



SURFACE MOUNT FAST SWITCHING DIODE

1N4448HWT

Features

- Fast Switching Speed
- Ultra-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)

Mechanical Data

- Case: SOD523
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Matte Tin Finish (Lead Free Plating) annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208 (3)
- Weight: 0.002 grams (approximate)

SOD523



Top View

Ordering Information (Notes 4 & 5)

Part Number (Note 6)	Case	Packaging
1N4448HWT-7	SOD523	3000/Tape & Reel
1N4448HWT-13	SOD523	10000/Tape & Reel

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.

- 2. See http://www.diodes.com/quality/lead_free.html 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.

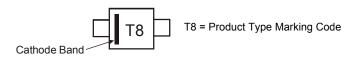
4. For packaging details, go to our website at http://www.diodes.com/products/packages.html

5. Product manufactured with date code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.

6. Dispensed in every other cavity of the tape.

Marking Information

Notes:



Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} VR	80	V
RMS Reverse Voltage	V _{R(RMS)}	57	V
Forward Continuous Current	I _{FM}	250	mA
Average Rectified Output Current	lo	125	mA
	= 1.0µs = 1.0s I _{FSM}	2.0 1.0	A



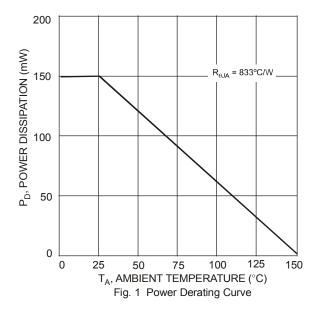
Thermal Characteristics

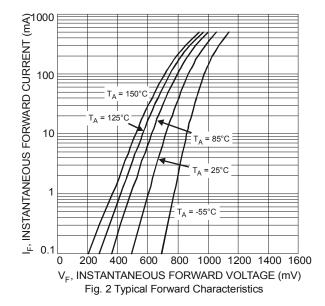
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 7)	PD	150	mW
Thermal Resistance Junction to Ambient (Note 7)	R _{0JA}	833	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 8)	V _{(BR)R}	80		V	I _R = 100μA
		0.62	0.72	V	I _F = 5.0mA
Forward Voltage	VF	_	0.855		I _F = 10mA
Forward Voltage			1.0		I _F = 100mA
		_	1.25		I _F = 150mA
		I _R —	100	nA	V _R = 80V
Deals Bayerea Current (Nate 9)			50	μA	V _R = 75V, T _J = +150°C
Peak Reverse Current (Note 8)	IR		30	μA	V _R = 25V, T _J = +150°C
			25	nA	V _R = 20V
Total Capacitance	CT		3.0	pF	V _R = 0.5V, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	4.0	ns	$I_{\rm F} = I_{\rm R} = 10 {\rm mA},$
Reverse Recovery Time					I _{rr} = 0.1 x I _R , R _L = 100Ω

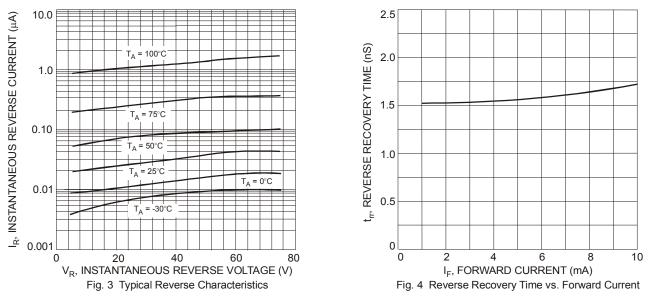
Notes: 7. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com. 8. Short duration pulse test used to minimize self-heating effect.





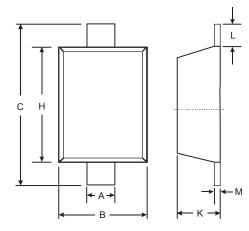






Package Outline Dimensions

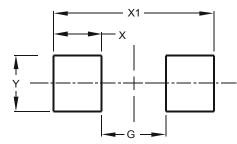
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



SOD523			
Dim	Min	Max	
Α	0.25	0.35	
В	0.70	0.90	
С	1.50	1.70	
Н	1.10	1.30	
K	0.55	0.65	
_	0.10	0.30	
М	0.10	0.12	
All Dimensions in mm			

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
G	0.80
Х	0.60
X1	2.00
Y	0.70



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