

Fig. 83 Radiated Spurious Emission (802.11n-HT20, ch40, 26.5 GHz-40 GHz)

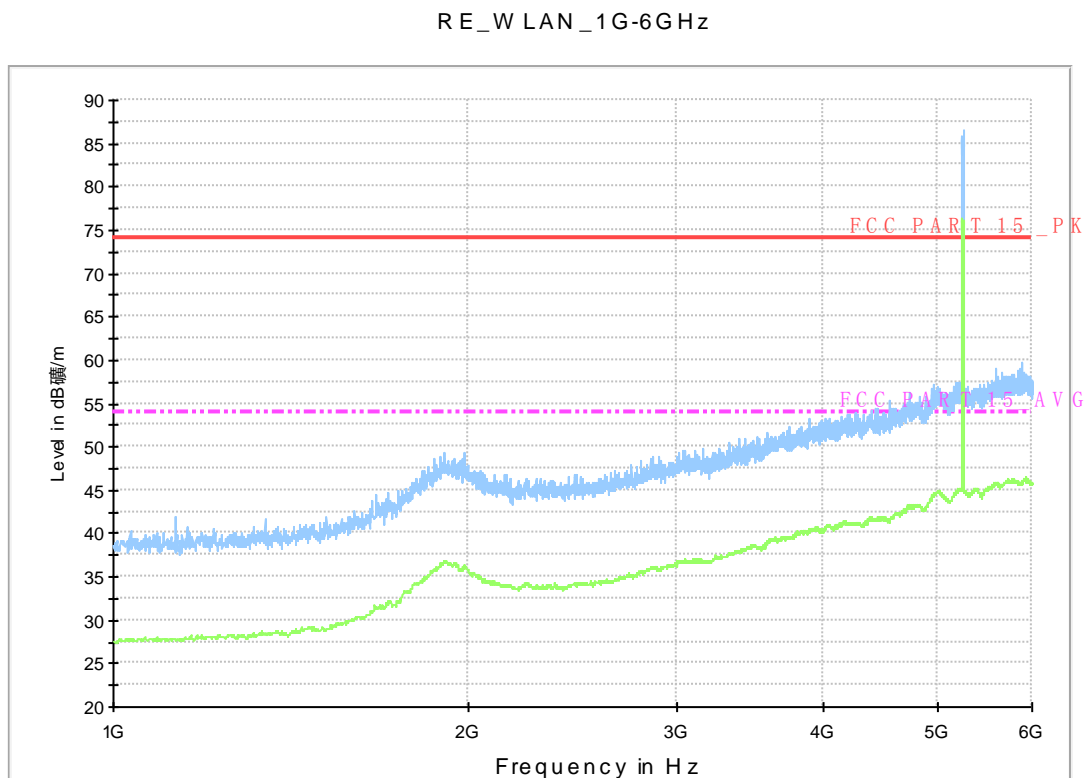


Fig. 84 Radiated Spurious Emission (802.11n-HT20, ch48, 1 GHz-6 GHz)

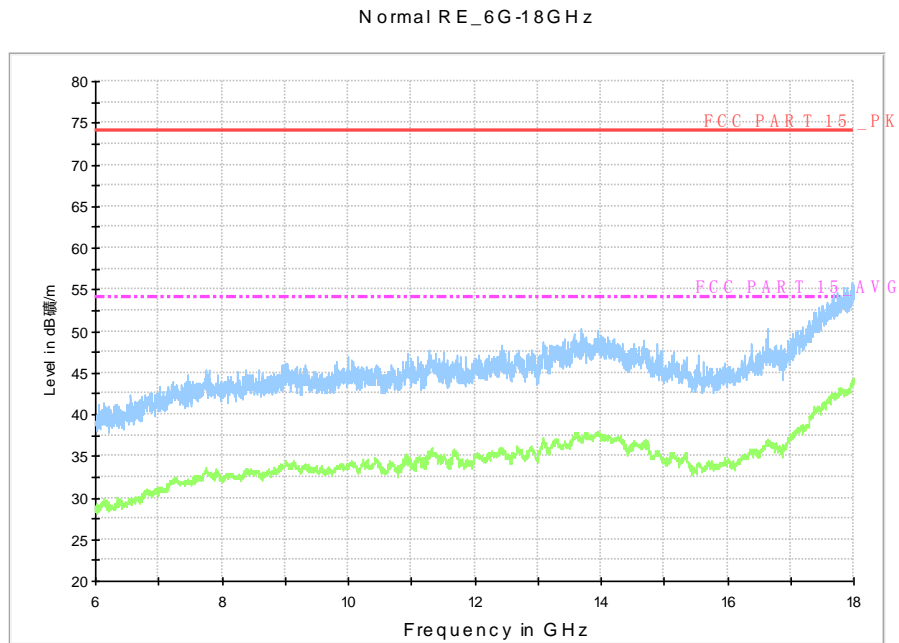


Fig. 85 Radiated Spurious Emission (802.11n-HT20, ch48, 6 GHz-18 GHz)

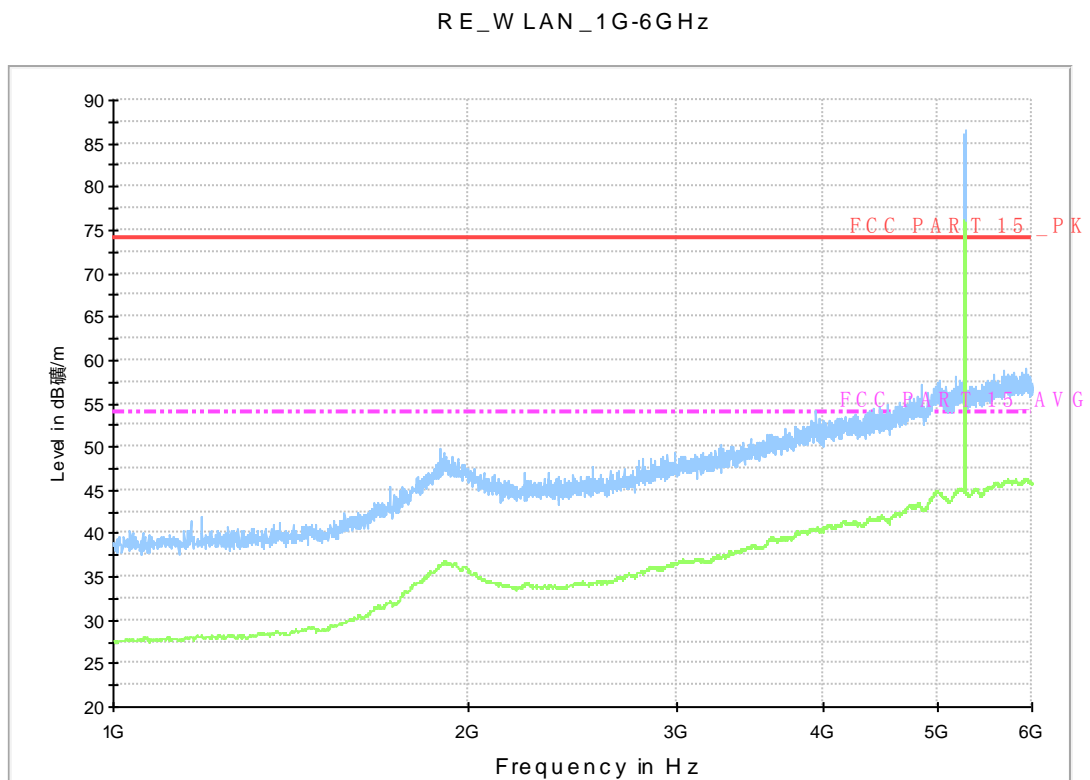


Fig. 86 Radiated Spurious Emission (802.11n-HT20, ch52, 1 GHz-6 GHz)

Normal RE_6G-18GHz

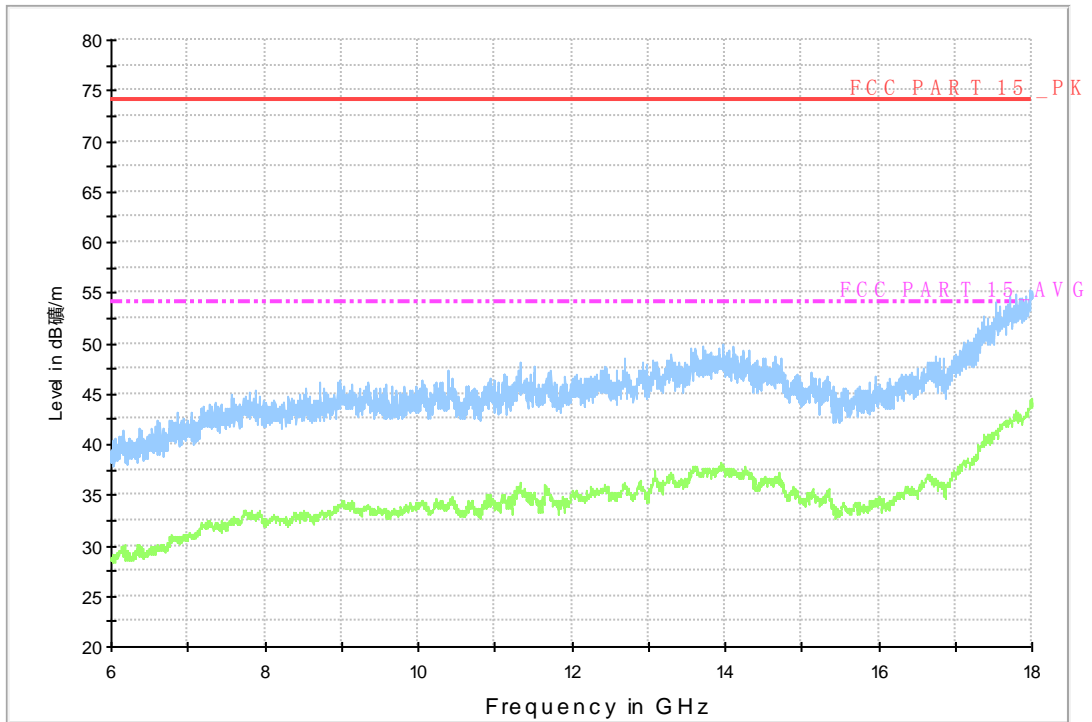


Fig. 87 Radiated Spurious Emission (802.11n-HT20, ch52, 6 GHz-18 GHz)

Normal RE_30M-1GHz_10m

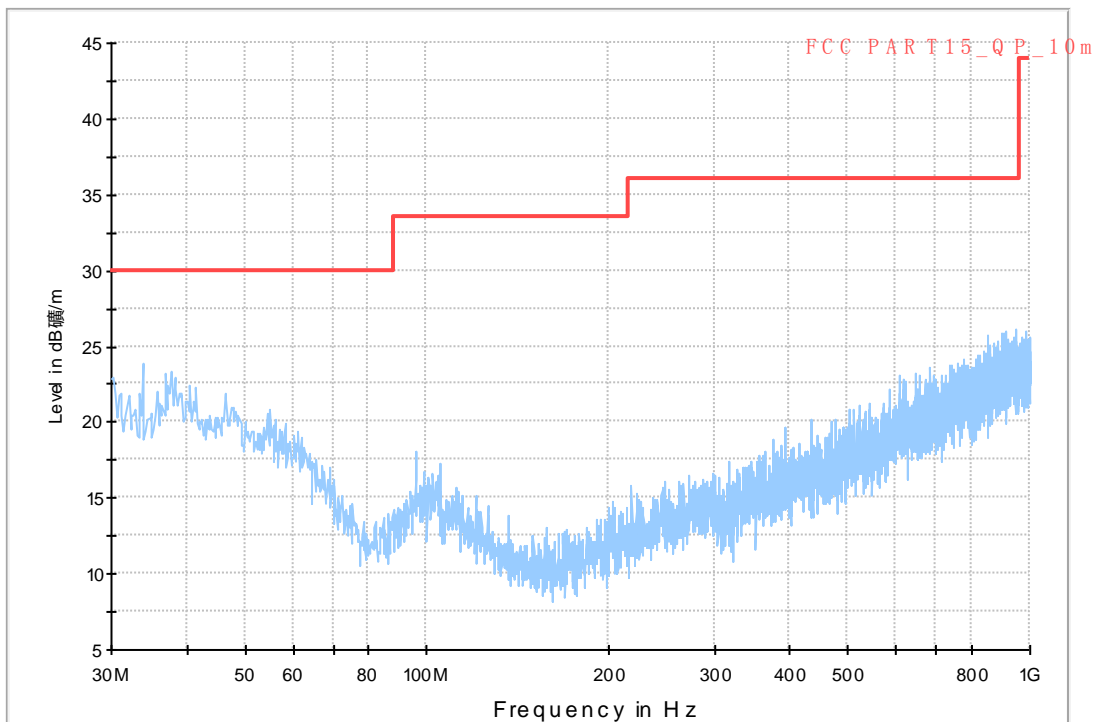


Fig. 88 Radiated Spurious Emission (802.11n-HT20, ch56, 30 MHz-1 GHz)

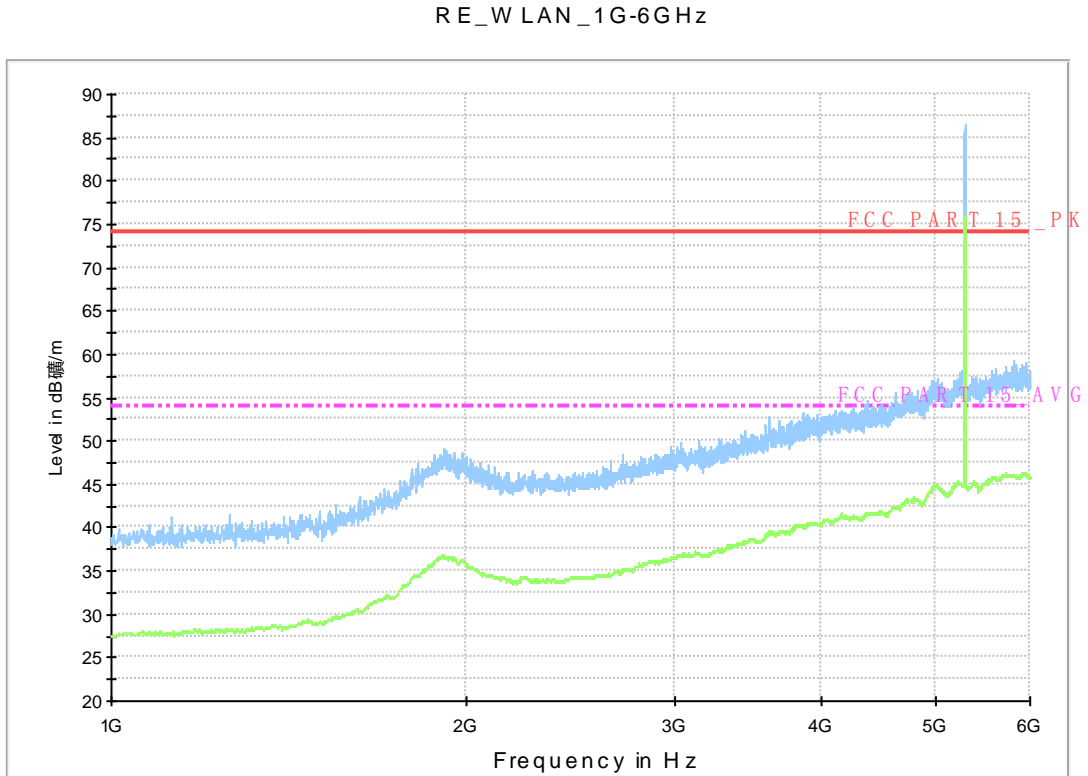


Fig. 89 Radiated Spurious Emission (802.11n-HT20, ch56, 1 GHz-6 GHz)

Normal RE_6G-18GHz

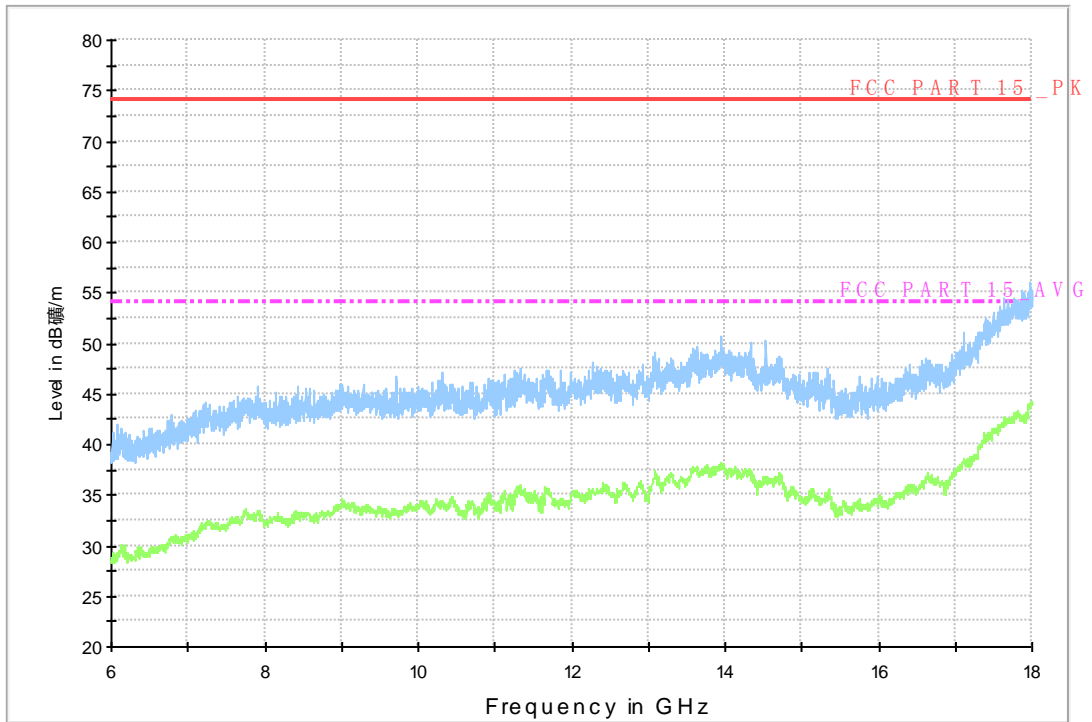


Fig. 90 Radiated Spurious Emission (802.11n-HT20, ch56, 6 GHz-18 GHz)

