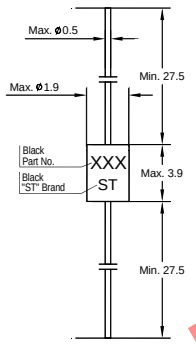
# DB3, DB4, DC34

## Silicon Bidirectional Trigger Diodes

These diacs are intended for use in thyristor phase control, circuits for lamp-dimming, universal-motor speed controls, and heat controls.




Glass Case DO-35
Dimensions in mm

**Absolute Maximum Ratings ($T_a$ = 25 °C)**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation ($T_a$ = 65 °C) | $P_{tot}$ | 150 | mW |
| Repetitive Peak On-state Current (tp = 20 µs, f = 100 Hz) | $I_{TRM}$ | 2 | A |
| Operating Junction and Storage Temperature Range | $T_j$, $T_{stg}$ | - 40 to + 125 | °C |

**Characteristics at $T_a$ = 25 °C**

| Parameter | | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|---|
| Breakover Voltage at C = 22 nF, see diagram 1 | DB3 | $V_{BO}$ | 28 | 36 | V |
| | DC34 | | 30 | 38 | |
| | DB4 | | 35 | 45 | |
| Breakover Voltage Symmetry at C = 22 nF, see diagram 1 | | $[\|+V_{BO}\|-\|-V_{BO}\|]$ | - | 3 | V |
| Dynamic Breakover Voltage at $\Delta I = [I_{BO}$ to $I_F$ = 10 mA] | | $\| \Delta V \pm \|$ | 5 | - | V |
| Output Voltage See diagram 2 | | $V_O$ | 5 | - | V |
| Breakover Current at C = 22 nF | | $I_{BO}$ | - | 50 | µA |
| Leakage Current at $V_B$ = 0.5 $V_{BO}$ max | | $I_B$ | - | 10 | µA |
| Rise Time See diagram 3 | | $t_r$ | - | 2 | µs |

Diagram 1: Current-voltage characteristics

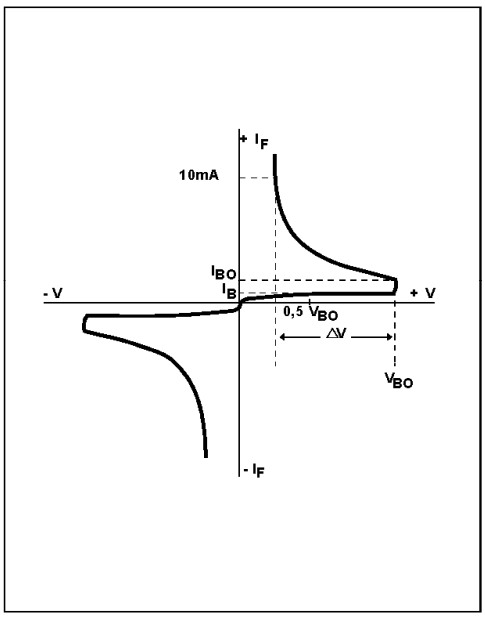



Diagram 2: Test circuit for output voltage

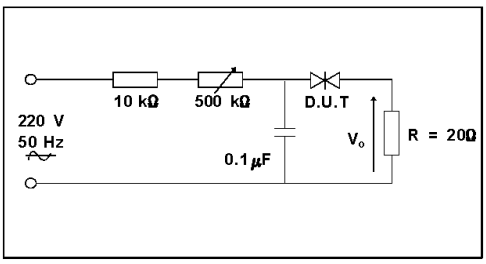



Diagram 3: Test circuit see diagram 2.
Adjust R for Ip=0.5A

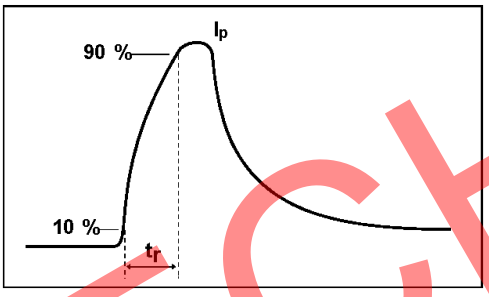



Fig. 1: Power dissipation versus ambient temperature (maximum values)

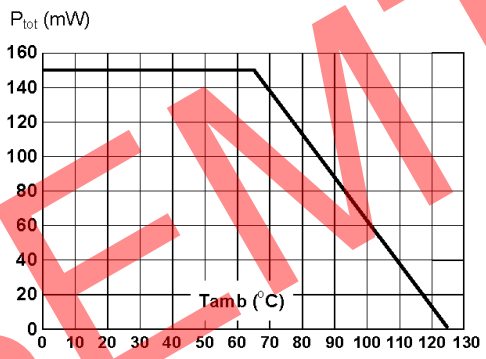



Fig. 2: Relative variation of $V_{BO}$ versus junction temperature (typical values)

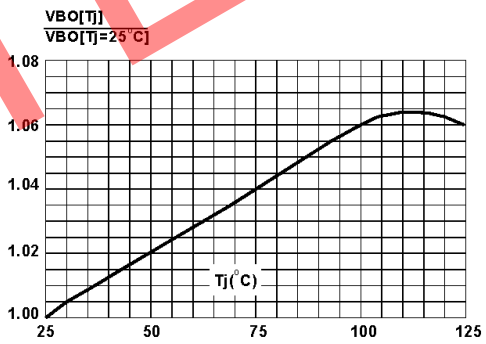



Fig. 3: Peak pulse current versus pulse duration (maximum values)