$$A = \frac{1}{T} \int_0^T i^2 \, dt$$

$$= \frac{1}{3.10^{-3}} \cdot \left[(-\sqrt{6})^2 . 10^{-3} + 0 + (\sqrt{6})^2 . 10^{-3} \right]$$

$$= \frac{1}{3} \left[6 + 6 \right]$$

$$= 4$$

$$I_{RMS} = \sqrt{A} \quad \Rightarrow \quad \boxed{I_{RMS} = 2}$$