

**LOW VOLTAGE (1.24V) ADJUSTABLE PRECISION SHUNT REGULATOR****AZ431L****Description**

The AZ431L series ICs are low voltage three-terminal adjustable regulators with guaranteed thermal stability over a full operation range. These ICs feature sharp turn-on characteristics, low temperature coefficient and low output impedance, which make them ideal substitutes for Zener diodes in applications such as switching power supply, charger, motherboard and other adjustable regulators.

The output voltage can be set to any value between 1.24V and 18V with two external resistors.

The AZ431L precision reference is offered in two voltage tolerance: 0.5% and 1.0%.

**Features**

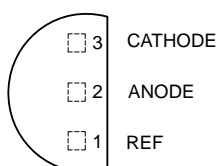
- Wide Programmable Precise Output Voltage from 1.24V to 18V
- High Stability under Capacitive Load
- Low Temperature Deviation: 3mV Typical
- Low Equivalent Full-range Temperature Coefficient: 20PPM/°C Typical
- Low Dynamic Output Resistance: 0.05Ω Typical
- High Sink Current Capacity from 0.1mA to 100mA
- Low Output Noise
- Wide Operating Range of -40 to 125°C

**Applications**

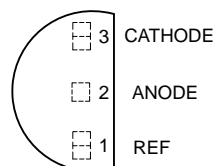
- Graphic Card
- PC Motherboard
- Voltage Adapter
- Switching Power Supply
- Charger

**Pin Configuration**

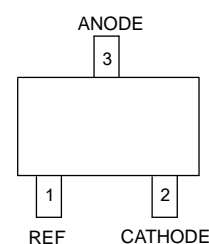
TO-92(Bulk Packing)



TO-92(Ammo Packing)



SOT-23

**Parametric Table**

	AZ431LA	AZ431LB
$I_{KA}$ (Max) (mA)	100	100
$I_{KA}$ (Min) (mA)	0.1	0.1
$V_{KA}/V_{REF}$ Initial Tol. (%)	0.5	1.0
$V_{KA}$ (Max) (V)	18	18
$V_{KA}$ (Min) (V)	1.24	1.24
$Z_{KA}$ (Typ) (Ω)	0.05	0.05
Temp Coeff. (Typ) (PPM/°C)	20	20
Operating Temperature (Min) (°C)	-40	-40
Operating Temperature (Max) (°C)	125	125

**Benefits**

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

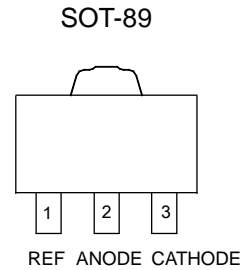
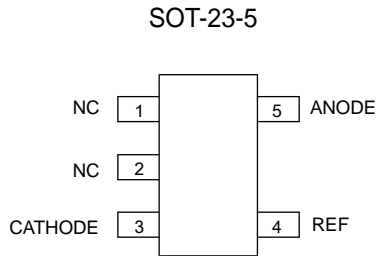
**Additional Available Materials**

- Samples
- Data Sheet
- Reliability Report
- ESD Report



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**Pin Configuration (Continued)**



**Ordering Information Example**

Package	Temperature Range	Voltage Tolerance	Part Number		Marking ID		Packing Type
			Lead Free	Green	Lead Free	Green	
TO-92	-40 to 125°C	0.5%	AZ431LAZ-E1	AZ431LAZ-G1	AZ431LAZ-E1	AZ431LAZ-G1	Bulk
		0.5%	AZ431LAZTR-E1	AZ431LAZTR-G1	AZ431LAZ-E1	AZ431LAZ-G1	Ammo
		1.0%	AZ431LBZ-E1	AZ431LBZ-G1	AZ431LBZ-E1	AZ431LBZ-G1	Bulk
		1.0%	AZ431LBZTR-E1	AZ431LBZTR-G1	AZ431LBZ-E1	AZ431LBZ-G1	Ammo
SOT-23	-40 to 125°C	0.5%	AZ431LANTR-E1	AZ431LANTR-G1	EA6	GA6	Tape & Reel
		1.0%	AZ431LBNTR-E1	AZ431LBNTR-G1	EA7	GA7	Tape & Reel
SOT-23-5	-40 to 125°C	0.5%	AZ431LAKTR-E1	AZ431LAKTR-G1	E5A	G5A	Tape & Reel
		1.0%	AZ431LBKTR-E1	AZ431LBKTR-G1	E6A	G6A	Tape & Reel
SOT-89	-40 to 125°C	0.5%	AZ431LARTR-E1	AZ431LARTR-G1	E41A	G41A	Tape & Reel
		1.0%	AZ431LBRTR-E1	AZ431LBRTR-G1	E41B	G41B	Tape & Reel

Detailed information please refer to the relevant datasheet.

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