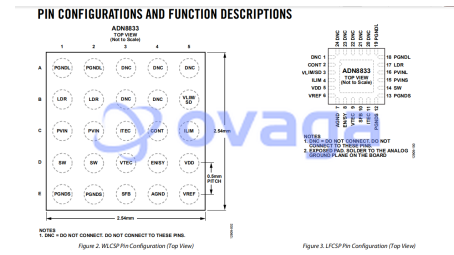


Control Unit 25Pin WLCSP T/R

Manufacturers	Analog Devices, Inc
Package/Case	WLCSP25
Product Type	Power Management - Specialized
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for ADN8833ACBZ-R7 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADN8833 is a monolithic H-bridge TEC driver with integrated 1 A power MOSFETs. It has a linear power stage with the linear driver (LDR) output and a pulse-width modulation (PWM) power stage with the SW output. Depending on the control voltage at the CONT input, the ADN8833 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 control voltage applied to the CONT input is generated by a digital-to-analog converter (DAC) closing the digital proportional, integral, derivative (PID) loop of temperature control system.

The internal 2.5 V reference voltage provides a 1% accurate output that is used to bias a voltage divider network to program the maximum TEC current and voltage limits for both the heating and cooling modes. It can also be a reference voltage for the DAC and the temperature sensing circuit, including a thermistor bridge and an analog-to-digital converter (ADC).

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

Applications

TEC temperature control

Optical modules

Optical fiber amplifiers

Optical networking systems

Instruments requiring TEC temperature control

Features

- Patented high efficiency single inductor architecture
- Integrated low RDSON MOSFETs for TEC driver
- TEC voltage and current operation monitoring
- No external sense resistor required
- Independent TEC heating and cooling current limit settings
- Programmable maximum TEC voltage
- 2 MHz PWM switching frequency
- External synchronization
- Digital thermal control loop compatible
- 2.50 V reference output with 1% accuracy
- Available in a 25-ball, 2.5 mm x 2.5 mm WLCSP or in a 24-lead, 4 mm x 4 mm LFCSP

Application

- TEC temperature control
- Optical modules
- Optical fiber amplifiers
- Optical networking systems
- Instruments requiring TEC temperature control

PIN CONFIGURATIONS AND FUNCTION DESCRIPTIONS

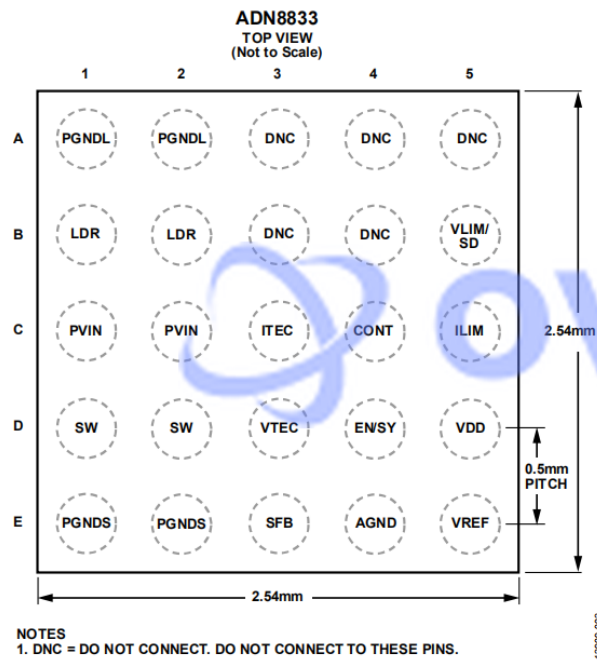


Figure 2. WLCSP Pin Configuration (Top View)

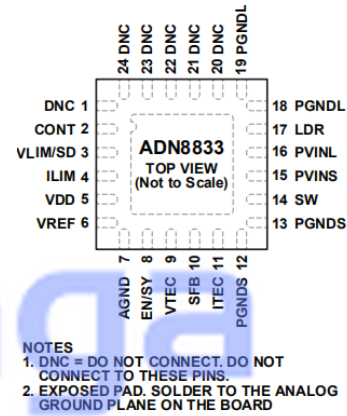


Figure 3. LFCSP Pin Configuration (Top View)

