

§ 90.1215

47 CFR Ch. I (10–1–20 Edition)

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4947.5	1 to 7*	4940	4955
4952.5	6 to 8	4945	4960
4957.5	7 to 9	4950	4965
4962.5	8 to 10	4955	4970
4967.5	9 to 11	4960	4975
4972.5	10 to 12	4965	4980
4977.5	11 to 13	4970	4985
4982.5	12 to 18*	4975	4990

* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

(4) 20 MHz bandwidth aggregation:

Center frequency (MHz)	Channel Nos. employed	Lower frequency (MHz)	Upper frequency (MHz)
4950	1 to 8*	4940	4960
4955	6 to 9	4945	4965
4960	7 to 10	4950	4970
4965	8 to 11	4955	4975
4970	9 to 12	4960	4980
4975	10 to 13	4965	4985
4980	11 to 18*	4970	4990

* Licensees should avoid using these channels in aggregations unless all other channels are blocked.

[77 FR 45506, Aug. 1, 2012, as amended at 78 FR 36684, June 19, 2013]

§ 90.1215 Power limits.

The transmitting power of stations operating in the 4940–4990 MHz band must not exceed the maximum limits in this section.

(a)(1) The maximum conducted output power should not exceed:

Channel bandwidth (MHz)	Low power maximum conducted output power (dBm)	High power maximum conducted output power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

(2) High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in

decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(b) Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

(c) The maximum conducted output power is measured as a conducted emission over any interval of continuous transmission using instrumentation

calibrated in terms of an RMS-equivalent voltage. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true maximum conducted output power measurement conforming to the definitions in this paragraph for the emission in question.

(d) The peak power spectral density is measured as 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. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total power over the measurement bandwidth. If the resolution bandwidth is approximately equal to the measurement bandwidth, and much less than the emission bandwidth of the equipment under test, the measured results shall be corrected to account for any difference between the resolution bandwidth of the test instrument and its actual noise bandwidth.

(e) The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

[70 FR 28467, May 18, 2005, as amended at 74 FR 23803, May 21, 2009; 74 FR 27455, June 10, 2009]

Subpart Z—Wireless Broadband Services in the 3650–3700 MHz Band

SOURCE: 70 FR 24726, May 11, 2005, unless otherwise noted.

§ 90.1301 Scope.

This subpart sets out the regulations governing wireless operations in the 3650–3700 MHz band. It includes licensing requirements, and specific operational and technical standards for wireless operations in this band. The rules in this subpart are to be read in conjunction with the applicable requirements contained elsewhere in the Commission's rules; however, in case of conflict, the provisions of this subpart shall govern with respect to licensing and operation in this band.

§ 90.1303 Eligibility.

Any entity, other than those precluded by section 310 of the Communications Act of 1934, as amended, 47 U.S.C. 310, is eligible to hold a license under this part.

§ 90.1305 Permissible operations.

Use of the 3650–3700 MHz band must be consistent with the allocations for this band as set forth in part 2 of the Commission's Rules. All stations operating in this band must employ a contention-based protocol (as defined in § 90.7).

§ 90.1307 Licensing.

(a) The 3650–3700 MHz band is licensed on the basis of non-exclusive nationwide licenses. Non-exclusive nationwide licenses will serve as a prerequisite for registering individual fixed and base stations. A licensee cannot operate a fixed or base station before registering it under its license and licensees must delete registrations for unused fixed and base stations.

(b) The Commission shall issue no new licenses or license renewals under this section after April 17, 2015, except as specified in paragraph (c) of this section.

(c) If a license issued under this Section expires between April 17, 2015 and April 17, 2020, the licensee may request a one-time renewal and the Commission may renew that license for a term ending no later than April 17, 2020.

(d) Licenses that were issued after January 8, 2013 will be afforded protection from harmful interference from Citizens Broadband Radio Service users