

Maximum Permissible Exposure (MPE) Compliance

BDA-PS7-2/25W-90-AB
FCC ID Q8KPS725W90

At the maximum operating frequency of 773MHz (Downlink) and 805MHz Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 0.52mW/cm² (f/1500mW/cm²) and Uplink = 0.54mW/cm² (f/1500mW/cm²).

The analysis is provided below.

Power Density (S) = $EIRP / (4\pi R^2)$, Therefore, $R \geq \sqrt{EIRP / S \times 4\pi}$

From the above calculations, with:

Downlink Maximum Antenna Gain = 0dBi
Downlink Maximum output power = 37dBm

Uplink Maximum Antenna Gain = 10dBi
Uplink Maximum output power = 27dBm

S = 0.52 mW/cm²
EIRP = 37dBm or 5.0 W (worst case)

S = 0.54 mW/cm²
EIRP = 37dBm or 5.0 W (worst case)

Therefore,

R = 27.66cm (Downlink)

R = 27.15cm (Uplink)

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

The Manufacturer's rated output power of this equipment is for single carrier operation. For situations when multiple carrier signals are present, the rating would have to be reduced by 3.5 dB, especially where the output signal is re-radiated and can cause interference to adjacent band users. This power reduction is to be by means of input power or gain reduction and not by an attenuator at the output of the device.