

## 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

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:	<mark>100</mark> %
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:	$0.37 \text{ W/m}^2$