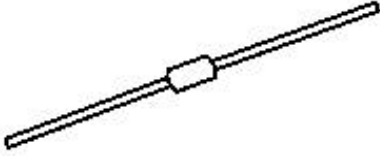


**SILICON DIAC  
BIDIRECTIONAL TRIGGER DIODE  
GLASS PASSIVATED PNP DEVICE**

**DIAC  
DB3-22**

**DO-35  
Glass Axial Package**



**Marking  
C  
DB3  
-22**

**APPLICATIONS**

For Triggering TRIACs, SCRs, Industrial and Commercial Equipments, Lamp Dimmer Circuits, Universal Motor Speed Controls, Heat Controls.

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$  unless specified otherwise )**

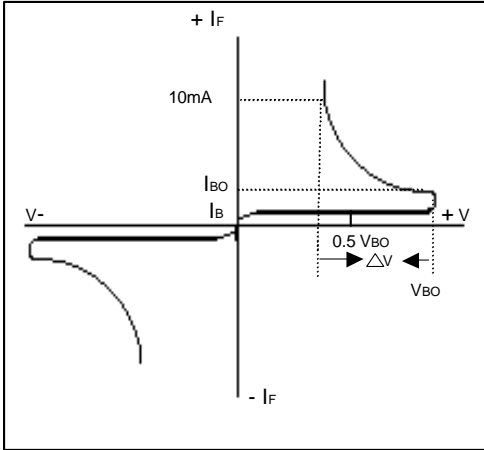
| DESCRIPTION                          | SYMBOL         | TEST CONDITIONS                                       | MIN | TYP | MAX | UNIT             |
|--------------------------------------|----------------|---|-----|-----|-----|------------------|
| Power Dissipation on Printed Circuit | $P_{tot}$      | $L= 10\text{mm}$ , $T_a =50^\circ\text{C}$            |     |     | 150 | mW               |
| Repetitive Peak On- State Current    | $I_{TRM}$      | $t_p= 20\mu\text{s}$ , $f=120\text{Hz}$<br>repetition |     |     | 2   | A                |
| Operating and Storage Temperature    | $T_j, T_{stg}$ |   | -40 |     | 125 | $^\circ\text{C}$ |
| Soldering Temperature                | $T_{sld}$      | 1.6mm from case,<br>10s max                           |     |     | 250 | $^\circ\text{C}$ |

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless specified otherwise)**

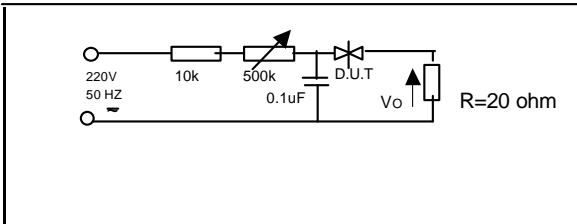
| DESCRIPTION                   | SYMBOL              | TEST CONDITION                    | MIN | TYP | MAX       | UNIT          |
|-------------------------------|---------------------|-----------------------------------|-----|-----|-----------|---------------|
| Break Over Voltage            | $V_{BO}$            | $T_C= -40$ to $125^\circ\text{C}$ | 28  | 32  | 36        | V             |
| * Break Over Voltage Symmetry | $ V_{BO1}-V_{BO2} $ | $T_j=125^\circ\text{C}$           |     |     | $\pm 3.0$ | V             |
| * Break Over Current          | $I_{BO}$            | $T_j=125^\circ\text{C}$           |     |     | 100       | $\mu\text{A}$ |
| * Peak Output Voltage         | $V_P$               |                                   | 5.0 |     |           | V             |
| * Rise Time                   | $t_r$               |                                   |     | 1.5 |           | $\mu\text{s}$ |
| * Leakage Current             | $I_B$               | $V_B = 0.5 V_{BOmax}$             |     |     | 10        | $\mu\text{A}$ |
| * Peak Current                | $I_P$               |                                   | 0.3 |     |           | A             |

