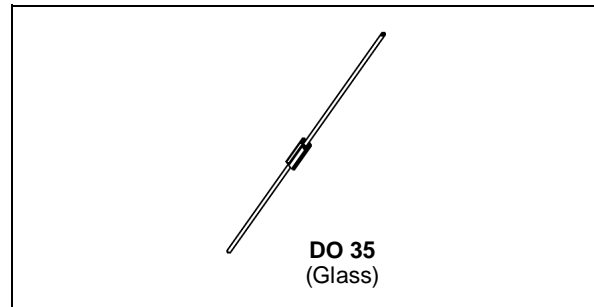


## SMALL SIGNAL SCHOTTKY DIODE

### 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*	$T_a = 25\text{ }^\circ\text{C}$ 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 -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	Test Conditions	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	400	$^\circ\text{C/W}$

### ELECTRICAL CHARACTERISTICS

#### STATIC CHARACTERISTICS

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

#### DYNAMIC CHARACTERISTICS

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

Figure 1. Forward current versus forward voltage (typical values).

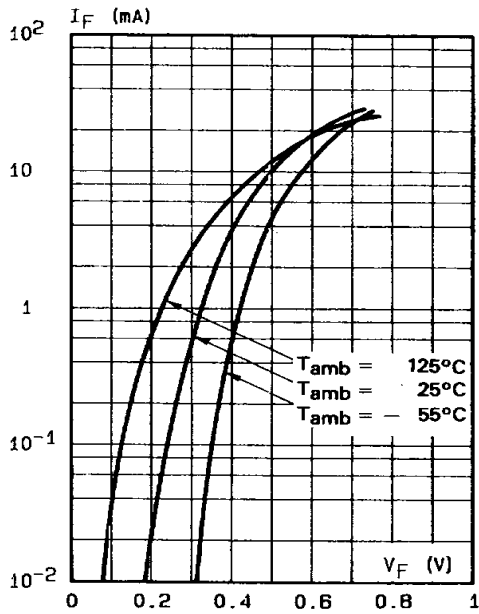


Figure 2. Capacitance C versus reverse applied voltage  $V_R$  (typical values).

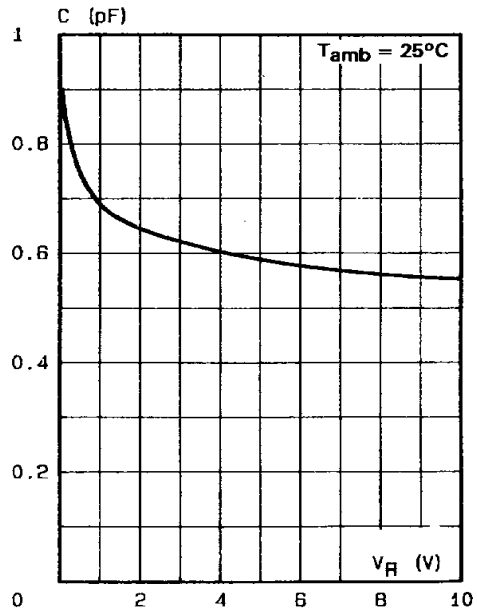


Figure 3. Reverse current versus ambient temperature.