Normal RE_18G-26.5GHz

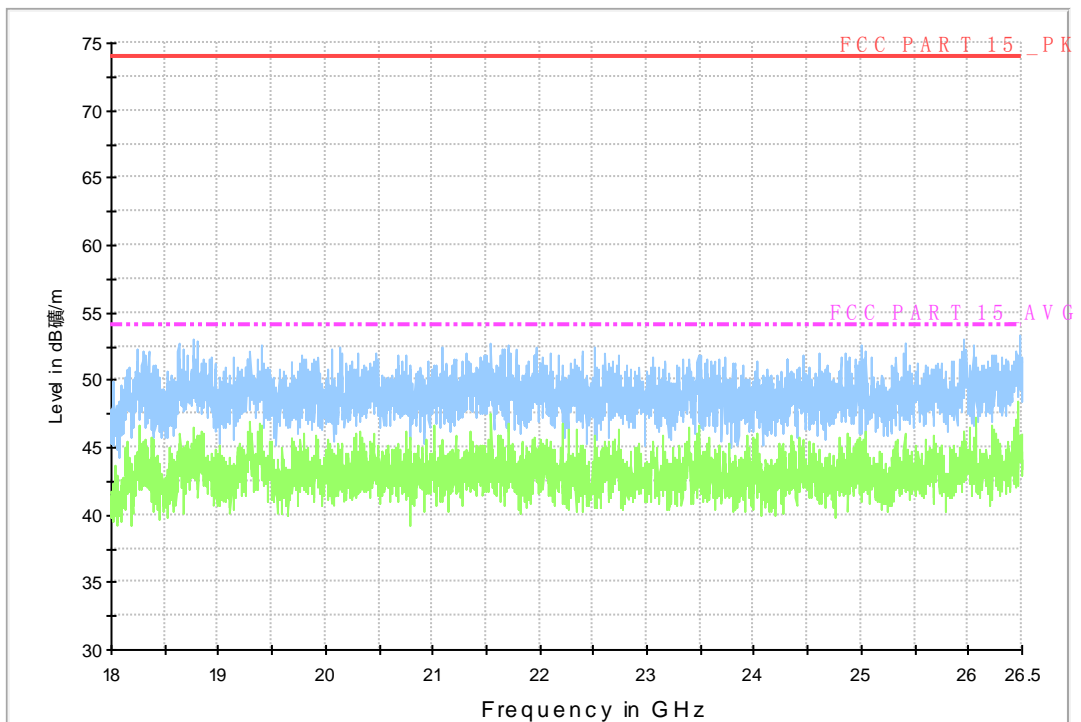


Fig. 91 Radiated Spurious Emission (802.11n-HT20, ch56, 18 GHz-26.5 GHz)

Normal RE_26.5G-40GHz

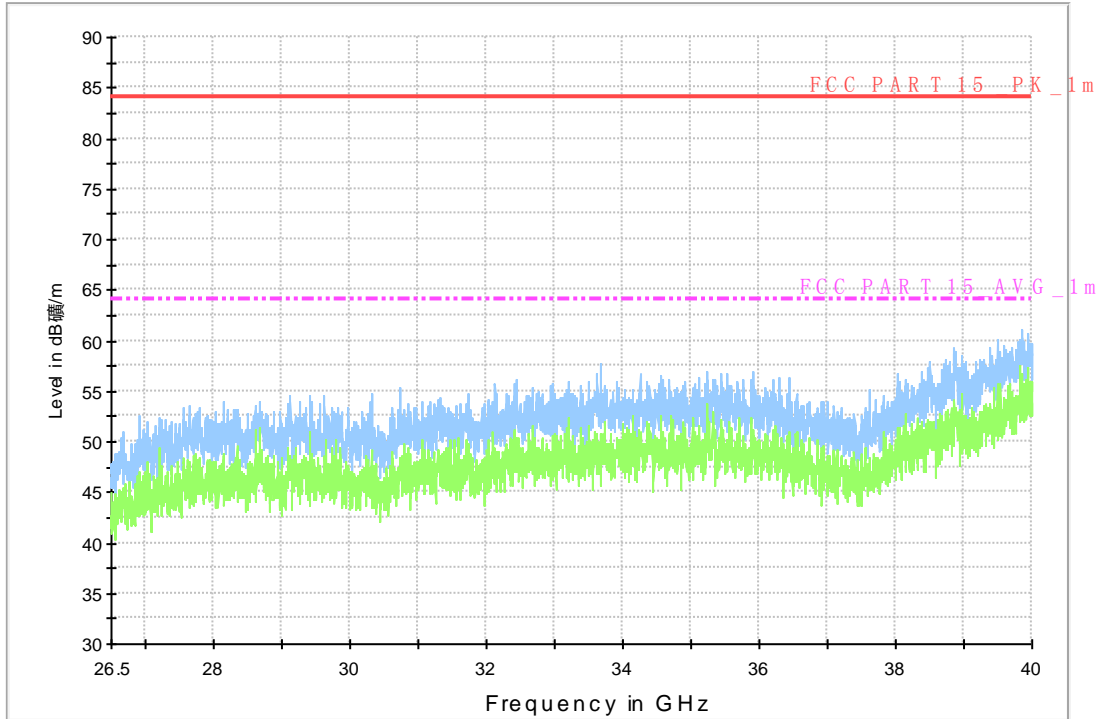


Fig. 92 Radiated Spurious Emission (802.11n-HT20, ch56, 26.5 GHz-40 GHz)

RE_WLAN_1G-6GHz

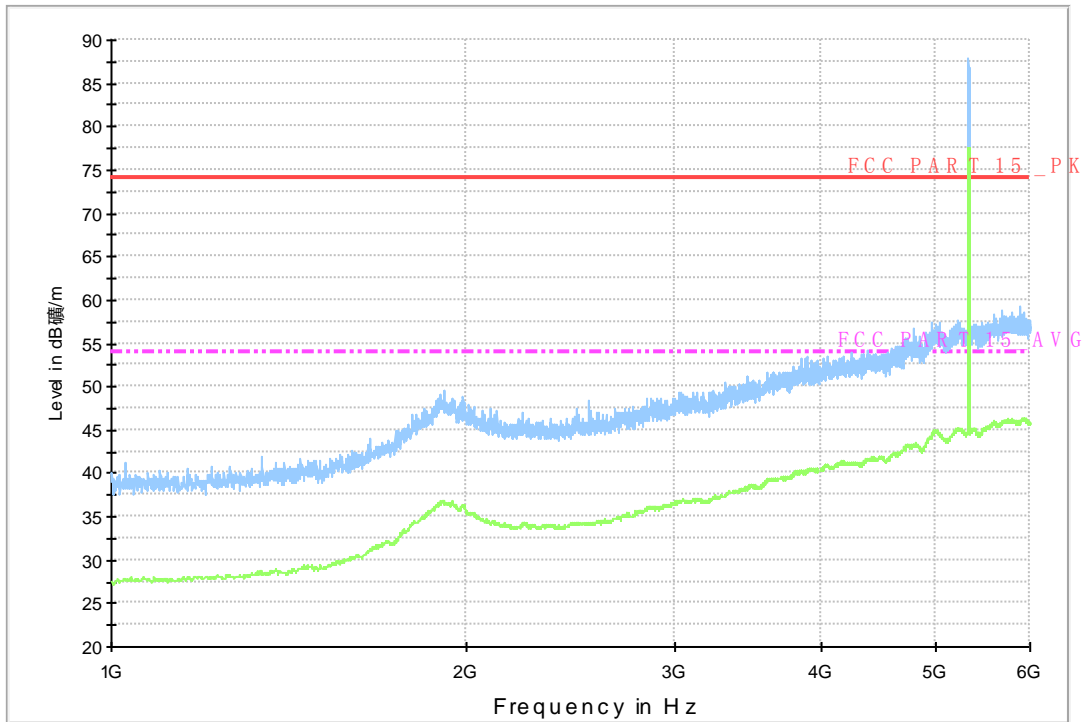


Fig. 93 Radiated Spurious Emission (802.11n-HT20, ch64, 1 GHz-6 GHz)

Normal RE_6G-18GHz

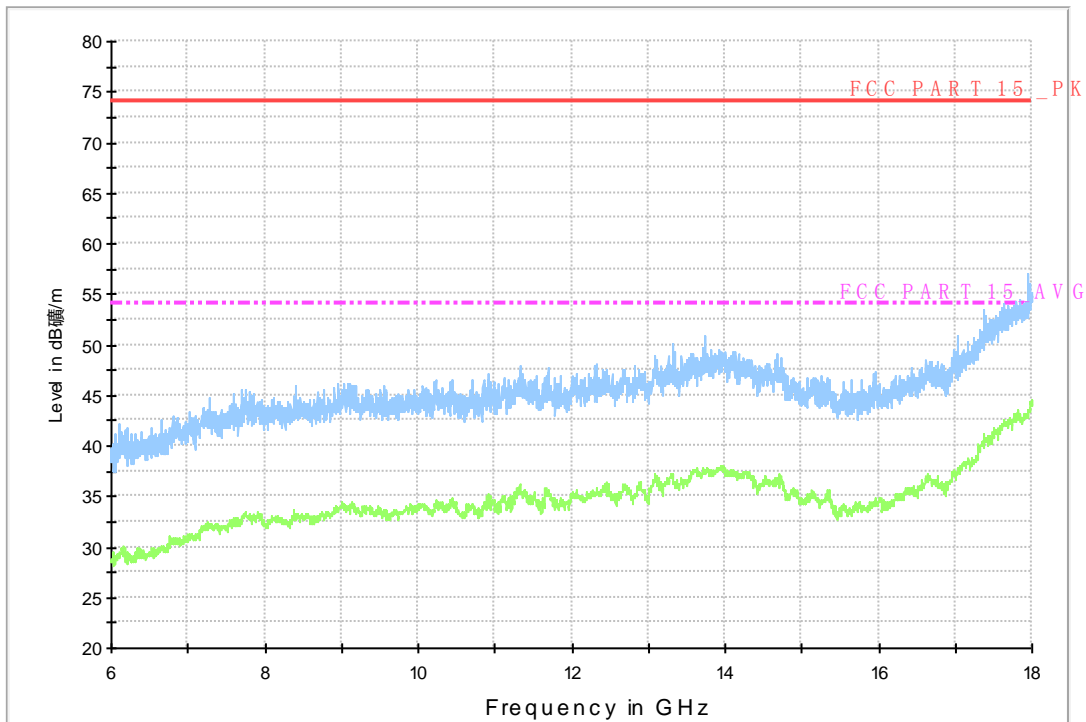


Fig. 94 Radiated Spurious Emission (802.11n-HT20, ch64, 6 GHz-18 GHz)

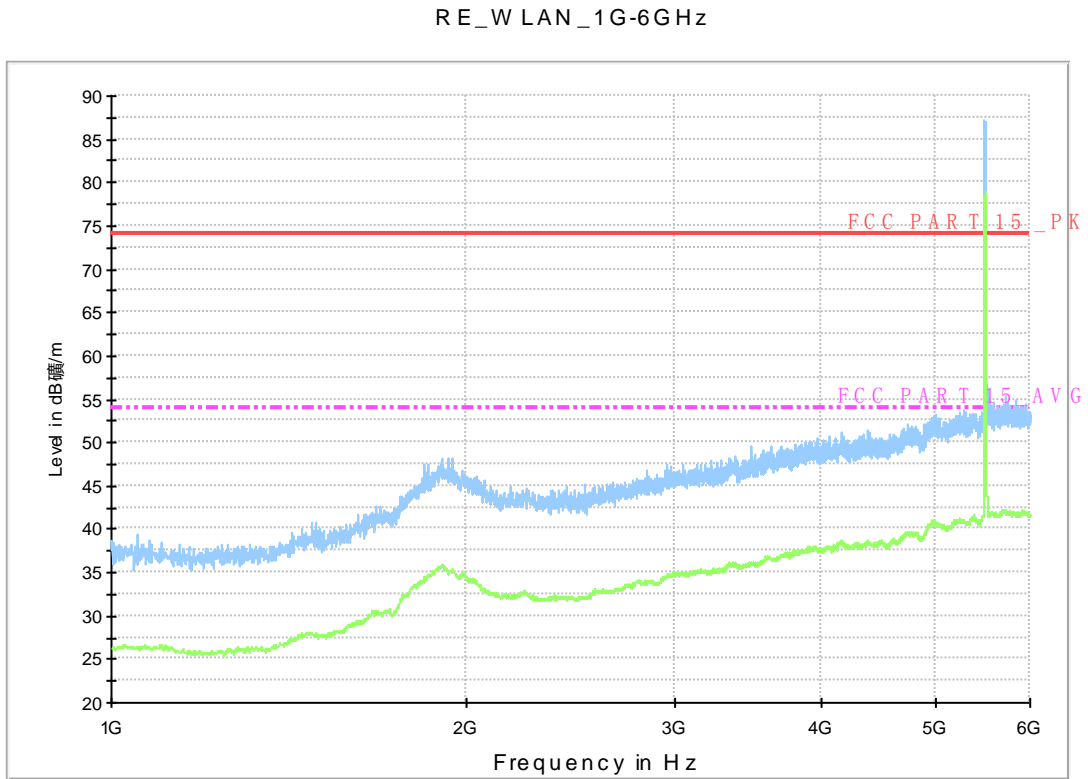


Fig. 95 Radiated Spurious Emission (802.11n-HT20, ch100, 1 GHz-6 GHz)

Normal RE_6G-18GHz

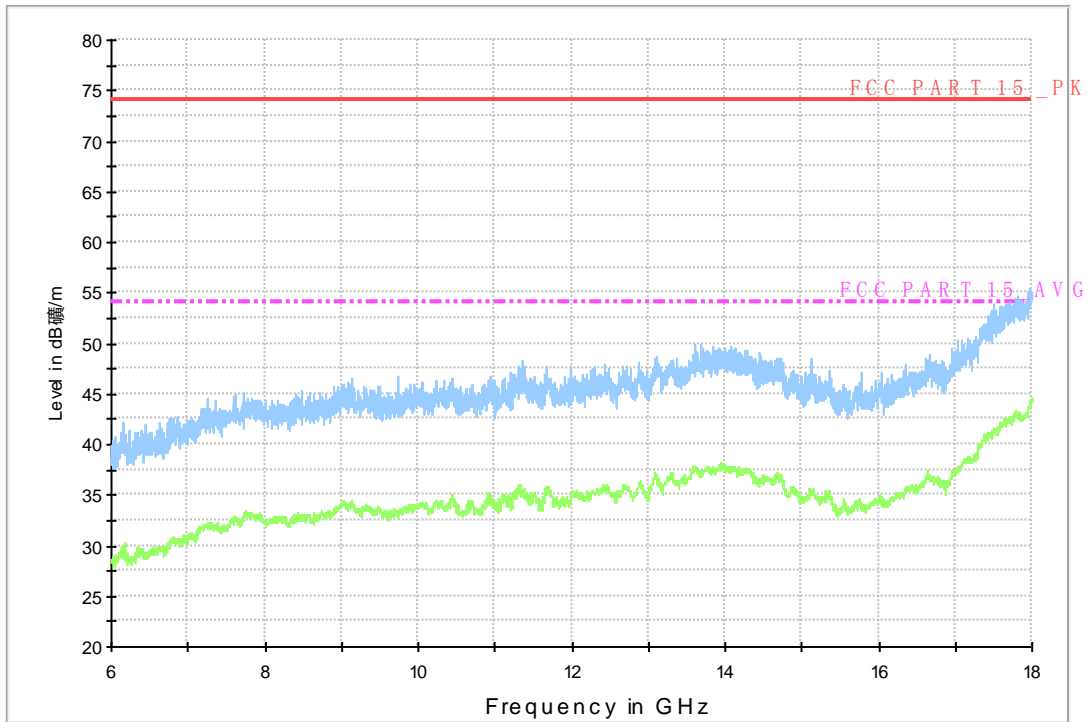


Fig. 96 Radiated Spurious Emission (802.11n-HT20, ch100, 6 GHz-18 GHz)

Normal RE_30M-1GHz_10m

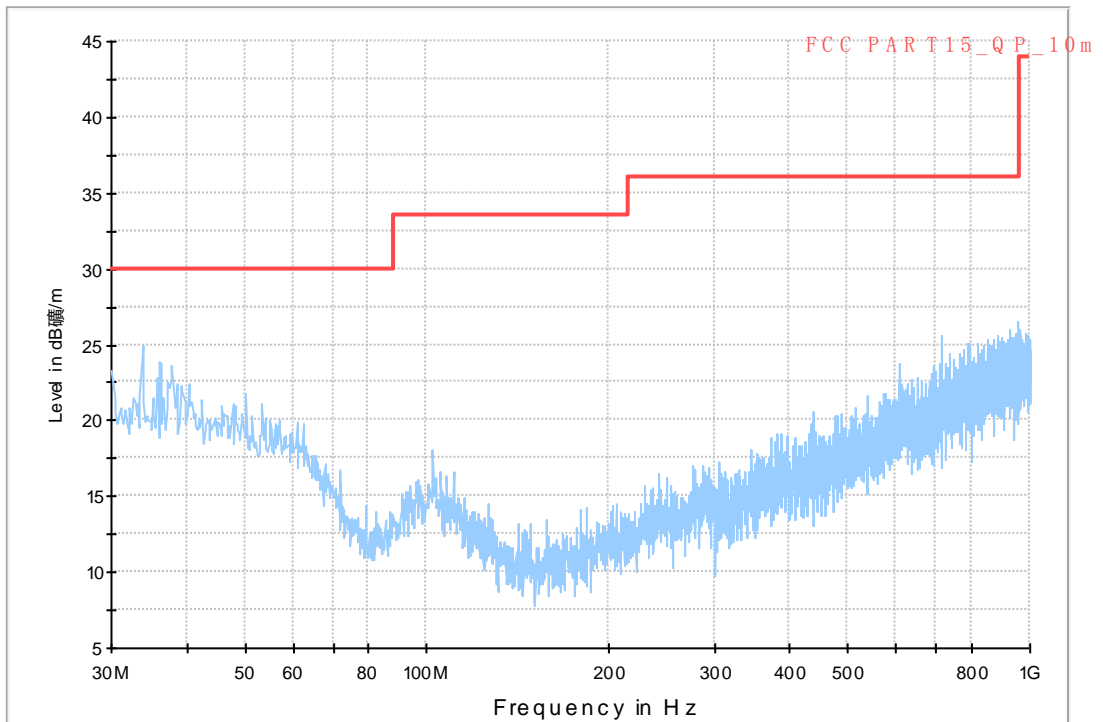


Fig. 97 Radiated Spurious Emission (802.11n-HT20, ch120, 30 MHz-1 GHz)

