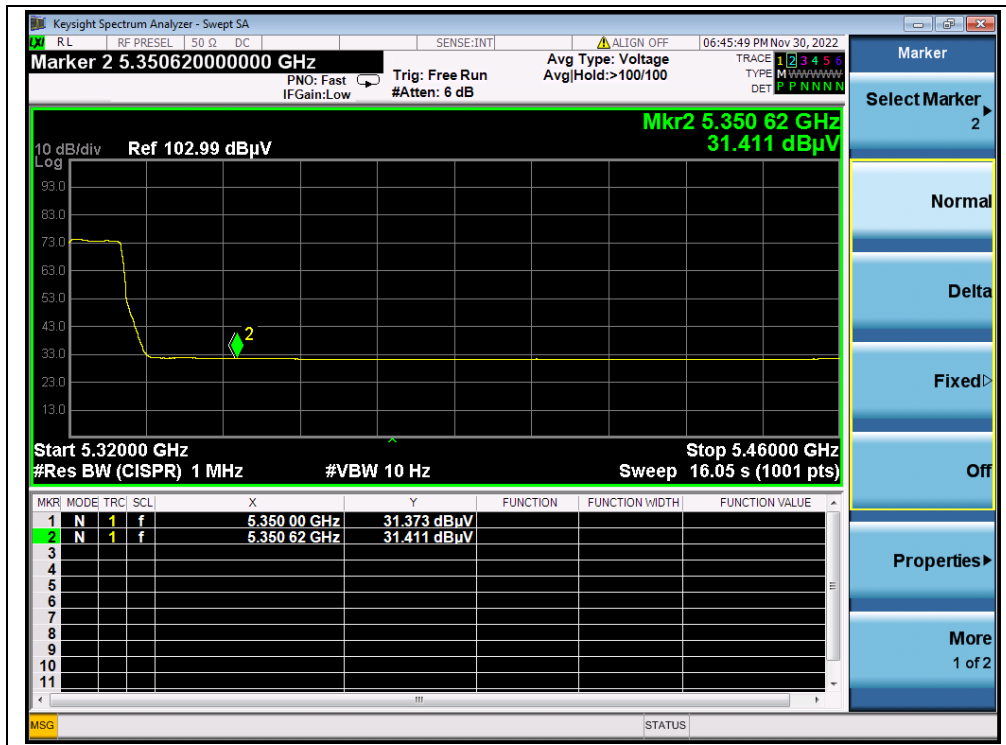
(PEAK, Channel 36, 802.11ax (HEW20))



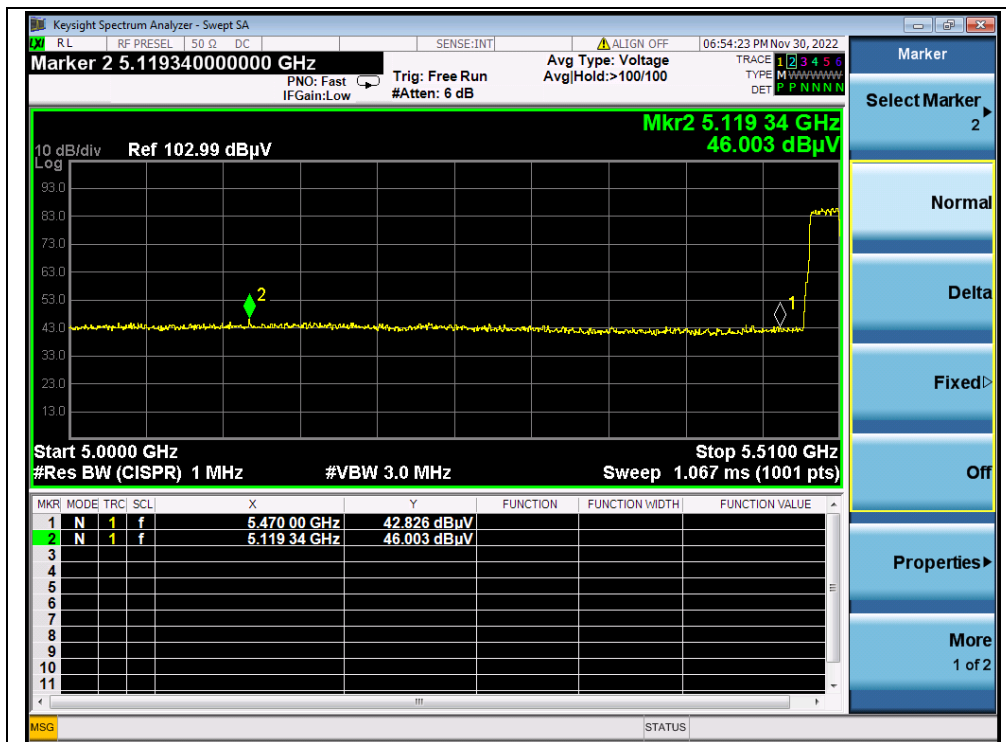
(AVERAGE, Channel 36, 802.11ax (HEW20))



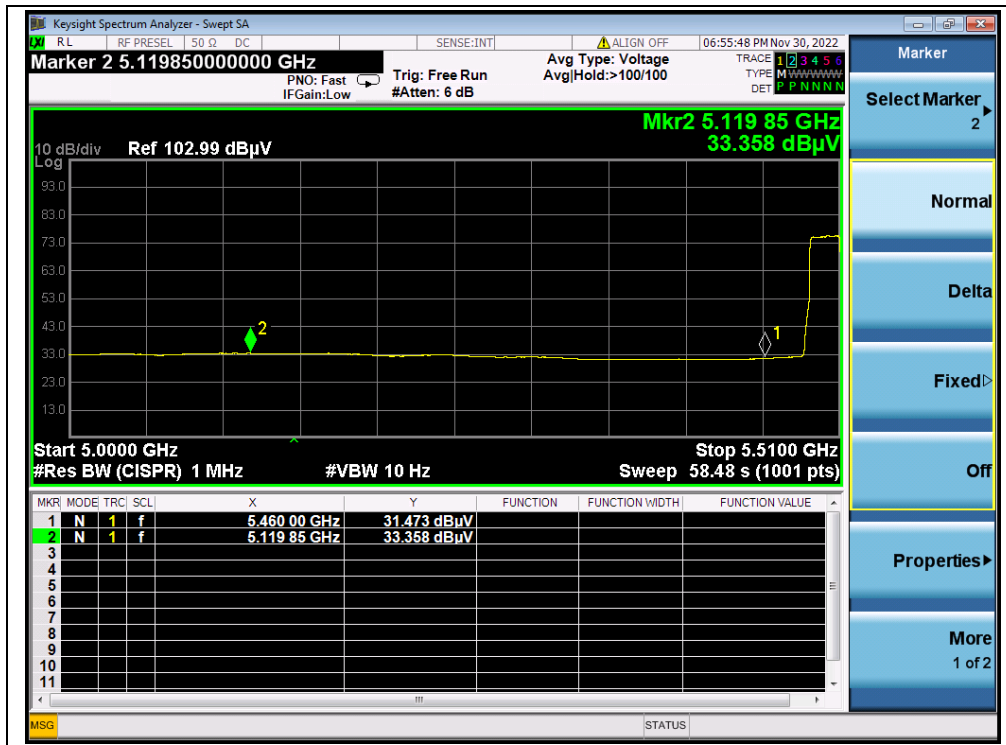
(PEAK, Channel 64, 802.11ax (HEW20))



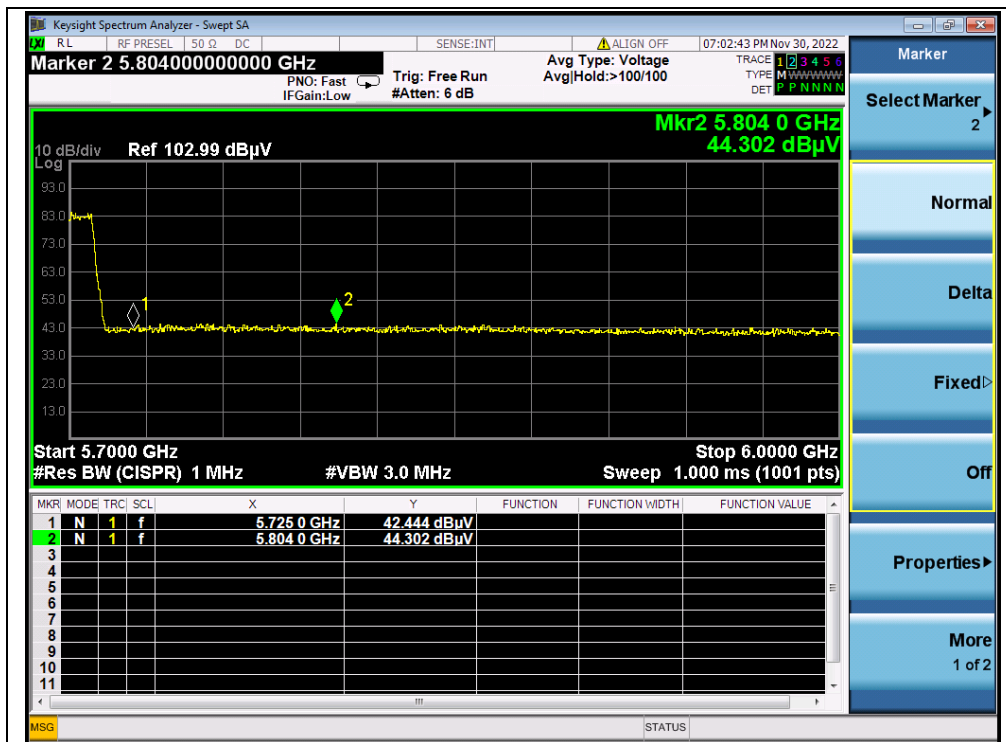
(AVERAGE, Channel 64, 802.11ax (HEW20))



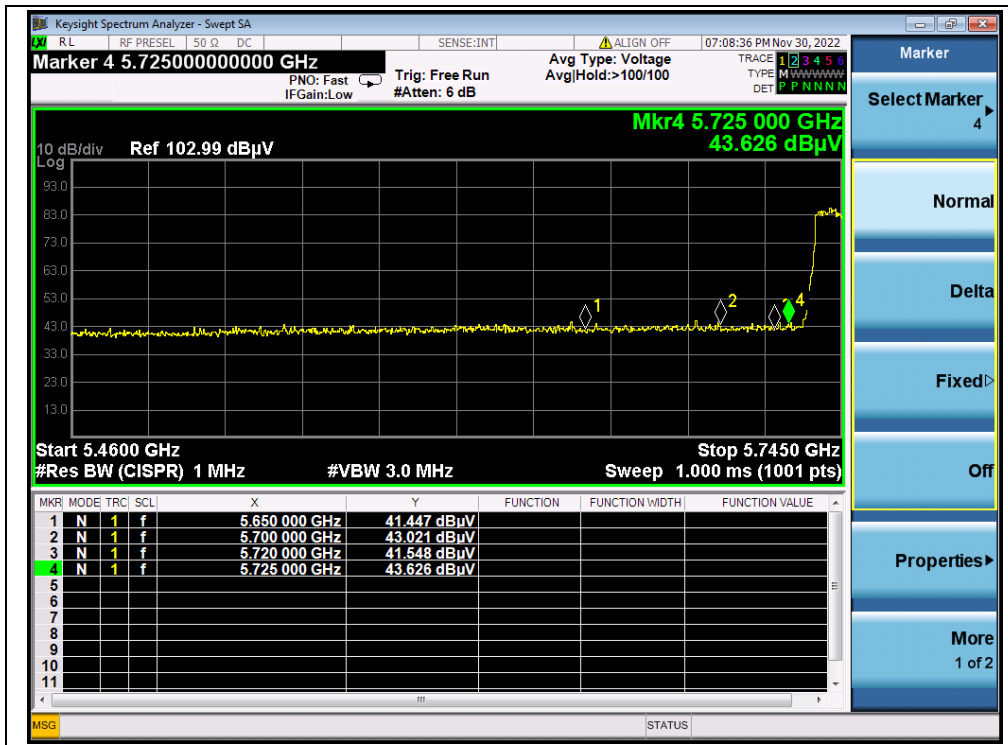
(PEAK, Channel100, 802.11ax (HEW20))



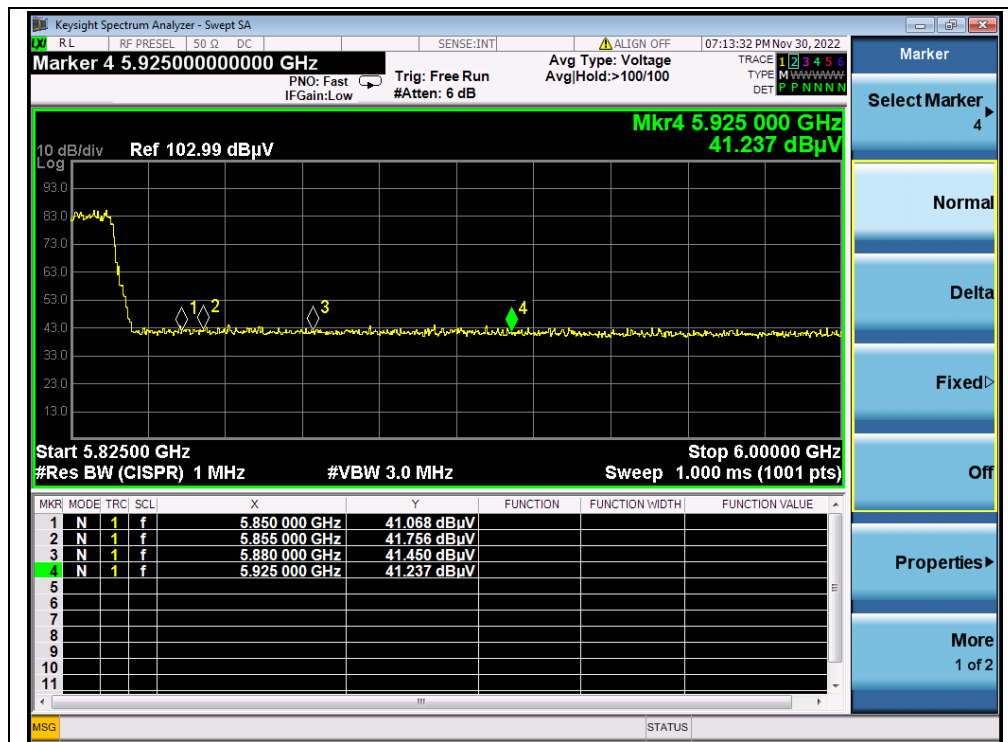
(AVERAGE, Channel 100, 802.11ax (HEW20))



(PEAK, Channel 144, 802.11ax (HEW20))



(PEAK, Channel 149, 802.11ax (HEW20))



(PEAK, Channel 165, 802.11ax (HEW20))

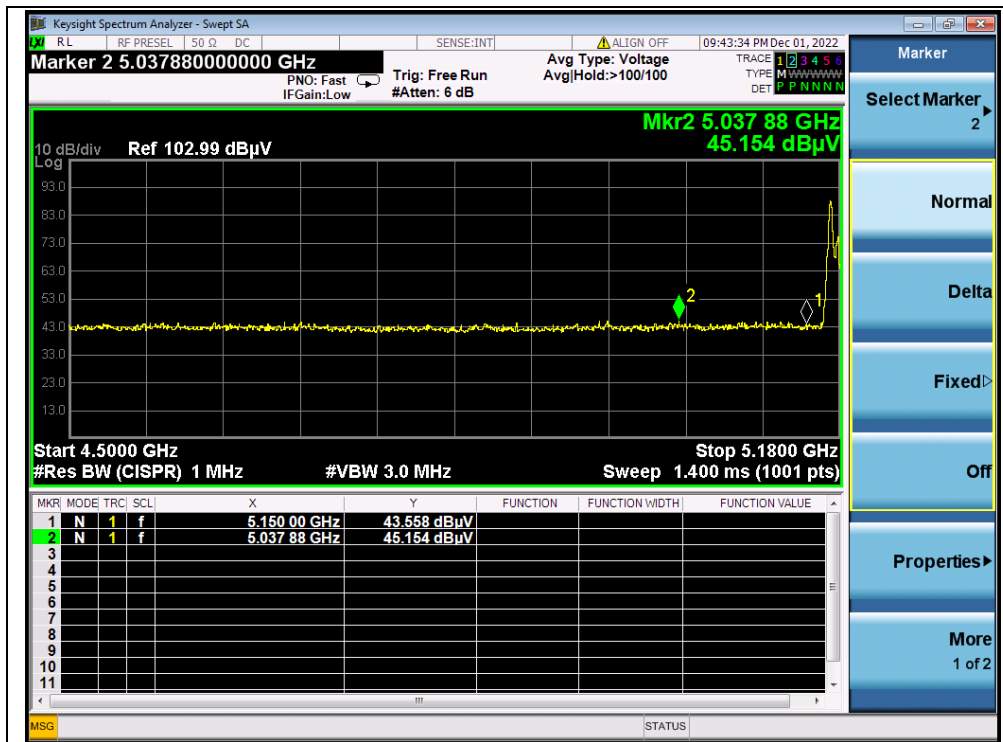


802.11ax (HEW20) RU26 Mode

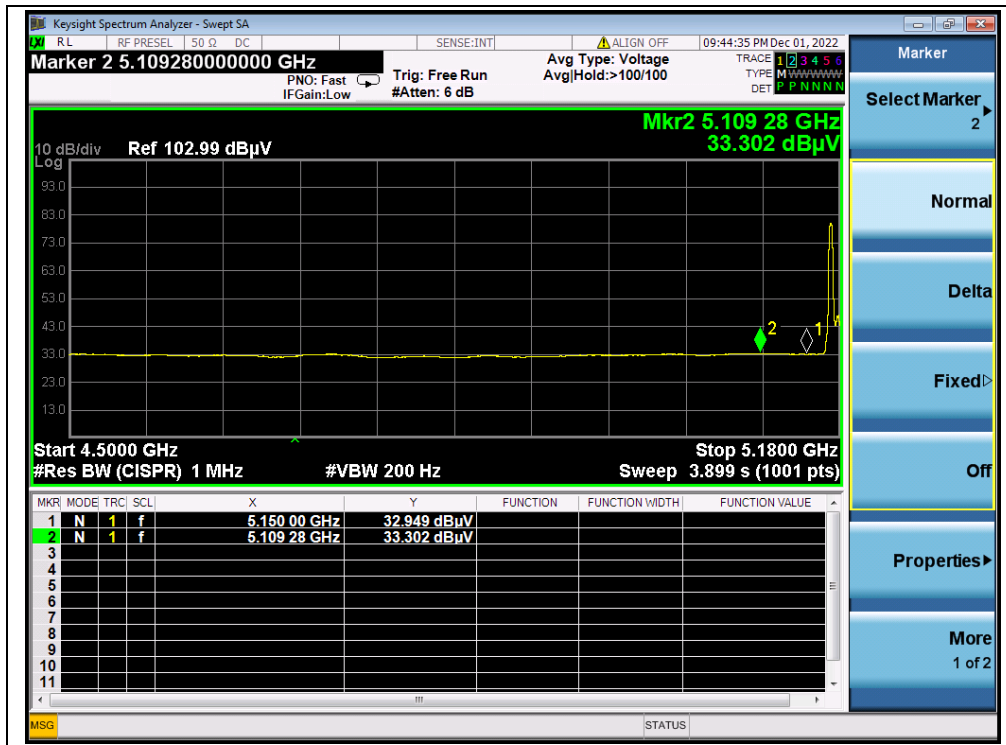
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A_T	A_{Factor}	Max. Emission	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)	(dB)	(dB@3m)	E (dB μ V/m)		
36	5037.88	PK	45.15	-19.54	32.20	57.81	74	PASS
36	5109.28	AV	33.30	-19.54	32.20	45.96	54	PASS
64	5408.14	PK	43.16	-18.80	32.20	56.56	74	PASS
64	5351.30	AV	31.42	-18.80	32.20	44.82	54	PASS
100	5144.33	PK	45.34	-19.20	32.20	58.34	74	PASS
100	5116.79	AV	33.40	-19.20	32.20	46.40	54	PASS
144	5842.90	PK	44.82	-19.20	32.20	57.82	68.23	PASS
149	5725.00	PK	43.98	-19.01	32.20	57.17	122.23	PASS
165	5880.00	PK	42.06	-19.01	32.20	55.25	101.53	PASS

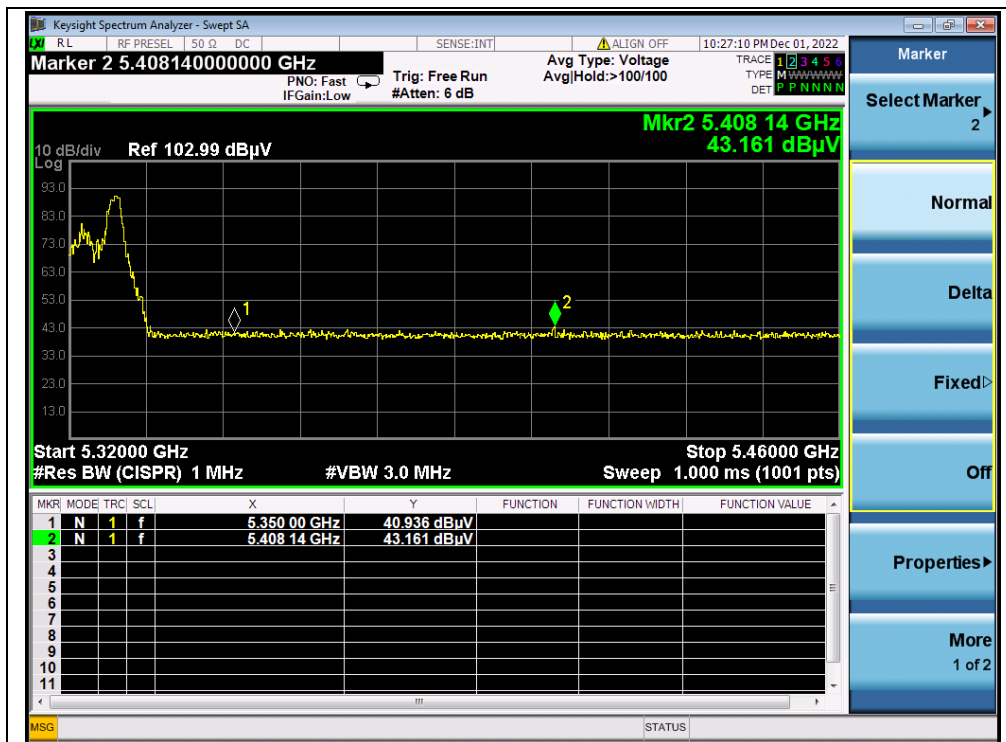
B. Test Plot:



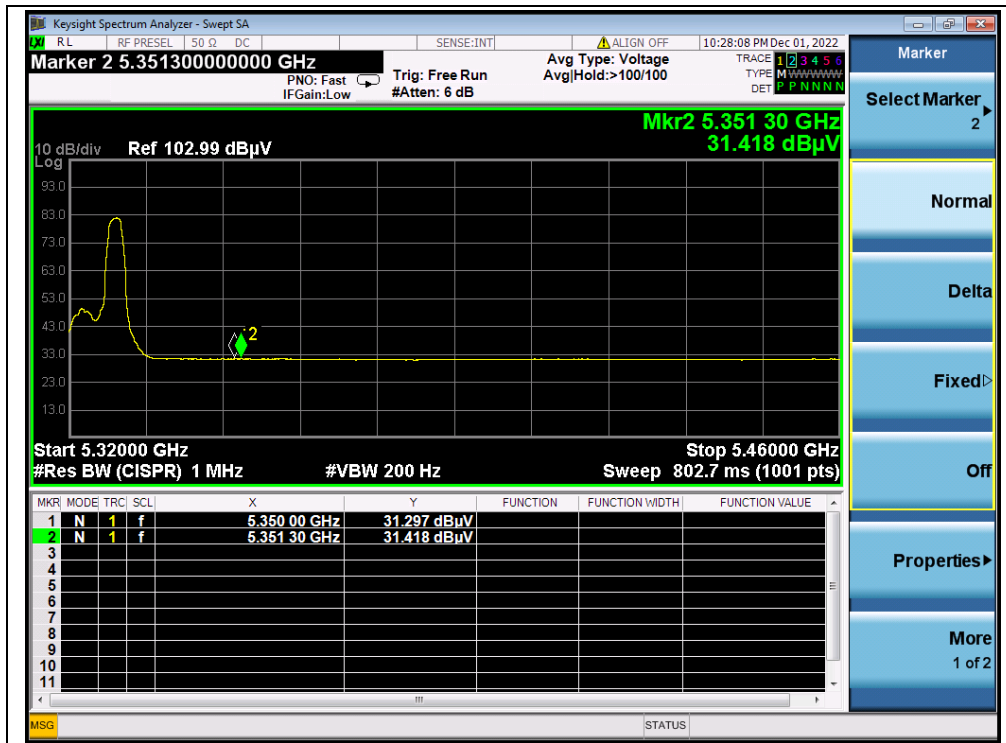
(PEAK, Channel 36, 802.11ax (HEW20) RU26)



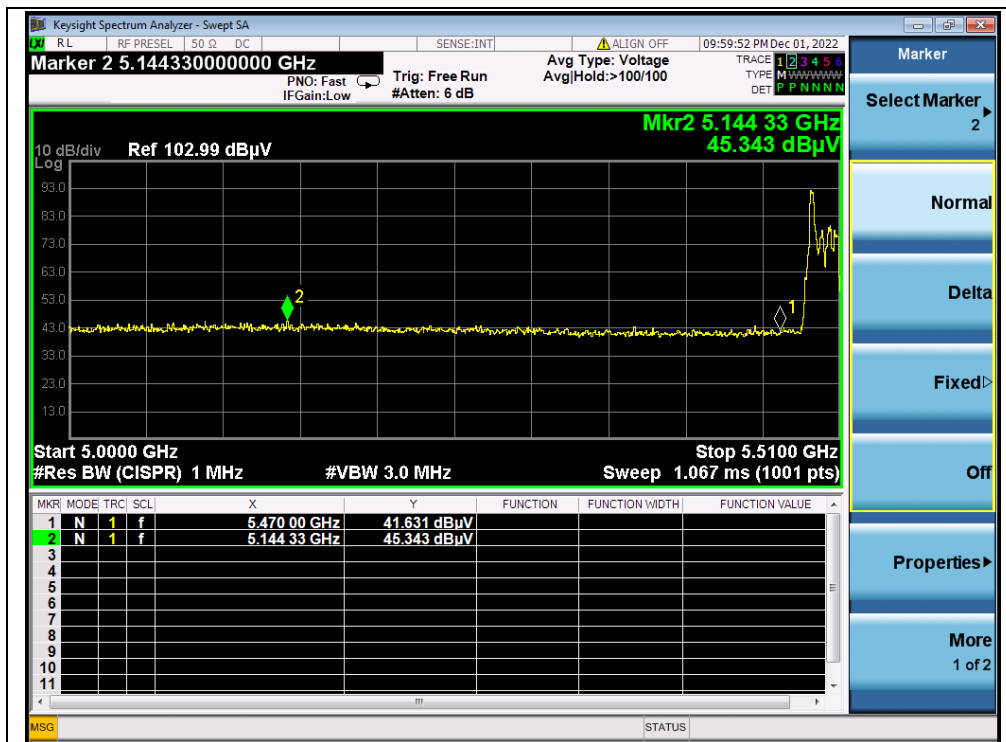
(AVERAGE, Channel 36, 802.11ax (HEW20) RU26)



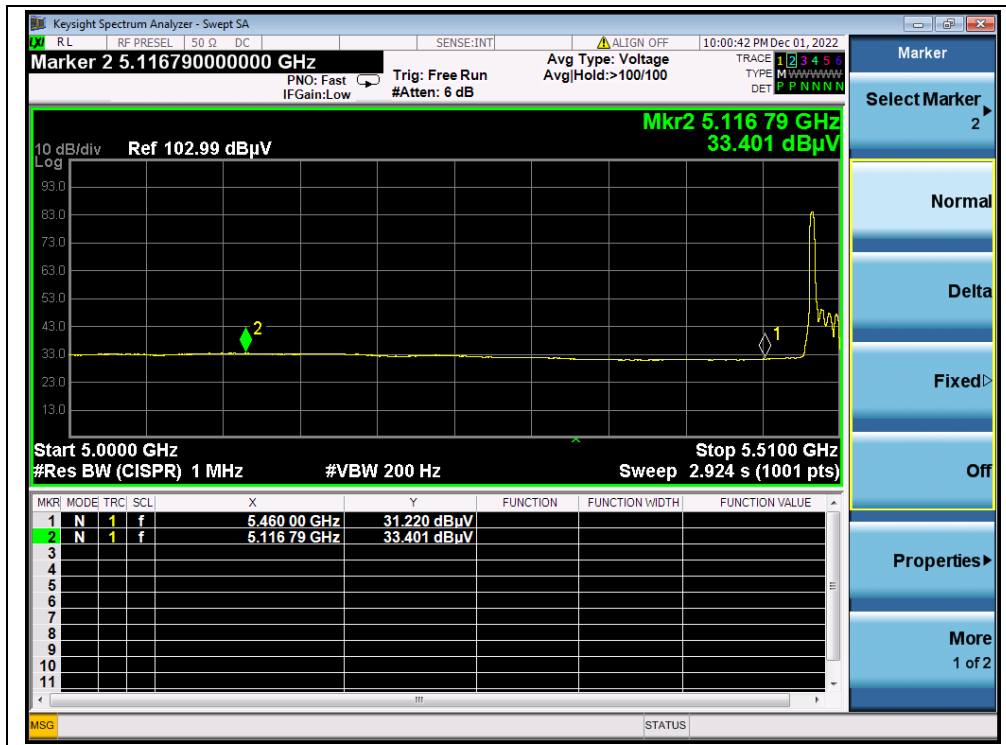
(PEAK, Channel 64, 802.11ax (HEW20) RU26)



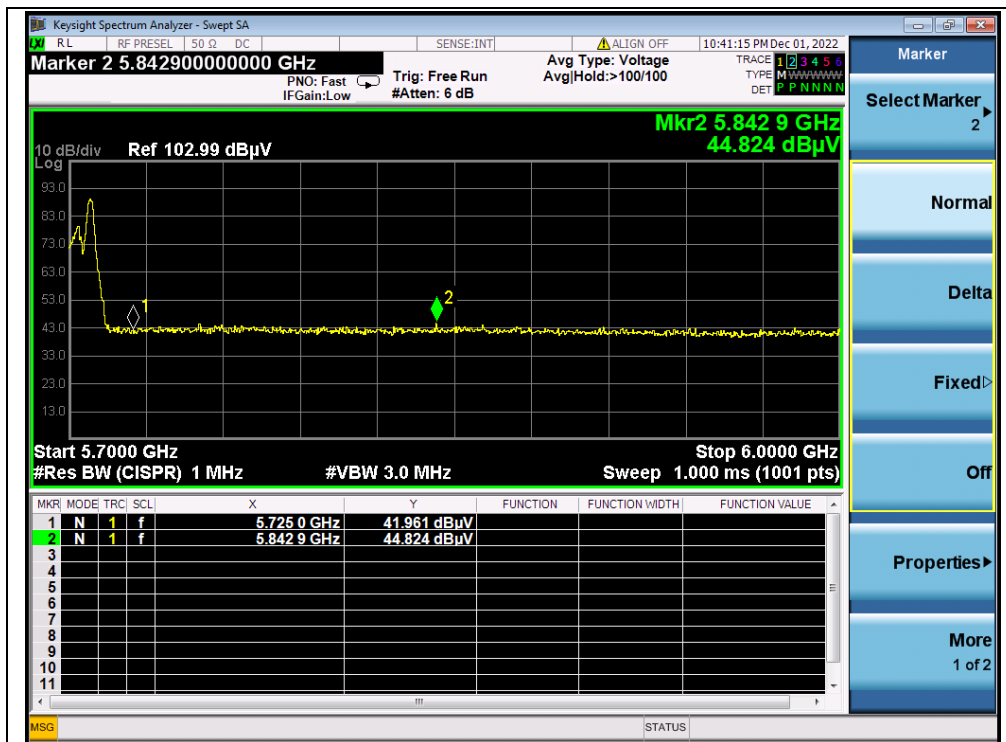
(AVERAGE, Channel 64, 802.11ax (HEW20) RU26)



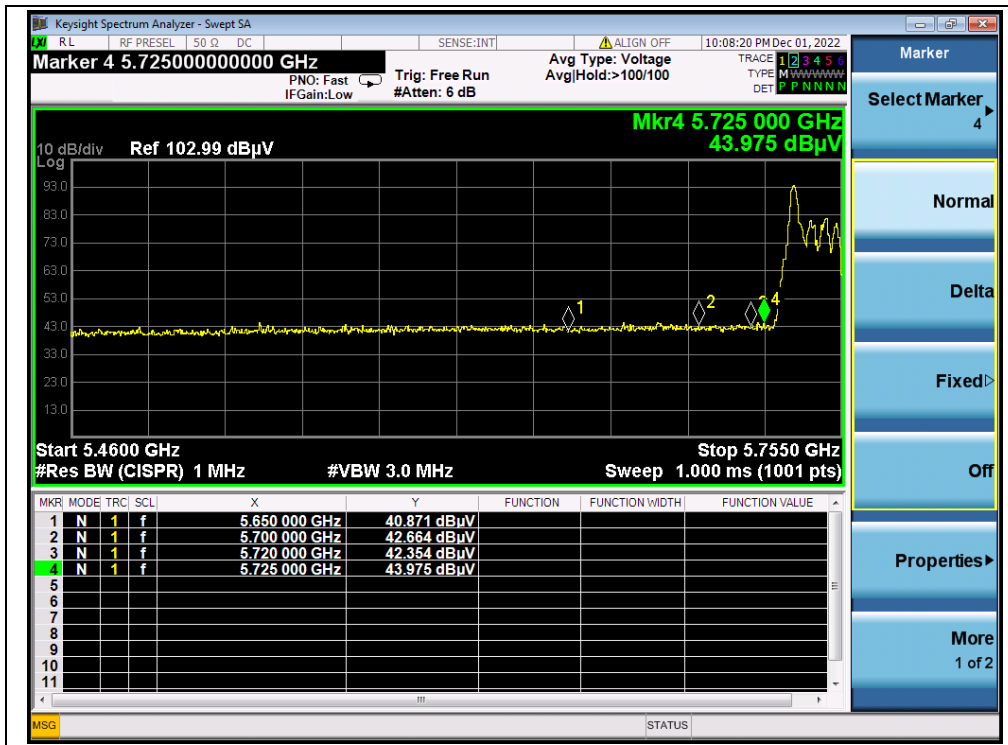
(PEAK, Channel100, 802.11ax (HEW20) RU26)



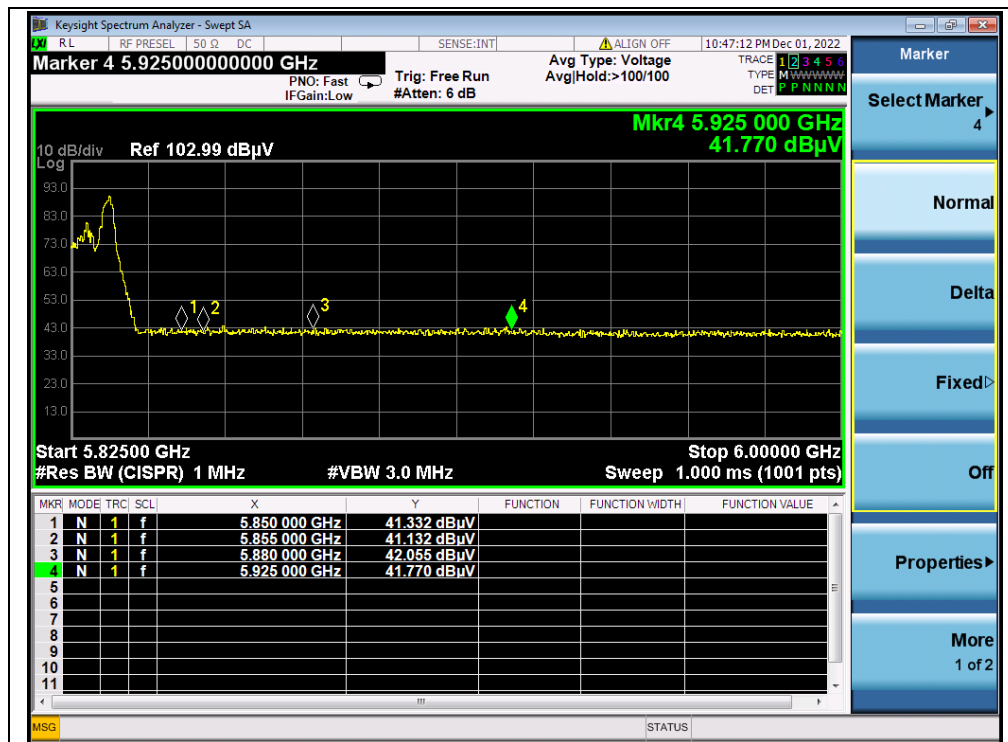
(AVERAGE, Channel 100, 802.11ax (HEW20) RU26)



(PEAK, Channel 144, 802.11ax (HEW20) RU26)



(PEAK, Channel 149, 802.11ax (HEW20) RU26)



(PEAK, Channel 165, 802.11ax (HEW20) RU26)

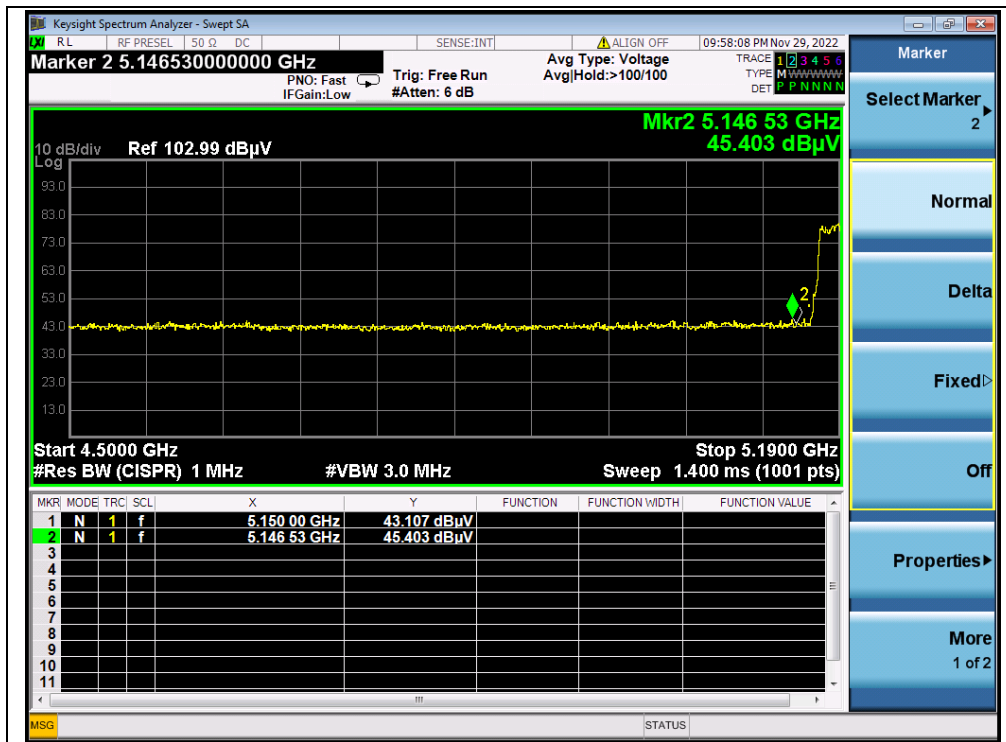


802.11n (HT40) Mode

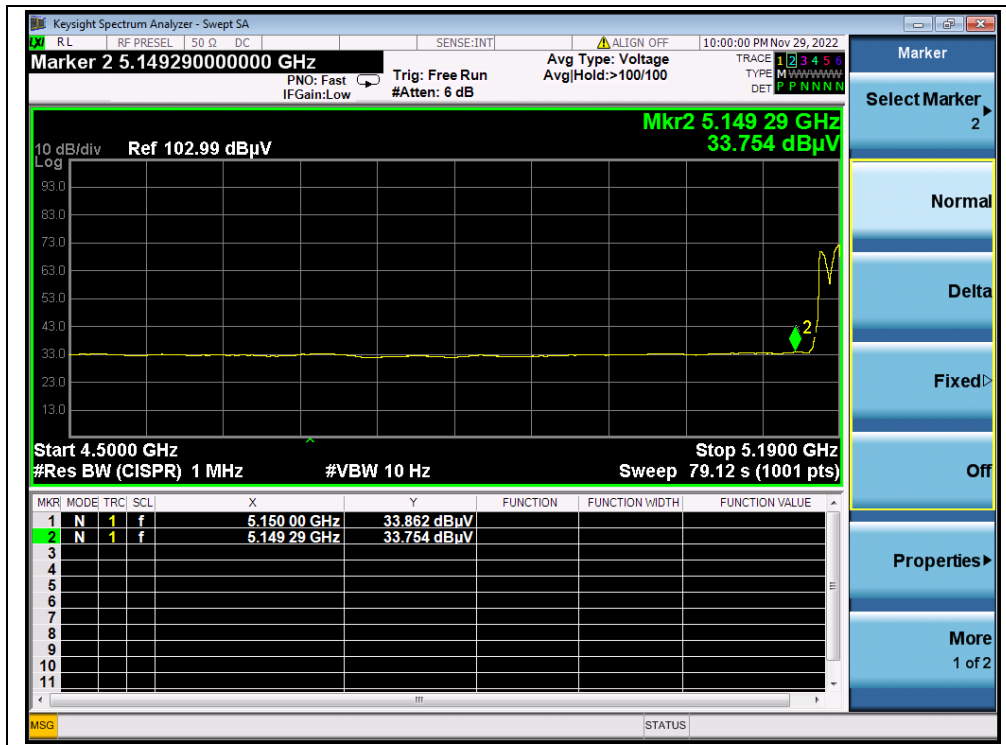
A.Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A_T	A_{Factor}	Max. Emission	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)	(dB)	(dB@3m)	E (dB μ V/m)		
38	5146.53	PK	45.40	-19.54	32.20	58.06	74	PASS
38	5150.00	AV	33.86	-19.54	32.20	46.52	54	PASS
62	5415.02	PK	42.59	-18.80	32.20	55.99	74	PASS
62	5351.04	AV	31.53	-18.80	32.20	44.93	54	PASS
102	5163.20	PK	45.22	-19.20	32.20	58.22	68.23	PASS
102	5173.58	AV	33.41	-19.20	32.20	46.41	54	PASS
142	5925.03	PK	44.81	-19.20	32.20	57.81	68.23	PASS
151	5725.00	PK	42.91	-19.01	32.20	56.10	122.23	PASS
159	5850.00	PK	42.53	-19.01	32.20	55.72	122.23	PASS

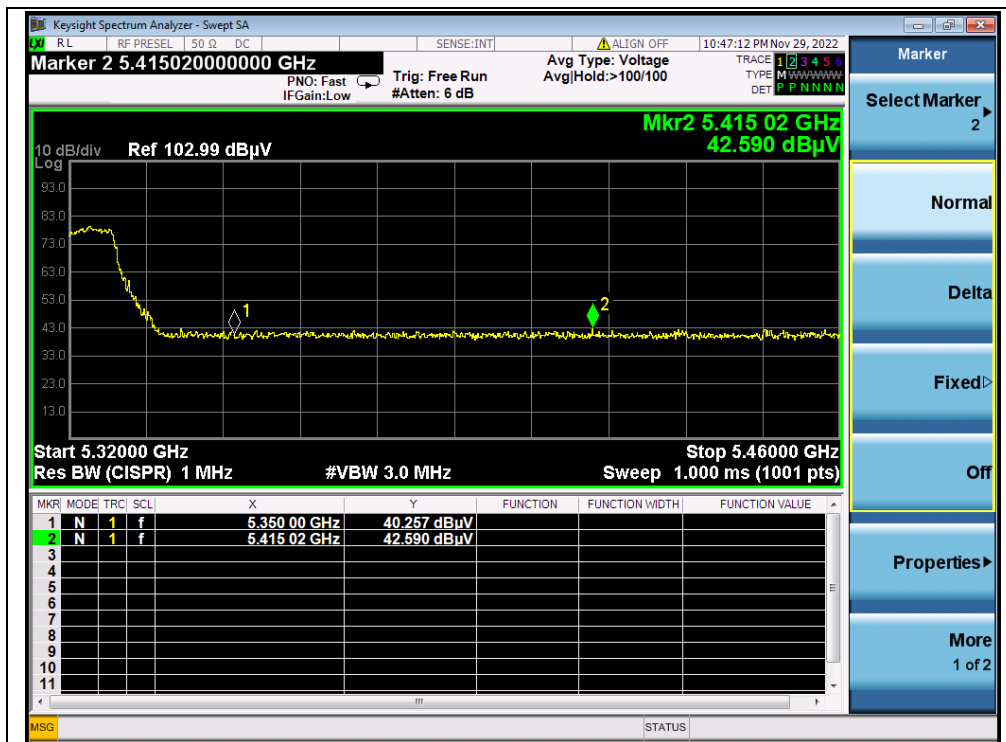
B.Test Plot:



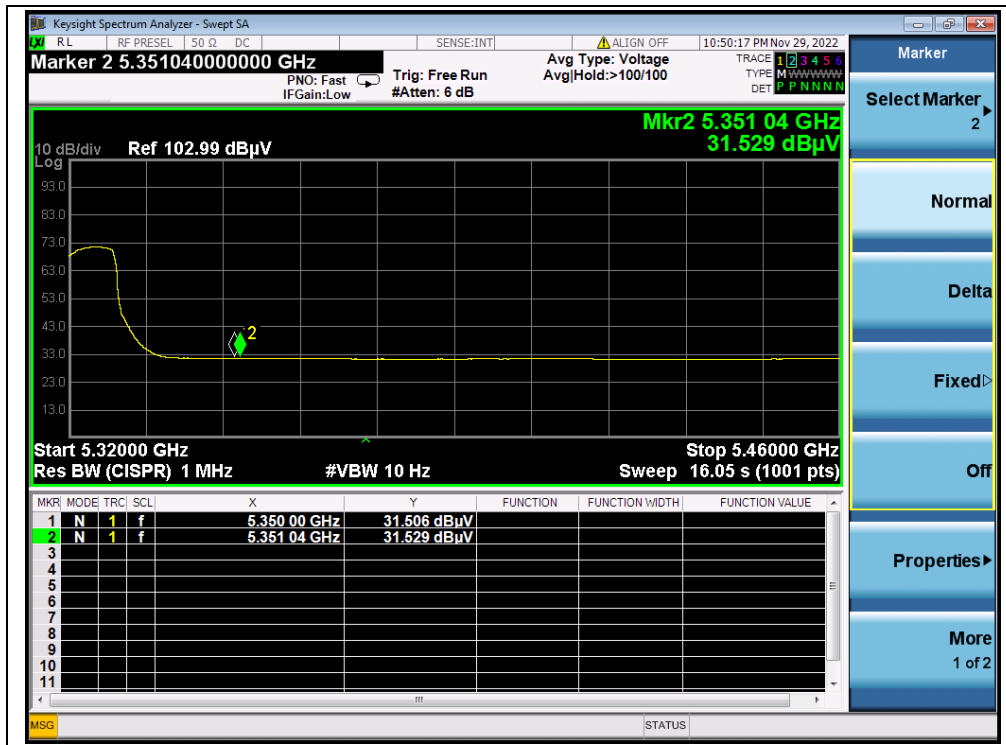
(PEAK, Channel 38, 802.11n (HT40))



