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Maxim Integrated DS1211S

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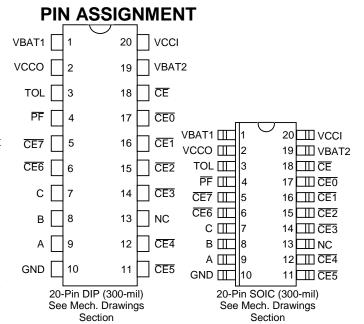


# DS1211 Nonvolatile Controller x 8 Chip

#### www.dalsemi.com

### **FEATURES**

- Converts full CMOS RAMs into nonvolatile memories
- Unconditionally write protects when V<sub>CC</sub> 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 DESCRIPTION

| A, B, C       | - Address Inputs         |
|---------------|--------------------------|
| CE            | - Chip Enable Input      |
| <br>CE0 - 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             |
| —<br>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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