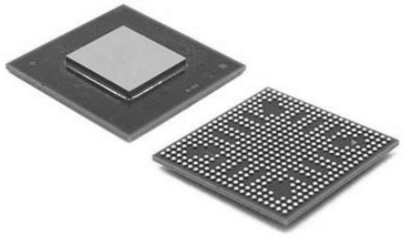
ADP1765ACPZ-R7

Data Sheet

5 A, Low VIN, Low Noise, CMOS Linear Regulator

Manufacturers	Analog Devices, Inc
Package/Case	16-Lead LFCSP (3mm x 3mm x 0.75mm w/ EP)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADP1765ACPZ-R7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADP1765 is a low noise, low dropout (LDO) linear regulator. It is designed to operate from a single input supply with an input voltage as low as 1.10 V without the requirement of an external bias supply to increase efficiency and provide up to 5 A of output current (IOUT).

The low 59 mV typical dropout voltage at a 5 A load allows the ADP1765 to operate with a small headroom while maintaining regulation and providing better efficiency.

The ADP1765 is optimized for stable operation with small 22 µF ceramic output capacitors. The ADP1765 delivers optimal transient performance with minimal printed circuit board (PCB) area.

The ADP1765 is available in fixed output voltages ranging from 0.55 V to 1.5 V. The output voltage (VOUT) of the adjustable output model can be set from 0.5 V to 1.5 V through an external resistor connected between VADJ and ground.

The ADP1765 has an externally programmable soft start time by connecting a capacitor to the SS pin. Short-circuit and thermal overload protection circuits prevent damage in adverse conditions. The ADP1765 is available in a small, 16-lead LFCSP package for the smallest footprint solution to meet a variety of applications.

Features

5 A maximum output current

Low input voltage supply>

Fixed output voltage range (VOUT_FIXED): 0.55 V to 1.5 V

Adjustable output voltage range (VOUT_ADJ): 0.5 V to 1.5 V

Application

Regulation to noise sensitive applications such as radio frequency (RF) transceivers, analog-to-digital converter (ADC) and digital-to-analog converter (DAC) circuits, phase-locked loops (PLLs), voltage controlled oscillators (VCOs) and clocking integrated circuits

Field-programmable gate array (FPGA) and digital signal processor (DSP) supplies

Medical and healthcare

Industrial and instrumentation

Ultralow noise: 2 µV rms, 100 Hz to 100 kHz

Noise spectral density: 5 nV/√Hz at 10 kHz; 4 nV/√Hz at 100 kHz

Low dropout voltage: 59 mV typical at 5 A load

Operating supply current: 5 mA typical at no load

Excellent power supply rejection ratio (PSRR) performance

61 dB typical at 10 kHz at 5 A load

43 dB typical at 100 kHz at 5 A load

Excellent load/line transient response

Soft start to reduce inrush current

Optimized for small 22 µF ceramic capacitors

Current-limit and thermal overload protection

Power-good indicator

Precision enable

16-lead, 3 mm × 3 mm LFCSP package

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