

# ADP5014ACPZ-R7

Data Sheet

Conv DC-DC 2.75V to 6V Step Down Quad-Out 0.5V to 5.4V 2A/4A/1A/2A 40-Pin LFCSP EP T/R

Manufacturers Analog Devices, Inc

Package/Case 40-WFQFN, CSP

Product Type Power Management ICs

RoHS Pb-free Halide free

Lifecycle



Images are for reference only

Please submit RFQ for ADP5014ACPZ-R7 or Email to us: sales@ovaga.com We will contact you in 12 hours.

**RFO** 

### **General Description**

The ADP5014 combines four high performance, low noise buck regulators in a 40-lead LFCSP package. Relying on its low output noise ( $\sim$ 25  $\mu$ V rms when VOUT  $\leq$  VREF), the low noise buck regulator enables the powering up of the noise sensitive signal chain products.

All channels in the ADP5014 integrate high-side and low-side power metal-oxide semiconductor field effect transistors (MOSFET). Channel 1 and Channel 2 deliver a programmable output current of 2 A or 4 A. Combining Channel 1 and Channel 2 in a parallel configuration provides a single output with up to 8 A of current.

Channel 3 and Channel 4 deliver a programmable output current of 1 A or 2 A. Combining Channel 3 and Channel 4 in a parallel configuration can provide a single output with up to 4 A of current.

The ADP5014 features two enable modes. The manual mode has four individual precision enable pins to enable each regulator manually. Alternatively, the sequence mode has one grouped precision enable signal with programmable power-up and power-down delay timers on each rail for specific rail sequence requirements.

The switching frequency of the ADP5014 can be programmed or synchronized to an external clock from 500 kHz to 2.5 MHz.

The ADP5014 offers other key features like selective forced pulse width modulation (FPWM)/power saving mode (PSM), an undervoltage output (UVO), active output discharge, and a power-good flag. Other safety features include input undervoltage lockout (UVLO), overvoltage protection (OVP), overcurrent protection (OCP) and thermal shutdown (TSD).

#### **Features**

Input voltage range: 2.75 V to 6.0 V

Programmable output voltage range:  $0.5~V~to~0.9 \times PVINx$ 

Low output noise: ~25  $\mu V$  rms when VOUT  $\leq$  VREF

500 kHz to 2.5 MHz adjustable switching frequency

Power regulation

Channel 1 and Channel 2: programmable 2 A/4 A sync buck regulators, or single 8 A output in parallel

Channel 3 and Channel 4: programmable 1 A/2 A sync buck regulators, or single 4 A output in parallel

Flexible parallel operation

Precision enable with 0.6 V threshold

Manual or sequence mode for power-up and power-down sequence

Selective FPWM or PSM operation mode

Precision undervoltage comparator

Frequency synchronization input or output

Active output discharge switch

Power-good flag on selective channels via factory fuse

UVLO, OVP, OCP, and TSD protection

40-lead, 6 mm × 6 mm LFCSP package

## **Application**

RF transceiver, high speed analog-to-digital converter (ADC)/digital-to-analog converter (DAC), mixed signal ASIC

FPGA and processor applications

Security and surveillance

Medical applications

#### **Related Products**



Analog Devices, Inc
MSOP-8



ADP3367ARZ

Analog Devices, Inc
SOIC-8



AD737JRZ
Analog Devices, Inc
SOP-8



AD636JH
Analog Devices, Inc
TO-100-10



<u>ADP3330ARTZ3.3-RL7</u>

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