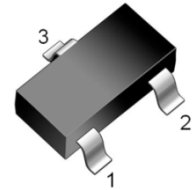


**FEATURES**

- Programmable output Voltage to 36V
- Low dynamic output impedance 0.22Ω.
- Sink current capability of 1.0 to 100mA.
- Low output noise.
- Fast turn-on response.
- Equivalent full-range temperature coefficient of 50ppm/°C typical for operation over full rated operating temperature range.

**SOT-23**

1: REFERENCE : CATHODE 3: ANODE

**MAXIMUM RATINGS** (Full operating ambient temperature range applies, unless otherwise noted.)

Parameter	Symbol	Ratings	Unit
Cathode Voltage	$V_{KA}$	36	V
Cathode Current	$I_{KA}$	-100~+150	mA
Reference Input Current Range	$I_{REF}$	0.05~10	mA
Power Dissipation	$P_D$	300	mW
Operating Junction	$T_J$	150	°C
Operating Ambient	$T_{OPR}$	0~70	°C
Storage Temperature	$T_{STG}$	-65~+150	°C

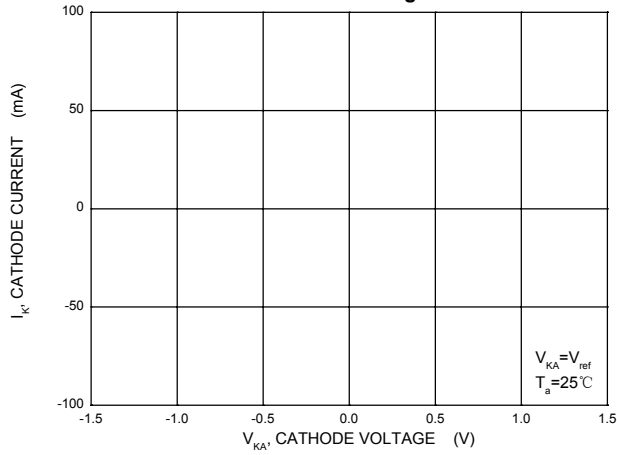
**ELECTRICAL CHARACTERISTICS** ( $T_a = 25\text{ °C}$  unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reference Input Voltage	$V_{REF}$	$V_{KA}=V_{REF}, I_{KA}=10\text{mA}$	2.4875	2.500	2.5125	V
Deviation of reference Input Voltage Over temperature (Note)	$V_{REF(dev)}$	$T_{MIN} \leq T_A \leq T_{MAX}$		3.5	16	mV
Ratio of Change in Reference Input Voltage to the Change in Cathode Voltage	$\Delta V_{REF} / \Delta V_{KA}$	$\Delta V_{KA} = 10V - V_{REF}$ $\Delta V_{KA} = 36V - 10V$		-1.4 -1.0	-2.7 -2.0	mV/V
Reference Input Current	$I_{REF}$	$R1=10k\Omega, R2=\infty$		1.8	4	uA
Deviation of Reference Input Current Over Full Temperature Range	$I_{REF(dev)}$	$R1=10k\Omega, R2=\infty$		0.4	1.2	uA
Minimum Cathode Current for Regulation	$I_{KA(min)}$	$V_{KA}=V_{REF}$		0.25	0.5	mA
Off-State Cathode Current	$I_{KA(off)}$	$\Delta V_{KA} = 36V, V_{REF} = 0V$		0.26	0.9	uA
Dynamic Impedance	$Z_{KA}$	$I_{KA}=10\text{mA to }100\text{mA}$		0.22	0.5	Ω

