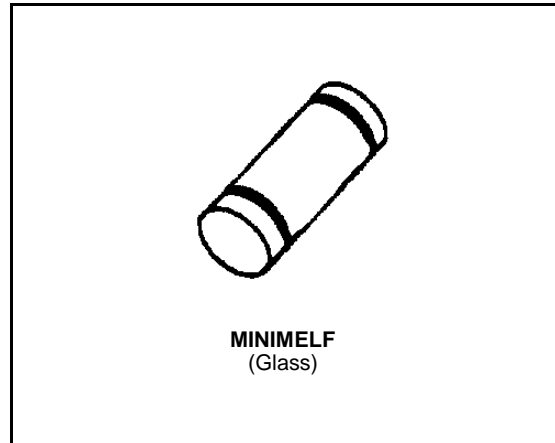




## TMMBAT 46

### SMALL SIGNAL SCHOTTKY DIODE



#### DESCRIPTION

General purpose, metal to silicon diode featuring high breakdown voltage low turn-on voltage.

#### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage	100	V
$I_F$	Forward Continuous Current	$T_I = 25\text{ }^\circ\text{C}$ 150	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	$T_I = 80\text{ }^\circ\text{C}$ 150	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
$V_{BR}$	$T_j = 25^\circ\text{C}$	$I_R = 100\mu\text{A}$	100			V
$V_F^*$	$T_j = 25^\circ\text{C}$	$I_F = 0.1\text{mA}$			0.25	V
	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$			0.45	
	$T_j = 25^\circ\text{C}$	$I_F = 250\text{mA}$			1	
$I_R^*$	$T_j = 25^\circ\text{C}$	$V_R = 1.5\text{V}$			0.5	$\mu\text{A}$
	$T_j = 60^\circ\text{C}$				5	
	$T_j = 25^\circ\text{C}$	$V_R = 10\text{V}$			0.8	
	$T_j = 60^\circ\text{C}$				7.5	
	$T_j = 25^\circ\text{C}$	$V_R = 50\text{V}$			2	
	$T_j = 60^\circ\text{C}$				15	
	$T_j = 25^\circ\text{C}$	$V_R = 75\text{V}$			5	
	$T_j = 60^\circ\text{C}$				20	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_j = 25^\circ\text{C}$	$V_R = 0\text{V}$		10		pF
	$T_j = 25^\circ\text{C}$	$V_R = 1\text{V}$		6		

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

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

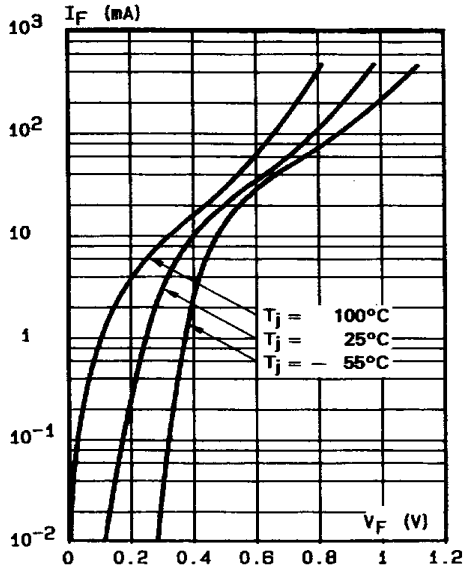


Figure 2. Forward current versus forward voltage (typical values).

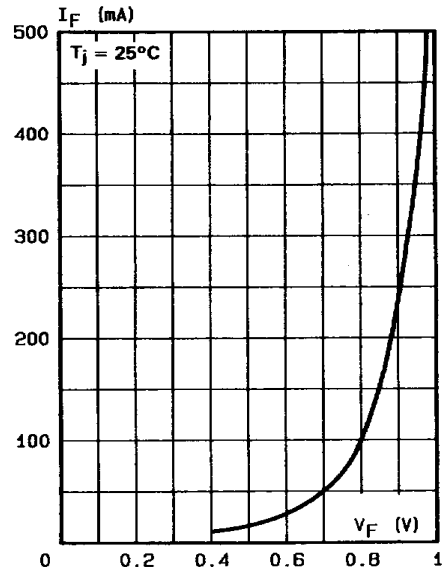


Figure 3. Reverse current versus junction temperature (typical values).

