

Fig. 78 Conducted Spurious Emission (802.11n-HT20, Ch6, 15 GHz-20 GHz)

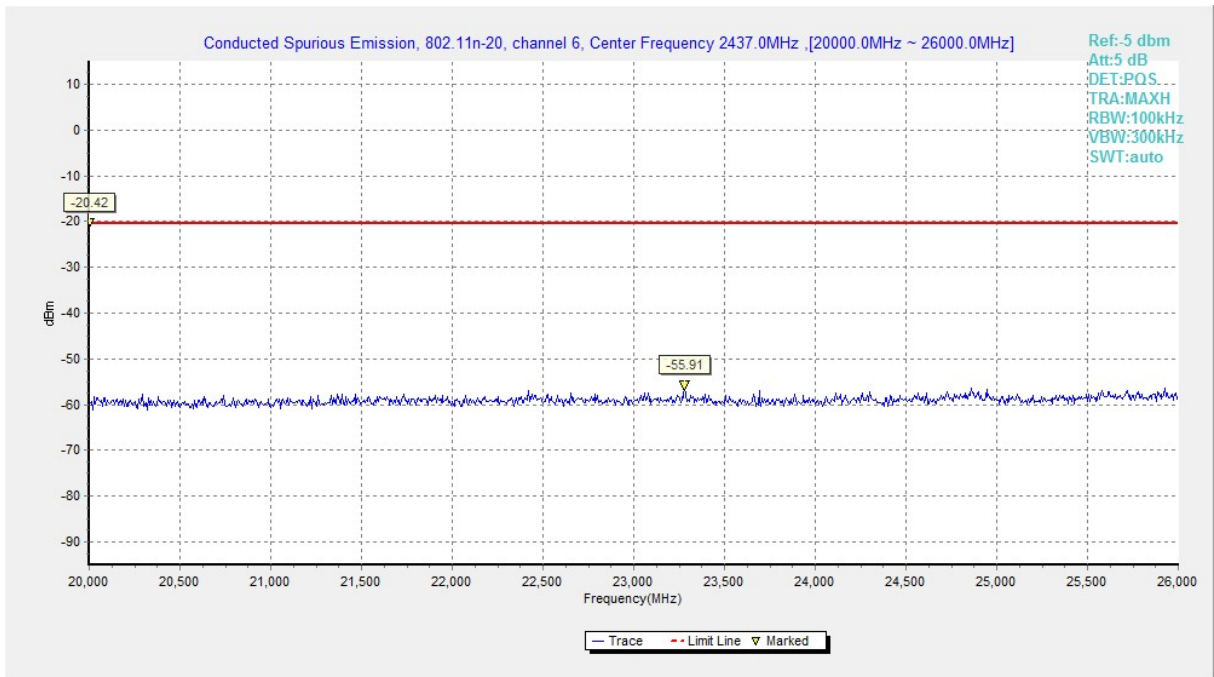


Fig. 79 Conducted Spurious Emission (802.11n-HT20, Ch6, 20 GHz-26 GHz)

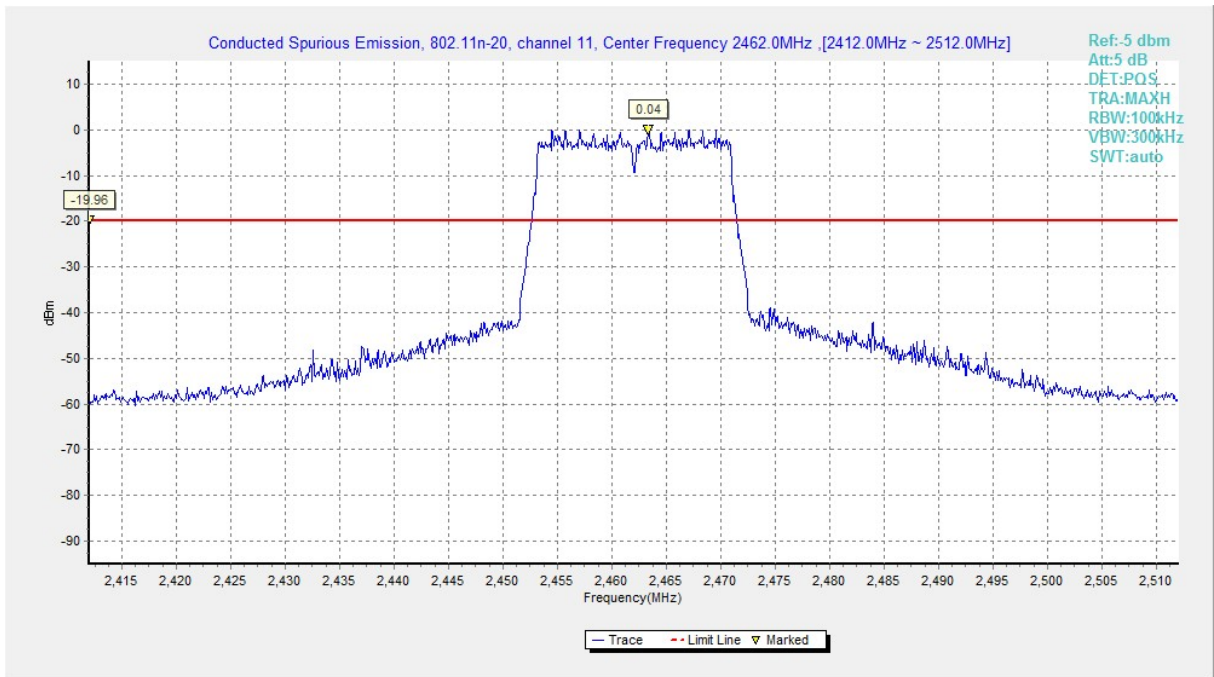


Fig. 80 Conducted Spurious Emission (802.11n-HT20, Ch11, Center Frequency)

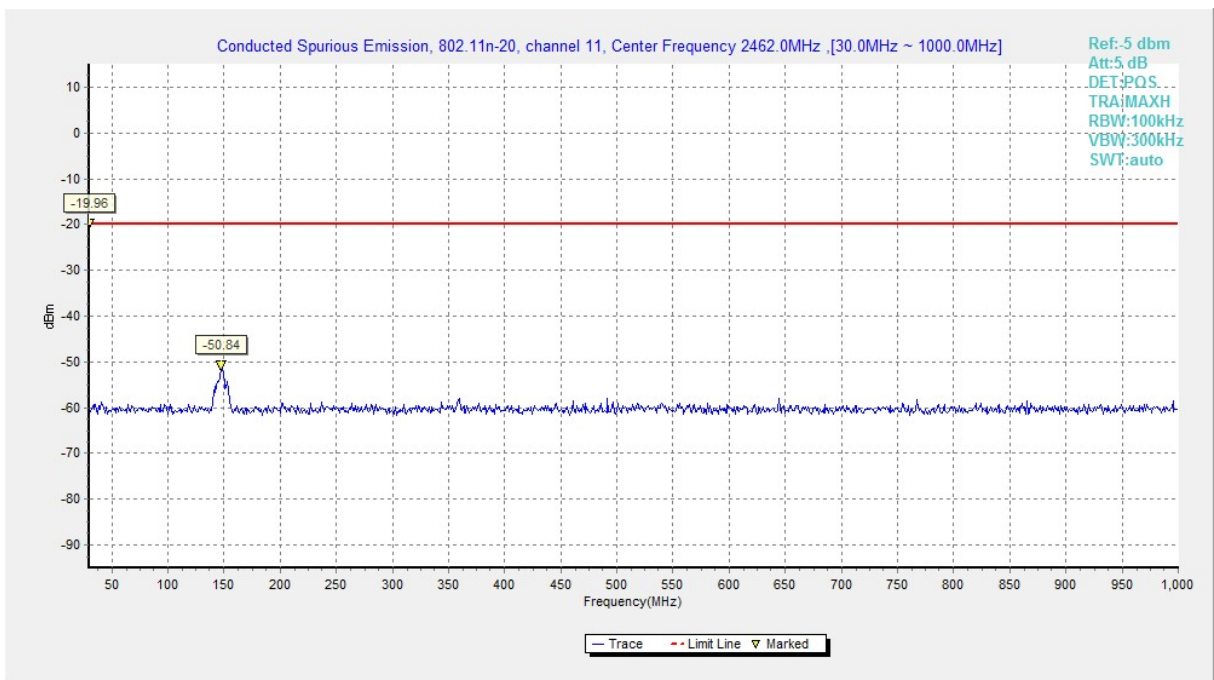


Fig. 81 Conducted Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)

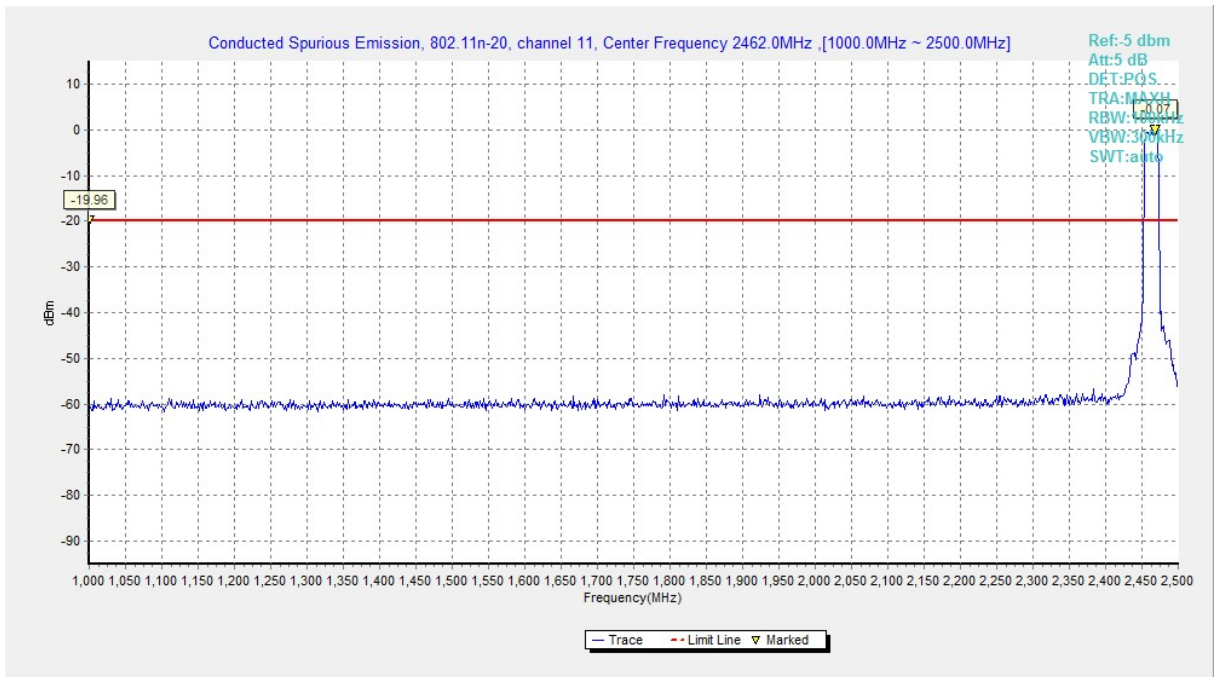


Fig. 82 Conducted Spurious Emission (802.11n-HT20, Ch11, 1 GHz-2.5 GHz)

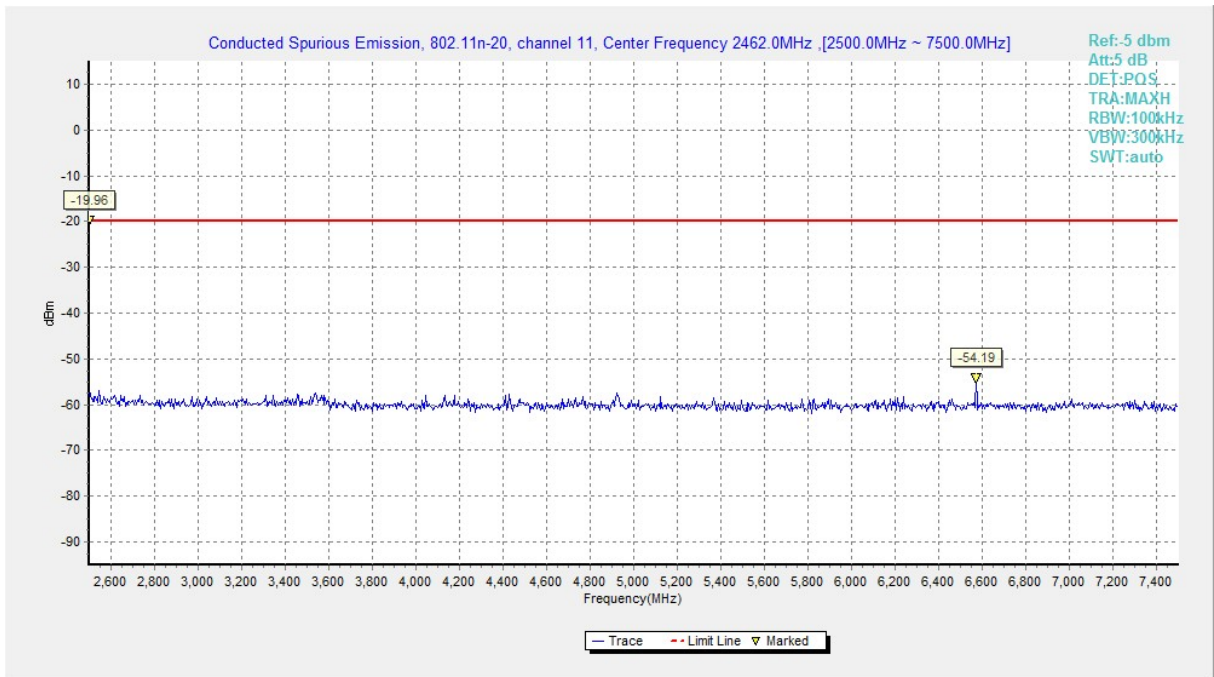


Fig. 83 Conducted Spurious Emission (802.11n-HT20, Ch11, 2.5 GHz-7.5 GHz)