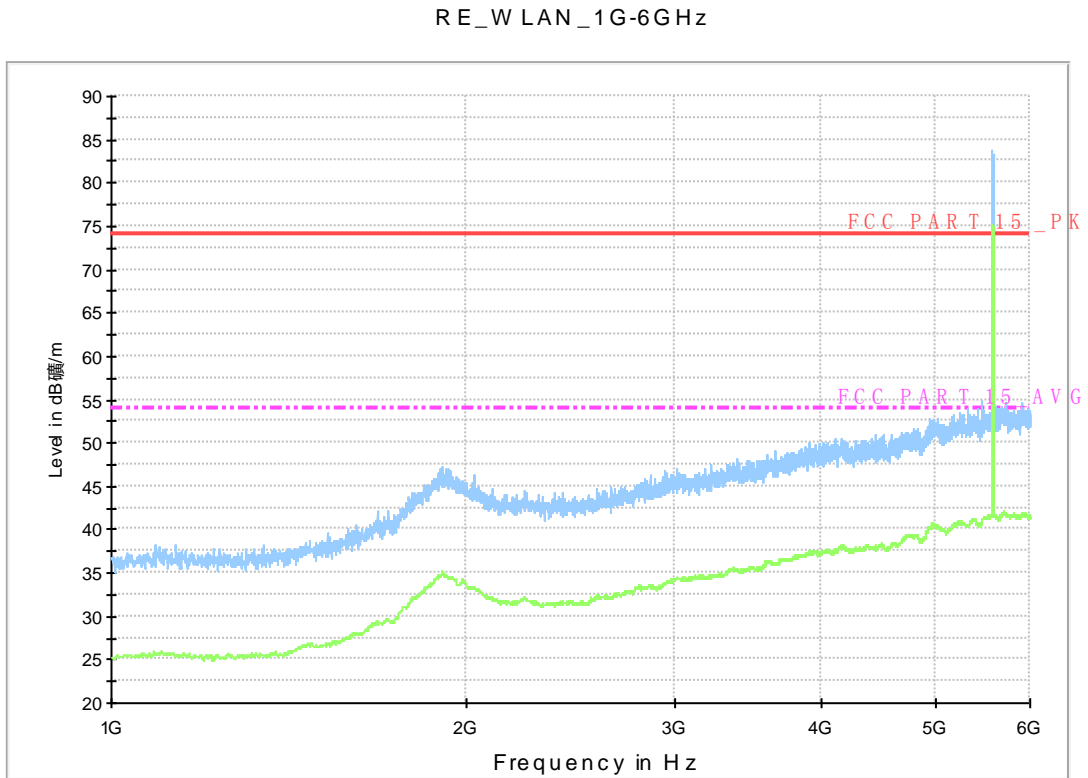


Fig. 98 Radiated Spurious Emission (802.11n-HT20, ch120, 1 GHz-6 GHz)

Normal RE_6G-18GHz

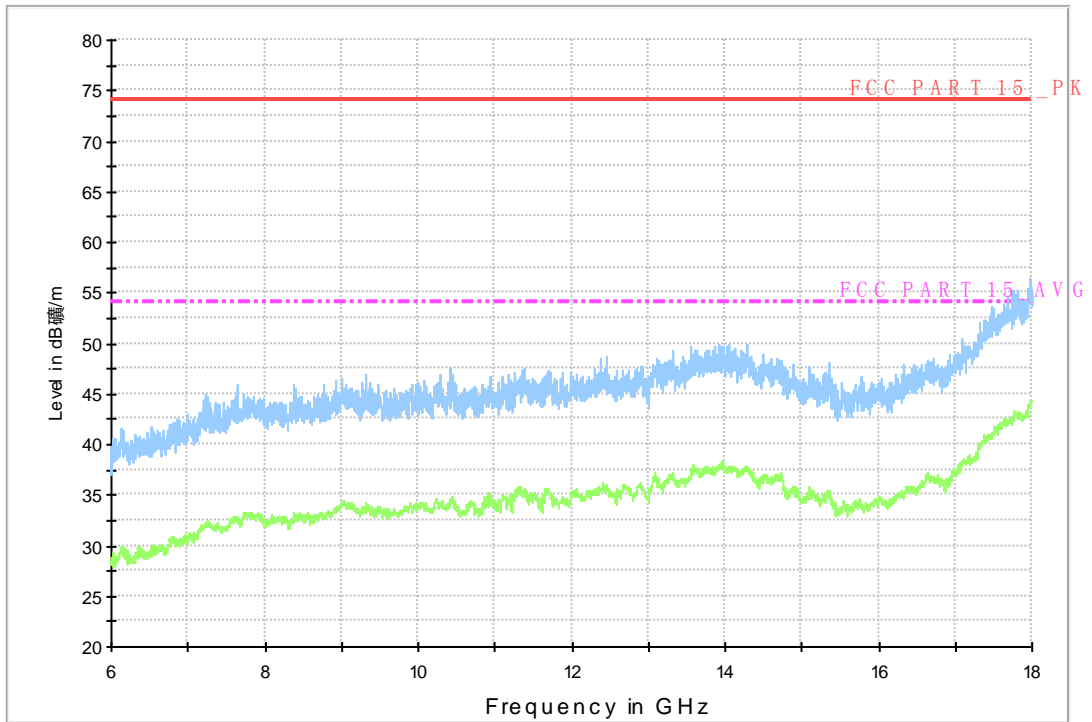


Fig. 99 Radiated Spurious Emission (802.11n-HT20, ch120, 6 GHz-18 GHz)

Normal RE_18G-26.5GHz

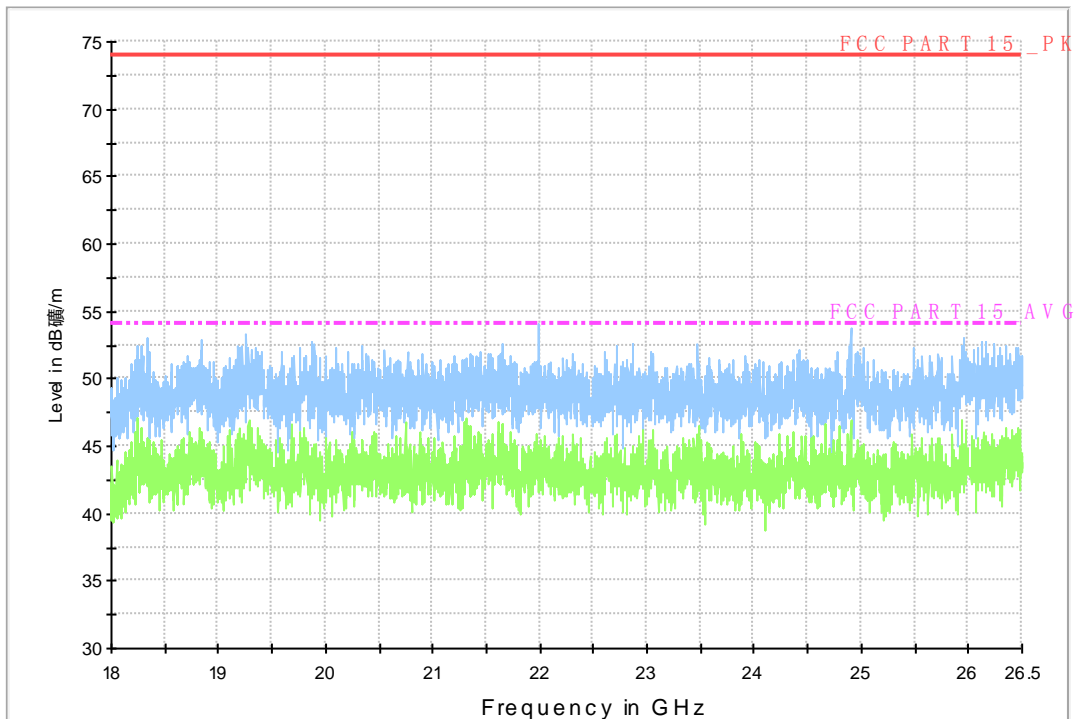


Fig. 100 Radiated Spurious Emission (802.11n-HT20, ch120, 18 GHz-26.5 GHz)

Normal RE_26.5G-40GHz

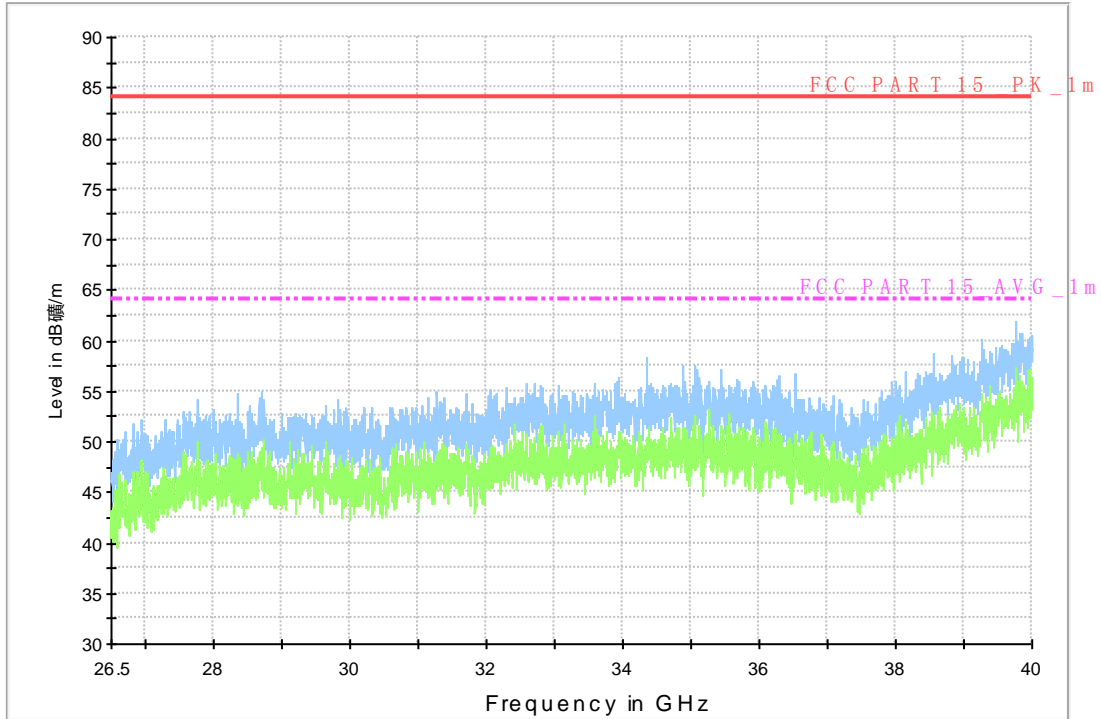


Fig. 101 Radiated Spurious Emission (802.11n-HT20, ch120, 26.5 GHz-40 GHz)

RE_WLAN_1G-6GHz

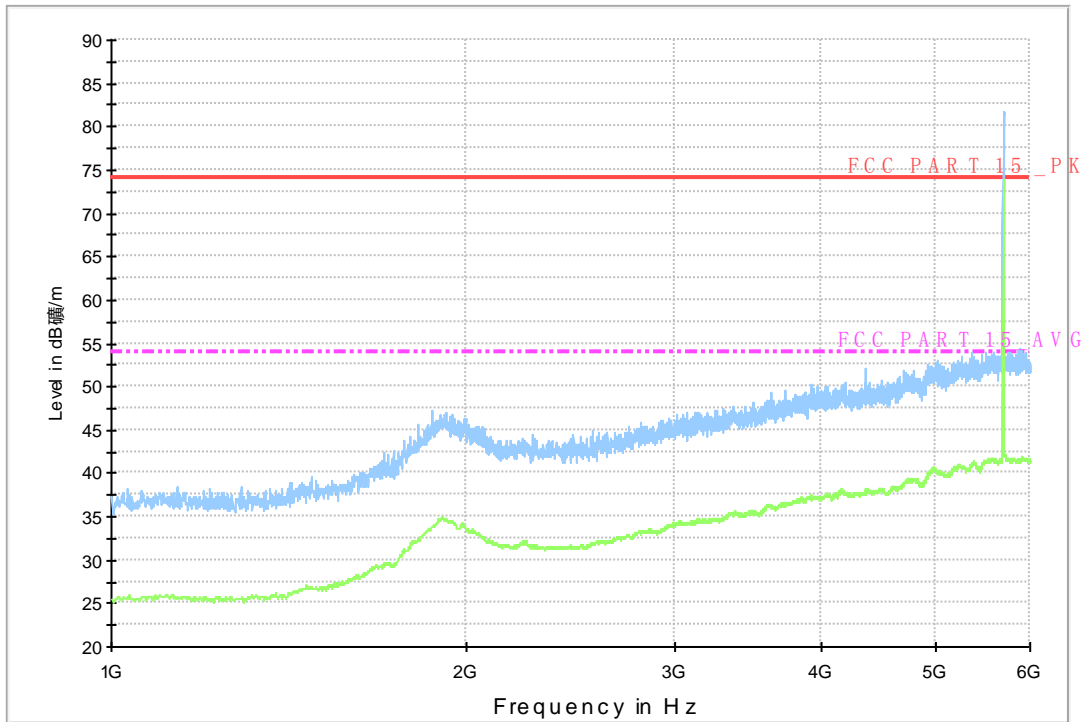


Fig. 102 Radiated Spurious Emission (802.11n-HT20, ch140, 1 GHz-6 GHz)

Normal RE_6G-18GHz

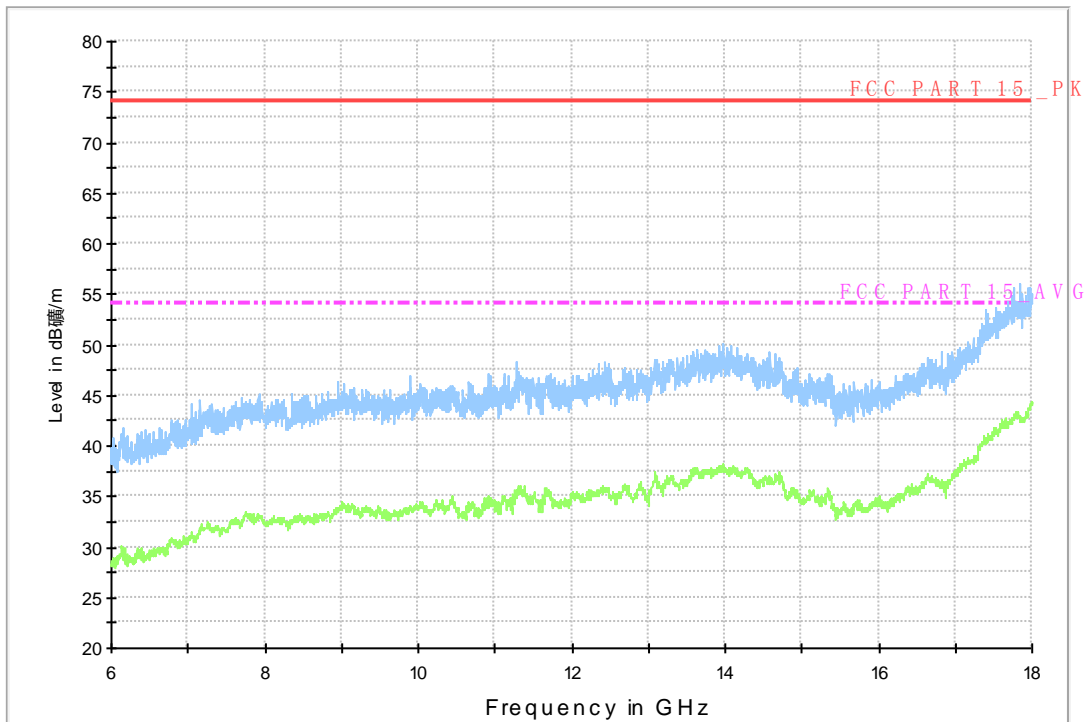


Fig. 103 Radiated Spurious Emission (802.11n-HT20, ch140, 6 GHz-18 GHz)

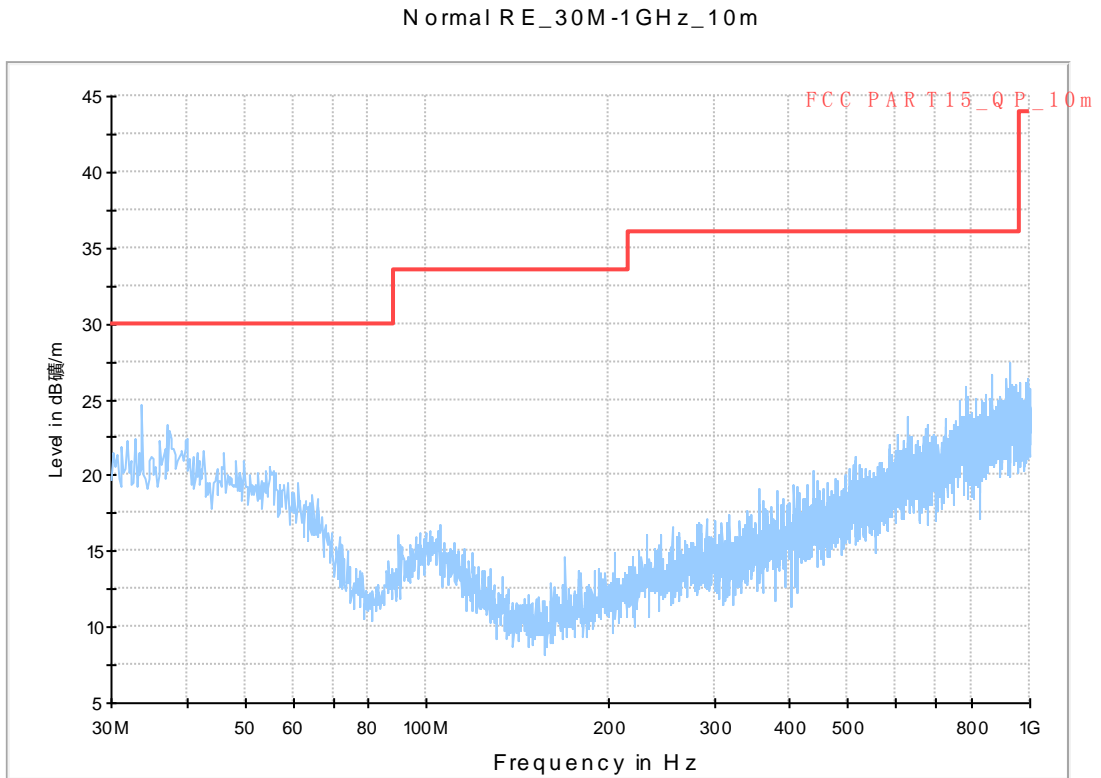


Fig. 104 Radiated Spurious Emission (802.11n-HT40, ch38, 30 MHz-1 GHz)

