

ADVANCE INFORMATION

All information in this data sheet is preliminary and subject to change.

8/93

MAXIM

3.0V/3.3V, Low-Cost μ P Supervisory Circuits with Battery Backup

MAX704T/S/R

General Description

The MAX704T/S/R reduce the complexity and number of components required for power-supply monitoring and battery-control functions in microprocessor (μ P) systems. These devices significantly improve system reliability and accuracy compared to separate ICs or discrete components.

The MAX704T/S/R provide four functions:

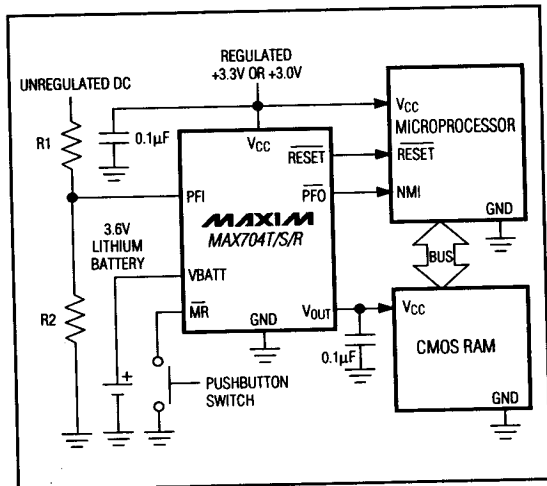
- 1) An active-low reset pulse upon power-up, and a reset output during power-down and brownout conditions.
- 2) Battery-backup switching for CMOS RAM, CMOS μ P, or other low-power logic circuitry.
- 3) An active-low manual-reset input.
- 4) A 1.25V threshold detector for power-fail warning, low-battery detection, or to monitor a power supply other than +3.3V or +3.0V.

The MAX704T, MAX704S, and MAX704R are distinguished by different reset-voltage threshold levels. These devices are available in 8-pin DIP and SO packages.

Applications

Battery-Powered Computers and Controllers
Intelligent Instruments
Automotive Systems
Critical μ P Power Monitoring

Typical Operating Circuit



Features

- ◆ Precision Supply-Voltage Monitor
- ◆ 200ms Reset Time Delay
- ◆ Battery-Backup Power Switching – Battery Can Exceed Vcc
- ◆ 50 μ A Quiescent Supply Current
- ◆ 50nA Battery Supply Current in Battery-Backup Mode
- ◆ Voltage Monitor for Power-Fail or Low-Battery Warning
- ◆ Guaranteed RESET Assertion to Vcc = 1V
- ◆ Debounced TTL-/CMOS-Compatible Manual-Reset Input
- ◆ 8-Pin DIP and SO Packages

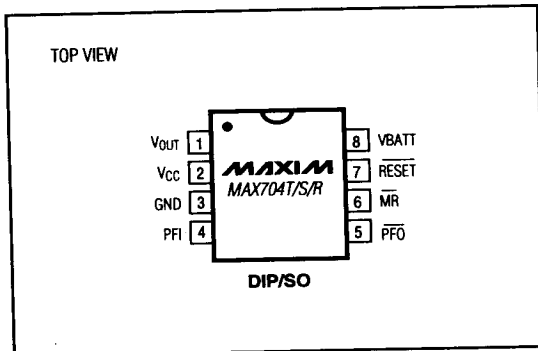
Ordering Information

PART**	TEMP. RANGE	PIN-PACKAGE
MAX704_CPA	0°C to +70°C	8 Plastic DIP
MAX704_CSA	0°C to +70°C	8 SO
MAX704_EPA	-40°C to +85°C	8 Plastic DIP
MAX704_ESA	-40°C to +85°C	8 SO
MAX704_MJA	-55°C to +125°C	8 CERDIP*

* Contact factory for availability and processing to MIL-STD-883.
**These parts offer a choice of reset threshold voltage. Insert the letter corresponding to the desired nominal reset threshold voltage into the blank to complete the part number.

SUFFIX	TYPICAL RESET THRESHOLD (V)
T	3.06
S	2.91
R	2.61

Pin Configuration



MAXIM

Maxim Integrated Products 5-43

Call toll free 1-800-998-8800 for free samples or literature.