

14. The intensity is the average of the Poynting vector:

$$I = S_{\text{avg}} = \frac{cB_m^2}{2\mu_0} = \frac{(3.0 \times 10^8 \text{ m/s})(1.0 \times 10^{-4} \text{ T})^2}{2(1.26 \times 10^{-6} \text{ H/m})} = 1.2 \times 10^6 \text{ W/m}^2 .$$