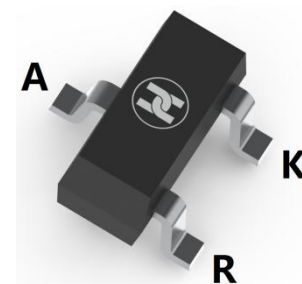


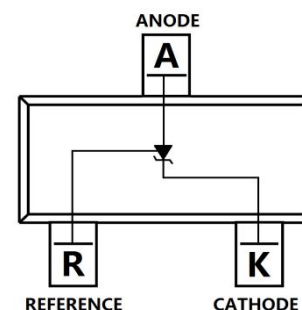
ADJUSTABLE ACCURATE REFERENCE SOURCE

FEATURES

- Programmable Precise Output Voltage from 2.5V to 36V or 18V
- Very Accurate Reference Voltage: 0.15% Typical
- High Stability under Capacitive Load
- Low Temperature Deviation: 4.5mV Typical
- Low Equivalent Full-range Temperature Coefficient with 20PPM/oC Typical
- Low Dynamic Output Resistance: 0.2Ω Typical
- Sink Current Capacity from 1mA to 100 mA
- Low Output Noise
- Wide Operating Range of -40 to 125oC



SOT-23



APPLICATION

- Shunt Regulator
- High-Current Shunt Regulator
- Precision Current Limiter

MECHANICAL DATA

- Case: SOT-23
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.008 grams (approximate)

MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

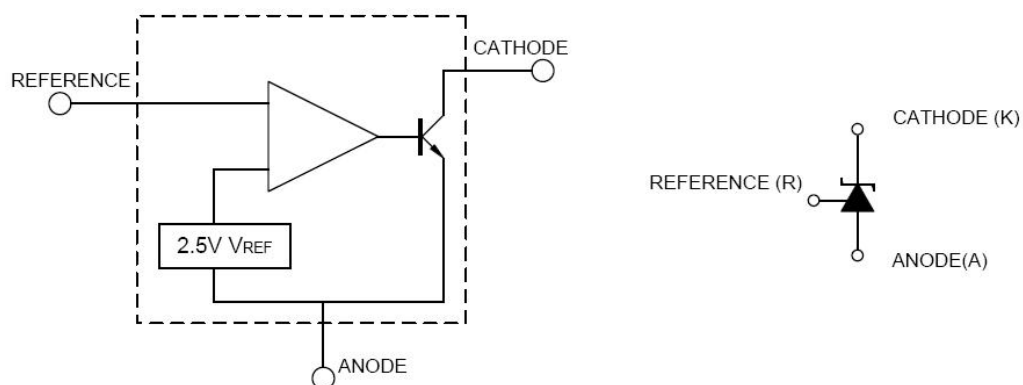
Parameter	Symbol	Value	Unit
Cathode Voltage	V_{KA}	40	V
Cathode Current Range (Continuous)	I_{KA}	-100 to +150	mA
Reference Input Current Range	I_{REF}	10	mA
Power Dissipation	P_D	770	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