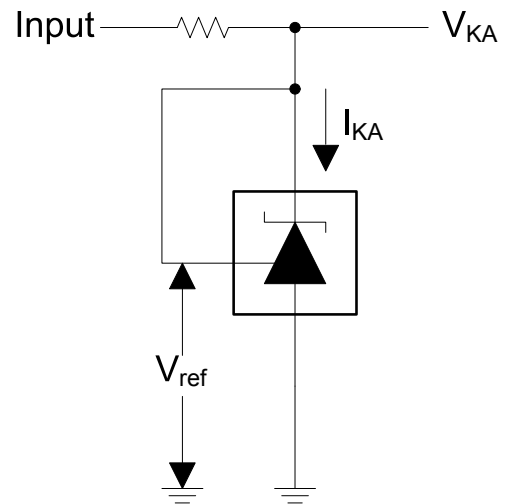
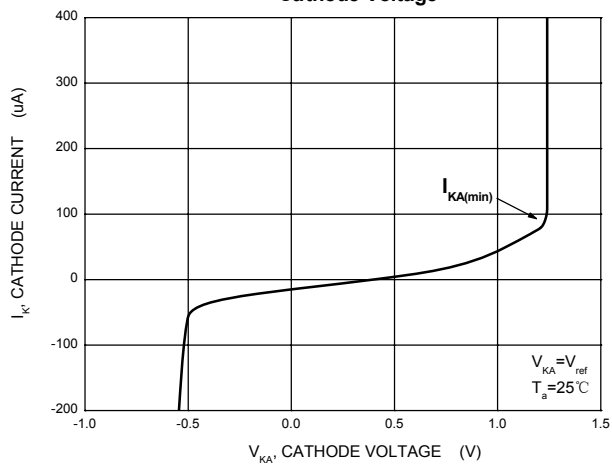
Note :  $T_{MIN}=0\text{ °C}$  ,  $T_{MAX}=+70\text{ °C}$

