



Micro Commercial Components
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TMMDB3

SILICON BIDIRECTIONAL DIAC

Features

- Function as a trigger diode with a fixed voltage reference
- The TMMDB3 can be used in conjunction with triacs for simplified gate control circuits or as a starting element in fluorescent lamp ballasts.
- The diacs are intended for use in thyristors phase control , circuits for lamp dimming, universal motor speed control ,and heat control.

Maximum Ratings

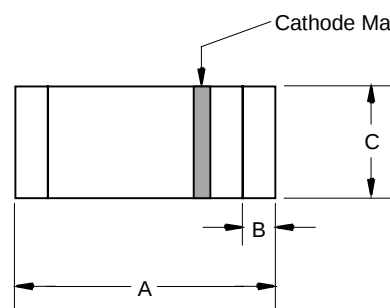
- Operating Temperature: -40°C to $+125^{\circ}\text{C}$
- Storage Temperature: -40°C to $+125^{\circ}\text{C}$

Electrical Characteristics @ 25°C Unless Otherwise Specified

Power dissipation on Printed Circuit($l=10\text{mm}$)	P_C	150mW	$T_A=50^{\circ}\text{C}$
Repetitive Peak on-state Current	I_{TRM}	2.0A	$t_p=10\mu\text{s}, f=100\text{Hz}$
Breakover Voltage TMMDB3	V_{BO}	Min Typ Max 28 32 36V	$C=22\text{nF}(\text{Note } 2)$
Breakover Voltage Symmetry	$ +V_{BO} $ $- -V_{BO} $	$\pm 3\text{V}$	$C=22\text{nF}(\text{Note } 2)$
Output Voltage(Note 1)	$V_{o(\min)}$	5V	
Breakover Current(Note 1)	$I_{BO(\max)}$	50uA	$C=22\text{nF}$
Rise Time(Note 1)	T_r	2us	
Leakage Current(Note 1)	$I_{R(\max)}$	10uA	$V_R=0.5V_{BO(\max)}$

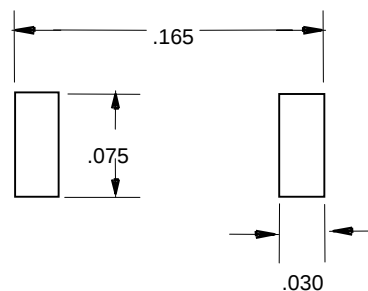
NOTES: 1.Electrical characteristics applicable in both forward and reverse directions.
2.Connected in parallel with the devices.

MINIMELF



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.134	.142	3.40	3.60	
B	.008	.016	.20	.40	
C	.055	.059	1.40	1.50	Ø

SUGGESTED SOLDER PAD LAYOUT



TMMDB3

Diagram 1: Voltage - current characteristic curve.

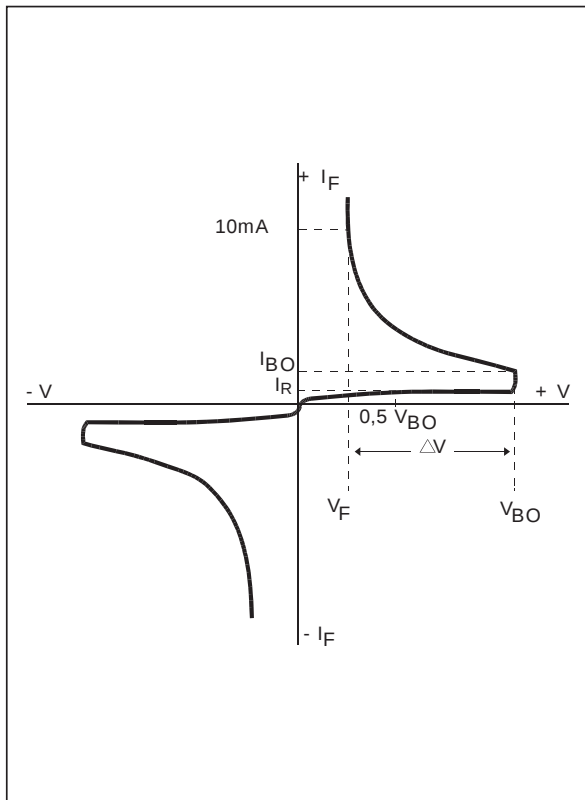


Fig. 1: Relative variation of VBO versus junction temperature (typical values)

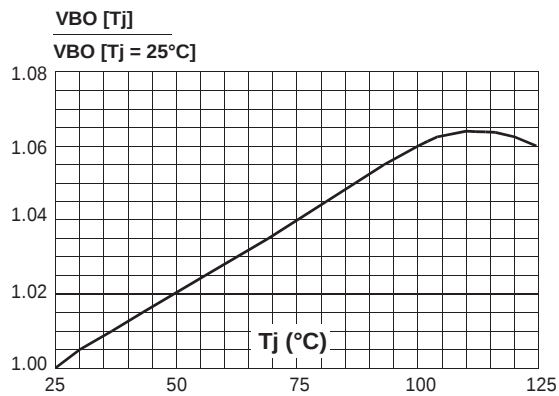


Fig. 3: Time duration while current pulse is higher 50mA versus C and Rs (typical values).

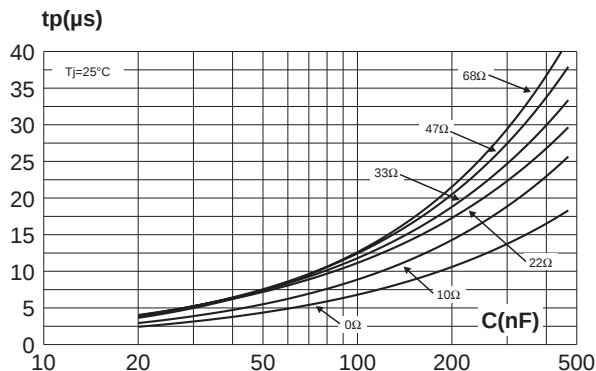


Diagram 2: Test circuit.

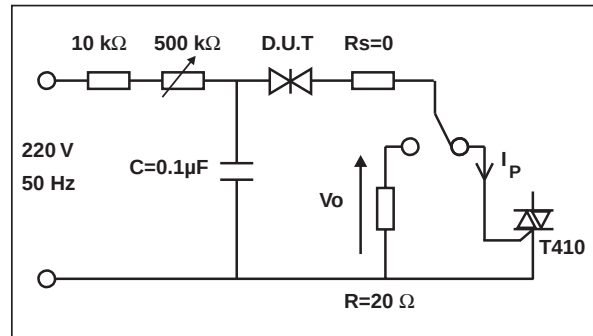


Diagram 3: Rise time measurement.

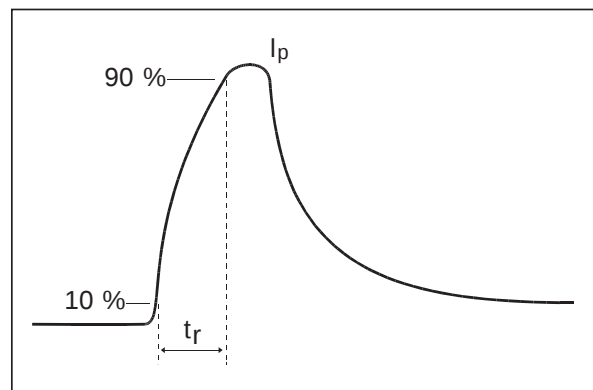


Fig. 2: Repetitive peak pulse current versus pulse duration (maximum values).

