

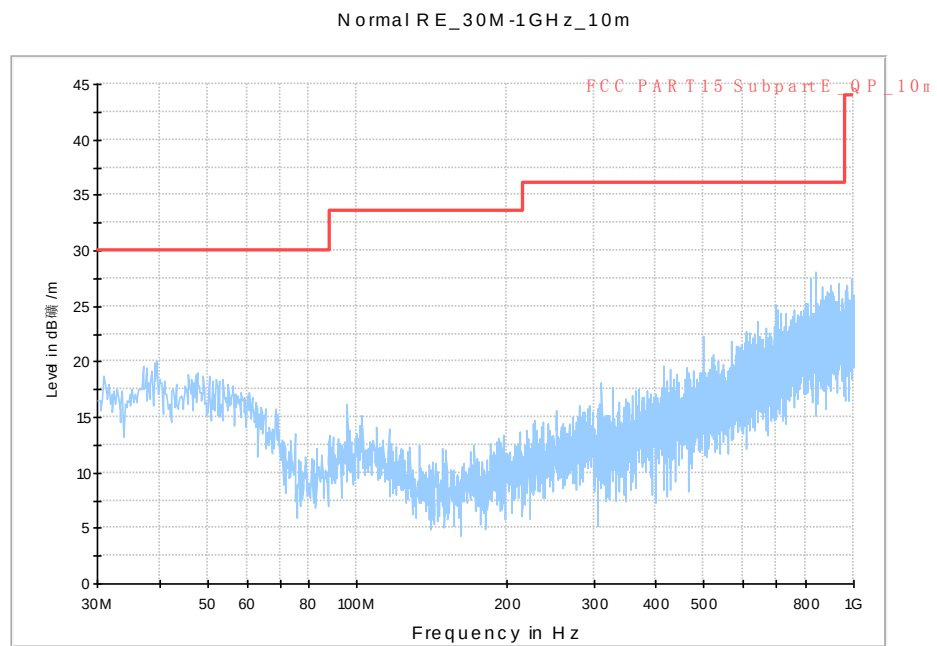


Fig. 78 Radiated Spurious Emission (802.11a, ch116, 30 MHz-1 GHz)

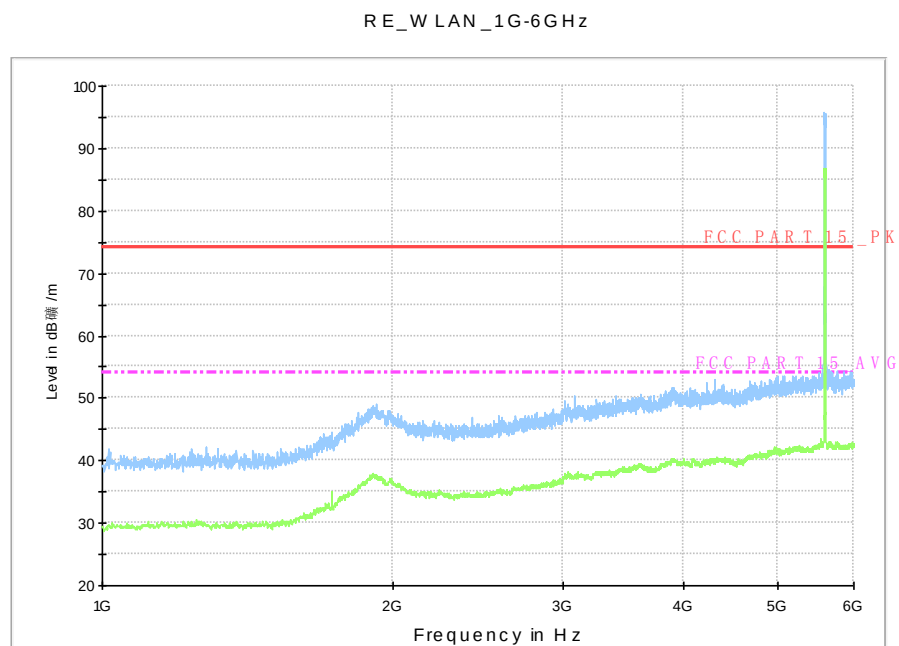


Fig. 79 Radiated Spurious Emission (802.11a, ch116, 1 GHz-6 GHz)

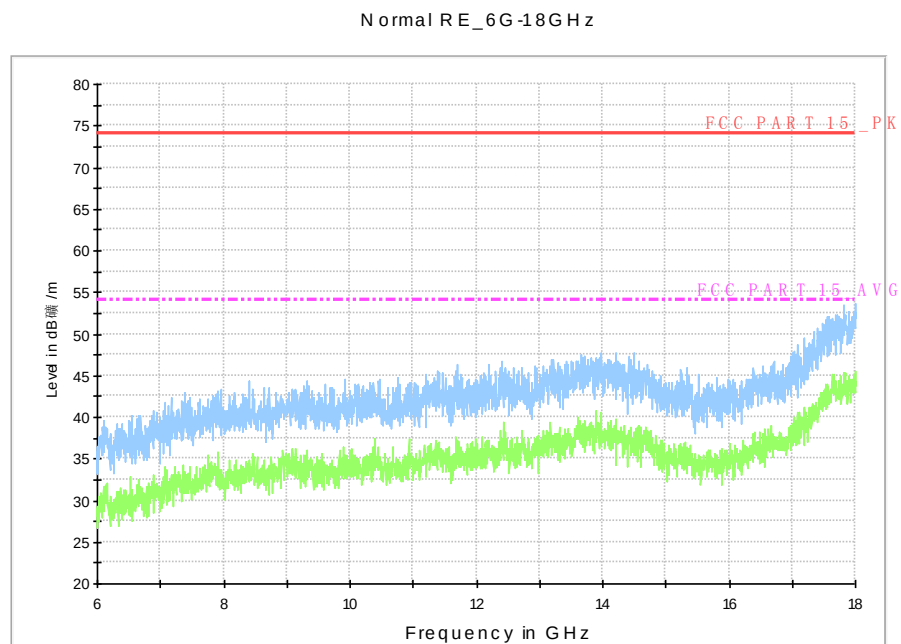


Fig. 80 Radiated Spurious Emission (802.11a, ch116, 6 GHz-18 GHz)

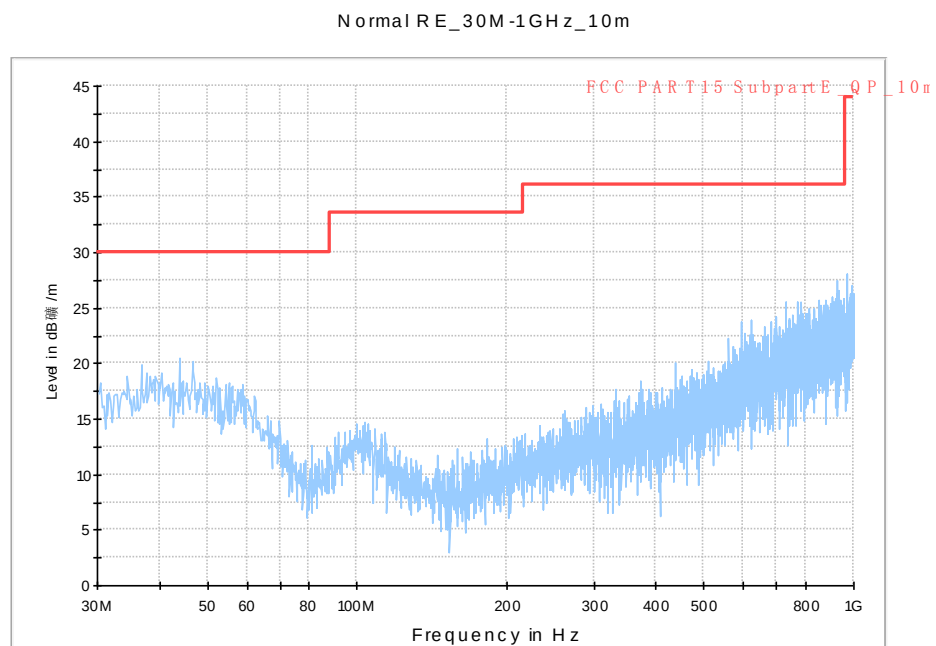


Fig. 81 Radiated Spurious Emission (802.11a, ch140, 30 MHz-1 GHz)

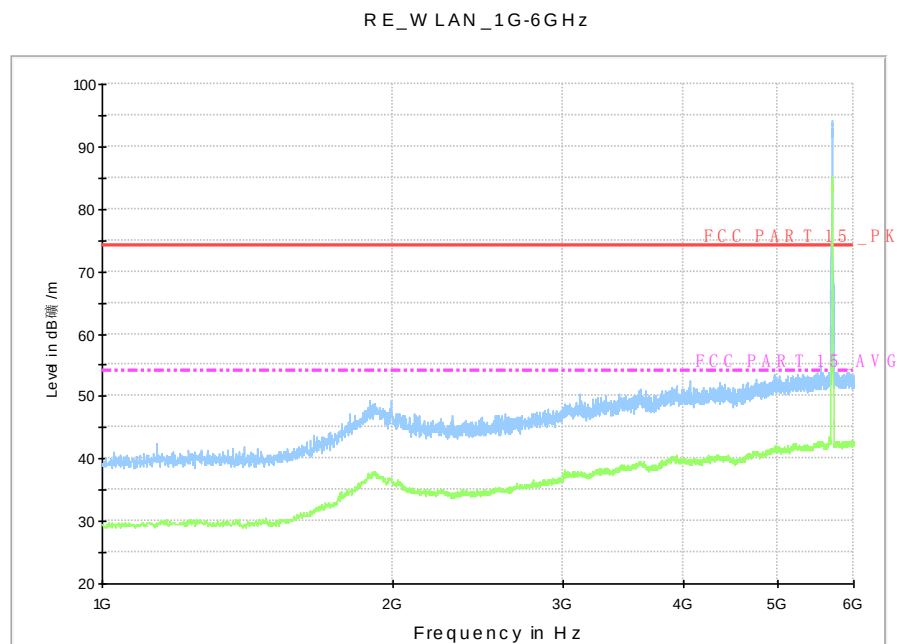


Fig. 82 Radiated Spurious Emission (802.11a, ch140, 1 GHz-6 GHz)

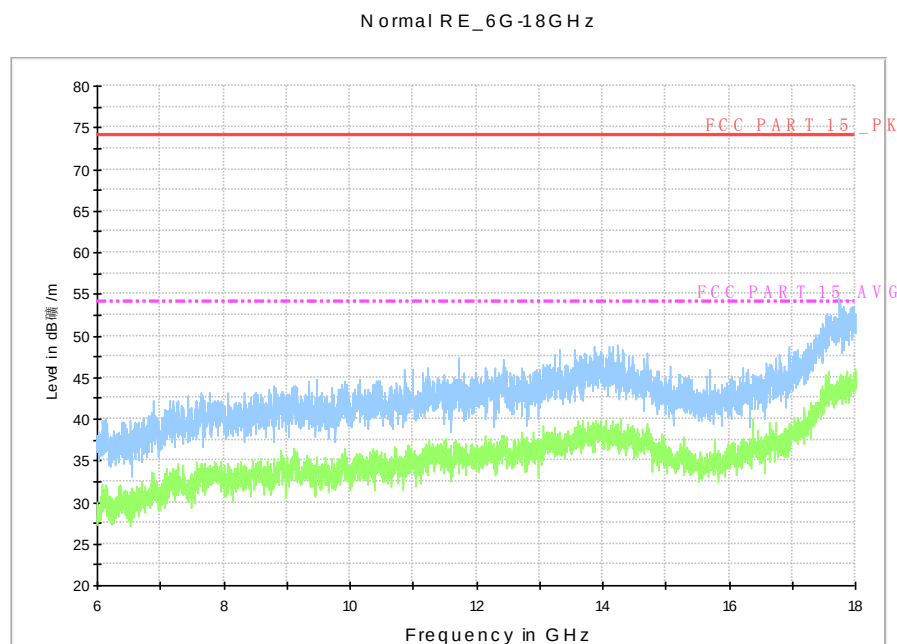


Fig. 83 Radiated Spurious Emission (802.11a, ch140, 6 GHz-18 GHz)

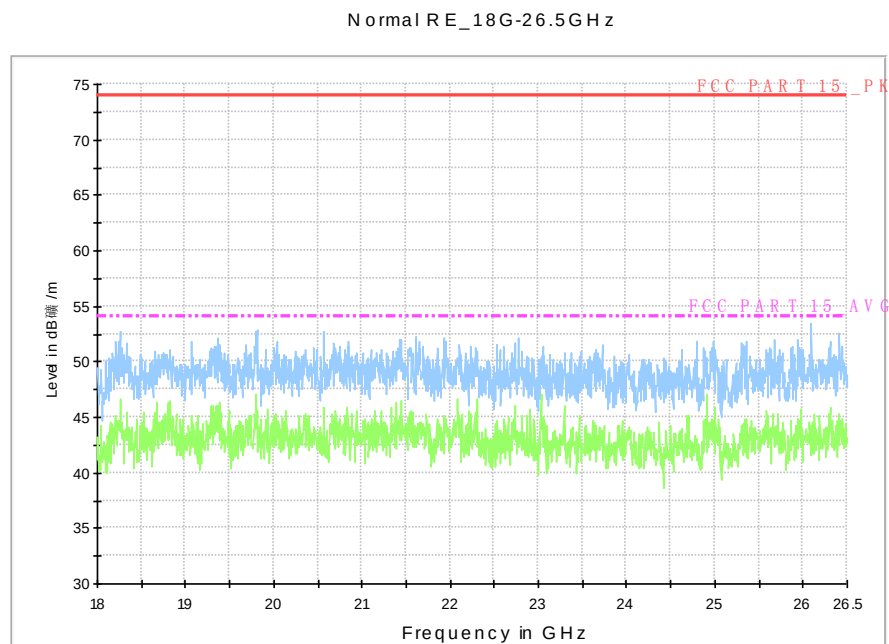


Fig. 84 Radiated Spurious Emission (802.11a, UNII3, 18 GHz-26.5 GHz)

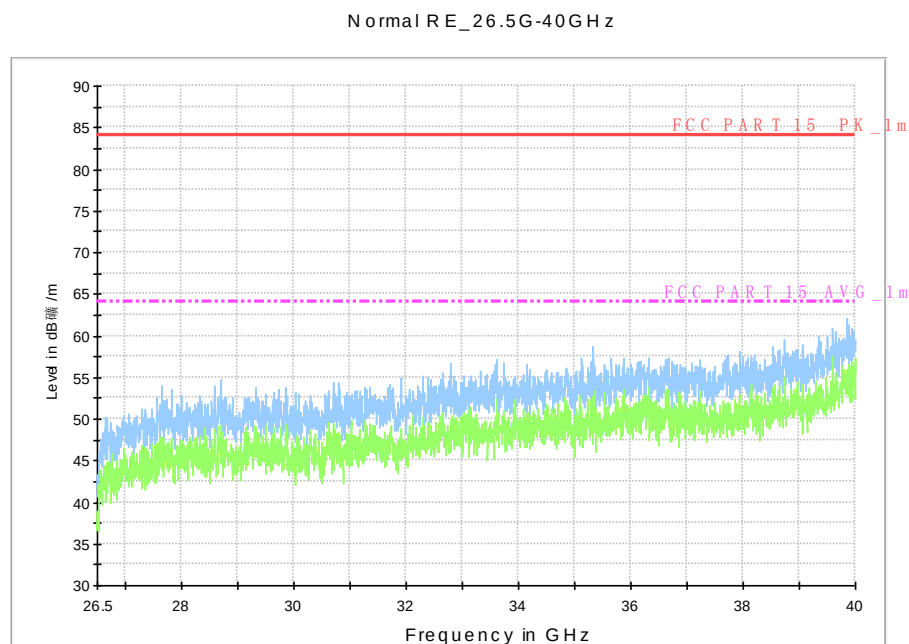


Fig. 85 Radiated Spurious Emission (802.11a, UNII3, 26.5 GHz-40 GHz)

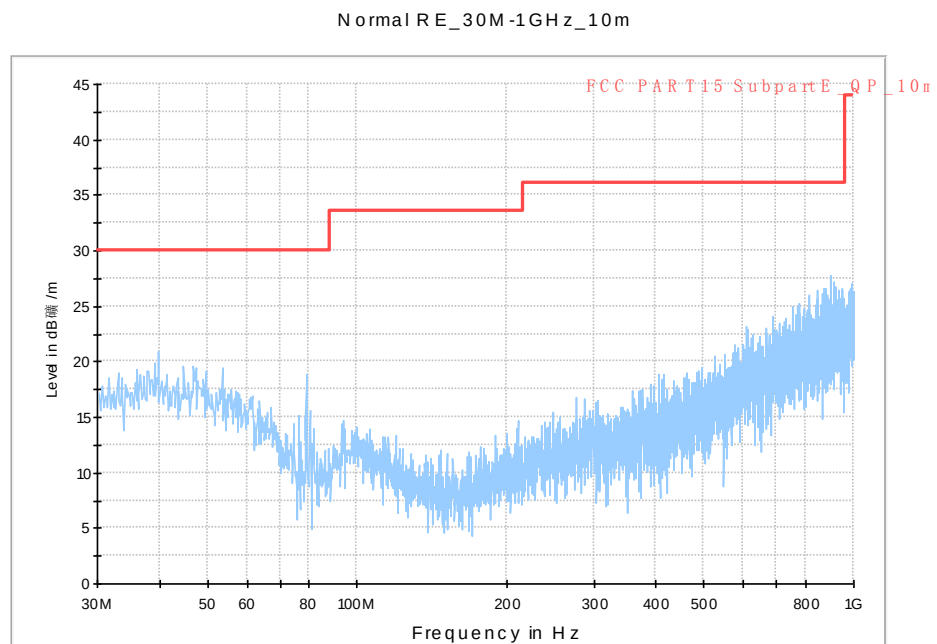


Fig. 86 Radiated Spurious Emission (802.11n-HT20, ch36, 30 MHz-1 GHz)

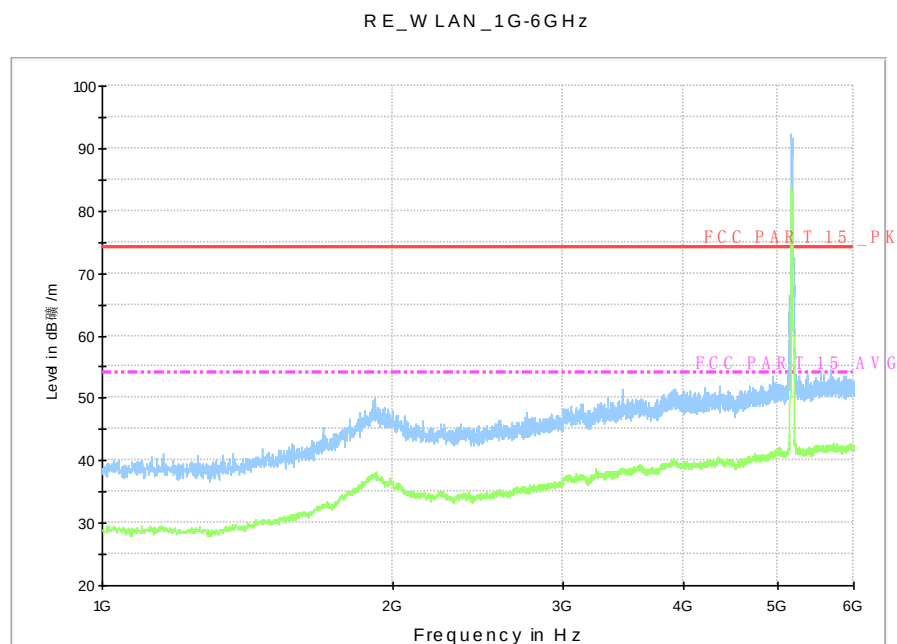


Fig. 87 Radiated Spurious Emission (802.11n-HT20, ch36, 1 GHz-6 GHz)

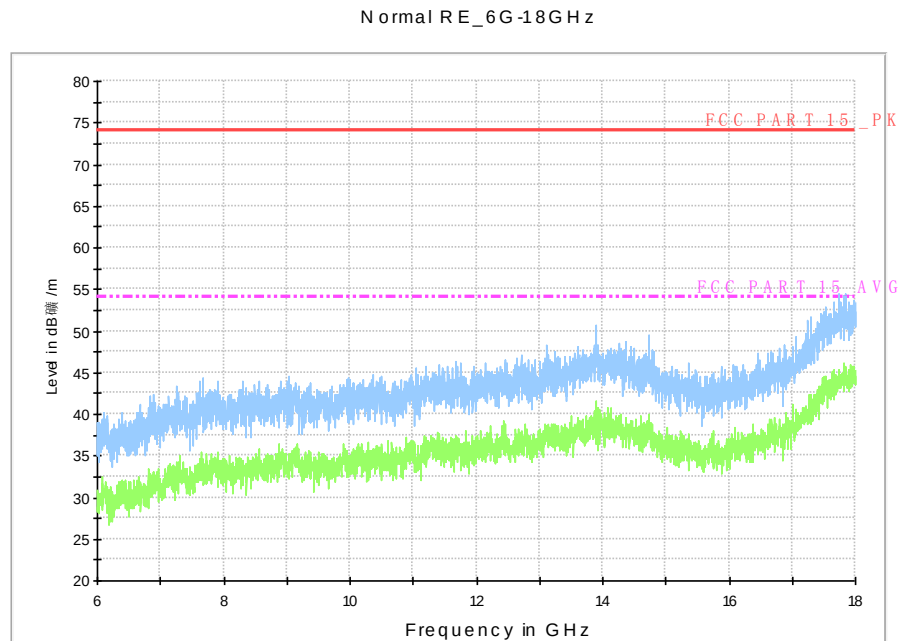


Fig. 88 Radiated Spurious Emission (802.11n-HT20, ch36, 6 GHz-18 GHz)