## Typical Characteristics

**Cathode Current versus Cathode Voltage**

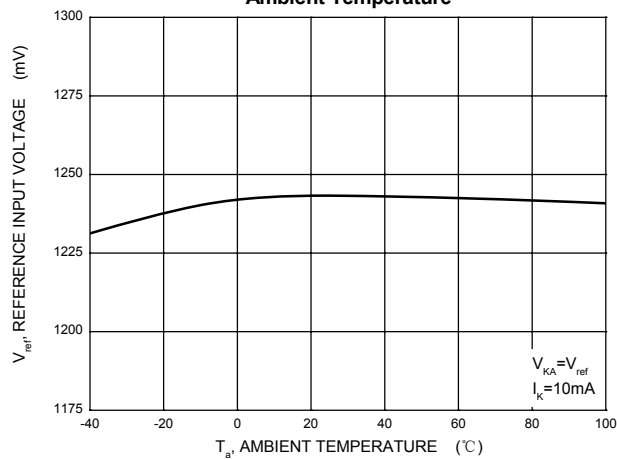


**Cathode Current versus Cathode Voltage**

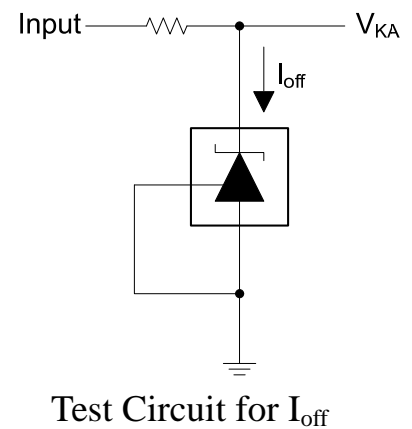
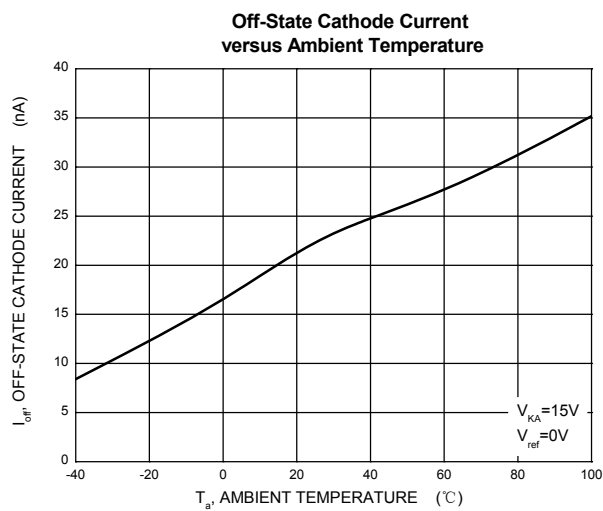
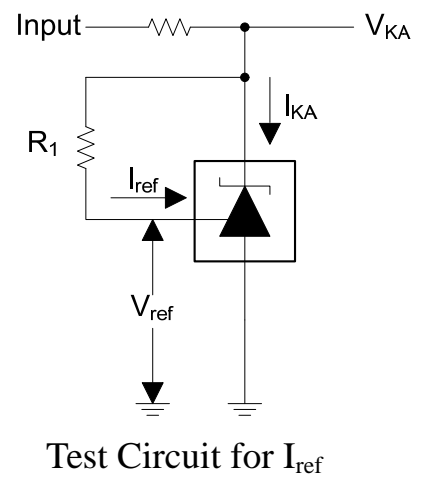
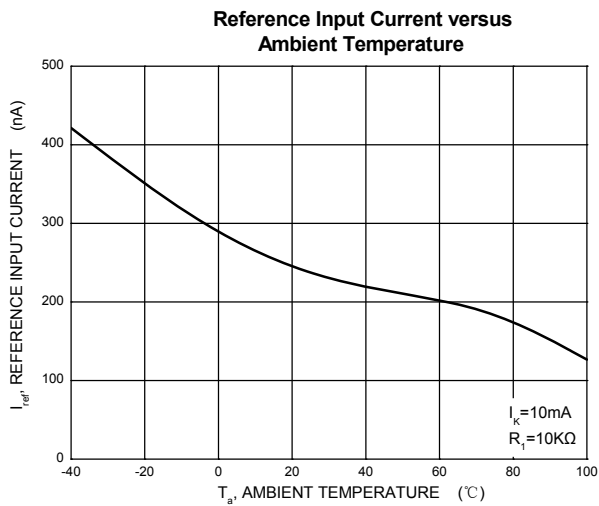
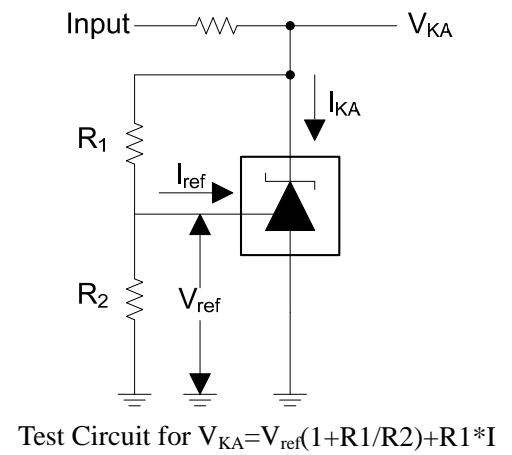
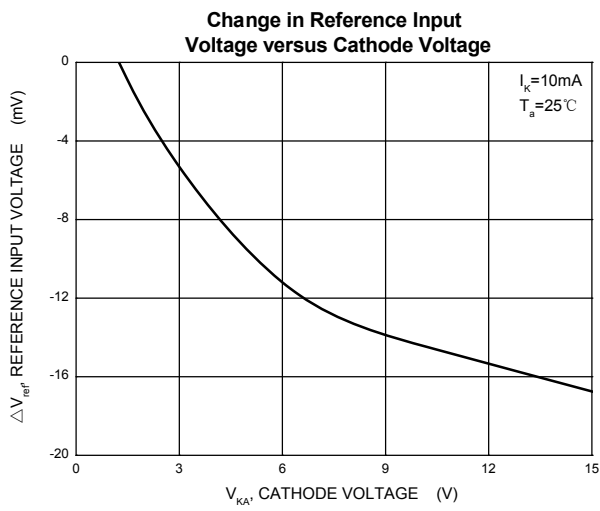


