# TMMBAT 41

## SMALL SIGNAL SCHOTTKY DIODE



**MINIMELF**
(Glass)

### DESCRIPTION

General purpose metal to silicon diode featuring very low turn-on voltage and fast switching.

This device has integrated protection against excessive voltage such as electrostatic discharges.

### ABSOLUTE RATINGS (limiting values)

| Symbol | Parameter | | Value | Unit |
|---|---|---|---|---|
| $V_{RRM}$ | Repetitive Peak Reverse Voltage | | 100 | V |
| $I_F$ | Forward Continuous Current | $T_i$ = 25 °C | 100 | mA |
| $I_{FRM}$ | Repetitive Peak Forward Current | $t_p \leq 1s$<br>$\delta \leq 0.5$ | 350 | mA |
| $I_{FSM}$ | Surge non Repetitive Forward Current | $t_p$ = 10ms | 750 | mA |
| $P_{tot}$ | Power Dissipation | $T_i$ = 95 °C | 100 | mW |
| $T_{stg}$<br>$T_j$ | Storage and Junction Temperature Range | | - 65 to + 150<br>- 65 to + 125 | °C<br>°C |
| $T_L$ | Maximum Temperature for Soldering during 15s | | 260 | °C |

### THERMAL RESISTANCE

| Symbol | Test Conditions | Value | Unit |
|---|---|---|---|
| $R_{th(j-l)}$ | Junction-leads | 300 | °C/W |

### ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

| Symbol | Test Conditions | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| $V_{BR}$ | $T_j$ = 25°C | $I_R$ = 100µA | 100 | | | V |
| $V_F$* | $T_j$ = 25°C | $I_F$ = 1mA | | 0.4 | 0.45 | V |
| | $T_j$ = 25°C | $I_F$ = 200mA | | | 1 | |
| $I_R$* | $T_j$ = 25°C | $V_R$ = 50V | | | 0.1 | µA |
| | $T_j$ = 100°C | | | | 20 | |

DYNAMIC CHARACTERISTICS

| Symbol | Test Conditions | | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| C | $T_j$ = 25°C | $V_R$ = 1V | f = 1MHz | | 2 | | pF |

* Pulse test: $t_p \leq 300\mu s$ $\delta < 2\%$.

