

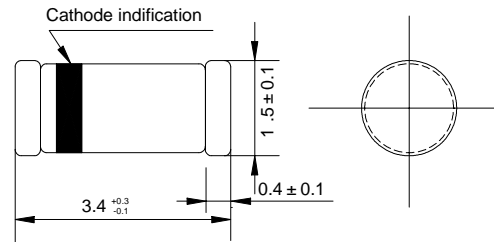
### SILICON BIDIRECTIONAL DIACS

VOLTAGE RANGE: 28-45 V

#### FEATURES

- ◇ The three layer,two terminal,hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low break over current at break over voltage as they withstand peak pulse current, The breakover symmetry is within three volts(DB6). These diacs are intended for use in thyristors phase control,circuits for lamp dimming,universal motor speed control,and heat control.

#### MINI-MELF



Dimensions in millimeters

#### ABSOLUTE RATINGS

Parameters	Symbols	DB3M,DB4M	UNITS
Power dissipation on printed $T_A=50^\circ\text{C}$	$P_C$	150.0	mW
Repetitive peak on-state current $t_p=20 \mu\text{S}$ $f=120\text{Hz}$	$I_{TRM}$	2.0	A
Operating junction temperature	$T_J$	-40--- +125	$^\circ\text{C}$
Storage temperature	$T_{STG}$	-40--- +125	$^\circ\text{C}$

#### ELECTRICAL CHARACTERISTICS

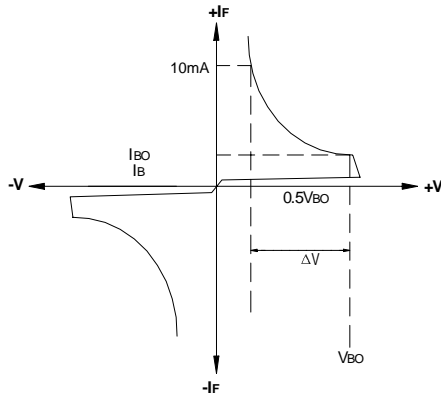
Parameters	Test Conditions	DB3M	DB4M	UNITS
		Min	Typ	
Breakover voltage (NOTE 1)	$V_{BO}$ $C=22\text{nf}$ (NOTE 2) See FIG.1	28	35	V
		32	40	
		36	45	
Breakover voltage symmetry	$C=22\text{nf}$ (NOTE 2) See FIG.1	Max	$\pm 3.0$	V
Dynamic breakover voltage (NOTE 1)	$\Delta I=(I_{BO} \text{ to } I_F=10\text{mA})$ See FIG.1	Min	5.0	V
Output voltage (NOTE 1)	See FIG.2	Min	5.0	V
Breakover current (NOTE 1)	$C=22\text{nf}$ (NOTE 2)	Max	100.0	$\mu\text{A}$
Rise time (NOTE 1)	See FIG.3	Typ	1.5	$\mu\text{S}$
Leakage current (NOTE 1)	$V_R=0.5 V_{BO}$ See FIG.1	Max	10.0	$\mu\text{A}$

NOTE: 1. Electrical characteristics applicable in both forward and reverse directions.

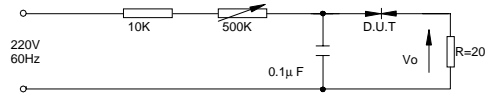
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2. Connected in parallel with the devices

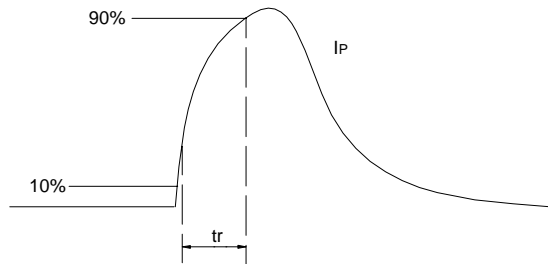
**FIG.1-VOLTAGE-CURRENT CHARACTERISTIC CURVE**



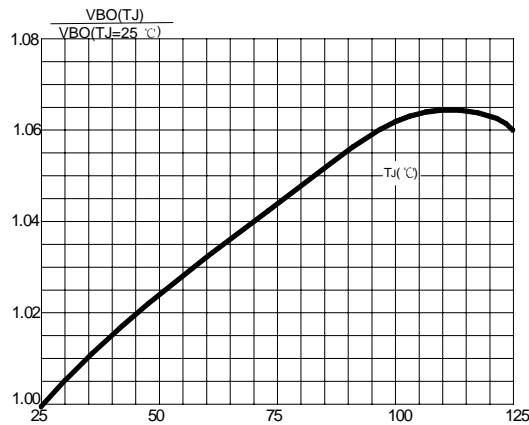
**FIG.2-TEST CIRCUIT FOR OUTPUT VOLTAGE**



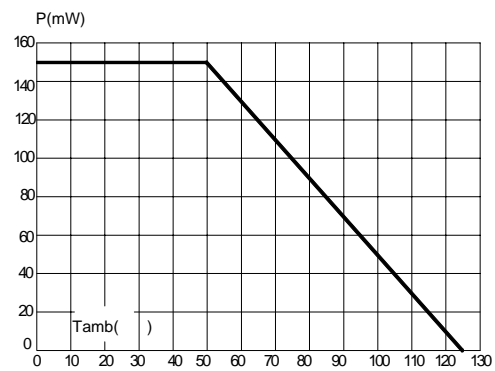
**FIG.3- TEST CIRCUIT SEE FIG.2 ADJUST R FOR  $I_P=0.5A$**



**FIG.5-RELATIVE VARIATION OF  $V_{BO}$  VERSUS JUNCTION TEMPERATURE(TYPICAL VALUES)**



**FIG.4-POWER DISSIPATION VERSUS AMBIENT TEMPERATURE (MAXIMUM VALUES)**



**FIG.6-PEAK PULSEE CURRENT VERENT VERSUS PULSE DURATION(MAXIMUM VALUES)**

