



## TMMDB3 / TMMDB3TG

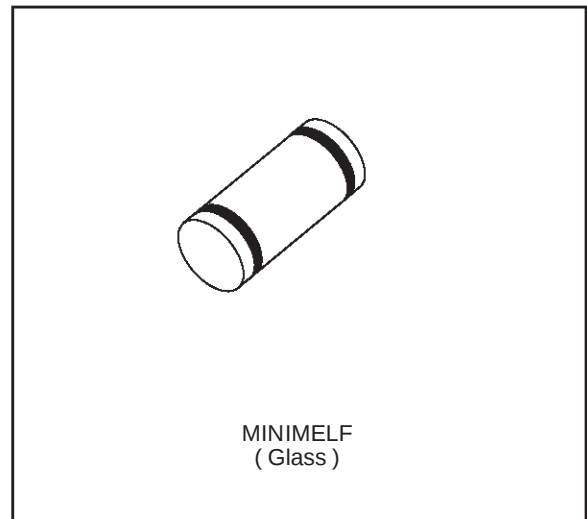
### TRIGGER DIODES

#### FEATURES

- $V_{BO}$  : 32V VERSION
- LOW BREAKOVER CURRENT

#### DESCRIPTION

High reliability glass passivation insuring parameter stability and protection against junction contamination.



#### ABSOLUTE RATINGS (limiting values)

| Symbol                             | Parameter                                        |                          | Value                          | Unit     |
|------------------------------------|--------------------------------------------------|--------------------------|--------------------------------|----------|
| P                                  | Power dissipation on printed circuit (L = 10 mm) | Ta = 65 °C               | 150                            | mW       |
| I <sub>TRM</sub>                   | Repetitive peak on-state current                 | tp = 20 µs<br>F = 100 Hz | 2                              | A        |
| T <sub>stg</sub><br>T <sub>j</sub> | Storage and operating junction temperature range |                          | - 40 to + 125<br>- 40 to + 125 | °C<br>°C |

#### THERMAL RESISTANCES

| Symbol                | Parameter             | Value | Unit |
|-----------------------|-----------------------|-------|------|
| R <sub>th (j-a)</sub> | Junction to ambient   | 400   | °C/W |
| R <sub>th (j-l)</sub> | Junction to tie-point | 300   | °C/W |

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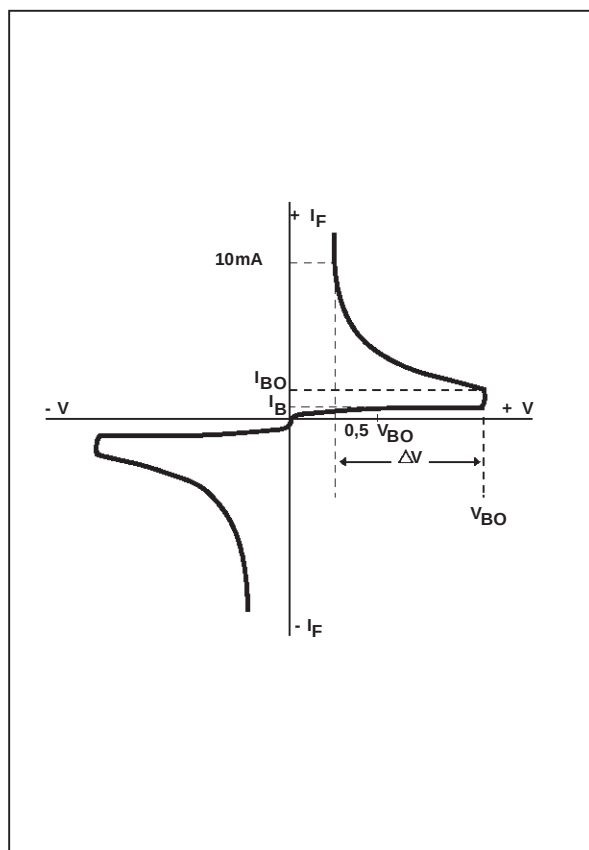
### ELECTRICAL CHARACTERISTICS (T<sub>j</sub> = 25°C)

