§ 24.130

Channel 19: 930.50–930.55 and 901.30–901.35 MHz; and
Channel 20: 930.75–930.80 and 901.90–901.95 MHz.

(2) Three 50 kHz channels paired with 12.5 kHz channels:
Channel 6: 930.40–930.45 and 901.7500–901.7625 MHz;
Channel 7: 930.45–930.50 and 901.7625–901.7750 MHz; and
Channel 8: 940.75–940.80 and 901.7750–901.7875 MHz;

(3) Two 50 kHz unpaired channels:
Channel 9: RESERVED;
Channel 10: 940.80–940.85 MHz; and
Channel 11: 940.85–940.90 MHz.

(4) One 100 kHz unpaired channel:
Channel 18: 940.65–940.75 MHz.

(5) Two 150 kHz channels paired with 50 kHz channels:
Channel 21: 930.00–930.15 and 901.50–901.55 MHz; and
Channel 22: 930.15–930.30 and 901.60–901.65 MHz.

(6) Three 100 kHz channels paired with 50 kHz channels:
Channel 23: 940.55–940.65 and 901.45–901.50 MHz;
Channel 24: 940.30–940.40 and 901.55–901.60 MHz; and
Channel 25: 940.45–940.55 and 901.85–901.90 MHz.

(b) Five frequencies are available for assignment on a regional basis as follows:
(1) One 50 kHz channel paired with 50 kHz channel:
Channel 12: 940.25–940.30 and 901.25–901.30 MHz.
Channel 13: RESERVED.

(2) Four 50 kHz channels paired with 12.5 kHz channels:
Channel 14: 930.55–930.60 and 901.7875–901.8000 MHz;
Channel 15: 930.60–930.65 and 901.8000–901.8125 MHz;
Channel 16: 930.65–930.70 and 901.8125–901.8250 MHz; and
Channel 17: 930.70–930.75 and 901.8250–901.8375 MHz.

(c) Seven frequencies are available for assignment on an MTA basis as follows:
(1) Three 50 kHz unpaired channels:
Channel 26: 901.35–901.40 MHz;
(2) For heights between the values listed in the table, linear interpolation shall be used to determine maximum e.r.p.

(e) MTA and regional base stations located less than 80 kilometers (50 miles) from the licensed service area border must limit their effective radiated power in accordance with the following formula:

\[
PW = 0.0175 \times d \text{km} \times x \text{hm} \times 3.1997
\]

PW is effective radiated power in watts

d is distance in kilometers

hm is antenna HAAT in meters; see §24.53 for HAAT calculation method

(f) All power levels specified in this section are expressed in terms of the maximum power, averaged over a 100 millisecond interval, when measured with instrumentation calibrated in terms of an rms-equivalent voltage with a resolution bandwidth equal to or greater than the authorized bandwidth.

(g) Additionally, PCS stations will be subject to any power limits imposed by international agreements.

§ 24.133 Emission limits.

(a) The power of any emission shall be attenuated below the transmitter power (P), as measured in accordance with §24.132(f), in accordance with the following schedule:

(i) For transmitters authorized a bandwidth greater than 10 kHz:

\[
PW = 0.0175 \times d \text{km} \times x \text{hm} \times 3.1997
\]

(ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d) in kHz) of up to and including 40 kHz: at least 116 Log_{10} ((f_d+10)/6.1) decibels or 50 plus 10 Log_{10} (P) decibels or 70 decibels, whichever is the lesser attenuation;

(ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d) in kHz) of more than 40 kHz: at least 43+10 Log_{10} (P) decibels or 80 decibels, whichever is the lesser attenuation.

(2) For transmitters authorized a bandwidth of 10 kHz:

(i) For transmitters authorized a bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d) in kHz) of up to and including 20 kHz: at least 116 Log_{10} ((f_d+5)/3.05) decibels or 50+10 Log_{10} (P) decibels or 70 decibels, whichever is the lesser attenuation;

(ii) On any frequency outside the authorized bandwidth and removed from the edge of the authorized bandwidth by a displacement frequency (f_d) in kHz) of more than 20 kHz: at least 43+10 Log_{10} (P) decibels or 80 decibels, whichever is the lesser attenuation.

(b) The measurements of emission power can be expressed in peak or average values provided they are expressed in the same parameters as the transmitter power.

(c) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

(d) The following minimum spectrum analyzer resolution bandwidth settings will be used: 300 Hz when showing compliance with paragraphs (a)(1)(i) and (a)(2)(i) of this section; and 30 kHz when showing compliance with paragraphs (a)(1)(ii) and (a)(2)(ii) of this section.

§ 24.134 Co-channel separation criteria.

The minimum co-channel separation distance between base stations in different service areas is 113 kilometers.