



DESCRIPTION

The A432 is available in SOT-23 package.

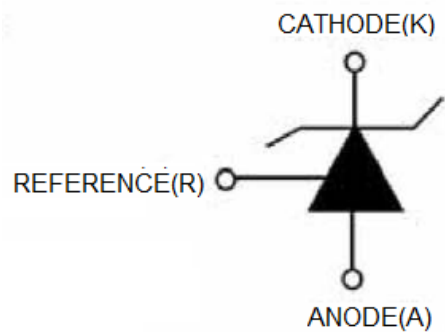
ORDERING INFORMATION

Package Type	Part Number	
SOT-23	E3	A432E3R-X
		A432E3VR-X
Note	R: Tape & Reel V: Halogen free Package X: Output Voltage Tolerance A: 0.5% B: 1%	
AiT provides all RoHS products Suffix “ V ” means Halogen free Package		

FEATURES

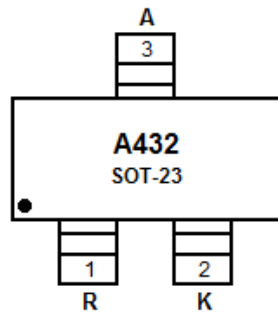
- Low Voltage Operation: 1.24V
- Programmable Out Voltage to 15V
- Sink Current Capability of 1mA to 100mA
- Equivalent Full-Range Temperature Coefficient of 50ppm/°C
- Temperature Compensated for Operation Over Full Rated
- Operating Temperature Range
- Trimmed Band gap to 5%
- Reference Input Voltage: 1.24+0.5% 1%
- Available in SOT-23 Package

PIN DESCRIPTION





PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	R	REFERENCE
2	K	CATHODE
3	A	ANODE



ABSOLUTE MAXIMUM RATINGS

$T_A=25^{\circ}\text{C}$

V_{KA} , Cathode Voltage	15V
I_{KA} , Continuous Cathode Current Range	100mA
I_{REF} , Reference Input Current Range	-0.05mA~ +3mA
P_D , Total Power Dissipation	370mW
T_J , Junction Temperature	-40°C~150°C
T_{OPR} , Operating Temperature	0°C~70°C
T_{STG} , Storage Temperature	-65°C~ +150°C

Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

CLASSIFICATION OF V_{REF}

Rank	1%	Rank	0.5%
Range	1.2276~1.2524	Range	1.233~1.247



ELECTRICAL CHARACTERISTICS

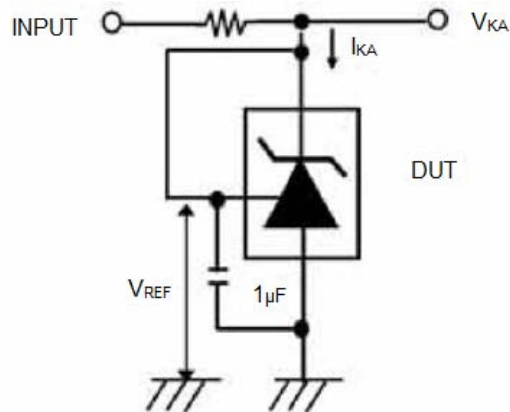
$T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Reference Input Voltage	V_{REF}	$V_{KA} = V_{REF}, I_{KA} = 10\text{mA}$	1.233	1.24	1.247	V
			1.227	1.24	1.252	V
Deviation of Reference Input Voltage Over Full Temperature Range	$\Delta V_{REF} / \Delta T$	$V_{KA} = V_{REF}, I_{KA} = 10\text{mA}$		10	25	mV
		$T_A = \text{Full Range}$				
Ratio of Change in Reference Input Voltage to the change in Cathode Voltage	$\Delta V_{REF} / \Delta V_{KA}$	$\Delta V_{KA} = 1.25\text{V to } 14.5\text{V}$		1.0	2.7	mV/V
Reference Input Current	I_{REF}	$R_1 = 10\text{K}\Omega, R_2 = \infty$		0.5	1	μA
Deviation of Reference Input Current Over Full Temperature Range	$\Delta I_{REF} / \Delta T$	$R_1 = 10\text{K}\Omega, R_2 = \infty$ $T_A = \text{full Temperature}$		0.05	0.3	μA
Minimum Cathode Current for Regulation	$I_{KA(MIN)}$	$V_{KA} = V_{REF}$		60	80	μA
Off-State Cathode Current	$I_{KA(OFF)}$	$V_{KA} = 15\text{V}, V_{REF} = 0\text{V}$		0.04	0.5	μA
Dynamic Impedance	Z_{KA}	$V_{KA} = V_{REF}, I_K = 0.1 \text{ to } 20\text{mA}, f \leq 1.0\text{KHz}$		0.2	0.4	Ω