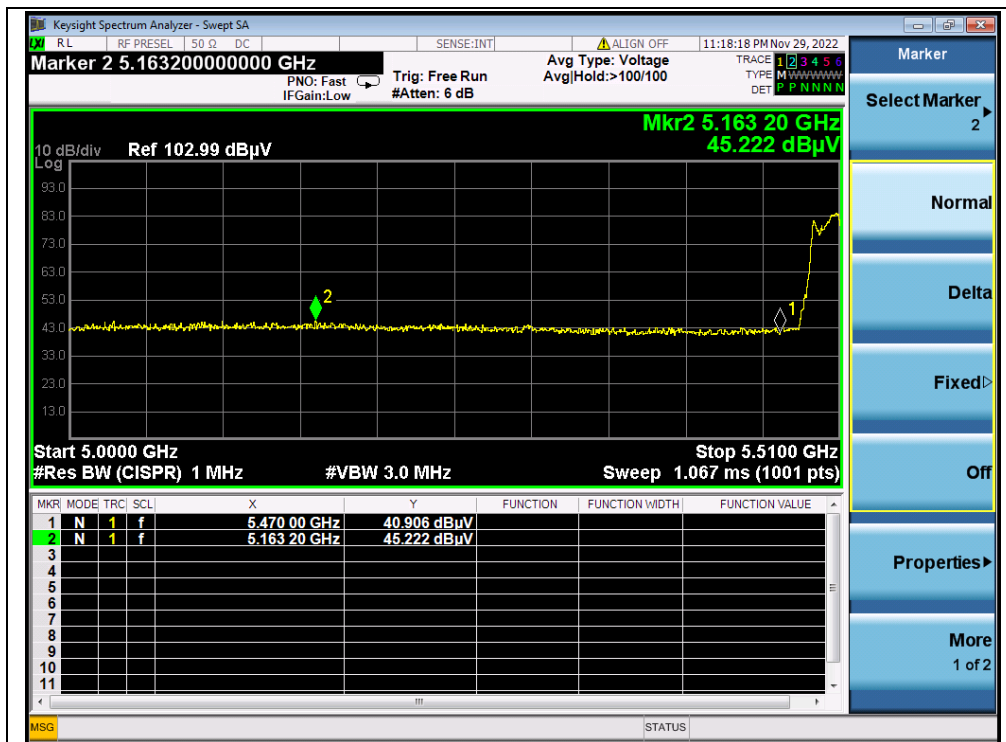
(AVERAGE, Channel 38, 802.11n (HT40))



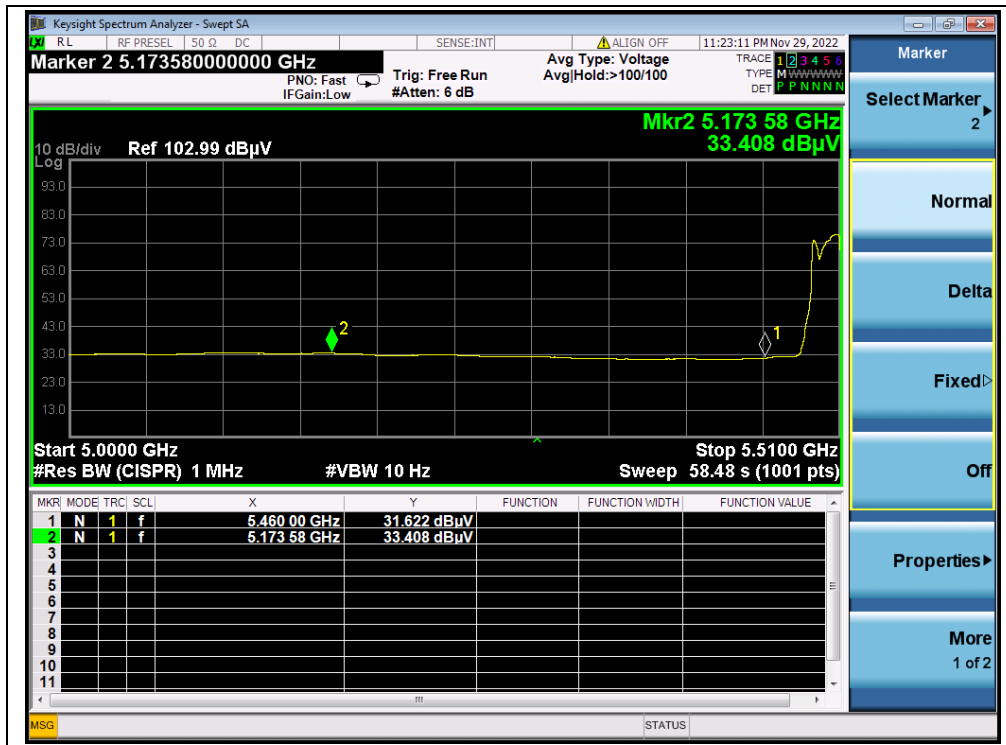
(PEAK, Channel 62, 802.11n (HT40))



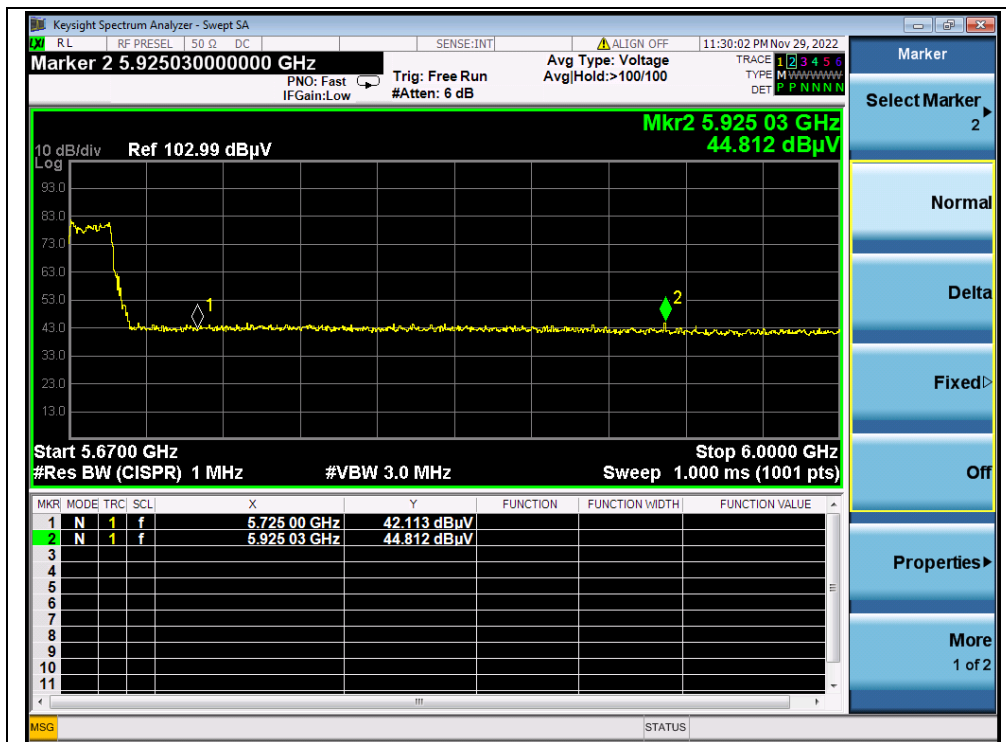
(AVERAGE, Channel 62, 802.11n (HT40))



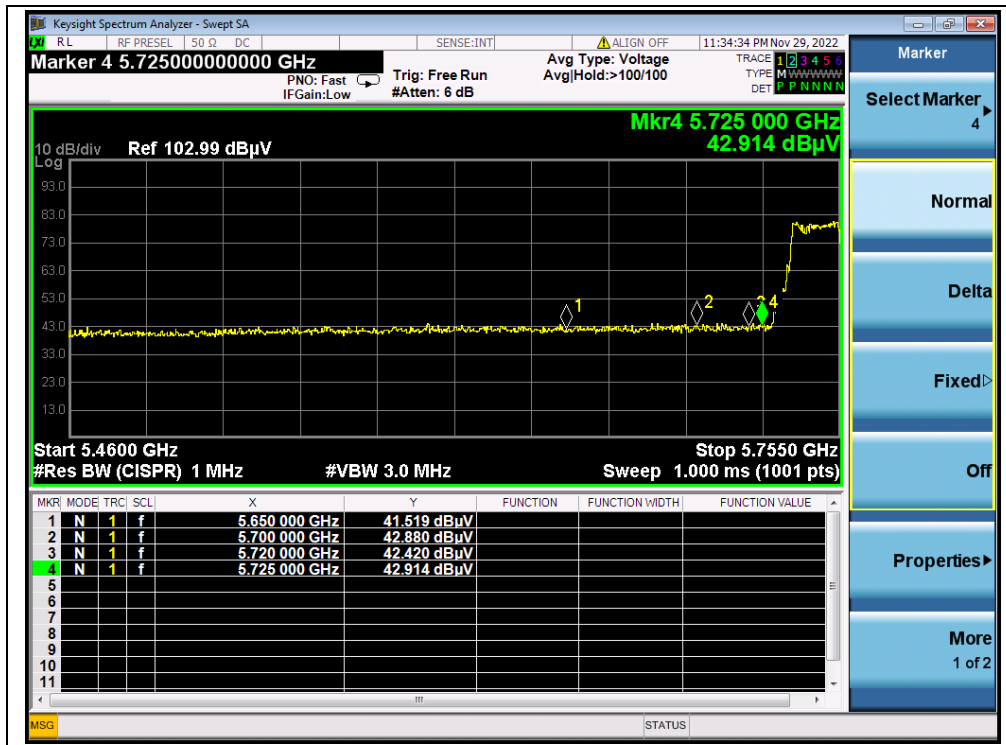
(PEAK, Channel 102, 802.11n (HT40))



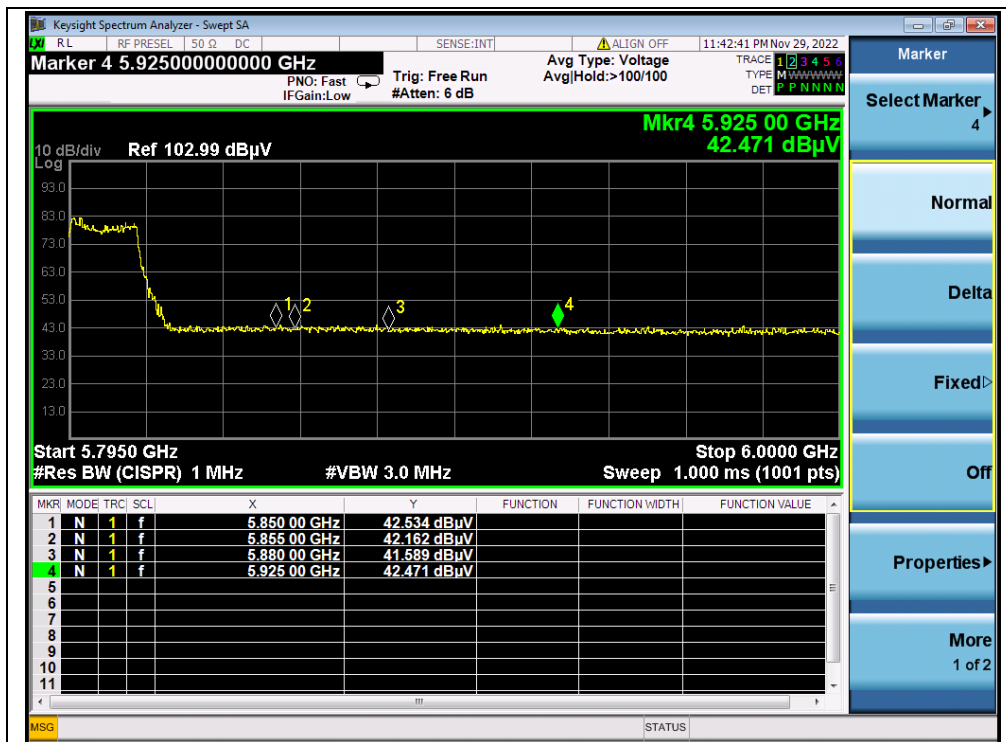
(AVERAGE, Channel 102, 802.11n (HT40))



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



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



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

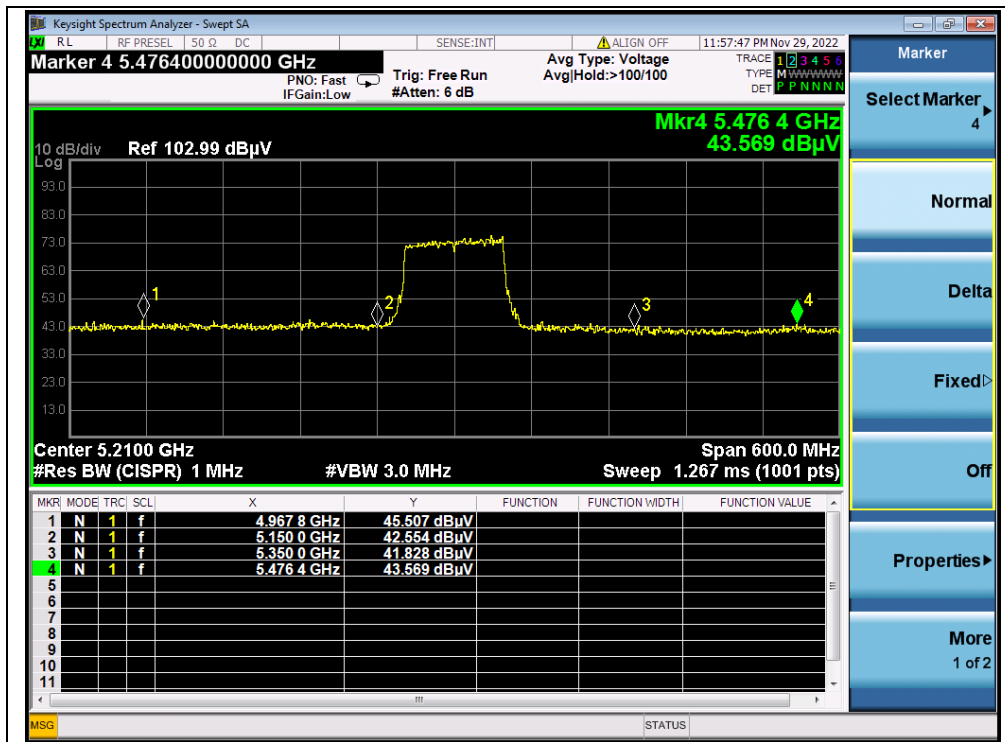


802.11ac (VHT80) Mode

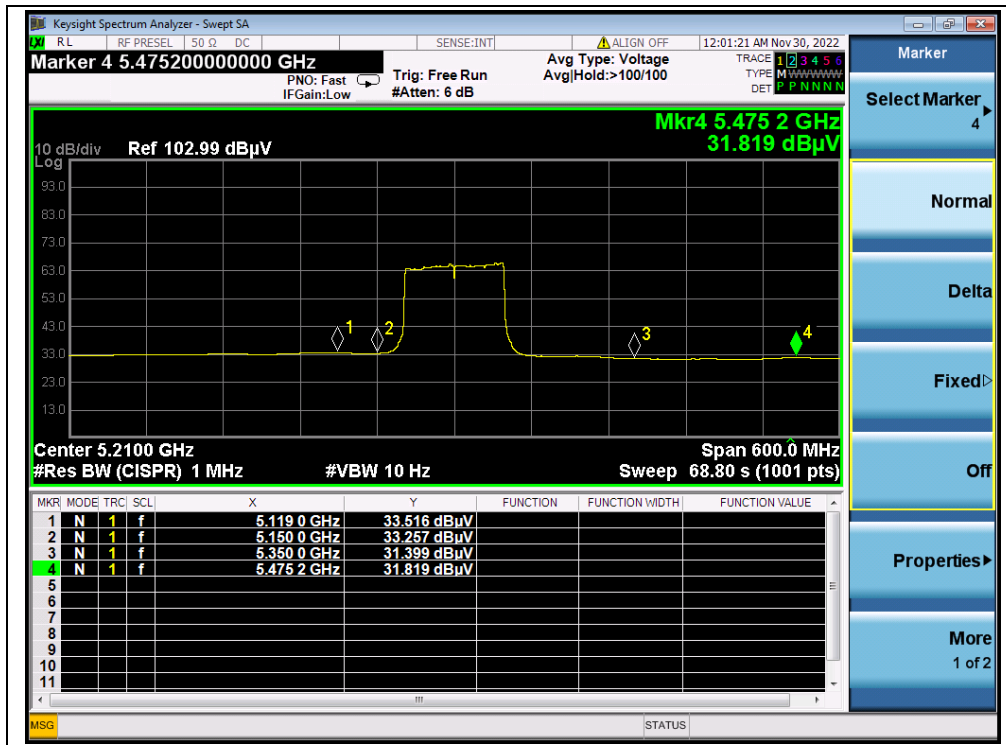
A. Test Verdict:

Channel	Frequency (MHz)	Detector	Receiver Reading	A_T	A_{Factor}	Max. Emission	Limit	Verdict
		PK/ AV	U_R (dB μ V)	(dB)	(dB@3m)	E (dB μ V/m)	(dB μ V/m)	
42	4967.80	PK	45.51	-19.54	32.20	58.17	74	PASS
42	5119.00	AV	33.52	-19.54	32.20	46.18	54	PASS
58	5110.60	PK	45.26	-18.80	32.20	58.66	74	PASS
58	5110.00	AV	33.51	-18.80	32.20	46.91	54	PASS
106	5179.63	PK	45.90	-19.20	32.20	58.90	68.23	PASS
106	5171.68	AV	33.46	-19.20	32.20	46.46	54	PASS
138	5736.24	PK	45.01	-19.20	32.20	58.01	68.23	PASS
155	5725.00	PK	45.80	-19.01	32.20	58.99	122.23	PASS
155	5855.00	PK	42.46	-19.01	32.20	55.65	110.83	PASS

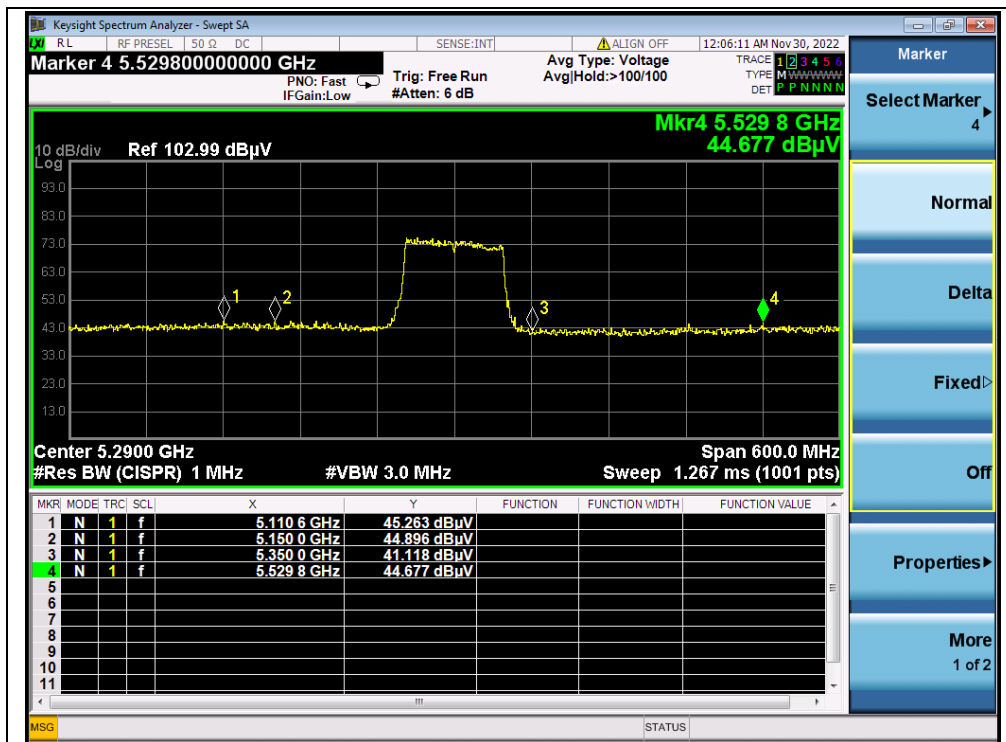
B. Test Plot:



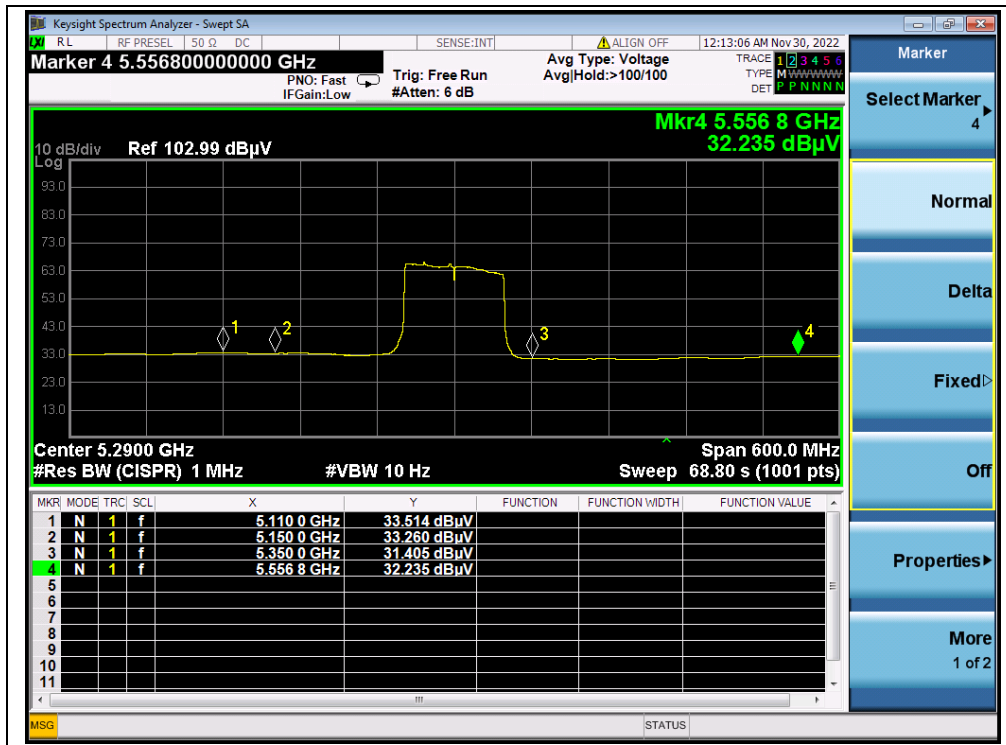
(PEAK, Channel 42, 802.11ac (VHT80))



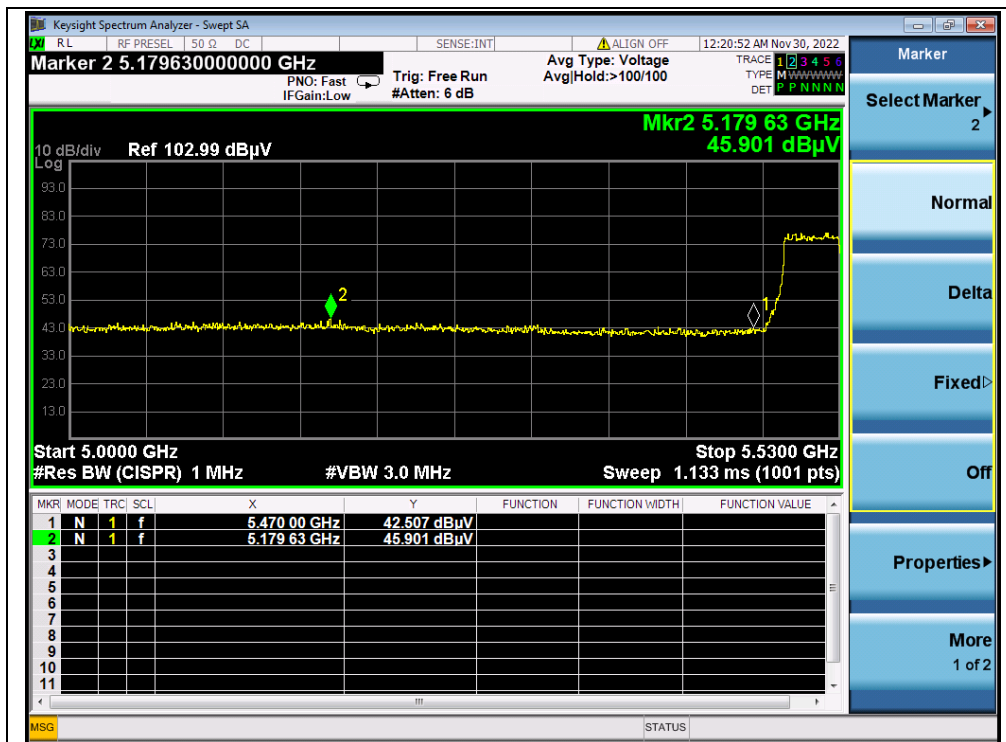
(AVERAGE, Channel 42, 802.11ac (VHT80))



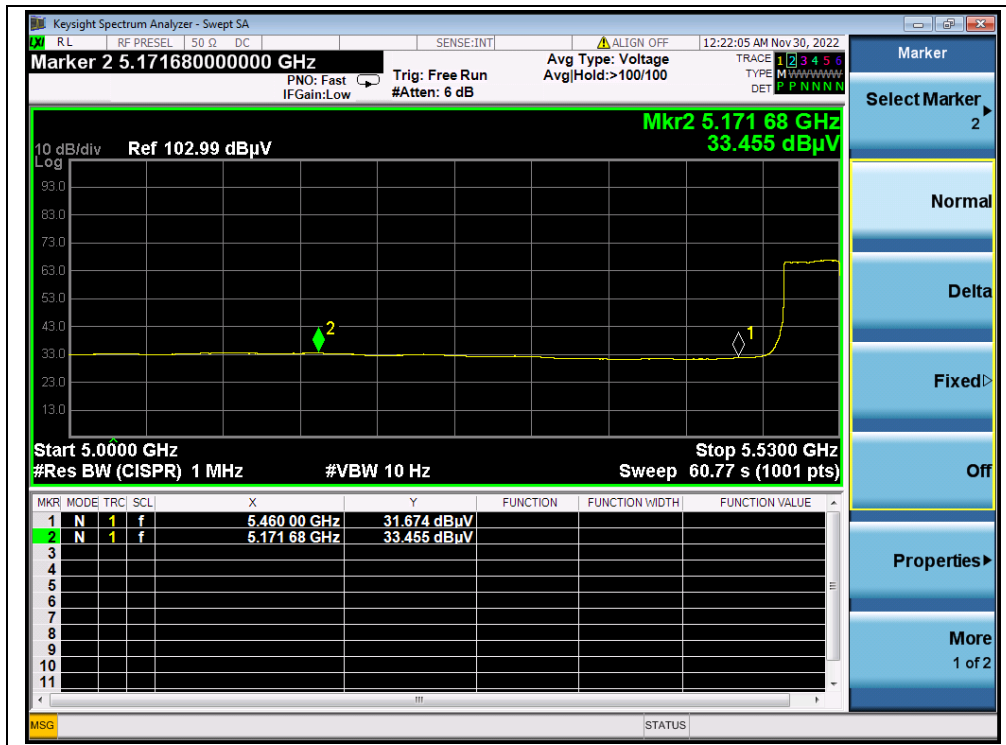
(PEAK, Channel 58, 802.11ac (VHT80))



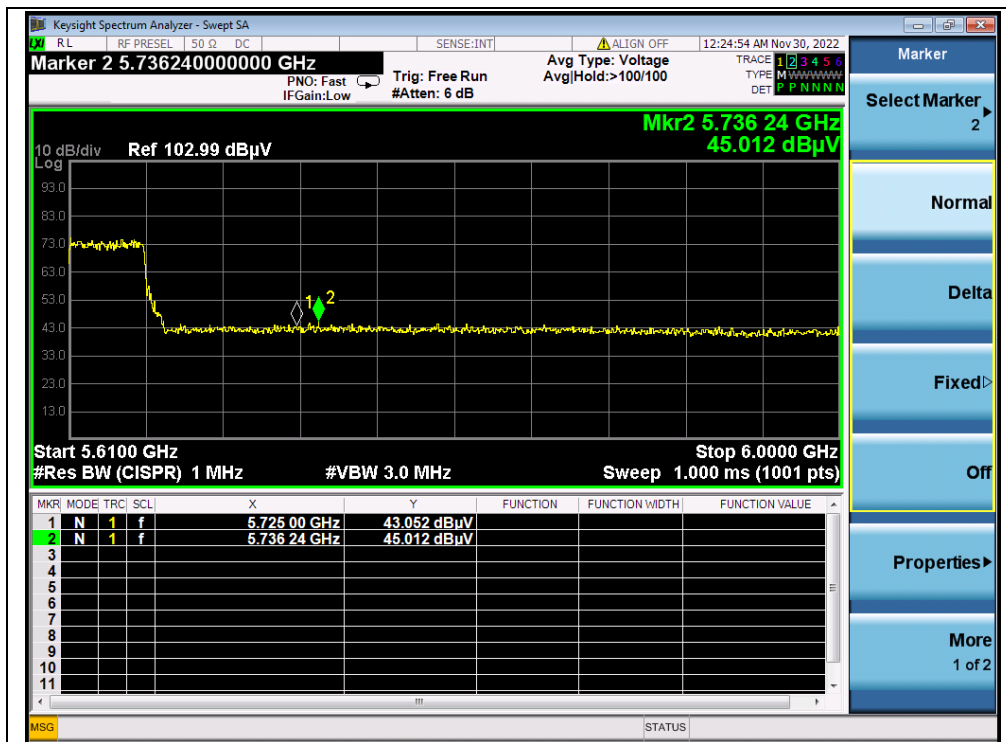
(AVERAGE, Channel 58, 802.11ac (VHT80))



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



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



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

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:

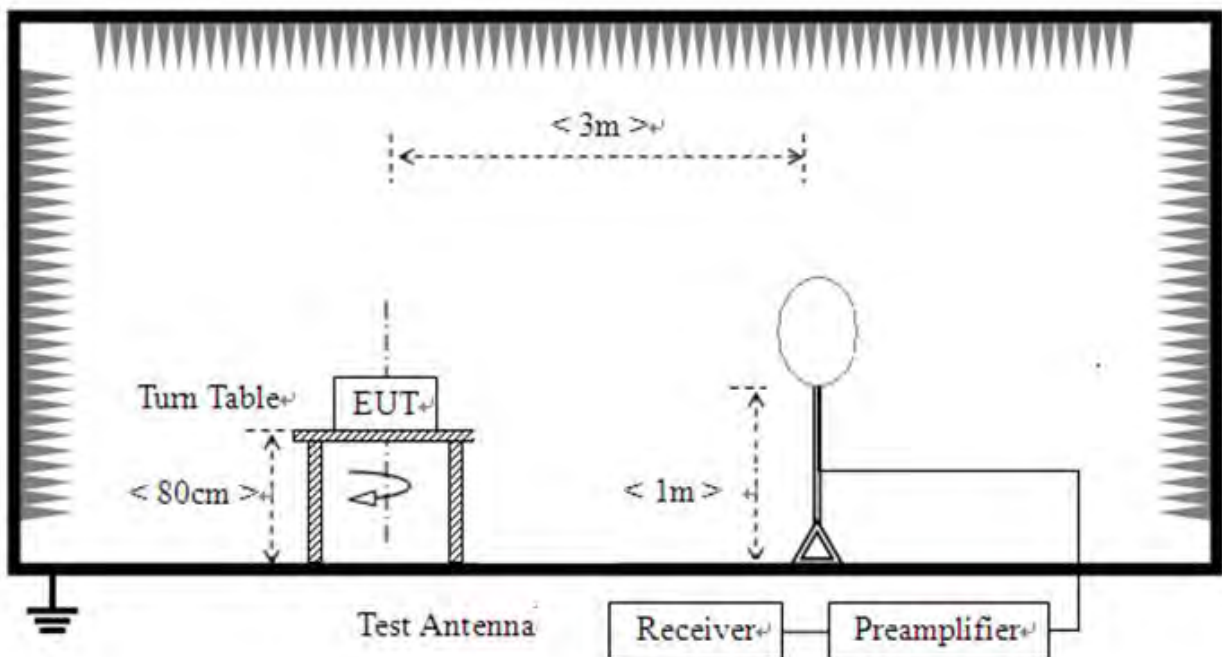
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

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).

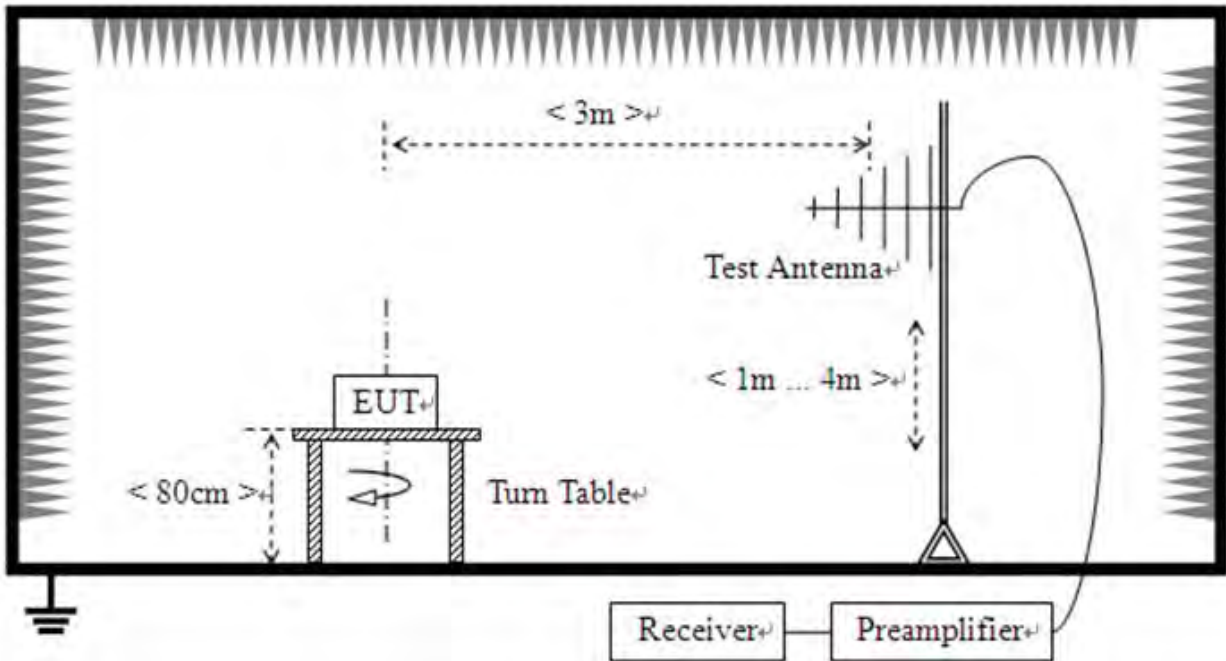
2.9.2. Test Description

Test Setup:

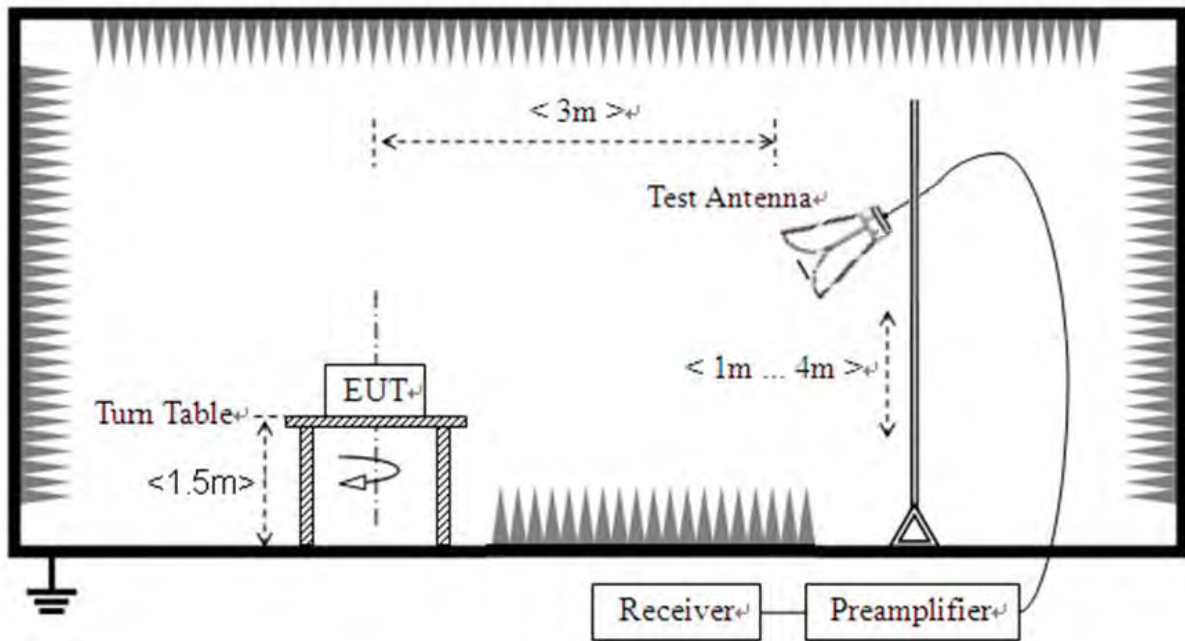
- 1) For radiated emissions from 9kHz to 30MHz



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 3 meters. 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:

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

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{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.

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.

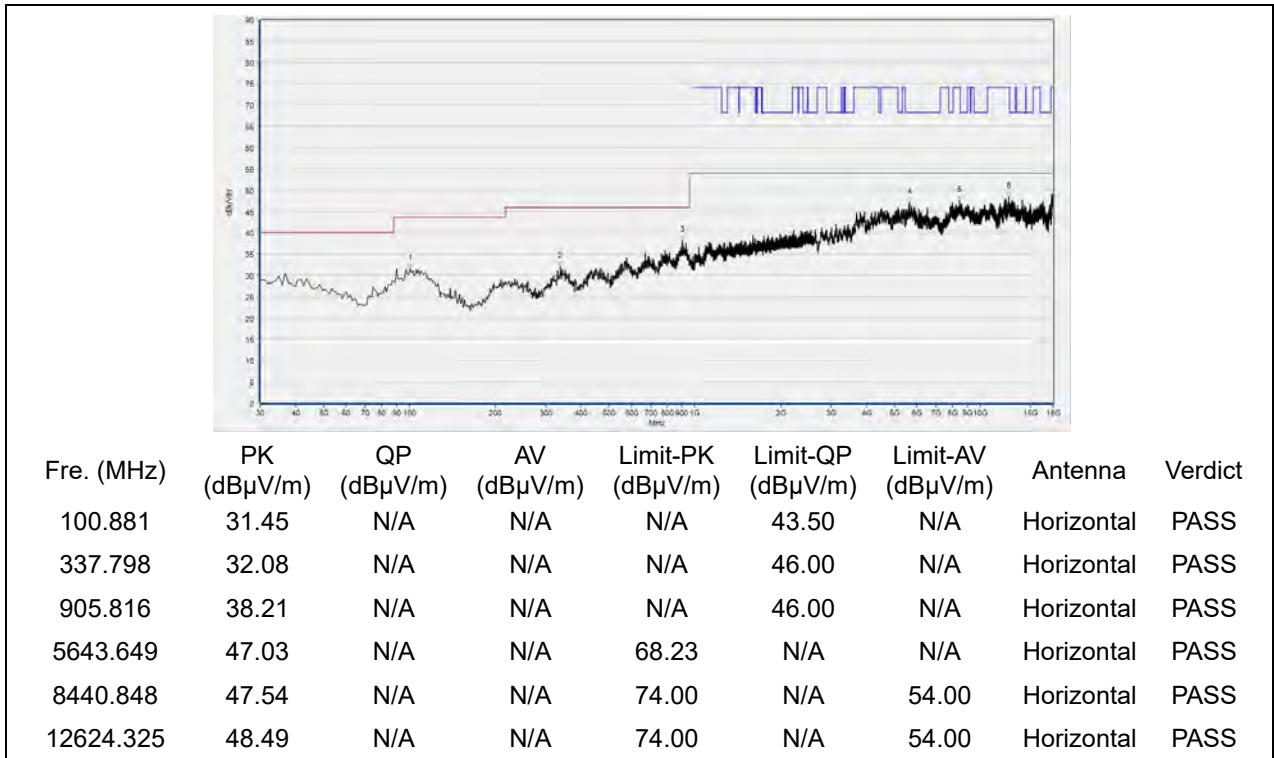
Note 2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

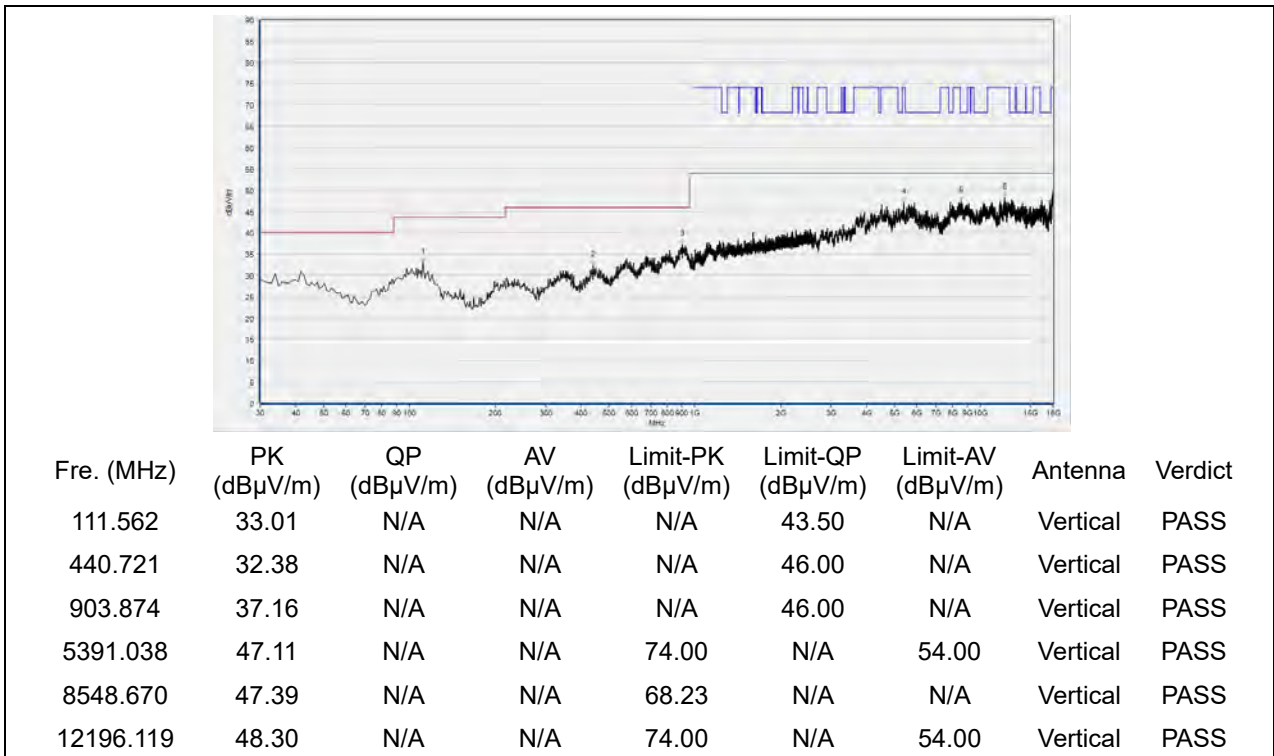
Note 4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11a Mode

Plot for Channel 36

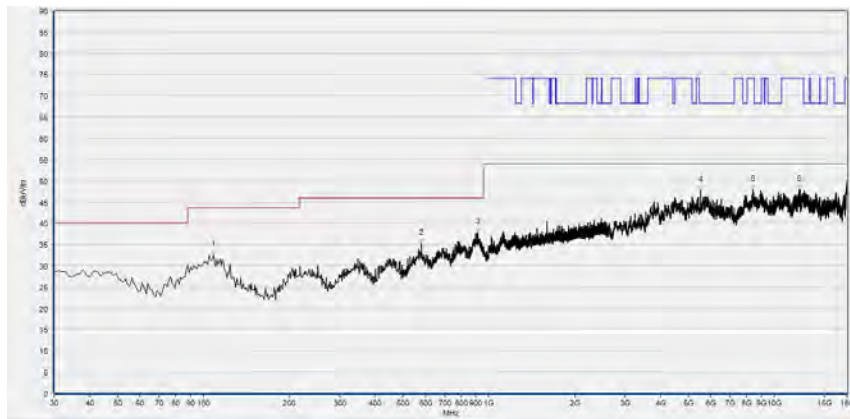


(Antenna Horizontal, 30MHz to 18GHz)



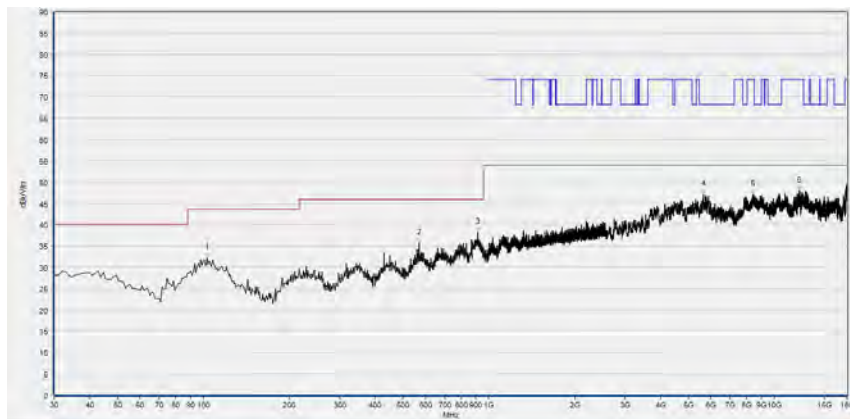
(Antenna Vertical, 30MHz to 18GHz)

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
108.649	32.43	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
579.570	35.25	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
916.496	37.84	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5523.505	47.70	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8406.961	47.93	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12199.200	47.95	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

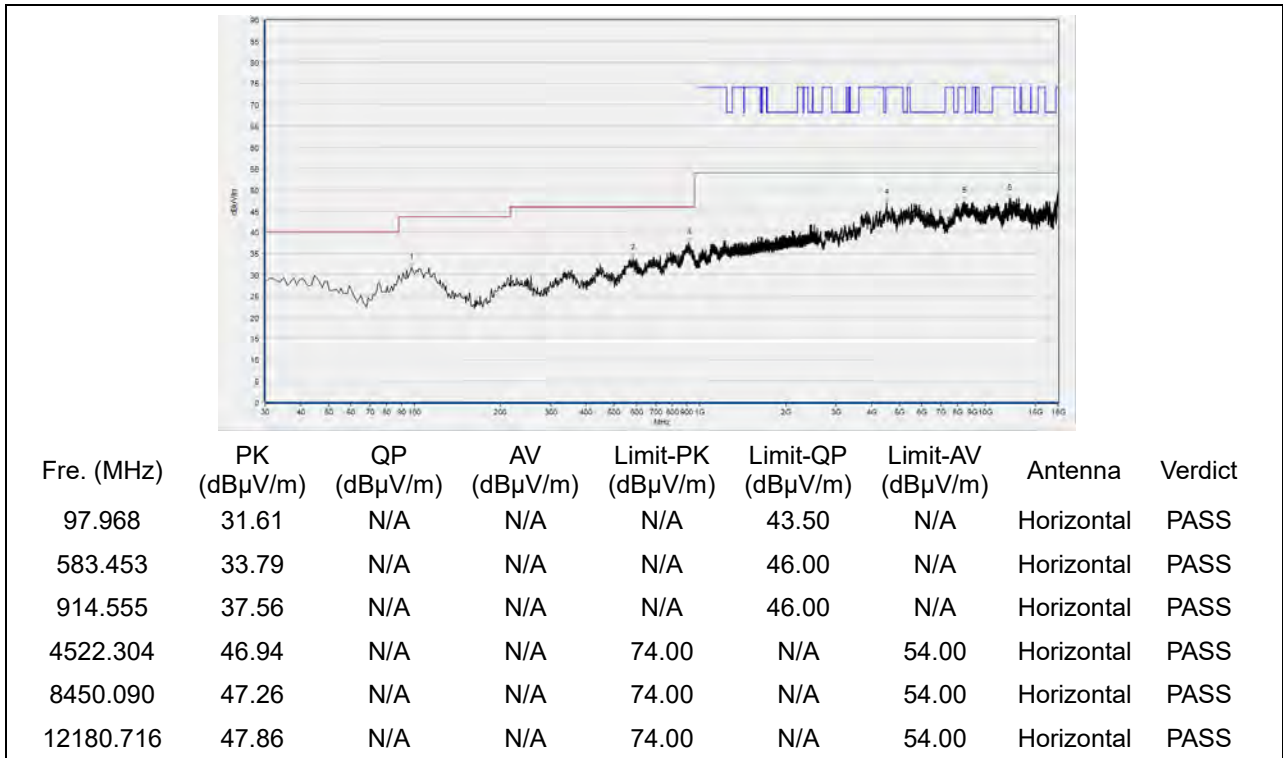
(Antenna Horizontal, 30MHz to 18GHz)



