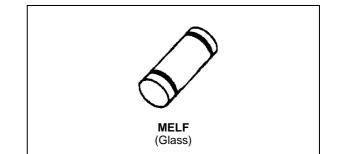
# **TMBAT 49**

# 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 MAXIMUM RATINGS** (limiting values)

Symbol	Parameter	Value	Unit	
$V_{RRM}$	Repetitive Peak Reverse Voltage	80	V	
l <sub>F</sub>	Forward Continuous Current	500	mA	
I <sub>FRM</sub>	Repetitive Peak Forward Current $ \begin{array}{ll} tp = 1s \\ \delta \leq 0.5 \end{array} $		3	А
I <sub>FSM</sub>	Surge non Repetitive Forward Current	10	Α	
T <sub>stg</sub> T <sub>j</sub>	Storage and Junction Temperature Range	- 65 to + 150 - 65 to + 125	° ° °	
TL	Maximum Temperature for Soldering during 1	260	°C	

## THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
R <sub>th(j-l)</sub>	Junction-leads	110	°C/W

#### **ELECTRICAL CHARACTERISTICS**

#### STATIC CHARACTERISTICS

Symbol		Test Conditions	Min.	Тур.	Max.	Unit
I <sub>R</sub> *	$T_j = 25^{\circ}C$	VR = 80V			200	μΑ
V <sub>F</sub> *	$T_j = 25^{\circ}C$	$I_F = 10mA$			0.32	V
	T <sub>j</sub> = 25°C	I <sub>F</sub> = 100mA			0.42	
	T <sub>i</sub> = 25°C	I <sub>F</sub> = 1A			1	

## DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Тур.	Max.	Unit
С	T <sub>j</sub> = 25°C	f = 1MHz	$V_R = 0V$		120		pF
			$V_R = 5V$		35		

<sup>\*</sup> Pulse test:  $t_p \le 300 \mu s \ \delta < 2\%$ .

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Figure 1. Forward current versus forward voltage at low level (typical values).

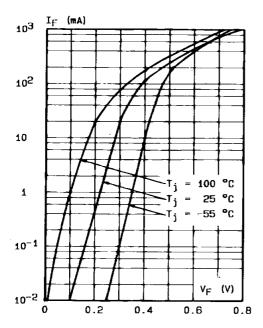


Figure 2. Forward current versus forward voltage at high level (typical values).

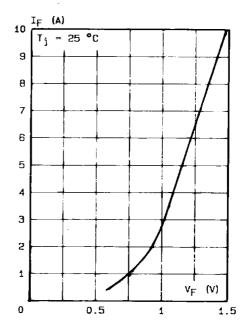


Figure 3. Reverse current versus junction temperature.

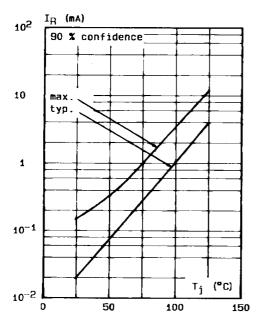


Figure 4. Reverse current versus  $\ensuremath{V_{\text{RRM}}}$  in per cent.

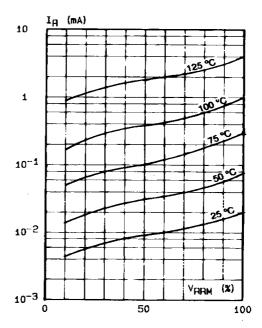


Figure 5. Capacitance C versus reverse applied voltage  $V_{\mbox{\scriptsize R}}$  (typical values).

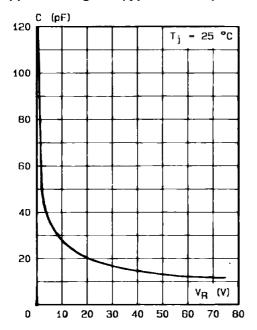


Figure 6. Surge non repetitive forward current for a rectangular pulse with  $t \le 10$  ms.

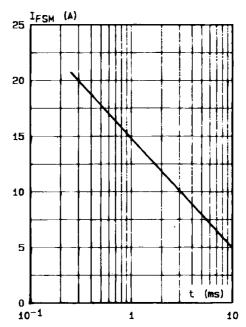
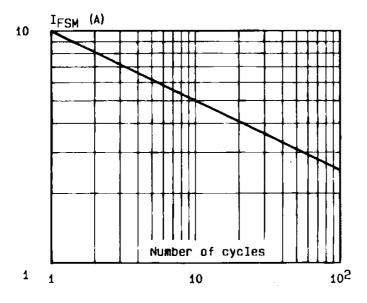
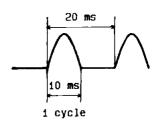


Figure 7. - Surge non repetitive forward current versus number of cycles.

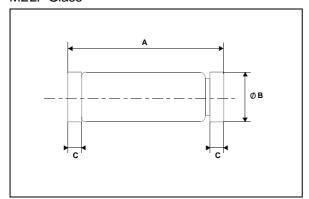




#### **PACKAGE MECHANICAL DATA**

### **FOOT PRINT DIMENSIONS** (Millimeter)

#### **MELF Glass**



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	DIMENSIONS				
REF.	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
Α	4.80	5.20	0.19	0.20	
В	2.55	2.65	0.10	0.10	
С	0.45	0.55	0.02	0.02	

Marking: ring at cathode end. Weight: 0.15g

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