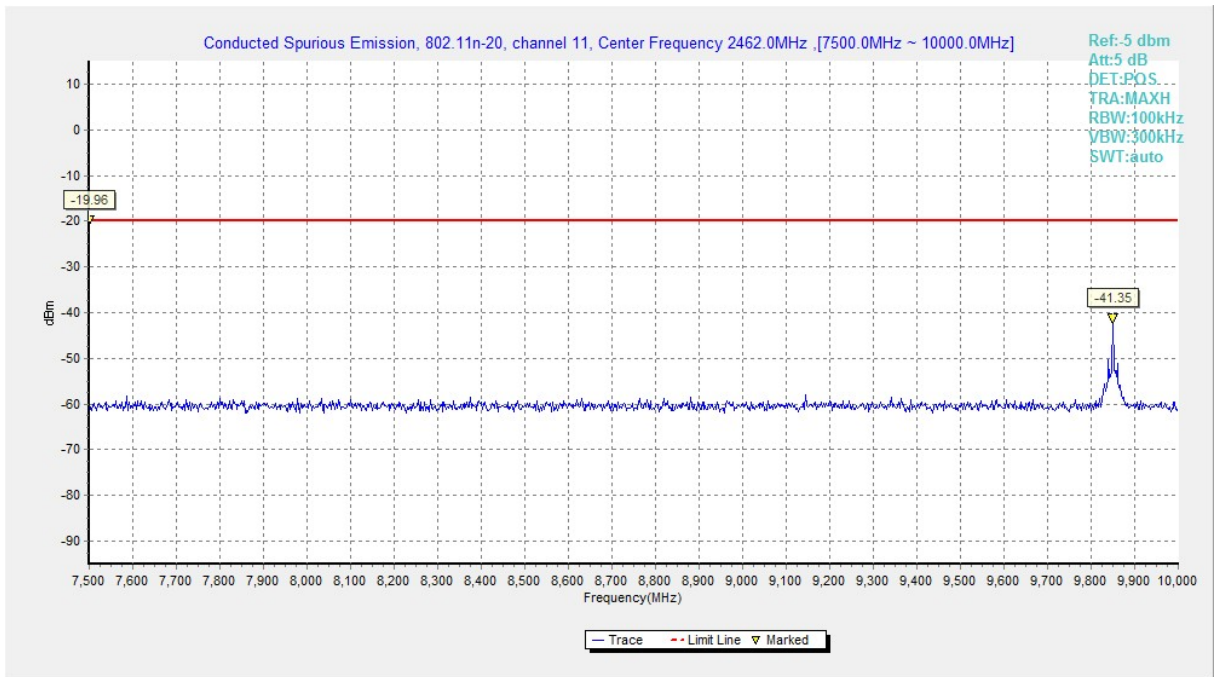


Fig. 84 Conducted Spurious Emission (802.11n-HT20, Ch11, 7.5 GHz-10 GHz)

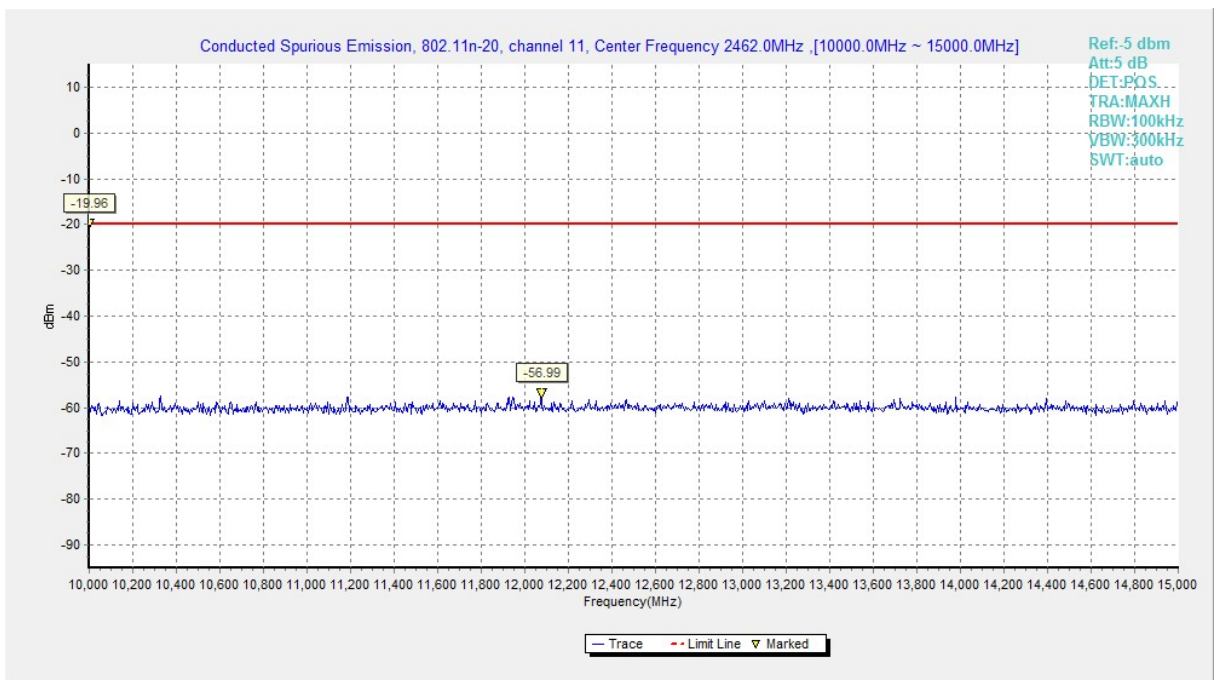


Fig. 85 Conducted Spurious Emission (802.11n-HT20, Ch11, 10 GHz-15 GHz)

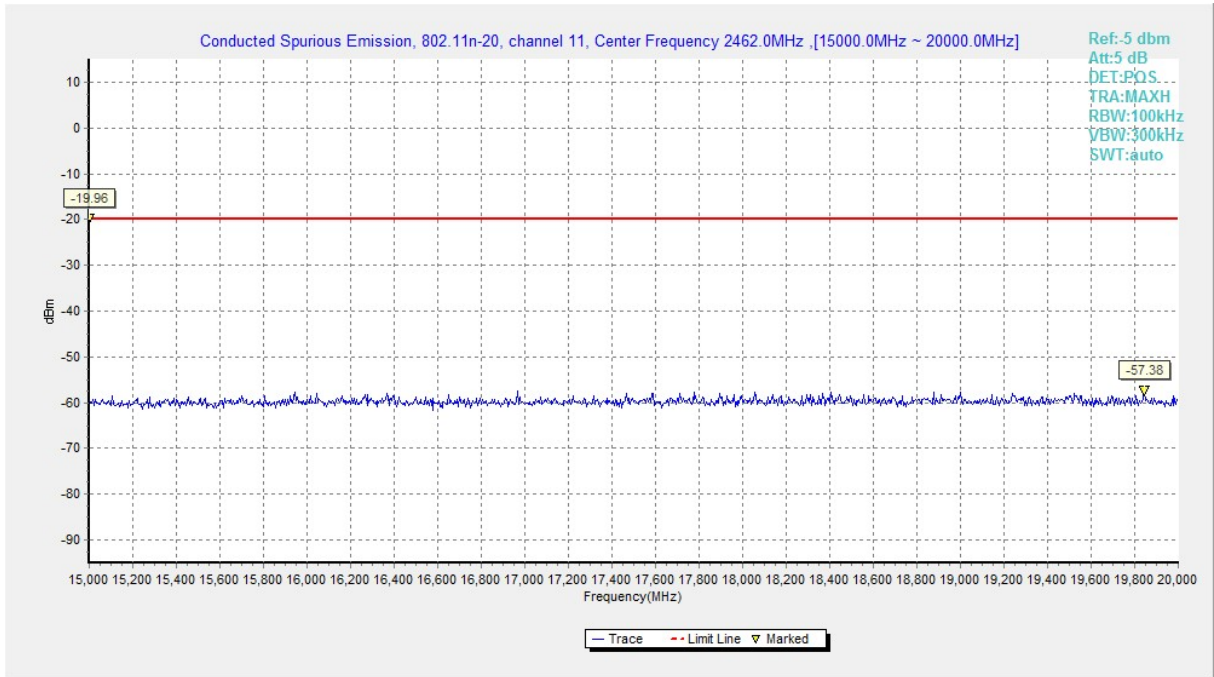


Fig. 86 Conducted Spurious Emission (802.11n-HT20, Ch11, 15 GHz-20 GHz)

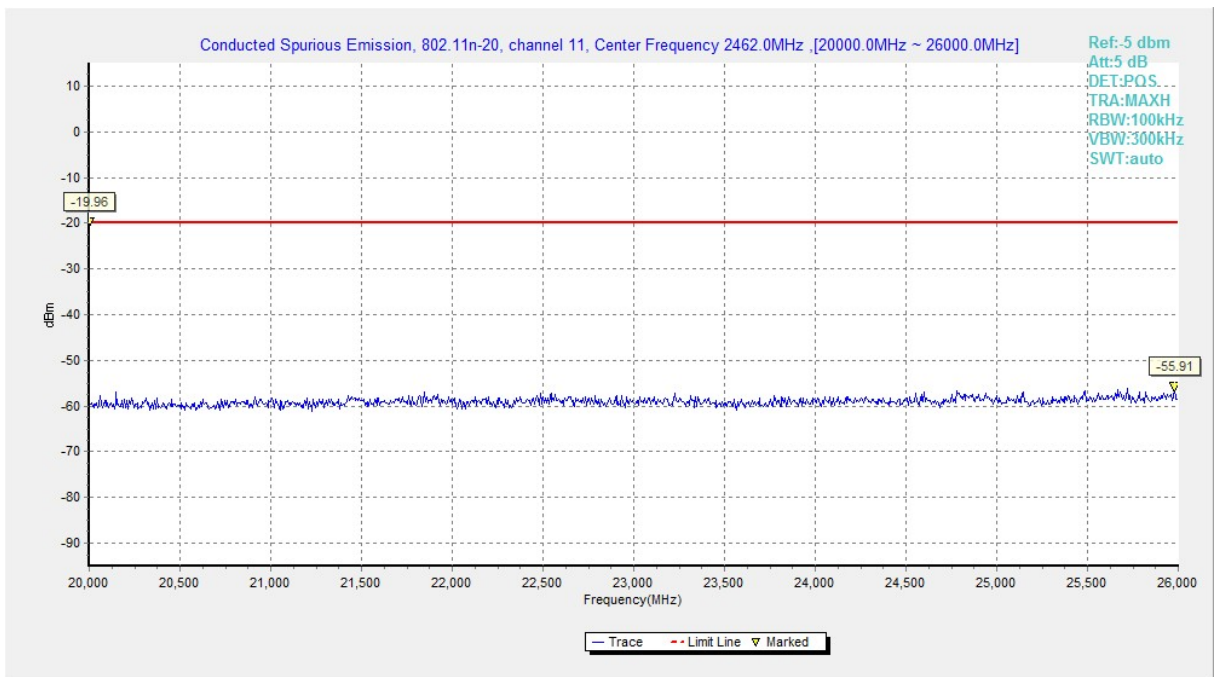


Fig. 87 Conducted Spurious Emission (802.11n-HT20, Ch11, 20 GHz-26 GHz)

A.6.2 Transmitter Spurious Emission - Radiated

Limit in restricted band:

Measurement Results:

Mode	Channel	Frequency Range	Test Results	Conclusion	
802.11b	Power	2.38GHz ~2.45GHz	Fig.88	P	
	1	9 kHz ~30 MHz	Fig.89	P	
		30 MHz ~1 GHz	Fig.90	P	
		1 GHz ~ 3 GHz	Fig.91	P	
		3 GHz ~ 18 GHz	Fig.92	P	
	6	9 kHz ~30 MHz	Fig.93	P	
		30 MHz ~1 GHz	Fig.94	P	
		1 GHz ~ 3 GHz	Fig.95	P	
		3 GHz ~ 18 GHz	Fig.96	P	
	Power	2.45GHz ~2.5GHz	Fig.97	P	
	11	9 kHz ~30 MHz	Fig.98	P	
		30 MHz ~1 GHz	Fig.99	P	
		1 GHz ~ 3 GHz	Fig.100	P	
		3 GHz ~ 18 GHz	Fig.101	P	
	802.11g	Power	2.38GHz ~2.45GHz	Fig.102	P
		1	9 kHz ~30 MHz	Fig.103	P
30 MHz ~1 GHz			Fig.104	P	
1 GHz ~ 3 GHz			Fig.105	P	
3 GHz ~ 18 GHz			Fig.106	P	
6		9 kHz ~30 MHz	Fig.107	P	
		30 MHz ~1 GHz	Fig.108	P	
		1 GHz ~ 3 GHz	Fig.109	P	
		3 GHz ~ 18 GHz	Fig.110	P	
Power		2.45GHz~2.5GHz	Fig.111	P	
		9 kHz ~30 MHz	Fig.112	P	
11		30 MHz ~1 GHz	Fig.113	P	
		1 GHz ~ 3 GHz	Fig.114	P	
	3 GHz ~ 18 GHz	Fig.115	P		
802.11n- HT20	Power	2.38GHz ~2.45GHz	Fig.116	P	
	1	9 kHz ~30 MHz	Fig.117	P	
		30 MHz ~1 GHz	Fig.118	P	
		1 GHz ~ 3 GHz	Fig.119	P	
		3 GHz ~ 18 GHz	Fig.120	P	
	6	9 kHz ~30 MHz	Fig.121	P	
		30 MHz ~1 GHz	Fig.122	P	
		1 GHz ~ 3 GHz	Fig.123	P	
		3 GHz ~ 18 GHz	Fig.124	P	
	Power	2.45GHz~2.5GHz	Fig.125	P	

	11	9 kHz ~30 MHz	Fig.126	P
		30 MHz ~1 GHz	Fig.127	P
		1 GHz ~ 3 GHz	Fig.128	P
		3 GHz ~ 18 GHz	Fig.129	P
/	All channels	18 GHz~ 26.5 GHz	Fig.130	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

These recorded emissions around 21GHz are highest noise floor levels since no higher spurious emission is detected.

