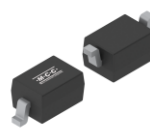


**Product Summary**

Parameter	Rating
V <sub>BR</sub>	75 V
t <sub>tr</sub> Max	6 ns
I <sub>R</sub> Max @ V <sub>R</sub> = 75 V	1 μA



**Features**

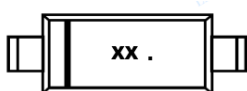
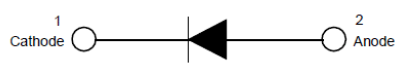
- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion

**SOD-323**

**Mechanical Data**

- Package: SOD-323
- Moisture Sensitivity: Level 1, per J-STD-020
- Halogen Free. "Green" Device (Note<sup>1</sup>)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish & RoHS Compliant
- Weight: 0.004 g (approximate)

**Body Marking and Pin Layout**

Body Marking	Internal structure
 <p><b>XX</b>: Device Marking Code<sup>1</sup>  <b>Bar</b>: Cathode Pin indicator  <b>Dot</b>(optional): Manufacturing Site Marking</p> <p><sup>1</sup>   Refer to the ordering information for the specific device code.</p>	

**Ordering Information**

Ordering Part Number	Device Marking Code	Reel Size	Packing Type	Qty/Reel	Pin 1 Orientation
Product Name-TP	T4	7"	Tape & Reel	3,000	Q1Q2
Product Name-13P	T4	13"	Tape & Reel	10,000	Q1Q2

For packaging details, visit our website at <https://www.mccsemi.com/Package/List>

**Maximum Ratings ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Reverse Voltage	$V_R$	75	V
Forward current	$I_F$	200	mA
Average Forward Current	$I_{F(AV)}$	100	mA
Non-Repetitive Peak Surge Current	$I_{FSM}$	2	A
	$t_p= 8.3\text{ms Half Sine Wave, } T_J = 25^\circ\text{C}$		
Power Dissipation <sup>(Note 2)</sup>	$P_D$	350	mW
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

- Note:
- Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  - Device mounted on an FR4 Printed-Circuit Board (PCB) with the recommended pad layout.

**Thermal characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

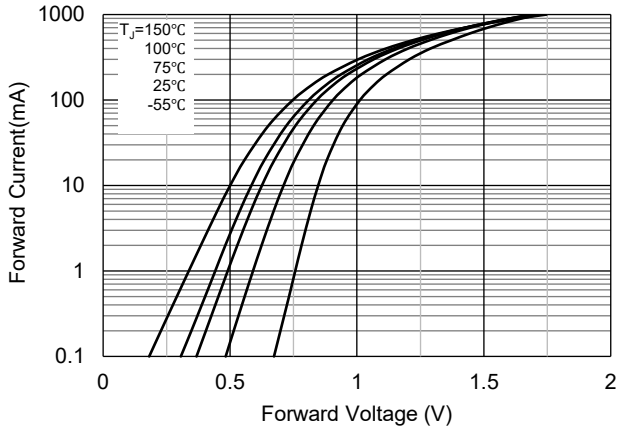
Parameter	Symbol	Rating	Unit
Thermal Resistance from Junction to Ambient <sup>(Note 2)</sup>	$R_{\theta JA}$	357	$^\circ\text{C/W}$

**Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise specified)**

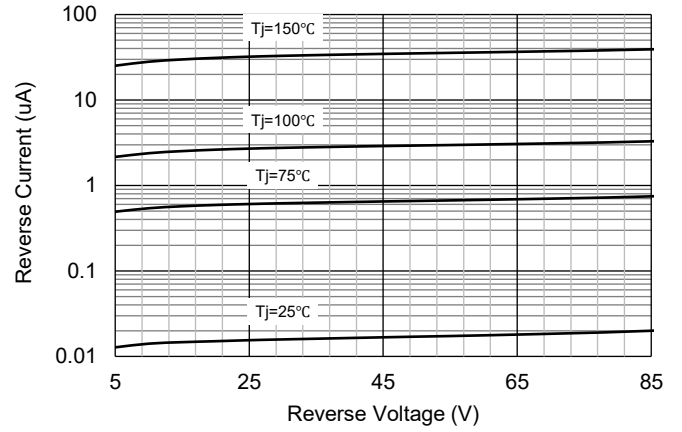
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$I_R=100 \mu\text{A}$ (pulse test)	$V_{BR}$	75			V
Forward Voltage	$I_F = 1 \text{ mA}$	$V_F$			0.715	V
	$I_F = 10 \text{ mA}$				0.855	
	$I_F = 50 \text{ mA}$				1	
	$I_F = 150 \text{ mA}$				1.25	
Reverse Current	$V_R = 75 \text{ V}$	$I_R$			1	$\mu\text{A}$
	$V_R = 75 \text{ V, } T_J=150^\circ\text{C}$				50	
Junction Capacitance	$V_R=0 \text{ V, } f=1.0\text{MHz}$	$C_J$			2	pF
Reverse Recovery Time	$I_F=10\text{mA, } I_R=10\text{mA, } I_{rr}=0.1 \times I_R, R_L=100\Omega$	$t_{rr}$			6	ns

