

26. Noting that $|\Delta B| = B$, we find the thermal energy is

$$P_{\text{thermal}}\Delta t = \frac{\mathcal{E}^2\Delta t}{R} = \frac{1}{R} \left(-\frac{d\Phi_B}{dt} \right)^2 \Delta t = \frac{1}{R} \left(-A\frac{\Delta B}{\Delta t} \right)^2 \Delta t = \frac{A^2 B^2}{R\Delta t} .$$