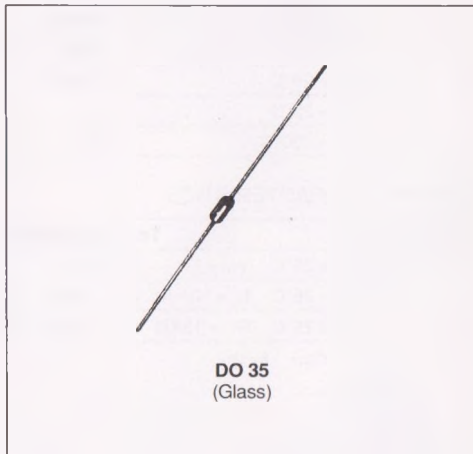


## SMALL SIGNAL SCHOTTKY DIODES

**DESCRIPTION**

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

These devices have integrated protection against excessive voltage such as electrostatic discharges.


**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter		Value	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage		30	V
$I_F$	Forward Continuous Current*	$T_a = 25^\circ\text{C}$	200	mA
$I_{FRM}$	Repetitive Peak Forward Current*	$t_p \leq 1\text{s}$ $\delta \leq 0.5$	500	mA
$I_{FSM}$	Surge non Repetitive Forward Current*	$t_p = 10\text{ms}$	4	A
$P_{TOT}$	Power Dissipation*	$T_a = 65^\circ\text{C}$	200	mW
$T_{stg}$ $T_j$	Storage and Junction Temperature Range		- 65 to 150 - 65 to 125	$^\circ\text{C}$ $^\circ\text{C}$
$T_L$	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*	300	$^\circ\text{C/W}$

\* On infinite heatsink with 4mm lead length

**ELECTRICAL CHARACTERISTICS**

**STATIC CHARACTERISTICS**

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)}$	$T_j = 25^\circ\text{C}$	$I_R = 100\mu\text{A}$	30			V
$V_F^*$	$T_j = 25^\circ\text{C}$	$I_F = 200\text{mA}$			1	V
	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$			0.4	
	$T_j = 25^\circ\text{C}$	$I_F = 50\text{mA}$			0.65	
	$T_j = 25^\circ\text{C}$	$I_F = 2\text{mA}$	BAT 42			
	$T_j = 25^\circ\text{C}$	$I_F = 15\text{mA}$	BAT 43	0.26		
$I_R^*$	$T_j = 25^\circ\text{C}$				0.5	$\mu\text{A}$
	$T_j = 100^\circ\text{C}$				100	

**DYNAMIC CHARACTERISTICS**

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_j = 25^\circ\text{C}$	$V_R = 1\text{V}$ $f = 1\text{MHz}$		7		pF
$t_{rr}$	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$ $I_R = 10\text{mA}$ $i_{rr} = 1\text{mA}$ $R_L = 100\Omega$			5	ns
$\eta$	$T_j = 25^\circ\text{C}$	$R_L = 15\text{K}\Omega$ $C_L = 300\text{pF}$ $f = 45\text{MHz}$ $V_i = 2\text{V}$	80			%

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

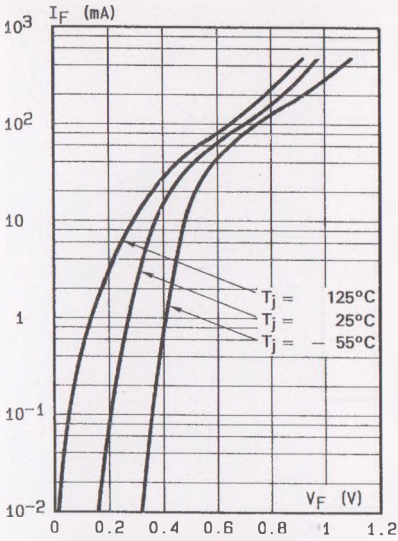


Fig.1 - Forward current versus forward voltage at different temperatures (typical values).

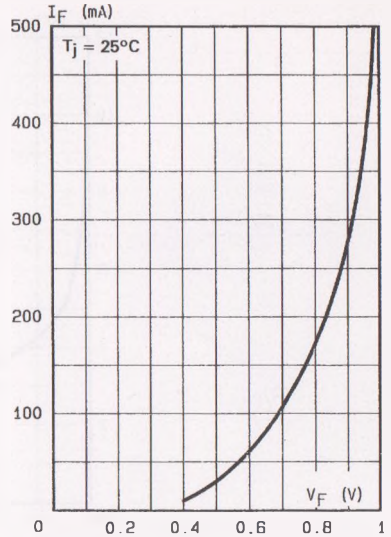


Fig.2 - Forward current versus forward voltage (typical values).

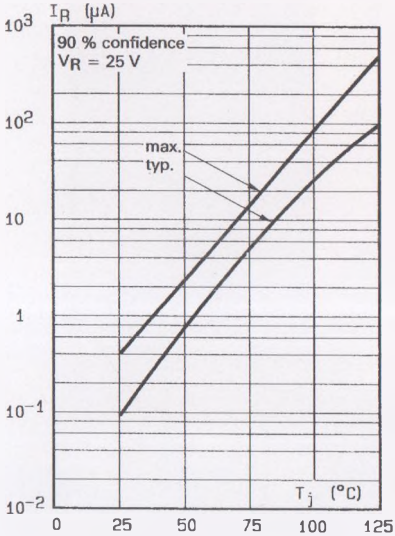


Fig.3 - Reverse current versus junction temperature.

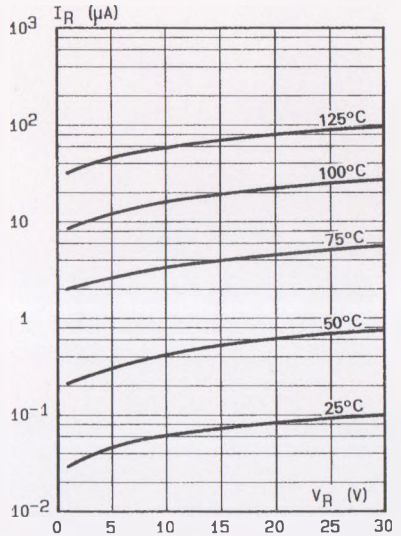


Fig.4 - Reverse current versus continuous reverse voltage (typical values).

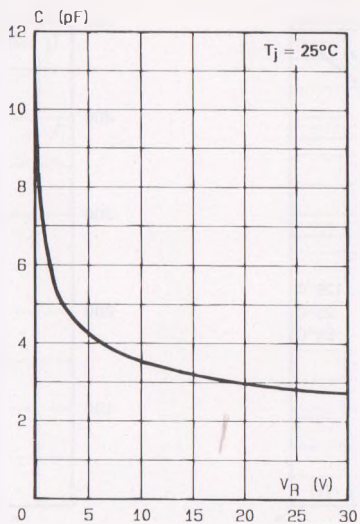


Fig.5 - Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).