



Category: Comparator & Detector **CIRCUIT IDEAS FOR DESIGNERS** 

Schematic no. cd\_23010.0

**Voltage Comparator with Complementary Outputs** 

## Description

This circuit utilizes a dual operational amplifier with high slew rate to act as voltage comparators with complementary outputs Q and QBAR. Alternatively, a dual voltage comparator can also be used. The input reference can be any reference signal generated externally that is within input voltage limits. Both the outputs Q and QBAR change state whenever the input signal VIN crosses VREF voltage levels. A high-precision voltage comparator function can be implemented by selecting a low offset voltage rail-to-rail dual operational amplifier. When a dual operational amplifier or dual voltage comparator is used, when both comparator functions are within the same IC package, the outputs Q and QBAR have better timing and temperature tracking to each other. In other words, the transition whenever Q changes state would track QBAR changing state in the opposite direction.

For full schematic diagram and notes, please register and login at aldinc.com

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