

Low-Power, Single/Dual-Supply Dual Comparator with Reference

FEATURES

- ◆ Improved Electrical Performance over MAX923
- ◆ Ultra-Low Quiescent Current: 4 μ A (max), Both Comparators plus Reference
- ◆ Single or Dual Power Supplies:
 - Single: +2.5V to +11V
 - Dual: \pm 1.25V to \pm 5.5V
- ◆ Input Voltage Range Includes Negative Supply
- ◆ 7 μ s Propagation Delay
- ◆ Push-pull TTL/CMOS-Compatible Outputs
- ◆ Crowbar-Current-Free Switching
- ◆ Continuous Source Current Capability: 40mA
- ◆ Internal 1.182V \pm 0.75% Reference
- ◆ Adjustable Hysteresis
- ◆ 8-pin MSOP Package

APPLICATIONS

Threshold Detectors/Discriminators
 Oscillator Circuits
 Window Comparators
 Level Translators
 Battery-Powered Systems

DESCRIPTION

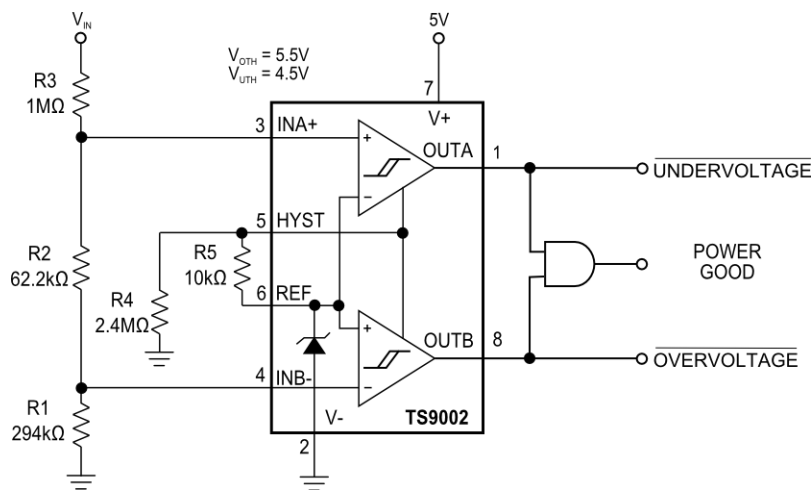
The TS9002 low-voltage, micropower dual analog comparator is form-factor identical to the MAX923 analog comparator with improved electrical specifications. Ideal for 3V or 5V single-supply applications, the TS9002 draws 11% lower supply current with a 25%-better initial accuracy reference voltage. The TS9002 joins Touchstone's TS9001-1/2 and the TS9004 analog comparators in the "NanoWatt Analog™" high performance analog integrated circuits portfolio. This dual comparator can operate from single +2.5V to +11V supplies or from \pm 1.25V to \pm 5V dual supplies.

The TS9002 exhibits an input voltage range from the negative supply rail to within 1.3V of the positive supply. In addition, its push-pull output stage is TTL/CMOS compatible and capable of sinking and sourcing current. It also incorporates an internal 1.182V \pm 0.75% voltage reference. Without complicated feedback configurations and only requiring two additional resistors, adding external hysteresis via a separate pin is available on the TS9002's HYST pin.

The TS9002 is fully specified over the -40°C to +85°C temperature range and is available in a 8-pin MSOP package.

TYPICAL APPLICATION CIRCUIT

A 5V, Low-Parts-Count, High-Accuracy Window Detector

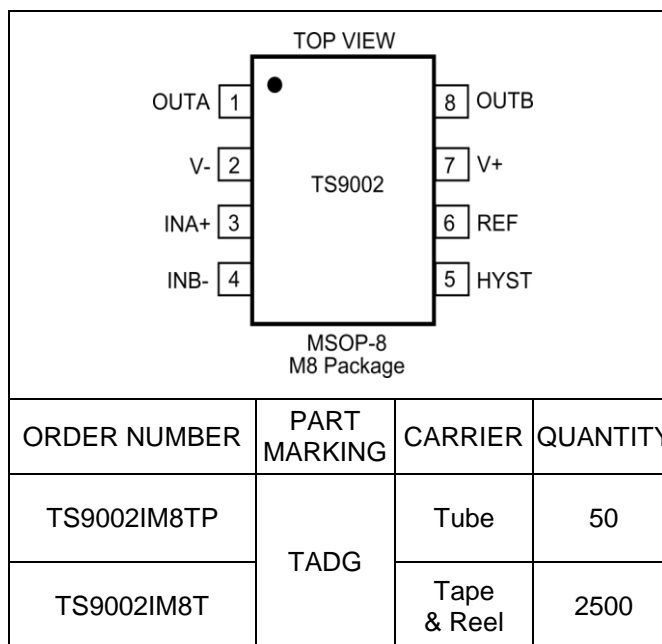


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TS9002 Product Brief



PACKAGE/ORDERING INFORMATION



Lead-free Program: Touchstone Semiconductor supplies only lead-free packaging.

Consult Touchstone Semiconductor for products specified with wider operating temperature ranges.

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