| Symbol                                  | Parameter                   | Test Conditions                                                   |     | Value  |          | Unit |
|-----------------------------------------|-----------------------------|-------------------------------------------------------------------|-----|--------|----------|------|
|                                         |                             |                                                                   |     | TMMDB3 | TMMDB3TG |      |
| V <sub>BO</sub>                         | Breakover voltage *         | C = 22nF **<br>see diagram 1                                      | MIN | 28     | 30       | V    |
|                                         |                             |                                                                   | TYP | 32     | 32       |      |
|                                         |                             |                                                                   | MAX | 36     | 34       |      |
| [I+V <sub>BO</sub> -I-V <sub>BO</sub> ] | Breakover voltage symmetry  | C = 22nF **<br>see diagram 1                                      | MAX | ± 3    | ± 2      | V    |
| IΔV± I                                  | Dynamic breakover voltage * | ΔI = [I <sub>BO</sub> to I <sub>F</sub> = 10 mA]<br>see diagram 1 | MIN | 5      |          | V    |
| V <sub>O</sub>                          | Output voltage *            | see diagram 2                                                     | MIN | 5      |          | V    |
| I <sub>BO</sub>                         | Breakover current *         | C = 22nF **                                                       | MAX | 100    | 15       | μA   |
| t <sub>r</sub>                          | Rise time *                 | see diagram 3                                                     | TYP | 1.5    |          | μs   |
| I <sub>B</sub>                          | Leakage current *           | V <sub>B</sub> = 0.5 V <sub>BO</sub> max<br>see diagram 1         | MAX | 10     |          | μA   |

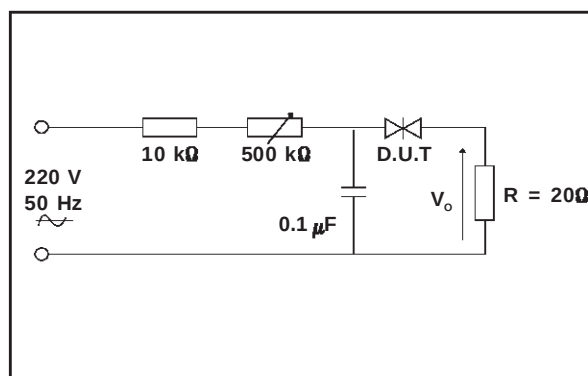
\* Electrical characteristic applicable in both forward and reverse directions.

\*\* Connected in parallel with the devices.

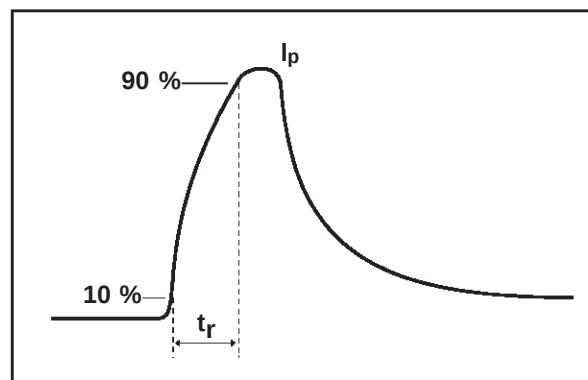
**DIAGRAM 1** : Current-voltage characteristics



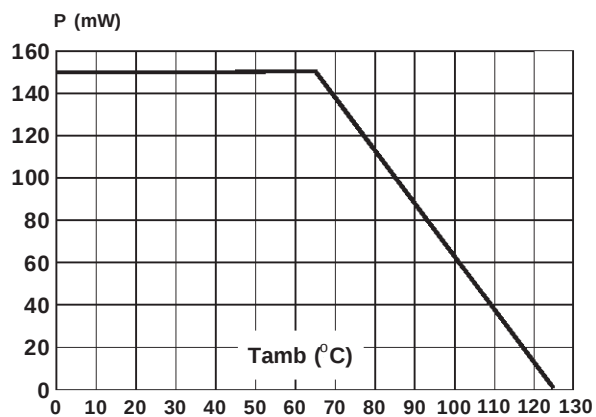
**DIAGRAM 2** : Test circuit for output voltage



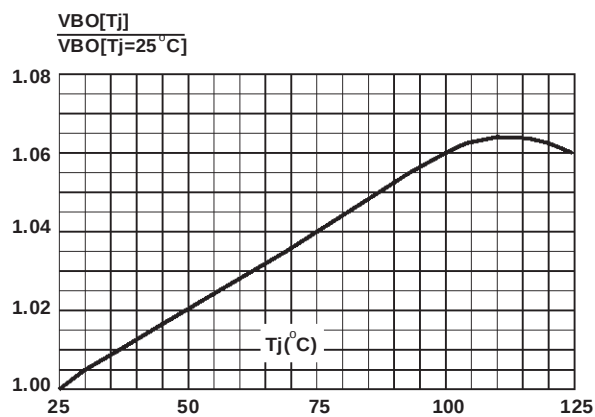
**DIAGRAM 3** : Test circuit see diagram 2.  
Adjust R for I<sub>p</sub> = 0.5A