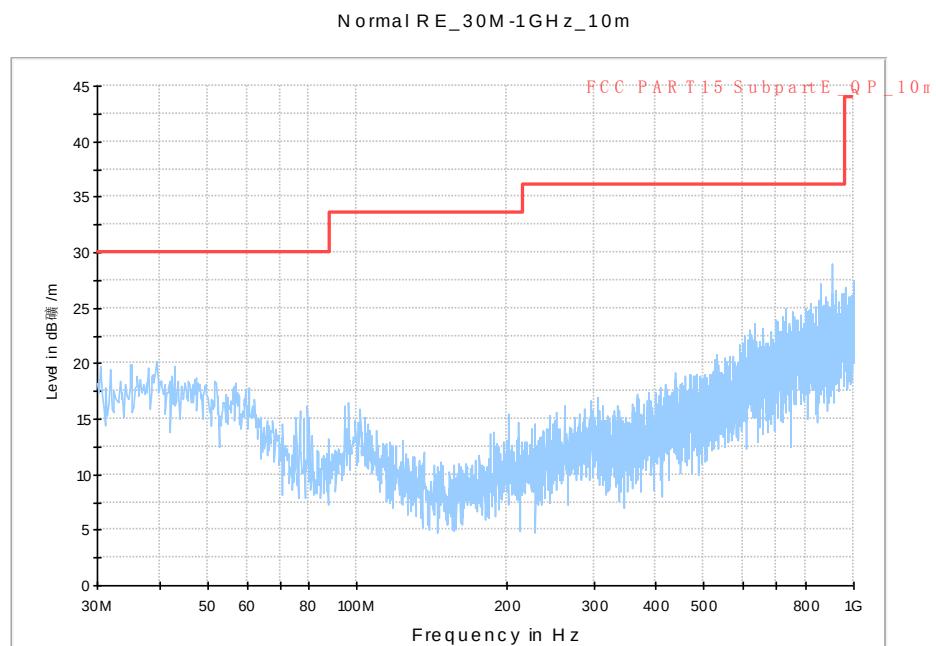


Fig. 89 Radiated Spurious Emission (802.11a, ch40, 30 MHz-1 GHz)

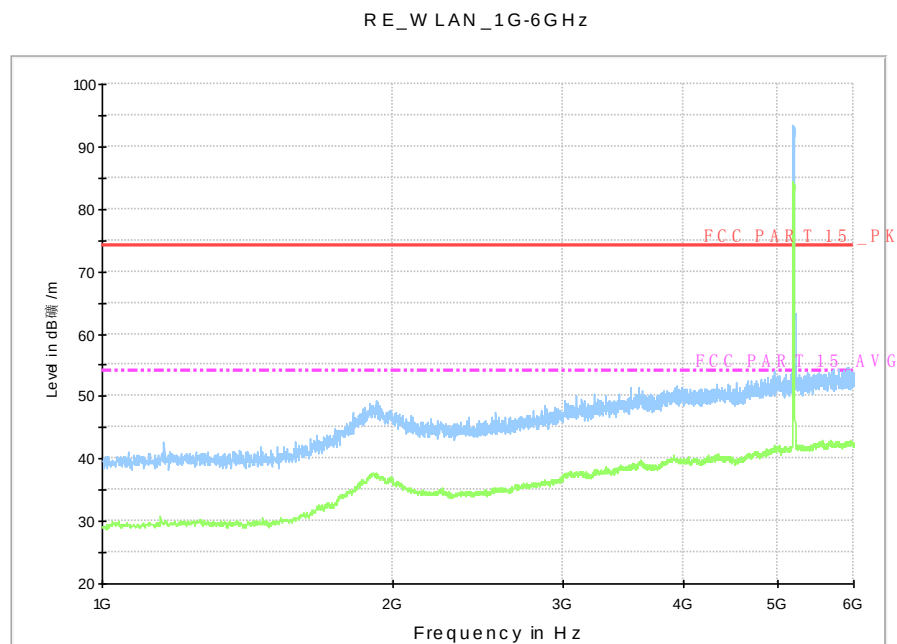


Fig. 90 Radiated Spurious Emission (802.11a, ch40, 1 GHz-6 GHz)

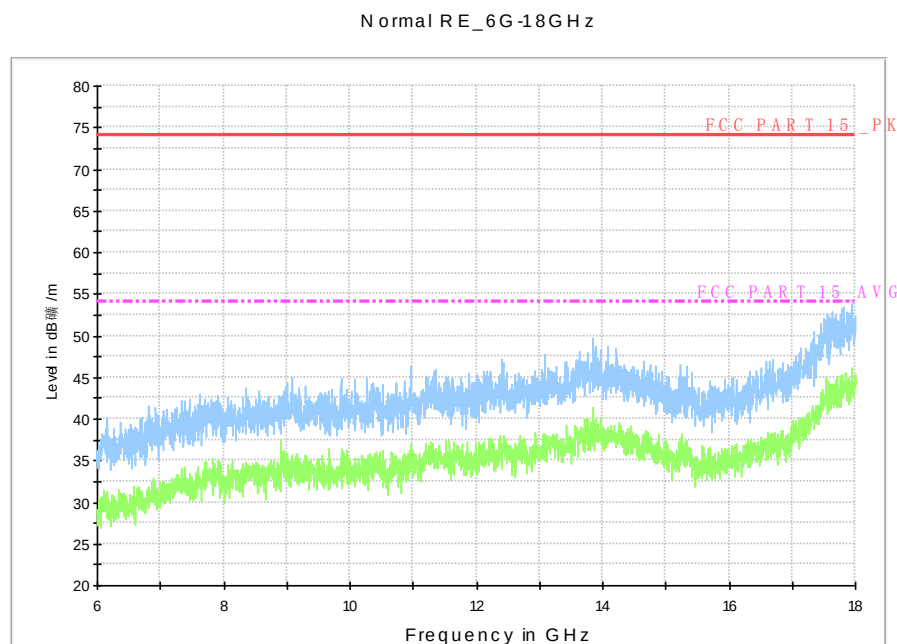


Fig. 91 Radiated Spurious Emission (802.11a, ch40, 6 GHz-18 GHz)

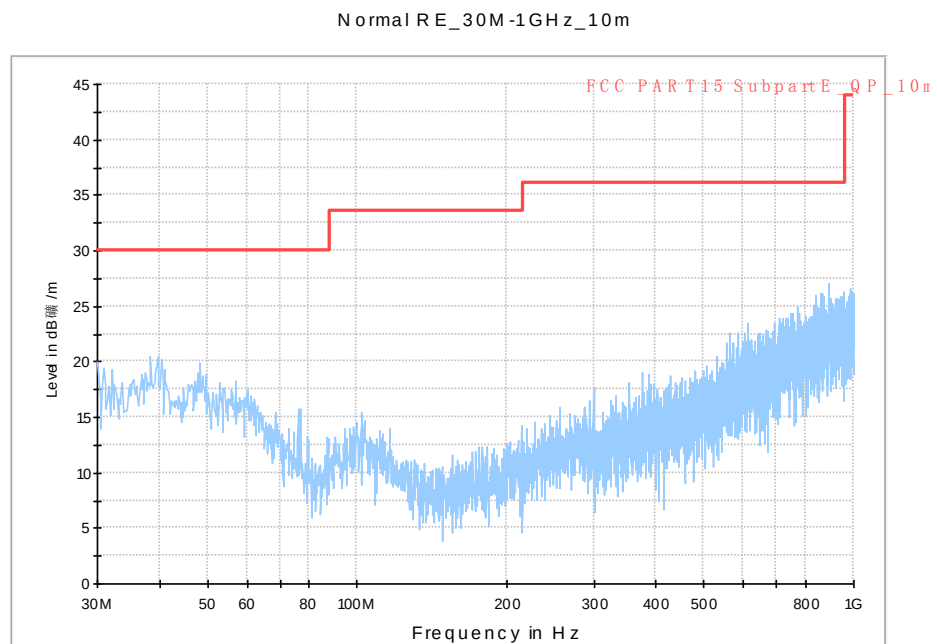


Fig. 92 Radiated Spurious Emission (802.11n-HT20, ch48, 30 MHz-1 GHz)

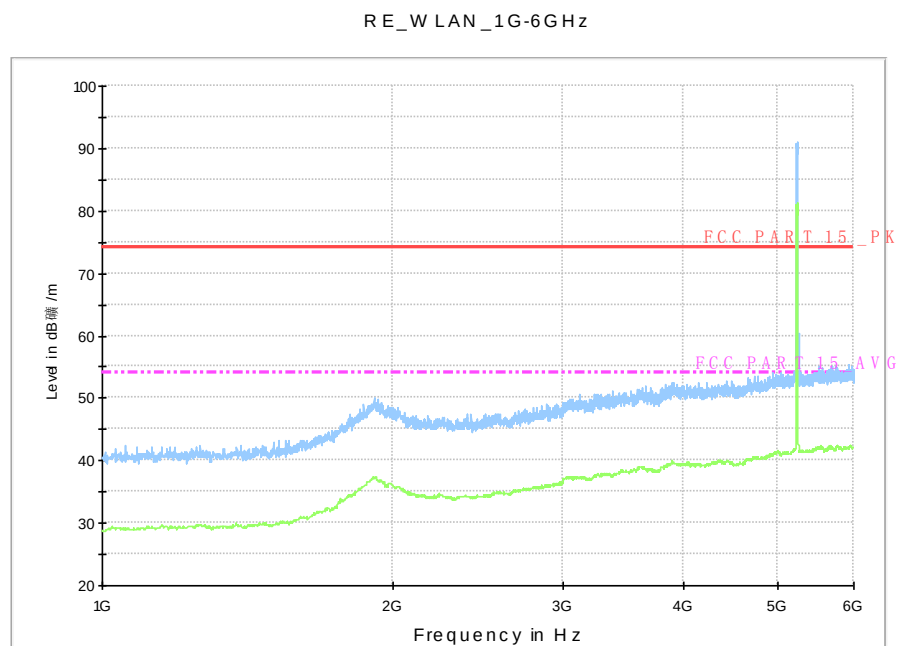


Fig. 93 Radiated Spurious Emission (802.11n-HT20, ch48, 1 GHz-6 GHz)

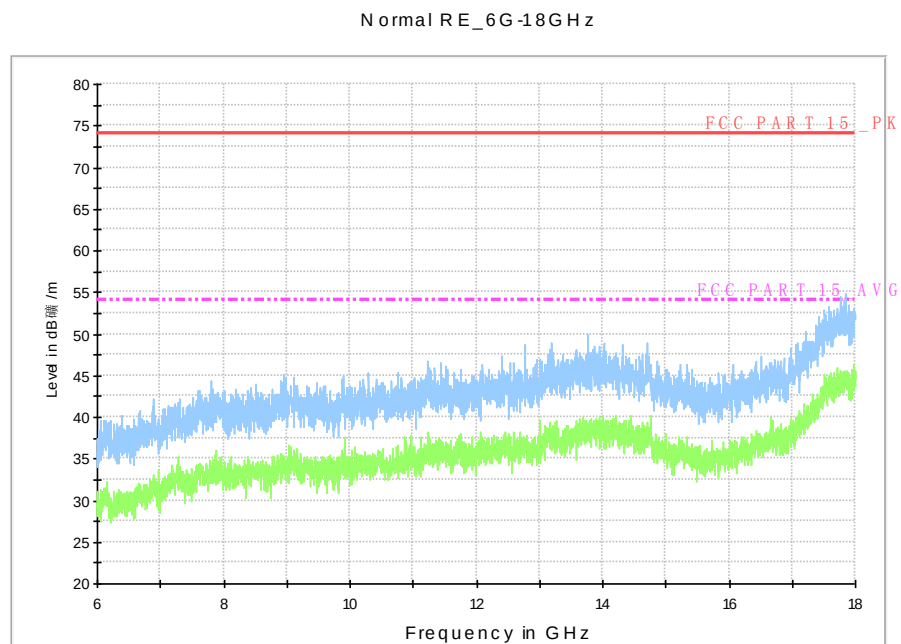


Fig. 94 Radiated Spurious Emission (802.11n-HT20, ch48, 6 GHz-18 GHz)

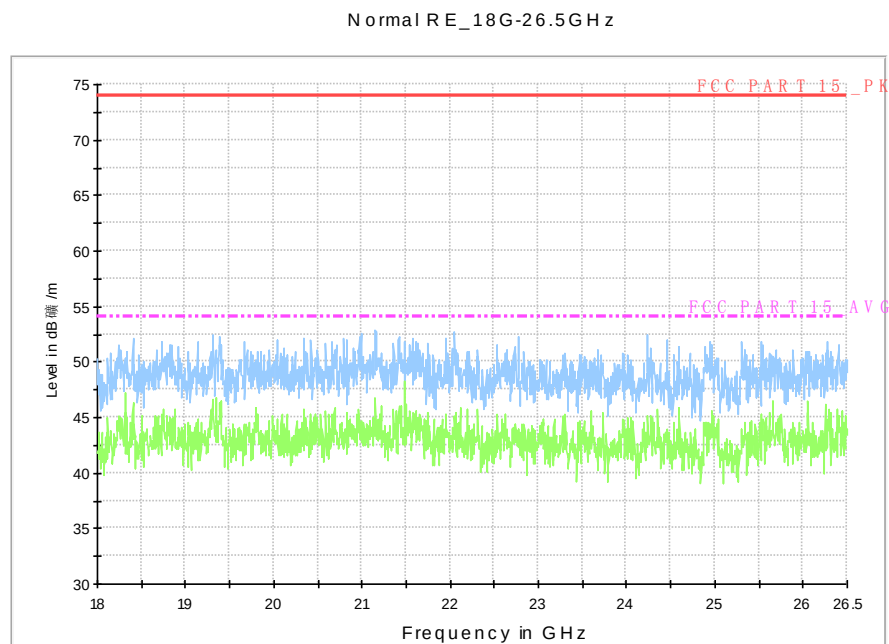


Fig. 95 Radiated Spurious Emission (802.11n-HT20, UNII1, 18 GHz-26.5 GHz)

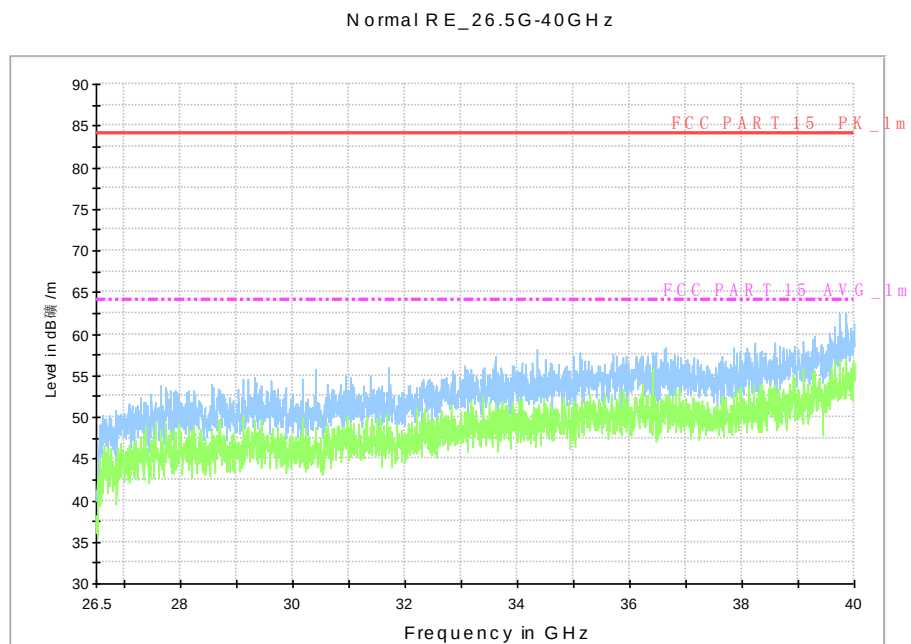


Fig. 96 Radiated Spurious Emission (802.11n-HT20, UNII1, 26.5 GHz-40 GHz)

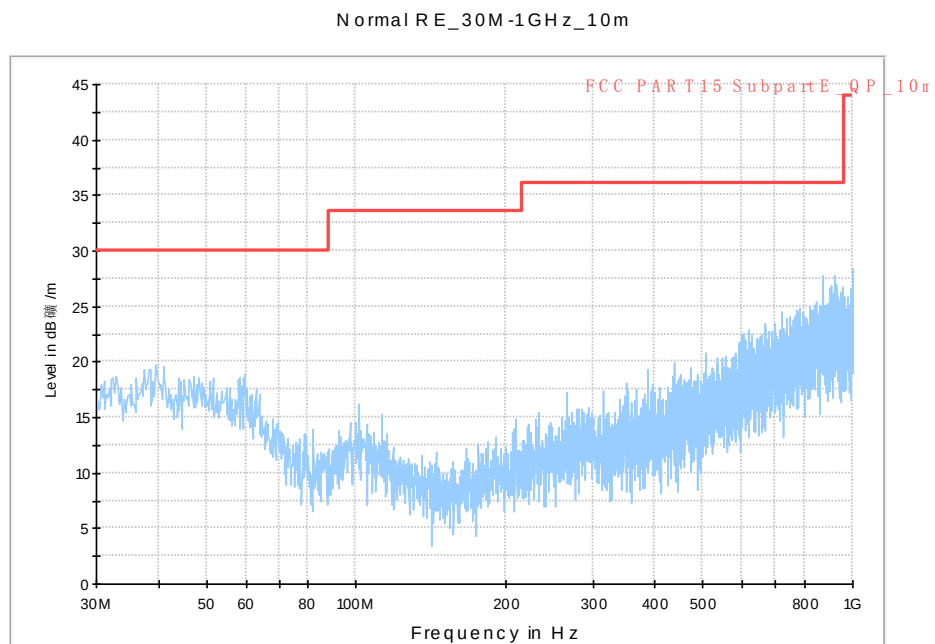


Fig. 97 Radiated Spurious Emission (802.11n-HT20, ch52, 30 MHz-1 GHz)

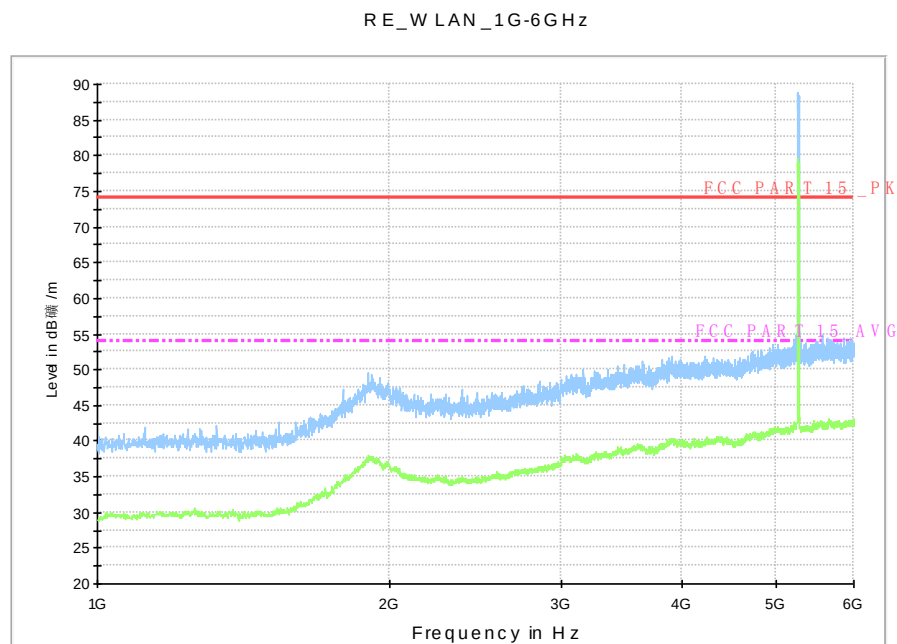


Fig. 98 Radiated Spurious Emission (802.11n-HT20, ch52, 1 GHz-6 GHz)

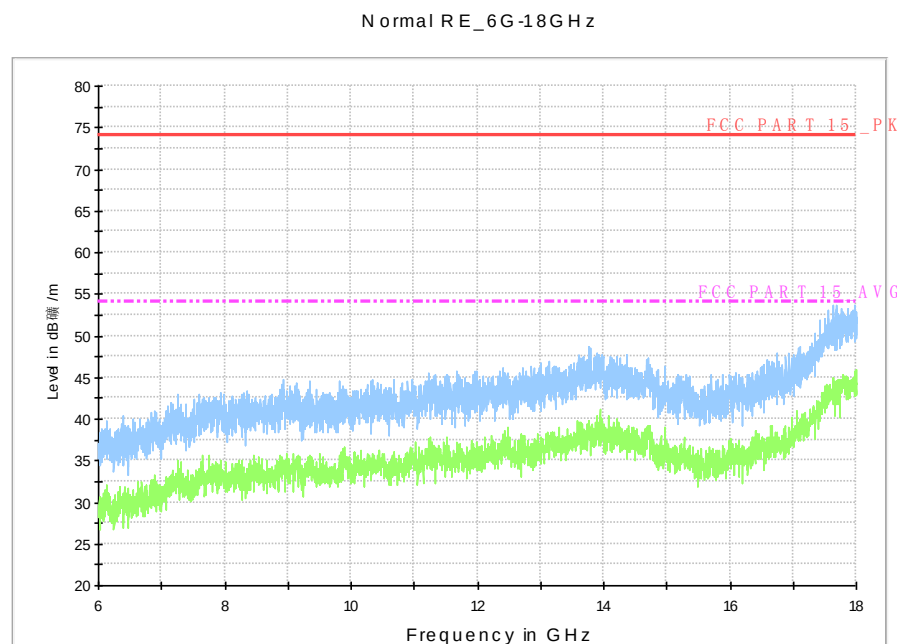


Fig. 99 Radiated Spurious Emission (802.11n-HT20, ch52, 6 GHz-18 GHz)

