

WiBear-I MPE calculation.

Model: AN00K59744

According to FCC §15.247(b)(4) and §1.1307(b)(1), systems operation under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

MPE Prediction

Equation for calculation

$$S = PG/4\pi R^2$$

Where: S – Power density

P – Power input to antenna

G – Antenna gain relative to isotropic radiator

R – Distance to antenna

Maximum peak output power at antenna terminal at 2.5GHz band: +19.7dBm (93mW)

Maximum peak output power at antenna terminal at 5GHz band: +15.3dBm (34mW)

Antenna gain at 2.5GHz band: 0.0dBi (numeric 1.00)

Antenna gain at 5GHz band: 3.0dBi (numeric 2.00)

Prediction distance: 20cm

MPE limit for General Population/Uncontrolled Exposure: 1mW/cm²

Intermediate results:

MPE safe distance (where is power density less than 1.0mW/cm²) at 2.5GHz: 2.72cm

MPE safe distance (where is power density less than 1.0mW/cm²) at 5GHz: 2.33cm

Power density at 20cm distance at 2.5GHz: 0.020mW/cm²

Power density at 20cm distance at 5GHz: 0.014mW/cm²

Final results:

MPE safe distance: **2.72cm**

Power density at 20cm distance: **0.02mW/cm²**