

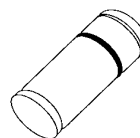
## SMALL SIGNAL SCHOTTKY DIODES

### 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).



**MINIMELF**  
(Glass)

### 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).

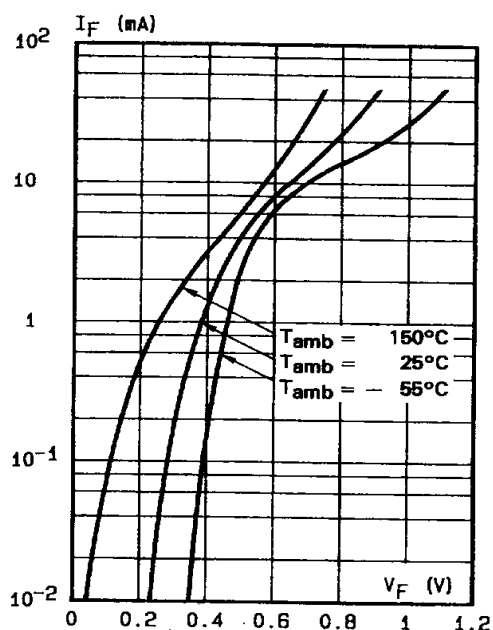


Figure 2. Forward current versus forward voltage (typical values).

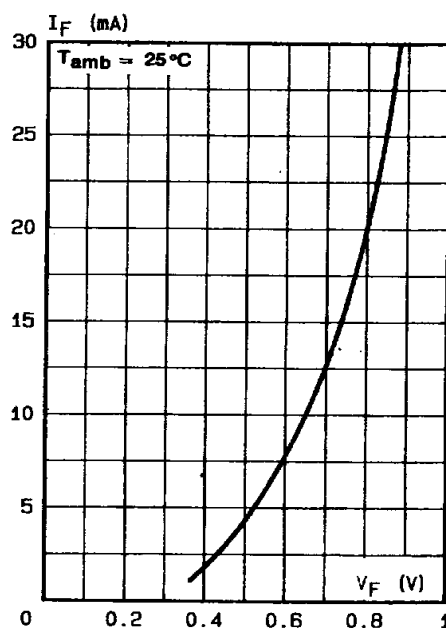


Figure 3a. Reverse current versus ambient temperature.

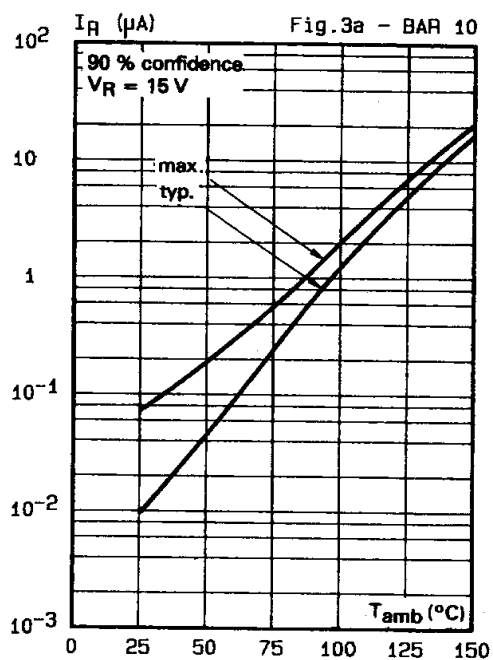


Figure 3b. Reverse current versus ambient temperature.

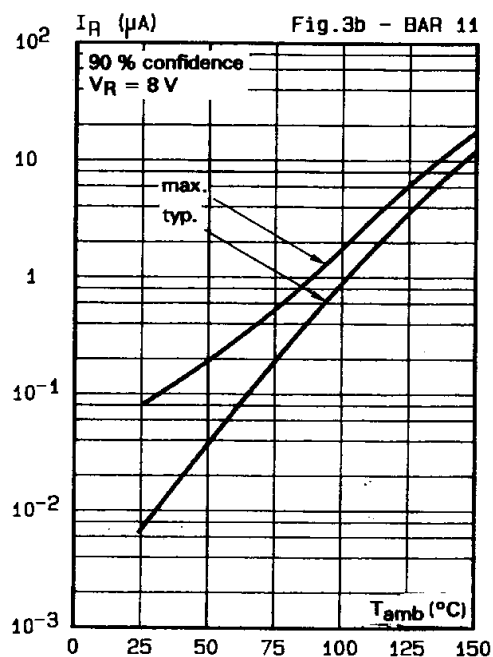


Figure 4. Reverse current versus continuous reverse voltage (typical values).

