

Fig. 36 Radiated Spurious Emission (802.11a, ch36, 3 GHz-6 GHz)

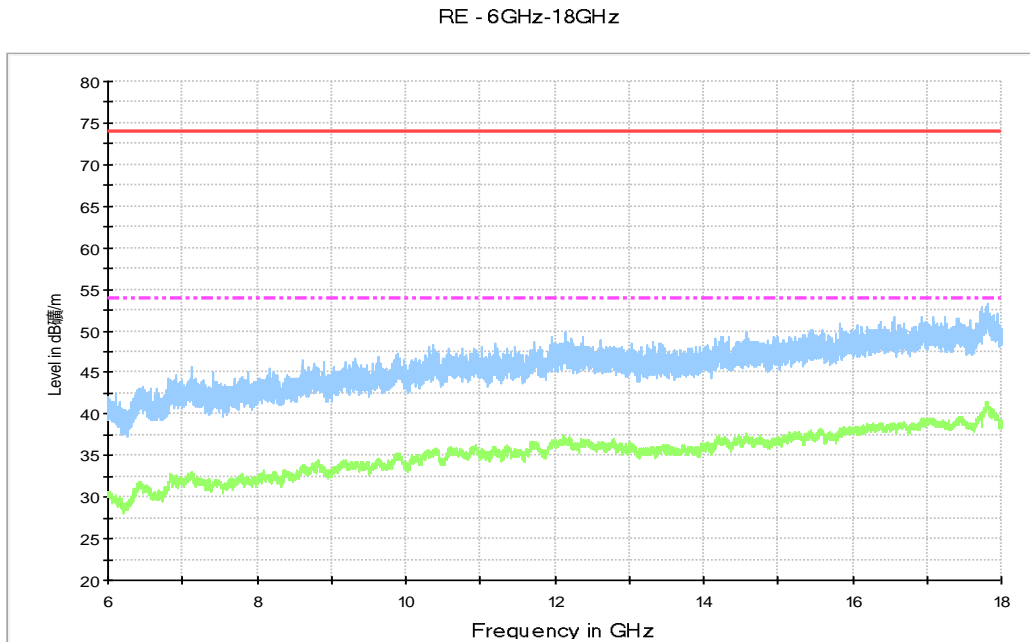


Fig. 37 Radiated Spurious Emission (802.11a, ch36, 6 GHz-18 GHz)

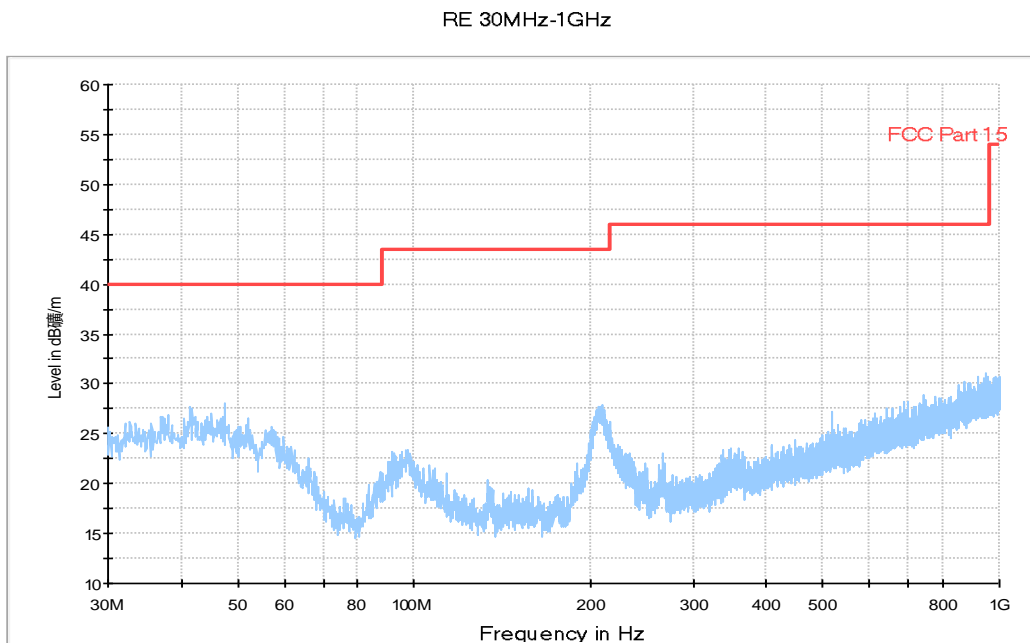


Fig. 38 Radiated Spurious Emission (802.11a, ch40, 30 MHz-1 GHz)

RE - 1GHz-3GHz

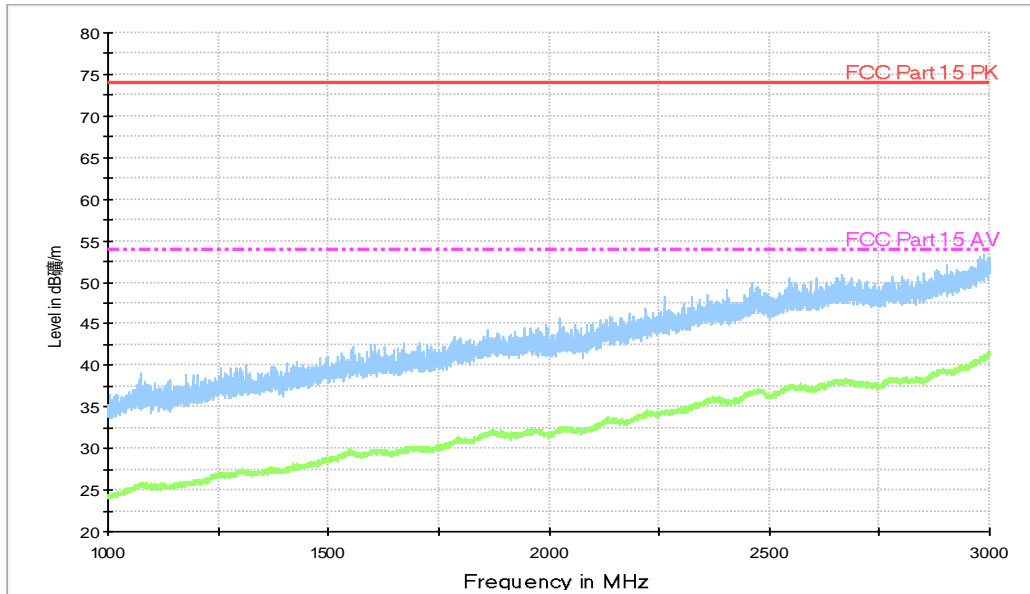


Fig. 39 Radiated Spurious Emission (802.11a, ch40, 1 GHz-3 GHz)

RE - 3GHz-6GHz

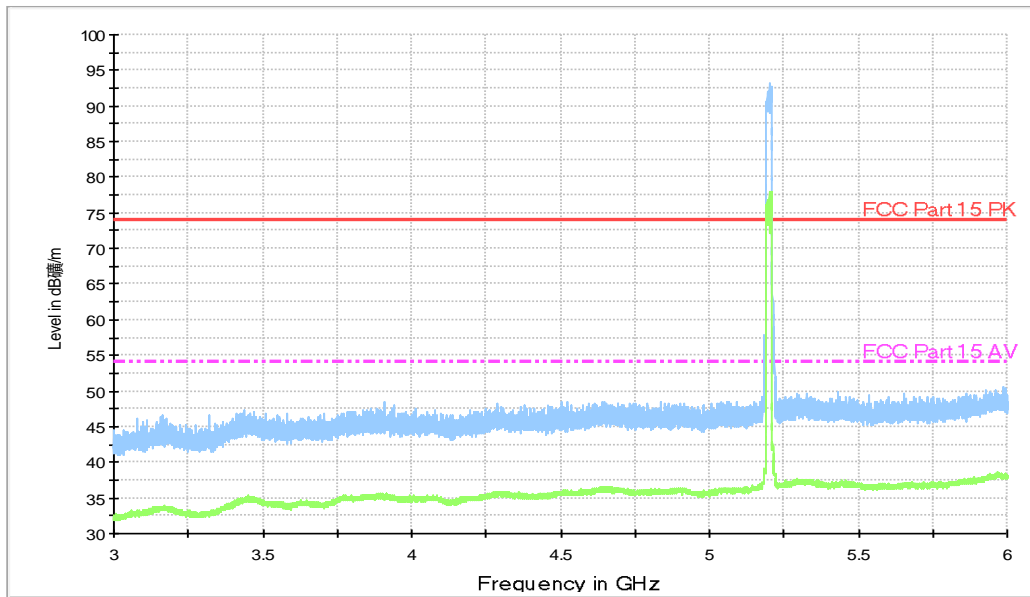


Fig. 40 Radiated Spurious Emission (802.11a, ch40, 3 GHz-6 GHz)

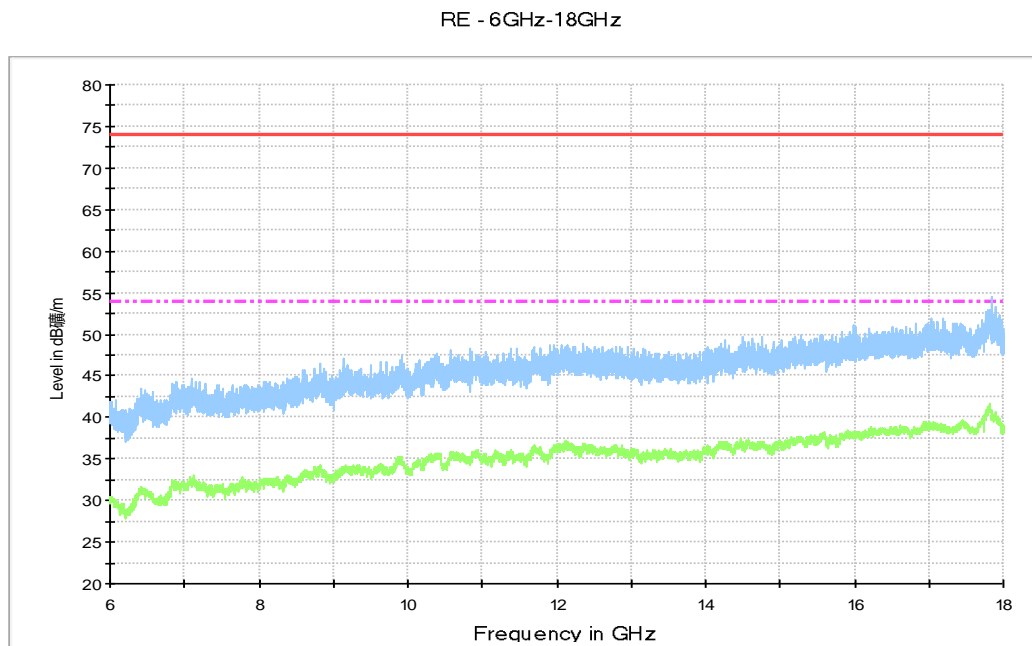


Fig. 41 Radiated Spurious Emission (802.11a, ch40, 6 GHz-18 GHz)

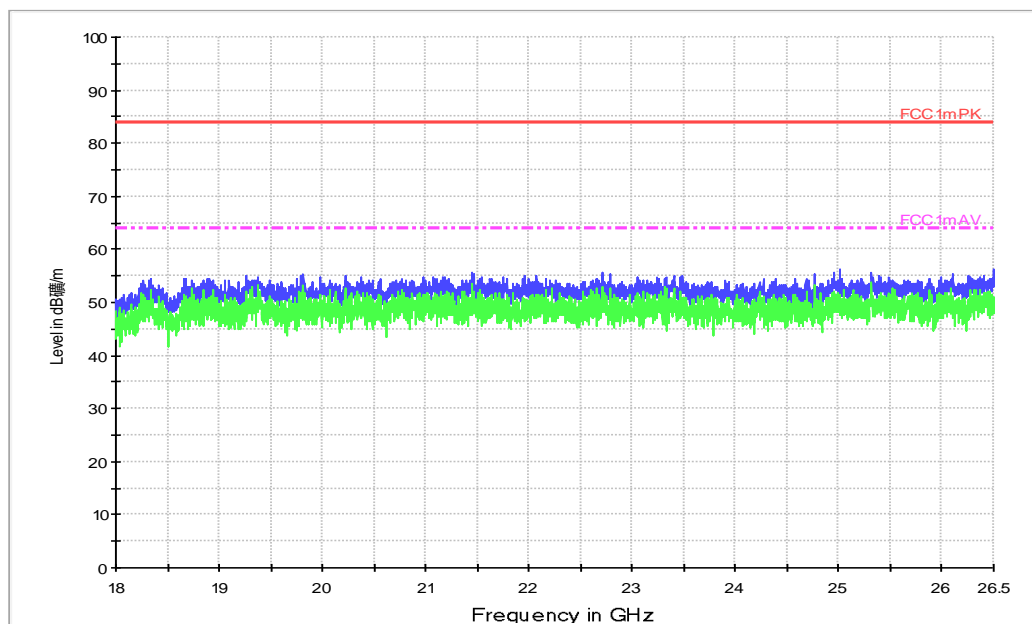


Fig. 42 Radiated Spurious Emission (802.11a, ch40, 18 GHz-26.5 GHz)

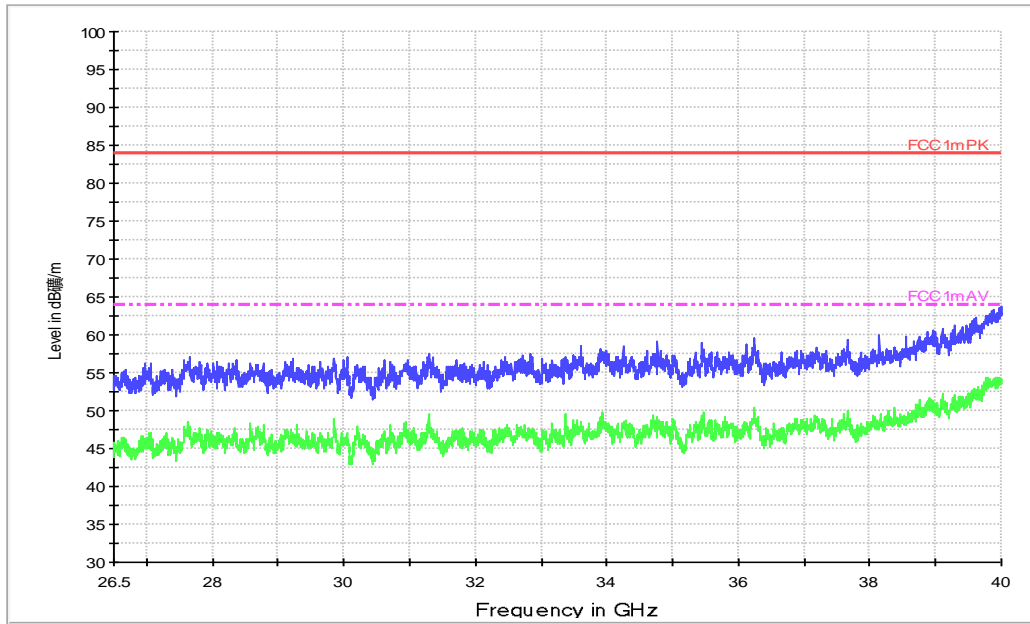


Fig. 43 Radiated Spurious Emission (802.11a, ch40, 26.5 GHz-40 GHz)

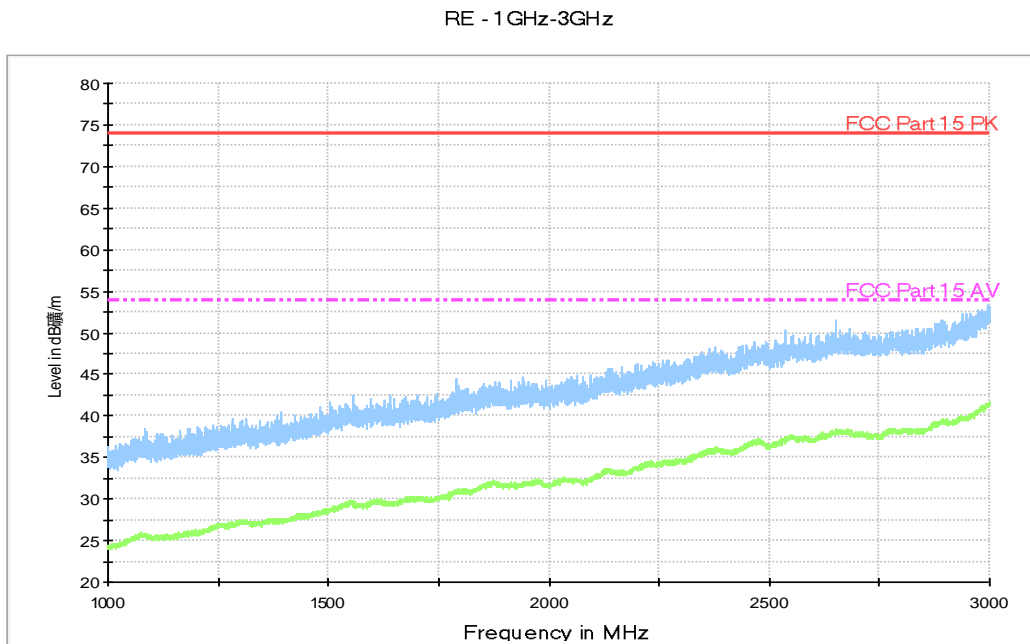


Fig. 44 Radiated Spurious Emission (802.11a, ch48, 1 GHz-3 GHz)

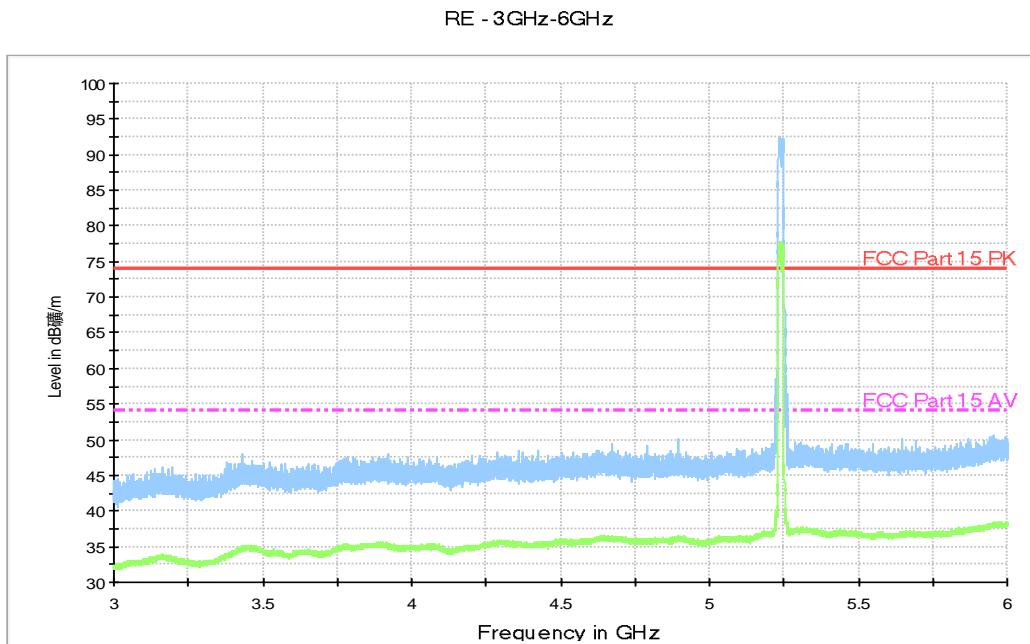


Fig. 45 Radiated Spurious Emission (802.11a, ch48, 3 GHz-6 GHz)

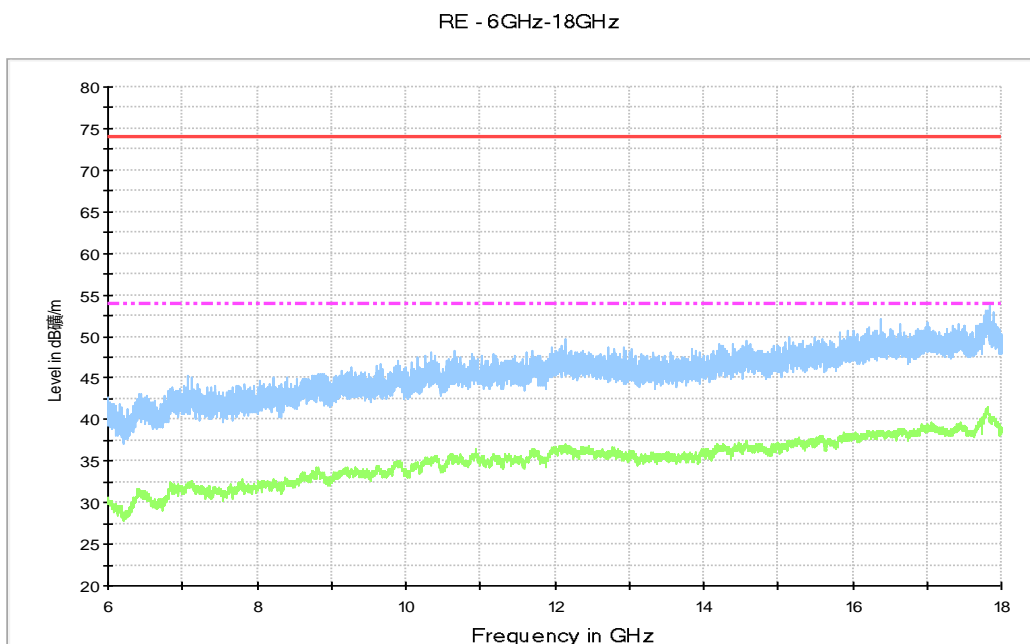


Fig. 46 Radiated Spurious Emission (802.11a, ch48, 6 GHz-18 GHz)

RE - 1 GHz-3GHz

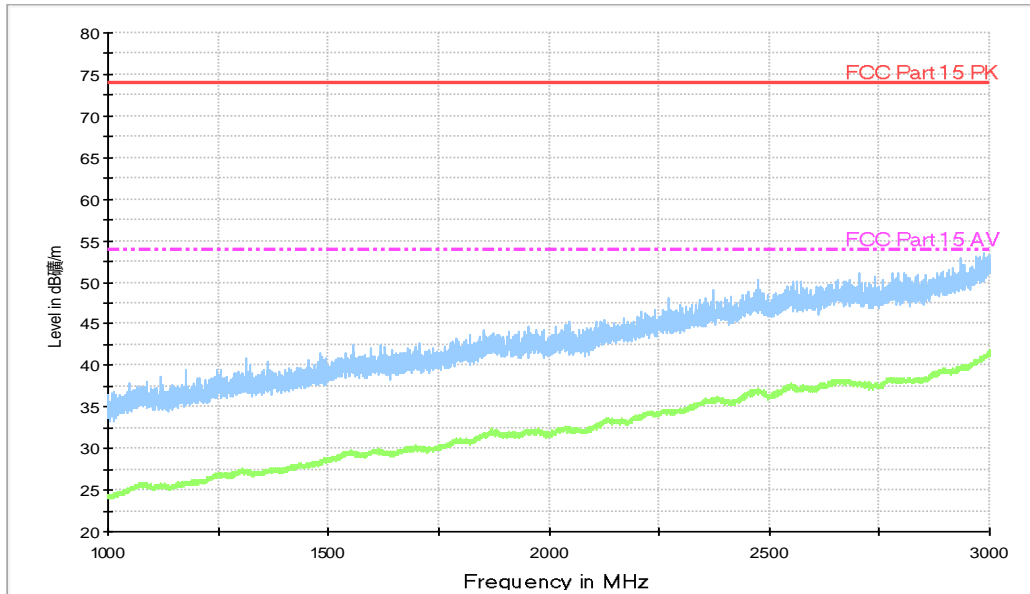


Fig. 47 Radiated Spurious Emission (802.11a, ch52, 1 GHz-3 GHz)

RE - 3GHz-6GHz

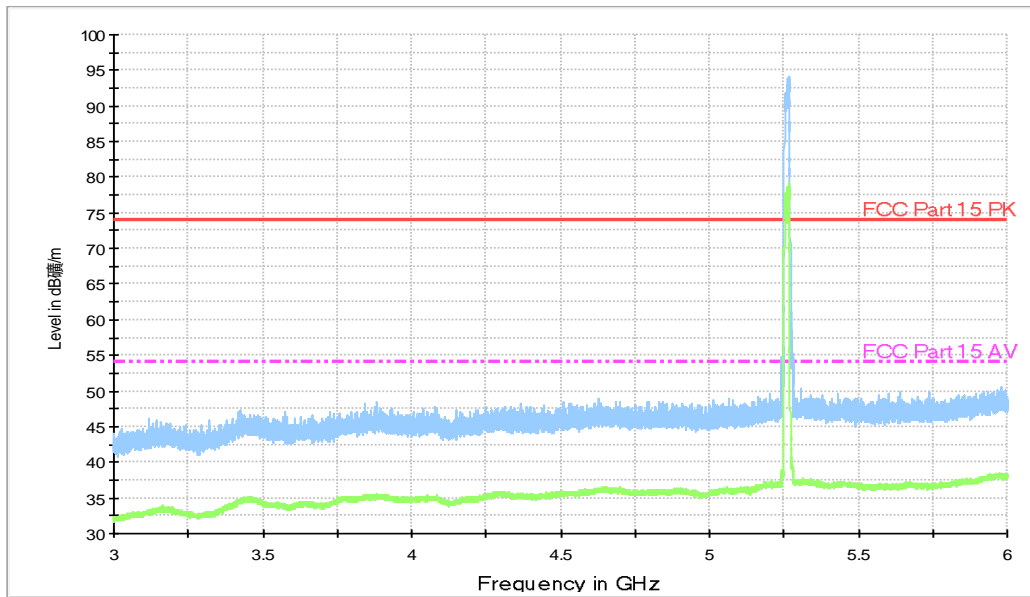


Fig. 48 Radiated Spurious Emission (802.11a, ch52, 3 GHz-6 GHz)

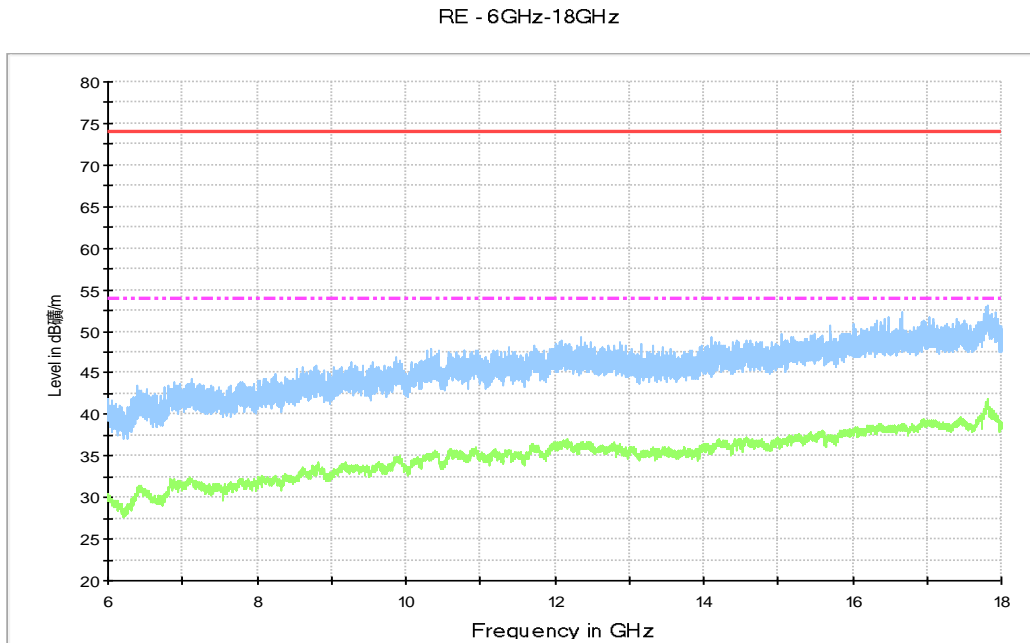


Fig. 49 Radiated Spurious Emission (802.11a, ch52, 6 GHz-18 GHz)

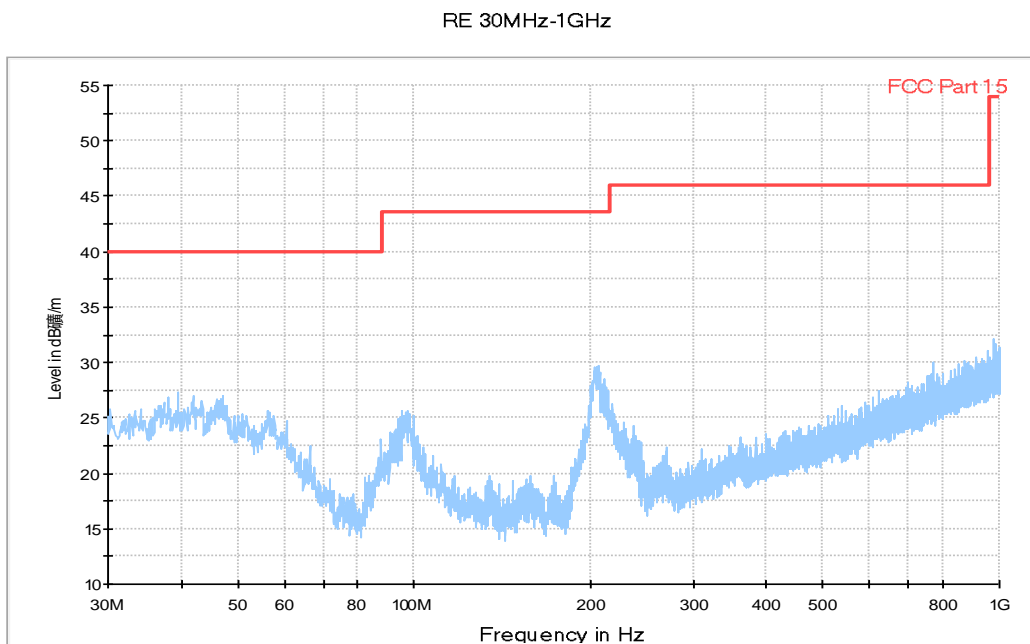


Fig. 50 Radiated Spurious Emission (802.11a, ch56, 30 MHz-1 GHz)

