



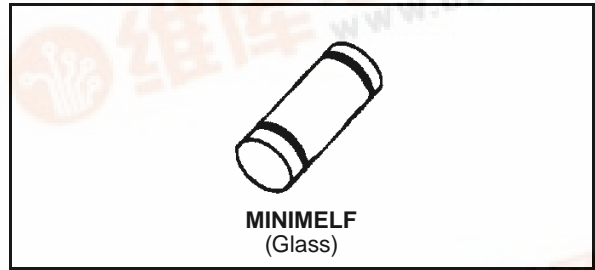
# TMMBAT 41

## 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 <sub>RRM</sub>	Repetitive Peak Reverse Voltage	100	V	
I <sub>F</sub>	Forward Continuous Current	T <sub>i</sub> = 25 °C	100	mA
I <sub>FRM</sub>	Repetitive Peak Forward Current	t <sub>p</sub> ≤ 1s δ ≤ 0.5	350	mA
I <sub>FSM</sub>	Surge non Repetitive Forward Current	t <sub>p</sub> = 10ms	750	mA
P <sub>tot</sub>	Power Dissipation	T <sub>j</sub> = 95 °C	100	mW
T <sub>stg</sub> T <sub>j</sub>	Storage and Junction Temperature Range		- 65 to + 150 - 65 to + 125	°C °C
T <sub>L</sub>	Maximum Temperature for Soldering during 15s		260	°C

### THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
R <sub>th(j-l)</sub>	Junction-leads	300	°C/W

### ELECTRICAL CHARACTERISTICS

#### STATIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>BR</sub>	T <sub>j</sub> = 25°C I <sub>R</sub> = 100μA	100			V
V <sub>F</sub> *	T <sub>j</sub> = 25°C I <sub>F</sub> = 1mA		0.4	0.45	V
	T <sub>j</sub> = 25°C I <sub>F</sub> = 200mA			1	
I <sub>R</sub> *	T <sub>j</sub> = 25°C	V <sub>R</sub> = 50V		0.1	μA
	T <sub>j</sub> = 100°C			20	

#### DYNAMIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
C	T <sub>j</sub> = 25°C V <sub>R</sub> = 1V f = 1MHz		2		pF

\* Pulse test: t<sub>p</sub> ≤ 300μs δ < 2%.



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

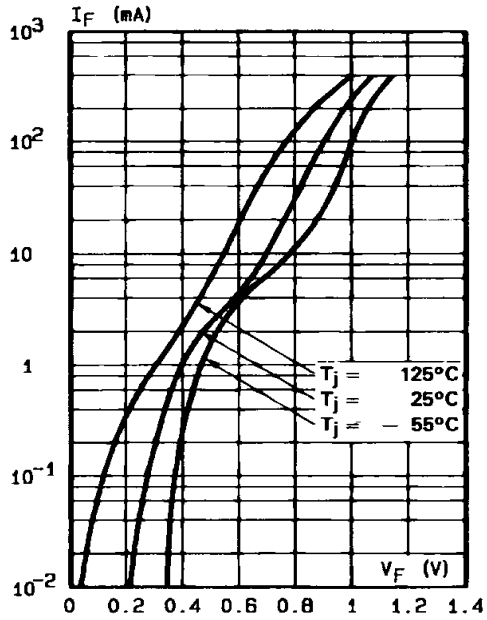


Figure 2. Forward current versus forward voltage (typical values).

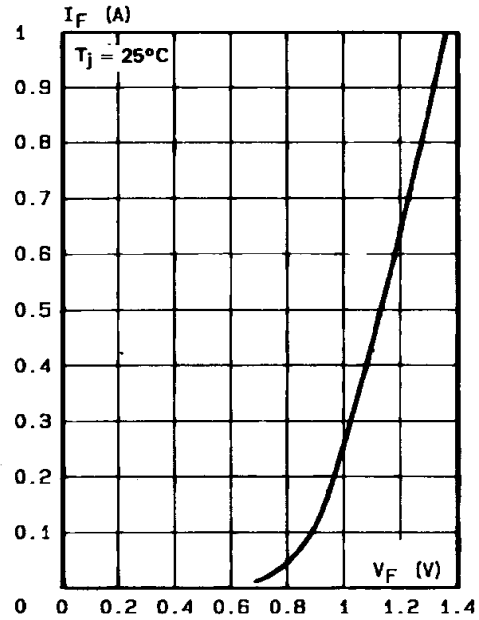


Figure 3. Reverse current versus junction temperature.

