rate of the analyzer should equal the number of sampling bins times one millisecond. The provision in §15.35(c) that allows emissions to be averaged over a 100 millisecond period does not apply to devices operating under this section. The video bandwidth of the measurement instrument shall not be less than the resolution bandwidth and trace averaging shall not be employed. The RMS average emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(2) The peak emission measurement is to be repeated over multiple sweeps with the analyzer set for maximum hold until the amplitude stabilizes.

(3) For transmitters that employ frequency hopping, stepped frequency or similar modulation types, the peak emission level measurement, the measurement of the RMS average emission levels, the measurement to determine the center frequency, and the measurement to determine the frequency at which the highest level emission occurs shall be made with the frequency hop or step function active. Gated signals may be measured with the gating active. The provisions of §15.31(c) continue to apply to transmitters that employ swept frequency modulation.

(4) The −10 dB bandwidth is based on measurement using a peak detector, a 1 MHz resolution bandwidth, and a video bandwidth greater than or equal to the resolution bandwidth.

(5) Alternative measurement procedures may be considered by the Commission.

(d) Wideband vehicular radar systems operating in the 23.12–29.0 GHz band are subject to the transition provisions of §15.37(l) through (n).

[70 FR 6775, Feb. 9, 2005, as amended at 82 FR 43870, Sept. 20, 2017]

§ 15.253 [Reserved]

§ 15.255 Operation within the band 57–71 GHz.

(a) *General*. Operation under the provisions of this section is not permitted for equipment used on satellites.

(b) *Operation on aircraft*. Operation on aircraft is permitted under the following conditions:

(1) When the aircraft is on the ground.

(2) While airborne, only in closed exclusive on-board communication networks within the aircraft, with the following exceptions:

(i) Equipment shall not be used in wireless avionics intra-communication (WAIC) applications where external structural sensors or external cameras are mounted on the outside of the aircraft structure.

(ii) Except as permitted in paragraph (b)(3) of this section, equipment shall not be used on aircraft where there is little attenuation of RF signals by the body/fuselage of the aircraft.

(iii) Field disturbance sensor/radar devices may only operate in the frequency band 59.3–71.0 GHz while installed in passengers' personal portable electronic equipment (*e.g.*, smartphones, tablets) and shall comply with paragraph (b)(2)(i) of this section, and relevant requirements of paragraphs (c)(2) through (c)(4) of this section.

(3) Field disturbance sensors/radar devices deployed on unmanned aircraft may operate within the frequency band 60–64 GHz, provided that the transmitter not exceed 20 dBm peak EIRP. The sum of continuous transmitter off-times of at least two milliseconds shall equal at least 16.5 milliseconds within any contiguous interval of 33 milliseconds. Operation shall be limited to a maximum of 121.92 meters (400 feet) above ground level.

(c) *Radiated power limits*. Within the 57–71 GHz band, emission levels shall not exceed the following equivalent isotropically radiated power (EIRP):

(1) Devices other than field disturbance sensors shall comply with one of the following power limits, as measured during the transmit interval:

(i) The average power of any emission shall not exceed 40 dBm and the peak power of any emission shall not exceed 43 dBm; or

(ii) For fixed point-to-point transmitters located outdoors, the average power of any emission shall not exceed 82 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi. The peak power of any emission shall not exceed 85 dBm, and shall be reduced by 2 dB for every dB