\* Electrical characteristics applicable in both forward and reverse directions

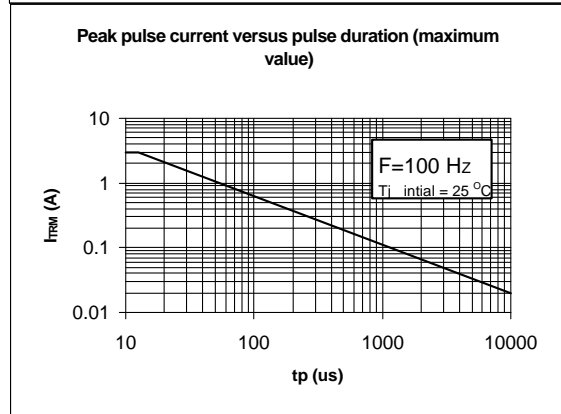
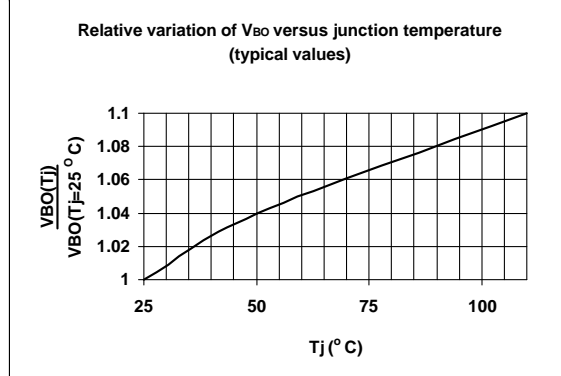
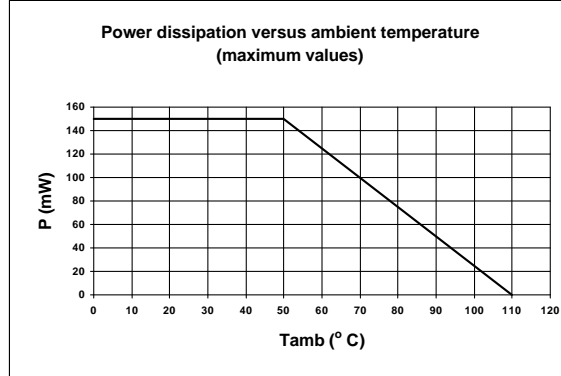
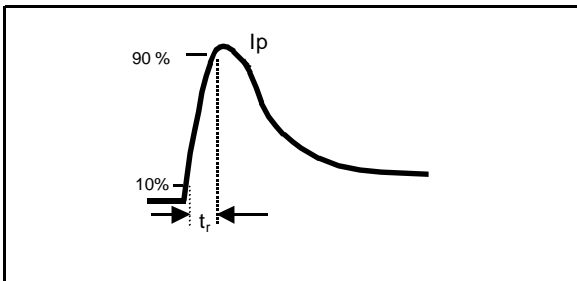
**DIAGRAM 1** :Current-voltage characteristics



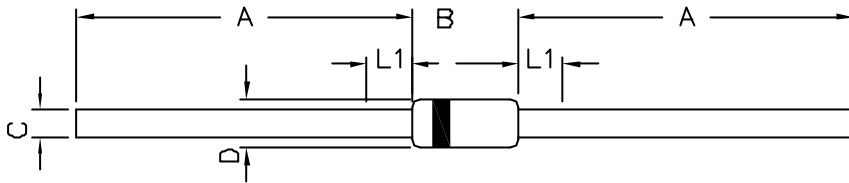
**DIAGRAM 2** :Test circuit for output voltage



