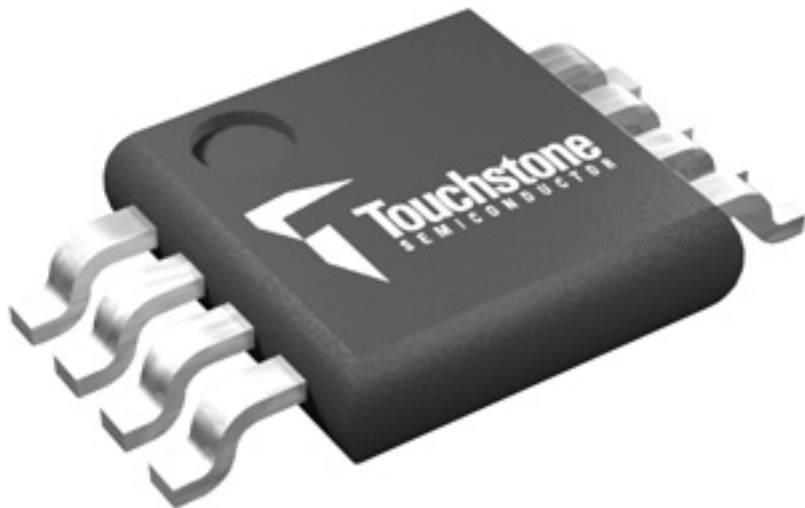


Low-power, low-voltage comparators intended for power-sensitive applications



[Touchstone Semiconductor](#) [1]

announced the TS9002 dual and the TS9004 quad low power analog comparators plus 1.182-V reference integrated circuits.

As an improved, pin-for-pin functional equivalent to the MAX923, the TS9002's 3.2- μ A supply current is 16% lower and its $\pm 0.75\%$ initial accuracy voltage reference is 25% lower in both specifications compared to the MAX923. As an improved, pin-for-pin functional equivalent to the MAX934, the TS9004's 4.1- μ A supply current is 25% lower and its $\pm 1\%$ initial accuracy reference is 50% lower in both specifications compared to the MAX934.

Ideal for 3V or 5V single-supply applications, the TS9002 dual and the TS9004 quad comparator can operate from single +2.5V to +11V supplies or from ± 1.25 V to ± 5 V dual supplies. Other common features include: a) an input voltage range from the negative supply rail to within 1.3V of the positive supply; b) 7- μ s propagation delay; c) a push-pull output stage with 40mA source-current drive capability; and d) crowbar-current free output stage switching.

Both comparators are designed for low-voltage, low-power applications, including threshold detectors/discriminators, oscillator circuits, window comparators, level translators, and other battery-powered systems.

TS9002 Dual Comparator Key Specifications

Low-power, low-voltage comparators intended for power-sensitive applications

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- Priced at \$0.75 in 1000-piece quantities - \$2.10 Less Expensive than MAX923
- 16% Lower Supply Current: 3.2 μ A vs 4.1 μ A
- 25% Lower VREF Initial Accuracy: $\pm 0.75\%$ vs $\pm 1\%$
- User-adjustable Hysteresis via External HYST Pin

TS9004 Quad Comparator Key Specifications

- Priced at \$1.15 in 1000-piece quantities - \$0.60 Less Expensive than MAX934
- 25% Lower Supply Current: 4.1 μ A vs 5.5 μ A
- 50% Lower VREF Initial Accuracy: $\pm 1\%$ vs $\pm 2\%$
- Separate GND Pin for Output Drivers

Both parts are fully specified over the -40 $^{\circ}$ C to +85 $^{\circ}$ C temperature range. The TS9002 is available in an 8-pin MSOP package and the TS9004 is available in a narrow 16-pin SOIC package. Both products are in stock and ready to ship from [Digi-Key](#) [2], Touchstone's authorized distributor.

Touchstone offers free samples and completely assembled/tested demo boards upon request by visiting <http://www.touchstonesemi.com/products/comparators> [3].

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Links:

[1] <http://www.touchstonesemi.com>

[2] <http://www.digikey.com/Suppliers/us/touchstone.page?lang=en>

[3] <http://www.touchstonesemi.com/products/comparators>