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 remote device that could possibly be used to transmit data from a mobile vehicle.

A minimum safe distance between the user / general public and the device has been calculated below.

In accordance with Section 1.1310 the Maximum Permissible Exposure (MPE) power density limit for the General Population / Uncontrolled Exposure of 0.3 mW/m^2 (f/1500 = 450 MHz/1500) has been applied.

The minimum distance from the antenna at which the MPE is met is calculated from the equation relating field strength in V/m, transmit power in watts, transmit antenna gain and separation distance in metres:

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

Power density = 0.3 mW/m^2 = E^2/3770

$$E = \sqrt{0.3 * 3770}$$
$$\underline{E = 33.6 \text{ V/m}}$$

The maximum transmitter power = 5 watts.

In a typically mobile installation this transceiver would be used with a whip type of antenna with a gain of 1.5.

$$d = \sqrt{(30 * P * G)} / E$$
$$= \sqrt{(30 * 5 * 1.5)} / 33.6$$
$$= \underline{0.446 \text{ metres or } 44.6 \text{ cm}}$$

The above calculations therefore show that this device meets the MPE requirement for mobile devices providing a safe distance of at least 45 cm is provided.

A warning to this affect will need to be inserted in the equipment manual.

Result: Complies

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