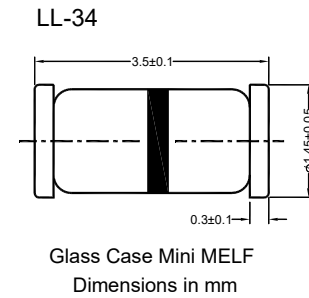


LLDB3, LLDB4

Silicon Bidirectional Trigger Diodes

These diacs are intended for use in thyristor phase control, circuits for lamp-dimming, universal-motor speed controls, and heat controls.



Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation ($T_a = 65\text{ }^{\circ}\text{C}$)	P_{tot}	150	mW
Repetitive Peak On-state Current ($t_p = 20\text{ }\mu\text{s}$, $f = 100\text{ Hz}$)	I_{TRM}	2	A
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 40 to + 125	$^{\circ}\text{C}$

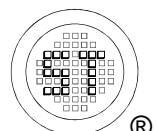
Thermal Resistance Ratings

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	400	$^{\circ}\text{C/W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter		Symbol	Min.	Max.	Unit
Breakover Voltage at $C = 22\text{ nF}$, see diagram 1	LLDB3	V_{BO}	28	36	V
	LLDB4		35	45	
Breakover Voltage Symmetry at $C = 22\text{ nF}$, see diagram 1		$[+V_{\text{BO}} - -V_{\text{BO}}]$	-	3	V
Dynamic Breakover Voltage at $\Delta I = [I_{\text{BO}} \text{ to } I_{\text{F}} = 10\text{ mA}]$		$ \Delta V \pm $	5	-	V
Output Voltage See diagram 2		V_o	5	-	V
Breakover Current at $C = 22\text{ nF}$		I_{BO}	-	50	μA
Leakage Current at $V_B = 0.5 V_{\text{BO}} \text{ max}$		I_B	-	10	μA
Rise Time See diagram 3		t_r	-	2	μs



LLDB3, LLDB4

Electrical Characteristics Curves

Diagram 1: Current-voltage characteristics

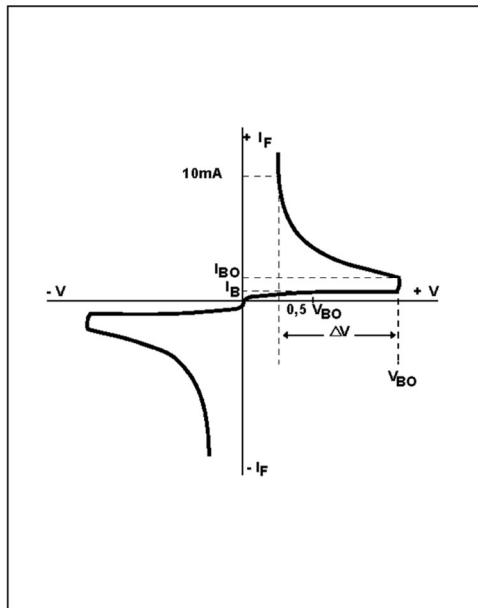


Diagram 2: Test circuit for output voltage

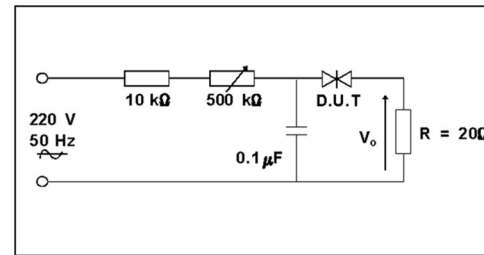


Diagram 3: Test circuit see diagram 2. Adjust R for $I_p=0.5A$

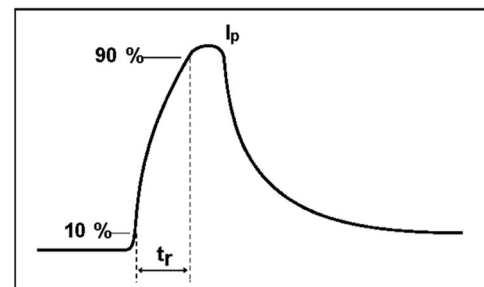


Fig. 1: Power dissipation versus ambient temperature (maximum values)

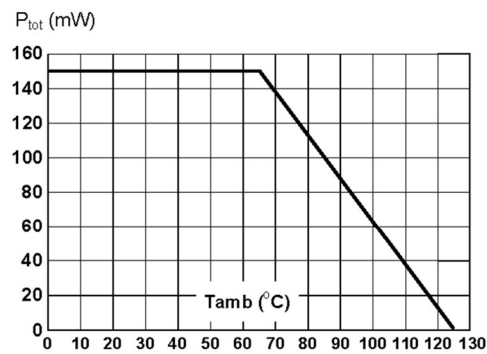


Fig. 2: Relative variation of V_{BO} versus junction temperature (typical values)

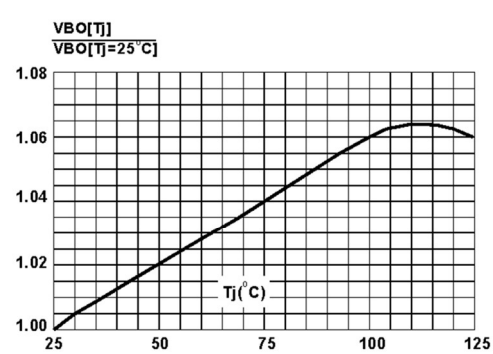


Fig. 3: Peak pulse current versus pulse duration (maximum values)