802.11b

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
19281.375	45.9	-44.7	45.1	45.482	HORIZONTAL
18239.594	46.0	-44.2	44.5	45.658	HORIZONTAL
21403.719	46.2	-44.4	45.7	44.942	VERTICAL
21180.063	46.3	-44.5	45.7	45.122	VERTICAL
20771.000	46.5	-44.3	45.4	45.372	VERTICAL
18840.969	46.6	-43.5	44.9	45.195	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
18185.938	46.0	-44.0	44.5	45.493	VERTICAL
18415.438	45.8	-44.6	44.5	45.912	HORIZONTAL
19411.000	45.7	-43.7	45.1	44.254	VERTICAL
19180.969	45.6	-45.1	45.1	45.618	VERTICAL
21408.500	45.6	-44.4	45.7	44.342	HORIZONTAL
18389.406	45.6	-43.7	44.5	44.824	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18837.250	48.1	-43.5	44.9	46.695	HORIZONTAL
19300.500	46.5	-43.4	45.1	44.792	HORIZONTAL
18250.219	46.1	-43.0	44.5	44.566	VERTICAL
18829.281	45.9	-43.5	44.9	44.495	VERTICAL
19294.125	45.8	-44.7	45.1	45.382	VERTICAL
18736.313	45.7	-43.8	44.9	44.554	VERTICAL

802.11g

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18736.313	46.1	-43.8	44.9	44.954	VERTICAL
19284.563	45.9	-44.7	45.1	45.482	HORIZONTAL
19390.281	45.9	-44.2	45.1	45.029	HORIZONTAL
21521.125	45.9	-44.9	46.0	44.812	HORIZONTAL
20059.656	45.8	-44.9	45.5	45.226	VERTICAL
18855.313	45.8	-43.4	44.9	44.342	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
19256.938	46.9	-44.7	45.1	46.482	HORIZONTAL
18252.344	46.8	-43.0	44.5	45.266	HORIZONTAL
18244.906	46.7	-44.2	44.5	46.358	VERTICAL
18827.156	46.3	-43.5	44.9	44.895	HORIZONTAL
17926.875	46.2	-17.7	45.6	18.300	VERTICAL
18771.375	46.1	-43.4	44.9	44.629	HORIZONTAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
20415.063	46.9	-45.0	45.5	46.396	VERTICAL
19292.000	46.8	-44.7	45.1	46.382	HORIZONTAL
18325.125	46.3	-44.1	44.5	45.880	VERTICAL
21999.781	46.3	-44.2	46.0	44.502	HORIZONTAL
19293.594	46.2	-44.7	45.1	45.782	VERTICAL
18244.375	46.2	-44.2	44.5	45.858	HORIZONTAL

802.11n-HT20

Ch1

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
18253.406	46.6	-43.0	44.5	45.066	VERTICAL
24898.813	46.1	-43.8	45.8	44.116	HORIZONTAL
25957.063	46.0	-43.7	46.0	43.708	VERTICAL
18839.906	45.8	-43.5	44.9	44.395	VERTICAL
19265.438	45.6	-44.7	45.1	45.182	VERTICAL
17777.813	45.5	-18.5	45.6	18.400	HORIZONTAL

Ch6

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
19893.906	46.4	-44.5	45.4	45.527	VERTICAL
17920.313	46.1	-17.7	45.6	18.200	HORIZONTAL
19289.875	46.1	-44.7	45.1	45.682	HORIZONTAL
17729.063	45.9	-18.9	45.6	19.200	HORIZONTAL
21717.688	45.7	-44.5	46.0	44.183	VERTICAL
19233.031	45.7	-44.1	45.1	44.689	VERTICAL

Ch11

Frequency(MHz)	Result (dBuV/m)	Cable Loss(dB)	Antenna Factor	P _{Mea} (dBuV/m)	Polarization
19347.250	47.2	-43.4	45.1	45.492	VERTICAL
19845.563	46.8	-43.7	45.4	45.121	HORIZONTAL
18865.406	46.8	-43.4	44.9	45.342	HORIZONTAL
19308.469	46.3	-43.4	45.1	44.592	HORIZONTAL
19252.156	45.7	-44.7	45.1	45.282	HORIZONTAL
18834.063	45.7	-43.5	44.9	44.295	HORIZONTAL

Test graphs as below:

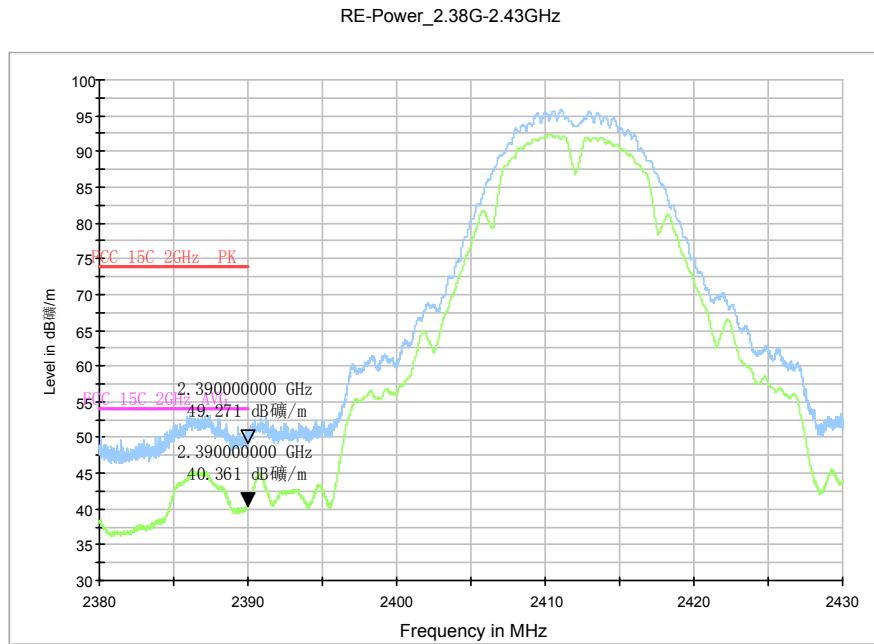


Fig. 88 Radiated Spurious Emission (Power): 802.11b, ch1, 2.38 GHz - 2.45GHz

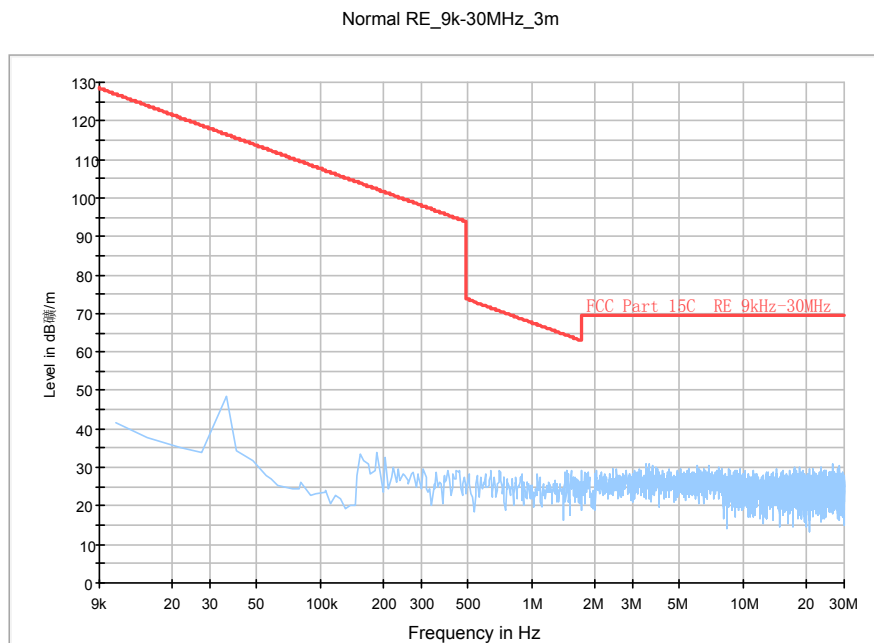


Fig. 89 Radiated Spurious Emission (802.11b, Ch1, 9 kHz ~30 MHz)

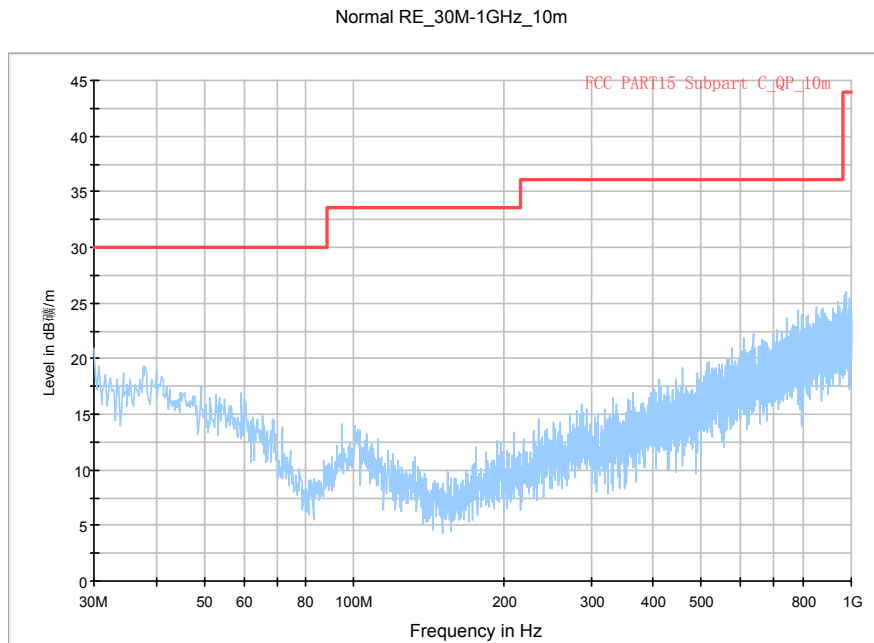


Fig. 90 Radiated Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)

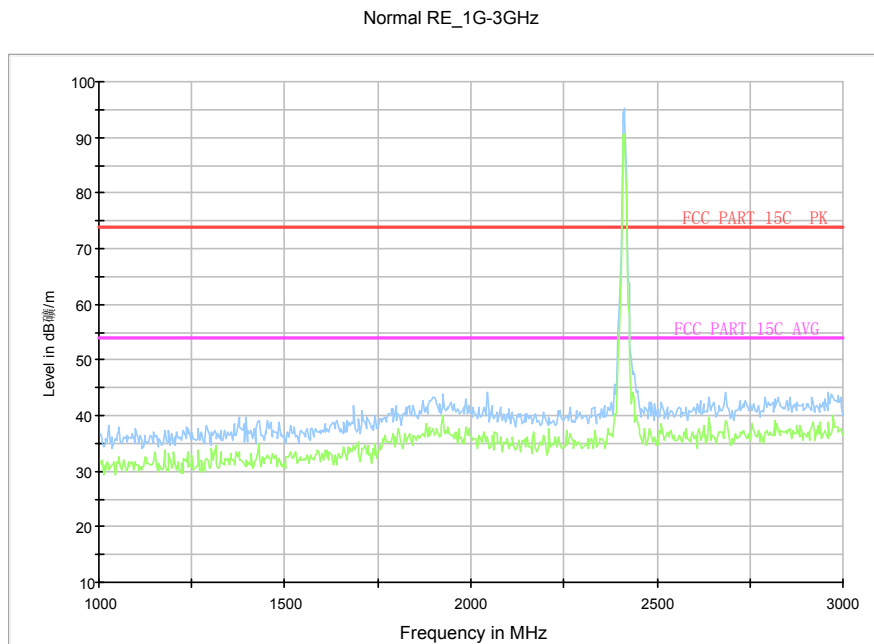


Fig. 91 Radiated Spurious Emission (802.11b, Ch1, 1 GHz-3 GHz)

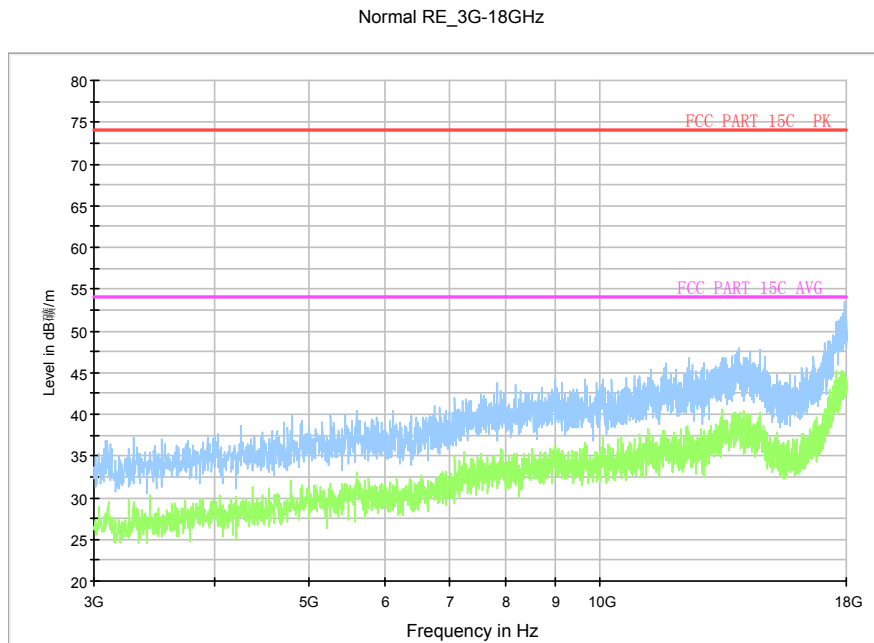


Fig. 92 Radiated Spurious Emission (802.11b, Ch1, 3 GHz-18 GHz)

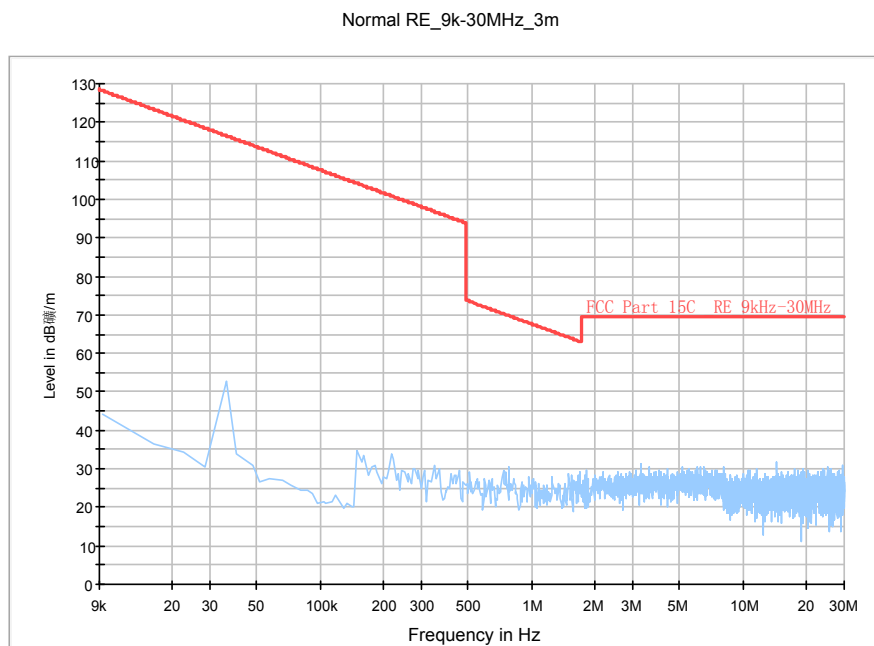


Fig. 93 Radiated Spurious Emission (802.11b, Ch6, 9 kHz ~30 MHz)