ADJUSTABLE ACCURATE REFERENCE SOURCE

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

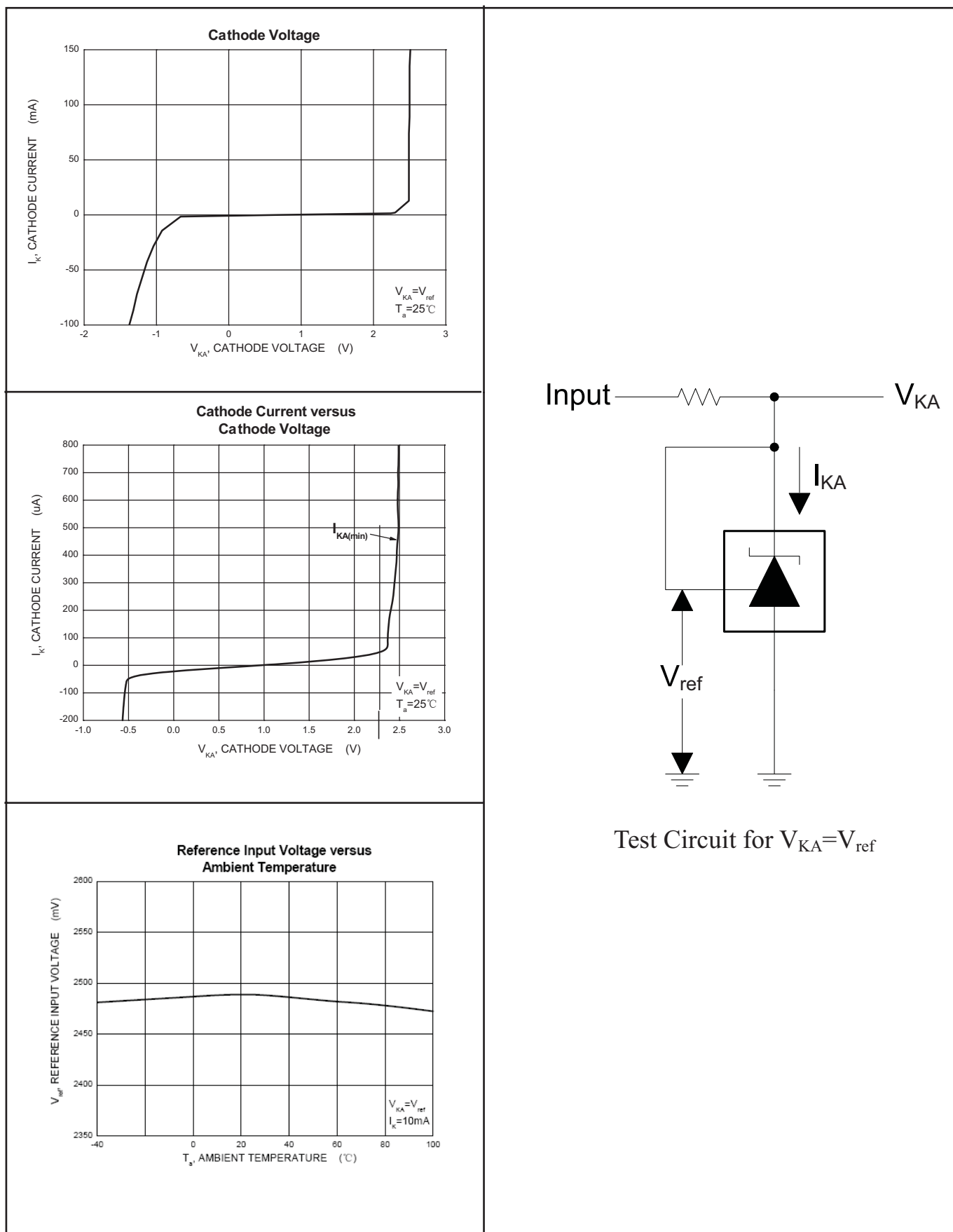
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reference Voltage	V_{REF}	$V_{\text{KA}}=V_{\text{REF}}, I_{\text{KA}}=10\text{mA}$	2.480	2.500	2.520	V
Deviation of Reference Voltage Over-Temperature	ΔV_{REF}	$V_{\text{KA}}=V_{\text{REF}}, I_{\text{KA}}=10\text{mA}$ 0 to 70°C		4.5	8	mV
Deviation of Reference Current Over Full Temperature Range	ΔI_{REF}	$I_{\text{KA}}=10\text{mA}, R1=10\text{K}\Omega$ $R2=\infty, T_A=-40$ to 85°C		0.4	1.2	μA
Minimum Cathode Current for Regulation	I_{KA} (MIN)	$V_{\text{KA}}=V_{\text{REF}}$		0.4	1.0	mA
Off-State Cathode Current	I_{KA} (OFF)	$V_{\text{KA}}=36\text{V}, V_{\text{REF}}=0$		0.05	1.0	μA

