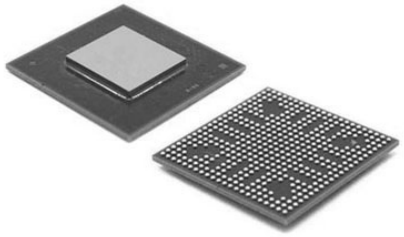
ADN8831ACPZ-REEL7

Data Sheet

Ic thermo cooler ctrlr 32lfcsp

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-32
Product Type	PMIC - Power Management - Specialized
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for ADN8831ACPZ-REEL7 or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADN88311 is a monolithic TEC controller. It has two integrated, zero drift, rail-to-rail comparators, and a PWM driver. A unique PWM driver works with an analog driver to control external selected MOSFETs in an H-bridge. By sensing the thermal detector feedback from the TEC, the ADN8831 can drive a TEC to settle the programmable temperature of a laser diode or a passive component attached to the TEC module.

The ADN8831 supports NTC thermistors or positive temperature coefficient (PTC) RTDs. The target temperature is set as an analog voltage input either from a DAC or from an external resistor divider driven by a reference voltage source.

A proportional integral differential (PID) compensation network helps to quickly and accurately stabilize the ADN8831 thermal control loop. An adjustable PID compensation network example is described in the AN-695 Application Note, Using the ADN8831TEC Controller Evaluation Board. A typical reference voltage of 2.5 V is available from the ADN8831 for thermistor temperature sensing or for TEC voltage/current measuring and limiting in both cooling and heating modes.

Features

Two integrated zero drift, rail-to-rail, chop amplifiers

TEC voltage and current operation monitoring

Programmable TEC maximum voltage and current

Programmable TEC current heating and cooling limits

Configurable PWM switching frequency up to 1 MHz

Power efficiency: > 90%

Temperature lock indication

Optional internal or external clock source

Clock phase adjustment for multiple drop operation

Supports negative temperature coefficient (NTC) thermistors or positive temperature coefficient (PTC) resistance thermal detectors (RTDs)

5 V typical and optional 3 V supplies

Standby and shutdown mode availability

Adjustable soft start feature

5 mm × 5 mm 32-lead LFCSP

Application

Thermoelectric cooler (TEC) temperature control

DWDM optical transceiver modules

Optical fiber amplifiers

Optical networking systems

Instruments requiring TEC temperature control

1 Product is covered by U.S. Patent No. 6,486,643

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

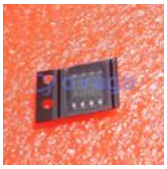
Analog Devices, Inc

SOT-23-6

ADR434BRZ

Analog Devices, Inc

SOIC-8



ADR421ARZ

Analog Devices, Inc

SOP-8

ADR3412ARJZ-R7

Analog Devices, Inc

SOT-23-6