

Features

- Fast Switching Speed
- Small Surface-Mount Package
- For General Purpose Switching Applications
- High Conductance
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)
- The 1N4448HWSQ is suitable for automotive applications requiring specific change control; this part is AEC-Q101 qualified, PPAP capable, and manufactured in IATF16949 certified facilities.

<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: Matte Tin Finish Annealed over Alloy 42 Leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band
- Weight: 0.004 grams (Approximate)

SOD323



Top View

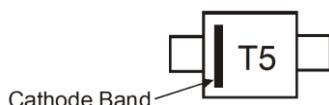
Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
1N4448HWS-7-F	SOD323	3,000	Tape & Reel
1N4448HWSQ-7-F	SOD323	3,000	Tape & Reel
1N4448HWS-13-F	SOD323	10,000	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. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



T5 = Product Type Marking Code
 A Bar on Top of the Letter 'T' Denotes AT Site.

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

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	80	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(\text{RMS})}$	57	V
Forward Continuous Current	I_{FM}	500	mA
Average Rectified Output Current	I_O	250	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$	I_{FSM}	4.0	A
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{s}$		1.0	

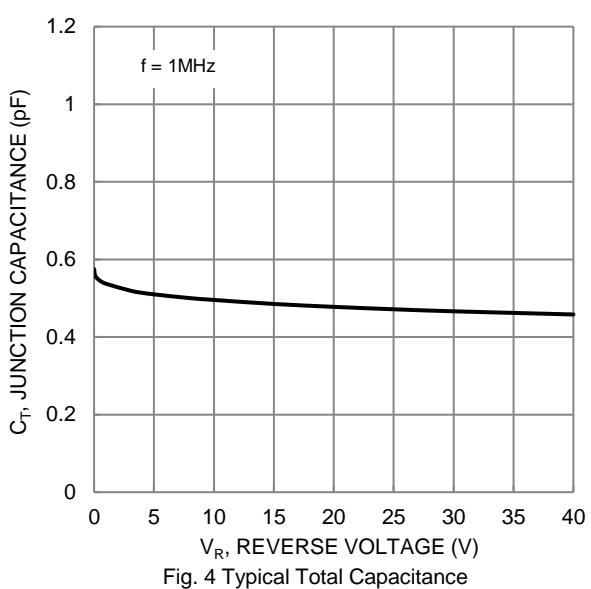
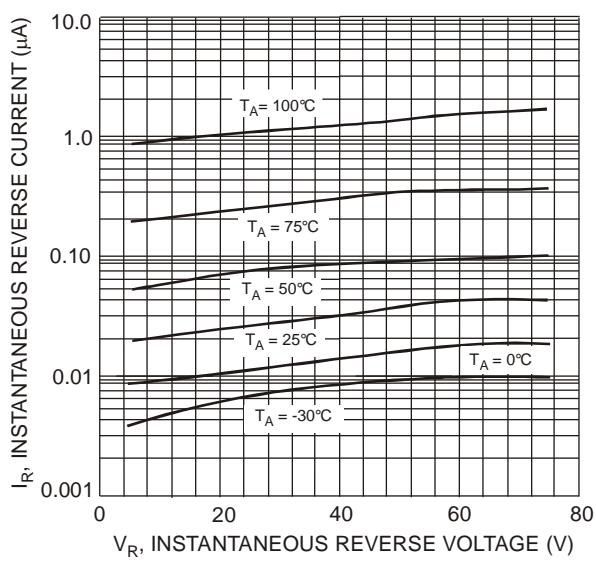
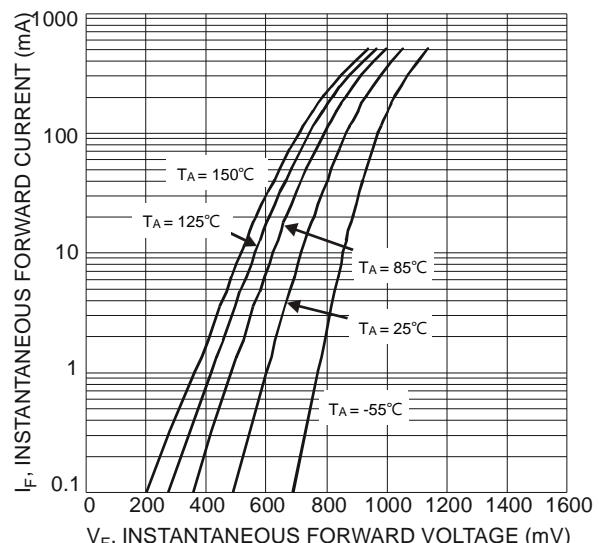
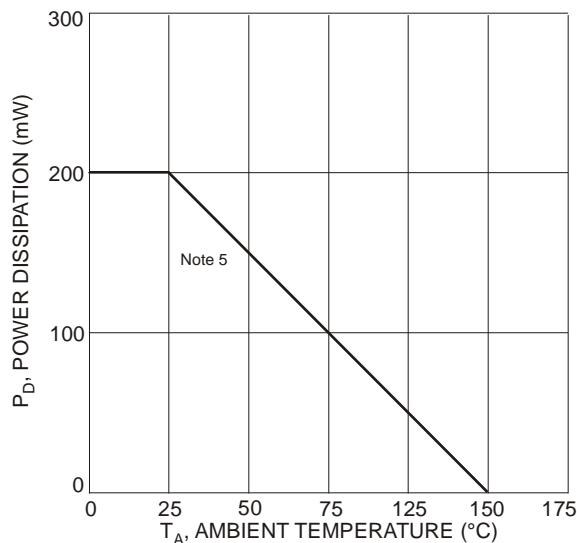
Thermal Characteristics

