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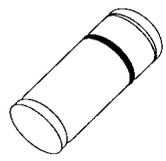
TMMBAT 42
TMMBAT 43

SMALL SIGNAL SCHOTTKY DIODES



MINIMELF
(Glass)

DESCRIPTION

General purpose, metal to silicon diodes featuring very low turn-on voltage fast switching.

These devices have integrated protection against excessive voltage such as electrostatic discharges.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		30	V
I_F	Forward Continuous Current	T_l = 25 °C	200	mA
I_{FRM}	Repetitive Peak Fordware Current	$t_p \leq 1s$ $\delta \leq 0.5$	500	mA
I_{FSM}	Surge non Repetitive Forward Current	t_p = 10ms	4	A
P_{tot}	Power Dissipation	T_l = 65 °C	200	mW
T_{stg} T_j	Storage and Junction Temperature Range		- 65 to 150 - 65 to 125	°C °C
T_L	Maximum Temperature for Soldering during 15s		260	°C

THERMAL RESISTANCE

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

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ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
V_{BR}	T_j = 25°C	I_R = 100µA		30			V
V_F*	T_j = 25°C	I_F = 200mA	All Types			1	V
	T_j = 25°C	I_F = 10mA	BAT 42			0.4	
	T_j = 25°C	I_F = 50mA				0.65	
	T_j = 25°C	I_F = 2mA	BAT 43	0.26		0.33	
	T_j = 25°C	I_F = 15mA				0.45	
I_R*	T_j = 25°C		V_R = 25V			0.5	µA
	T_j = 100°C					100	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
C	T_j = 25°C V_R = 1V f = 1MHz		7		pF
trr	Tj = 25°C I_F = 10mA I_R = 10mA i_{rr} = 1mA R_L = 100Ω			5	ns
η	T_j = 25°C R_L = 15KΩ C_L = 300pF f = 45MHz V_i = 2V	80			%

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

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

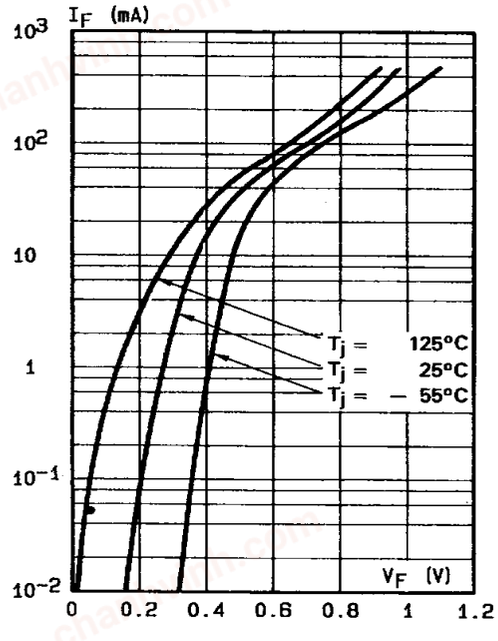

Figure 2. Forward current versus forward voltage (typical values).

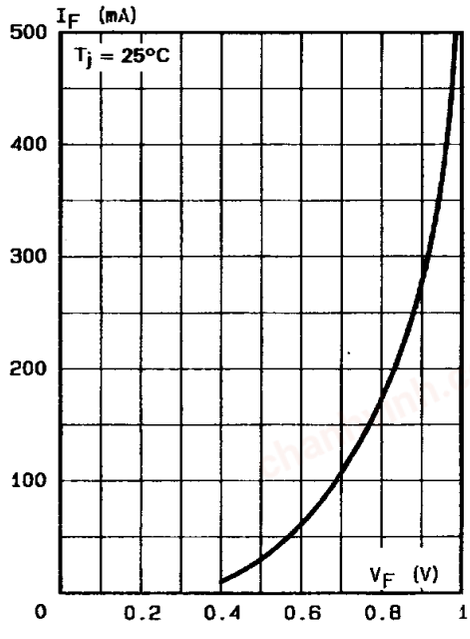

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Figure 3. Reverse current versus junction temperature.