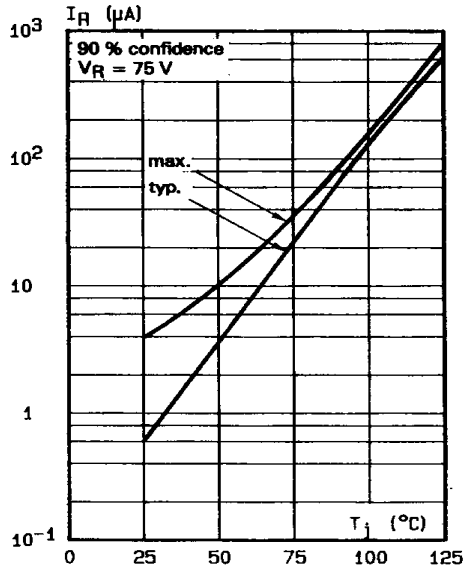


Figure 4. Reverse current versus continuous reverse voltage.

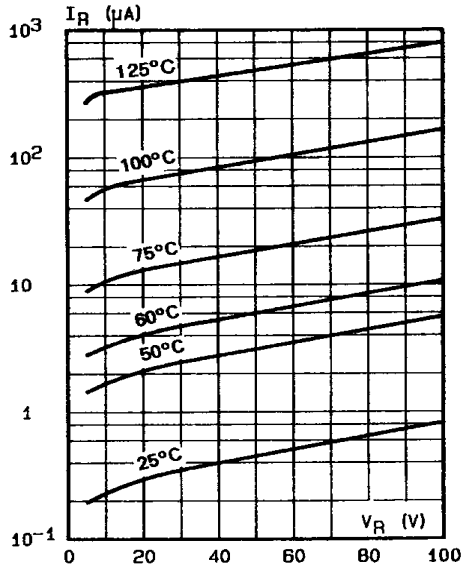
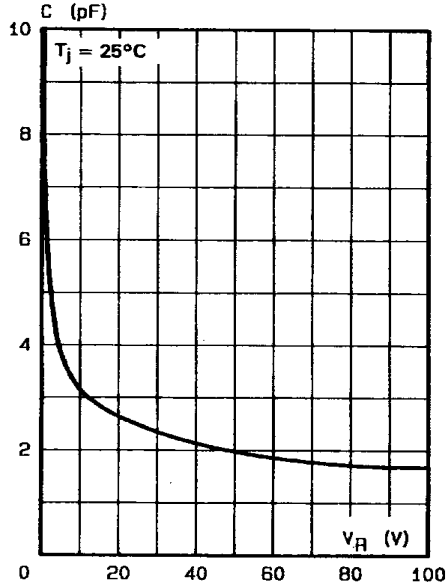


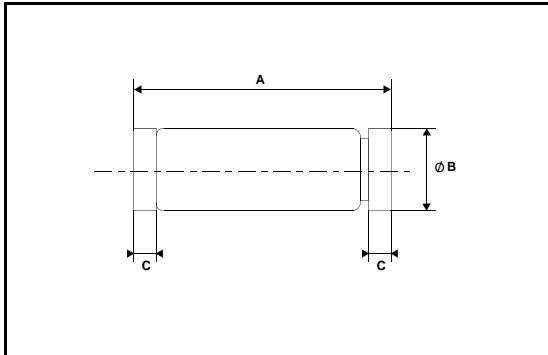
Figure 5. Forward current versus forward voltage (typical values).



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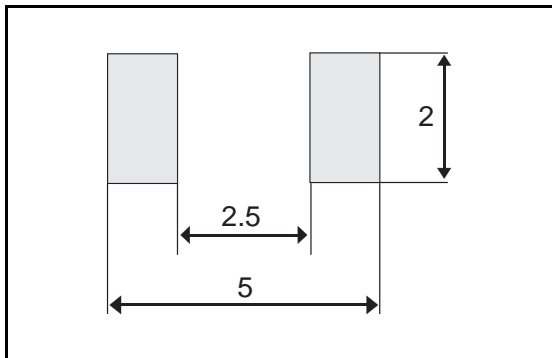
## PACKAGE MECHANICAL DATA

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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