

ADVANCE INFORMATION

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

7/83

MAXIM

3.3V, Step-Down, Current-Mode PWM DC-DC Converters

General Description

The MAX748A/MAX763A are 3.3V-output CMOS, step-down switching regulators. The MAX748A accepts inputs from 3.5V to 16V and delivers up to 900mA (500mA is guaranteed for inputs above 4.75V). The MAX763A accepts inputs between 3.5V and 11V and delivers up to 750mA (500mA is guaranteed for inputs above 4.75V). Typical efficiencies are 85% to 90%. Quiescent supply current is 1.7mA, and only 3μA in shutdown.

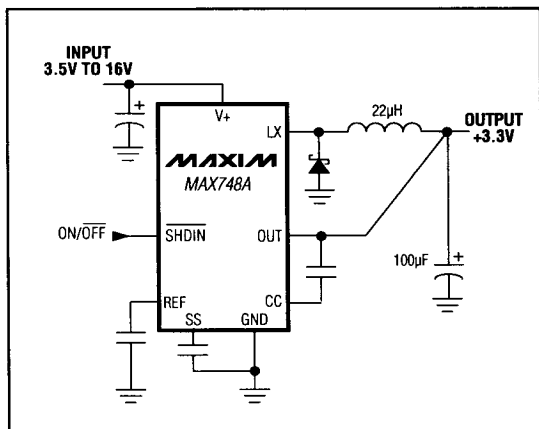
Pulse-width modulation (PWM) current-mode control provides precise output regulation and excellent transient responses. Output voltage accuracy is guaranteed to be ±5% over line, load, and temperature variations. Fixed-frequency switching at 185kHz allows easy filtering of output ripple and noise, as well as the use of small external components. A 22μH inductor will work in most applications, so no magnetics design is necessary.

The MAX748A/MAX763A also feature cycle-by-cycle current limiting, overcurrent limiting, undervoltage lockout, and programmable soft-start protection. The MAX748A is available in 8-pin DIP and 16-pin wide SO packages; the MAX763A comes in 8-pin DIP and SO packages.

Applications

5V-to-3V Converters
Cellular Phones
Portable Instruments
Hand-Held Computers
Computer Peripherals

Typical Operating Circuit



Features

- ♦ Up to 900mA Load Currents (MAX748A)
- ♦ 185kHz, High-Frequency, Current-Mode PWM
- ♦ 85 to 90% Efficiencies
- ♦ 1.7mA Quiescent Current
- ♦ 3μA Shutdown Supply Current
- ♦ 22μH Preselected Inductor Value; No Component Design Required
- ♦ Overcurrent, Soft-Start, and Undervoltage Lockout Protection
- ♦ Cycle-by-Cycle Current Limiting
- ♦ 8-Pin DIP/SO Packages (MAX763A)

Ordering Information

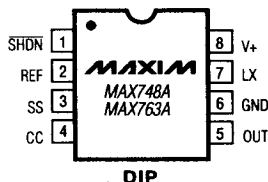
PART	TEMP. RANGE	PIN-PACKAGE
MAX748ACPA	0°C to +70°C	8 Plastic DIP
MAX748ACWE	0°C to +70°C	16 Wide SO
MAX748AC/D	0°C to +70°C	Dice*
MAX748AEPA	-40°C to +85°C	8 Plastic DIP
MAX748AEWE	-40°C to +85°C	16 Wide SO
MAX748AMJA	-55°C to +125°C	8 CERDIP

Ordering Information continued on last page.

* Contact factory for dice specifications.

Pin Configurations

TOP VIEW



Pin Configurations continued on last page.

MAXIM

Maxim Integrated Products 4-147

Call toll free 1-800-998-8800 for free samples or literature.

MAX748A/MAX763A

4

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Ordering Information (continued)

PART	TEMP. RANGE	PIN-PACKAGE
MAX763ACPA	0°C to +70°C	8 Plastic DIP
MAX763ACSA	0°C to +70°C	8 SO
MAX763AC/D	0°C to +70°C	Dice*
MAX763AEPA	-40°C to +85°C	8 Plastic DIP
MAX763AESA	-40°C to +85°C	8 SO
MAX763AMJA	-55°C to +125°C	8 CERDIP

* Contact factory for dice specifications.

Pin Configurations (continued)

