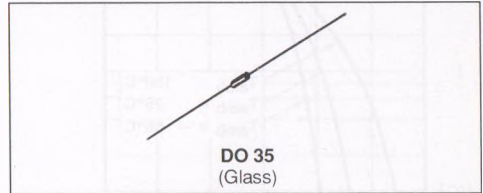


SMALL SIGNAL SCHOTTKY DIODES

DESCRIPTION

Metal to silicon junction diodes featuring high breakdown, low turn-on voltage and ultrafast switching.

Primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range. Matched batches are available on request, (BAR 11 only).



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		BAR 10	BAR 11	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		20	15	V
I_F	Forward Continuous Current*	$T_a = 25^\circ\text{C}$	35	20	mA
I_{FSM}	Surge non Repetitive Forward Current*	$t_p \leq 1\text{s}$	100		mA
T_{stg} T_J	Storage and Junction Temperature Range		- 65 to 200		$^\circ\text{C}$
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230		$^\circ\text{C}$

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
$V_{(BR)}$	$T_{amb} = 25^\circ\text{C}$	$I_R = 10\mu\text{A}$	BAR 10	20			V
	$T_{amb} = 25^\circ\text{C}$	$I_R = 10\mu\text{A}$	BAR 11	15			
V_F^{**}	$T_{amb} = 25^\circ\text{C}$	$I_F = 1\text{mA}$				0.41	V
	$T_{amb} = 25^\circ\text{C}$	$I_F = 35\text{mA}$	BAR 10			1	
	$T_{amb} = 25^\circ\text{C}$	$I_F = 20\text{mA}$	BAR 11			1	
I_R^{**}	$T_{amb} = 25^\circ\text{C}$	$V_R = 15\text{V}$	BAR 10			0.1	μA
	$T_{amb} = 25^\circ\text{C}$	$V_R = 8\text{V}$	BAR 11			0.1	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^\circ\text{C}$	$V_R = 0\text{V}$	$f = 1\text{MHz}$			1.2	pF
τ^*	$T_{amb} = 25^\circ\text{C}$	$I_F = 5\text{mA}$	Krakauer Method			100	ps

* On infinite heatsink with 4mm lead length

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

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

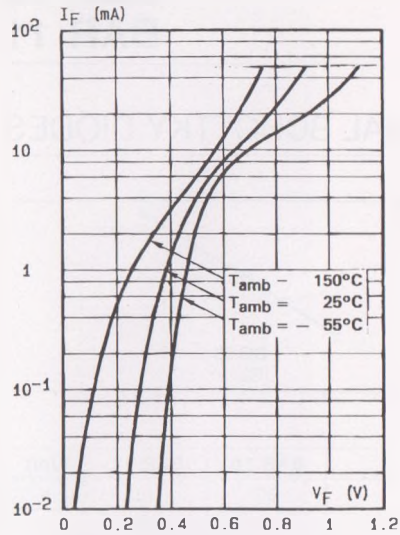


Fig. 1 - Forward current versus forward voltage at different temperatures (typical values).

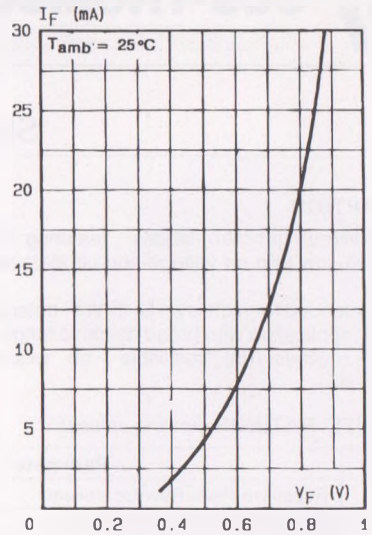


Fig. 2 - Forward current versus forward voltage (typical values).

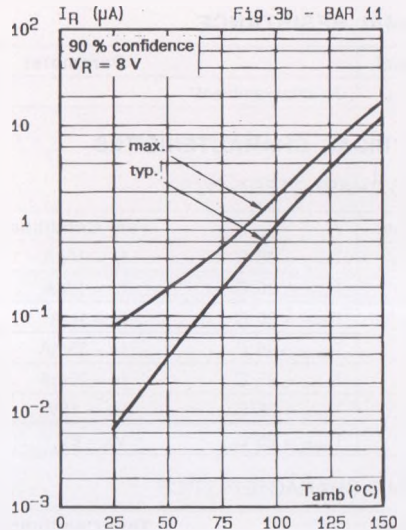
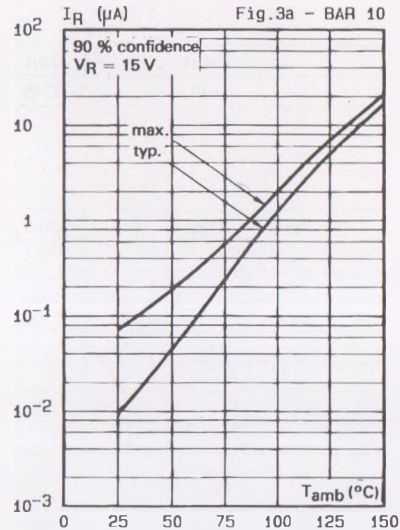


Fig. 3a/3b - Reverse current versus ambient temperature.

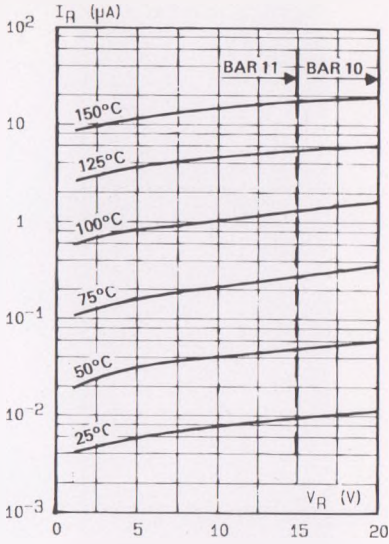


Fig.4 - Reverse current versus continuous reverse voltage (typical values).

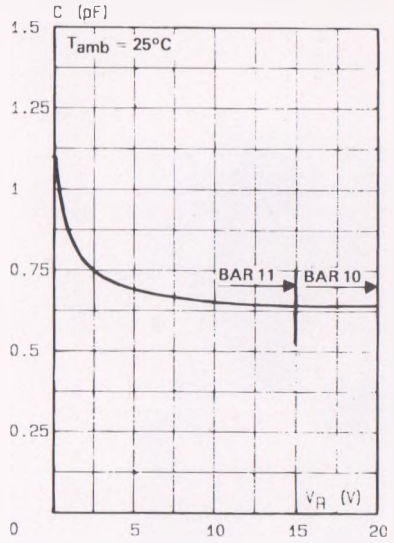


Fig.5 - Capacitance C versus reverse applied voltage V_R (typical values).