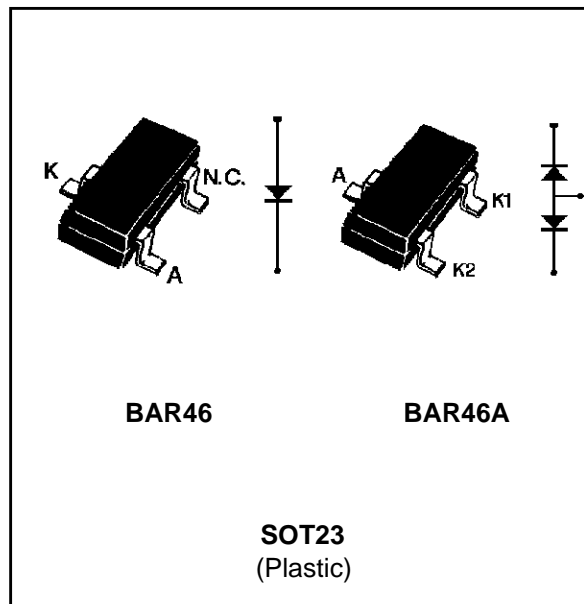


SMALL SIGNAL SCHOTTKY DIODES



**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	$\mu\text{A}$
	$T_j = 60\text{ }^\circ\text{C}$				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

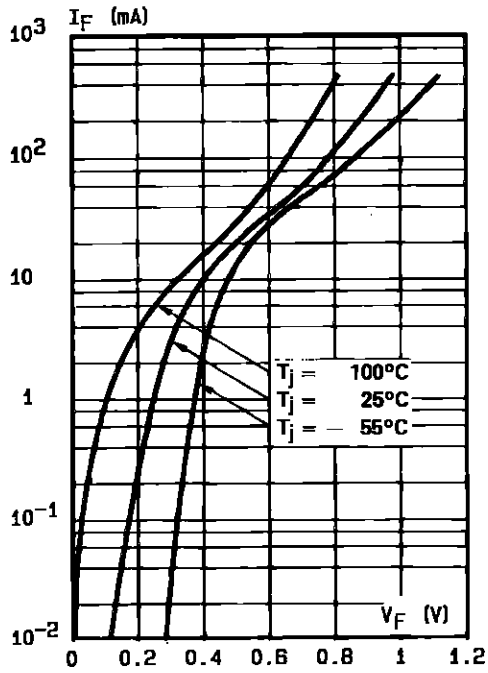


Fig.1 - Forward current versus forward voltage at different temperatures (typical values).

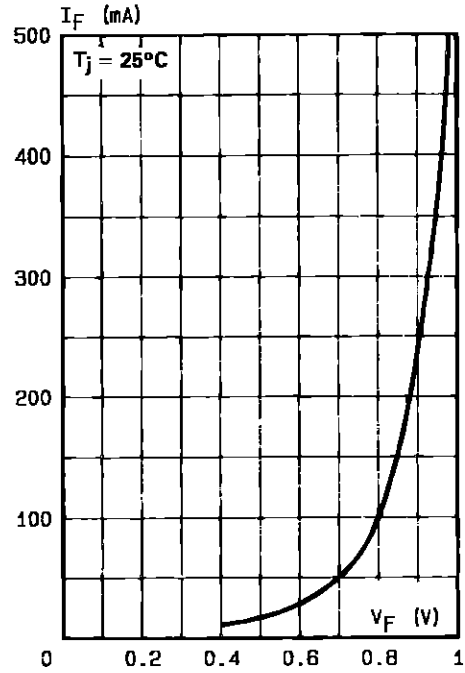


Fig.2 - Forward current versus forward voltage (typical values).

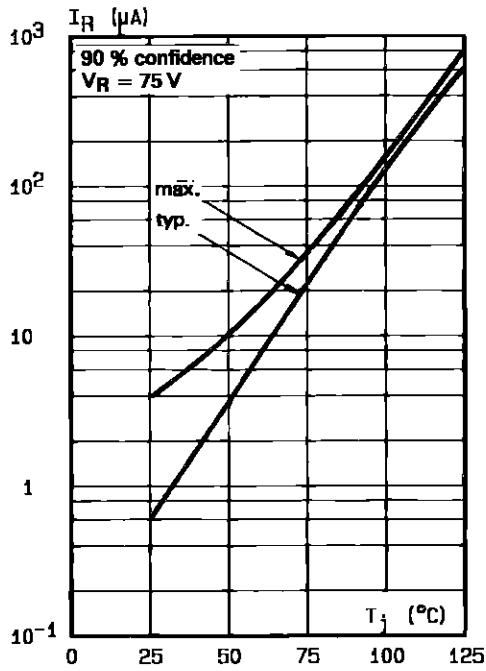


Fig.3 - Reverse current versus junction temperature (typical values).

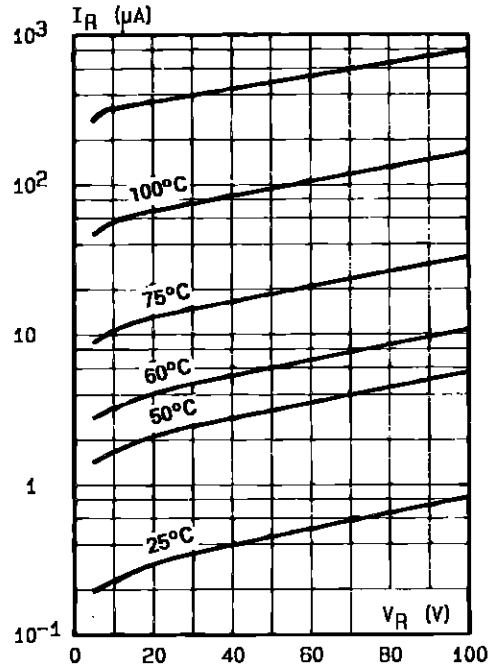


Fig.4 - Reverse current versus continuous reverse voltage

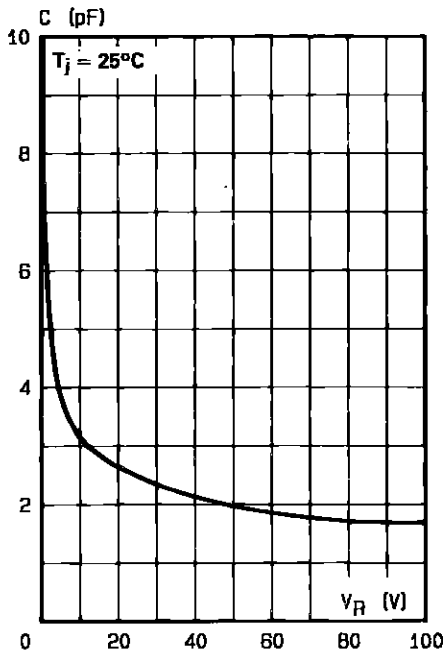


Fig.5 - Capacitance C versus reverse applied voltage V<sub>R</sub> (typical values).

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