RE - 1 GHz-3GHz

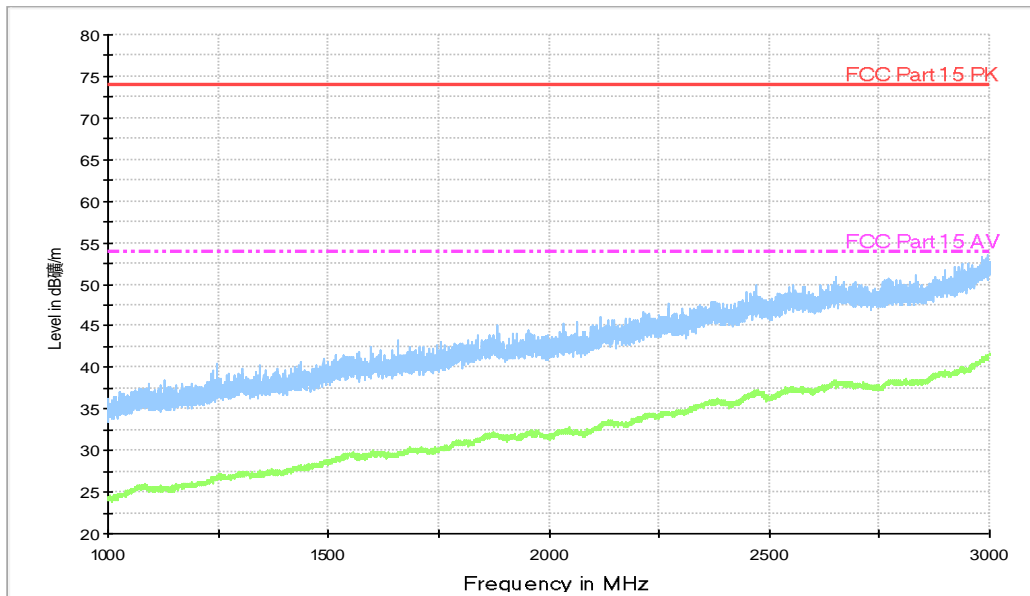


Fig. 51 Radiated Spurious Emission (802.11a, ch56, 1 GHz-3 GHz)

RE - 3GHz-6GHz

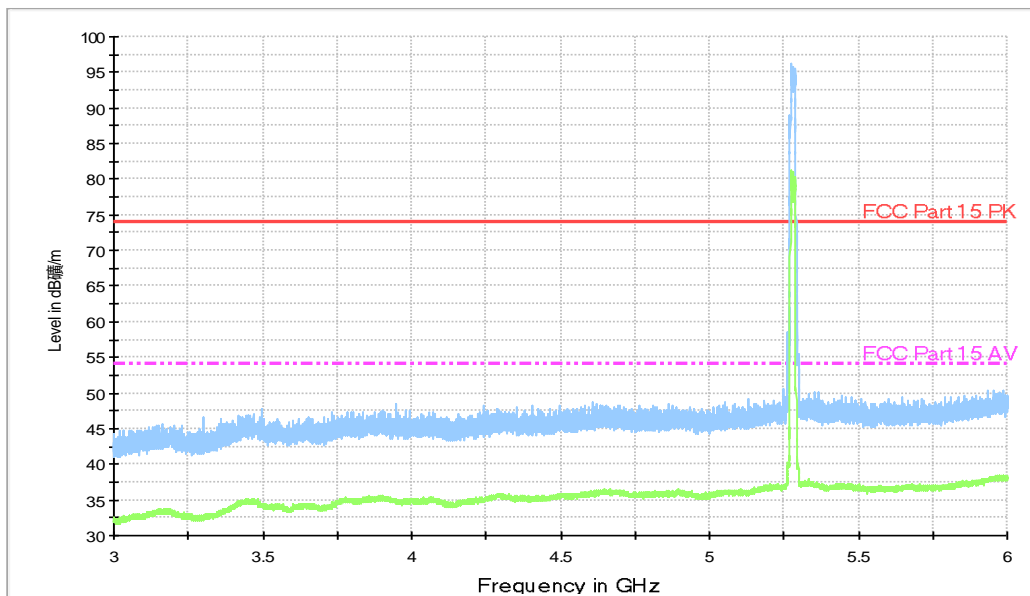


Fig. 52 Radiated Spurious Emission (802.11a, ch56, 3 GHz-6 GHz)

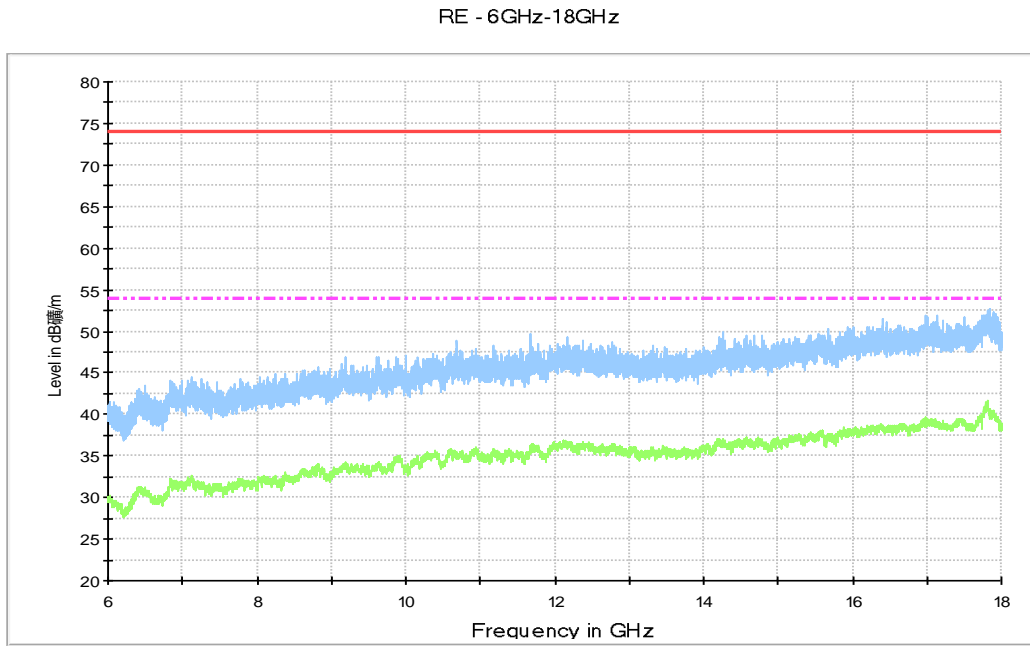


Fig. 53 Radiated Spurious Emission (802.11a, ch56, 6 GHz-18 GHz)

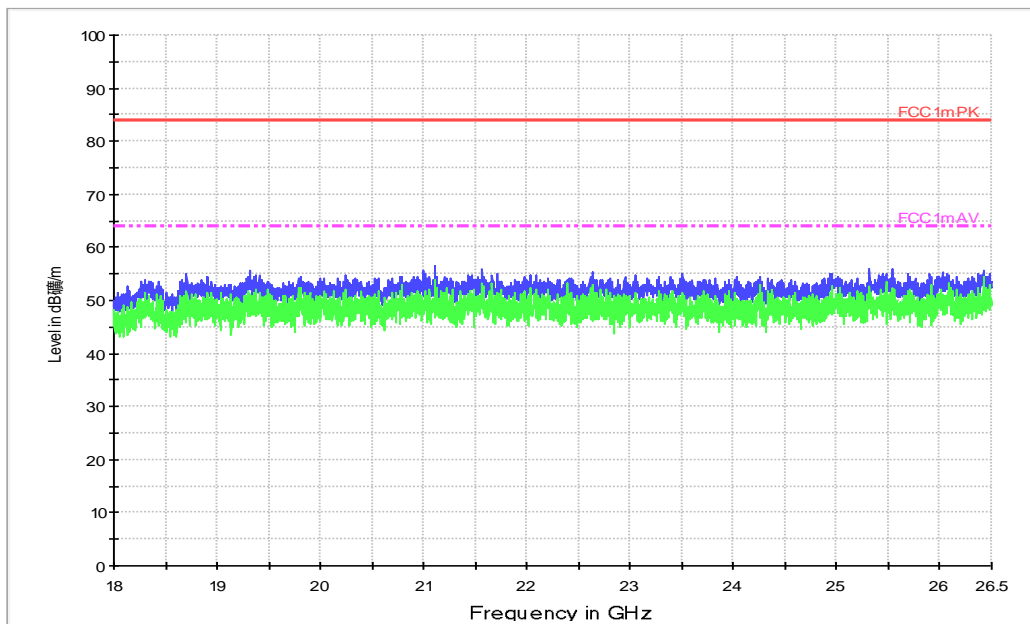


Fig. 54 Radiated Spurious Emission (802.11a, ch56, 18 GHz-26.5 GHz)

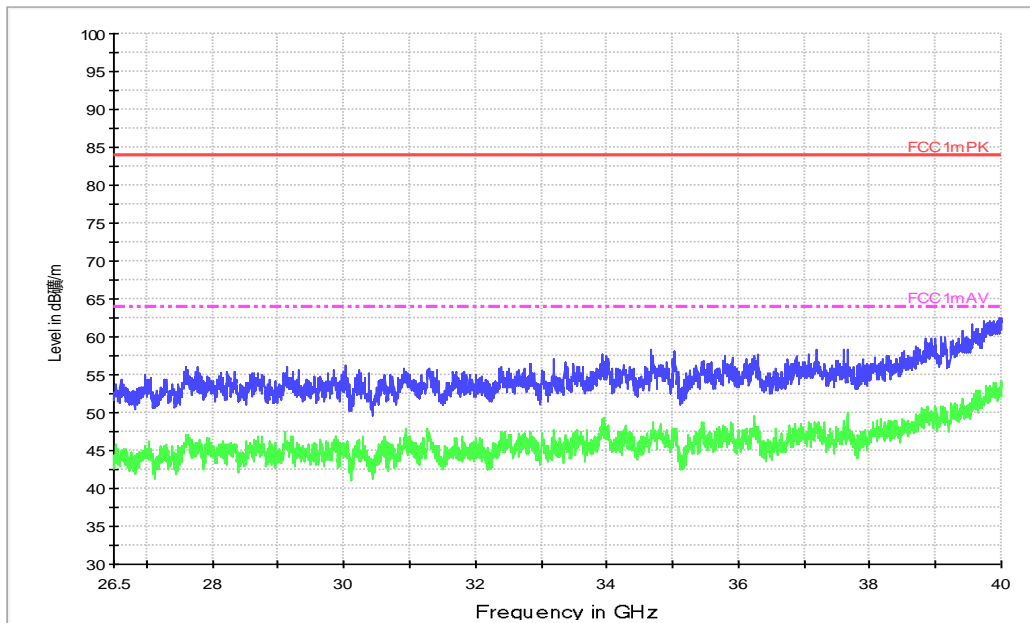


Fig. 55 Radiated Spurious Emission (802.11a, ch56, 26.5 GHz-40 GHz)

RE - 1 GHz-3GHz

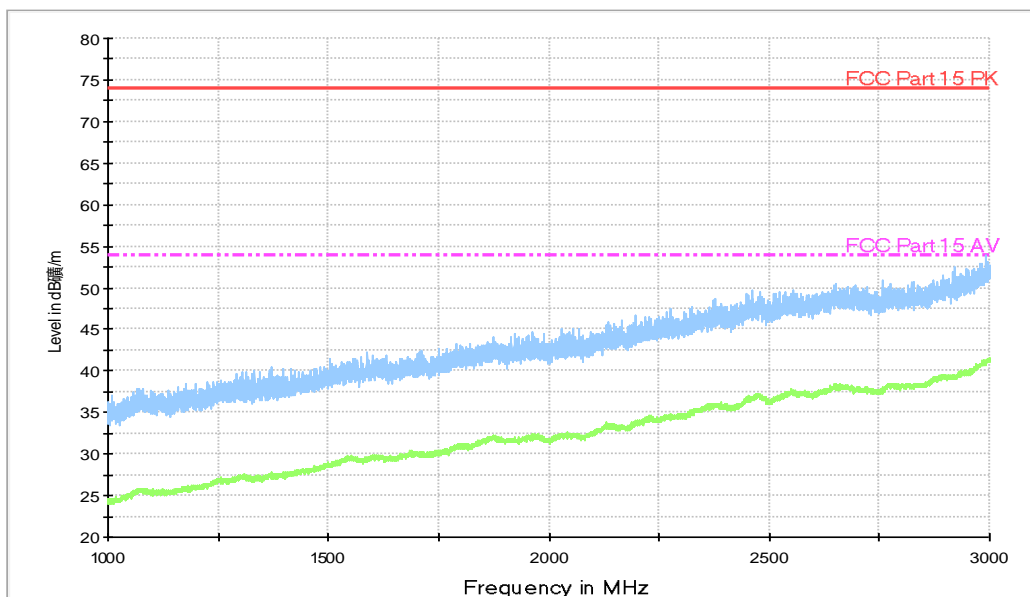


Fig. 56 Radiated Spurious Emission (802.11a, ch64, 1 GHz-3 GHz)

RE - 3GHz-6GHz

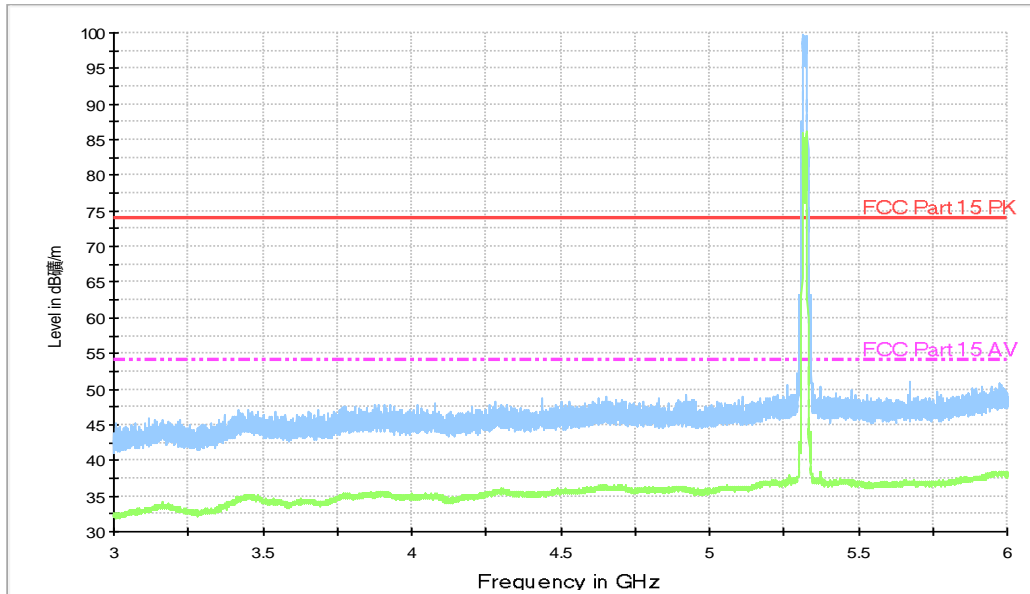


Fig. 57 Radiated Spurious Emission (802.11a, ch64, 3 GHz-6 GHz)

RE - 6GHz-18GHz

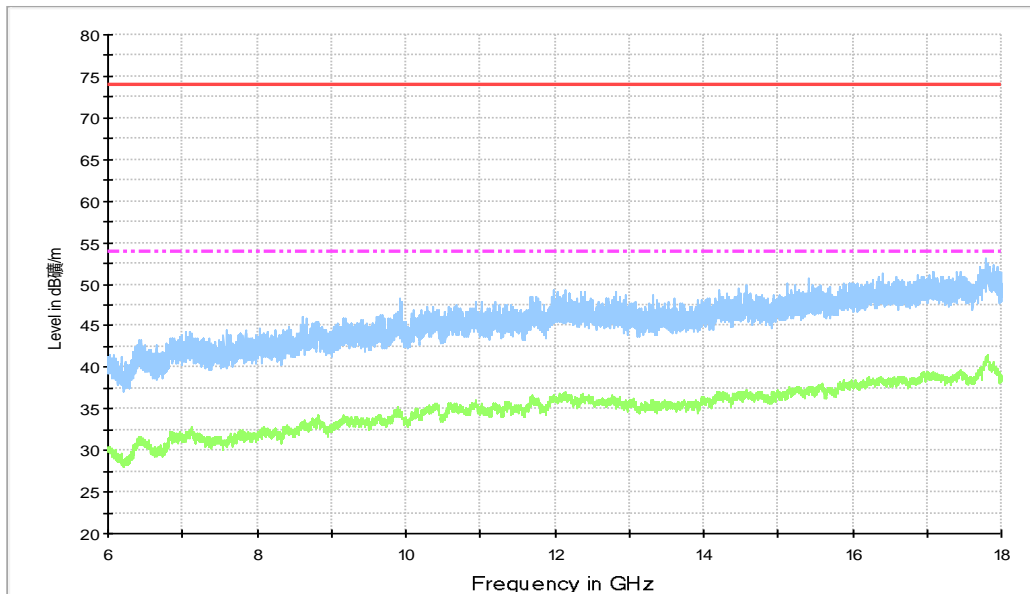


Fig. 58 Radiated Spurious Emission (802.11a, ch64, 6 GHz-18 GHz)

RE - 1 GHz-3GHz

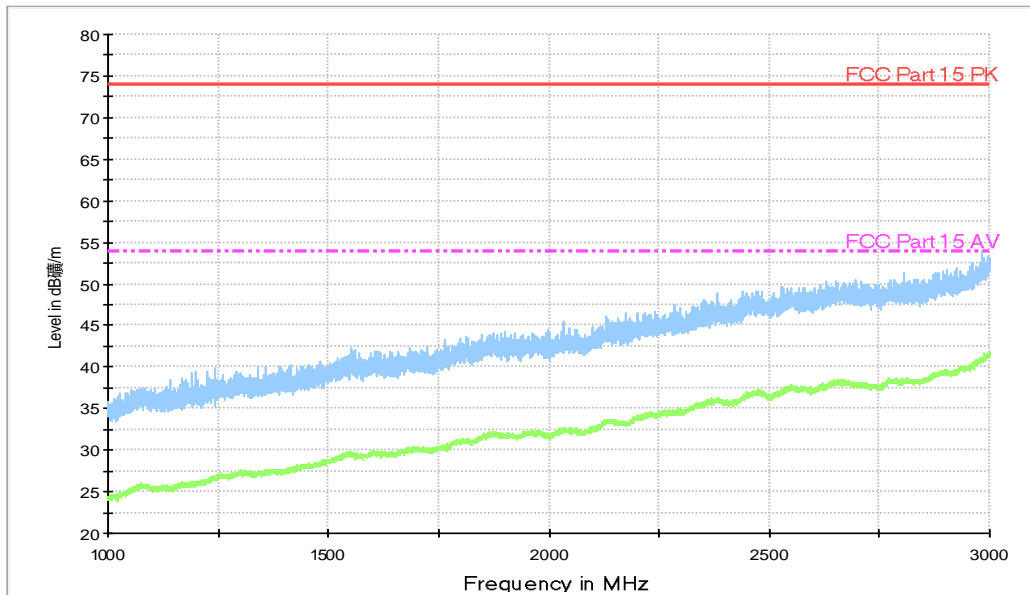


Fig. 59 Radiated Spurious Emission (802.11a, ch100, 1 GHz-3 GHz)

RE - 3GHz-6GHz

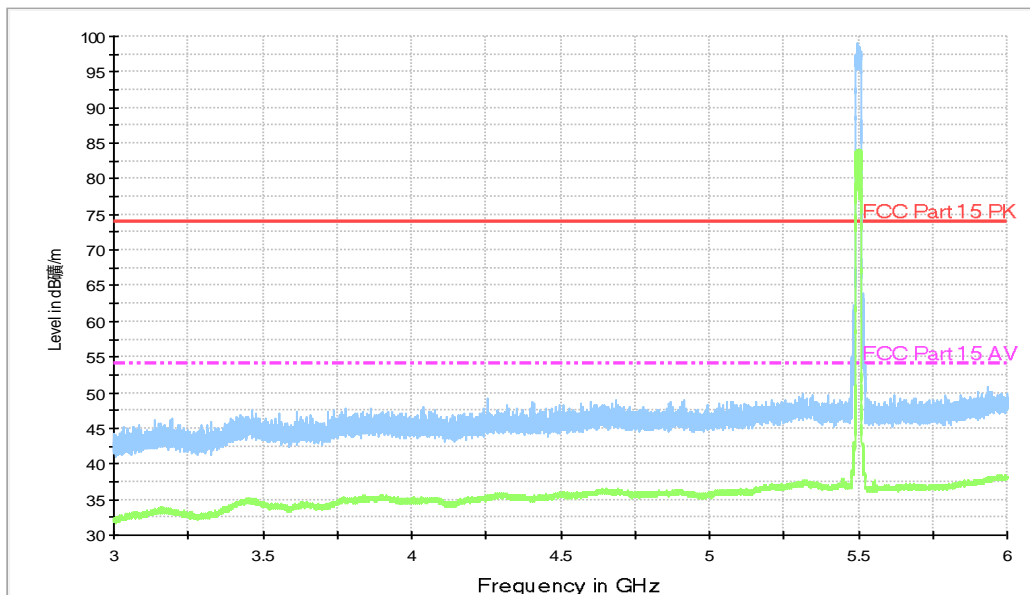


Fig. 60 Radiated Spurious Emission (802.11a, ch100, 3 GHz-6 GHz)

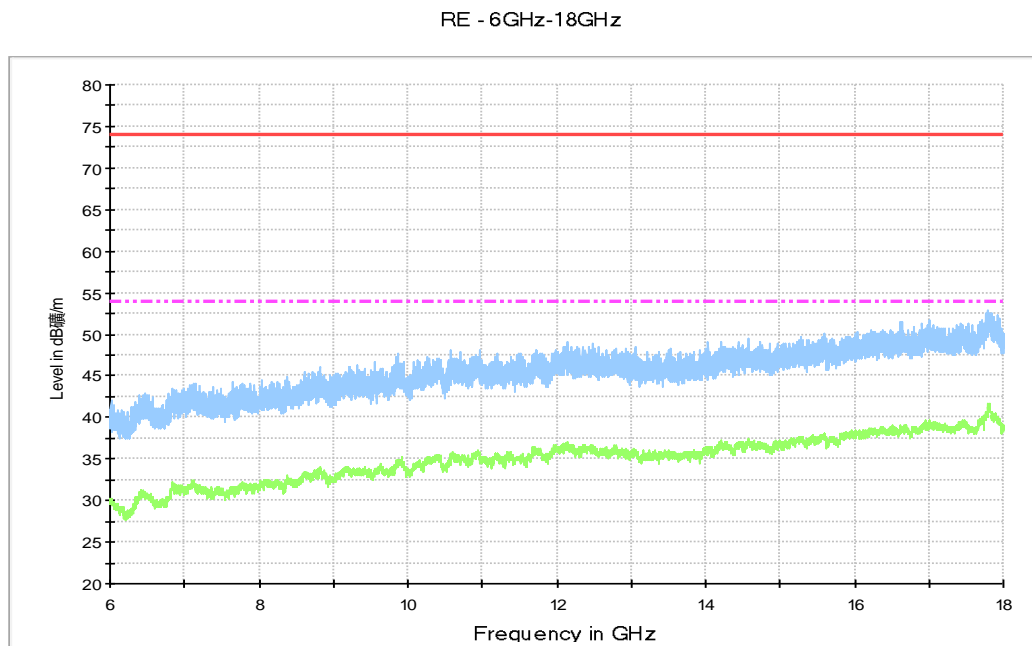


Fig. 61 Radiated Spurious Emission (802.11a, ch100, 6 GHz-18 GHz)

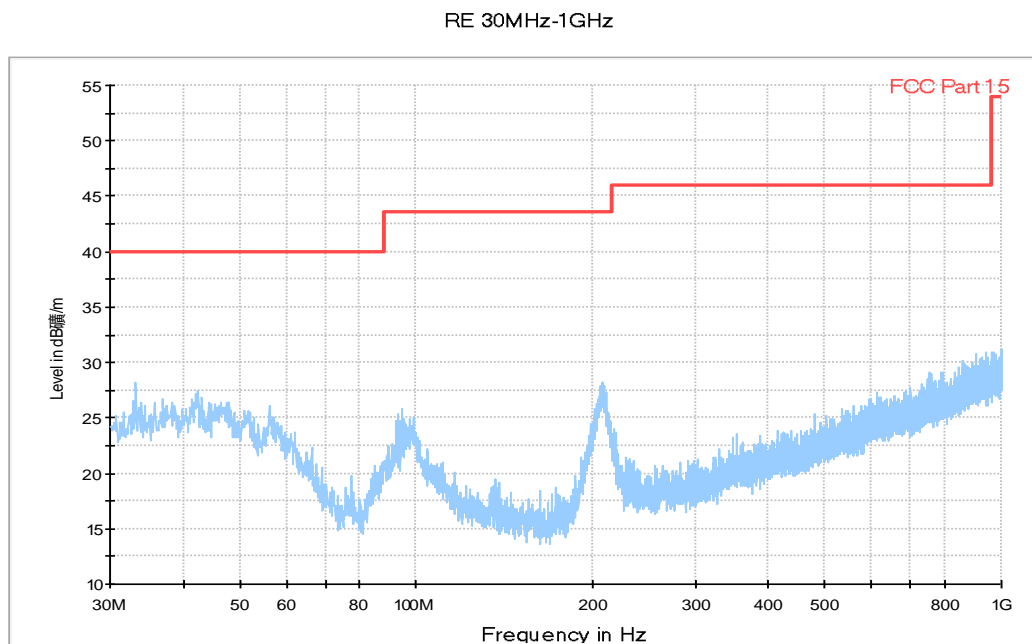


Fig. 62 Radiated Spurious Emission (802.11a, ch116, 30 MHz-1 GHz)

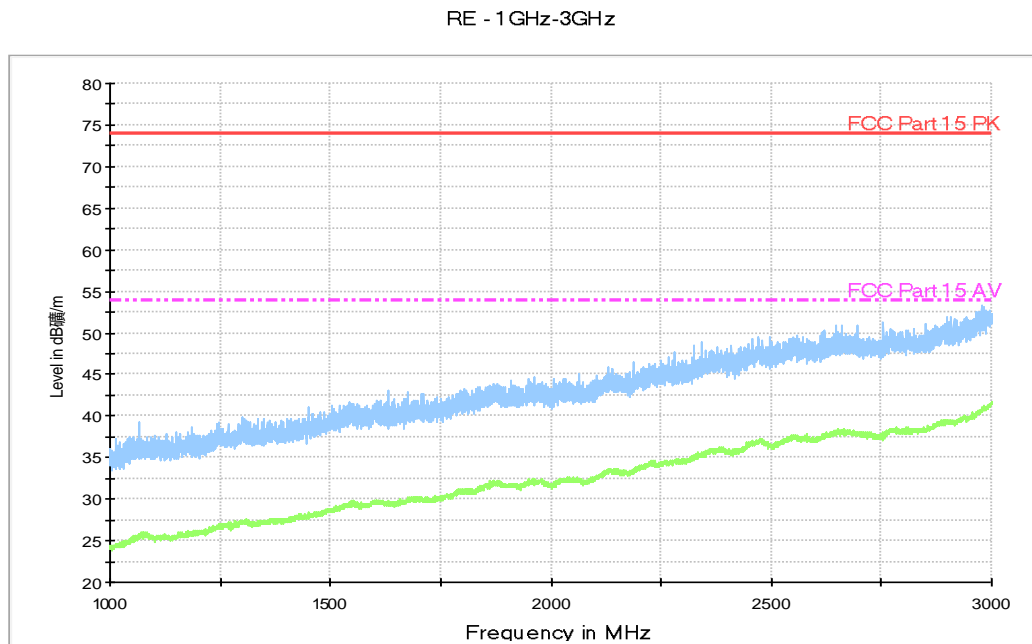


Fig. 63 Radiated Spurious Emission (802.11a, ch116, 1GHz-3 GHz)

