

Radio Frequency Hazard Information

As per Section 1.1310 mobile transmitters are required to be operated in a manner that ensures that the public is not exposed to RF energy levels in accordance with OST/OET Bulletin Number 65.

In accordance with this section and also Section 2.1091, this device has been classified as a mobile device.

In accordance with Section 1.1310 the Maximum Permissible Exposure (MPE) limit for the General Population / Uncontrolled Exposure of 0.3 mW/cm² (f/1500 = 450 MHz/1500) has been applied.

This mobile transceiver will typically be used at emergency incidents requiring temporary extended range communications.

A minimum safe distance has been calculated using the above MPE , a transmit power of 4 watts and a typical antenna gain of 1 (0 dBi):

$$E(V/m) = (\sqrt{30 * P * G}) / D$$

$$\text{Power density, mW/m}^2 = E^2/3770$$

$$MPE = E^2/3770$$

$$MPE = ((\sqrt{30 * P * G}) / d)^2/3770$$

$$\begin{aligned} D &= (\sqrt{30 * P * G}) / (\sqrt{MPE * 3770}) \\ &= (\sqrt{30 * 4 * 1}) / (\sqrt{0.3 * 3770}) \\ &= 10.95 / 33.63 \end{aligned}$$

$$D = \underline{32.0 \text{ cm}}$$

Typically this mobile transceiver would operate in a push to talk mode and therefore a duty cycle of 50% could be expected.

$$\begin{aligned} D &= (\sqrt{30 * P * G * 0.5}) / (\sqrt{MPE * 3770}) \\ &= (\sqrt{30 * 4 * 1 * 0.5}) / (\sqrt{0.3 * 3770}) \\ &= 7.75 / 33.63 \end{aligned}$$

$$D = \underline{23.0 \text{ cm}}$$

In order to comply with the General Population / Uncontrolled Exposure limits this mobile will need to be installed with a minimum safe distance of 32 cm.

The equipment manual for this device will need to be noted accordingly.

Result: Complies