

A +2.5V, Low-Power/Low-Dropout Precision Voltage Reference

FEATURES

- ◆ Alternate Source for MAX6025
- ◆ Initial Accuracy:
 - 0.2% (max) – TSM6025A
 - 0.4% (max) – TSM6025B
- ◆ Temperature Coefficient:
 - 15ppm/°C (max) – TSM6025A
 - 25ppm/°C (max) – TSM6025B
- ◆ Quiescent Supply Current: 35µA (max)
- ◆ Low Supply Current Change with V_{IN} : $1\mu A/V$
- ◆ Output Source/Sink Current: $\pm 500\mu A$
- ◆ Low Dropout at 500µA Load Current: 100mV
- ◆ Load Regulation: 0.14µV/µA
- ◆ Line Regulation : 25µV/V
- ◆ Stable with C_{LOAD} up to 2200pF

APPLICATIONS

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

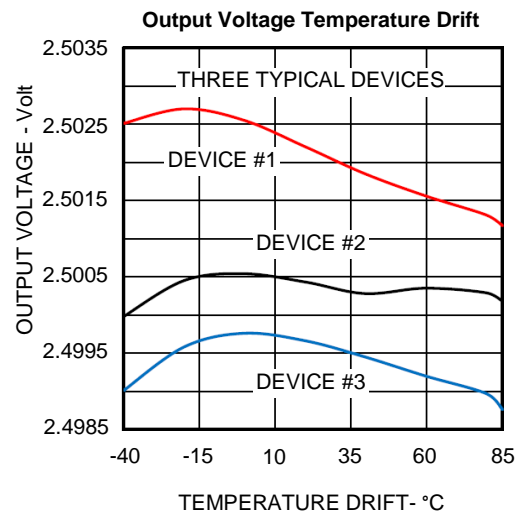
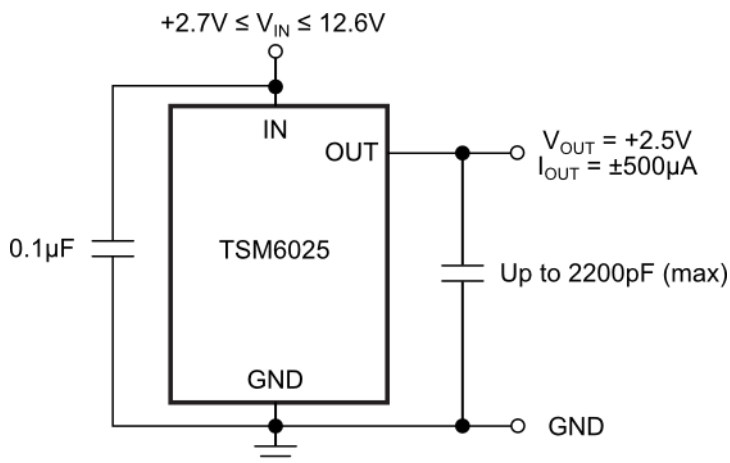
DESCRIPTION

The TSM6025 is a 3-terminal, series-mode 2.5-V precision voltage reference and is a pin-for-pin alternate source for the MAX6025 voltage reference. Like the MAX6025, the TSM6025 consumes only 27µA of supply current at no-load, exhibits an initial output voltage accuracy of less than 0.2%, and a low output voltage temperature coefficient of 15ppm/°C. In addition, the TSM6025'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 TSM6025 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 TSM6025's small form factor and low supply current operation all combine to make it an ideal choice in low-power, precision applications.

The TSM6025 is fully specified over the -40°C to +85°C temperature range and is available in a 3-pin SOT23 package.

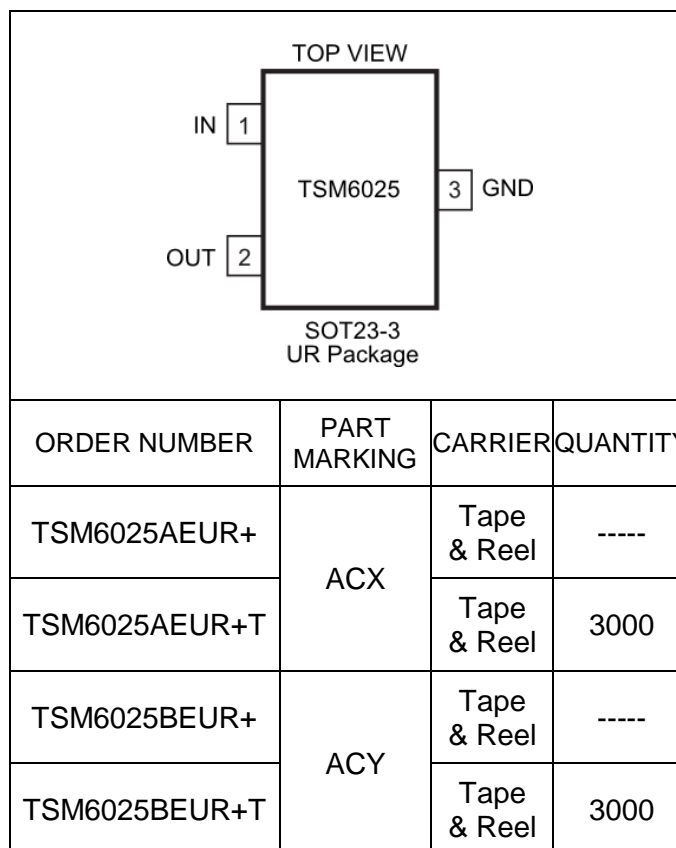
TYPICAL APPLICATION CIRCUIT



TSM6025 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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