RE_WLAN_1G-6GHz

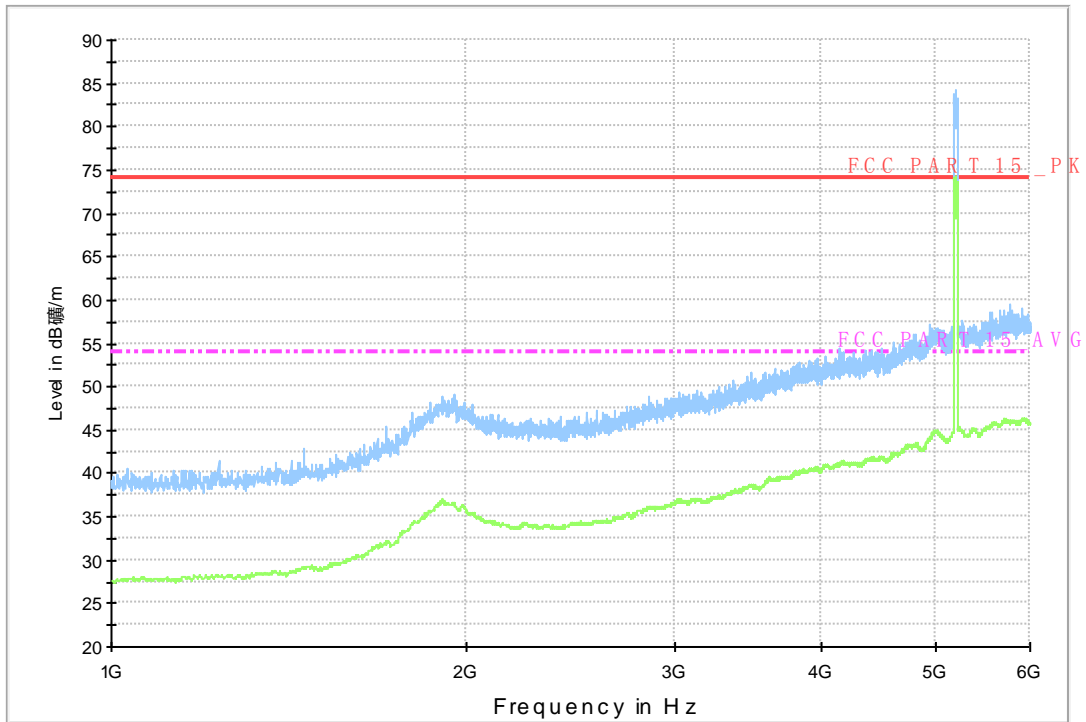


Fig. 105 Radiated Spurious Emission (802.11n-HT40, ch38, 1 GHz-6 GHz)

Normal RE_6G-18GHz

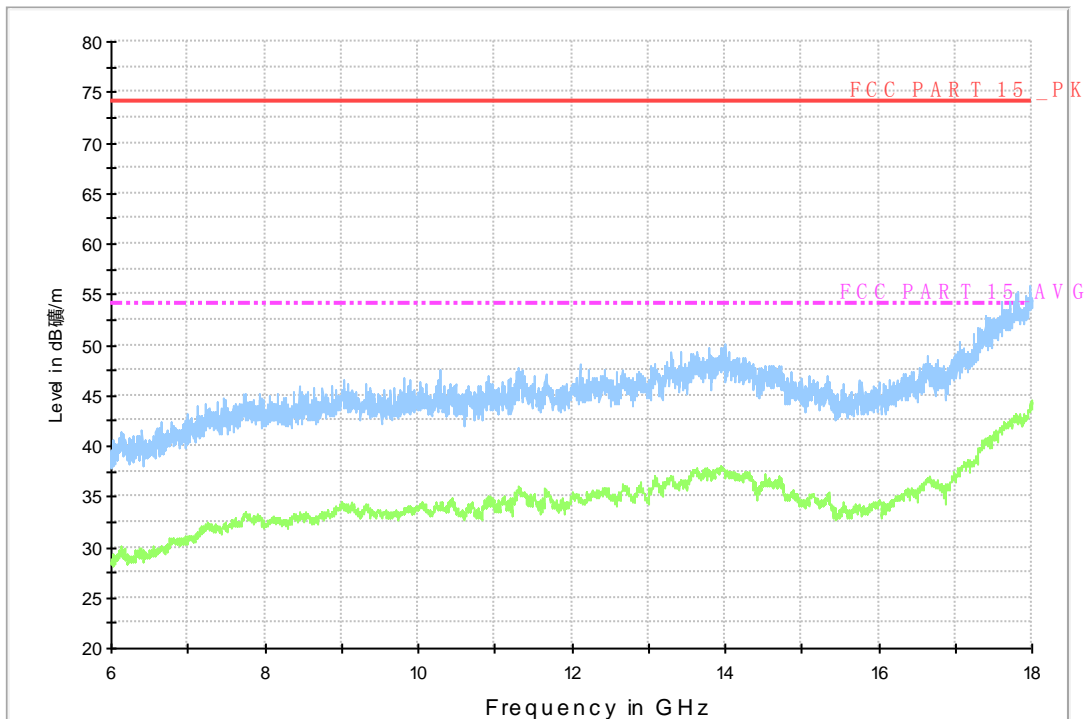


Fig. 106 Radiated Spurious Emission (802.11n-HT40, ch38, 6 GHz-18 GHz)

Normal RE_18G-26.5GHz

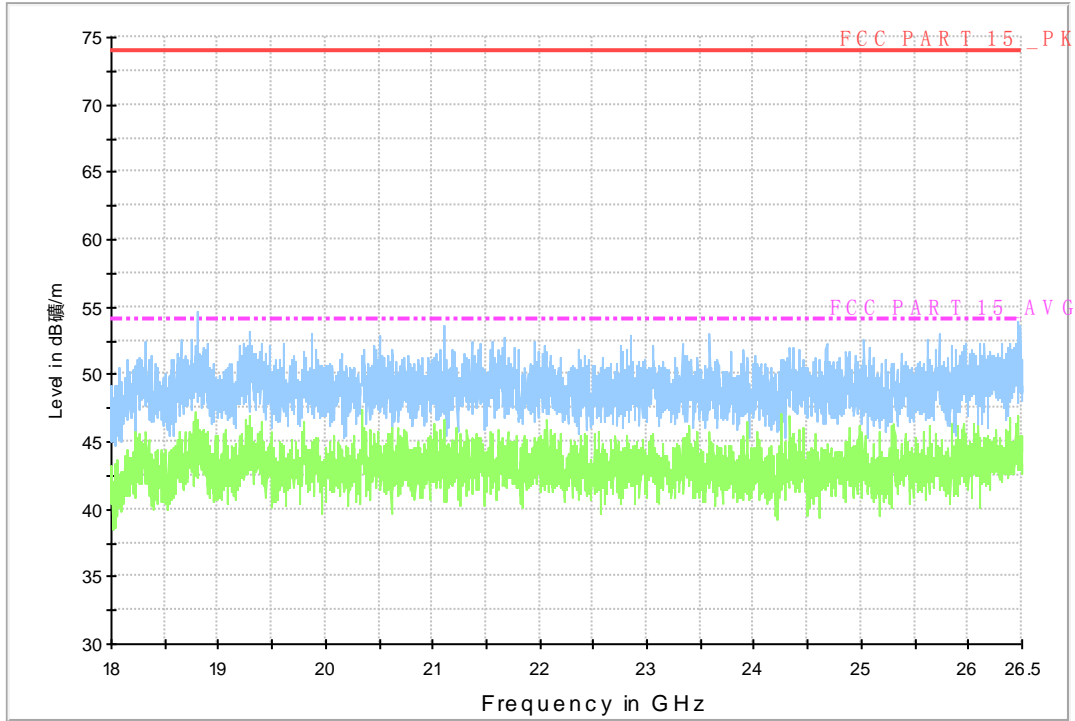


Fig. 107 Radiated Spurious Emission (802.11n-HT40, ch38, 18 GHz-26.5 GHz)

Normal RE_26.5G-40GHz

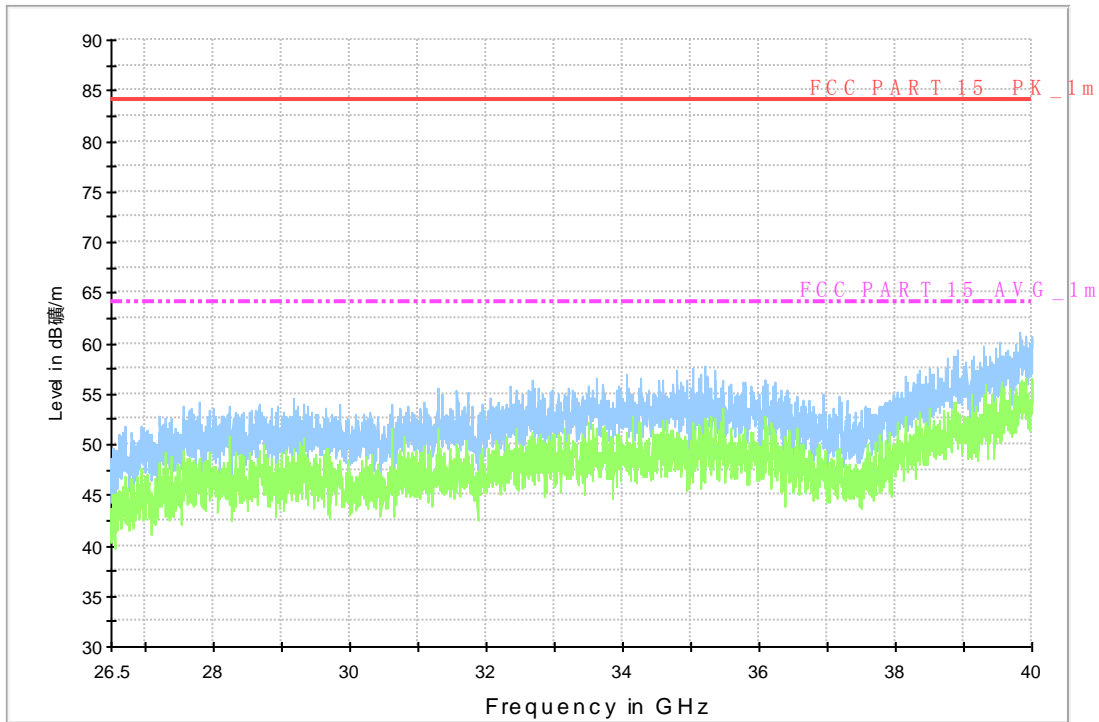


Fig. 108 Radiated Spurious Emission (802.11n-HT40, ch38, 26.5 GHz-40 GHz)

RE_WLAN_1G-6GHz

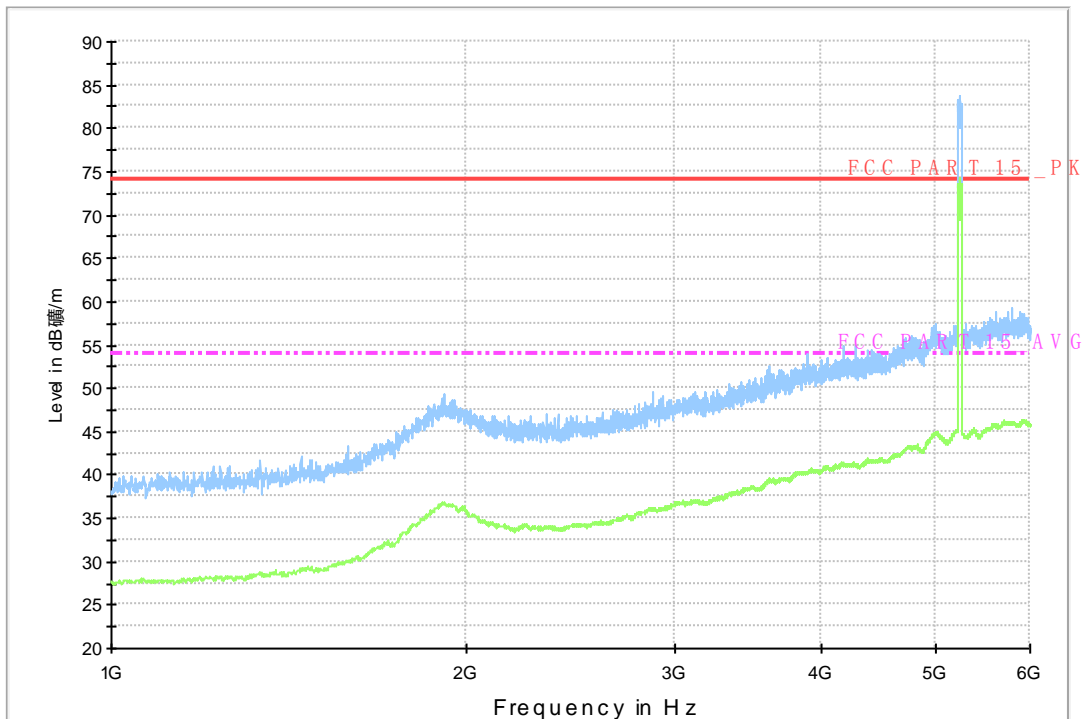


Fig. 109 Radiated Spurious Emission (802.11n-HT40, ch46, 1 GHz-6 GHz)

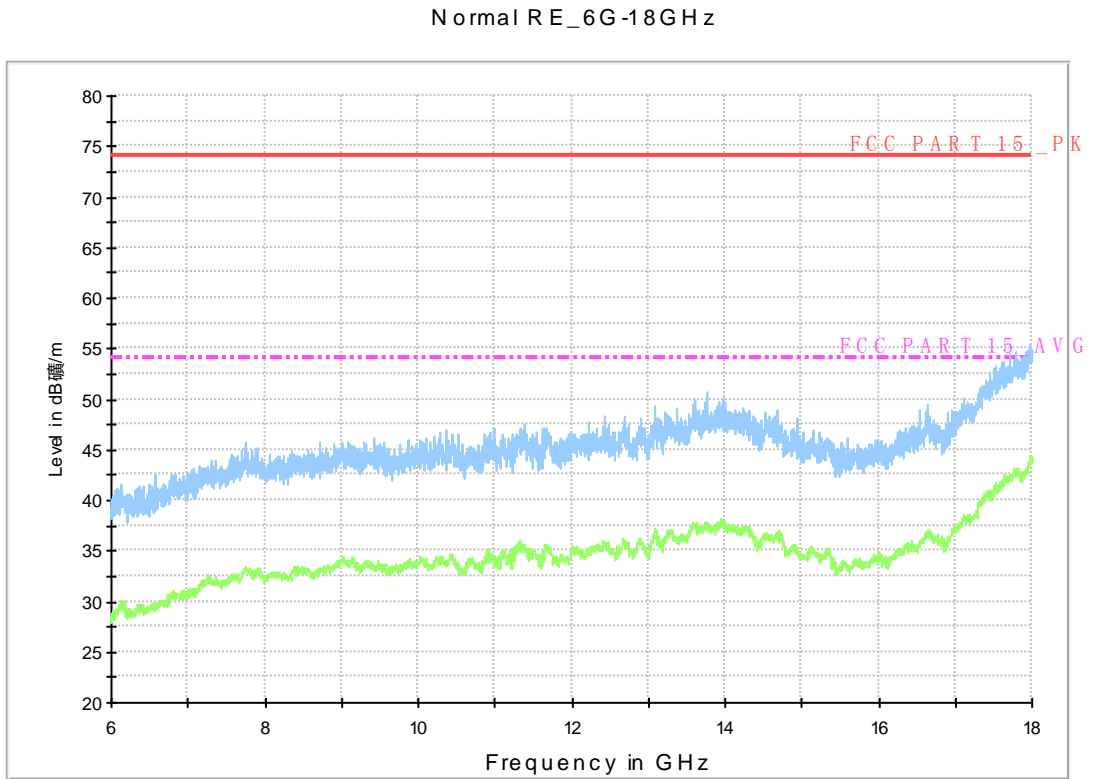


Fig. 110 Radiated Spurious Emission (802.11n-HT40, ch46, 6 GHz-18 GHz)

Normal RE_30M-1GHz_10m

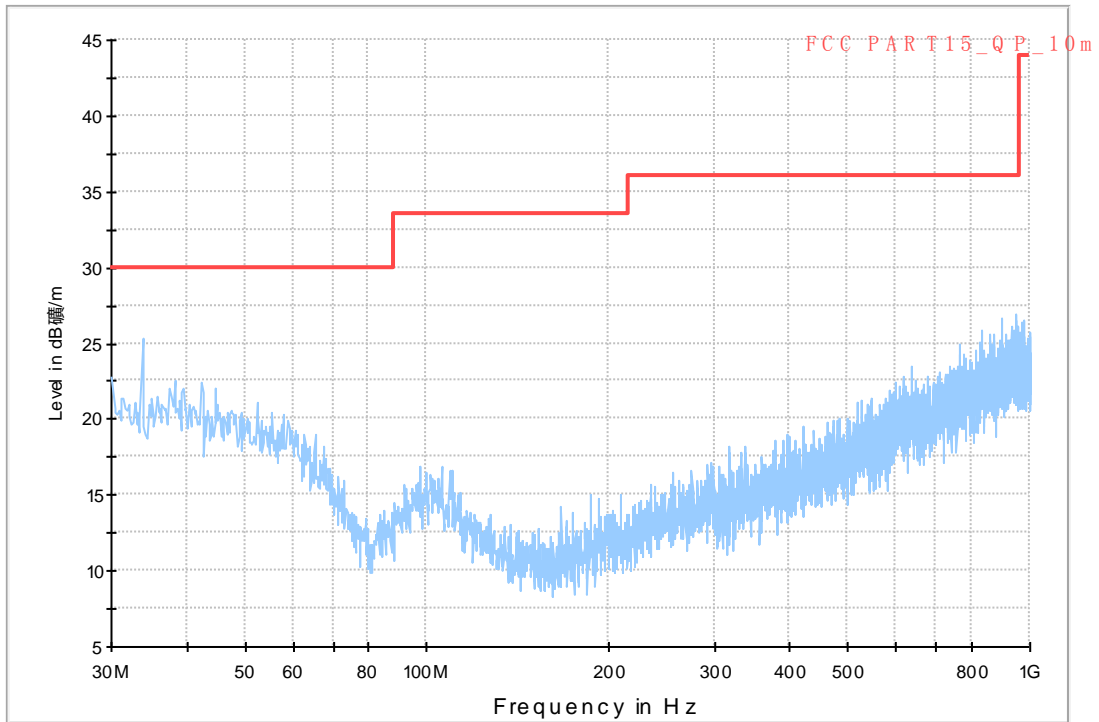


Fig. 111 Radiated Spurious Emission (802.11n-HT40, ch54, 30 MHz-1 GHz)

