A particle of mass 5.0×10^{-3} kg performing simple harmonic motion takes 47 s to make 50 oscillations. In each complete oscillation, the particle travels a total distance of 600 mm.

What is the maximum kinetic energy of the particle?

A

2.0×10^{-3} J

B

2.5×10^{-3} J

C

3.9×10^{-3} J

D

5.0×10^{-3} J