Description

This is a basic time delay generator using voltage comparators. This example uses a quad voltage comparator. The first input stage produces an RC time delay. In this example, this time delay is determined by $R=50K+RT$ and $C=CT$. When the voltage of this RC network charges past threshold voltages set by resistor network $R_F1$, $R_F2$, $R_F3$, $R_F4$, each of the voltage comparator is triggered on in a sequence, depending on the respective voltage set at the negative input terminals of each voltage comparator by the $R_F$ resistor values.

This time delay generator produces outputs $V1$, $V2$ and $V3$ that has a fixed relative time delay to each other as they are triggered by the same input voltage stage. Time delay of $V2$ always exceeds time delay of $V3$ because its reference voltage at its negative input terminal is set by the addition of resistor $R_F3$. Likewise, time delay of $V1$ always exceed that of $V2$ and $V3$ because of addition of $R_F2$ to its reference threshold setting.

Recommended Components

ALD4302
For ALD4301 and ALD4303 (micropower) open drain versions, add pull-up resistors at the outputs

Other Related Circuit Ideas