FCC Regulations and Backoff

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Peak Power in FCC Regulations

15.401 Scope.
This subpart sets out the regulations for unlicensed National Information Infrastructure (U-NII) devices operating in the 5.15 - 5.35 GHz and 5.725 - 5.825 GHz bands.

15.403 Definitions.
(a) U-NII devices [Unlicensed]. Intentional radiators operating in the frequency bands 5.15 - 5.35 GHz and 5.725 - 5.825 GHz that provide a wide array of wideband, high data rate, digital, mobile and fixed communications for individuals, businesses, and institutions.
(b) Peak transmit power. The peak power output as measured over an interval of time equal to the frame rate or transmission burst of the device under all conditions of modulation. Usually this parameter is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used.
Backoff: 5 dB

51.7 dB > 50.3 dB

OBO = 5 dB
16 QAM

5150 MHz frequency [MHz]
Backoff for Restricted Edge

![Graph showing frequency in MHz on the x-axis and power in dB on the y-axis. The graph displays a peak at 57.3 dB and a specified OBO of 8.2 dB. The frequency range is from -30 MHz to 30 MHz, with 150 MHz indicated.]
Backoff with Diversity

- OBO=5dB
- 16 QAM
- Diversity is employed

Power [dB]

frequency [MHz]

-80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30

24mW

150mW

60 dB > 57.3 d
Backoff for Restricted Regulation
(Psat=250 mW)