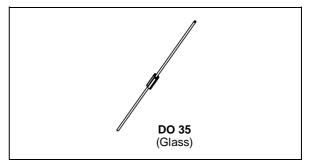


# **BAR 28**

## SMALL SIGNAL SCHOTTKY DIODE

#### DESCRIPTION

Metal to silicon junction diode featuring high breakdown, low turn-on voltage and ultrafast switching. Primarly intended for high level UHF/VHF detection and pulse application with broad dynamic range. Matched batches are available on request.



#### **ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value	Unit
V <sub>RRM</sub>	Repetitive Peak Reverse Voltage	70	V
IF	Forward Continuous Current*	15	mA
I <sub>FSM</sub>	Surge non Repetitive Forward Current*	50	mA
T <sub>stg</sub> Tj	Storage and Junction Temperature Range	- 65 to 200 - 65 to 200	°C
TL	Maximum Lead Temperature for Soldering d from Case	230	°C

### THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
R <sub>th(j-a)</sub>	Junction-ambient*	400	°C/W

### **ELECTRICAL CHARACTERISTICS**

#### STATIC CHARACTERISTICS

Symbol		Min.	Тур.	Max.	Unit		
V <sub>BR</sub>	$T_{amb} = 25^{\circ}C$	I <sub>R</sub> = 10μΑ		70			V
V <sub>F</sub> * *	$T_{amb} = 25^{\circ}C$	I <sub>F</sub> = 1mA				0.41	V
	T <sub>amb</sub> = 25°C	I <sub>F</sub> = 15mA				1	
I <sub>R</sub> * *	$T_{amb} = 25^{\circ}C$	$V_R = 50V$				0.2	μΑ

#### DYNAMIC CHARACTERISTICS

Symbol		Min.	Тур.	Max.	Unit		
С	$T_{amb} = 25^{\circ}C$	$V_R = 0V$	f = 1MHz			2	pF
τ	$T_{amb} = 25^{\circ}C$	I <sub>F</sub> = 5mA	Krakauer Method			100	ps

\* On infinite heatsink with 4mm lead length \*\* Pulse test:  $t_p \le 300 \mu s \ \delta < 2\%$ .

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

#### November 1994

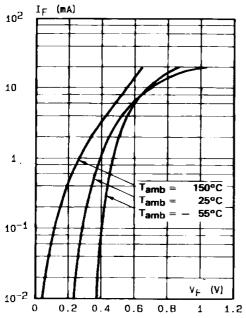
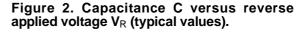


Figure 1. Forward current versus forward voltage at low level (typical values).



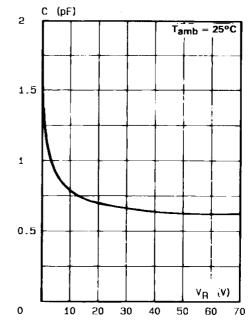


Figure 3. Reverse current versus ambient temperature.

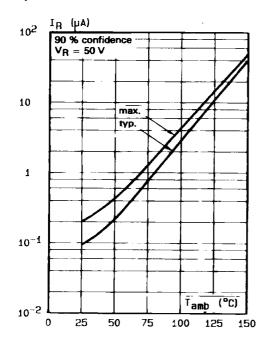
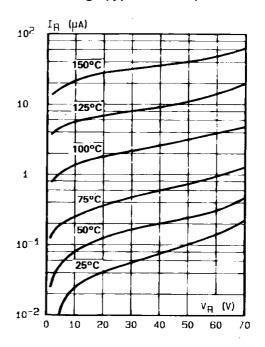


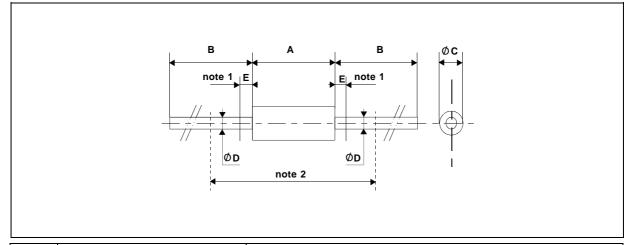
Figure 4. Reverse current versus continuous reverse voltage (typical values).





#### PACKAGE MECHANICAL DATA

#### DO 35 Glass



	DIMENSIONS				
REF.	Millin	Millimeters Inches		hes	NOTES
	Min.	Max.	Min.	Max.	
А	3.050	4.500	0.120	0.117	1 - The lead diameter $\oslash$ D is not controlled over zone E
В	12.7		0.500		2 - The minimum axial lengh within which the device may be
ØC	1.530	2.000	0.060	0.079	placed with its leads bent at right angles is 0.59"(15 mm)
ØD	0.458	0.558	0.018	0.022	
E		1.27		0.050	

Cooling method : by convection and conduction Marking: clear, ring at cathode end. Weight: 0.15g

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsability 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.

