

## LLDB3/LLDC34/LLDB4/LLDB6 SILICON BIDIRECTIONAL DIAC

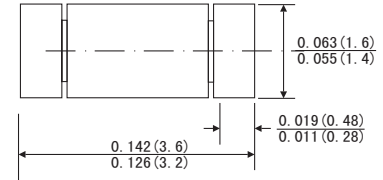
### FEATURES

The 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 three volts(DB3,DC34,DB4) or four volts(DB6). These diacs are intended for use in thyristors phase control , circuits for lamp dimming, universal motor speed control and heat control.

Topdiode's DB3/DC34/DB4/DB6 are bi-directional triggered diodes designed to operate in conjunction with Triacs and SCR's

High temperature soldering guaranteed: 260°C/10 seconds at terminals  
Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### MiniMELF



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: MiniMELF glass case(SOD-80)

Weight: Approx. 0.05 gram

### ABSOLUTE RATINGS(LIMITING VALUES)

Symbols	Parameters	Value	Units
PC	Power Dissipation on Printed Circuit(L=10mm) T <sub>A</sub> =50°C	150	mW
I <sub>TRM</sub>	Repetitive Peak on-state Current t <sub>p</sub> =10μs f=100Hz	2.0	1.6 A
T <sub>STG</sub> /T <sub>J</sub>	Storage and Operating Junction Temperature	-40 to +125	°C

### ELECTRICAL CHARACTERISTICS

Symbols	Parameters	Test Condition	Value	Units				
					LLDB3	LLDC34	LLDB4	LLDB6
V <sub>BO</sub>	Breakover Voltage (Note 2)	C=22nF(Note 2) See diagram 1	Min	28	30	35	56	V
			Typ	32	34	40	60	
			Max	36	38	45	70	
$\left  \frac{+V_{BO}}{-V_{BO}} \right $	Breakover Voltage Symmetry	C=22nF(Note 2) See diagram 1	Max	±3		±4	V	
$ \pm \Delta V $	Dynamic Breakover Voltage (Note1)	$\Delta I=(I_{BO} \text{ to } I_F=10\text{mA})$ See Diagram 1	Min	5		10	V	
V <sub>O</sub>	Output Voltage (Note 1)	See Diagram 2	Min	5			V	
I <sub>BO</sub>	Breakover Current (Note1)	C=22nF(Note 2)	Max	100			μA	
t <sub>r</sub>	Rise Time (Note1)	See Diagram 3	Typ	1.5			μs	
I <sub>B</sub>	Leakage Current (Note1)	V <sub>B</sub> =0.5 V <sub>BO</sub> max see diagram 1	Max	10			μA	

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

**LLDB3/LLDC34/LLDB4/LLDB6**  
SILICON BIDIRECTIONAL DIAC

**RATINGS AND CHARACTERISTIC CURVES LLDB3/LLDC34/LLDB4/LLDB6**

DIAGRAM 1: Current-voltage characteristics

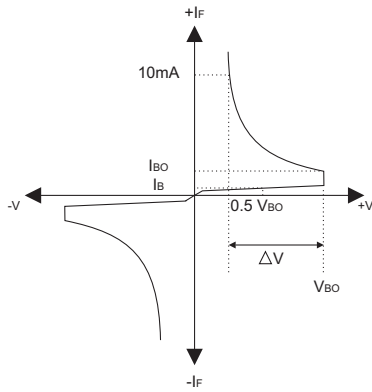


FIG.1-Power dissipation versus ambient temperature (maximum values)

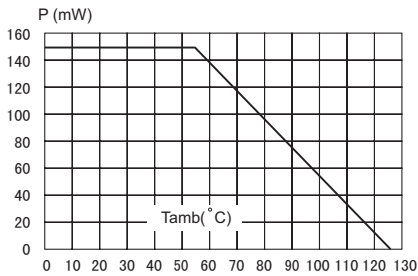


FIG.3-Peak pulse current versus pulse duration (maximum values)

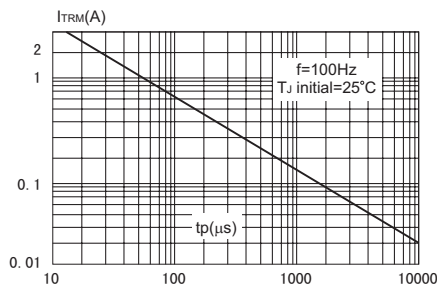


DIAGRAM 2: Test circuit for output voltage

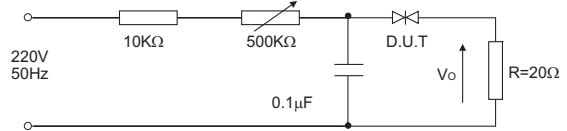


DIAGRAM 3: Test circuit see diagram2 adjust R for IP=0.5A

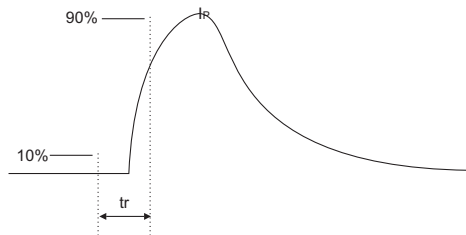


FIG.2-Relative variation of VBO versus junction temperature (typical values)

