DB3W / DC34W / DB4W

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View
Marking Code : DB3 / DC34 /DB4
Simplified outline SOD-123FL 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 T_a = 25°C

Parameter		Symbol	Min.	Max.	Unit
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 △I = [I_{BO} to I_F = 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	µA
Leakage Current at V_B=0.5V_{BO}max		I_B	—	10	µA
Rise Time See diagram 3		t_r	—	2	µs

Diagram1: current-voltage characteristice

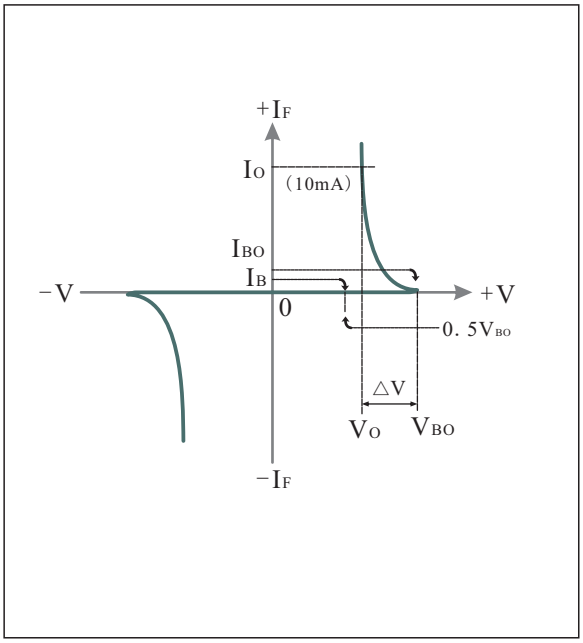


Diagram2: Test circuit for output voltage

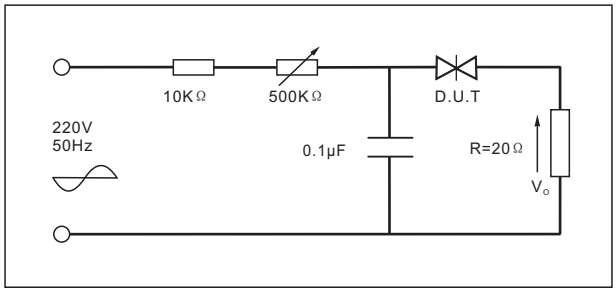


Diagram3: Test circuit see Fig.2. Adjust R for Ip=0.5A

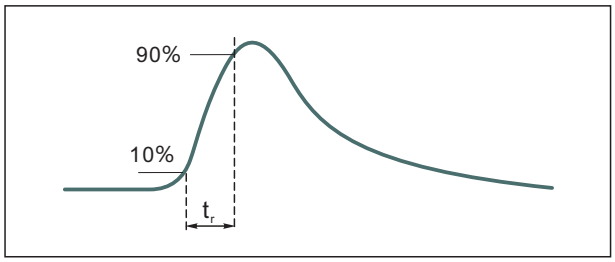


Fig.1: Power dissipation versus ambient temperapture(maximum values)

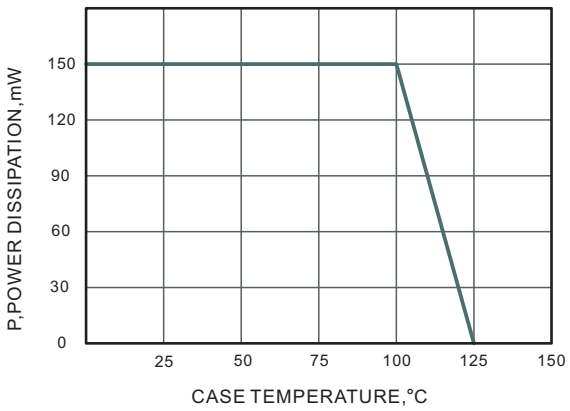


Fig.2: Power dissipation versus ambient temperapture(maximum values)

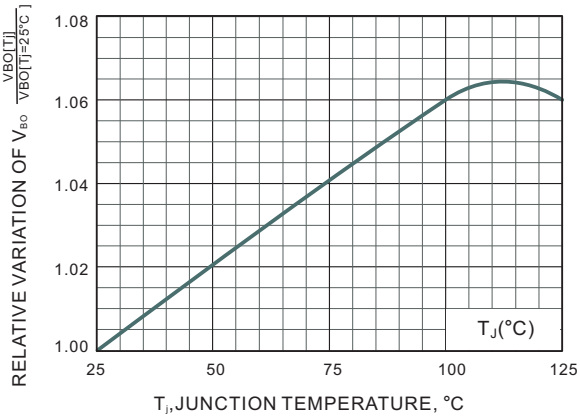
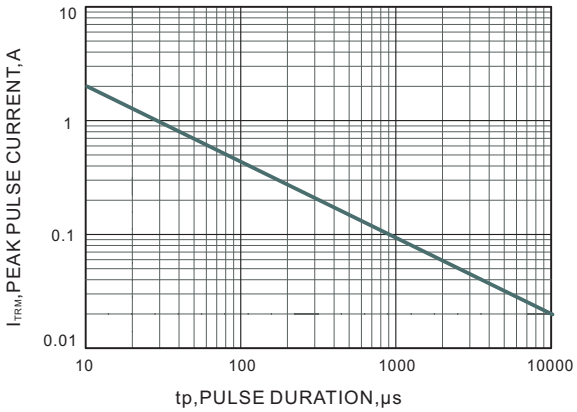
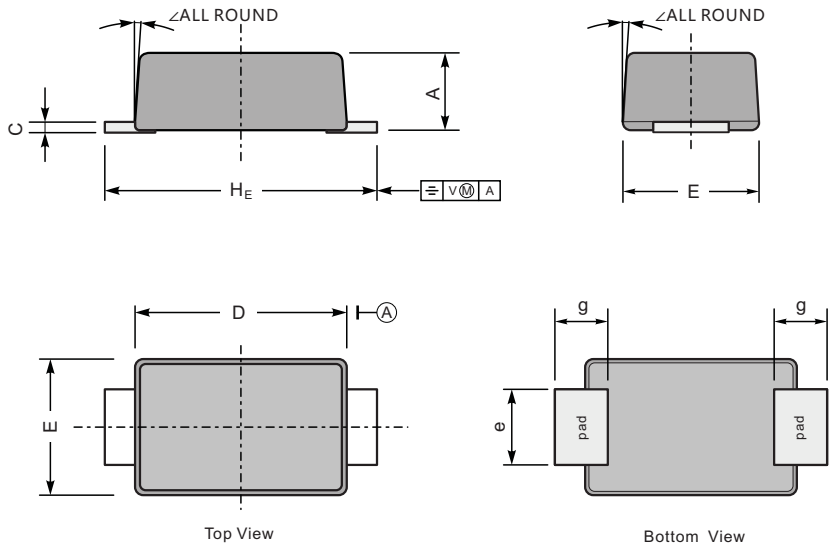


Fig.3: Power dissipation versus ambient temperapture(maximum values)



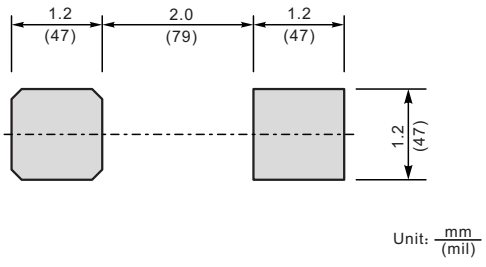
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-123FL



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	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



Marking

Type number	Marking code
DB3W	DB3
DC34W	DC34
DB4W	DB4