



DESCRIPTION

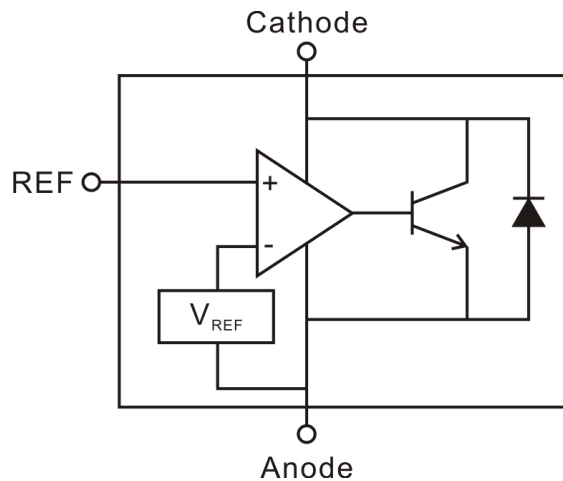
The RS431 series are three-terminal adjustable regulators with guaranteed thermal stability over applicable temperature ranges. The output voltage may be set to any value between V_{REF} (approximately 2.5V) and 36V with two external resistors. These devices have a typical dynamic output impedance of 0.2Ω . Active output circuitry provides a very sharp turn-on characteristic, making these devices excellent replacement for zener diodes in many applications.

FEATURES

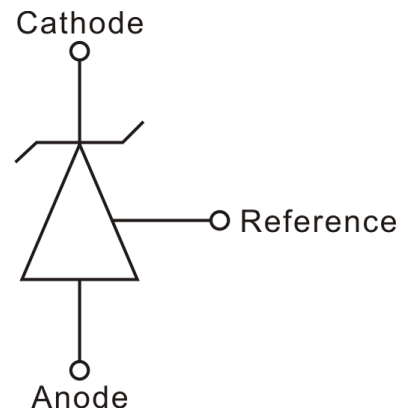
- Programmable Precise Output Voltage from 2.5V to 36V
- High Stability under Capacitive Load
- Low Temperature Deviation: 4.5mV Typical
- Low Dynamic Output Resistance: 0.2Ω Typical
- Sink Current Capacity from 1mA to 100mA
- Low Output Noise
- Wide Operating Range of -40 to 125°C
- Low Equivalent Full-range Temperature Coefficient with 20PPM/ $^\circ\text{C}$ Typical

BLOCK DIAGRAM

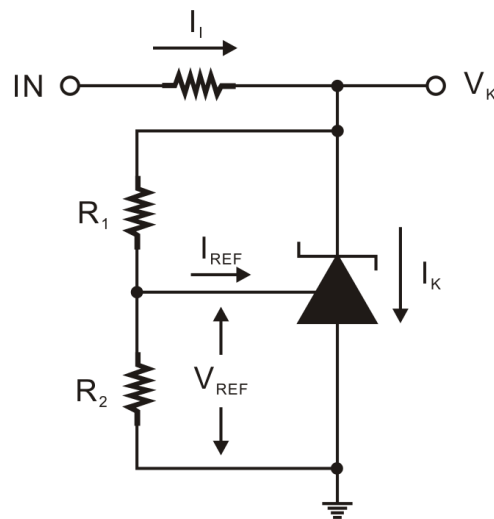
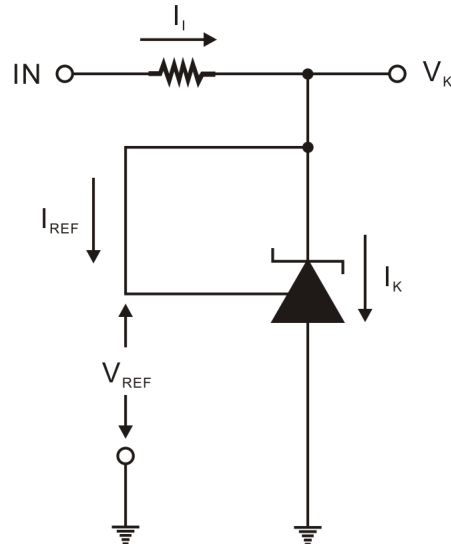
Functional Block Diagram



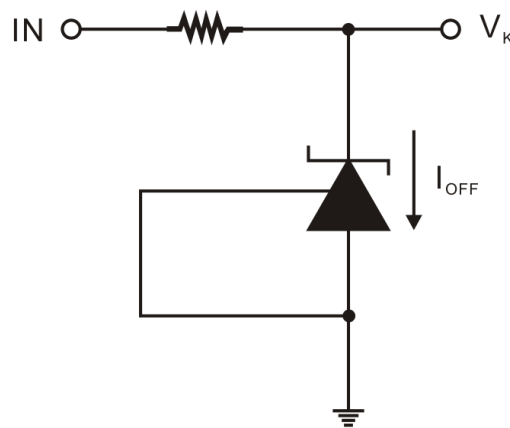
Symbol



APPLICATION CIRCUIT



Note: $V_K = V_{REF}(1 + R_1/R_2) + I_{REF} \times R_1$

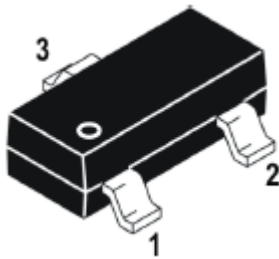


ORDER INFORMATION

Device	Device Code
RS431 X YY Z	X is Reference voltage precision designator: A: $2.5V \pm 0.4\%$ B: $2.5V \pm 0.8\%$ YY is package designator: A: TO-92 (Straight lead option) AT: TO-92 (Formed lead option) N: SOT-23 Z is Lead Free designator: P: Commercial Standard, Lead (Pb) Free and Phosphorous (P) Free Package G: Green (Halogen Free with Commercial Standard)

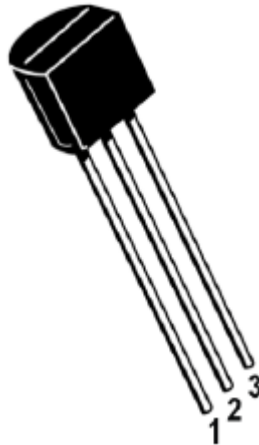
PIN ASSIGNMENTS

SOT-23



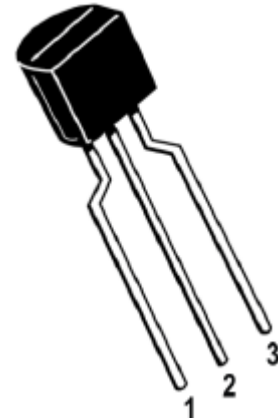
TO-92

(STRAIGHT LEAD OPTION)



TO-92

(FORMED LEAD OPTION)



PIN DESCRIPTION

Package	Pin No.	Description
SOT-23	1	Reference
	2	Cathode
	3	Anode
TO-92	1	Reference
	2	Anode
	3	Cathode



IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

Princeton Technology Corp.

2F, 233-1, Baociao Road,

Sindian Dist., New Taipei City 23145, Taiwan

Tel: 886-2-66296288

Fax: 886-2-29174598

<http://www.princeton.com.tw>