

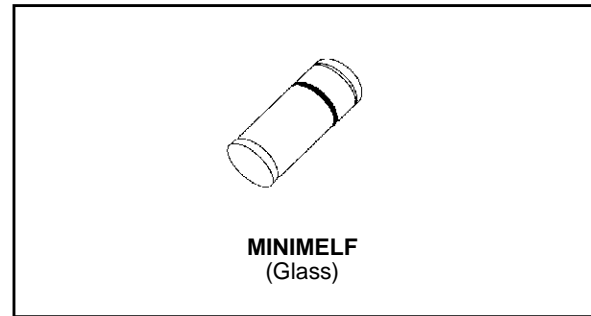
## SMALL SIGNAL SCHOTTKY DIODES

### DESCRIPTION

Metal to silicon junction diodes featuring high breakdown, low turn-on voltage and ultrafast switching.

Primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range.

Matched batches are available on request, (TMMBAR11 only).



### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	TMMBAR 10	TMMBAR 11	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage	20	15	V
$I_F$	Forward Continuous Current	$T_I = 25^\circ\text{C}$ 35	20	mA
$I_{FSM}$	Surge non Repetitive Forward Current	$t_p \leq 1\text{s}$ 100		mA
$T_{stg}$ $T_j$	Storage and Junction Temperature Range	- 65 to 200 - 65 to 200		$^\circ\text{C}$
$T_L$	Maximum Temperature for Soldering during 15s	260		$^\circ\text{C}$

### THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
$R_{th(j-l)}$	Junction-leads	400	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS

#### STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
$V_{BR}$	$T_{amb} = 25^\circ\text{C}$	$I_R = 10\mu\text{A}$	TMMBAR 10	20			V
	$T_{amb} = 25^\circ\text{C}$	$I_R = 10\mu\text{A}$	TMMBAR 11	15			
$V_F^*$	$T_{amb} = 25^\circ\text{C}$	$I_F = 1\text{mA}$				0.41	V
	$T_{amb} = 25^\circ\text{C}$	$I_F = 35\text{mA}$	TMMBAR 10			1	
	$T_{amb} = 25^\circ\text{C}$	$I_F = 20\text{mA}$	TMMBAR 11			1	
$I_R^*$	$T_{amb} = 25^\circ\text{C}$	$V_R = 15\text{V}$	TMMBAR 10			0.1	$\mu\text{A}$
	$T_{amb} = 25^\circ\text{C}$	$V_R = 8\text{V}$	TMMBAR 11			0.1	

#### DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^\circ\text{C}$	$V_R = 0\text{V}$	$f = 1\text{MHz}$			1.2	pF
$\tau$	$T_{amb} = 25^\circ\text{C}$	$I_F = 5\text{mA}$	Krakauer Method			100	ps

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

Matched batches available on request. Test conditions (forward voltage and/or capacitance) according to customer specification.

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

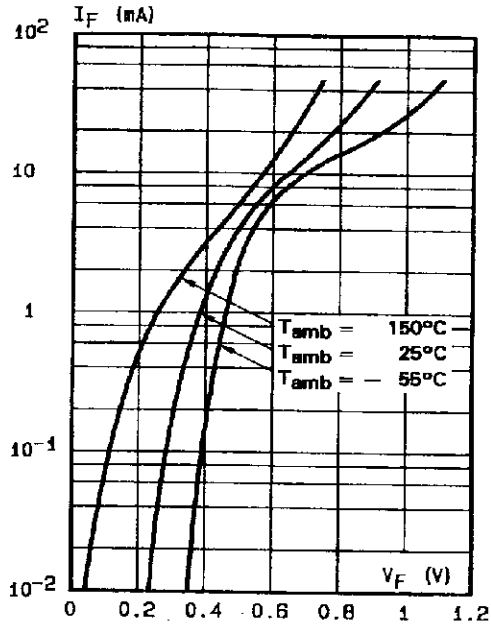


Figure 2. Forward current versus forward voltage (typical values).

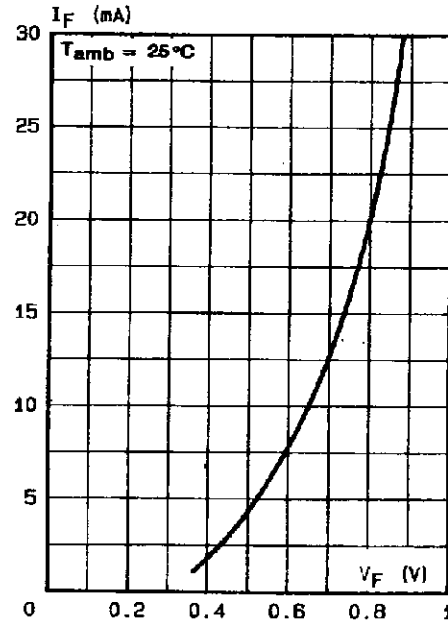


Figure 3a. Reverse current versus ambient temperature.

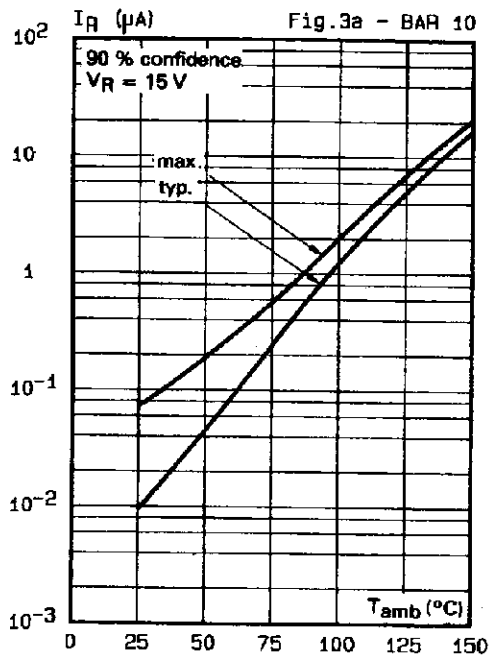


Figure 3b. Reverse current versus ambient temperature.

