RF Exposure / Safety

Calculation of Maximum Permissible Exposure (MPE)
based on Section 1.1307(b) Requirements

a) FCC limit is: 1mW/cm^2

b) The Wimax CPE can be configured in one of three different setups:
Setup 1: CPE with 10dBi internal antenna

c) The power density produced by the EUT is:

$$S_{peak} = \frac{P_t \cdot G_t}{4\pi R^2}$$

$$S_{average} = \frac{P_t \cdot G_t \cdot dc}{4\pi R^2 \cdot 100}$$

P_t – Transmitted power 251mW (rms peak) (24dBm)
G_t – Antenna gain dependant on setup
R – Distance from transmitter
Dc – duty cycle

d) The power density is:

	Setup 1
P_t - Power output (rms peak) 24dBm	24dBm 251mW
G_t – Antenna gain	10dBi 10
Maximum duty cycle	100%
R – Distance from antenna (cm)	20
S_{peak} – peak power density (mW/cm^2)	0.50

e) S_{peak} < 1mW/cm^2