

# HA17431 Series

R03DS0086EJ0400

## Shunt Regulator

Rev.4.00

Jan 10, 2014

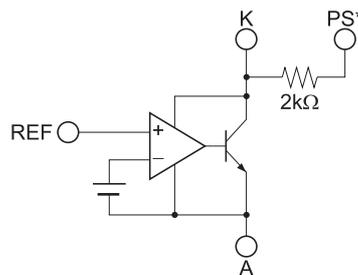
### Description

The HA17431 series is temperature-compensated variable shunt regulators. The main application of these products is in voltage regulators that provide a variable output voltage. The on-chip high-precision reference voltage source can provide  $\pm 1\%$  accuracy in the V versions, which have a  $V_{KA}$  max of 16 volts. The HA17431VLP, which is provided in the MPAK-5V package, is designed for use in switching mode power supplies. It provides a built-in photocoupler bypass resistor for the PS pin, and an error amplifier can be easily constructed on the supply side.

### Features

- The V versions provide  $2.500\text{ V} \pm 1\%$  at  $T_a = 25^\circ\text{C}$
- The HA17431VLP includes a photocoupler bypass resistor ( $2\text{ k}\Omega$ )
- The reference voltage has a low temperature coefficient
- The MPAK-5V(5-pin), MPAKV(3-pin) and UPAKV miniature packages are optimal for use on high mounting density circuit boards

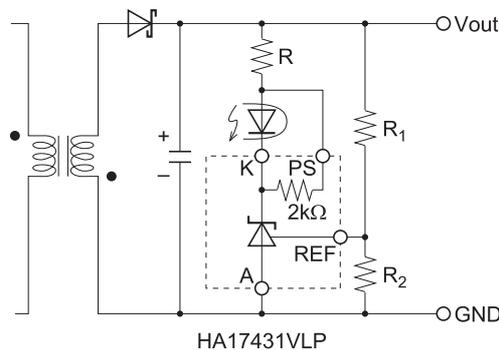
### Block Diagram



Note: \* The PS pin is only provided by the HA17431VLP.

### Application Circuit Example

Switching power supply secondary-side error amplification circuit



## Ordering Information

Item		Reference voltage (at 25°C)			Package Code (Package Name)	Operating Temperature Range
		Normal Version ±4% 2.395V to 2.495V to 2.595V	A Version ±2.2% 2.440V to 2.495V to 2.550V	V Version ±1% 2.475V to 2.500V to 2.525V		
Industrial use	HA17431FP	○			PRSP0008DE-B (FP-8DGV)	-20 to +85°C
	HA17431FPA		○		PRSP0008DE-B (FP-8DGV)	
	HA17431P	○			PRSS0003DC-A (TO-92MODV)	
	HA17431PA		○		PRSS0003DC-A (TO-92MODV)	
	HA17431PNA		○		PRSS0003DA-A (TO-92V)	
	HA17431VLP			○	PLSP0005ZB-A (MPAK-5V)	
	HA17431VP			○	PRSS0003DA-A (TO-92V)	
	HA17431VUP			○	PLZZ0004CA-A (UPAKV)	
	HA17432VUP			○	PLZZ0004CA-A (UPAKV)	
	HA17431VLTP			○	PLSP0003ZB-A (MPAKV)	
	HA17432VLTP			○	PLSP0003ZB-A (MPAKV)	
Commercial use	HA17431UA		○		PLZZ0004CA-A (UPAKV)	-20 to +85°C
	HA17432UA		○		PLZZ0004CA-A (UPAKV)	