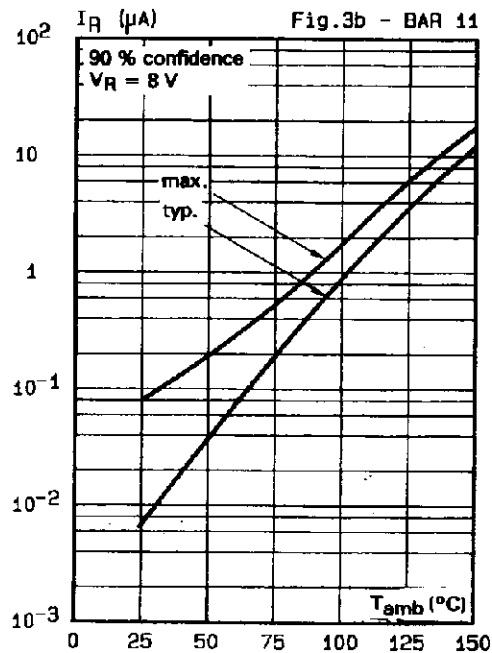


Figure 4. Reverse current versus continuous reverse voltage (typical values).

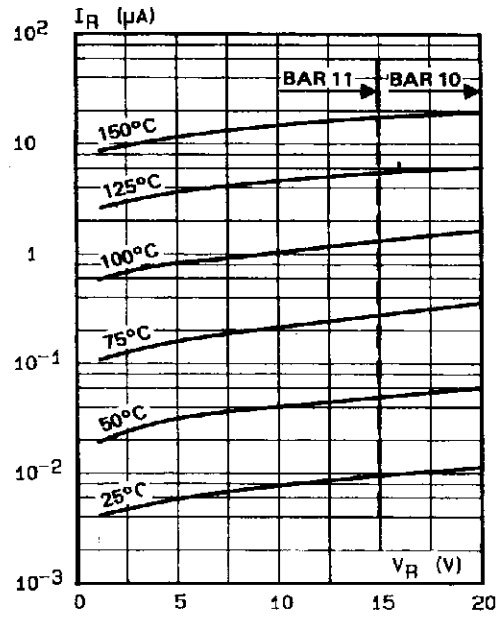
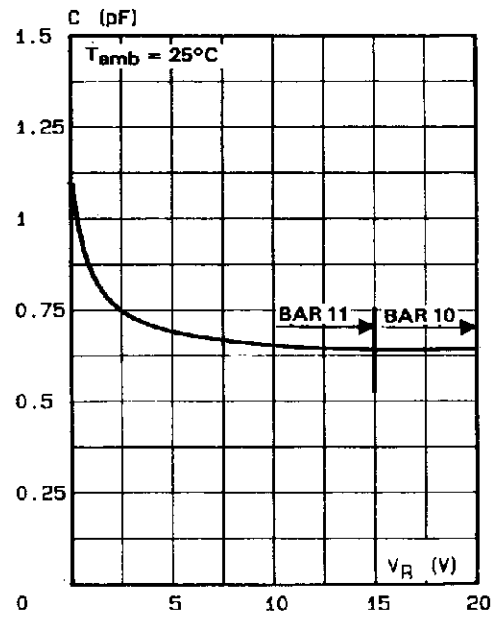


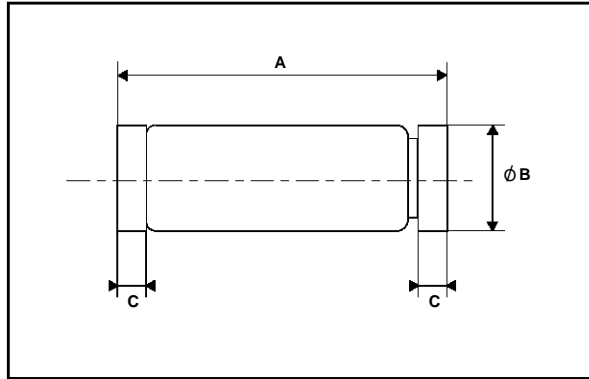
Figure 5. Capacitance C versus reverse applied voltage  $V_R$  (typical values).



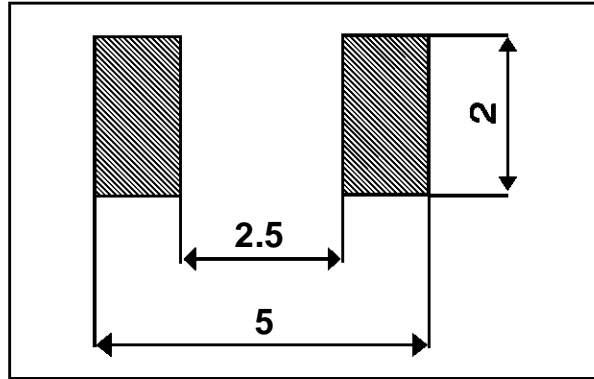
# TMMBAR 10/TMMBAR 11

## PACKAGE MECHANICAL DATA

MINIMELF Glass



## FOOT PRINT DIMENSIONS (Millimeter)



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

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - Printed in Italy - All rights reserved.

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - United Kingdom - U.S.A.