Maximum Permissible Exposure Statement

For the

Microchip Technology Inc.

IEEE 802.15.4 RF Transceiver Module with PA/LNA

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Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

S = PG/4πR2

Where,

S = power density (mW/cm2)
P = output power at the antenna terminal (mW)
G = gain of transmit antenna (numeric)
R = distance from transmitting antenna (cm)

Maximum peak output power at antenna input terminal = 20.6 (dBm)
Maximum peak output power at antenna input terminal = 114.81 (mW)
Antenna gain (typical) = 5 (dBi)
Maximum antenna gain = 3.16 (numeric)
Prediction distance = 200 (cm)
Prediction frequency = 2405 (MHz)
MPE limit for uncontrolled exposure at prediction frequency = 1.0 (mW/cm^2)
Power density at prediction frequency = 0.07217 (mW/cm^2)

To solve for the minimum mounting distance required;

R = √ (PG/4πS)

R = √ (114.81 x 3.16 / 4π x 0.07217) = 20 cm (Based on continuous transmission)

END OF TEST REPORT