

48. Ignoring points where the determination of the slope is problematic, we find the interval of largest $\Delta|\vec{E}|/\Delta t$ is $6\mu s < t < 7\mu s$. During that time, we have, from Eq. 32-38,

$$i_d = \varepsilon_0 A \frac{\Delta|\vec{E}|}{\Delta t} = \varepsilon_0 (2.0\text{ m}^2) (2.0 \times 10^6 \text{ V/m})$$

which yields $i_d = 3.5 \times 10^{-5} \text{ A}$.