DS1211
Nonvolatile Controller x 8 Chip

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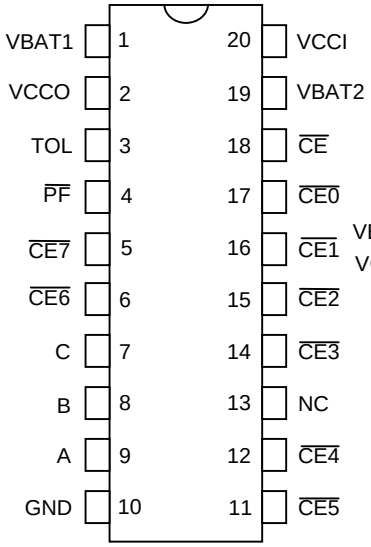
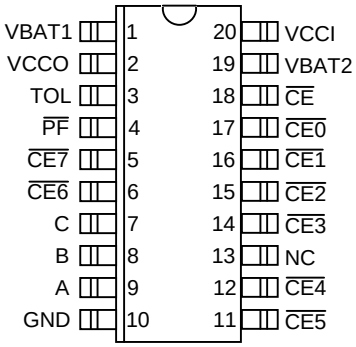
FEATURES

- 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°C

PIN ASSIGNMENT



20-Pin DIP (300-mil)
See Mech. Drawings Section



20-Pin SOIC (300-mil)
See Mech. Drawings Section

PIN DESCRIPTION

A, B, C	- Address Inputs
$\overline{CE}$	- Chip Enable Input
$\overline{CE0}$ - $\overline{CE7}$	- Chip Enable Outputs
GND	- Ground
V_{BAT1}	- + Battery 1
V_{BAT2}	- + Battery 2
TOL	- Power Supply Tolerance
V_{CCI}	- +5V Supply
V_{CC0}	- RAM Supply
$\overline{PF}$	- 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.

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