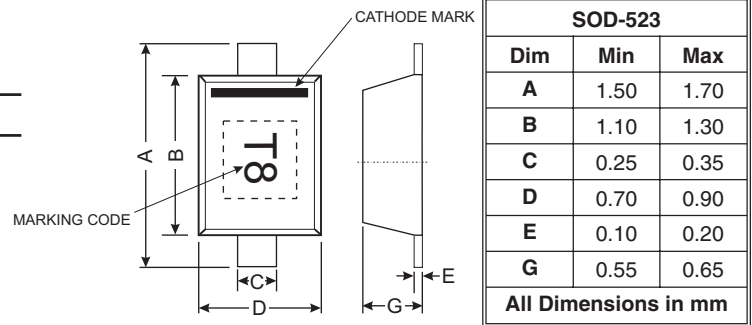


Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- **Lead Free by Design/RoHS Compliant (Note 1)**
- "Green" Device, Note 3 and 4

Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic, "Green" Molding Compound, Note 4. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish) annealed over Alloy 42 leadframe.
- Marking Code: T8
- Ordering Information: See Last Page
- Weight: 0.002 grams (approximate)



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}	80	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current	I_{FM}	250	mA
Average Rectified Output Current	I_O	125	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	I_{FSM}	2.0 1.0	A
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P_d	150	mW
Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	833	$^\circ\text{C/W}$

- Note:
1. No purposefully added lead.
 2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 3. Diode's Inc.'s "Green" Policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 4. Product manufactured with date code 0609 (week 9, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0609 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

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

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	80	—	V	$I_R = 100\mu\text{A}$
Forward Voltage	V_F	0.62 — — —	0.72 0.855 1.0 1.25	V	$I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$
Peak Reverse Current (Note 5)	I_R	—	100 50 30 25	nA μA μA nA	$V_R = 80\text{V}$ $V_R = 75\text{V}, T_j = 150^\circ\text{C}$ $V_R = 25\text{V}, T_j = 150^\circ\text{C}$ $V_R = 20\text{V}$
Total Capacitance	C_T	—	3.0	pF	$V_R = 0.5\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	4.0	ns	$I_F = I_R = 10\text{mA}$, $t_{rr} = 0.1 \times I_R, R_L = 100\Omega$

Note: 5. Short duration pulse test used to minimize self-heating effect.