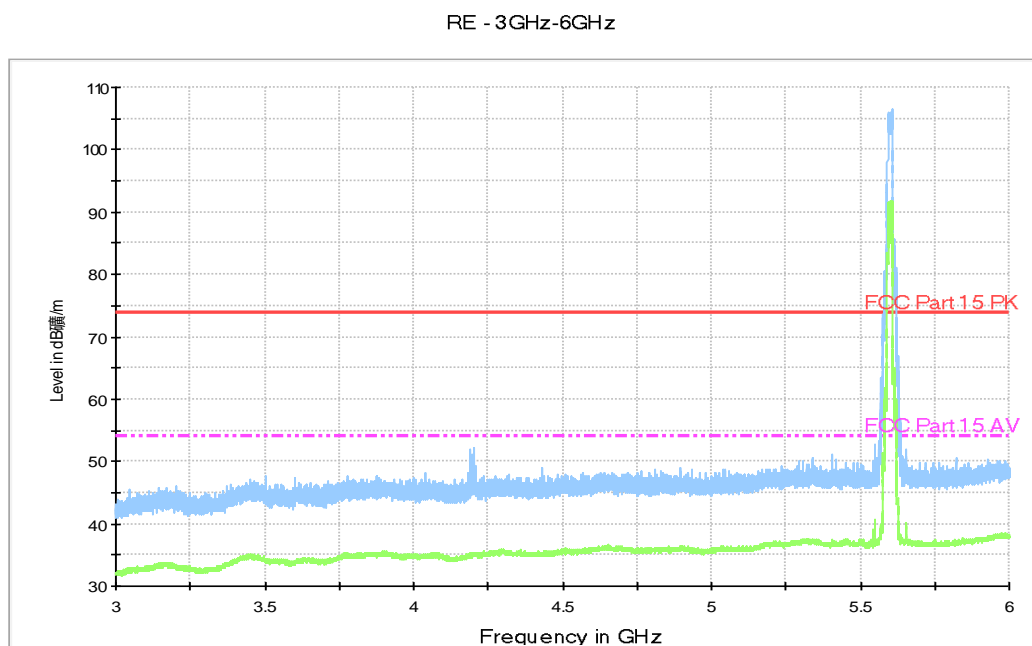


Fig. 64 Radiated Spurious Emission (802.11a, ch116,3G Hz-6 GHz)

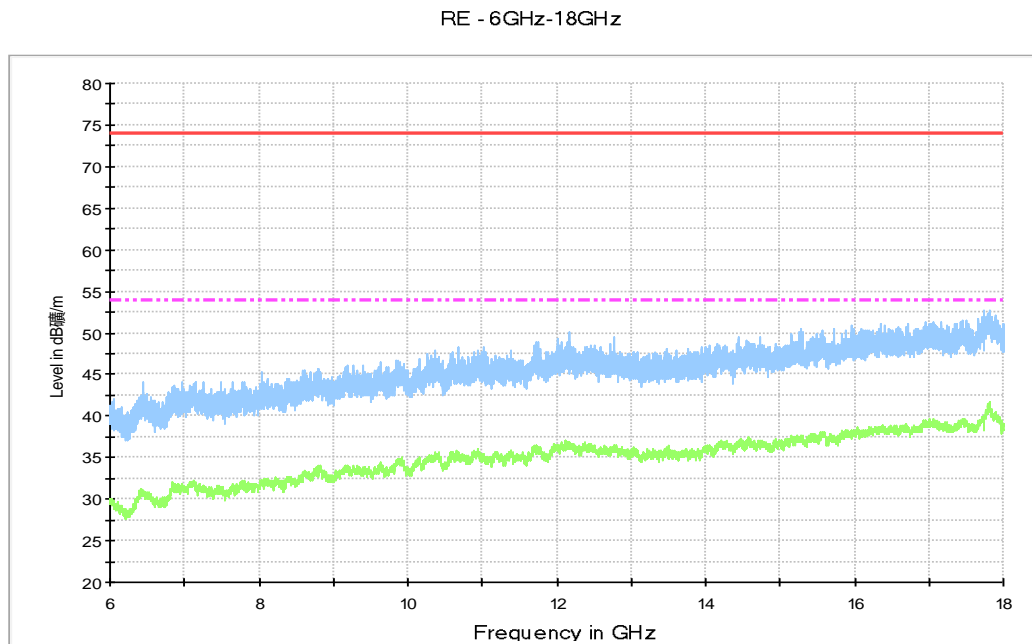


Fig. 65 Radiated Spurious Emission (802.11a, ch116, 6 GHz-18 GHz)

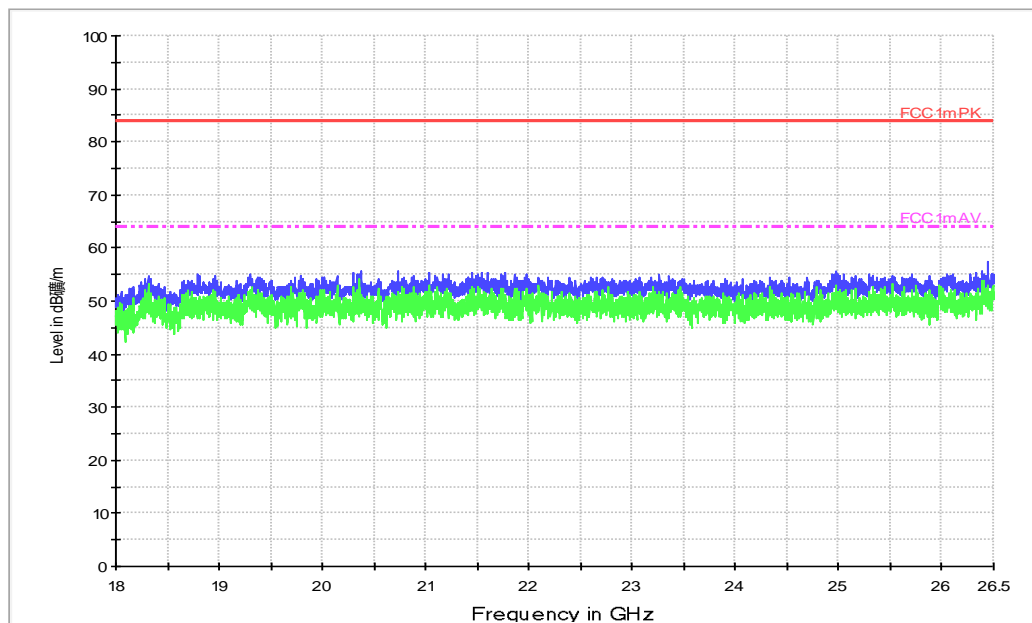


Fig. 66 Radiated Spurious Emission (802.11a, ch116, 18 GHz-26.5 GHz)

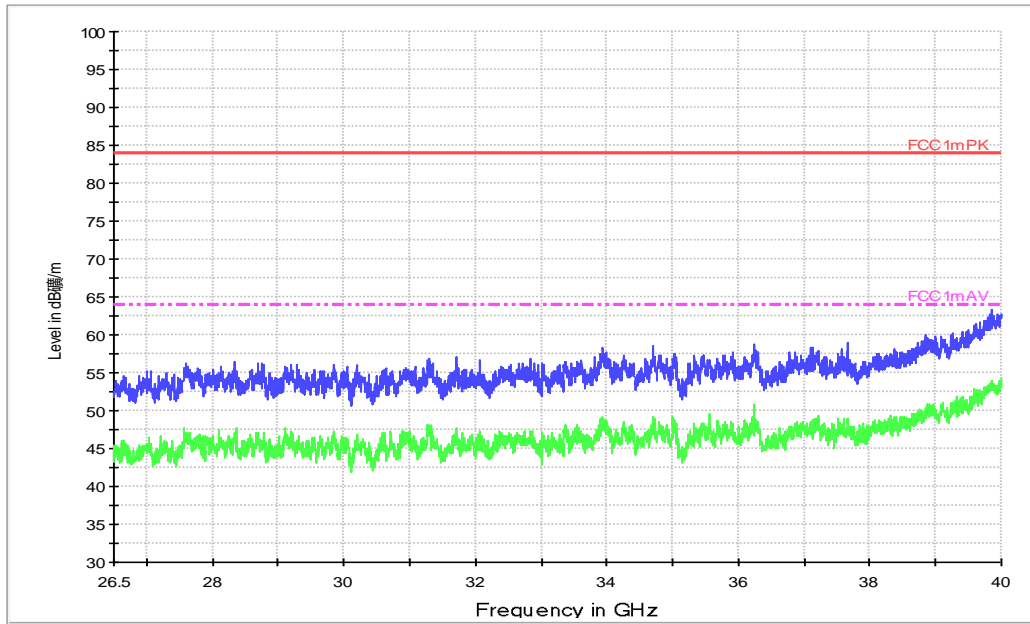


Fig. 67 Radiated Spurious Emission (802.11a, ch116, 26.5 GHz-40 GHz)

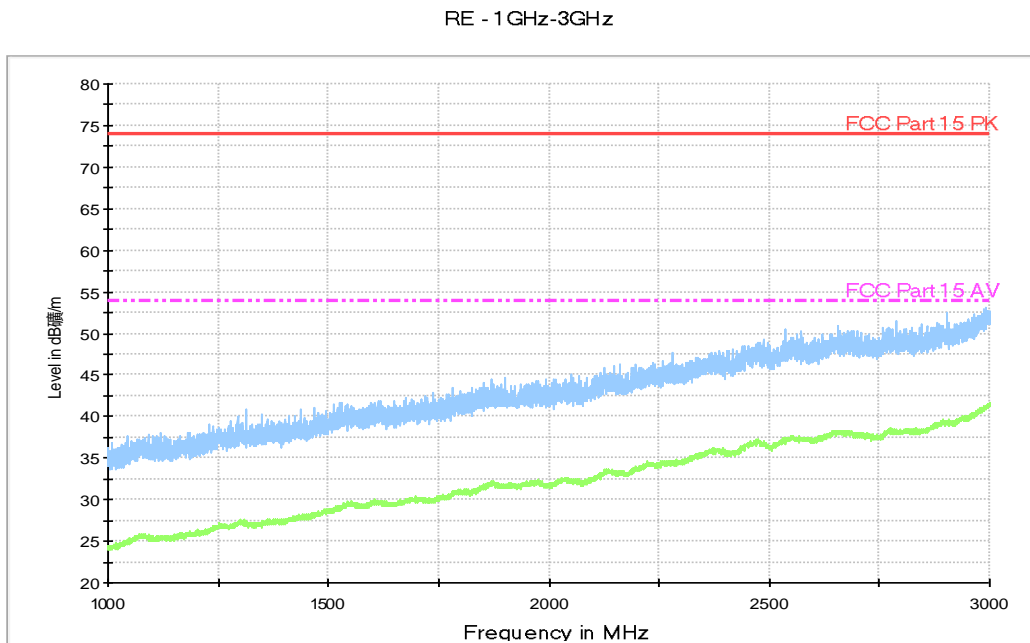


Fig. 68 Radiated Spurious Emission (802.11a, ch140, 1 GHz-3 GHz)

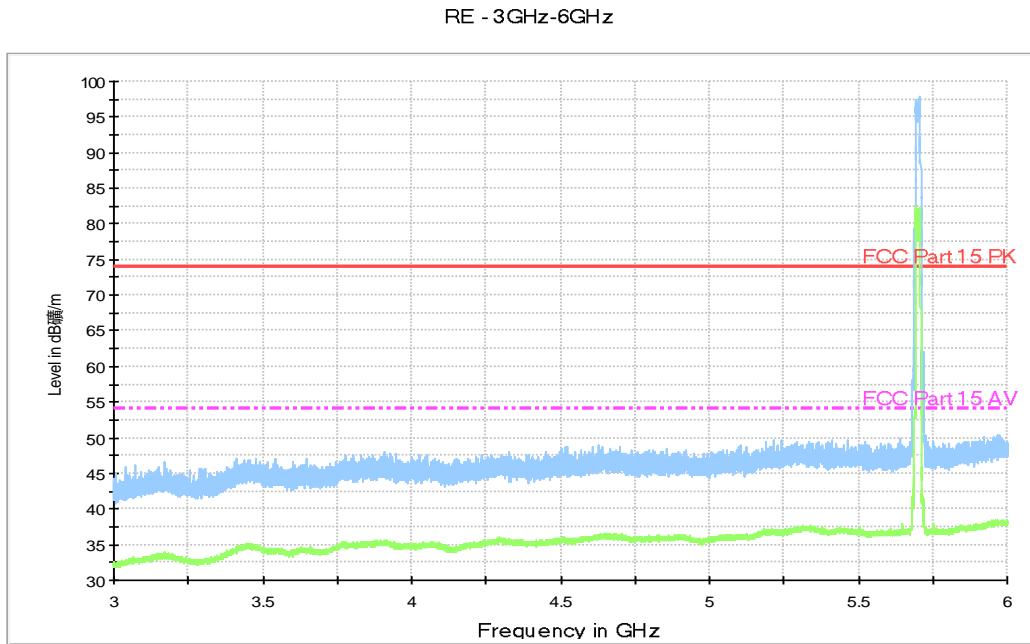


Fig. 69 Radiated Spurious Emission (802.11a, ch140, 3 GHz-6 GHz)

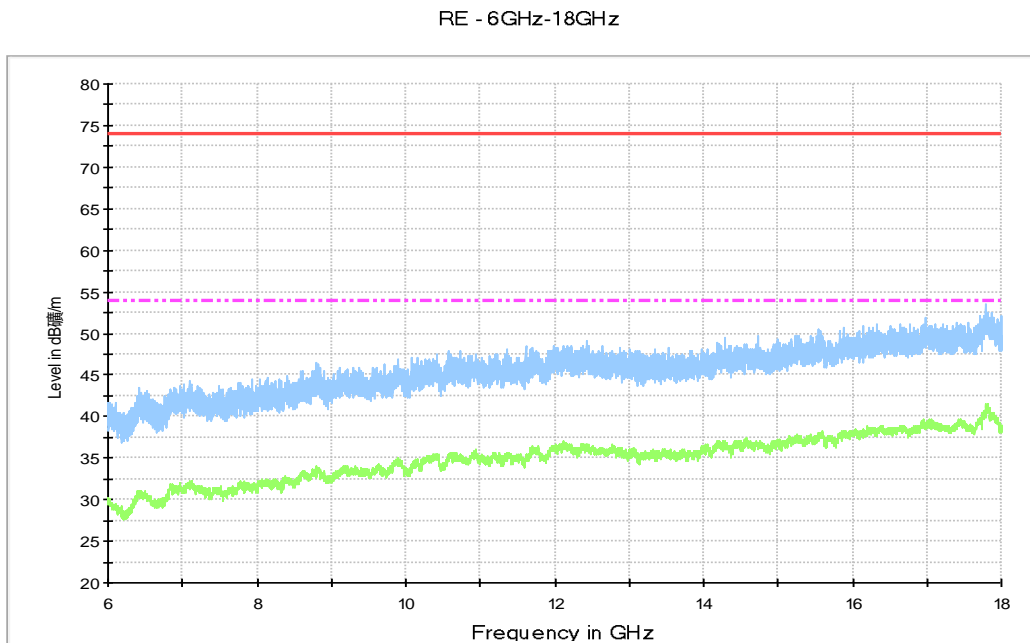


Fig. 70 Radiated Spurious Emission (802.11a, ch140, 6 GHz-18 GHz)

RE - 1GHz-3GHz

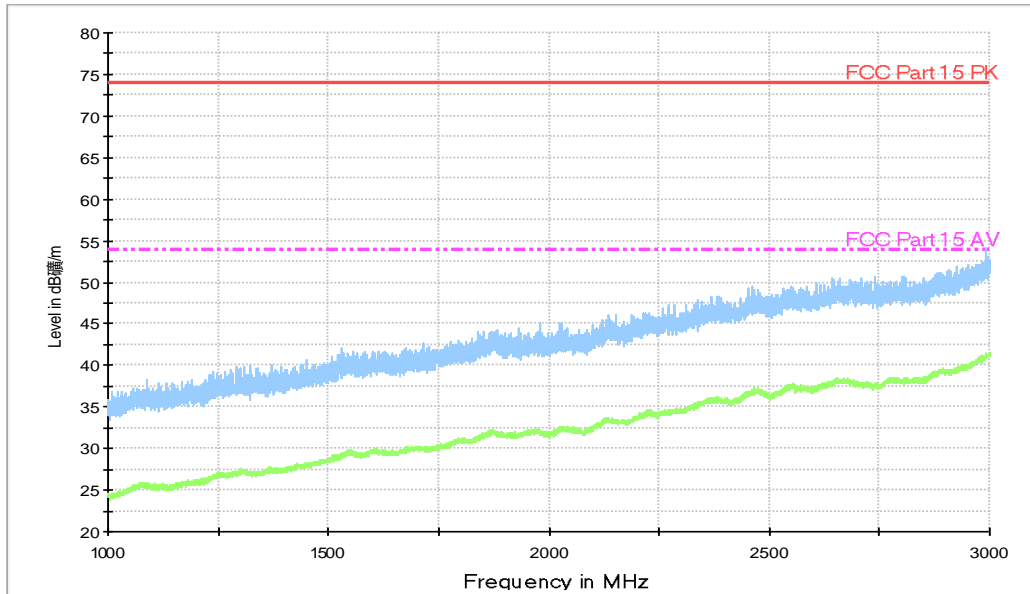


Fig. 71 Radiated Spurious Emission (802.11n-HT20, ch36, 1 GHz-3 GHz)

RE - 3GHz-6GHz

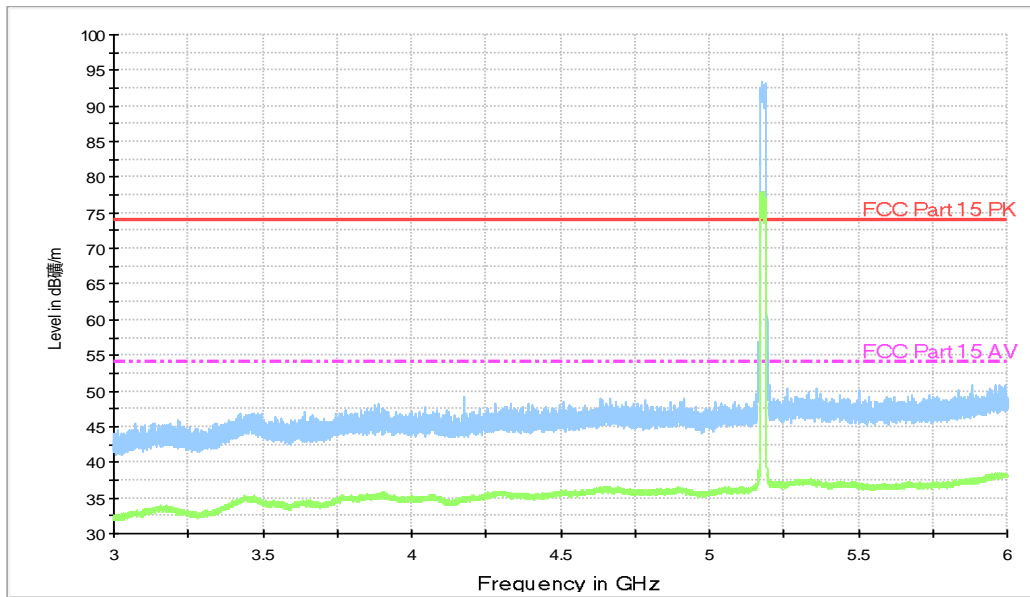


Fig. 72 Radiated Spurious Emission (802.11n-HT20, ch36, 3 GHz-6 GHz)

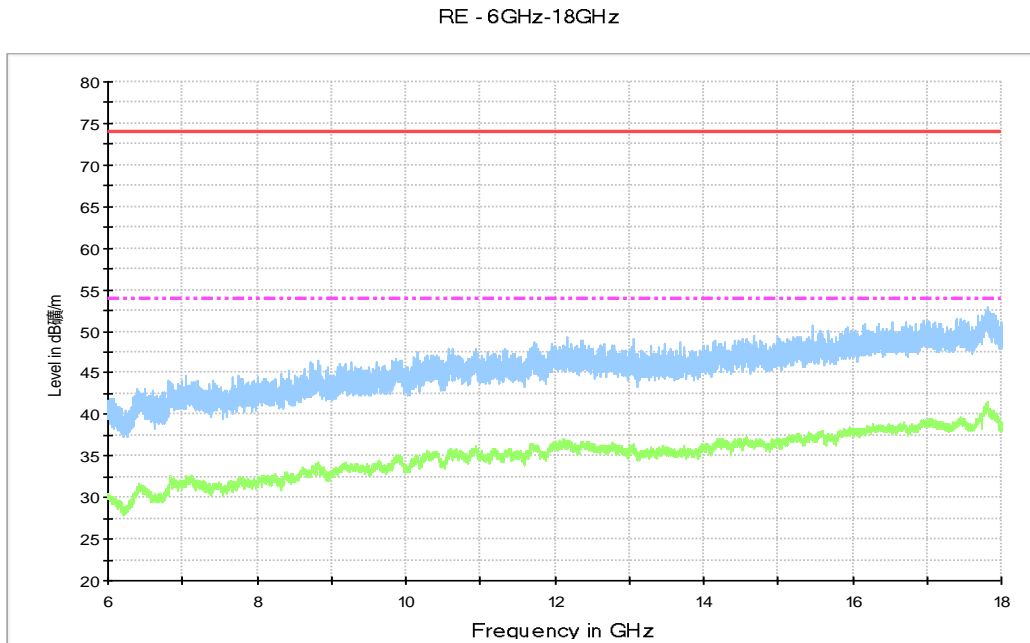


Fig. 73 Radiated Spurious Emission (802.11n-HT20, ch36, 6 GHz-18 GHz)

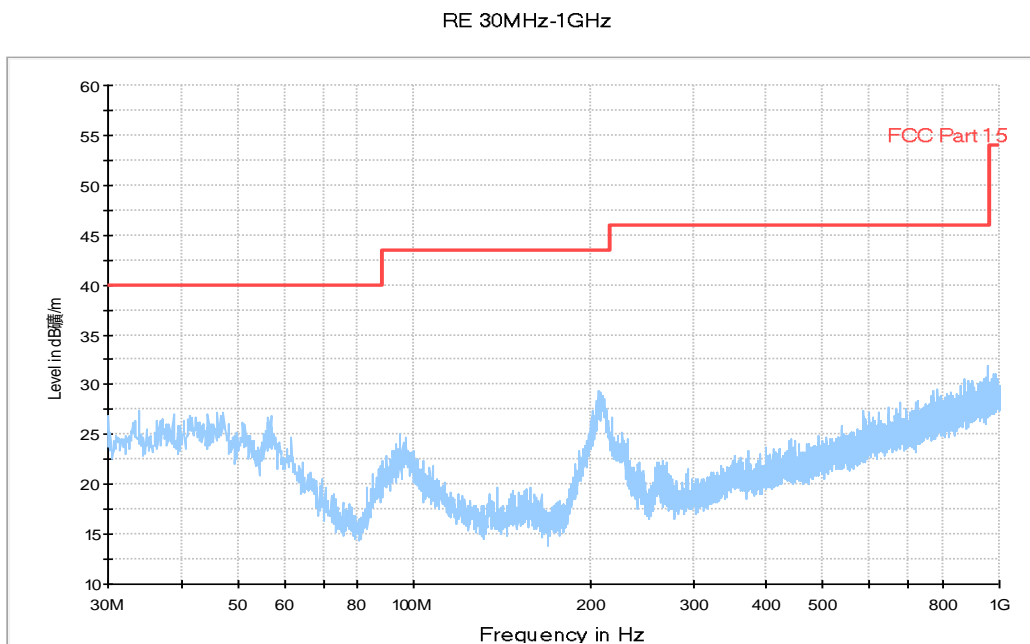


Fig. 74 Radiated Spurious Emission (802.11n-HT20, ch40, 30 MHz-1 GHz)

RE - 1GHz-3GHz

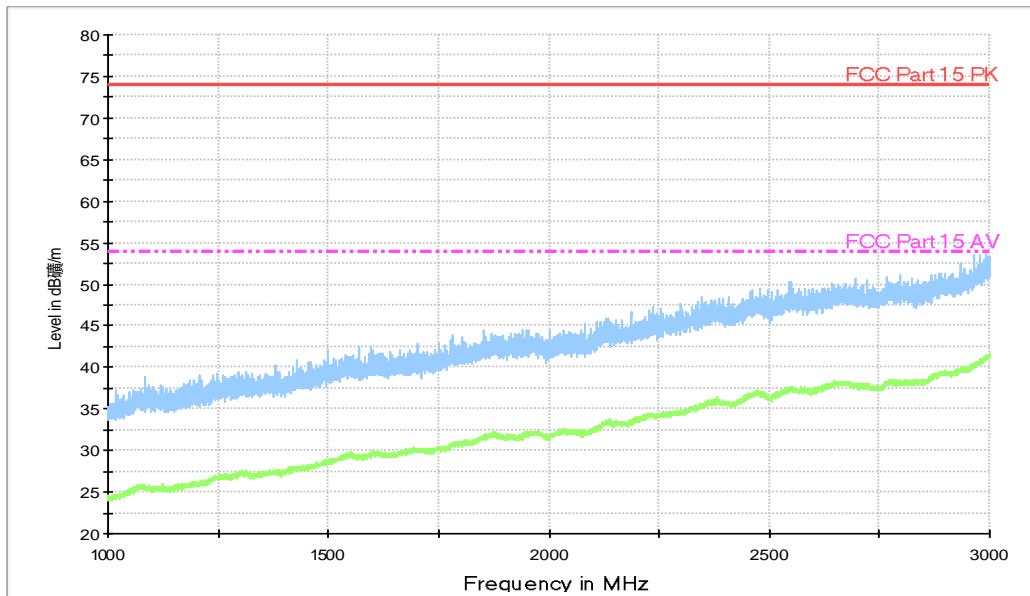


Fig. 75 Radiated Spurious Emission (802.11n-HT20, ch40, 1 GHz-3 GHz)

RE - 3GHz-6GHz

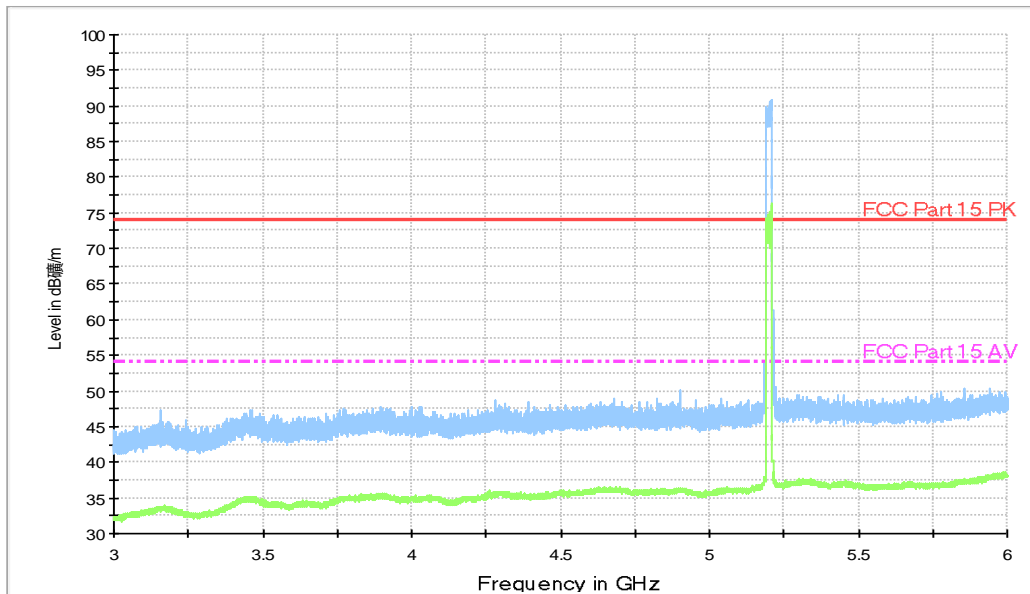


Fig. 76 Radiated Spurious Emission (802.11n-HT20, ch40, 3 GHz-6 GHz)

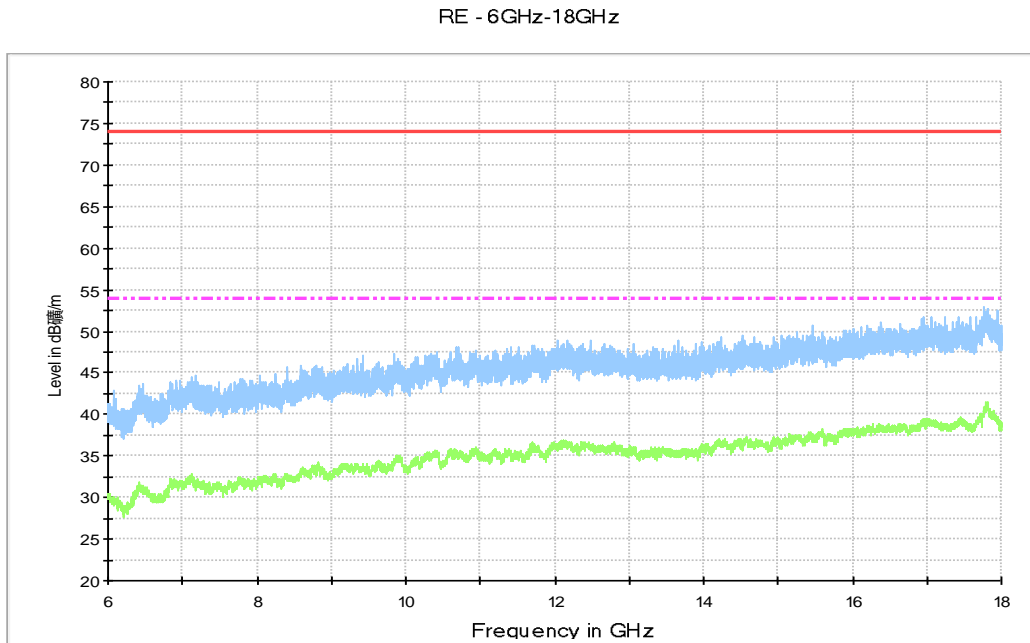


Fig. 77 Radiated Spurious Emission (802.11n-HT20, ch40, 6 GHz-18 GHz)

