



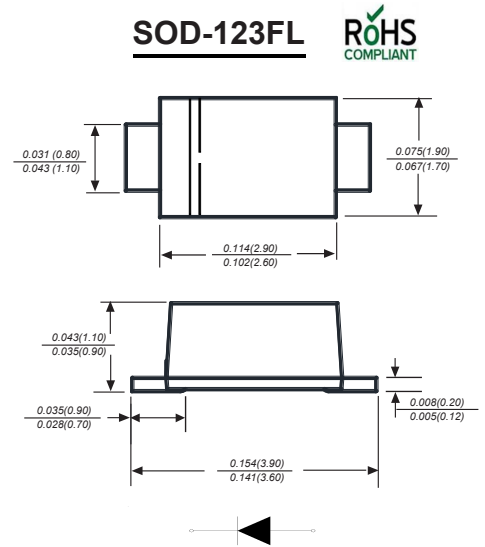
## BIDIRECTIONAL TRIGGER DIODE

### Features

- ◆ Small glass structure ensures high reliability
- ◆ VBO:28-36V version
- ◆ Low breakover current
- ◆ High temperature soldering guaranteed
- ◆ 250 C/10 seconds,0.375”(9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

Case: JEDEC SOD-123FL molded plastic body  
 Terminals: Solderable per MIL-STD-750,  
 Method 2026 Mounting Position: Any  
 Weight:0.00048 ounce, 0.015gram  
 Marking :DB3



### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	TEST CONDITION	SYMBOLS	VALUE			UNITS
			Min.	Typ.	Max.	
Breakover voltage *	C=22nF **	$V_{Bo}$	28	32	36	VOLTS
Breakover voltage symmetry	C=22nF **	$ +V_{Bo}  -  -V_{Bo} $			3	VOLTS
Dynamic breakover voltage *	(NOTE 1)	$I \Delta V \pm I$	5			VOLTS
Output voltage *	DIAGRAM2	$V_o$	5			VOLTS
Breakover current *	C=22nF **	$I_{Bo}$			50	$\mu A$
Rise time *	DIAGRAM3	$t_r$			2	$\mu S$
Leakage current *	$V_R=0.5V_{Bo}$	$I_B$			10	$\mu A$
Power dissipation on printed circuit	$T_A=65^\circ C$	$P_d$			150	mW
Repetitive peak on-state current	$t_p=20\mu s$ $f=100Hz$	$I_{TRM}$			2	A
Thermal Resistances from Junction to ambient		$R_{\theta JA}$			400	$^\circ C/W$
Thermal Resistances from Junction to lead		$R_{\theta JL}$			150	
Operating junction and storage temperature range		$T_J, T_{STG}$	-40		125	$^\circ C$

\* :Electrical characteristic applicable in forward and reverse direction

\*\* :Connected in parallel with the devices.