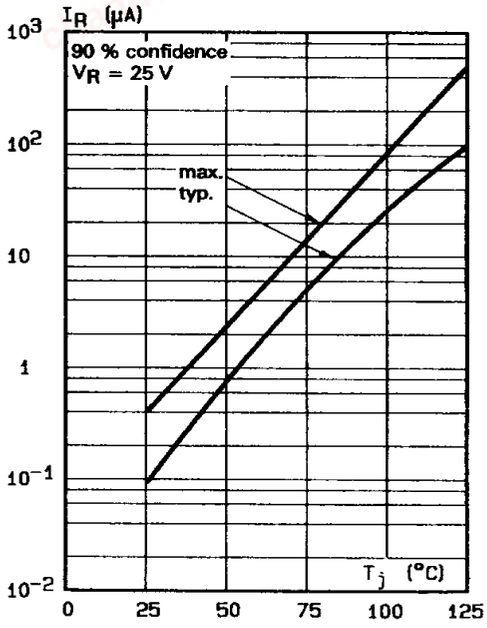


Figure 4. Reverse current versus continuous reverse voltage (typical values).

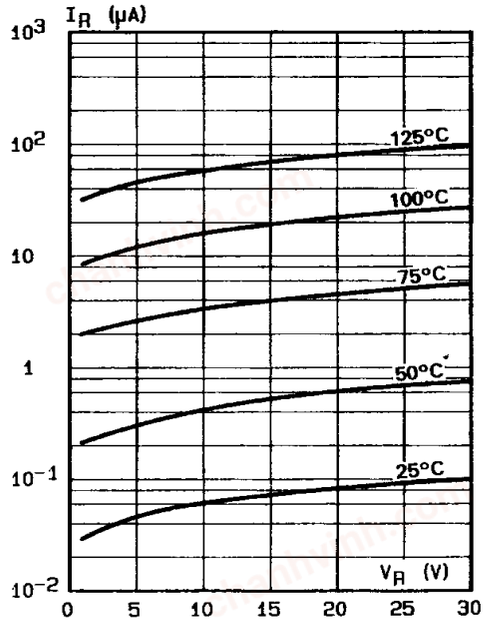
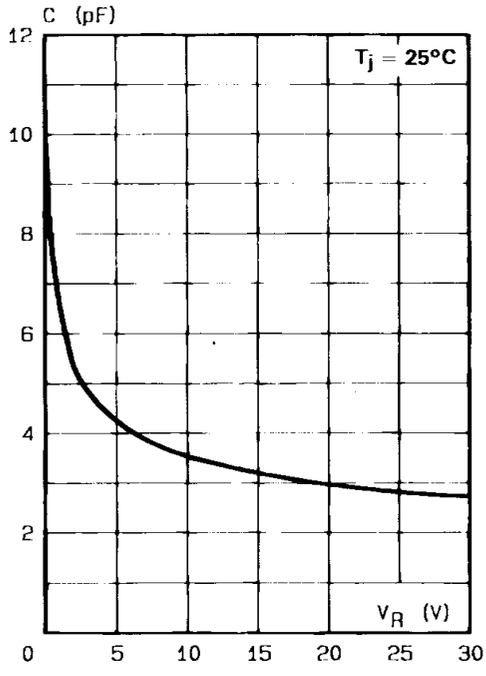


Figure 5. Forward current versus forward voltage (typical values).



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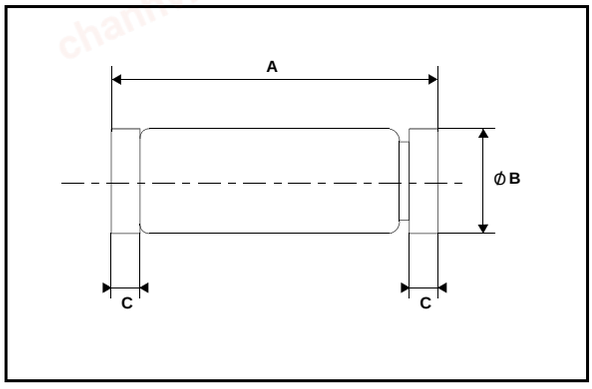
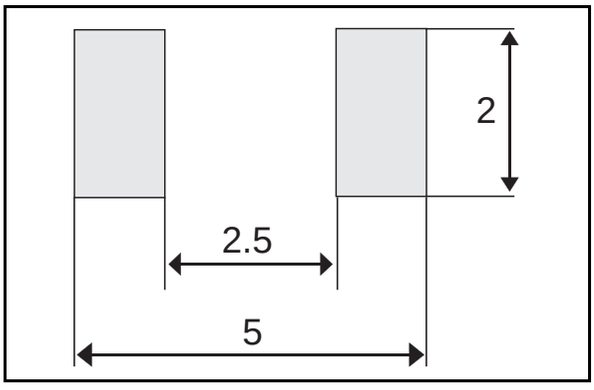
PACKAGE MECHANICAL DATA

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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