



Sheet (6)

Oscillators – part 3

1. What is a VCO, and basically, what does it do?
2. Upon what principle does a relaxation oscillator operate?
3. What type of signal does the circuit in figure 1 produce? Determine the frequency of the output.
4. Show how to change the frequency of oscillation in figure 1 to 10 KHz.
5. Determine the amplitude and frequency of the output voltage in figure 2. Use 1V as the forward PUT voltage.
6. Modify the sawtooth generator in figure 2 so that its peak-to-peak is 4V.
7. A certain Sawtooth generator has the following parameters values: $V_{IN}=3V$, $R=4.7K\Omega$, $C=0.001\mu F$. determine its peak-to-peak output voltage if the period is $10\mu s$.

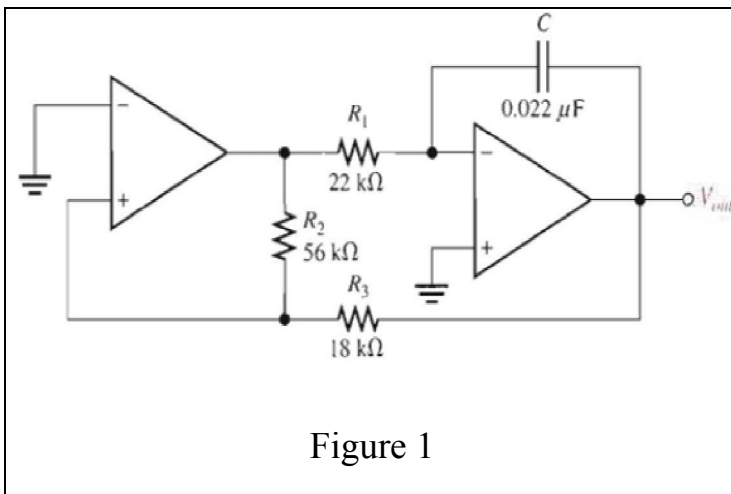


Figure 1

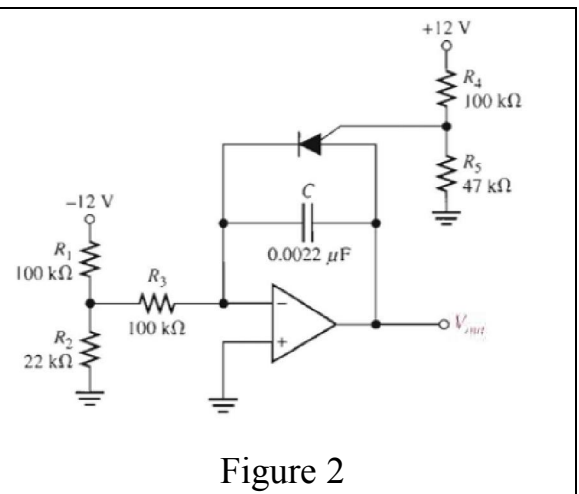


Figure 2

Good Luck

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