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.
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg /0.00048oz

Pinning

1.Cathode	2.Anode



SOD123FL

Marking Code	
DB3W	DB3W
DC34W	DC34W
DB4W	DB4W

Absolute Maximum Ratings at 25 °C

Parameter	Symbols	Value	Units
Power Dissipation (TC = 100)	P_{tot}	150	mA
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

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Characteristics at Ta = 25 °C

Parameter		Symbols	Min.	Max.	Units
Breakover Voltage at C = 22 nF, see diagram 1	DB3W	V_{BO}	28	36	V
	DC34W		30	38	V
	DB4W		35	45	V
Breakover Voltage Symmetry at C = 22 nF, see diagram 1		$[\|+V_{BO}\|-\|-V_{BO}\|]$	-	3	V
Dynamic Breakover Voltage at ΔI = [IBO to IF = 10 mA]		$\|\triangle V \pm\|$	5	-	V
Output Voltage See diagram 2		V_O	5	-	V
Breakover Current at C = 22 nF		I_{BO}	-	50	uA
Leakage Current at VB=0.5V_{BO} max		I_B	-	10	uA
Rise Time See diagram 3		t_r	-	2	uS

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Diagram1: current-voltage characteristice

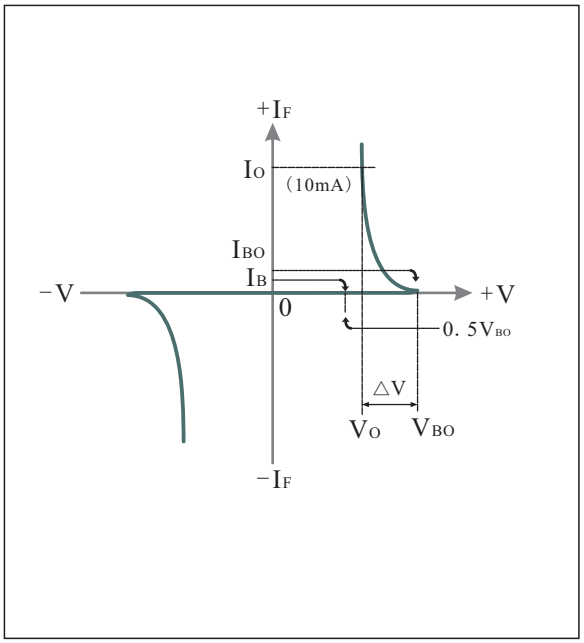


Diagram2: Test circuit for output voltage

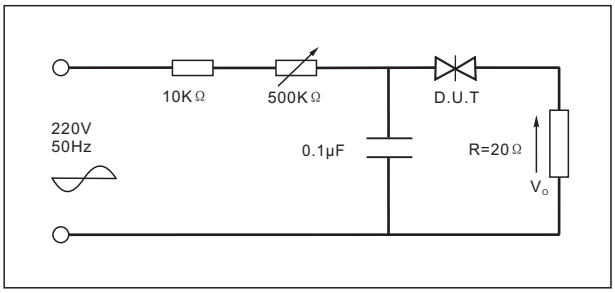


Diagram3: Test circuit see Fig.2. Adjust R for Ip=0.5A

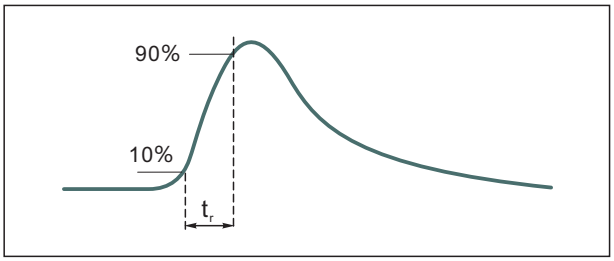


Fig.1: Power dissipation versus ambient temperapture(maximum values)