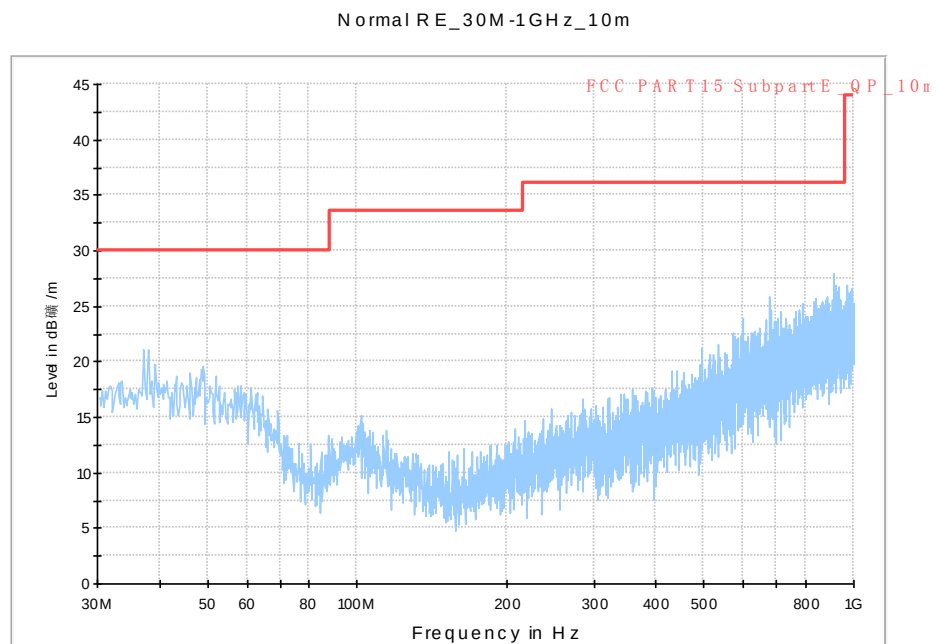


Fig. 100 Radiated Spurious Emission (802.11n-HT20, ch56, 30 MHz-1 GHz)

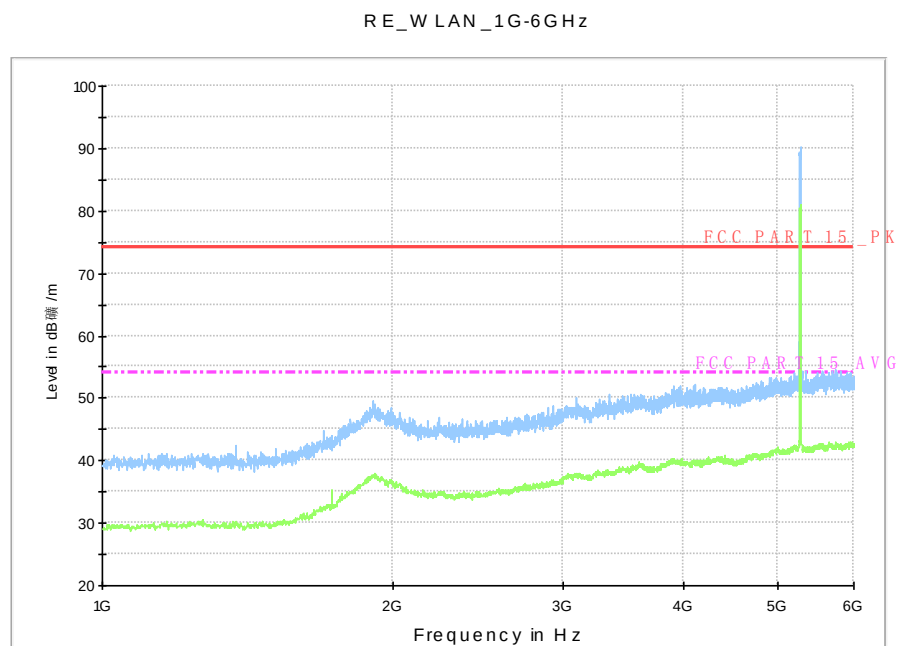


Fig. 101 Radiated Spurious Emission (802.11n-HT20, ch56, 1 GHz-6 GHz)

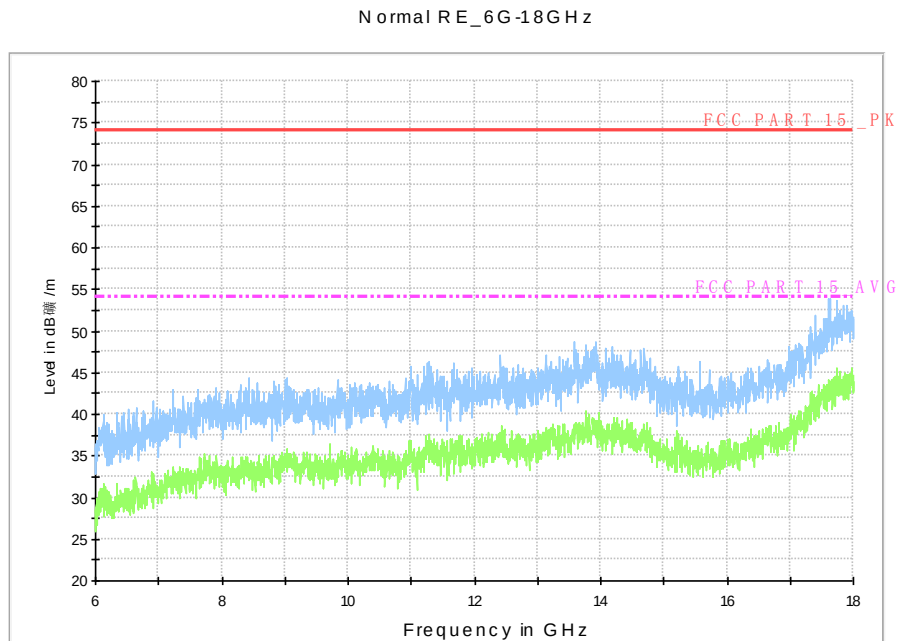


Fig. 102 Radiated Spurious Emission (802.11n-HT20, ch56, 6 GHz-18 GHz)

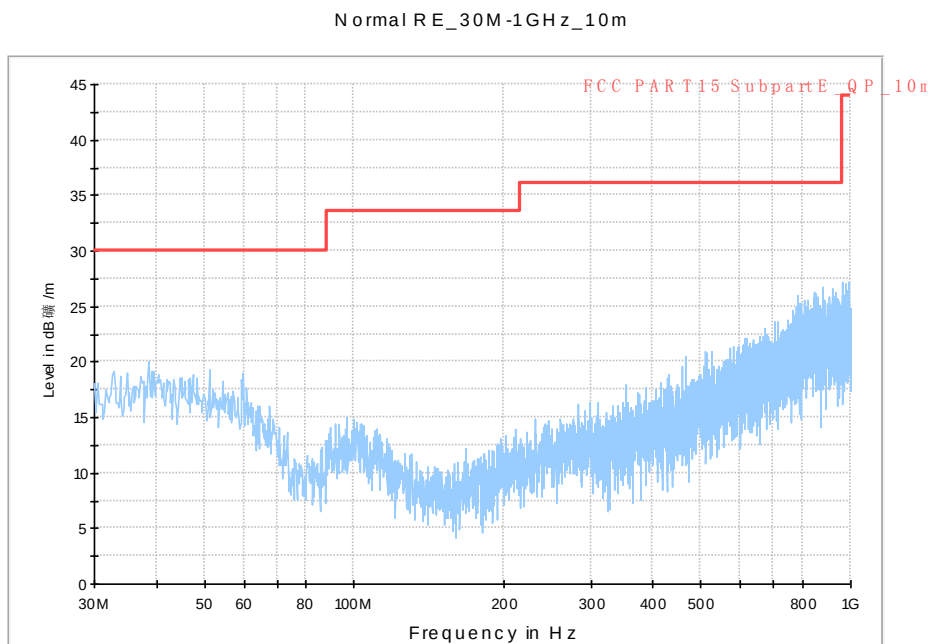


Fig. 103 Radiated Spurious Emission (802.11n-HT20, ch64, 30 MHz-1 GHz)

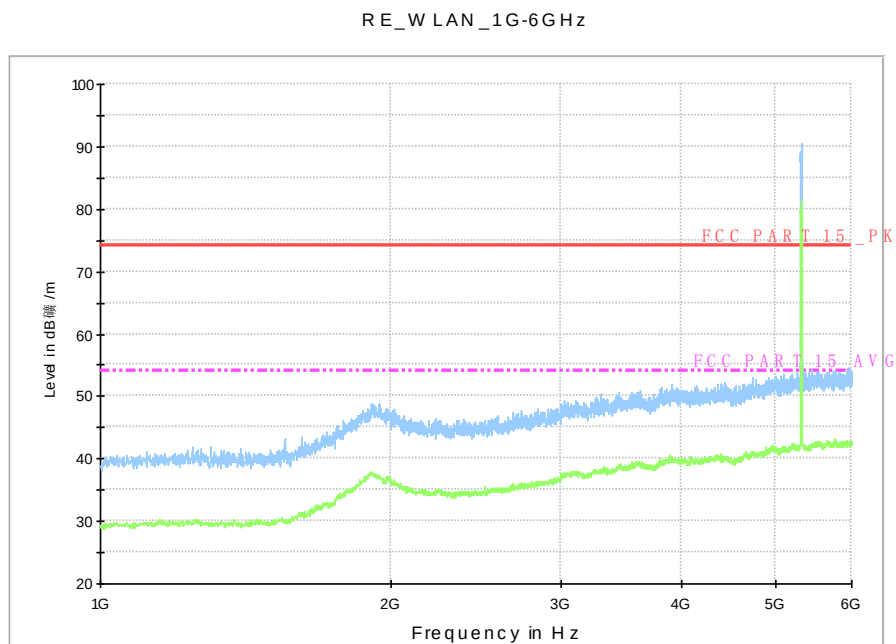


Fig. 104 Radiated Spurious Emission (802.11n-HT20, ch64, 1 GHz-6 GHz)

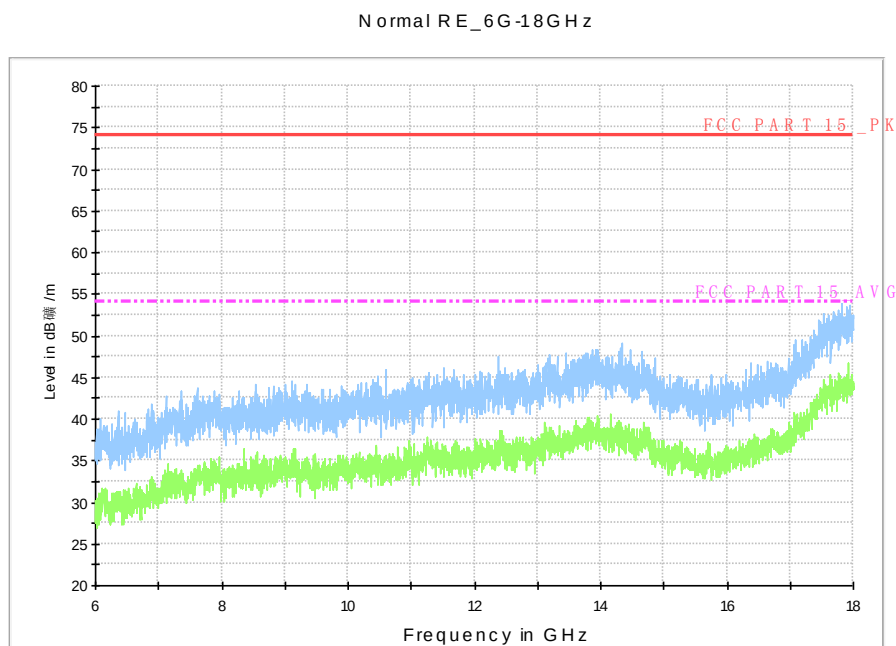


Fig. 105 Radiated Spurious Emission (802.11n-HT20, ch64, 6 GHz-18 GHz)

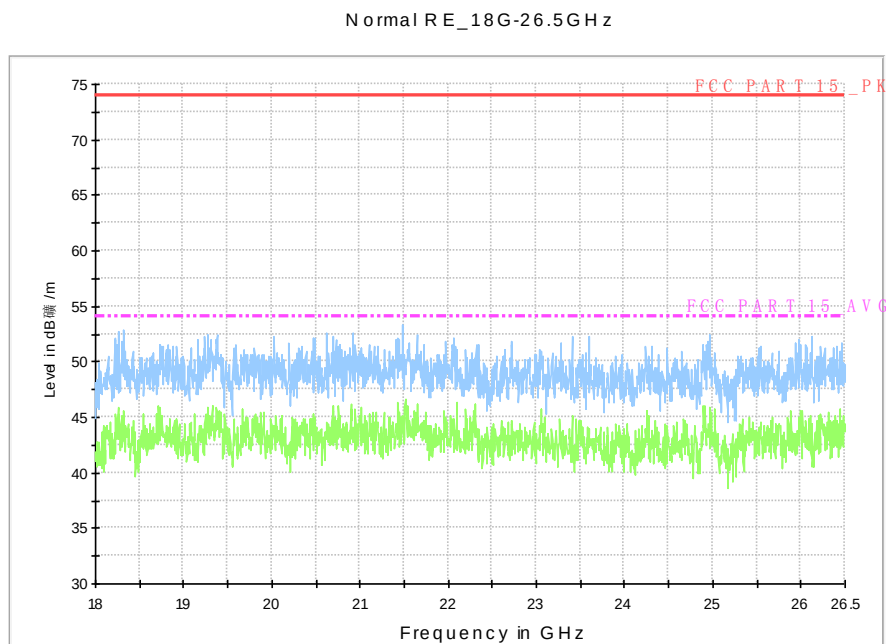


Fig. 106 Radiated Spurious Emission (802.11n-HT20, UNII2, 18 GHz-26.5 GHz)

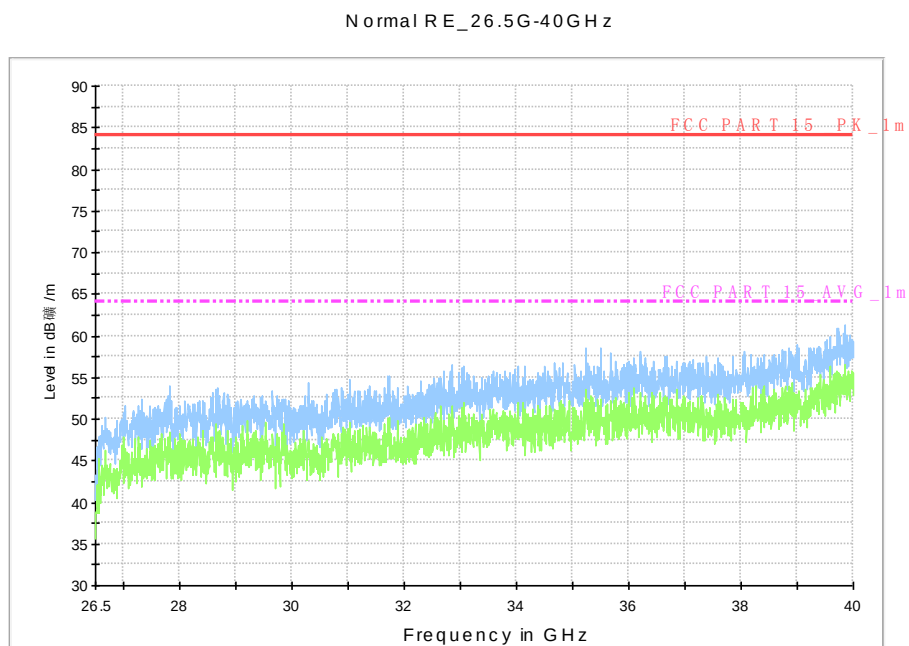


Fig. 107 Radiated Spurious Emission (802.11n-HT20, UNII2, 26.5 GHz-40 GHz)

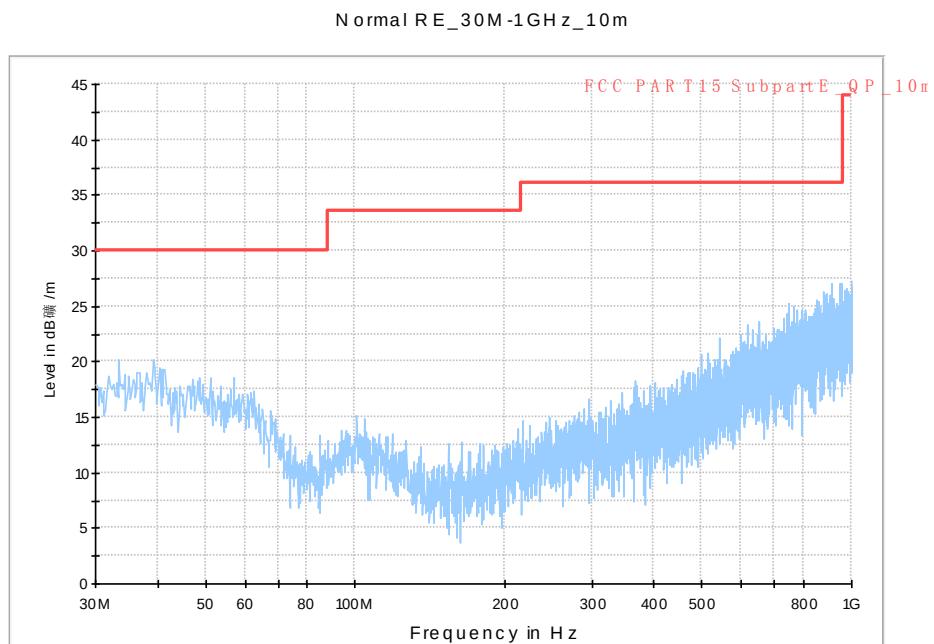


Fig. 108 Radiated Spurious Emission (802.11n-HT20, ch100, 30 MHz-1 GHz)

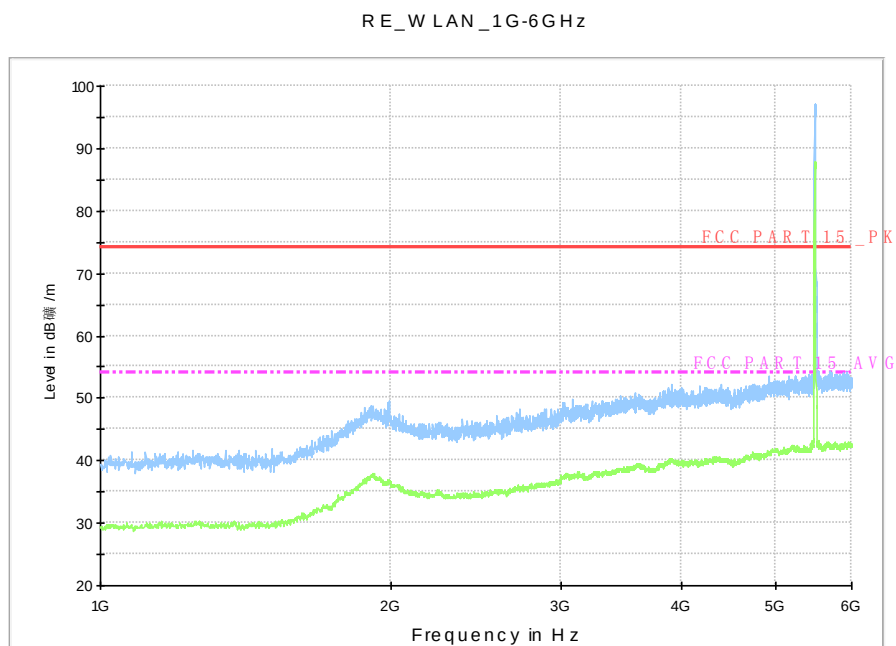


Fig. 109 Radiated Spurious Emission (802.11n-HT20, ch100, 1 GHz-6 GHz)

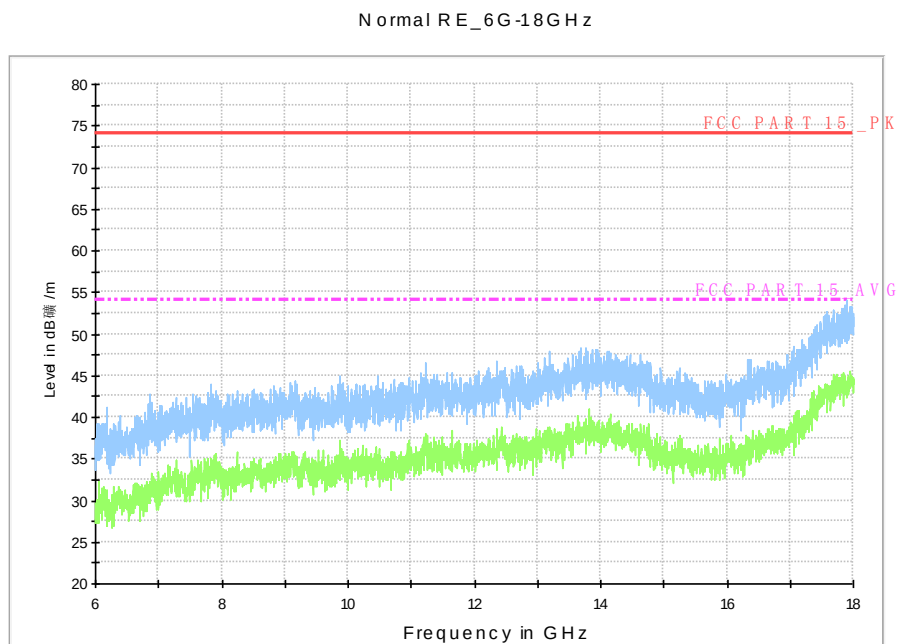


Fig. 110 Radiated Spurious Emission (802.11n-HT20, ch100, 6 GHz-18 GHz)