**Figure 1. Forward current versus forward voltage at different temperatures (typical values).**

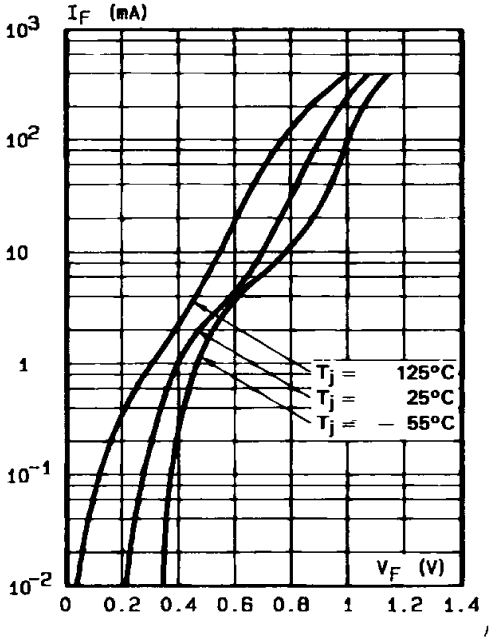



**Figure 2. Forward current versus forward voltage (typical values).**

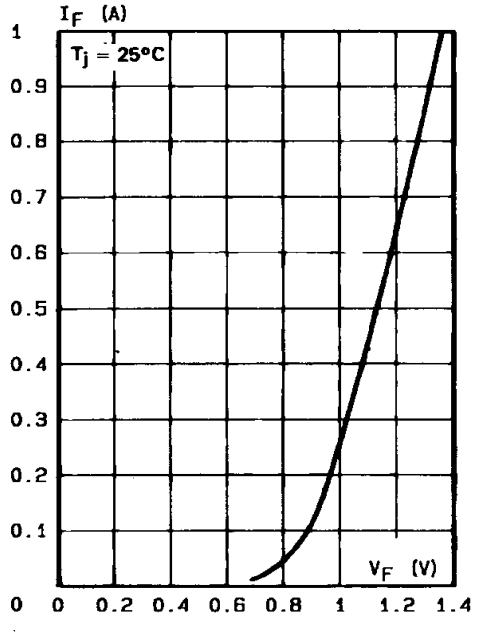



**Figure 3. Reverse current versus junction temperature.**

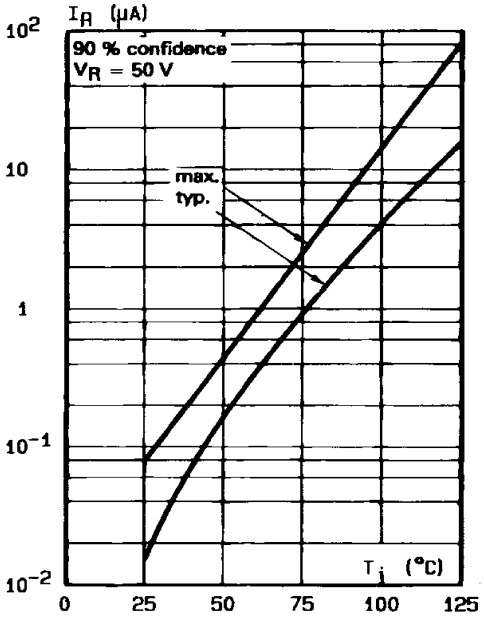



**Figure 4. Reverse current versus continuous reverse voltage (typical values).**

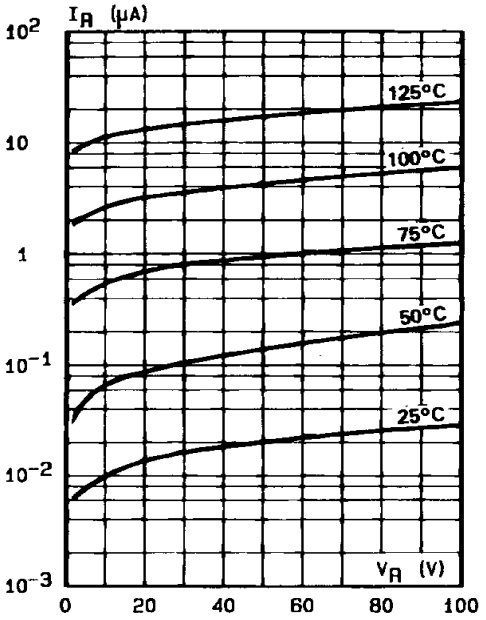
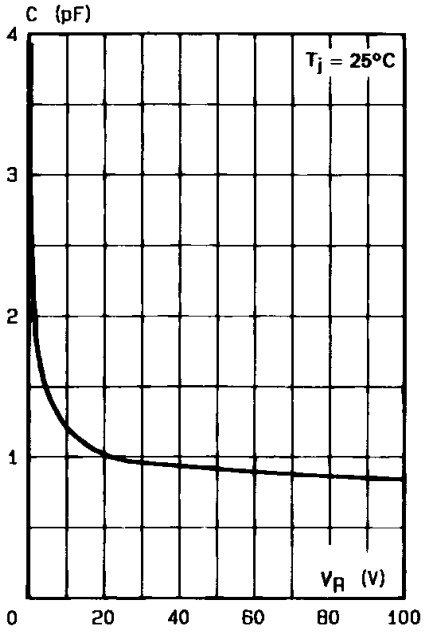
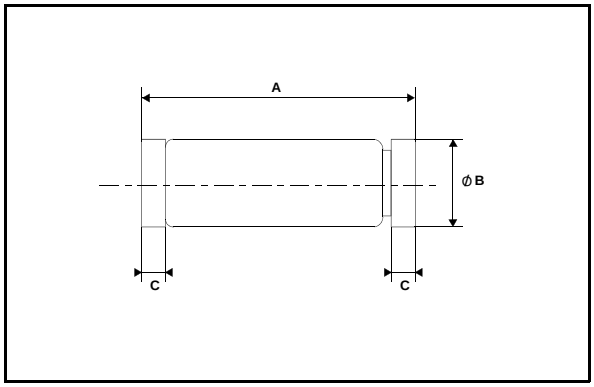


**Figure 5. Capacitance C versus reverse applied voltage $V_R$ (typical values).**



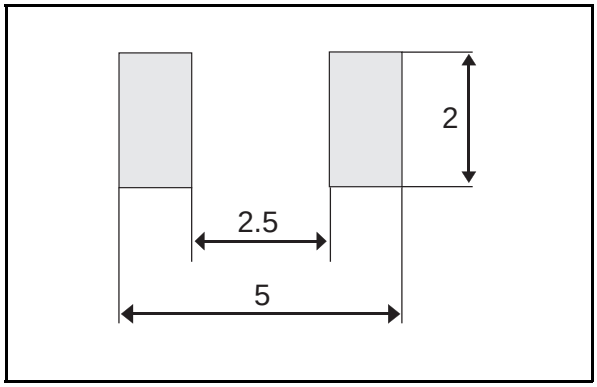
## PACKAGE MECHANICAL DATA

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 |
| 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 |
| D | | 1.50 | | | 0.059 | |

## FOOT PRINT DIMENSIONS (Millimeter)




Marking: ring at cathode end.
Weight: 0.05g

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