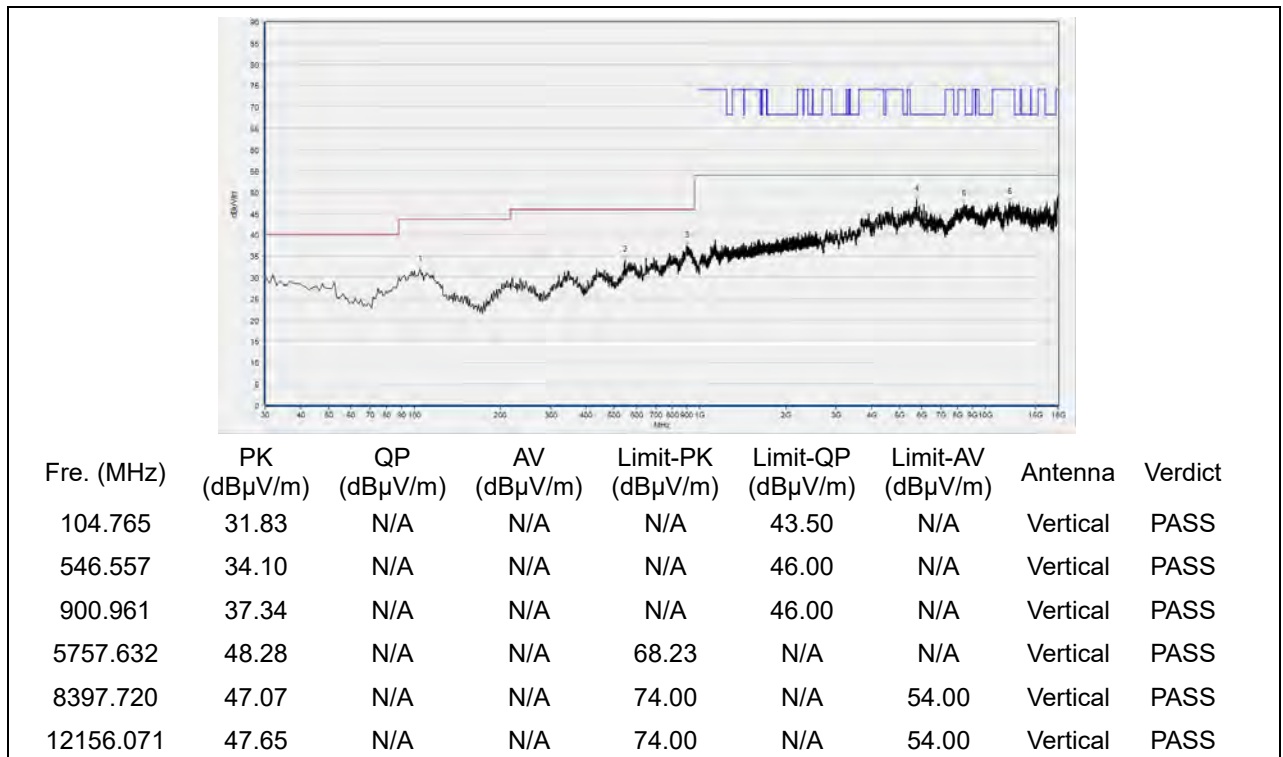
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
102.823	32.14	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
569.860	35.70	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
913.584	38.28	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5655.971	47.01	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
8425.445	47.13	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12205.361	47.92	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48

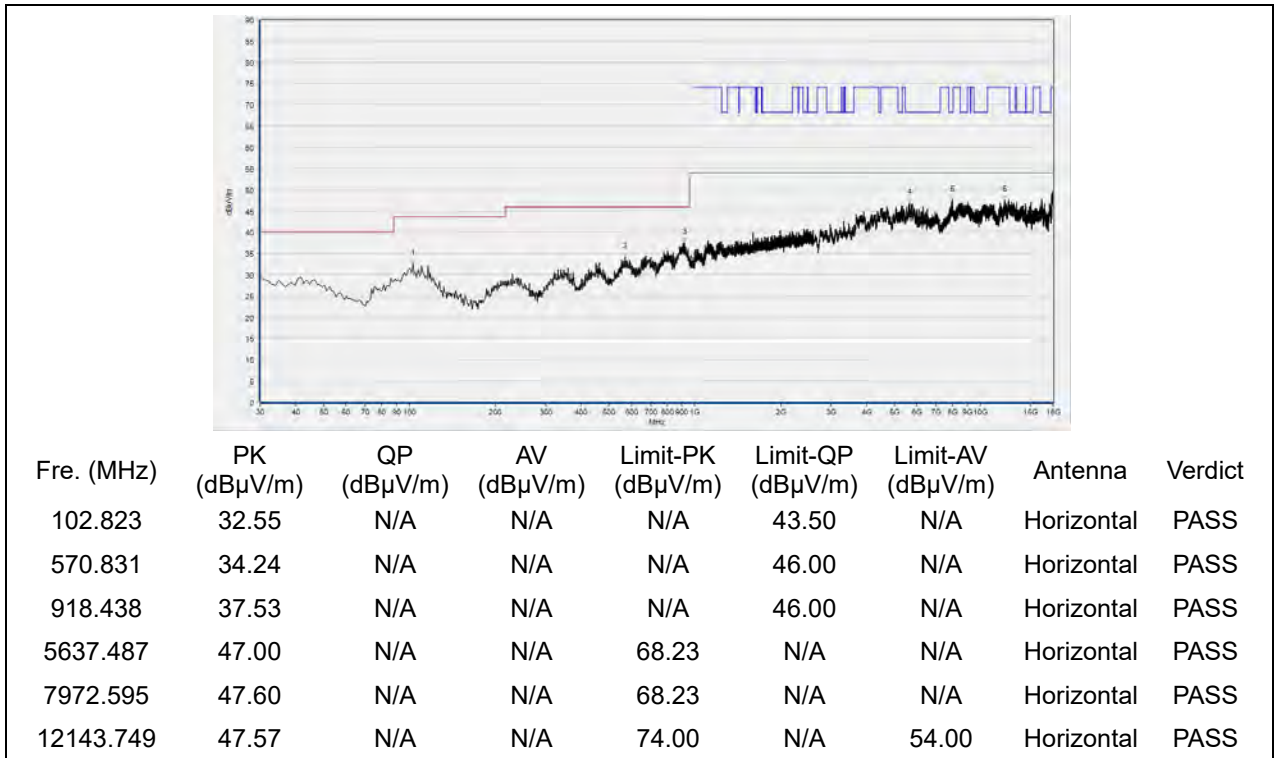


(Antenna Horizontal, 30MHz to 18GHz)

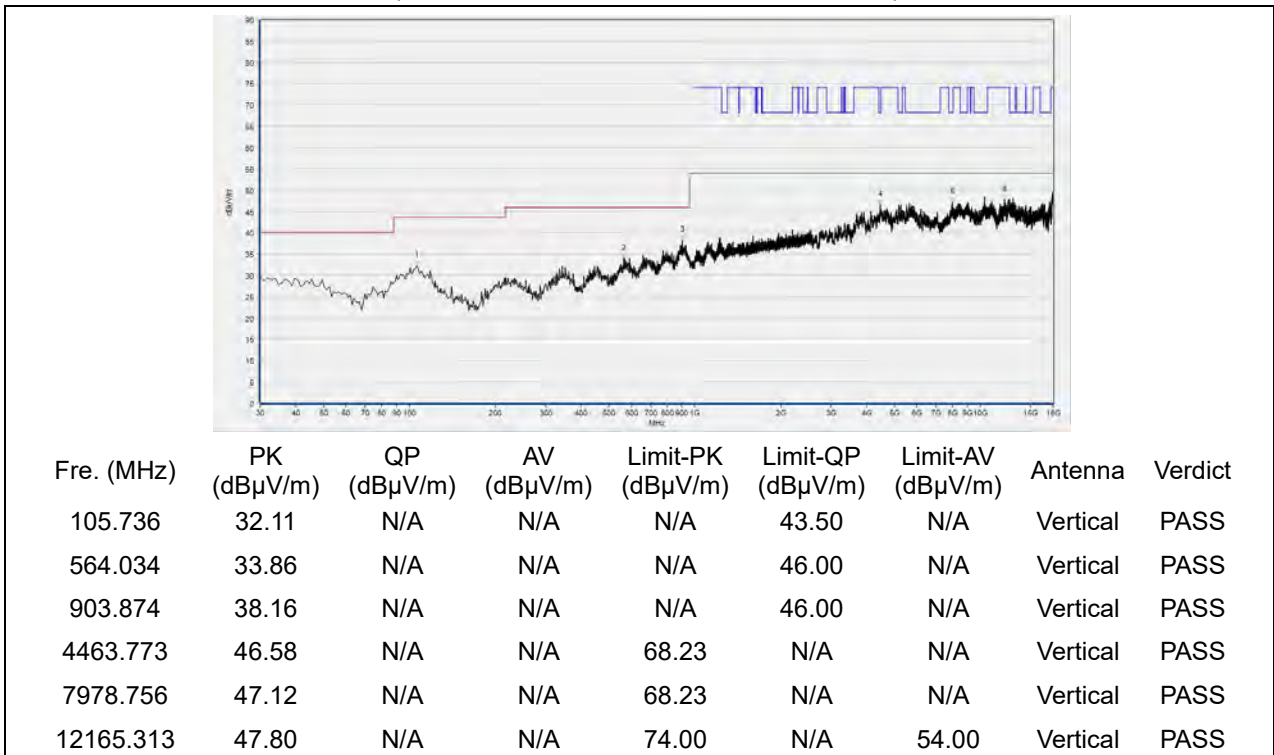


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 52

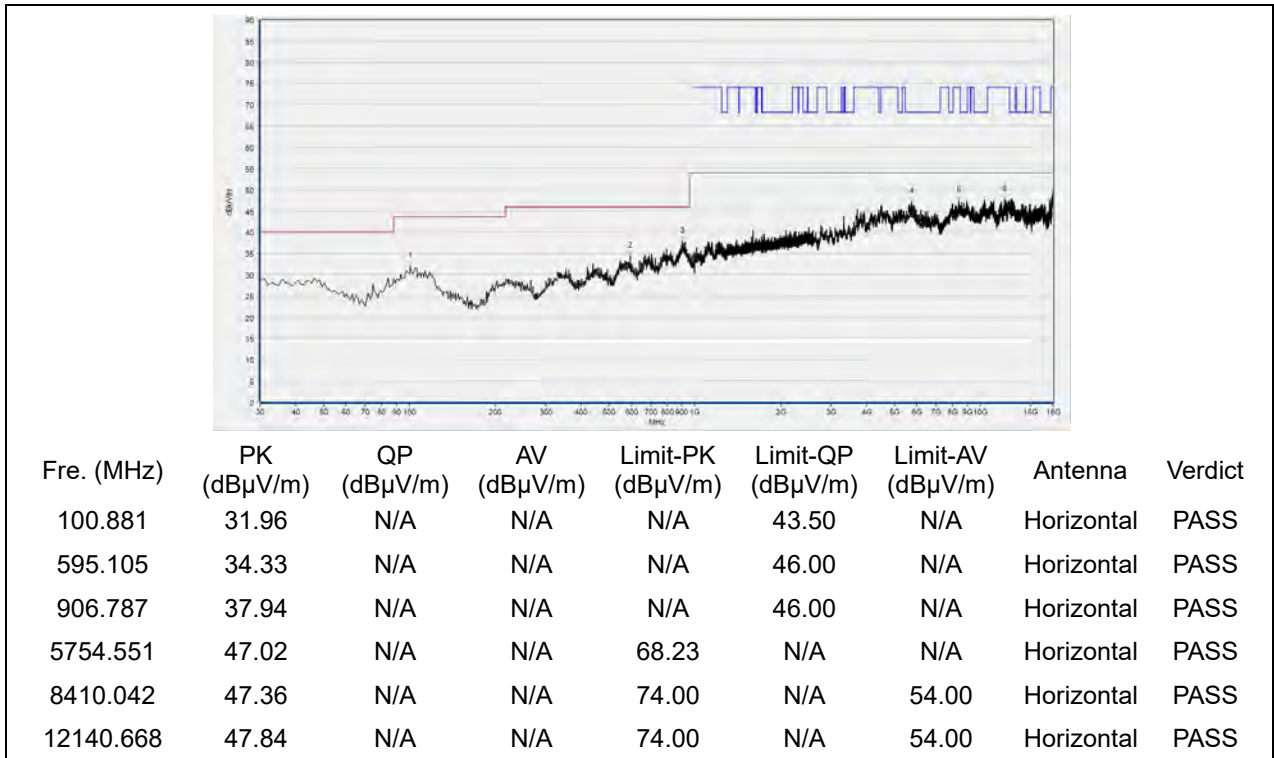


(Antenna Horizontal, 30MHz to 18GHz)

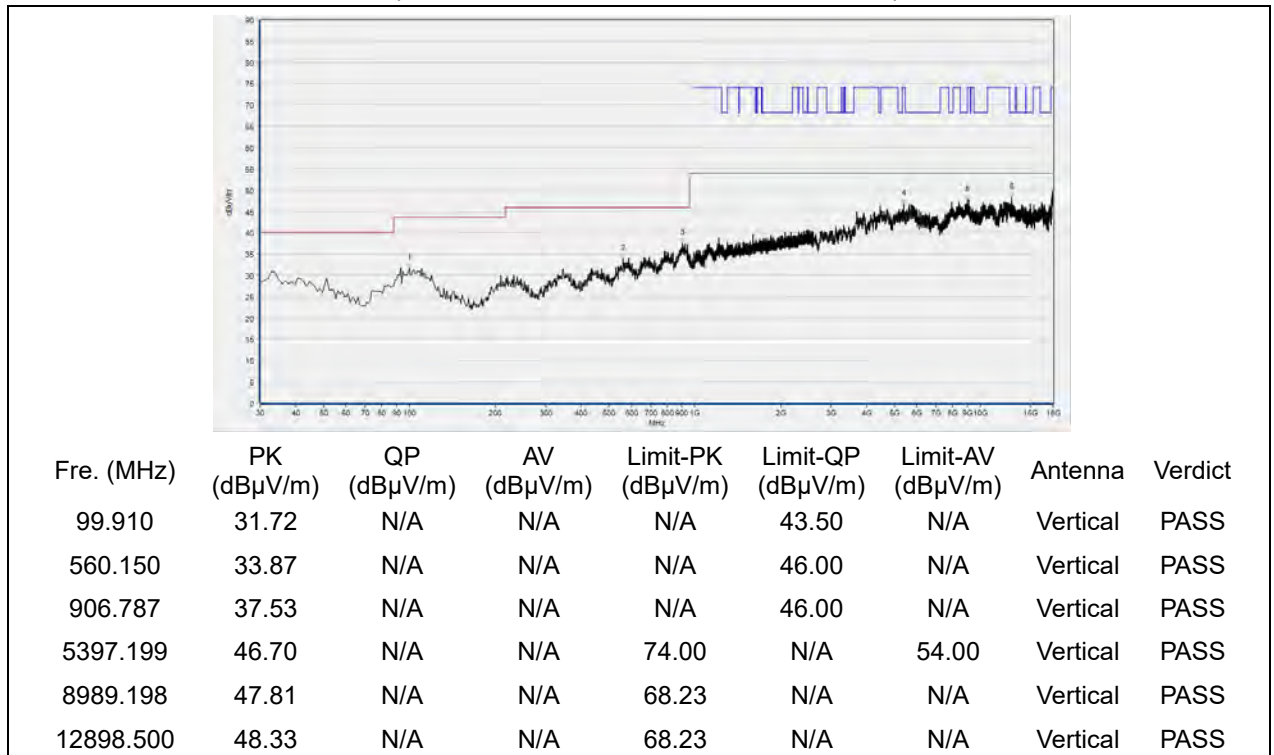


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 60

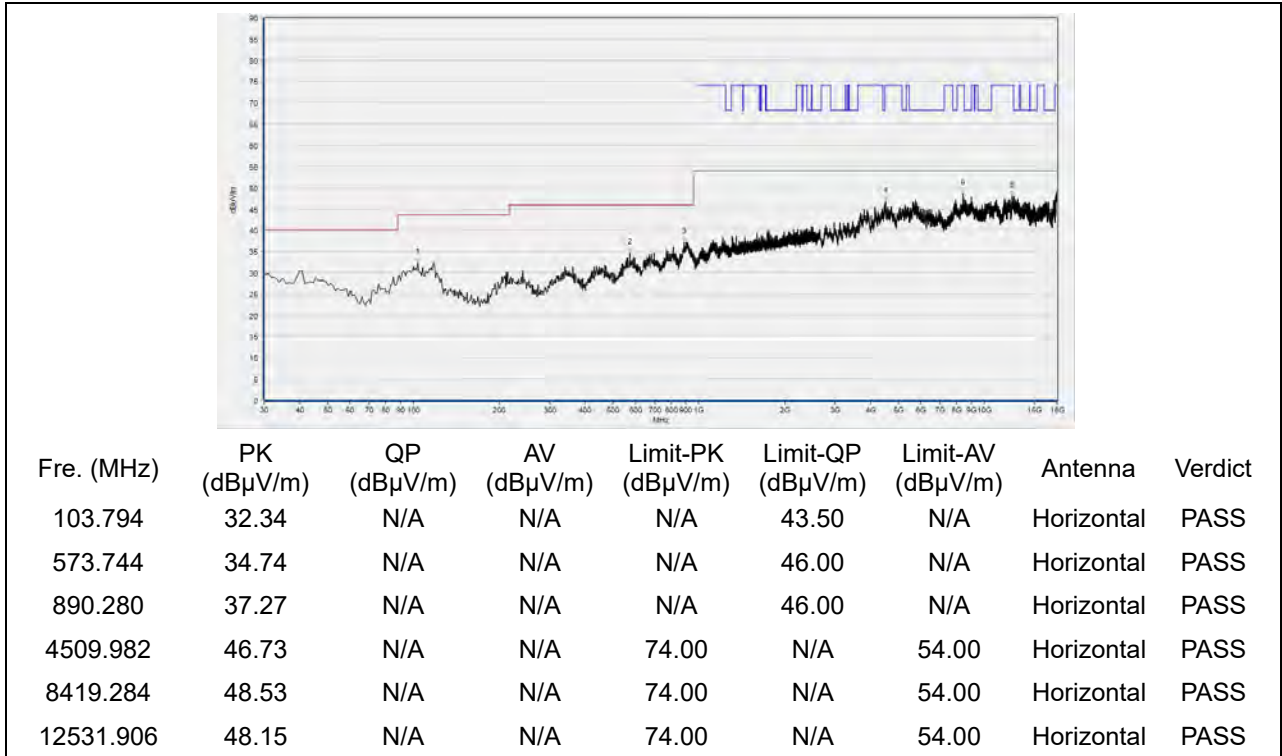


(Antenna Horizontal, 30MHz to 18GHz)

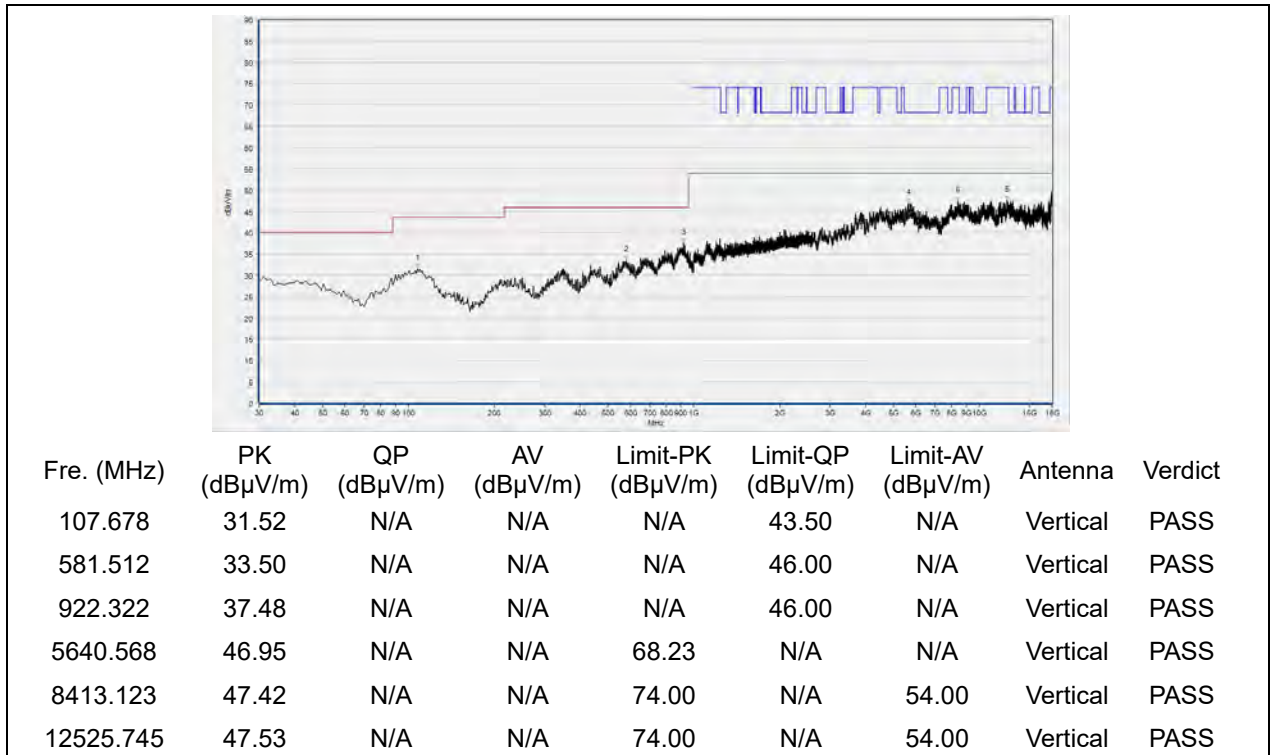


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 64

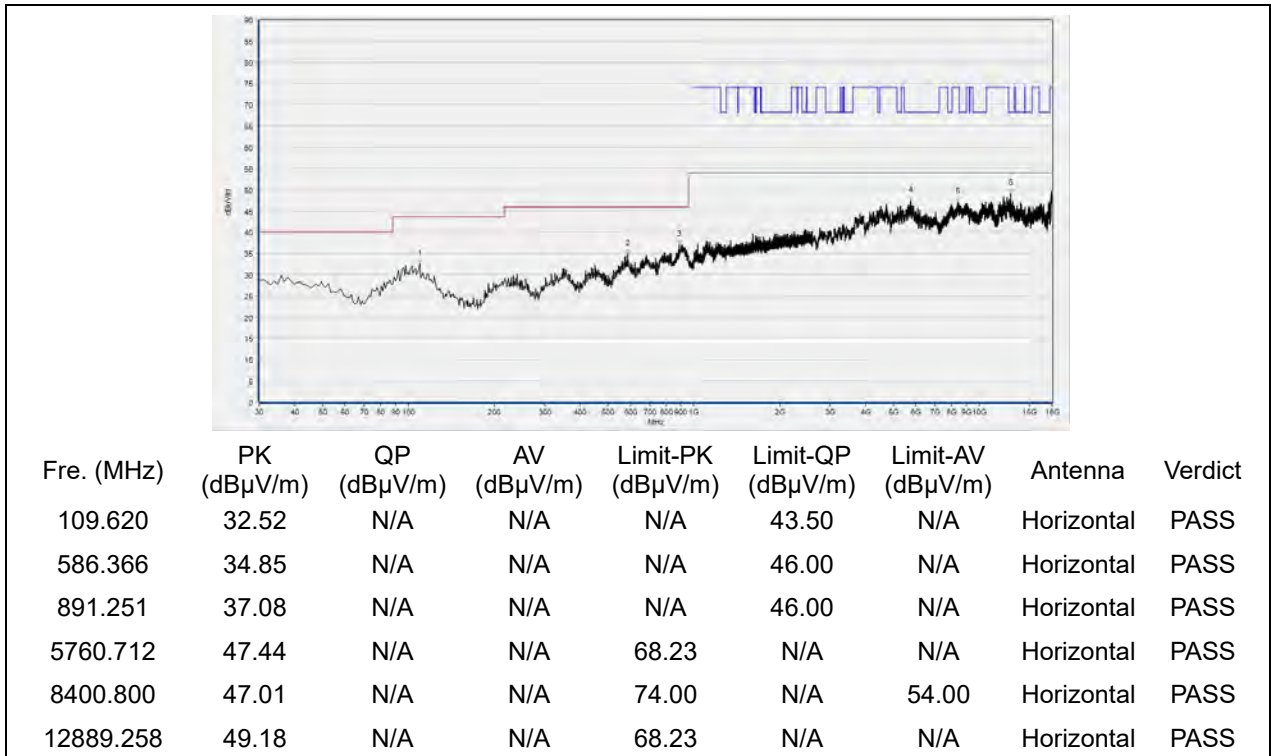


(Antenna Horizontal, 30MHz to 18GHz)

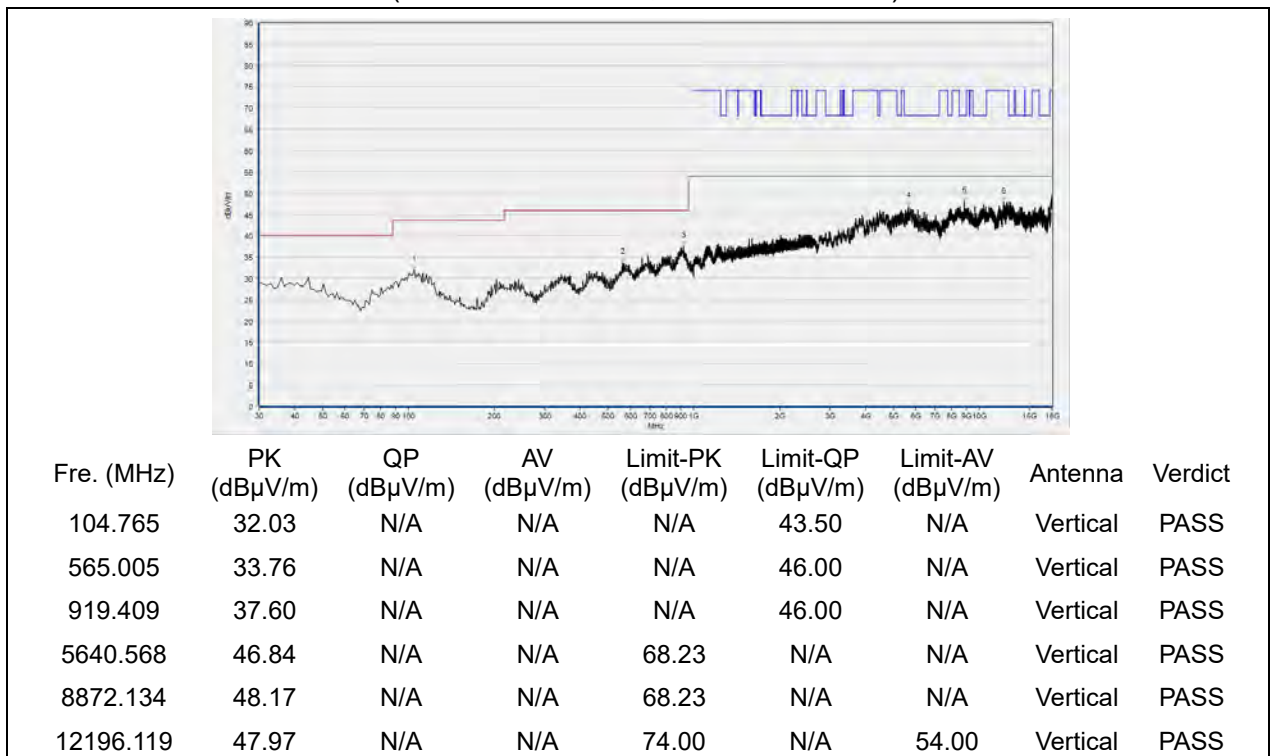


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 100

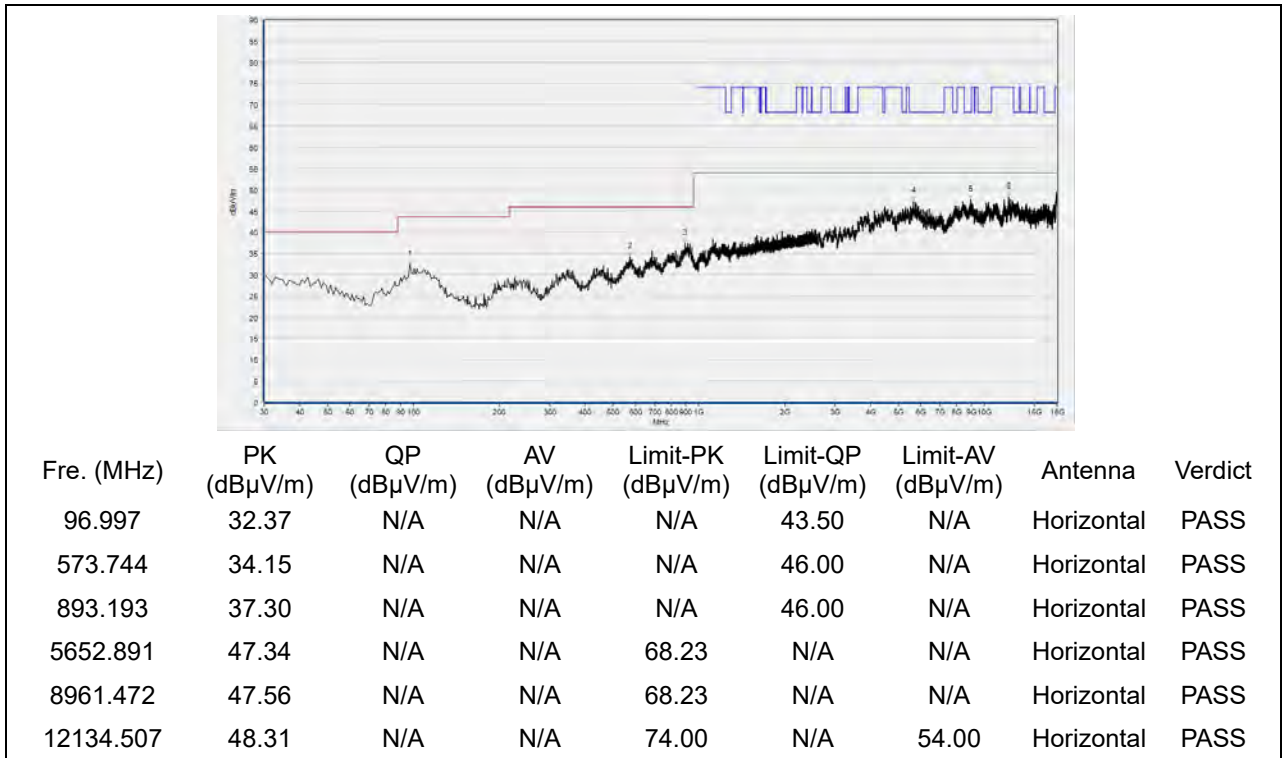


(Antenna Horizontal, 30MHz to 18GHz)

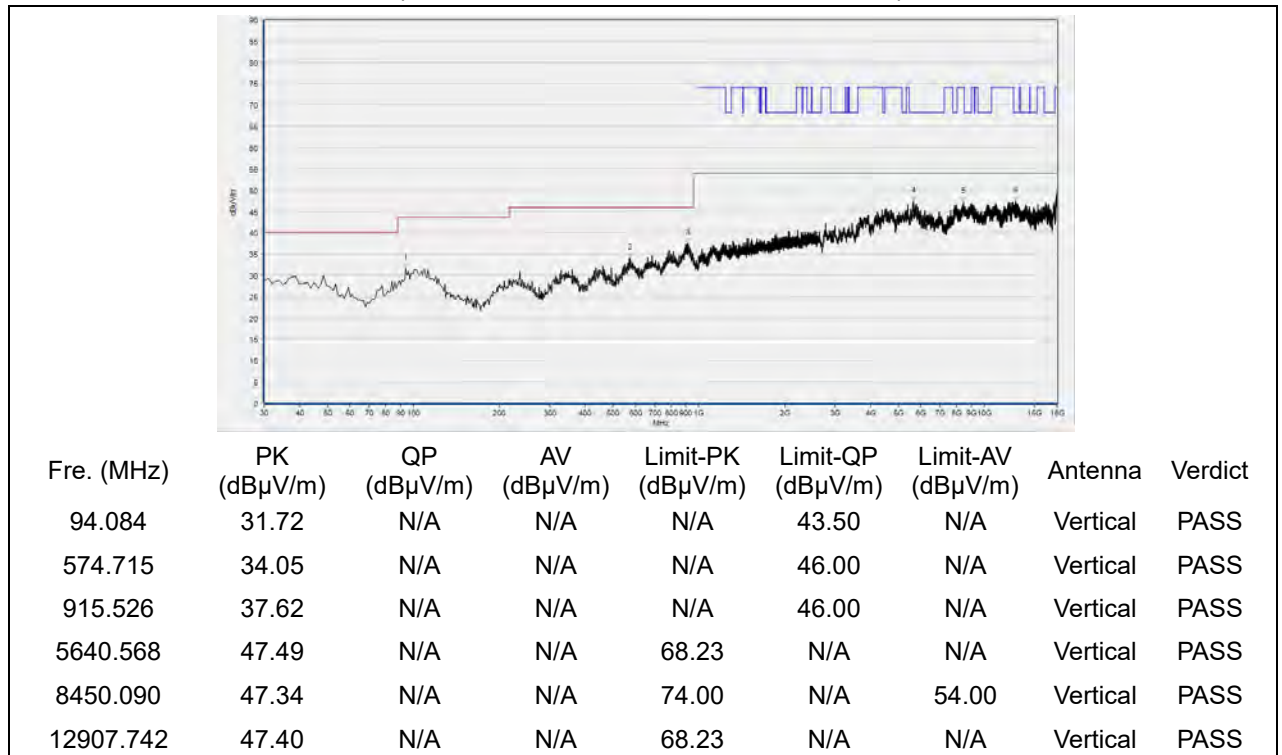


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 120

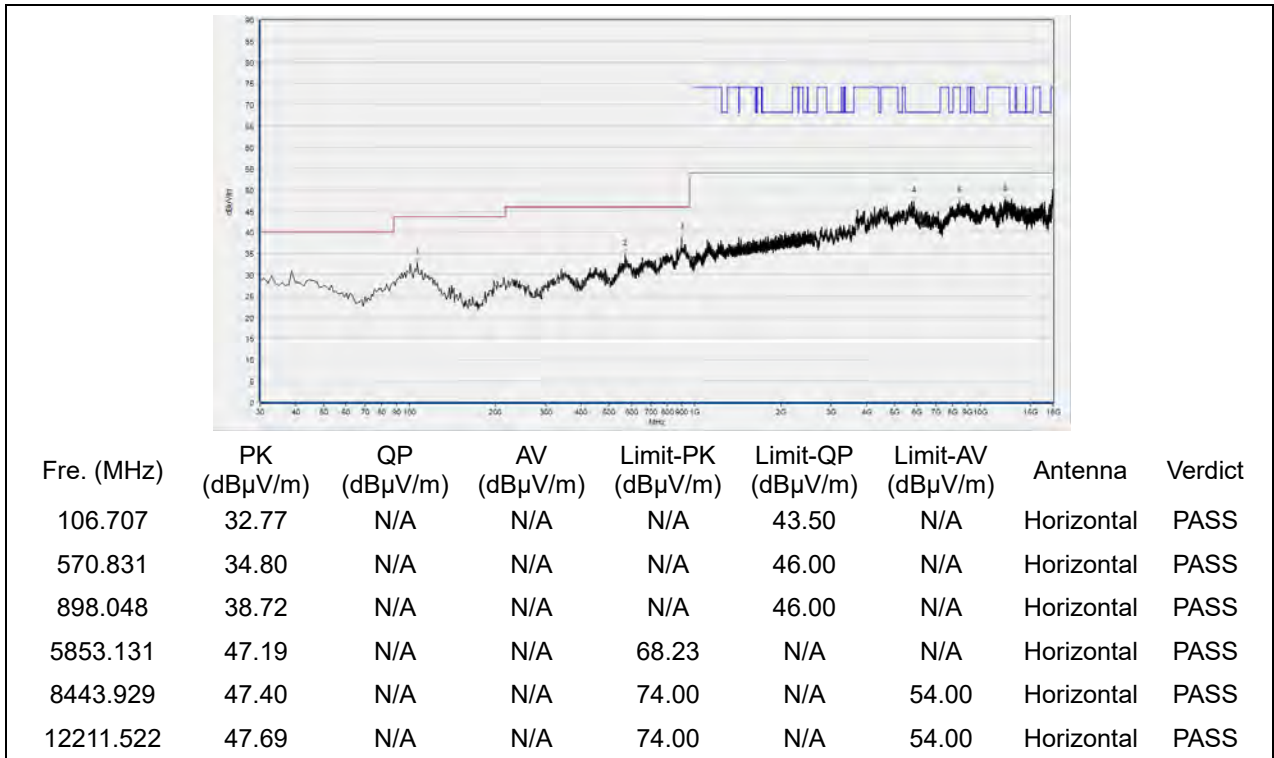


(Antenna Horizontal, 30MHz to 18GHz)

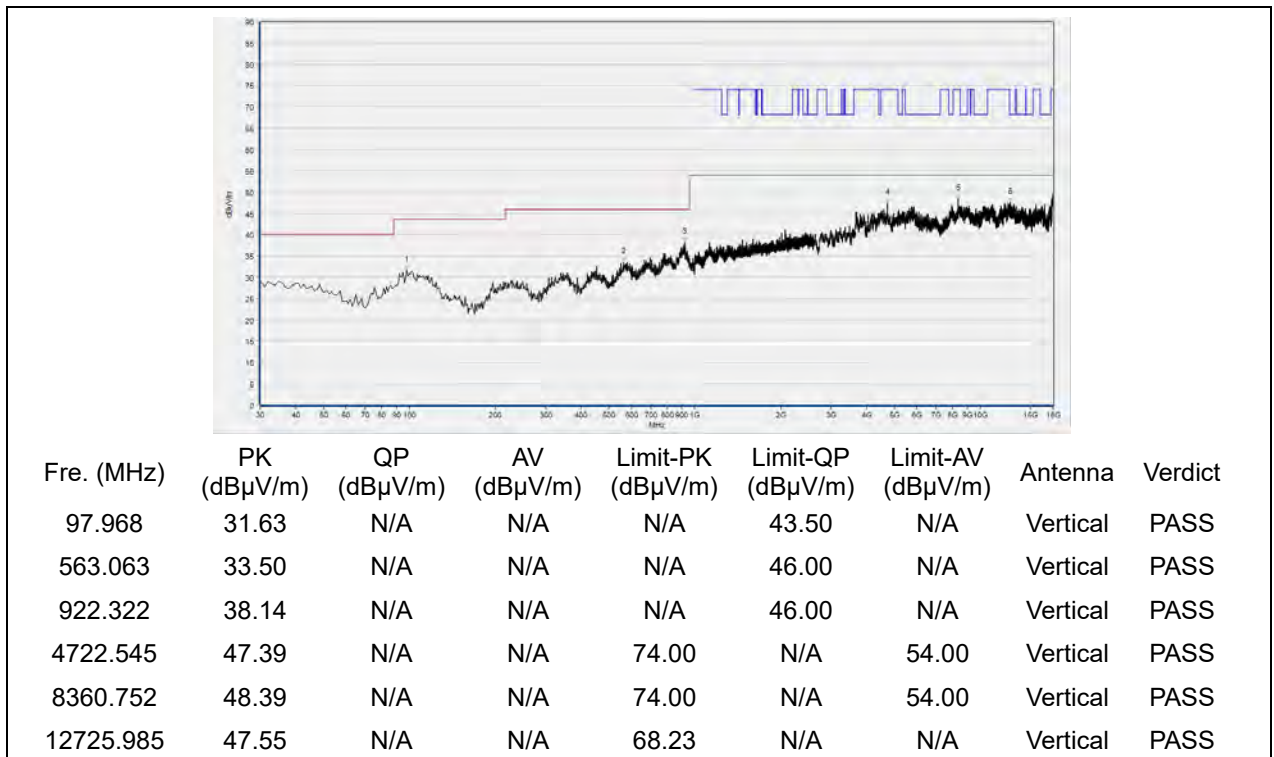


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 144

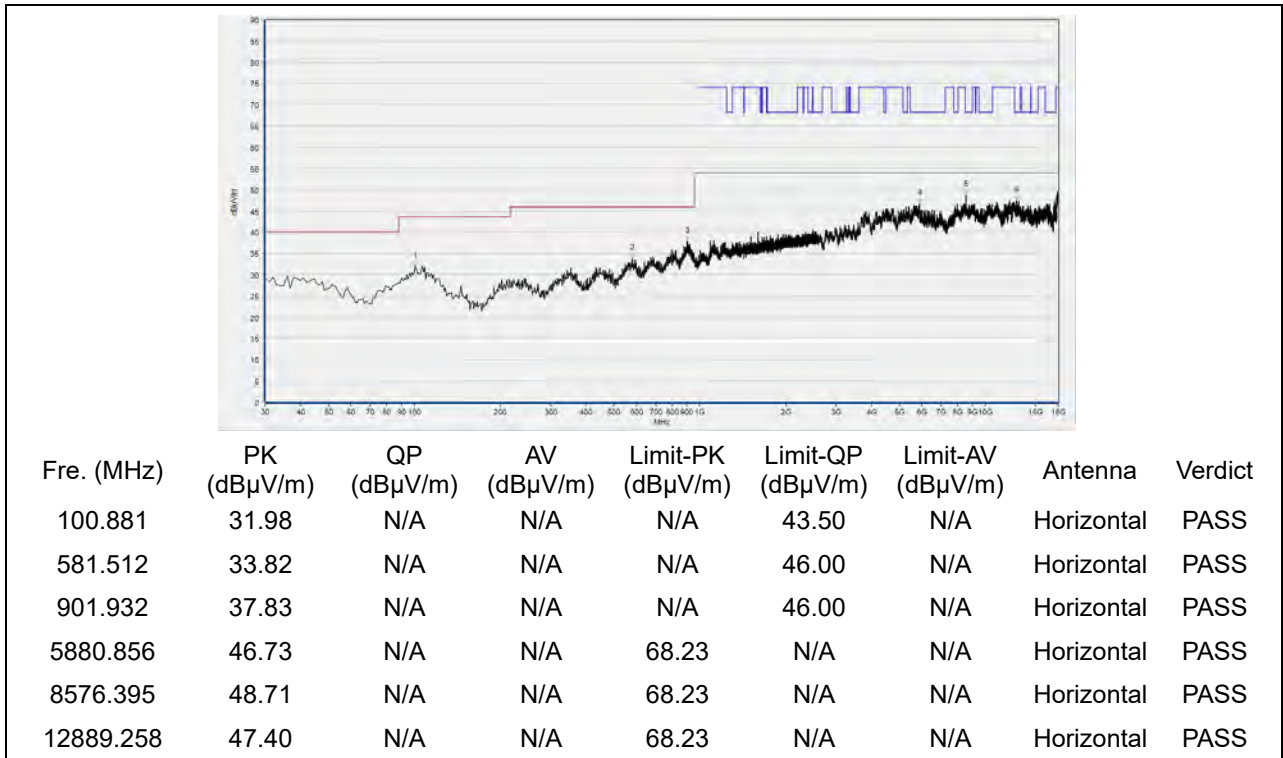


(Antenna Horizontal, 30MHz to 18GHz)

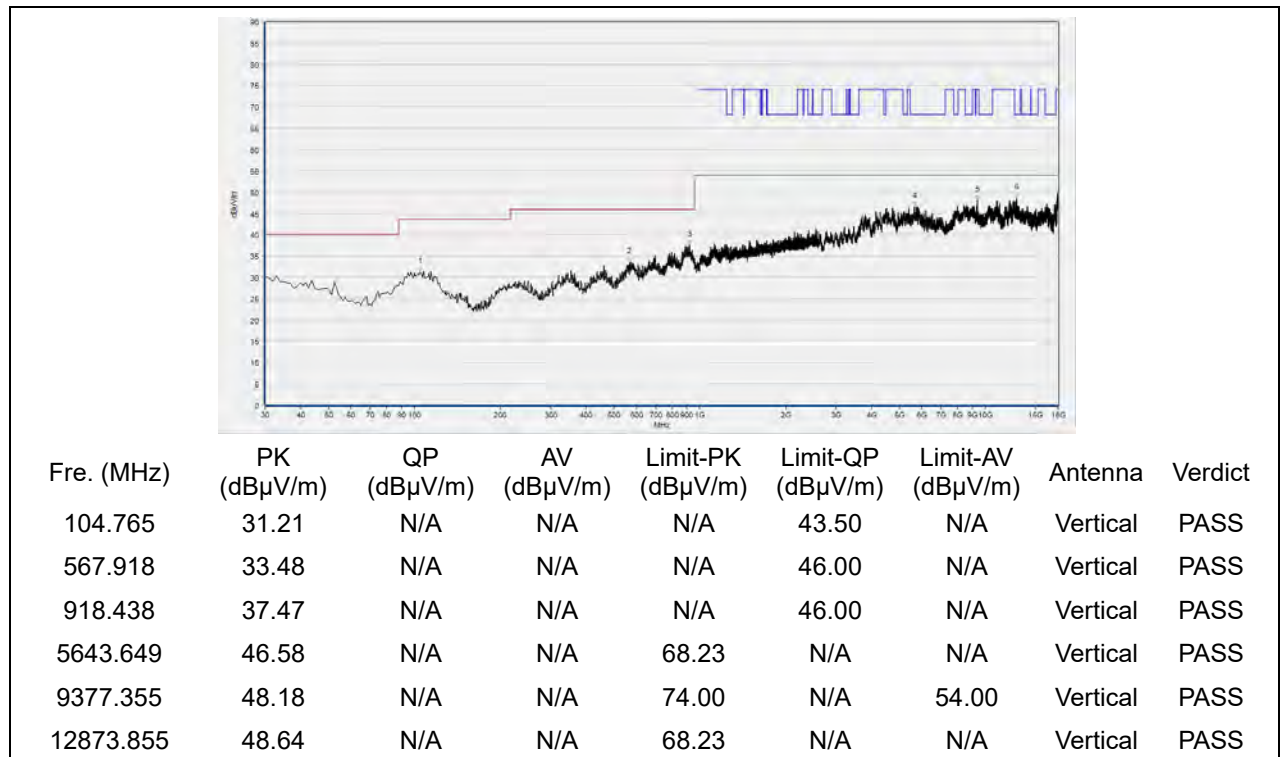


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149

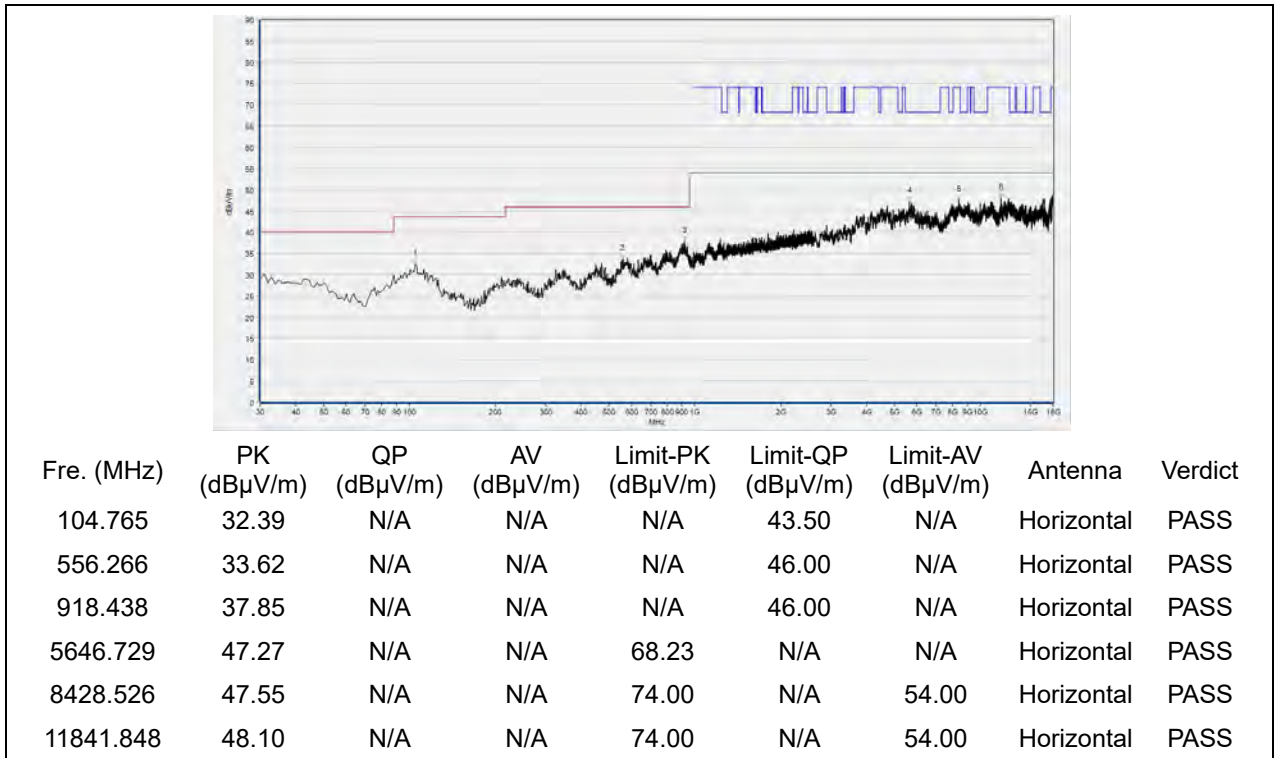


(Antenna Horizontal, 30MHz to 18GHz)

