T-46-23-37

DALLAS SEMICONDUCTOR

DS1211
Nonvolatile Controller x 8 Chip

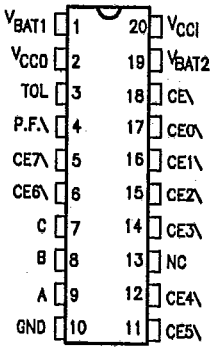
FEATURES

- 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

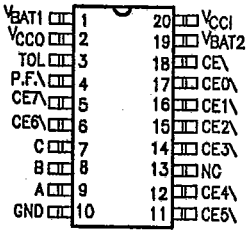
ORDERING INFORMATION:

DS1211	20-Pin DIP
DS1211S	20-Pin SOIC

PIN DESCRIPTION



20-PIN DIP (300 MIL)



20-PIN SOIC (300 MIL)

PIN NAMES (\ Denotes Condition Low)

A, B, C	Address Inputs
CE\	Chip Enable Input
CE0\ - CE7\	Chip Enable Outputs
GND	Ground
V_{BAT1}	+ Battery 1
V_{BAT2}	+ Battery 2
TOL	Power Supply Tolerance
V_{CCI}	+ 5V Supply
V_{CCO}	RAM Supply
P.F.\	Power Fail
N.C.	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 ten years of 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.