Qeios

Peer Review

Review of: "One of the features of the PUT compared to the UJT is that it has a much lower on-state resistance and can carry much higher peak current values"

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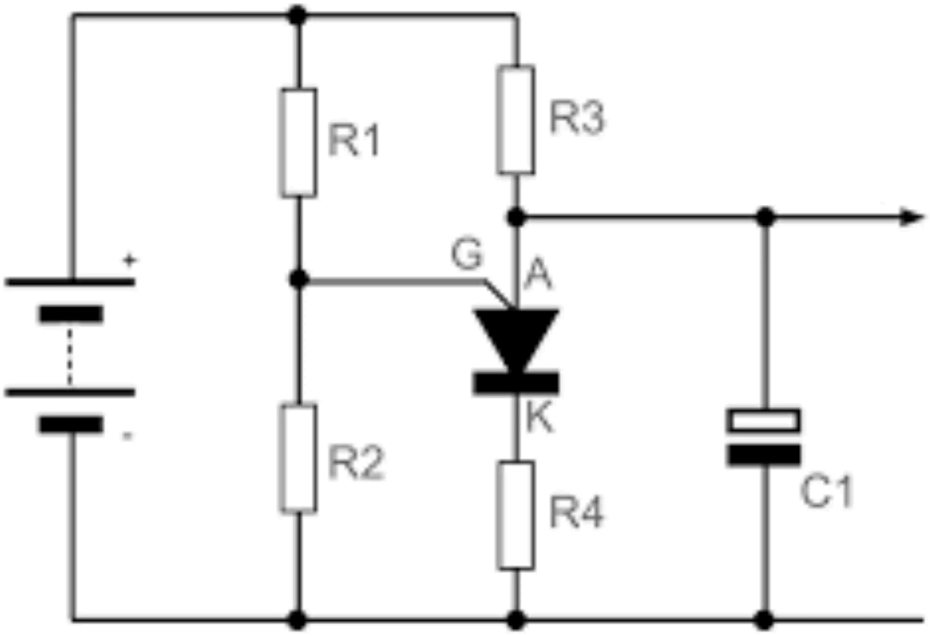
One of the features of the PUT compared to the UJT is that it has a much lower on-state resistance and can carry much higher peak current values. Therefore, it can provide higher levels of trigger energy. The characteristics of the PUT are similar to the UJT , the main differences being that the reverse leakage current (gate to anode) is much lower and the on-state resistance is also much lower.



Programmable single-junction transistor oscillator performance

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The PUT oscillator operates in a similar manner to the UJT oscillator. Its operation can be summarized as follows:

The resistors create a bias voltage on the gate terminal of the PUT. This voltage depends on the supply voltage and the values of the resistors. These resistors program the gap ratio. When the power supply is connected, the capacitor is charged through the circuit. Its charging rate is determined by the circuit's time constant, or RC. When the anode voltage (voltage across the capacitor) reaches 0.6 volts above the gate voltage, the PUT turns on and latches. When the PUT turns on, the capacitor discharges through the PUT and the resistors .

> ***Conclusion :***
>
> ***In general, in order to receive the electromagnetic wave in the space, the dimensions of the antenna must be on the order of the wavelength of the input to its surface. Due to the very small dimensions of nano sensors, nano antennas need to have a very high working frequency to be usable.***

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Declarations

Potential competing interests: No potential competing interests to declare.