

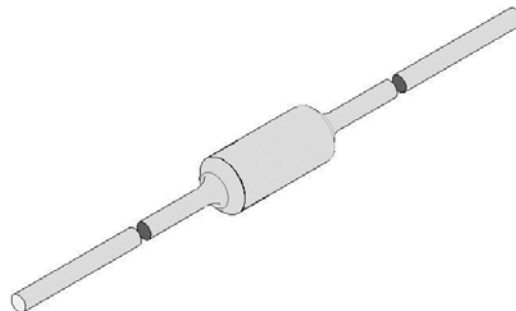
# DIAC

## Features

1.  $V_{BO}$ : 32V(TYP)
2. Breakover voltage range: 28 to 36V

## Applications

Functioning as a trigger diode with a fixed voltage reference, the DB3 can be used in conjunction with triacs for simplified gate control circuits or as a starting element in fluorescent lamp ballasts.



## Absolute Maximum Ratings

(Limiting values)

Parameter	Symbol	Value	Unit
Repetitive peak on-state current (tp=20 $\mu$ s F=120 Hz)	$I_{TRM}$	2	A
Operating junction temperature range	$T_j$	-40 ~ +125	$^{\circ}$ C
Storage temperature range	$T_{stg}$	-40 ~ +125	$^{\circ}$ C

## Electrical Characteristics

( $T_J=25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Value	Unit	
Breakover voltage*	$V_{BO}$		MIN.	28	V
			TYP.	32	
			MAX.	36	
Breakover voltage symmetry	$ V_{BO1}-V_{BO2} $		MAX.	$\pm 3$	V
Dynamic breakover voltage*	$\Delta V$	$V_{BO}$ and $V_F$ at 10mA	MIN.	5	V
Output voltage*	$V_O$	see diagram 2( $R=20\ \Omega$ )	MIN.	5	V
Breakover current*	$I_{BO}$		MAX.	50	$\mu\text{A}$
Rise time*	$t_r$	see diagram 3	MAX.	2	$\mu\text{s}$
Leakage current*	$I_R$	$V_R=0.5V_{BO}$ max	MAX.	10	$\mu\text{A}$

\*Applicable to both forward and reverse directions.

\*\*Connected in parallel to the device.

Diagram 1: Voltage - current characteristic curve.

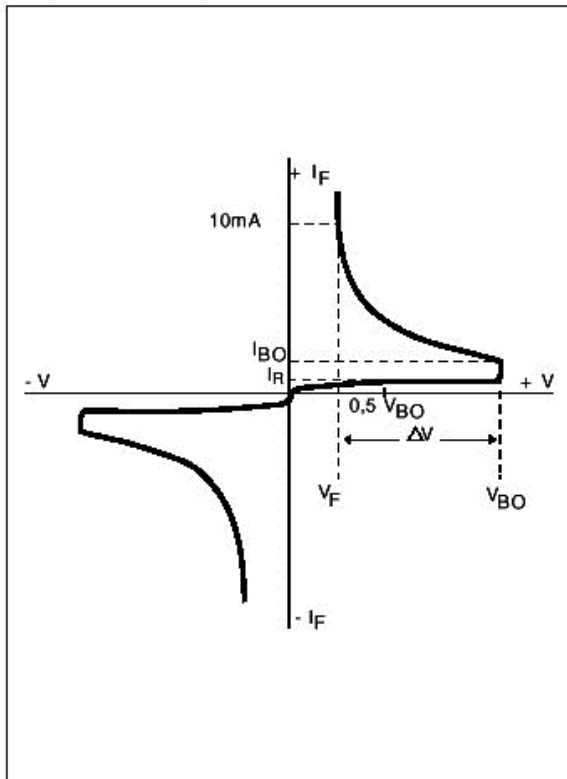


Diagram 2: Test circuit.

