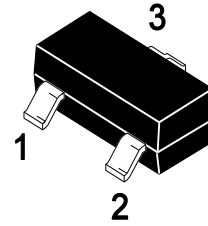




## Features

- Low dynamic output impedance.
- Sink current capability of 1 to 100mA.
- Low output noise voltage
- Fast turn on response

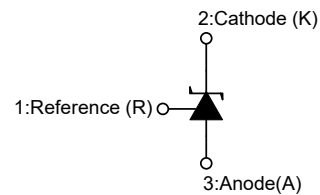
SOT-23



Marking: TL432: 432G  
TL432C: 432CG

## Application

- It provides very wide applications, including shunt regulator, series regulator, switching regulator, voltage reference and others.



## Absolute Maximum Ratings (Ta=25°C unless otherwise specified)

Symbol	Parameter	Rating	Units
V <sub>KA</sub>	Cathode Voltage	20	V
I <sub>KA</sub>	Cathode Current Range(Continuous)	-100 ~ +100	mA
I <sub>REF</sub>	Reference Input Current Range	10	mA
P <sub>D</sub>	Power Dissipation	350	mW
T <sub>J</sub>	Operating Junction	+150	°C
T <sub>OPR</sub>	Operating Ambient	0 ~ +70	°C
T <sub>STG</sub>	Storage Temperature	-65 ~ +150	°C

## Recommended Operating Conditions

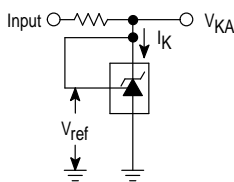
Symbol	Parameter	Min.	Max.	Units
V <sub>KA</sub>	Cathode Voltage	V <sub>REF</sub>	18	V
I <sub>KA</sub>	Cathode Current	0.1	100	mA



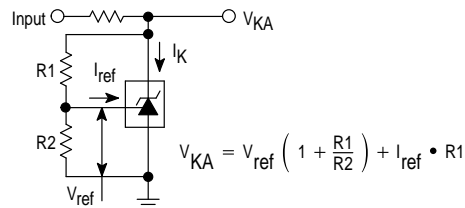
**Electrical Characteristics** (Ta=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
V <sub>REF</sub>	Reference Input Voltage Fig 1	V <sub>KA</sub> =V <sub>REF</sub> , I <sub>KA</sub> =10mA	TL432C	1.244	1.25	1.256	V
			TL432	1.24	1.25	1.26	V
ΔV <sub>REF</sub>	Deviation of Reference Input Voltage Over Temperature Fig 1	V <sub>KA</sub> =V <sub>REF</sub> , I <sub>KA</sub> =10mA, 0°C ≤ T <sub>A</sub> ≤ 70°C		2	10	mV	
$\frac{\Delta V_{REF}}{\Delta V_{KA}}$	Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage Fig 2	I <sub>KA</sub> =10mA ΔV <sub>KA</sub> =V <sub>REF</sub> ~16V			2.4	mV/V	
I <sub>REF</sub>	Reference Input Current	I <sub>KA</sub> =10mA, R1=10kΩ, R2=∞		0.15	0.4	μA	
ΔI <sub>REF</sub>	Deviation of Reference Input Current Over Full Temperature Range Fig 2	I <sub>KA</sub> =10mA, R1=10kΩ, R2=∞, 0°C ≤ T <sub>A</sub> ≤ 70°C			0.6	μA	
I <sub>KA(MIN)</sub>	Minimum Cathode Current for Regulation Fig 1	V <sub>KA</sub> =V <sub>REF</sub>			100	μA	
I <sub>KA(OFF)</sub>	Off-State Cathode Current Fig 3	V <sub>KA</sub> =18V, V <sub>REF</sub> =0		0.04	0.5	μA	
Z <sub>KA</sub>	Dynamic Impedance	V <sub>KA</sub> =V <sub>REF</sub> , I <sub>KA</sub> =1~100mA, f≤1.0kHz		0.15	0.5	Ω	

