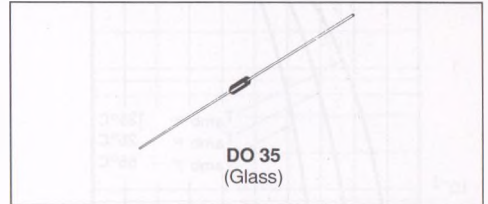


SMALL SIGNAL SCHOTTKY DIODE
DESCRIPTION

Metal to silicon junction diode primarily intended for UHF mixers and ultrafast switching applications.


ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		5	V
I_F	Forward Continuous Current*	$T_a = 25^\circ\text{C}$	30	mA
I_{FSM}	Surge non Repetitive Forward Current*	$t_p \leq 1\text{s}$	60	mA
T_{stg} T_j	Storage and Junction Temperature Range		- 65 to 150	$^\circ\text{C}$
T_L	Maximum Lead Temperature for Soldering 10s at 4mm from Case		230	$^\circ\text{C}$

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS
STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)}$	$T_{amb} = 25^\circ\text{C}$	$I_R = 100\mu\text{A}$	5			V
$V_F(1)$	$T_{amb} = 25^\circ\text{C}$	$I_F = 10\text{mA}$			0.55	V
$I_R(1)$	$T_{amb} = 25^\circ\text{C}$	$V_R = 1\text{V}$			0.05	μA

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^\circ\text{C}$	$V_R = 0\text{V}$			1	pF
$Q_S(2)$	$T_{amb} = 25^\circ\text{C}$	$I_F = 10\text{mA}$			3	pC
F(3)	$T_{amb} = 25^\circ\text{C}$	$f = 1\text{GHz}$		6	7	dB

* On infinite heatsink with 4mm lead length

(1) Pulse test : $t_p \leq 300\mu\text{s}$ $\delta < 2\%$.

(2) Measured on B-line Electronics QS-3 stored charge meter.

(3) Noise figure test :

- diode is inserted in a tuned stripline circuit
- local oscillator frequency 1GHz
- local oscillator power 1mW
- intermediate frequency amplifier, tuned on 30MHz, has a noise figure, 1.5dB

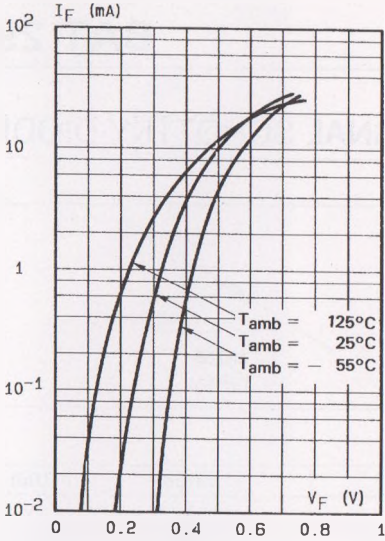


Fig.1 - Forward current versus forward voltage (typical values).

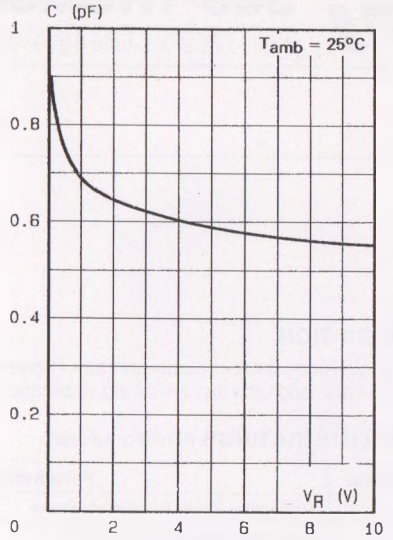


Fig.2 - Capacitance C versus reverse applied voltage V_R (typical values).

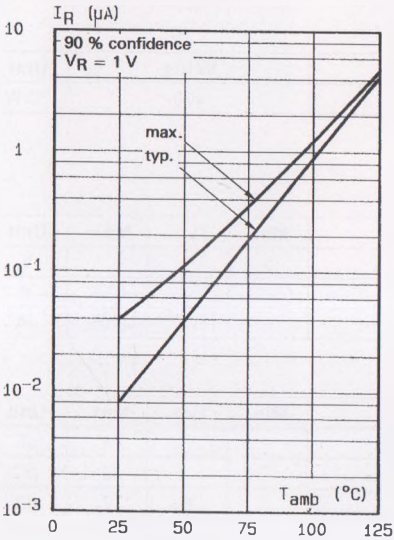


Fig.3 - Reverse current versus ambient temperature.

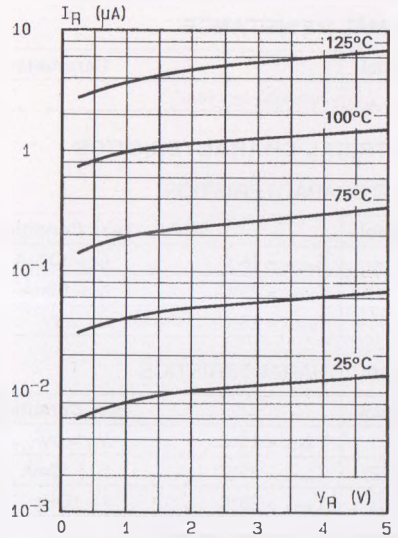


Fig.4 - Reverse current versus continuous reverse voltage (typical values).