



30V Internal Switch LCD Bias Supply

MAX1605

General Description

The MAX1605 boost converter contains a 0.5A internal switch in a tiny 6-pin SOT23 package. The IC operates from a +2.4V to +5.5V supply voltage, but can boost battery voltages as low as 0.8V up to 30V at the output.

The MAX1605 uses a unique control scheme providing the highest efficiency over a wide range of load conditions. An internal 0.5A MOSFET reduces external component count, and a high switching frequency (up to 500kHz) allows for tiny surface-mount components. The current limit can be set to 500mA, 250mA, or 125mA, allowing the user to reduce the output ripple and component size in low-current applications.

Additional features include a low quiescent supply current and a shutdown mode to save power. The MAX1605 is ideal for small LCD panels with low current requirements, but can also be used in other applications. A MAX1605EVKIT evaluation kit (EV kit) is available to help speed up design time.

Features

- ◆ Adjustable Output Voltage up to 30V
- ◆ 20mA at 20V from a Single Li+ Battery
- ◆ 88% Efficiency
- ◆ Up to 500kHz Switching Frequency
- ◆ Selectable Inductor Current Limit (125mA, 250mA, or 500mA)
- ◆ 18μA Operating Supply Current
- ◆ 0.1μA Shutdown Current
- ◆ Available in Two Small Packages
 - 6-Pin TDFN
 - 6-Pin SOT23

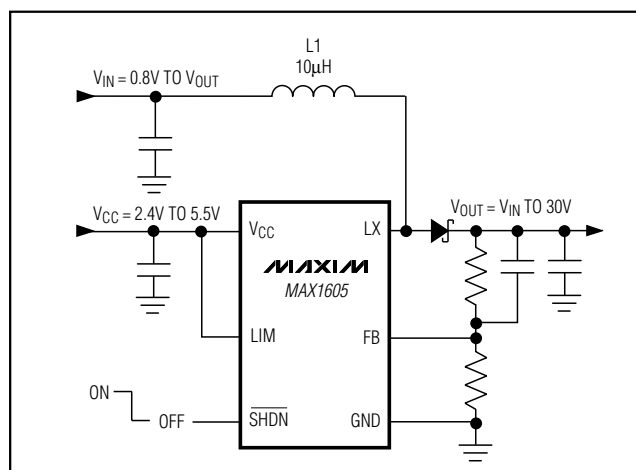
Applications

LCD Bias Generators
 Cellular/Cordless Phones
 Palmtop Computers
 Personal Digital Assistants (PDAs)
 Organizers
 Handy Terminals

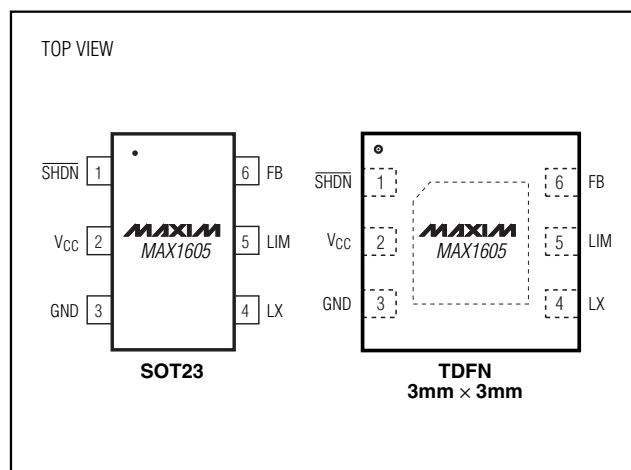
Ordering Information

PART	TEMP RANGE	PIN-PACKAGE	SOT MARK
MAX1605EUT-T	-40°C to +85°C	6 SOT23-6	AAHP
MAX1605ETT-T	-40°C to +85°C	6 TDFN	ABW

Typical Operating Circuit



Pin Configuration



Maxim Integrated Products 1

For pricing, delivery, and ordering information, please contact Maxim/Dallas Direct! at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.