32.22

Datos

$\lambda = 35.4 \cdot 10^{-2}\ m$

$E_{MAX} = 5.4\ 10^{-2}\ v/m$

$R = 250\ m$

considerando que:

$E_{MAX} = c\, B_{MAX}$

$B_{MAX} = \frac{E_{MAX}}{c} = \frac{35.4\ 10^{-2}}{3 \cdot 10^{8}} = 1.8 \cdot 10^{-10}\ T$

El valor medio del vector de Poynting

$\vec{S} = \frac{\vec{E} \times \vec{B}}{\mu_0}$

$I = S_{med} = \frac{E_{MAX}\, B_{MAX}}{2\mu_0}$ como $E_{MAX} = c\, B_{MAX}$

$I = \frac{E_{MAX}^2}{2\mu_0 c} = 3.87\ 10^{-6}\ W/m^2$