LINEAR BUILDING BLOCK – LOW-POWER VOLTAGE REFERENCE WITH PROGRAMMABLE HYSTERESIS COMPARATOR AND SHUTDOWN

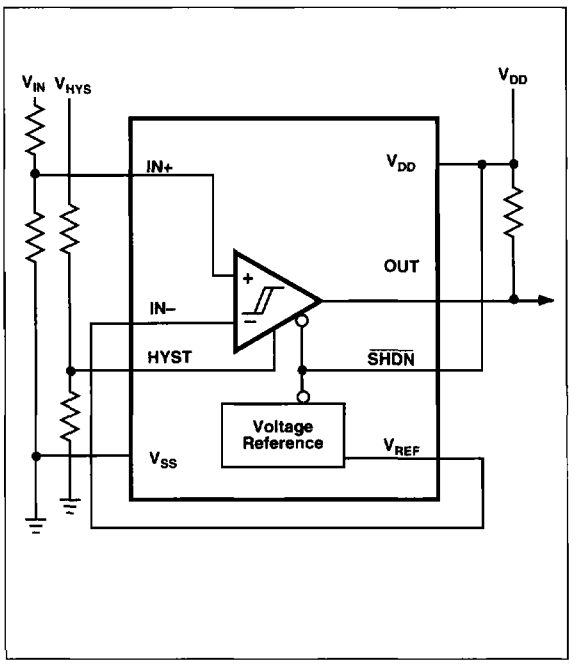
FEATURES

- **Combines Comparator and Voltage Reference in a Single Package**
- **Optimized for Single-Supply Operation**
- **Small Package ..... 8-Pin MSOP (Occupies Only Half the Space of an 8-Pin SOIC)**
- **Ultra Low Input Bias Current ..... Less than 100 pA**
- **Low Quiescent Current ..... 6 µA, Max, Active ..... 0.1 µA in Shutdown Mode**
- **Operates Down to V_{DD} = 1.8V, Min**
- **High Integration**
- **Rail-to-Rail Inputs and Outputs (Operates From Low Supply Voltage While Accomodating Large Input Signals — Yields Larger Output Signal)**

APPLICATIONS

- **Power Management Circuits**
- **Battery Operated Equipment**
- **Consumer Products**

FUNCTIONAL BLOCK DIAGRAM



GENERAL DESCRIPTION

The TC1031 is a low-power comparator (available with complementary or open drain outputs) plus voltage reference designed specifically for low-power applications.

The TC1031 is designed for operation from a single supply, however, operation from dual supplies also is possible, and the power supply current drain is independent of the magnitude of the power supply voltage. The TC1031 can operate from two 1.5V alkaline cells, and operation is guaranteed to V_{DD} = 1.8V. Maximum active supply current is 6 µA. Rail-to-rail inputs and outputs allow operation from low supply voltages while accommodating large input signals.

The TC1031 provides a simple method for adding user-adjustable hysteresis without feedback or complex external circuitry. Hysteresis is adjusted with a simple resistor divider on the HYST input. A shutdown input, $\overline{SHDN}$, disables the comparator and voltage reference and reduces supply current to less than 0.1 µA (typical) when taken low.

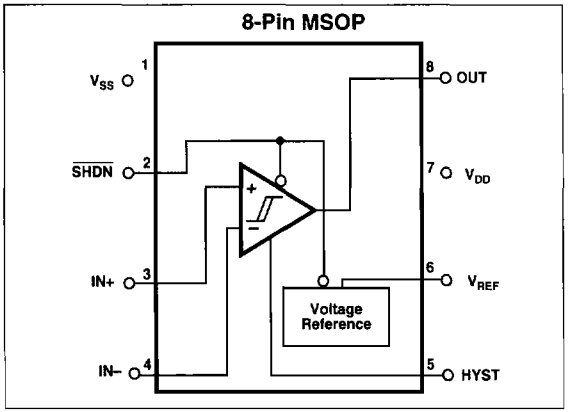
Packaged in a space-saving 8-Pin MSOP, the TC1031 is ideal for applications requiring high integration, small size, and low power.

ORDERING INFORMATION

Part No.	Package	Comparator	Temp. Range
TC1031NEUA	8-Pin MSOP	Open Drain	– 40°C to +85°C
TC1031CEUA	8-Pin MSOP	Complementary	– 40°C to +85°C

TC1043EV Evaluation Kit for Linear Building Block Family

PIN CONFIGURATION



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