

## A 7ppm/°C, 0.08% Precision +2.5V Voltage Reference in SOT23

### FEATURES

- ◆ Improved Electrical Performance over MAX6025
- ◆ Initial Accuracy:
  - 0.08% (max) – TS6001A
  - 0.16% (max) – TS6001B
- ◆ Temperature Coefficient:
  - 7ppm/°C (max) – TS6001A
  - 10ppm/°C (max) – TS6001B
- ◆ Quiescent Supply Current: 35µA (max)
- ◆ Low Supply Current Change with  $V_{IN}$ : 0.1µA/V
- ◆ Output Source/Sink Current: ±500µA
- ◆ Low Dropout at 500µA Load Current: 75mV
- ◆ Load Regulation: 30ppm/mA
- ◆ Line Regulation: 10ppm/V
- ◆ Stable with  $C_{LOAD}$  up to 2200pF

### APPLICATIONS

Battery-Operated Equipment  
 Data Acquisition Systems  
 Hand-Held Equipment  
 Smart Industrial Transmitters  
 Industrial and Process-Control Systems  
 Precision 3V/5V Systems  
 Hard-Disk Drives

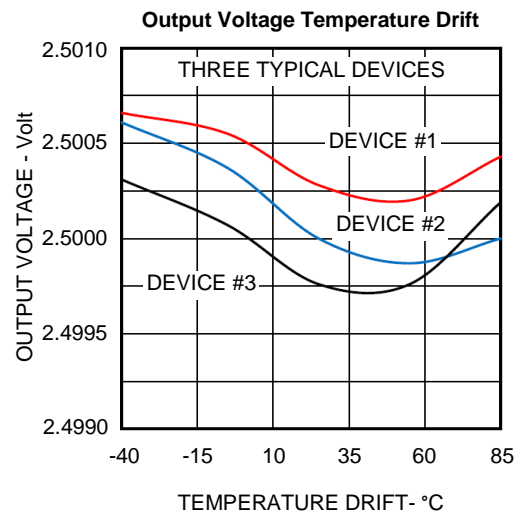
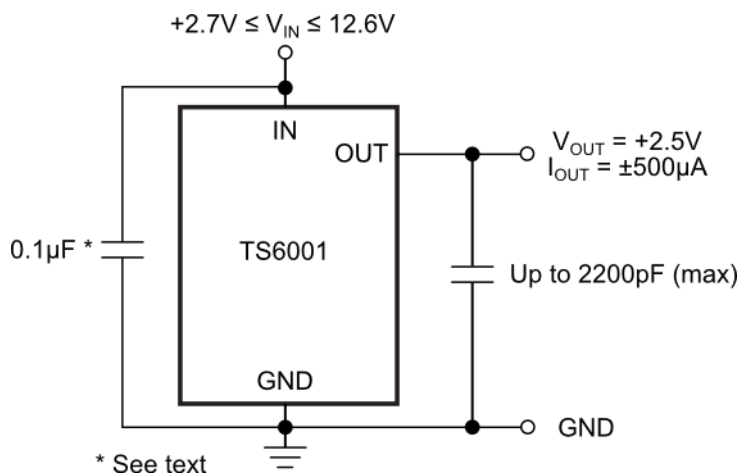
### DESCRIPTION

The TS6001 is a 3-terminal, series-mode 2.5-V precision voltage reference and is a pin-for-pin, identical to the MAX6025 voltage reference with improved electrical performance. The TS6001 consumes only 31µA of supply current at no-load, exhibits an initial output voltage accuracy of less than 0.08%, and a low output voltage temperature coefficient of 7ppm/°C. In addition, the TS6001's output stage is stable for all capacitive loads to 2200pF and is capable of sinking and sourcing load currents up to 500µA.

Since the TS6001 is a series-mode voltage reference, its supply current is not affected by changes in the applied supply voltage unlike two-terminal shunt-mode references that require an external resistor. The TS6001's small form factor and low supply current operation all combine to make it an ideal choice in low-power, precision applications.

The TS6001 is fully specified over the -40°C to +85°C temperature range and is available in a 3-pin SOT23 package.

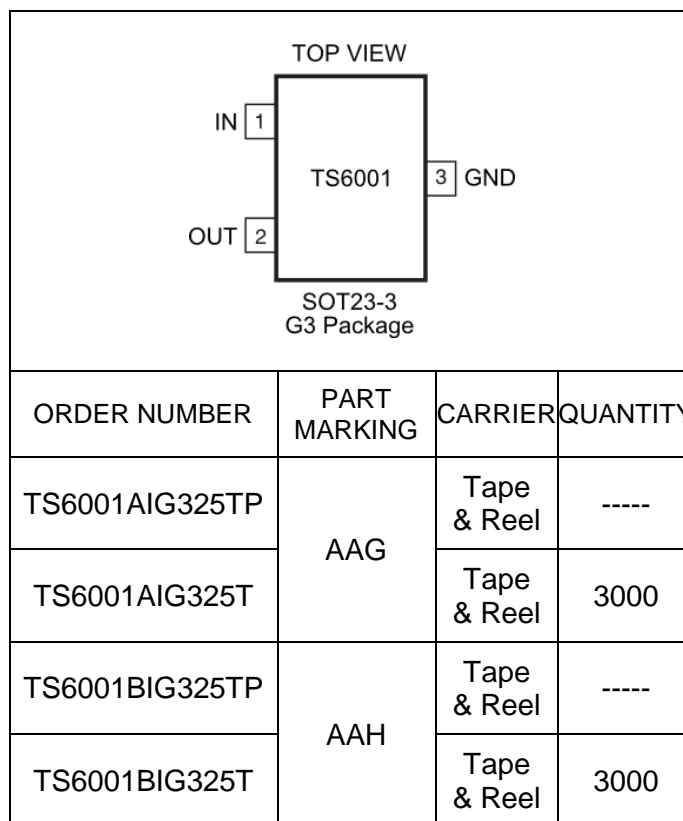
### TYPICAL APPLICATION CIRCUIT



# TS6001 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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