

Answer on Question #51106, Physics, Electric Circuits

Calculate the minimum slew rate of the op-amp used for obtaining 2 MHz frequency, + -10V amplitude triangular wave signal at the output.

Answer:

The minimum slew rate of the op-amp used for obtaining 2 MHz frequency, + -10V amplitude triangular wave signal at the output is given by Eq.(1)

$$dU / dt = \omega U = 2\pi f U = 2\pi \cdot 2 \cdot 10^6 \cdot 10 = 4\pi \cdot 10^7 V / s \approx 125.6 V / \mu s$$

where $\omega = 2\pi f$

A minimum slew rate is 125.6 volts per microsecond.