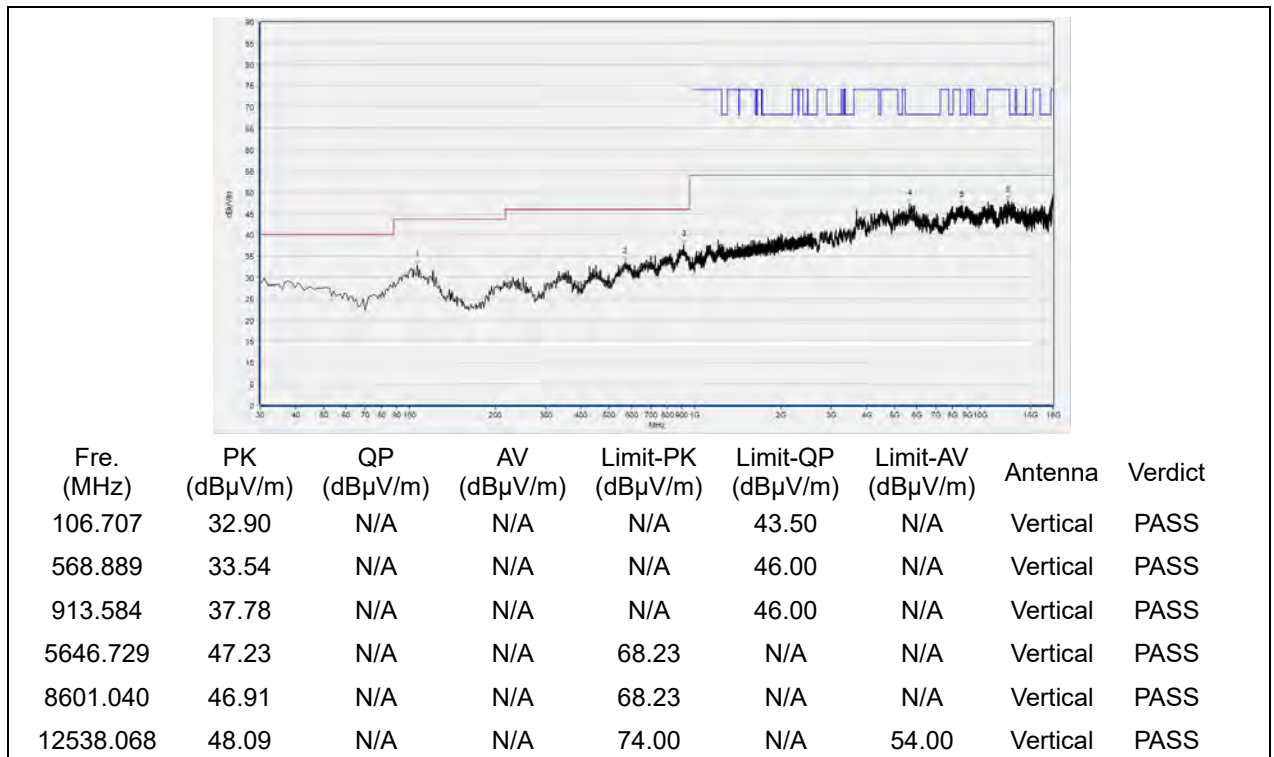


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157

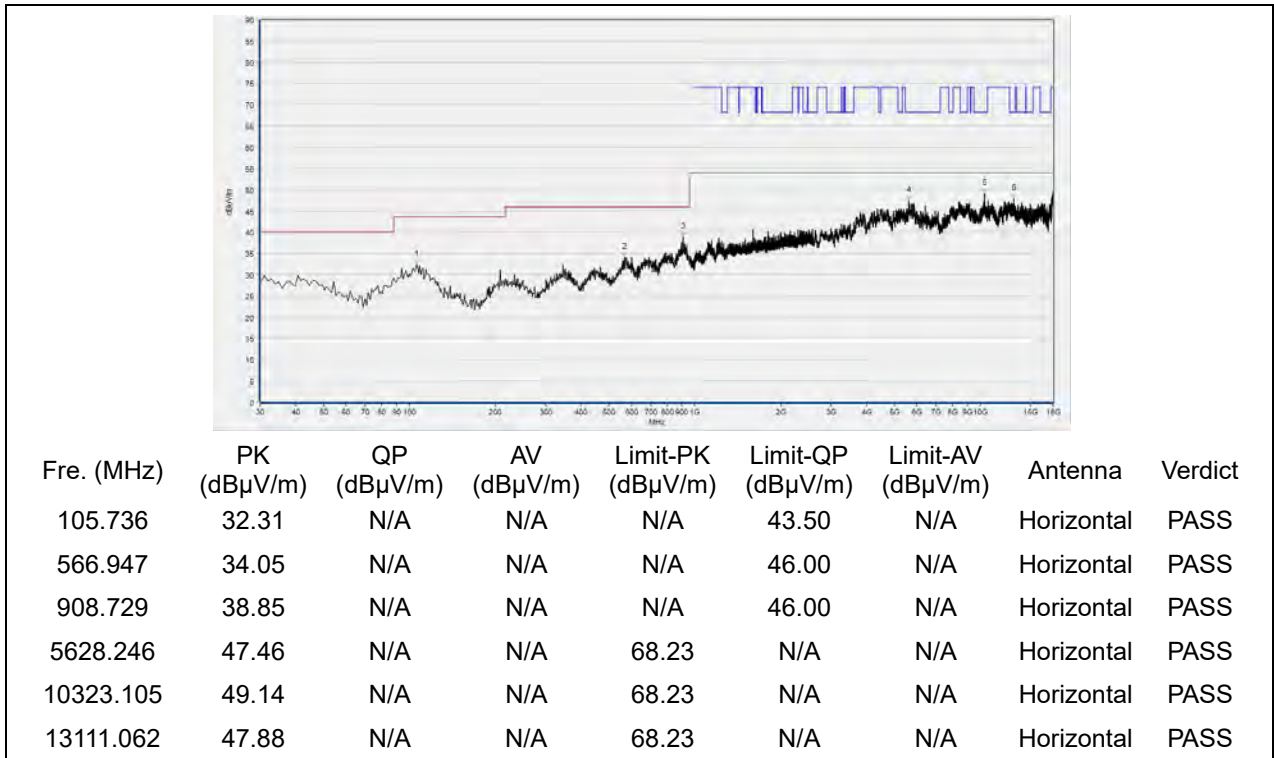


(Antenna Horizontal, 30MHz to 18GHz)

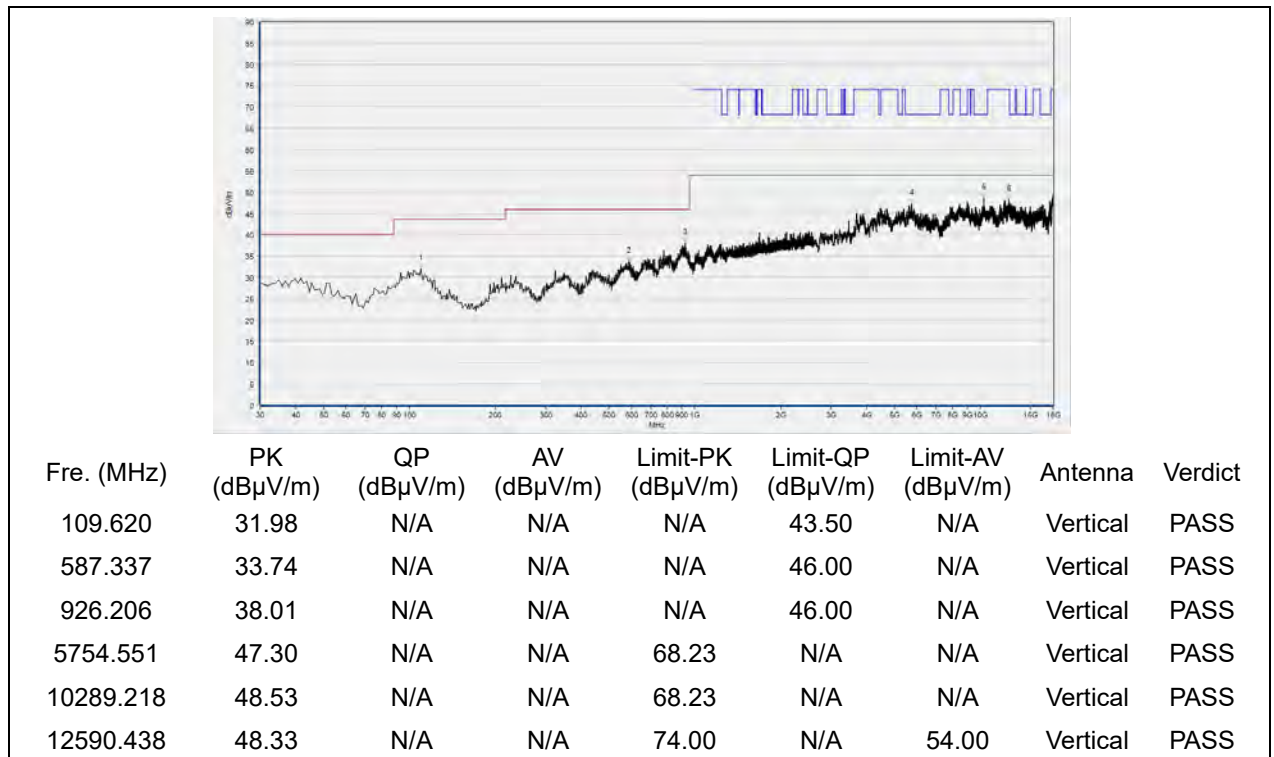


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



(Antenna Horizontal, 30MHz to 18GHz)

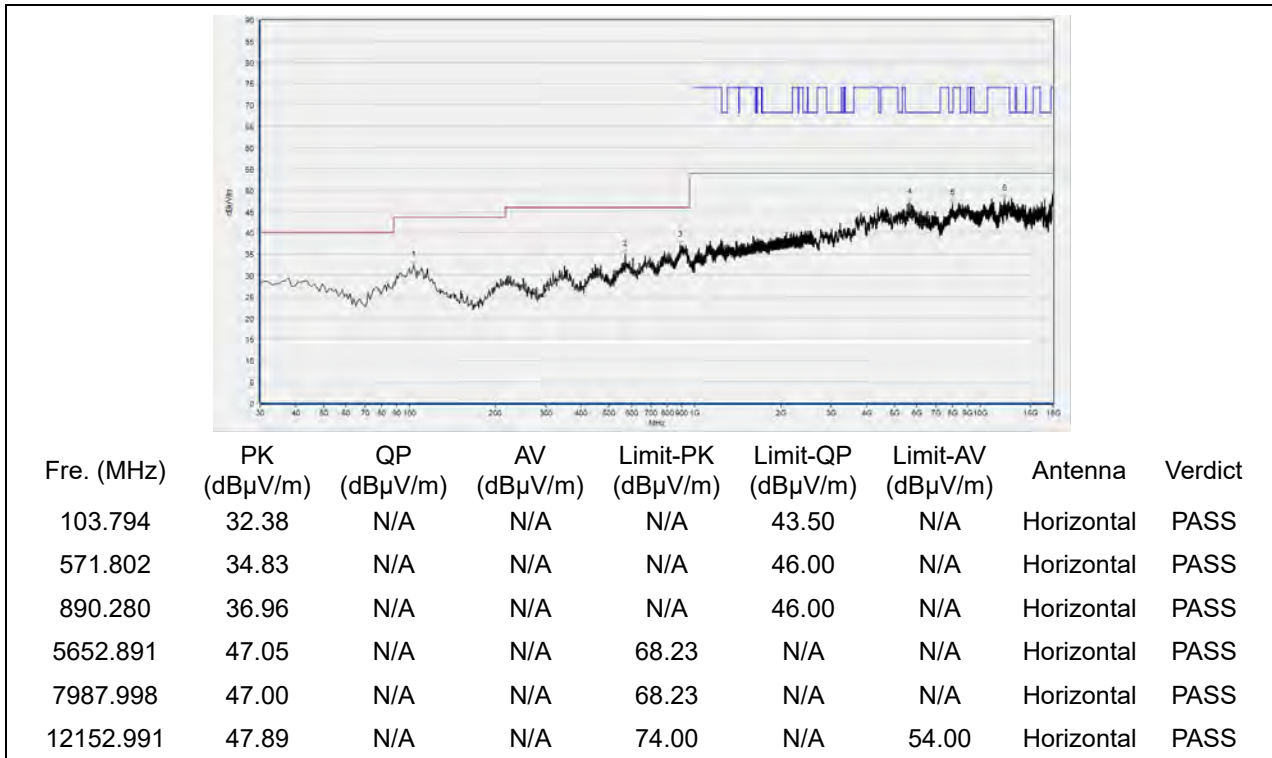


(Antenna Vertical, 30MHz to 18GHz)

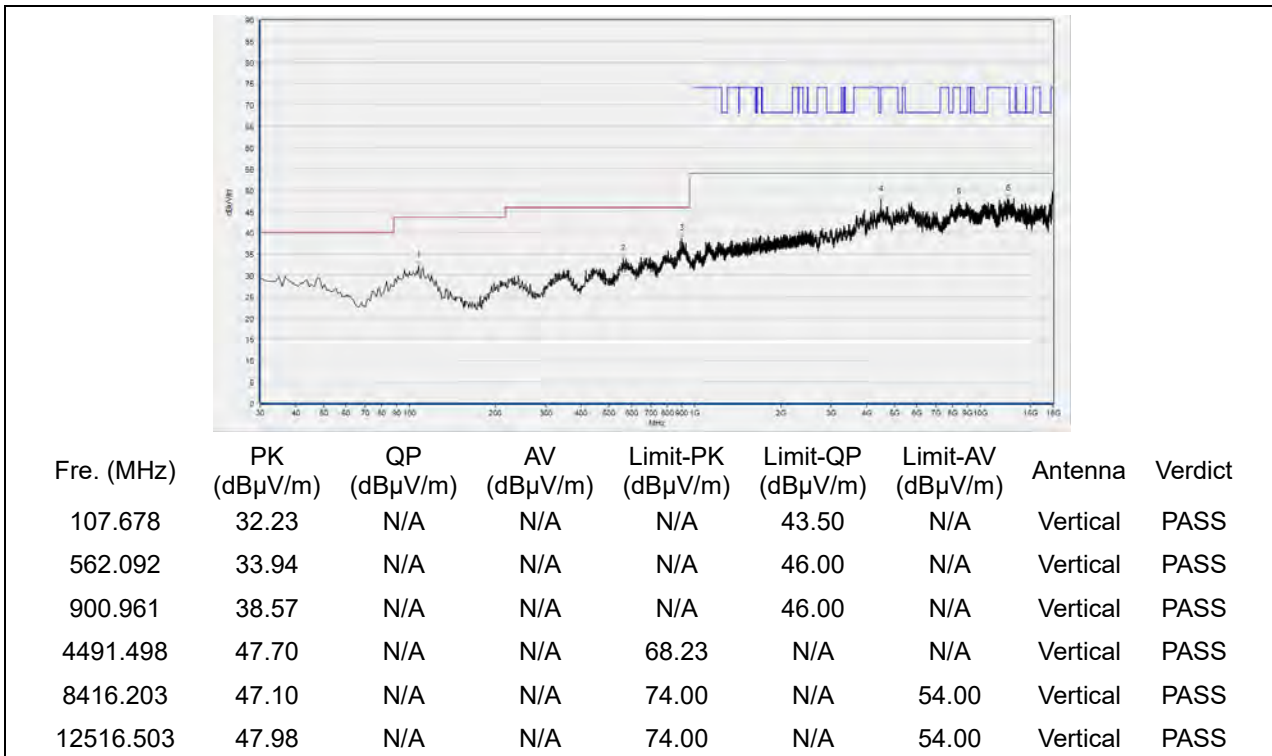


802.11ax (HEW20) Mode

Plot for Channel 36

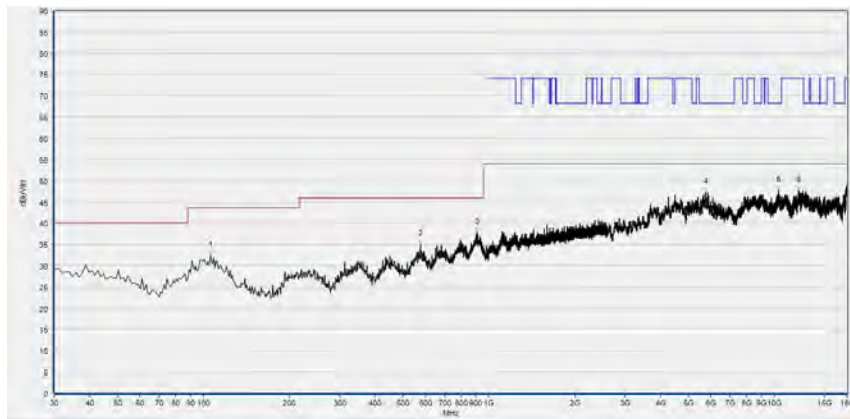


(Antenna Horizontal, 30MHz to 18GHz)



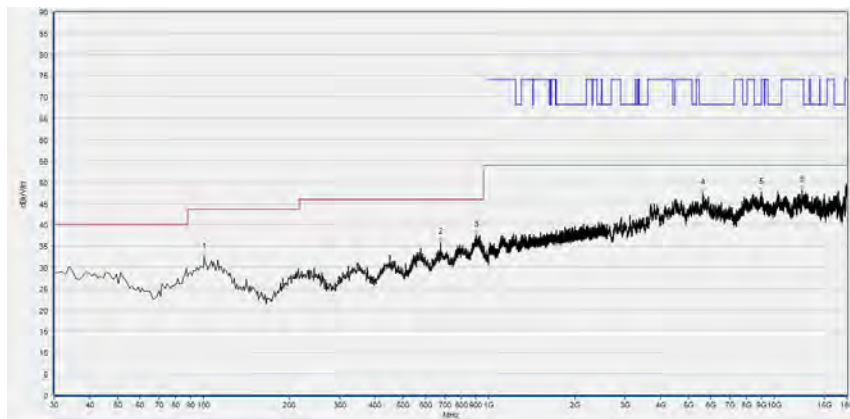
(Antenna Vertical, 30MHz to 18GHz)

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
105.736	32.40	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
576.657	35.06	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
909.700	37.85	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5757.632	47.32	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
10332.346	47.74	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12152.991	47.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

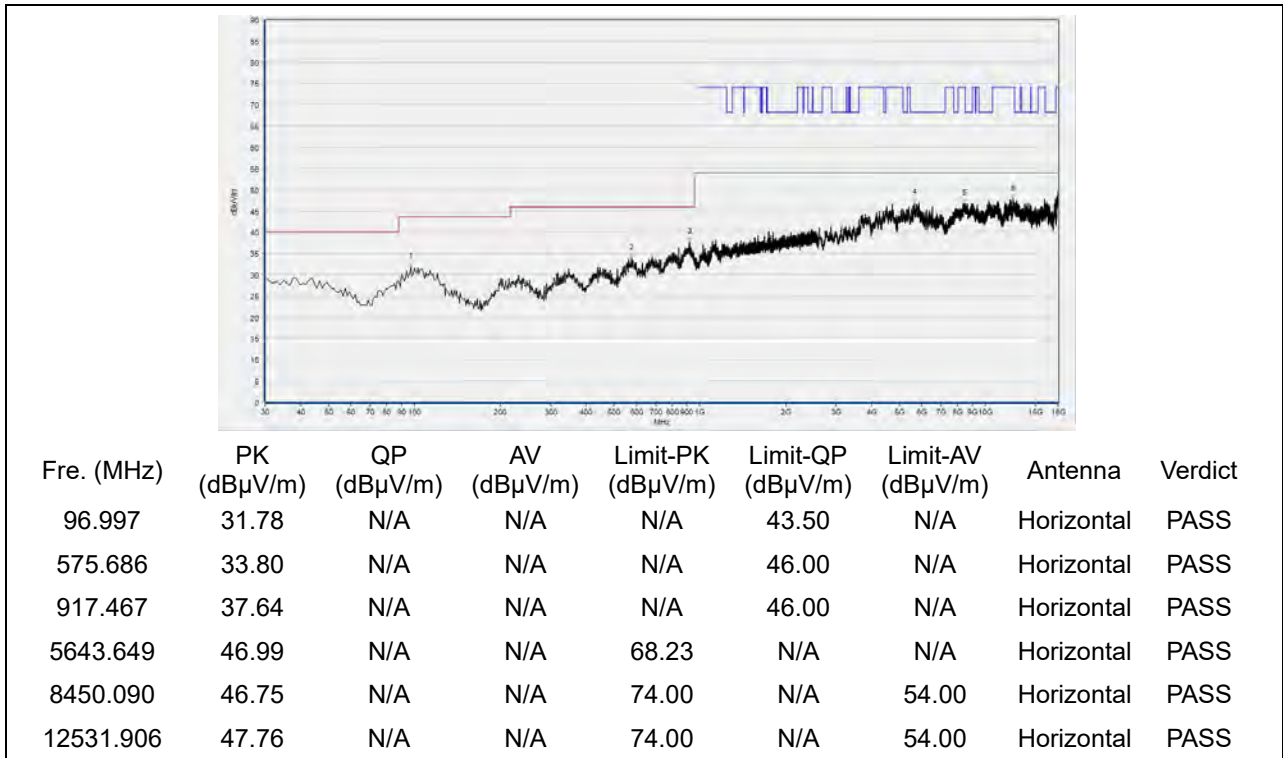
(Antenna Horizontal, 30MHz to 18GHz)



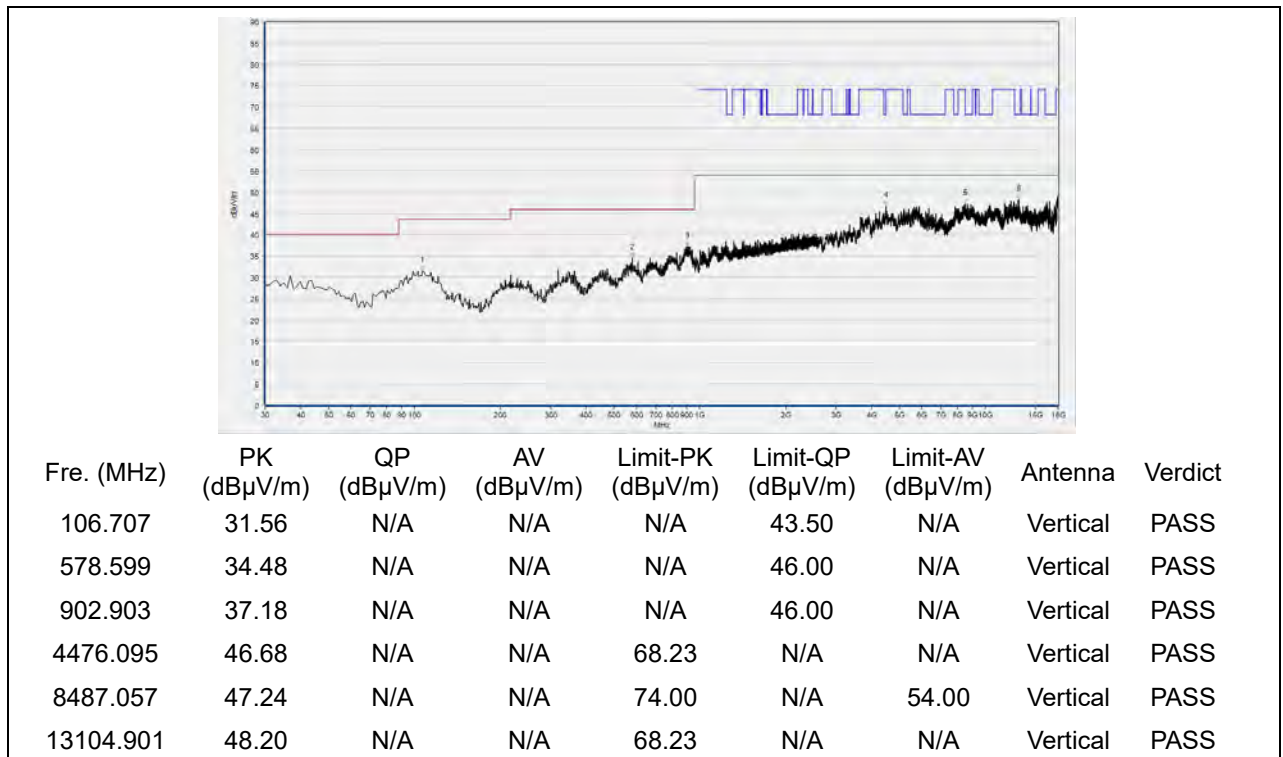
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
100.881	32.41	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
677.638	35.91	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
901.932	37.53	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5631.326	47.37	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
8998.440	47.55	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12522.665	48.06	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48

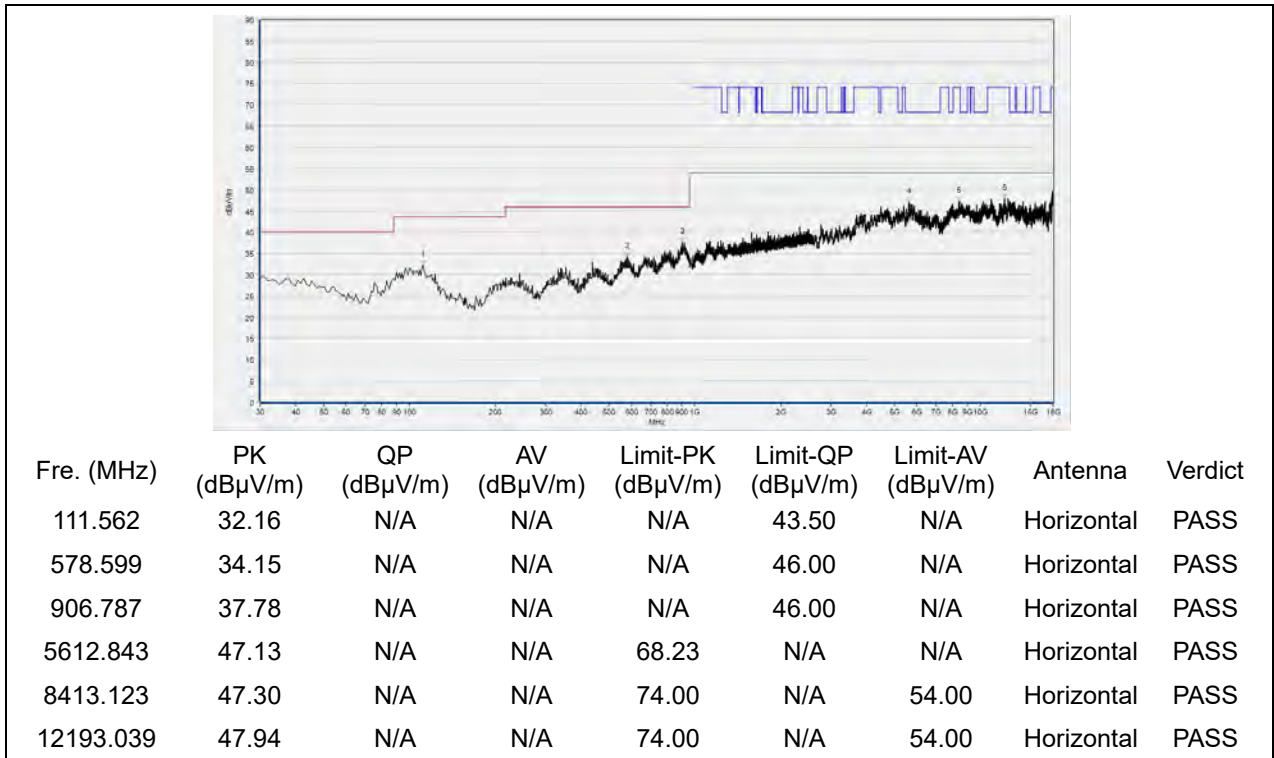


(Antenna Horizontal, 30MHz to 18GHz)

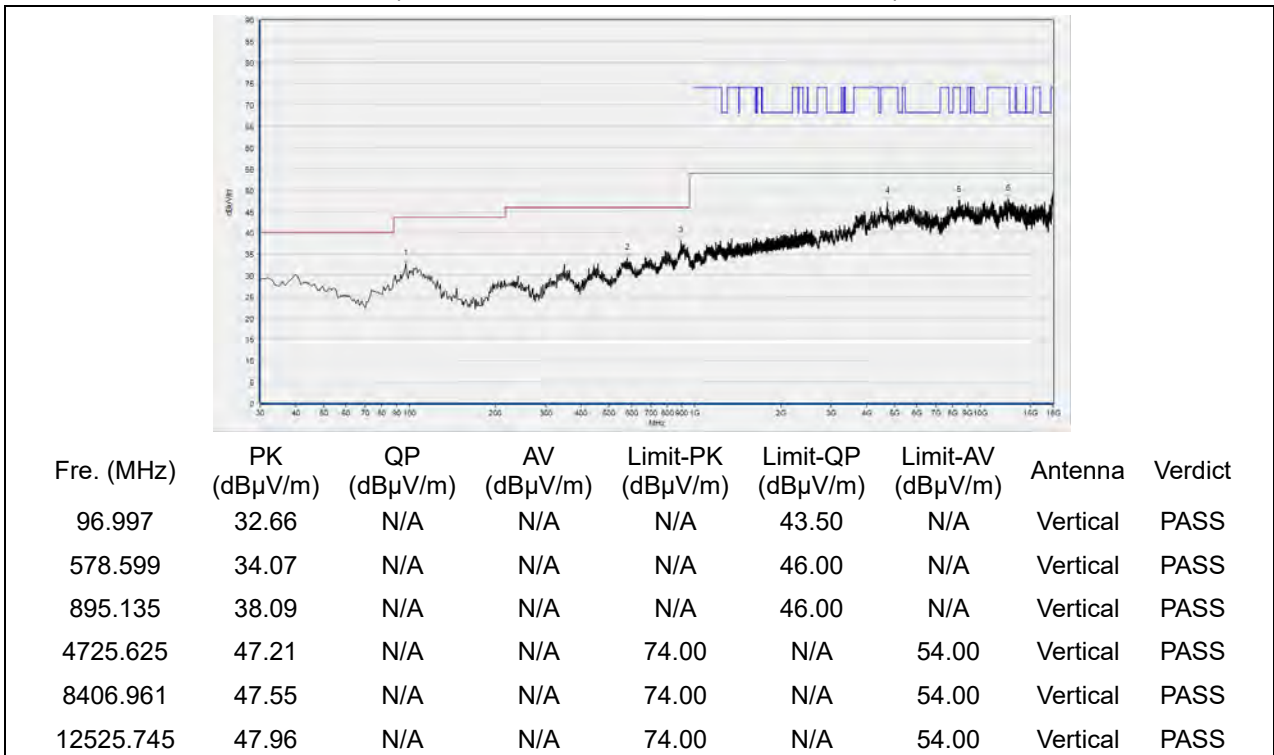


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 52

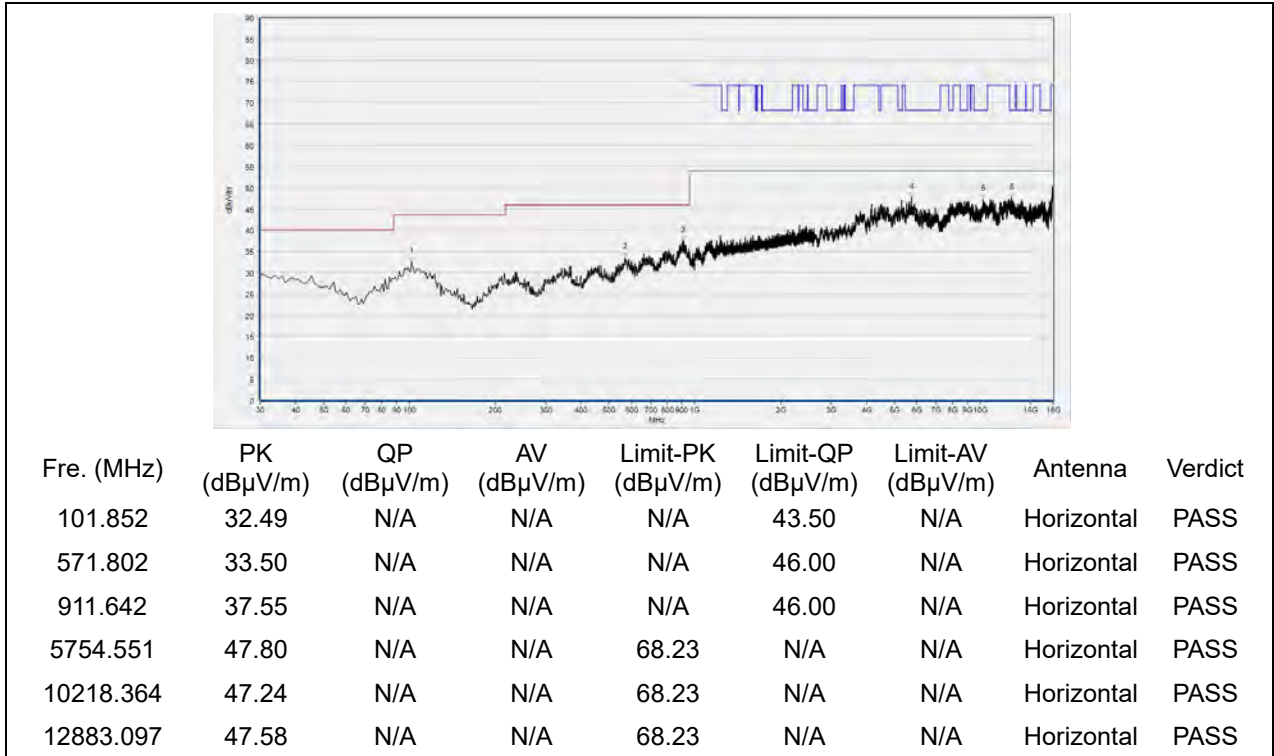


(Antenna Horizontal, 30MHz to 18GHz)

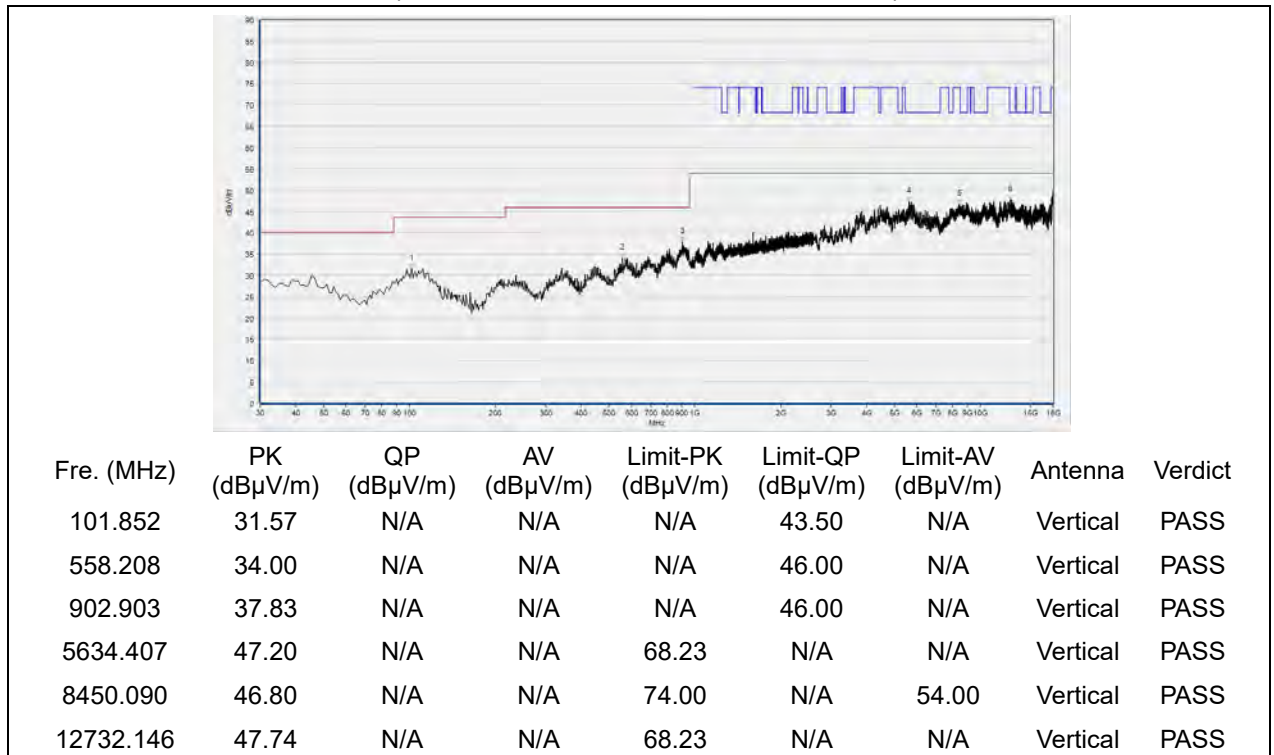


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 60

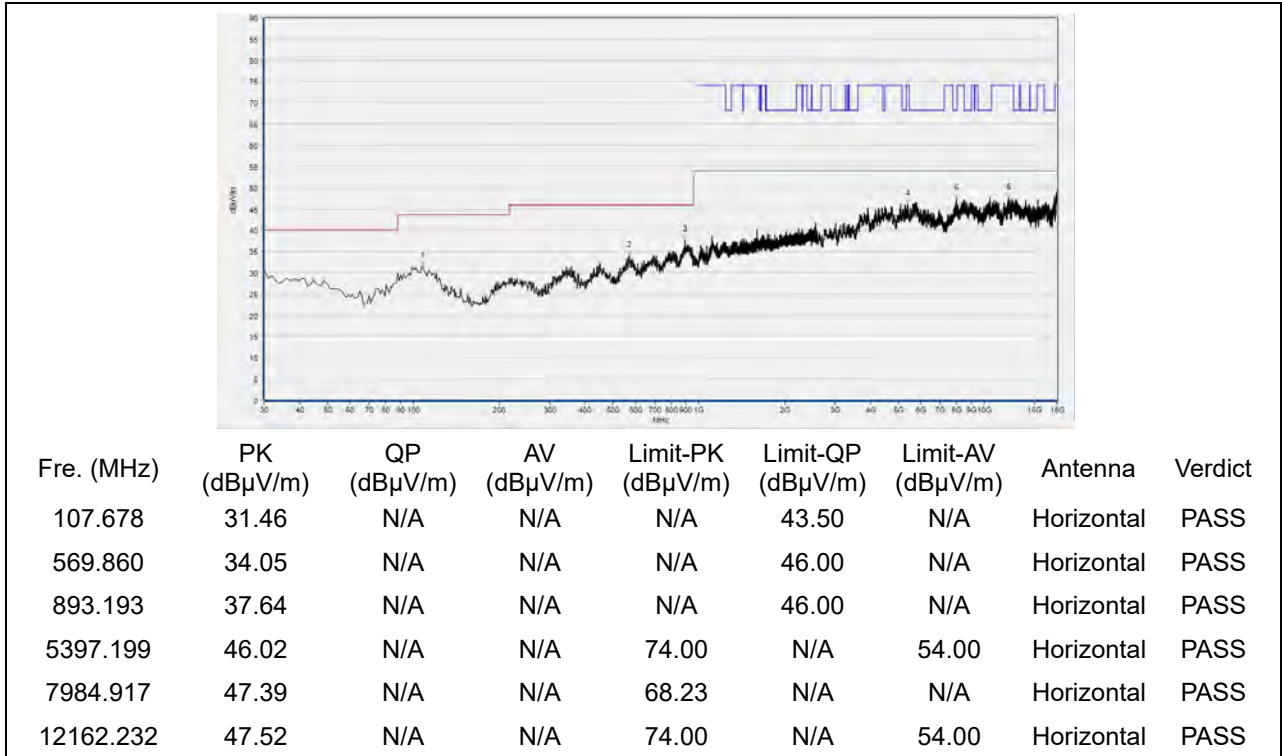


(Antenna Horizontal, 30MHz to 18GHz)

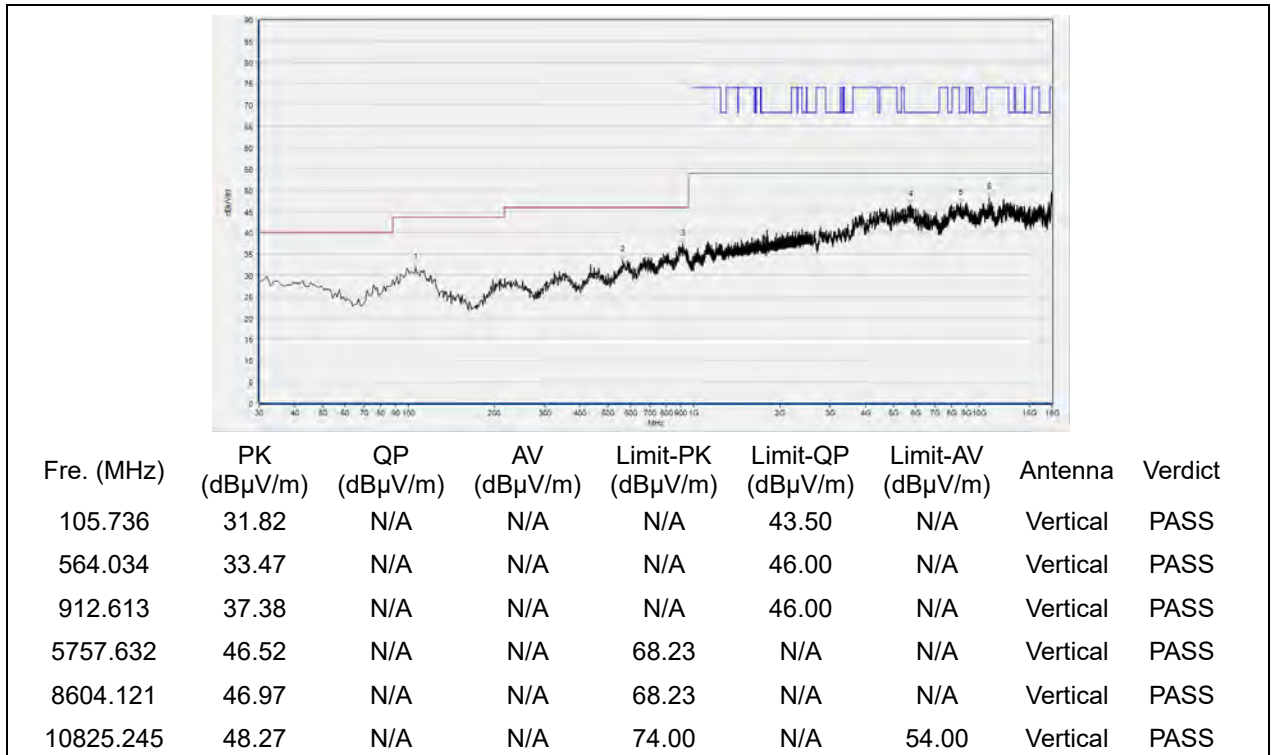


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 64

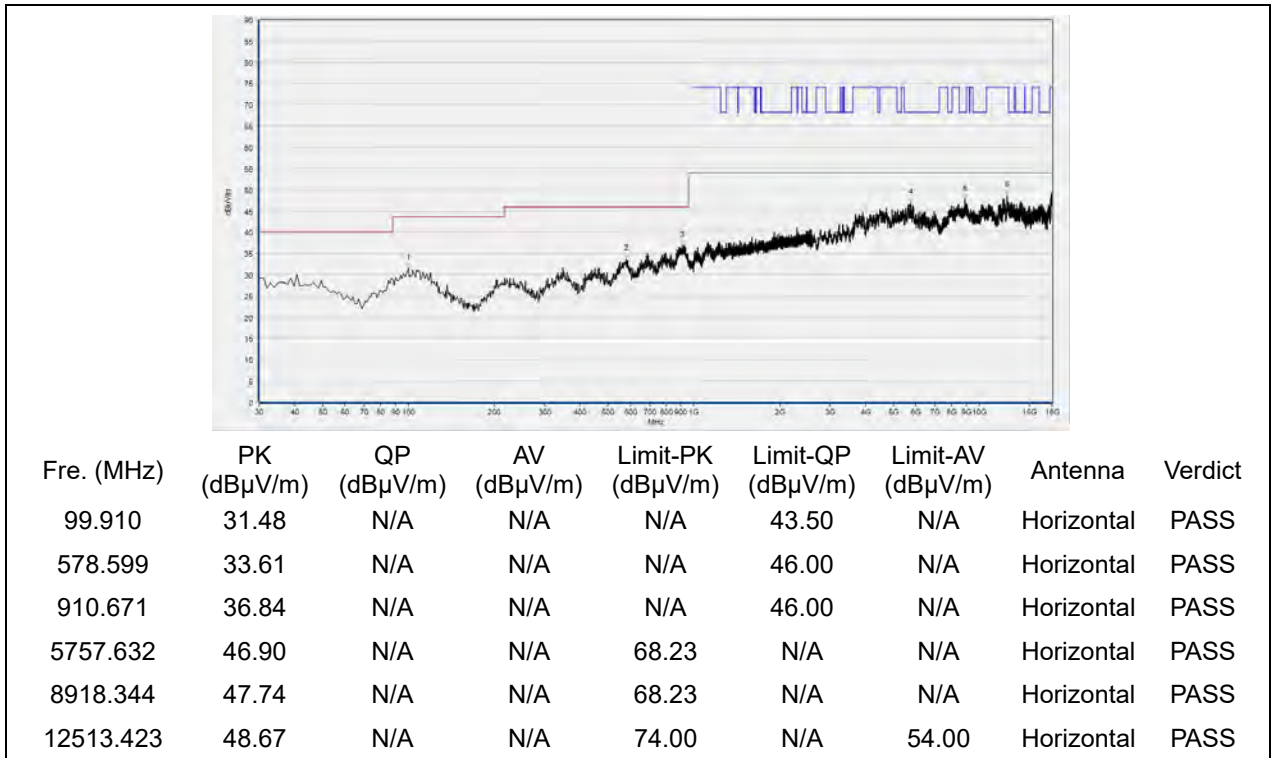


(Antenna Horizontal, 30MHz to 18GHz)