BLOCK DIAGRAM

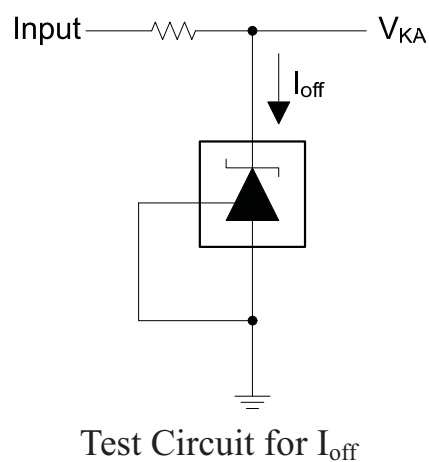
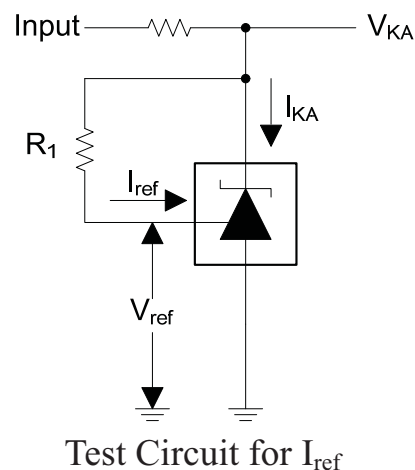
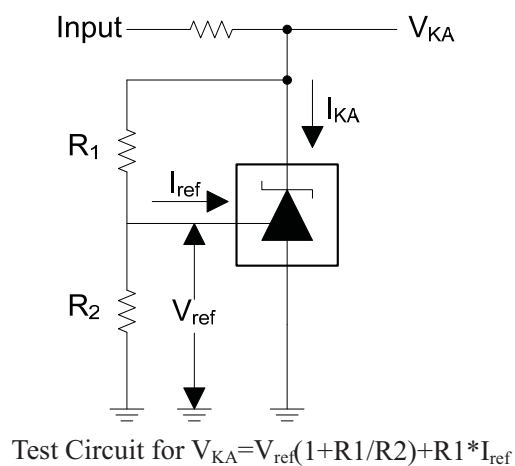
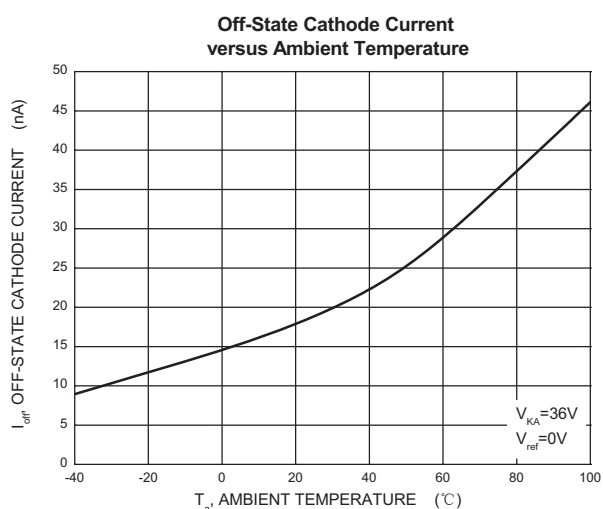
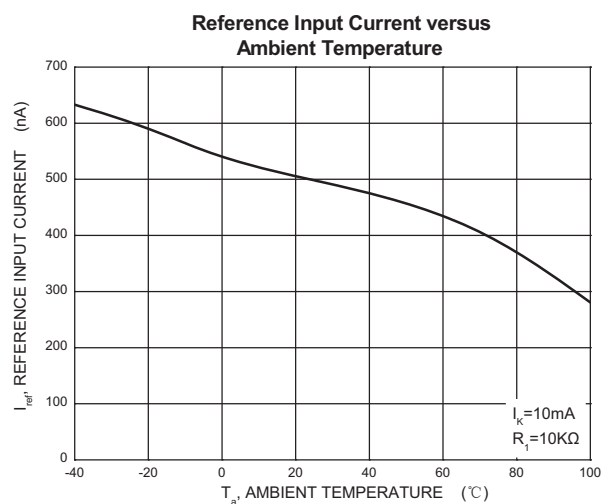
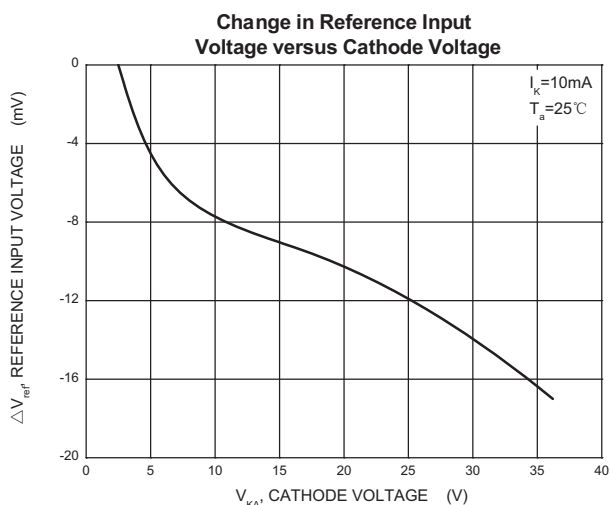