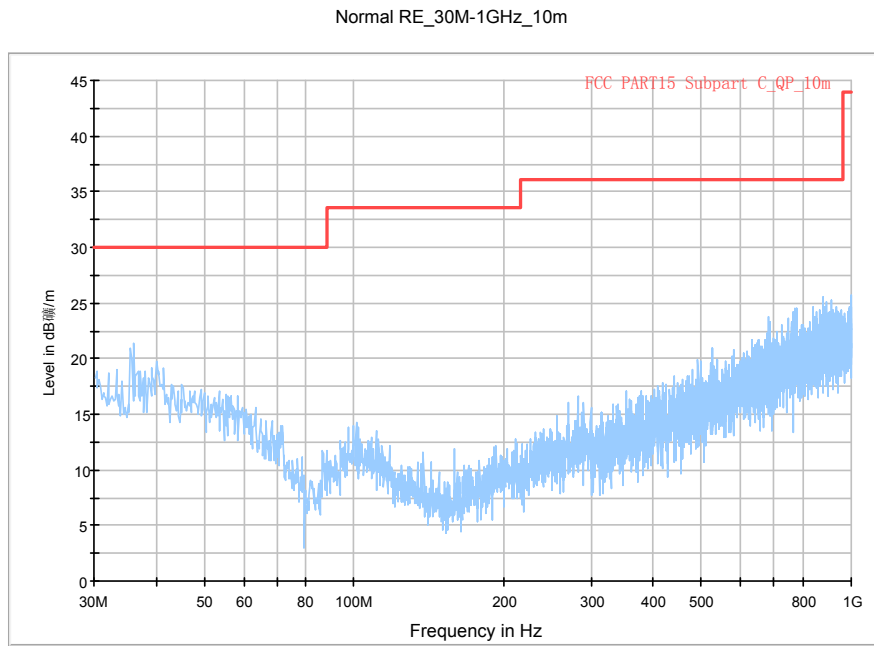


Fig. 94 Radiated Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)

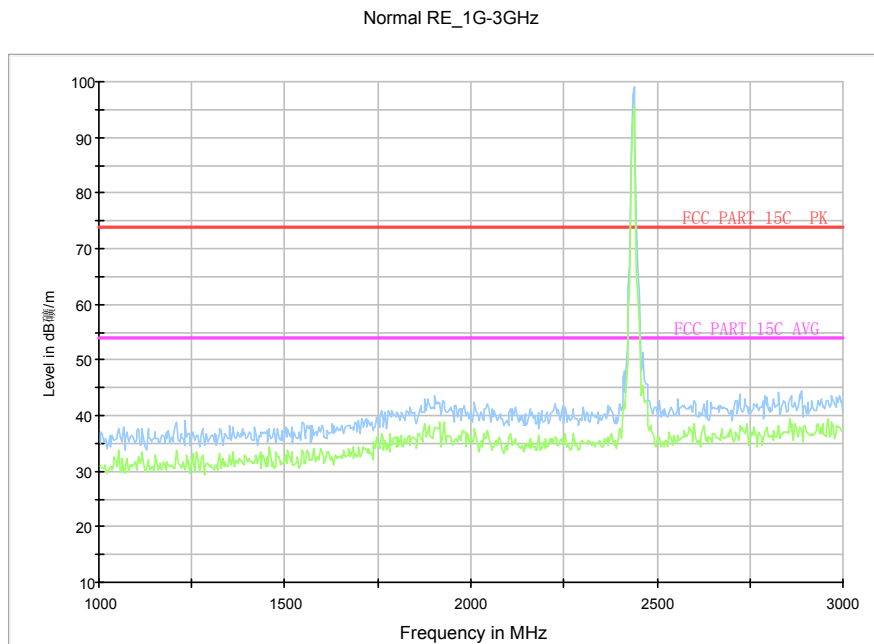


Fig. 95 Radiated Spurious Emission (802.11b, Ch6, 1 GHz-3 GHz)

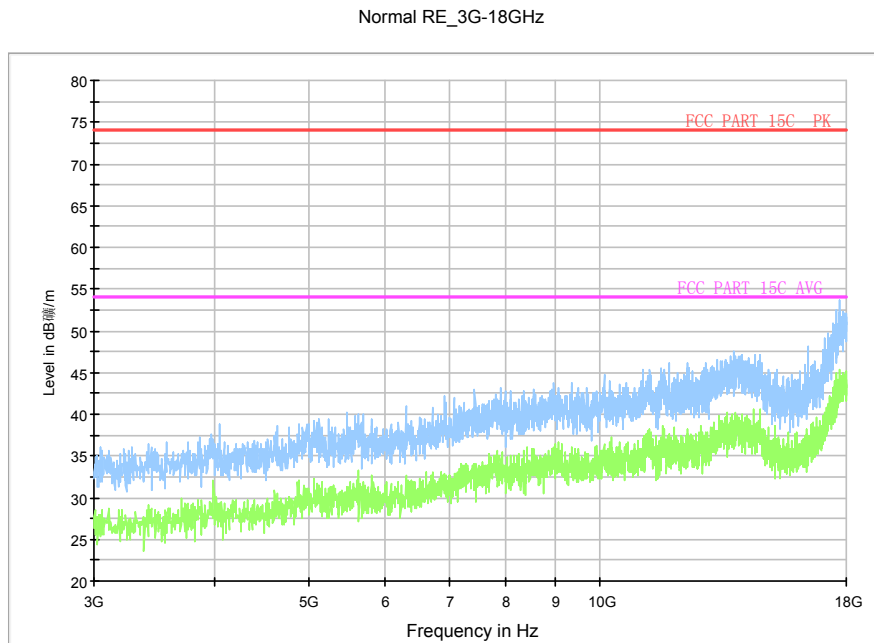


Fig. 96 Radiated Spurious Emission (802.11b, Ch6, 3 GHz-18 GHz)

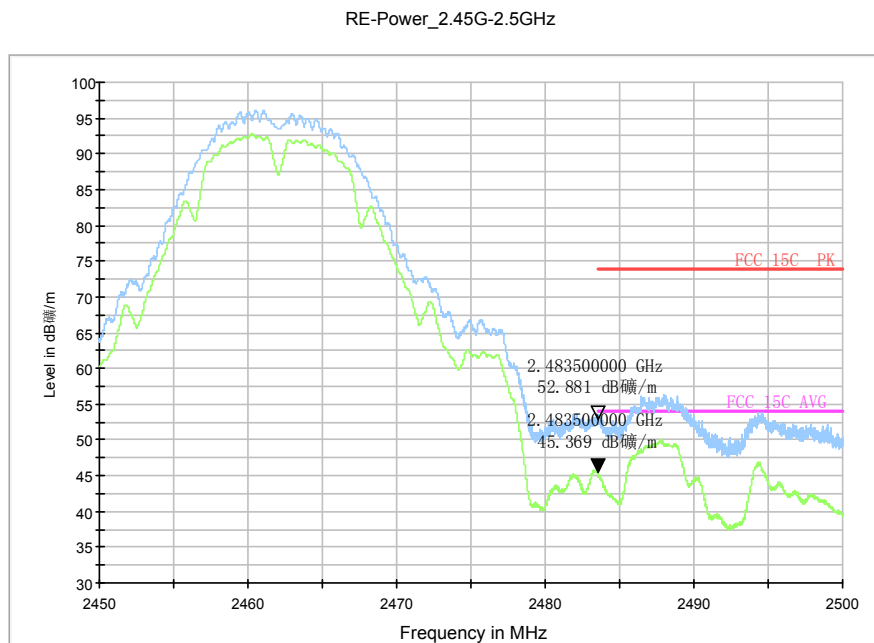


Fig. 97 Radiated Spurious Emission (Power): 802.11b, ch11, 2.45 GHz - 2.5GHz

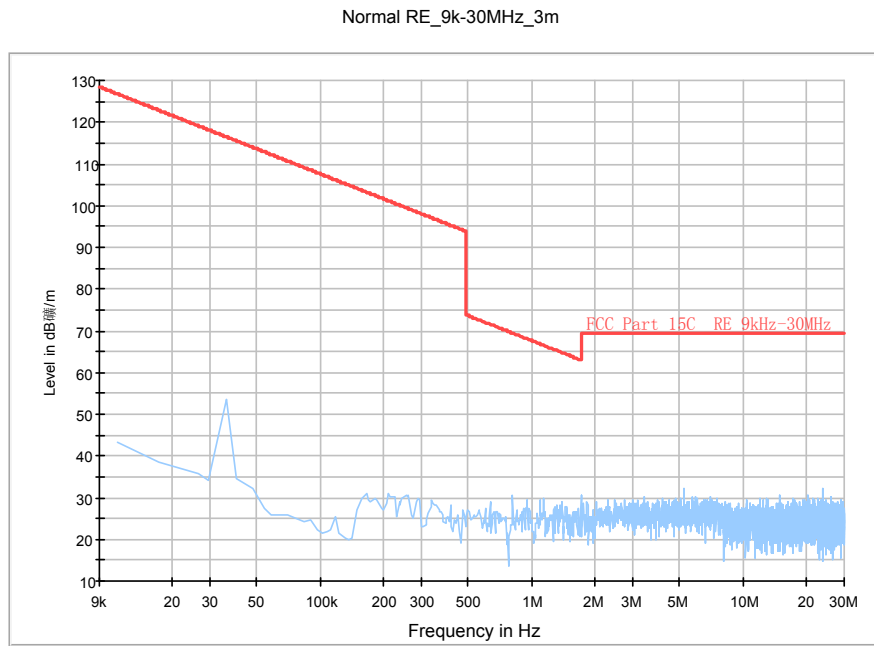


Fig. 98 Radiated Spurious Emission (802.11b, Ch11, 9 kHz ~30 MHz)

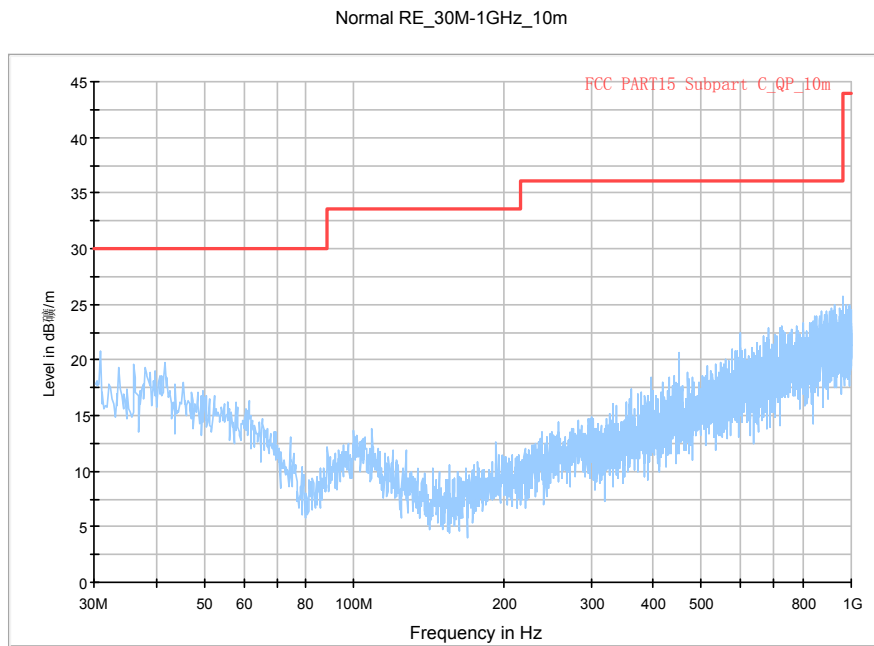


Fig. 99 Radiated Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)

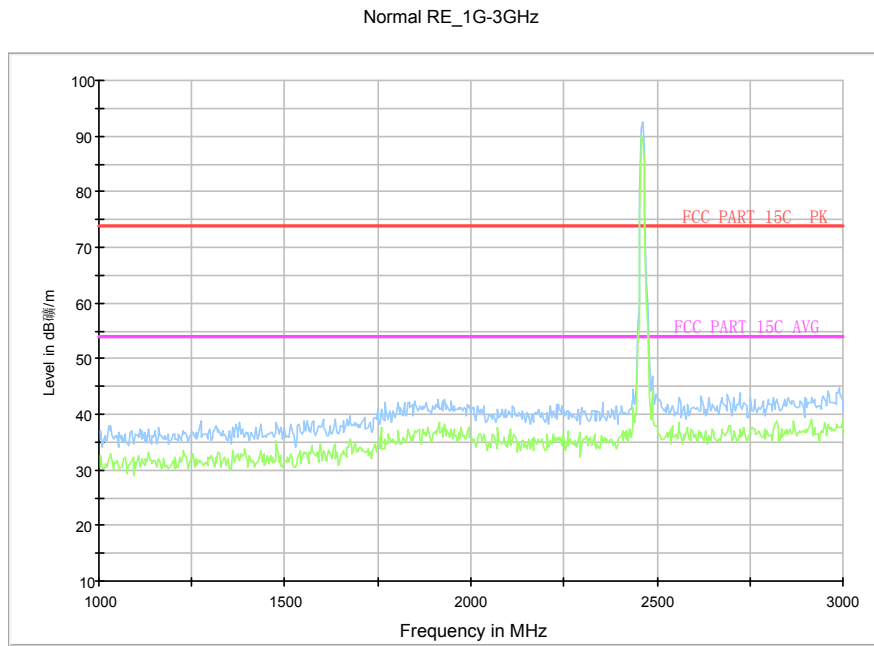


Fig. 100 Radiated Spurious Emission (802.11b, Ch11, 1 GHz-3 GHz)

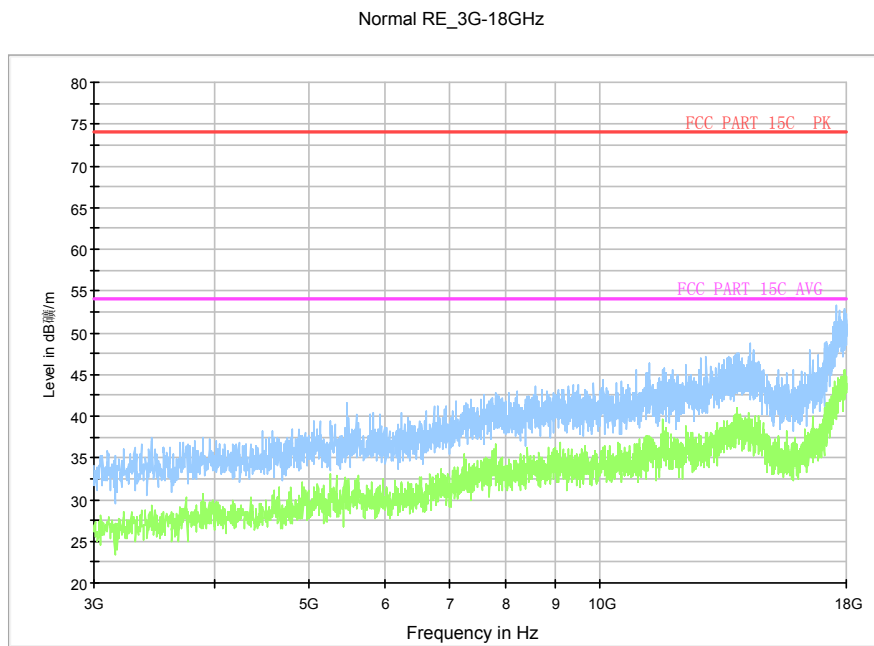


Fig. 101 Radiated Spurious Emission (802.11b, Ch11, 3 GHz-18 GHz)

