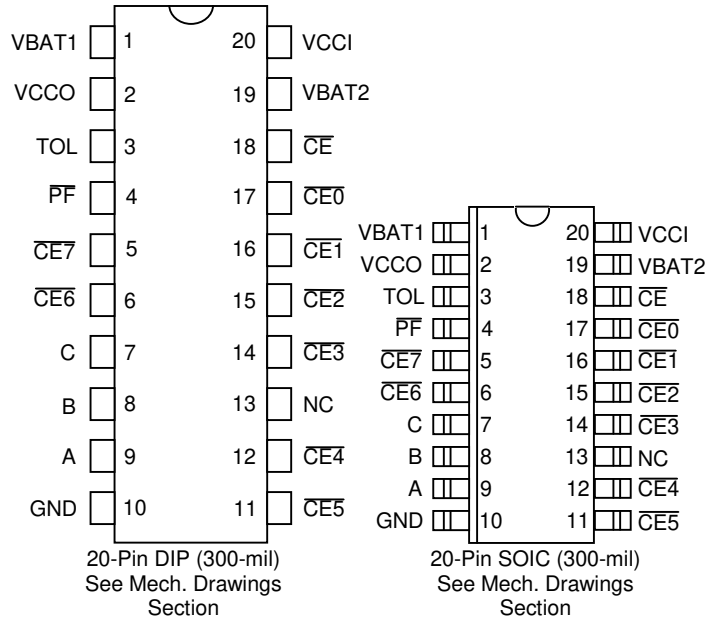


FEATURES

- 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°C to $+85^{\circ}\text{C}$

PIN ASSIGNMENT



PIN DESCRIPTION

- | | |
|------------------------|--------------------------|
| A, B, C | - Address Inputs |
| $\overline{\text{CE}}$ | - Chip Enable Input |
| CE0 - CE7 | - Chip Enable Outputs |
| GND | - Ground |
| V_{BAT1} | - + Battery 1 |
| V_{BAT2} | - + Battery 2 |
| TOL | - Power Supply Tolerance |
| V_{CC1} | - +5V Supply |
| V_{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.