



### Prediction of MPE limit at a given distance

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

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density  
P = power input to the antenna  
G = power gain of the antenna in the direction of interest relative to isotropic radiator  
R = distance to the center of radiation of the antenna

WIFI 5250-5350 MHz	
PWR in dBm	Maximum peak output power at antenna input terminal: 20.2 dBm
	Maximum peak output power at antenna input terminal: 104.5 mW
Ant. gain in dBi	Antenna gain(maximum): 2.5 dBi
	Maximum antenna gain: 1.8 numeric
Use the duty cycle from test report or 100%	Time Averaging: 100 %
Separation distance from antenna to user in cm.	Prediction distance: 20 cm
Freq. in MHz	Prediction frequency: 5270 MHz
	FCC MPE limit for uncontrolled exposure at prediction frequency: 1.00 mW/cm <sup>2</sup>
	IC MPE limit for uncontrolled exposure at prediction frequency: 9.15 W/m <sup>2</sup>
	Power density at prediction frequency: 0.04 mW/cm <sup>2</sup>
	This equates to: 0.37 W/m <sup>2</sup>