RF EXPOSURE INFORMATION

Transmitters operating in the 450 - 470 MHz band is 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).

The MPE calculation shown below is for the antenna with a minimum separation distance of 20cm.

In accordance with Section 1.1310, the Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure of 1.0 has been applied, i.e 0.3mW/cm^2.

Friis transmission formula: $Pd = (P*G) / (4*\pi*r^2)$

where: Pd = power density (mW/cm^2)
P = power input to the antenna (mW)
G = antenna gain (numeric)
r = distance to the center of radiation of the antenna (cm)

Prediction frequency = 450 – 470 MHz
Maximum peak output power with unity antenna gain = 19.03 dBm = 80.0 mW
Prediction distance = 20 cm
The power density calculated = 0.016 mW/cm^2

Results: Calculations show that the device with described antennas complied with Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure with a separation distance of 20cm.