

SMALL SIGNAL SCHOTTKY DIODE

DESCRIPTION

Metal to silicon junction diode featuring high break-down, 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.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	70	V
I_F	Forward Continuous Current* $T_a = 25^\circ\text{C}$	15	mA
I_{FSM}	Surge non Repetitive Forward Current* $t_p \leq 1\text{s}$	50	mA
T_{stg} T_j	Storage and Junction Temperature Range	- 65 to 200 - 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	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}	$T_{amb} = 25^\circ\text{C}$ $I_R = 10\mu\text{A}$	70			V
V_F^{**}	$T_{amb} = 25^\circ\text{C}$ $I_F = 1\text{mA}$			0.41	V
	$T_{amb} = 25^\circ\text{C}$ $I_F = 15\text{mA}$			1	
I_R^{**}	$T_{amb} = 25^\circ\text{C}$ $V_R = 50\text{V}$			0.2	μA

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
C	$T_{amb} = 25^\circ\text{C}$ $V_R = 0\text{V}$ $f = 1\text{MHz}$			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 low level (typical values).

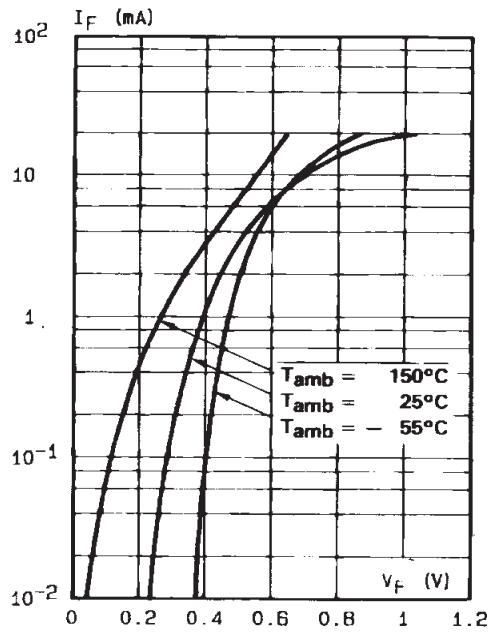


Fig. 2: Capacitance C versus reverse applied voltage V_R (typical values).

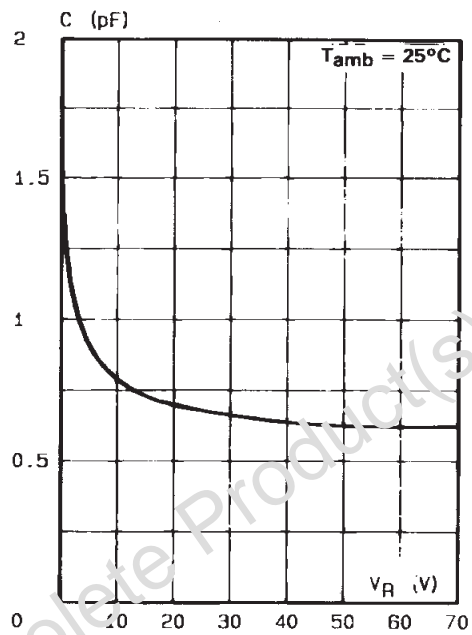


Fig. 3: Reverse current versus ambient temperature.

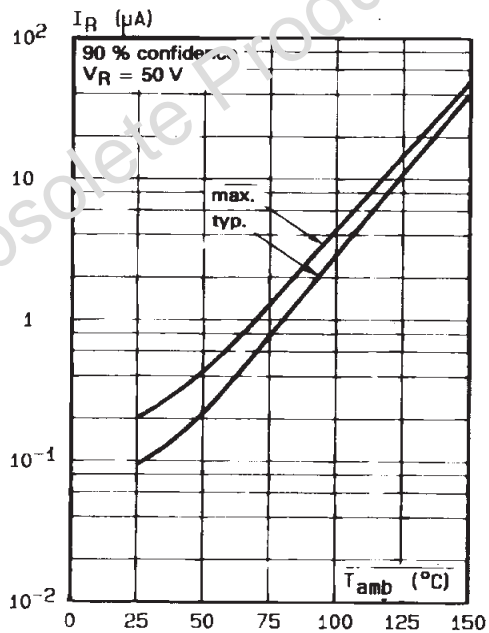
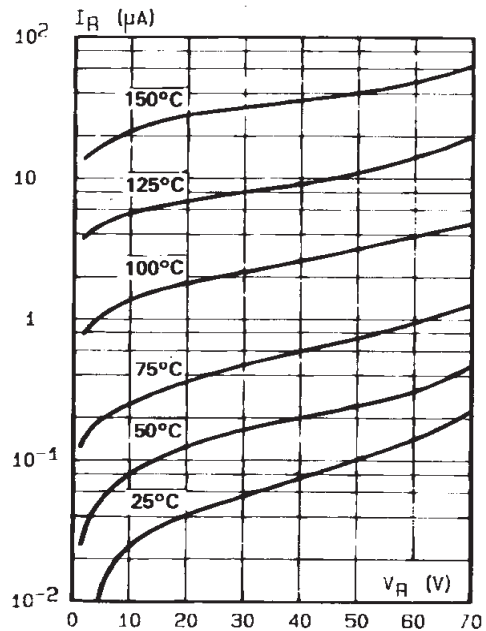
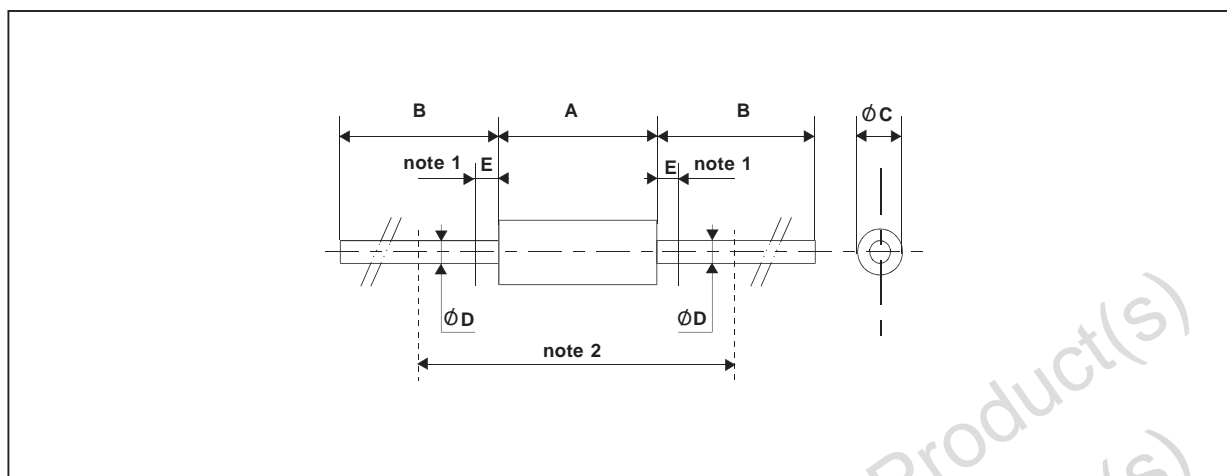


Fig. 4: Reverse current versus continuous reverse voltage (typical values).



Cooling method : by convection and conduction
 Marking: clear, ring at cathode end.

PACKAGE MECHANICAL DATA



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	0.013	0.022	
E		1.27		0.050	

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