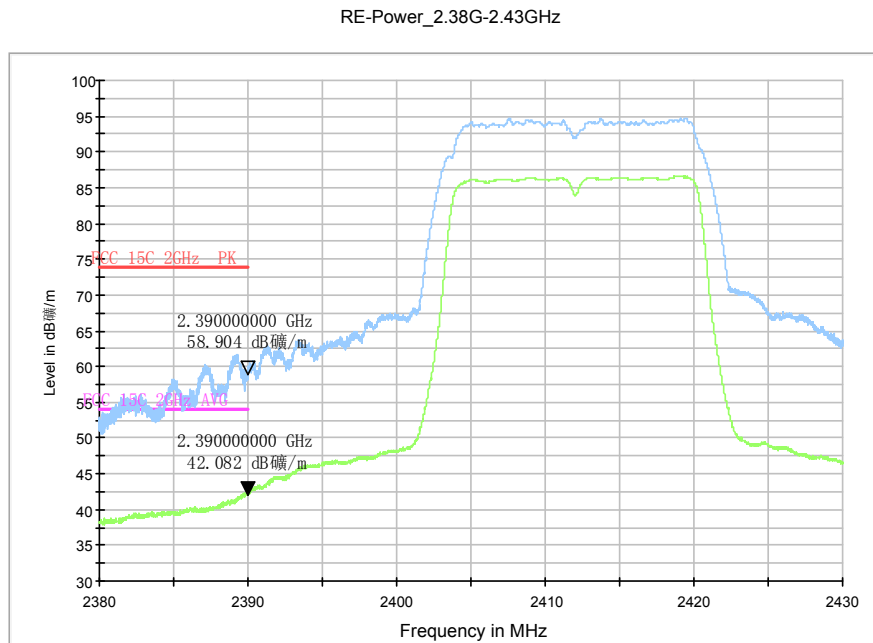


Fig. 102 Radiated Spurious Emission (Power): 802.11g, ch1, 2.38 GHz - 2.45GHz

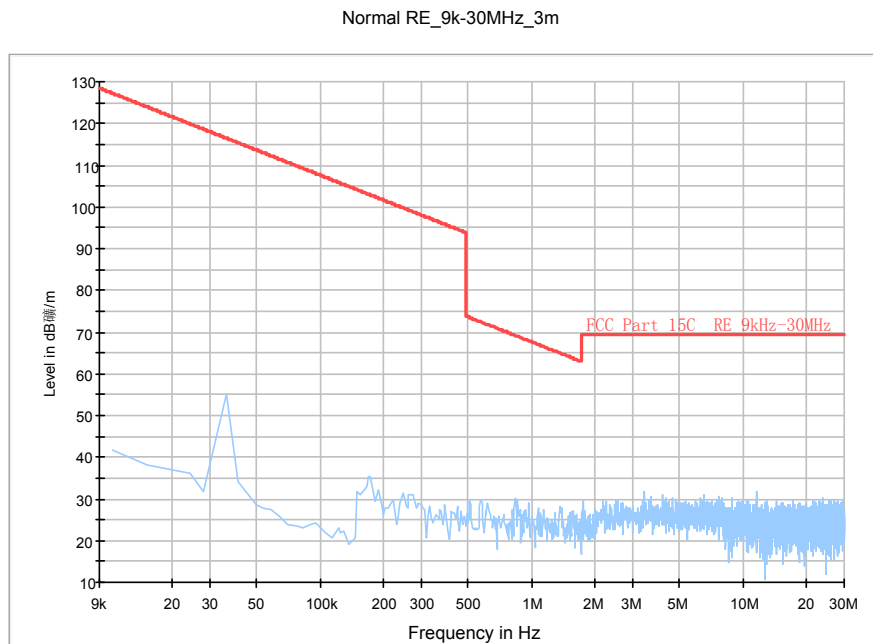


Fig. 103 Radiated Spurious Emission (802.11g, Ch1, 9 kHz ~30 MHz)

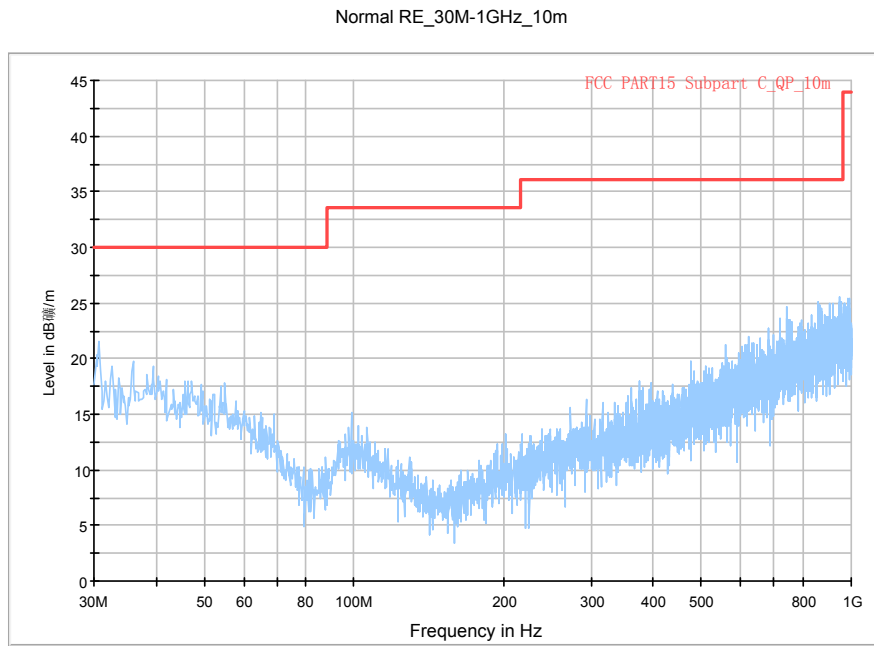


Fig. 104 Radiated Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)

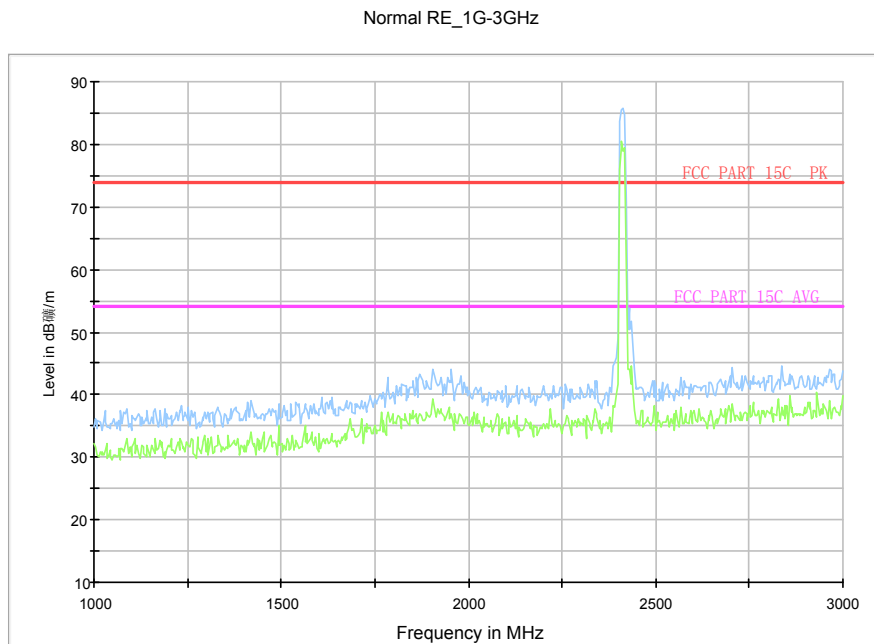


Fig. 105 Radiated Spurious Emission (802.11g, Ch1, 1 GHz-3 GHz)

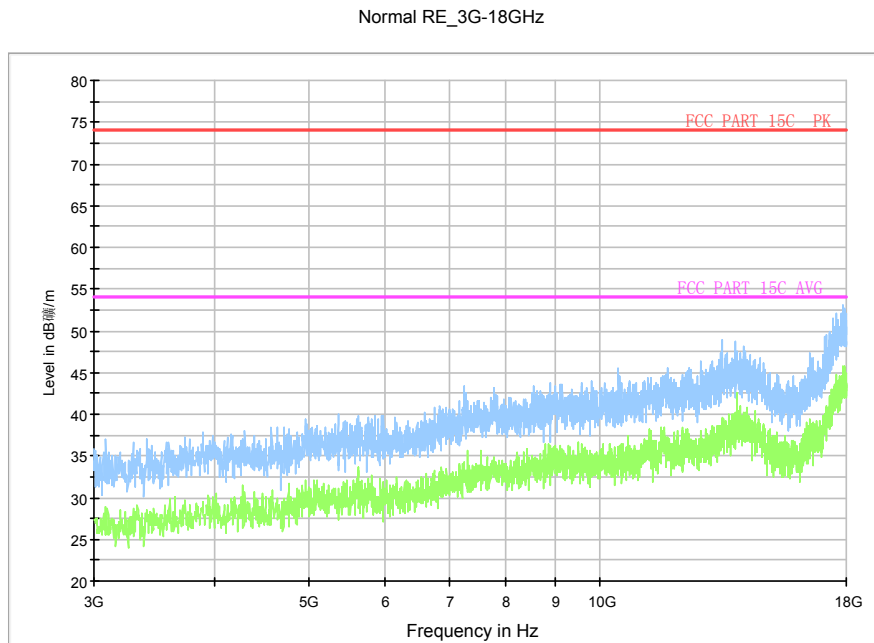


Fig. 106 Radiated Spurious Emission (802.11g, Ch1, 3 GHz-18 GHz)

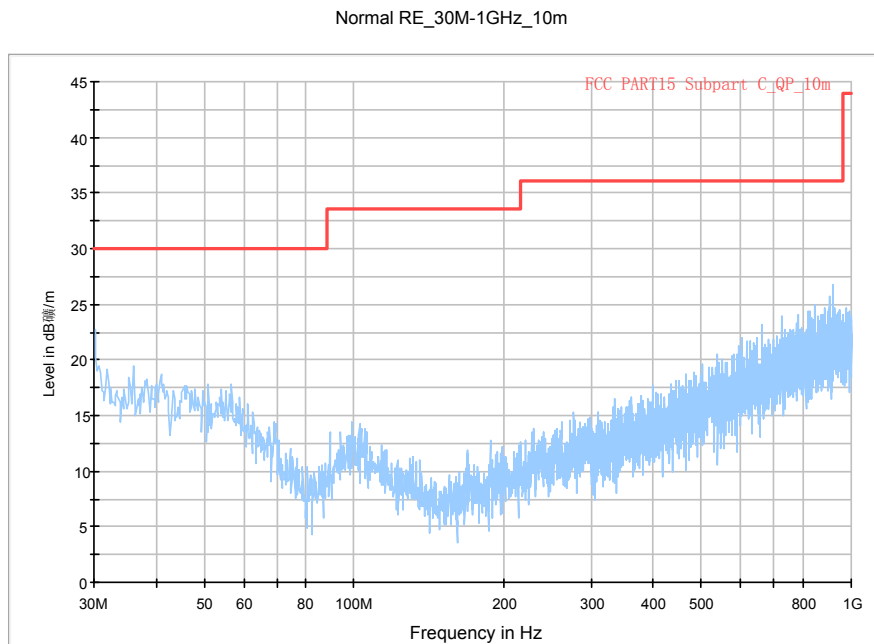


Fig. 107 Radiated Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)

Normal RE_9k-30MHz_3m

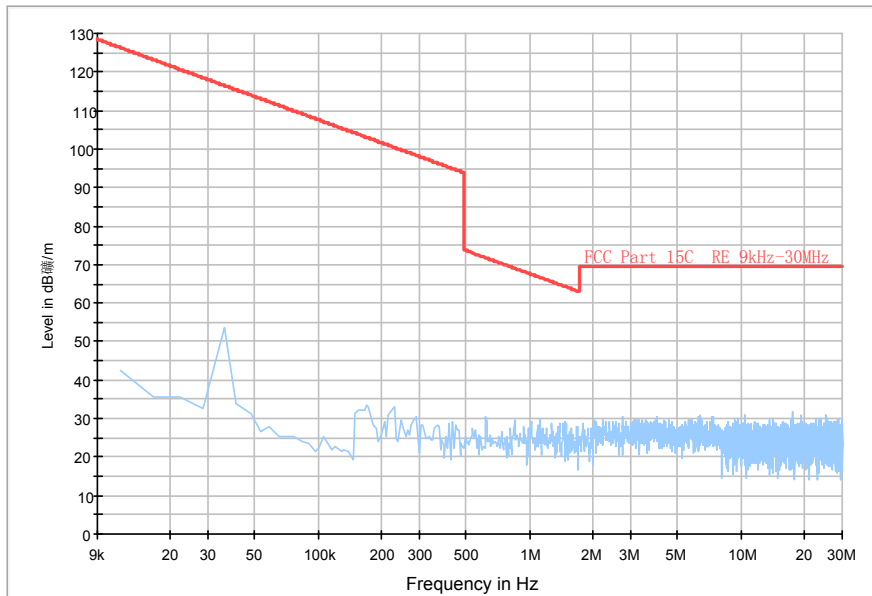


Fig. 108 Radiated Spurious Emission (802.11g, Ch6, 9 kHz ~30 MHz)

Normal RE_1G-3GHz

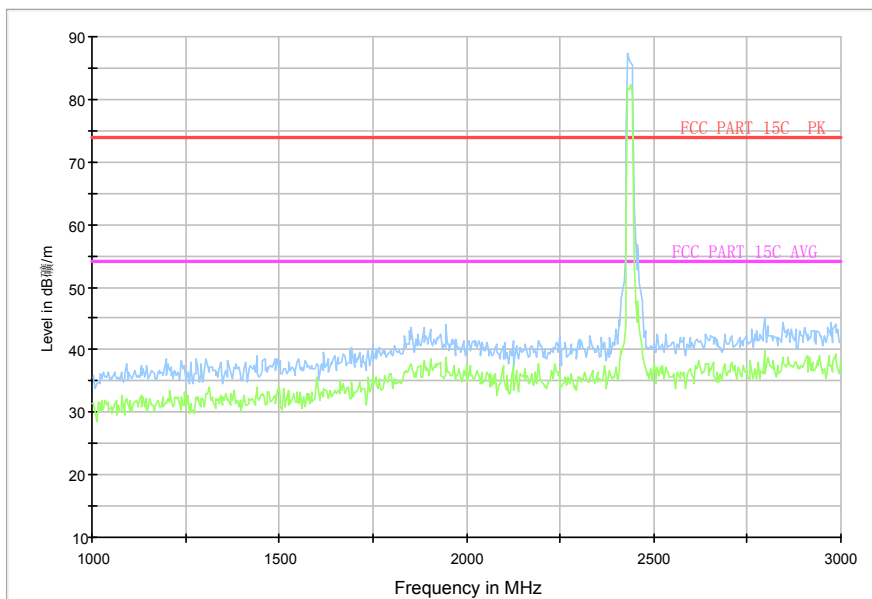


Fig. 109 Radiated Spurious Emission (802.11g, Ch6, 1 GHz-3 GHz)