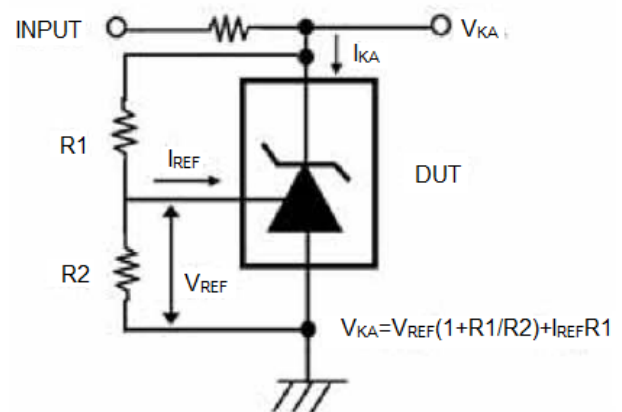


TEST CIRCUIT

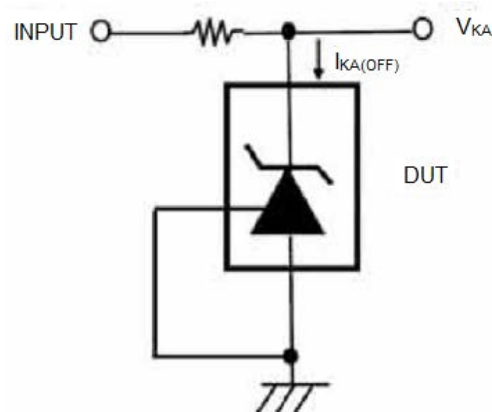
1. Test Circuit for $V_{KA} = V_{REF}$



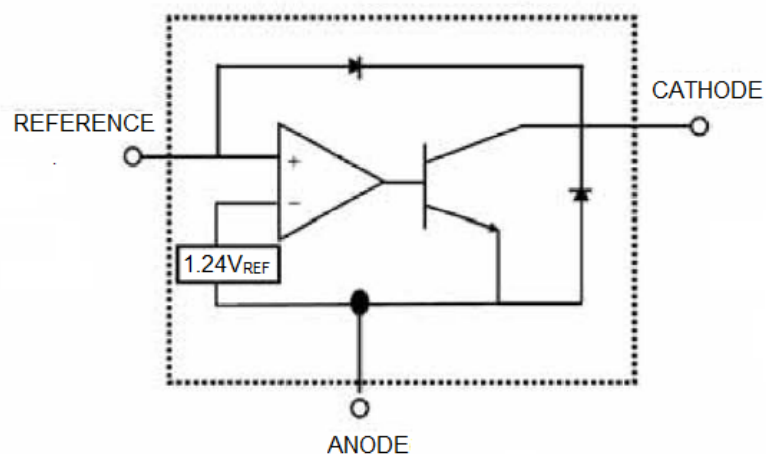
2. Test Circuit for $V_{KA} \geq V_{REF}$



3. Test Circuit for I_{KA} (off)



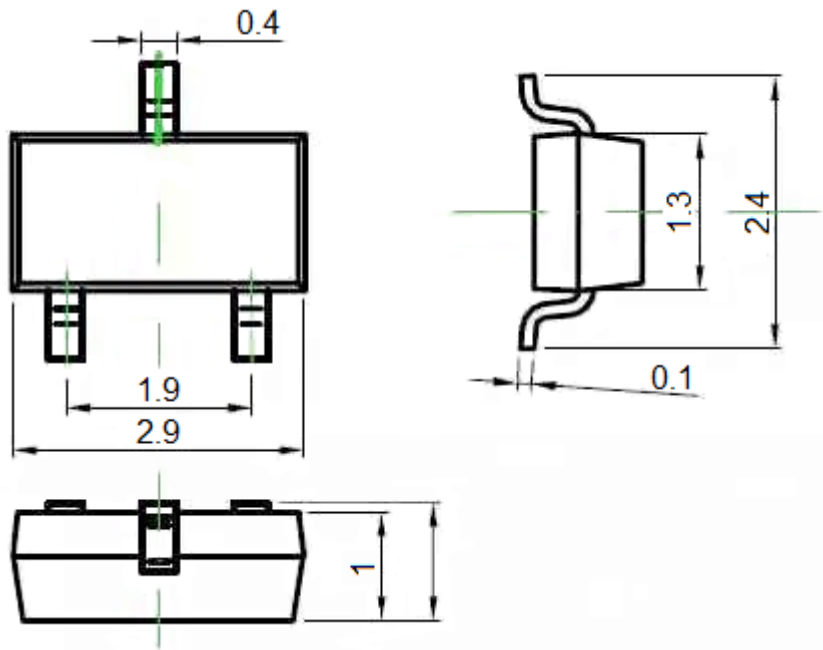
BLOCK DIAGRAM





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)





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