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 whereby a distance of 20 cm can normally be maintained between the user and the device.

In accordance with Section 1.1310 the Maximum Permissible Exposure (MPE) limit for the Occupational / Controlled Exposure of 2.687 (f/300 = 806 MHz/300) has been applied.

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

The MPE has been calculated from the equation relating field strength in V/m, transmit power in watts and transmit antenna gain when a separation distance of 20 cm (0.2 metres) is maintained with a transmit power of 3 watts and a typical antenna gain of 1:

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

Power density, $mW/m^2 = E^2/3770$

$MPE = E^2/3770$
$MPE = ((\sqrt{(30 * P * G)}) / d))^2/3770$
$MPE = ((\sqrt{(30 * 3 * 1.0)}) / 0.2))^2/3770$
$\underline{MPE = 0.597 \ mW/m^2}$

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

$MPE = E^2/3770$
$MPE = ((\sqrt{(30 * P * G * duty \ cycle)}) / d))^2/3770$
$MPE = ((\sqrt{(30 * 3 * 1.0 * 0.5)}) / 0.2))^2/3770$
$\underline{MPE = 0.298 \ mW/m^2}$

The MPE limit at this frequency is 2.687 mW/m^2

The above calculations therefore show that this device meets the MPE requirement for mobile devices when a 20 cm clearance is maintained.

Result: Complies