



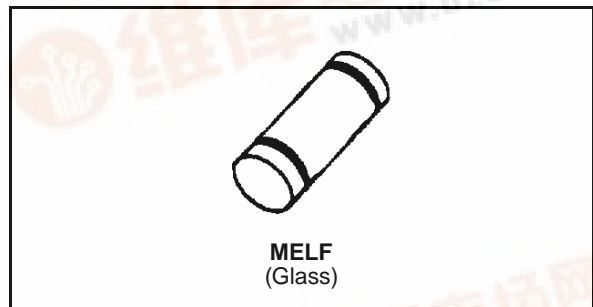
TMBAT 49

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
I_F	Forward Continuous Current	$T_j = 70^\circ\text{C}$ 500	mA
I_{FRM}	Repetitive Peak Forward Current	$t_p = 1\text{s}$ $\delta \leq 0.5$ 3	A
I_{FSM}	Surge non Repetitive Forward Current	$t_p = 10\text{ms}$ 10	A
T_{stg}	Storage and Junction Temperature Range	- 65 to + 150	$^\circ\text{C}$
T_j		- 65 to + 125	$^\circ\text{C}$
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	110	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_R^*	$T_j = 25^\circ\text{C}$	$V_R = 80\text{V}$			200	μA
V_F^*	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$			0.32	V
	$T_j = 25^\circ\text{C}$	$I_F = 100\text{mA}$			0.42	
	$T_j = 25^\circ\text{C}$	$I_F = 1\text{A}$			1	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_j = 25^\circ\text{C}$	$f = 1\text{MHz}$	$V_R = 0\text{V}$		120	pF
			$V_R = 5\text{V}$		35	

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



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

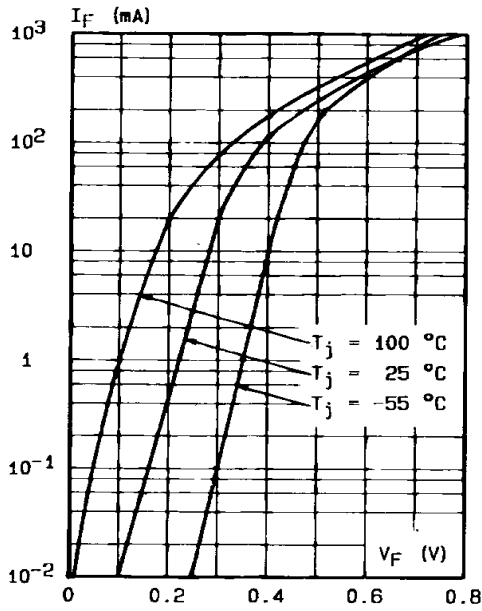


Figure 2. Forward current versus forward voltage at high level (typical values).

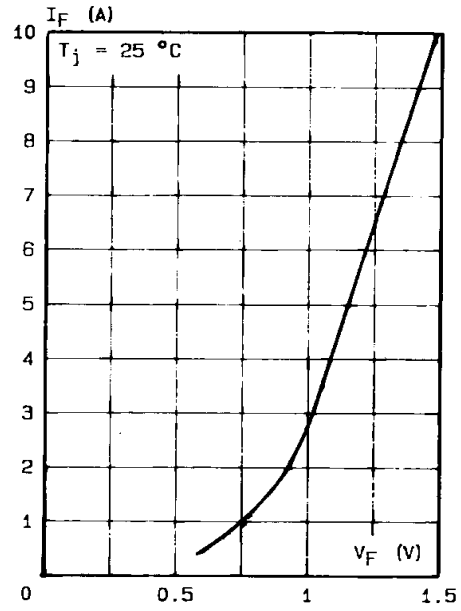


Figure 3. Reverse current versus junction temperature.

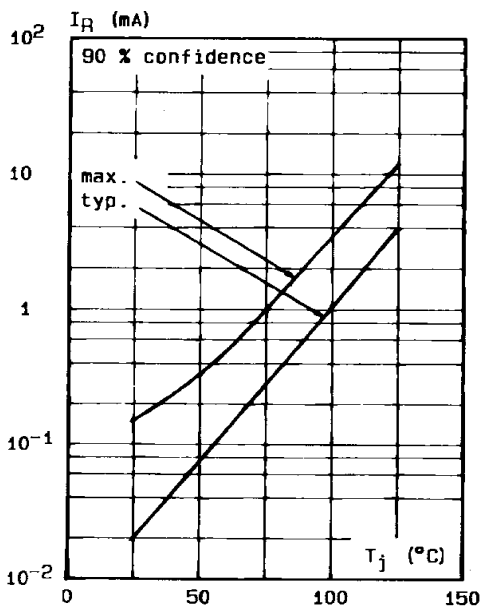


Figure 4. Reverse current versus V_{RRM} in per cent.

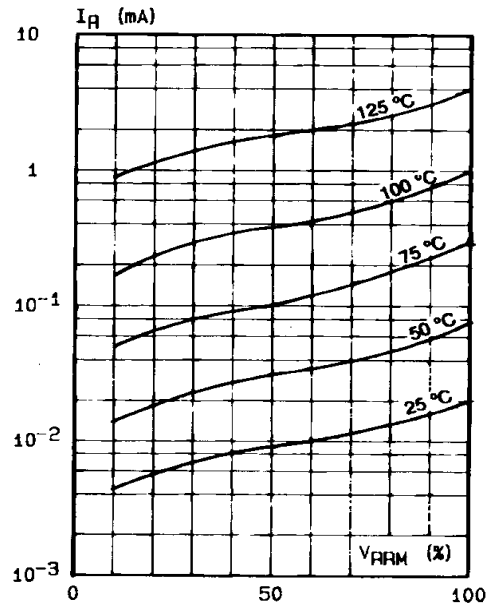


Figure 5. Capacitance C versus reverse applied voltage V_R (typical values).

