

ADJUSTABLE PRECISION SHUNT REGULATORS
AZ431-B
Description

The AZ431-B is a three-terminal adjustable shunt regulator with guaranteed thermal stability over a full operation range. It features sharp turn-on characteristics, low temperature coefficient and low output impedance, which make it ideal substitute for Zener diode in applications such as switching power supply, charger and other adjustable regulators.

The output voltage of AZ431-B can be set to any value between V_{REF} (2.5V) and the corresponding maximum cathode voltage.

The AZ431-B precision reference is offered in two voltage tolerance: 0.4% and 0.8%.

Features

- Programmable Precise Output Voltage from 2.5V to 18V
- High Stability under Capacitive Load
- Low Temperature Deviation: 4.5mV Typical
- Low Equivalent Full-range Temperature Coefficient with 20PPM/°C Typical
- Sink Current Capacity from 1mA to 100mA
- Low Output Noise
- Wide Operating Range of -40 to 125°C

Applications

- Charger
- Voltage Adapter
- Switching Power Supply
- Graphic Card
- Precision Voltage Reference

Parametric Table

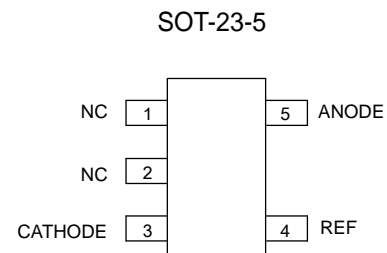
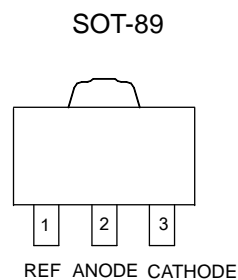
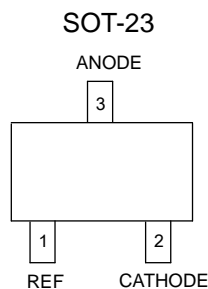
I_{KA} (Max) (mA)	100
I_{KA} (Min) (mA)	1.0
V_{KA}/V_{REF} Initial Tol. (%)	0.8
V_{KA} (Max) (V)	18
V_{KA} (Min) (V)	2.5
Z_{KA} (Typ) (Ω)	0.2
Temp Coeff. (Typ) (PPM/°C)	20
Operating Temperature (Min) (°C)	-40
Operating Temperature (Max) (°C)	125

Benefits

- Easier to Stabilize
- Ultra Low Temperature Coefficient
- Higher V_{REF} Accuracy
- Wider Operating Temperature Range
- Very Competitive Price

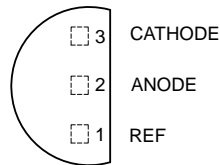
Additional Available Materials

- Samples
- Data Sheet
- Reliability Report
- ESD Report

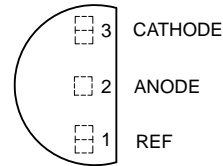
Pin Configuration


**ADJUSTABLE PRECISION SHUNT REGULATORS****AZ431-B****Pin Configuration**

TO-92(Bulk Packing)



TO-92(Ammo Packing)

**Ordering Information Example**

Package	Temperature Range	Voltage Tolerance	Part Number		Marking ID		Packing Type
			Lead Free	Green	Lead Free	Green	
SOT-23	-40 to 125°C	0.4%	AZ431AN-BTRE1	AZ431AN-BTRG1	EA4	GA4	Tape & Reel
		0.8%	AZ431BN-BTRE1	AZ431BN-BTRG1	EA5	GA5	Tape & Reel
SOT-23-5	-40 to 125°C	0.4%	AZ431AK-BTRE1	AZ431AK-BTRG1	E4A	G4A	Tape & Reel
		0.8%	AZ431BK-BTRE1	AZ431BK-BTRG1	E4B	G4B	Tape & Reel
TO-92	-40 to 125°C	0.4%	AZ431AZ-BE1	AZ431AZ-BG1	AZ431AZ-BE1	AZ431AZ-BG1	Bulk
		0.4%	AZ431AZ-BTRE1	AZ431AZ-BTRG1	AZ431AZ-BE1	AZ431AZ-BG1	Ammo
		0.8%	AZ431BZ-BE1	AZ431BZ-BG1	AZ431BZ-BE1	AZ431BZ-BG1	Bulk
		0.8%	AZ431BZ-BTRE1	AZ431BZ-BTRG1	AZ431BZ-BE1	AZ431BZ-BG1	Ammo
SOT-89	-40 to 125°C	0.4%	AZ431AR-BTRE1	AZ431AR-BTRG1	E43C	G43C	Tape & Reel
		0.8%	AZ431BR-BTRE1	AZ431BR-BTRG1	E43D	G43D	Tape & Reel

Detailed information please refer to the relevant datasheet.

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