21 A 1.0 kΩ resistor has a maximum power rating of 0.25 W.

What is the maximum rate of flow of electrons that can pass through this resistor?

A $1.0 \times 10^{13}\,\text{s}^{-1}$

B $1.0 \times 10^{15}\,\text{s}^{-1}$

C $1.0 \times 10^{17}\,\text{s}^{-1}$

D $1.0 \times 10^{19}\,\text{s}^{-1}$