RE_WLAN_1G-6GHz

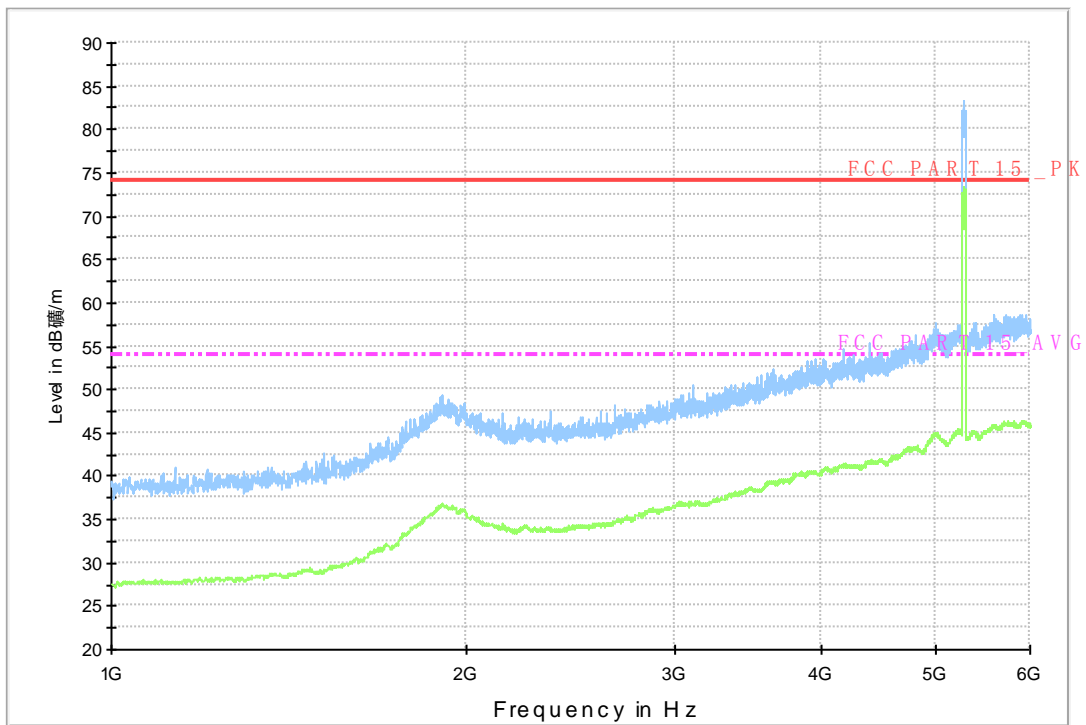


Fig. 112 Radiated Spurious Emission (802.11n-HT40, ch54, 1 GHz-6 GHz)

Normal RE_6G-18GHz

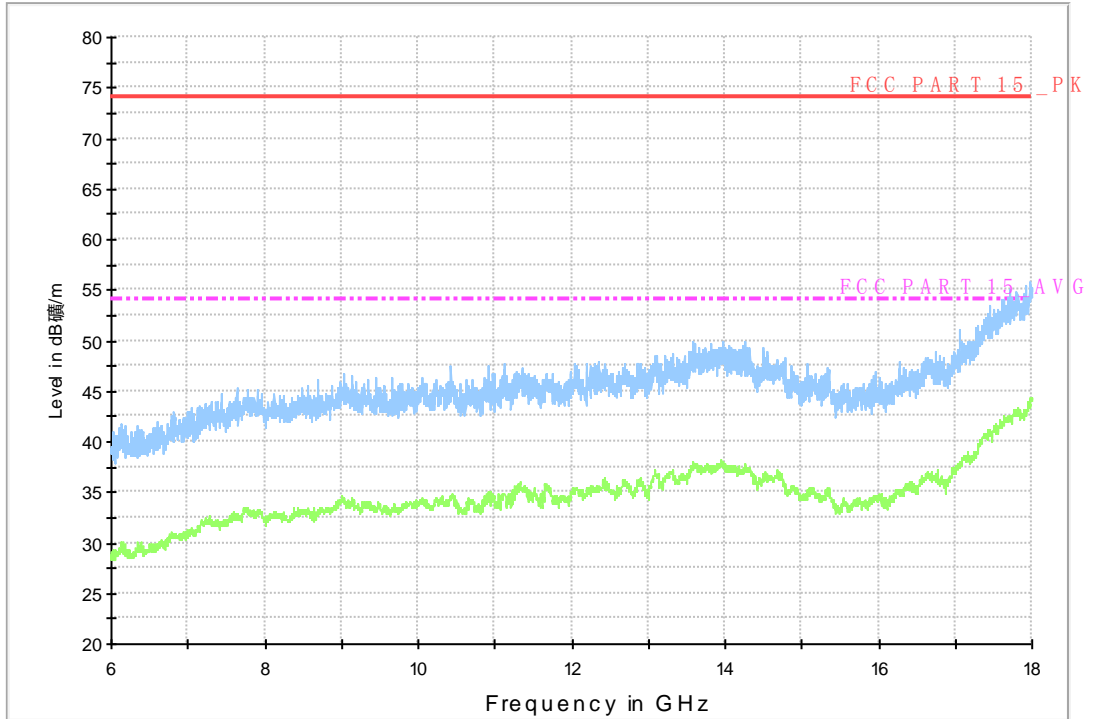


Fig. 113 Radiated Spurious Emission (802.11n-HT40, ch54, 6 GHz-18 GHz)

Normal RE_18G-26.5GHz

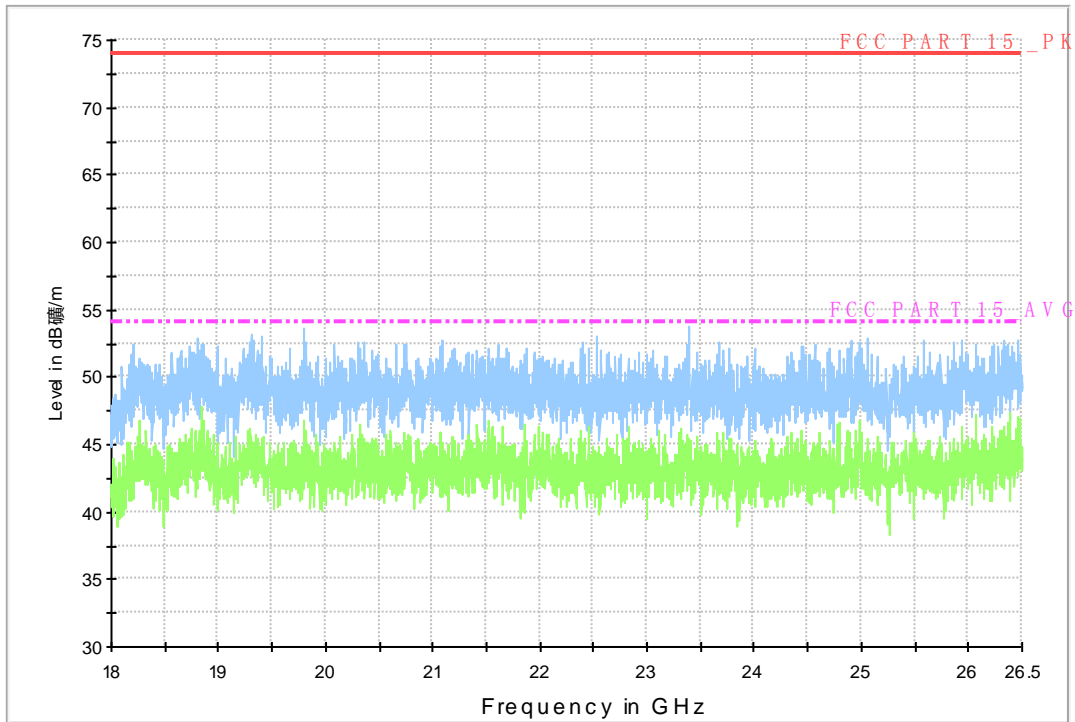


Fig. 114 Radiated Spurious Emission (802.11n-HT40, ch54, 18 GHz-26.5 GHz)

Normal RE_26.5G-40GHz

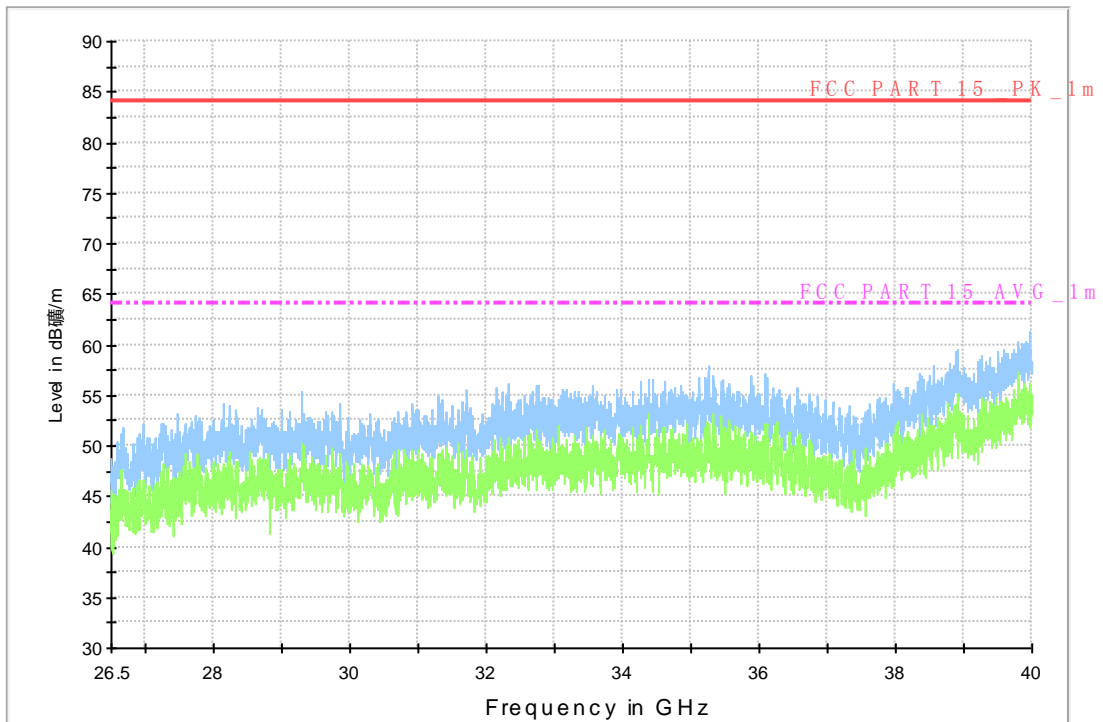


Fig. 115 Radiated Spurious Emission (802.11n-HT40, ch54, 26.5 GHz-40 GHz)

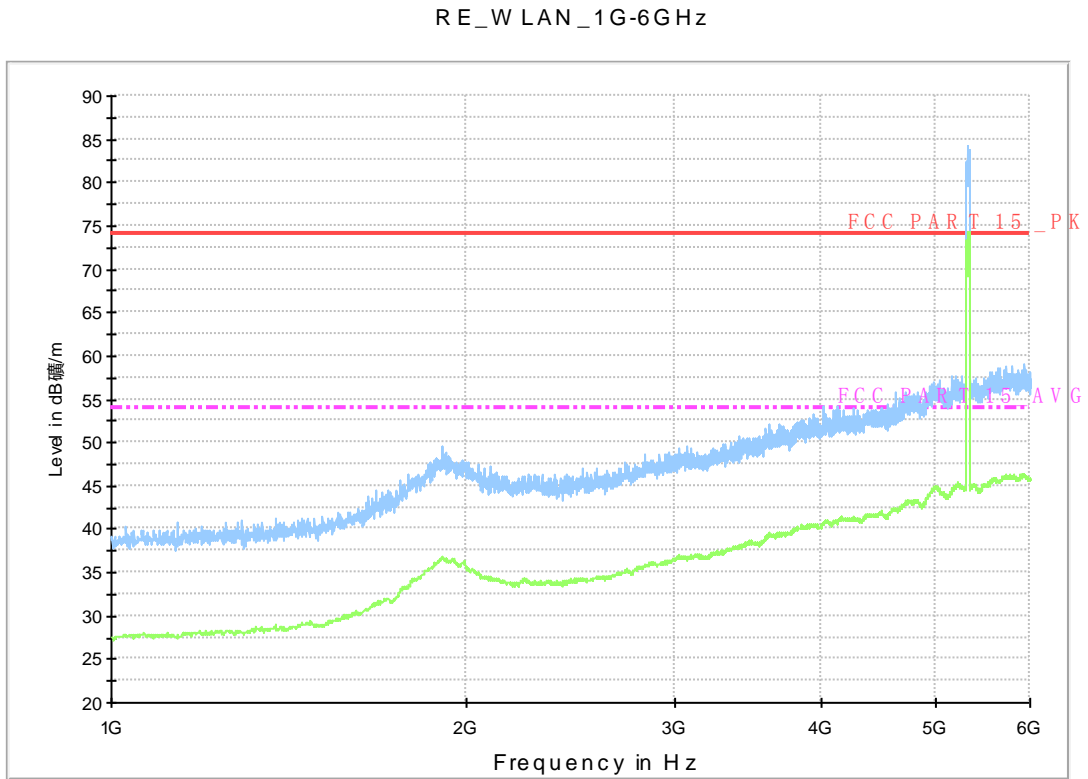


Fig. 116 Radiated Spurious Emission (802.11n-HT40, ch62, 1 GHz-6 GHz)

Normal RE_6G-18GHz

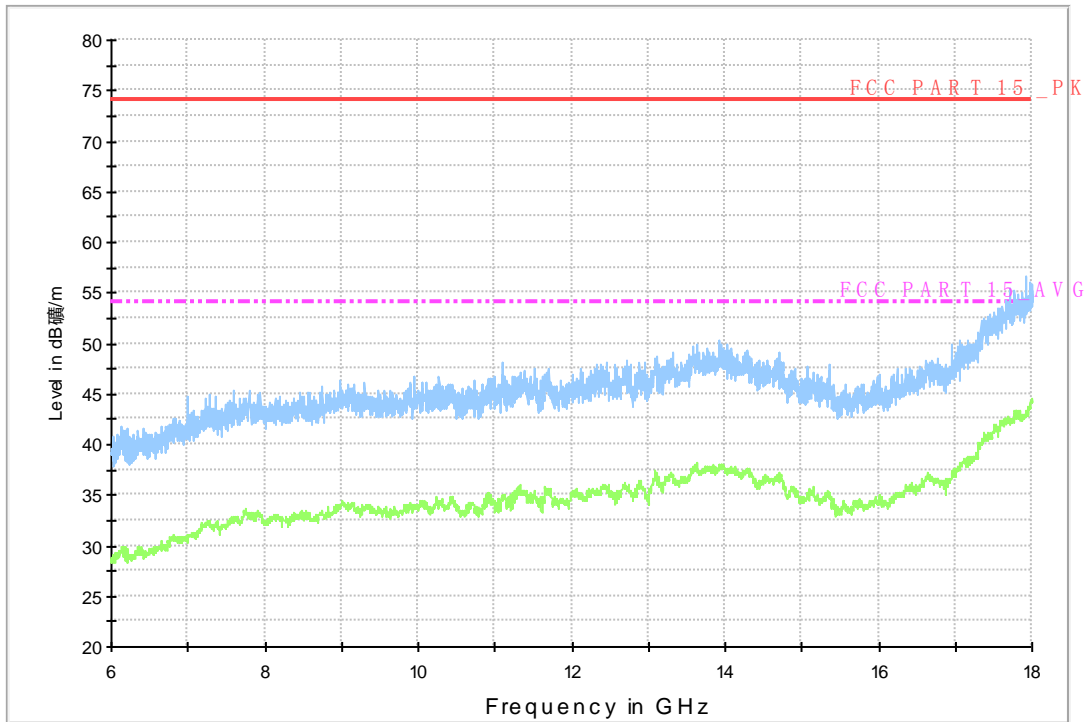


Fig. 117 Radiated Spurious Emission (802.11n-HT40, ch22, 6 GHz-18 GHz)

RE_WLAN_1G-6GHz

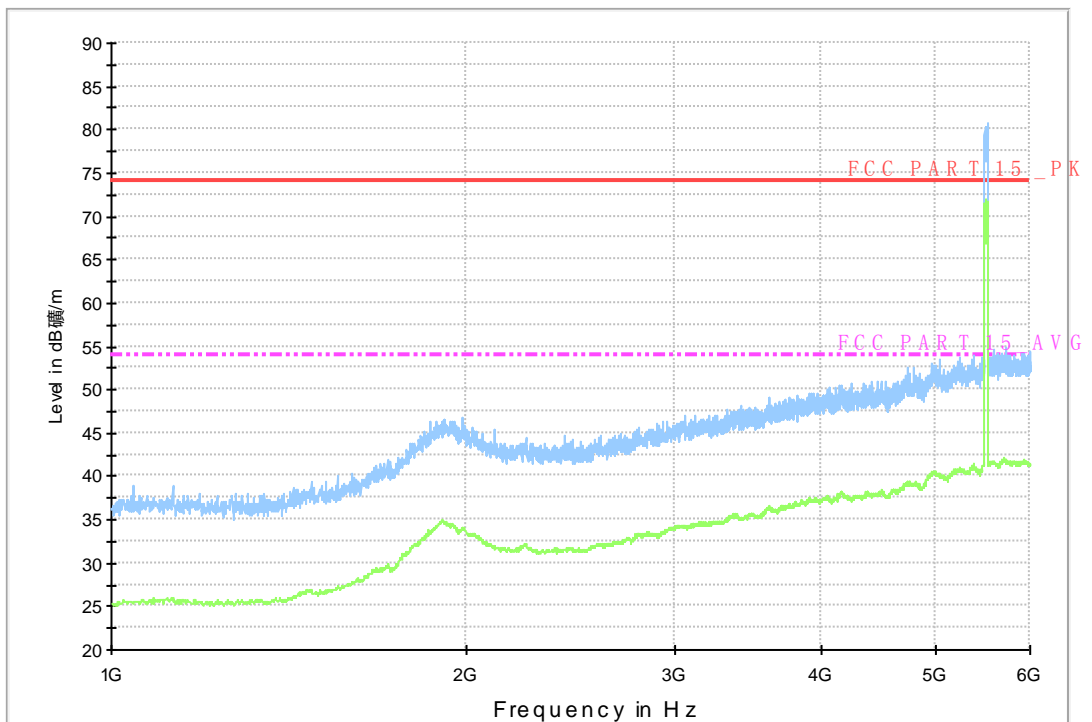


Fig. 118 Radiated Spurious Emission (802.11n-HT40, ch102, 1 GHz-6 GHz)