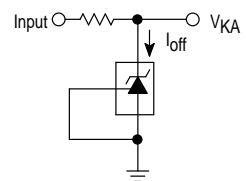
**Figure 1. Test Circuit for V<sub>KA</sub> = V<sub>ref</sub>**



**Figure 2. Test Circuit for V<sub>KA</sub> > V<sub>ref</sub>**

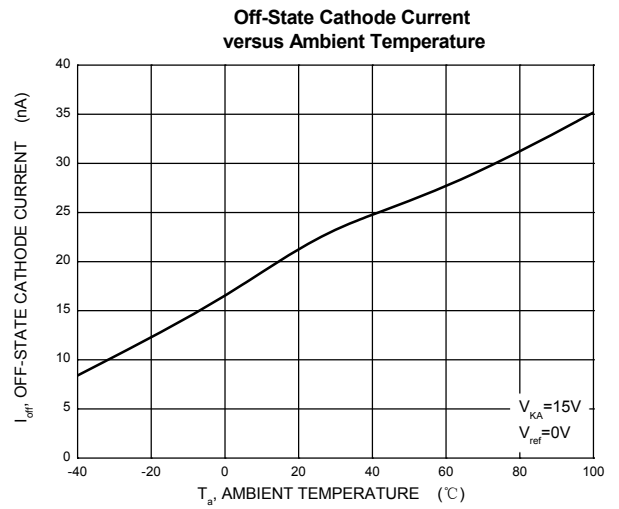
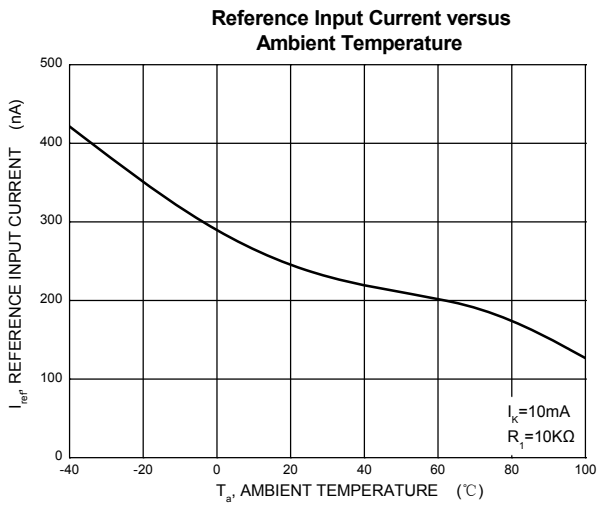
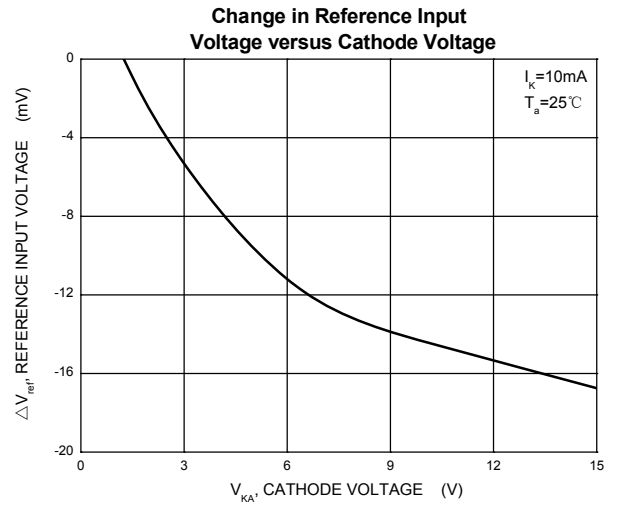
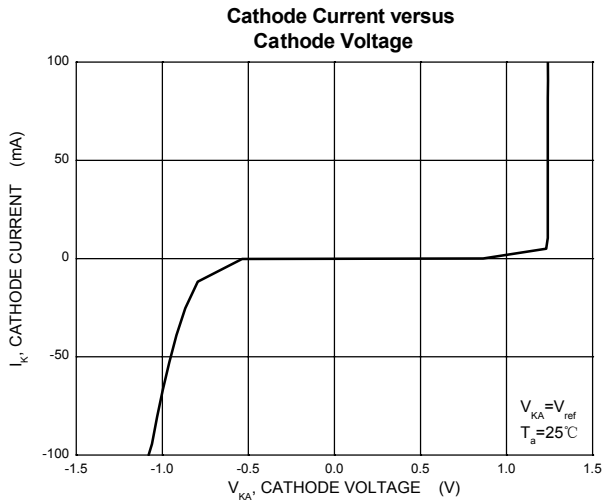


