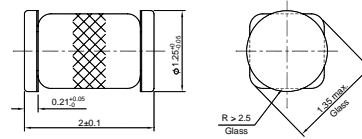


MCLDB3, MCLDB4

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.

LS-31



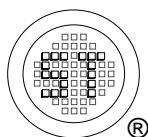
Glass Case Micro MELF
Dimensions in mm

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	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit	
Breakover Voltage at $C = 22\text{ nF}$, see diagram 1	V_{BO}	MCLDB3	28	36	V
		MCLDB4	35	45	
Breakover Voltage Symmetry at $C = 22\text{ nF}$, see diagram 1	$[+V_{BO} - -V_{BO}]$	-	3	V	
Dynamic Breakover Voltage at $\Delta I = [I_{BO}\text{ to }I_F = 10\text{ mA}]$	$ \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 $V_B = 0.5 V_{BO}\text{ max}$	I_B	-	10	μA	
Rise Time See diagram 3	t_r	-	2	μs	



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Dated : 08/08/2009

MCLDB3, MCLDB4

Diagram 1: Current-voltage characteristics

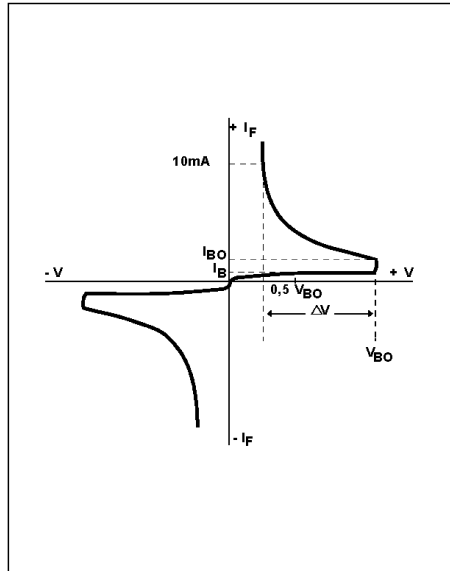


Diagram 2: Test circuit for output voltage

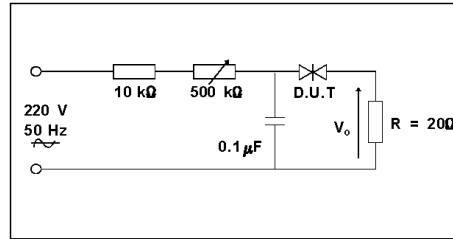


Diagram 3: Test circuit see diagram 2. Adjust R for $I_p=0.5A$

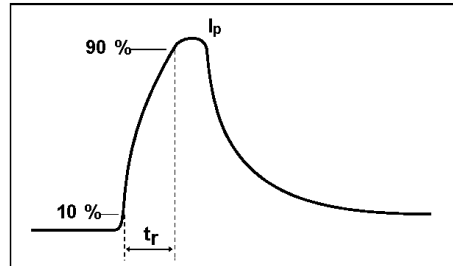


Fig. 1: Power dissipation versus ambient temperature (maximum values)

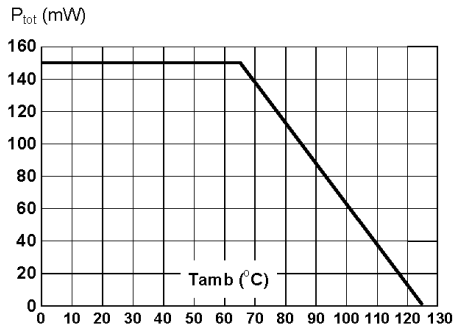


Fig. 2: Relative variation of V_{BO} versus junction temperature (typical values)

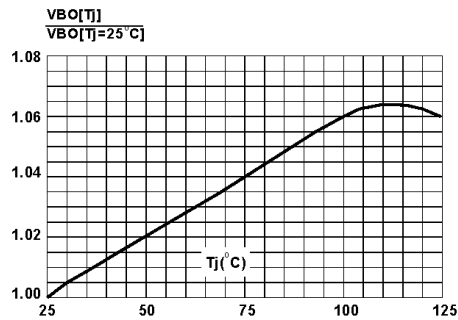
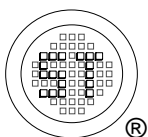
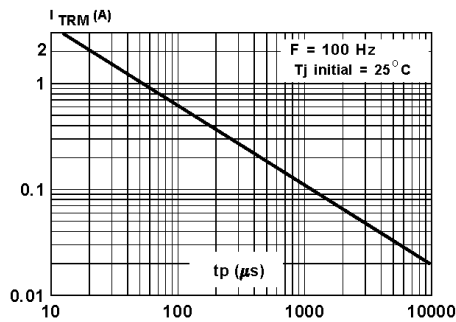


Fig. 3: Peak pulse current versus pulse duration (maximum values)



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