

January 27, 2001
MAXIM'S NEW PRODUCT
RELEASE ANNOUNCEMENT

MAX6825
Low-Voltage SOT23 μ P Supervisor with Manual Reset and Complementary Reset Outputs

FOR PRODUCT RELATED INFORMATION CONTACT

THE BUSINESS MANAGER: Rick Gould

DATA SHEET AVAILABLE: Within 4 weeks

ADVERTISEMENT SHOWS: Within 4 weeks

FOR ALL OTHER INFORMATION CONTACT

THE DIRECTOR OF DISTRIBUTION: Ken Bloom

EV KIT AVAILABLE: No

PRESS RELEASE SHOWS: Within 4 weeks

PRODUCT DESCRIPTION

The MAX6825 is a **low-voltage microprocessor (μ P) supervisory circuit** that combines voltage monitoring, watchdog timer, and manual reset input functions in a 5-pin SOT23 package. Microprocessor supervisory circuits significantly improve system reliability and accuracy compared to separate ICs or discrete components. This device asserts a reset signal whenever the monitored voltage drops below its preset threshold, keeping it asserted for a minimum timeout period after V_{CC} rises above the threshold. The MAX6825 has a manual reset input and both push-pull /RESET\ and push-pull RESET. The MAX6825 monitors voltages from +1.8V to +5.0V. These outputs are guaranteed to be in the correct state for V_{CC} down to +1.0V. Nine preprogrammed reset threshold voltages are available (see *Threshold Suffix Guide*). The *Selector Guide* explains the functions offered in this series of parts. *See the attached data sheet page(s) for more information.*

APPLICATION AREAS

- Set-Top Boxes
- Computers and Controllers
- Embedded Controllers
- Portable/Battery-Powered Equipment
- Intelligent Instruments
- Automotive Systems
- Critical μ P Monitoring

PRICING

Those on our pricing distribution list will receive a fax of the prices within 24 hours.

DISTRIBUTOR/SALES INFORMATION (*Please enter your stocking orders with the factory now.*)

SAMPLES AVAILABLE: Now

PLACE STOCKING ORDERS: Now (2 week lead)

PLACE PRODUCTION ORDERS: Now (6 week lead)

For sales strategy and competitive information, look for these parts in a forthcoming Maxim Advantage issue.



Low-Voltage SOT23 μ P Supervisors with Manual Reset and Watchdog Timer

MAX6821-MAX6825

General Description

The MAX6821-MAX6825 are low-voltage microprocessor (μ P) supervisory circuits that combine voltage monitoring, watchdog timer, and manual reset input functions in a 5-pin SOT23 package. Microprocessor supervisory circuits significantly improve system reliability and accuracy compared to separate ICs or discrete components. These devices assert a reset signal whenever the monitored voltage drops below its preset threshold, keeping it asserted for a minimum timeout period after V_{CC} rises above the threshold. In addition, a watchdog timer monitors against code execution errors. A debounced manual reset is also available. The MAX6821-MAX6825 monitor voltages from +1.8V to +5.0V. These outputs are guaranteed to be in the correct state for V_{CC} down to +1.0V.

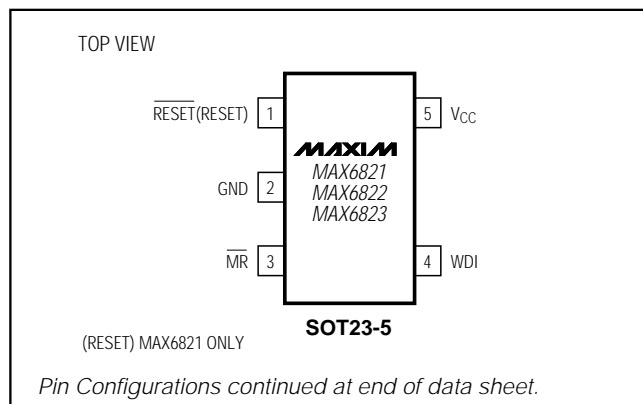
Nine preprogrammed reset threshold voltages are available (see *Threshold Suffix Guide*). The MAX6821, MAX6822, and MAX6823 all have a manual reset input and a watchdog timer. The MAX6821 has push-pull RESET, the MAX6822 has open-drain RESET, and the MAX6823 has push-pull RESET. The MAX6824 has a watchdog timer and both push-pull RESET and push-pull RESET. The MAX6825 has a manual reset input and both push-pull RESET and push-pull RESET. The *Selector Guide* explains the functions offered in this series of parts.

Applications

Set-Top Boxes
Computers and
Controllers
Embedded Controllers
Intelligent Instruments

Automotive Systems
Critical μ P Monitoring
Portable/Battery-
Powered Equipment

Pin Configurations



Typical Operating Circuit appears at end of data sheet.

Features

- ♦ Monitors +1.8V, +2.5V, +3.0V, +3.3V, +5.0V Supplies
- ♦ 140ms (min) Reset Timeout Delay
- ♦ 1.6s Watchdog Timeout Period (MAX6821/MAX6822/MAX6823/MAX6824)
- ♦ Manual Reset Input (MAX6821/MAX6822/MAX6823/MAX6825)
- ♦ Three Reset Output Options
 - Push-Pull RESET
 - Push-Pull RESET
 - Open-Drain RESET
- ♦ Guaranteed Reset Valid to V_{CC} = +1.0V
- ♦ Immune to Short Negative V_{CC} Transients
- ♦ No External Components
- ♦ Small 5-Pin SOT23 Packages

Ordering Information

PART*	TEMP. RANGE	PIN-PACKAGE
MAX6821_UK-T	-40°C to +125°C	5 SOT23-5
MAX6822_UK-T	-40°C to +125°C	5 SOT23-5
MAX6823_UK-T	-40°C to +125°C	5 SOT23-5
MAX6824_UK-T	-40°C to +125°C	5 SOT23-5
MAX6825_UK-T	-40°C to +125°C	5 SOT23-5

*Insert the desired suffix letter (from the table below) into the blank to complete the part number.

Threshold Suffix Guide

SUFFIX	RESET THRESHOLD (V)
L	4.63
M	4.38
T	3.08
S	2.93
R	2.63
Z	2.32
Y	2.19
W	1.67
V	1.58

Note: Bold indicates standard versions. Samples are typically available for standard versions only. All parts require a 2.5k minimum order increment. Contact factory for availability.

Selector Guide appears at end of data sheet.



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For price, delivery, and to place orders, please contact Maxim Distribution at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.