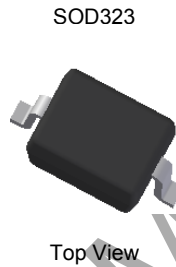


## Features

- Fast Switching Speed: 50ns Maximum
- 400V High Reverse Breakdown Voltage Rating
- Low Capacitance: 2.5pF Maximum
- Surface Mount Package Ideally Suited for Automated Insertion
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**
- **PPAP Capable (Note 4)**

## Mechanical Data

- Case: SOD323
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Matte Tin Finish Annealed Over Alloy 42 Leadframe. Lead Free Plating. Solderable per MIL-STD-202, Method 208
- Weight: 0.005 grams (Approximate)



## Ordering Information (Note 5)

Part Number	Compliance	Marking	Reel Size (inches)	Tape Width (mm)	Quantity per Reel
BAV5004WSQ-7	Automotive	LY	7	8	3,000/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. Automotive products are AEC-Q101 qualified and are PPAP capable. Refer to <https://www.diodes.com/quality/>.
  5. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

## Marking Information



LY = Product Type Marking Code  
Bar Denotes Cathode Side

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	400	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	350	V
DC Blocking Voltage	V <sub>R</sub>	247	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	247	V
Forward Continuous Current (Note 6)	I <sub>FM</sub>	300	mA
Peak Repetitive Forward Current (Note 6)	I <sub>FRM</sub>	625	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	5.0 3.0	A
		@ t = 1.0μs	
		@ t = 1.0ms	

Note: 6. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/package-outlines.html>.

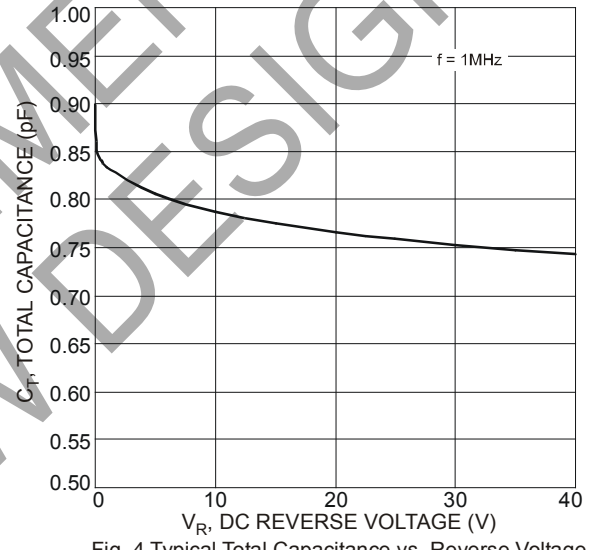
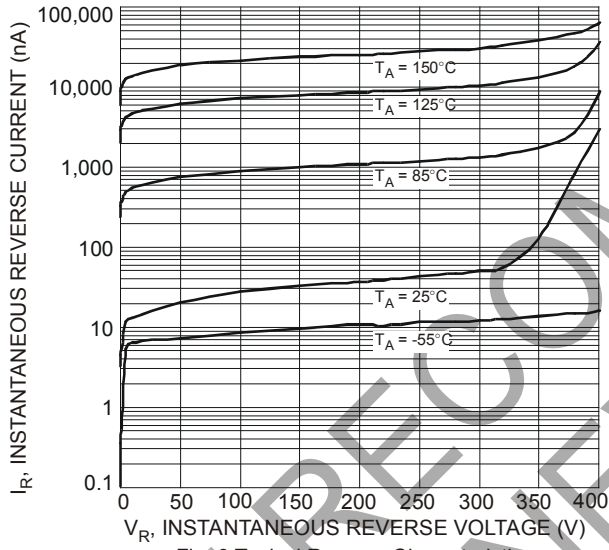
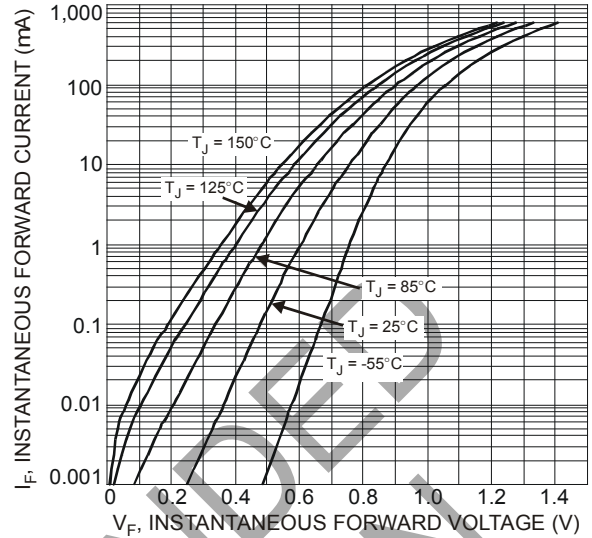
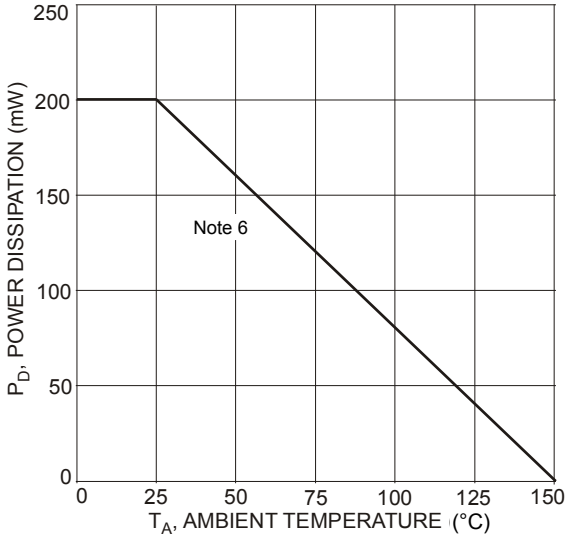
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6) (See Figure 1)	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient Air (Note 6)	R <sub>θJA</sub>	625	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	V <sub>(BR)R</sub>	400	–	–	V	I <sub>R</sub> = 150μA
Forward Voltage	V <sub>F</sub>	–	–	0.93	V	I <sub>F</sub> = 20mA
		–	–	1.09		I <sub>F</sub> = 100mA
		–	–	1.29		I <sub>F</sub> = 200mA
Reverse Current (Note 7)	I <sub>R</sub>	–	–	1	μA	V <sub>R</sub> = 240V
		–	–	100		V <sub>R</sub> = 240V, T <sub>J</sub> = +150°C
Total Capacitance	C <sub>T</sub>	–	0.9	2.5	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>RR</sub>	–	–	50	ns	I <sub>F</sub> = I <sub>R</sub> = 30mA, I <sub>RR</sub> = 3.0mA, R <sub>L</sub> = 100Ω

