

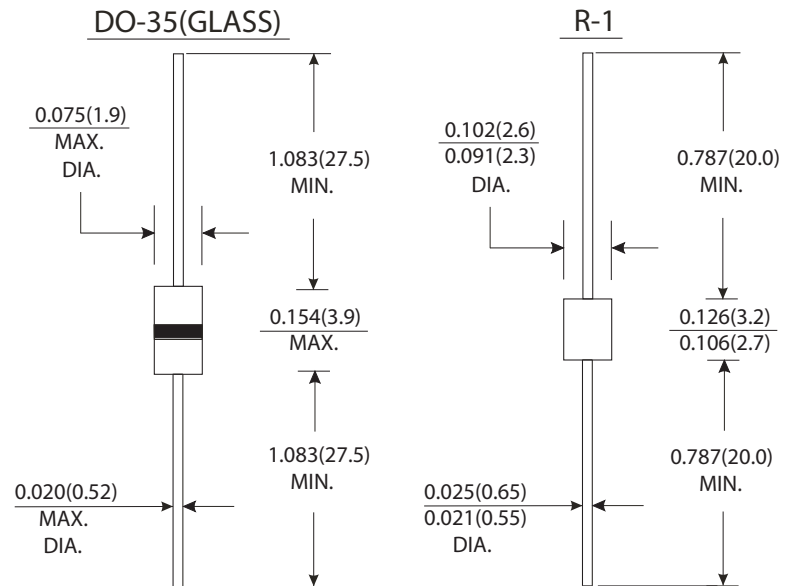
Features

The 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 three volts.

These diacs are intended for use in thyristors phase control, circuits for lamp dimming, universal motor speed control, and heat control

DEC's DB3/DB4 are bi-directional triggered diode designed to operate in conjunction with Triacs and SCR's



Dimensions in inches and (millimeters)

Absolute Ratings (Limiting Values)

Symbols	Parameters	Value	Value		Units
			DB3	DB4	
P _c	Power Dissipation on Printed Circuit(L=10mm) T _A =50 °C	150			mW
I _{TRM}	Repetitive Peak on-state Current t _p =10 μs F=100Hz	2.0	2.0		A
T _{STG} /T _J	Storage and Operating Junction Temperature	-40 to +125/-40 to 110			°C

Electrical characteristics

Symbols	Parameters	Test Conditions	Value		Units	
			DB3	DB4		
V _{BO}	Breakover Voltage (Note 2)	C=22nF(Note2) See diagram 1	Min Typ Max	28 32 36	35 40 45	V
$\frac{ +V_{BO} }{ -V_{BO} }$	Breakover Voltage Symmetry	C=22nF(Note2) See diagram 1	Max	±3		V
$ \pm \Delta V $	Dynamic Breakover Voltage (Note 1)	$\Delta I=(I_{BO} \text{ to } I_F=10\text{mA})$ See diagram 1	Min	5		V
V _O	Output Voltage (Note 1)	See diagram 2	Min	5		V
I _{BO}	Breakover Current (Note 1)	C=22nF(Note2)	Max	100		μA
t _r	Rise Time (Note 1)	See diagram 3	Typ	1.5		μs
I _B	Leakage Current (Note 1)	V _B =0.5 V _{BO} max see diagram 1	Max	10		μA

Notes:

- (1) Electrical characteristics applicable in both forward and reverse directions
- (2) Connected in parallel with the devices

RATINGS AND CHARACTERISTIC CURVES DB3/DB4

DIAGRAM 1 : Current-voltage characteristics

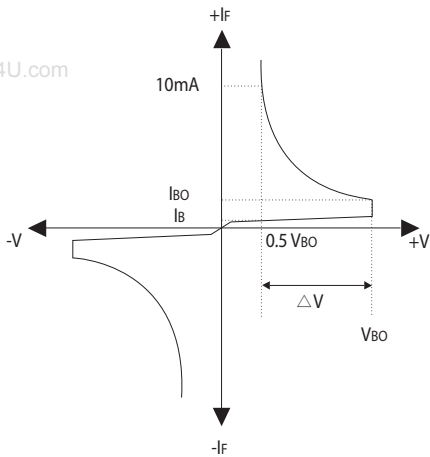


FIG.1-Power dissipation versus ambient temperature (maximum values)

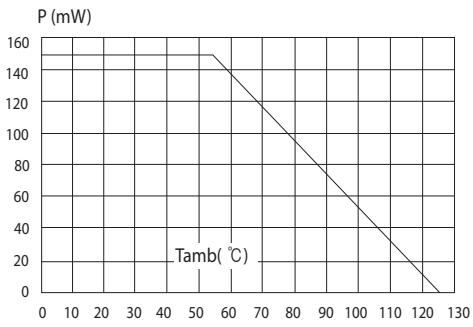


DIAGRAM 2 : Test circuit for output voltage

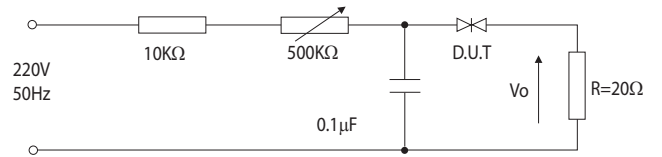


DIAGRAM 3 : Test circuit see diagram2 adjust R for Ip=0.5A

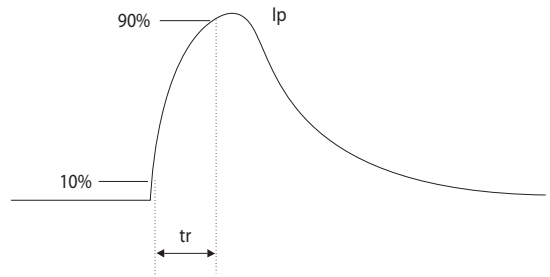


FIG.2-Relative variation of VBO versus junction temperature (typical values)

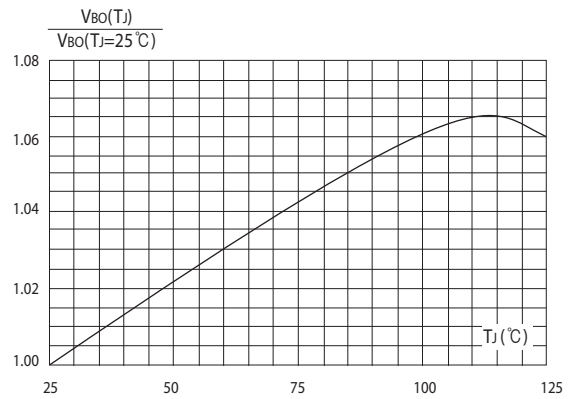


FIG.3-Peak pulse current versus pulse duration (maximum values)