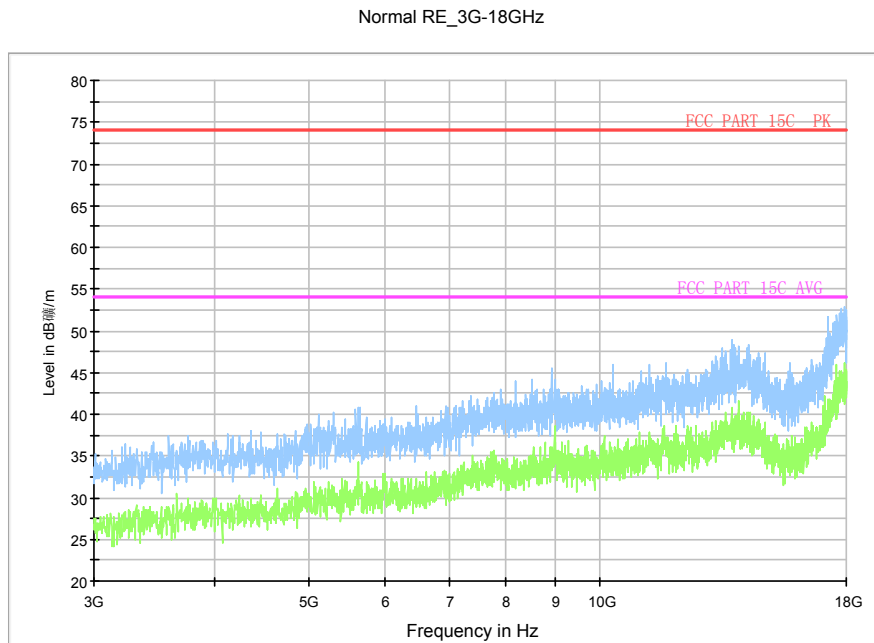


Fig. 110 Radiated Spurious Emission (802.11g, Ch6, 3 GHz-18 GHz)

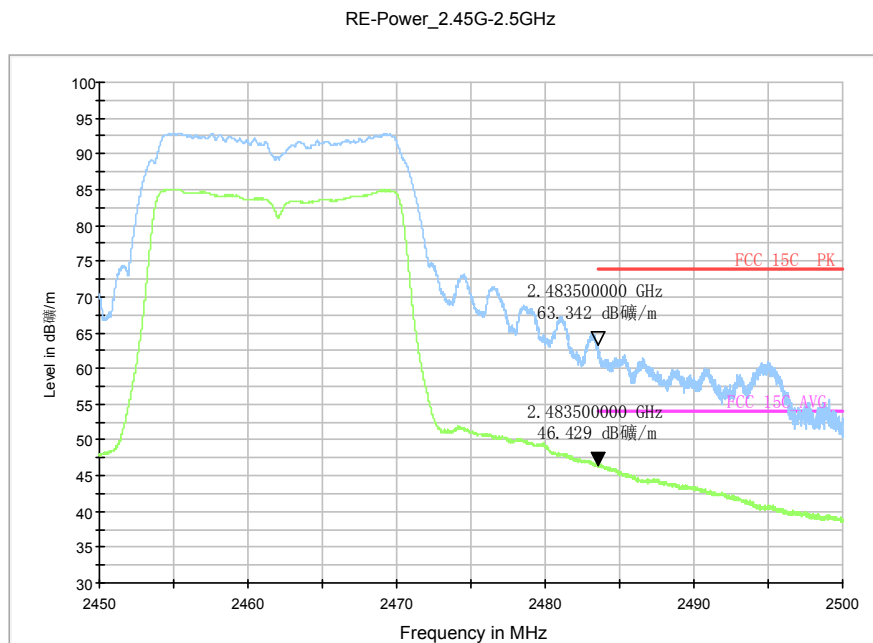


Fig. 111 Radiated Spurious Emission (Power): 802.11g, ch11, 2.45 GHz - 2.5GHz

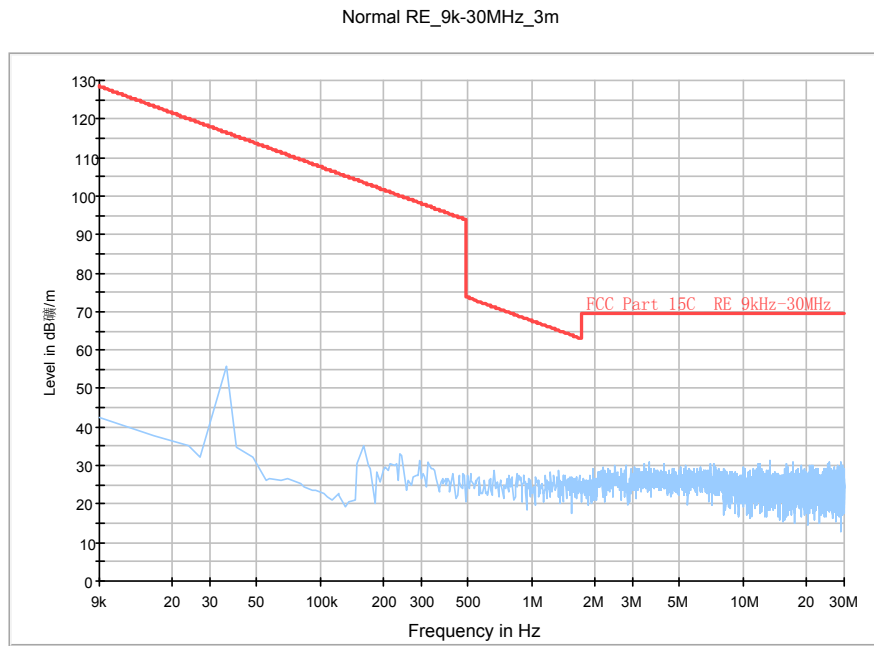


Fig. 112 Radiated Spurious Emission (802.11g, Ch11, 9 kHz ~30 MHz)

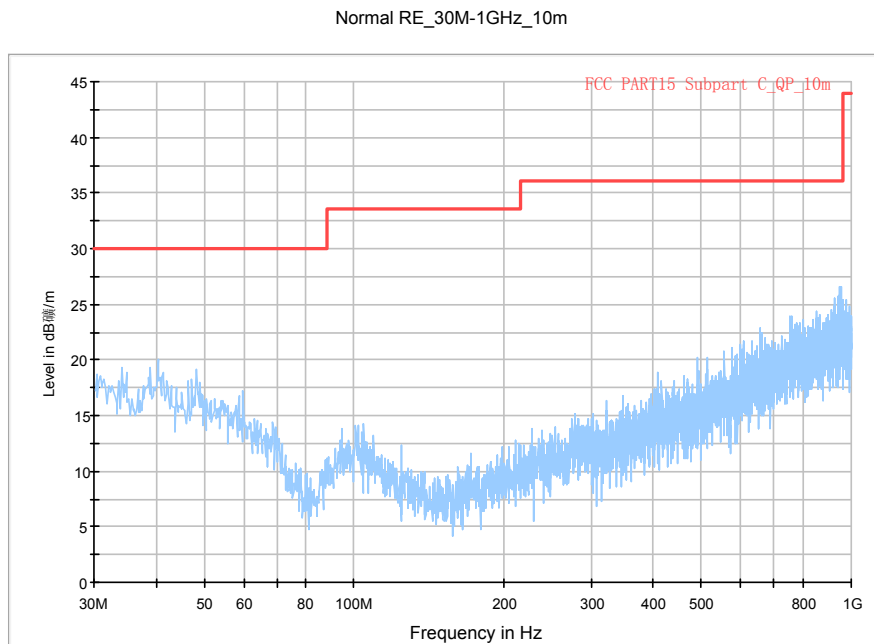


Fig. 113 Radiated Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)

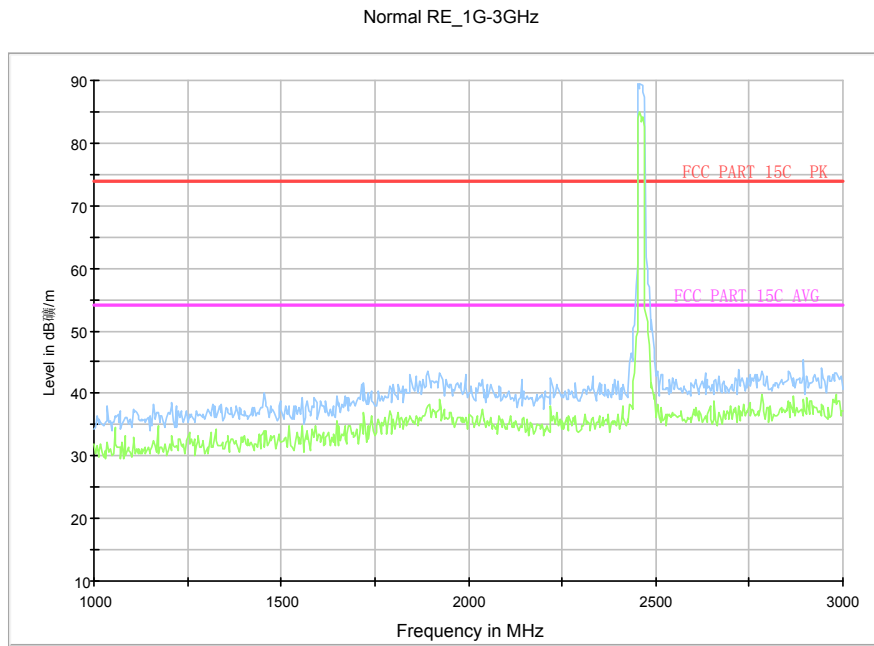


Fig. 114 Radiated Spurious Emission (802.11g, Ch11, 1 GHz-3 GHz)

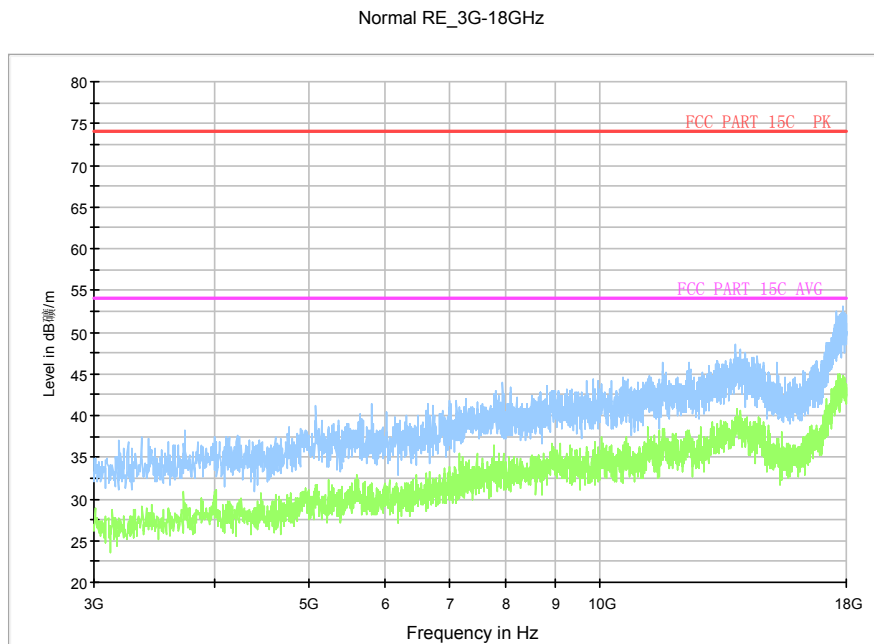


Fig. 115 Radiated Spurious Emission (802.11g, Ch11, 3 GHz-18 GHz)

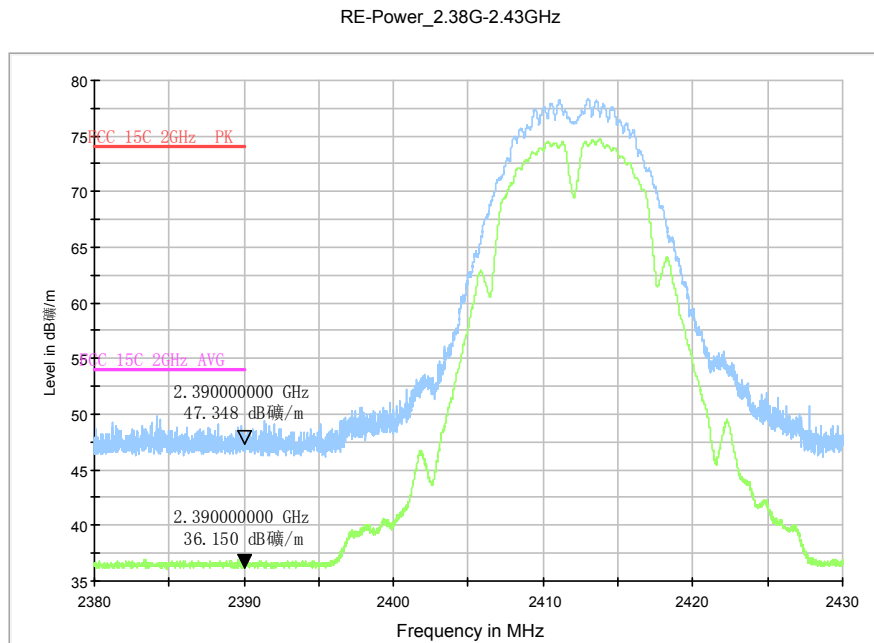


Fig. 116 Radiated Spurious Emission (Power): 802.11n-HT20, ch1, 2.38 GHz - 2.45GHz

