

LINEAR BUILDING BLOCK – SINGLE COMPARATORS IN SOT PACKAGES

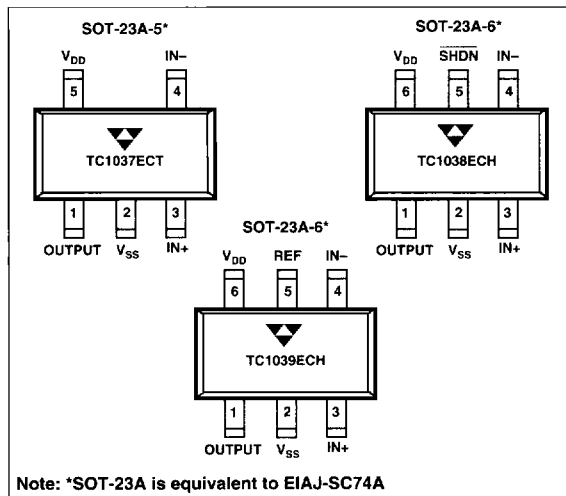
FEATURES

- Tiny SOT-23A Packages Save Space!
- Optimized for Single-Supply Operation
- Ultra Low Input Bias Current Less than 100 pA
- Low Quiescent Current 4 μA (TC1037)
..... 4 μA , 0.05 μA in Shutdown Mode (TC1038)
..... 6 μA (TC1039)
- Shutdown Mode (TC1038)
- 1.5% Accurate Independent Voltage Reference (TC1039)
- Rail-to-Rail Inputs and Outputs

APPLICATIONS

- Power Management Circuits
- Battery Operated Equipment
- Consumer Products

PIN CONFIGURATION



GENERAL DESCRIPTION

The TC1037/1038/1039 are single, low-power comparators available with either complementary or open drain outputs designed for low-power applications.

These comparators are specifically designed for operation from a single supply, however, operation from dual supplies also is possible, and power supply current is independent of the magnitude of the power supply voltage. The TC1037/1038/1039 operate from two 1.5V alkaline cells down to $V_{DD} = 1.8\text{V}$. Active supply current is 4 μA for the TC1037/1038 and 6 μA for the TC1039. Input and output swing of these devices is rail-to-rail.

An active low shutdown input, SHDN, is available on the TC1038 and disables the comparator, placing its output in a high-impedance state. The TC1038 draws only 0.05 μA (typical) when the shutdown mode is active.

An internally biased 1.20V bandgap reference is included in the TC1039. The reference is accurate to 1.5 percent tolerance. This reference is independent of the comparator in the TC1039.

Packaged in a SOT-23A-5 (TC1037) or SOT-23A-6 (TC1038/1039), these single comparators are ideal for applications requiring high integration, small size, and low power.

ORDERING INFORMATION

Part No.	Package	Comparator	Temp. Range
TC1037NECT	SOT-23A-5	Open Drain	-40°C to +85°C
TC1037CECT	SOT-23A-5	Complementary	-40°C to +85°C
TC1038NECH	SOT-23A-6	Open Drain	-40°C to +85°C
TC1038CECH	SOT-23A-6	Complementary	-40°C to +85°C
TC1039NECH	SOT-23A-6	Open Drain	-40°C to +85°C
TC1039CECH	SOT-23A-6	Complementary	-40°C to +85°C

TC1043EV Evaluation Kit for Linear Building Blocks Family

FUNCTIONAL BLOCK DIAGRAM

