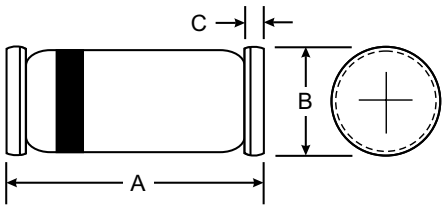
LLDB3/LLDC34/LLDB4/LLDB6

SILICON BIDIRECTIONAL DIAC

Features

- The glass passivated, three-layer, two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low breakover current at breakover voltage as they withstand peak pulse current. The breakover symmetry is within four volts with a typical breakover voltage of LLDB3 32 V, LLDB4 40 V. These diacs are intended for use in thyristor phase control, circuits for lamp-dimming, universal-motor speed controls, and heat controls.



LL34/ SOD-80		
Dim	**Min**	**Max**
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

Mechanical Data

- Case: SOD-80/LL34, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.05 grams (approx.)

RoHS COMPLIANT

Absolute Ratings

Characteristic		Value				Symbol	Unit
		LLDB3	LLDC34	LLDB4	LLDB6		
Power Dissipation on Printed Circuit(L=10mm)	T_A=50˚C	150				P_C	mW
Repetitive Peak on-state Current	tp=10μs f=100Hz	2.0	2.0	2.0	1.6	I_{TRM}	A
Storage and Operating Junction Temperature		-40 to+125/-40 to +110				T_{STG}/T_J	℃

Electrical Characteristics

Characteristic	Condition		Value				Symbol	Unit
			LLDB3	LLDC34	LLDB4	LLDB6		
Breakover Voltage (Note 2)	C=22nF(Note 2) See diagram 1	Min	28	30	35	56	V_{BO}	V
		Typ	32	34	40	60		
		Max	36	38	45	70		
Breakover Voltage Symmetry	C=22nF(Note 2) See diagram 1	Max	±3			±4	| +VBO | - | -VBO |	V
Dynamic Breakover Voltage (Note1)	△I=(I_{BO} to IF=10mA) See Diagram 1	Min	5			10	| ±△V |	V
Output Voltage (Note 1)	See Diagram 2	Min	5				V_O	V
Breakover Current (Note1)	C=22nF(Note 2)	Max	100				I_{BO}	μA
Rise Time (Note1)	See Diagram 3	Typ	1.5				tr	μs
Leakage Current (Note1)	V_B=0.5 V_{BO} max see diagram 1	Max	10				I_B	μA

Notes: 1.Electrical characteristics applicable in both forward and reverse directions.
2.Connected in parallel with the devices.

DIAGRAM 1: Current-voltage characteristics

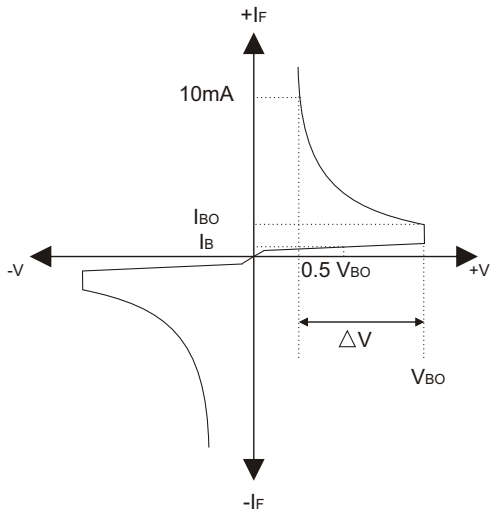


DIAGRAM 2: Test circuit for output voltage

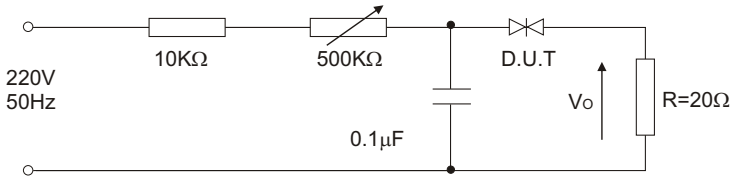


DIAGRAM 3: Test circuit see diagram2 adjust R for IP=0.5A

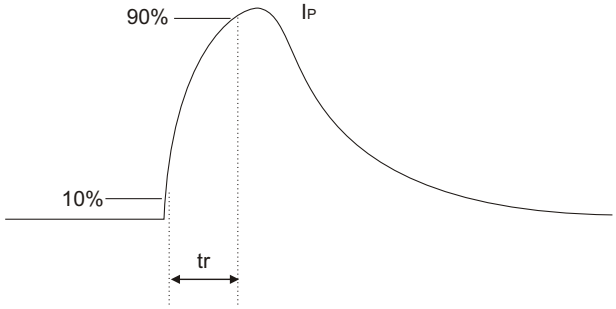


FIG.1-Power dissipation versus ambient temperature (maximum values)

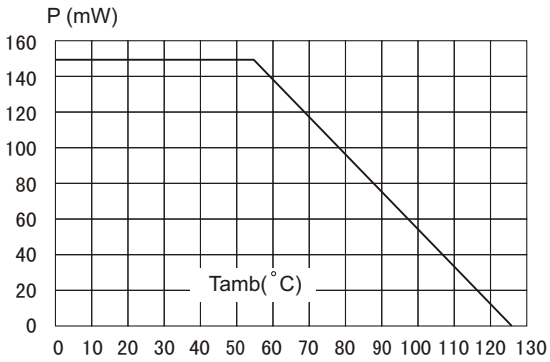


FIG.2-Relative variation of VBO versus junction temperature(typical values)

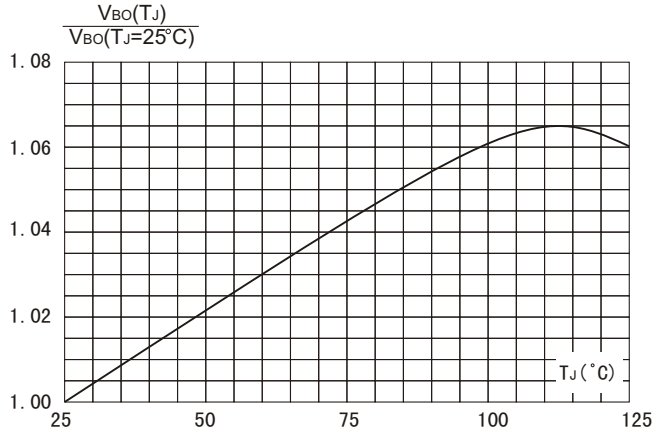


FIG.3-Peak pulse current versus pulse duration (maximum values)