

**IMK-HARDSAP****2.4 GHz worst case MPE**

limit 1 mW/cm<sup>2</sup> uncontrolled @ 2.4 GHz FCC/NCRP limit  
 use different numbers for controlled environment or other band

**input**

Output power measured in dBm	16
measurement cable loss in dB	0
duty cycle	1
Antenna gain in dBi	2

**intermediate calculations**

Output power in dBm	16
Output power in mW	40
numeric antenna gain	1.58
EIRP in mW	63

$$\text{EIRP} = \text{Output power (mW)} \times \text{numeric antenna gain}$$

**outputs**

MPE distance in cm	2.2
MPE distance in inches	0.9
wavelength in inches	4.9

the distance in cm at which far field MPE = limit

the distance in inches at which far field MPE = limit

calculated MPE distance exceeds actual MPE distance significantly at distances less than one wavelength