

47. The definition of displacement current is Eq. 32-34, and the formula of greatest convenience here is Eq. 32-41:

$$i_d = \frac{2\pi r B}{\mu_0} = \frac{2\pi(0.0300 \text{ m})(2.00 \times 10^{-6} \text{ T})}{4\pi \times 10^{-7} \text{ T} \cdot \text{m/A}} = 0.30 \text{ A} \quad .$$