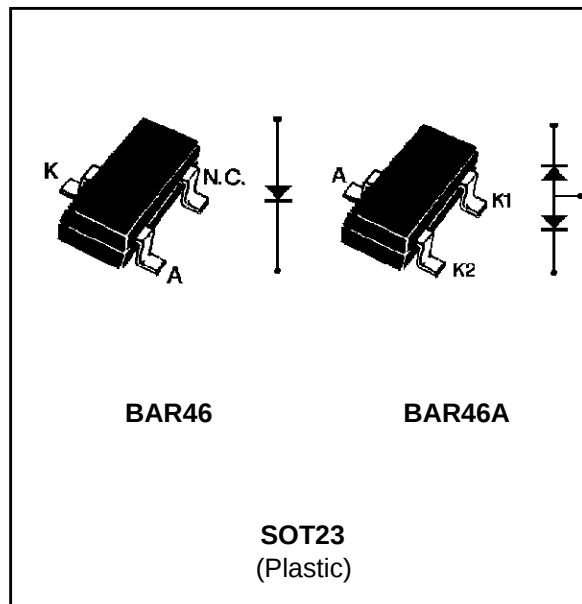


SMALL SIGNAL SCHOTTKY DIODES

DESCRIPTION

High voltage Schottky rectifier suited for SLIC protection during the card insertion operation.



ABSOLUTE RATINGS(limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		100	V
P_{tot}	Power Dissipation *	$T_{amb}=25^{\circ}C$	200	mW
T_{stg} T_j	Storage and Junction Temperature Range		- 55 to + 150 150	$^{\circ}C$

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient *	625	$^{\circ}C/W$
$R_{th(j-SR)}$	Junction-Substrate	400	$^{\circ}C/W$

* Mounted on ceramic substrate : 7 x 5 x 0.5mm

BAR46 /BAR46A**ELECTRICAL CHARACTERISTICS****STATIC CHARACTERISTICS**

Symbol	Test conditions		Min.	Typ.	Max.	Unit
V_{BR}	$T_j = 25\text{ }^{\circ}\text{C}$	$I_R = 100\text{ }\mu\text{A}$	100			V
V_F^*	$T_j = 25\text{ }^{\circ}\text{C}$	$I_F = 0.1\text{ mA}$			0.25	V
	$T_j = 25\text{ }^{\circ}\text{C}$	$I_F = 10\text{ mA}$			0.45	
	$T_j = 25\text{ }^{\circ}\text{C}$	$I_F = 250\text{ mA}$			1	
I_R^*	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 1.5\text{ V}$			0.5	μA
	$T_j = 60\text{ }^{\circ}\text{C}$				5	
	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 10\text{ V}$			0.8	
	$T_j = 60\text{ }^{\circ}\text{C}$				7.5	
	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 50\text{ V}$			2	
	$T_j = 60\text{ }^{\circ}\text{C}$				15	
	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 75\text{ V}$			5	
	$T_j = 60\text{ }^{\circ}\text{C}$				20	

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

DYNAMIC CHARACTERISTICS

Symbol	Test conditions			Min.	Typ.	Max.	Unit
C	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 0\text{ V}$	$f = 1\text{ MHz}$		10		pF
	$T_j = 25\text{ }^{\circ}\text{C}$	$V_R = 1\text{ V}$			6		

Type	BAR46	BAR46A
Marking	S46	A46

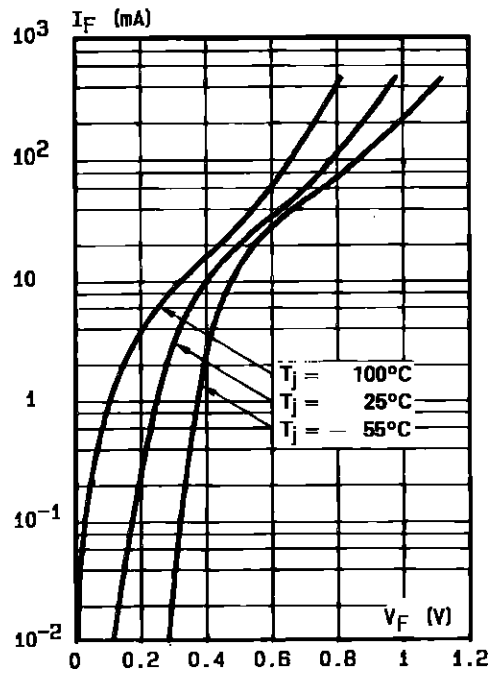


Fig.1 - Forward current versus forward voltage at different temperatures (typical values).

