Section 15.247 (b) (5) – Radio Frequency Hazard Information

As per Section 15.247 (b) (4) spread spectrum transmitters operating in the 2400 – 2483.5 MHz band are required to be operated in a manner that ensures that the public is not exposed to RF energy levels in accordance with CFR 47, Section 1.1307(b)(1).

In accordance with this section, and also Section 2.1091, this device has been defined 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) limits for the General Population / Uncontrolled Exposure of 1.0 mW/cm^2 have been applied.

The maximum distance from the antenna at which the MPE is met or exceeded 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, $mW/cm^2 = E^2/3770$

E for MPE: $1 = E^2/3770$

$E = \sqrt{}1*3770$

$E = \underline{61.4\ V/m}$

The worst case set up will be in point to point mode where use is made of an antenna with a gain of 12 dBi (G=16) and a transmitter output power of +27 dBm (P =0.5 watts) and no cable losses.

Therefore:

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

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

d = $\sqrt{}$ (30*0.5*16) / 61.4

d = <u>0.252 m or 25.2 cm</u>

This device will comply providing a safe distance of at least 25.2 cm is specified.

<u>Result</u>: Complies