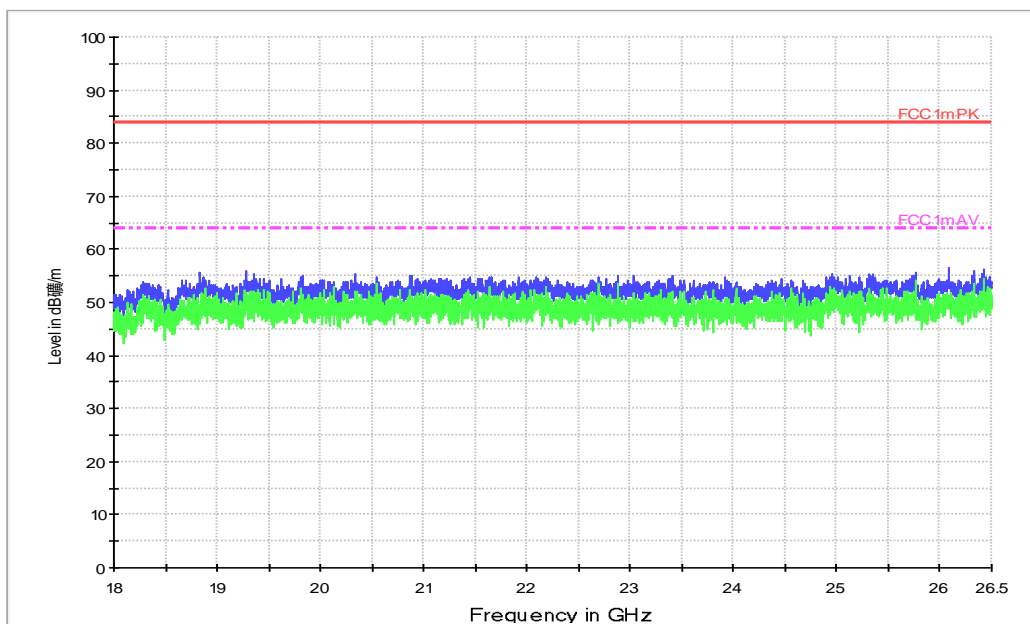


Fig. 78 Radiated Spurious Emission (802.11n-HT20, ch40, 18 GHz-26.5 GHz)

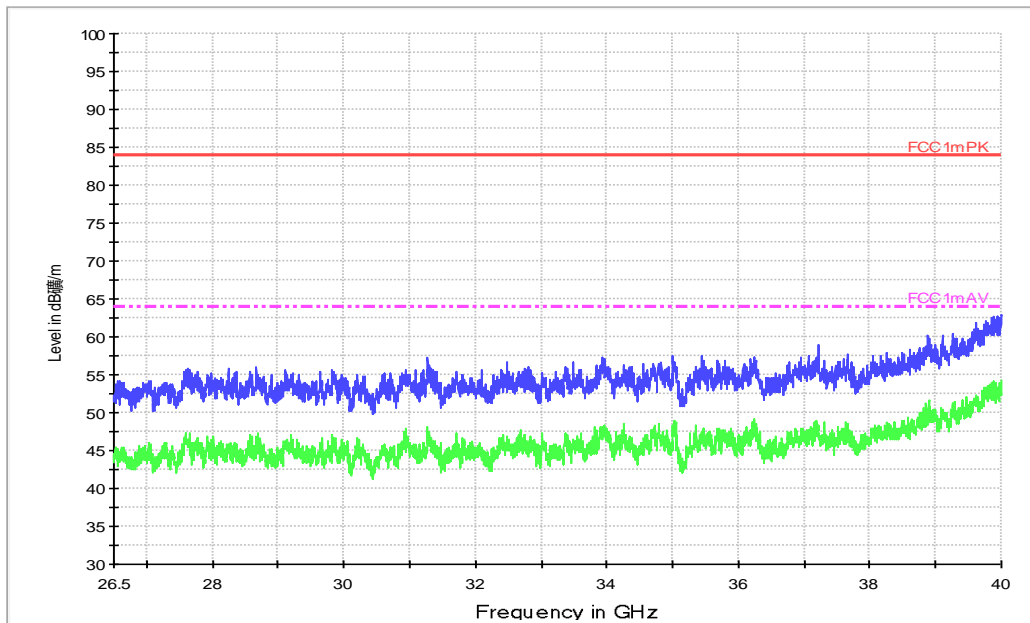


Fig. 79 Radiated Spurious Emission (802.11n-HT20, ch40, 26.5 GHz-40 GHz)

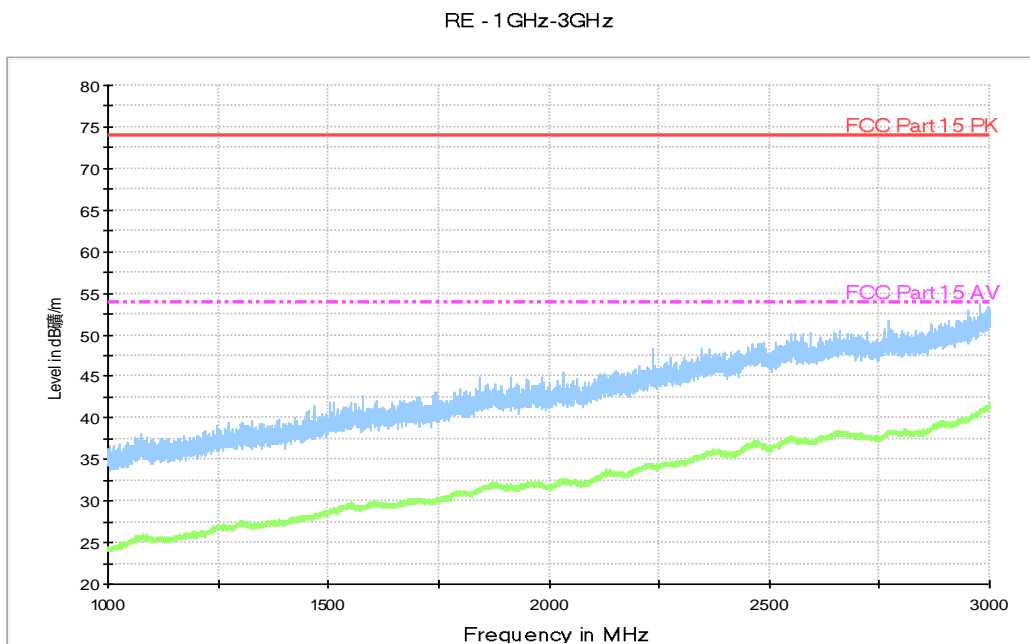


Fig. 80 Radiated Spurious Emission (802.11n-HT20, ch48, 1 GHz-3 GHz)

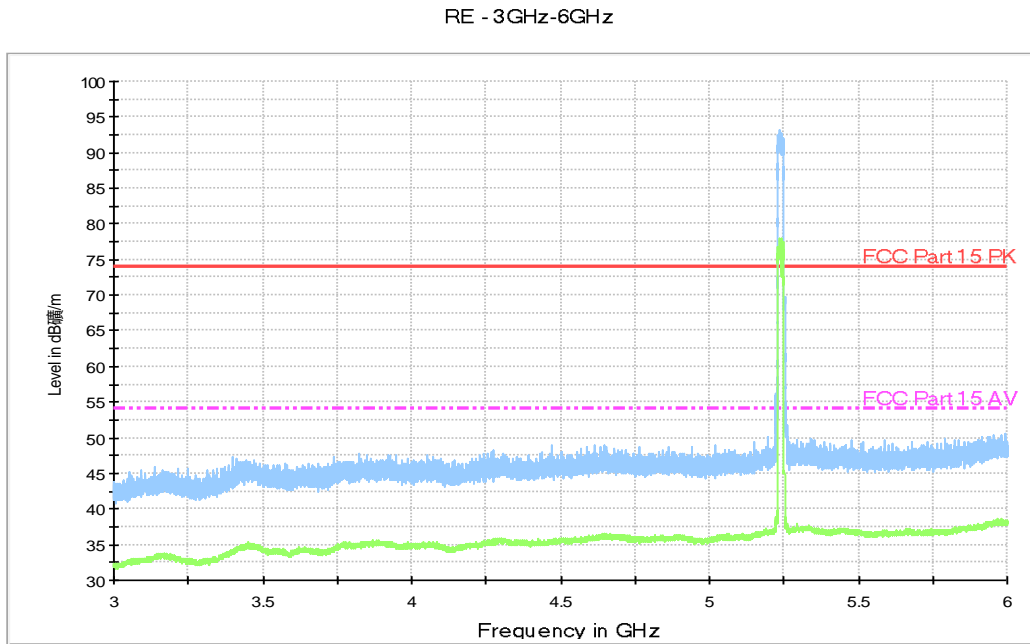


Fig. 81 Radiated Spurious Emission (802.11n-HT20, ch48, 3 GHz-6 GHz)

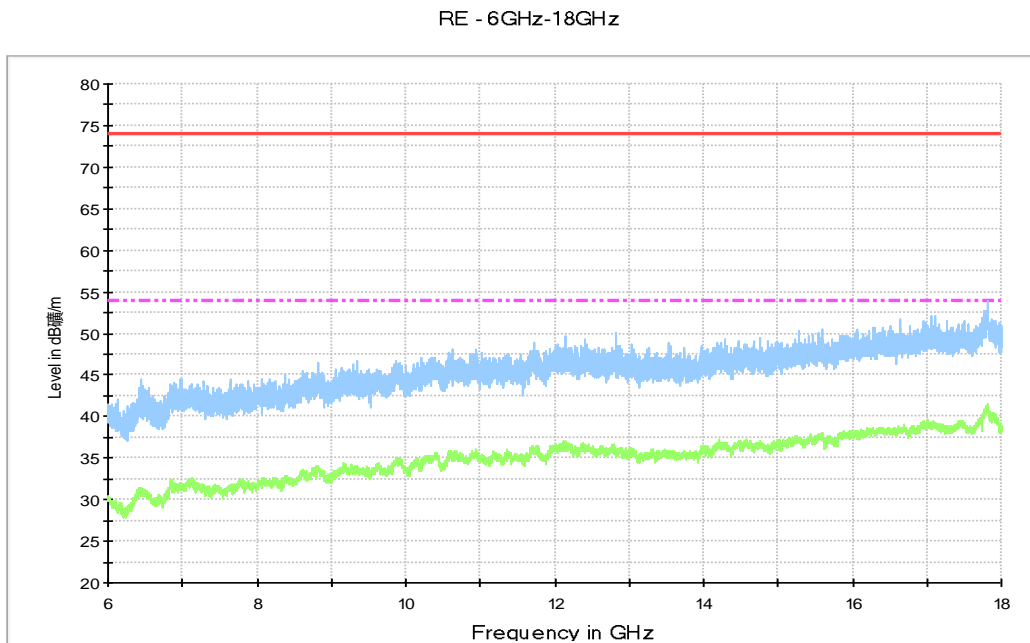


Fig. 82 Radiated Spurious Emission (802.11n-HT20, ch48, 6 GHz-18 GHz)

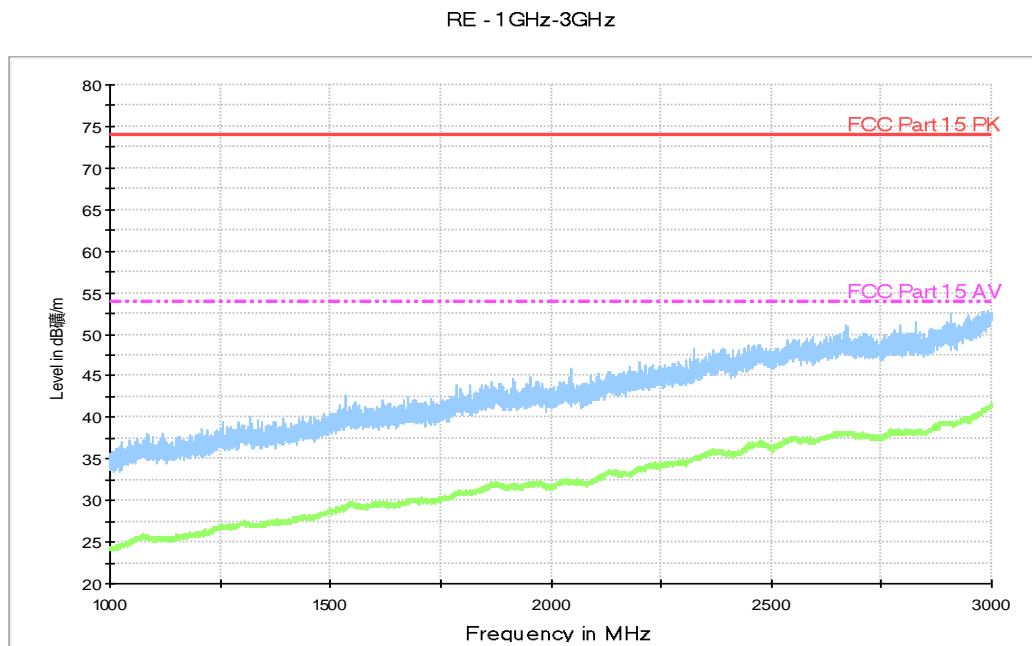


Fig. 83 Radiated Spurious Emission (802.11n-HT20, ch52, 1 GHz-3 GHz)

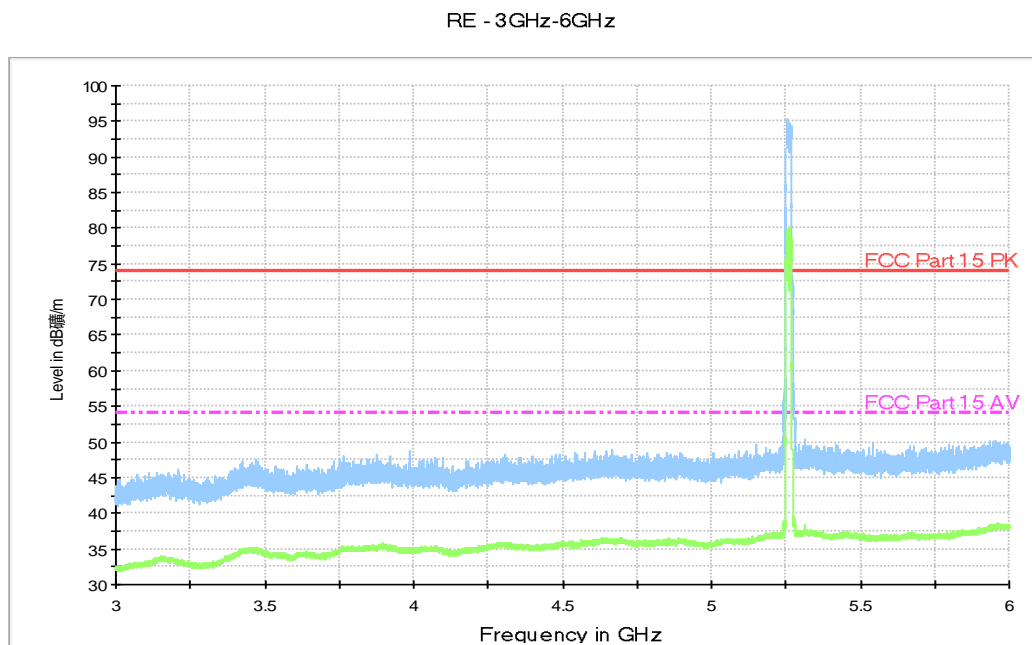


Fig. 84 Radiated Spurious Emission (802.11n-HT20, ch52, 3 GHz-6 GHz)

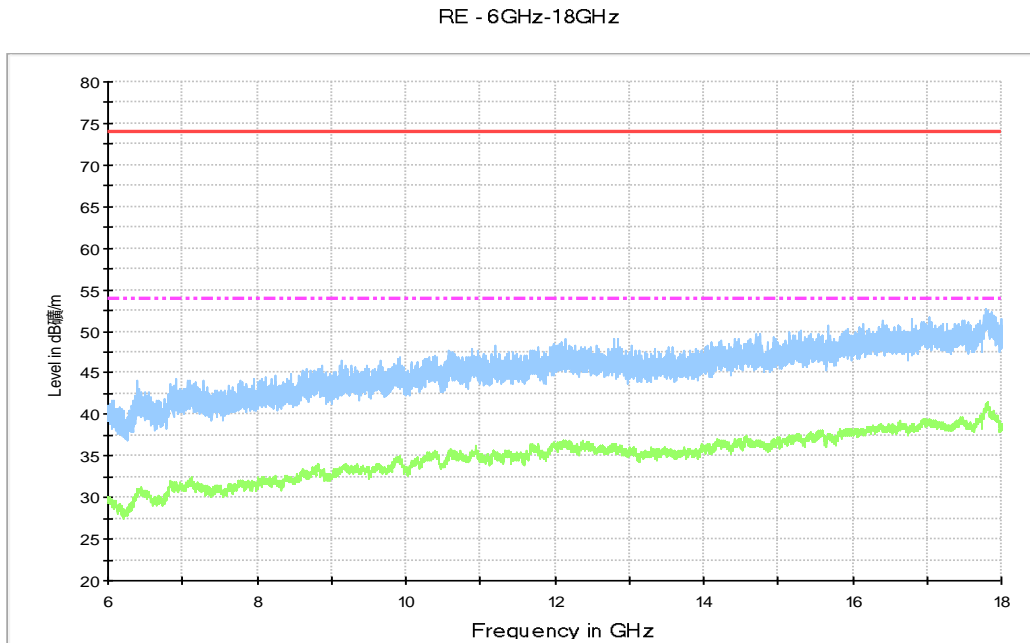


Fig. 85 Radiated Spurious Emission (802.11n-HT20, ch52, 6 GHz-18 GHz)

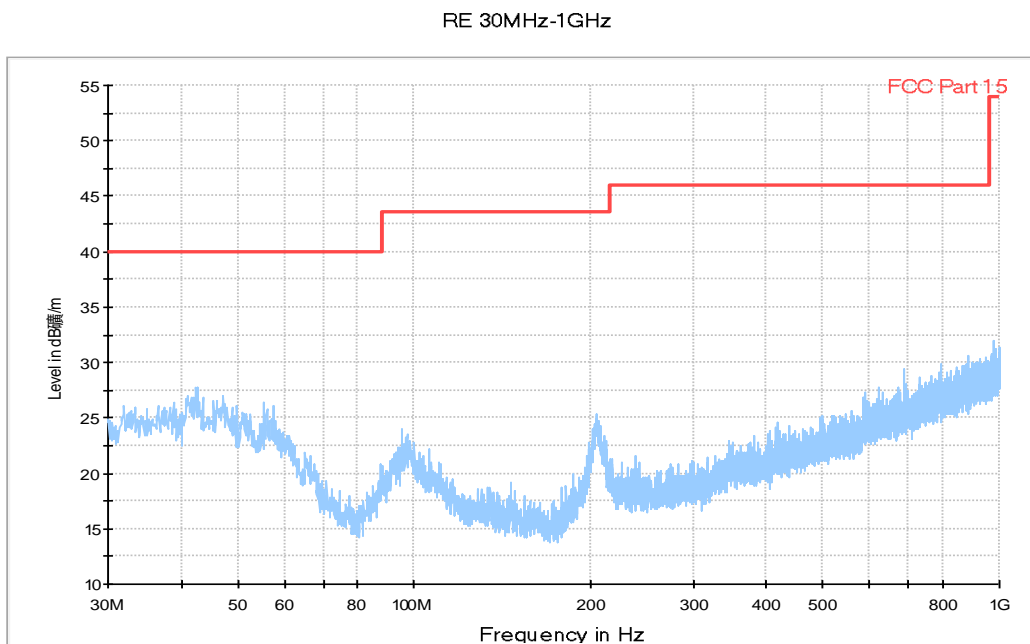


Fig. 86 Radiated Spurious Emission (802.11n-HT20, ch56, 30 MHz-1 GHz)

RE - 1GHz-3GHz

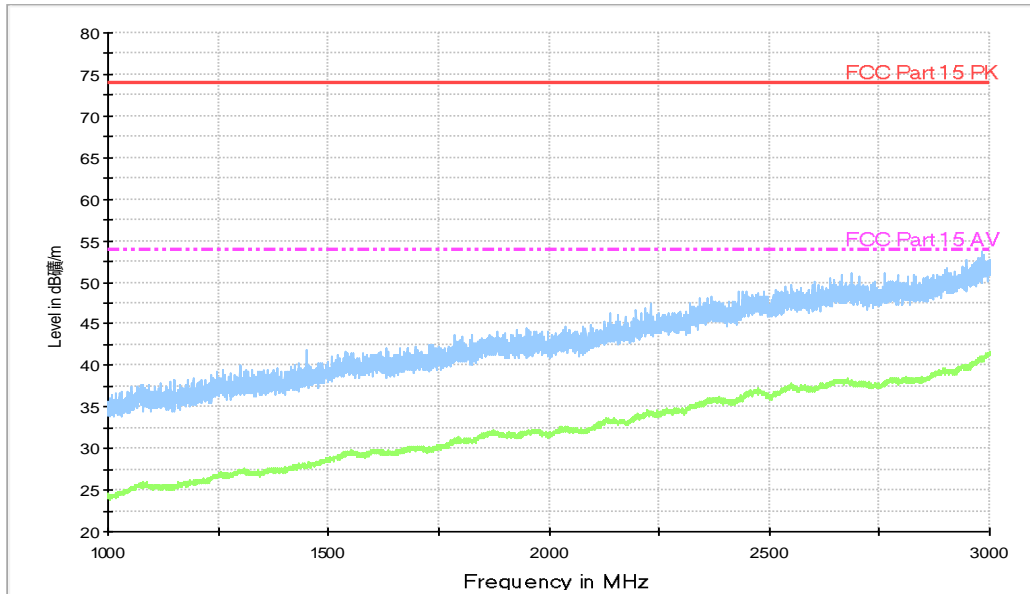


Fig. 87 Radiated Spurious Emission (802.11n-HT20, ch56, 1 GHz-3 GHz)

RE - 3GHz-6GHz

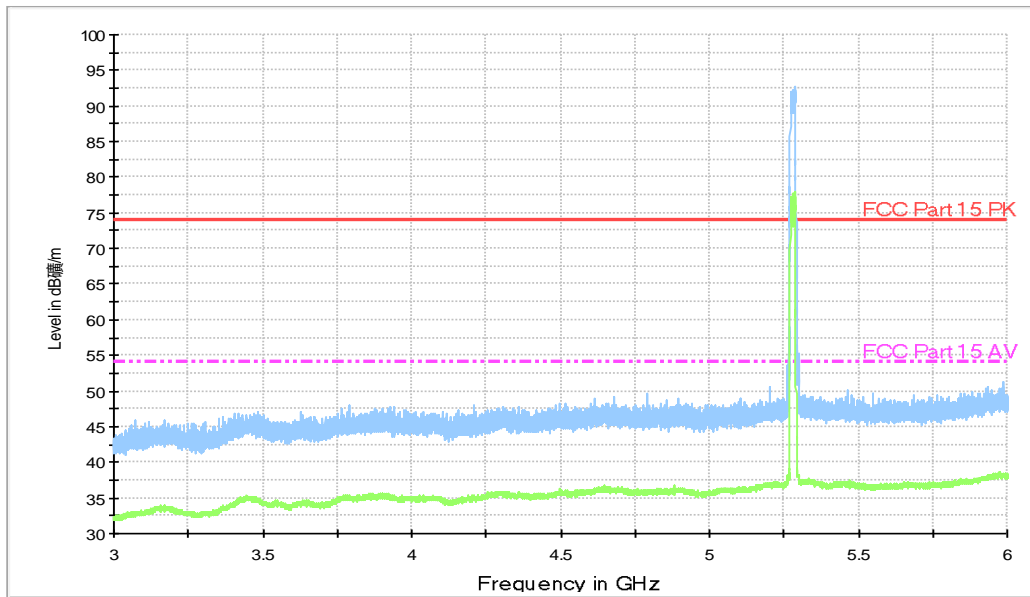


Fig. 88 Radiated Spurious Emission (802.11n-HT20, ch56, 3 GHz-6 GHz)

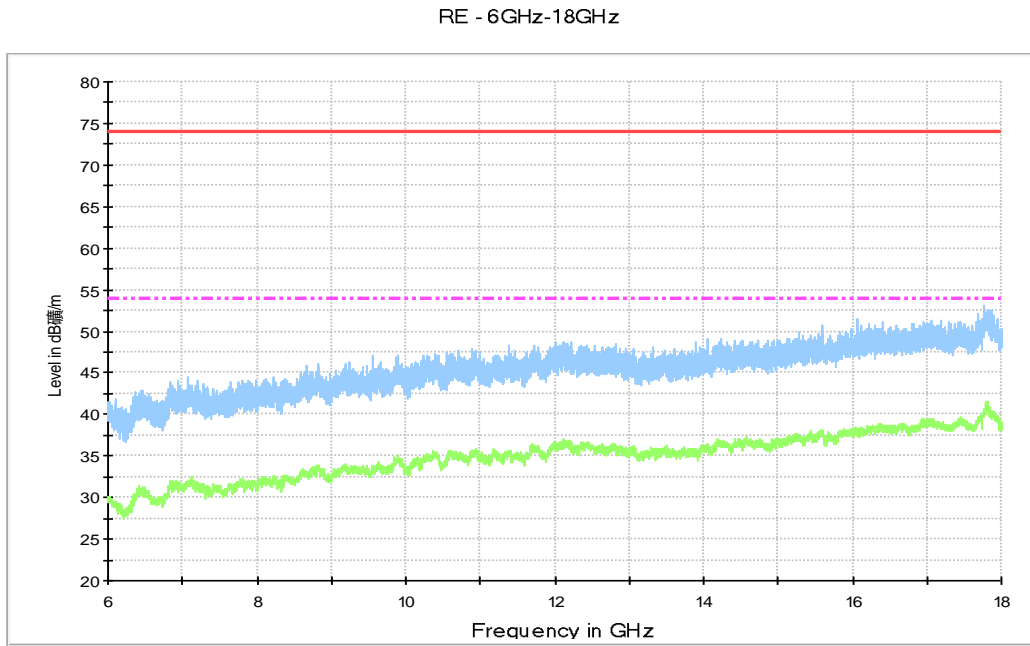


Fig. 89 Radiated Spurious Emission (802.11n-HT20, ch56, 6 GHz-18 GHz)

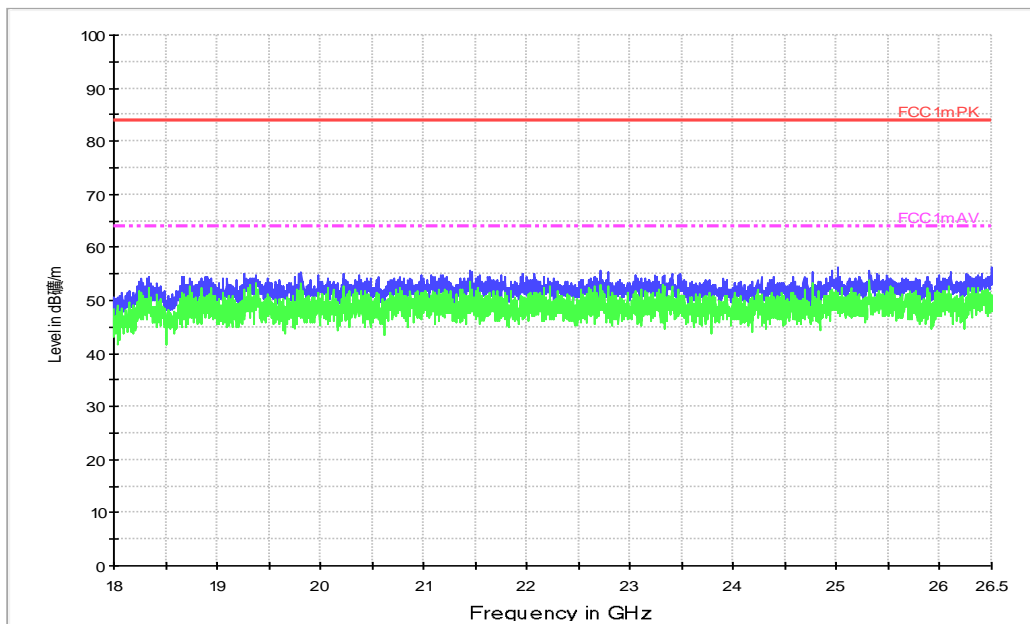


Fig. 90 Radiated Spurious Emission (802.11n-HT20, ch56, 18 GHz-26.5 GHz)

