Maximum Permissible Exposure (MPE) Compliance

BDA-PS8-0.1/25W-55-A
FCC ID Q8KPS825W60R

At the maximum operating frequency of 869MHz (Downlink) and 824MHz (Uplink) the MPE limit for the General Population/Uncontrolled Exposure is as follows: Downlink = 0.58mW/cm2 (f/1500mW/cm2) and Uplink = 0.55mW/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 = 1dBi
Downlink Maximum output power = 36dBm

S = 0.58 mW/cm2
EIRP = 37dBm or 5.0 W (worst case)

Therefore,
R= 26.19cm (Downlink)

Uplink Maximum Antenna Gain = 15dBi
Uplink Maximum output power = 5dBm

S = 0.55 mW/cm2
EIRP = 20dBm or 0.1 W (worst case)

R= 3.8cm (Uplink)

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