

ADVANCE INFORMATION

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

8/97

MAXIM

2A, Current-Limited, High-Side P-Channel Switch with Thermal Shutdown

General Description

The MAX869L P-channel load switch features an accurate user-set current limit and low on-resistance. This switch is designed to protect your power source from shorts and surges by limiting current and preventing the system supply from being pulled low. The input voltage range is 2.7V to 5.5V.

The MAX869L features a 2A, 45mΩ switch controlled by a logic signal. Current-limit accuracy is $\pm 21\%$, and can be set from 400mA to 2.4A using a single resistor.

The device has a low 12μA quiescent supply current, which reduces to 2μA max in shutdown. It features thermal-shutdown protection and a logic-signal output pin (FAULT) that signals when there is an overcurrent or overtemperature condition.

For other devices in this family, consult the *Selector Guide*.

Selector Guide

PART	R _{ON} AT 3V (mΩ)	NOMINAL CURRENT (A)	COUNT	PACKAGE
MAX869L	45	2	Single	16 QSOP
MAX890L	90	1	Single	8 SO
MAX891L	150	0.5	Single	8 μMAX
MAX892L	300	0.25	Single	8 μMAX
MAX894L	150	0.5	Dual	8 SO
MAX895L	300	0.25	Dual	8 SO

Applications

Universal Serial Bus (USB)
 Notebook Computers
 Personal Communicators
 Palmtop Computers
 Hand-Held Instruments
 Portable Medical Instruments

Features

- ♦ Very Small Footprint (16-pin QSOP is the same size as an 8-pin SO)
- ♦ Low Resistance: 45mΩ at 3V
- ♦ $\pm 21\%$ -Accurate, User-Set Current Limit
- ♦ 12μA (typ) Quiescent Current
- ♦ 0.01μA (typ) Shutdown Current
- ♦ 0.04μA (typ) Leakage to Output when Switch is Off
- ♦ 2.7V to 5.5V Input Range
- ♦ Thermal Shutdown
- ♦ FAULT Output

Ordering Information

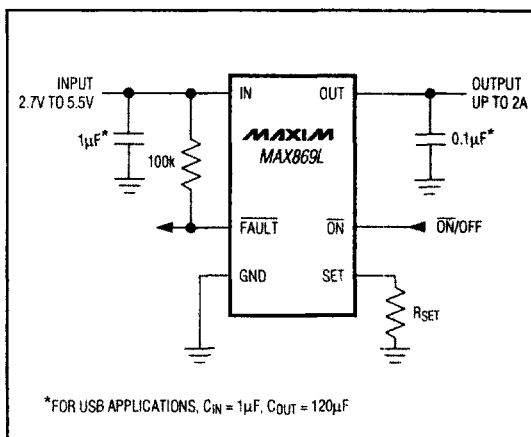
PART	TEMP. RANGE	PIN-PACKAGE
MAX869LC/D	0°C to +70°C	Dice*
MAX869LEEE	-40°C to +85°C	16 QSOP

*Dice are specified at $T_A = +25^\circ\text{C}$.

MAX869L

4

Typical Operating Circuit



MAXIM

Maxim Integrated Products 4-75

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 For small orders, phone 408-737-7600 ext. 3468.

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Pin Configuration

