

Assignment

12.8 - 6

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

TABLE 0

VARIABLE DESCRIPTION

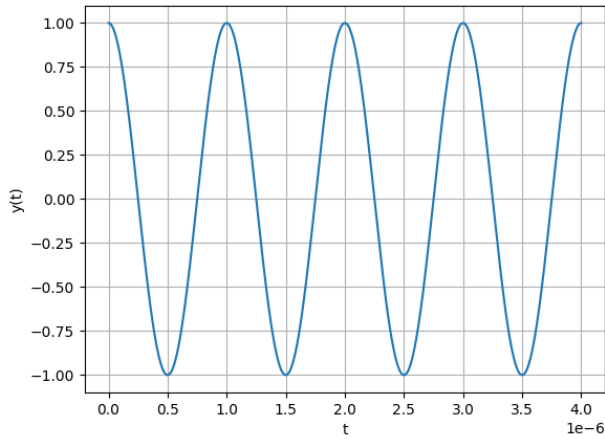


Fig. 0. $y(t) = \cos(2 \times 10^9 \pi t)$