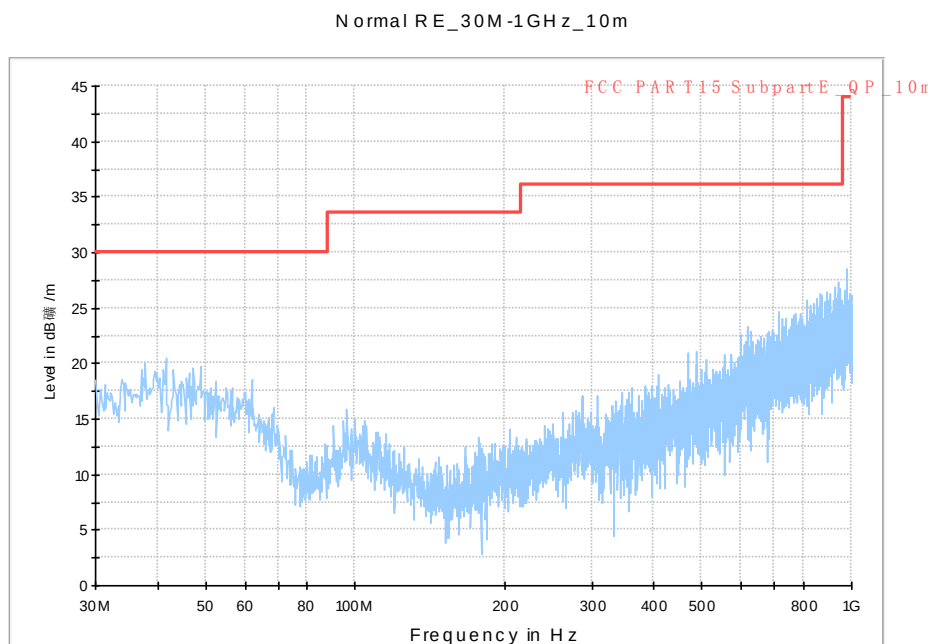


Fig. 111 Radiated Spurious Emission (802.11n-HT20, ch116, 30 MHz-1 GHz)

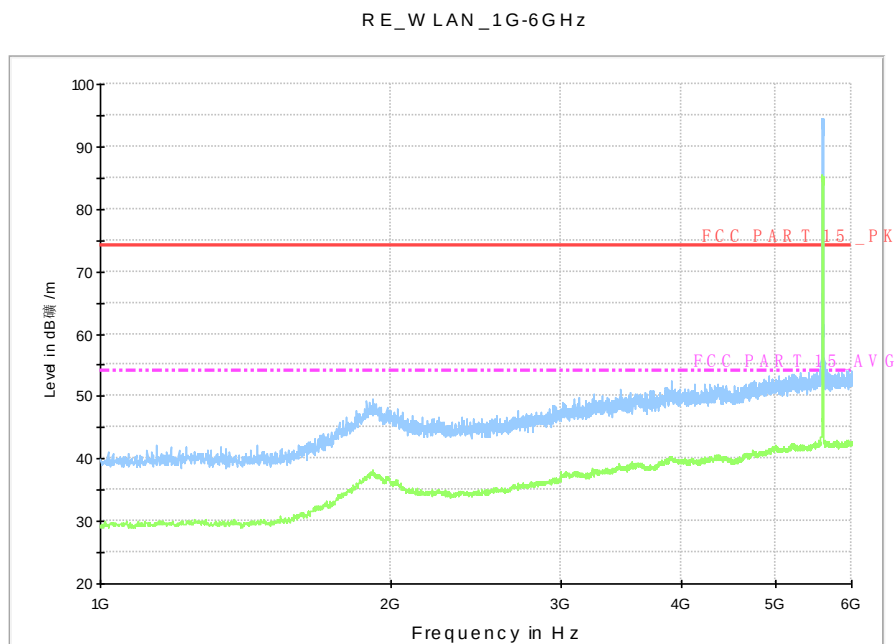


Fig. 112 Radiated Spurious Emission (802.11n-HT20, ch116, 1 GHz-6 GHz)

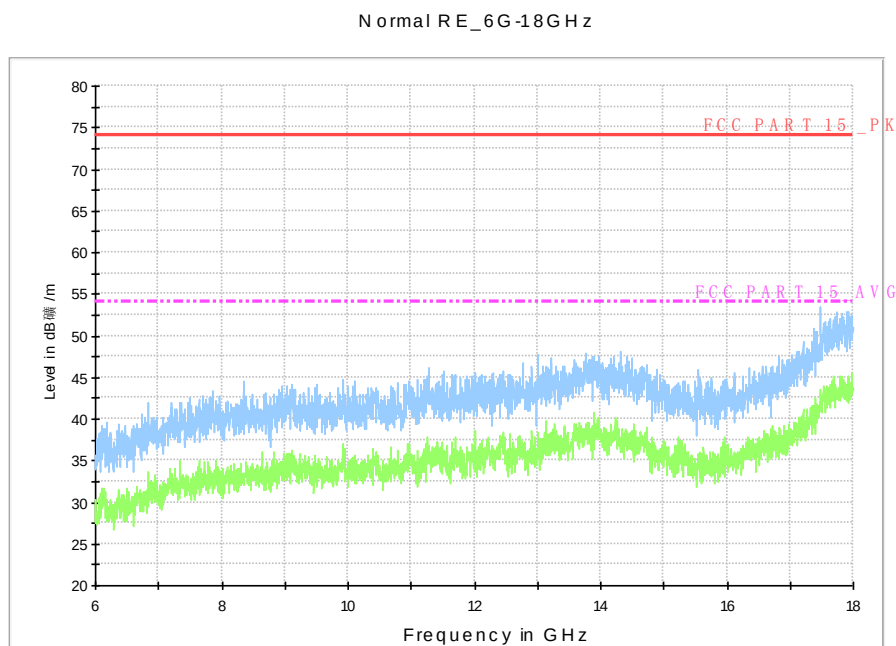


Fig. 113 Radiated Spurious Emission (802.11n-HT20, ch116, 6 GHz-18 GHz)

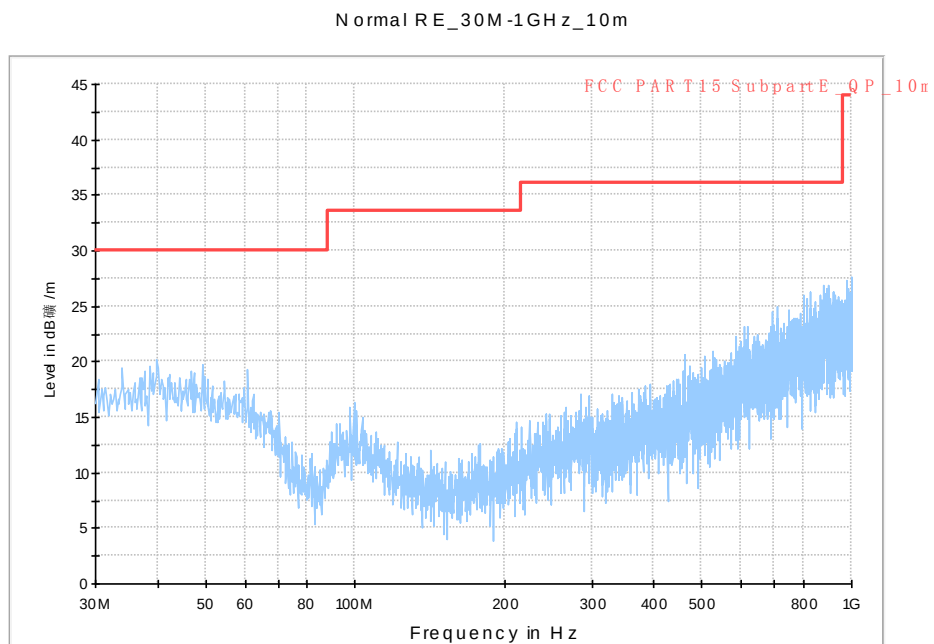


Fig. 114 Radiated Spurious Emission (802.11n-HT20, ch140, 30 MHz-1 GHz)

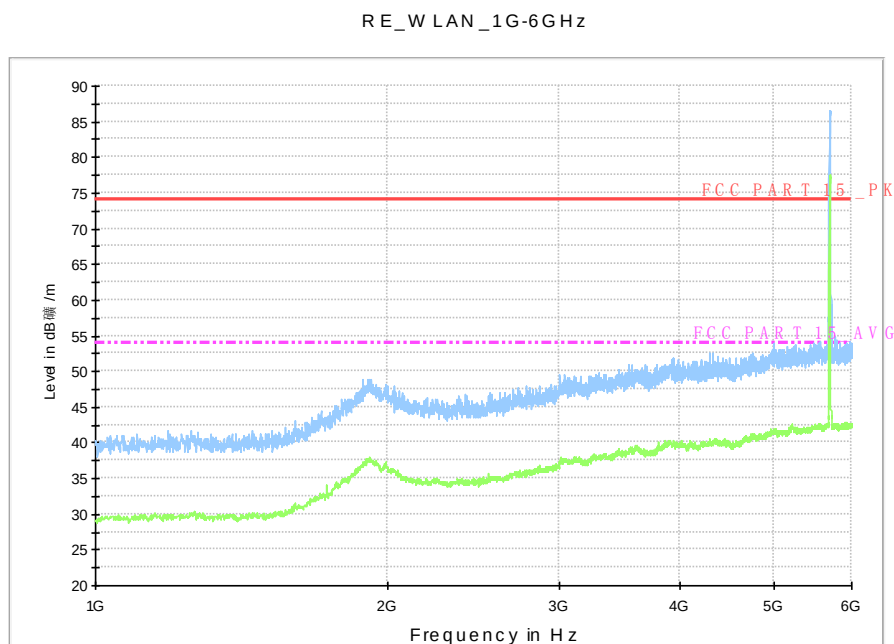


Fig. 115 Radiated Spurious Emission (802.11n-HT20, ch140, 1 GHz-6 GHz)

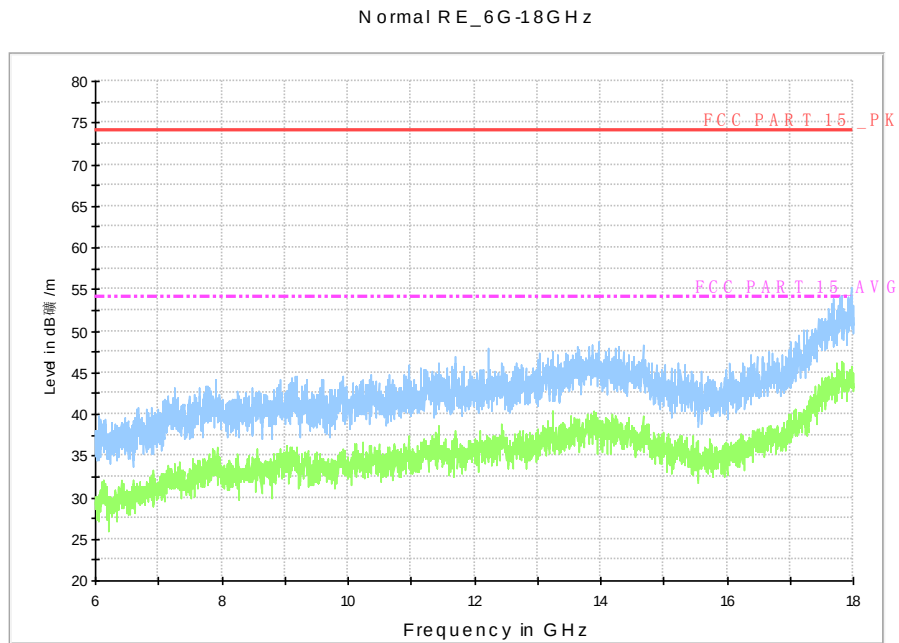


Fig. 116 Radiated Spurious Emission (802.11n-HT20, ch140, 6 GHz-18 GHz)

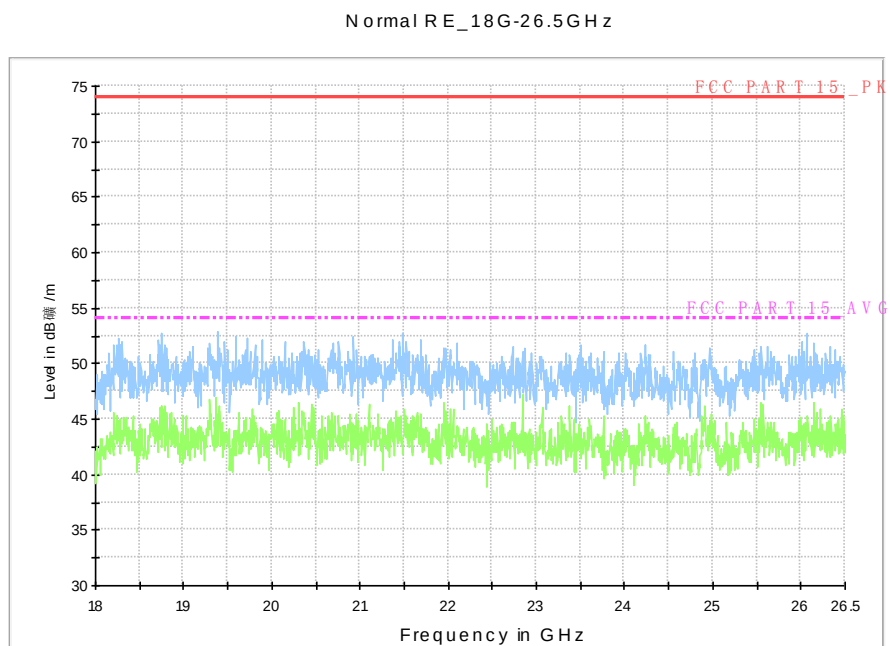


Fig. 117 Radiated Spurious Emission (802.11n-HT20, UNII3, 18 GHz-26.5 GHz)

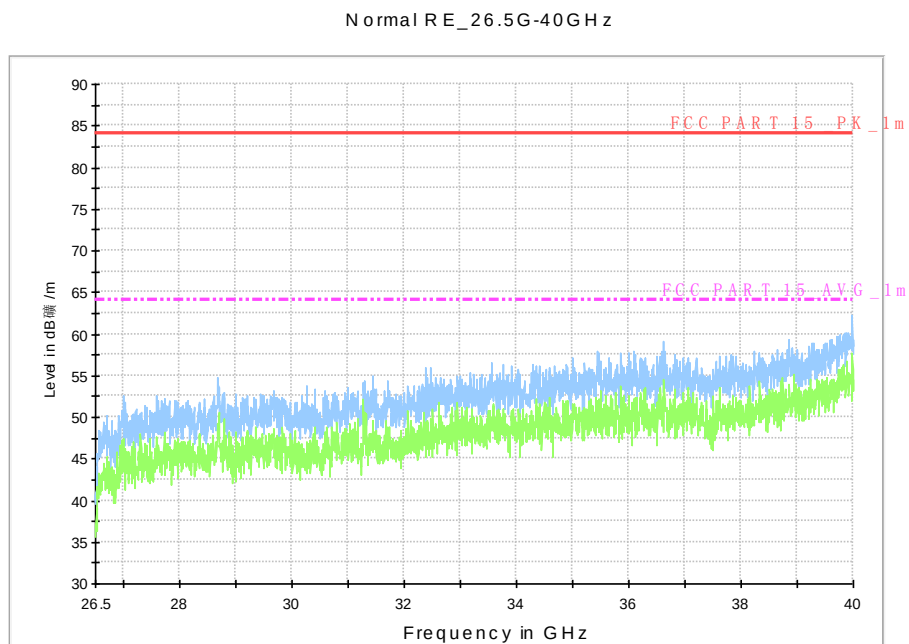


Fig. 118 Radiated Spurious Emission (802.11n-HT20, UNII3, 26.5 GHz-40 GHz)

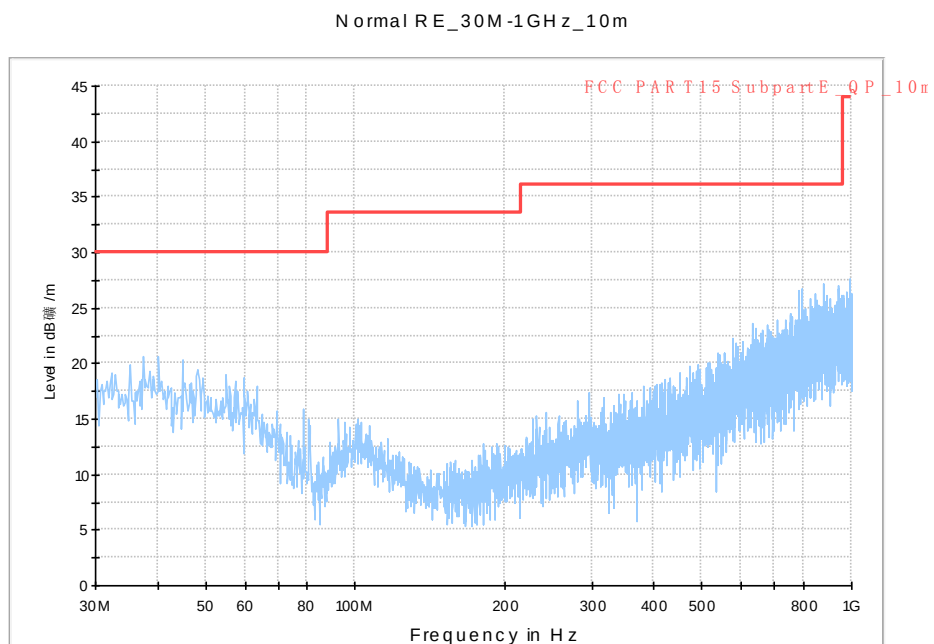


Fig. 119 Radiated Spurious Emission (802.11n-HT40, ch38, 30 MHz-1 GHz)

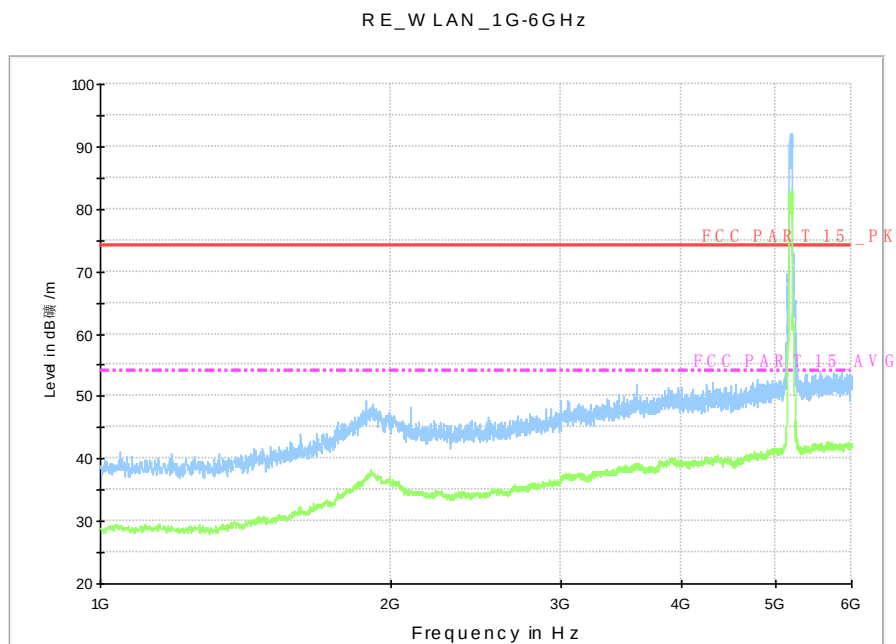


Fig. 120 Radiated Spurious Emission (802.11n-HT40, ch38, 1 GHz-6 GHz)

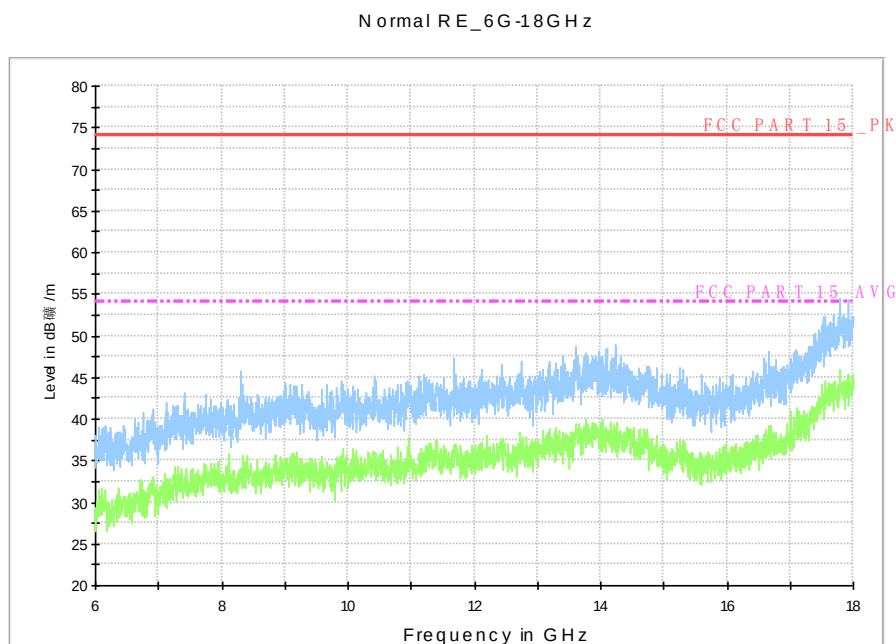


Fig. 121 Radiated Spurious Emission (802.11n-HT40, ch38, 6 GHz-18 GHz)