**Figure 3. Test Circuit for I<sub>off</sub>**



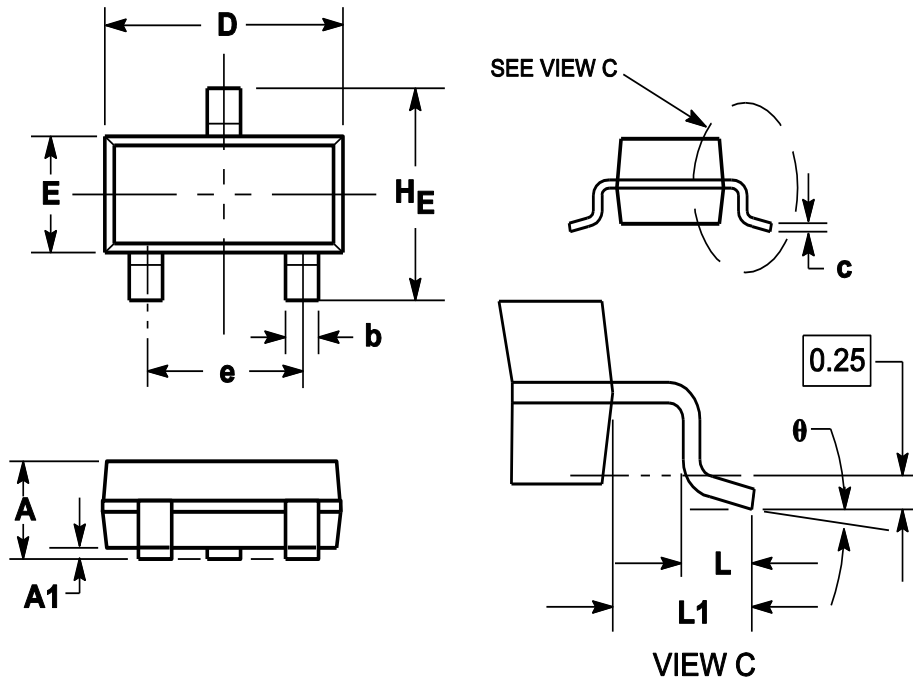


### Typical Characteristic Curves

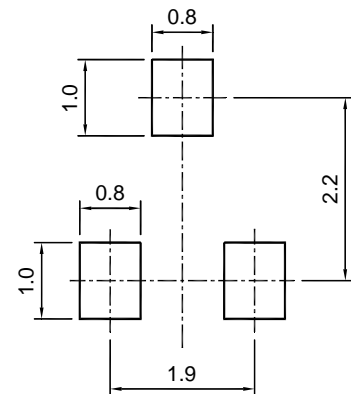




**Package Outline**  
SOT-23



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
HE	2.250	2.400	2.550
e	1.800	1.900	2.000
L1	0.550REF		
L	0.300		0.500
θ	0°		8°



SOT-23 (TO-236)  
**Recommended soldering pad**

**Ordering Information**

Device	Package	Shipping
TL432/TL432C	SOT-23	3000PCS/Reel&Tape

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