

Table of contents

Frequency (commonness)

$$\omega = \frac{d}{dt}\varphi = \eta kv = kc = \frac{2\pi}{\mathcal{T}} = 2\pi \cdot \nu = \frac{a}{v} = \frac{v}{r} = \frac{E}{\hbar} = \sqrt{\frac{k}{m}} = \sqrt{\frac{r \times F}{m}} = \sqrt{\frac{g}{l}} \stackrel{EM}{=} \dots = \sqrt{\frac{1}{LC}} \stackrel{QM}{=} \frac{1}{2} \frac{p^2}{m} \frac{1}{\hbar} = \frac{(\hbar \vec{k})^2}{2m} \quad (1)$$

$$\nu = \frac{E}{h} = \frac{v_{phs}}{\lambda} = \frac{c^2}{v} \frac{1}{\lambda} = \frac{\omega}{k} \frac{1}{\lambda} = \frac{\omega}{2\pi} \quad (2)$$

$$\nu_i = \frac{eV_{0i}}{h} + \nu_0 = \frac{E_{kin}}{\hbar} \omega \mathcal{T} + \nu_0 \quad (3)$$

$$e = \text{electron charge} \quad V_0 = \text{Opposing Potential } (I = 0) \quad (4)$$

Energy Level: $i = [1, n] \in \mathbb{N}$

$$E_{kin}^{max} = eV_0 = h(\nu - \nu_0) \quad (5)$$