

Federal Communications Commission

§ 30.406

out the communications desired. Application of this principle includes, but is not to be limited to, requiring a licensee who replaces one or more of its antennas with larger antennas to reduce its antenna input power by an amount appropriate to compensate for the increased primary lobe gain of the replacement antenna(s). In no event shall the average equivalent isotropically radiated power (EIRP), as referenced to an isotropic radiator, exceed the following:

| MAXIMUM ALLOWABLE EIRP | |
|----------------------------------|-------------|
| Frequency band (MHz) | Fixed (dBW) |
| 27,500–28,350 ¹ | + 55 |
| 38,600–40,000 | + 55 |

¹For Point-to-multipoint user stations authorized in these bands, the EIRP shall not exceed 55 dBw or 42 dBw/MHz.

§ 30.406 Directional antennas.

(a) Unless otherwise authorized upon specific request by the applicant, each station authorized under the rules of this subpart must employ a directional antenna adjusted with the center of the major lobe of radiation in the horizontal plane directed toward the re-

ceiving station with which it communicates: *provided, however*, where a station communicates with more than one point, a multi- or omni-directional antenna may be authorized if necessary.

(b) Fixed stations (other than temporary fixed stations) must employ transmitting and receiving antennas (excluding second receiving antennas for operations such as space diversity) meeting the appropriate performance Standard A indicated in the table to this section, except that in areas not subject to frequency congestion, antennas meeting performance Standard B may be used. For frequencies with a Standard B1 and a Standard B2, in order to comply with Standard B an antenna must fully meet either Standard B1 or Standard B2. Licensees shall comply with the antenna standards table shown in this paragraph in the following manner:

- (1) With either the maximum beamwidth to 3 dB points requirement or with the minimum antenna gain requirement; and
- (2) With the minimum radiation suppression to angle requirement.

| Frequency (MHz) | Category | Maximum beamwidth to 3 dB points ¹ (included angle in degrees) | Minimum antenna gain (dbi) | Minimum radiation suppression to angle in degrees from centerline of main beam in decibels | | | | | | |
|-----------------------------------|----------|---------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------|------------|------------|------------|-------------|--------------|--------------|
| | | | | 5° to 10° | 10° to 15° | 15° to 20° | 20° to 30° | 30° to 100° | 100° to 140° | 140° to 180° |
| 38,600 to 40,000 ² ... | A | n/a | 38 | 25 | 29 | 33 | 36 | 42 | 55 | 55 |
| | B | n/a | 38 | 20 | 24 | 28 | 32 | 35 | 36 | 36 |

¹ If a licensee chooses to show compliance using maximum beamwidth to 3 dB points, the beamwidth limit shall apply in both the azimuth and the elevation planes.

² Stations authorized to operate in the 38,600–40,000 MHz band may use antennas other than those meeting the Category A standard. However, the Commission may require the use of higher performance antennas where interference problems can be resolved by the use of such antennas.