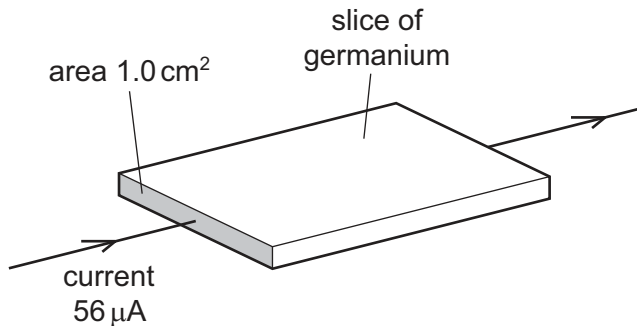30 A slice of germanium of cross-sectional area $1.0\,cm^2$ carries a current of $56\,\mu A$. The number density of charge carriers in the germanium is $2.0 \times 10^{13}\,cm^{-3}$. Each charge carrier has a charge equal to the charge on an electron.

area $1.0\,cm^2$

slice of germanium

current
$56\,\mu A$

What is the average drift velocity of the charge carriers in the germanium?

A $0.18\,ms^{-1}$ **B** $18\,ms^{-1}$ **C** $180\,ms^{-1}$ **D** $1800\,ms^{-1}$