DS1314S+

Nonvolatile Controller 2.7V to 3.3V 16-Pin SOIC W

Manufacturer:	Maxim Integrated
Package/Case:	SOP16
Product Type:	Power Management ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

The DS1314 Nonvolatile Controller with Battery Monitor is a CMOS circuit which solves the application problem of converting CMOS RAM into nonvolatile memory. Incoming power is monitored for an out-of-tolerance condition. When such a condition is detected, chip enable is inhibited to accomplish write protection and the battery is switched on to supply the RAM with uninterrupted power. Special circuitry uses a low-leakage CMOS process which affords precise voltage detection at extremely low battery consumption. In addition to battery-backup support, the DS1314 performs the important function of monitoring the remaining capacity of the lithium battery and providing a warning before the battery reaches end-of-life. Because the open-circuit voltage of a lithium backup battery remains relatively constant over the majority of its life, accurate battery monitoring requires loaded-battery voltage measurement. The DS1314 performs such measurement by periodically comparing the voltage of the battery as it supports an internal resistive load with a carefully selected reference voltage. If the battery voltage falls below the reference voltage under such conditions, the battery will soon reach end-of-life. As a result, the Battery Warning pin is activated to signal the need for battery replacement.

Key Features

Converts CMOS SRAM into nonvolatile memory

Unconditionally write-protects SRAM when V

CC

Automatically switches to battery backup supply when V

CC

Monitors voltage of a lithium cell and provides advanced warning of impending battery failure

Signals low-battery condition on active low Battery Warning output signal

Automatic V

CC

Space-saving 8-pin DIP and SOIC packages

Optional 16-pin SOIC and 20-pin TSSOP versions reset processor when power failure occurs and hold processor in reset during system power-up

Industrial temperature range of -40°C to +85°C

Recommended For You

DS1220AB-150+

Maxim Integrated

DIP-24

DS1245Y-70+

Maxim Integrated

DIP32

DS1245Y-100+

Maxim Integrated

DIP

DS1250Y-70

Maxim Integrated

DIP

DS1220AB-200+

Maxim Integrated

24-EDIP

DS1212

Maxim Integrated

DIP

DS1230Y-70+

Maxim Integrated

DIP

DS1250Y-70IND

Maxim Integrated

DIP

DS1250Y-70IND+

Maxim Integrated

DIP-32

DS1230W-150+

Maxim Integrated

DIP-28

DS1312+

Maxim Integrated

SMDSMT

DS1321+

Maxim Integrated

DIP-16

DS1212+

Maxim Integrated

BGA

DS9092

Maxim Integrated

IBACC

DS9092L

Maxim Integrated

IBACC