

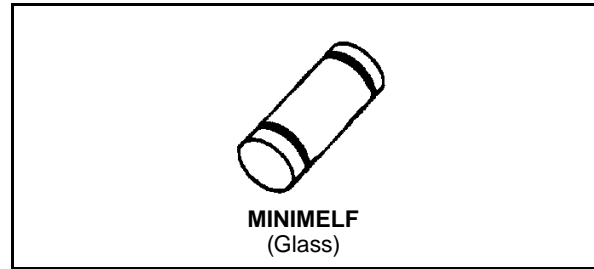


# TMMBAT 41

## SMALL SIGNAL SCHOTTKY DIODE

### 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	$T_i = 25\text{ }^\circ\text{C}$	100 mA
$I_{FRM}$	Repetitive Peak Forward Current	$t_p \leq 1\text{ s}$ $\delta \leq 0.5$	350 mA
$I_{FSM}$	Surge non Repetitive Forward Current	$t_p = 10\text{ ms}$	750 mA
$P_{tot}$	Power Dissipation	$T_i = 95\text{ }^\circ\text{C}$	100 mW
$T_{stg}$ $T_j$	Storage and Junction Temperature Range	- 65 to + 150 - 65 to + 125	$^\circ\text{C}$ $^\circ\text{C}$
$T_L$	Maximum Temperature for Soldering during 15s	260	$^\circ\text{C}$

### THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
$R_{th(j-l)}$	Junction-leads	300	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS

#### STATIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
$V_{BR}$	$T_j = 25\text{ }^\circ\text{C}$ $I_R = 100\text{ }\mu\text{A}$	100			V
$V_F^*$	$T_j = 25\text{ }^\circ\text{C}$ $I_F = 1\text{ mA}$		0.4	0.45	V
	$T_j = 25\text{ }^\circ\text{C}$ $I_F = 200\text{ mA}$			1	
$I_R^*$	$T_j = 25\text{ }^\circ\text{C}$			0.1	$\mu\text{A}$
	$T_j = 100\text{ }^\circ\text{C}$			20	

#### DYNAMIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
C	$T_j = 25\text{ }^\circ\text{C}$ $V_R = 1\text{ V}$ $f = 1\text{ MHz}$		2		pF

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

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

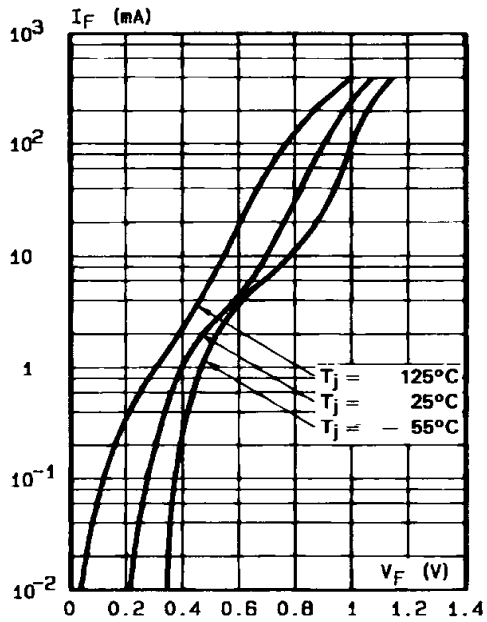


Figure 2. Forward current versus forward voltage (typical values).

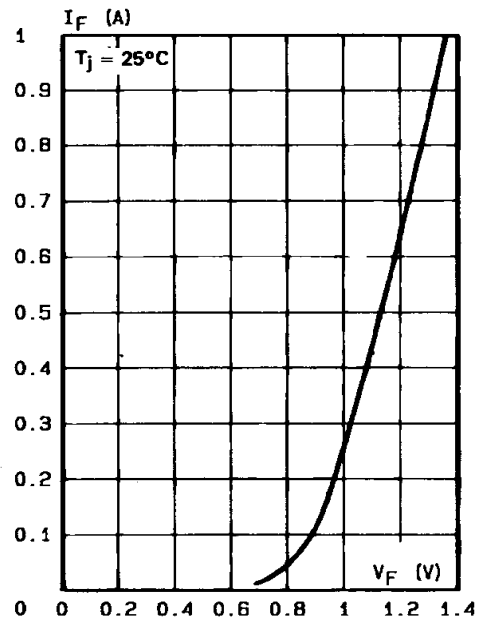


Figure 3. Reverse current versus junction temperature.

