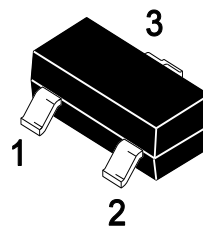




Features

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

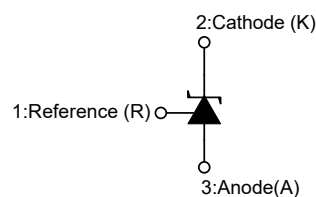
SOT-23



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 _{KA}	Cathode Voltage	20	V
I _{KA}	Cathode Current Range(Continuous)	-100 ~ +100	mA
I _{REF}	Reference Input Current Range	10	mA
P _D	Power Dissipation	350	mW
T _J	Operating Junction	+150	°C
T _{OPR}	Operating Ambient	0 ~ +70	°C
T _{STG}	Storage Temperature	-65 ~ +150	°C

Recommended Operating Conditions

Symbol	Parameter	Min.	Max.	Units
V _{KA}	Cathode Voltage	V _{REF}	18	V
I _{KA}	Cathode Current	0.1	100	mA



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

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
V_{REF}	Reference Input Voltage Fig 1	$V_{KA}=V_{REF}, I_{KA}=10mA$	TL432C	1.244	1.25	1.256	V
			TL432	1.24	1.25	1.26	V
ΔV_{REF}	Deviation of Reference Input Voltage Over Temperature Fig 1	$V_{KA}=V_{REF}, I_{KA}=10mA,$ $0^{\circ}C \leq T_A \leq 70^{\circ}C$			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	$I_{KA}=10mA$ $\Delta V_{KA}=V_{REF} \sim 16V$				2.4	mV/V
I_{REF}	Reference Input Current	$I_{KA}=10mA, R1=10k\Omega, R2=\infty$			0.15	0.4	μA
ΔI_{REF}	Deviation of Reference Input Current Over Full Temperature Range Fig 2	$I_{KA}=10mA, R1=10k\Omega, R2=\infty,$ $0^{\circ}C \leq T_A \leq +70^{\circ}C$				0.6	μA
$I_{KA(MIN)}$	Minimum Cathode Current for Regulation Fig 1	$V_{KA}=V_{REF}$				100	μA
$I_{KA(OFF)}$	Off-State Cathode Current Fig 3	$V_{KA}=18V, V_{REF}=0$			0.04	0.5	μA
Z_{KA}	Dynamic Impedance	$V_{KA}=V_{REF}, I_{KA}=1 \sim 100mA, f \leq 1.0kHz$			0.15	0.5	Ω

