



# FUKUCOM COMPANY LTD.

## 福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
 KWUN TONG, KOWLOON, HONG KONG.  
 TEL: 852-2790 0314 FAX: 852-2790 0206

### DB-3, DB-4

#### SILICON BIDIRECTIONAL DIACS

The glass passivated, three-layer, two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low breakover current at breakover voltage as they withstand peak pulse current. The breakover symmetry is within four volts with a typical breakover voltage of DB-3 32 volts, DB-4 40 volts. These diacs are intended for use in thyristor phase control, circuits for lamp-dimming, universal-motor speed controls, and heat controls.

Semtech's **DB-3** and **DB-4** are bi-directional trigger diodes designed to operate in conjunction with all of Semtech Electronics' Triacs and SCR's

Storage Temperature  $T_{STG}$  - 40°C to +150°C

Operating Temperature  $T_J$  - 40°C to +100°C

#### MAXIMUM RATINGS AT 50°C Ambient

Peak Current (10μ sec duration, 120 cycle repetition rate)  $I_P \pm 2$  Amperes Max.

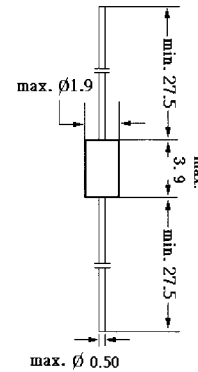
Peak output voltage  $e_P 3 \pm$  volts Max\*.

#### Characteristics at $T_{amb} = 25^\circ\text{C}$

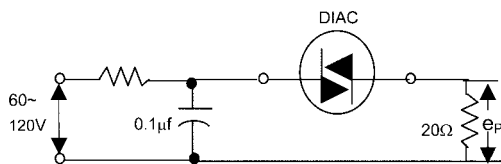
Test	Symbol	Min.	Typ.	Max.	Unit
Breakover Voltage	DB-3	28	32	36	Volts
	DB-4	35	40	45	
Breakover Currents	$I_{(BR)1}$ and $I_{(BR)2}$	-	-	200	μamp
Breakover Voltage Symmetry	$[V_{(BR)1}] - [V_{(BR)2}]$	-	-	3.8	Volts
Dynamic Breakover Voltage $\Delta I = [I_{BR} \text{ to } I_F = 10\text{mA}]$	$ \Delta V  \pm$	5	-	-	Volts
Thermal Impedance Junction To Ambient	$R_{\theta JA}$	-	-	60	°C/W

\*CIRCUIT FOR PEAK OUTPUT VOLTAGE TEST

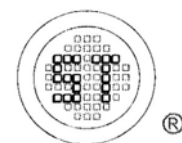
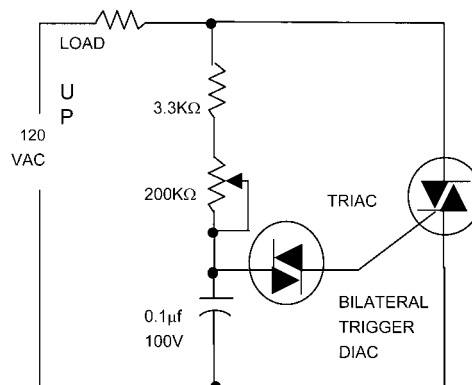
TYPICAL DIAC-TRIAC  
 FULL-WAVE PHASE CONTROL CIRCUIT



Glass case JEDEC DO-35  
 Dimensions in mm



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



**SEMTECH**  
 Dated : 31/12/2002