Normal RE_6G-18GHz

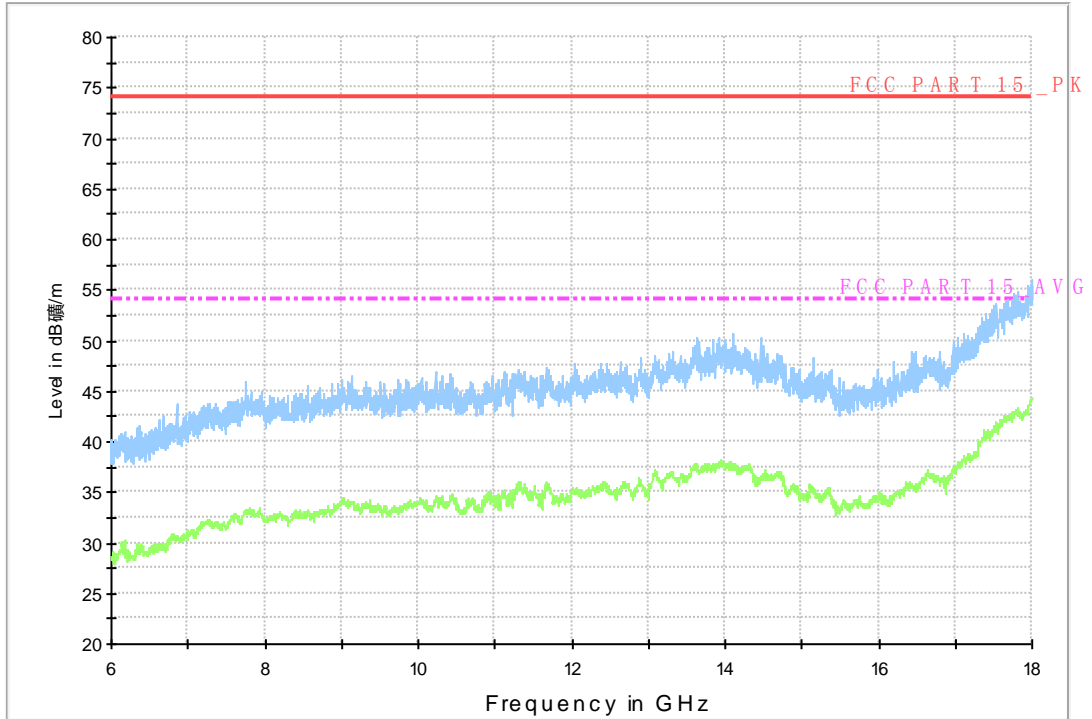


Fig. 119 Radiated Spurious Emission (802.11n-HT40, ch102, 6 GHz-18 GHz)

Normal RE_30M-1GHz_10m

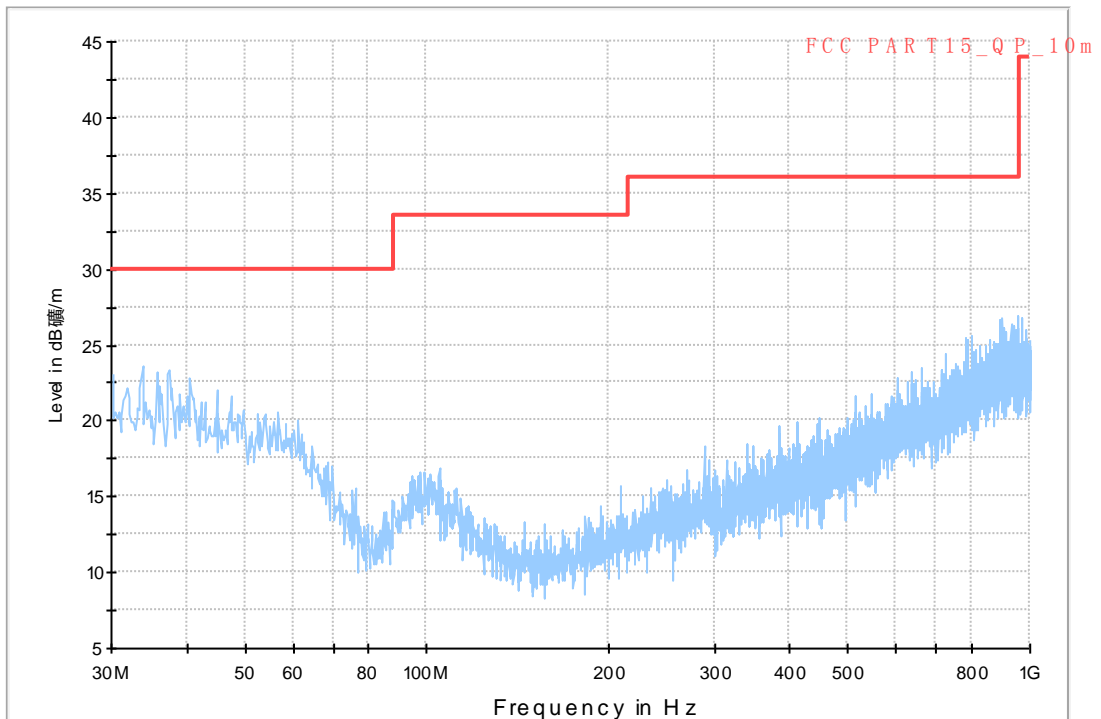


Fig. 120 Radiated Spurious Emission (802.11n-HT40, ch118, 30 MHz-1 GHz)

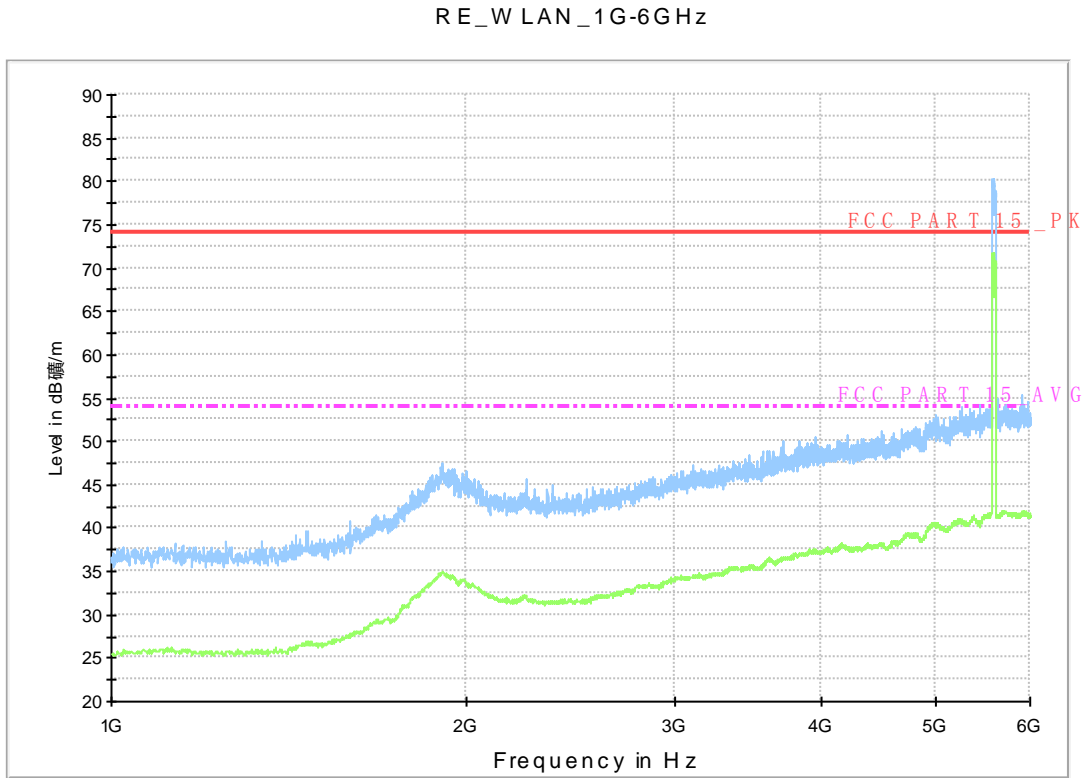


Fig. 121 Radiated Spurious Emission (802.11n-HT40, ch118, 1 GHz-6 GHz)

Normal RE_6G-18GHz

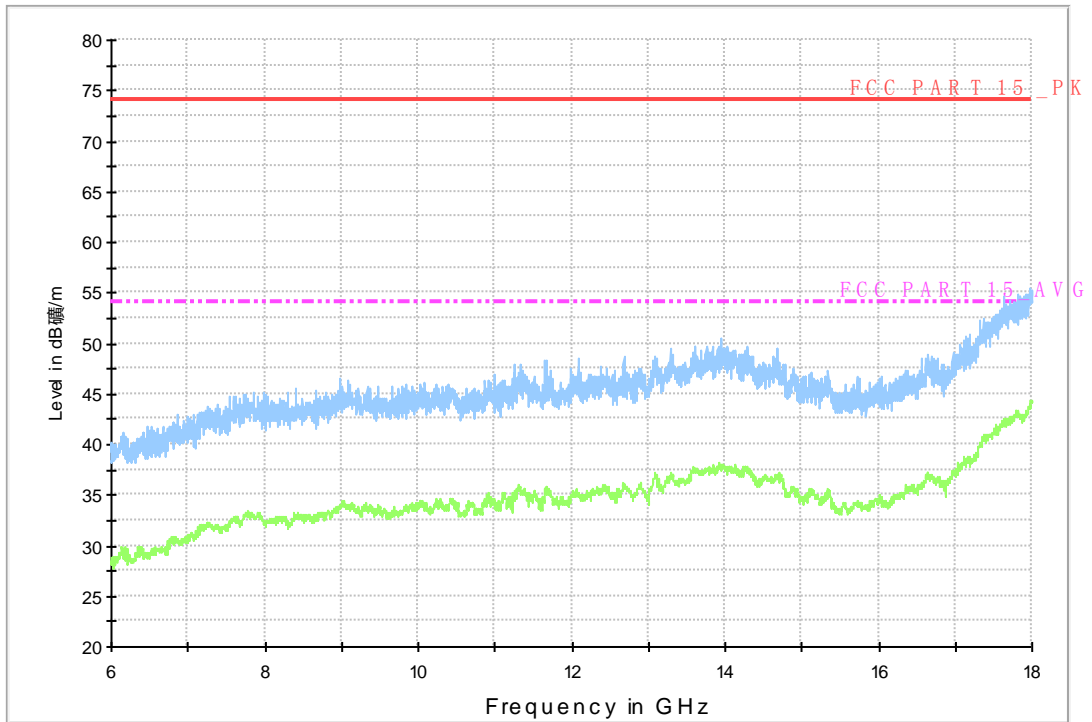


Fig. 122 Radiated Spurious Emission (802.11n-HT40, ch118, 6 GHz-18 GHz)

Normal RE_18G-26.5GHz

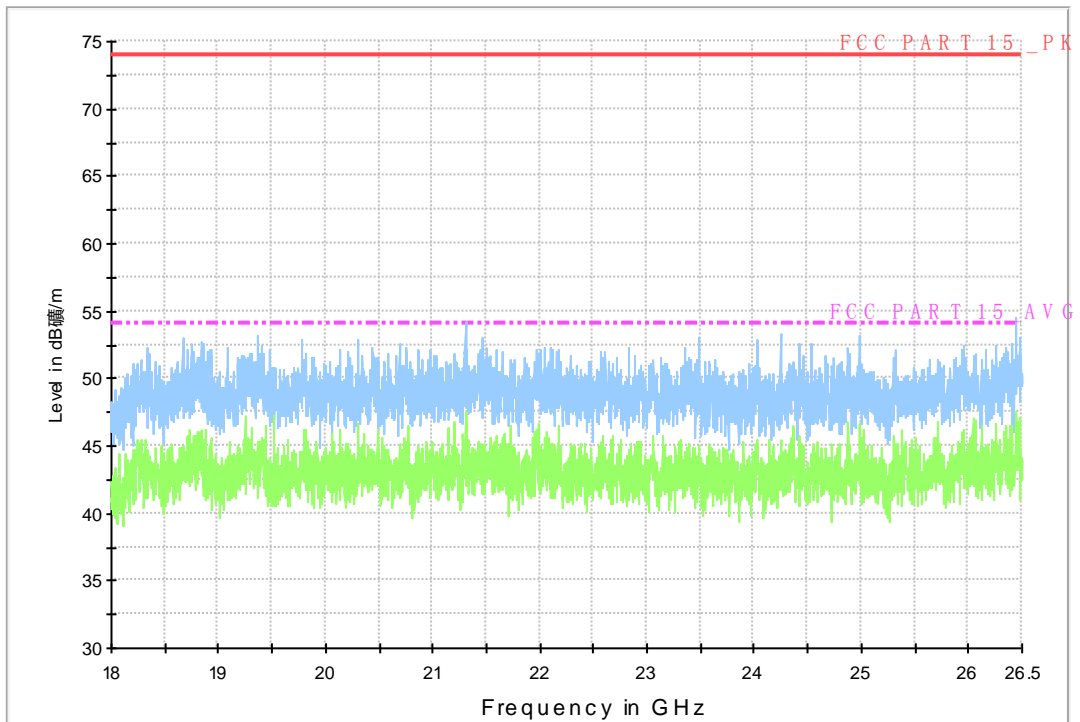


Fig. 123 Radiated Spurious Emission (802.11n-HT40, ch118, 18 GHz-26.5 GHz)

Normal RE_26.5G-40GHz

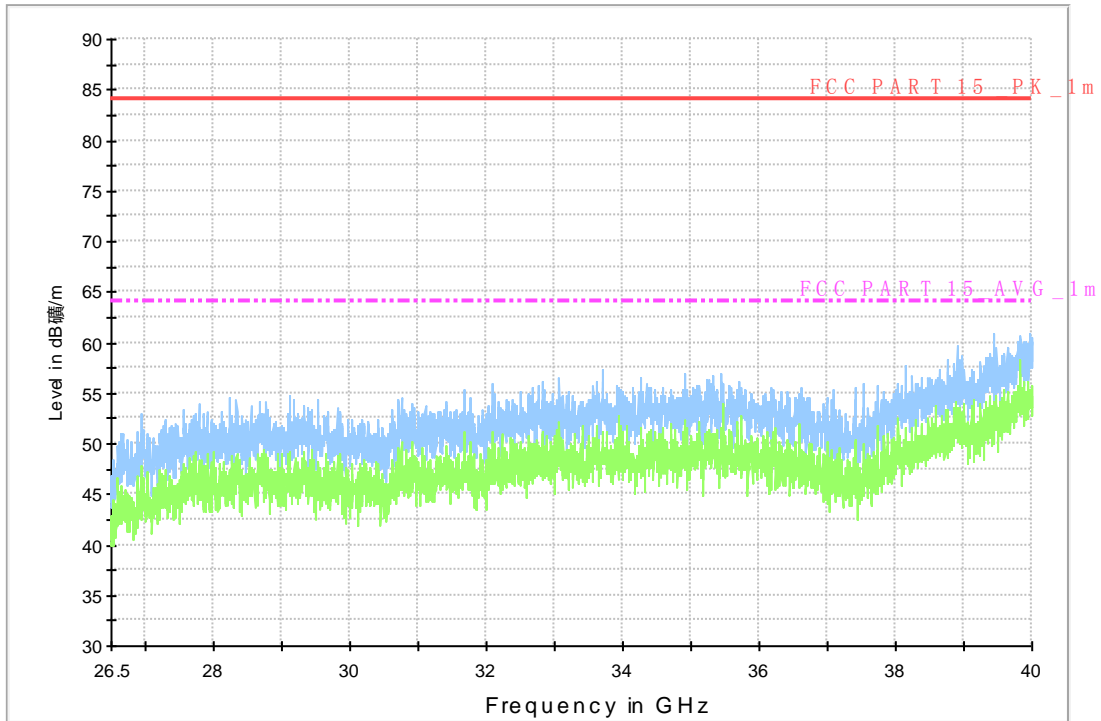


Fig. 124 Radiated Spurious Emission (802.11n-HT40, ch118, 26.5 GHz-40 GHz)

RE_WLAN_1G-6GHz

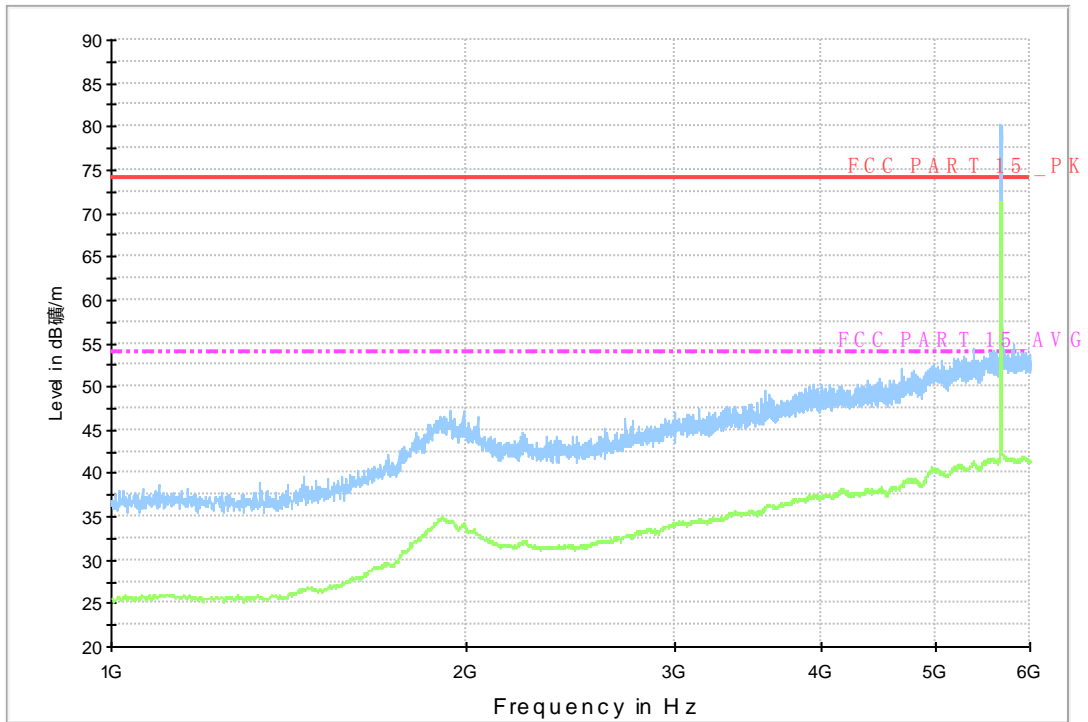


Fig. 125 Radiated Spurious Emission (802.11n-HT40, ch134, 1 GHz-6 GHz)

Normal RE_6G-18GHz

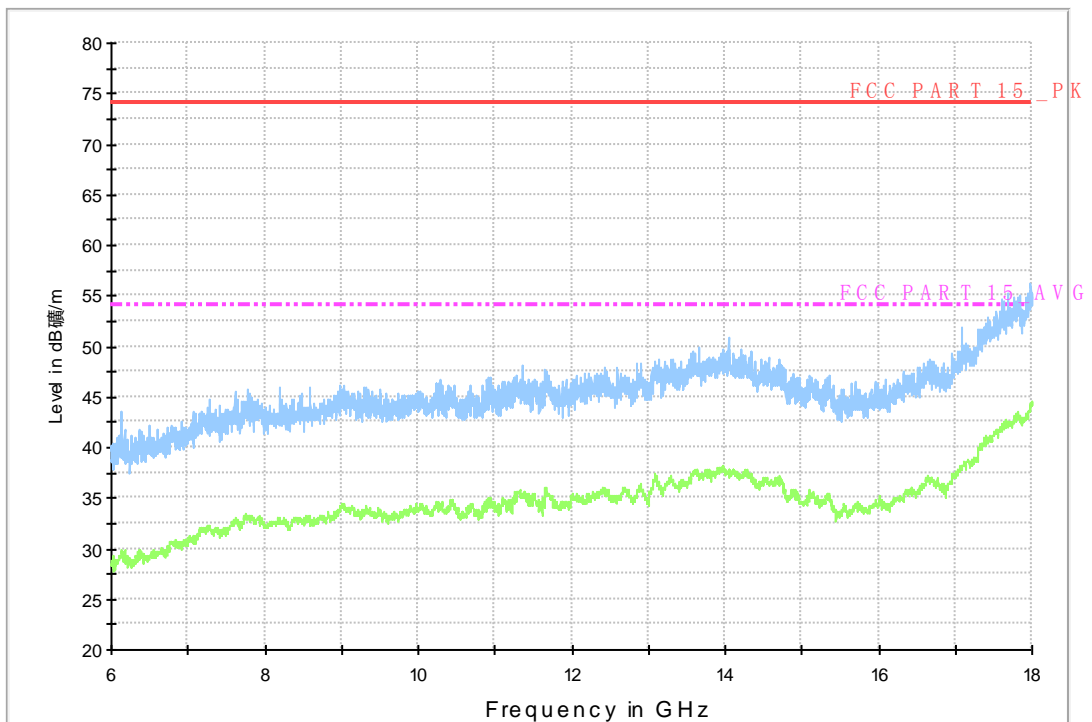


Fig. 126 Radiated Spurious Emission (802.11n-HT40, ch134, 6 GHz-18 GHz)

A.7. Spurious Emissions Radiated < 30MHz

Measurement Limit(15.209, 9kHz-30MHz):

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

The measurement is made according to KDB 789033 D02

Note: The measurement distance during the test is 3m. The limit used in plots is recalculated based on the extrapolation factor of 40 dB/decade.

