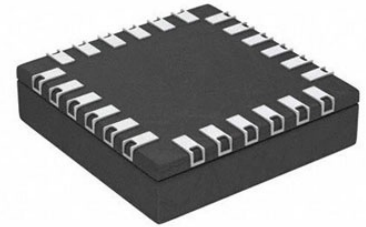


Power Management Specialised 1.5A TEC Driver

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	24-WFQFN, CSP
Product Type	Fiber Optic Control ; Thermoelectric Cooler Controller
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for ADN8834ACPZ-R2 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ADN8834 is a monolithic TEC controller with an integrated TEC controller. It has a linear power stage, a pulse-width modulation (PWM) power stage, and two zero-drift, rail-to-rail operational amplifiers. The linear controller works with the PWM driver to control the internal power MOSFETs in an H-bridge configuration. By measuring the thermal sensor feedback voltage and using the integrated operational amplifiers as a proportional integral differential (PID) compensator to condition the signal, the ADN8834 drives current through a TEC to settle the temperature of a laser diode or a passive component attached to the TEC module to the programmed target temperature.

The ADN8834 supports negative temperature coefficient (NTC) thermistors as well as positive temperature coefficient (PTC) resistive temperature detectors (RTD). The target temperature is set as an analog voltage input either from a digital-to-analog converter (DAC) or from an external resistor divider.

The temperature control loop of the ADN8834 is stabilized by PID compensation utilizing the built in, zero drift chopper amplifiers. The internal 2.50 V reference voltage provides a 1% accurate output that is used to bias a thermistor temperature sensing bridge as well as a voltage divider network to program the maximum TEC current and voltage limits for both the heating and cooling modes. With the zero drift chopper amplifiers, extremely good long-term temperature stability is maintained via an autonomous analog temperature control loop.

## Features

Patented high efficiency single inductor architecture

Integrated low RDS(on) MOSFETs for the TEC controller

TEC voltage and current operation monitoring

No external sense resistor required

Independent TEC heating and cooling current limits settings

Programmable maximum TEC voltage

2.0 MHz PWM driver switching frequency

External synchronization

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

Capable of NTC or RTD thermal sensors

2.50 V reference output with 1% accuracy

Temperature lock indicator

Available in a 25-ball, 2.5 mm × 2.5 mm WLCSP or in a 24-lead, 4 mm × 4 mm LFCSP

## Application

TEC temperature control

Optical modules

Optical fiber amplifiers

Optical networking systems

Instruments requiring TEC temperature control

## Related Products



### [ADP3336ARMZ-REEL7](#)

Analog Devices, Inc  
MSOP-8



### [ADP3367ARZ](#)

Analog Devices, Inc  
SOIC-8



### [ADP3330ARTZ3.3-RL7](#)

Analog Devices, Inc  
SOT-23-6



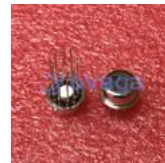
### [ADR421ARZ](#)

Analog Devices, Inc  
SOP-8



### [AD737JRZ](#)

Analog Devices, Inc  
SOP-8



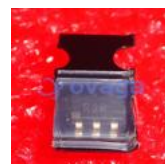
### [AD636JH](#)

Analog Devices, Inc  
TO-100-10



### [ADR434BRZ](#)

Analog Devices, Inc  
SOIC-8



### [ADR3412ARJZ-R7](#)

Analog Devices, Inc  
SOT-23-6