



Bidirectional DIAC Trigger Diode

DB3/DB4

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

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

Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

| Symbol | Description | DB3 | DB4 | Unit |
|------------------------|---|-------------|-----|-------|
| P_D | Power Dissipation on Printed Circuit (L=10mm) (T _a =50°C) | 150 | | mW |
| I_{TRM} | Repetitive Peak on-state Current (t _p =20µs, f=100Hz) | 2 | | A |
| T_J | Operating Temperature Range | -40 to +110 | | ° C |
| T_{STG} | Storage Temperature Range | -40 to +125 | | ° C |
| R_{θJA} | Thermal Resistance Junction to Ambient Air | 400 | | ° C/W |
| R_{θJL} | Thermal Resistance Junction to Case | 150 | | ° C/W |

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

| Symbol | Description | Min. | Max. | Unit | Conditions | |
|-------------------------------|-----------------------------|----------|------|---------|--|------------------------|
| $*V_{BO}$ | *Breakover Voltage | DB3 | 28 | 36 | V | **C=22nF See Fig. D |
| | | DB4 | 35 | 45 | V | |
| $[+V_{BO} - -V_{BO}]$ | Breakover Voltage Symmetry | -3 | 3 | V | **C=22nF, See Fig. D | |
| $ \pm \Delta V $ | **Dynamic Breakover Voltage | 5 | - | V | $\Delta 1 = [I_{BO} \text{ to } I_F = 10mA]$ See Fig. D | |
| V_O | *Output Voltage | 5 | - | V | See Fig. F | |
| I_{BO} | *Breakover Current | - | 50 | μA | **C=22nF | |
| T_r | *Rise Time | Typ. 1.5 | | μs | See Fig. E | |
| I_B | *Leakage Current | - | 10 | μA | $V_B = 0.5, V_{BO} \text{ Max.}$ See Fig. D | |

*Electrical characteristic applicable in both forward and reverse directions.

**Connected in parallel with the devices.

Typical Characteristics Curves

Fig. A-Max. Power Dissipation

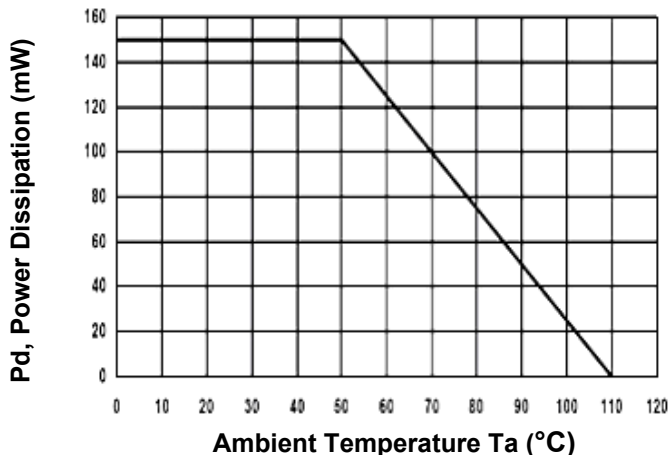
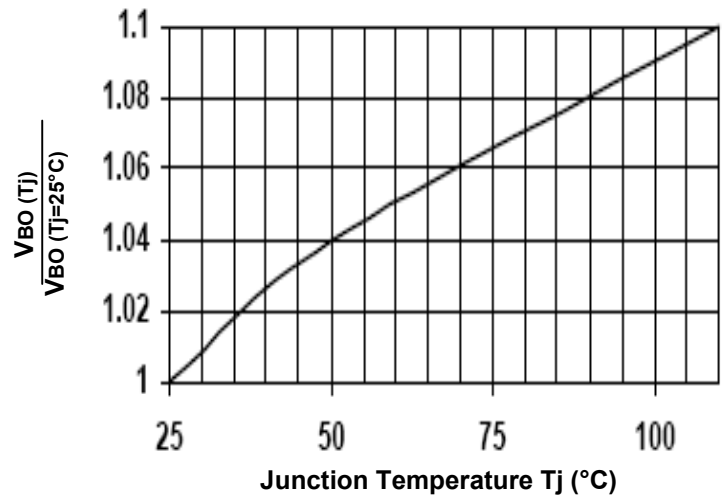


