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

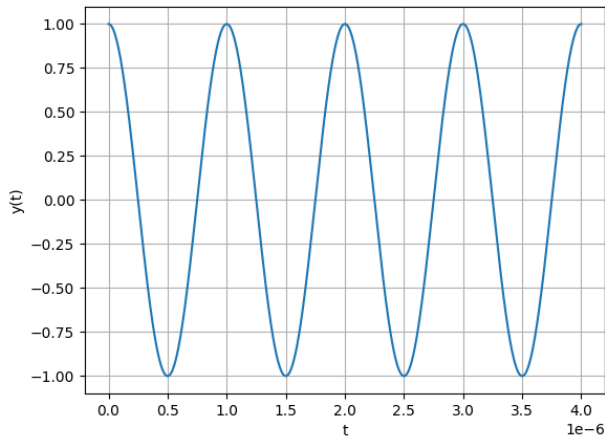| Symbol	Value	Description
$y(t)$	$\cos\left(2f_c\pi t\right)$	Wave equation of electro-magnetic wave
f_c	10^9	Frequency of electromagnetic wave
t	seconds	Time

TABLE 0

VARIABLE DESCRIPTION

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