

Attachment 1: RF EXPOSURE INFORMATION



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RADIO FREQUENCY EXPOSURE (HAZARD) INFORMATION

Testing was performed in accordance with the requirements of FCC Part 15.247(b)(5)

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 the WLAN device for a 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: $P_d = (P \cdot G) / (4 \cdot \pi \cdot r^2)$

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)

The result was extracted from section 5.0 of EMC test report: M050241_Cert_WMIR-103G

Maximum peak output power = 19.8 dBm = 95.5 mW

Antenna (SMA Dipole) gain (typical) = 1.46 dBi = 1.4 numeric

Prediction distance = 20 cm

Prediction frequency = 2412 MHz

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

The power density calculated = 0.027 mW/cm²

Results: Calculations show that the Radio devices with described antennas complied with Maximum Permissible Exposure (MPE) limit for the General Population/Uncontrolled Exposure