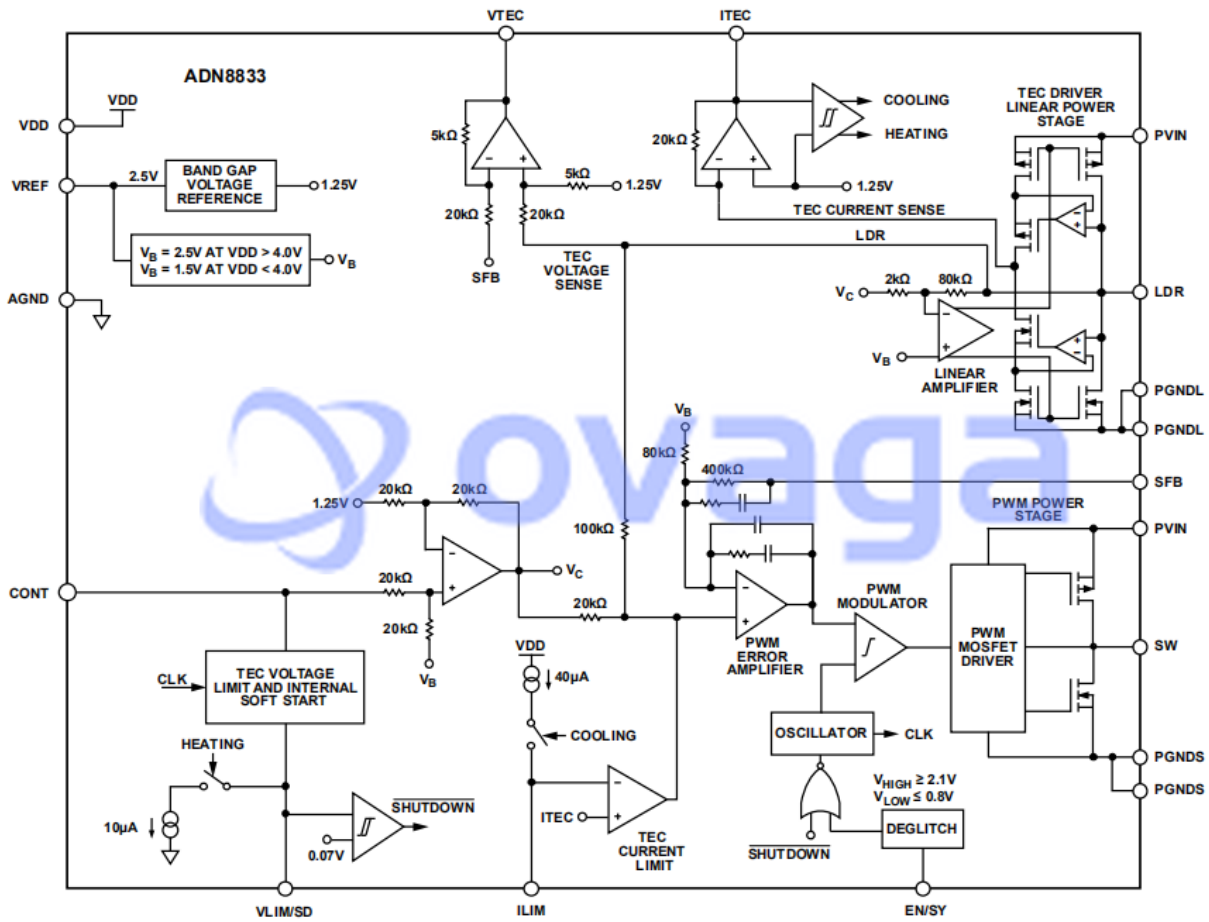


Figure 23. Detailed Functional Block Diagram of the ADN8833 in the WLCSP

Related Products



[ADP3336ARMZ-REEL7](#)

Analog Devices, Inc
MSOP-8



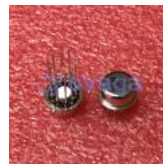
[AD737JRZ](#)

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