**DIAGRAM 3** : Test circuit see diagram 2.  
Adjust R for  $I_p=0.5\text{A}$



## DO-35 Glass Axial Package

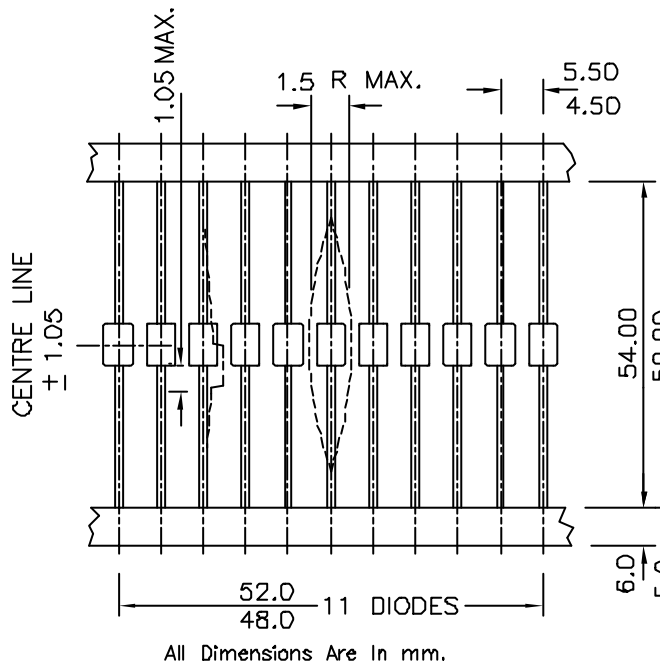


| DIM | MIN   | MAX   |
|-----|-------|-------|
| A   | 25.40 | 38.10 |
| B   | 3.05  | 5.08  |
| C   | 0.46  | 0.55  |
| D   | 1.53  | 2.28  |
| L1  | -     | 1.27  |

### NOTES:-

Cathode is marked by Band.  
All Dimensions Are In mm.

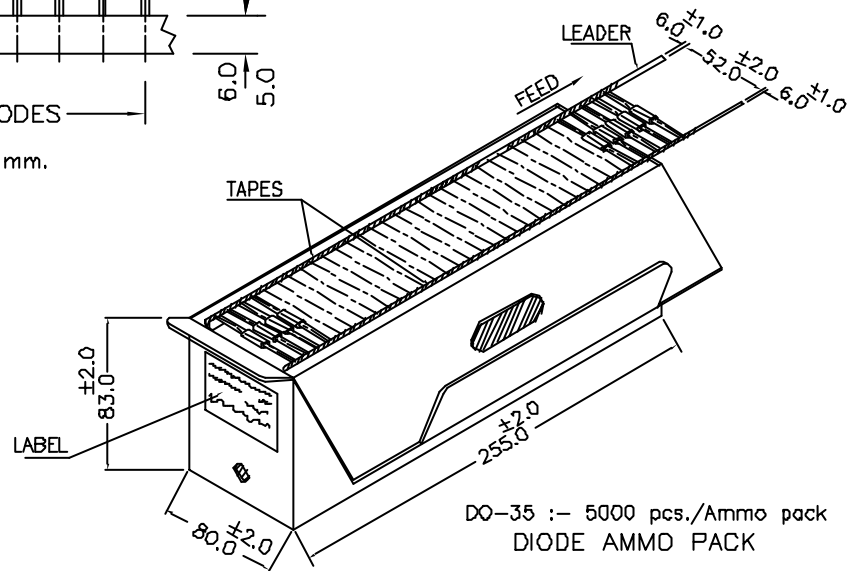
## DO-35, 52mm Taping Specification



All Dimensions Are In mm.

## 52mm Taping Specification

1. T & A Indicates Axial Tape & Ammo packing (52 mm Tape Specing)
2. 300 mm (min) leader tape on every spool.
3. No. of empty places allowed 0.25% without consecutive empty places.
4. Ends of leads shall preferably not protrude beyond the tapes.
5. Components shall be held sufficiently in the tape or tapes so that they can not come free in normal handling.



DO-35 :- 5000 pcs./Ammo pack  
DIODE AMMO PACK

on request also available in 26 mm Tape and Ammo Pack

## Packing Detail

| PACKAGE   | STANDARD PACK |                | INNER CARTON BOX |      | OUTER CARTON BOX |        |       |
|-----------|---------------|----------------|------------------|------|------------------|--------|-------|
|           | Details       | Net Weight/Qty | Size             | Qty  | Size             | Qty    | Qty   |
| DO-35 T&A | 5K/ammo box   | 0.88kg/5K pcs  | 10"X3.5"X3.5"    | 5.0K | 12.7"X12.7"X20"  | 125.0K | 25Kgs |

### **Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of  
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.  
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119  
email@cdil.com www.cdilsemi.com