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MAX618

28V, PWM, Step-Up DC-DC Converter

High-Voltage, High Current Step-Up in QSOP Also Offers SEPIC and Flyback Topologies

DESCRIPTION

The MAX618 CMOS, PWM, step-up DC-DC converter generates output voltages up to 28V and accepts inputs from +3V to +28V. An internal 2A, 0.3Ω switch eliminates the need for external power MOSFETs while supplying output currents up to 500mA or more. A PWM control scheme combined with Idle Mode[®] operation at light loads minimizes noise and ripple while maximizing efficiency over a wide load range. No-load operating current is 500μA, which allows efficiency up to 93%.

A fast 250kHz switching frequency allows the use of small surface-mount inductors and capacitors. A shutdown mode extends battery life when the device is not in use. Adaptive slope compensation allows the MAX618 to accommodate a wide range of input and output voltages with a simple, single compensation capacitor.

The MAX618 is available in a thermally enhanced 16-pin QSOP package that is the same size as an industry-standard 8-pin SO but dissipates up to 1W. An evaluation kit (MAX618EVKIT) is available to help speed designs.

KEY FEATURES

- Adjustable Output Voltage Up to +28V
- Up to 93% Efficiency
- Wide Input Voltage Range (+3V to +28V)
- Up to 500mA Output Current at +12V
- 500μA Quiescent Supply Current
- 3μA Shutdown Current
- 250kHz Switching Frequency
- Small 1W 16-Pin QSOP Package

APPLICATIONS

- Automotive-Powered DC-DC Converters
- Industrial +24V and +28V Systems
- LCD Displays
- Palmtop Computers

KEY SPECIFICATIONS: Switchmode DC-DC Power Supplies

Part Number	Min. V _{IN} (V)	Max. V _{IN} (V)	Max. I _{CC} (mA)	Preset V _{OUT} (V)	Min. Adj. V _{OUT} (V)	Max. Adj. V _{OUT} (V)	Typ. I _{OUT} (A)	Outputs	Op. Freq. ≥ (kHz)	Package	EV Kit	Op. Range (°C)	Price @ 1k
MAX618	3	28	0.5	12	V _{in}	28	0.5	• Adjustable O/P Voltage	250	16/QSOP	Yes	-40 to +85 0 to +70	\$3.25

NOTES AND COMMENTS

- Internal 2A MOSFET saves space. Wide range of input and output voltages accommodated with single compensation capacitor

LINKS TO MORE INFORMATION

- [Reliability Report](#)
- Printed Data Sheet: (19-1462; Rev 0; Rev 1999-06-01)
- Complete Data Sheet (PDF 208k): [DOWNLOAD](#) or [E-MAIL](#)
- Japanese Data Sheet (PDF 176k): [DOWNLOAD](#)
- Reliability Report: [MAX618EEE.pdf](#)
- Evaluation Kit: [MAX618EVKIT](#)
- Request Samples: [MAX618](#) [Samples Cart](#)
- New Product Press Release: [1999-05-25](#)
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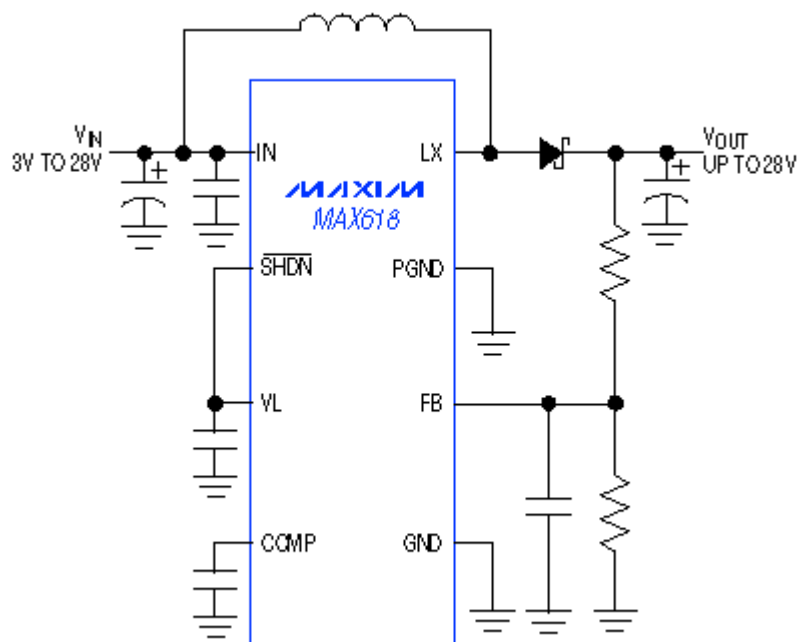
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DIAGRAM

Typical Operating Circuit



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