



-5V Inverting Current-Mode PWM Regulators

General Description

The MAX735/MAX739 are fixed-output, -5V inverting switch-mode regulators with internal power MOSFETs. The MAX739's guaranteed output current is 250mA when powered from a +4.5V input, and exceeds 300mA when powered from +12V. Quiescent supply current is typically 2mA, and falls to less than 1μA in shutdown mode. These power-conserving features, in highly efficient small packages, make the MAX735 and MAX739 ideal for a broad range of on-card and portable equipment applications.

A high-performance, current-mode PWM control scheme coupled with a simple buck-boost switching topology provides tight output voltage regulation and low noise. The oscillator is factory-trimmed to a fixed frequency of 165kHz. The MAX735/MAX739 are production tested in the actual application circuit, guaranteeing output accuracy at ±5% over all line, load, and temperature conditions.

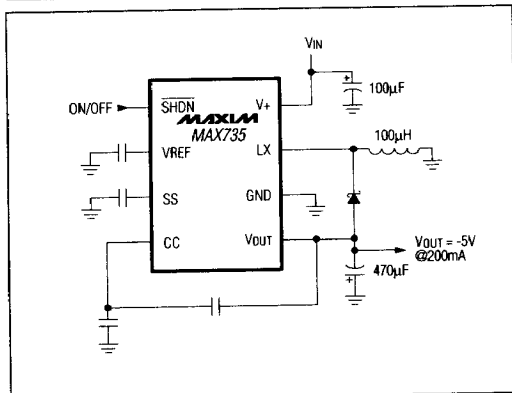
Part	Input Voltage	Load Capability
MAX735	+4V to +11V	200mA
MAX739	+4V to +16V	300mA

For adjustable output versions, refer to the MAX755 and MAX759 data sheets.

Applications

Board-Level DC-DC Conversion
Battery-Powered Equipment
Computer Peripherals

Typical Operating Circuit



Features

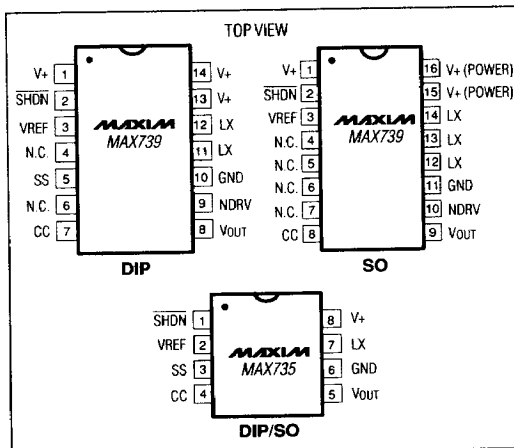
- ◆ Converts Positive Voltages to Negative
- ◆ Guaranteed 300mA at -5V (MAX739)
- ◆ 80% Typical Efficiency
- ◆ 2mA Typical Quiescent Current
- ◆ 1μA Shutdown Mode
- ◆ Current-Mode PWM—Low Noise and Ripple
- ◆ Undervoltage Lockout and Soft-Start
- ◆ Cycle-by-Cycle Current Limiting

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX735CPA	0°C to +70°C	8 Plastic DIP
MAX735CSA	0°C to +70°C	8 SO
MAX735C/D	0°C to +70°C	Dice*
MAX735EPA	-40°C to +85°C	8 Plastic DIP
MAX735ESA	-40°C to +85°C	8 SO
MAX735MJA	-55°C to +125°C	8 CERDIP
MAX739CPD	0°C to +70°C	14 Plastic DIP
MAX739CWE	0°C to +70°C	16 Wide SO
MAX739C/D	0°C to +70°C	Dice*
MAX739EPD	-40°C to +85°C	14 Plastic DIP
MAX739EWE	-40°C to +85°C	16 Wide SO
MAX739MJD	-55°C to +125°C	14 CERDIP

* Contact factory for dice specifications.

Pin Configurations



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MAX735/MAX739