

Silicon Bidirectional Trigger Diodes

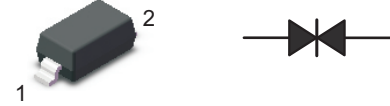
FEATURES

These diacs are intended for use in thyristor phase control circuits for lamp-dimming, universal-motor speed controls, and heat controls.

MECHANICAL DATA

Case: SOD-123

Terminals: Solderable per MIL-STD-750, Method 2026



Top View

Simplified outline SOD-123 and symbol

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Power Dissipation (T _c = 100°C)	P _{tot}	150	mW
Repetitive Peak On-state Current (tp = 20 μs, f = 100 Hz)	I _{TRM}	2	A
Operating Junction and Storage Temperature Range	T _j , T _{stg}	- 40 to + 125	°C

Characteristics at Ta = 25°C

Parameter		Symbol	Min.	Max.	Unit
Breakover Voltage at C = 22 nF, see diagram 1	DB3T	V _{BO}	28	36	V
	DC34T		30	38	V
	DB4T		35	45	V
Breakover Voltage Symmetry at C = 22 nF, see diagram 1		[+V _{BO} - -V _{BO}]	—	3	V
Dynamic Breakover Voltage at ΔI = [I _{BO} to I _F = 10 mA]		ΔV _±	5	—	V
Output Voltage See diagram 2		V _O	5	—	V
Breakover Current at C = 22 nF		I _{BO}	—	50	μA
Leakage Current at V _B = 0.5V _{BOmax}		I _B	—	10	μA
Rise Time See diagram 3		t _r	—	2	μs

Diagram1: current-voltage characteristic

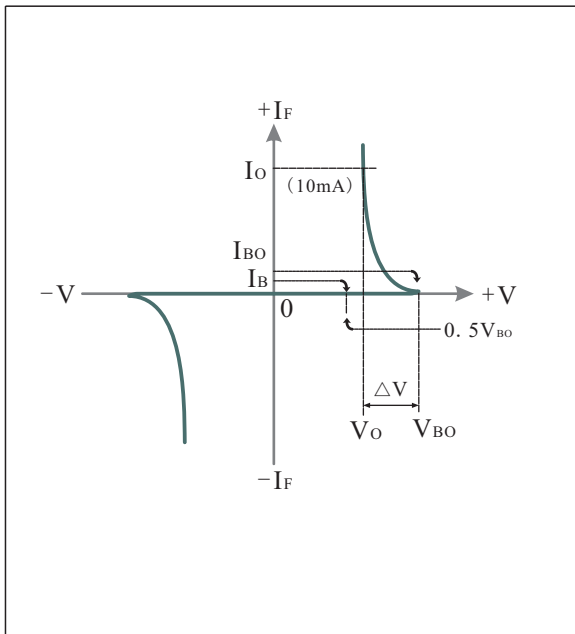


Diagram2: Test circuit for output voltage

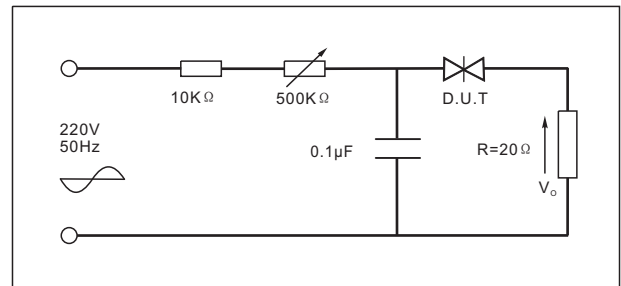


Diagram3: Test circuit see Fig.2. Adjust R for $I_p=0.5A$

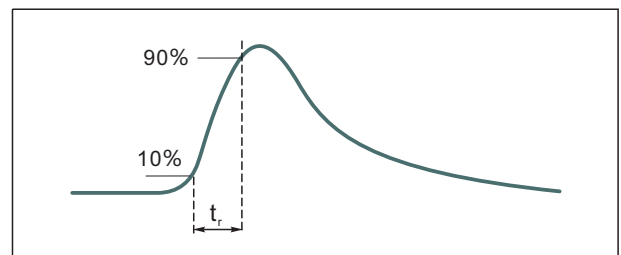


Fig.1: Power dissipation versus ambient temperature(maximum values)