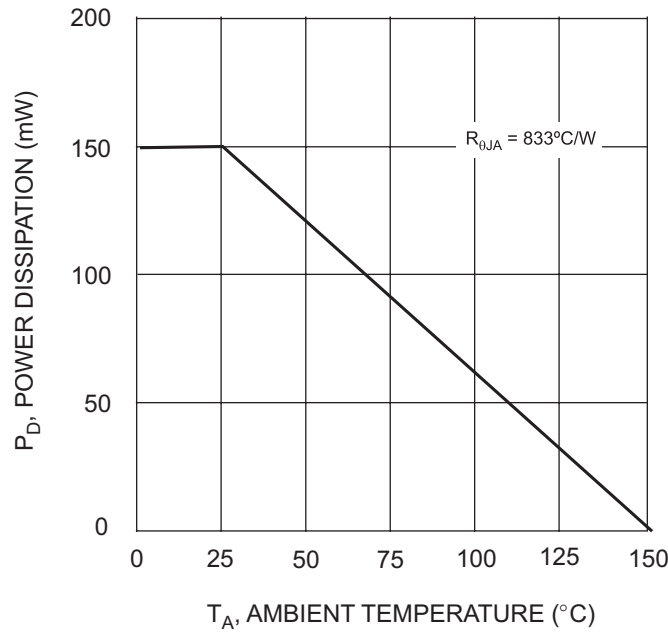


Fig. 1 Derating Curve

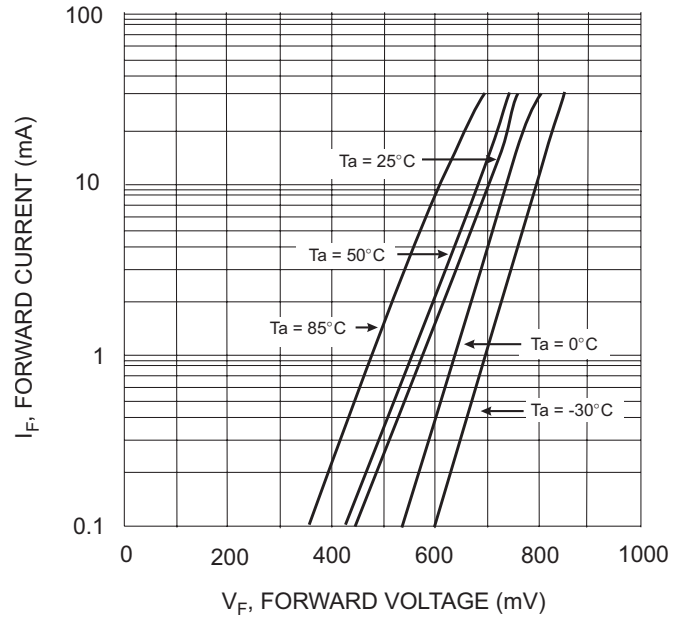


Fig. 2 Typical Forward Characteristics

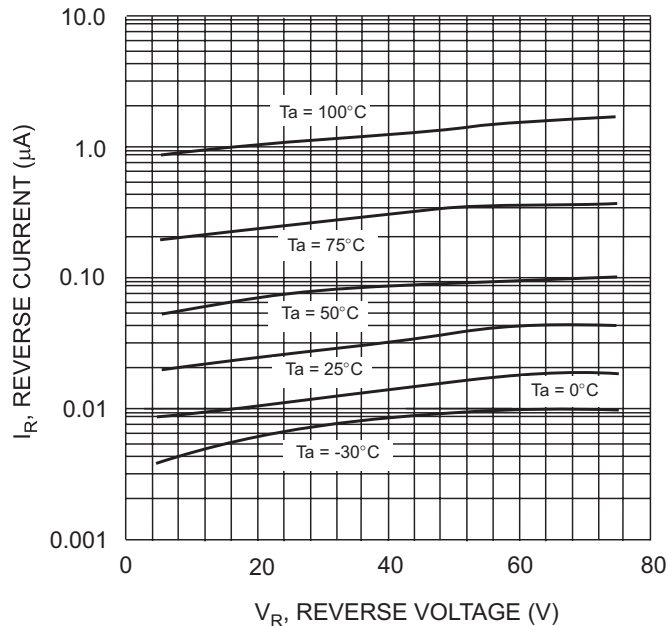


Fig. 3 Typical Reverse Characteristics

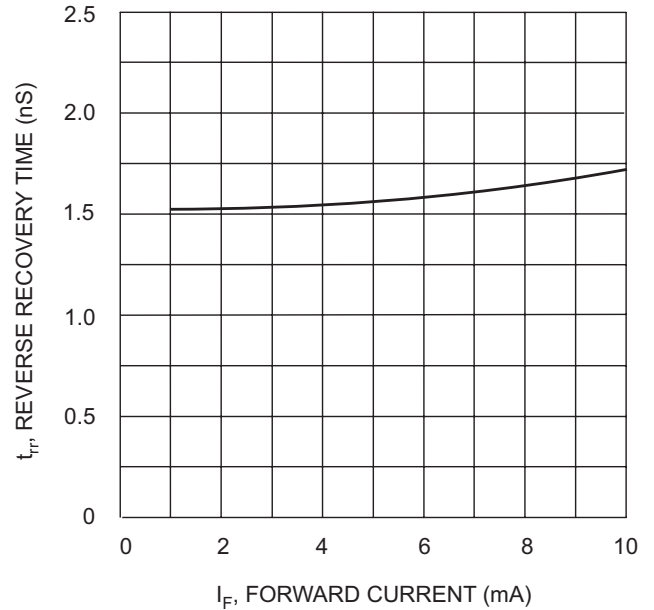


Fig. 4 Reverse Recovery Time vs. Forward Current

Ordering Information (Note 6 & 7)

Device	Packaging	Shipping
1N4448HWT-7	SOD-523	3000/Tape & Reel

- Note:
6. Product manufactured with date code 0609 (week 9, 2006) and newer are built with Green Molding Compound. Product manufactured prior to date code 0609 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.
 7. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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