

1.1310 & 2.1091 / RSS-102

Maximum Permissible Exposure (MPE)

Determine the maximum power density for the general / uncontrolled population minimum separation distance of 20 cm.

FCC Limit: $f > 1500 \text{ MHz} = 1\text{mW/cm}^2$; IC Limit: $f=1500 \text{ to } 15000 \text{ MHz} = 10\text{W/m}^2$

The power density is calculated as:

$$P_d = \frac{P_t \times G}{4 \times \pi \times r^2}$$

P_d = power density in milliwatts/cm²

P_t = transmit power in milliwatts

G = numeric antenna gain

r = distance between body and transmitter in centimeters.

Other Technical Information:

Antenna Type: Omni

Antenna Gain: 0 dBi

Transmitter Power (Conducted): 60mW

Frequency: 2405 MHz

results: $P_D = (60 \times 1) / (4 \times \pi \times 20\text{cm}^2) = 0.01194\text{mW/cm}^2 = 0.1194\text{W/m}^2 @ 20 \text{ cm}$