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 2.6\text{dB}$, $k=2$.

Measurement Results:

Mode	Frequency Range	Test Results	Conclusion
802.11a	9 kHz ~30 MHz	Fig.127	P

Conclusion: PASS

Test graphs as below:

RE_9kHz-30MHz

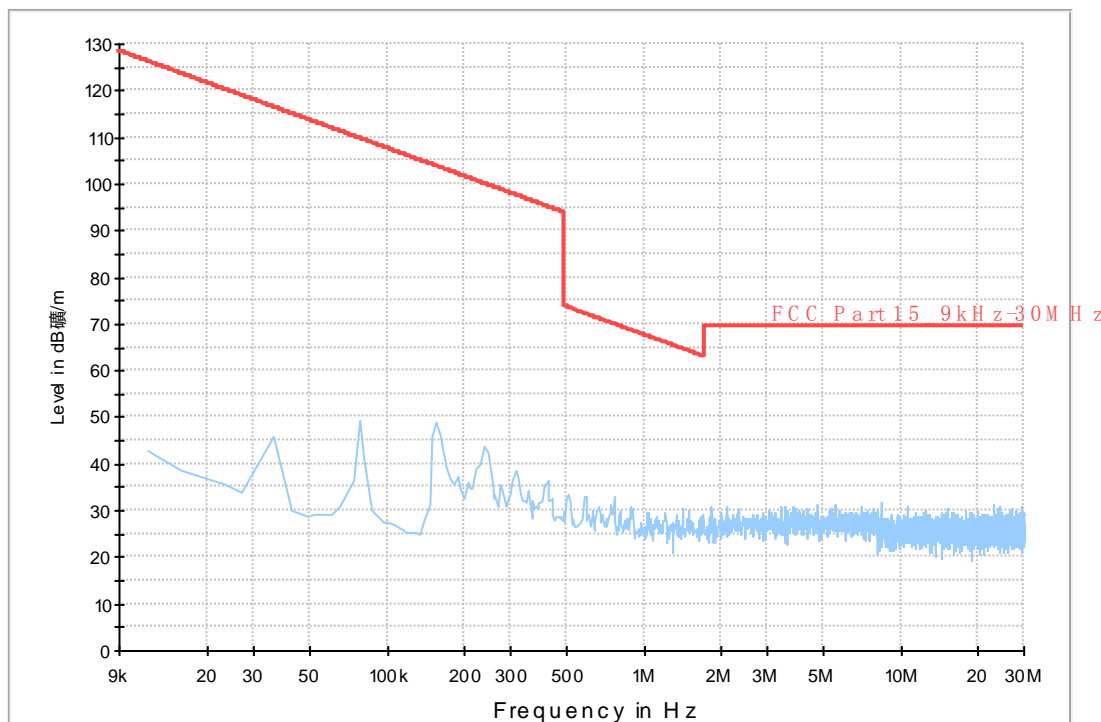


Fig. 127 Radiated Spurious Emission (802.11a, ch40, 9 kHz ~30 MHz)

A.8. Conducted Emission (150kHz- 30MHz)

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 3.2\text{dB}$, $k=2$.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig. 122	Fig. 123	P
0.5 to 5	56			
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.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.128	Fig.129	P
0.5 to 5	46			
5 to 30	50			

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:

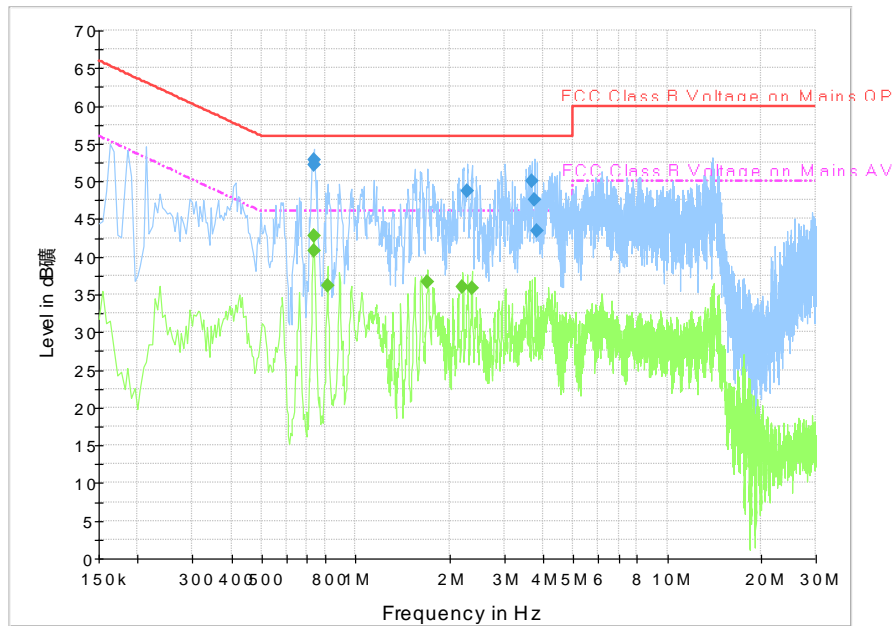


Fig. 128 Conducted Emission(802.11a, Ch40, TX)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.735000	52.8	GND	L1	9.8	3.2	56.0
0.739500	52.2	GND	L1	9.8	3.8	56.0
2.278500	48.8	GND	L1	9.7	7.2	56.0
3.669000	50.0	GND	L1	9.7	6.0	56.0
3.759000	47.5	GND	L1	9.7	8.5	56.0
3.831000	43.4	GND	N	9.7	12.6	56.0

Measurement Result:

Frequency (MHz)	Average (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.735000	42.8	GND	L1	9.8	3.2	46.0
0.739500	40.8	GND	L1	9.8	5.2	46.0
0.811500	36.2	GND	L1	9.8	9.8	46.0
1.698000	36.7	GND	L1	9.7	9.3	46.0
2.206500	36.1	GND	L1	9.7	9.9	46.0
2.359500	35.8	GND	L1	9.7	10.2	46.0

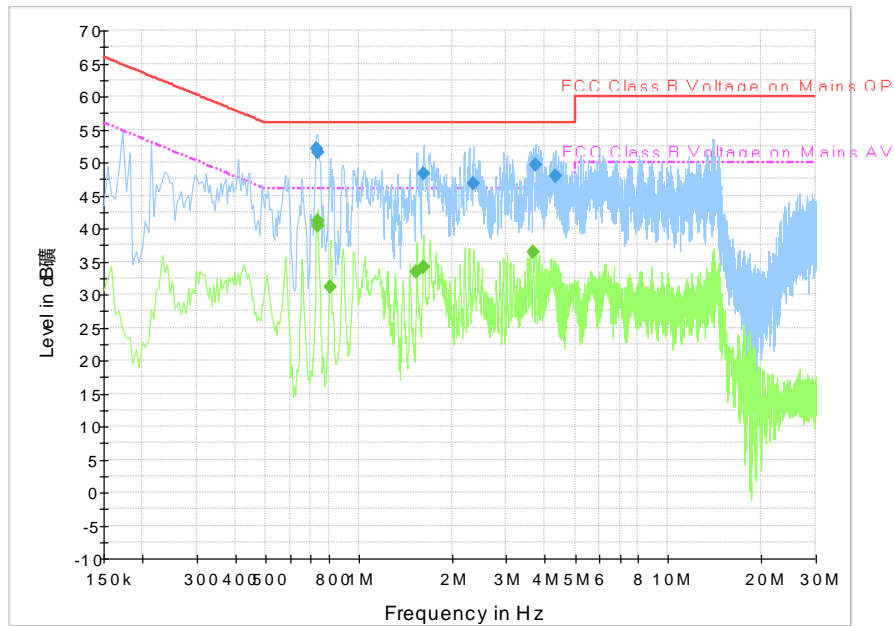


Fig. 129 Conducted Emission(802.11a, IDLE)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.730500	52.1	GND	L1	9.8	3.9	56.0
0.739500	51.5	GND	L1	9.8	4.5	56.0
1.617000	48.3	GND	L1	9.7	7.7	56.0
2.341500	46.7	GND	L1	9.7	9.3	56.0
3.732000	49.7	GND	L1	9.7	6.3	56.0
4.312500	47.9	GND	L1	9.7	8.1	56.0

Measurement Result:

Frequency (MHz)	Average (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.735000	41.1	GND	L1	9.8	4.9	46.0
0.739500	40.3	GND	L1	9.8	5.7	46.0
0.807000	31.0	GND	L1	9.8	15.0	46.0
1.540500	33.3	GND	L1	9.7	12.7	46.0
1.617000	34.1	GND	L1	9.7	11.9	46.0
3.660000	36.4	GND	L1	9.7	9.6	46.0

A.9. Peak Excursion

Measurement Limit:

Standard	Limit (dB)
FCC 47 CFR Part 15.407	13

The measurement is made according to KDB 789033 D02, the method SA-1 is used for PPSD measurement.

Measurement Uncertainty:

Measurement Uncertainty	0.75 dB
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Measurement Result:

11a mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.130	13.61	Fig.131	13.42	Fig.132	14.20
Average(dBm)	Fig.133	6.44	Fig.134	6.08	Fig.135	6.60
Result (dB)	7.17		7.34		7.60	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.136	13.99	Fig.137	13.38	Fig.138	13.62
Average(dBm)	Fig.139	5.60	Fig.140	5.51	Fig.141	5.64
Result (dB)	8.39		7.87		7.98	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5580MHz (Ch116)		5700MHz (Ch140)	
Peak (dBm)	Fig.142	13.63	Fig.143	13.51	Fig.144	13.79
Average(dBm)	Fig.145	6.13	Fig.146	5.96	Fig.147	6.28
Result (dB)	7.50		7.55		7.51	

11n-HT20 mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.148	14.53	Fig.149	13.95	Fig.150	13.56
Average(dBm)	Fig.151	6.62	Fig.152	6.21	Fig.153	6.02
Result (dB)	7.91		7.74		7.54	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.154	13.31	Fig.155	12.91	Fig.156	13.07
Average(dBm)	Fig.157	5.73	Fig.158	5.64	Fig.159	5.69
Result (dB)	7.90		7.27		7.38	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5580MHz (Ch116)		5700MHz (Ch140)	
Peak (dBm)	Fig.160	14.36	Fig.161	13.45	Fig.162	13.78
Average(dBm)	Fig.163	6.37	Fig.164	6.12	Fig.165	6.28
Result (dB)	7.99		7.33		7.50	

11n-HT40 mode

Type	Peak Excursion							
	5190MHz (Ch38)		5230MHz (Ch46)		5270MHz (Ch54)		5310 MHz (Ch62)	
Peak (dBm)	Fig.166	10.38	Fig.167	10.66	Fig.168	10.12	Fig.169	10.07
Average(dBm)	Fig.170	2.68	Fig.171	2.87	Fig.172	2.07	Fig.173	2.09
Result (dB)	7.70		7.79		8.05		7.98	

Type	Test Result (dBm)					
	5510MHz (Ch102)		5550MHz (Ch110)		5670MHz (Ch134)	
Peak (dBm)	Fig.174	10.68	Fig.175	10.95	Fig.176	10.61
Average(dBm)	Fig.177	2.70	Fig.178	2.35	Fig.179	2.55
Result (dB)	7.98		8.60		8.06	

Conclusion: PASS

Test graphs as below:



Fig. 130 Peak Excursions (802.11a, ch36, peak)



Fig. 131 Peak Excursions (802.11a, ch40, peak)



Fig. 132 Peak Excursions (802.11a, ch48, peak)



Fig. 133 Peak Excursions (802.11a, ch36, average)



Fig. 134 Peak Excursions (802.11a, ch40, average)



Fig. 135 Peak Excursions (802.11a, ch48, average)

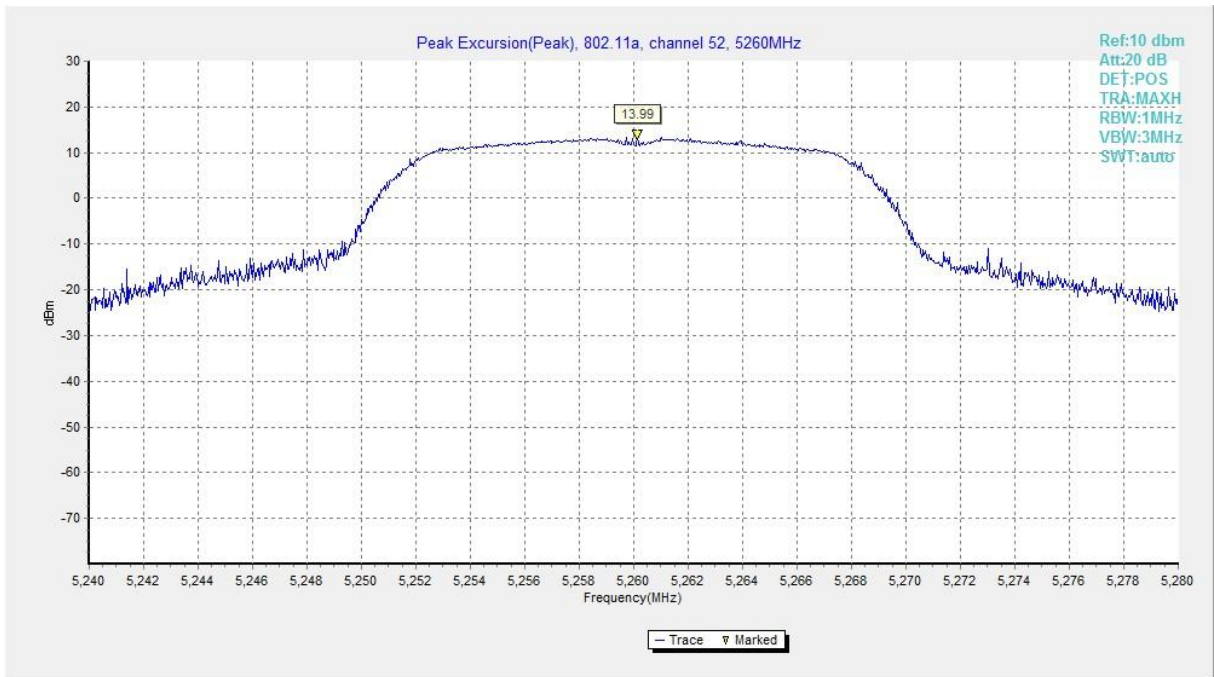


Fig. 136 Peak Excursions (802.11a, ch52, peak)

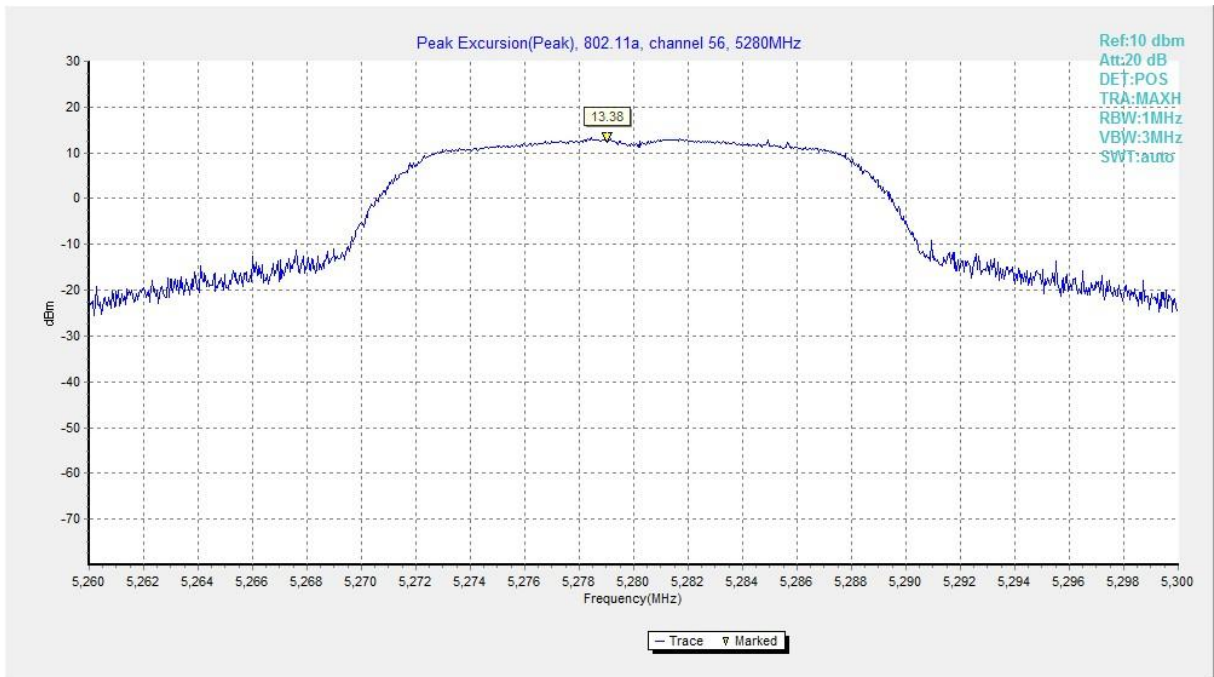


Fig. 137 Peak Excursions (802.11a, ch56, peak)



