Maximum Permissible Exposure

FCC, Part 90 Subpart C §90.1217

Maximum Permissible Exposure Limits

§90.1217 Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency levels in excess of the Commission's guidelines. See §1.1307 (b)(1) of this chapter.

Limit = 1mW / cm2 from 1.310 Table 1

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33dB

Calculations for Maximum Permissible Exposure Levels

The EUT has a single transmitter. The peak power in the table below is calculated by assuming a worst case scenario for the maximum gain antenna and output power. The calculated separation distance is for worst case highest power level.

Power Density = Pd (mW/cm2) = EIRP/(4πd2)
EIRP = P * G
P = Peak output power (mW)
G = Antenna numeric gain (numeric)
d = Separation distance (cm)
Numeric Gain = 10 ^ (G (dBi)/10)

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm2

Freq. Band (MHz)	Antenna Gain (dBi)	Peak Output Power (dBm)	Antenna Gain (numeric)	EIRP (mW)	Distance @ 1mW/cm2 Limit(cm)	Minimum Separation Distance (cm)
900	12	30.81	15.848932	19098.53	38.99	38.994664