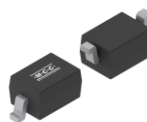


400mW High Voltage/Fast Switching Diode

Product Summary

Parameter	Rating
V _{BR}	100 V
t _r Max	4 ns
I _R Max @ V _R = 75 V	1 μA



Features

- 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 (Note¹)
- 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>XX: Device Marking Code¹ Bar: Cathode Pin indicator Dot(optional): Manufacturing Site Marking</p> <p>¹ Refer to the ordering information for the specific device code.</p>	<p>1 Cathode 2 Anode</p>

Ordering Information

Ordering Part Number	Device Marking Code	Reel Size	Packing Type	Qty/Reel	Pin 1 Orientation
Product Name-TP	A6	7"	Tape & Reel	3,000	Q1Q2
Product Name-13P	A6	13"	Tape & Reel	10,000	Q1Q2

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

400mW High Voltage/Fast Switching Diode

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

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	V
Reverse Voltage	V_R	100	V
Forward current	I_F	250	mA
Non-Repetitive Peak Surge Current	I_{FSM}	1	A
$t_p=1\text{ms Square Wave, } T_J = 25^{\circ}\text{C}$			
Power Dissipation ^(Note 2)	P_D	400	mW
Operating Junction Temperature Range	T_J	-65 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}\text{C}$

Note:
 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 2. 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 ^(Note 2)	$R_{\theta JA}$	312.5	$^{\circ}\text{C/W}$

 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}	100			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	$V_R = 20\ \text{V}$	I_R			0.03	μA
	$V_R = 75\ \text{V}$				1	
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}			4	ns

Curve Characteristics

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

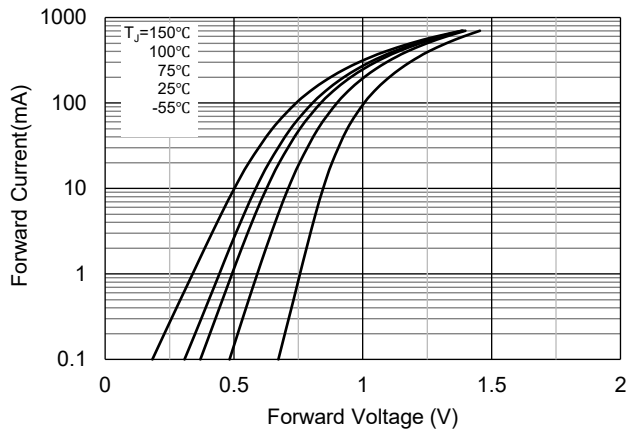


Fig.2 - Typical Reverse Leakage Characteristics (per diode)

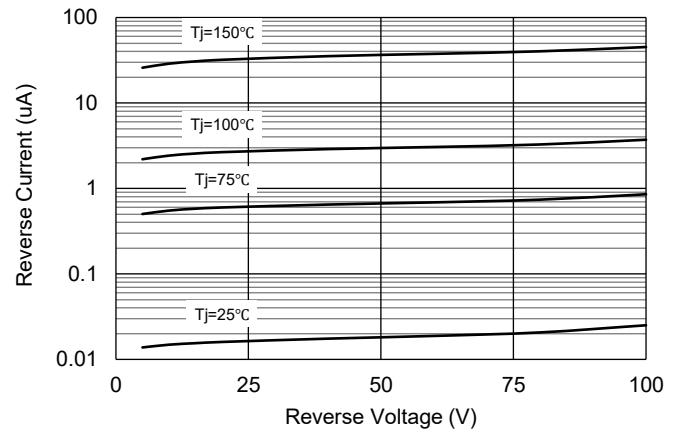


Fig.3 - Typical Capacitance Characteristics (per diode)

