13. (a) We use $I = E_m^2/2\mu_0 c$ to calculate E_m:

$$E_m = \sqrt{2\mu_0 I_c} = \sqrt{2\left(4\pi\times10^{-7}\ \text{T}\cdot\text{m/A}\right)\left(1.40\times10^{3}\ \text{W/m}^2\right)\left(2.998\times10^{8}\ \text{m/s}\right)}$$
$$= 1.03\times10^{3}\ \text{V/m}.$$

(b) The magnetic field amplitude is therefore

$$B_m = \frac{E_m}{c} = \frac{1.03\times10^{4}\ \text{V/m}}{2.998\times10^{8}\ \text{m/s}} = 3.43\times10^{-6}\ \text{T}.$$