

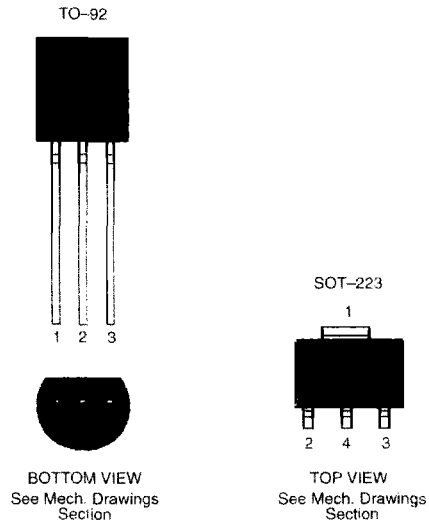
## FEATURES

- Low-cost, general-purpose, 256-bit memory
  - DS2223 has 256-bit SRAM
  - DS2224 has 32-bit ROM, 224-bit SRAM
- Reduces control, address and data interface to a single pin
- Each DS2224 32-bit ROM is factory-lasered with a unique serial number
- DS2224 portion of ROM with custom code and unique serial number available
- Minimal operating power: 45 nanocoulombs per transaction @ 1.5V typical
- Less than 15 nA standby current at 25°C
- Nonvolatile data retention easily achieved via low-cost alkaline batteries or capacitors
- Directly connects to a port pin of popular microcontrollers
- Operation from 1.2 to 5.5 volts
- Popular TO-92 or SOT-223 surface mount package
- Operates over industrial temperature range -40°C to +85°C

## DESCRIPTION

The DS2223 and DS2224 EconoRAMs are fully static, micro-powered, read/write memories in low-cost TO-92 or SOT-223 packages. The DS2223 is organized as a serial 256 x 1 bit static read/write memory. The DS2224's first 32 bits are lasered with a unique ID code at the time of manufacture; the remaining 224 bits are static read/write memory. Signaling necessary for reading or writing is reduced to just one interface lead.

## PACKAGE OUTLINE



## PIN CONNECTIONS

Pin 1	GND	– Ground
Pin 2	DQ	– Data In/Out
Pin 3	V <sub>CC</sub>	– Supply
Pin 4	GND	– Ground

## ORDERING INFORMATION

DS2223	256-bit SRAM – TO-92 Package
DS2223Z	256-bit SRAM – SOT-223 Package
DS2223T	1000 piece tape-and-reel of DS2223Z
DS2223Y	2500 piece tape-and-reel of DS2223Z
DS2224	32-bit serial number (ROM), 224-bit SRAM – TO-92 Package
DS2224Z	32-bit serial number (ROM), 224-bit SRAM – SOT-223 Package
DS2224T	1000 piece tape-and-reel of DS2224Z
DS2224Y	2500 piece tape-and-reel of DS2224Z