

Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.407(f)
Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels

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

$$\text{EIRP} = P * G * 3$$

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-104 has two transmitters. The peak power in the table below is calculated by assuming a worst case scenario where the two transmitters are operating simultaneously in the same band. The Peak Power in mW is calculated by taking the maximum conducted power measured.

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)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density @ 20cm (mW/cm ²)	Minimum Separation Distance (cm)
5150 - 5250	7.5	5.62	+14.81	30.27	0.034	20*

***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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