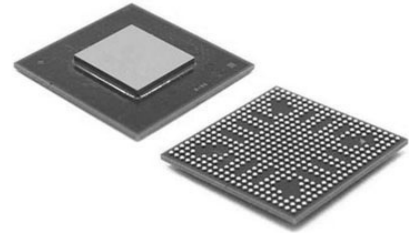


Interleaved Inverting Charge Pump with Negative LDO Regulator

Manufacturers	Analog Devices, Inc
Package/Case	16-Lead LFCSP (4mm x 4mm)
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADP5600ACPZ-R7 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADP5600 is an interleaved charge pump inverter with an integrated, negative, low dropout (LDO) linear regulator. The interleaved charge pump inverter exhibits reduced output voltage ripple and reflected input current noise over conventional inductive or conventional capacitive based solutions. The integrated LDO provides a rail with good regulation at sufficient power supply rejection ratio (PSRR).

The ADP5600 charge pump operates via resistor programming or external clock synchronization at switching frequency range of 100 kHz to 1 MHz. Operating at a higher switching frequency allows the use of small input, output, and fly capacitors. To combine the high switching frequency with internal field effect transistors (FETs), compensation, and soft start gives a best-in-class total solution size for negative rail generation.

The ADP5600 also features comprehensive fault protection for robust applications. These protections include overload protection, shorted fly capacitor protection, undervoltage lockout (UVLO), and thermal shutdown. For easy sequencing, the ADP5600 has a power-good pin.

The integrated LDO of the ADP5600 uses an advanced proprietary architecture to provide high power supply rejection. It also achieves decent line and load transient response with only a small 2.2 μ F ceramic output capacitor. The output can be configured via the SEL1 and SEL2 pins to one of four fixed output voltages and is adjustable from -0.505 V to $-V_{IN} + 0.5$ V via an external feedback divider.

APPLICATIONS

Features

Input voltage: 2.7 V to 16 V

Maximum output current: -100 mA

Integrated power MOSFETs

Four LDO selectable output voltage options

Adjustable output voltage range: -0.505 V to -V

IN

Programmable charge pump switching frequency range

100 kHz to 1 MHz

100 kHz to 1 MHz

Frequency synchronization via SYNC pin

Precision enable and power good

Internal soft start

Output short-circuit and overload protection

Shorted charge pump fly capacitor protection

Integrated LDO output discharge resistor

16-lead, 4 mm × 4 mm LFCSP

Application

Powering the negative rail on bipolar/split supply ADC/DAC/AMP/mux applications

Related Products



[ADP3336ARMZ-REEL7](#)

Analog Devices, Inc
MSOP-8



[ADP3367ARZ](#)

Analog Devices, Inc
SOIC-8



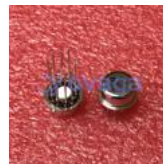
[ADP3330ARTZ3.3-RL7](#)

Analog Devices, Inc
SOT-23-6



[AD737JRZ](#)

Analog Devices, Inc
SOP-8



[AD636JH](#)

Analog Devices, Inc
TO-100-10



[ADR434BRZ](#)

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SOIC-8



[ADR421ARZ](#)

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[ADR3412ARJZ-R7](#)

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