Section 15.247 (i) – Radio Frequency Hazard Information

As per Section 1.1310 and Section 2.1091 certification of this transmitter is sought using the Uncontrolled / General Public Exposure limits as detailed in OST/OET Bulletin Number 65.

Minimum safe distances have been calculated below.

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

General Population / Uncontrolled exposure limit will be 1.0 mW/cm^2 as the device operates in the band 2400 – 2483.5 MHz.

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, transmitter duty cycle and separation distance in metres:

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

$E = 1.0$ mW/cm$^2 = E^2/3770$
$E = \sqrt{1.0*3770}$
$\underline{E = 61.4 \text{ V/m}}$

The rated maximum transmitter power = 1 mW (0 dBm).

The antenna for this device is integral.

The safe distance has been calculated as follows.

$d = \sqrt{(30 * P * G*DC)} / E$
$d = \sqrt{(30 * 0.001)} / 61.4$
$d = \underline{0.0003 \text{ metres or 0.3 cm}}$

Result: Complies. This device will comply with the 20 cm safe distance requirement.

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