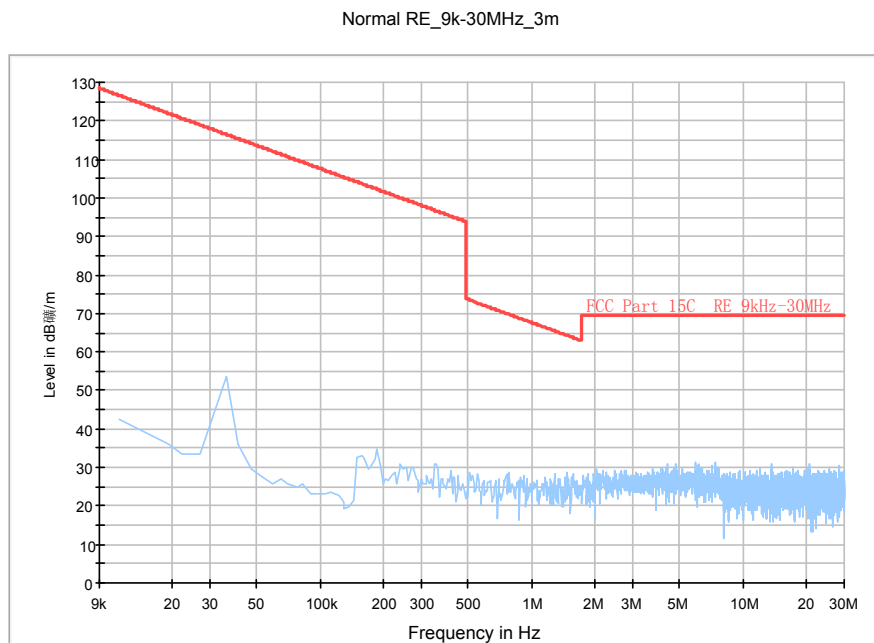


Fig. 117 Radiated Spurious Emission (802.11n-HT20, Ch1, 9 kHz ~30 MHz)

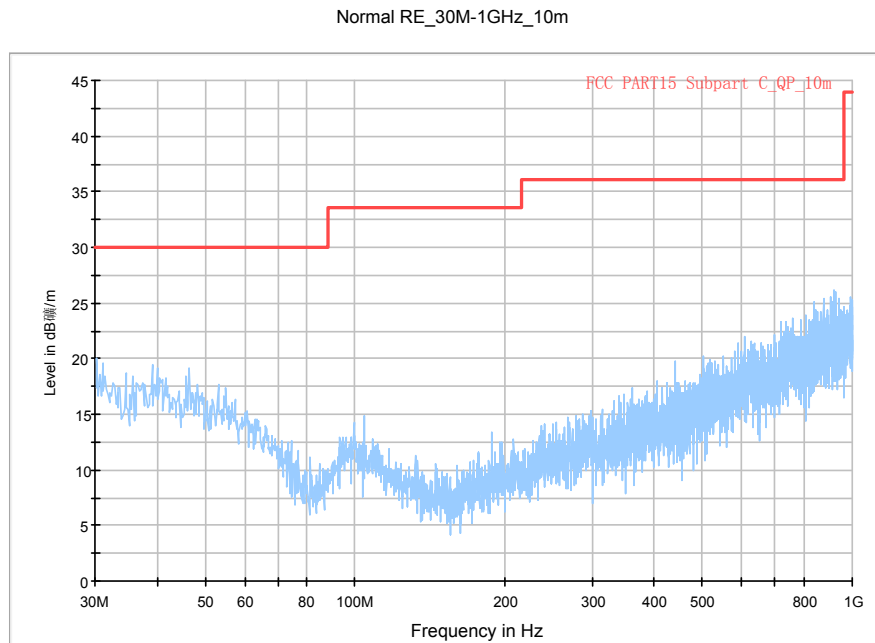


Fig. 118 Radiated Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)

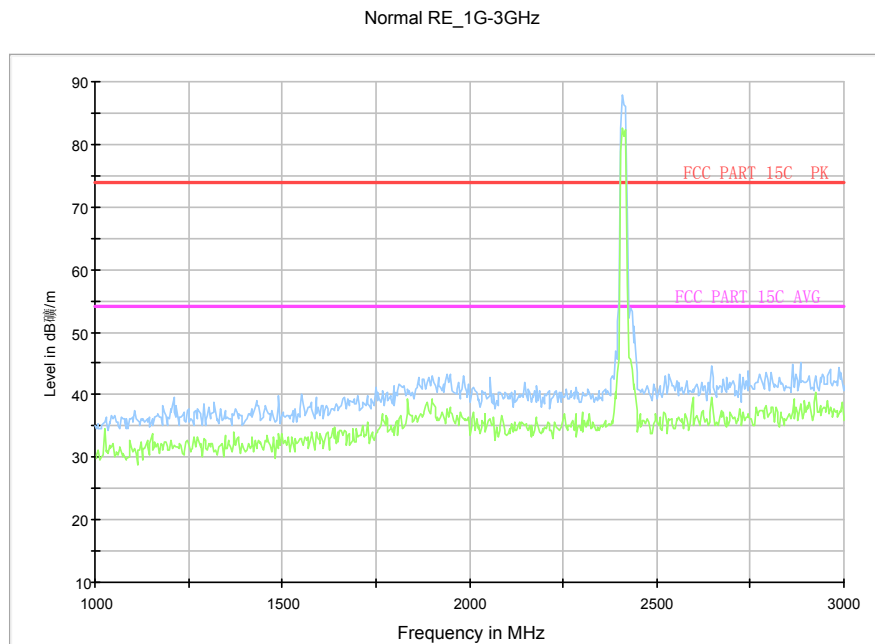


Fig. 119 Radiated Spurious Emission (802.11n-HT20, Ch1, 1 GHz-3 GHz)

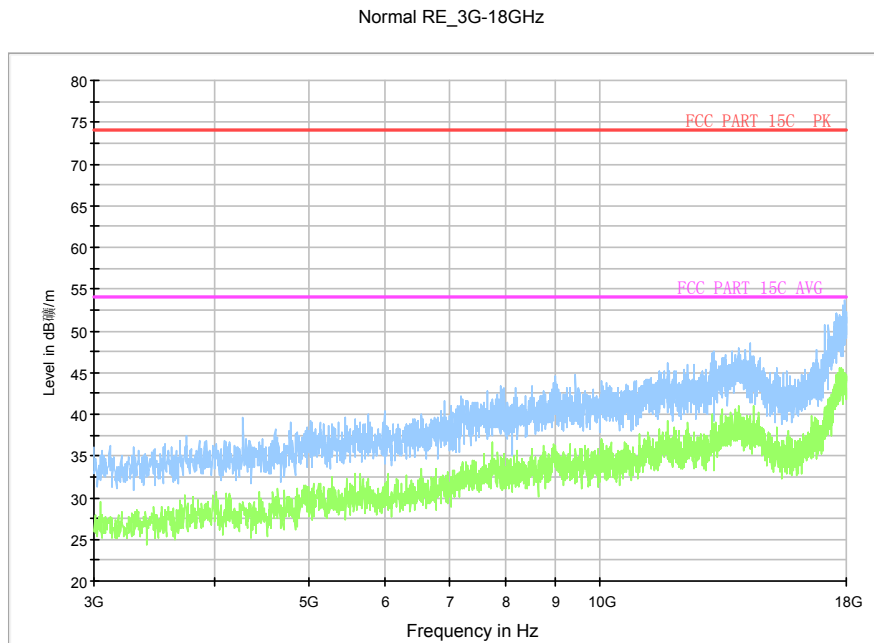


Fig. 120 Radiated Spurious Emission (802.11n-HT20, Ch1, 3 GHz-18 GHz)

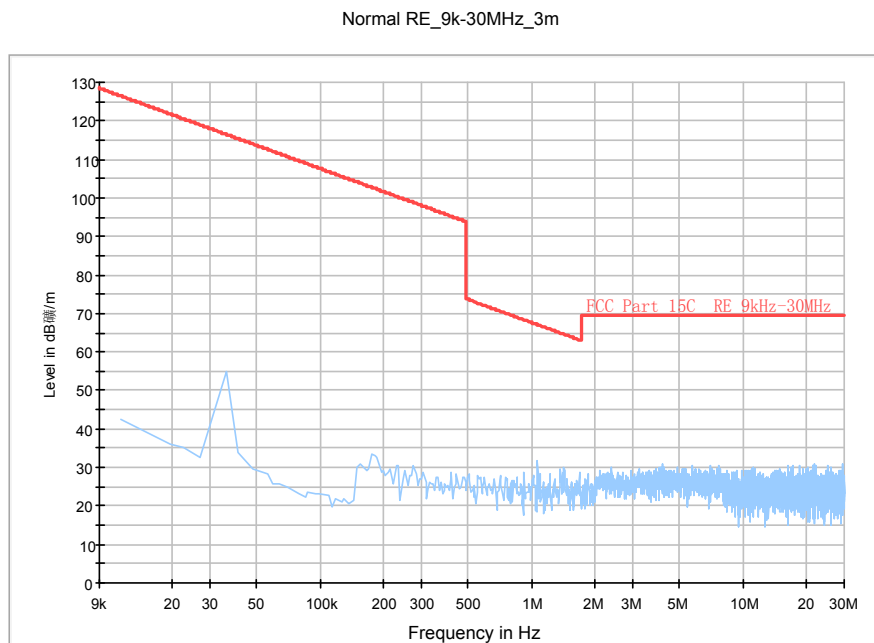


Fig. 121 Radiated Spurious Emission (802.11n-HT20, Ch6, 9 kHz ~30 MHz)

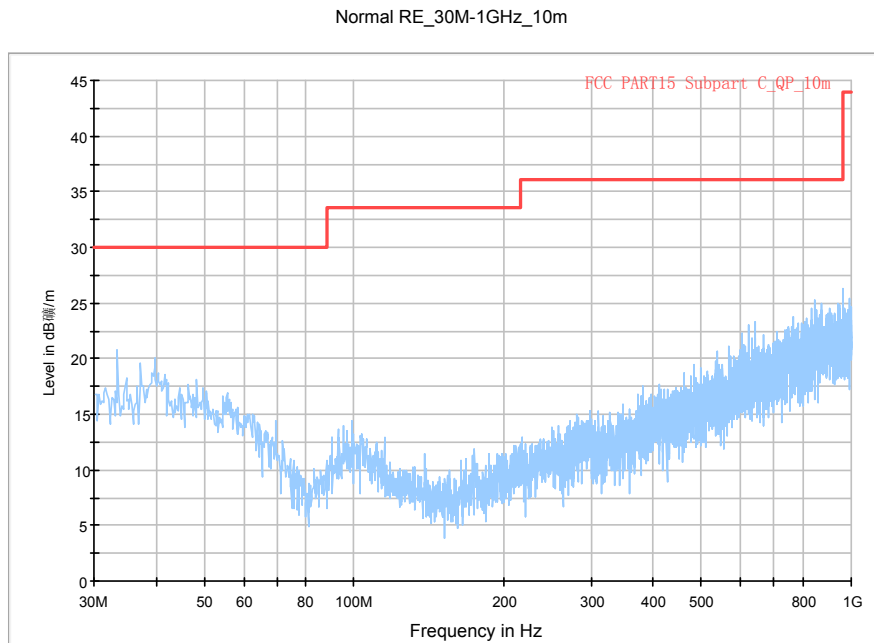


Fig. 122 Radiated Spurious Emission (802.11n-HT20, Ch6, 30 MHz-1 GHz)

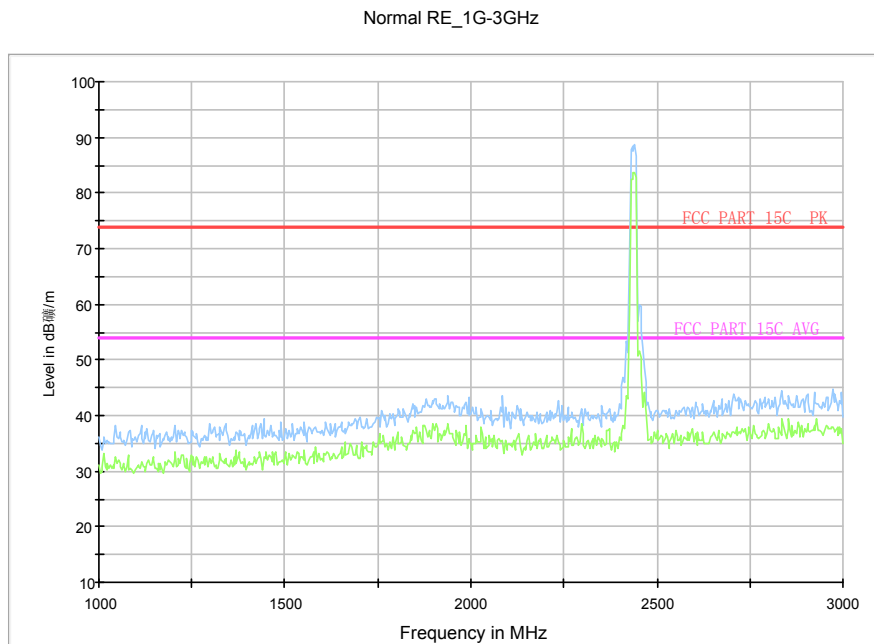


Fig. 123 Radiated Spurious Emission (802.11n-HT20, Ch6, 1 GHz-3 GHz)

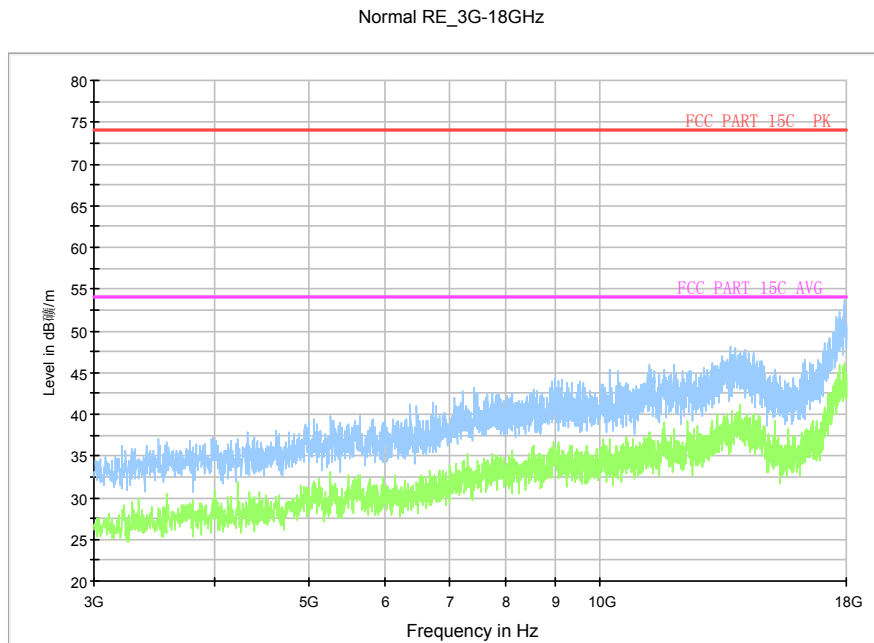


Fig. 124 Radiated Spurious Emission (802.11n-HT20, Ch6, 3 GHz-18 GHz)

