



Silicon Planar Zener Diodes

FEATURES

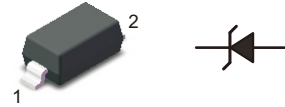
- Total power dissipation: Max. 500mW.
- Small plastic package suitable for surface mounted design.
- Tolerance approximately $\pm 2\%$

MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Simplified outline SOD-123 and symbol

Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Forward Voltage at $I_F = 10$ mA	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	340	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Characteristics at Ta = 25°C

Type	Marking	Zener Voltage Range (1)			I _{ZT}	Dynamic Impedance	Reverse Current	
		V _{ZT} (at I _{ZT})				Z _{ZT} (at I _{ZT})	I _R	at V _R
		Min (V)	Nom (V)	Max (V)		(mA)	Max (Ω)	Max (μA)
BZT52B30	R5	29.4	30	30.6	5	80	0.1	23

(1) V_{ZT} is tested with pulses (20 ms)



Typical Performance Characteristics

Fig.1 Maximum Continuous Power Derating

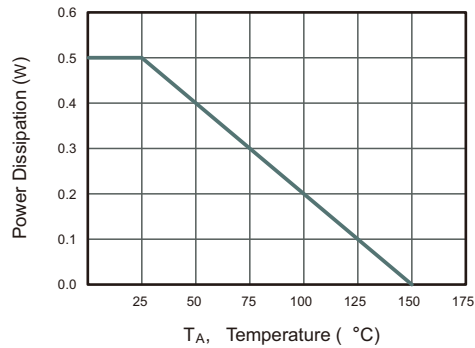


Fig.2 Typical Transient Thermal Impedance

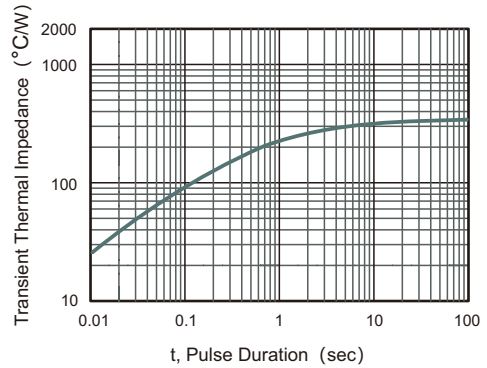


Fig.3 Zener voltage vs zener current

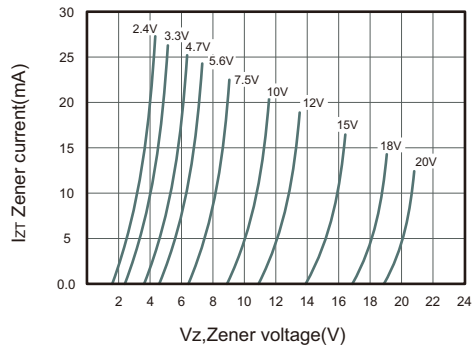


Fig.4 Zener voltage vs zener current

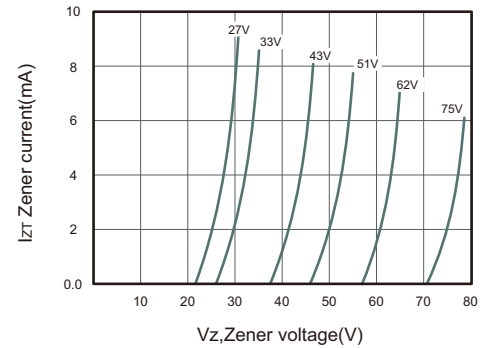
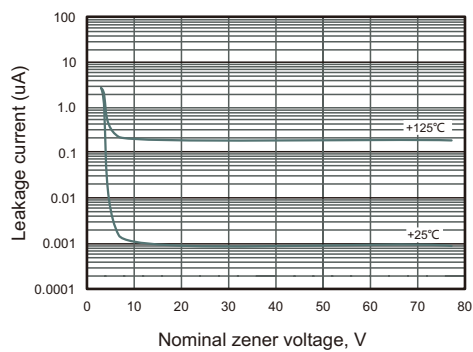


Fig.5 Typical leakage current

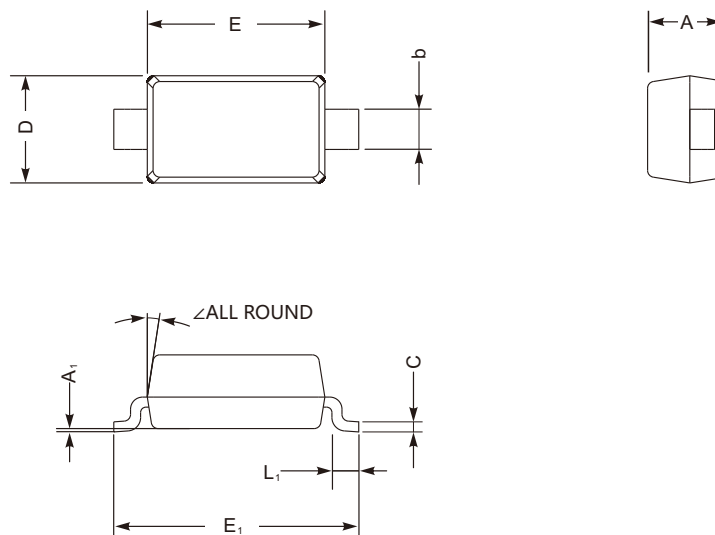




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size

