



**DB3/DB4**

**SIGNAL BIDIRECTIONALDIAC**

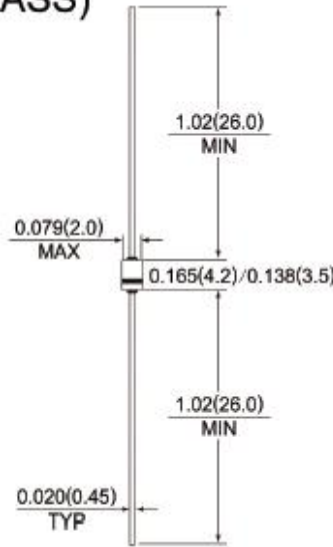
**POWER DISSIPATION 150 mW**

**Features:**

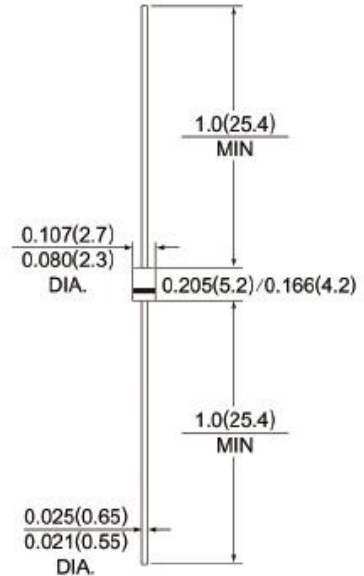
The three layer, two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors. They demonstrate low breakover current at breakover voltage as they withstand peak pulse current. The breakover symmetry is within three volts. These diacs are intended for use in 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

**DO-35  
(GLASS)**



**A-405**



**Absolute Ratings (Limiting Values)**

Symbols	Parameters		Value		Units
			DB3	DB4	
Pc	Power Dissipation on Printed Circuit(L=10mm)	TA=50°C	150		mW
ITRM	Repetitive Peak on-state Current	tp=10µs F=100Hz	2.0	2.0	A
TSTG/TJ	Storage and Operating Junction Temperature		-40 to +125/-40 to 110		°C

**Electrical characteristics**

Symbols	Parameters	Test Conditions	Value		Units	
			DB3	DB4		
VBO	Breakover Voltage (Note 2)	C=22nF(Note2) See diagram 1	Min	28.0	35.0	V
			Typ	32.0	40.0	
			Max	36.0	45.0	
+VBO   - VBO	Breakover Voltage Symmetry	C=22nF(Note2) See diagram 1	Max	±3		V
±ΔV	Dynamic Breakover Voltage (Note 1)	ΔI=(IBO to IF=10mA) See diagram 1	Min	5		V
VO	Output Voltage (Note 1)	See diagram 2	Min	5		V
IBO	Breakover Current (Note 1)	C=22nF(Note2)	Max	100		µA
tr	Rise Time (Note 1)	See diagram 3	Typ	1.5		µS
IB	Leakage Current (Note 1)	VB=0.5 VBO 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

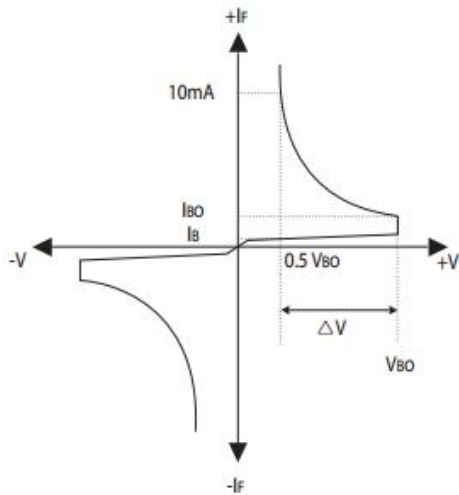


DIAGRAM 2 : Test circuit for output voltage

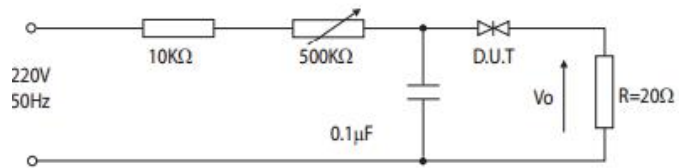


DIAGRAM 3 : Test circuit see diagram2 adjust R for  $I_p=0.5A$

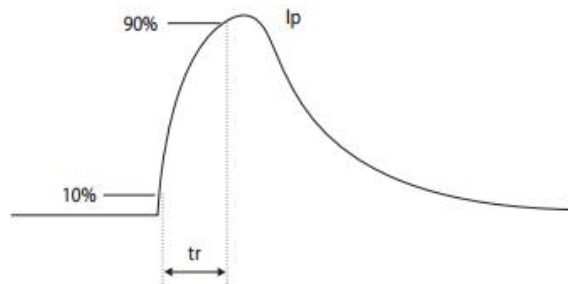


FIG.1-Power dissipation versus ambient temperature (maximum values)

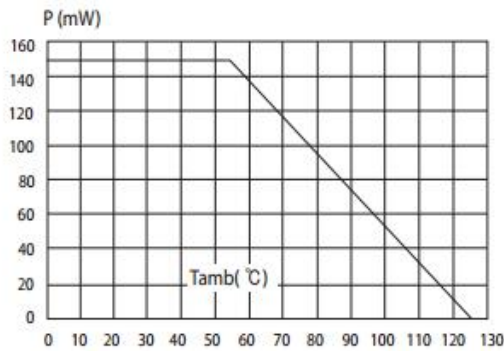


FIG.2-Relative variation of VBO versus junction temperature (typical values)

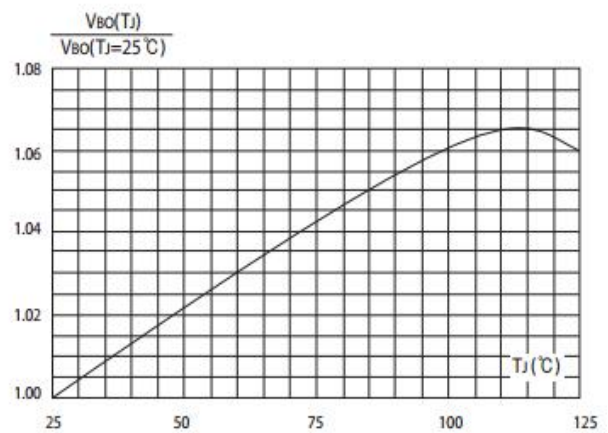


FIG.3-Peak pulse current versus pulse duration (maximum values)