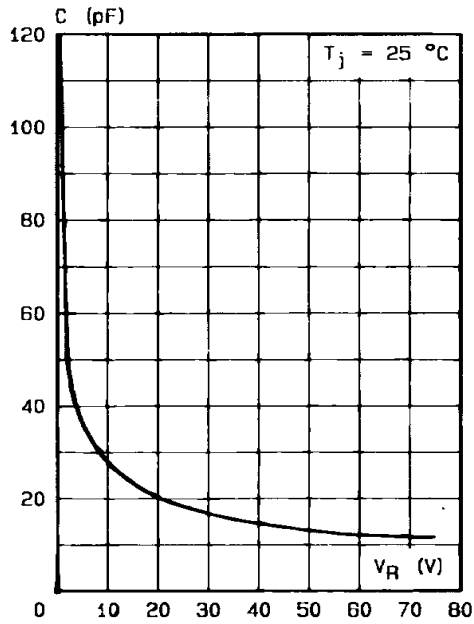


Figure 6. Surge non repetitive forward current for a rectangular pulse with $t \leq 10$ ms.

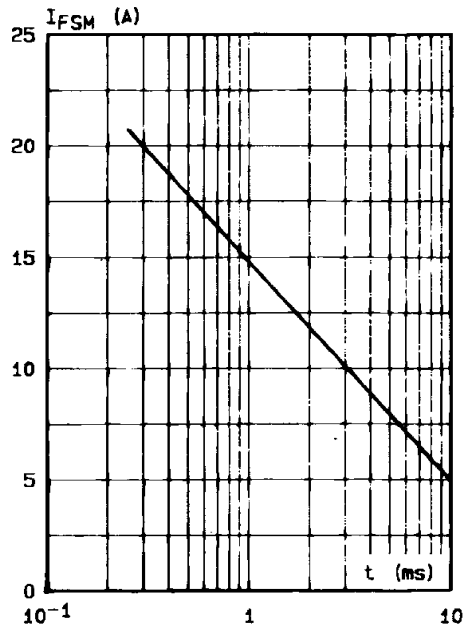
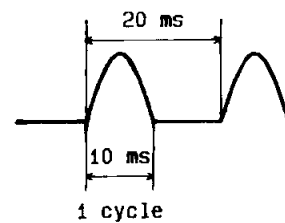
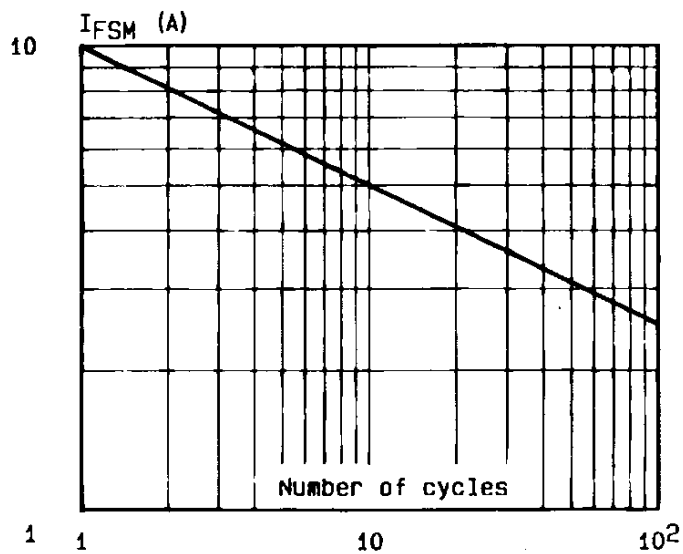


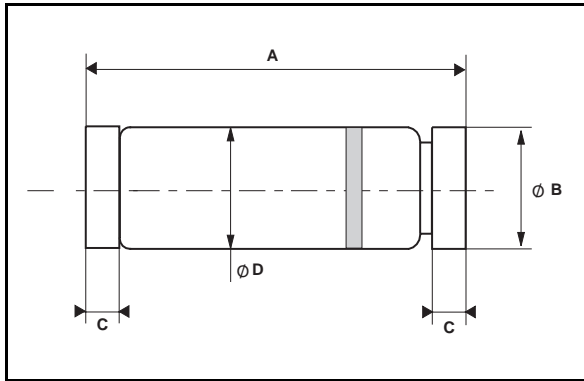
Figure 7. - Surge non repetitive forward current versus number of cycles.



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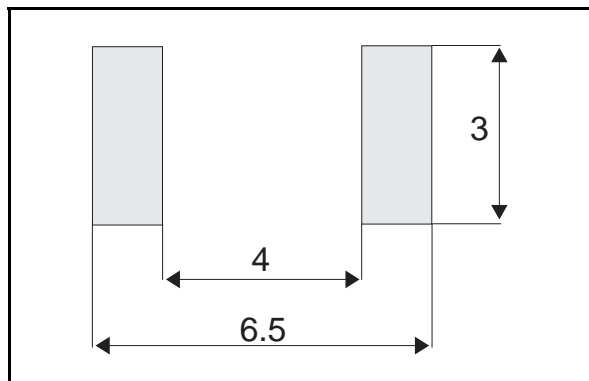
PACKAGE MECHANICAL DATA

MELF Glass



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.80		5.20	0.189		0.205
Ø B	2.50		2.65	0.098		0.104
C	0.45		0.60	0.018		0.024
Ø D		2.50			0.098	

FOOT PRINT DIMENSIONS (Millimeter)



Marking: ring at cathode end.
Weight: 0.15g

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