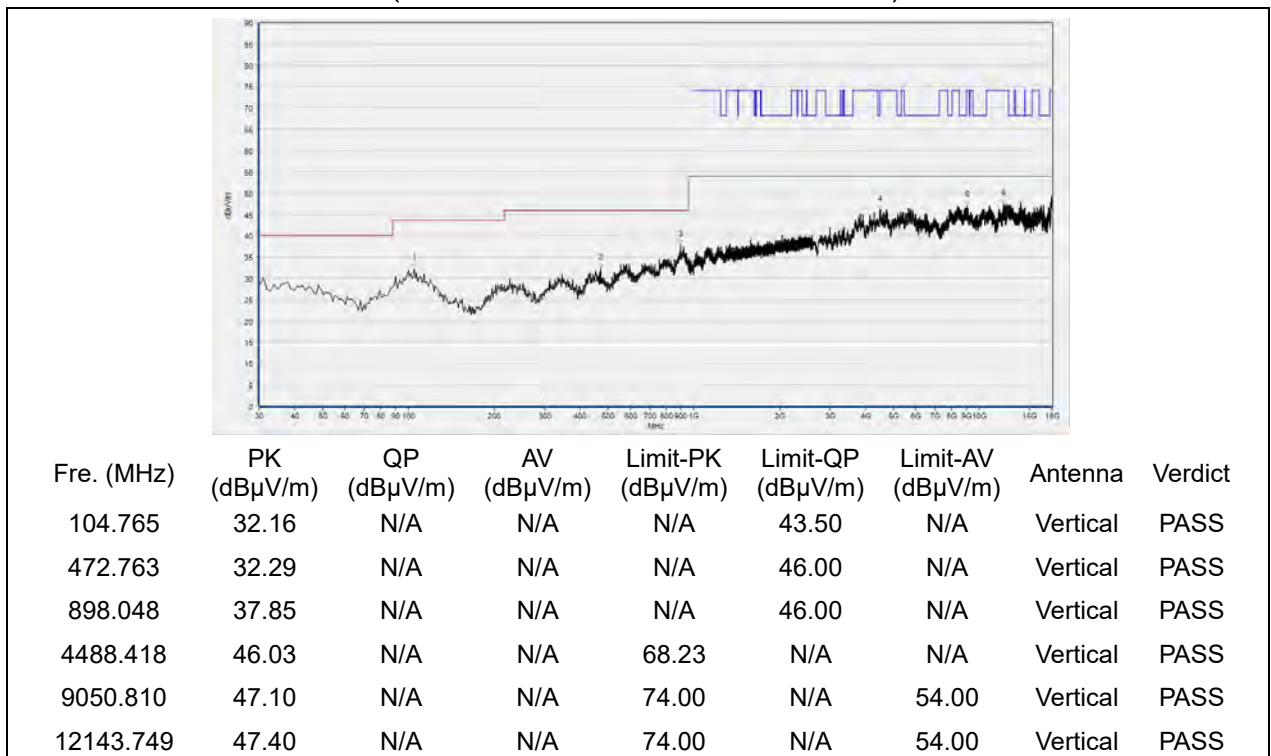


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 100

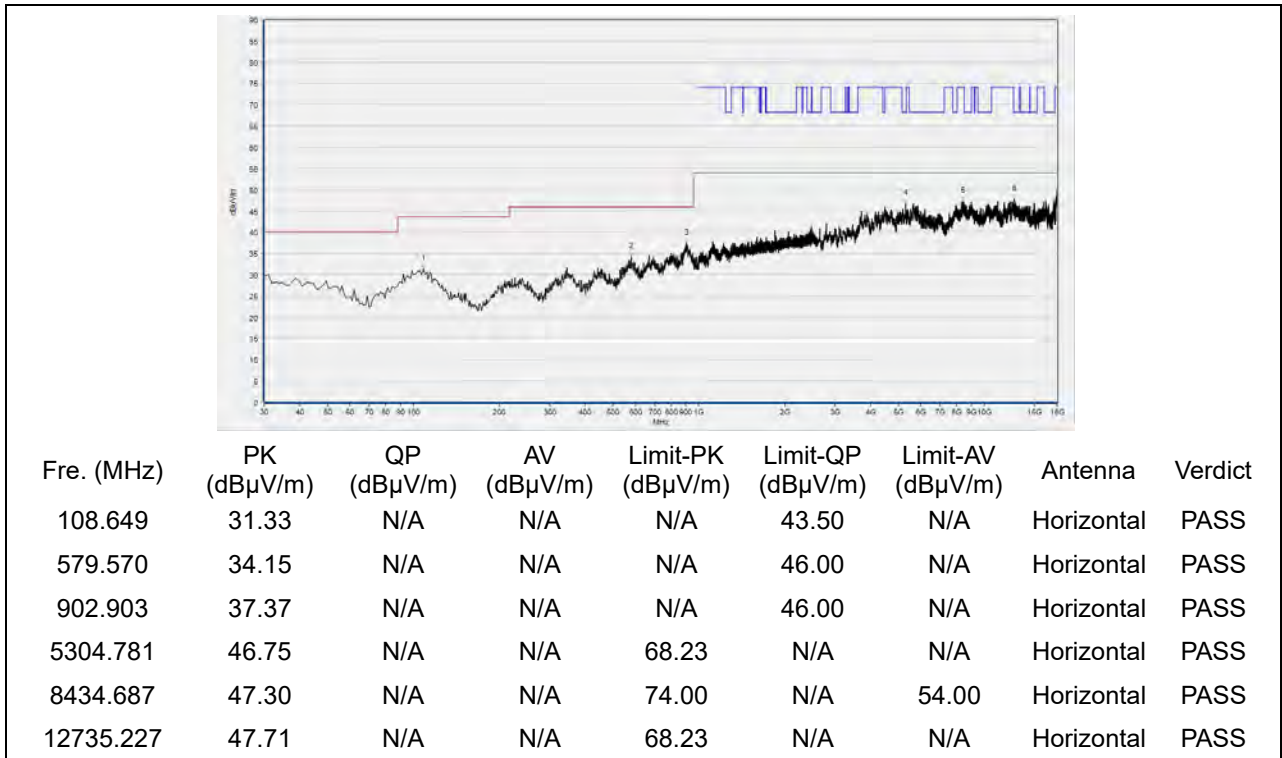


(Antenna Horizontal, 30MHz to 18GHz)

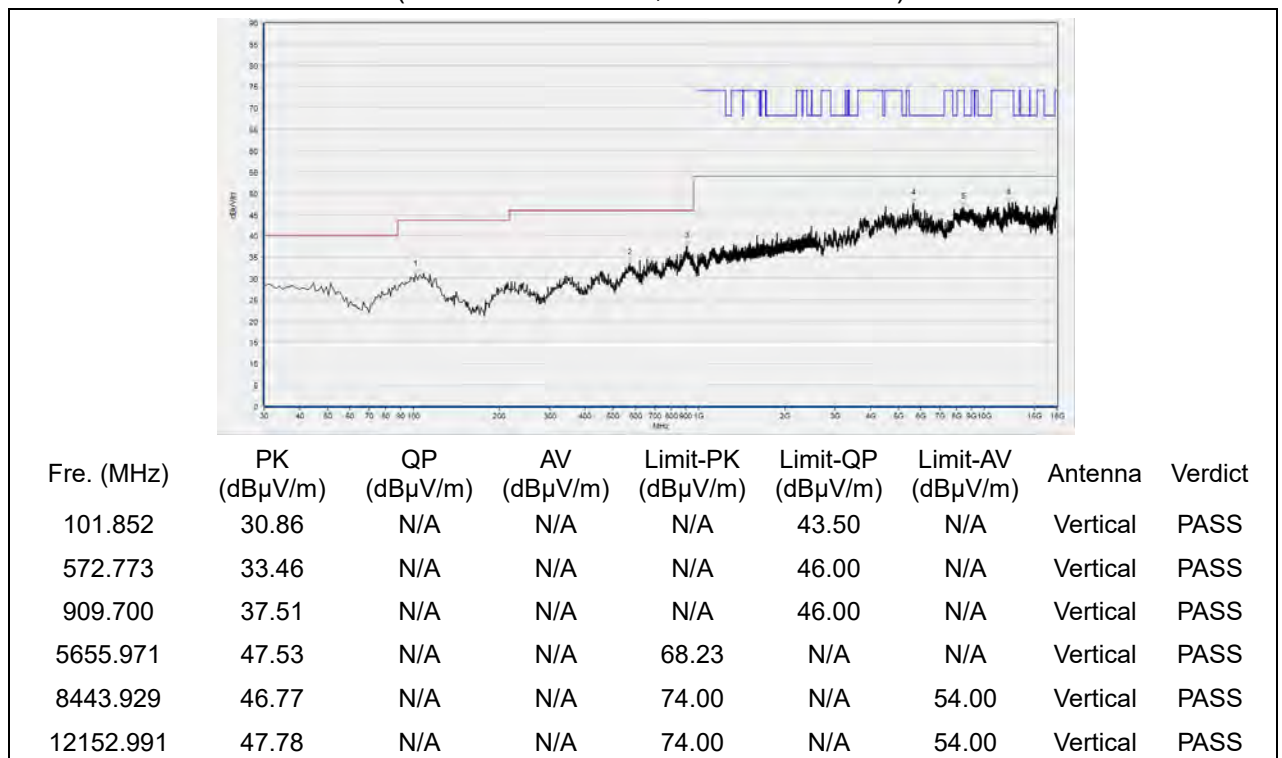


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 120

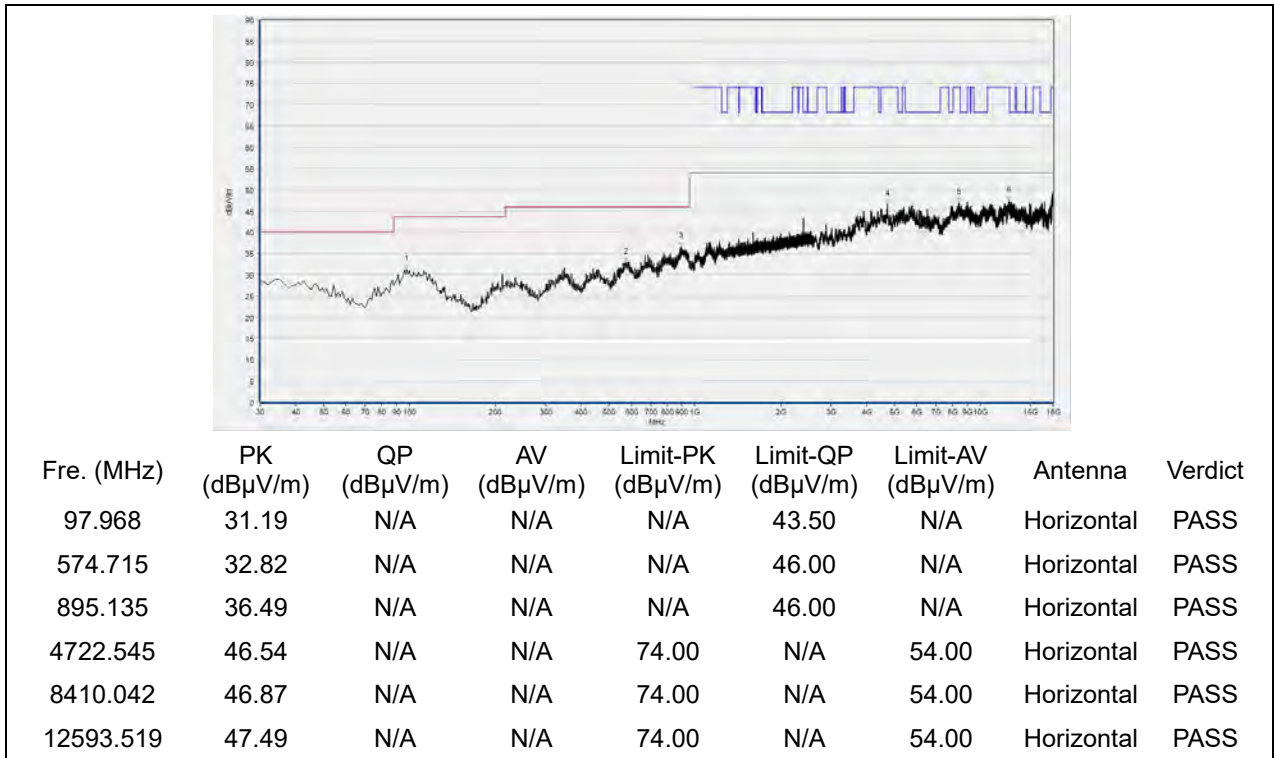


(Antenna Horizontal, 30MHz to 18GHz)

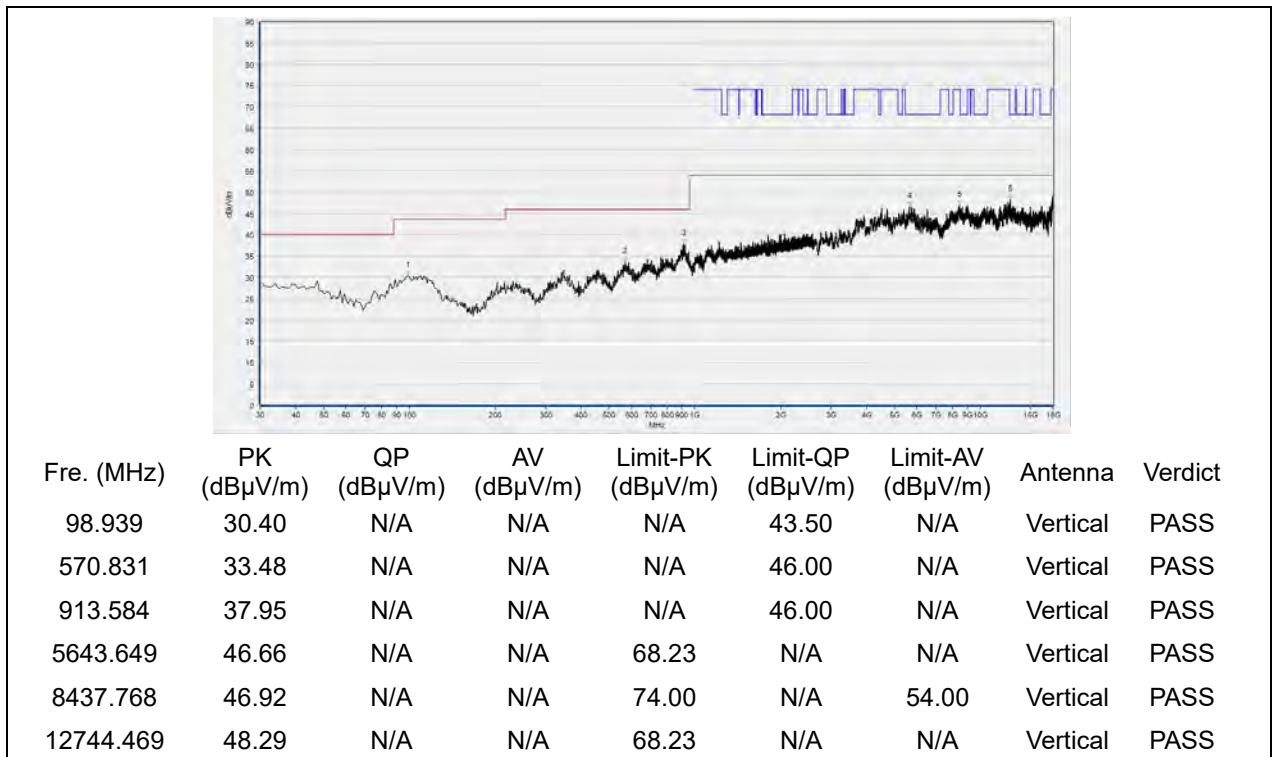


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 144

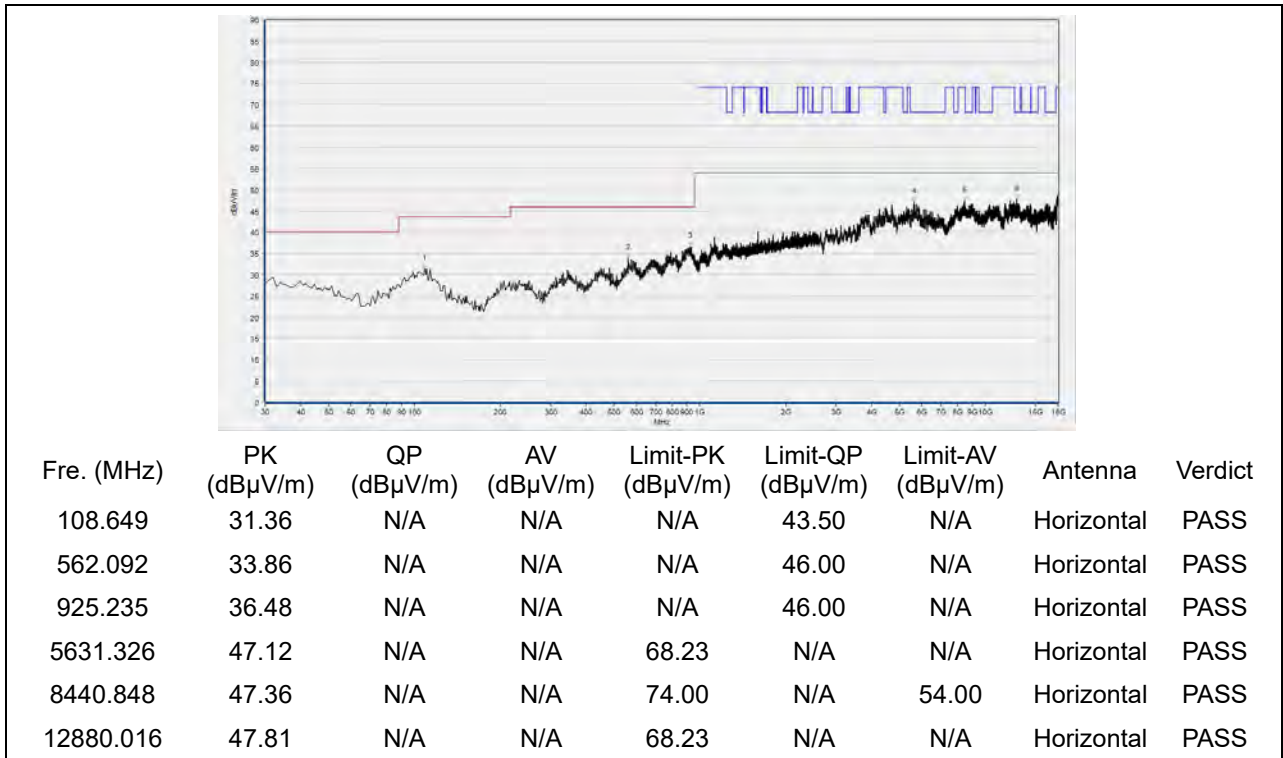


(Antenna Horizontal, 30MHz to 18GHz)

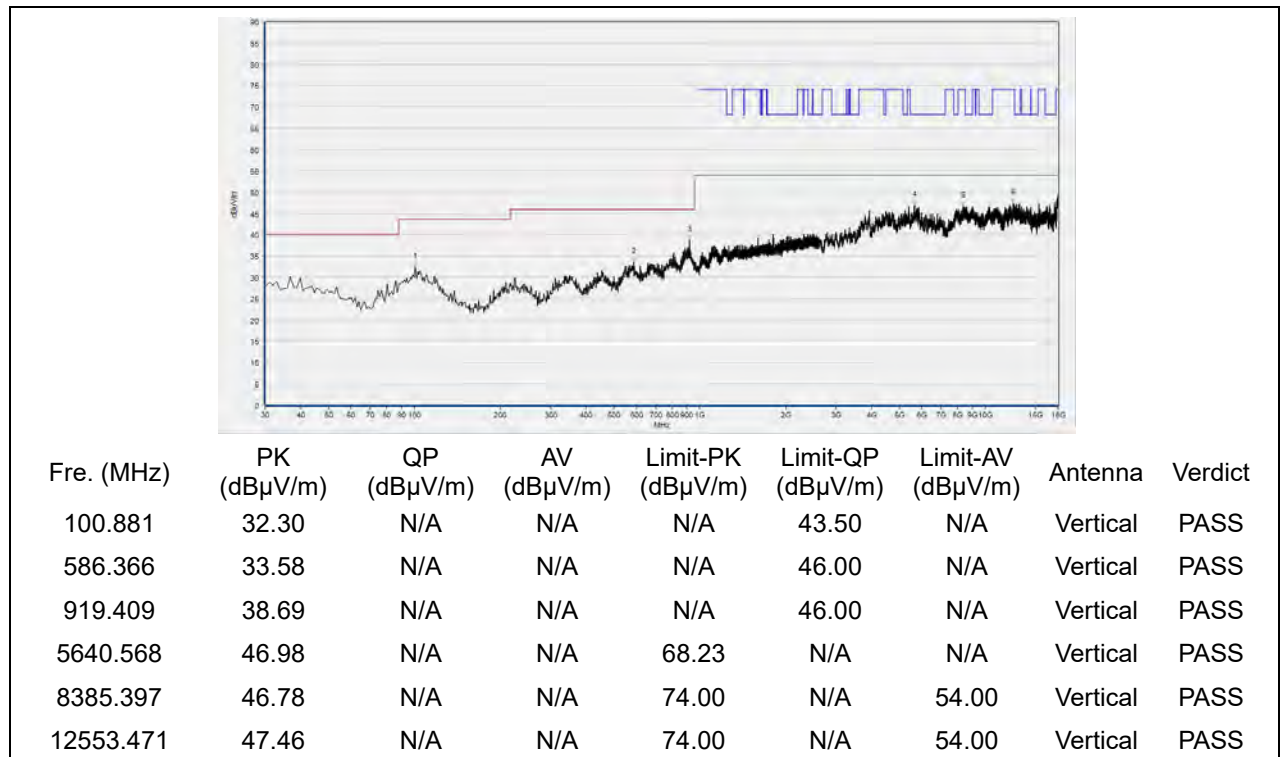


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149

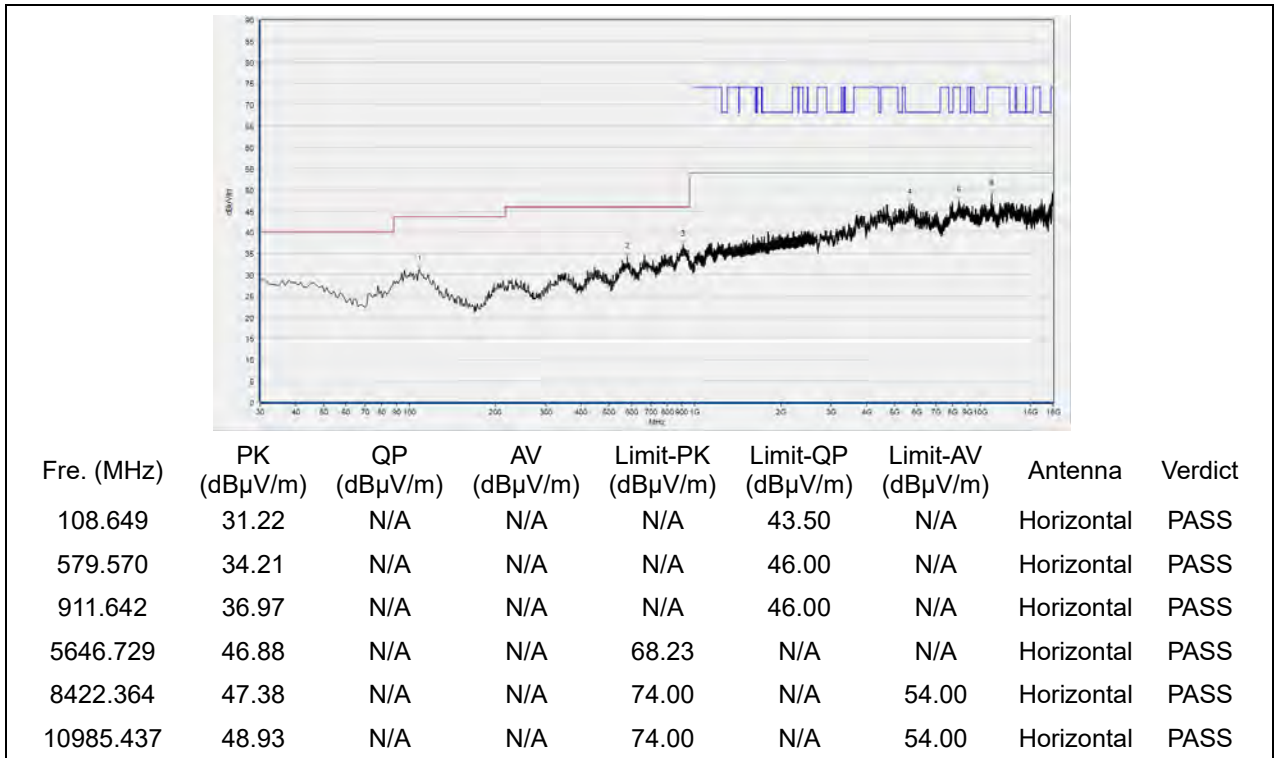


(Antenna Horizontal, 30MHz to 18GHz)

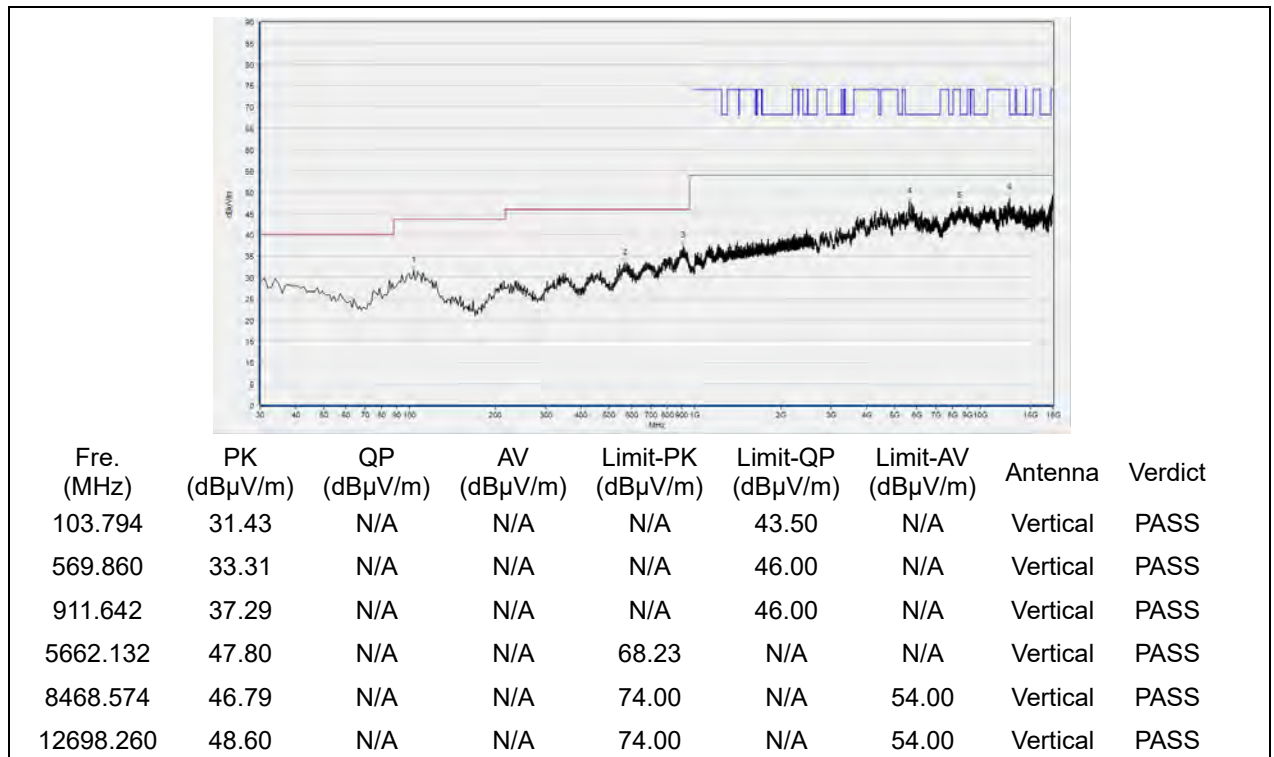


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157

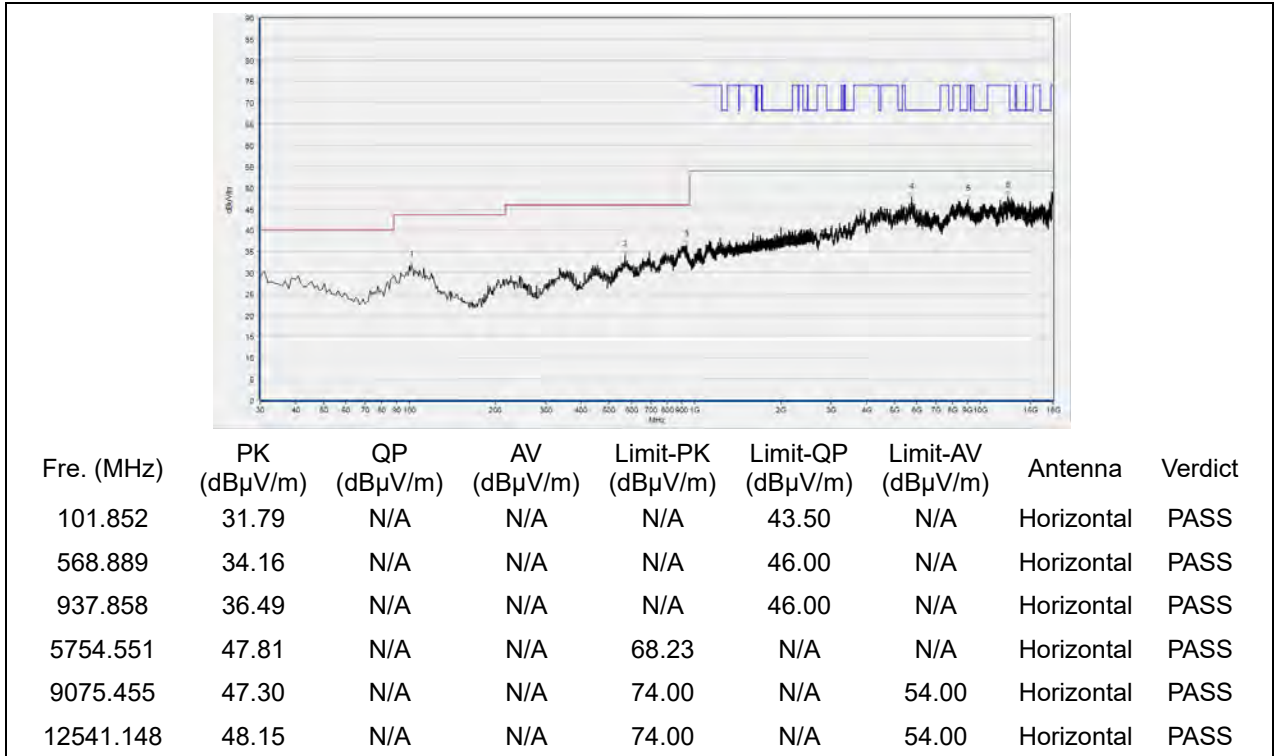


(Antenna Horizontal, 30MHz to 18GHz)

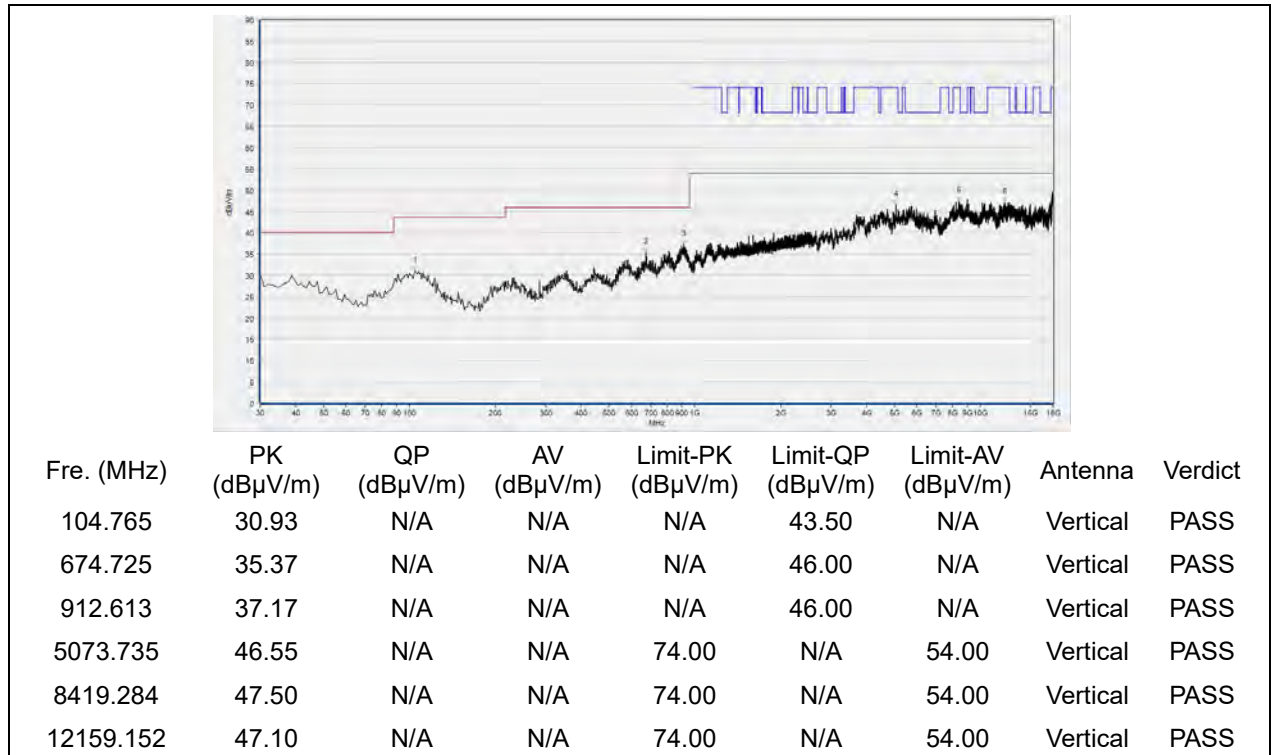


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



(Antenna Horizontal, 30MHz to 18GHz)

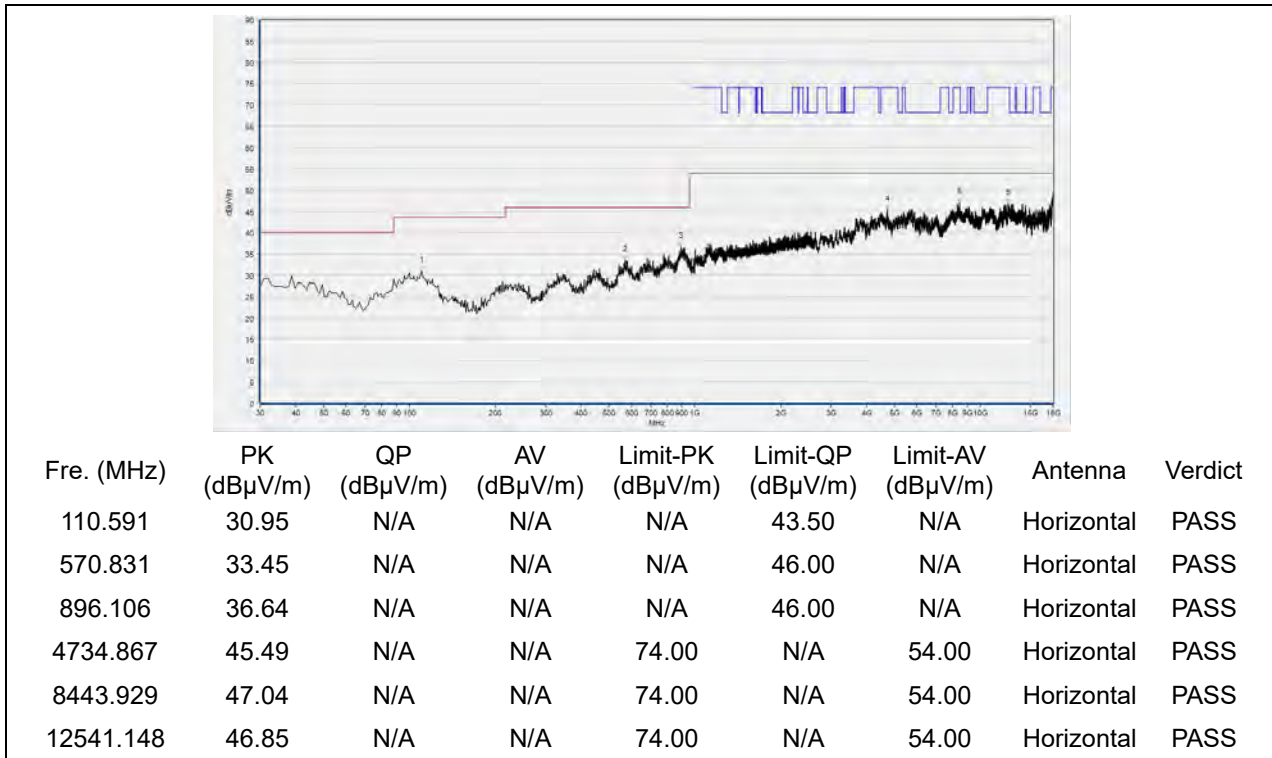


(Antenna Vertical, 30MHz to 18GHz)

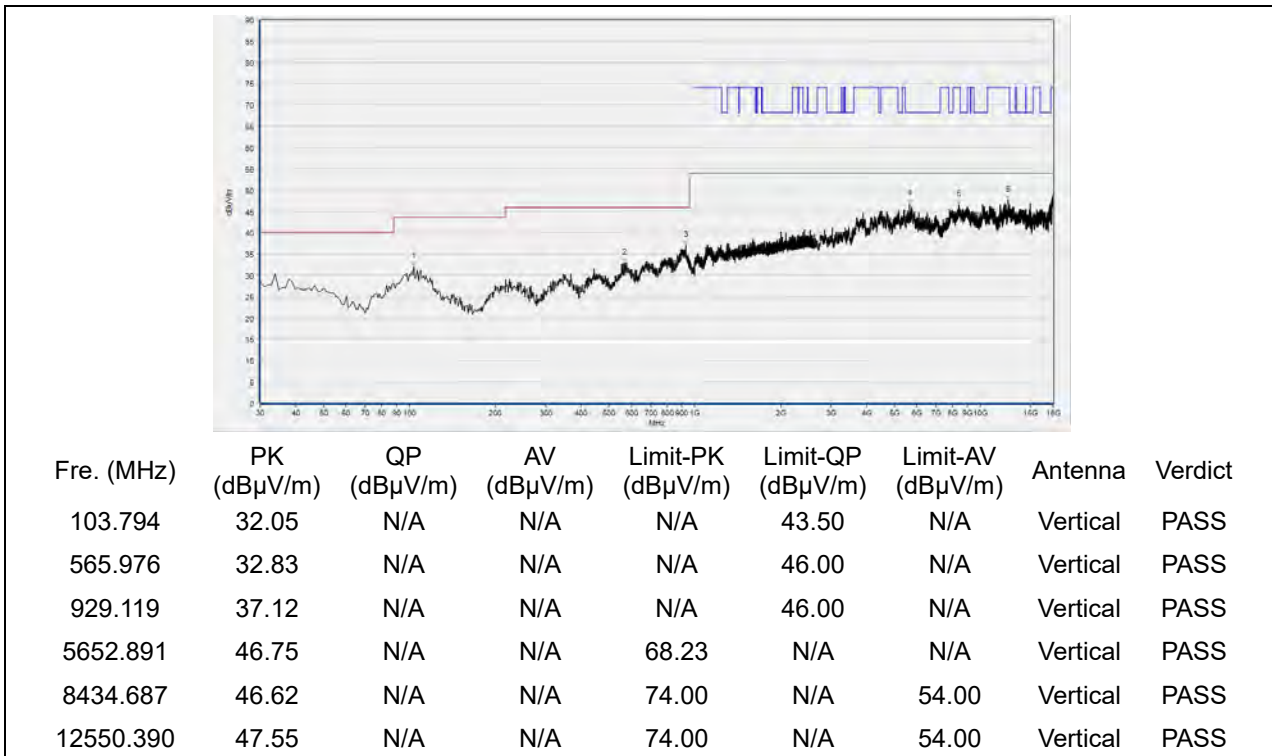


802.11ax (HEW20) RU26 Mode

Plot for Channel 36

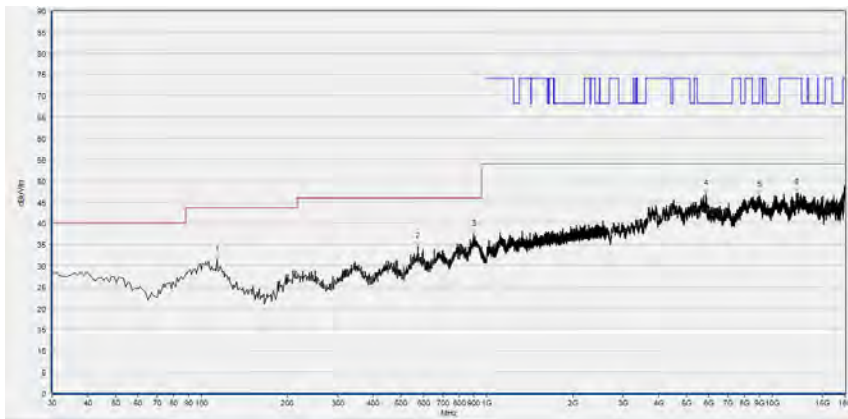


(Antenna Horizontal, 30MHz to 18GHz)



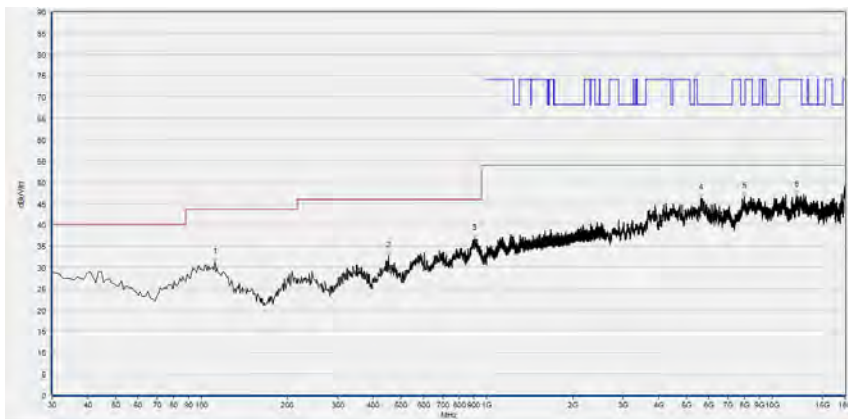
(Antenna Vertical, 30MHz to 18GHz)

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
113.504	31.42	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
572.773	34.54	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
899.990	37.31	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5865.453	46.86	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8998.440	46.53	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12143.749	47.06	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

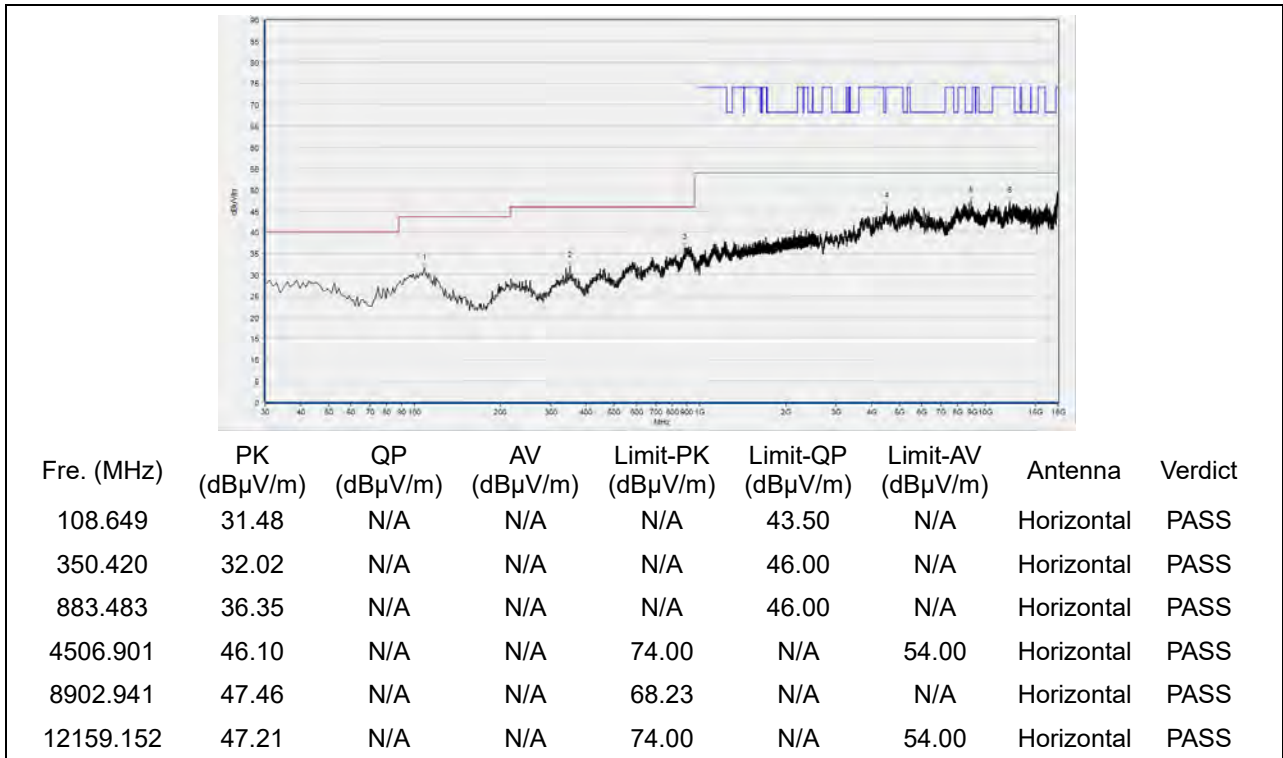
(Antenna Horizontal, 30MHz to 18GHz)