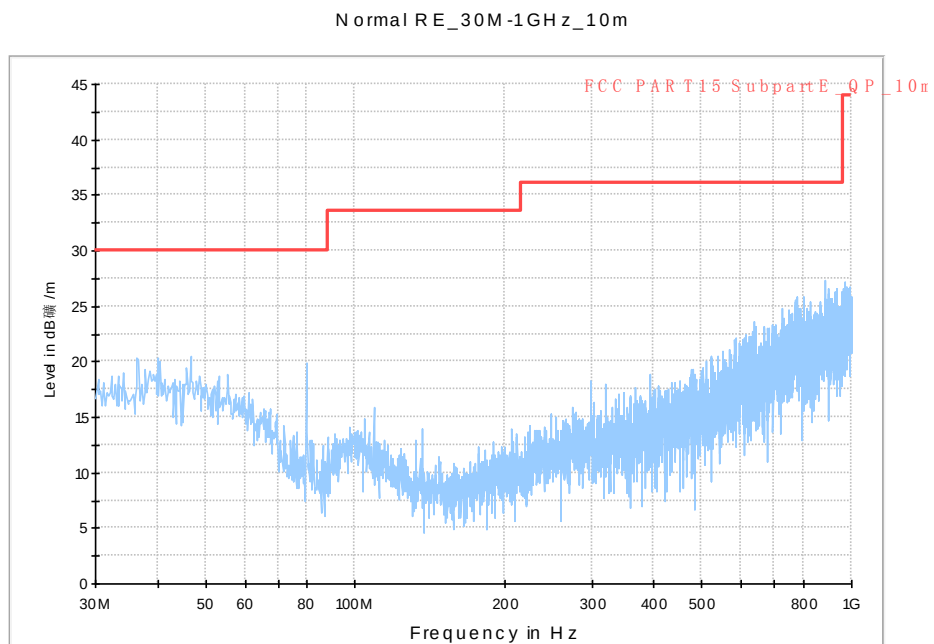


Fig. 122 Radiated Spurious Emission (802.11n-HT40, ch46, 30 MHz-1 GHz)

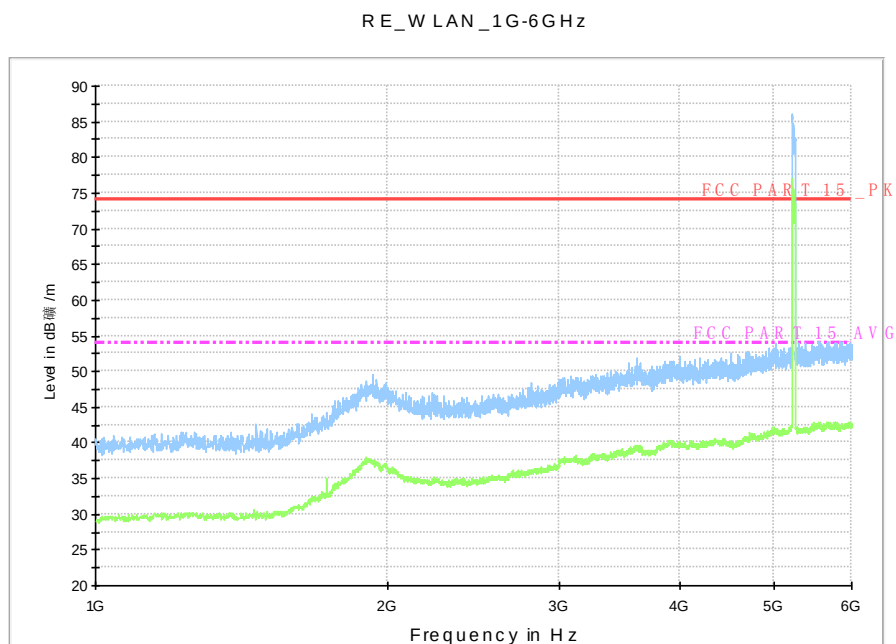


Fig. 123 Radiated Spurious Emission (802.11n-HT40, ch46, 1 GHz-6 GHz)

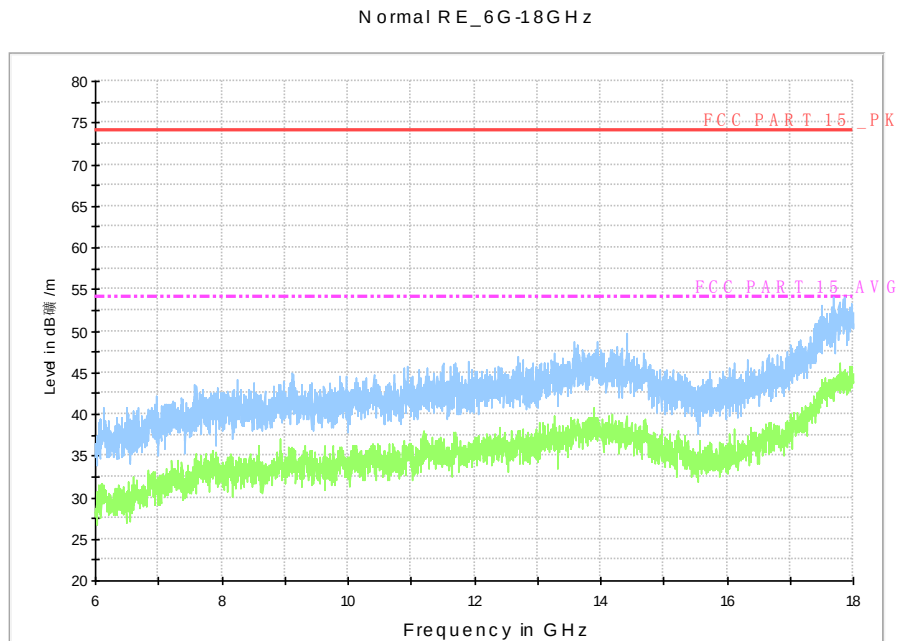


Fig. 124 Radiated Spurious Emission (802.11n-HT40, ch46, 6 GHz-18 GHz)

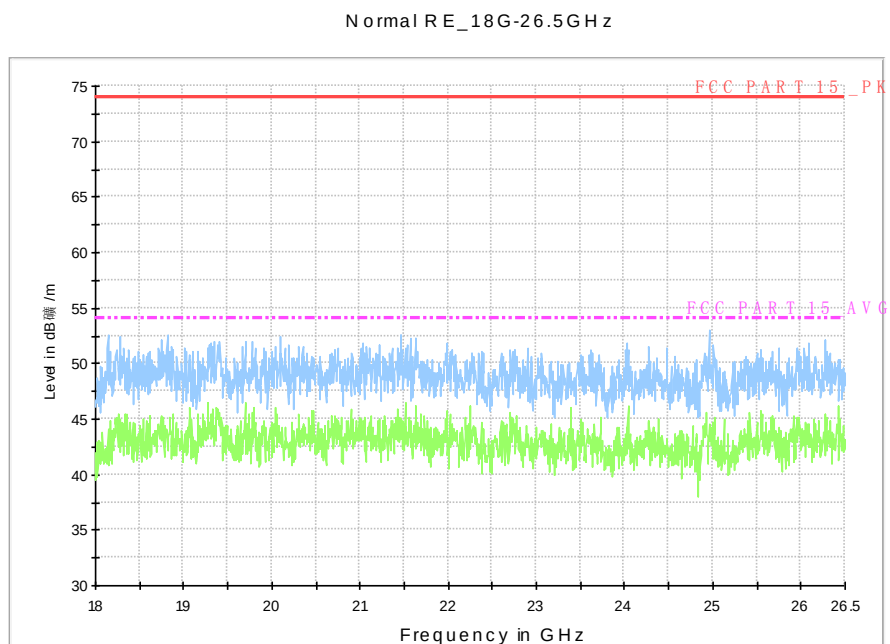


Fig. 125 Radiated Spurious Emission (802.11n-HT40, UNII1, 18 GHz-26.5 GHz)

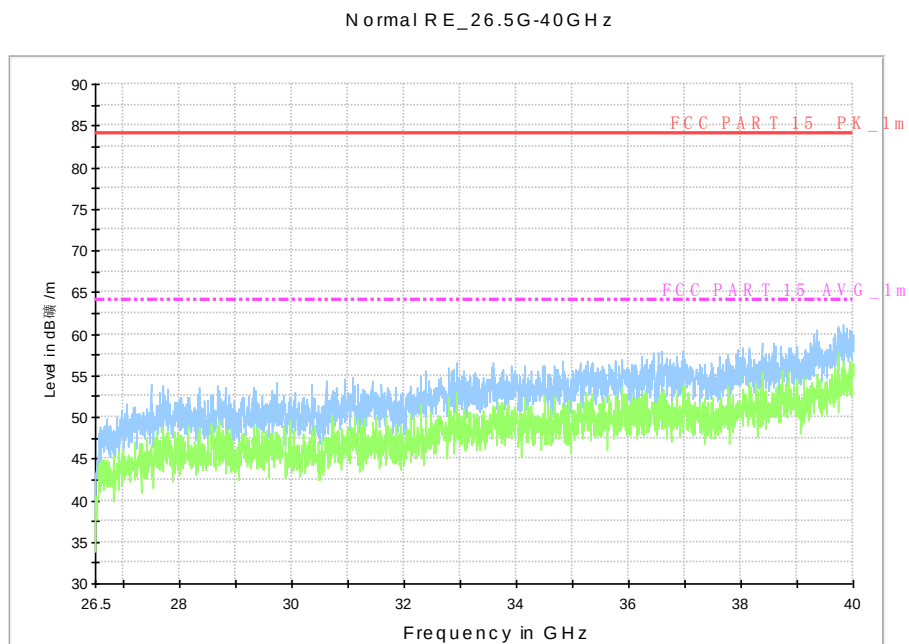


Fig. 126 Radiated Spurious Emission (802.11n-HT40, UNII1, 26.5 GHz-40 GHz)

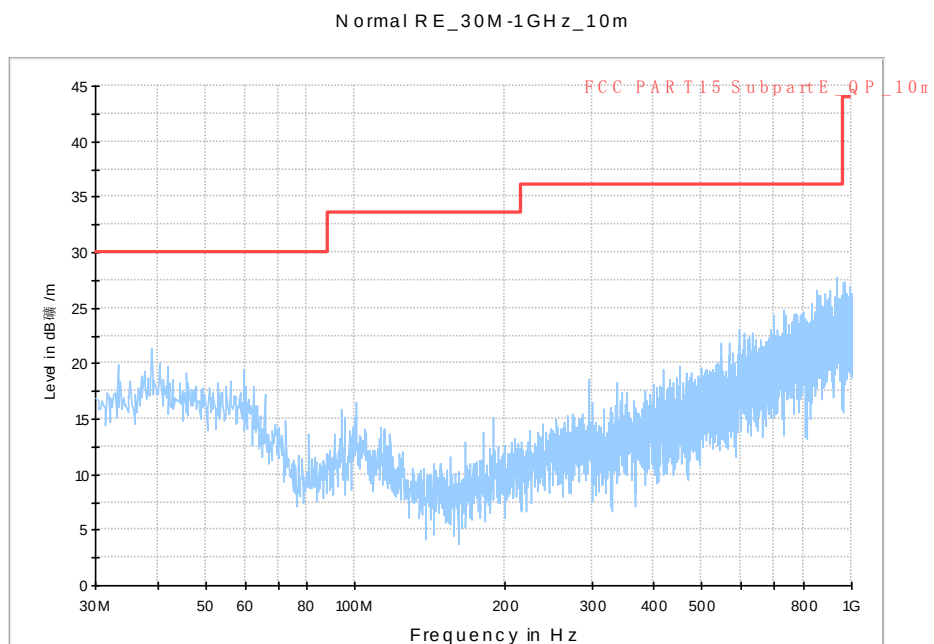


Fig. 127 Radiated Spurious Emission (802.11n-HT40, ch54, 30 MHz-1 GHz)

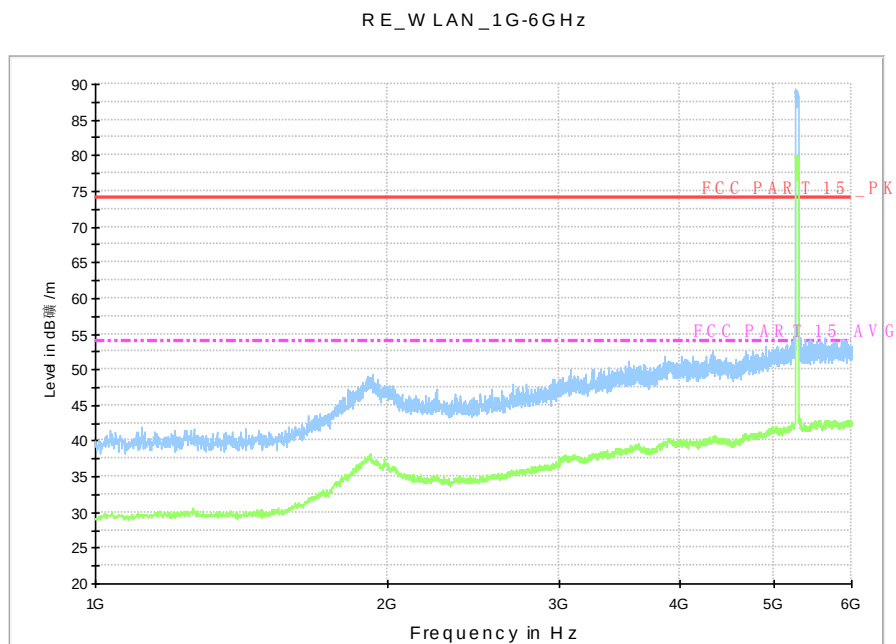


Fig. 128 Radiated Spurious Emission (802.11n-HT40, ch54, 1 GHz-6 GHz)

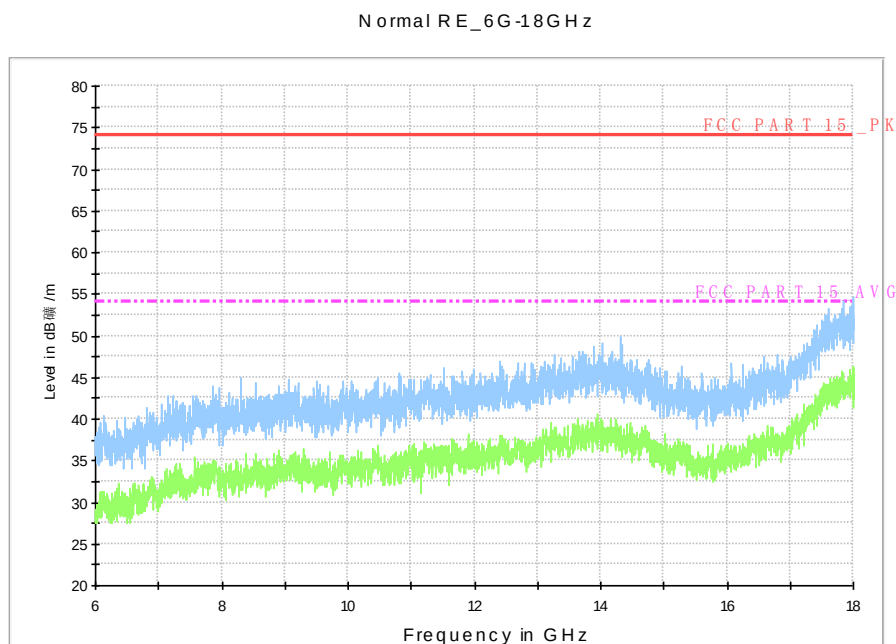


Fig. 129 Radiated Spurious Emission (802.11n-HT40, ch54, 6 GHz-18 GHz)

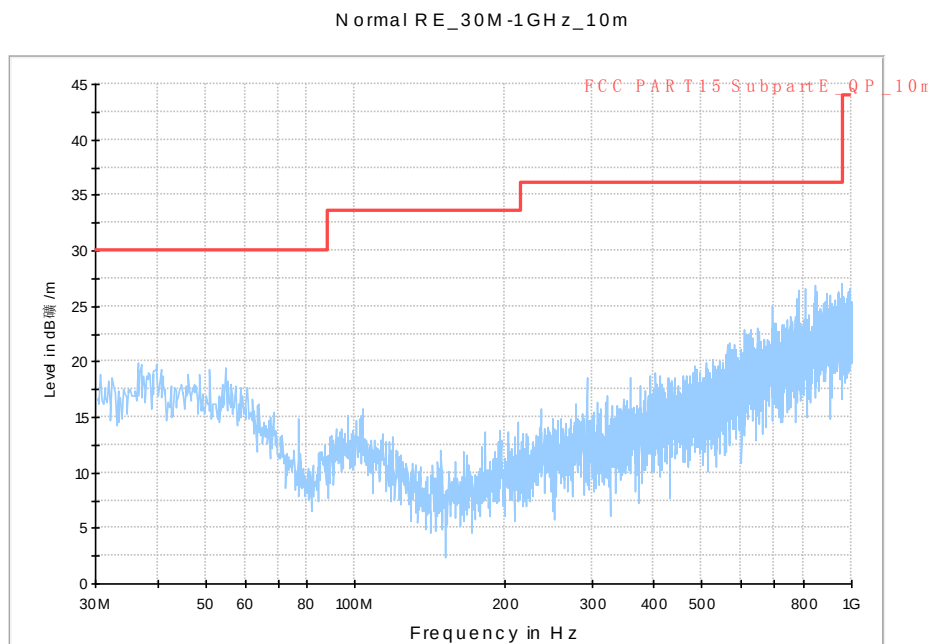


Fig. 130 Radiated Spurious Emission (802.11n-HT40, ch62, 30 MHz-1 GHz)

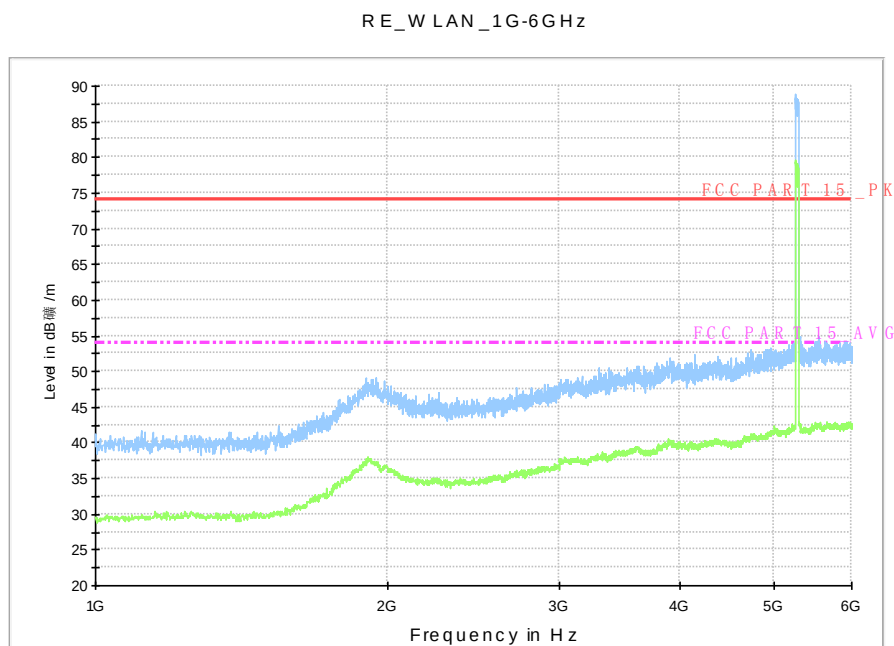


Fig. 131 Radiated Spurious Emission (802.11n-HT40, ch62, 1 GHz-6 GHz)

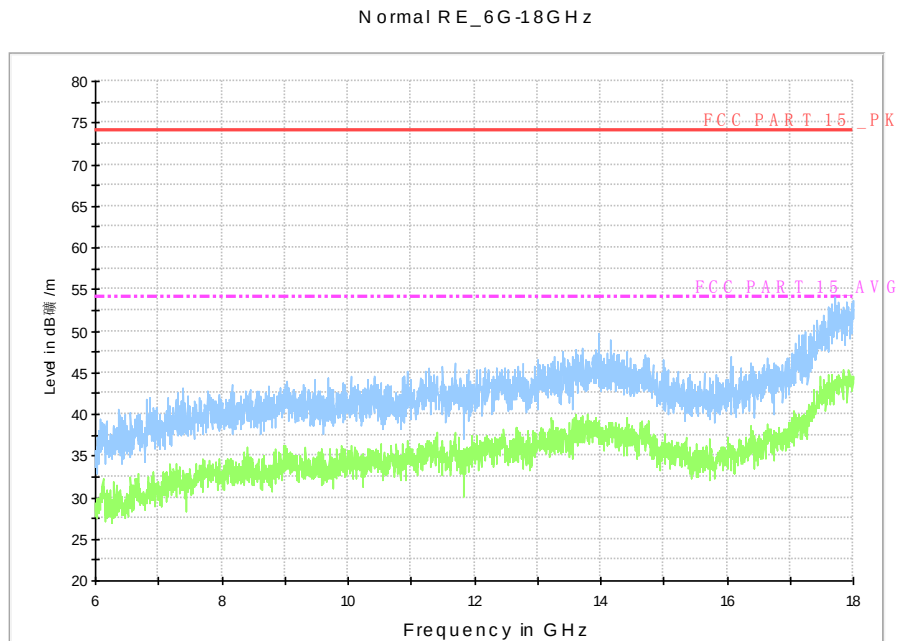


Fig. 132 Radiated Spurious Emission (802.11n-HT40, ch62, 6 GHz-18 GHz)

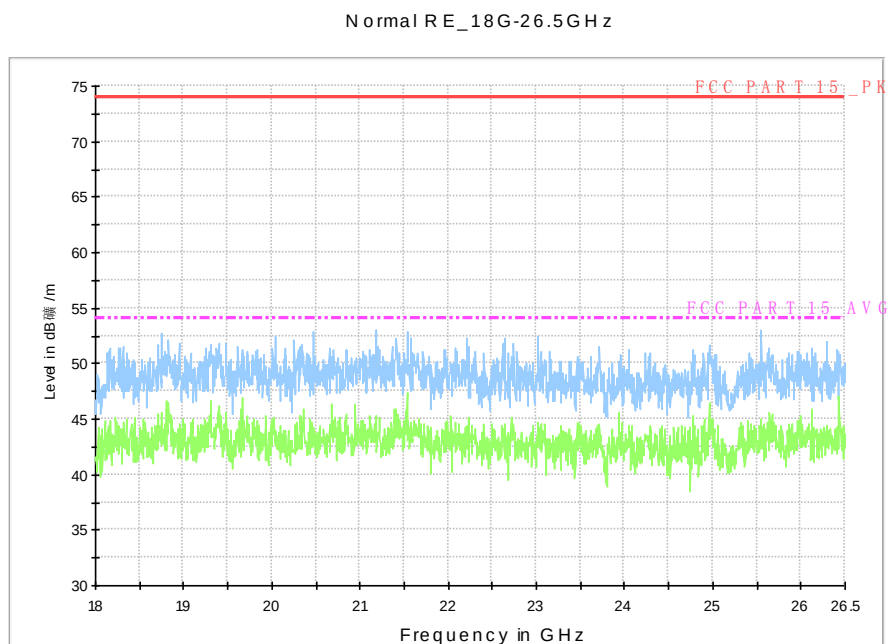


Fig. 133 Radiated Spurious Emission (802.11n-HT40, UNII2, 18 GHz-26.5 GHz)

