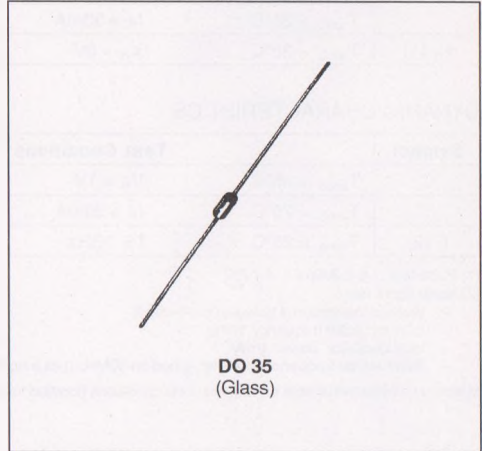


SMALL SIGNAL SCHOTTKY DIODE

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		15	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_{sig} T_j	Storage and Junction Temperature Range		- 65 to 150	$^\circ\text{C}$
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	$^\circ\text{C/W}$

* On infinite heatsink with 4mm lead length

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)}$	$T_{amb} = 25^{\circ}C$	$I_R = 10\mu A$	15			V
$V_F (1)$	$T_{amb} = 25^{\circ}C$	$I_F = 1mA$			0.38	V
	$T_{amb} = 25^{\circ}C$	$I_F = 10mA$			0.5	
	$T_{amb} = 25^{\circ}C$	$I_F = 30mA$			1	
$I_R (1)$	$T_{amb} = 25^{\circ}C$	$V_R = 6V$			0.1	μA

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^{\circ}C$	$V_R = 1V$ $f = 1MHz$			1.1	pF
τ	$T_{amb} = 25^{\circ}C$	$I_F = 20mA$ Krakauer Method			100	ps
F (2)	$T_{amb} = 25^{\circ}C$	$f = 1GHz$		6	7	dB

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

(2) 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

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

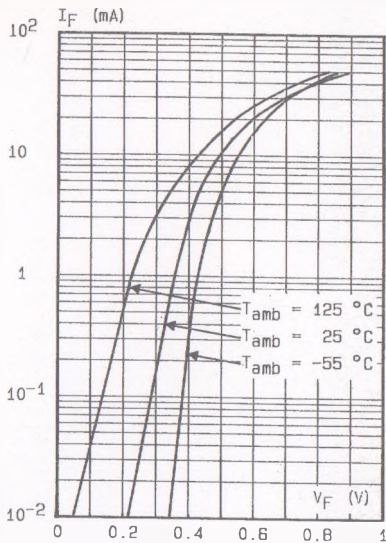


Fig.1 - Forward current versus forward voltage (typical values).

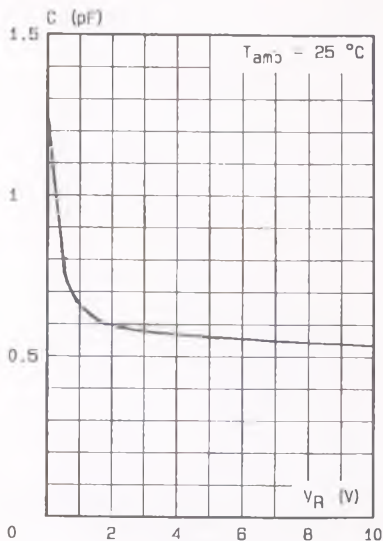


Fig.2 - Capacitance C versus reverse applied voltage V_R (typical values).

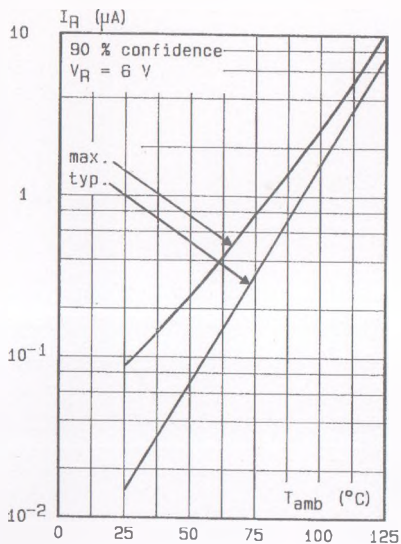


Fig.3 - Reverse current versus ambient temperature.

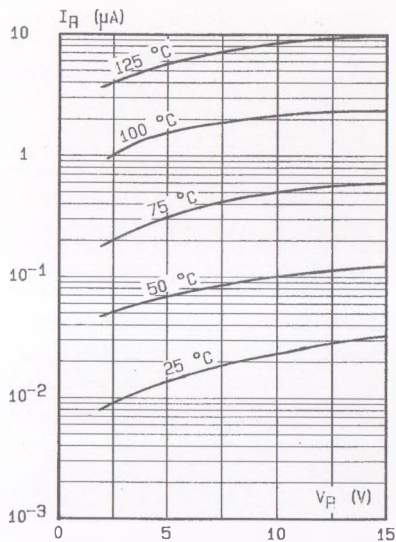


Fig.4 - Reverse current versus continuous reverse voltage (typical values).