



Pb Free Plating Product

DB3 DB4 DB6

150 mW SILICON BIDIRECTIONAL DIACS

**FEATURES**

- Three way layer two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low breakover current. The breakover symmetry is within three volts (DB3, 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
- This diode is also available in the DO-41 case.

Dimensions in inches and (millimeters)

**ABSOLUTE RATINGS**

PARAMETERS	SYMBOL	VALUE			UNITS
		DB3	DB4	DB6	
Power Dissipation on Printed Circuit (L=10mm) $T_A=50^\circ\text{C}$	$P_c$	150			mW
Repetitive Peak on-state Current $T_p=10\mu\text{s}$ $f=100\text{Hz}$	$I_{TRM}$	2.0			A
Storage and Operating Junction Temperature	$T_{STG}/T_J$	-44 to +125 / -40 to +110			$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS**

PARAMETERS	SYMBOLS	TEST CONDITIONS	VALUE			UNITS	
			DB3	DB4	DB6		
Breakover Voltage*	$V_{BO}$	C=22nF** See Diagram 1	Min	28	35	56	V
			Typ	32	40	60	
			Max	36	45	70	
Breakover Voltage Symmetry	$1+V_{BO-}$ $1-V_{BO-}$	C=22nF** See Diagram 1	Max	$\pm 3$		V	
Dynamic Breakover Voltage	$1 \pm \Delta V_1$	$\Delta I = (I_{BO} \text{ to } I_F = 10\text{mA})$ See FIG 1	Min	5		V	
Output Voltage*	$V_O$	See FIG 2	Min	5		V	
Breakover Current*	$I_{BO}$	C=22nF**	Max	100		$\mu\text{A}$	
Rise Time*	$t_r$	See FIG 3	Typ	1.5		$\mu\text{s}$	
Leakage Current*	$I_B$	$I_B = 0.5 V_{BO} \text{ MAX}$ See FIG 3	Max	10		$\mu\text{A}$	

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

\*\* Connected in parallel with the devices.

RATING AND CHARACTERISTIC CURVES

FIG.1-CURRENT-VOLTAGE CHARACTERISTICS

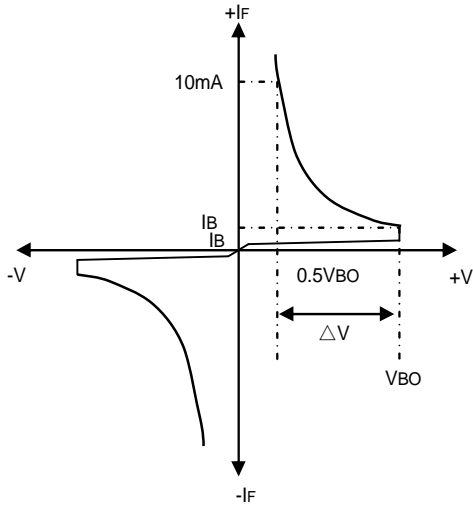


FIG.2-TEST CIRCUIT FOR OUTPUT VOLTAGE

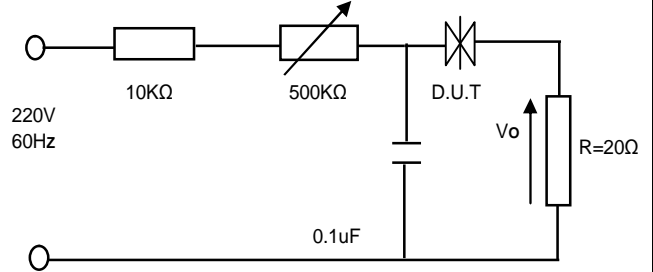


FIG.3-TEST CIRCUIT SEE FIG.2 ADJUST R FOR  $I_p=0.5A$

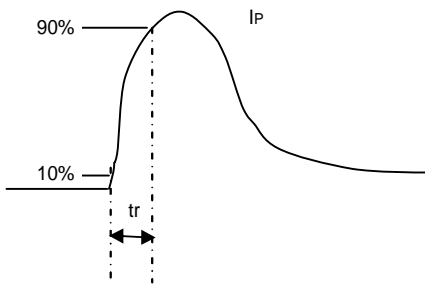


FIG.4-TEST CIRCUIT FOR OUTPUT

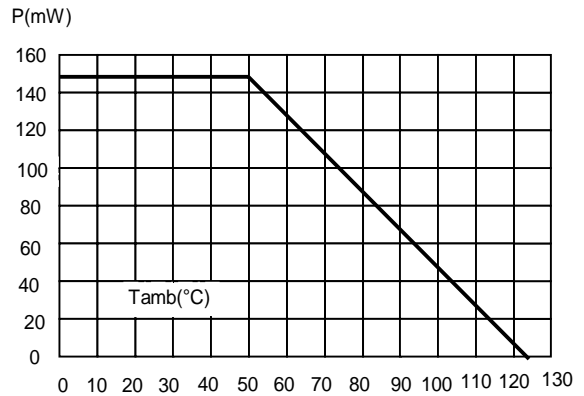


FIG.5-RELATIVE VARIATION OF  $V_{BO}$  VERSUS JUNCTION TEMPERATURE(TYPICAL VALUES)

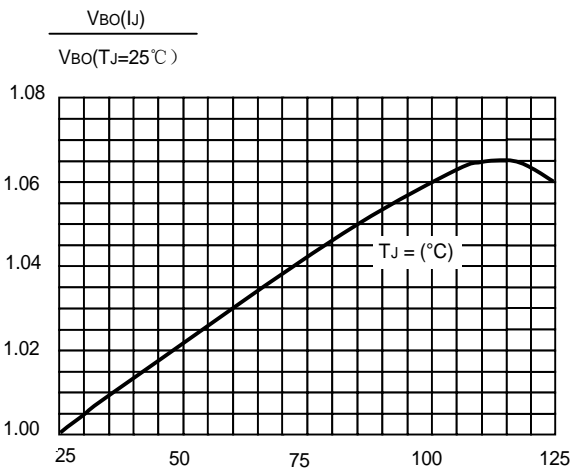


FIG.6-PEAK PULSE CURRENT VERSUS PULSE DURATION (MAXIMUM VALUES)

