

**22** A variable resistor dissipates a certain power when a steady current  $I$  flows through it. The resistance had to be halved to obtain the same power dissipation in the resistor when a sinusoidal alternating current is used with a diode in series with the resistor in the circuit.

What is the peak value of the alternating current?

- A**  $I$                       **B**  $1.4 I$                       **C**  $2 I$                       **D**  $2.8 I$

[illegible]