

Features

- Surface Mount Package Ideally Suited for Automated Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](mailto:contact@diodes.com) or your local Diodes representative.**
<https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: SOD323
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish — Matte Tin Finish annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: Cathode Band
- Weight: 0.004 grams (approximate)

SOD323



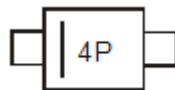
Top View

Ordering Information (Note 4)

Part Number	Qualification	Package	Packing	
			Qty.	Carrier
BAV3004WS-7	Commercial	SOD323	3000	Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>

Marking Information



4P = Product Type Marking Code

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	300	V
RMS Reverse Voltage	$V_{R(RMS)}$	212	V
Forward Continuous Current	I_{FM}	225	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4.0 1.0	A
	@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{ms}$		

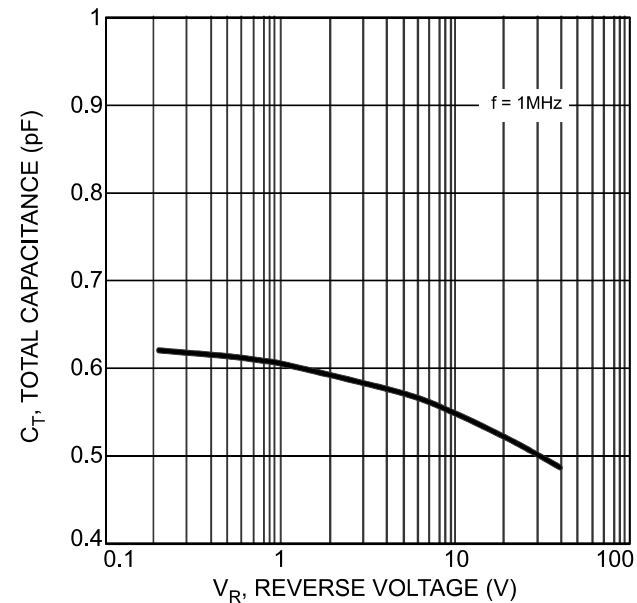
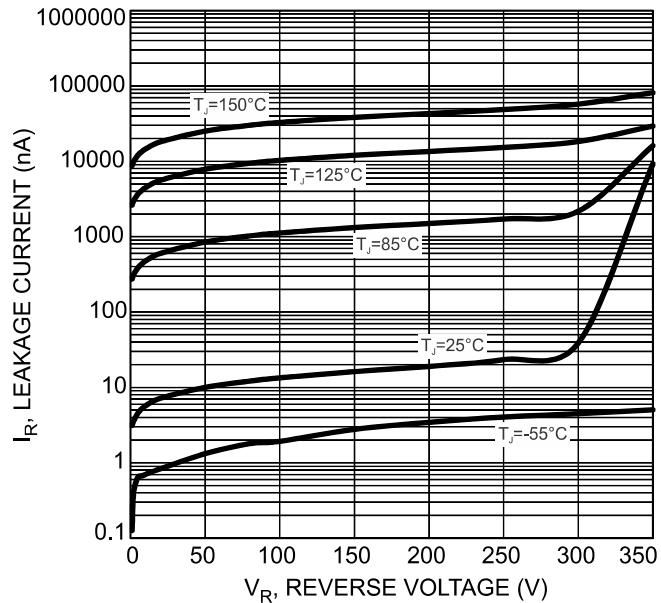
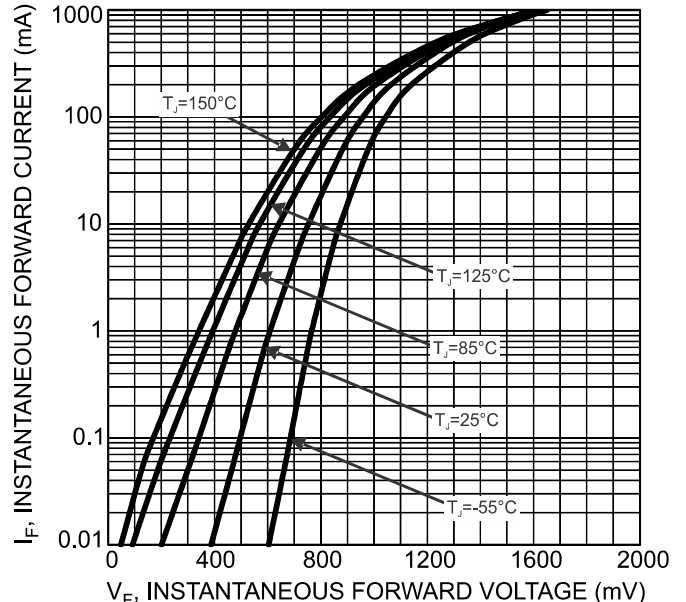
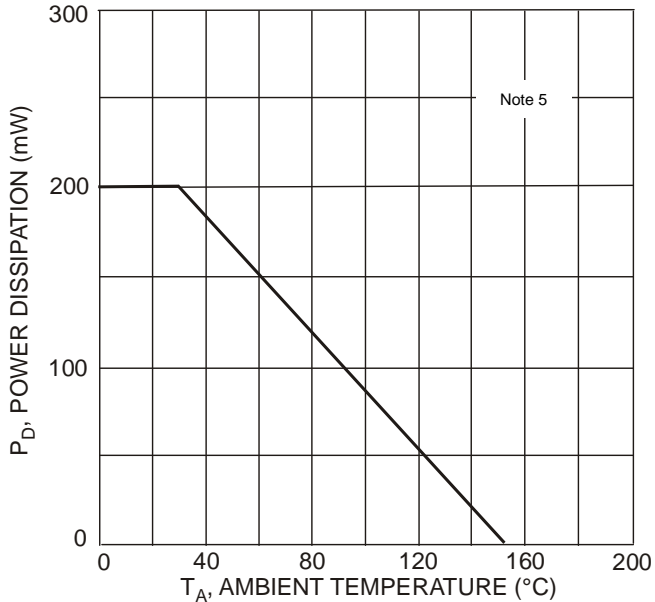
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	200	mW
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	350	—	—	V	$I_R = 150\mu\text{A}$
Forward Voltage	V_F	—	0.78 0.93 1.03	0.87 1.0 1.25	V	$I_F = 20\text{mA}$ $I_F = 100\text{mA}$ $I_F = 200\text{mA}$
Leakage Current (Note 6)	I_R	—	30 35	100 100	nA μA	$V_R = 240\text{V}, T_J = 25^\circ\text{C}$ $V_R = 240\text{V}, T_J = 150^\circ\text{C}$
Total Capacitance	C_T	—	1.0	5.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	50	ns	$I_F = I_R = 30\text{mA}$, $I_{rr} = 3.0\text{mA}, R_L = 100\Omega$

