

Answer on Question #50859, Physics, Electric Circuits

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

Answer:

The slew rate for a given amplitude U and frequency f is

$$\text{slewrate} = 2\pi fU = 2\pi \cdot 2 \cdot 10^6 \cdot 10 = 4\pi \cdot 10^7 V/s \approx 125.6 V/\mu s$$

A minimum slew rate of 125.6 volts per microsecond is required.