

## Bidirectional DIAC Trigger Diode

### Features

- Low breakover current
- Excellent symmetry
- Very low leakage current
- Trigger diode with a fixed voltage reference
- High temperature soldering guaranteed:  
250°C/10s/9.5mm lead length at 5 lbs tension
- RoHS Compliance



DO-35



### Mechanical Data

<b>Case:</b>	Glass Case DO-35
<b>Terminals:</b>	Plated axial leads, solderable per MIL-STD-750, method 2026
<b>Weight:</b>	Approx. 0.13 gram

### Maximum Ratings *(T<sub>Ambient</sub>=25°C unless noted otherwise)*

Symbol	Description	DB3	DB4	Unit
<b>P<sub>D</sub></b>	Power Dissipation on Printed Circuit (L=10mm) (T <sub>a</sub> =50°C)	150		mW
<b>I<sub>TRM</sub></b>	Repetitive Peak on-state Current (t <sub>p</sub> =20μs, f=100Hz)	2		A
<b>T<sub>J</sub></b>	Operating Temperature Range	-40 to +110		°C
<b>T<sub>STG</sub></b>	Storage Temperature Range	-40 to +125		°C
<b>R<sub>θJA</sub></b>	Thermal Resistance Junction to Ambient Air	400		°C/W
<b>R<sub>θJL</sub></b>	Thermal Resistance Junction to Case	150		°C/W

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## DB3/DB4

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	Min.	Max.	Unit	Conditions	
*V <sub>BO</sub>	*Breakover Voltage	DB3	28	36	V	**C=22nF See Fig.4
		DB4	35	45	V	
[   $+V_{BOI}$ - $I-V_{BOI}$   ]	Breakover Voltage Symmetry	-3	3	V	**C=22nF, See Fig.4	
$\pm\Delta V$	**Dynamic Breakover Voltage	5	-	V	$\Delta I=[ I_{BO}$ to $I_F=10mA$ ] See Fig.4	
V <sub>O</sub>	*Output Voltage	5	-	V	See Fig.6	
I <sub>BO</sub>	*Breakover Current	-	50	$\mu A$	**C=22nF	
T <sub>r</sub>	*Rise Time	Typ.1.5		$\mu s$	See Fig.5	
I <sub>B</sub>	*Leakage Current	-	10	$\mu A$	V <sub>B</sub> =0.5, V <sub>BO</sub> Max. See Fig.4	

\*Electrical characteristic applicable in both forward and reverse directions.

\*\*Connected in parallel with the devices.

### Typical Characteristics Curves

Fig.1-Max. Power Dissipation

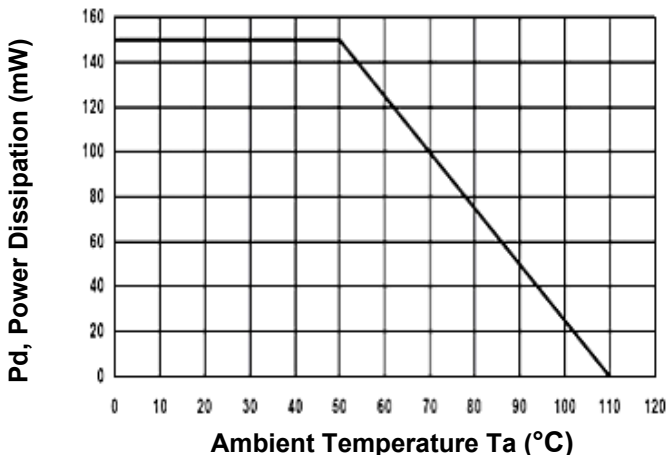
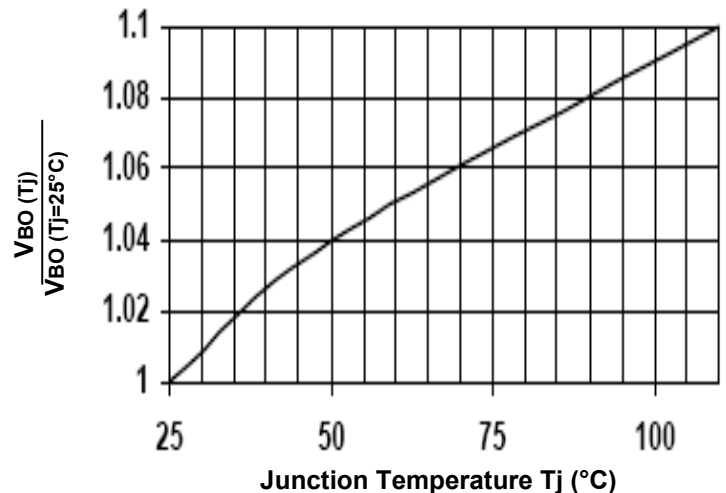
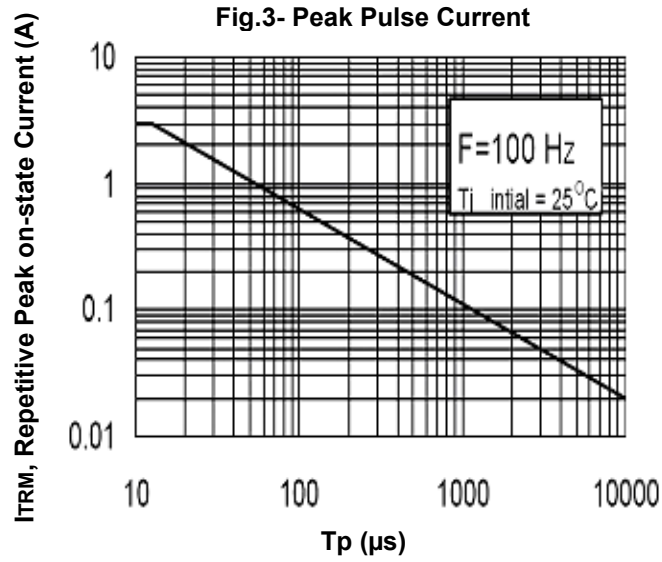