ADJUSTABLE ACCURATE REFERENCE SOURCE

Typical Characteristics

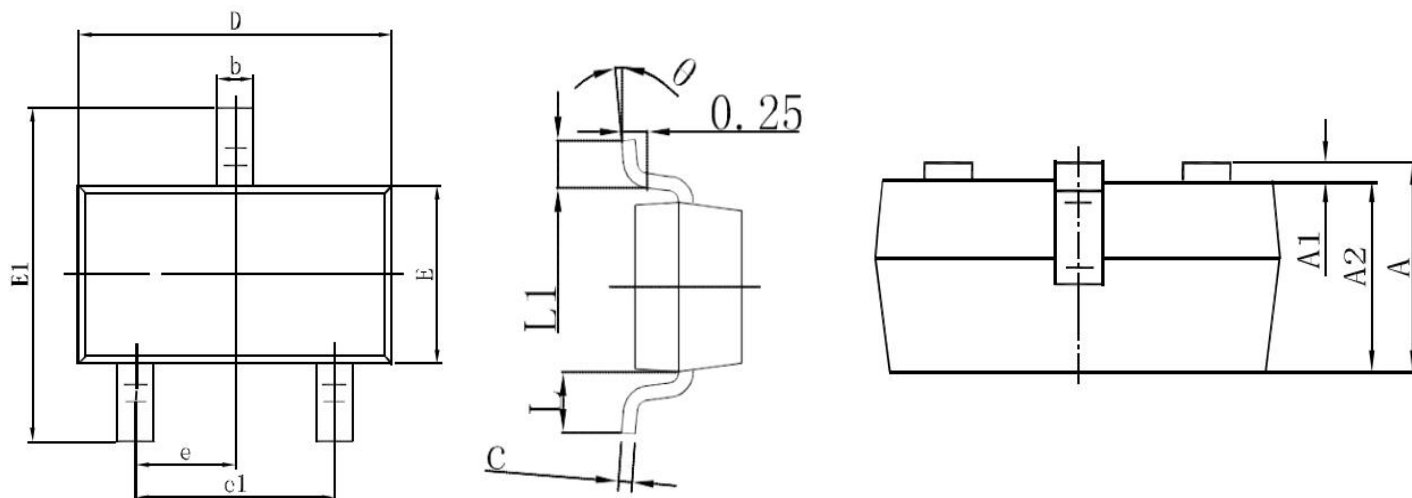


ADJUSTABLE ACCURATE REFERENCE SOURCE



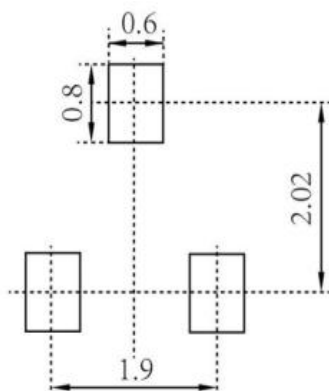
ADJUSTABLE ACCURATE REFERENCE SOURCE

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.354	0.453
A1	0.000	0.100	0.000	0.039
A2	0.900	1.050	0.354	0.413
b	0.300	0.500	0.118	0.197
c	0.080	1.150	0.031	0.453
D	2.900	3.100	1.142	1.220
E	1.200	1.400	0.472	0.551
E1	2.250	2.550	0.886	1.004
e	0.95REF		0.374REF	
e1	1.800	2.000	0.709	0.787