**Curve Characteristics**

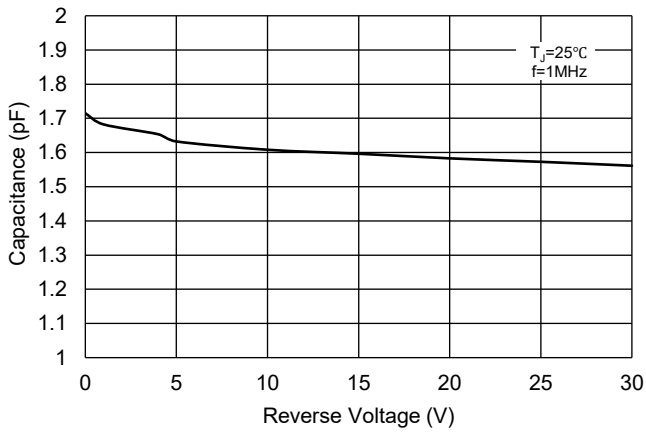
**Fig.1 - Typical Instantaneous Forward Characteristics (per diode)**



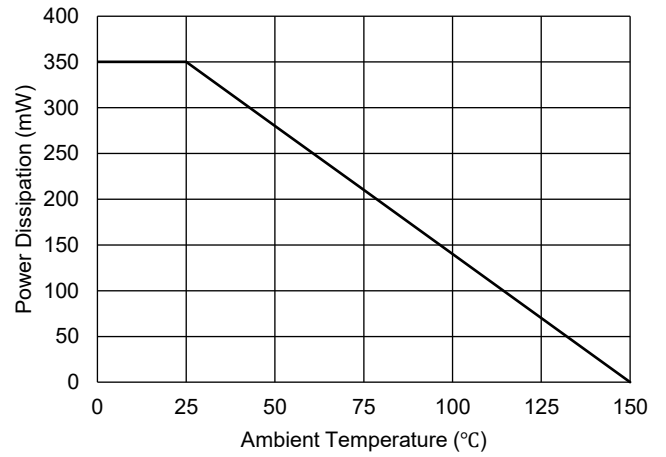
**Fig.2 - Typical Reverse Leakage Characteristics (per diode)**



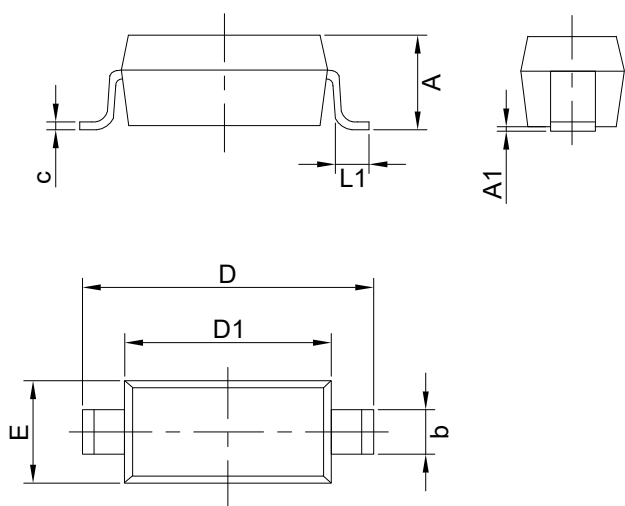
**Fig.3 - Typical Capacitance Characteristics (per diode)**



**Fig.4 - Power Derating Curve**



## Package Outline

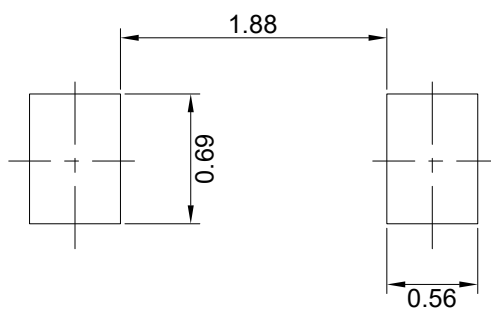


DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.031	0.045	0.80	1.15*	Note 1
A1	0.000	0.006	0.00	0.15	
b	0.010	0.016	0.25	0.40	
c	0.003	0.010	0.08	0.25	
D	0.090	0.107	2.30	2.70	
D1	0.063	0.071	1.60	1.80	
E	0.045	0.055	1.15	1.40	
L1	0.004	0.018	0.10	0.45	

**Notes:**

1. Dimension A for products from manufacturing site VN is controlled at max 1.10 mm.

## Suggested Pad Layout (Unit:mm)



**Notes:**

1. The suggested land pattern dimensions have been provided for reference only.
2. For further information, please refer to document IPC-7351A.

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