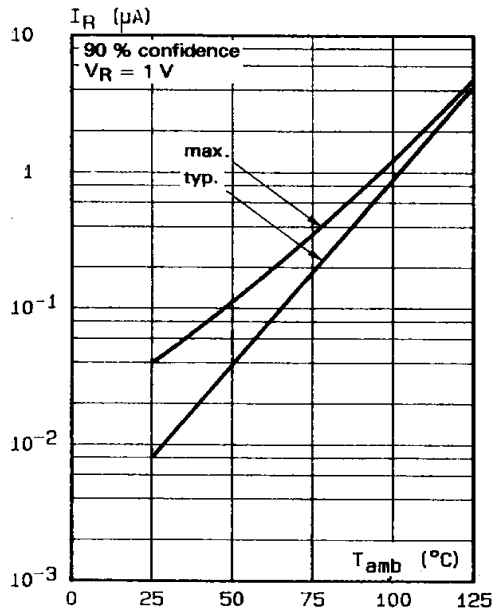
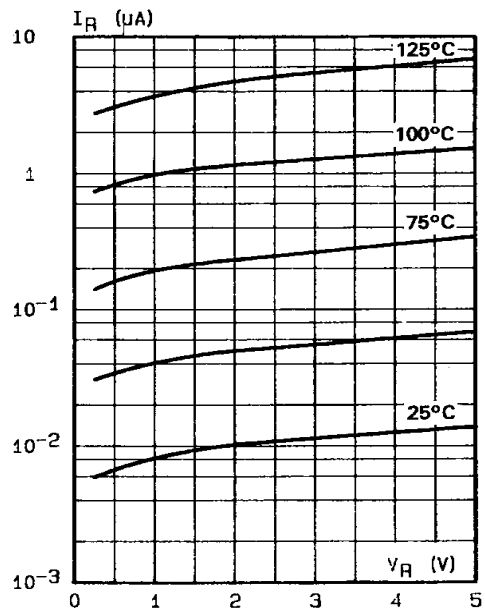
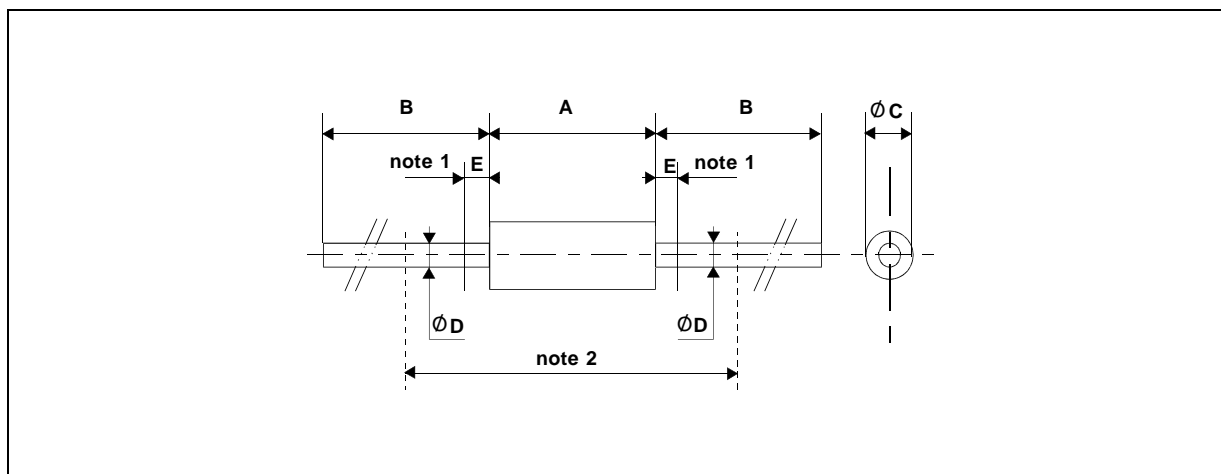


Figure 4. Reverse current versus continuous reverse voltage (typical values).



## PACKAGE MECHANICAL DATA

DO 35 Glass



REF.	DIMENSIONS				NOTES
	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
A	3.050	4.500	0.120	0.117	1 - The lead diameter $\varnothing D$ is not controlled over zone E 2 - The minimum axial length within which the device may be placed with its leads bent at right angles is 0.59" (15 mm)
B	12.7		0.500		
$\varnothing C$	1.530	2.000	0.060	0.079	
$\varnothing D$	0.458	0.558	0.018	0.022	
E		1.27		0.050	

Cooling method : by convection and conduction

Marking: clear, ring at cathode end.

Weight: 0.15g

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