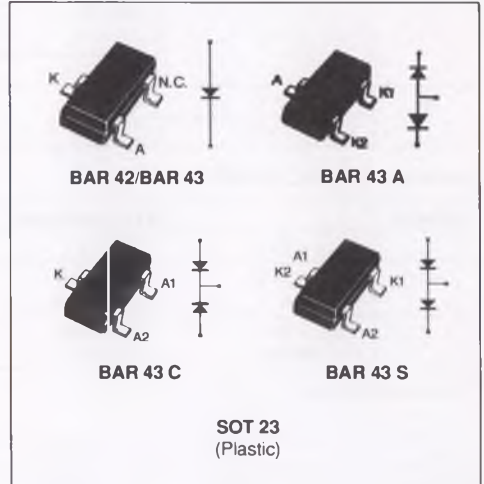


SMALL SIGNAL SCHOTTKY DIODES



DESCRIPTION

General purpose, metal to silicon diodes featuring very low turn-on voltage and fast switching.

ABSOLUTE RATINGS (limiting values) ($T_{amb} = 25^{\circ}\text{C}$) (see note 1)

Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	30	V
I_F	Forward Current	100	mA
I_{FRM}	Repetitive Peak Forward Current	350	mA
I_{FSM}	Surge non Repetitive Forward Current	750	mA
P_{Tot}	Power Dissipation* (see note 2)	160	mW
T_{sig} T_j	Storage and Junction Temperature Range	- 55 to 150 125	$^{\circ}\text{C}$ $^{\circ}\text{C}$

THERMAL RESISTANCES (see note 3)

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

* Mounted on ceramic substrate : $7 \times 5 \times 0.5\text{mm}$

Notes : 1 For double diodes maximum ratings apply to each diode, provided that rated P_{tot} is not exceeded

2 For double diodes, P_{tot} is the total power dissipation of the two diodes.

3 For double diodes, R_{th} refer to the total power dissipation in the two diodes and is given independently of the power distribution in the two diodes.

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
$V_{(BR)}$	$T_{amb} = 25^{\circ}C$	$I_R = 100\mu A$		30			V
V_F	$T_{amb} = 25^{\circ}C$	BAR 42	$I_F = 10mA$		0.35	0.4	V
			$I_F = 50mA$		0.5	0.65	
		BAR 43	$I_F = 2mA$	0.26		0.33	
			$I_F = 15mA$			0.45	
All	$I_F = 100mA$			1			
I_R	$T_{amb} = 25^{\circ}C$	$V_R = 25V$				500	nA
	$T_{amb} = 100^{\circ}C$					100	μA

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^{\circ}C$	$V_R = 1V$	$f = 1MHz$		7		pF
t_{rr}	$T_{amb} = 25^{\circ}C$ $I_{rr} = 1mA$	$I_F = 10mA$ $R_L = 100\Omega$	$I_R = 10mA$			5	ns
η^*	$T_{amb} = 25^{\circ}C$ $F = 45MHz$	$R_L = 15k\Omega$ $V_i = 2V$	$C_L = 300pF$ for BAR 43	80			%

* Detection efficiency.

Type	BAR 42	BAR 43	BAR 43A	BAR 43C	BAR 43 S
Marking	D94	D95	DB1	DB2	DA5

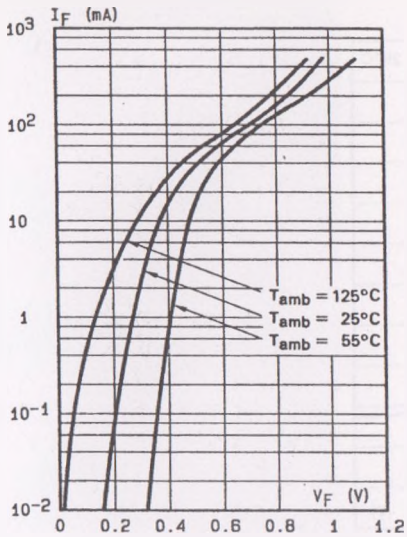


Fig.1 - Forward current versus forward voltage at different temperatures (typical values).

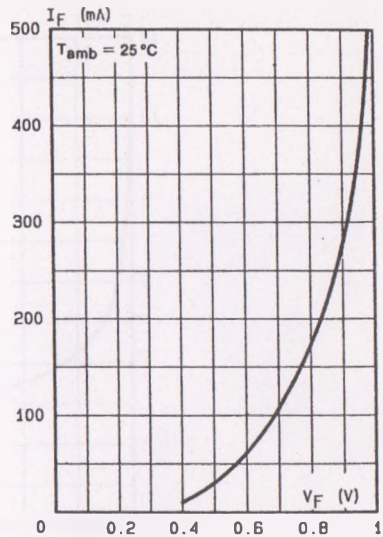


Fig.2 - Forward current versus forward voltage (typical values).

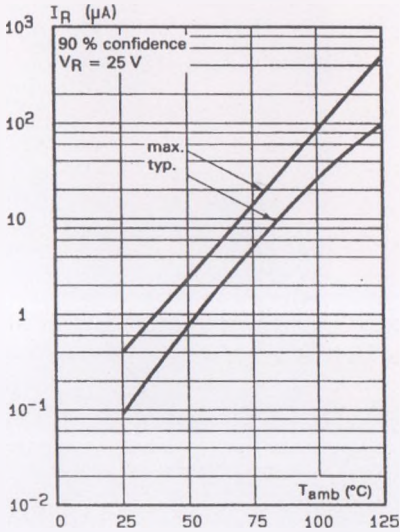


Fig.3 - Reverse current versus junction temperature.

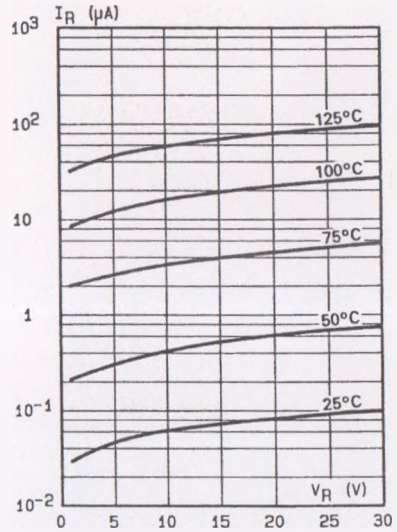


Fig.4 - Reverse current versus continuous reverse voltage (typical values).

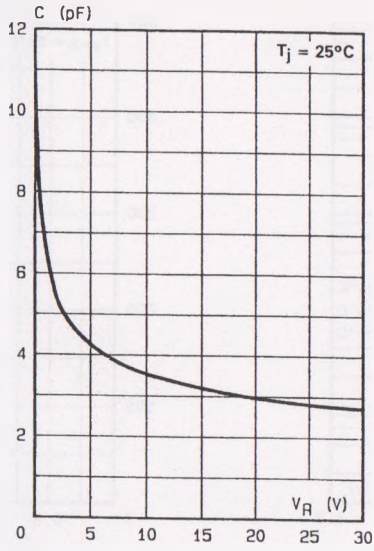


Fig.5 - Capacitance C versus reverse applied voltage V_R (typical values).