

EMC Technologies Report Number: M081219_Cert_External_Router

Attachment 1

RF EXPOSURE INFORMATION

RADIO FREQUENCY EXPOSURE (HAZARD) INFORMATION

Testing was performed in accordance with the requirements of FCC Part 15.247(i)

Spread spectrum transmitters operating in the 2400 - 2483.5 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 device with separation distance of greater than 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 1mW/cm².

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

where: Pd = power density (mW/cm²)

P = power input to the antenna (mW)

G = antenna gain (numeric)

r = distance to the center of radiation of the antenna (cm)

Maximum peak output power at antenna terminal = 14.2 dBm = 26.3 mW

Antenna gain = 3 dBi = 2.0 numeric

Prediction distance = 20 cm

Prediction frequency = 2480 MHz

MPE limit for uncontrolled exposure at prediction frequency = 1 mW/cm²

The power density calculated = 0.011 mW/cm²

Calculations show that the radio modules with described antennas complied with Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure.