

## 1 FCC Rules and Regulations Part 1.1307, 1.1310, 2.1091, 2.1093: RF EXPOSURES

The manufacturer does not specify or sale any antenna with the radio identified in this report.  
**The manufacturer applies for the General Population/Uncontrolled Exposure environment.**

The maximum distance, from the antenna at which MPE is met or exceeded, is calculated from the equation relating field strength E in V/m, transmit power P in Watts, transmit antenna numeric gain G , and separation distance in meters:

$$E(V / m) = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power density: } P_d (mW / cm^2) = \frac{E^2}{3770}$$

The limit for general population/uncontrolled exposure applicable to Bystanders (at 806 MHz) = f(MHz)/1500  $mW / cm^2$  .

## 2 MPE Calculation

Antennae: Typical SMR antenna available on the market and commonly chosen by end-users for vehicle application.

Frequency<sup>A</sup> 806 MHz

Limit for General Population/Uncontrolled Environment (Bystanders): 0.537  $mW / cm^2$

### SEPARATION DISTANCE:

| Power <sup>B</sup>           | (dBd) Antenna Gain <sup>C</sup> |      |
|------------------------------|---------------------------------|------|
|                              | 12                              |      |
| (Watt)                       | (in)                            | (cm) |
| 85                           | 225                             | 571  |
| 42.5 (50%of 85) <sup>D</sup> | 159                             | 404  |

#### Notes:

<sup>A</sup> = Distances are calculated for the largest (worst-case) separation distance

<sup>B</sup> = Conducted Output Power delivered to the antenna

<sup>C</sup> = Gains are compared to an ideal 1/2-wave dipole (0 dBd = 2.15 dBi)

<sup>D</sup> = Duty Cycle Factor for typical P-T-T configuration.

Instructions will be placed in the user manual instructing installers and users to maintain the MPE distances during operation of the EUT.