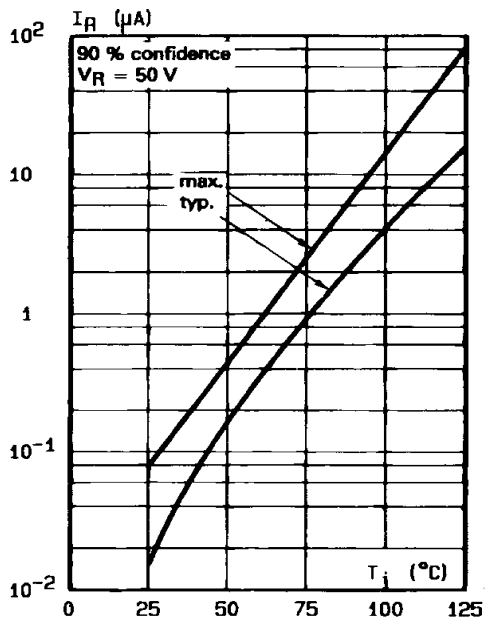


Figure 4. Reverse current versus continuous reverse voltage (typical values).

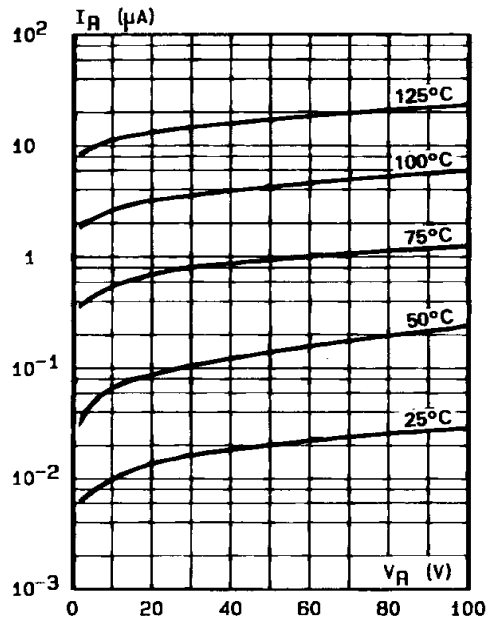
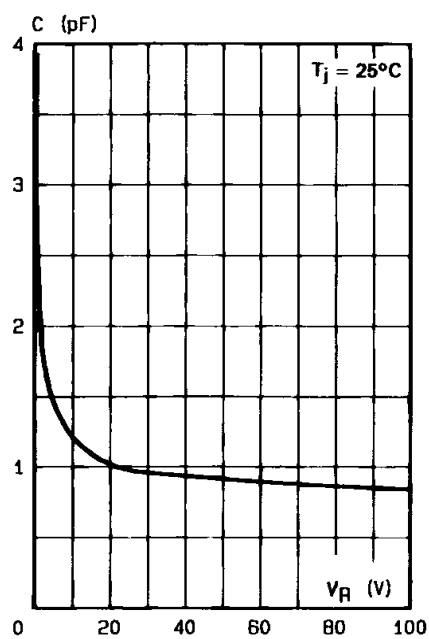


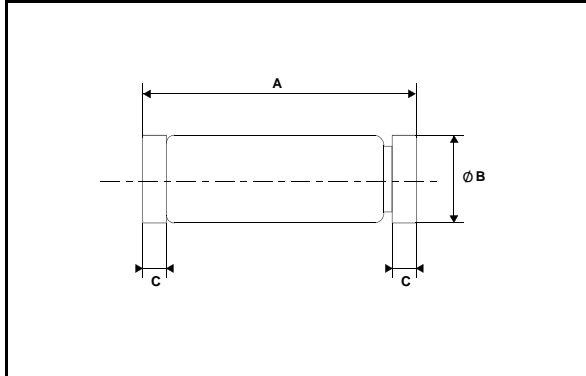
Figure 5. Capacitance C versus reverse applied voltage  $V_R$  (typical values).



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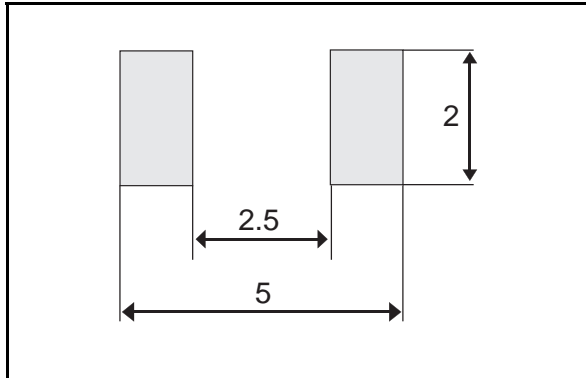
## PACKAGE MECHANICAL DATA

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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