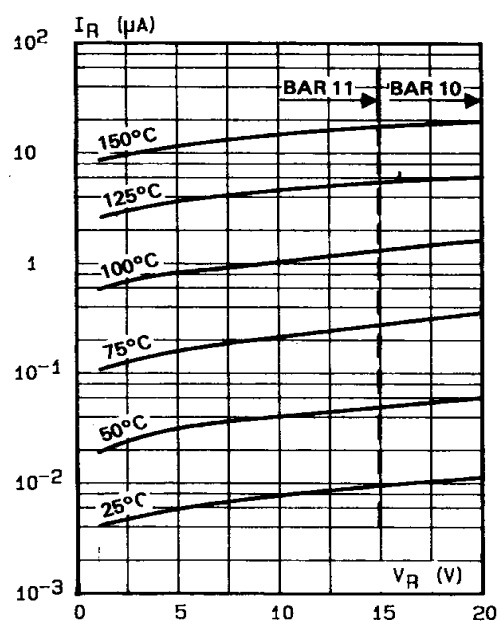
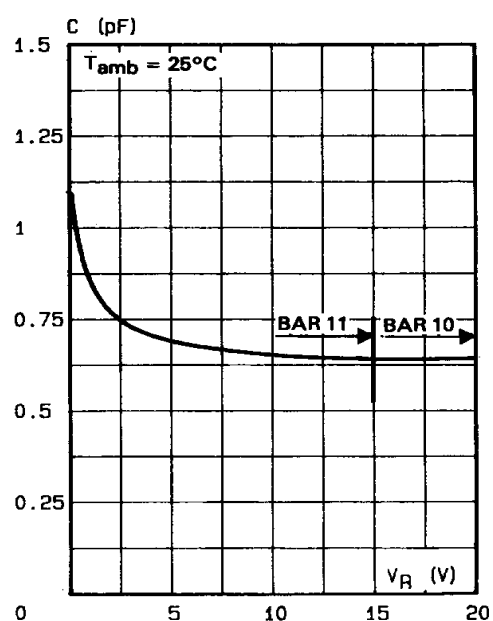


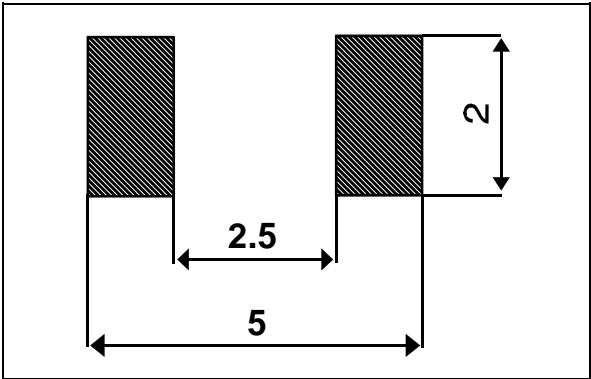
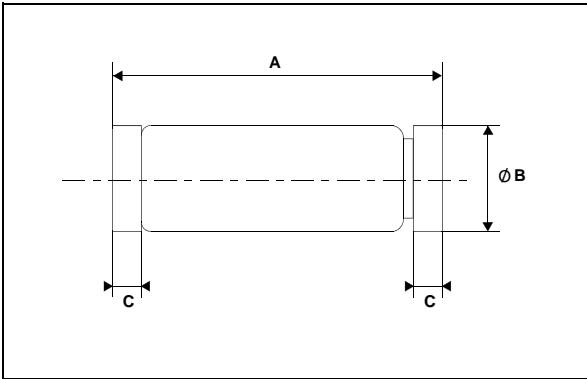
Figure 5. Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).



PACKAGE MECHANICAL DATA

FOOT PRINT DIMENSIONS (Millimeter)

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

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