

Maximum Permissible Exposure (MPE) Compliance

BDA-PCS/C-0.5/0.5W-70-A
FCC ID Q8KPCSHW70A

At the maximum operating frequency of 1990MHz (Downlink) and 1910MHz (Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 1.0mW/cm² and Uplink = 1.0mW/cm².

The analysis is provided below.

Power Density (S) = EIRP/(4πR²), Therefore, R ≥ √(EIRP/S) × 4π

From the above calculations, with:

Downlink Maximum Antenna Gain = 2dBi
Downlink Maximum output power = 18dBm

Uplink Maximum Antenna Gain = 11dBi
Uplink Maximum output power = 18dBm

S = 1.0 mW/cm²
EIRP = 20dBm or .10W (worst case)

S = 1.0 mW/cm²
EIRP = 29dBm or .794W (worst case)

Therefore,
R = 2.82cm (Downlink)

R = 7.95cm (Uplink)

These are the minimum safe distances for the general population for each antenna.