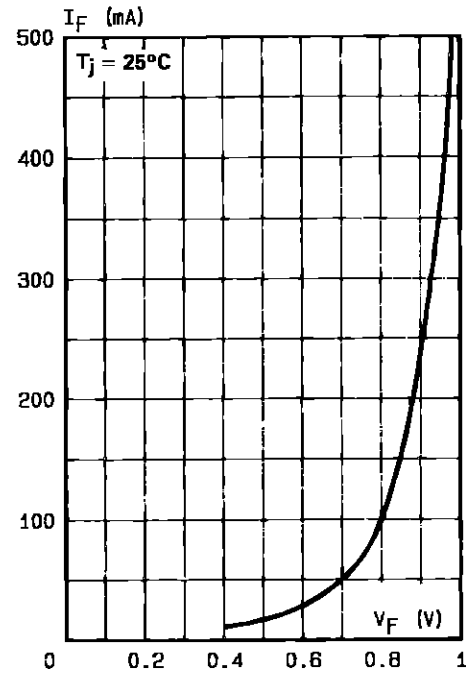


Fig.2 - Forward current versus forward voltage (typical values).

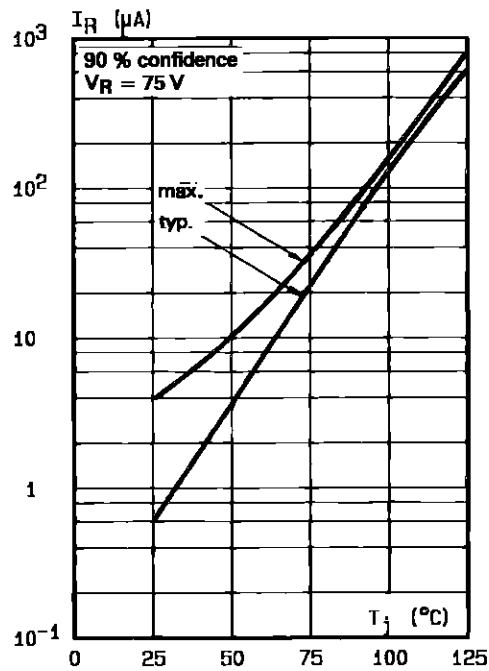


Fig.3 - Reverse current versus junction temperature (typical values).

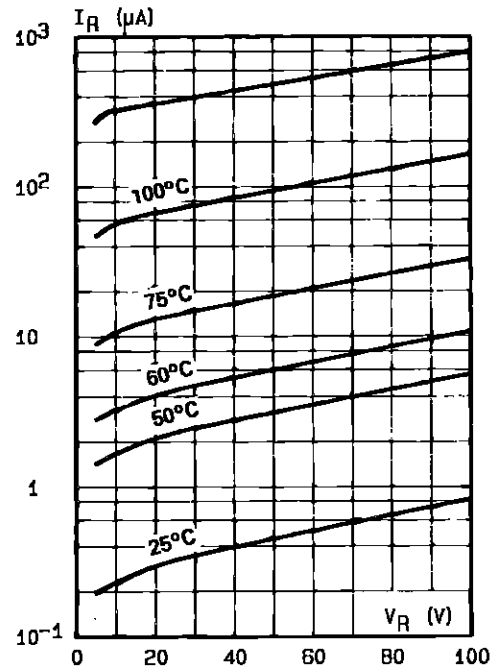


Fig.4 - Reverse current versus continuous reverse voltage

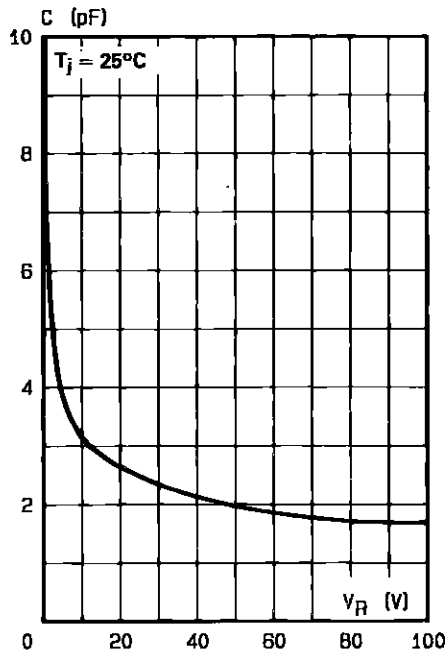


Fig.5 - Capacitance C versus reverse applied voltage V_R (typical values).

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 - All Rights Reserved

Purchase of I²C Components by SGS-THOMSON Microelectronics, conveys a licence under the Philips I²C Patent. Rights to use these components in an I²C system, is granted provided that the system conforms to the I²C Standard Specification as defined by Philips.

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 - Thailand - United Kingdom - U.S.A