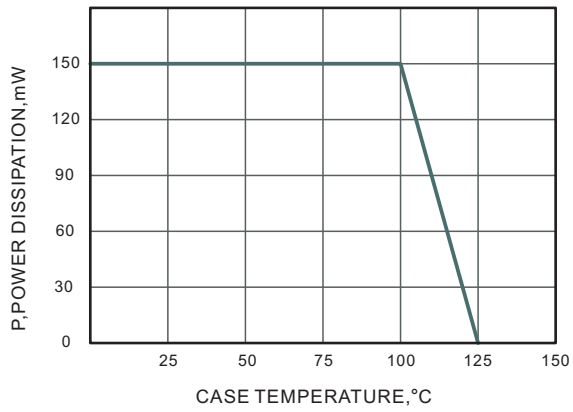


Fig.2: Power dissipation versus ambient temperapture(maximum values)

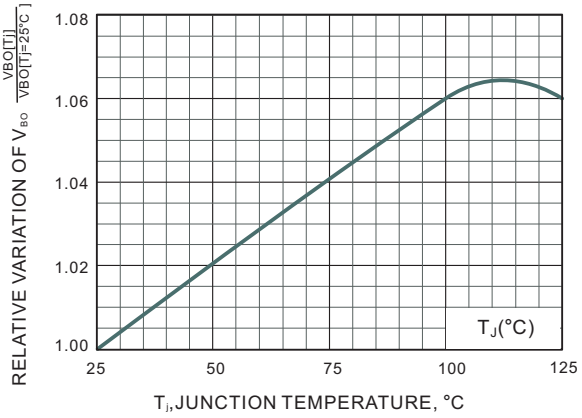
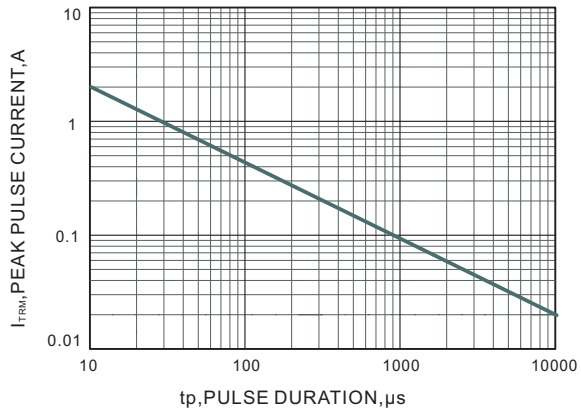


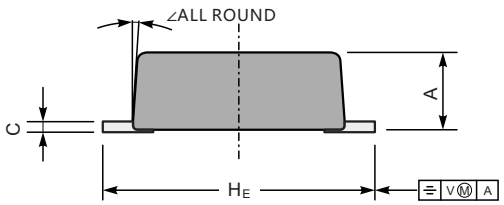
Fig.3: Power dissipation versus ambient temperapture(maximum values)

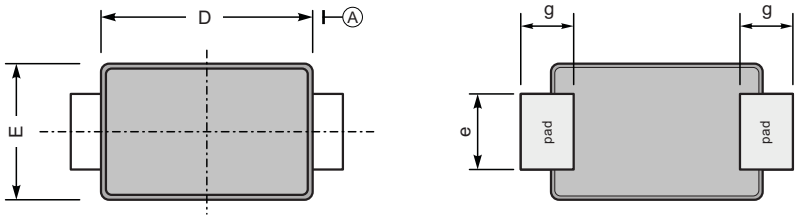


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Package Outline SOD-123FL

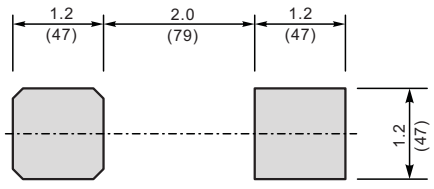
Plastic surface mounted package; 2 leads





UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.3	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size



Unit: mm / (mil)

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123FL	Tape/Reel,13”reel	10000	EIA-481-1
	Tape/Reel,7”reel	3000	EIA-481-1

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