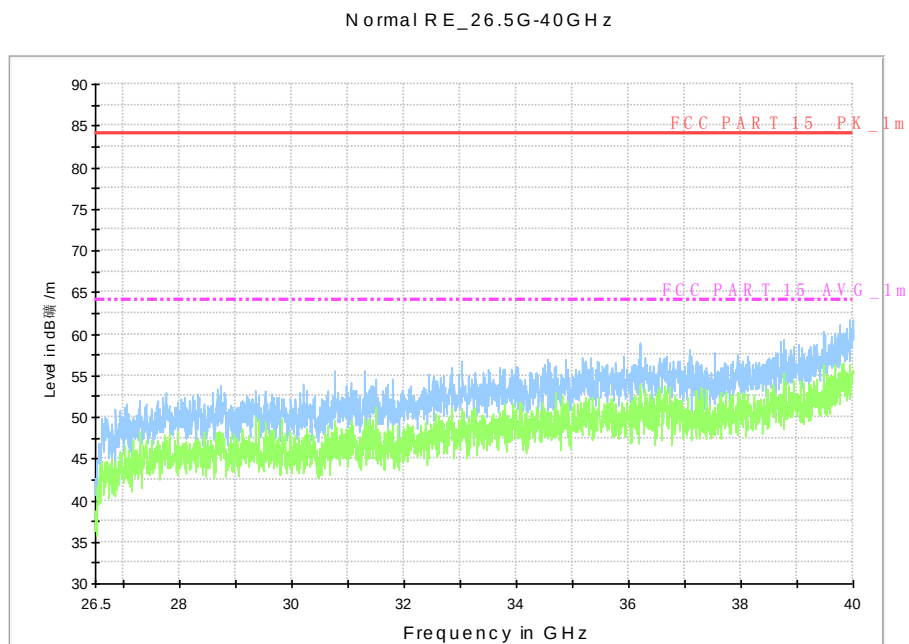


Fig. 134 Radiated Spurious Emission (802.11n-HT40, UNII2, 26.5 GHz-40 GHz)

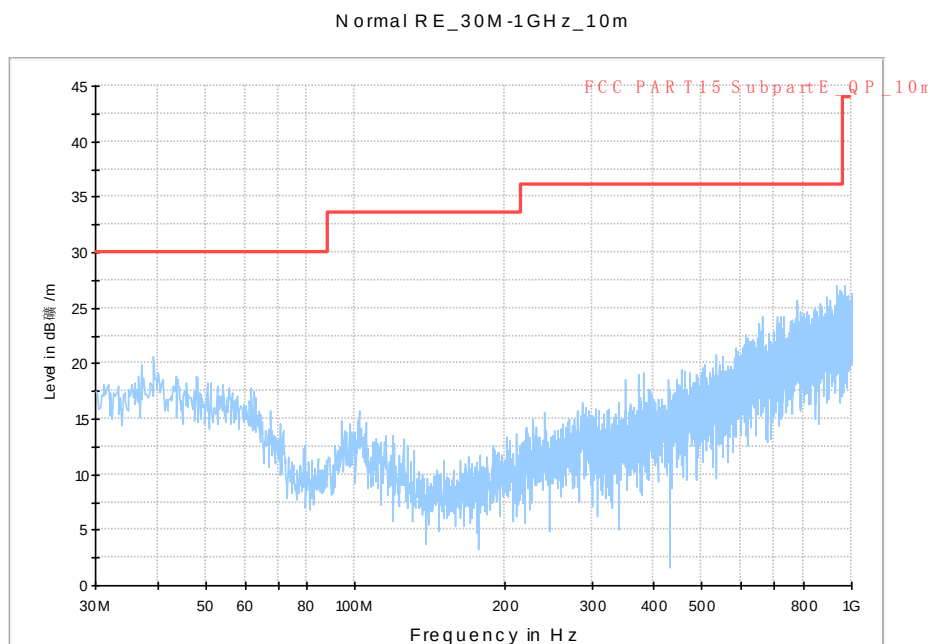


Fig. 135 Radiated Spurious Emission (802.11n-HT40, ch102, 30 MHz-1 GHz)

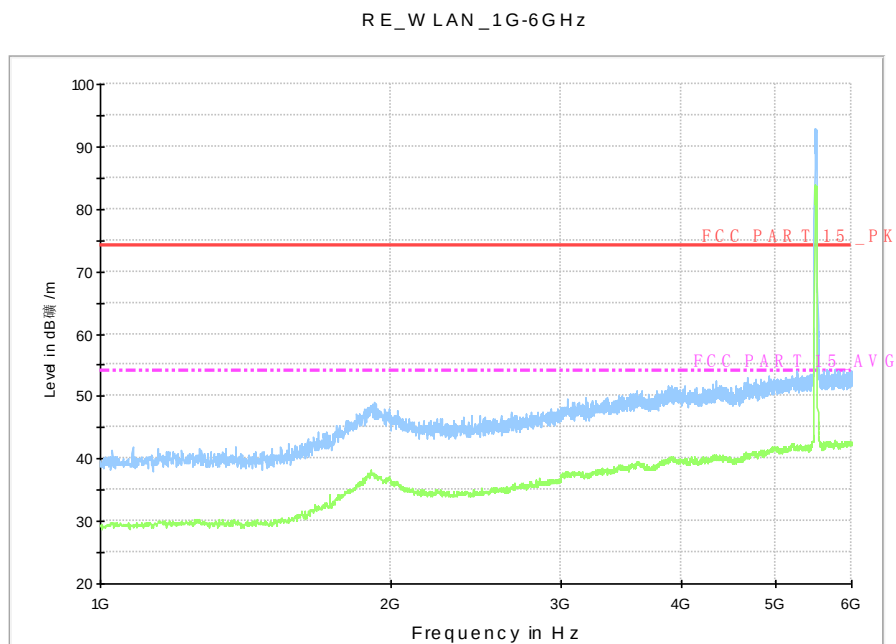


Fig. 136 Radiated Spurious Emission (802.11n-HT40, ch102, 1 GHz-6 GHz)

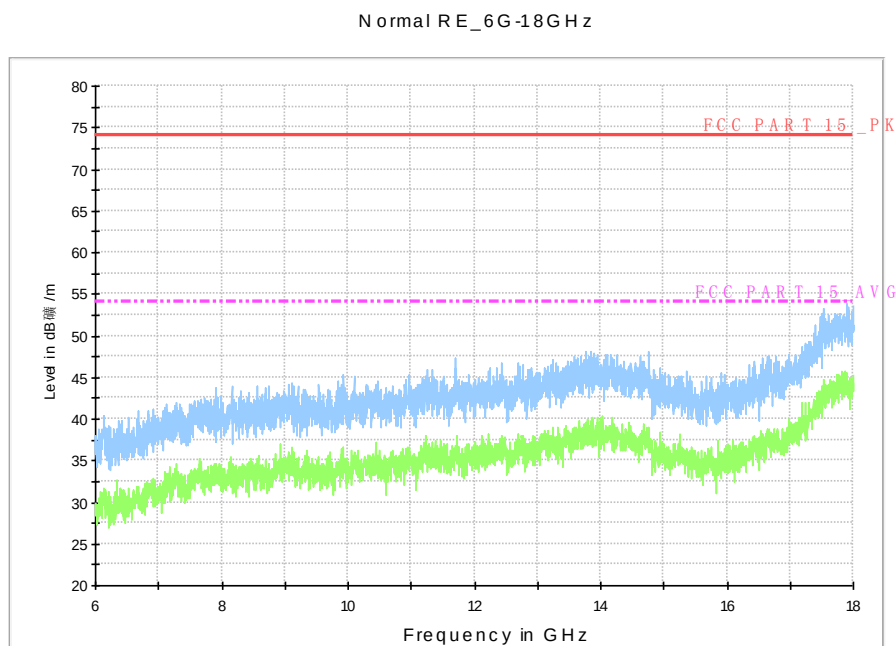


Fig. 137 Radiated Spurious Emission (802.11n-HT40, ch102, 6 GHz-18 GHz)

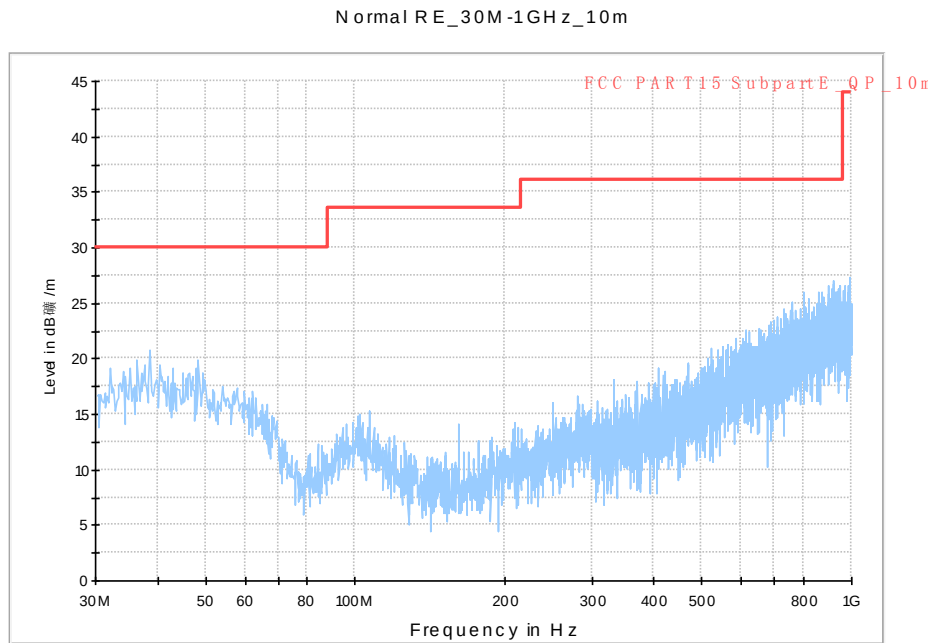


Fig. 138 Radiated Spurious Emission (802.11n-HT40, ch110, 30 MHz-1 GHz)

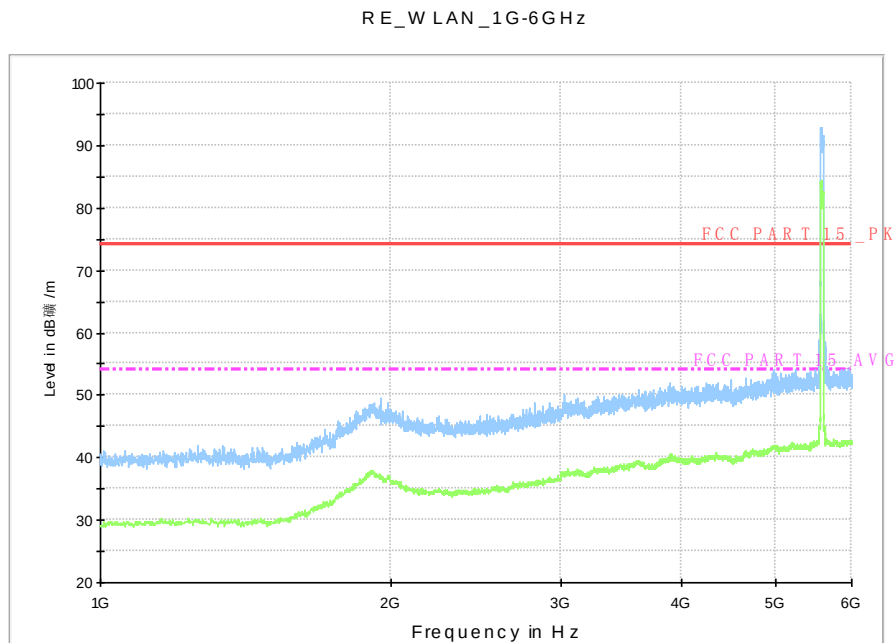


Fig. 139 Radiated Spurious Emission (802.11n-HT40, ch110, 1 GHz-6 GHz)

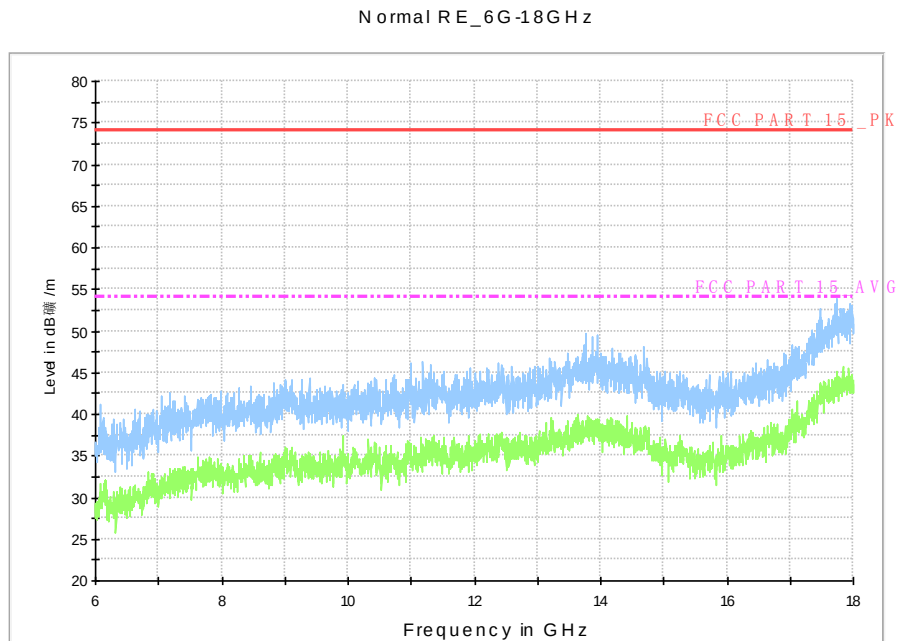


Fig. 140 Radiated Spurious Emission (802.11n-HT40, ch110, 6 GHz-18 GHz)

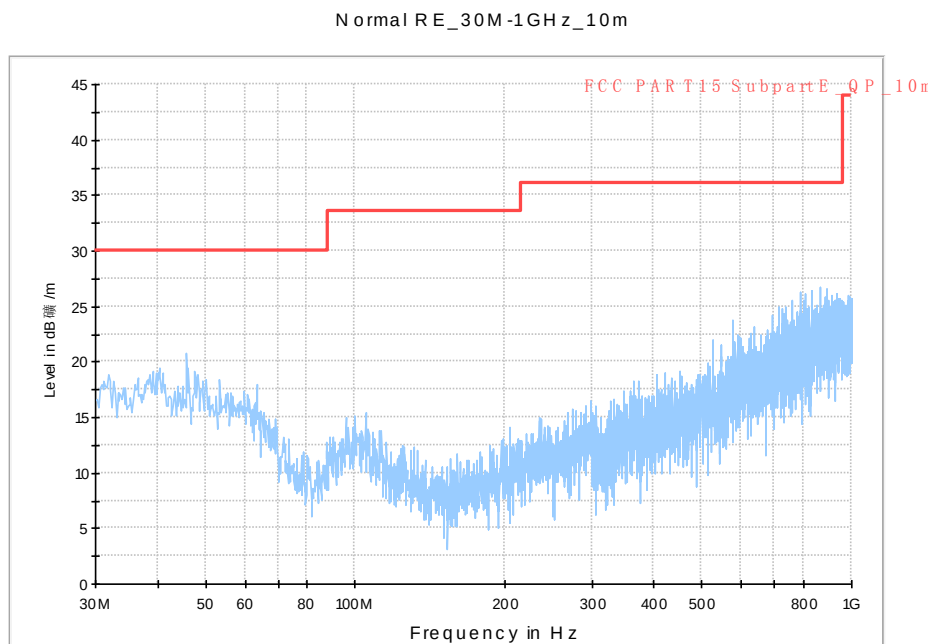


Fig. 141 Radiated Spurious Emission (802.11n-HT40, ch134, 30 MHz-1 GHz)

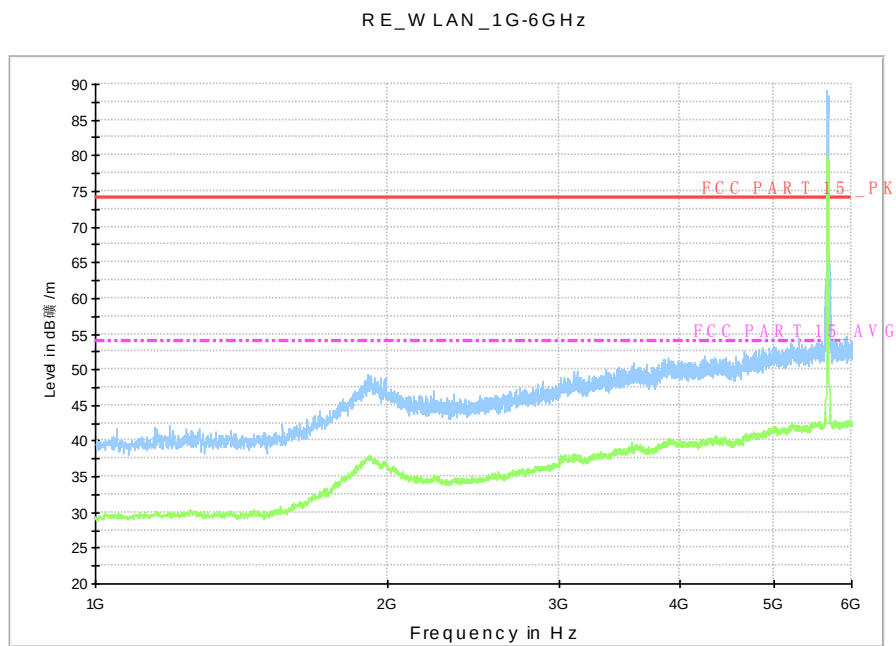


Fig. 142 Radiated Spurious Emission (802.11n-HT40, ch134, 1 GHz-6 GHz)

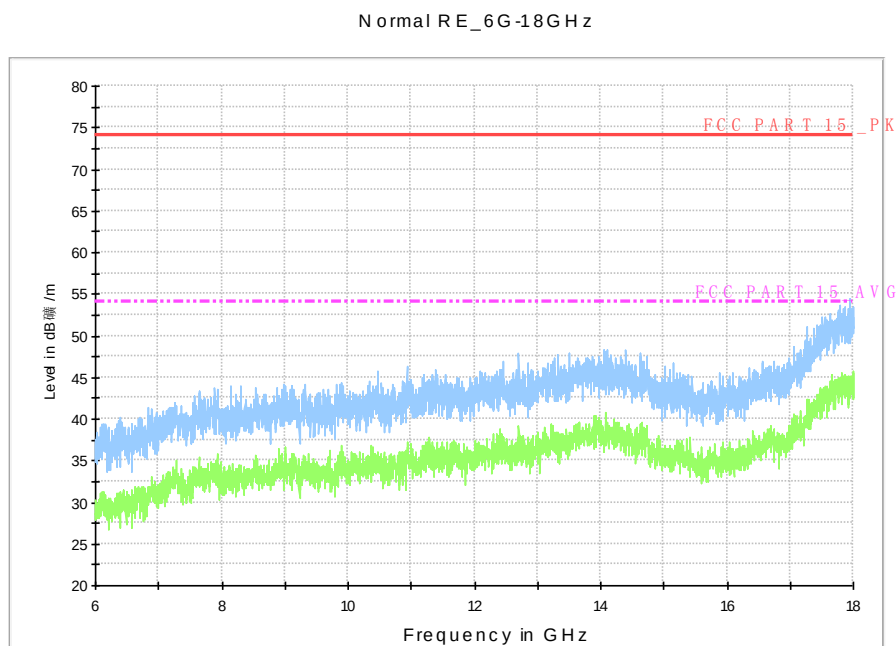


Fig. 143 Radiated Spurious Emission (802.11n-HT40, ch134, 6 GHz-18 GHz)

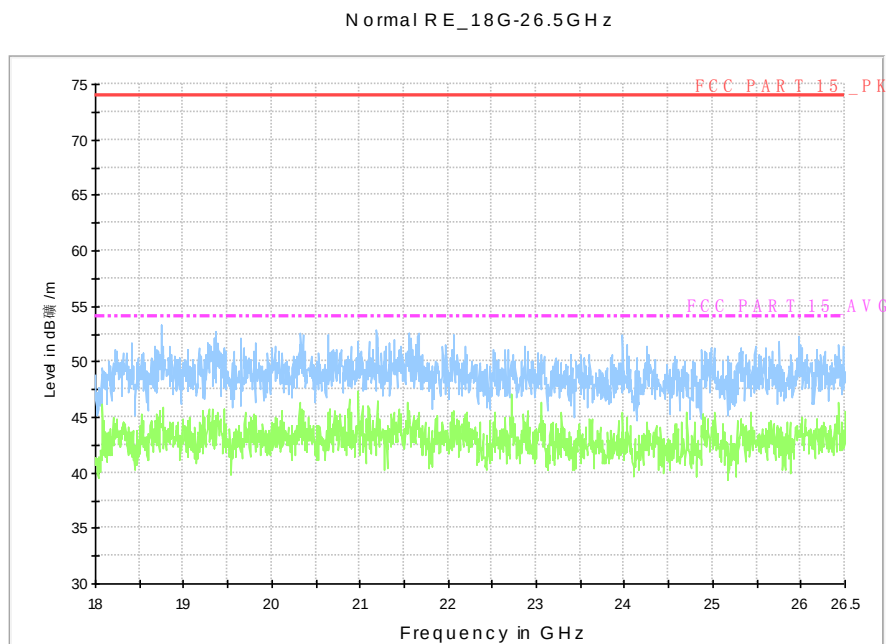


Fig. 144 Radiated Spurious Emission (802.11n-HT40, UNII3, 18 GHz-26.5 GHz)

