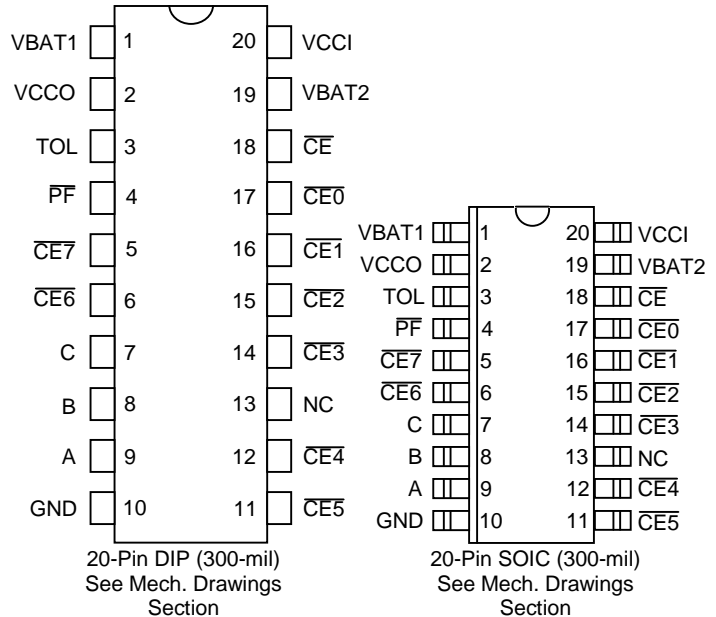


### FEATURES

- Converts full CMOS RAMs into nonvolatile memories
- Unconditionally write protects when  $V_{CC}$  is out of tolerance
- Automatically switches to battery when power-fail occurs
- 3 to 8 decoder provides control for up to eight CMOS RAMs
- Consumes less than 100 nA of battery current
- Tests battery condition on power-up
- Provides for redundant batteries
- Power-fail signal can be used to interrupt processor on power failure
- Optional 5% or 10% power-fail detection
- Optional 20-pin SOIC surface mount package
- Optional industrial temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

### PIN ASSIGNMENT



### PIN DESCRIPTION

- |   |                          |
|---|--------------------------|
| A, B, C   | - Address Inputs         |
| $\overline{\text{CE}}$                          | - Chip Enable Input      |
| $\overline{\text{CE0}} - \overline{\text{CE7}}$ | - Chip Enable Outputs    |
| GND   | - Ground                 |
| $V_{\text{BAT1}}$                               | - + Battery 1            |
| $V_{\text{BAT2}}$                               | - + Battery 2            |
| TOL   | - Power Supply Tolerance |
| $V_{\text{CC1}}$                                | - +5V Supply             |
| $V_{\text{CC0}}$                                | - RAM Supply             |
| PF  | - Power-fail             |
| NC  | - No Connection          |

### DESCRIPTION

The DS1211 Nonvolatile Controller x 8 Chip is a CMOS circuit which solves the application problem of converting CMOS RAMs into nonvolatile memories. Incoming power is monitored for an out-of-tolerance condition. When such a condition is detected, the chip enables are inhibited to accomplish write protection and the battery is switched on to supply RAMs with uninterrupted power. Special circuitry uses a low-leakage CMOS process which affords precise voltage detection at extremely low battery consumption.

By combining the DS1211 nonvolatile controller/decoder chip and lithium batteries, nonvolatile RAM operation can be achieved for up to eight CMOS memories.

See the data sheet for the DS1212 Nonvolatile Controller x 16 Chip for electrical specifications and operation.