Note 1:  $I_{Bo}$  from  $I_{Bo}$  to 10mA

## Typical Characteristics

Diagram1: current-voltage characteristic

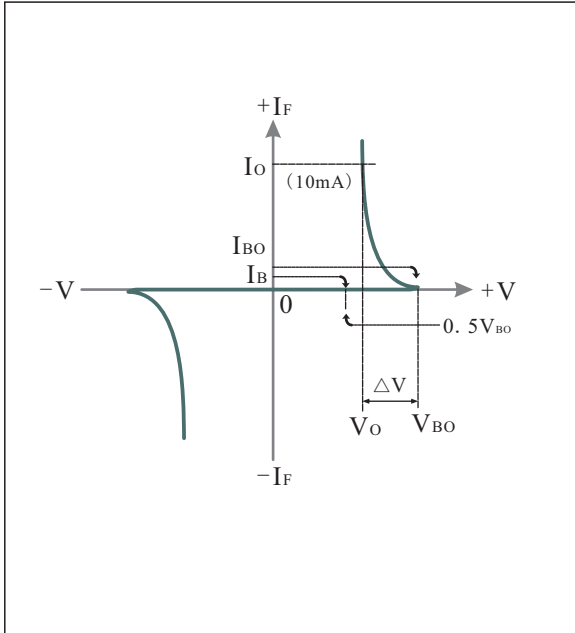


Diagram2: Test circuit for output voltage

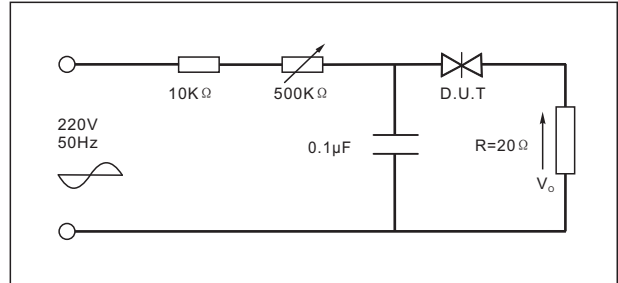


Diagram3: Test circuit see Fig.2. Adjust R for I\_p=0.5A

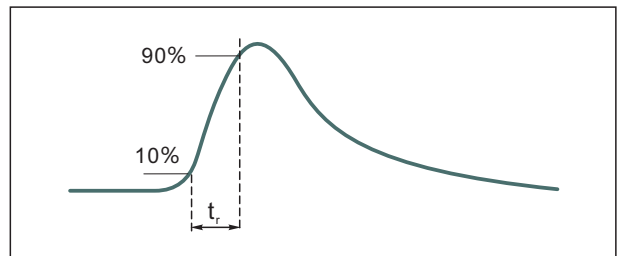


Fig.1: Power dissipation versus ambient temperature(maximum values)

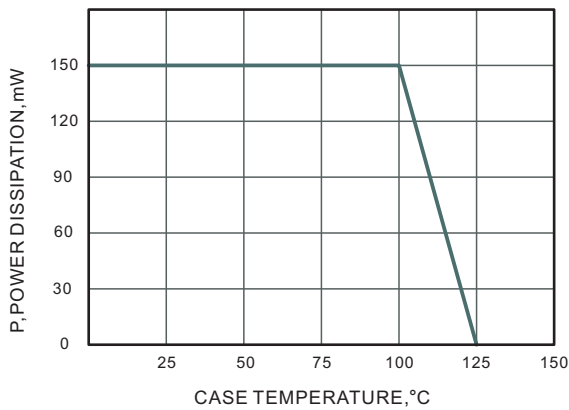


Fig.2: Power dissipation versus ambient temperature(maximum values)

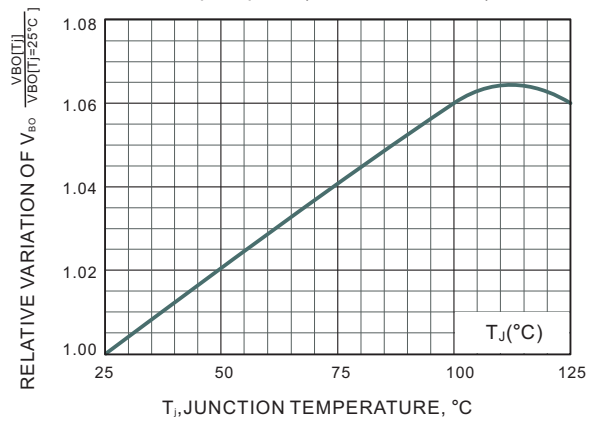
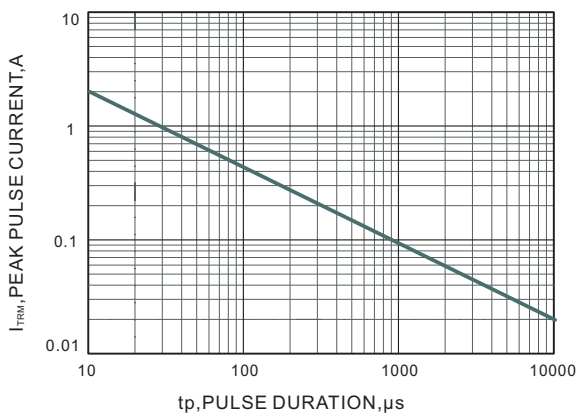


Fig.3: Power dissipation versus ambient temperature(maximum values)



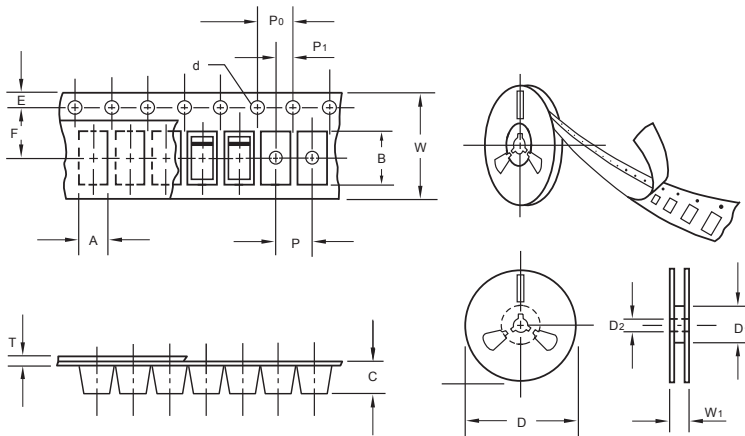
The curve above is for reference only.



# SODDB3

Reverse Voltage 32 Volts Power- 150mW

## Packing information



unit:mm

Item	Symbol	Tolerance	SOD-123FL
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	50.0
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W1	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123FL	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2	0.079
E	4.4	0.173