Fig. 138 Peak Excursions (802.11a, ch64, peak)



Fig. 139 Peak Excursions (802.11a, ch52, average)



Fig. 140 Peak Excursions (802.11a, ch56, average)



Fig. 141 Peak Excursions (802.11a, ch64, average)

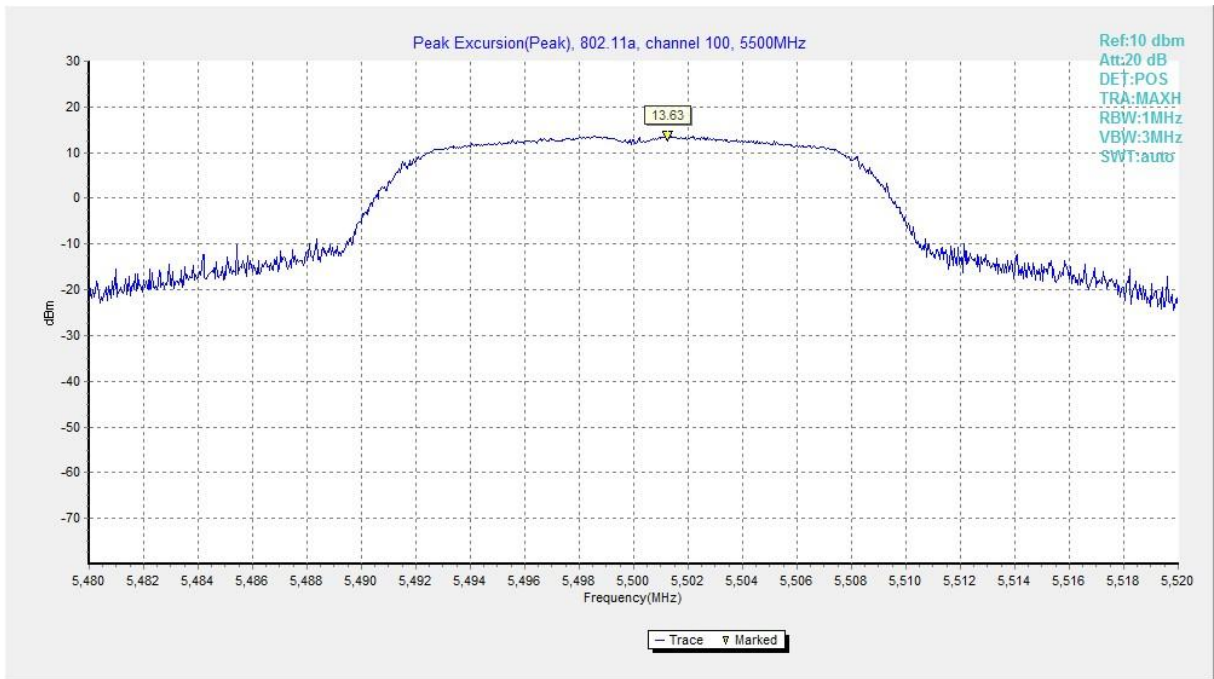


Fig. 142 Peak Excursions (802.11a, ch100, peak)

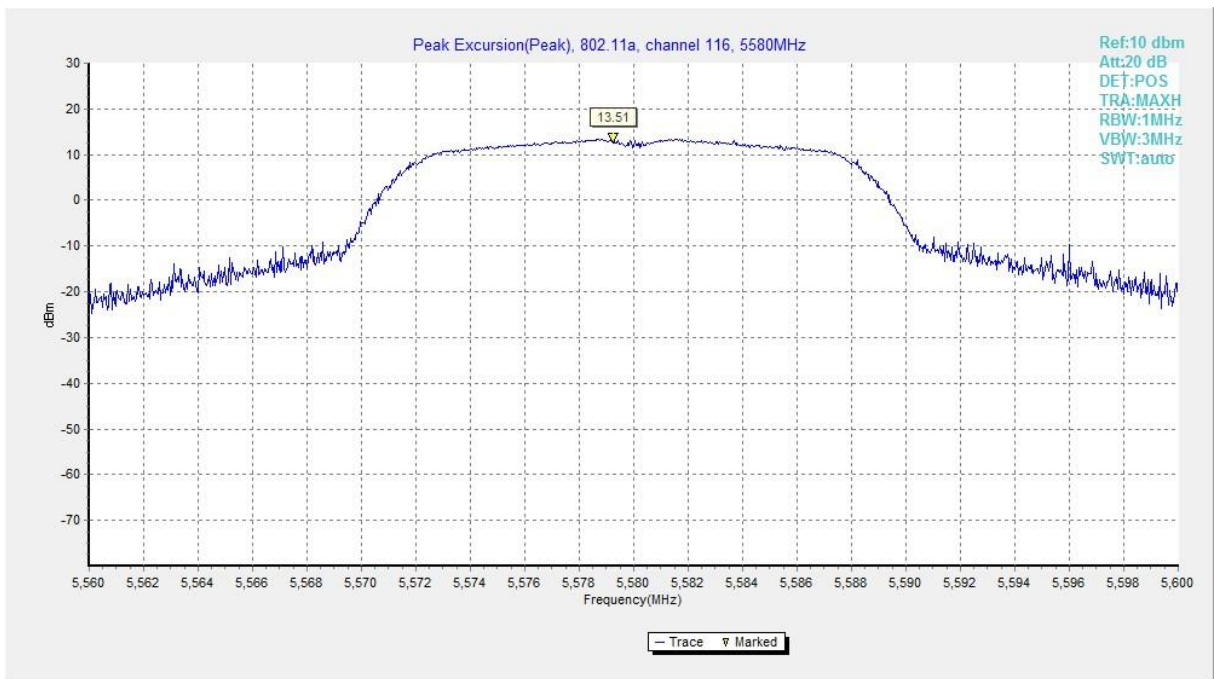


Fig. 143 Peak Excursions (802.11a, ch116, peak)

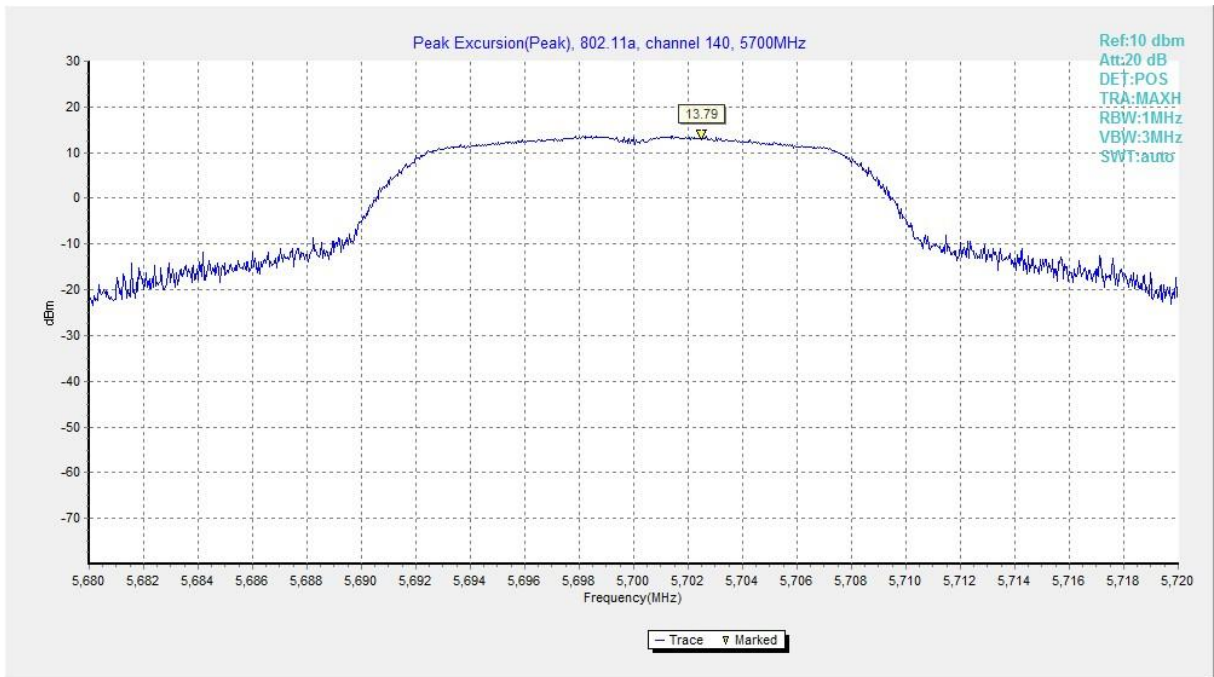


Fig. 144 Peak Excursions (802.11a, ch140, peak)



Fig. 145 Peak Excursions (802.11a, ch100, average)



Fig. 146 Peak Excursions (802.11a, ch116, average)



Fig. 147 Peak Excursions (802.11a, ch140, average)



Fig. 148 Peak Excursions (802.11n-HT20, ch36, peak)



Fig. 149 Peak Excursions (802.11n-HT20, ch40, peak)

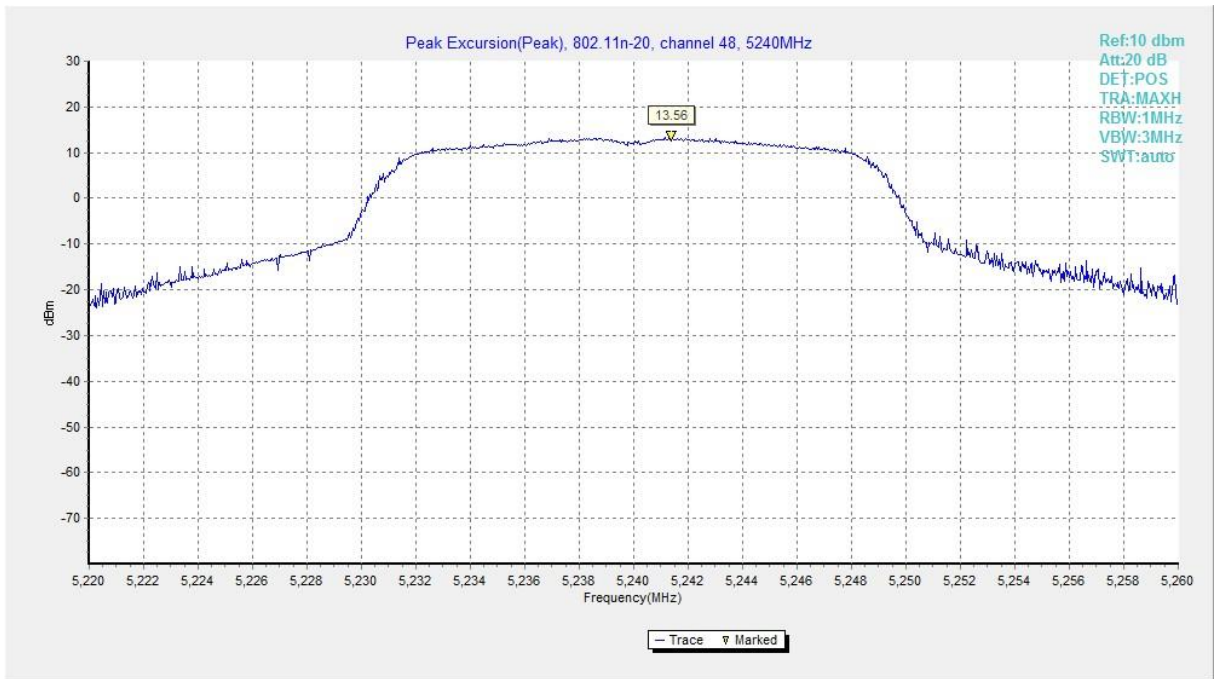


Fig. 150 Peak Excursions (802.11n-HT20, ch48, peak)



Fig. 151 Peak Excursions (802.11n-HT20, ch36, average)



Fig. 152 Peak Excursions (802.11n-HT20, ch40, average)



Fig. 153 Peak Excursions (802.11n-HT20, ch48, average)



Fig. 154 Peak Excursions (802.11n-HT20, ch52, peak)



Fig. 155 Peak Excursions (802.11n-HT20, ch56, peak)



Fig. 156 Peak Excursions (802.11n-HT20, ch64, peak)

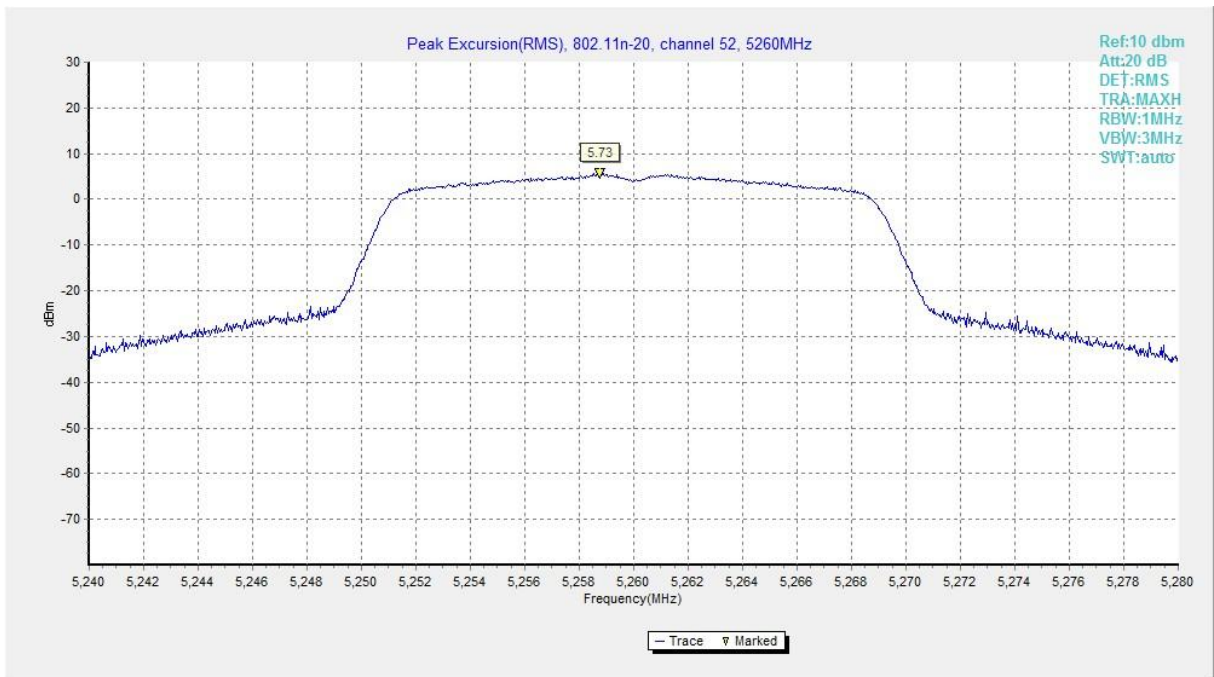


Fig. 157 Peak Excursions (802.11n-HT20, ch52, average)



Fig. 158 Peak Excursions (802.11n-HT20, ch56, average)



Fig. 159 Peak Excursions (802.11n-HT20, ch64, average)



Fig. 160 Peak Excursions (802.11n-HT20, ch100, peak)



Fig. 161 Peak Excursions (802.11n-HT20, ch116, peak)



Fig. 162 Peak Excursions (802.11n-HT20, ch140, peak)



Fig. 163 Peak Excursions (802.11n-HT20, ch100, average)



Fig. 164 Peak Excursions (802.11n-HT20, ch116, average)



Fig. 165 Peak Excursions (802.11n-HT20, ch140, average)



Fig. 166 Peak Excursions (802.11n-HT40, ch38, peak)



Fig. 167 Peak Excursions (802.11n-HT40, ch46, peak)



Fig. 168 Peak Excursions (802.11n-HT40, ch54, peak)



Fig. 169 Peak Excursions (802.11n-HT40, ch62, peak)



Fig. 170 Peak Excursions (802.11n-HT40, ch38, average)



Fig. 171 Peak Excursions (802.11n-HT40, ch46, average)



Fig. 172 Peak Excursions (802.11n-HT40, ch54, average)



Fig. 173 Peak Excursions (802.11n-HT40, ch62, average)



Fig. 174 Peak Excursions (802.11n-HT40, ch102, peak)



Fig. 175 Peak Excursions (802.11n-HT40, ch110, peak)



Fig. 176 Peak Excursions (802.11n-HT40, ch134, peak)



Fig. 177 Peak Excursions (802.11n-HT40, ch102, average)



Fig. 178 Peak Excursions (802.11n-HT40, ch110, average)



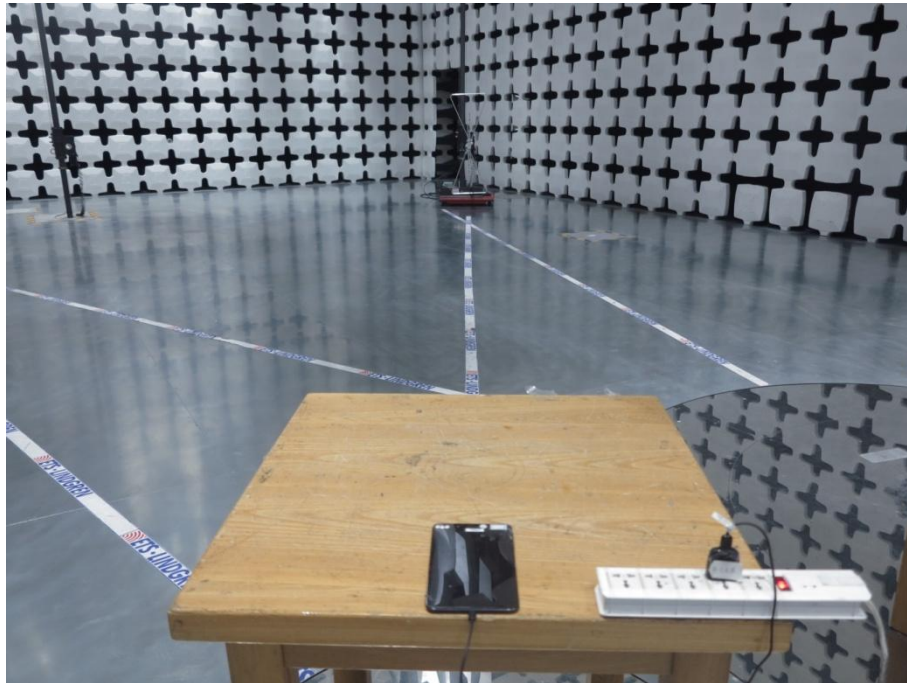
Fig. 179 Peak Excursions (802.11n-HT40, ch134, average)

A.10. Frequency Stability

Manufacturers ensured the EUT meet the requirement of 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.

A.11. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

ANNEX B: PHOTOGRAPHS OF THE TEST SET-UP**Layout of Radiated Spurious Emission Test**

***** END OF REPORT BODY *****