

Maximum Permissible Exposure (MPE) Compliance

BDA-CELLB-2/2W-80-OCA
FCC ID Q8KCELLB2W80CA

At the maximum operating frequency of 894MHz (Downlink) and 849MHz (Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 0.6mW/cm² (f/1500mW/cm²) and Uplink = 0.57mW/cm² (f/1500mW/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 = 26dBm

Uplink Maximum Antenna Gain = 11dBi
Uplink Maximum output power = 26dBm

S = 0.6 mW/cm²
EIRP = 28dBm or 0.631 W (worst case)

S = 0.57 mW/cm²
EIRP = 37dBm or 5.01 W (worst case)

Therefore,

R = 9.15cm (Downlink)

R = 25.75cm (Uplink)

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