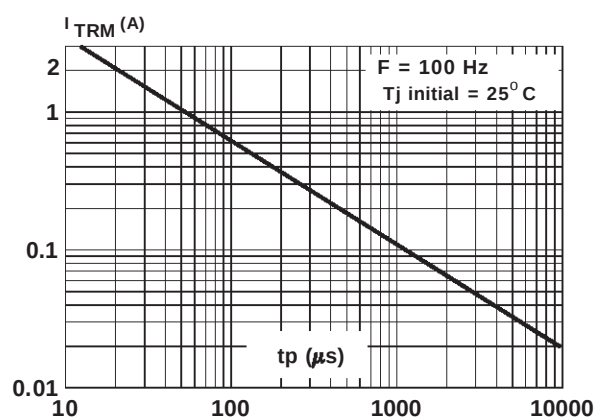
**Fig.1 :** Power dissipation versus ambient temperature (maximum values)



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

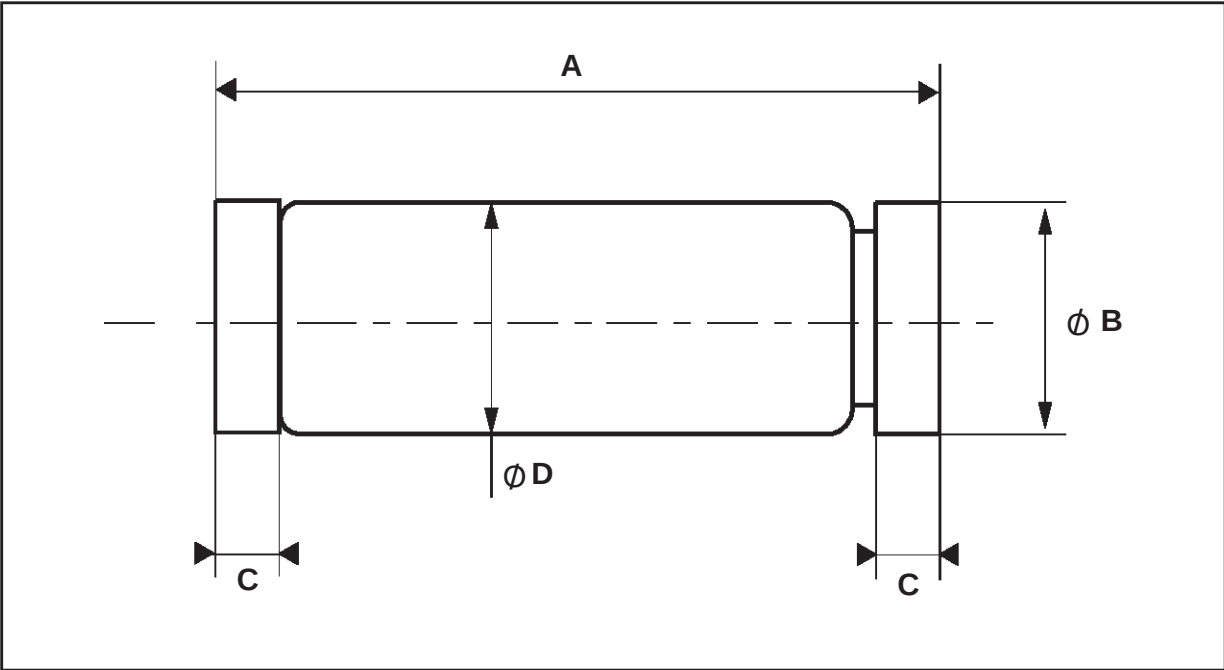


**Fig.3 :** Peak pulse current versus pulse duration (maximum values)



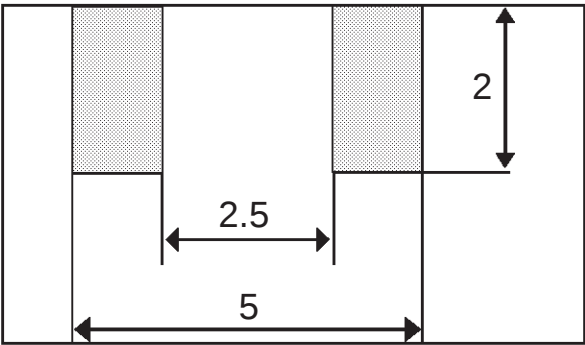
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PACKAGE MECHANICAL DATA (in millimeters)  
MINIMELF Glass



| REF. | DIMENSIONS  |      |      |        |       |       |
|------|-------------|------|------|--------|-------|-------|
|      | Millimeters |      |      | Inches |       |       |
|      | Min.        | Typ. | Max. | Min.   | Typ.  | Max.  |
| A    | 3.30        | 3.40 | 3.6  | 0.130  | 0.134 | 0.142 |
| Ø B  | 1.59        | 1.60 | 1.62 | 0.063  | 0.063 | 0.064 |
| C    | 0.40        | 0.45 | 0.50 | 0.016  | 0.018 | 0.020 |
| Ø D  |             | 1.50 |      |        | 0.059 |       |

FOOT PRINT (in millimeters)



- **Marking** : Clear
- Cooling method by convection and conduction
- Polarity : N A
- Stud torque : N A
- Weight : 0.0380 g

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