

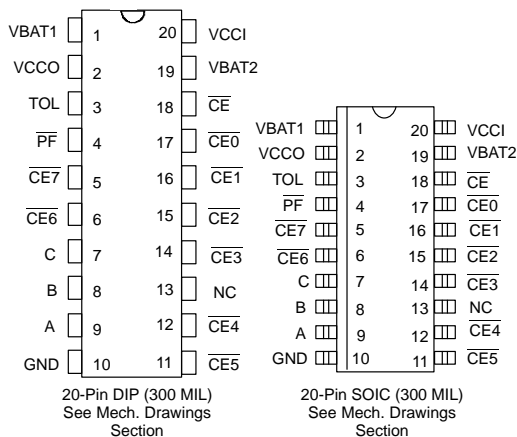
### FEATURES

- 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  $+85^{\circ}\text{C}$

### 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

### 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
$\overline{\text{PF}}$	– Power Fail
NC	– No Connection

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.