



MAX5035

1A, 76V, High-Efficiency MAXPower Step-Down DC-DC Converter

DESCRIPTION

The MAX5035 easy-to-use, high-efficiency, high-voltage, step-down DC-DC converter operates from an input voltage up to 76V and consumes only 350 μ A quiescent current at no load. This pulse-width modulated (PWM) converter operates at a fixed 125kHz switching frequency at heavy loads, and automatically switches to pulse-skipping mode to provide low quiescent current and high efficiency at light loads. The MAX5035 includes internal frequency compensation simplifying circuit implementation. The device uses an internal low-on-resistance, high-voltage, DMOS transistor to obtain high efficiency and reduce overall system cost. This device includes undervoltage lockout, cycle-by-cycle current limit, hiccup mode output short-circuit protection, and thermal shutdown.

The MAX5035 delivers up to 1A output current. External shutdown is included, featuring 10 μ A (typ) shutdown current. The MAX5035A/B/C versions have fixed output voltages of 3.3V, 5V, and 12V, respectively, while the MAX5035D features an adjustable output voltage from 1.25V to 13.2V.

The MAX5035 is available in space-saving 8-pin SO and 8-pin plastic DIP packages and operates over the industrial (0°C to +85°C) temperature range.

KEY FEATURES

- Wide 7.5V to 76V Input Voltage Range
- Fixed (3.3V, 5V, 12V) and Adjustable (1.25V to 13.2V) Versions
- 1A Output Current
- Efficiency Up to 94%
- Internal 0.4 Ω High-Side DMOS FET
- 350 μ A Quiescent Current at No Load, 10 μ A Shutdown Current
- Internal Frequency Compensation
- Fixed 125kHz Switching Frequency
- Thermal Shutdown and Short-Circuit Current Limit
- 8-Pin SO and PDIP Packages

APPLICATIONS

- Consumer Electronics
- Distributed Power
- Industrial

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	Op. Range (°C)	Inductor Based	Current Regulator	Price @ 1k
MAX5035	6.5	76	0.5	3.3 5 12	1.25	13.2	1	<ul style="list-style-type: none"> • +/-3% • Hiccup mode short-circuit protection 	125	8/PDIP.300 8/SO.150	0 to +85	Yes	Pulse-by-pulse	\$1.90

LINKS TO MORE INFORMATION

- Printed Data Sheet: (19-2988; Rev 0; Rev 2003-11-05)
- Complete Data Sheet: (PDF 392k): [Download](#) or or [E-MAIL](#)
- Evaluation Kit: [MAX5035EVKIT](#)
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