Fig.2- Typical Relative Variation of V<sub>BO</sub>

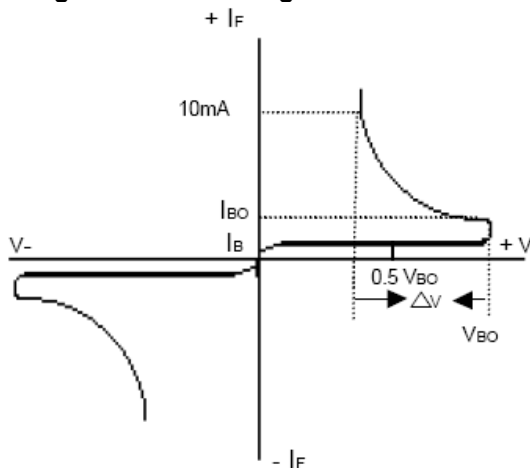


# Bidirectional DIAC Trigger Diode

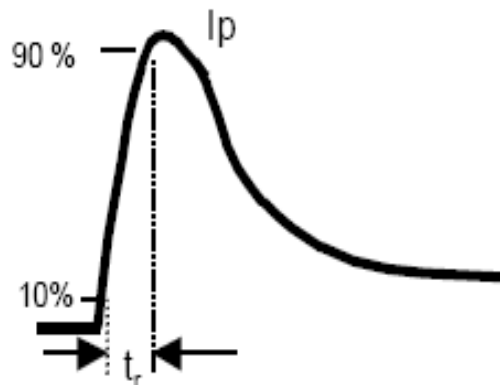
DB3/DB4



**Fig.4- Current-Voltage Characteristics**



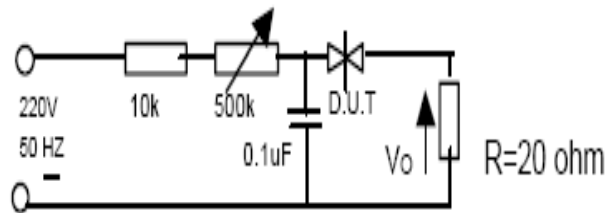
**Fig.5- Rise Time Measurement**



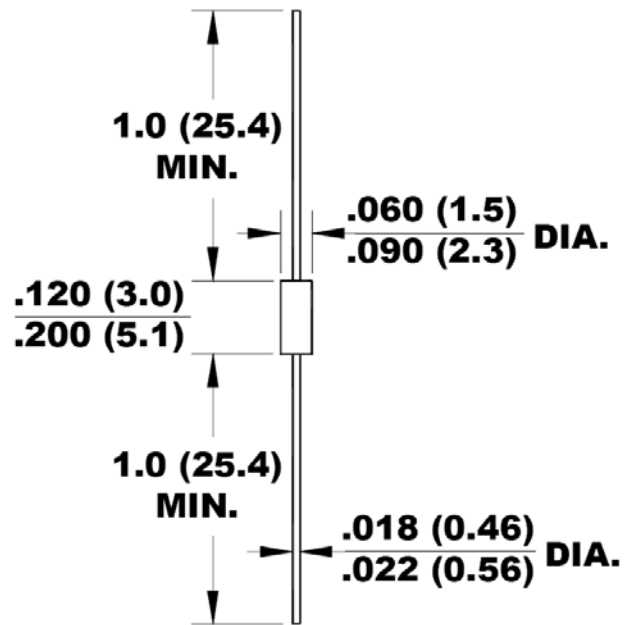
# Bidirectional DIAC Trigger Diode

DB3/DB4

Fig.6-Test Circuit for Output Voltage



## Dimensions in inches (mm)



DO-35

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