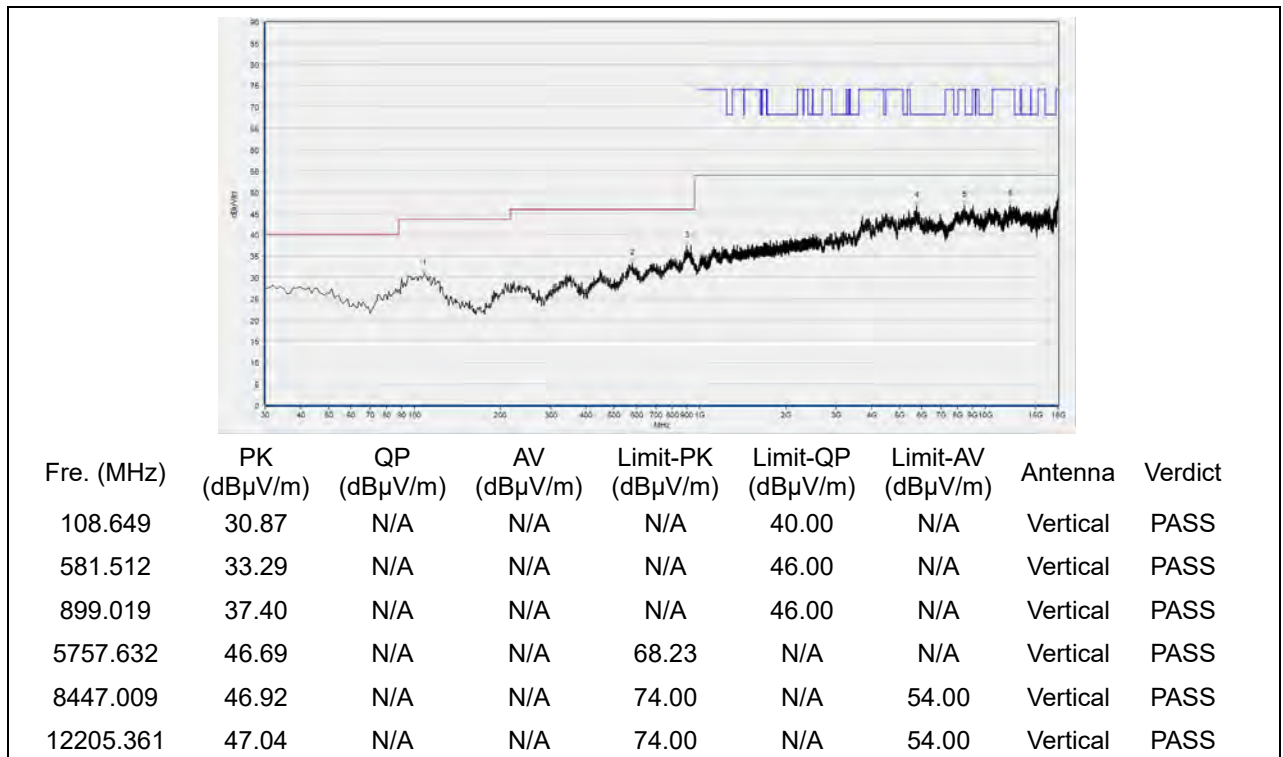
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
111.562	31.09	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
452.372	32.69	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
904.845	36.72	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5631.326	46.25	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
7997.239	46.52	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12171.474	46.99	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48

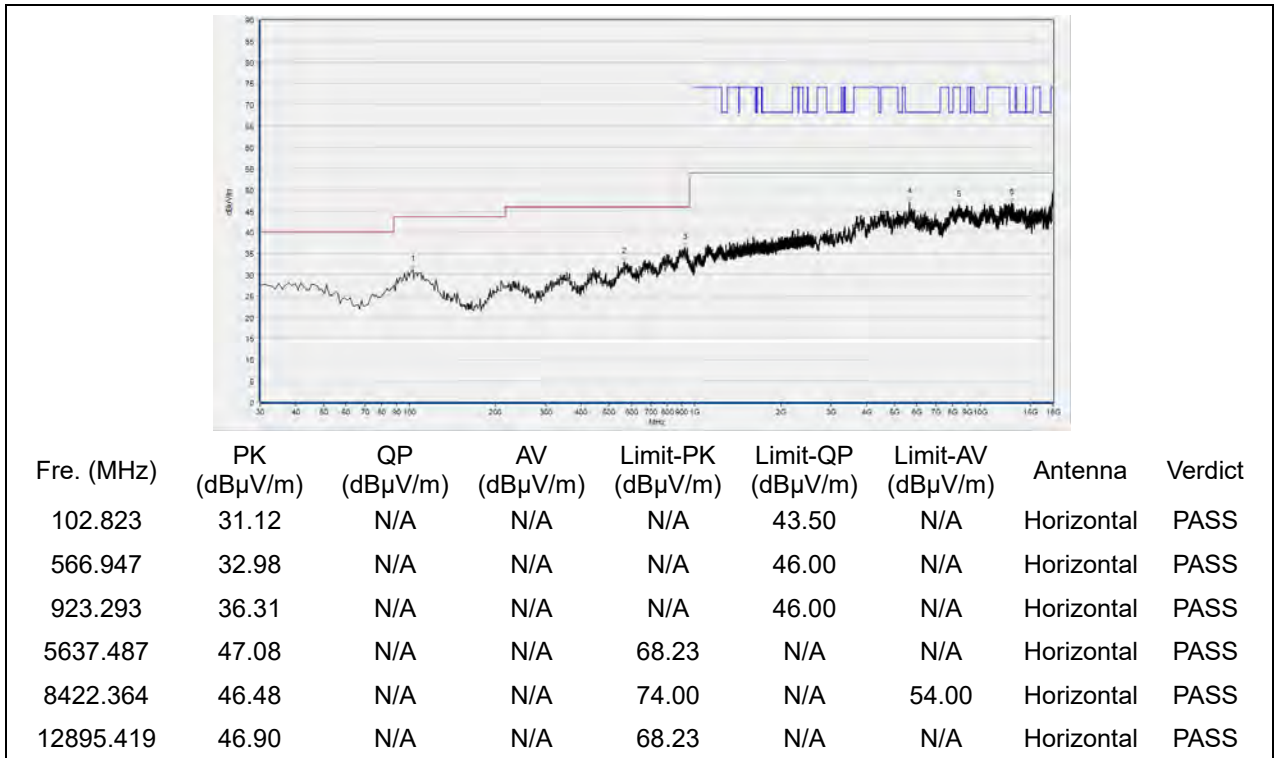


(Antenna Horizontal, 30MHz to 18GHz)

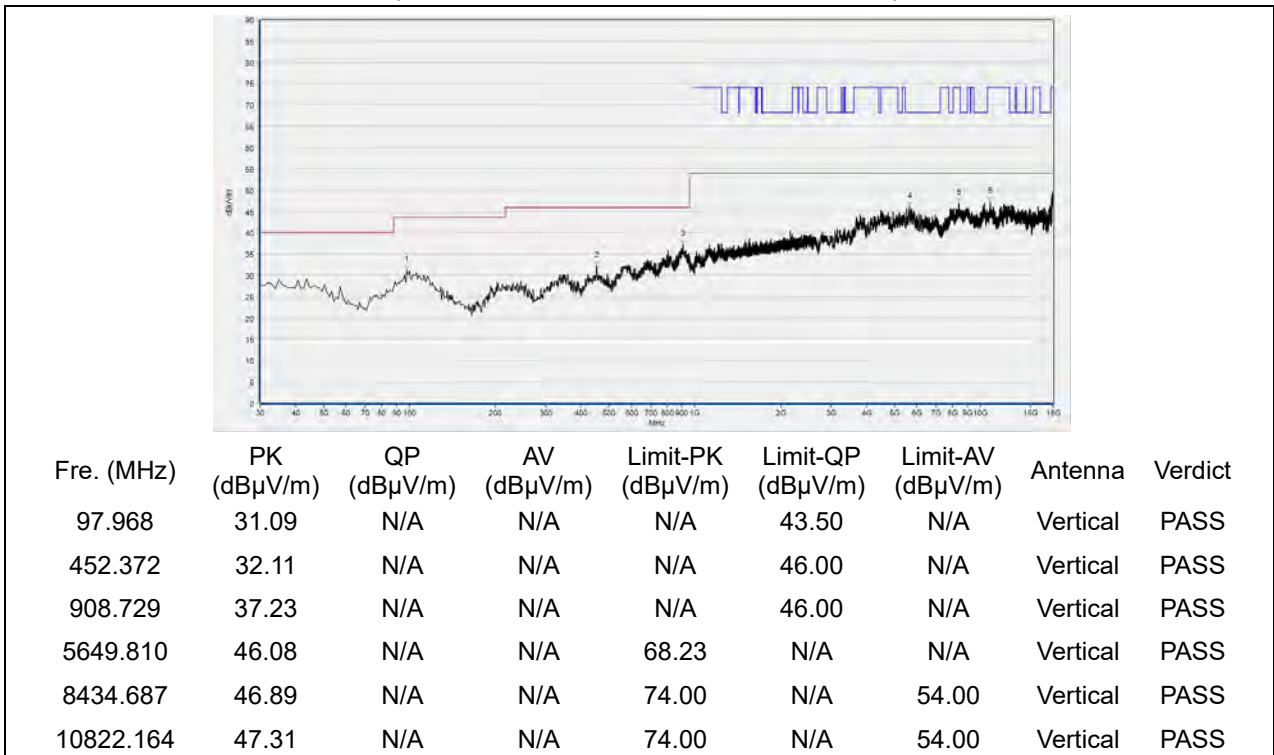


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 52

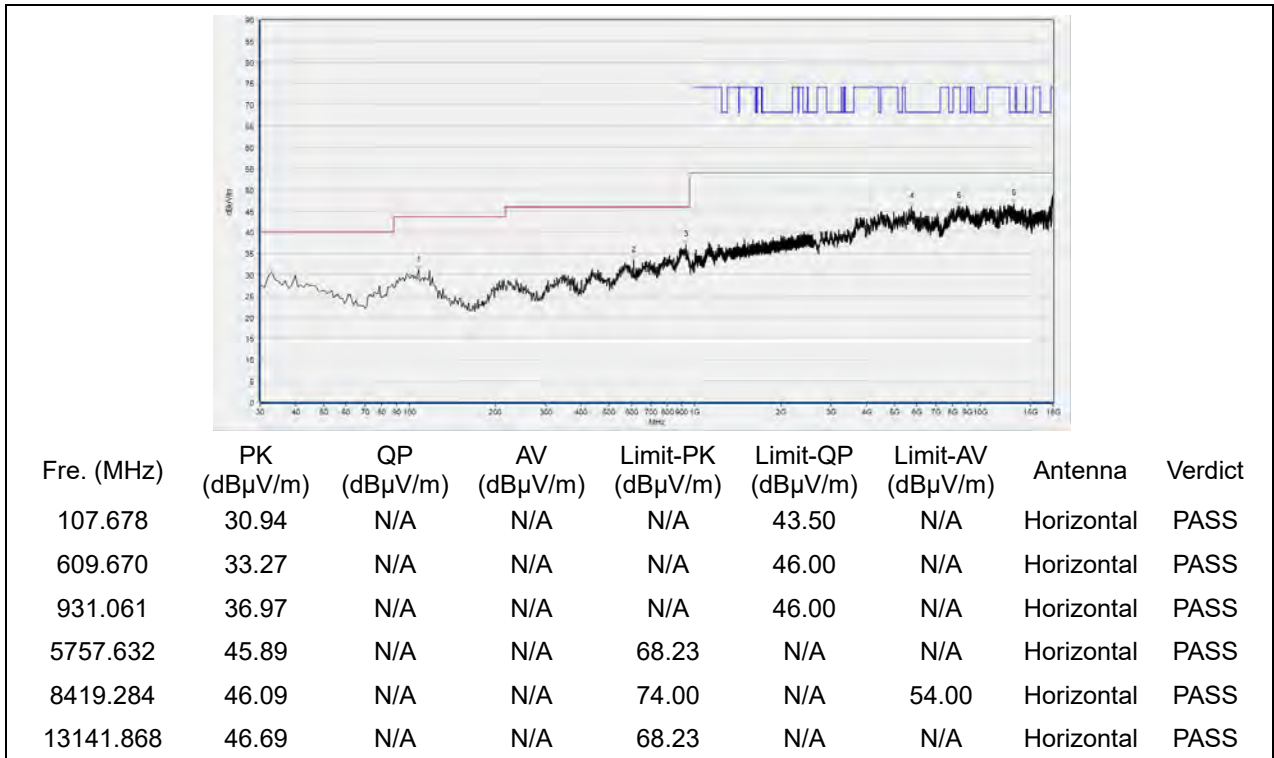


(Antenna Horizontal, 30MHz to 18GHz)

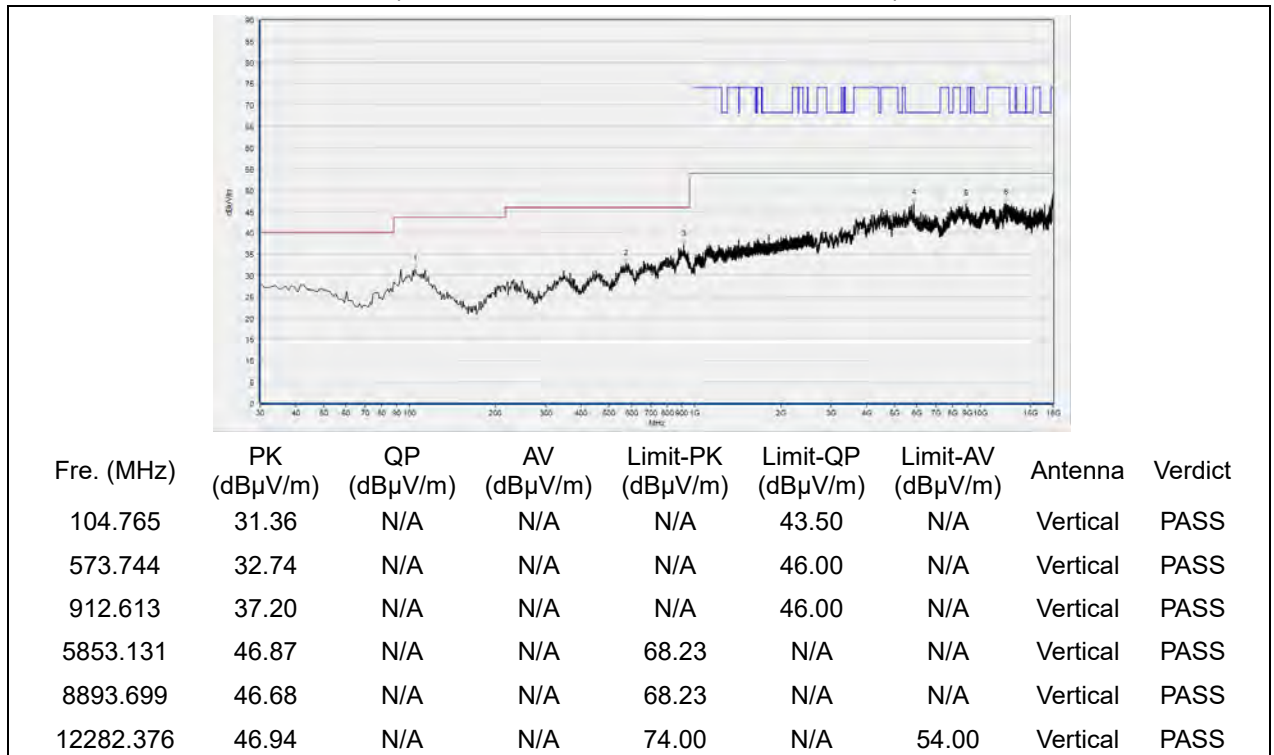


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 60

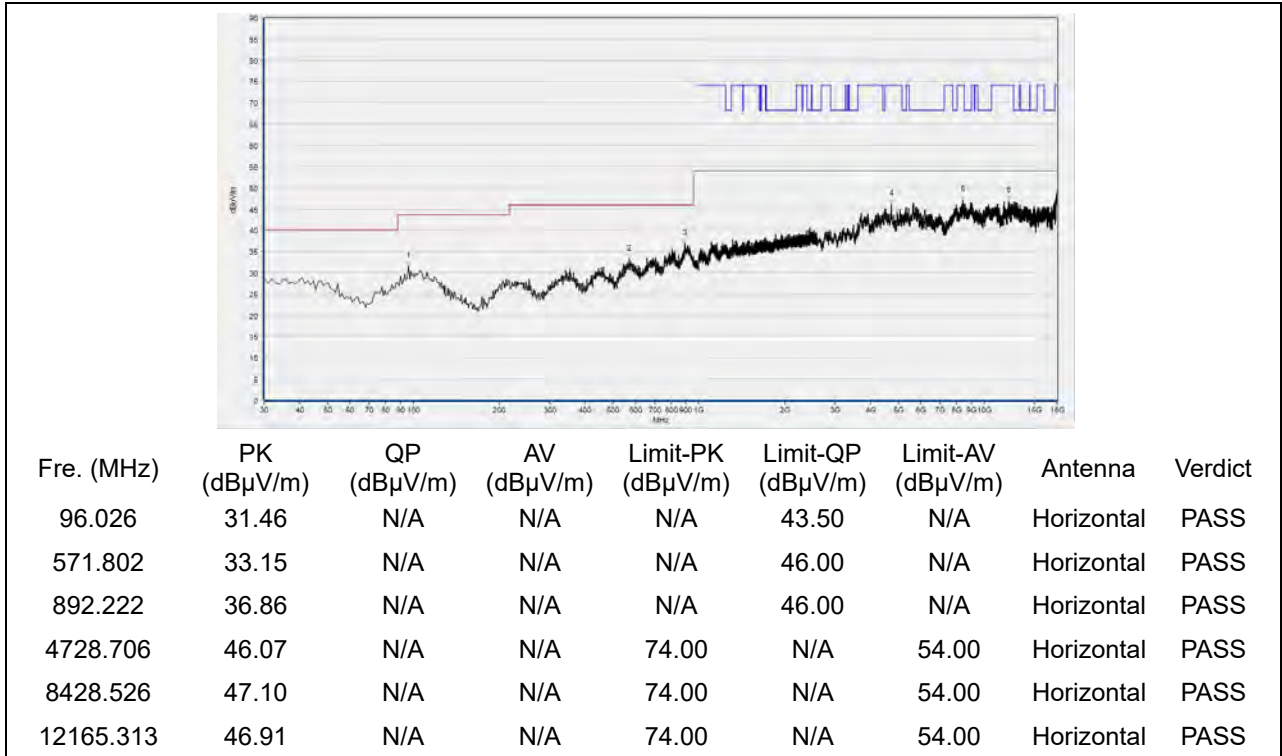


(Antenna Horizontal, 30MHz to 18GHz)

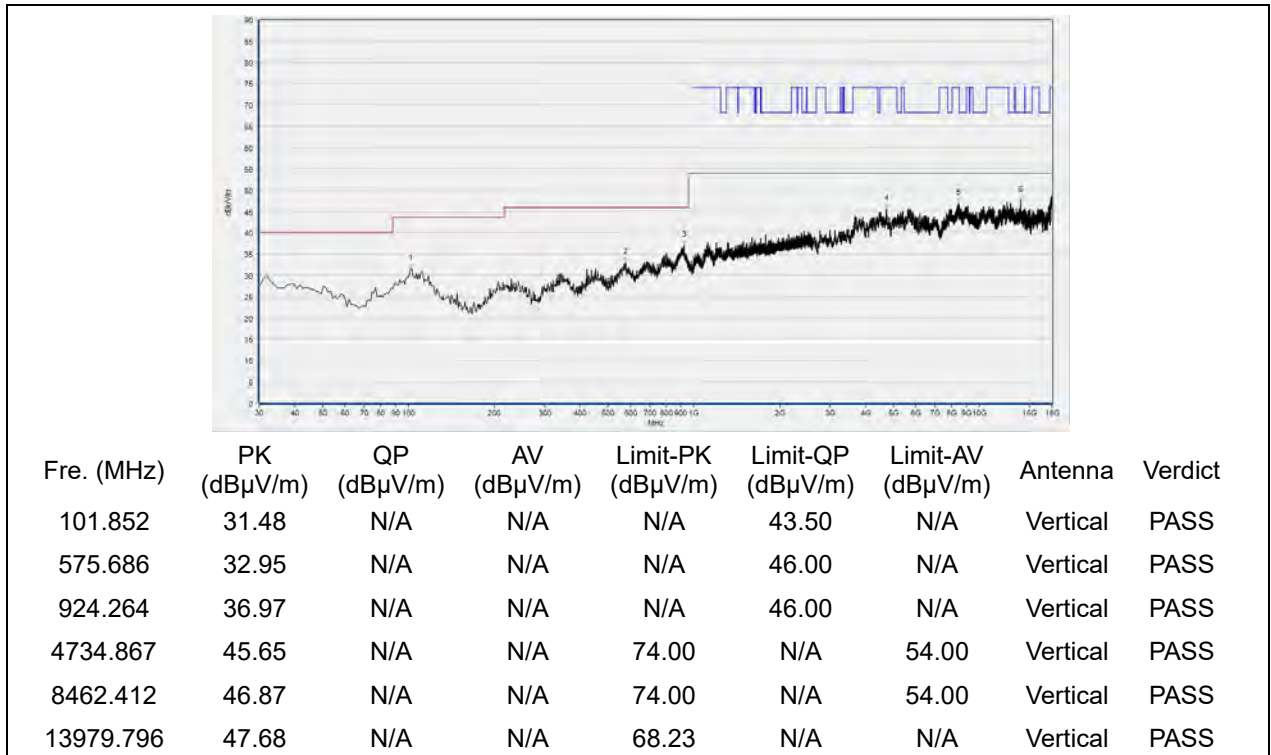


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 64

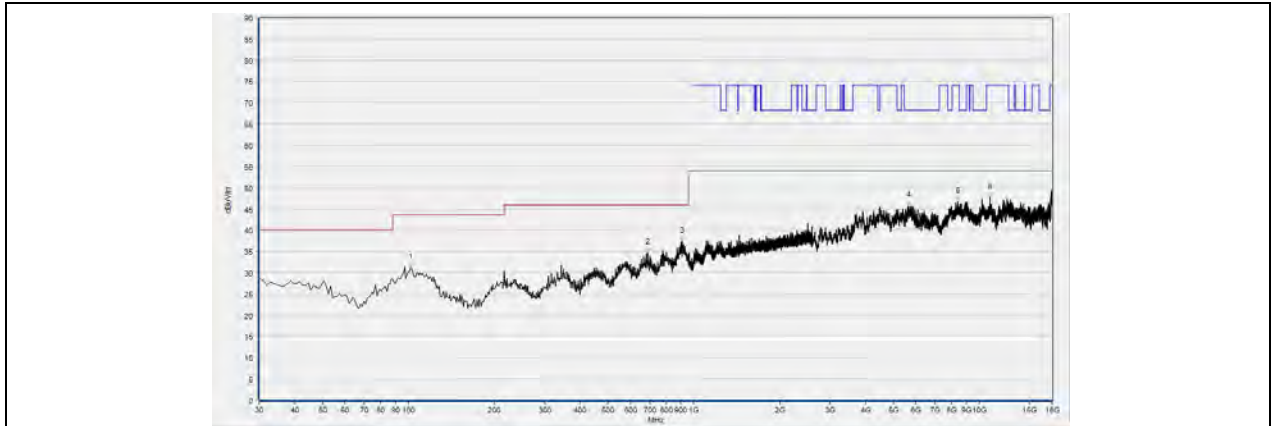


(Antenna Horizontal, 30MHz to 18GHz)



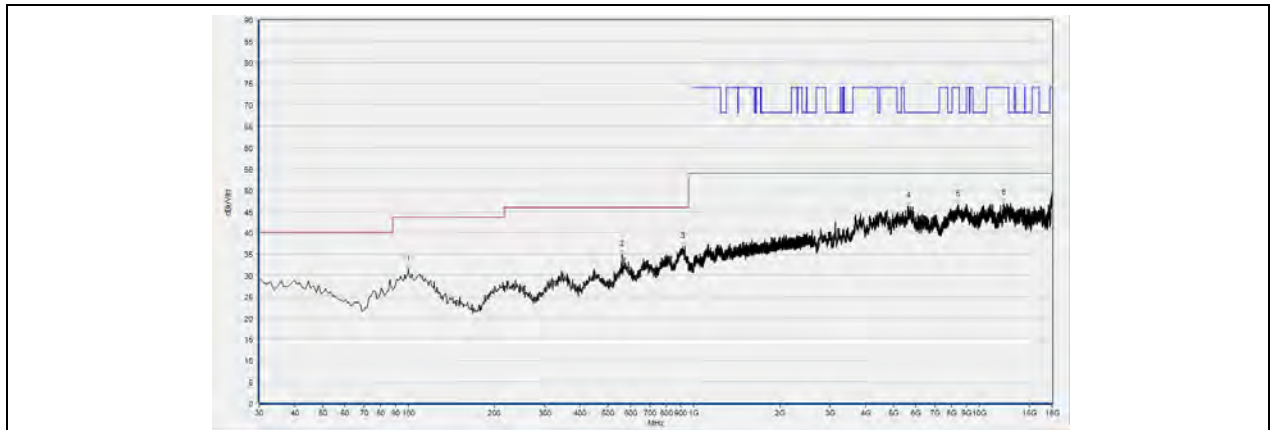
(Antenna Vertical, 30MHz to 18GHz)

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
101.852	31.24	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
690.260	34.63	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
909.700	37.45	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5668.294	45.74	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8388.478	46.81	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
10880.696	47.76	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

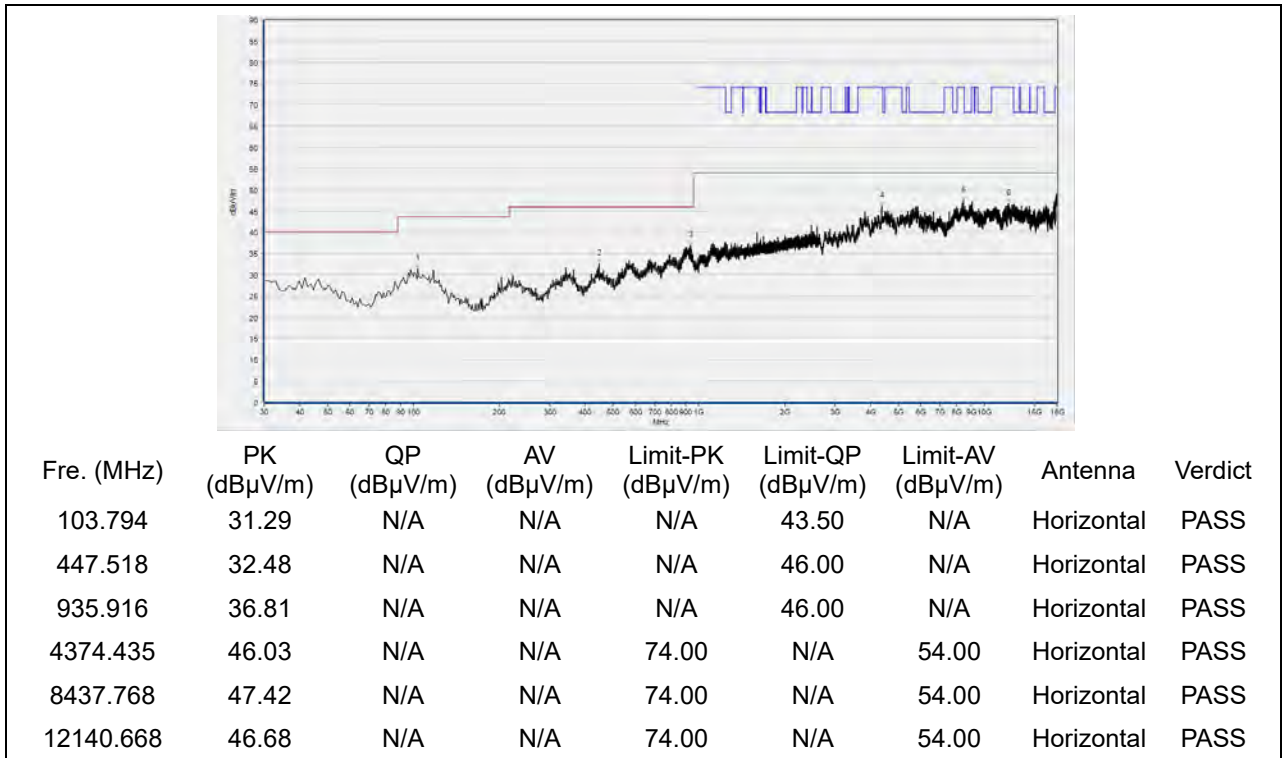
(Antenna Horizontal, 30MHz to 18GHz)



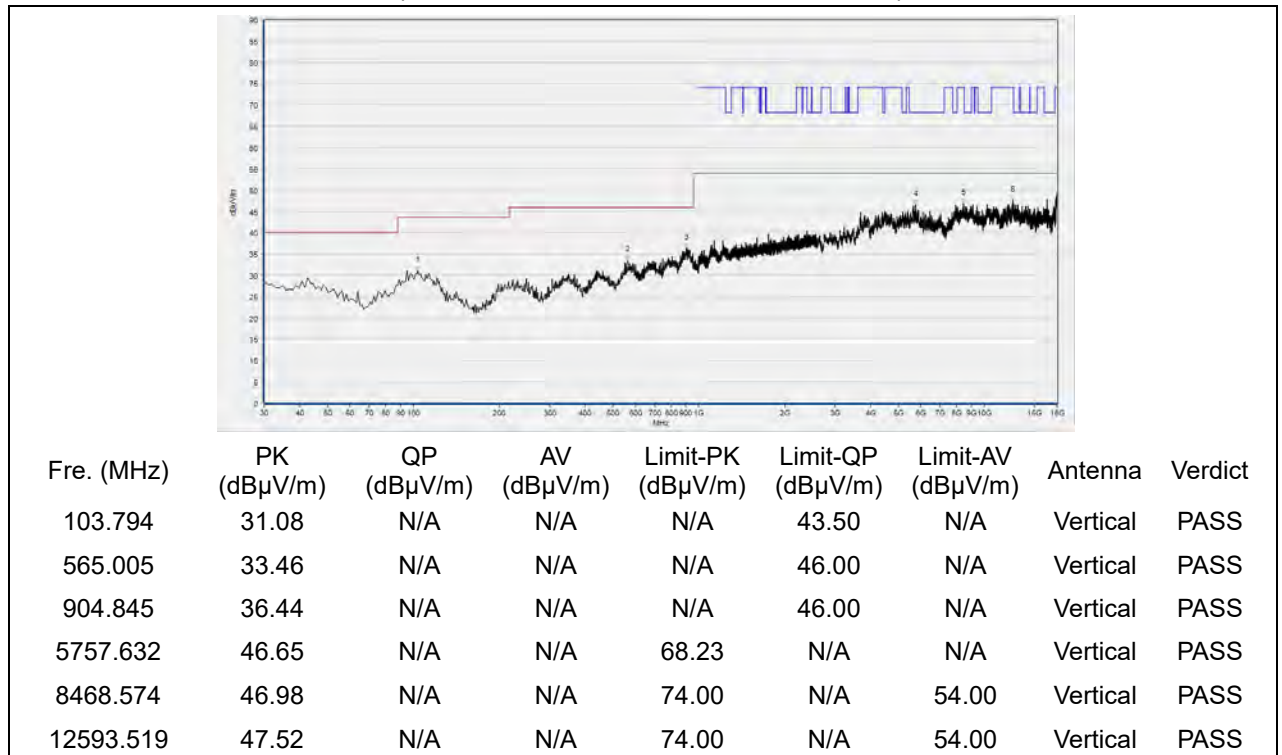
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
99.910	31.35	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
561.121	34.91	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
913.584	36.77	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5649.810	46.26	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
8400.800	46.55	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12183.797	46.88	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 120

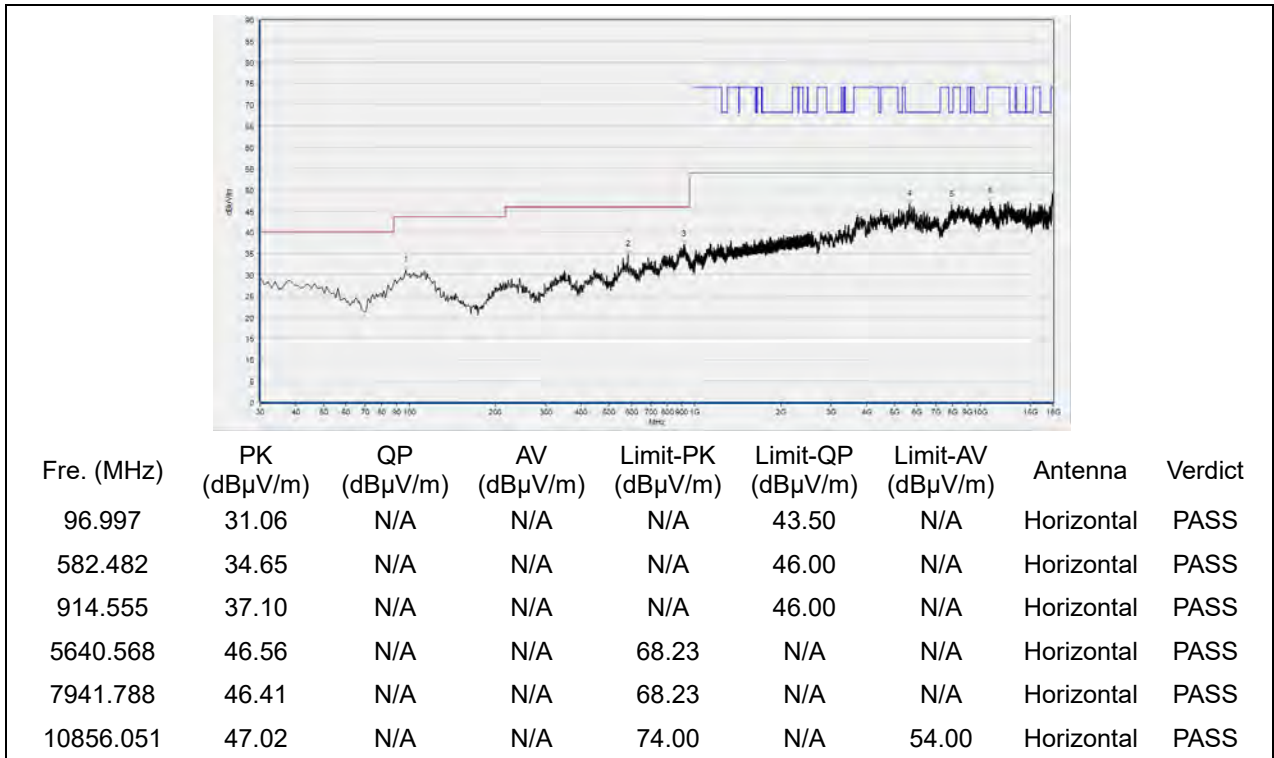


(Antenna Horizontal, 30MHz to 18GHz)

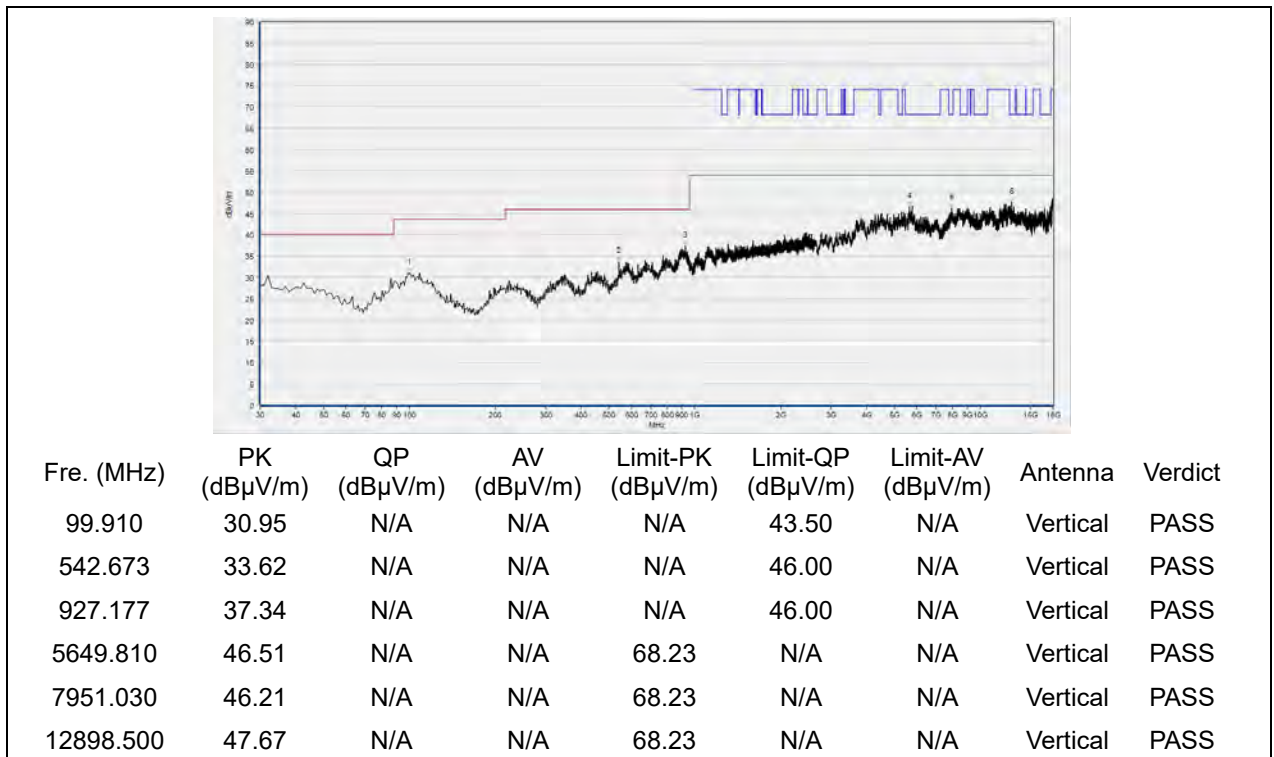


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 144

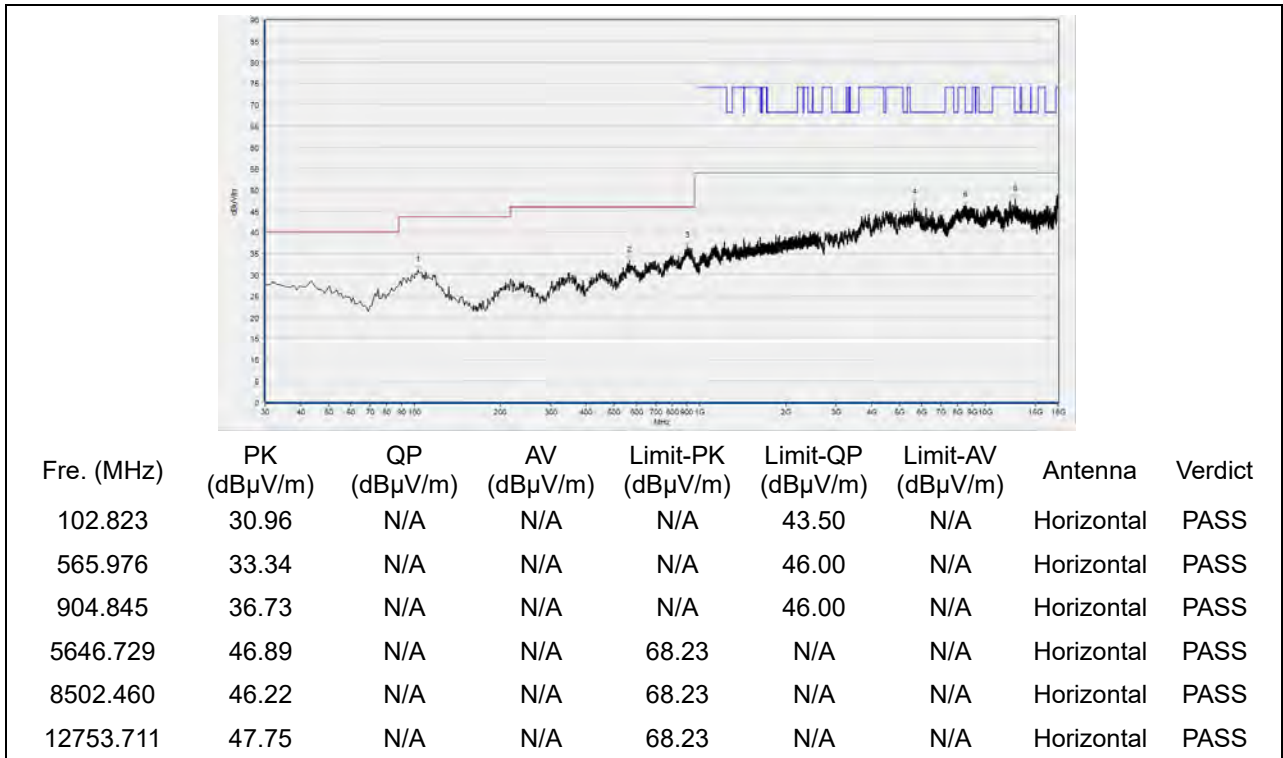


(Antenna Horizontal, 30MHz to 18GHz)

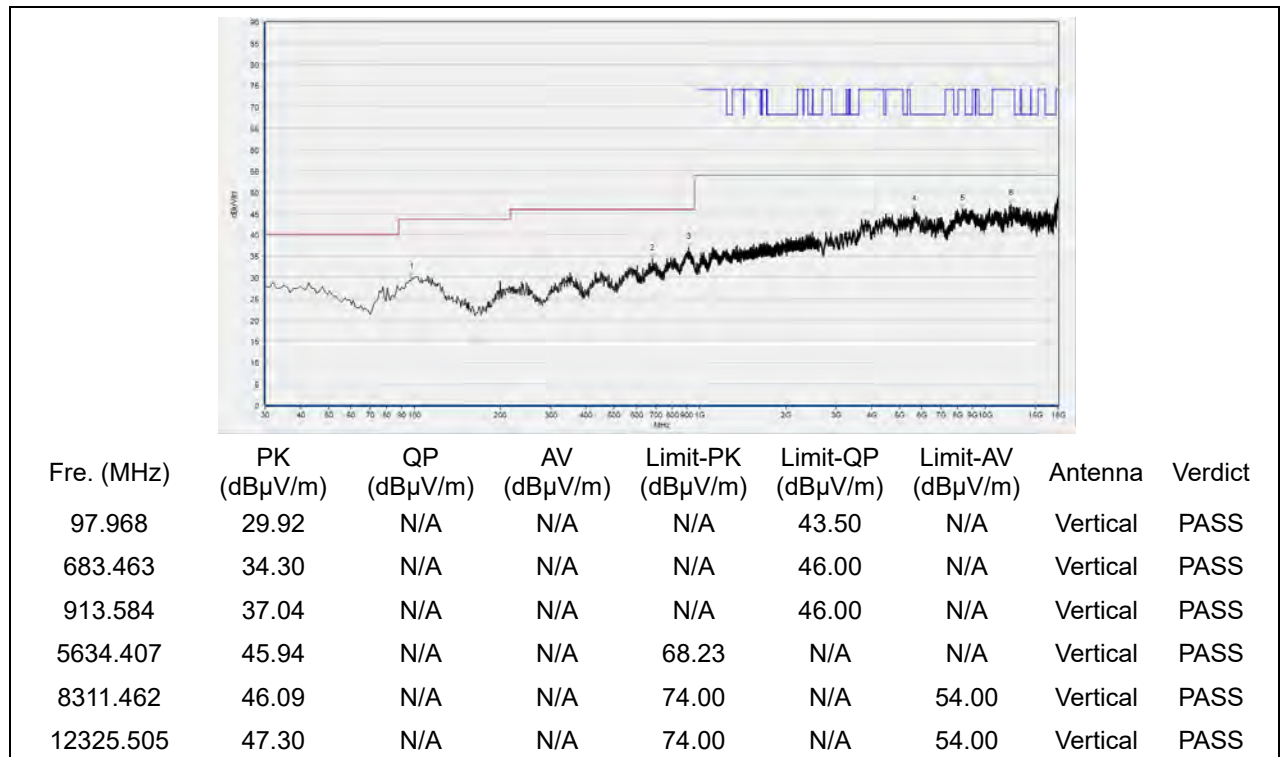


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149

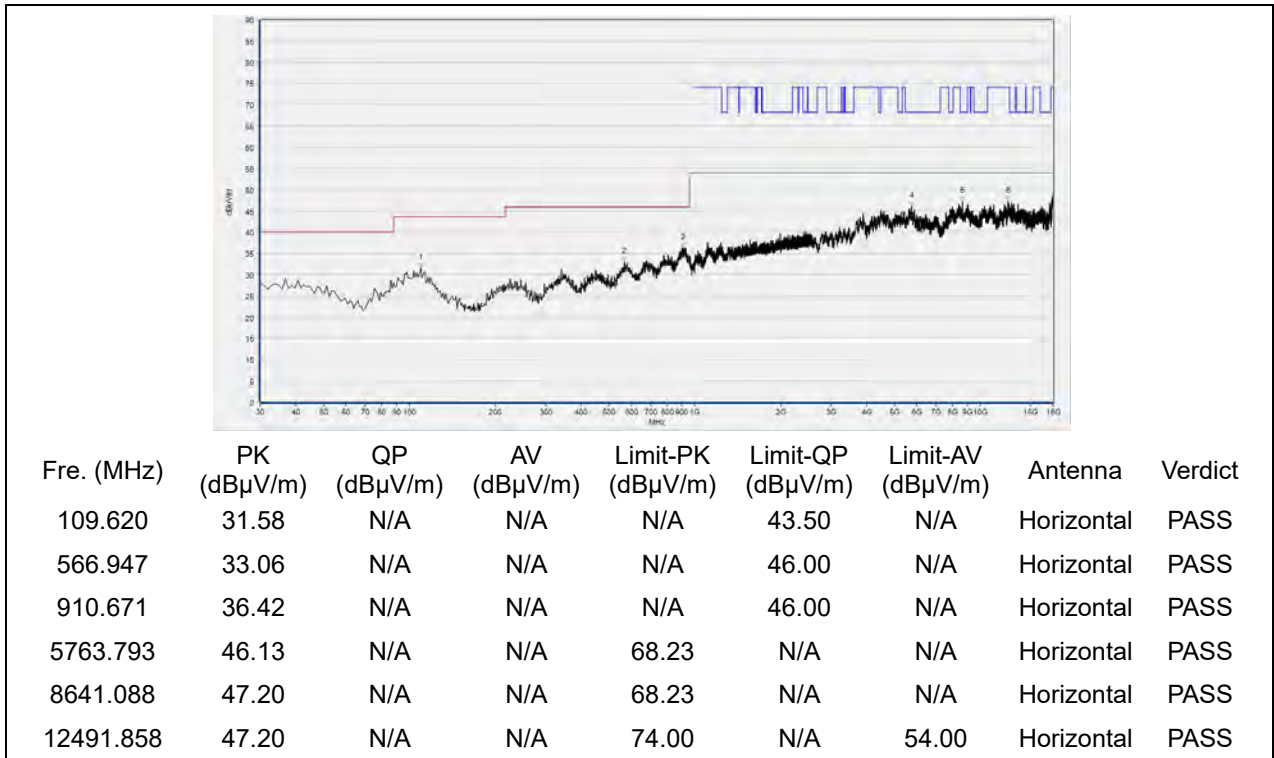


(Antenna Horizontal, 30MHz to 18GHz)

