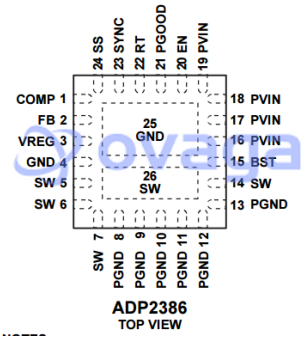
ADP2386ACPZN-R7

Data Sheet

Conv DC-DC 4.5V to 20V Synchronous Step Down Single-Out 0.6V to 18V 6A 24-Pin LFCSP EP T/R

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-24
Product Type	Power Management ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for ADP2386ACPZN-R7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADP2386 is a synchronous step-down, dc-to-dc regulator with an integrated 44 mΩ, high-side power MOSFET and an 11 mΩ, synchronous rectifier MOSFET to provide a high efficiency solution in a compact 4 mm × 4 mm LFCSP package. This device uses a peak current mode, constant frequency pulse-width modulation (PWM) control scheme for excellent stability and transient response. The switching frequency of the ADP2386 can be programmed between 200 kHz to 1.4 MHz. To minimize system noise, the synchronization function allows the switching frequency to be synchronized to an external clock.

The ADP2386 requires minimal external components and operates from an input voltage of 4.5 V to 20 V. The output voltage can be adjusted from 0.6 V to 90% of the input voltage and delivers up to 6 A of continuous current. Each IC draws less than 110 µA current from the input source when it is disabled.

This regulator targets high performance applications that require high efficiency and design flexibility. External compensation and an adjustable soft start function provide design flexibility. The power-good output and precision enable input provide simple and reliable power sequencing.

Other key features include undervoltage lockout (UVLO), overvoltage protection (OVP), overcurrent protection (OCP), short-circuit protection (SCP) and thermal shutdown (TSD).

The ADP2386 operates over the −40°C to +125°C junction temperature range and is available in a 24-lead, 4 mm × 4 mm LFCSP package.

Features

Input voltage: 4.5 V to 20 V

Integrated MOSFET: 44 mΩ/11 mΩ

Reference voltage: 0.6 V ± 1%

Continuous output current: 6 A

Programmable switching frequency: 200 kHz to 1.4 MHz

Synchronizes to external clock: 200 kHz to 1.4 MHz

180° out of phase clock synchronization

Precision enable and power good

External compensation

Internal soft start with external adjustable option

Startup into a precharged output

Supported by ADIsimPower design tool

Application

Communications infrastructure

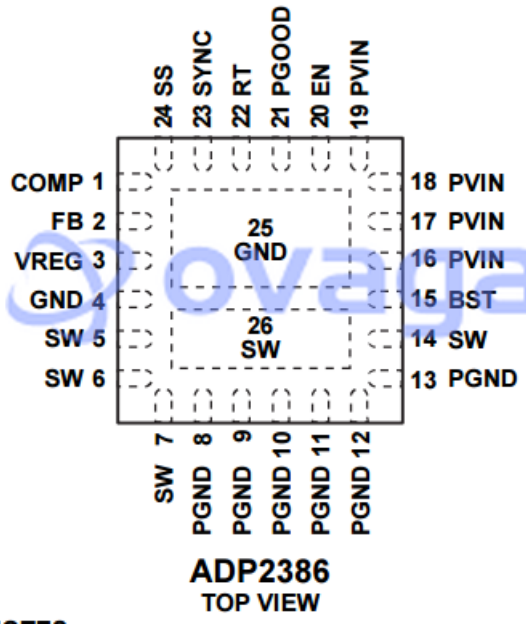
Networking and servers

Industrial and instrumentation

Healthcare and medical

Intermediate power rail conversion

DC-to-dc point-of-load applications



ADP2386
TOP VIEW

TYPICAL APPLICATIONS CIRCUIT

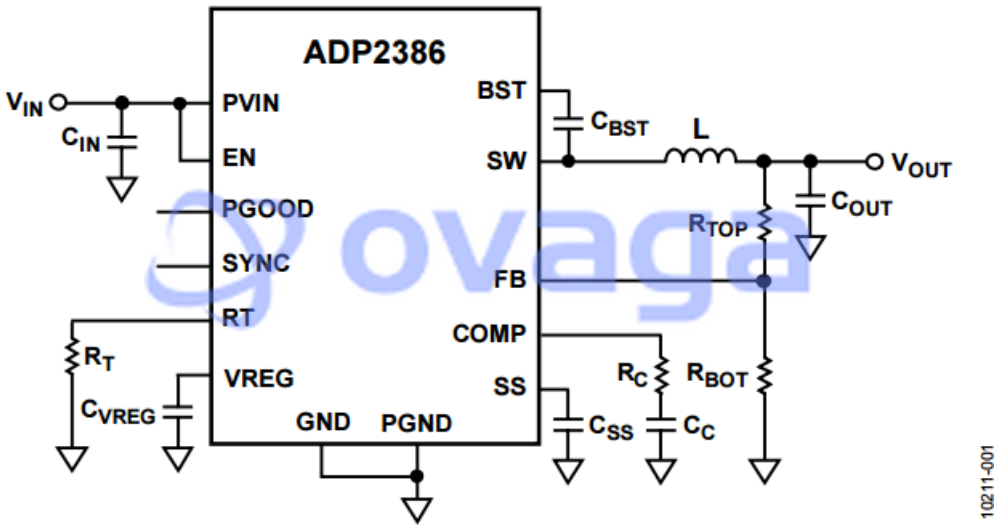


Figure 1.

Related Products

[ADP3336ARMZ-REEL7](#)

Analog Devices, Inc

MSOP-8

[AD737JRZ](#)

Analog Devices, Inc

SOP-8

[ADP3367ARZ](#)

Analog Devices, Inc

SOIC-8

[AD636JH](#)

Analog Devices, Inc

TO-100-10

[ADP3330ARTZ3.3-RL7](#)

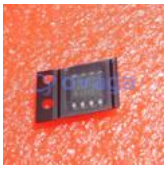
Analog Devices, Inc

SOT-23-6

[ADR434BRZ](#)

Analog Devices, Inc

SOIC-8



[ADR421ARZ](#)

Analog Devices, Inc

SOP-8

[ADR3412ARJZ-R7](#)

Analog Devices, Inc

SOT-23-6