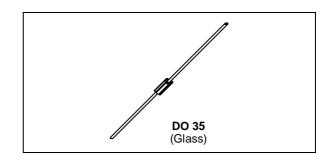


SMALL SIGNAL SCHOTTKY DIODE



DESCRIPTION

Metal to silicon junction diode primarly intended for UHF mixers and ultrafast switching applications. Matched batches are available on request.

ABSOLUTE MAXIMUM RATINGS (limiting values)

Symbol	Parameter	Value	Unit	
V_{RRM}	Repetitive Peak Reverse Voltage	10	V	
I _F	Forward Continuous Current*	30	mA	
I _{FSM}	Surge non Repetitive Forward Current*	$t_p \le 1s$	60	mA
$T_{stg} \ T_{j}$	Storage and Junction Temperature Range	- 65 to + 150 - 65 to + 125	°C °C	
TL	Maximum Lead Temperature for Soldering of from Case	230	°C	

THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
R _{th(j-a)}	Junction-ambient*	400	°C/W

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Тур.	Max.	Unit
V_{BR}	$T_{amb} = 25^{\circ}C$ $I_R = 10\mu A$	10			V
V _F (1)	$T_{amb} = 25^{\circ}C$ $I_F = 1mA$			0.4	٧
	$T_{amb} = 25$ °C $I_F = 20$ mA			1	
I _R (1)	$T_{amb} = 25^{\circ}C$ $V_R = 5V$			0.1	μΑ

DYNAMIC CHARACTERISTICS

Symbol		Test Condition	ns	Min.	Тур.	Max.	Unit
С	T _{amb} = 25°C	$V_R = 0V$	f = 1GHz			1.2	рF
τ	T _{amb} = 25°C	$I_F = 20mA$	Krakauer Method			100	ps
F (2)	T _{amb} = 25°C	f = 1GHz			6		dB

^{*} On infinite heatsink with 4mm lead length

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

November 1994 1/3

⁽¹⁾ Pulse test: $t_p \le 300 \mu s \ \delta < 2\%$. (2) Noise figure test :

<sup>diode is inserted in a tuned stripline circuit
local oscillator frequency 1GHz</sup>

⁻ local oscillator power 1mW

⁻ intermediate frequency amplifier, tuned on 30MHz, has a noise figure 1.5dB

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

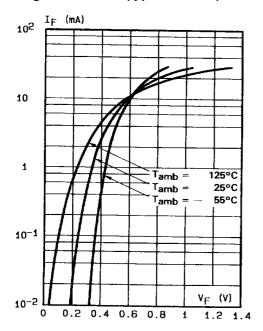


Figure 2. Capacitance C versus reverse applied voltage $V_{\rm R}$ (typical values).

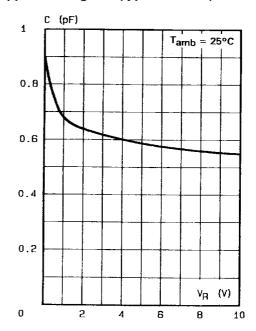


Figure 3. Reverse current versus ambient temperature.

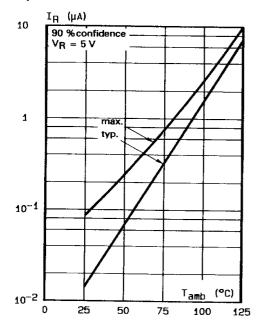
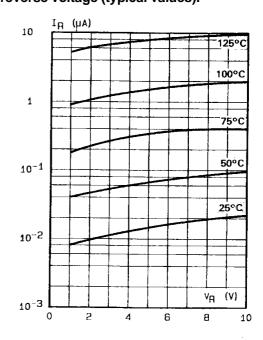
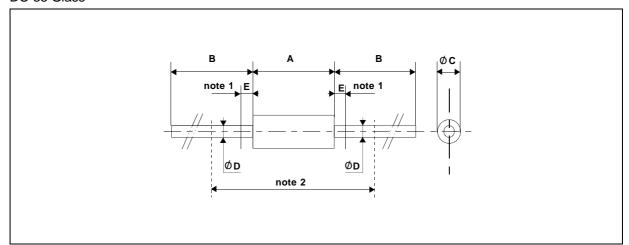


Figure 4. Reverse current versus continuous reverse voltage (typical values).



PACKAGE MECHANICAL DATA

DO 35 Glass



DIME		DIMENSIONS					
REF. Millimeters		Inches		NOTES			
	Min.	Max.	Min.	Max.			
Α	3.050	4.500	0.120	0.117	1 - The lead diameter Ø D is not controlled over zone E		
В	12.7		0.500		The lead didifference & B is not someoned over 2016 E		
ØC	1.530	2.000	0.060		2 - The minimum axial lengh within which the device may be		
ØD	0.458	0.558	0.018	0.022	placed with its leads bent at right angles is 0.59"(15 mm)		
Е		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.

