

Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.247section (i)

Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d (\text{mW/cm}^2) = \text{EIRP}/(4\pi d^2)$$

$$\text{EIRP} = P * G * 2$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10^{(G (\text{dBi})/10)}$$

The Aruba AP-175P / MSR2K23N0-XX has two transmitters. The peak power used in the table below is the highest conducted level used to meet the EIRP requirements.

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)	Antenna Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm ² Limit(cm)	Minimum Separation Distance (cm)
2400 – 2500	15.0	31.62	+20.7	117.5	17.2	20.00
5725 - 5850	13.25	21.10	+22.1	162.2	16.5	20.00

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

Specification

Maximum Permissible Exposure Limits

FCC §1.1310 Limit = 1mW / cm² from 1.310 Table 1

RSS-Gen §5.5 Before equipment certification is granted, the application requirements of RSS-102 shall be met.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	±1.33 dB
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