

§ 15.253 Operation within the bands 46.7–46.9 GHz and 76.0–77.0 GHz.

(a) Operation within the bands 46.7–46.9 GHz and 76.0–77.0 GHz is restricted to vehicle-mounted field disturbance sensors used as vehicle radar systems. The transmission of additional information, such as data, is permitted provided the primary mode of operation is as a vehicle-mounted field disturbance sensor. Operation under the provisions of this section is not permitted on aircraft or satellites.

(b) The radiated emission limits within the bands 46.7–46.9 GHz and 76.0–77.0 GHz are as follows:

(1) If the vehicle is not in motion, the power density of any emission within the bands specified in this section shall not exceed 200 nW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(2) For forward-looking vehicle-mounted field disturbance sensors, if the vehicle is in motion the power density of any emission within the bands specified in this section shall not exceed 60 μW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(3) For side-looking or rear-looking vehicle-mounted field disturbance sensors, if the vehicle is in motion the power density of any emission within the bands specified in this section shall not exceed 30 μW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(c) The power density of any emissions outside the operating band shall consist solely of spurious emissions and shall not exceed the following:

(1) Radiated emissions below 40 GHz shall not exceed the general limits in § 15.209.

(2) Radiated emissions outside the operating band and between 40 GHz and 200 GHz shall not exceed the following:

(i) For vehicle-mounted field disturbance sensors operating in the band 46.7–46.9 GHz: 2 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(ii) For forward-looking vehicle-mounted field disturbance sensors operating in the band 76–77 GHz: 600 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(iii) For side-looking or rear-looking vehicle-mounted field disturbance sensors operating in the band 76–77 GHz: 300 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(3) For radiated emissions above 200 GHz from field disturbance sensors operating in the 76–77 GHz band: the power density of any emission shall not exceed 1000 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(4) For field disturbance sensors operating in the 76–77 GHz band, the spectrum shall be investigated up to 231 GHz.

(d) The provisions in § 15.35 limiting peak emissions apply.

(e) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range –20 to +50 degrees celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

(f) Regardless of the power density levels permitted under this section, devices operating under the provisions of this section are subject to the radio-frequency radiation exposure requirements specified in §§ 1.1307(b), 2.1091 and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[61 FR 14503, Apr. 2, 1996, as amended at 61 FR 41018, Aug. 7, 1996; 63 FR 42279, Aug. 7, 1998]

§ 15.255 Operation within the band 57–64 GHz.

(a) Operation under the provisions of this section is not permitted for the following products:

(1) Equipment used on aircraft or satellites.

(2) Field disturbance sensors, including vehicle radar systems, unless the field disturbance sensors are employed