Figure 1. Test Circuit for $V_{KA} = V_{ref}$

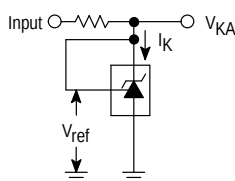


Figure 2. Test Circuit for $V_{KA} > V_{ref}$

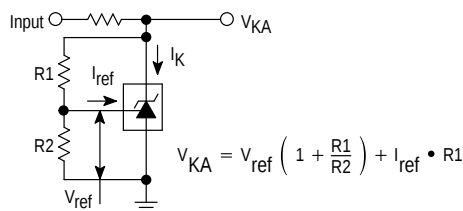
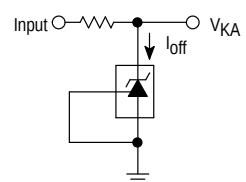
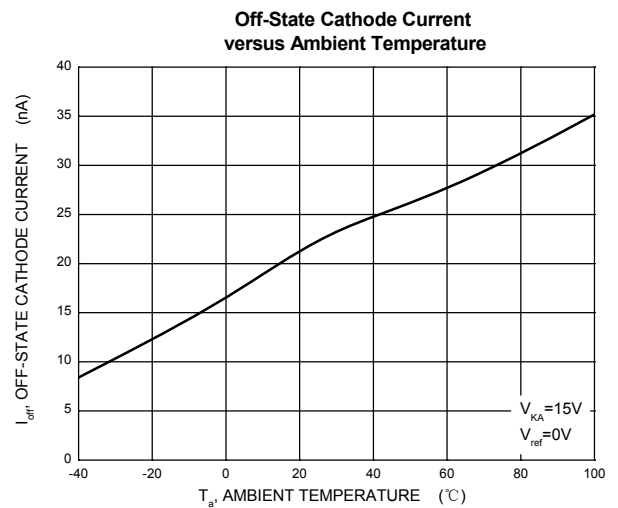
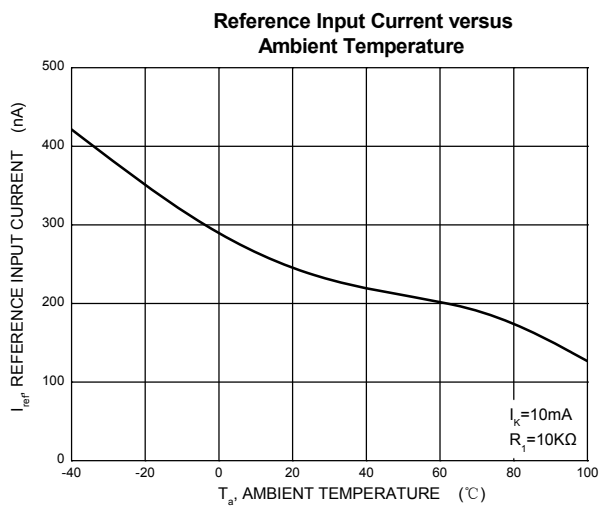
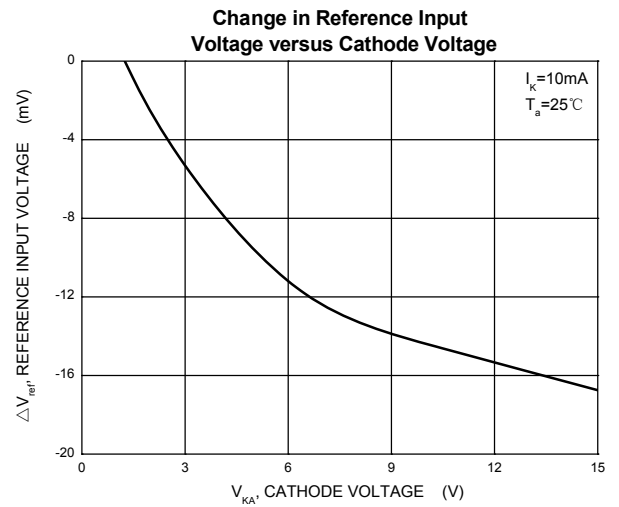
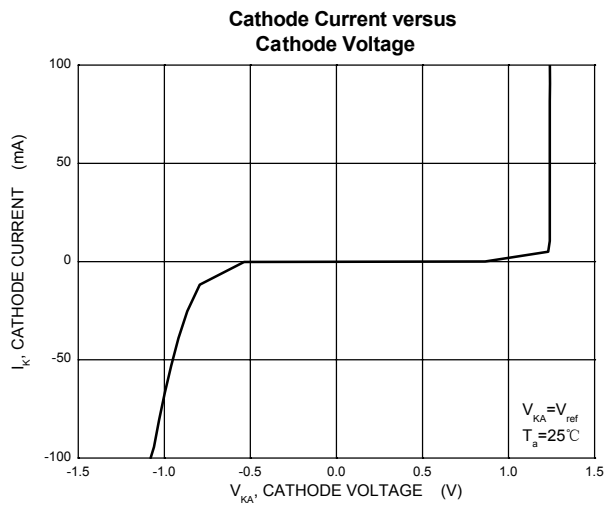


Figure 3. Test Circuit for I_{off}





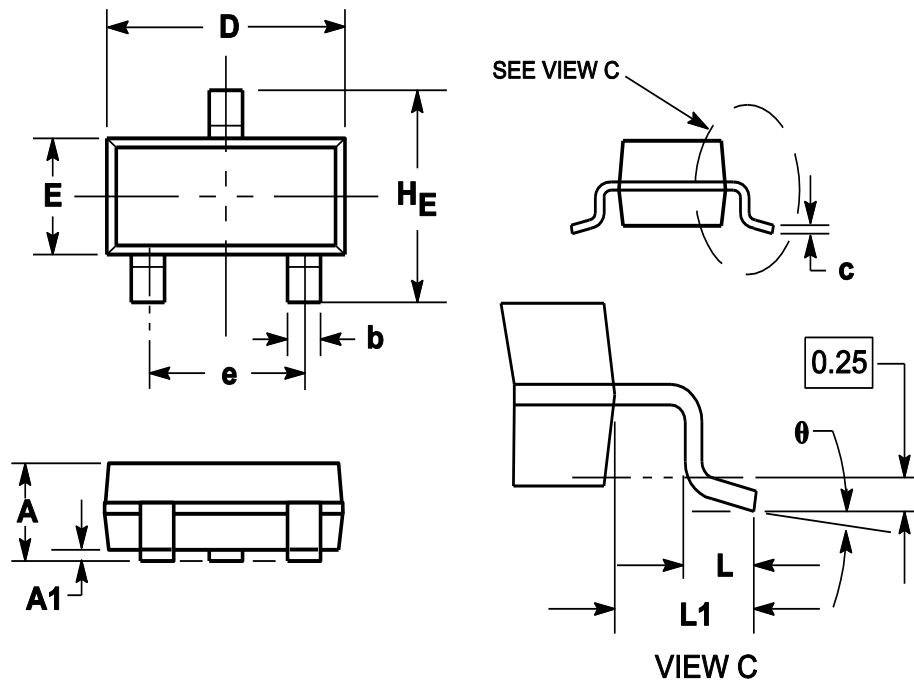
Typical Characteristic Curves



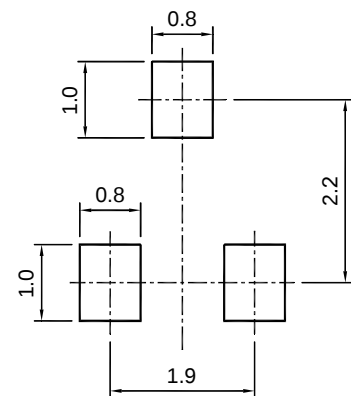


Package Outline

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