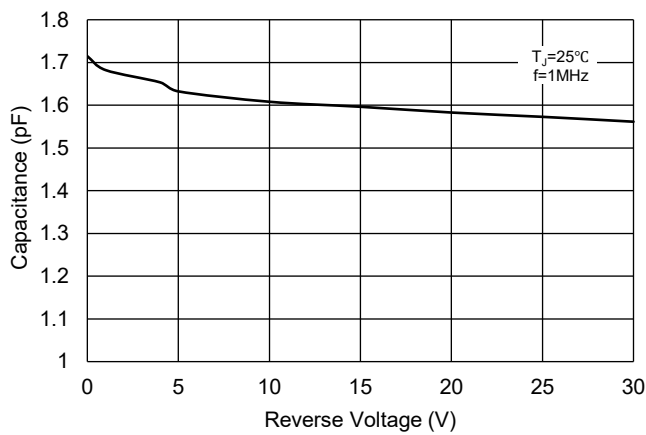
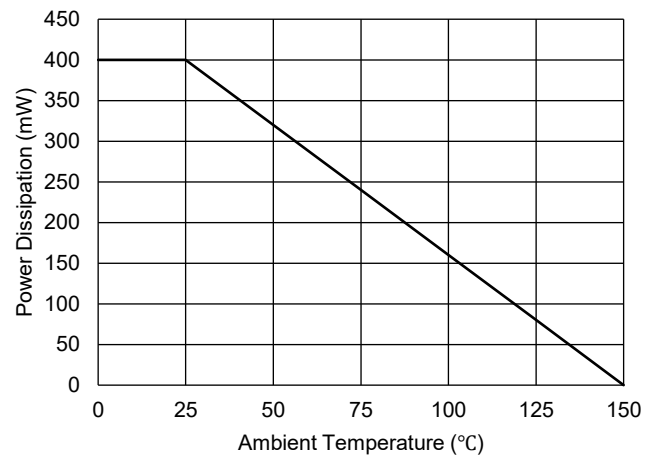
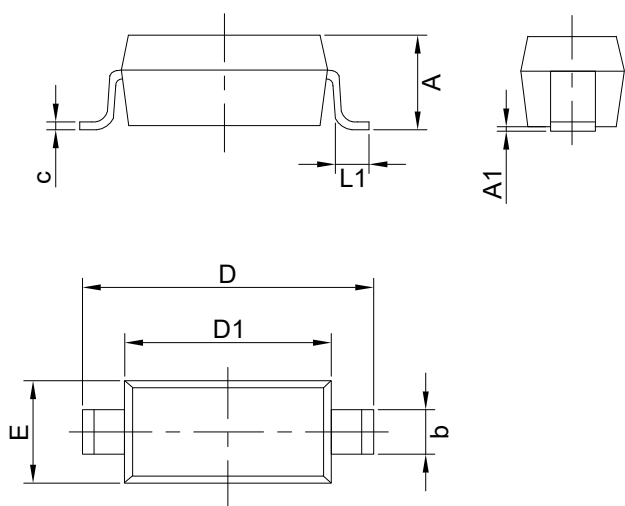


Fig.4 - Power Derating Curve



Package Outline

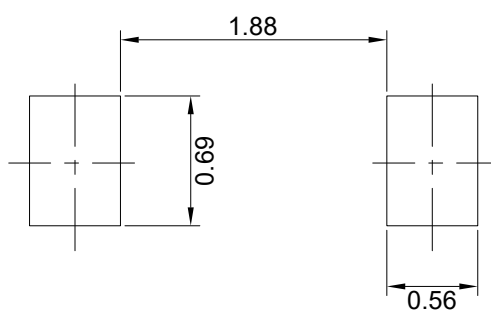


DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.031	0.045	0.80	1.15*	Note 1
A1	0.000	0.006	0.00	0.15	
b	0.010	0.016	0.25	0.40	
c	0.003	0.010	0.08	0.25	
D	0.090	0.107	2.30	2.70	
D1	0.063	0.071	1.60	1.80	
E	0.045	0.055	1.15	1.40	
L1	0.004	0.018	0.10	0.45	

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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