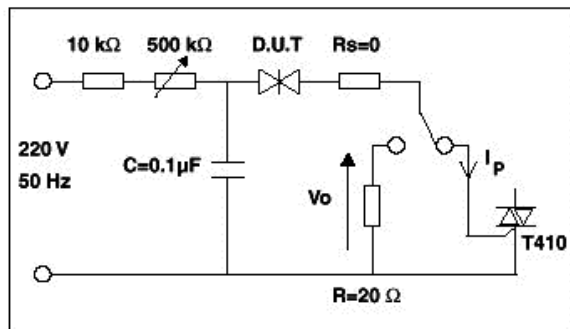
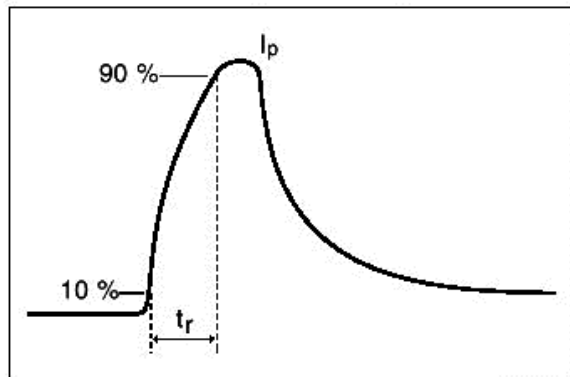
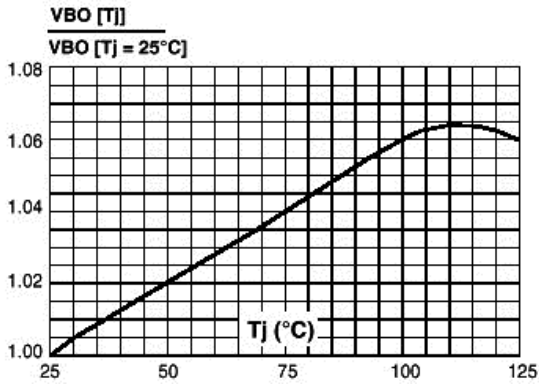


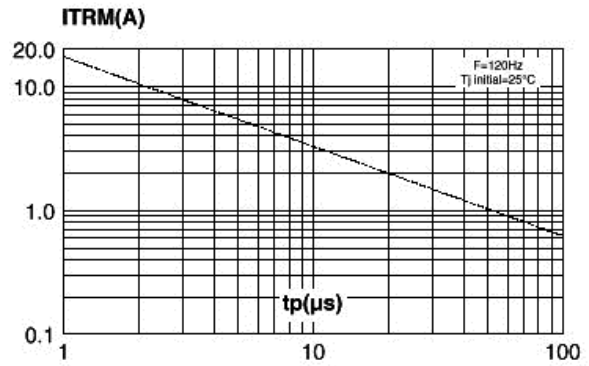
Diagram 3: Rise time measurement.



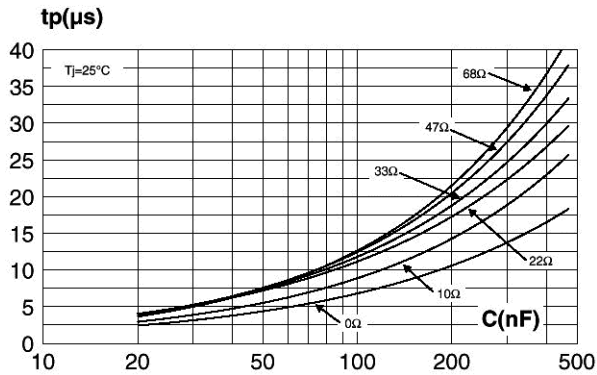
**Fig. 1:** Relative variation of VBO versus junction temperature (typical values)



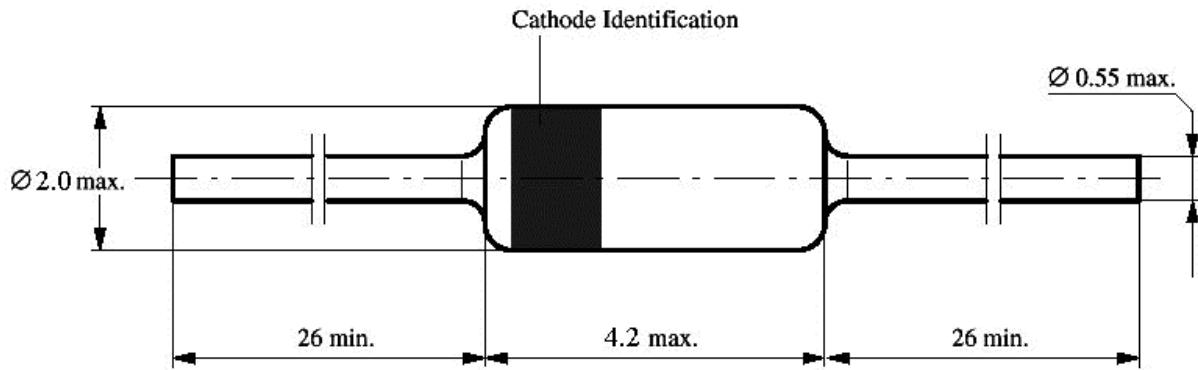
**Fig. 2:** Repetitive peak pulse current versus pulse duration (maximum values).



**Fig. 3:** Time duration while current pulse is higher 50mA versus C and Rs (typical values).



Dimensions in mm



Standard Glass Case  
JEDEC DO 35