

2. According to $U = \frac{1}{2}LI^2 = \frac{1}{2}Q^2/C$, the current amplitude is

$$I = \frac{Q}{\sqrt{LC}} = \frac{3.00 \times 10^{-6} \text{ C}}{\sqrt{(1.10 \times 10^{-3} \text{ H})(4.00 \times 10^{-6} \text{ F})}} = 4.52 \times 10^{-2} \text{ A} .$$