Fig. B- Typical Relative Variation of V_{BO}



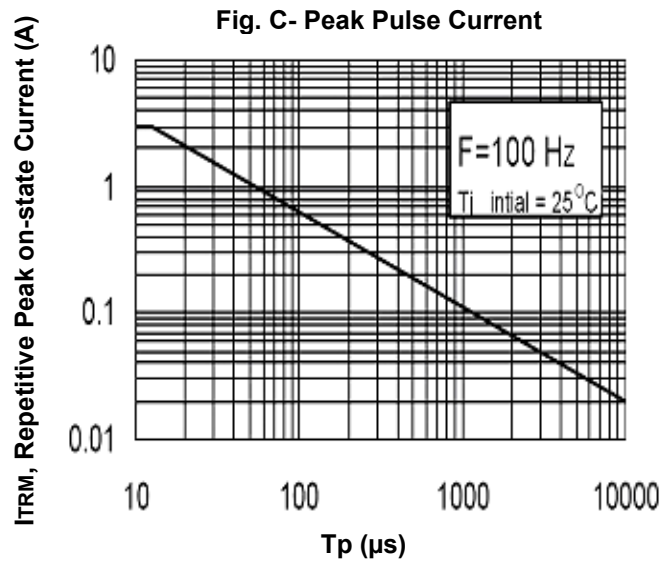


Fig. D- Current–Voltage Characteristics

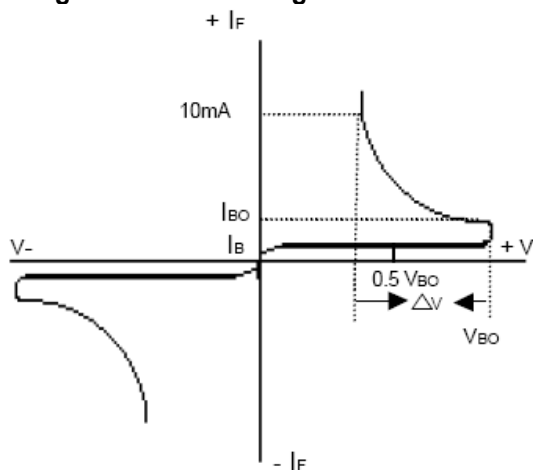
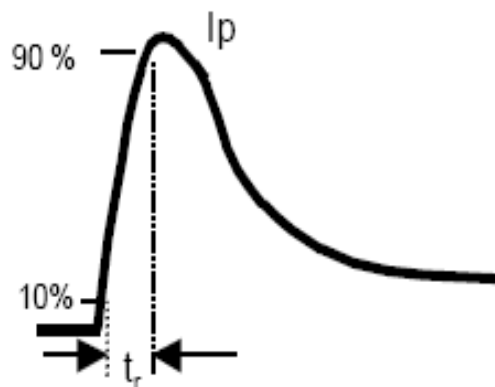


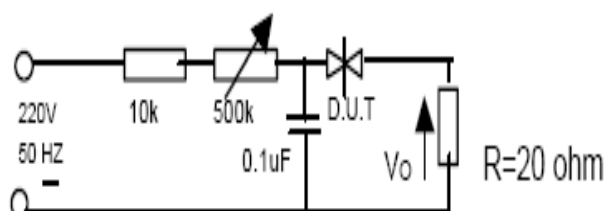
Fig. E- Rise Time Measurement



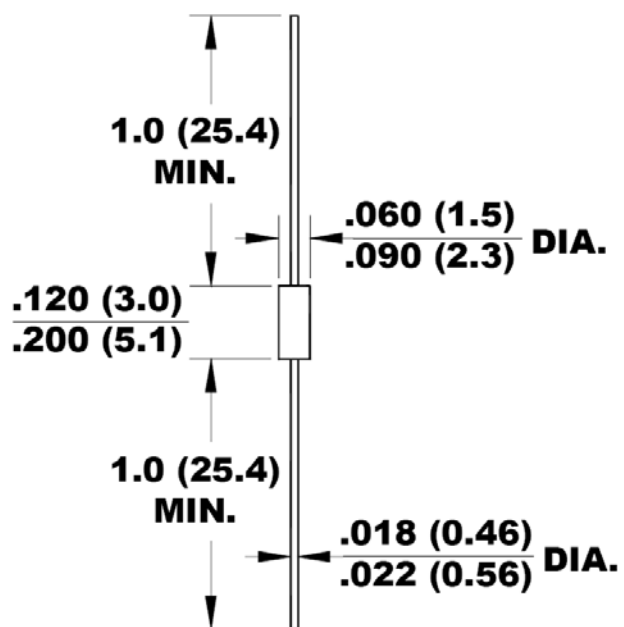
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Fig. F-Test Circuit for Output Voltage



Dimensions in inches (mm)



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