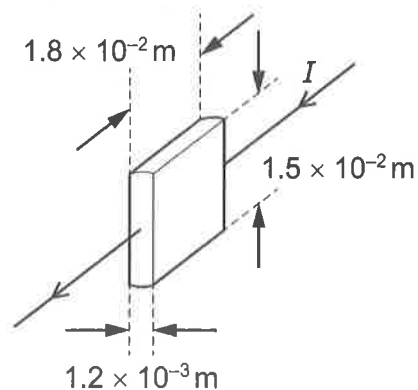


- 21 A current of 40 mA passes through a slice of semi-conducting material of dimensions as shown.



The slice dissipates 400 mW of heat energy.

What is the resistivity of the semiconductor under these conditions?

- A** $0.25 \Omega \text{ m}$ **B** $0.36 \Omega \text{ m}$ **C** $56 \Omega \text{ m}$ **D** $380 \Omega \text{ m}$

- 22 Six cells are used to make a battery. They are arranged in two parallel branches, each containing