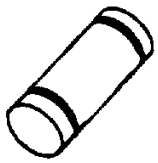
SGS-THOMSON MICROELECTRONICS

TMMBAT 41

SMALL SIGNAL SCHOTTKY DIODE



MINIMELF
(Glass)

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_{RRM}	Repetitive Peak Reverse Voltage		100	V
I_F	Forward Continuous Current	T_i = 25 °C	100	mA
I_{FRM}	Repetitive Peak Forward Current	$t_p \leq 1s$ $\delta \leq 0.5$	350	mA
I_{FSM}	Surge non Repetitive Forward Current	t_p = 10ms	750	mA
P_{tot}	Power Dissipation	T_i = 95 °C	100	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

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V_{BR}	T_j = 25°C	I_R = 100µA	100			V
V_F*	T_j = 25°C	I_F = 1mA		0.4	0.45	V
	T_j = 25°C	I_F = 200mA			1	
I_R*	T_j = 25°C	V_R = 50V			0.1	µA
	T_j = 100°C				20	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	T_j = 25°C	V_R = 1V	f = 1MHz		2		pF

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

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

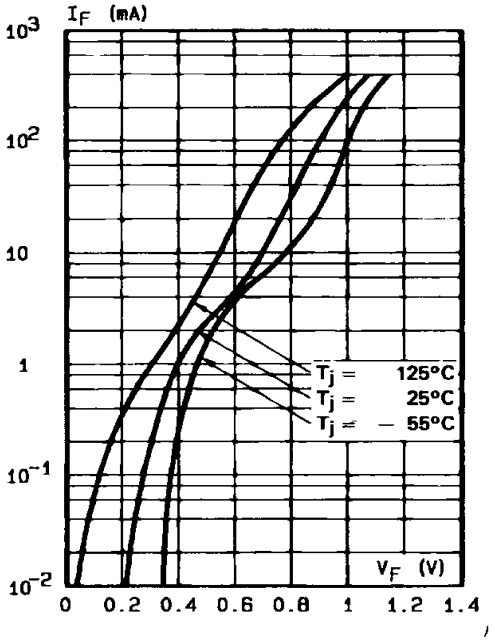


Figure 2. Forward current versus forward voltage (typical values).

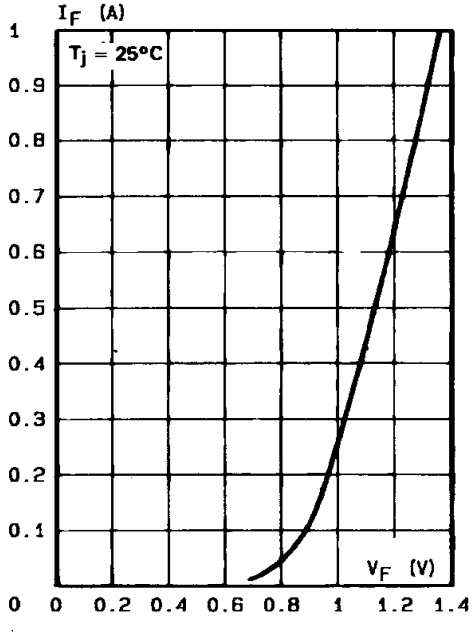


Figure 3. Reverse current versus junction temperature.

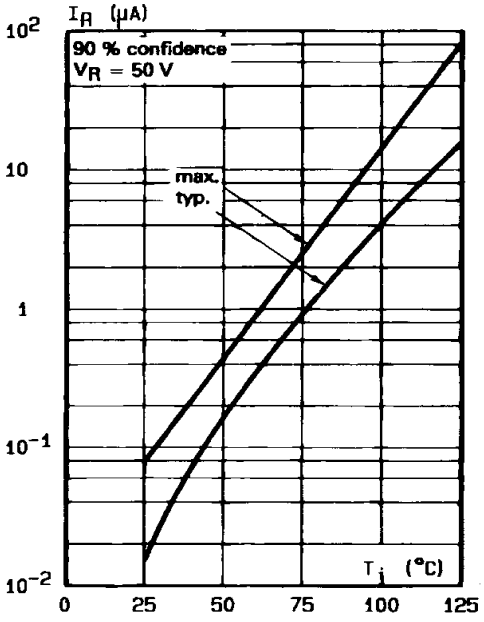


Figure 4. Reverse current versus continuous reverse voltage (typical values).

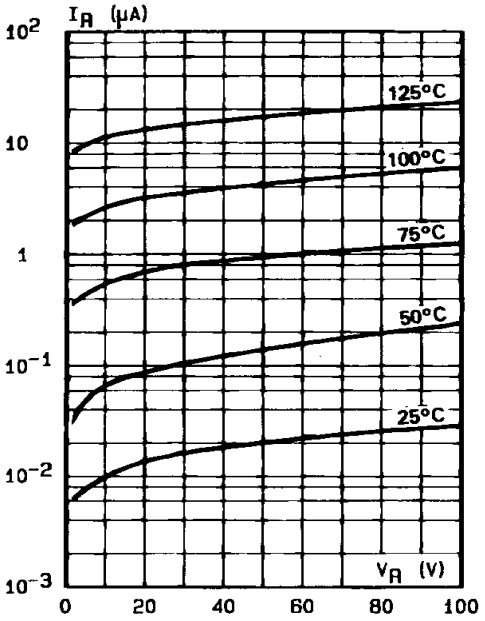
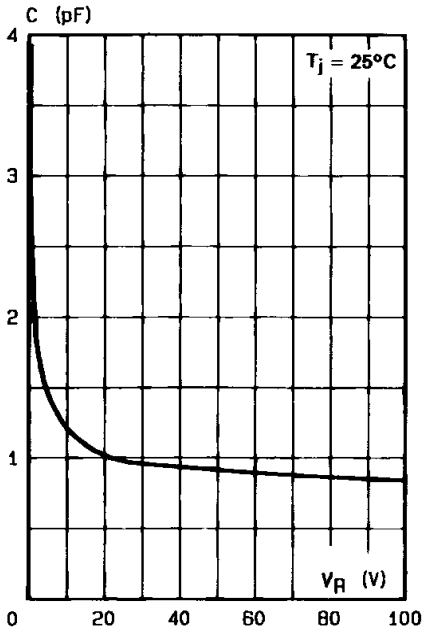
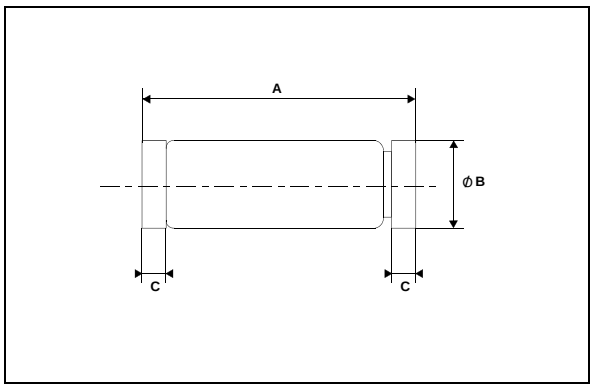


Figure 5. Capacitance C versus reverse applied voltage V_R (typical values).



PACKAGE MECHANICAL DATA

MINIMELF Glass



REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.3	3.6	0.130	0.142
B	1.59	1.62	0.063	0.064
C	0.4	0.5	0.016	0.020

Marking: ring at cathode end.
Weight: 0.05g

FOOT PRINT DIMENSIONS (Millimeter)