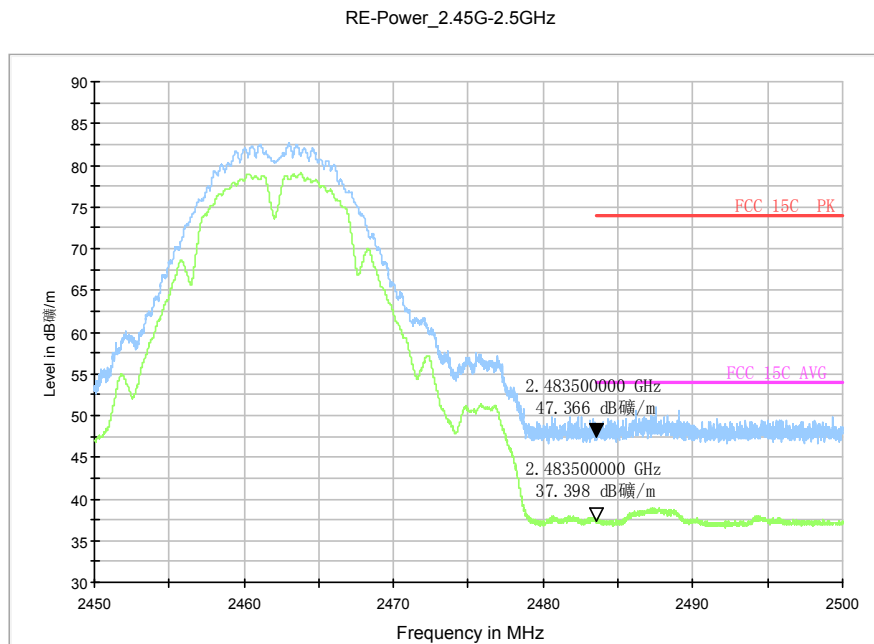


Fig. 125 Radiated Spurious Emission (Power): 802.11n-HT20, ch11, 2.45 GHz - 2.5GHz

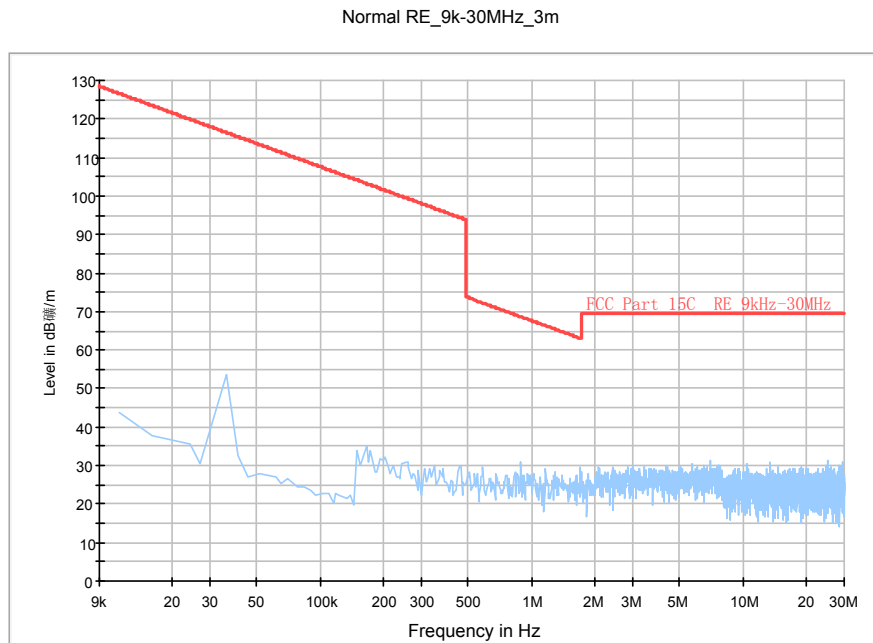


Fig. 126 Radiated Spurious Emission (802.11n-HT20, Ch11, 9 kHz ~30 MHz)

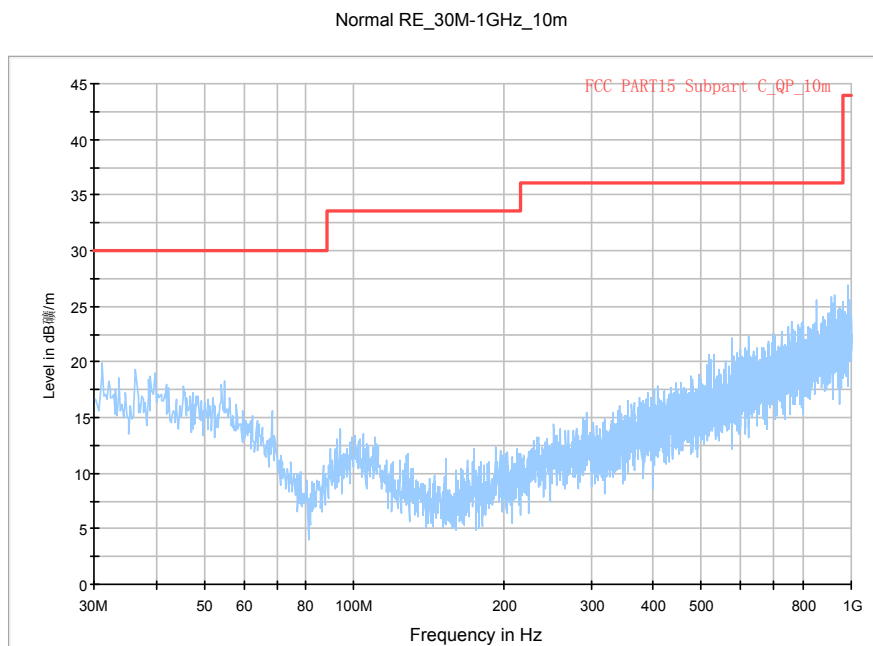


Fig. 127 Radiated Spurious Emission (802.11n-HT20, Ch11, 30 MHz-1 GHz)

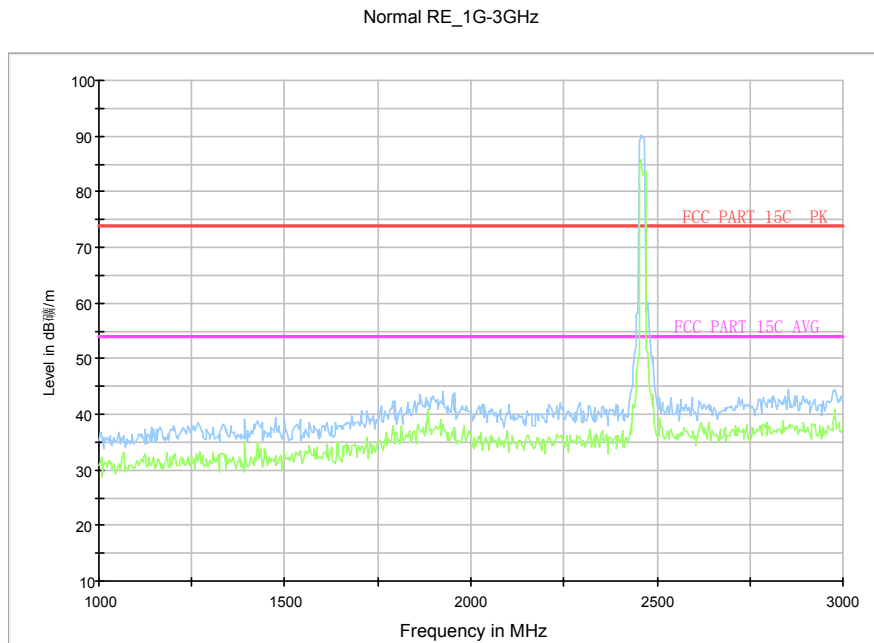


Fig. 128 Radiated Spurious Emission (802.11n-HT20, Ch11, 1 GHz-3 GHz)

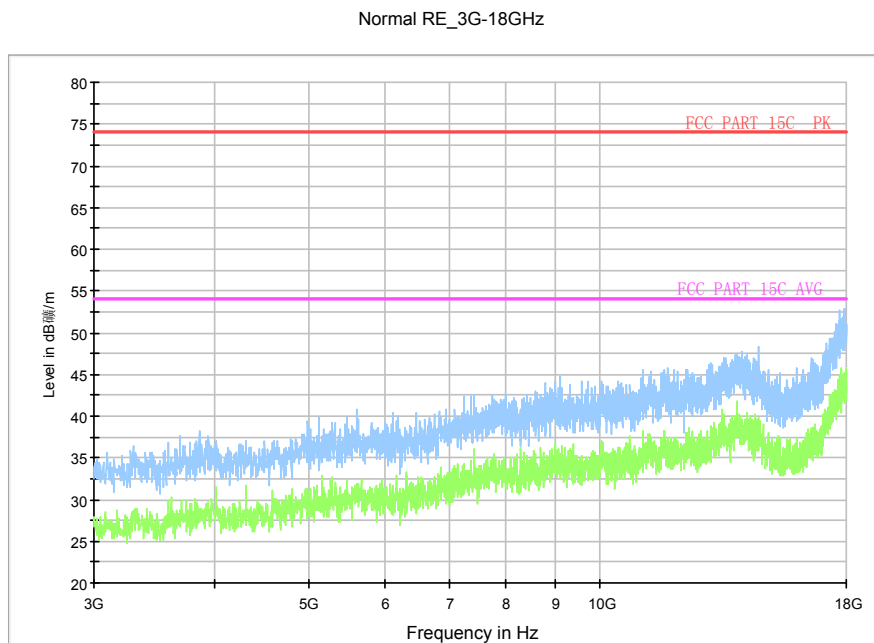


Fig. 129 Radiated Spurious Emission (802.11n-HT20, Ch11, 3 GHz-18 GHz)

Normal RE_18G-26.5GHz

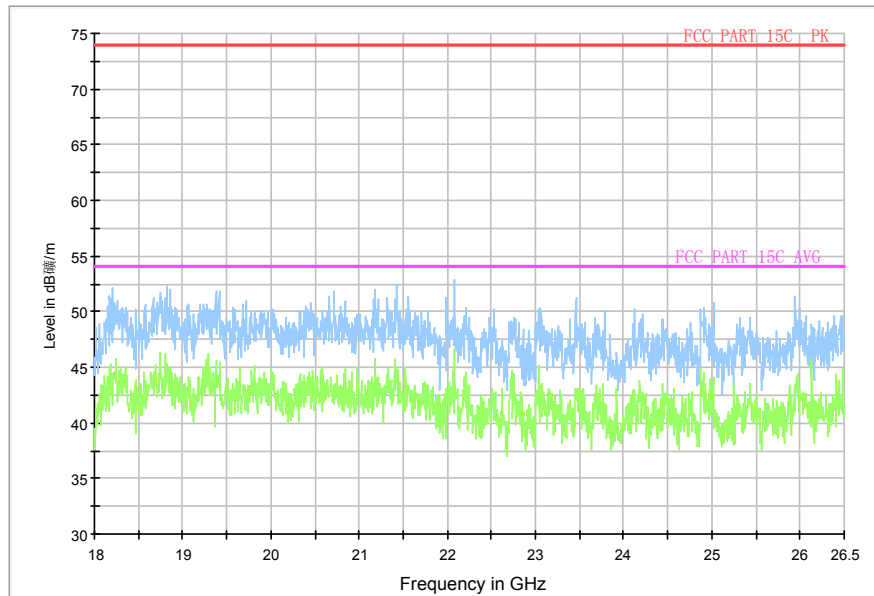


Fig. 130 Radiated emission: 18 GHz – 26.5 GHz

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)	Conclusion
		With charger	
0.15 to 0.5	66 to 56	802.11b	P
0.5 to 5	56	Fig.131	
5 to 30	60		

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: PASS

Test graphs as below:

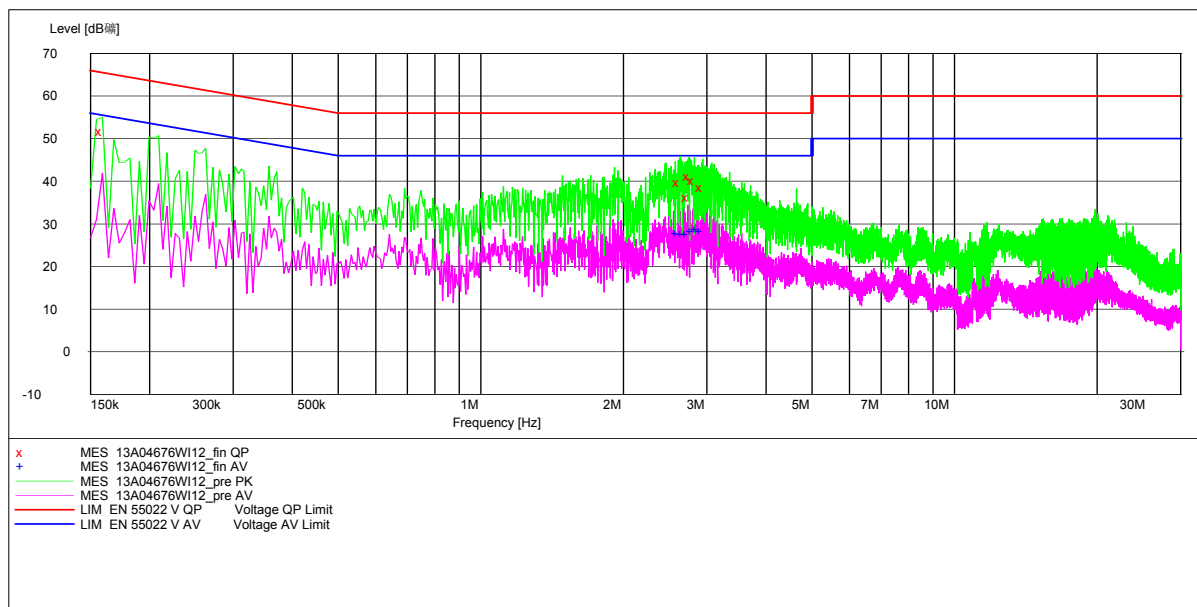


Fig. 131 AC Powerline Conducted Emission-802.11b

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Measurement Result 1:

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	51.70	GND	L1	9.8	13.9	66
2.634500	39.70	GND	L1	9.7	16.3	56
2.751500	36.30	GND	N	9.7	19.7	56
2.765000	41.10	GND	L1	9.7	14.9	56
2.823500	40.30	GND	L1	9.7	15.7	56
2.940500	38.60	GND	L1	9.7	17.4	56

Measurement Result 2:

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.607500	27.80	GND	L1	9.7	18.2	46
2.679500	27.50	GND	L1	9.7	18.5	46
2.738000	27.50	GND	L1	9.7	18.5	46
2.810000	28.30	GND	L1	9.7	17.7	46
2.868500	28.70	GND	L1	9.7	17.3	46
2.927000	28.30	GND	L1	9.7	17.7	46

*** END OF REPORT BODY ***