

# DALLAS

SEMICONDUCTOR

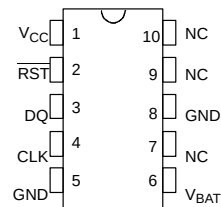
## DS1200

### Serial RAM Chip

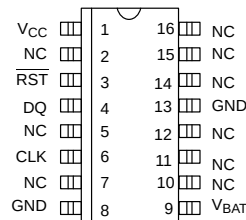
#### FEATURES

- 1024 bits of read/write memory
- Low data retention current for battery backup applications
- 4 million bits/second data rate
- Single byte or multiple byte data transfer capability
- No restrictions on the number of write cycles
- Low-power CMOS circuitry
- Applications include:
  - software authorization
  - computer identification
  - system access control
  - secure personnel areas
  - calibration
  - automatic system setup
  - traveling work record

#### PIN ASSIGNMENT



10-Pin DIP (300 MIL)  
See Mech. Drawings  
Section



16-Pin SOIC (300 MIL)  
See Mech. Drawings  
Section

#### PIN DESCRIPTION

|                  |                     |
|------------------|---------------------|
| $V_{CC}$         | – +5 Volts          |
| $\overline{RST}$ | – RESET             |
| DQ               | – Data Input/Output |
| CLK              | – Clock             |
| GND              | – Ground            |
| $V_{BAT}$        | – Battery (+)       |
| NC               | – No Connection     |

#### DESCRIPTION

The DS1200 Serial RAM Chip is a miniature read/write memory which can randomly access individual 8-bit strings (bytes) or sequentially access the entire 1024-bit contents (burst). Interface cost to a microprocessor is minimized by on-chip circuitry which permits data transfers with only three signals: CLOCK,  $\overline{RST}$ , and DATA INPUT/OUTPUT.

Nonvolatility can be achieved by connecting a battery of 2 to 4 volts at the battery input  $V_{BAT}$ . A load of 0.5  $\mu A$

should be used to size the external battery for the required data retention time. If nonvolatility is not required the  $V_{BAT}$  pin should be grounded.

For a complete description of operating conditions, electrical characteristics, bus timing, and signal descriptions other than  $V_{BAT}$ , see the DS1201 Electronic Tag 1024-Bit data sheet.