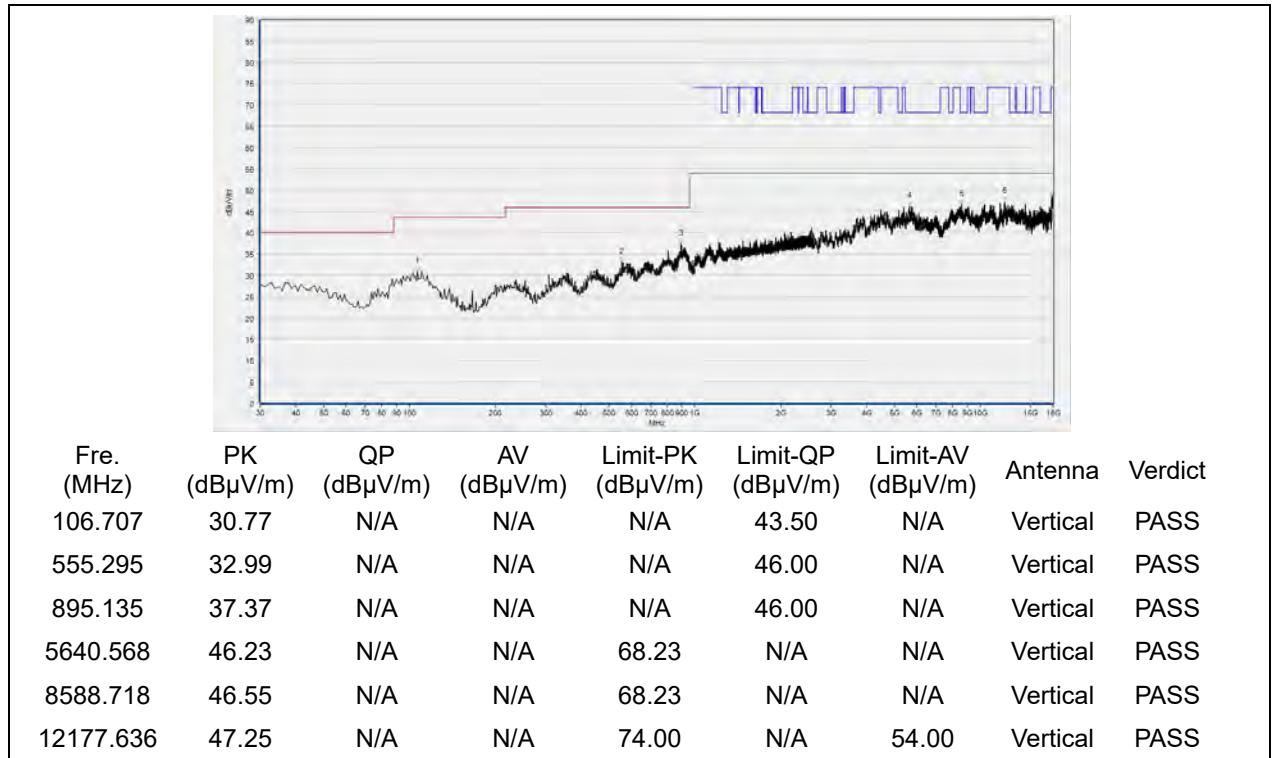


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157

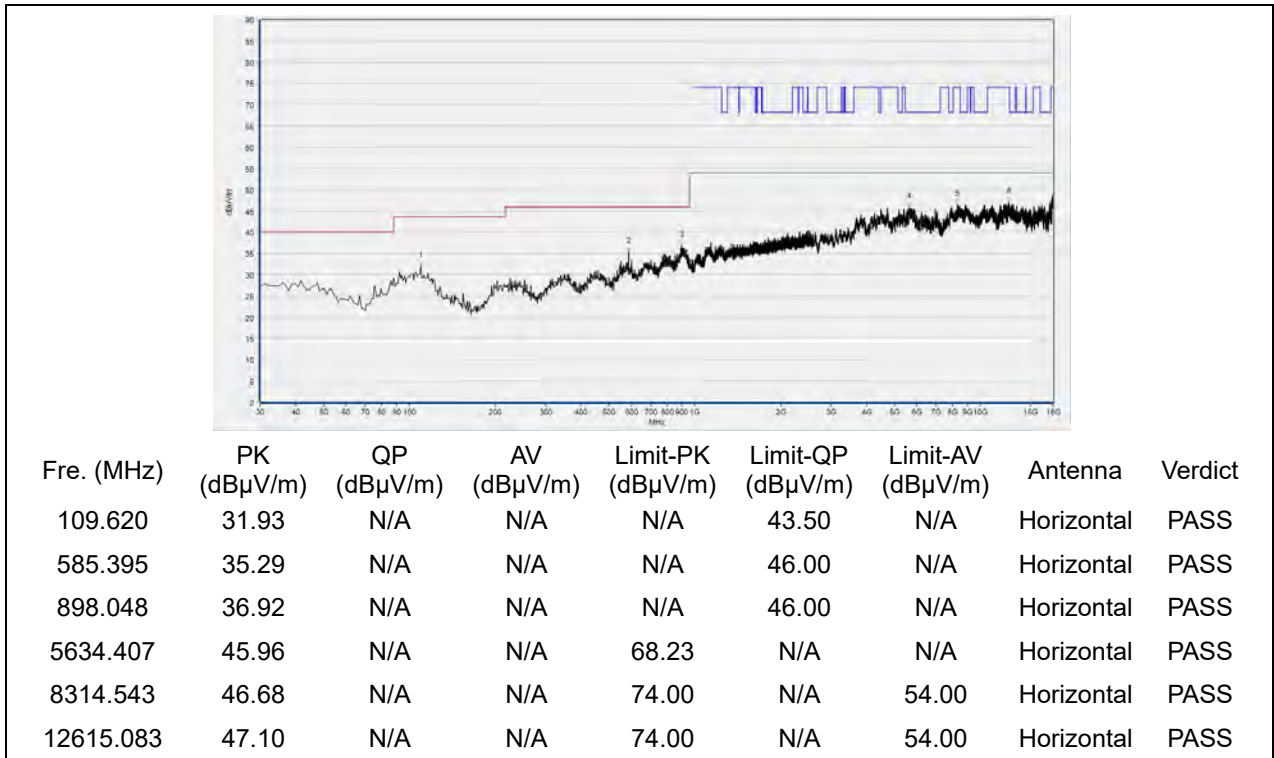


(Antenna Horizontal, 30MHz to 18GHz)

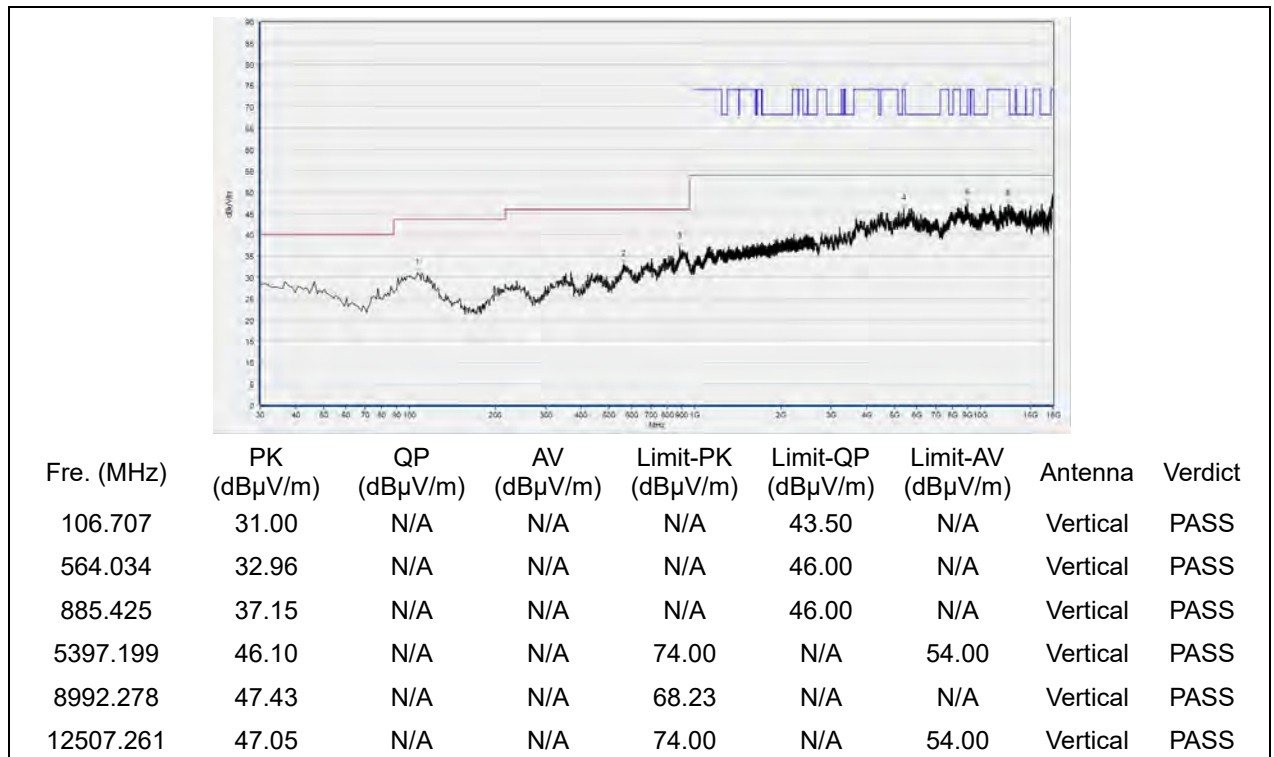


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



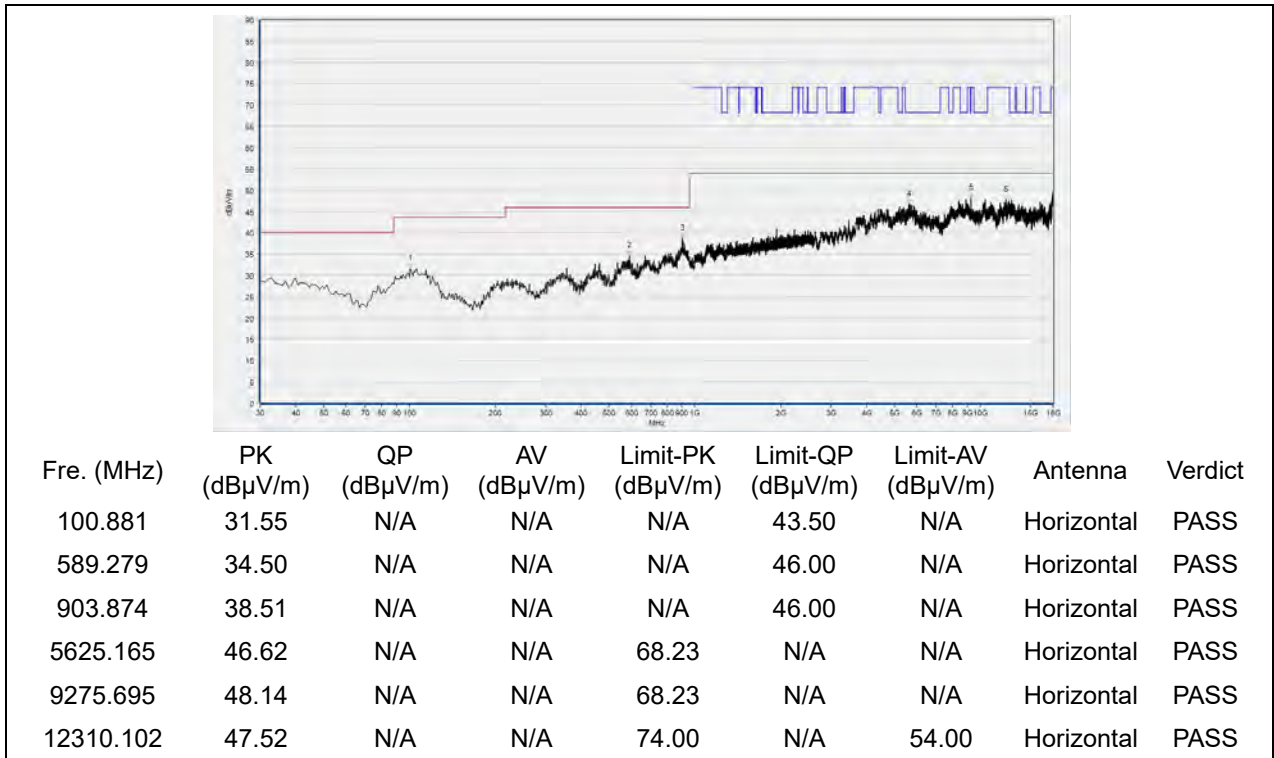
(Antenna Horizontal, 30MHz to 18GHz)



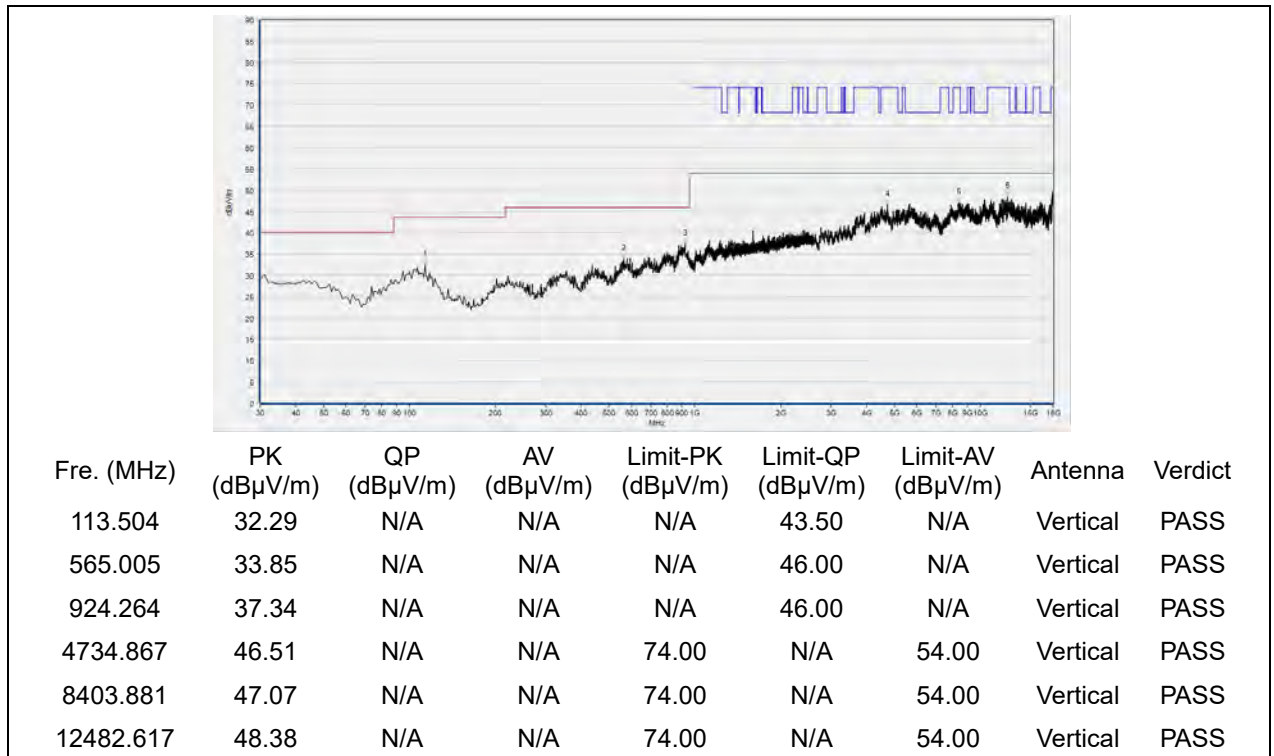
(Antenna Vertical, 30MHz to 18GHz)

802.11n (HT40) mode

Plot for Channel 38

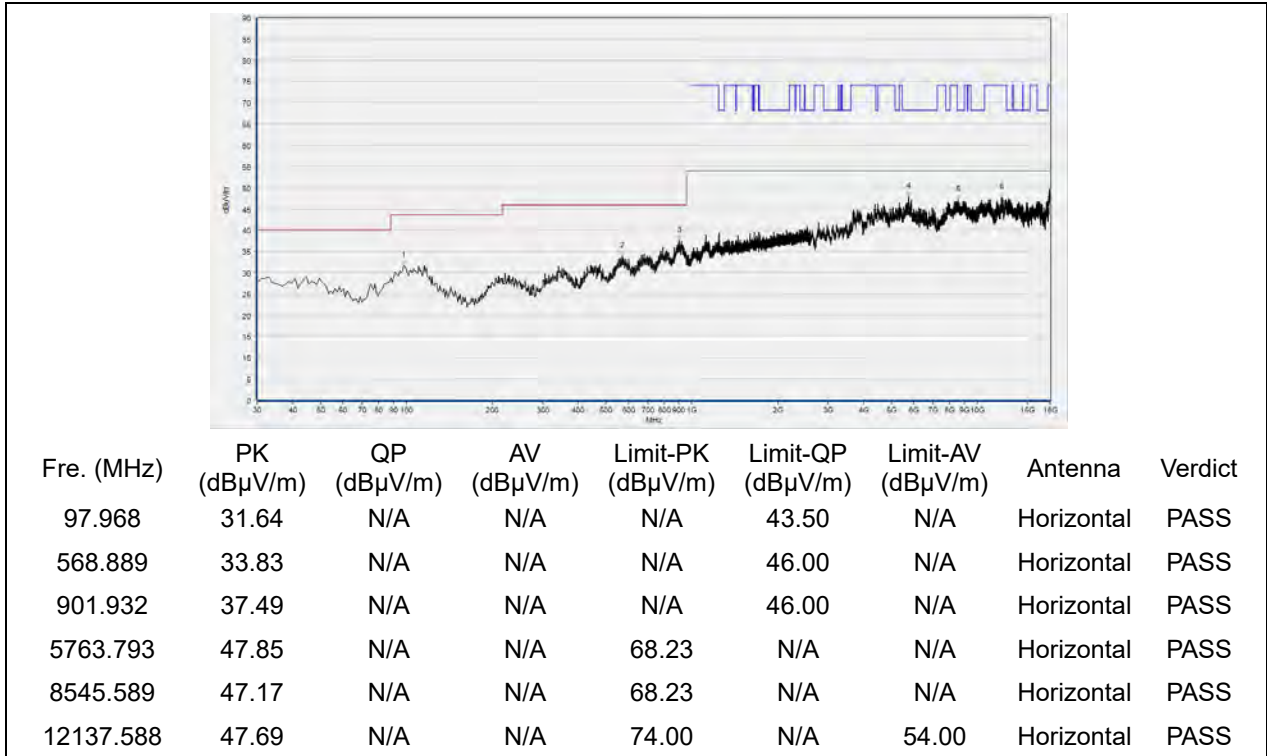


(Antenna Horizontal, 30MHz to 18GHz)

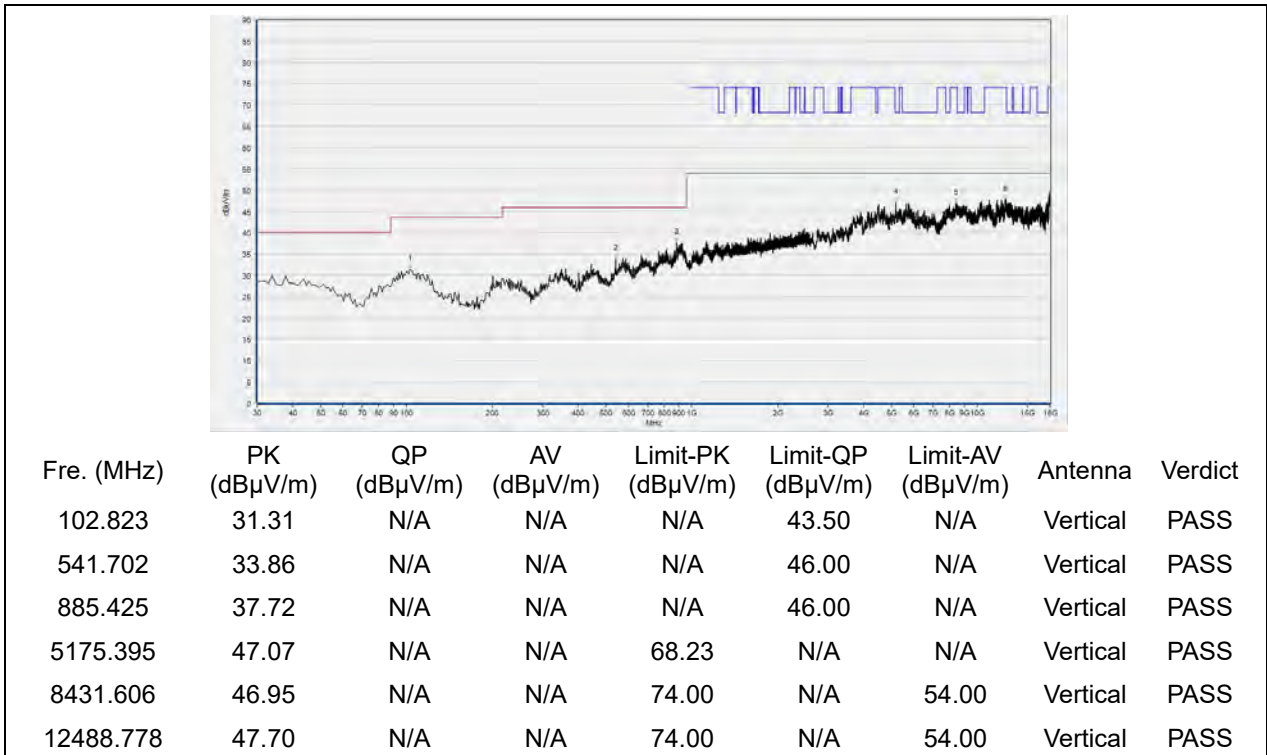


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 46

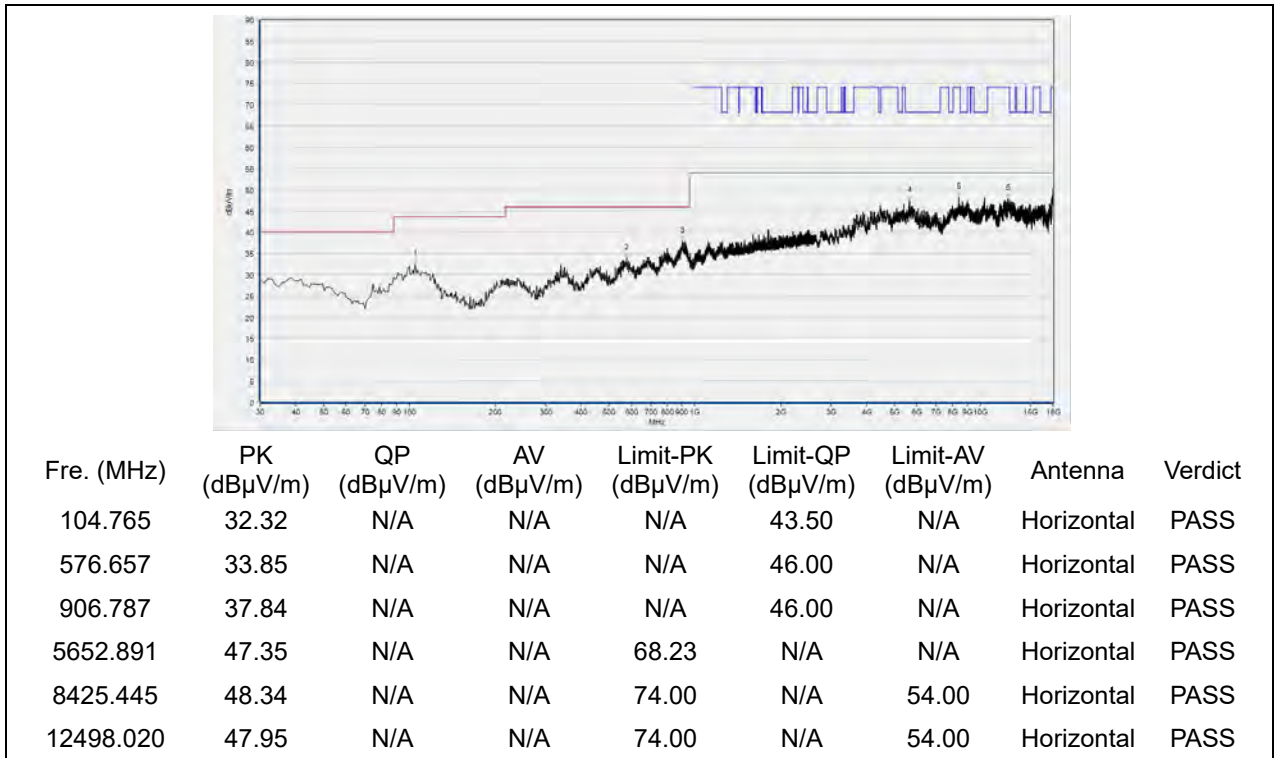


(Antenna Horizontal, 30MHz to 18GHz)

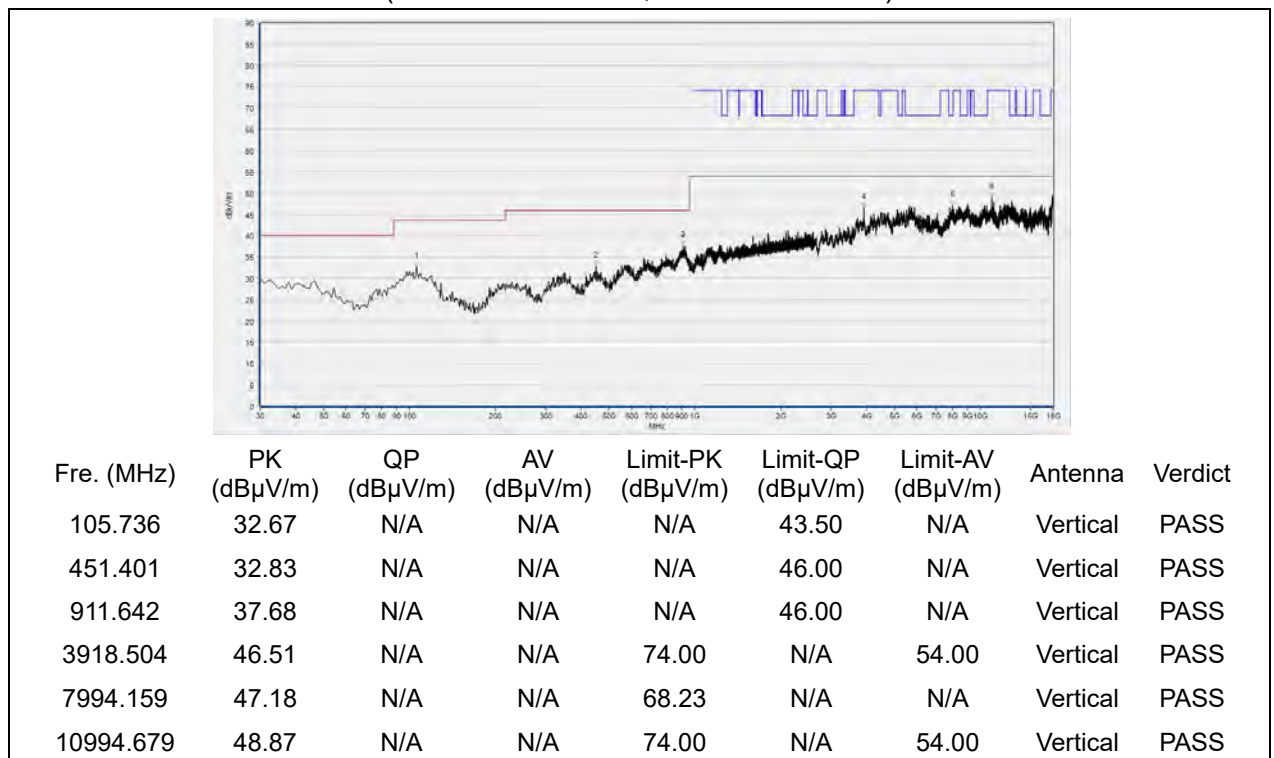


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 54

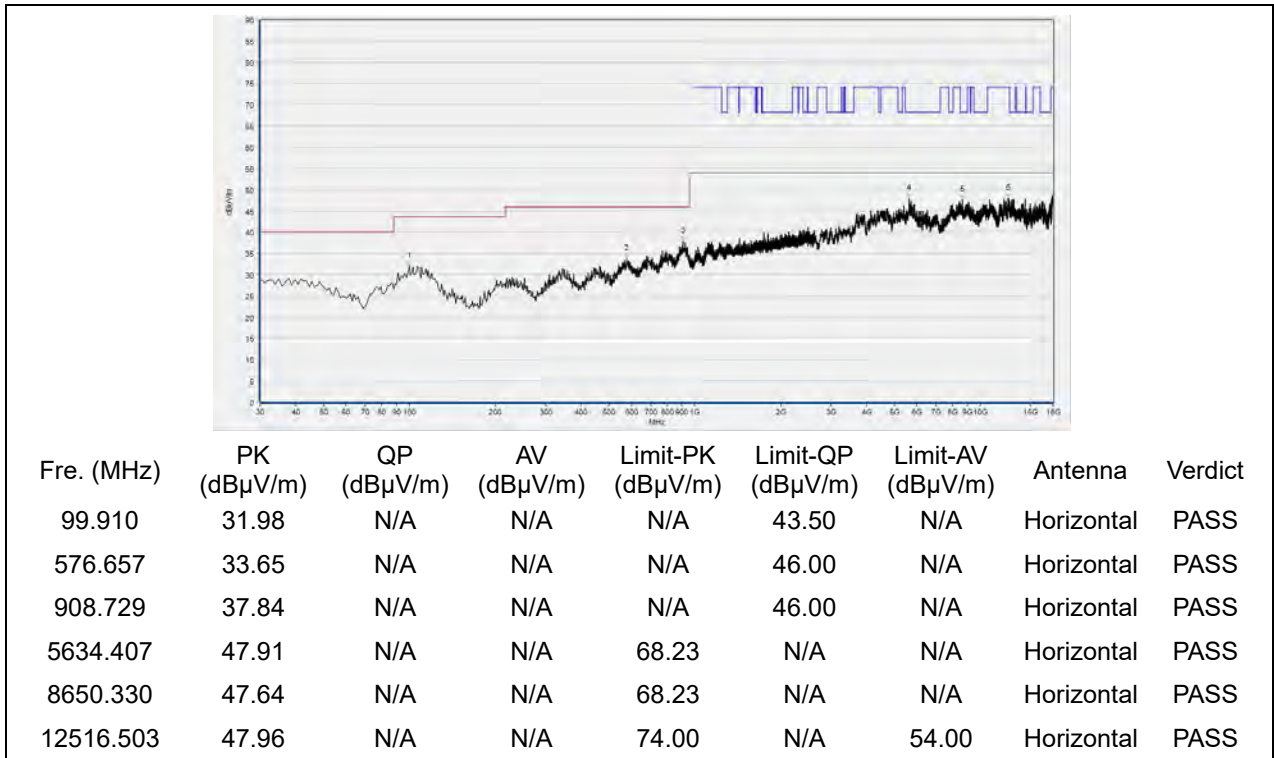


(Antenna Horizontal, 30MHz to 18GHz)

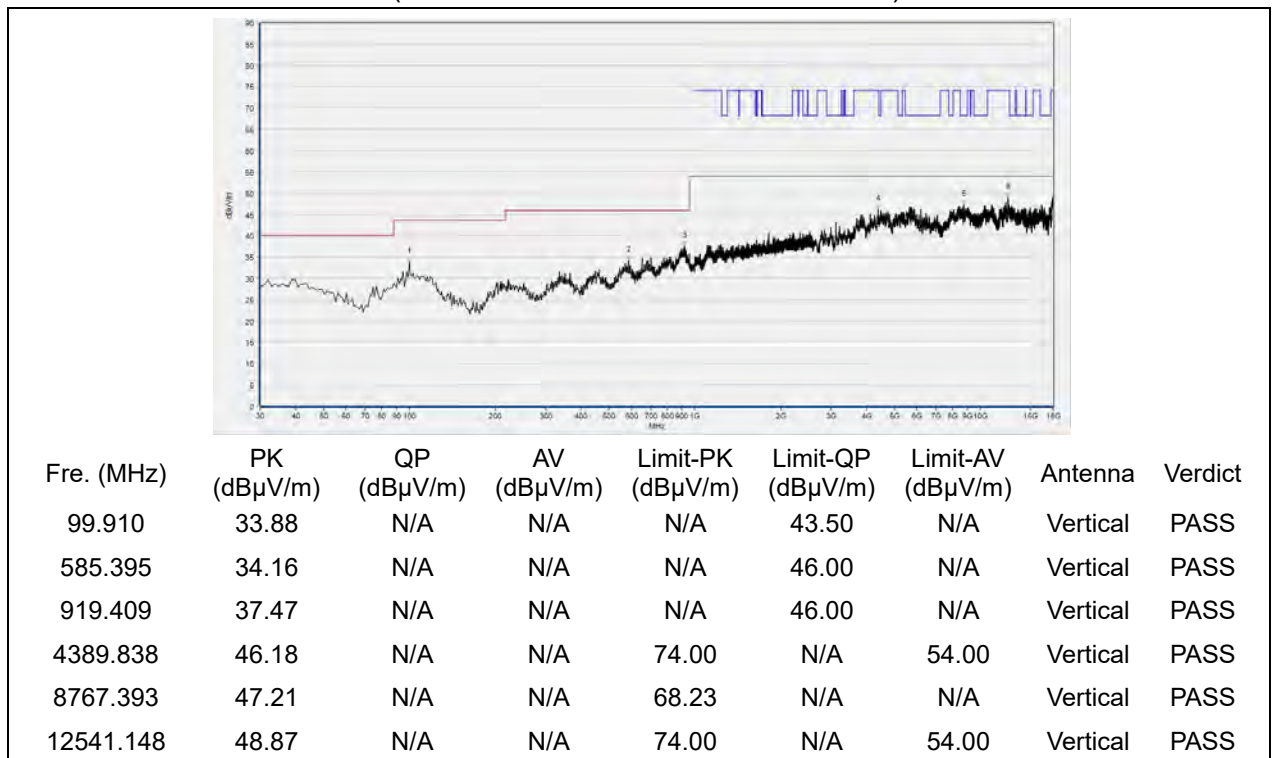


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 62

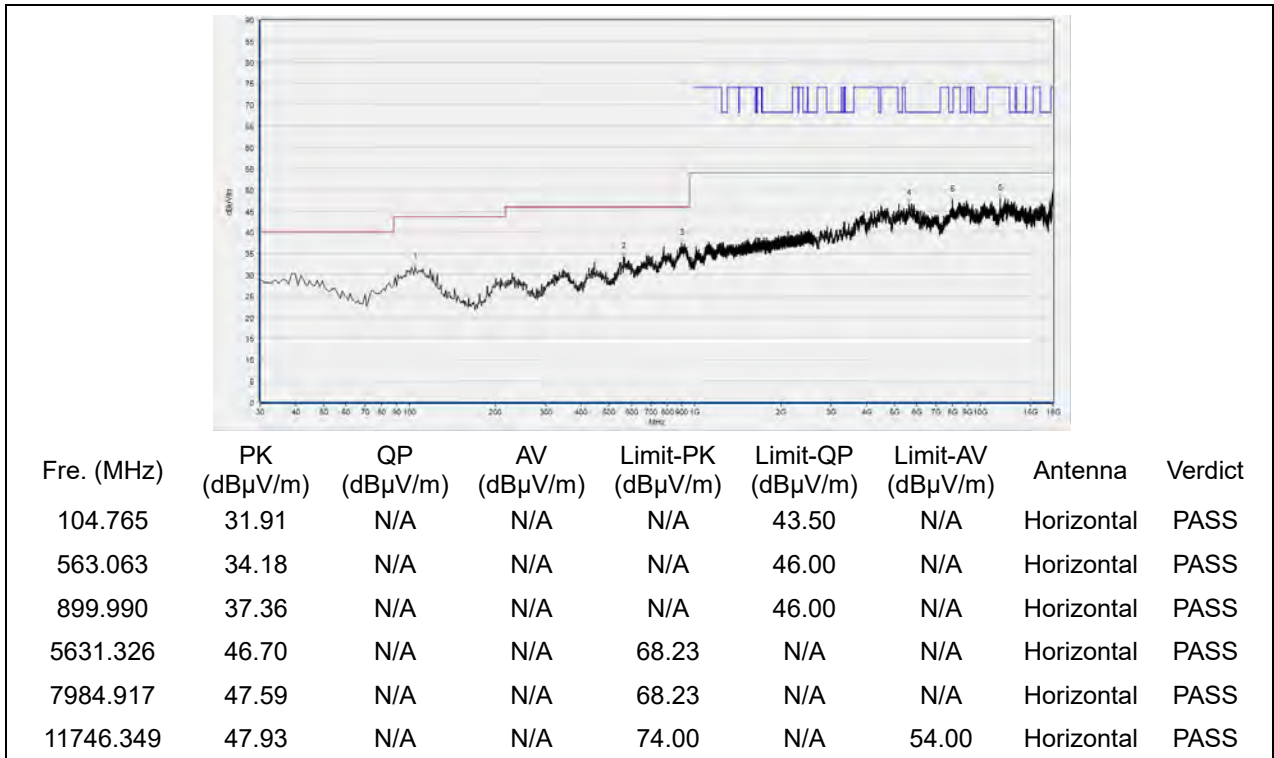


(Antenna Horizontal, 30MHz to 18GHz)

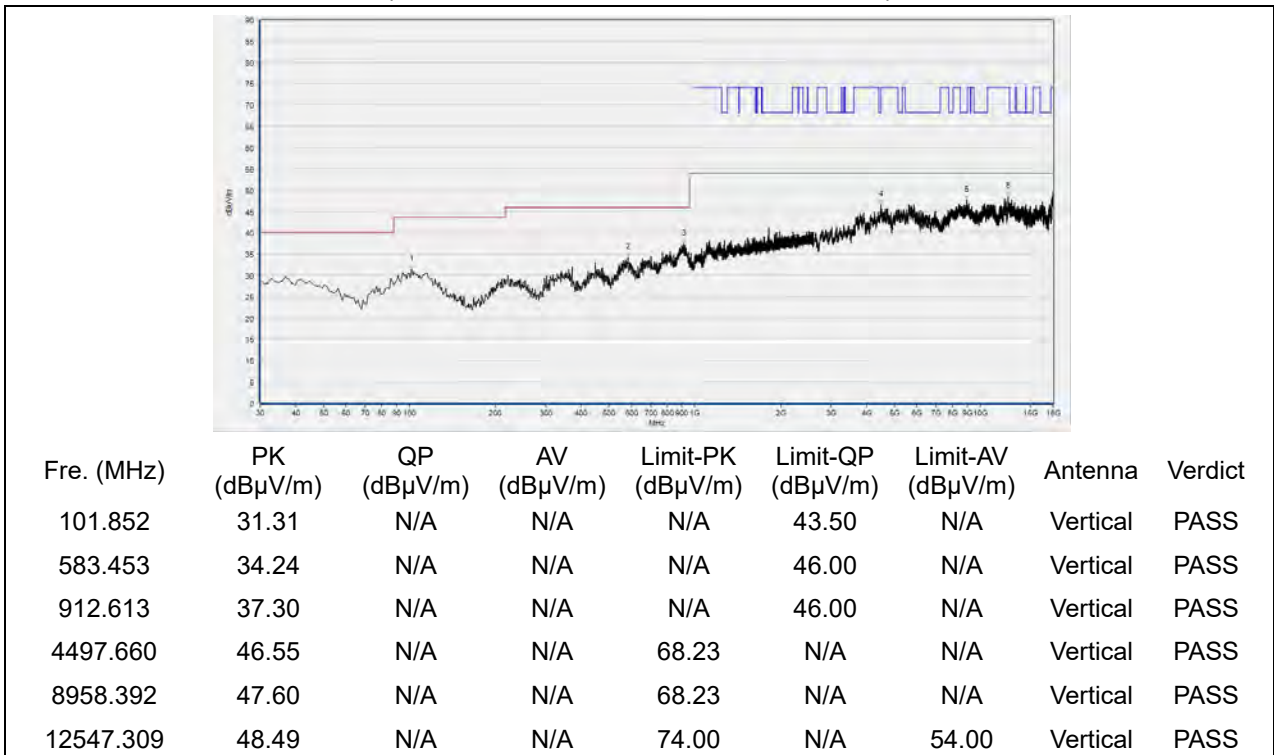


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 102

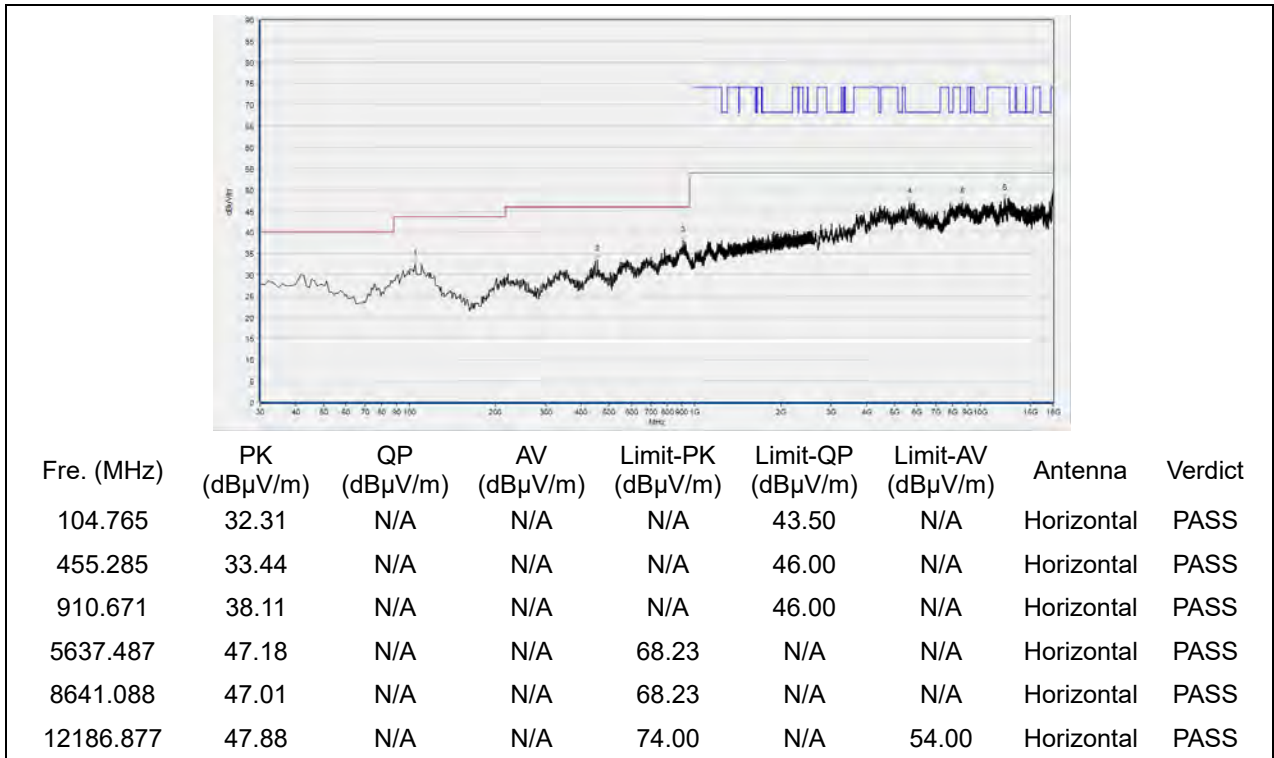


(Antenna Horizontal, 30MHz to 18GHz)

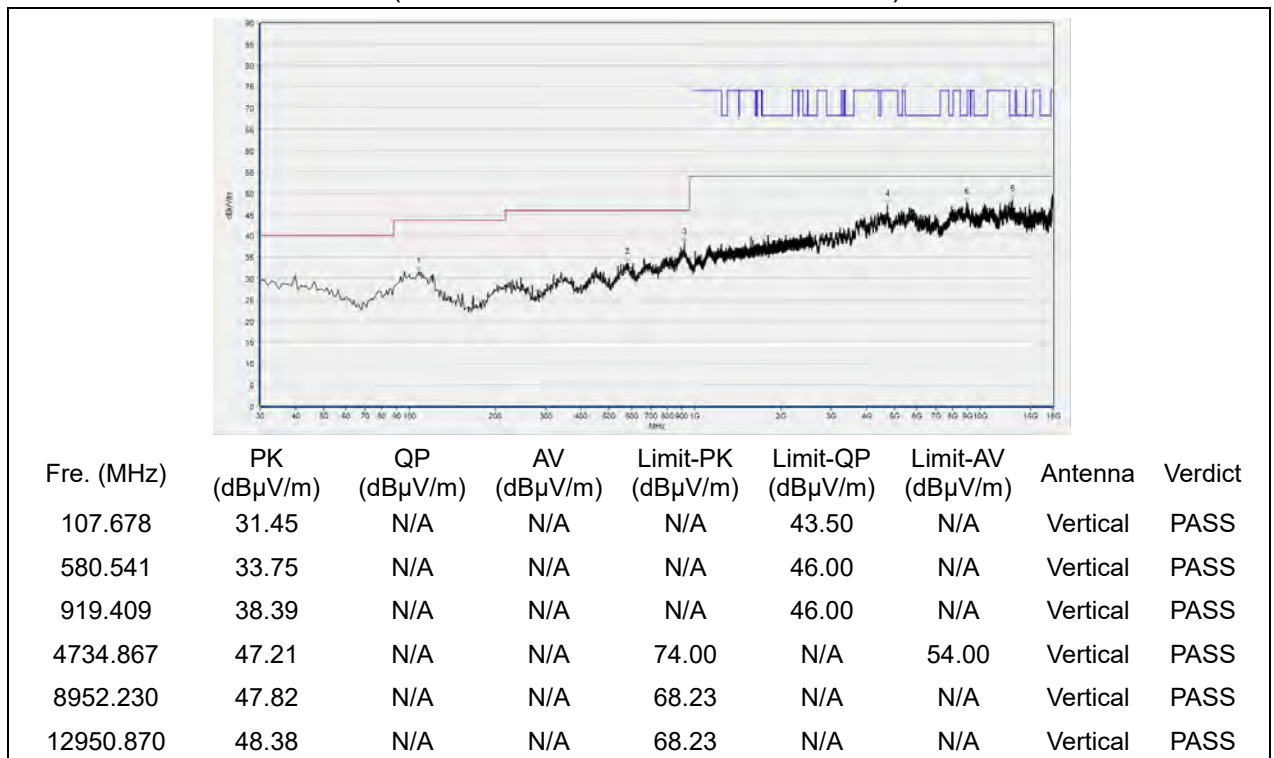


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 126

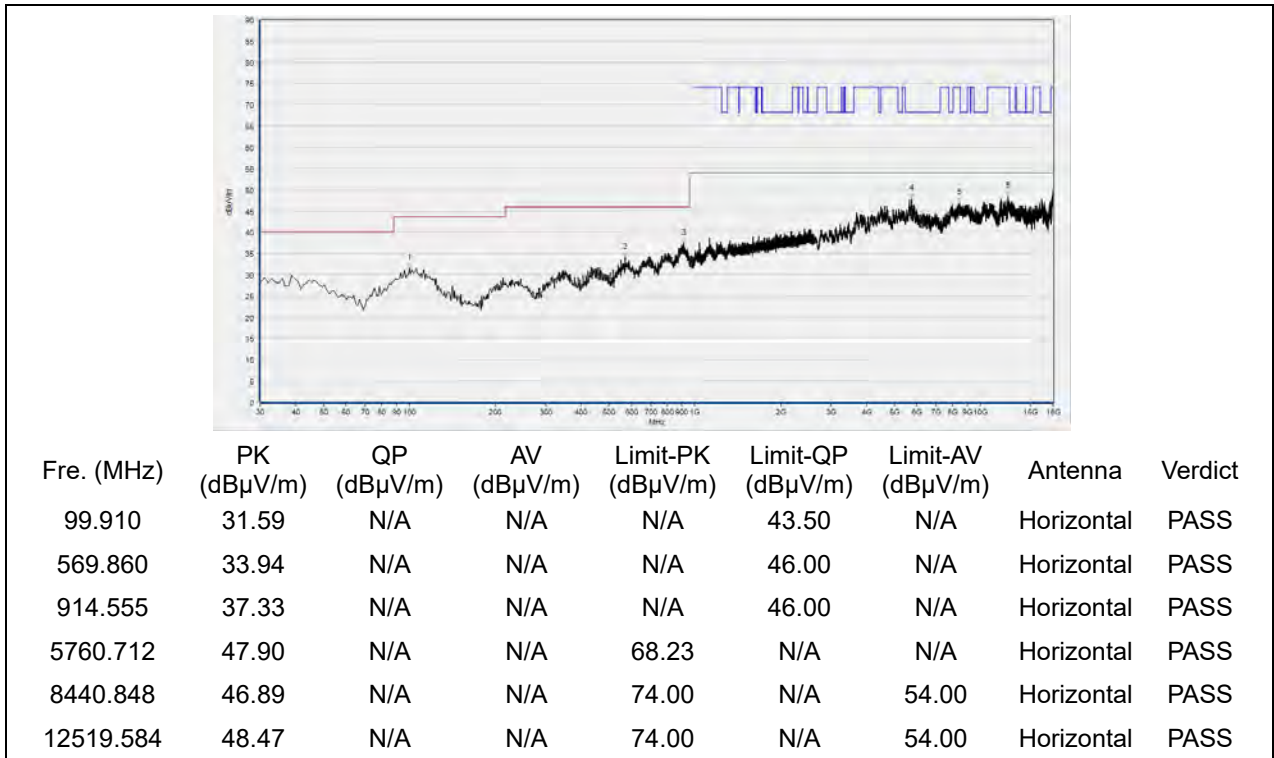


(Antenna Horizontal, 30MHz to 18GHz)