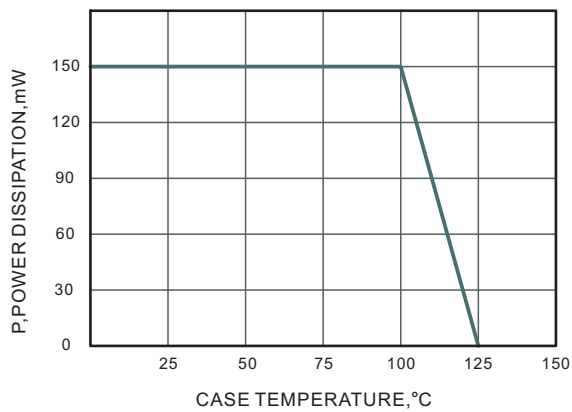


Fig.2: Power dissipation versus ambient temperature(maximum values)

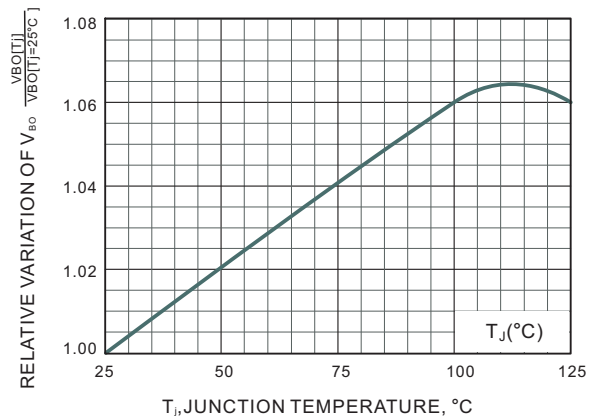
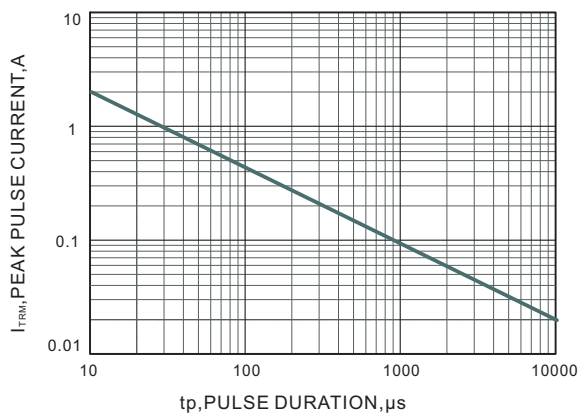


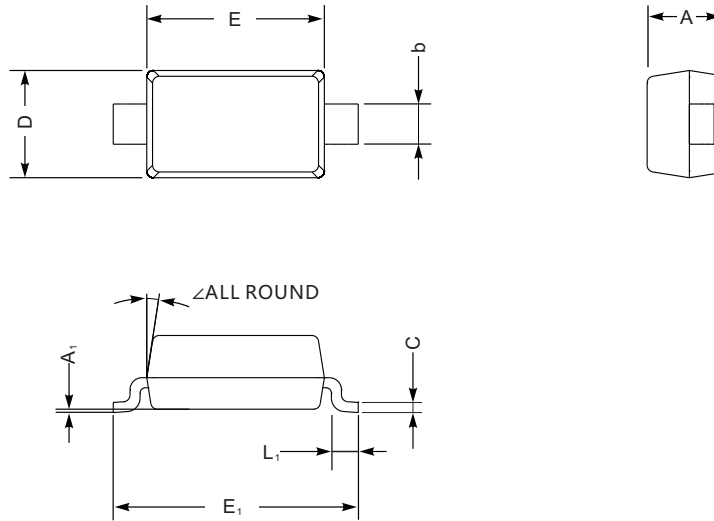
Fig.3: Power dissipation versus ambient temperature(maximum values)



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

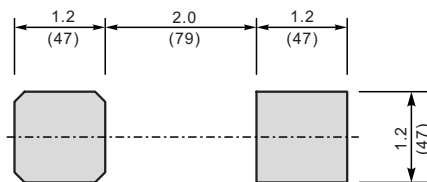
SOD-123



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



Unit: $\frac{\text{mm}}{\text{(mil)}}$

Marking

Type number	Marking code
DB3T	DB3
DC34T	DC34
DB4T	DB4