



Micro Commercial Components

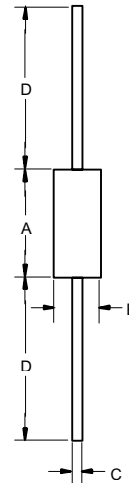


Micro Commercial Components  
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**DB3TG**

**SILICON  
BIDIRECTIONAL  
DIAC**

**DO-35G**



**Features**

- The three layer, two terminal, axial lead, hermetically sealed diacs are designed specifically for triggering thyristors.
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Moisture Sensitivity: Level 1 per J-STD-020C
- Intended for use in thyristors phase control , circuits for lamp dimming, universal motor speed control ,and heat control.

**Maximum Ratings**

- Operating Temperature: -40°C to +125°C
- Storage Temperature: -40°C to +125°C
- Thermal Resistance Junction to Lead:167°C/W
- Thermal Resistance Junction to Ambient: 400°C/W

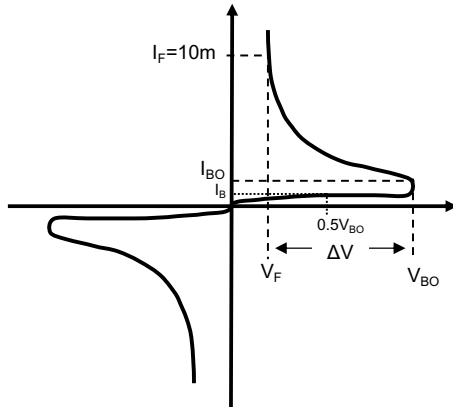
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

|  |  |                          |  |
|--|--|--------------------------|--|
| Power dissipation on Printed Circuit(l=10mm) | P <sub>C</sub>                           | 150mW                    | T <sub>A</sub> =65°C                       |
| Repetitive Peak on-state Current             | I <sub>TRM</sub>                         | 2.0A                     | t <sub>p</sub> =10us,f=120Hz               |
| Breakover Voltage                            | V <sub>BO</sub>                          | Min Typ Max<br>30 32 34V | C=22nF(Note 3)                             |
| Breakover Voltage Symmetry                   | +V <sub>BO</sub>  <br>- -V <sub>BO</sub> | ±2V                      | C=22nF(Note 3)                             |
| Output Voltage(Note 2)                       | V <sub>o(min)</sub>                      | 5V                       |  |
| Dynamic breakover voltage ( N o t e 2 )      | Δ V                                      | 9V(Min)                  | V <sub>BO</sub> and V <sub>F</sub> at 10mA |
| Breakover Current(Note 2)                    | I <sub>BO(max)</sub>                     | 15uA                     | C=22nF                                     |
| Rise Time(Note 2)                            | T <sub>r</sub>                           | 2us(max)                 |  |
| Leakage Current(Note 2)                      | I <sub>B(max)</sub>                      | 10uA                     | V <sub>B</sub> =0.5V <sub>BO(max)</sub>    |

| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | ---    | .150 | ---   | 3.8  |      |
| B          | ---    | .079 | ---   | 2.00 |      |
| C          | ---    | .020 | ---   | .52  |      |
| D          | 1.083  | ---  | 27.50 | ---  |      |

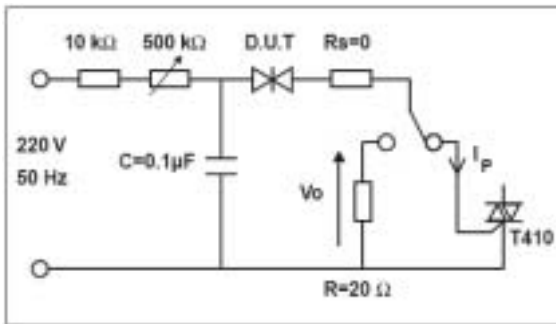
- Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 7(C)-I.  
2. Electrical characteristics applicable in both forward and reverse directions.  
3. Connected in parallel with the devices.

**Typical Performance Characteristics**

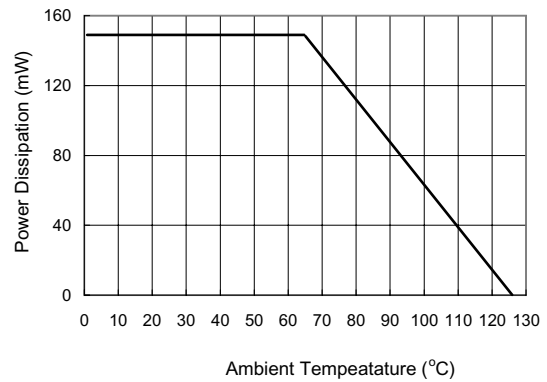


$V_{BO}$  : Break-Over Voltage  
 $I_{BO}$  : Break-Over Current  
 $\Delta V$  : Dynamic Breakover Voltage  
 $I_B$  : Leakage Current at  $V_B=0.5 \cdot V_{BO}$   
 $V_F$  : Voltage at Current  $I_F=10mA$

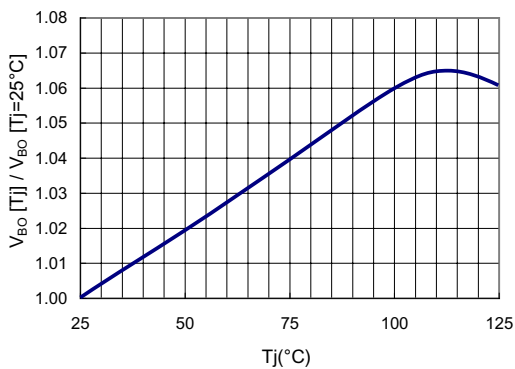
**Diagram 1 : Test circuit**



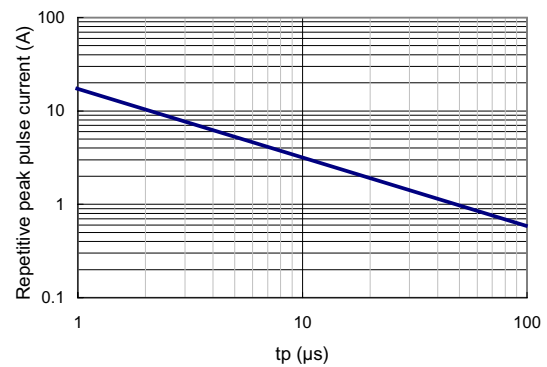
**Figure 1. Admissible Power Dissipation Curve**



**Figure 2. Relative Variation of VBO versus Junction Temperature**



**Figure 3. Repetitive Peak Pulse Current versus Pulse Duration (maximum values)**





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### Ordering Information :

| Device         | Packing                      |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel        |
| Part Number-AP | Ammo Packing: 5Kpcs/Ammo Box |
| Part Number-BP | Bulk: 100Kpcs/Carton         |

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