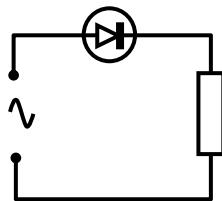


**25**

The rate of heat dissipation of a resistor connected to an a.c. supply is  $P$ .



An ideal diode is then connected in series with the resistor.



What is the new rate of heat dissipation of the resistor?

**A**

$$\frac{P}{8}$$

**B**

$$\frac{P}{4}$$

**C**

$$\frac{P}{2}$$

**D**  $P$

