Assignment

12.8 - 6

EE23BTECH11034 - Prabhat Kukunuri

Question

A charged particle oscillates about its mean equilibrium position with a frequency of $10^9 Hz$. What is the frequency of the electromagnetic waves produced by the oscillator?

Solution

Symbol	Value	Description
$y(t)$	$\cos(2f_c\pi t)$	Wave equation of electro-magnetic wave
f_c	10^9	Frequency of electromagnetic wave
t	seconds	Time

TABLE 0
Variable description

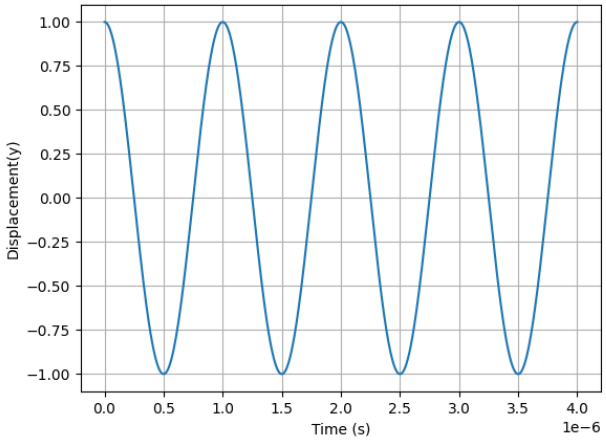

Fig. 0. Graph of $y(t) = \cos\left(2 \times 10^9 \pi t\right)$