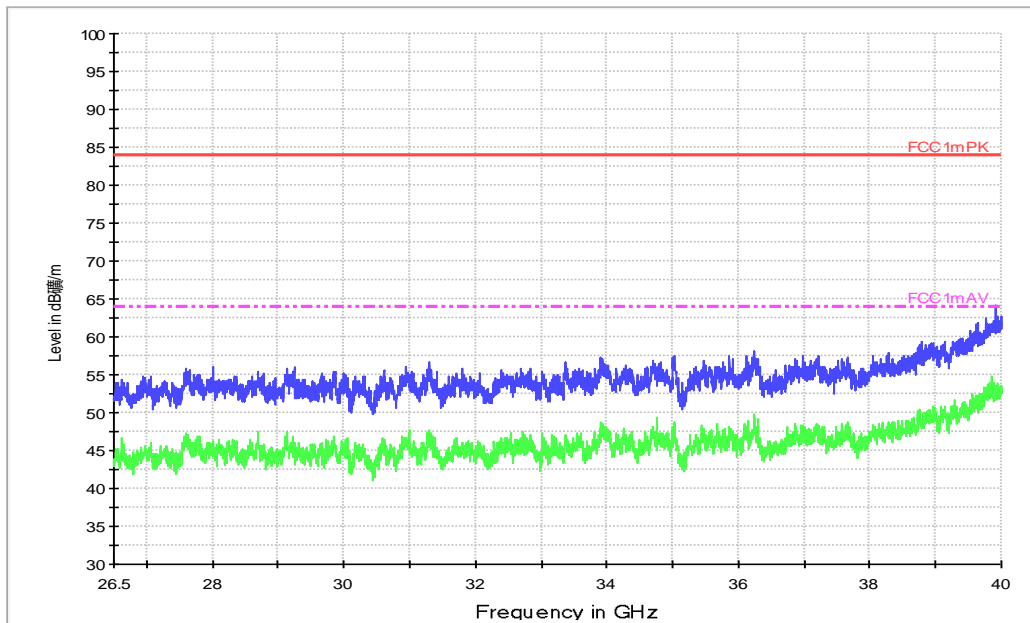


Fig. 91 Radiated Spurious Emission (802.11n-HT20, ch56, 26.5 GHz-40 GHz)

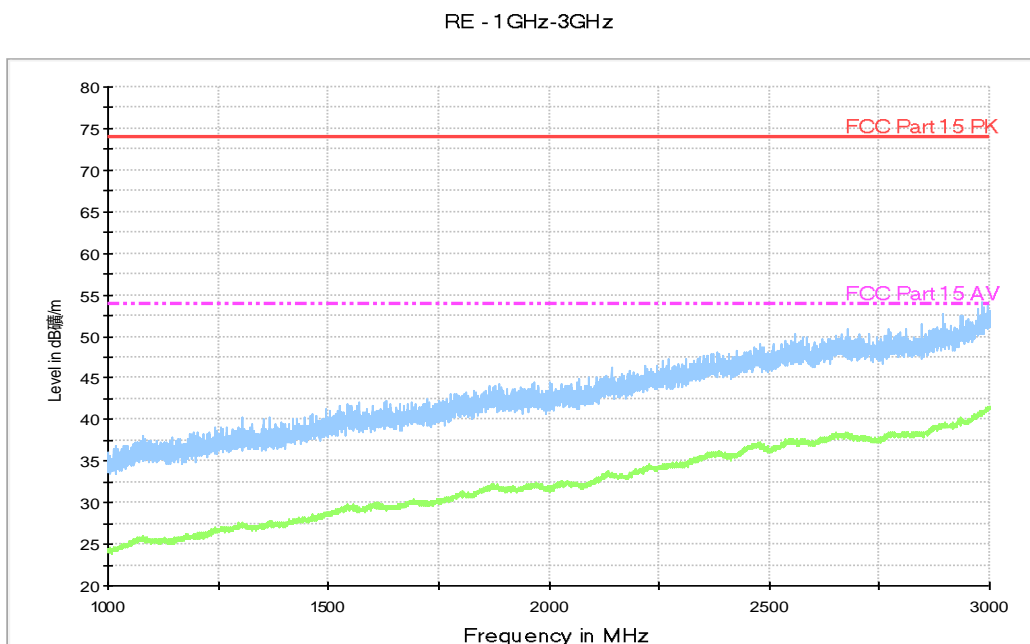


Fig. 92 Radiated Spurious Emission (802.11n-HT20, ch64, 1 GHz-3 GHz)

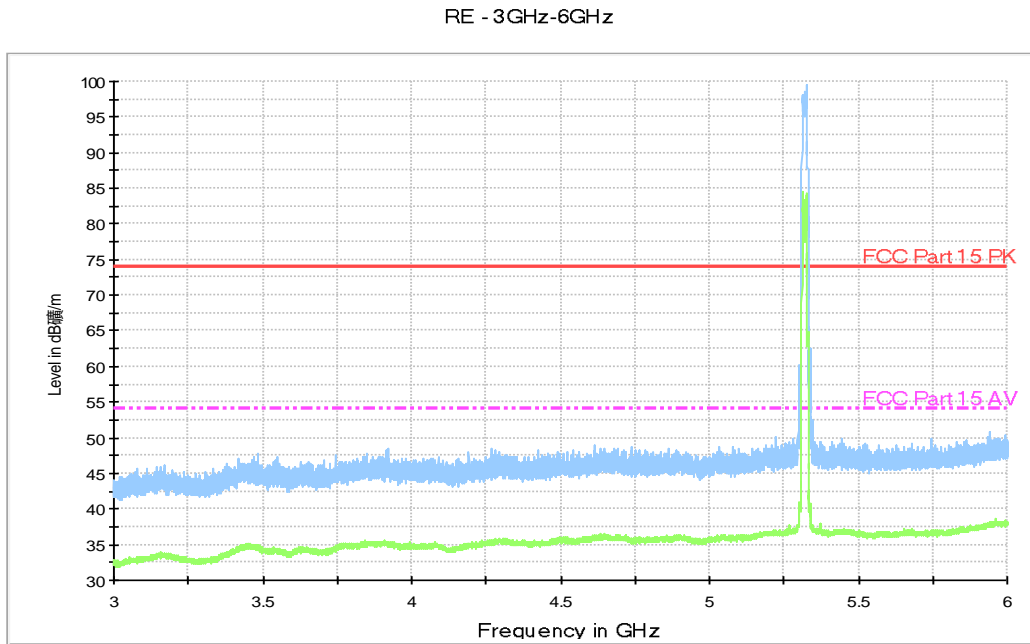


Fig. 93 Radiated Spurious Emission (802.11n-HT20, ch64, 3 GHz-6 GHz)

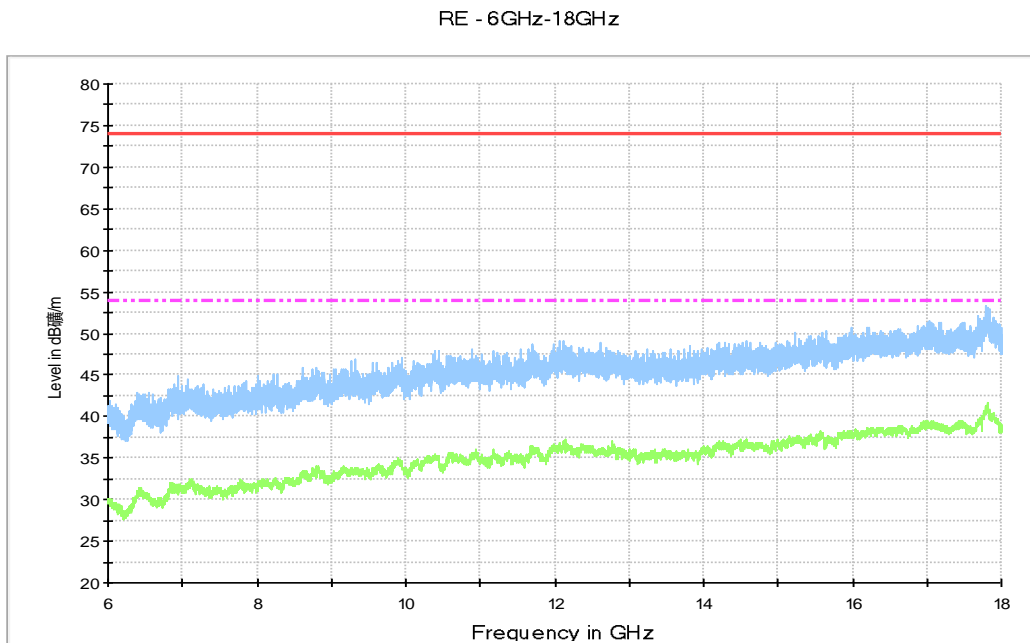


Fig. 94 Radiated Spurious Emission (802.11n-HT20, ch64, 6 GHz-18 GHz)

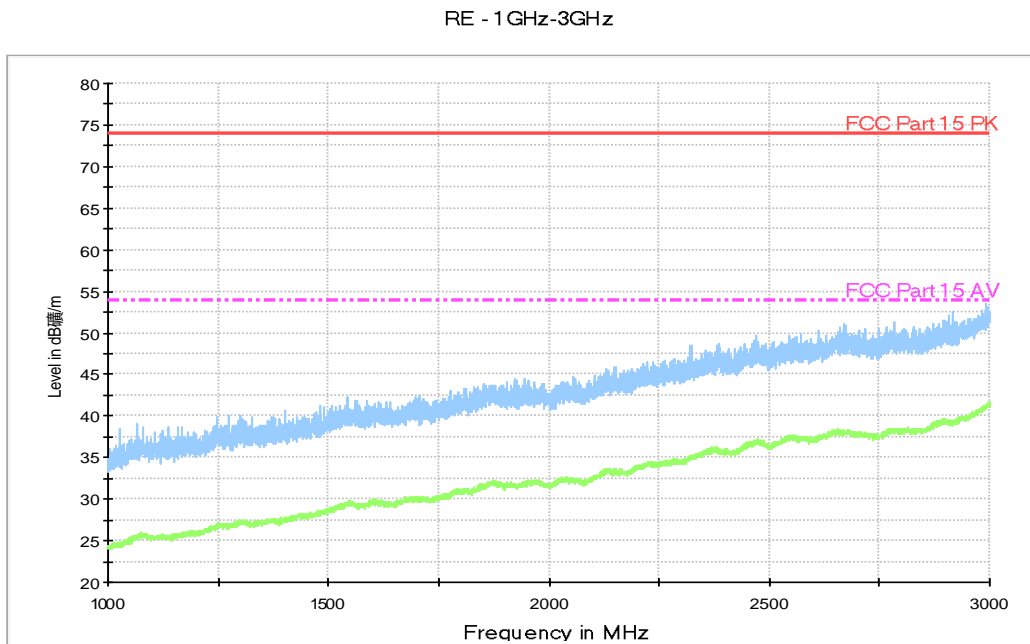


Fig. 95 Radiated Spurious Emission (802.11n-HT20, ch100, 1 GHz-3 GHz)

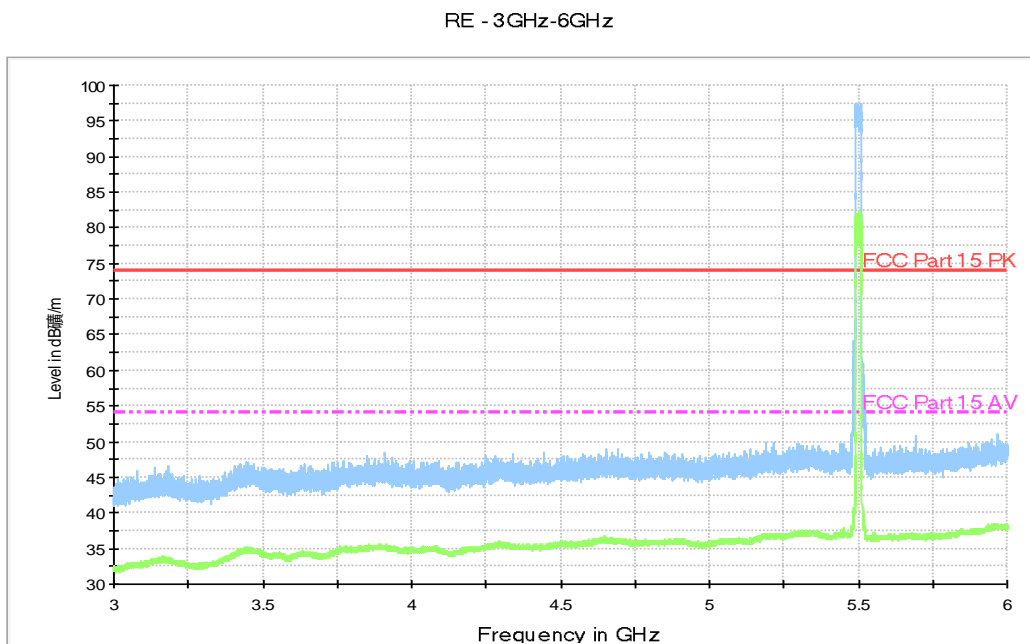


Fig. 96 Radiated Spurious Emission (802.11n-HT20, ch100, 3 GHz-6 GHz)

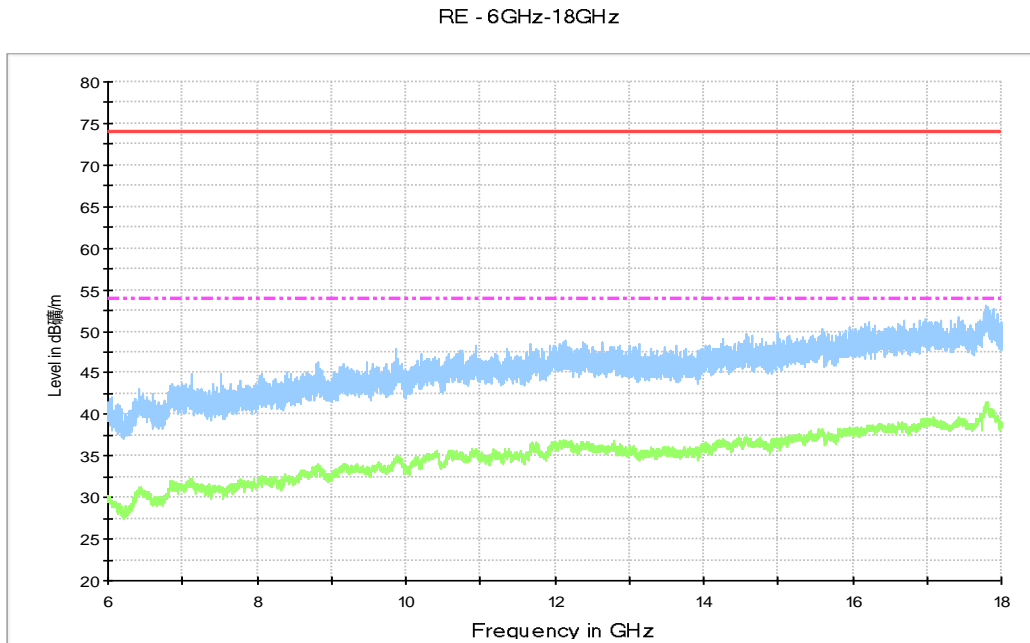


Fig. 97 Radiated Spurious Emission (802.11n-HT20, ch100, 6 GHz-18 GHz)

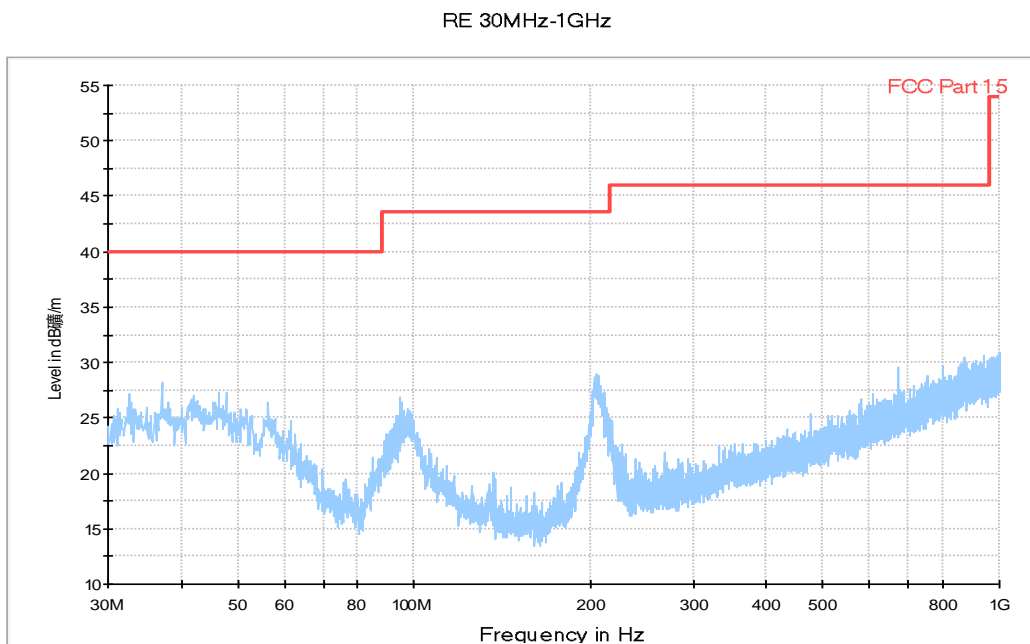


Fig. 98 Radiated Spurious Emission (802.11n-HT20, ch116, 30 MHz-1 GHz)

RE - 1GHz-3GHz

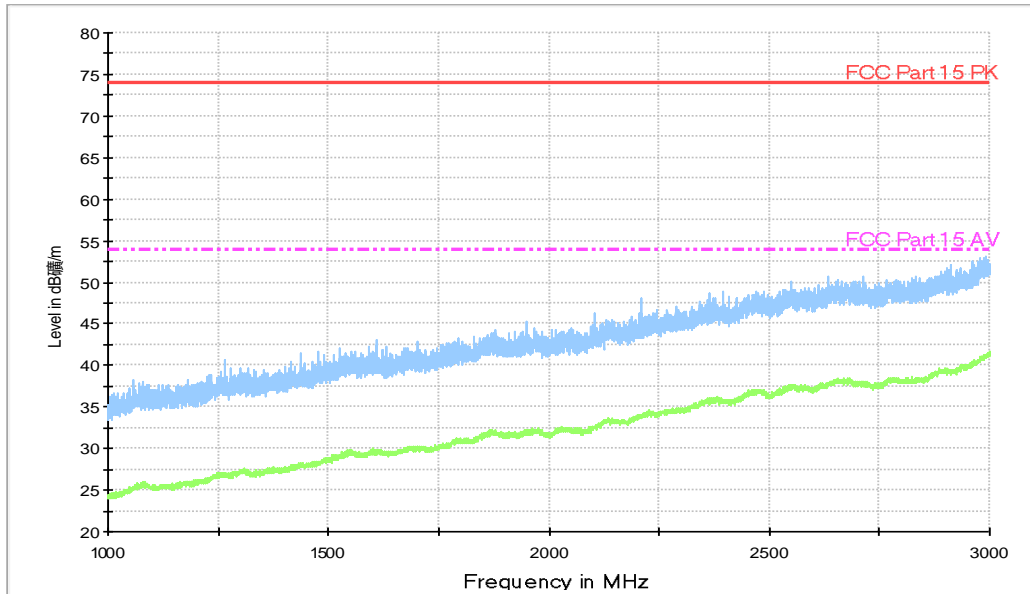


Fig. 99 Radiated Spurious Emission (802.11n-HT20, ch116, 1 GHz-3 GHz)

RE - 3GHz-6GHz

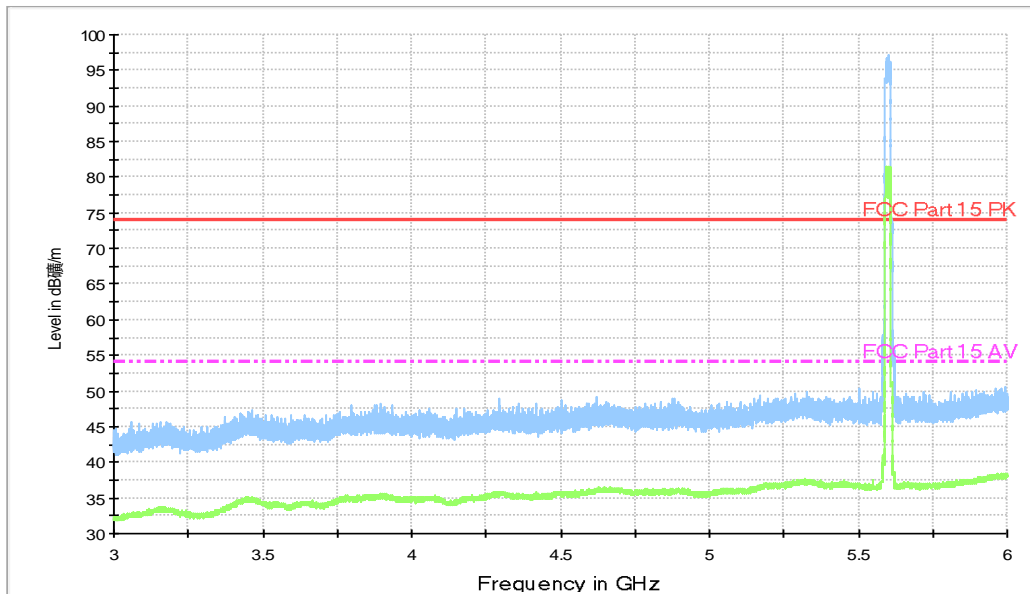


Fig. 100 Radiated Spurious Emission (802.11n-HT20, ch116, 3 GHz-6 GHz)

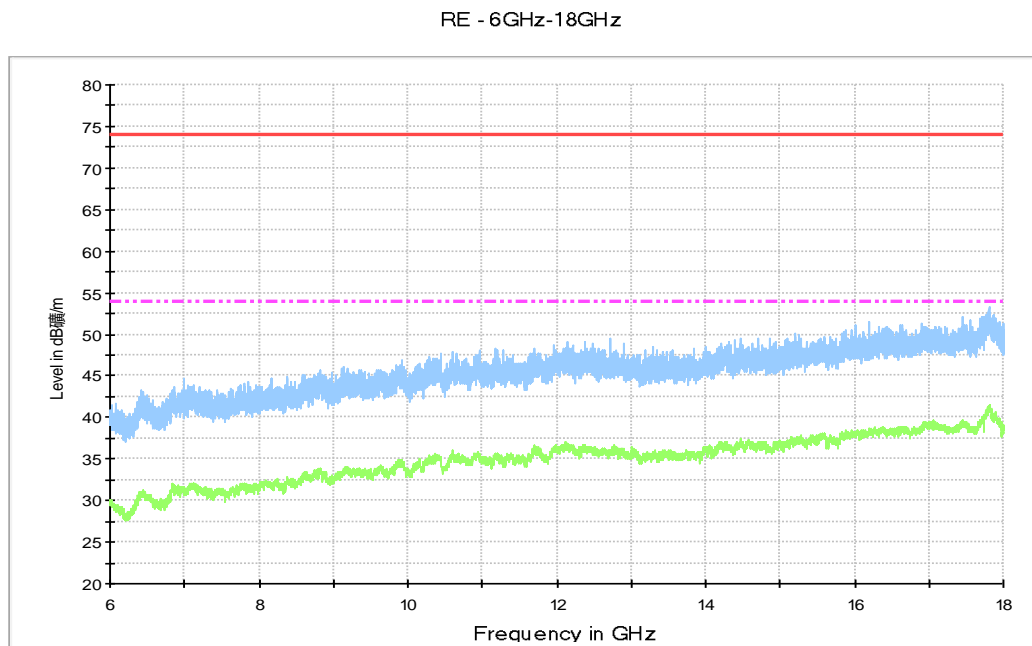


Fig. 101 Radiated Spurious Emission (802.11n-HT20, ch116, 6 GHz-18 GHz)

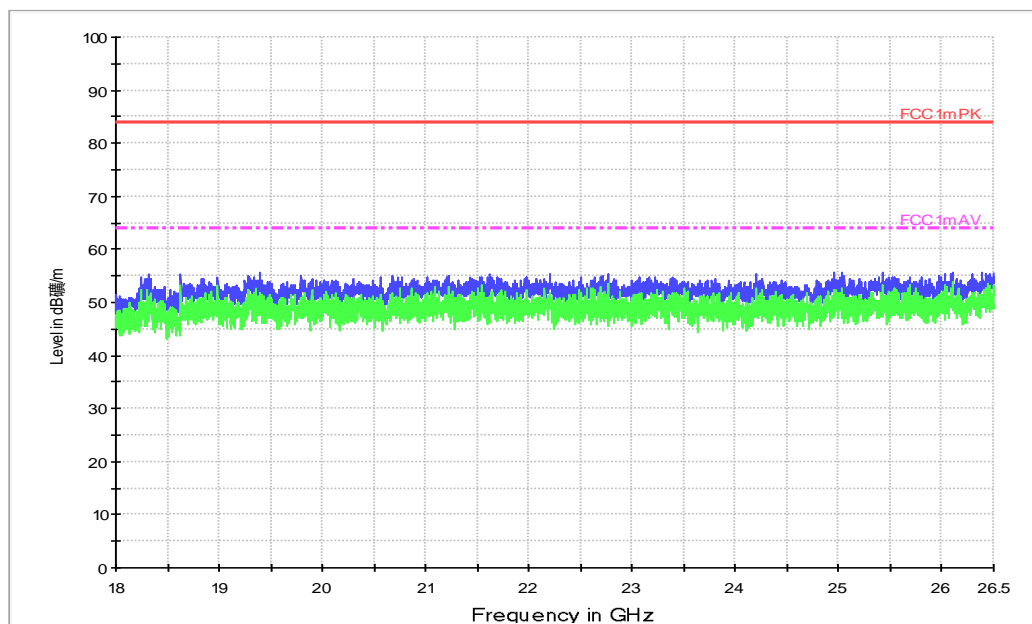


Fig. 102 Radiated Spurious Emission (802.11n-HT20, ch116, 18 GHz-26.5 GHz)

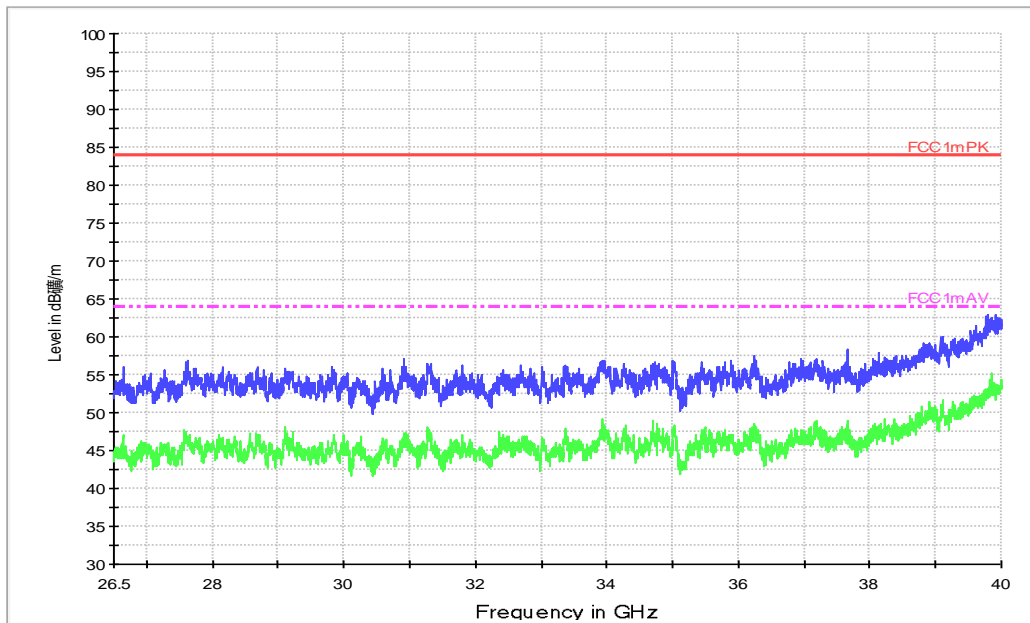


Fig. 103 Radiated Spurious Emission (802.11n-HT20, ch116, 26.5 GHz-40 GHz)

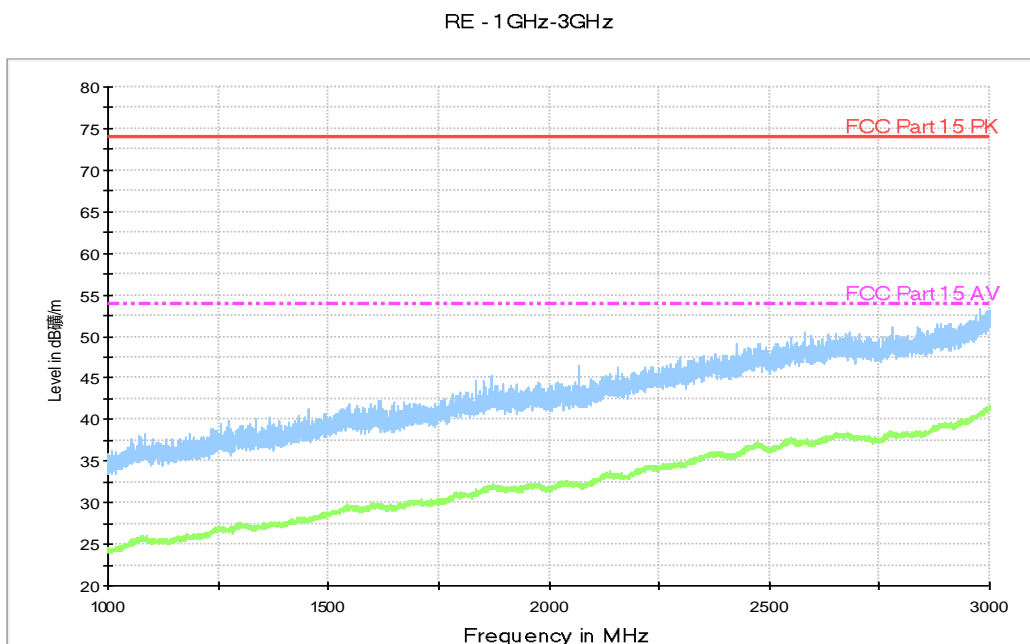


Fig. 104 Radiated Spurious Emission (802.11n-HT20, ch140, 1 GHz-3 GHz)