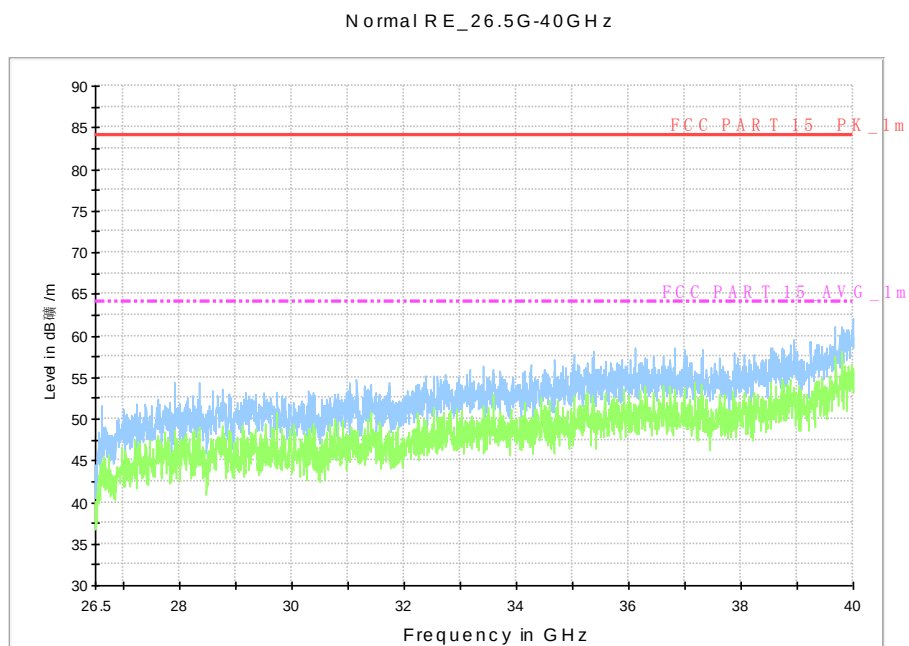


Fig. 145 Radiated Spurious Emission (802.11n-HT40, UNII3, 26.5 GHz-40 GHz)

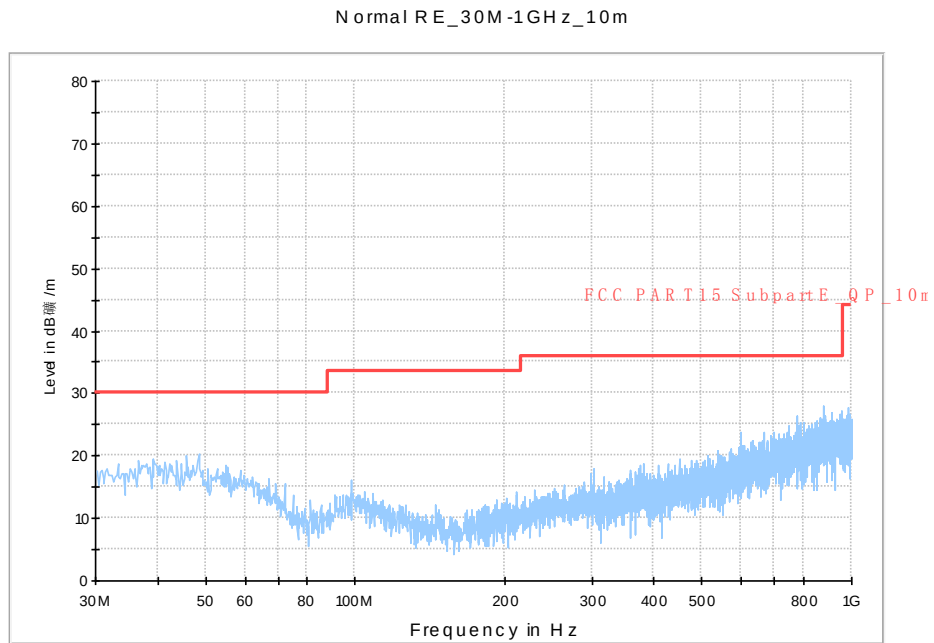


Fig. 146 Radiated Spurious Emission (802.11ac-HT80, ch42, 30 MHz-1 GHz)

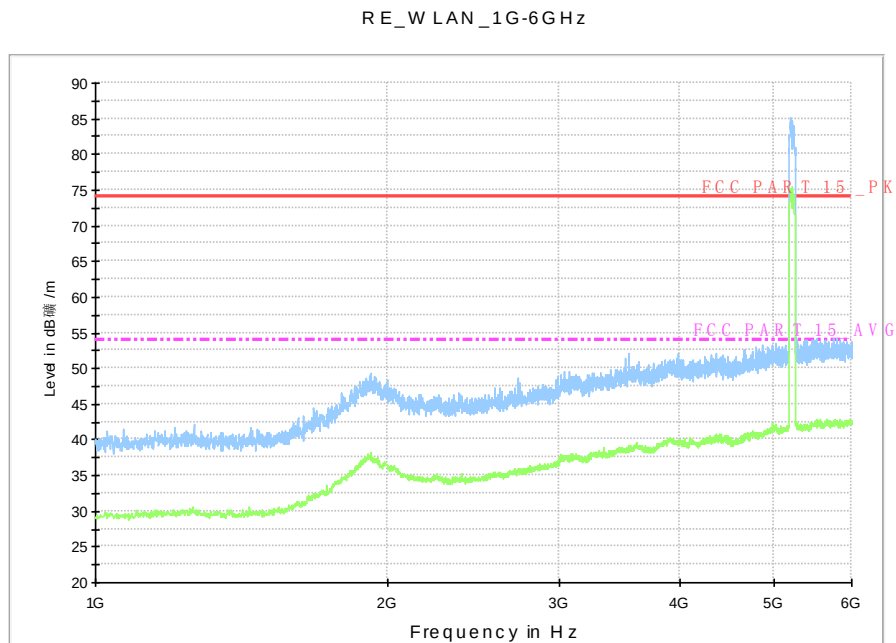


Fig. 147 Radiated Spurious Emission (802.11ac-HT80, ch42, 1 GHz-6 GHz)

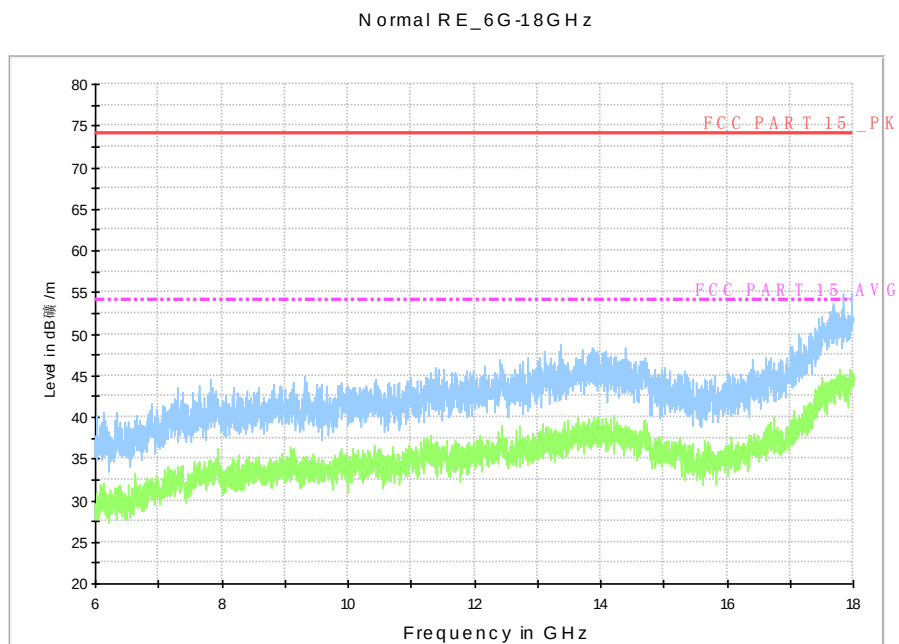


Fig. 148 Radiated Spurious Emission (802.11ac-HT80, ch42, 6 GHz-18 GHz)

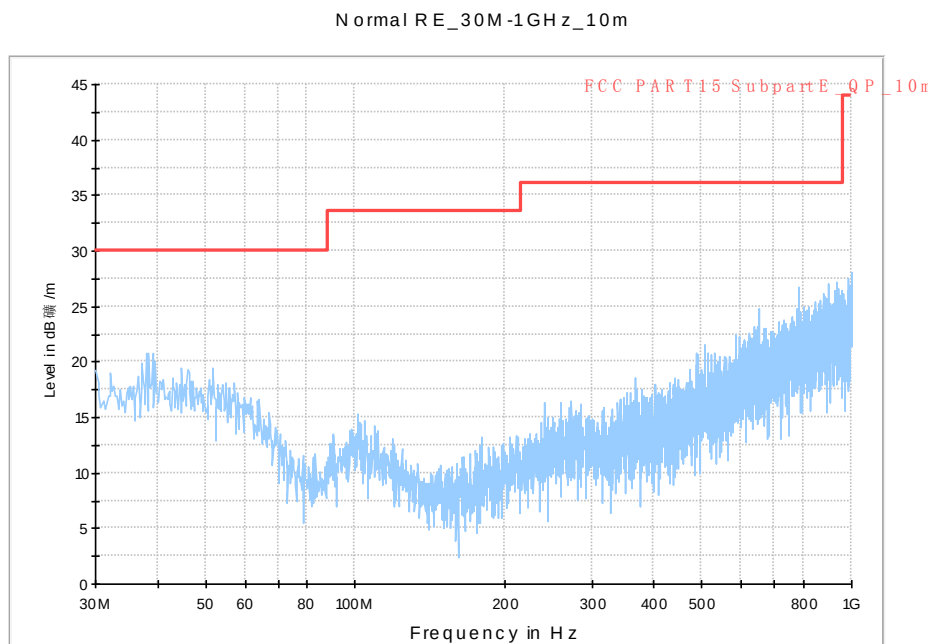


Fig. 149 Radiated Spurious Emission (802.11ac-HT80, ch58, 30 MHz-1 GHz)

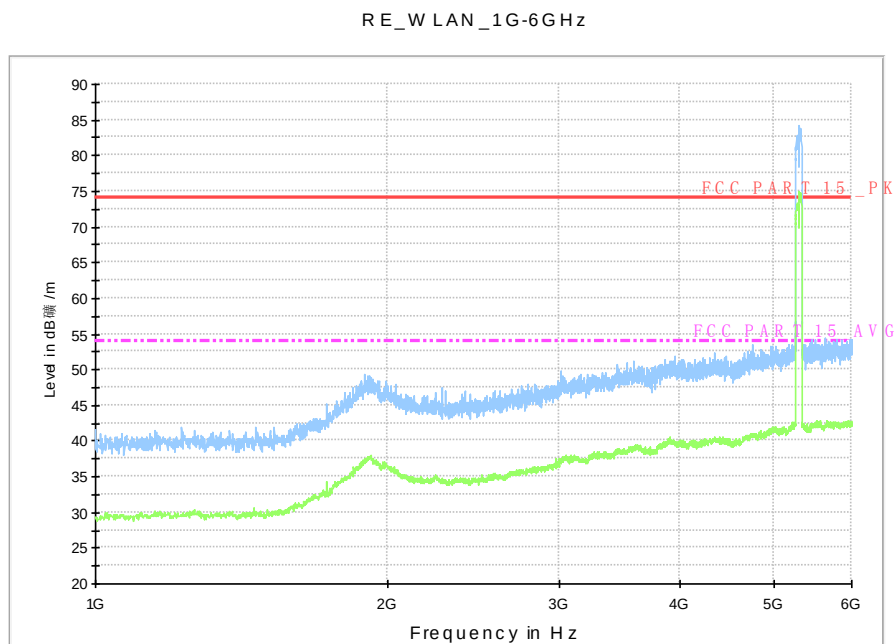


Fig. 150 Radiated Spurious Emission (802.11ac-HT80, ch58, 1 GHz-6 GHz)

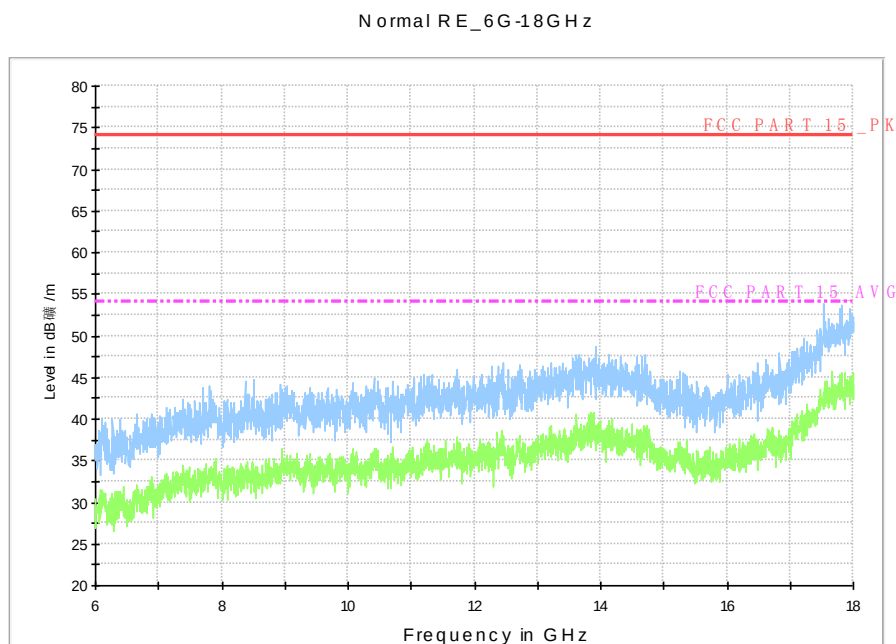


Fig. 151 Radiated Spurious Emission (802.11ac-HT80, ch58, 6 GHz-18 GHz)

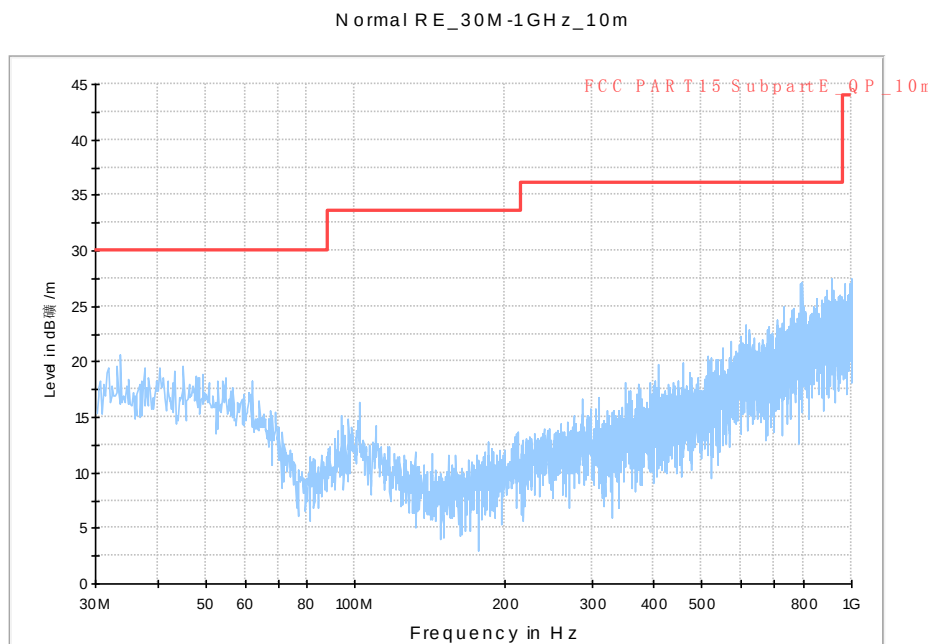


Fig. 152 Radiated Spurious Emission (802.11ac-HT80, ch106, 30 MHz-1 GHz)

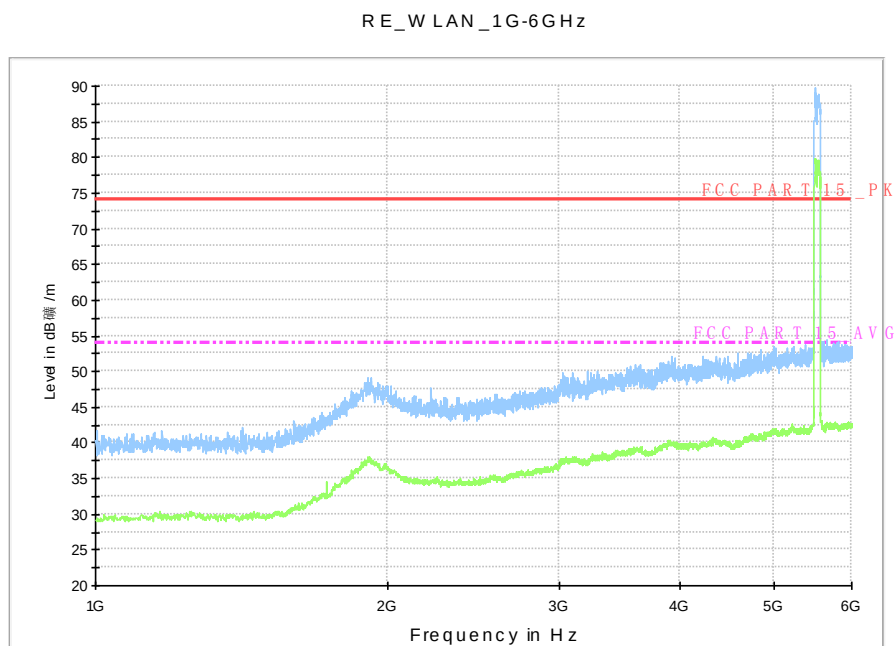


Fig. 153 Radiated Spurious Emission (802.11ac-HT80, ch106, 1 GHz-6 GHz)

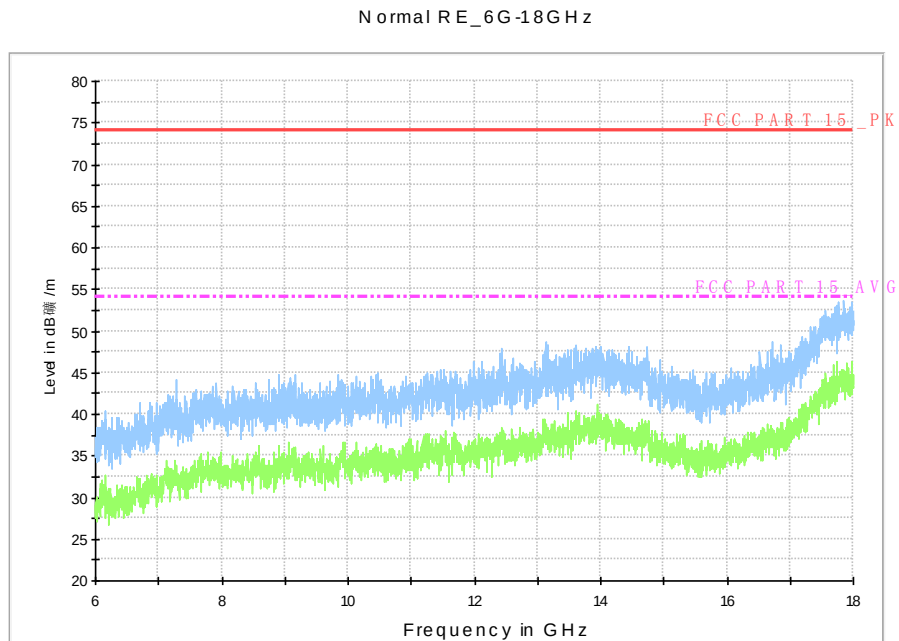


Fig. 154 Radiated Spurious Emission (802.11ac-HT80, ch106, 6 GHz-18 GHz)

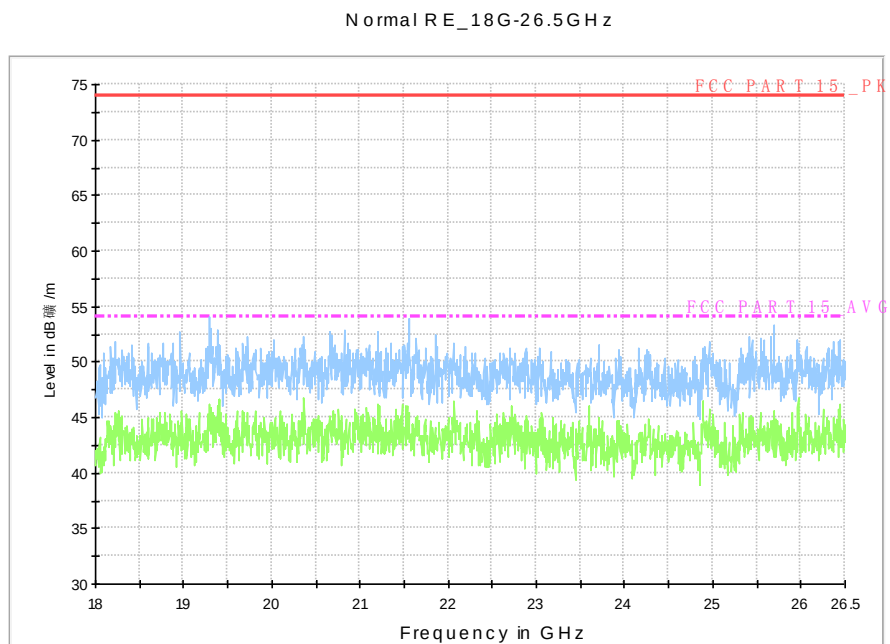


Fig. 155 Radiated Spurious Emission (802.11ac-HT80, All Channel, 18 GHz-26.5 GHz)