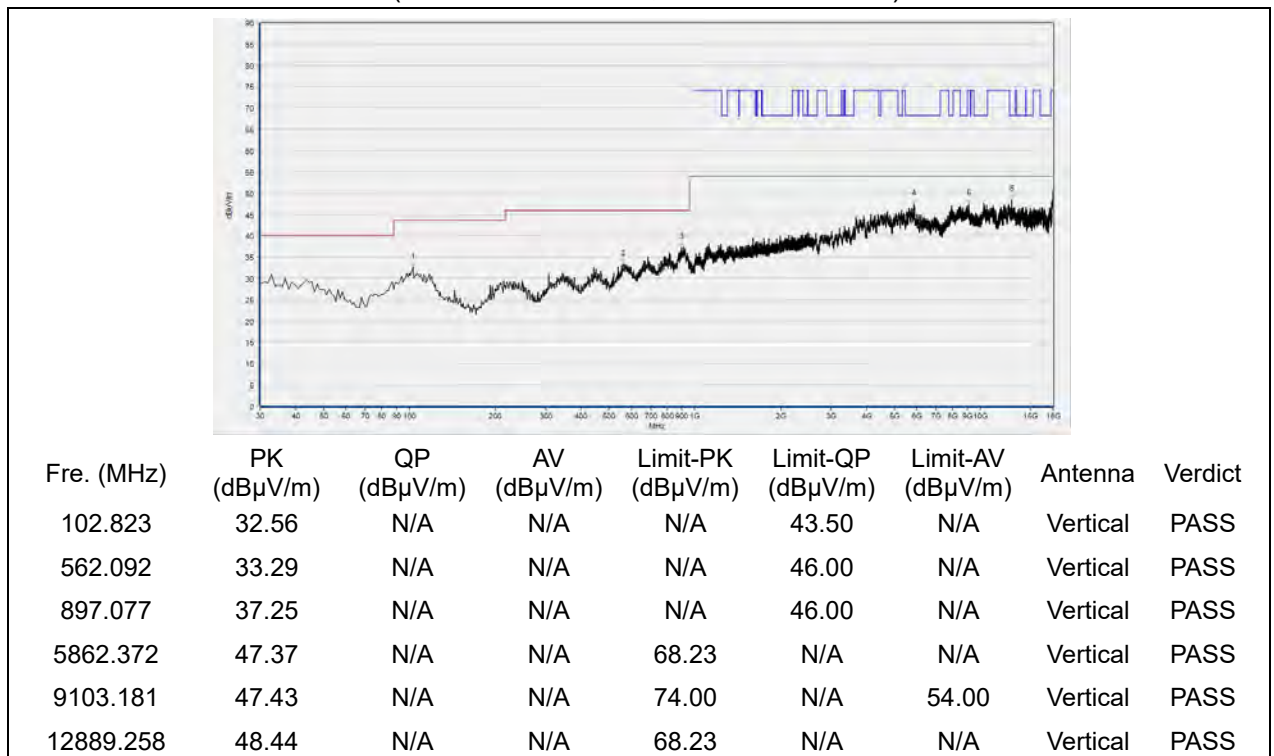


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 142

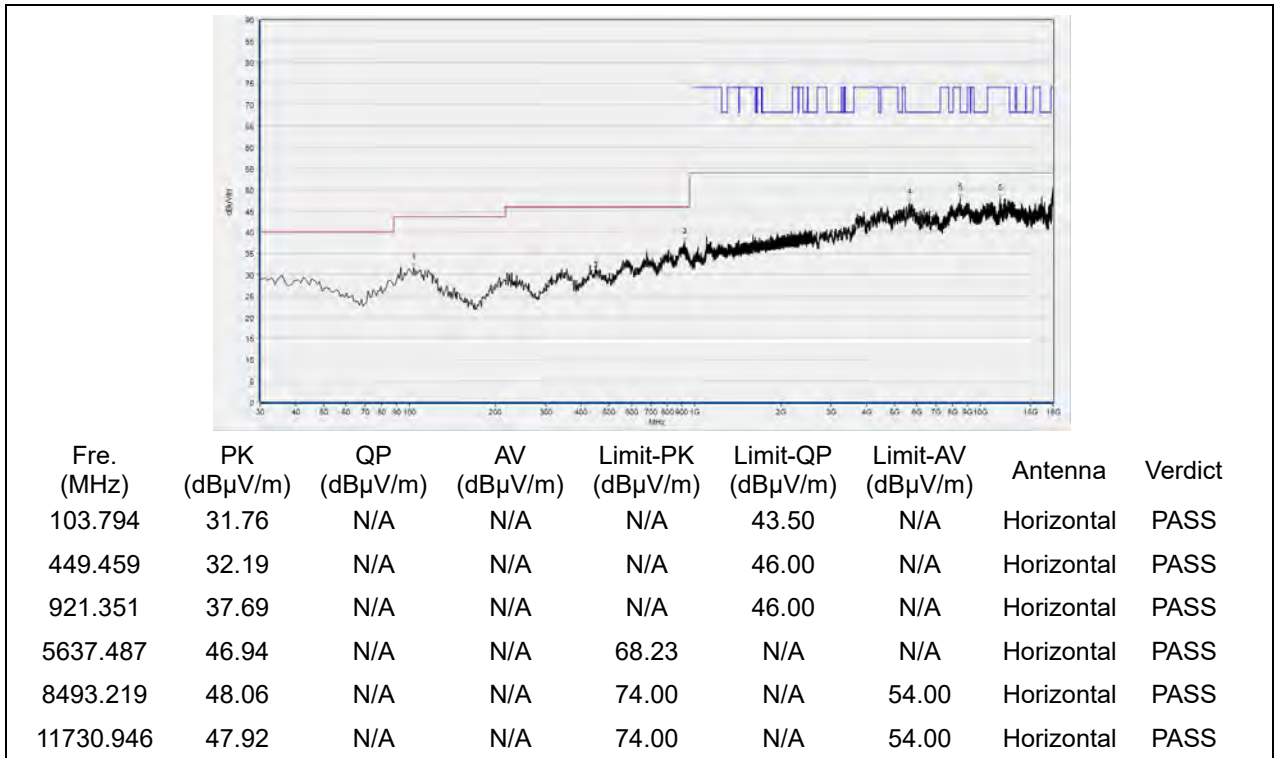


(Antenna Horizontal, 30MHz to 18GHz)

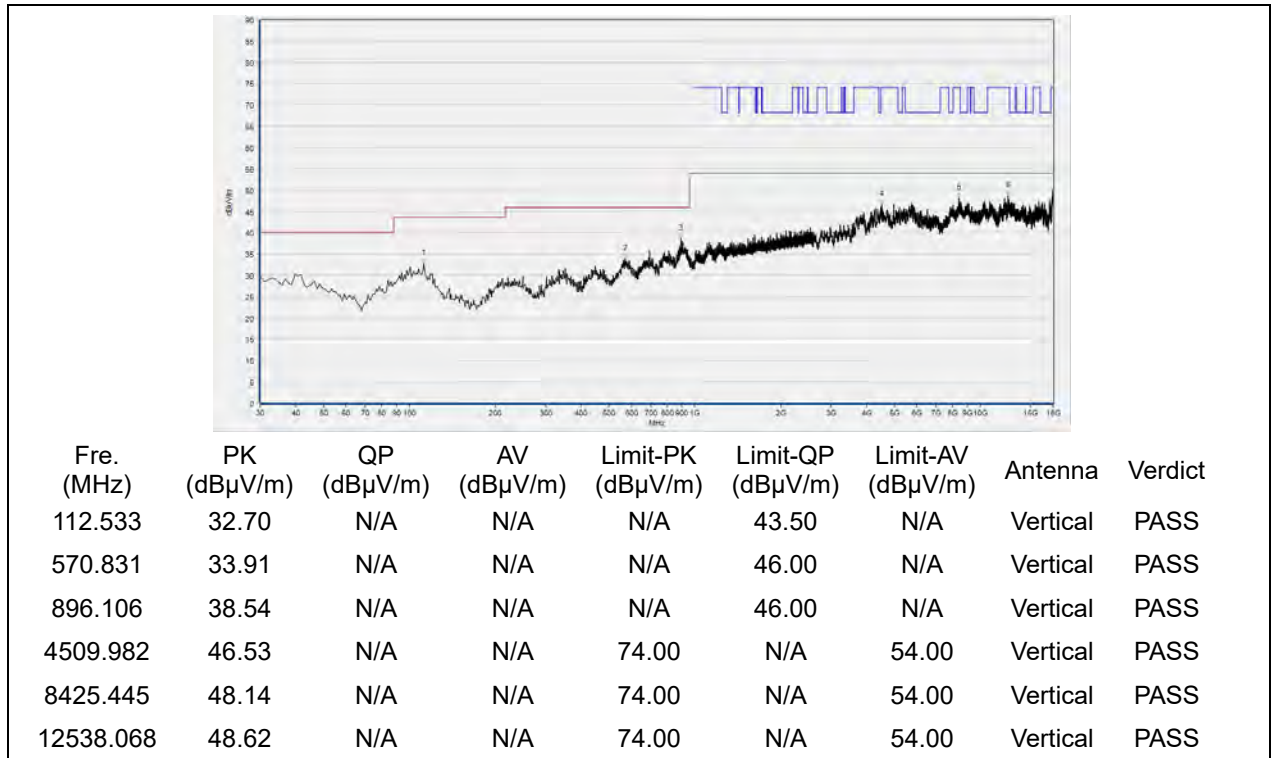


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 151

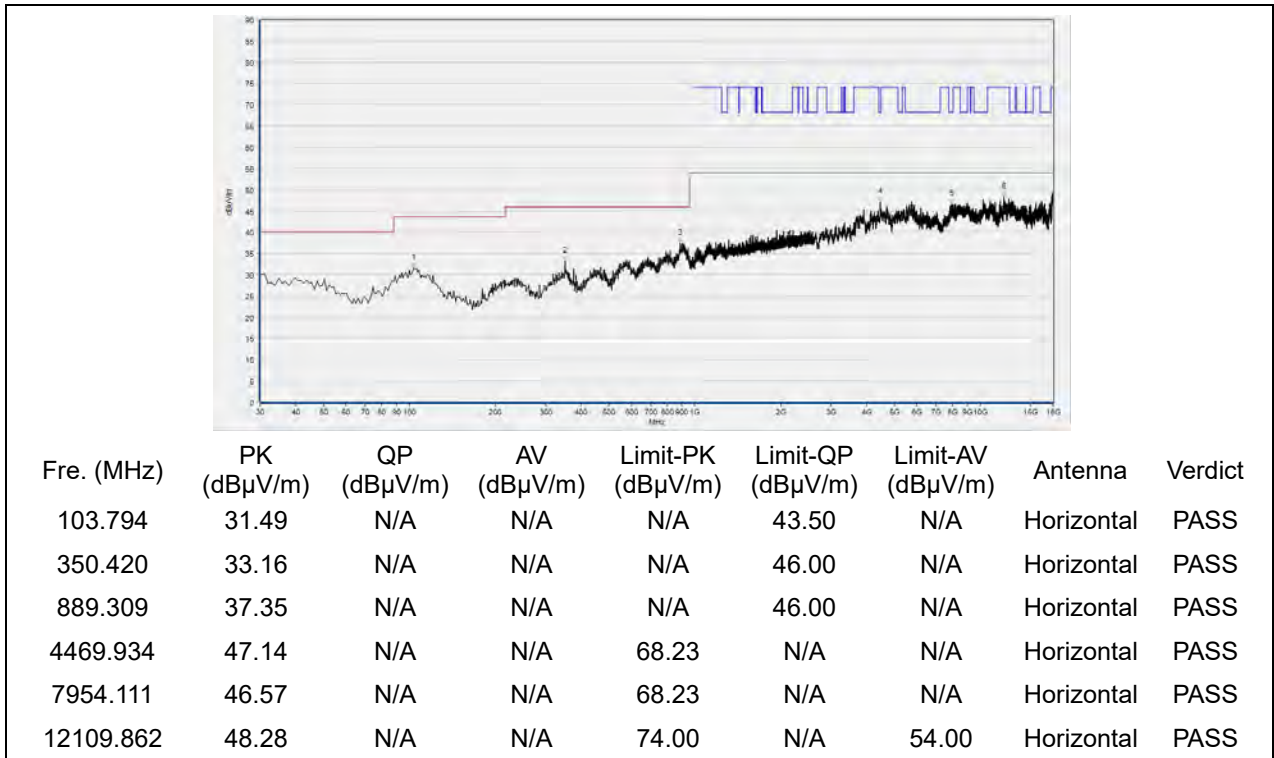


(Antenna Horizontal, 30MHz to 18GHz)

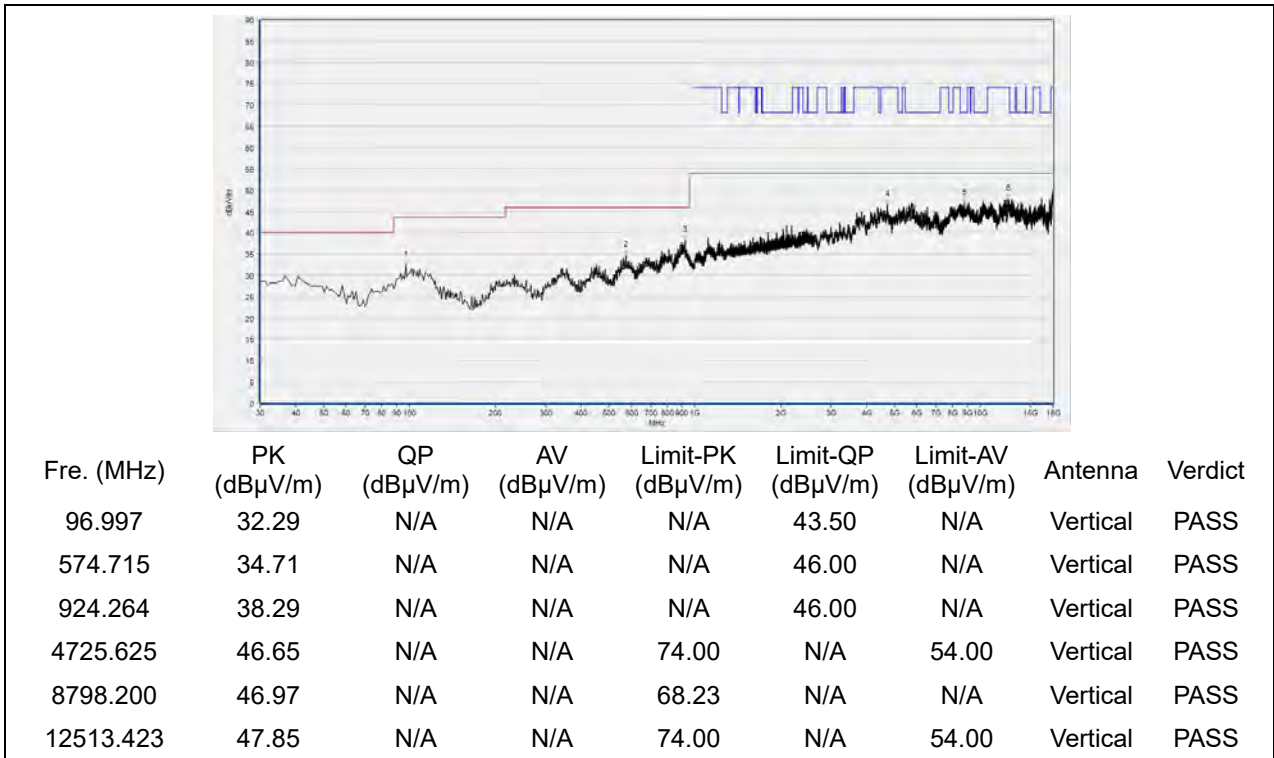


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 159



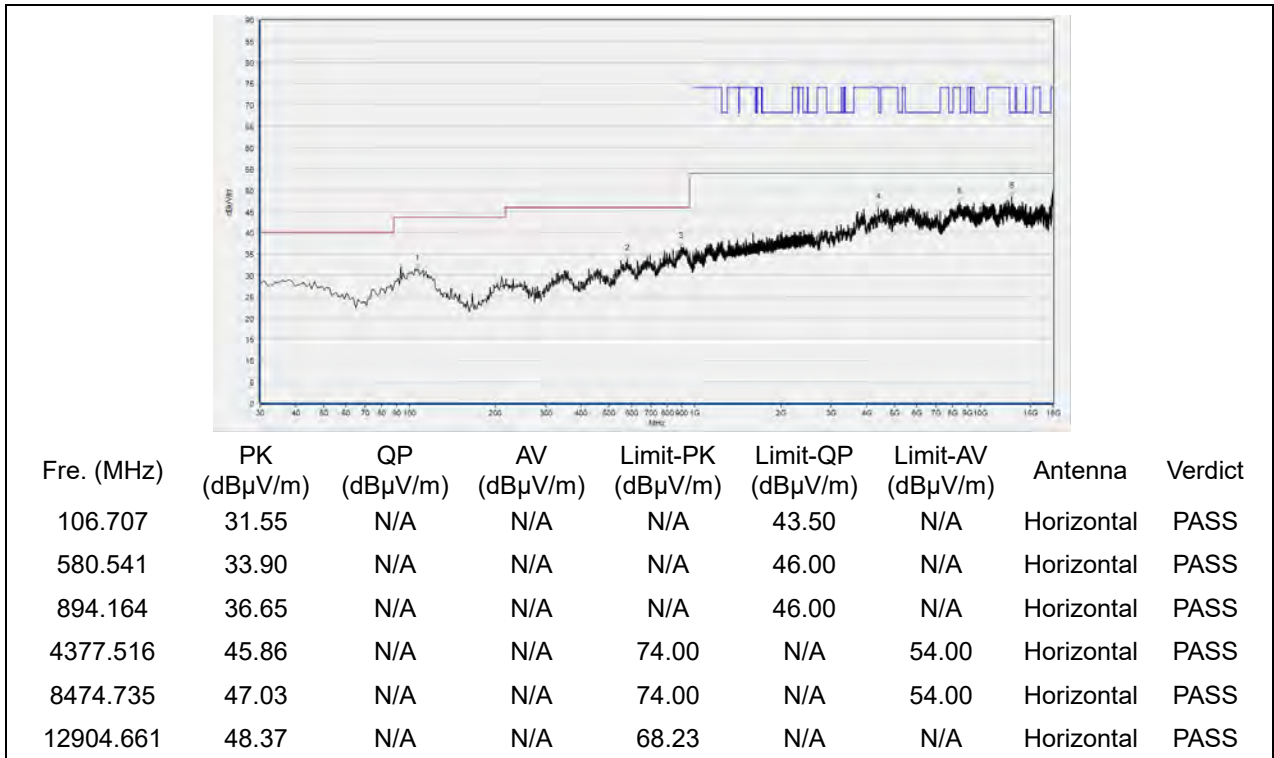
(Antenna Horizontal, 30MHz to 18GHz)



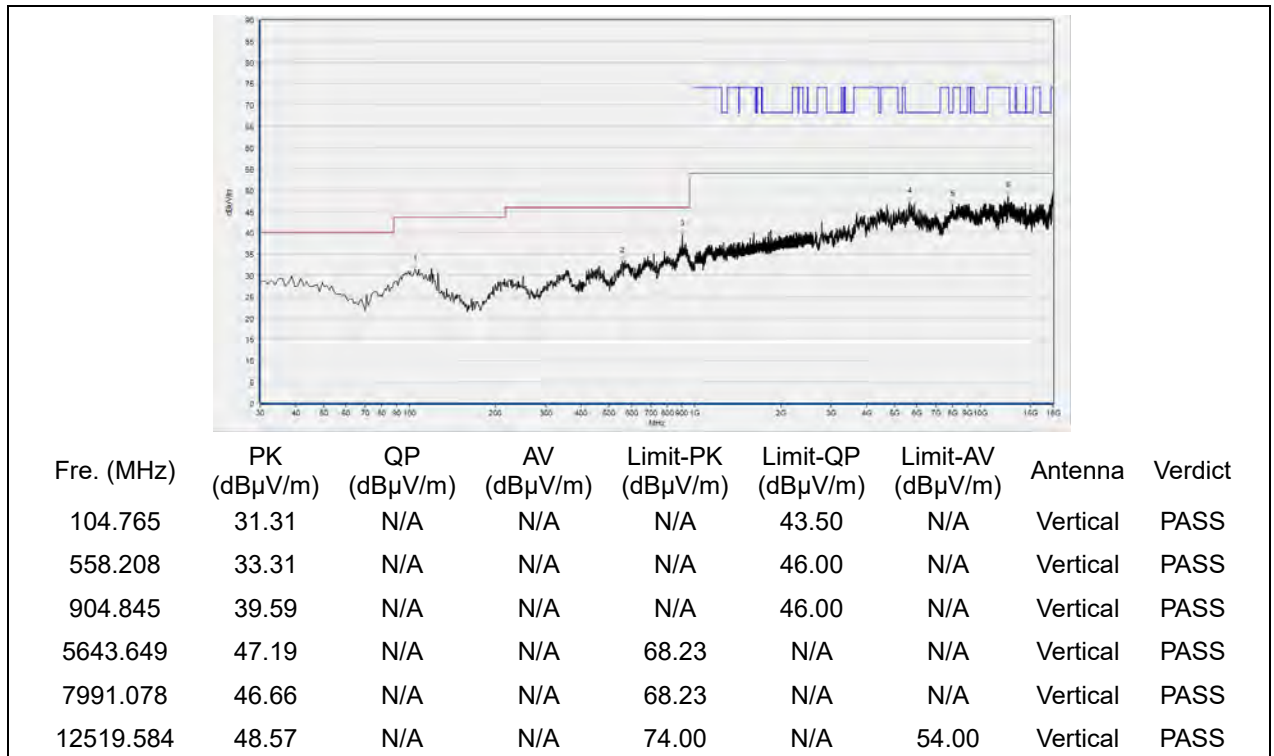
(Antenna Vertical, 30MHz to 18GHz)

802.11ac (VHT80) Mode

Plot for Channel 42

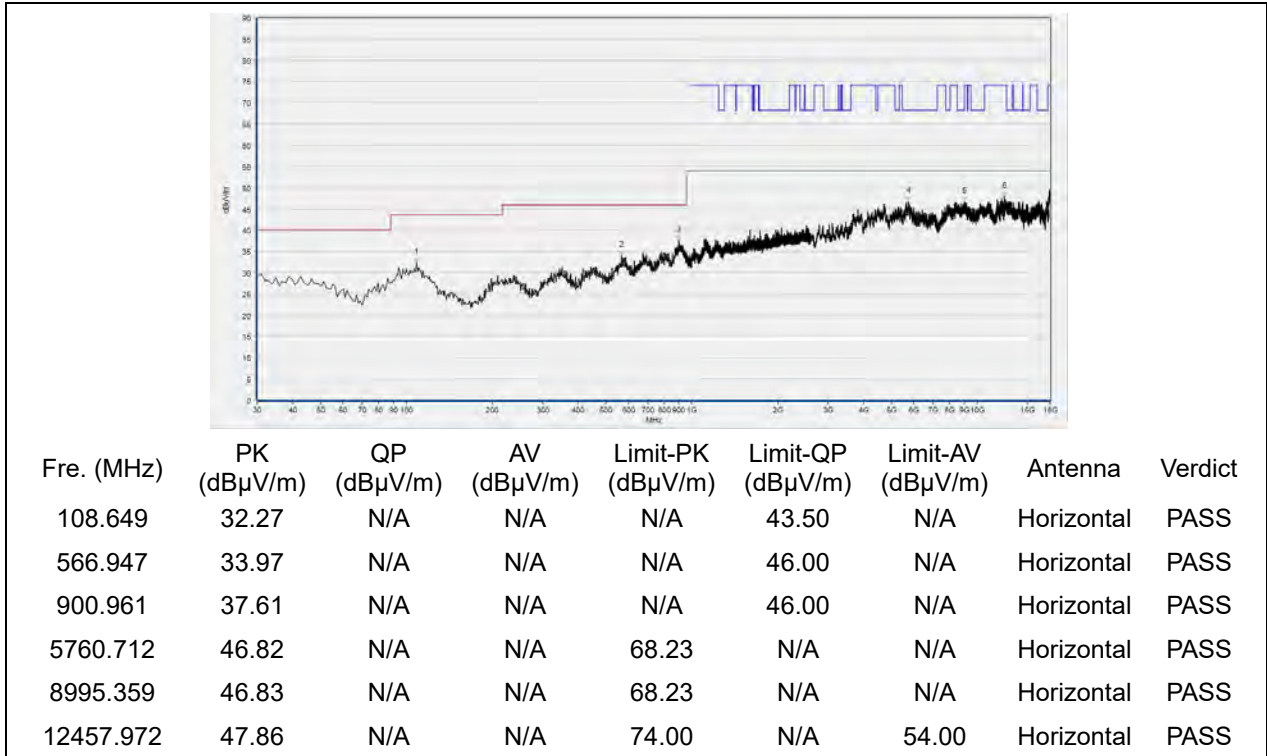


(Antenna Horizontal, 30MHz to 18GHz)

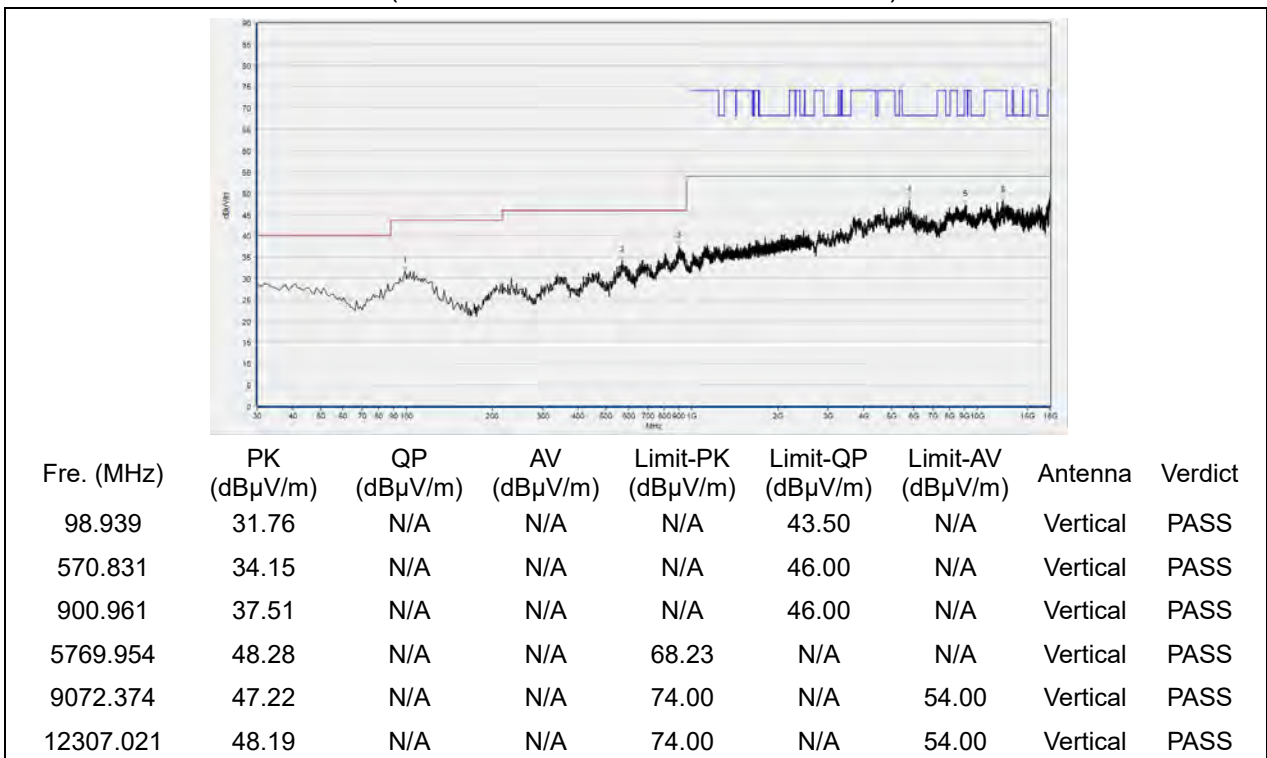


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 58

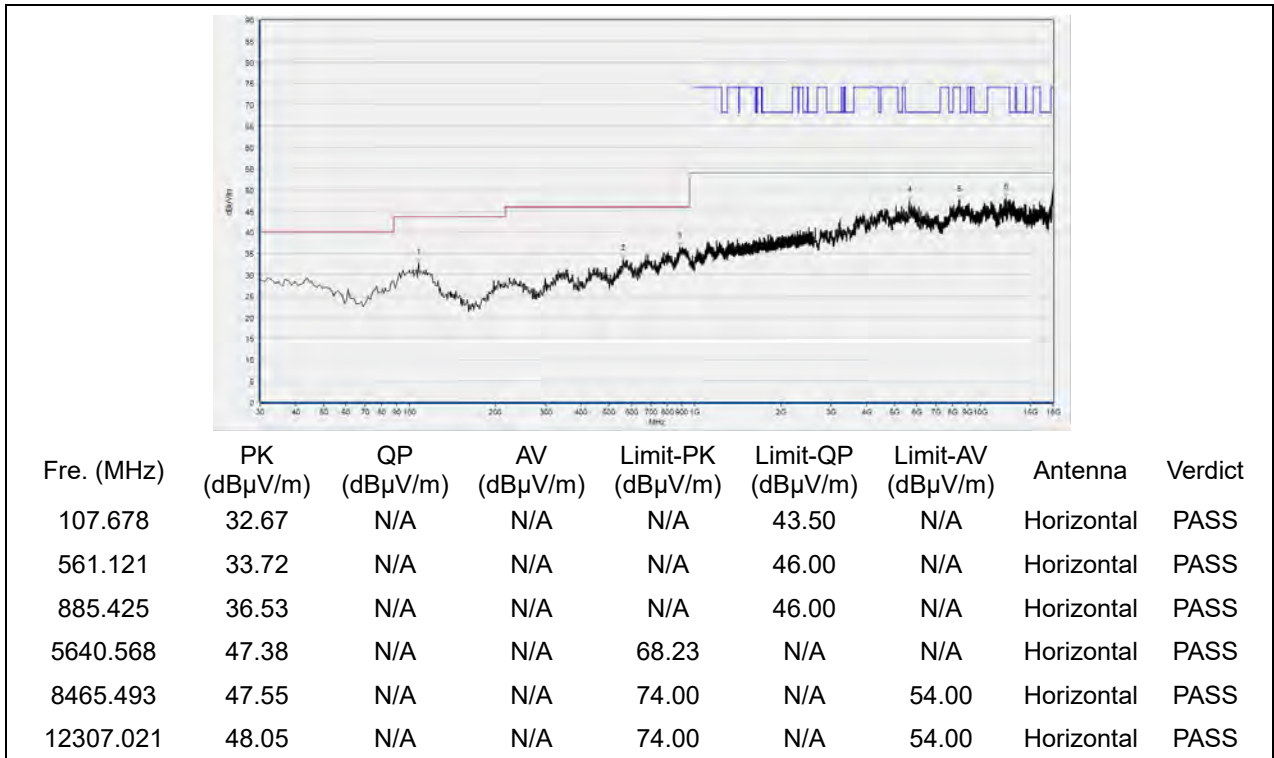


(Antenna Horizontal, 30MHz to 18GHz)

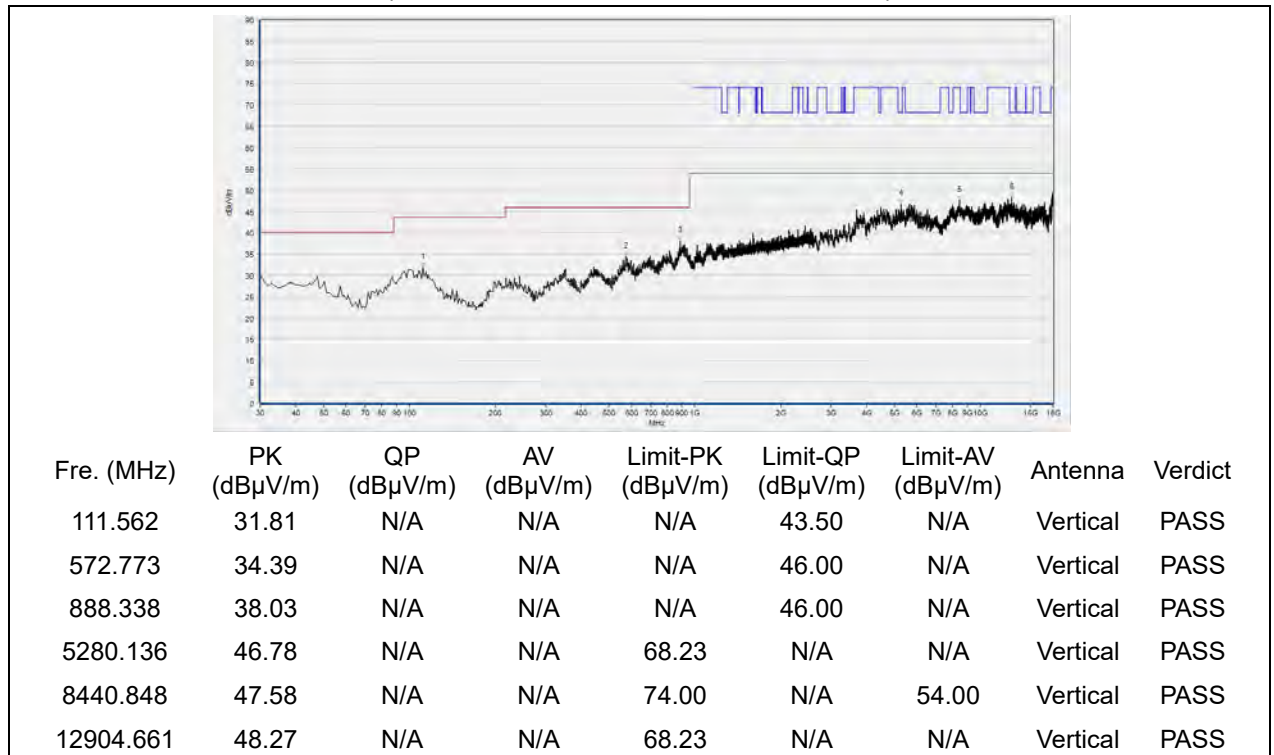


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 106

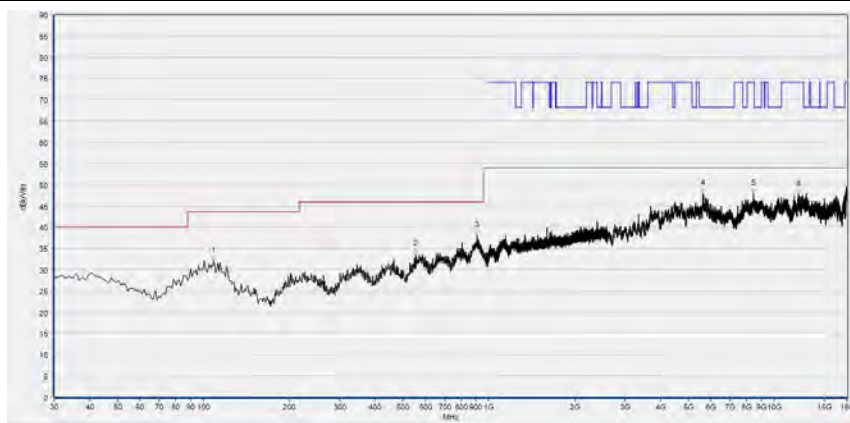


(Antenna Horizontal, 30MHz to 18GHz)



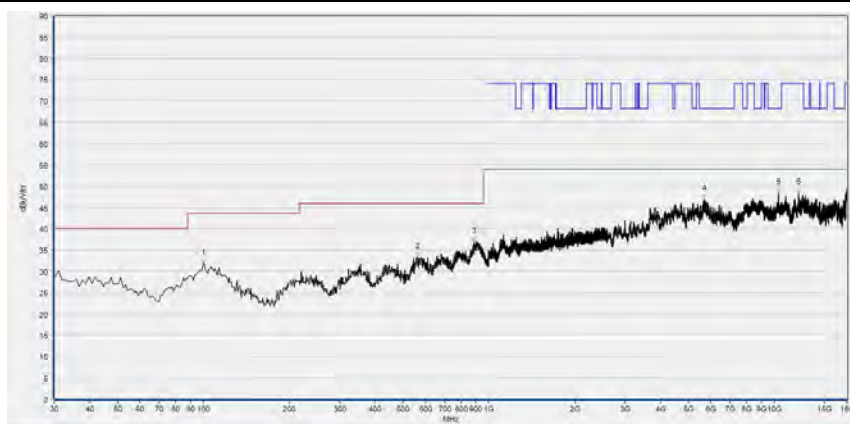
(Antenna Vertical, 30MHz to 18GHz)

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
108.649	32.08	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
554.324	33.47	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
908.729	38.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5628.246	47.87	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8440.848	47.88	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12140.668	47.78	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

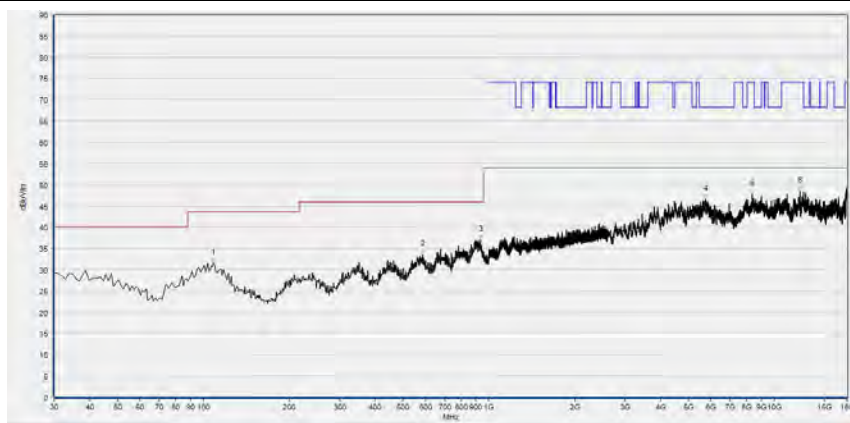
(Antenna Horizontal, 30MHz to 18GHz)



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
99.910	31.76	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
564.034	33.36	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
890.280	36.93	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5674.455	46.88	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
10329.266	48.46	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
12180.716	48.44	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

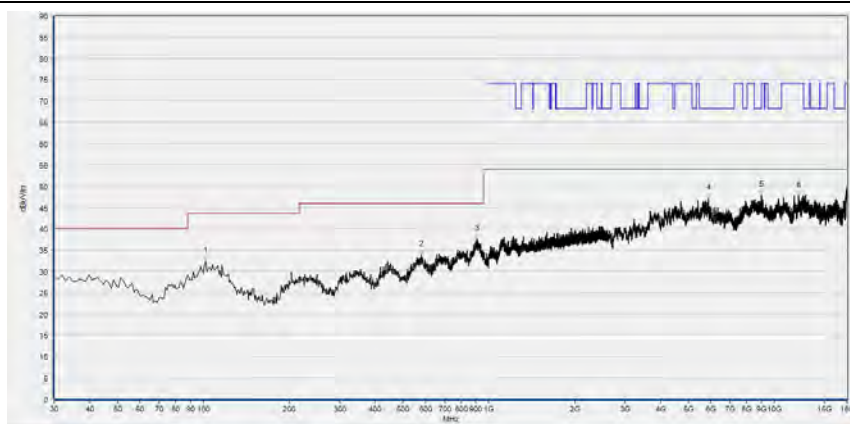
(Antenna Vertical, 30MHz to 18GHz)

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
108.649	31.45	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
585.395	33.54	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
933.974	37.05	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
5742.228	46.55	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8348.430	47.70	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12307.021	48.40	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

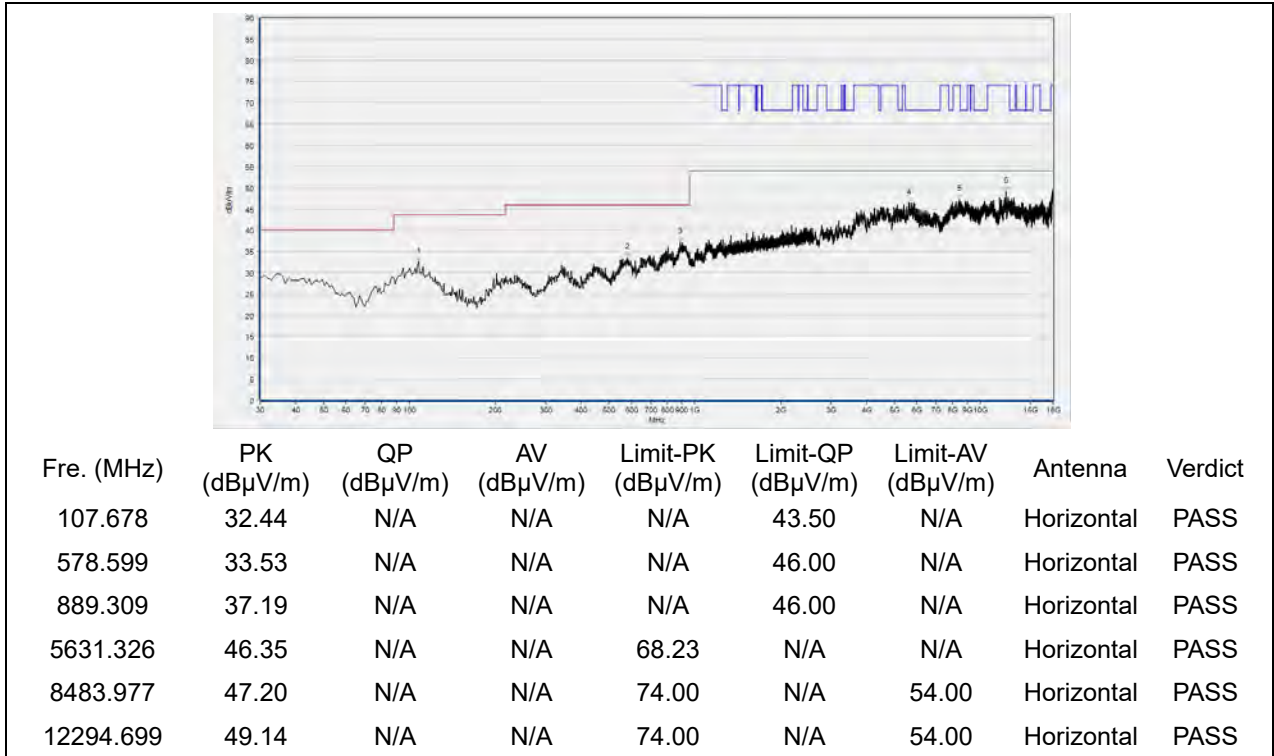
(Antenna Horizontal, 30MHz to 18GHz)



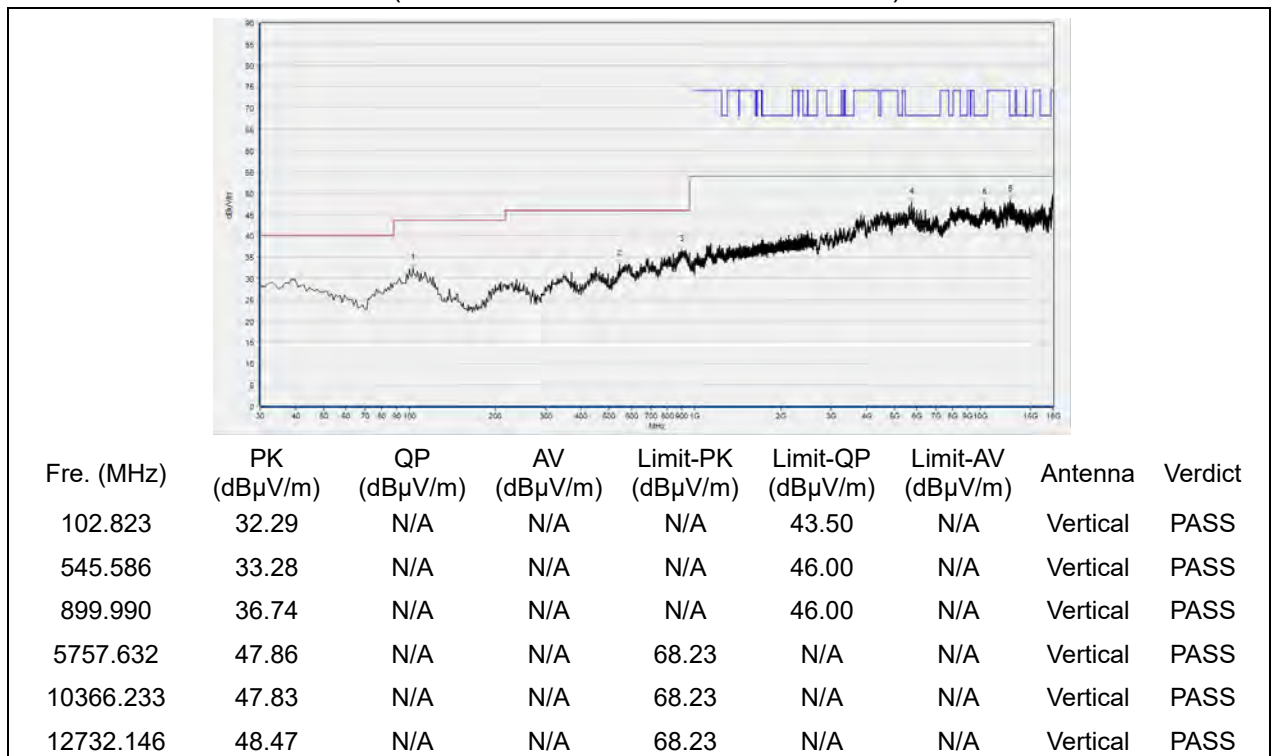
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
101.852	32.37	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
578.599	33.83	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
908.729	37.56	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
5871.614	47.15	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
9013.843	47.85	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12189.958	47.69	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 155



(Antenna Horizontal, 30MHz to 18GHz)



(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	$\pm 2.22\text{dB}$
Power Spectral Density	$\pm 2.22\text{dB}$
Bandwidth	$\pm 5\%$
Restricted Frequency Bands	$\pm 5\%$
Radiated Emission	$\pm 2.95\text{dB}$
Conducted Emission	$\pm 2.44\text{dB}$

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



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

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

2. Identification of the Responsible Testing Location

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

3. Facilities and Accreditations

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



4. Test Equipments Utilized

4.1 Conducted Test Equipments

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Attenuator 1	N/A	10dB	Resnet	N/A	N/A
EXA Signal Analyzer	MY53470836	N9010A	Agilent	2022.03.01	2023.02.28
USB Wideband Power Sensor	MY54180008	U2021XA	Agilent	2022.10.11	2023.10.10
Temperature Chamber	12108015	DTL-003S101	YOMA	2022.10.10	2023.10.09
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
Computer	T430i	Think Pad	Lenovo	N/A	N/A

4.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2022.03.03	2023.03.02
LISN	812744	NSLK 8127	Schwarzbeck	2022.03.03	2023.03.02
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2022.07.06	2023.07.05
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	V2.5.77.0418
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	2022.07.06	2023.07.05
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2022.05.25	2025.05.24
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2022.02.11	2025.02.10
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2022.07.13	2025.07.12
Test Antenna – Horn	BBHA9170#773	BBHA 9170	Schwarzbeck	2022.07.14	2025.07.13
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	S020180L3203	Tonscend	2022.07.08	2023.07.07
18-26.5GHz pre-Amplifier	46732	S10M100L3802	Tonscend	2022.07.08	2023.07.07
26-40GHz pre-Amplifier	56774	S40M400L4002	Tonscend	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG-5150-5350	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG-5470-5725	Wainwright	2022.07.08	2023.07.07
Notch Filter	N/A	WRCG-5725-5850	Wainwright	2022.07.08	2023.07.07



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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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