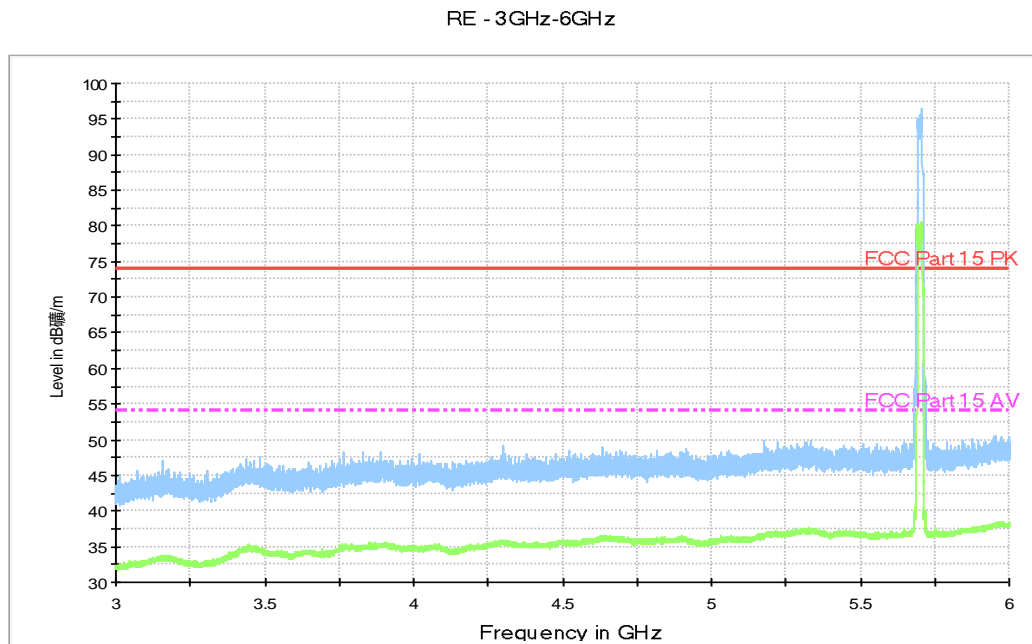


Fig. 105 Radiated Spurious Emission (802.11n-HT20, ch140, 3 GHz-6 GHz)

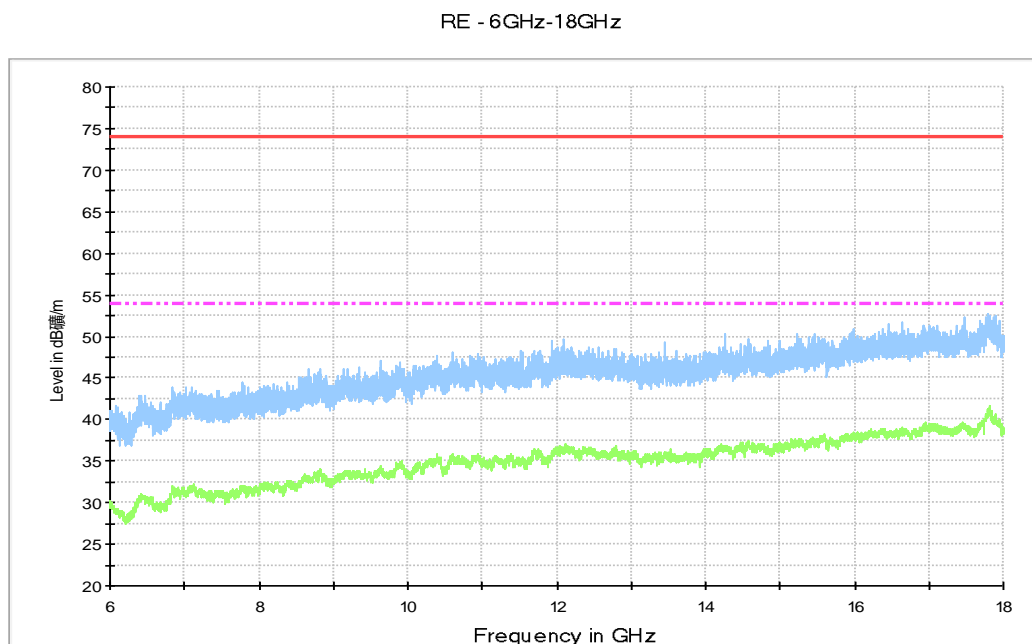


Fig. 106 Radiated Spurious Emission (802.11n-HT20, ch140, 6 GHz-18 GHz)

RE 30MHz-1GHz

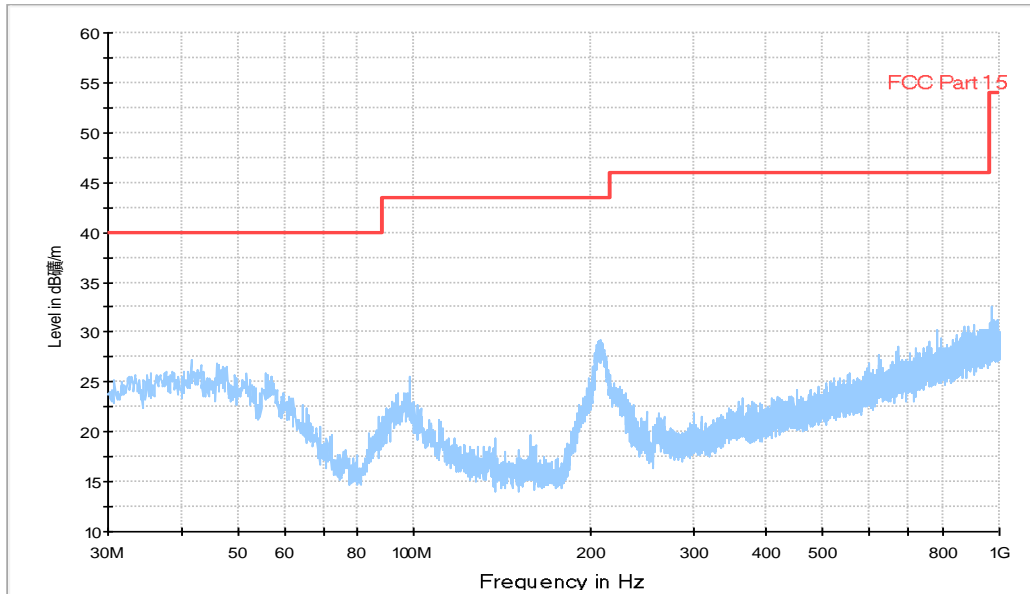


Fig. 107 Radiated Spurious Emission (802.11n-HT40, ch38, 30 MHz-1 GHz)

RE - 1GHz-3GHz

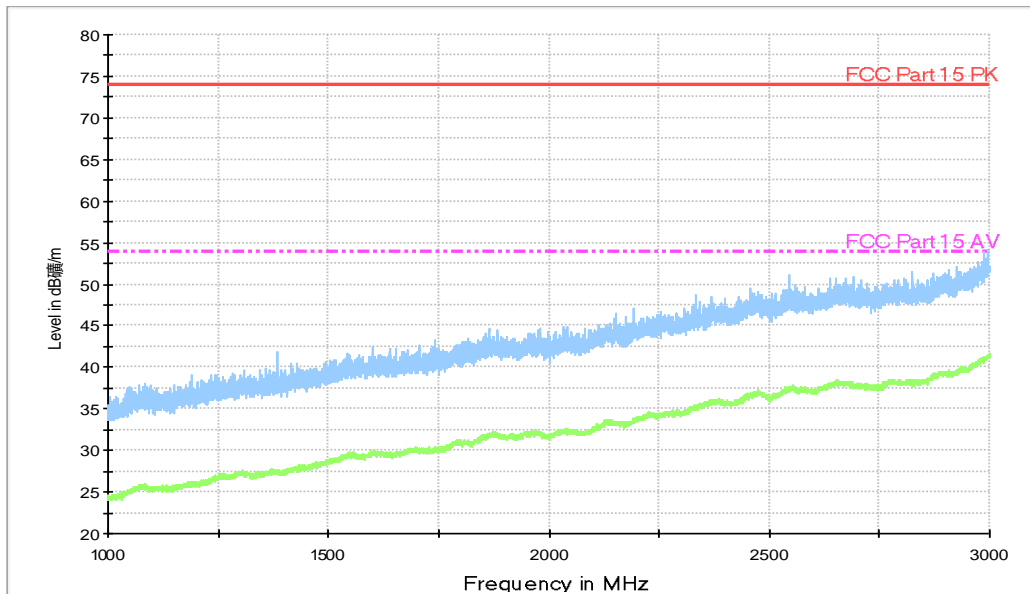


Fig. 108 Radiated Spurious Emission (802.11n-HT40, ch38, 1 GHz-3 GHz)

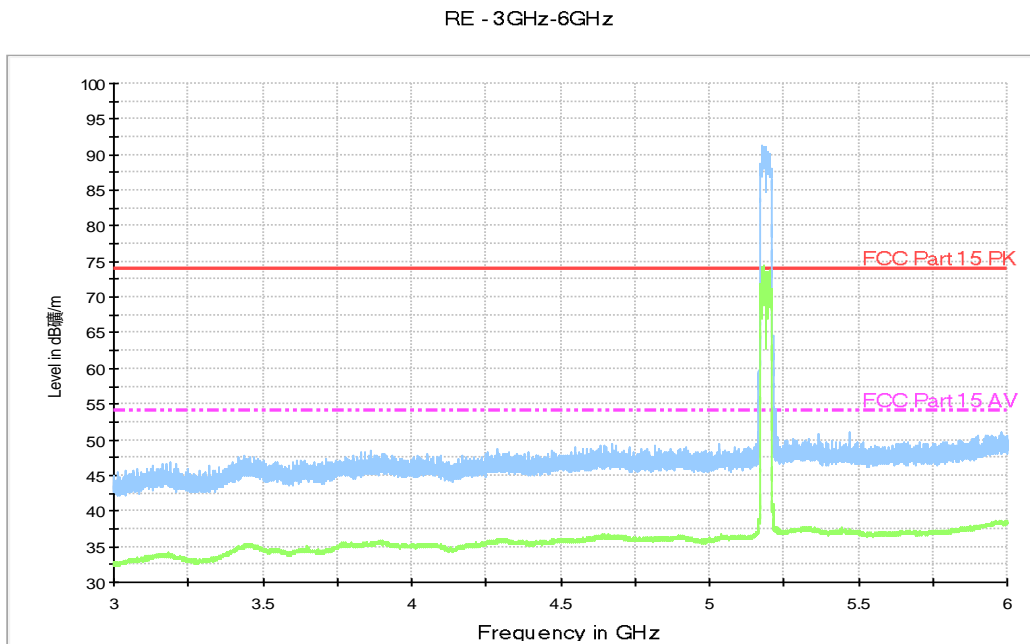


Fig. 109 Radiated Spurious Emission (802.11n-HT40, ch38, 3 GHz-6 GHz)

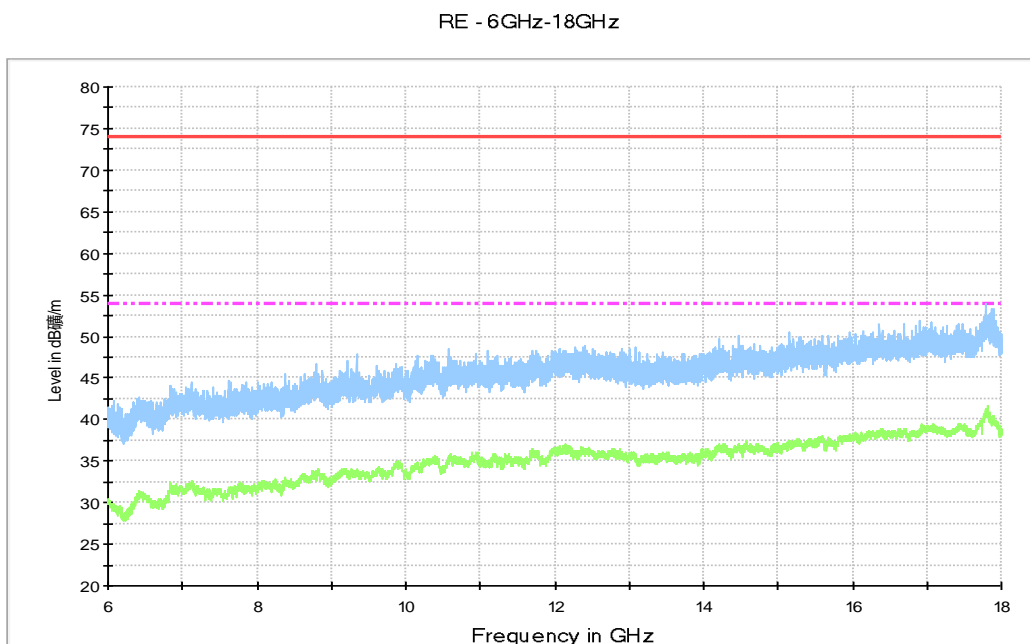


Fig. 110 Radiated Spurious Emission (802.11n-HT40, ch38, 6 GHz-18 GHz)

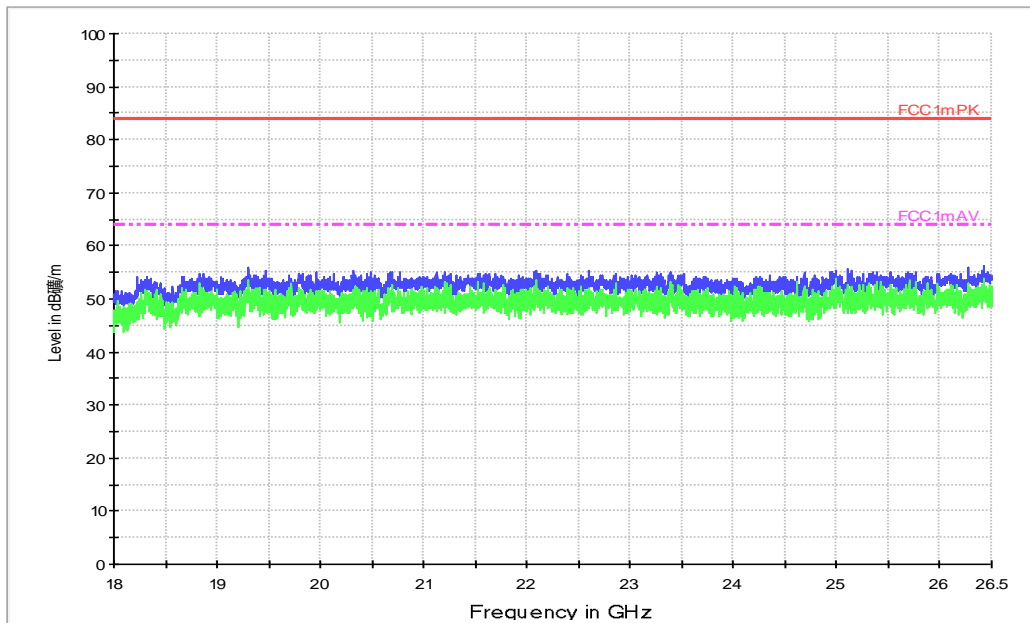


Fig. 111 Radiated Spurious Emission (802.11n-HT40, ch38, 18 GHz-26.5 GHz)

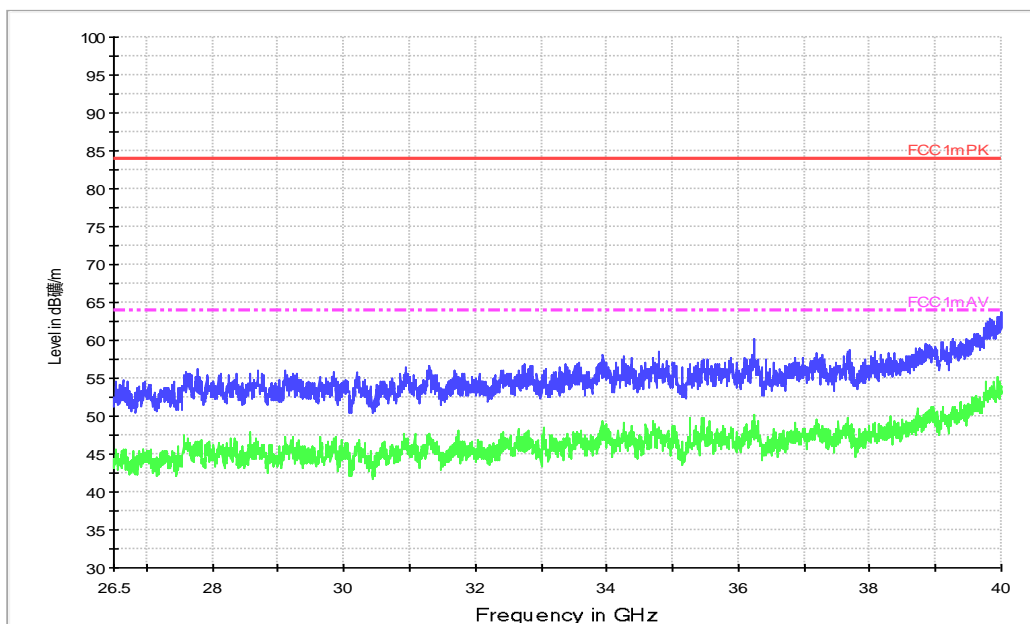


Fig. 112 Radiated Spurious Emission (802.11n-HT40, ch38, 26.5 GHz-40 GHz)

RE - 1 GHz-3GHz

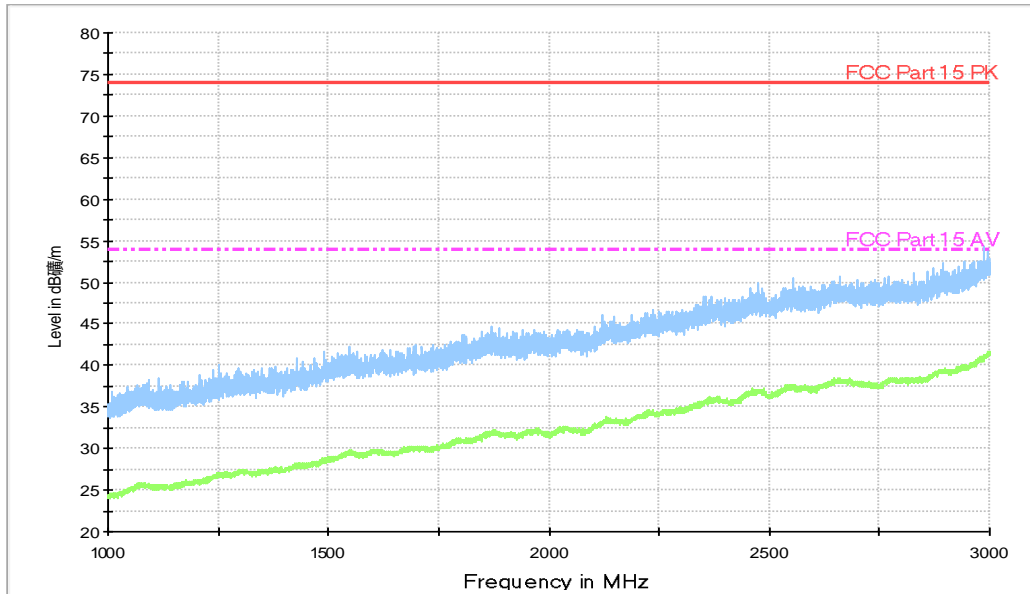


Fig. 113 Radiated Spurious Emission (802.11n-HT40, ch46, 1 GHz-3 GHz)

RE - 3GHz-6GHz

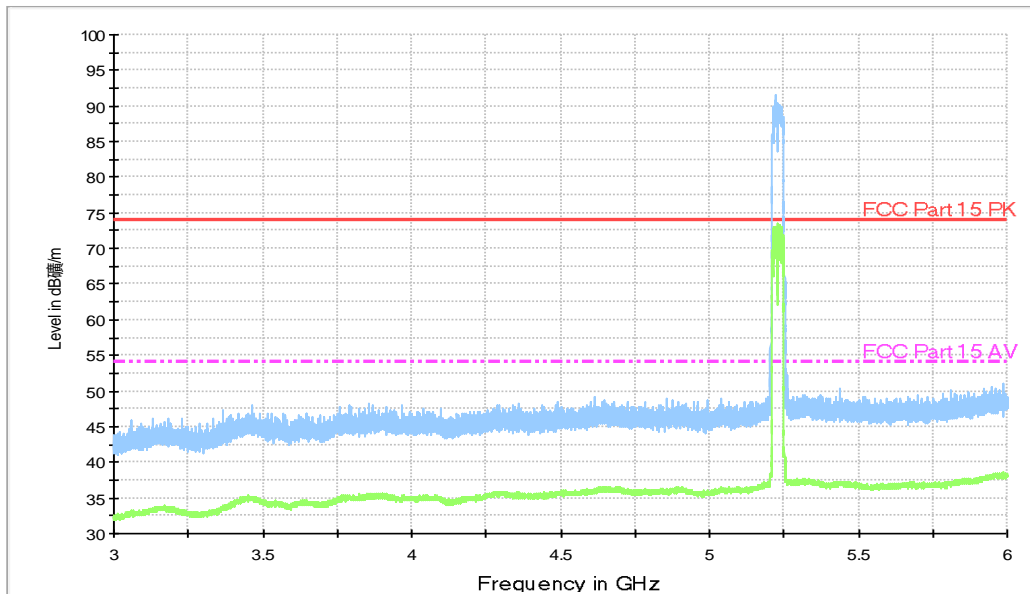


Fig. 114 Radiated Spurious Emission (802.11n-HT40, ch46, 3 GHz-6 GHz)

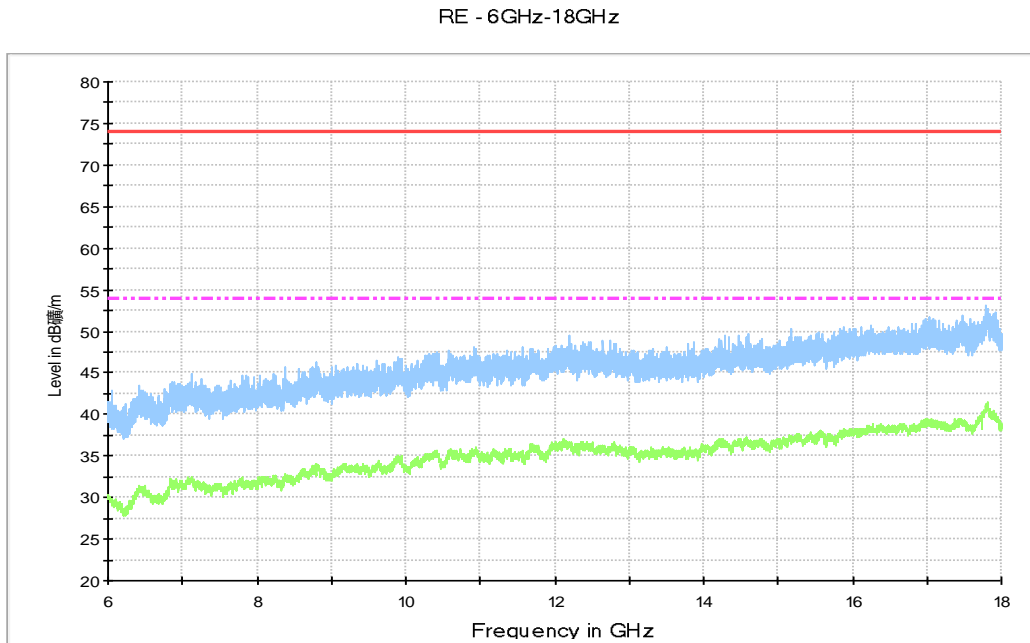


Fig. 115 Radiated Spurious Emission (802.11n-HT40, ch46, 6 GHz-18 GHz)

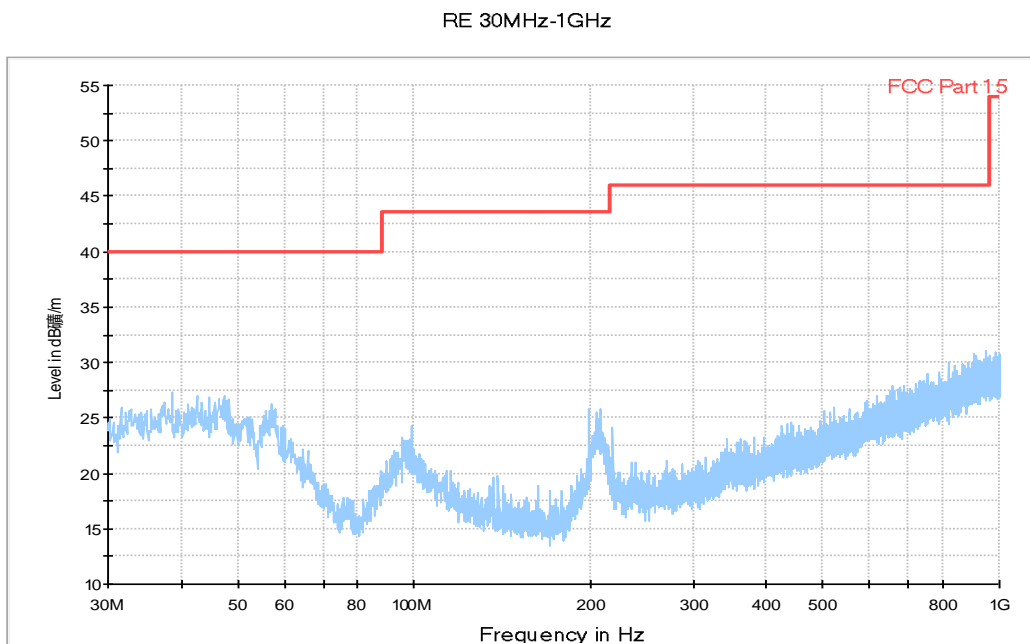


Fig. 116 Radiated Spurious Emission (802.11n-HT40, ch54, 30 MHz-1 GHz)

RE - 1GHz-3GHz

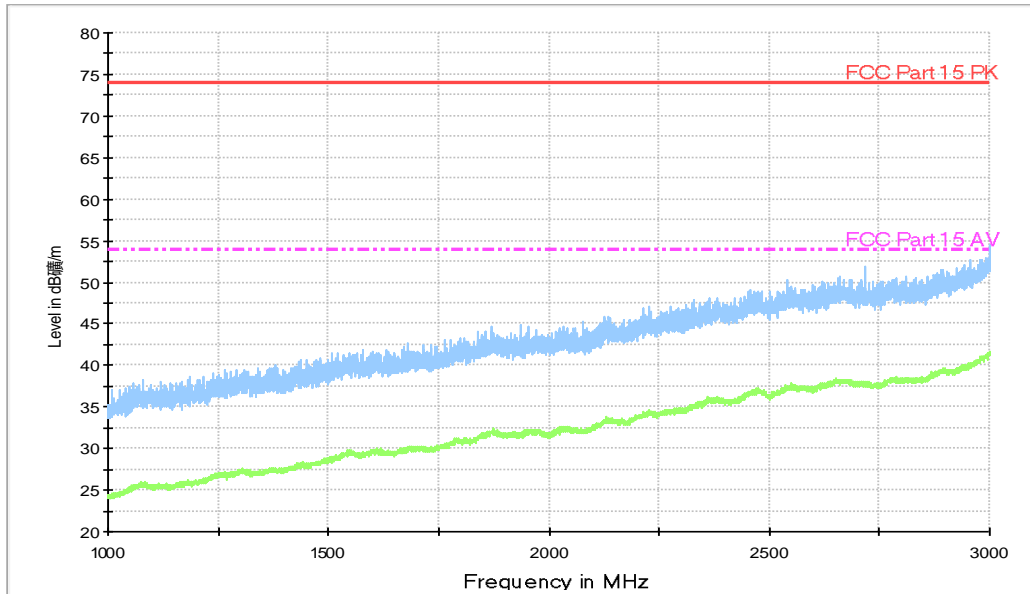


Fig. 117 Radiated Spurious Emission (802.11n-HT40, ch54, 1 GHz-3 GHz)