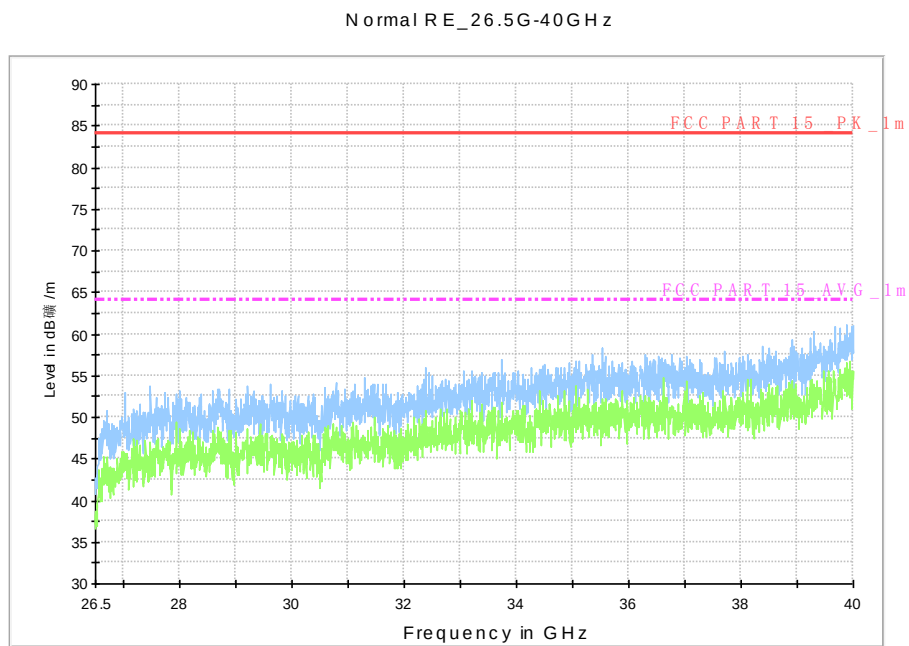


Fig. 156 Radiated Spurious Emission (802.11ac-HT80, All Channel, 26.5 GHz-40 GHz)

A.7. Spurious Emissions Radiated < 30MHz

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

Frequency (MHz)	Field strength($\mu\text{V/m}$)	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

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.157	P

Conclusion: PASS

Test graphs as below:

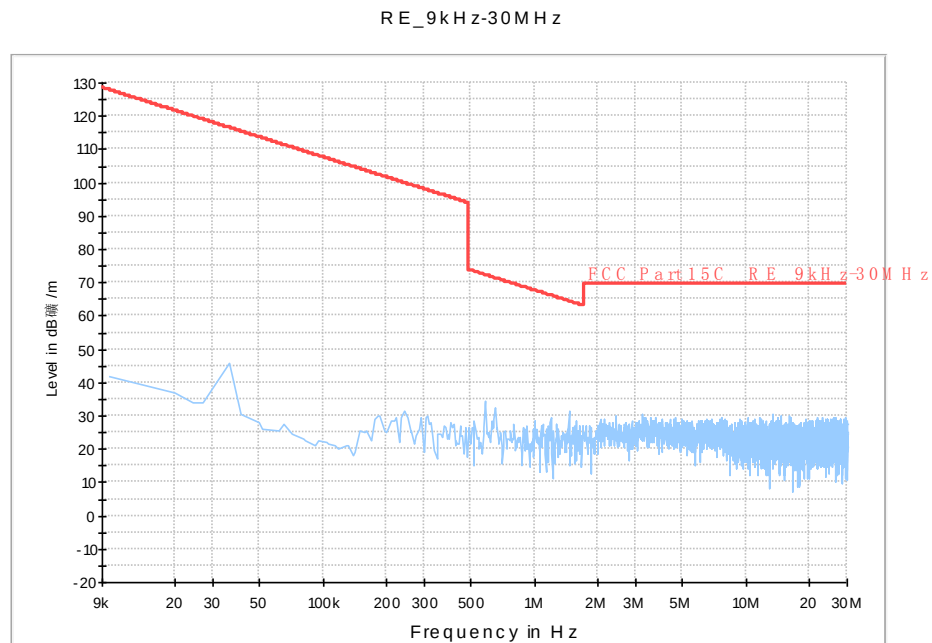


Fig. 157 Radiated Spurious Emission (802.11a, ch40, 9 kHz ~30 MHz)

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 =3.2dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig. 158	Fig. 159	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 (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.158	Fig.159	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:

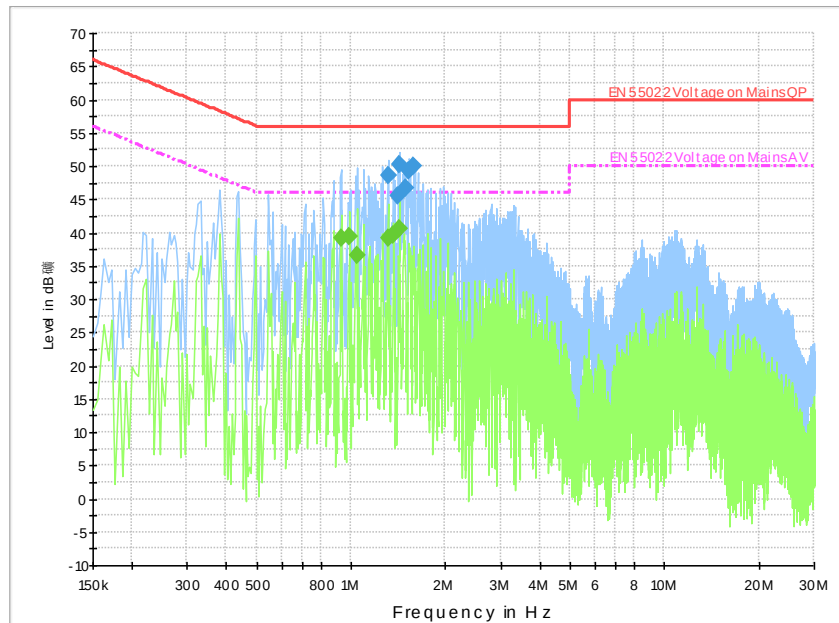


Fig. 158 Conducted Emission(802.11a, Ch40, TX)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.311001	48.6	GND	N	9.9	7.4	56.0
1.414501	45.6	GND	L1	9.9	10.4	56.0
1.423501	50.2	GND	N	9.9	5.8	56.0
1.486501	46.7	GND	N	9.9	9.3	56.0
1.536001	49.2	GND	N	9.9	6.8	56.0
1.585501	49.9	GND	N	9.9	6.1	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	39.2	GND	N	9.9	6.8	46.0
0.987001	39.4	GND	N	9.9	6.6	46.0
1.045501	36.7	GND	N	9.9	9.3	46.0
1.311001	39.3	GND	N	9.9	6.7	46.0
1.369501	39.6	GND	N	9.9	6.4	46.0
1.423501	40.5	GND	N	9.9	5.5	46.0

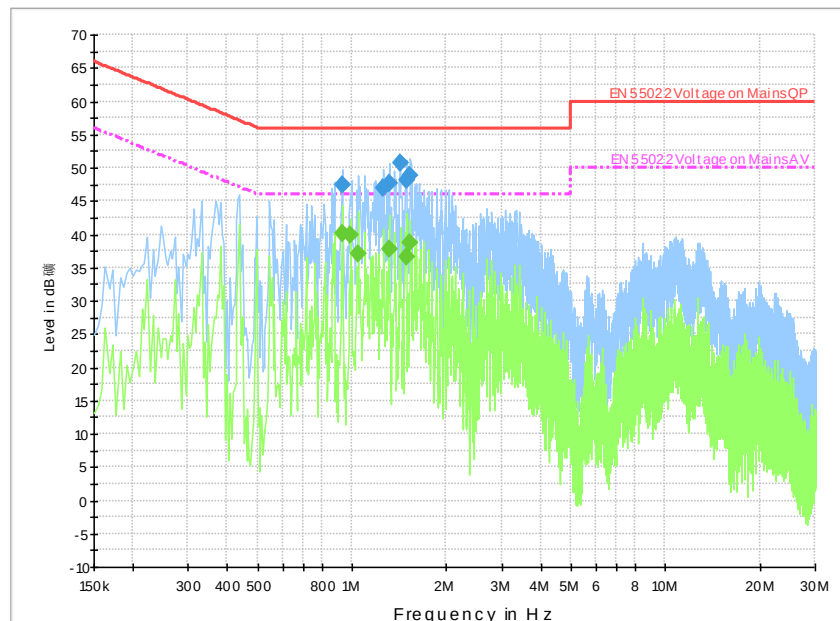


Fig. 159 Conducted Emission(802.11a, IDLE)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	47.5	GND	N	9.9	8.5	56.0
1.261501	47.1	GND	N	9.9	8.9	56.0
1.311001	47.7	GND	N	9.9	8.3	56.0
1.423501	50.8	GND	N	9.9	5.2	56.0
1.486501	48.0	GND	N	9.9	8.0	56.0
1.536001	48.7	GND	N	9.9	7.3	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	40.2	GND	N	9.9	5.8	46.0
0.987001	39.8	GND	N	9.9	6.2	46.0
1.045501	37.0	GND	N	9.9	9.0	46.0
1.311001	37.8	GND	N	9.9	8.2	46.0
1.486501	36.6	GND	N	9.9	9.4	46.0
1.536001	38.7	GND	N	9.9	7.3	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, 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.160	12.67	Fig.161	12.62	Fig.162	12.01
Average(dBm)	Fig.163	4.08	Fig.164	4.28	Fig.165	3.63
Result (dB)	8.59		8.34		8.38	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.166	12.48	Fig.167	12.29	Fig.168	11.74
Average(dBm)	Fig.169	4.23	Fig.170	4.33	Fig.171	3.38
Result (dB)	8.25		7.96		8.36	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5580MHz (Ch116)		5700MHz (Ch140)	
Peak (dBm)	Fig.172	11.93	Fig.173	12.07	Fig.174	12.78
Average(dBm)	Fig.175	4.00	Fig.176	4.01	Fig.177	4.39
Result (dB)	7.93		8.06		8.39	

11n-HT20 mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.178	12.26	Fig.179	12.14	Fig.180	11.23
Average(dBm)	Fig.181	3.88	Fig.182	3.91	Fig.183	3.09
Result (dB)	8.38		8.23		8.14	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.184	12.09	Fig.185	12.21	Fig.186	11.12
Average(dBm)	Fig.187	3.69	Fig.188	4.33	Fig.189	2.98
Result (dB)	8.40		7.88		8.14	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5580MHz (Ch116)		5700MHz (Ch140)	
Peak (dBm)	Fig.190	12.46	Fig.191	12.27	Fig.192	12.91
Average(dBm)	Fig.193	3.62	Fig.194	3.69	Fig.195	4.15
Result (dB)	8.84		8.58		8.76	

11n-HT40 mode

Type	Peak Excursion							
	5190MHz (Ch38)		5230MHz (Ch46)		5270MHz (Ch54)		5310 MHz (Ch62)	
Peak (dBm)	Fig.196	9.51	Fig.197	9.22	Fig.198	10.45	Fig.199	9.09
Average(dBm)	Fig.200	1.27	Fig.201	1.04	Fig.202	1.10	Fig.203	0.03
Result (dB)	8.24		8.18		9.35		9.06	

Type	Test Result (dBm)					
	5510MHz (Ch102)		5550MHz (Ch110)		5670MHz (Ch134)	
Peak (dBm)	Fig.204	9.54	Fig.205	9.41	Fig.206	9.07
Average(dBm)	Fig.207	0.76	Fig.208	0.77	Fig.209	0.73
Result (dB)	8.78		8.64		8.34	

11ac-HT80 mode

Type	Test Result (dBm)					
	5210MHz (Ch42)		5290MHz (Ch58)		5530MHz (Ch106)	
Peak (dBm)	Fig.210	4.65	Fig.211	4.24	Fig.212	3.90
Average(dBm)	Fig.213	-2.91	Fig.214	-3.53	Fig.215	-3.77
Result (dB)	7.56		7.77		7.67	

Conclusion: PASS

Test graphs as below:



Fig. 160 Peak Excursions (802.11a, ch36, peak)



Fig. 161 Peak Excursions (802.11a, ch40, peak)



Fig. 162 Peak Excursions (802.11a, ch48, peak)



Fig. 163 Peak Excursions (802.11a, ch36, average)



Fig. 164 Peak Excursions (802.11a, ch40, average)



Fig. 165 Peak Excursions (802.11a, ch48, average)



Fig. 166 Peak Excursions (802.11a, ch52, peak)



Fig. 167 Peak Excursions (802.11a, ch56, peak)



Fig. 168 Peak Excursions (802.11a, ch64, peak)



Fig. 169 Peak Excursions (802.11a, ch52, average)



Fig. 170 Peak Excursions (802.11a, ch56, average)



Fig. 171 Peak Excursions (802.11a, ch64, average)



Fig. 172 Peak Excursions (802.11a, ch100, peak)



Fig. 173 Peak Excursions (802.11a, ch116, peak)



Fig. 174 Peak Excursions (802.11a, ch140, peak)



Fig. 175 Peak Excursions (802.11a, ch100, average)



Fig. 176 Peak Excursions (802.11a, ch116, average)



Fig. 177 Peak Excursions (802.11a, ch140, average)



Fig. 178 Peak Excursions (802.11n-HT20, ch36, peak)

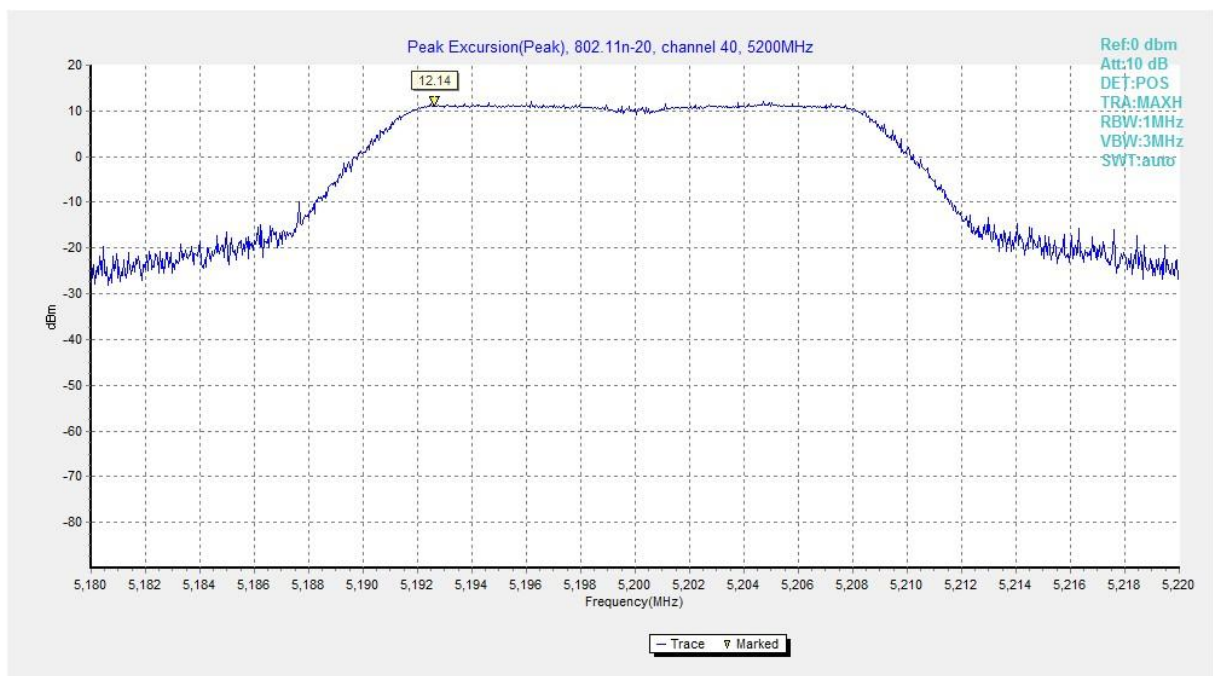


Fig. 179 Peak Excursions (802.11n-HT20, ch40, peak)

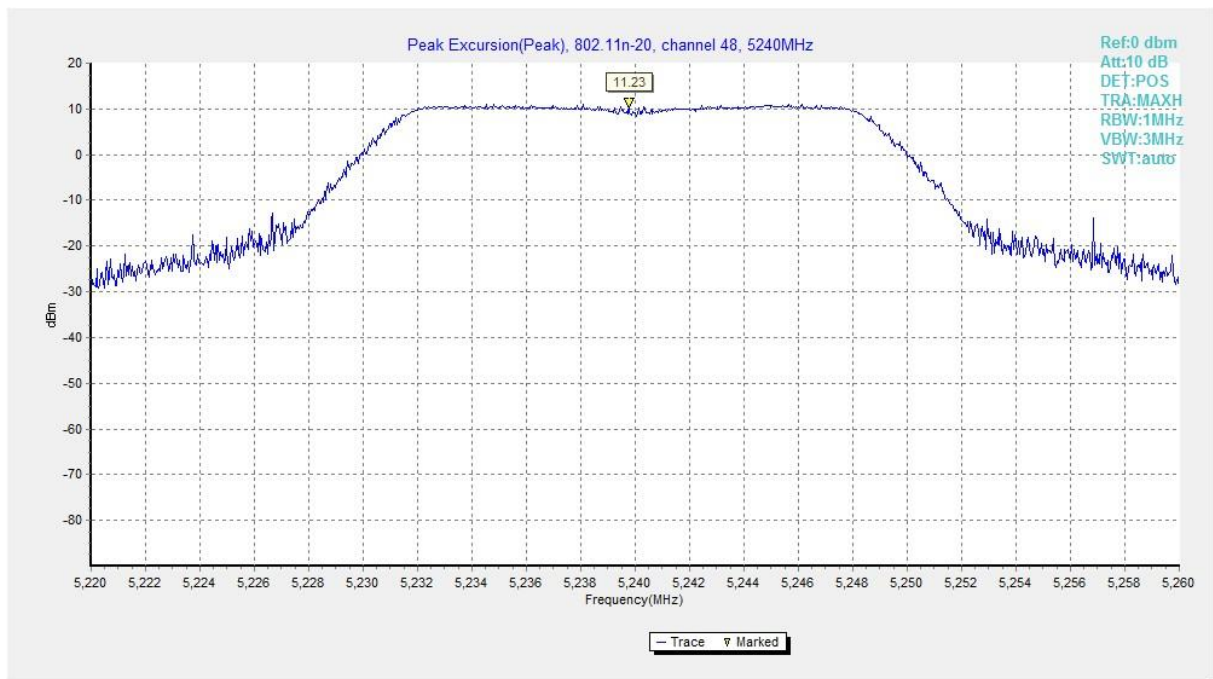


Fig. 180 Peak Excursions (802.11n-HT20, ch48, peak)



Fig. 181 Peak Excursions (802.11n-HT20, ch36, average)



Fig. 182 Peak Excursions (802.11n-HT20, ch40, average)

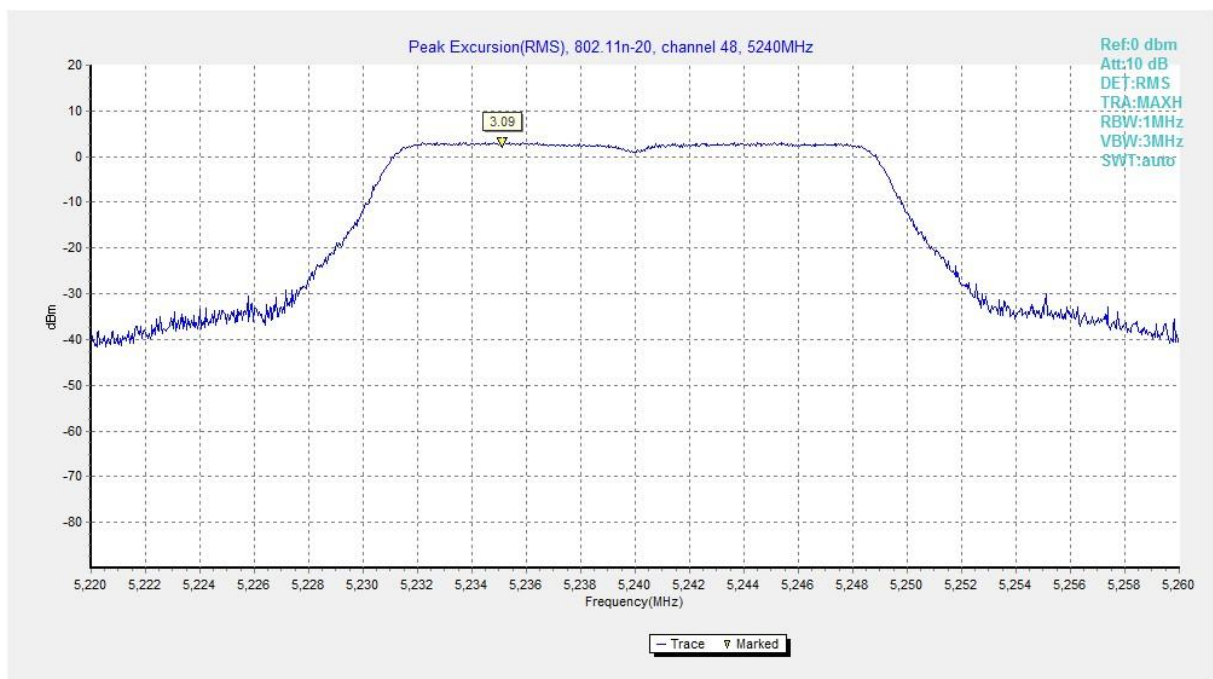


Fig. 183 Peak Excursions (802.11n-HT20, ch48, average)



Fig. 184 Peak Excursions (802.11n-HT20, ch52, peak)



Fig. 185 Peak Excursions (802.11n-HT20, ch56, peak)