

1.6V Nanopower Comparator with Internal Reference

FEATURES

- ◆ Improved Electrical Performance over the MAX9117 and MAX9118
- ◆ Guaranteed to Operate Down to +1.6V
- ◆ Ultra-Low Supply Current: 600nA
- ◆ Internal 1.252V \pm 1% Reference
- ◆ Input Voltage Range Extends 200mV Outside-the-Rails
- ◆ No Phase Reversal for Overdriven Inputs
- ◆ Output Stage: Push-pull (TS9001-1)
Open-Drain (TS9001-2)
- ◆ Crowbar-Current-Free Switching
- ◆ Internal Hysteresis for Clean Switching
- ◆ 5-pin SC70 Packaging

APPLICATIONS

2-Cell Battery Monitoring/Management
 Medical Instruments
 Threshold Detectors/Discriminators
 Sensing at Ground or Supply Line
 Ultra-Low-Power Systems
 Mobile Communications
 Telemetry and Remote Systems

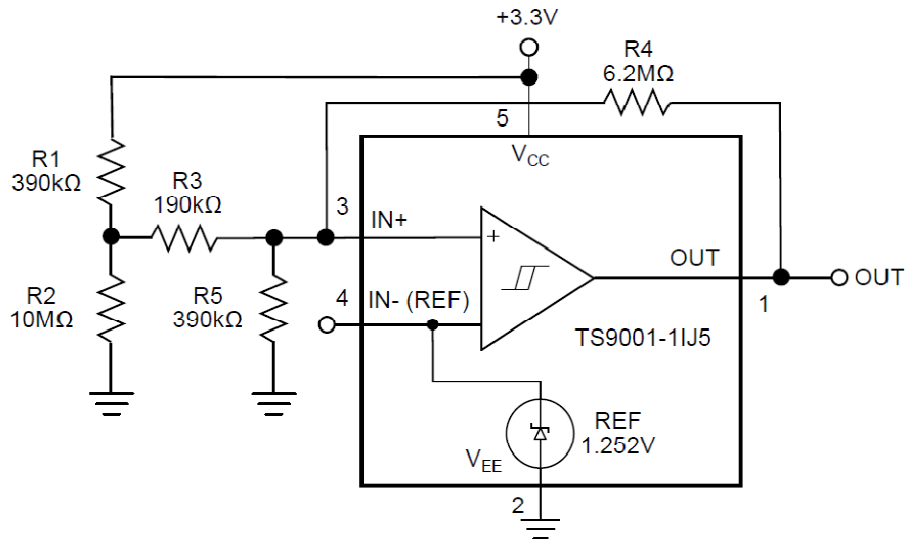
DESCRIPTION

Ideally suited for all 2-cell battery-management/monitoring applications, the nanopower TS9001-1/2 analog comparators guarantee +1.6V operation, draw very little supply current, and have robust input stages that can tolerate input voltages beyond the power supply. Both products are Touchstone Semiconductor's first analog comparator products in its "NanoWatt Analog" high-performance analog integrated circuits portfolio. The TS9001-1/2 draw 600nA of supply current and include an on-board +1.252V \pm 1% reference. These comparators are also electrically and form-factor identical to the MAX9117 and the MAX9118 family of analog comparators. Both comparators offer a 33% improvement in voltage reference initial accuracy and the TS9001-1 offers 73% higher output current drive.

The TS9001-1's push-push output drivers were designed to drive 5mA loads from one supply rail to the other supply rail. The TS9001-2's open-drain output stage makes it easy to incorporate this analog comparator into systems that operate on different supply voltages. The TS9001-1/2 are available in space-saving 5-pin SC70 packages.

TYPICAL APPLICATION CIRCUIT

Nanopower 2.9V V_{CC} Threshold Detector



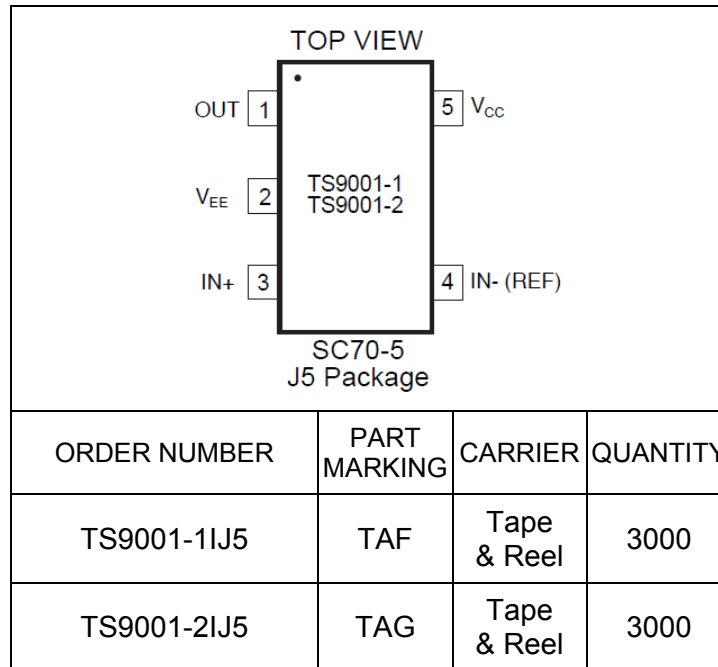
PART	INTERNAL REFERENCE	OUTPUT STAGE	IN-Connection	SUPPLY CURRENT (nA)
TS9001-1	Yes	Push-Pull	REF	600
TS9001-2	Yes	Open-Drain	REF	600

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TS9001 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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