Test Circuit for  $V_{KA} = V_{ref}$

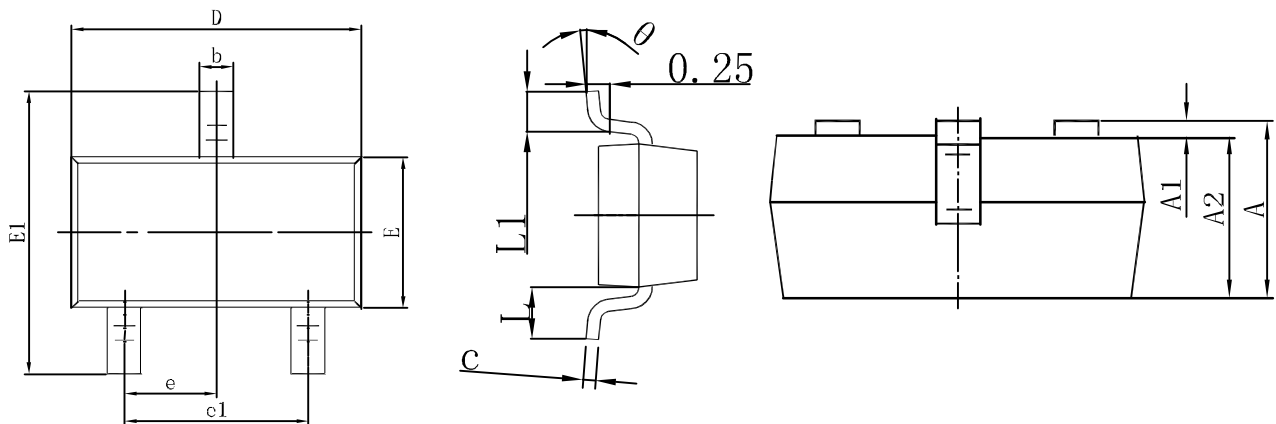
**Reference Input Voltage versus Ambient Temperature**



### Typical Characteristics

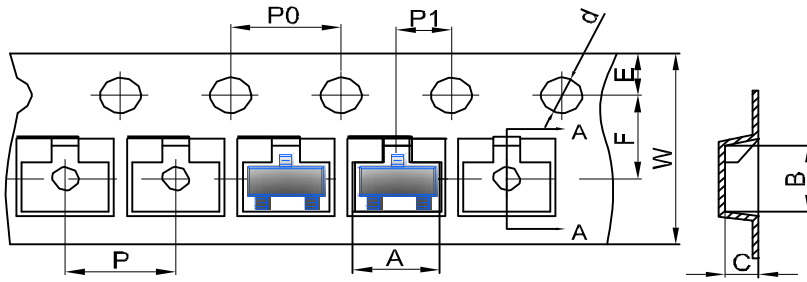


SOT-23 Package Outline Dimensions



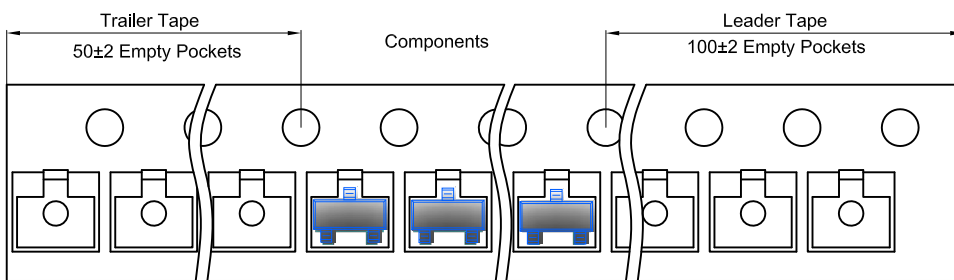
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**SOT-23 Embossed Carrier Tape**

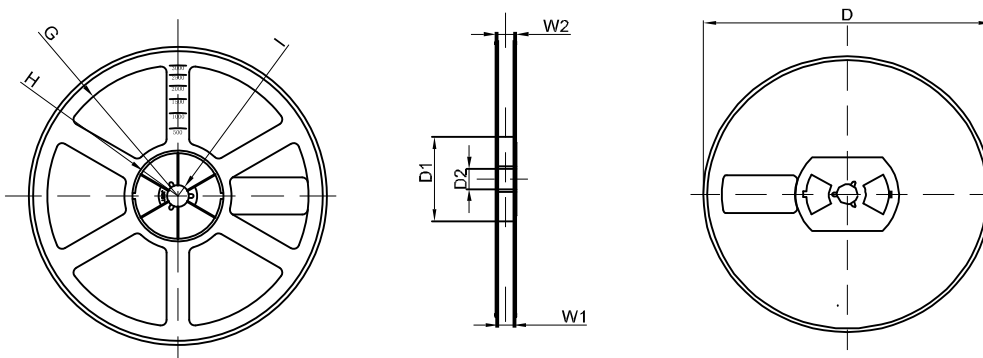


DIMENSIONS ARE IN MILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1
SOT-23	3.15	2.77	1.22	φ1.50	1.75	3.50	4.00	4.00	2.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SOT-23 Tape Leader and Traller**



**SOT-23 Reel**



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	φ178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1