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

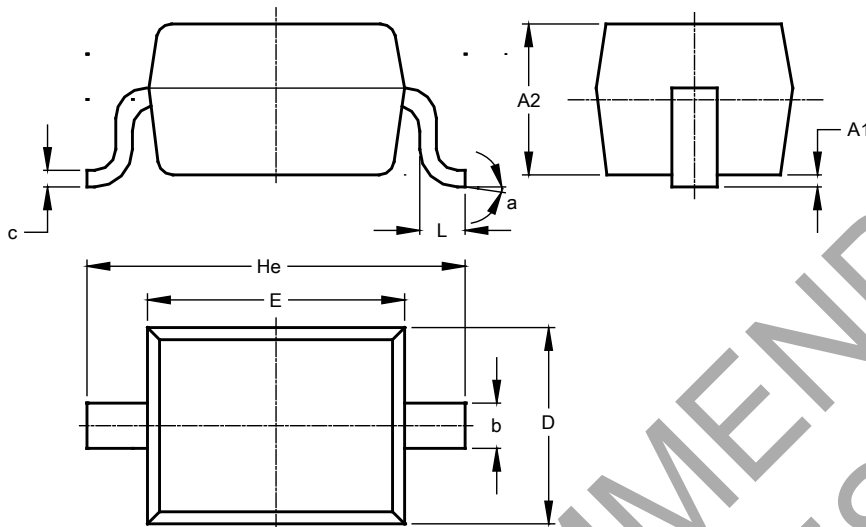


NOT FOR RECOMMENDED DESIGN

## Package Outline Dimensions

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

SOD323

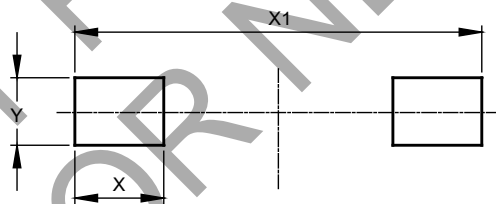


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

## 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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