RE - 3GHz-6GHz

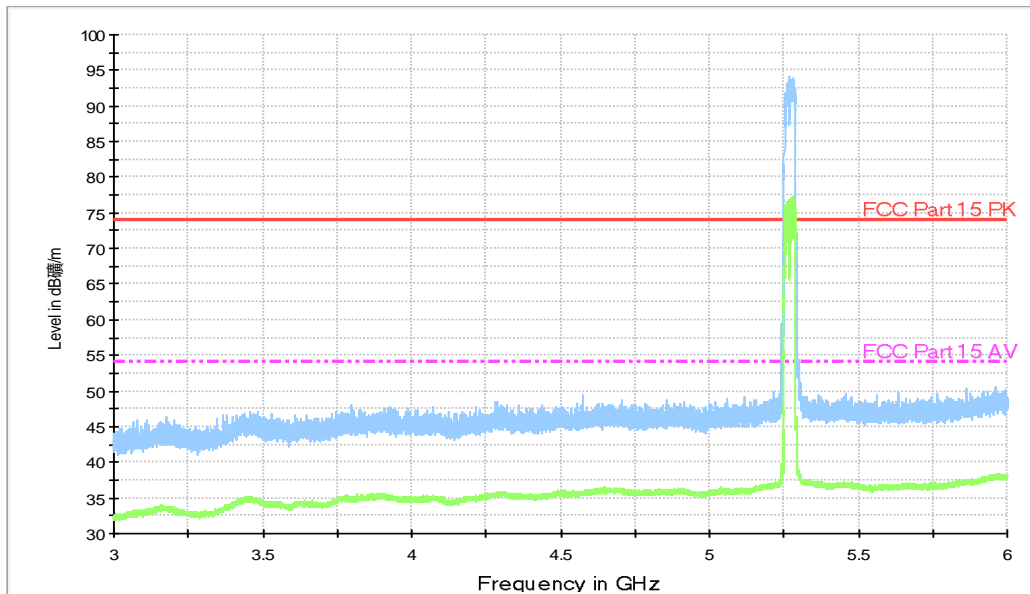


Fig. 118 Radiated Spurious Emission (802.11n-HT40, ch54, 3 GHz-6 GHz)

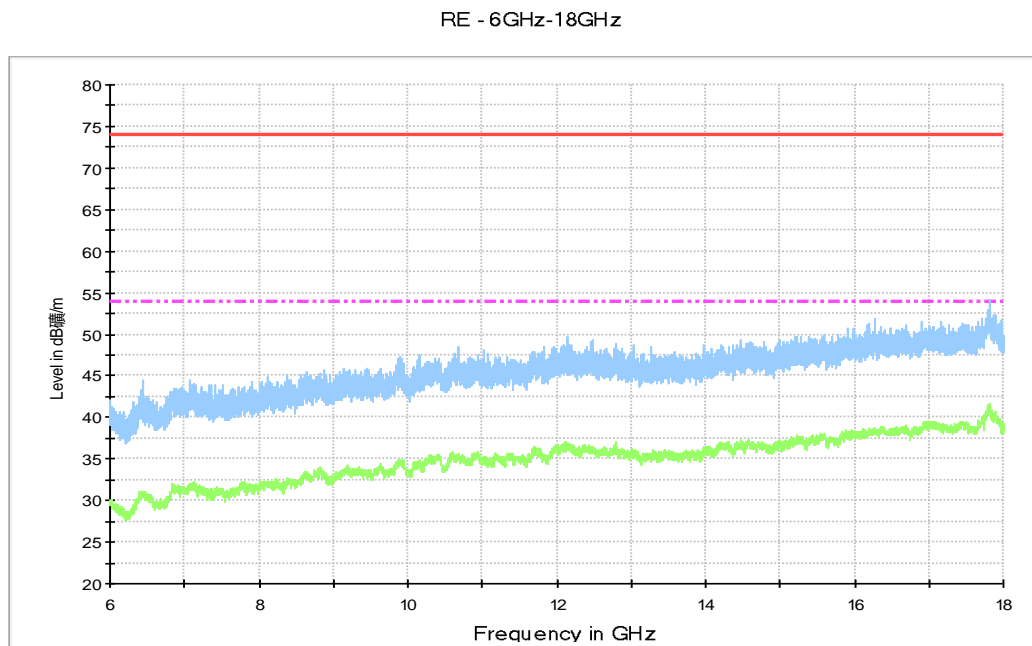


Fig. 119 Radiated Spurious Emission (802.11n-HT40, ch54, 6 GHz-18 GHz)

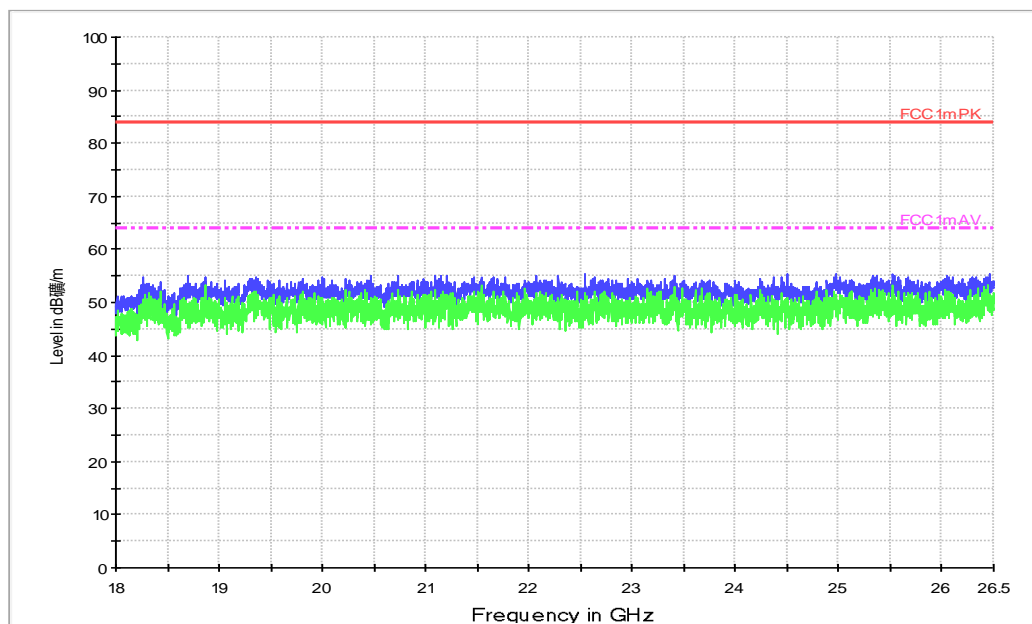


Fig. 120 Radiated Spurious Emission (802.11n-HT40, ch54, 18 GHz-26.5 GHz)

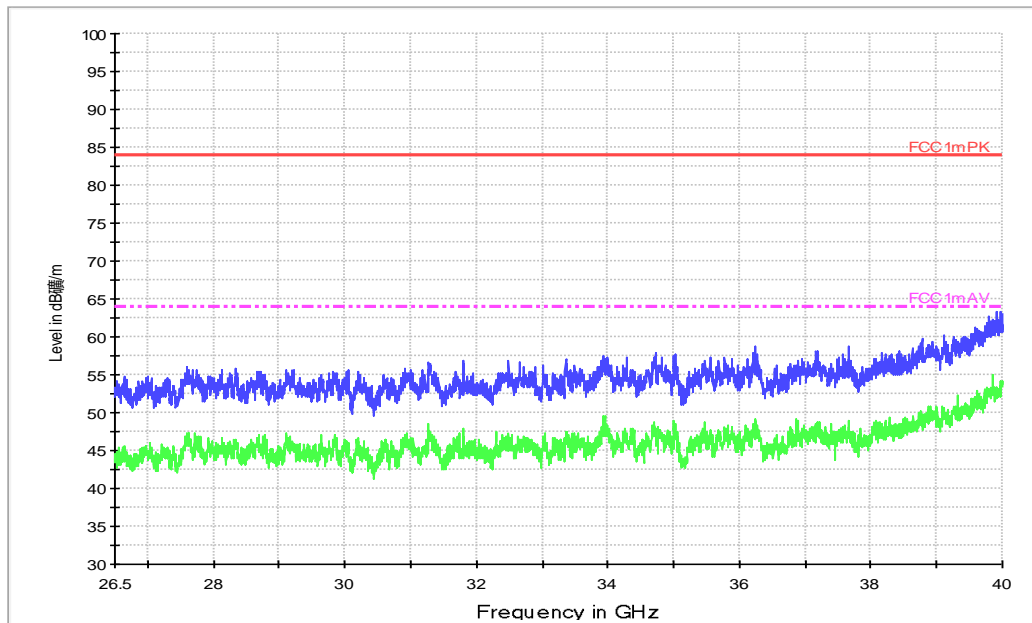


Fig. 121 Radiated Spurious Emission (802.11n-HT40, ch54, 26.5 GHz-40 GHz)

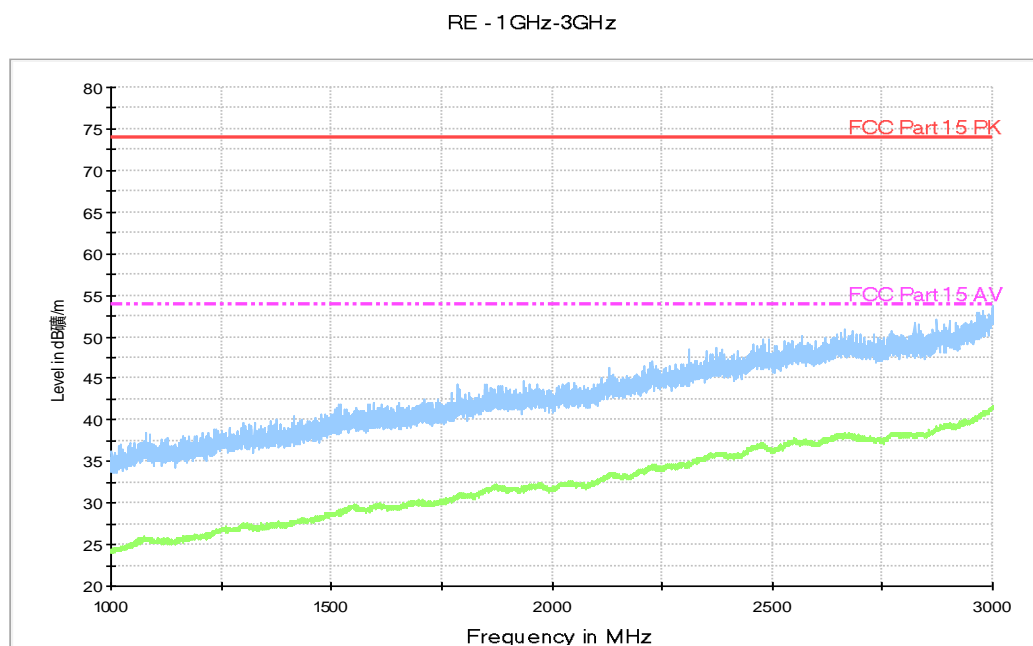


Fig. 122 Radiated Spurious Emission (802.11n-HT40, ch62, 1 GHz-3 GHz)

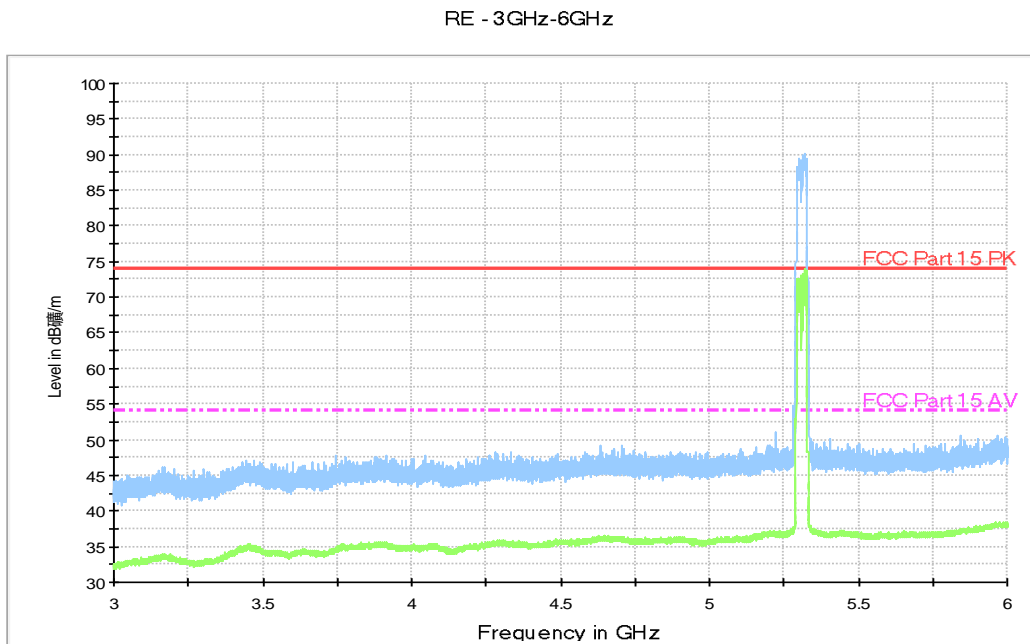


Fig. 123 Radiated Spurious Emission (802.11n-HT40, ch62, 3 GHz-6 GHz)

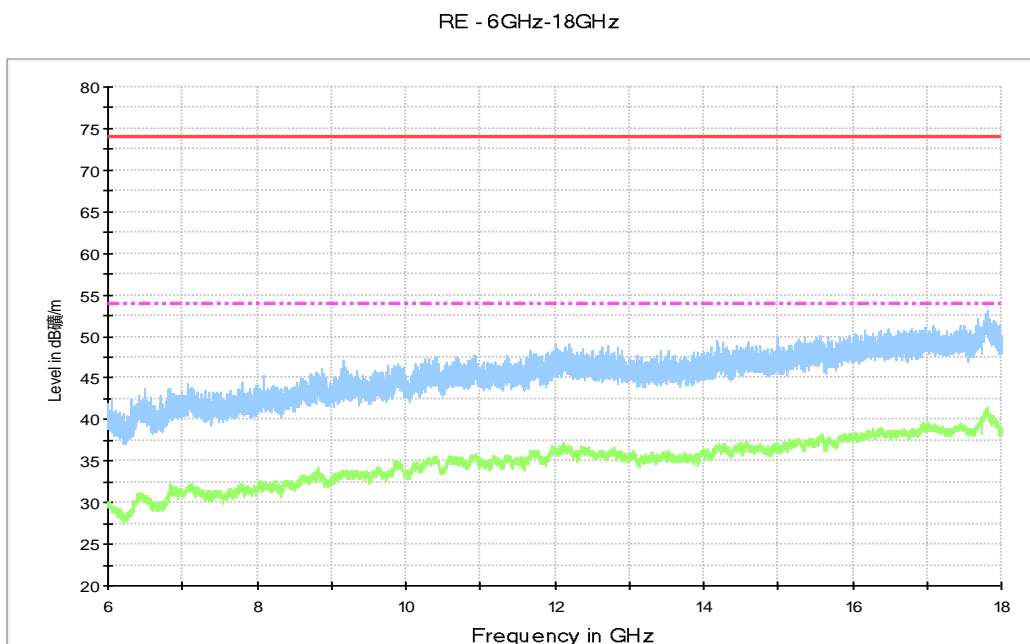


Fig. 124 Radiated Spurious Emission (802.11n-HT40, ch62, 6 GHz-18 GHz)

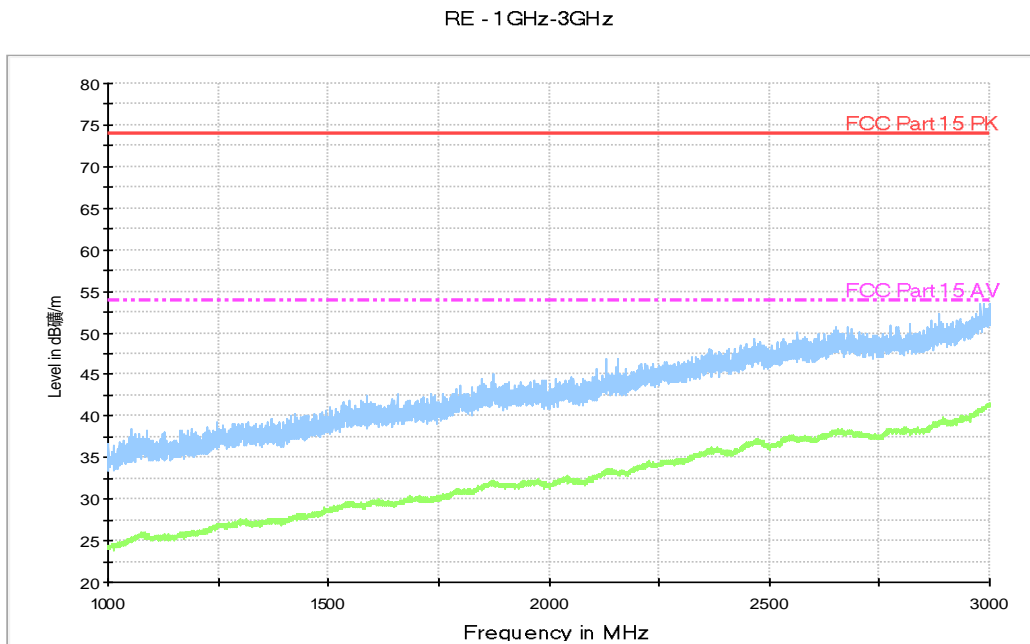


Fig. 125 Radiated Spurious Emission (802.11n-HT40, ch102, 1 GHz-3 GHz)

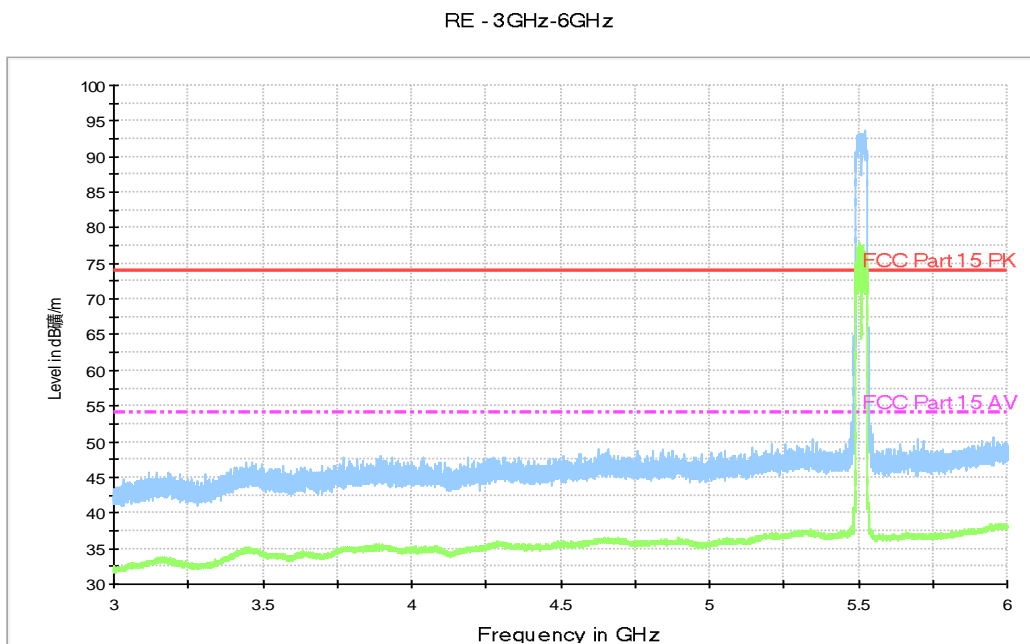


Fig. 126 Radiated Spurious Emission (802.11n-HT40, ch102, 3 GHz-6 GHz)

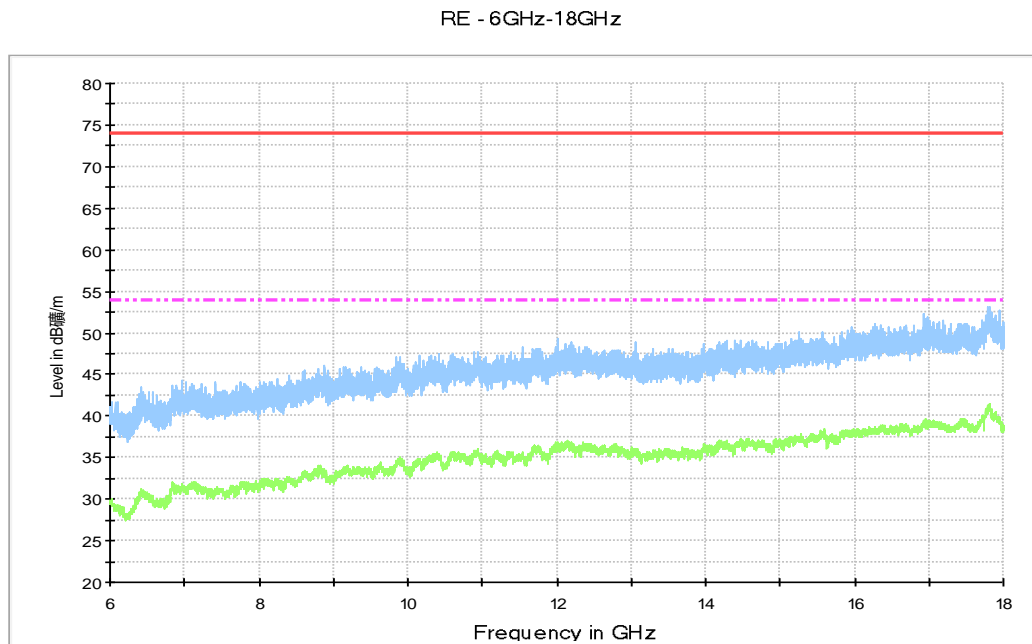


Fig. 127 Radiated Spurious Emission (802.11n-HT40, ch102, 6 GHz-18 GHz)

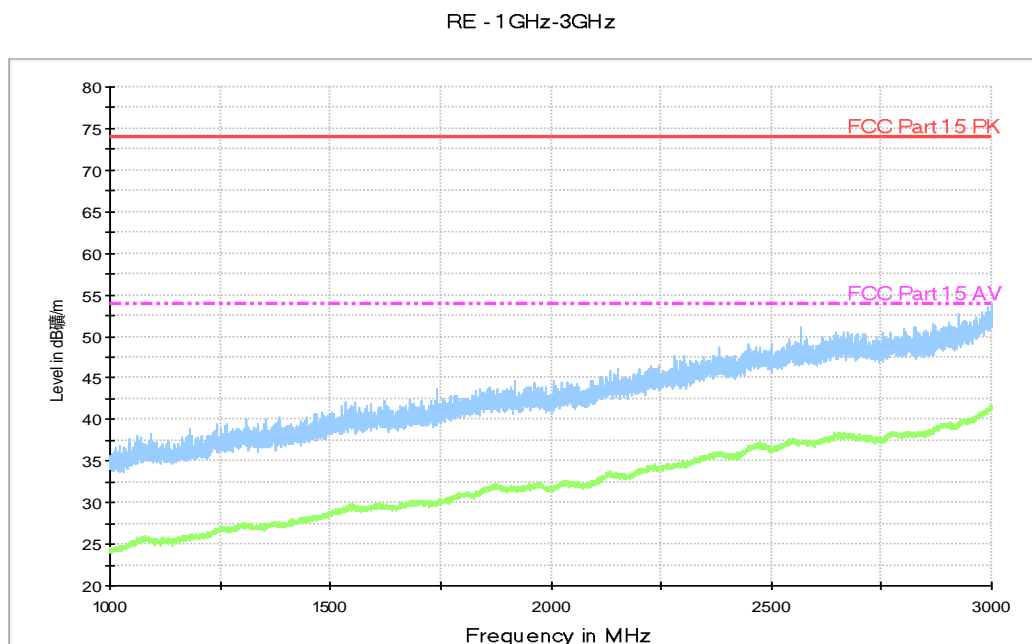


Fig. 128 Radiated Spurious Emission (802.11n-HT40, ch134, 1 GHz-3 GHz)

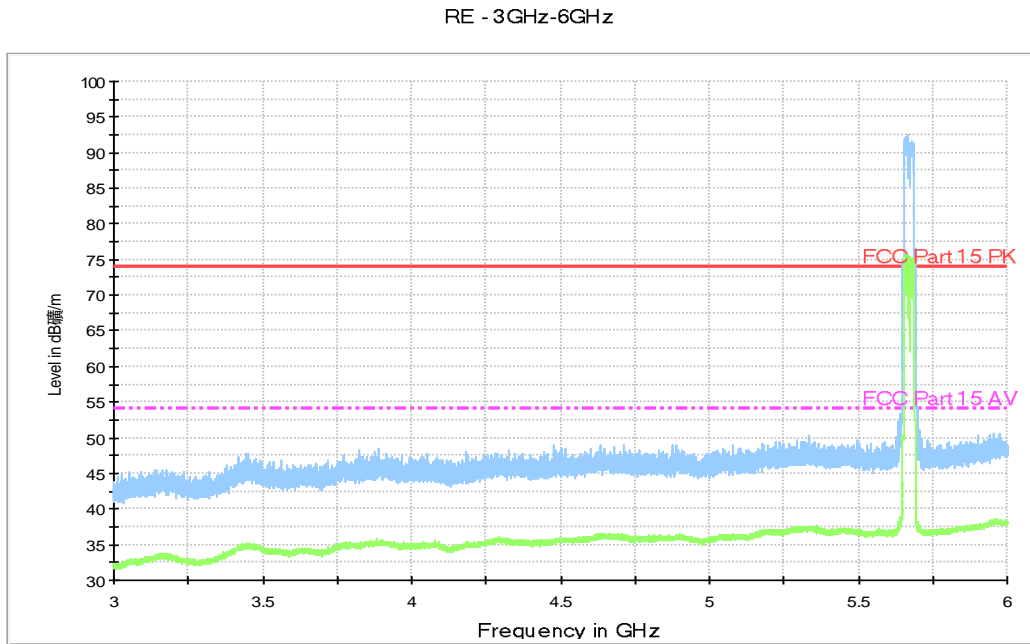


Fig. 129 Radiated Spurious Emission (802.11n-HT40, ch134, 3 GHz-6 GHz)

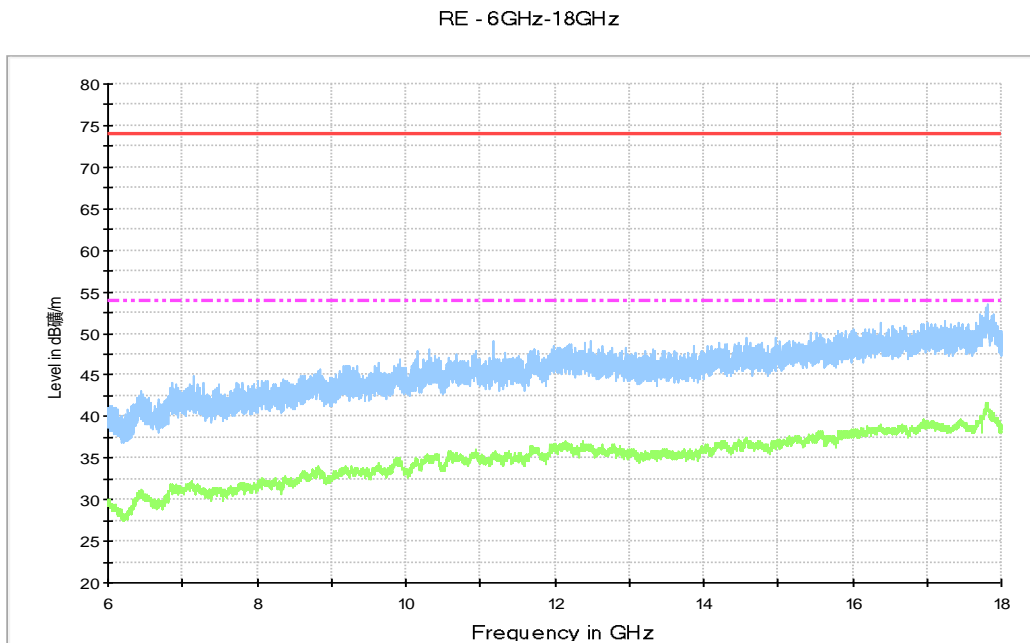


Fig. 130 Radiated Spurious Emission (802.11n-HT40, ch134, 6 GHz-18 GHz)

A.7. 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.131 | Fig.132 | 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.131 | Fig.132 | 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:

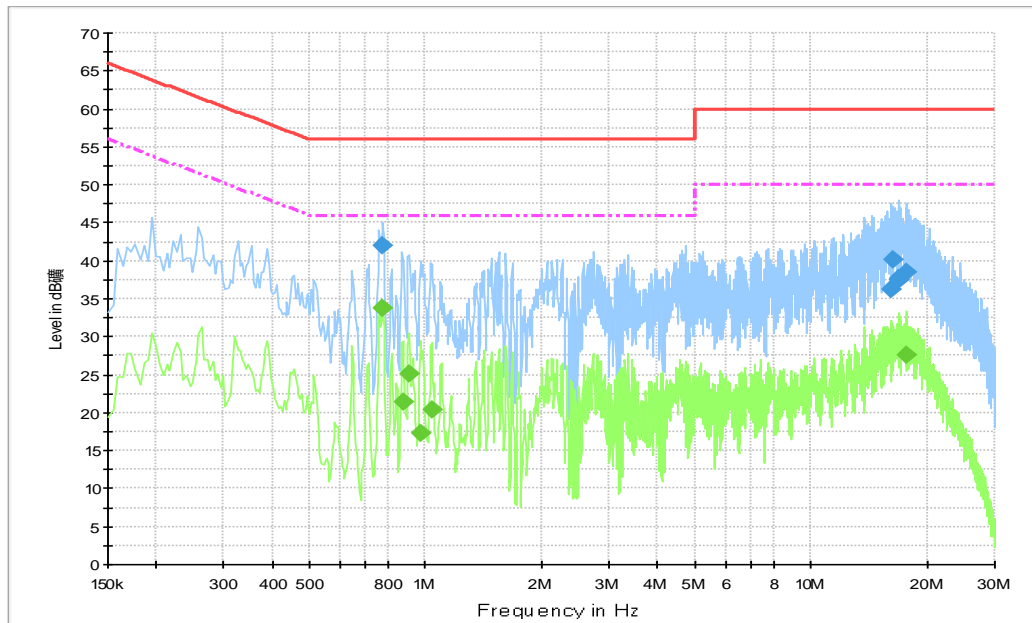


Fig. 131 Conducted Emission(802.11a, Ch40, TX)

Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----|------|------------|-------------|--------------|
| 0.775500 | 42.0 | GND | L1 | 10.7 | 14.0 | 56.0 |
| 16.224000 | 36.3 | GND | L1 | 11.2 | 23.7 | 60.0 |
| 16.354500 | 40.2 | GND | L1 | 11.2 | 19.8 | 60.0 |
| 16.899000 | 37.6 | GND | L1 | 11.2 | 22.4 | 60.0 |
| 17.002500 | 37.7 | GND | L1 | 11.2 | 22.3 | 60.0 |
| 17.785500 | 38.5 | GND | L1 | 11.2 | 21.5 | 60.0 |

Final Result 2

| Frequency (MHz) | Average (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|-----|------|------------|-------------|--------------|
| 0.775500 | 33.8 | GND | L1 | 10.7 | 12.2 | 46.0 |
| 0.874500 | 21.5 | GND | L1 | 10.7 | 24.5 | 46.0 |
| 0.906000 | 25.1 | GND | L1 | 10.7 | 20.9 | 46.0 |
| 0.973500 | 17.3 | GND | L1 | 10.7 | 28.7 | 46.0 |
| 1.036500 | 20.4 | GND | L1 | 10.7 | 25.6 | 46.0 |
| 17.718000 | 27.6 | GND | L1 | 11.2 | 22.4 | 50.0 |

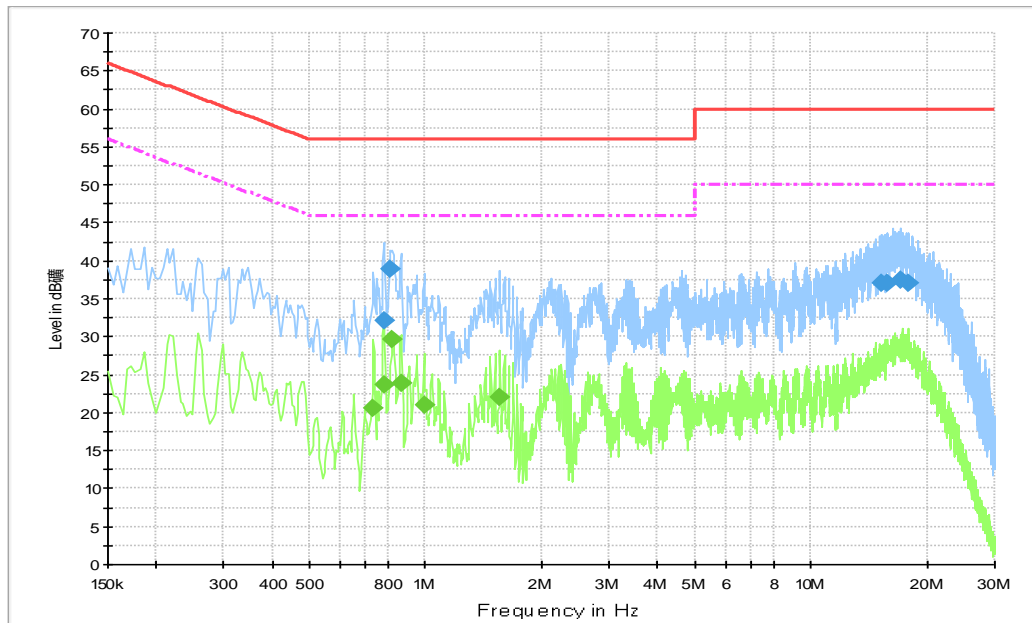


Fig. 132 Conducted Emission(802.11a, IDLE)

Final Result 1

| Frequency (MHz) | QuasiPeak (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|------------------|-----|------|------------|-------------|--------------|
| 0.780000 | 32.0 | GND | L1 | 10.7 | 24.0 | 56.0 |
| 0.811500 | 38.8 | GND | L1 | 10.7 | 17.2 | 56.0 |
| 15.315000 | 37.0 | GND | L1 | 11.2 | 23.0 | 60.0 |
| 15.783000 | 37.1 | GND | L1 | 11.2 | 22.9 | 60.0 |
| 17.025000 | 37.4 | GND | L1 | 11.2 | 22.6 | 60.0 |
| 17.947500 | 37.0 | GND | L1 | 11.2 | 23.0 | 60.0 |

Final Result 2

| Frequency (MHz) | Average (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|-----|------|------------|-------------|--------------|
| 0.730500 | 20.7 | GND | L1 | 10.7 | 25.3 | 46.0 |
| 0.780000 | 23.7 | GND | L1 | 10.7 | 22.3 | 46.0 |
| 0.820500 | 29.7 | GND | L1 | 10.7 | 16.3 | 46.0 |
| 0.865500 | 23.9 | GND | L1 | 10.7 | 22.1 | 46.0 |
| 0.991500 | 21.0 | GND | L1 | 10.7 | 25.0 | 46.0 |
| 1.558500 | 22.0 | GND | L1 | 10.7 | 24.0 | 46.0 |

A.9. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

| | |
|-------------------------|---------|
| Measurement Uncertainty | 60.80Hz |
|-------------------------|---------|

Measurement Result:

| Mode | Channel | 99% Occupied bandwidth (kHz) | | conclusion |
|-----------------|----------|-------------------------------|-------|------------|
| 802.11a | 5180 MHz | Fig.133 | 17.47 | P |
| | 5200 MHz | Fig.134 | 17.50 | P |
| | 5240 MHz | Fig.135 | 17.49 | P |
| 802.11n HT20 | 5180 MHz | Fig.136 | 18.40 | P |
| | 5200 MHz | Fig.137 | 18.40 | P |
| | 5240 MHz | Fig.138 | 18.41 | P |
| 802.11n HT40 | 5190 MHz | Fig.139 | 36.23 | P |
| | 5230 MHz | Fig.140 | 36.15 | P |

Conclusion: PASS

Test graphs as below:

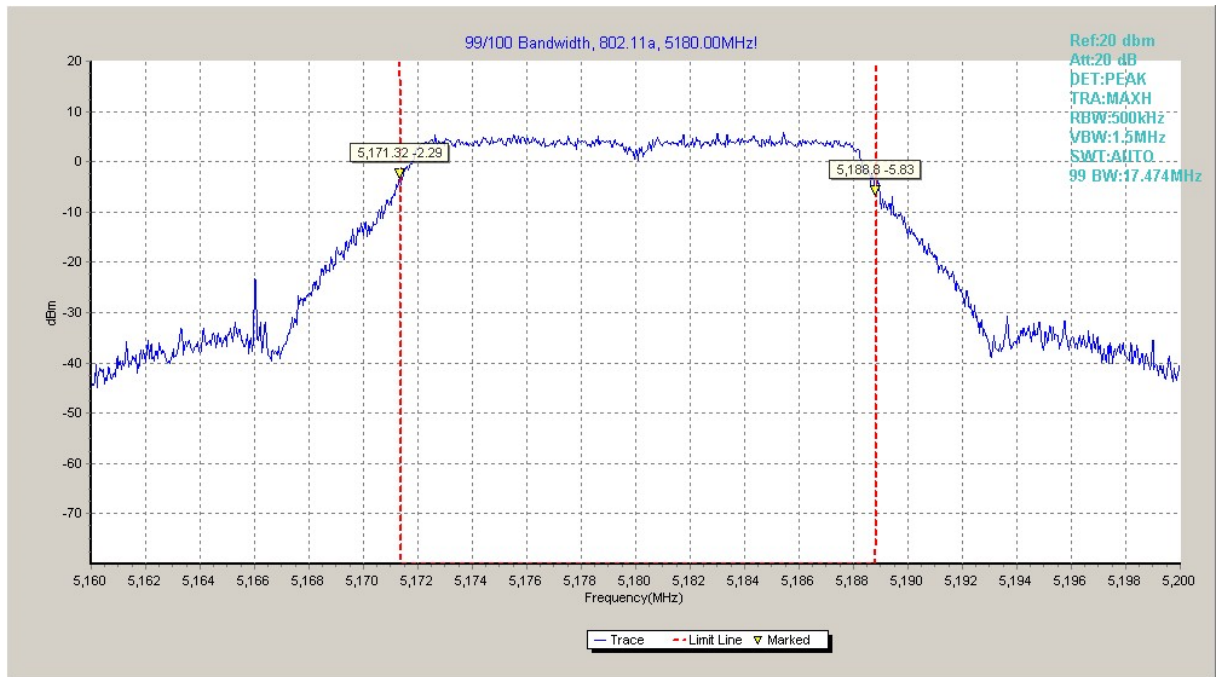


Fig. 133 99% Occupied bandwidth (802.11a, 5180MHz)

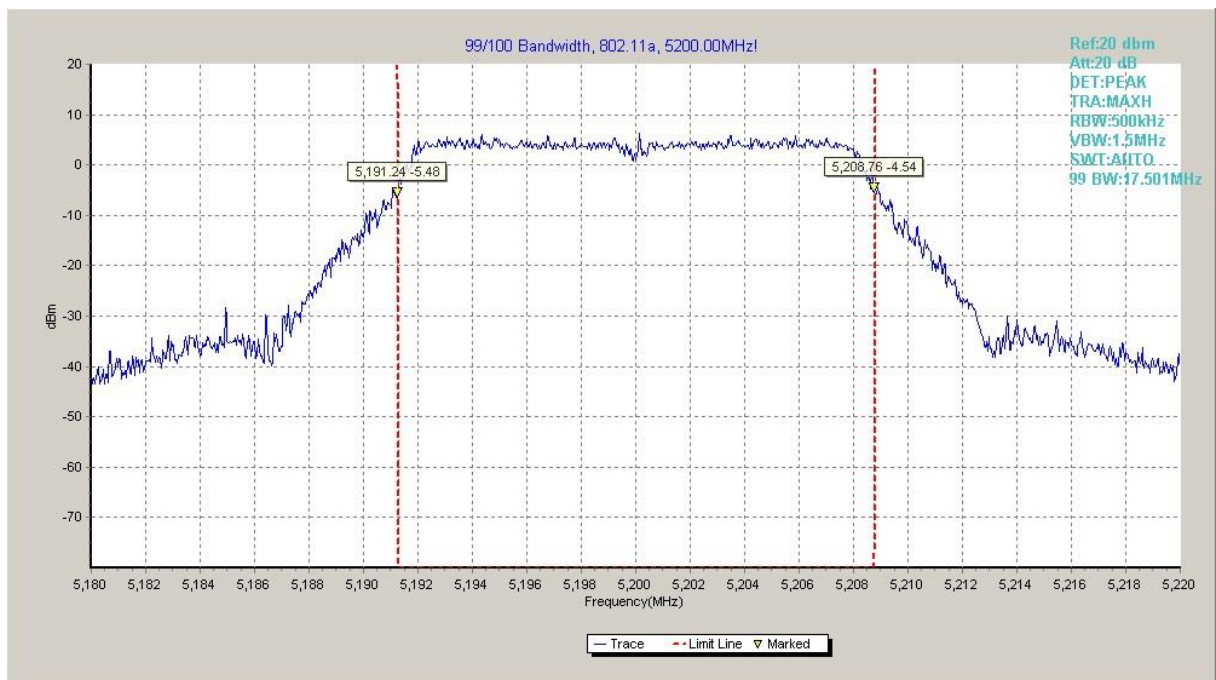


Fig. 134 99% Occupied bandwidth (802.11a, 5200MHz)

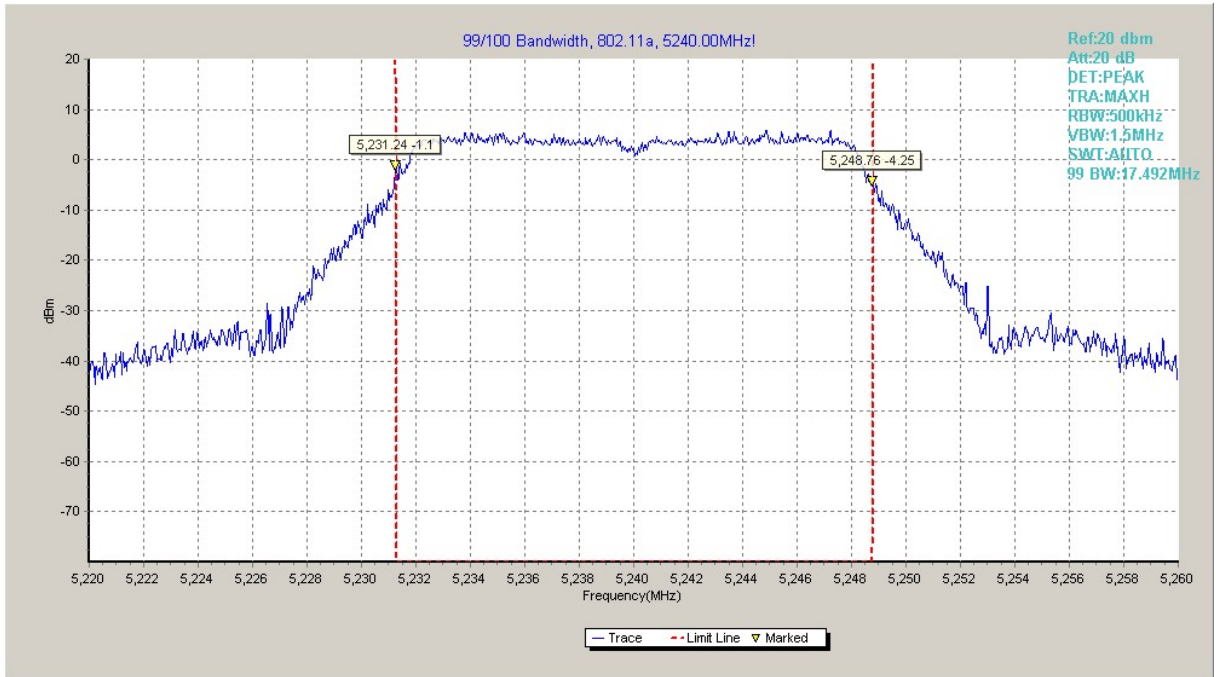


Fig. 135 99% Occupied bandwidth (802.11a, 5240MHz)

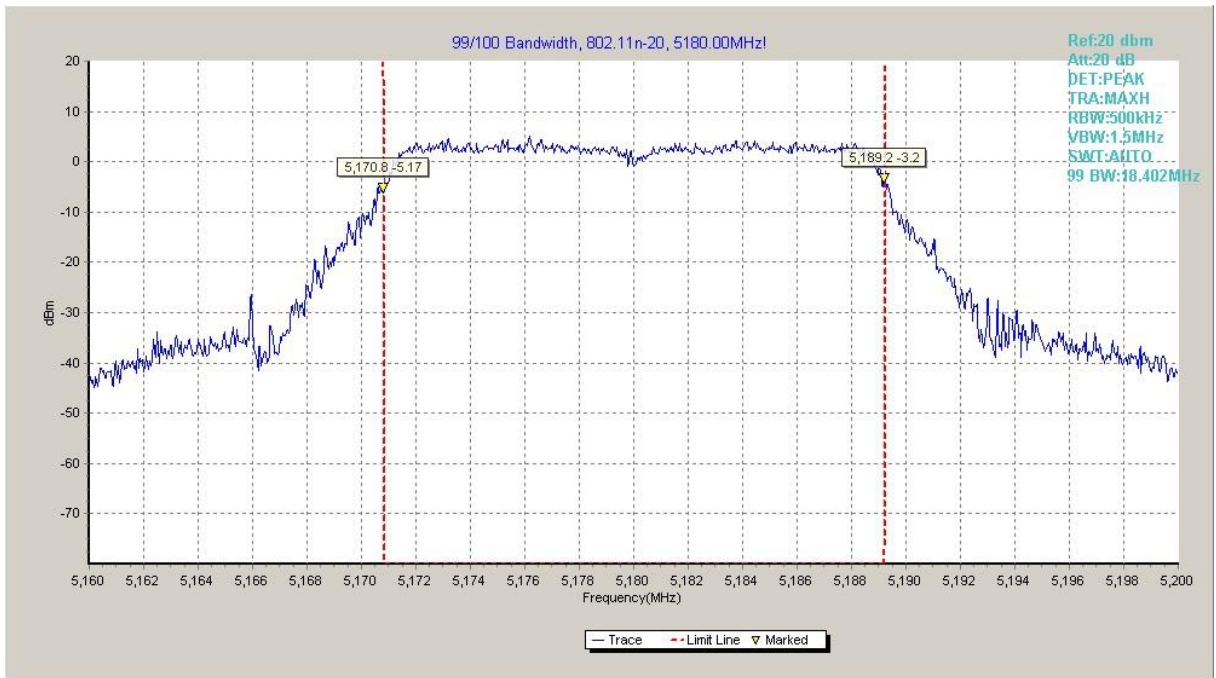


Fig. 136 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

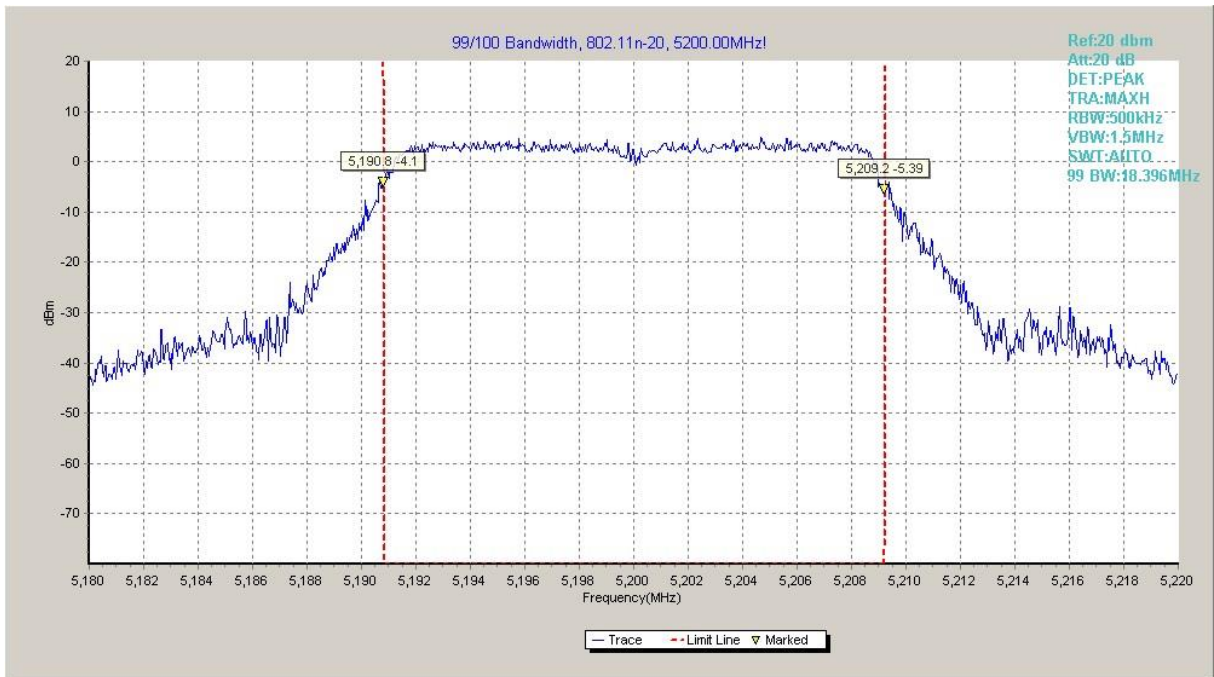


Fig. 137 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

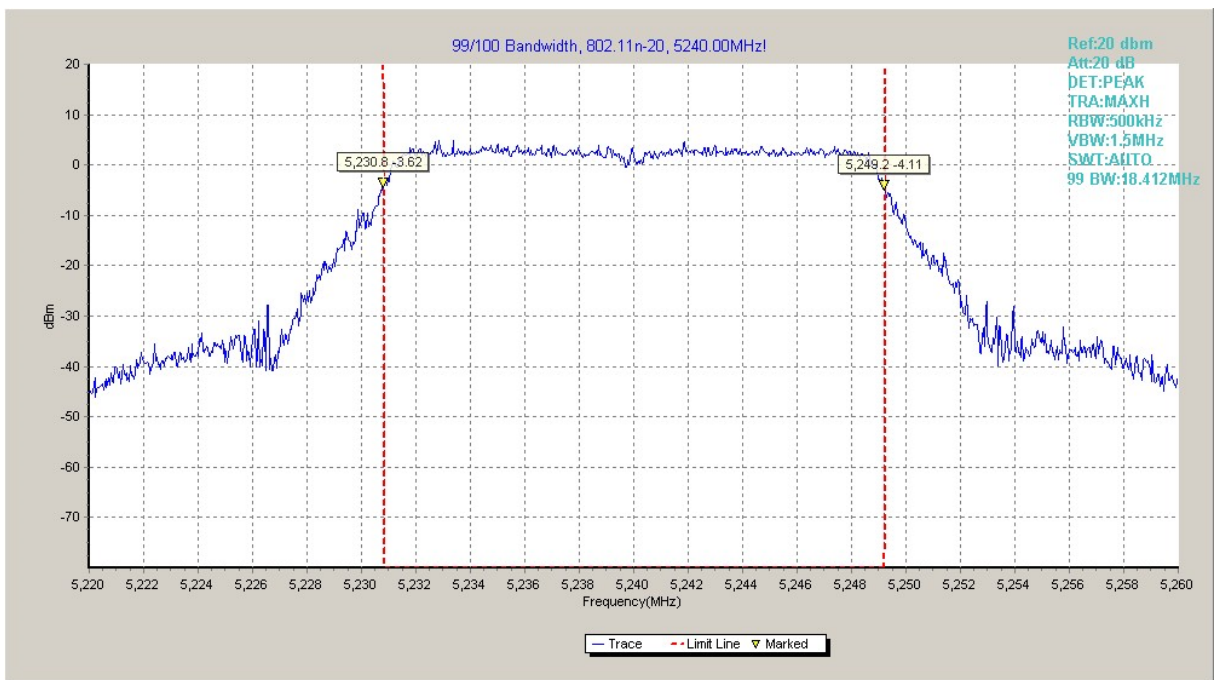


Fig. 138 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

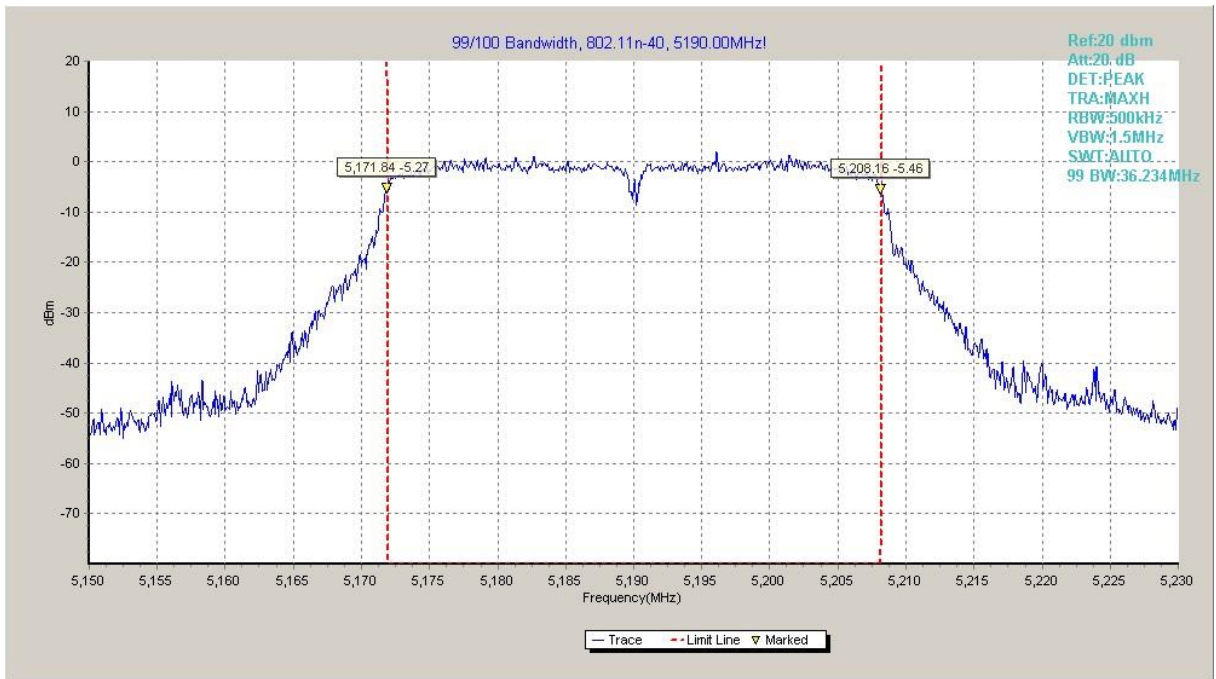


Fig. 139 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

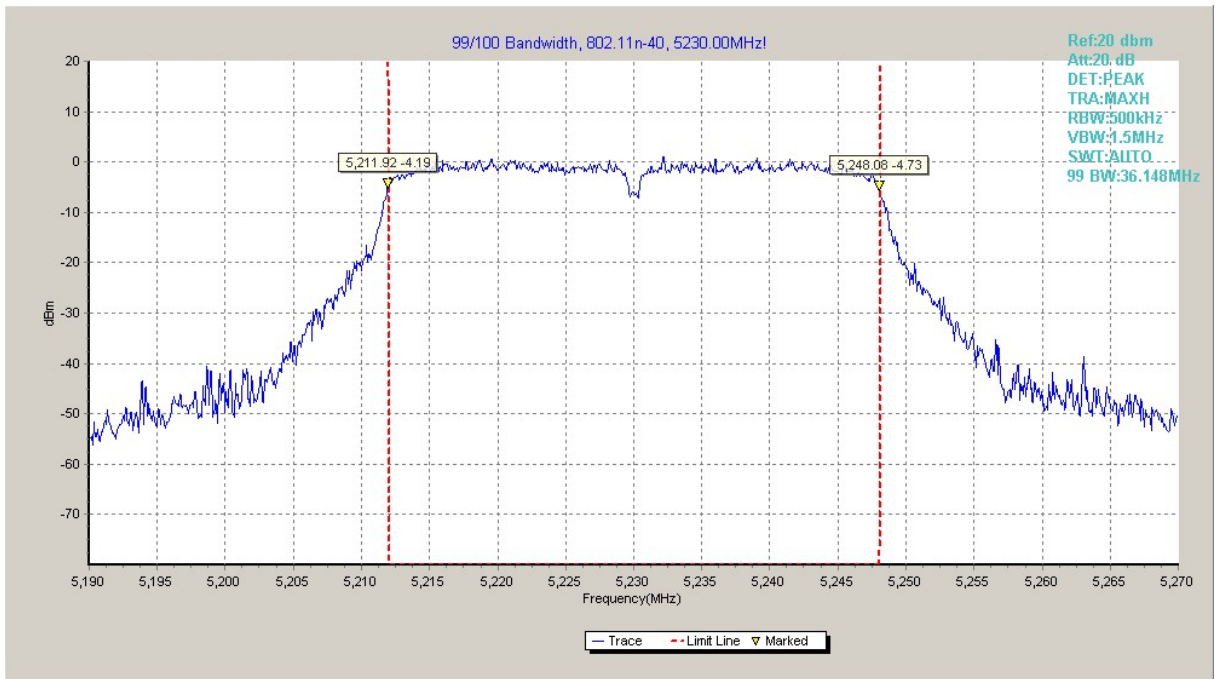


Fig. 140 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

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.

Measurement Result:

| Mode | Channel | Test Condition | | Result |
|---------|----------|----------------|------|--------|
| 802.11a | 5180 MHz | Tnom | Vnom | 0.00 |
| | | Tmax | Vnom | |
| | | Tmin | Vnom | |
| | | Vmax | Tnom | |
| | | Vmin | Tnom | |
| 802.11a | 5500 MHz | Tnom | Vnom | 9.77 |
| | | Tmax | Vnom | |
| | | Tmin | Vnom | |
| | | Vmax | Tnom | |
| | | Vmin | Tnom | |
| 802.11a | 5700 MHz | Tnom | Vnom | 4.88 |
| | | Tmax | Vnom | |
| | | Tmin | Vnom | |
| | | Vmax | Tnom | |
| | | Vmin | Tnom | |

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).

*** END OF REPORT BODY ***