L	0.55REF		0.215REF	
L1	0.300	0.500	0.118	0.197

SOT-23 Suggested Pad Layout



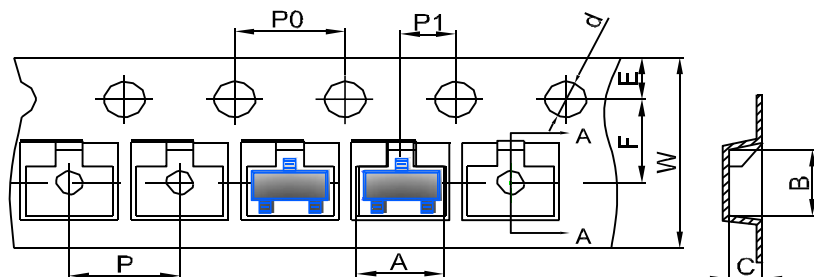
Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

ADJUSTABLE ACCURATE REFERENCE SOURCE

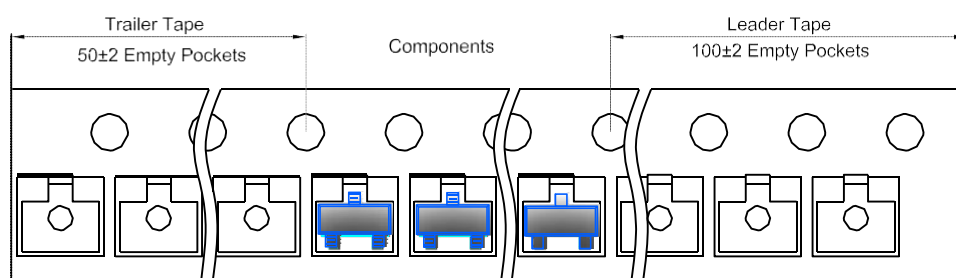
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

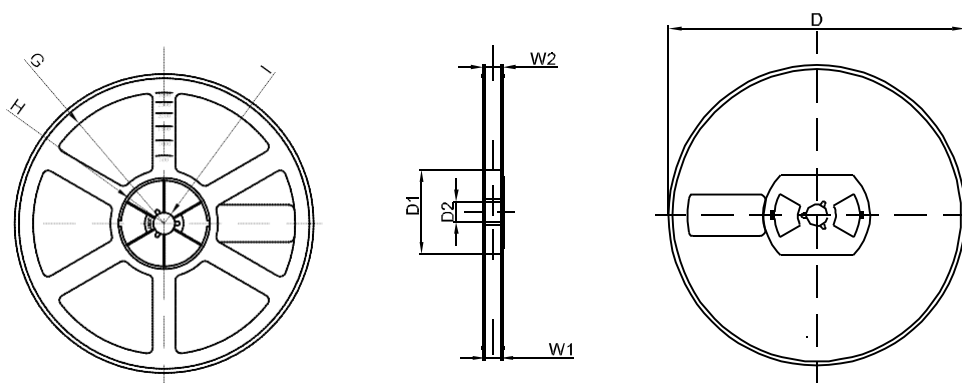


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-23 Tape Leader and Trailer



SOT-23 Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1