

- 28** A microwave pulse lasts for  $3.0 \times 10^{-9}$  s. A photon of the microwave may be considered to be anywhere within this pulse, although the exact location is not known.

What is the uncertainty in the momentum of the photon?

**A**  $5.9 \times 10^{-35}$  kg m s<sup>-1</sup>

**B**  $1.2 \times 10^{-34}$  kg m s<sup>-1</sup>

**C**  $3.7 \times 10^{-34}$  kg m s<sup>-1</sup>

**D**  $7.4 \times 10^{-34}$  kg m s<sup>-1</sup>