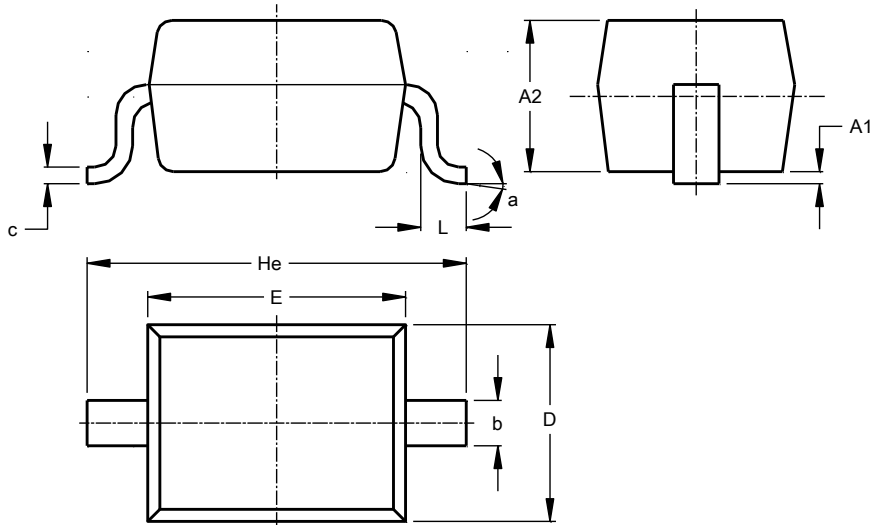
Notes: 5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/products/packages.html>.
6. Short duration pulse test used to minimize self-heating effect.



Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOD323

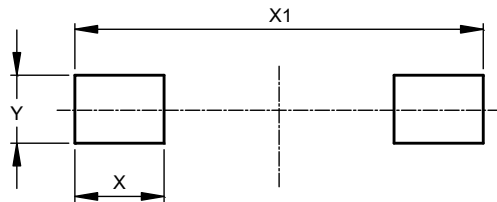


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOD323



Dimensions	Value (in mm)
X	0.590
X1	2.700
Y	0.450

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