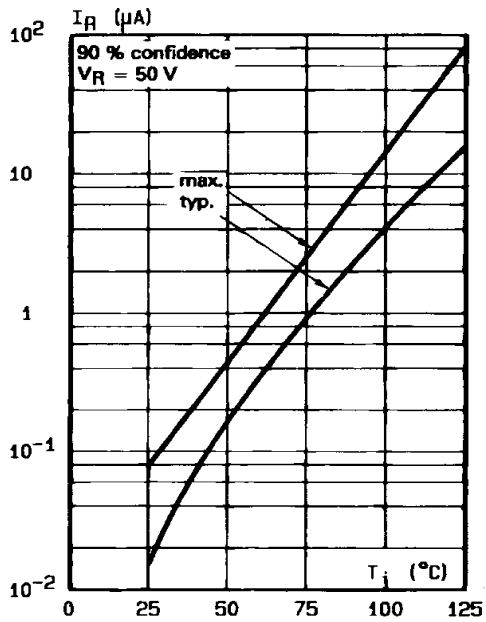


Figure 4. Reverse current versus continuous reverse voltage (typical values).

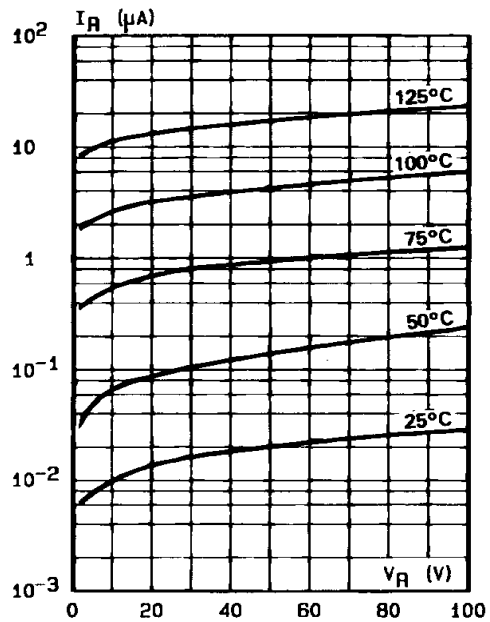
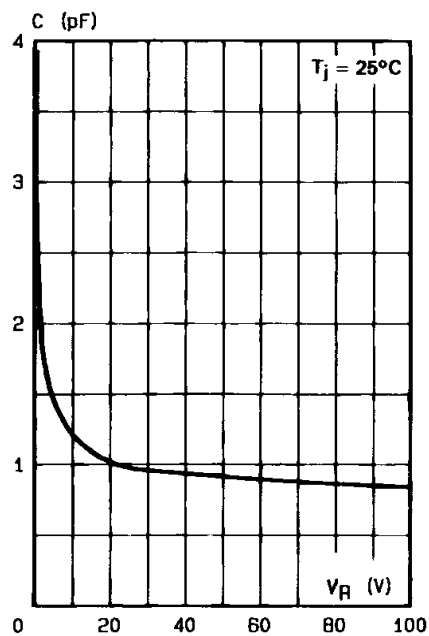


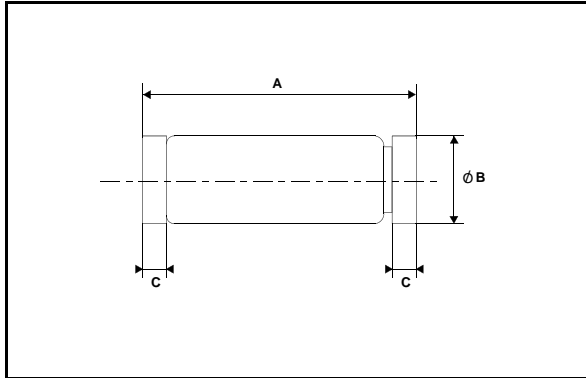
Figure 5. Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).



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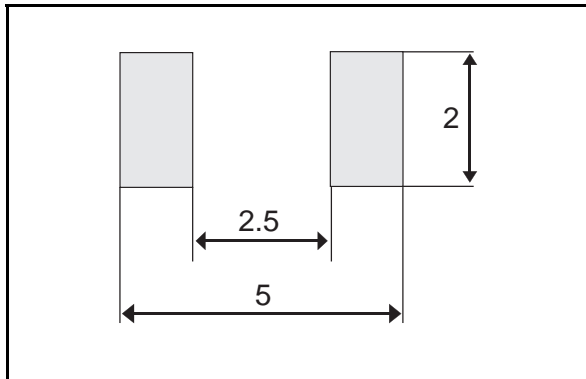
### PACKAGE MECHANICAL DATA

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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