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

 Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

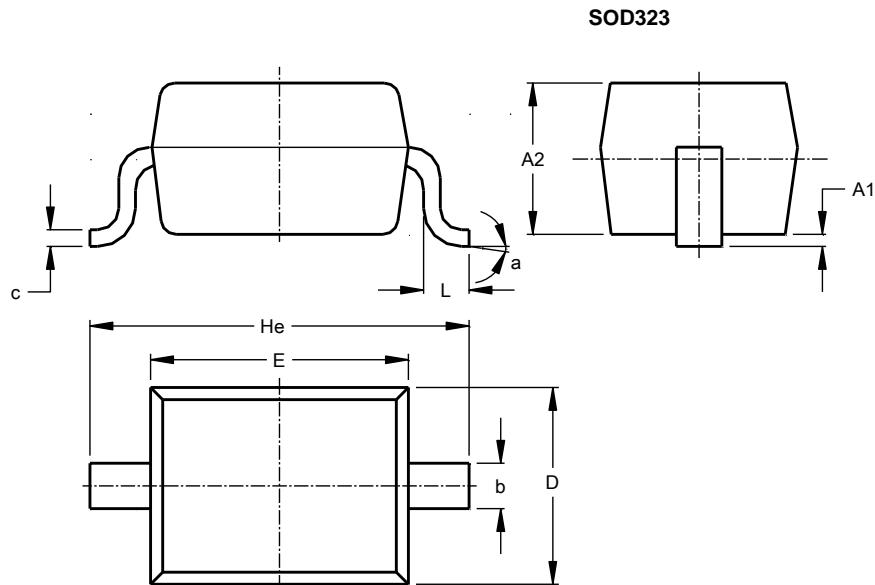
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{BR(R)}$	80	—	V	$I_R = 100\mu\text{A}$
Forward Voltage	V_{FM}	0.62	0.72	V	$I_F = 5.0\text{mA}$
		—	0.855		$I_F = 10\text{mA}$
		—	1.0		$I_F = 100\text{mA}$
		—	1.25		$I_F = 150\text{mA}$
Peak Reverse Current (Note 6)	I_{RM}	—	100	nA	$VR = 80\text{V}$
		—	50		$VR = 75\text{V}, T_J = +150^\circ\text{C}$
		—	30		$VR = 25\text{V}, T_J = +150^\circ\text{C}$
		—	25		$VR = 20\text{V}$
Total Capacitance	C_T	—	3.5	pF	$VR = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	4.0	ns	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

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/package-outlines.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.

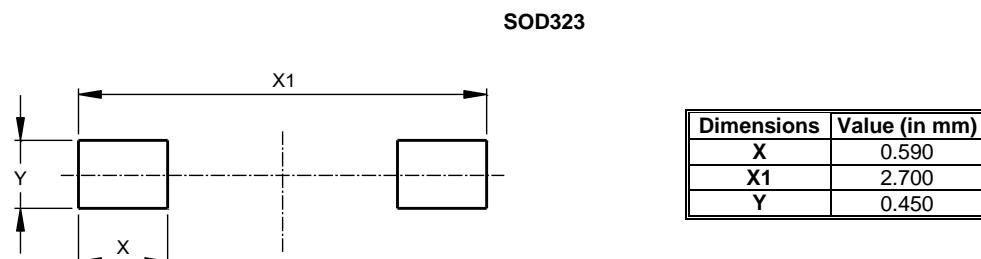


SOD323			
Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--

All Dimensions in mm

Suggested Pad Layout

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



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