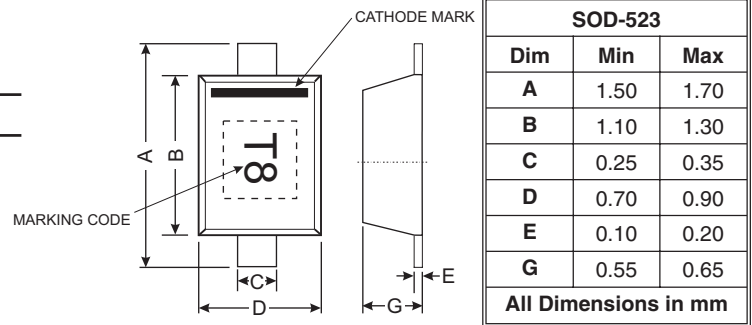


### Features

- 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<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	80	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	57	V
Forward Continuous Current	I <sub>FM</sub>	250	mA
Average Rectified Output Current	I <sub>O</sub>	125	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I <sub>FSM</sub>	2.0 1.0	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

### Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P <sub>d</sub>	150	mW
Thermal Resistance Junction to Ambient (Note 2)	R <sub>θJA</sub>	833	°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](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 $\mu\text{A}$ $\mu\text{A}$ 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.

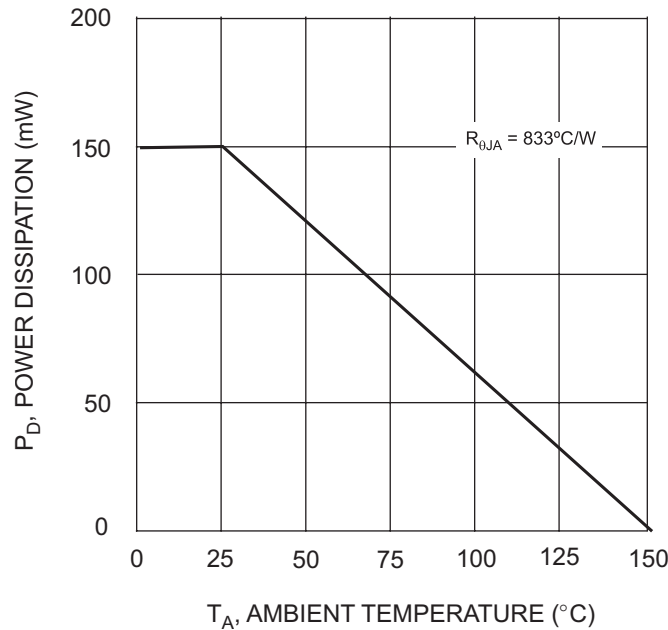


Fig. 1 Derating Curve

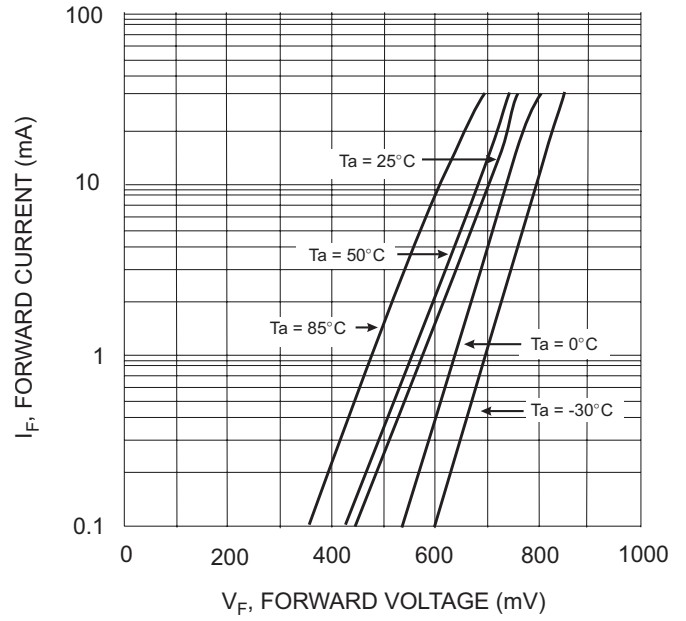


Fig. 2 Typical Forward Characteristics

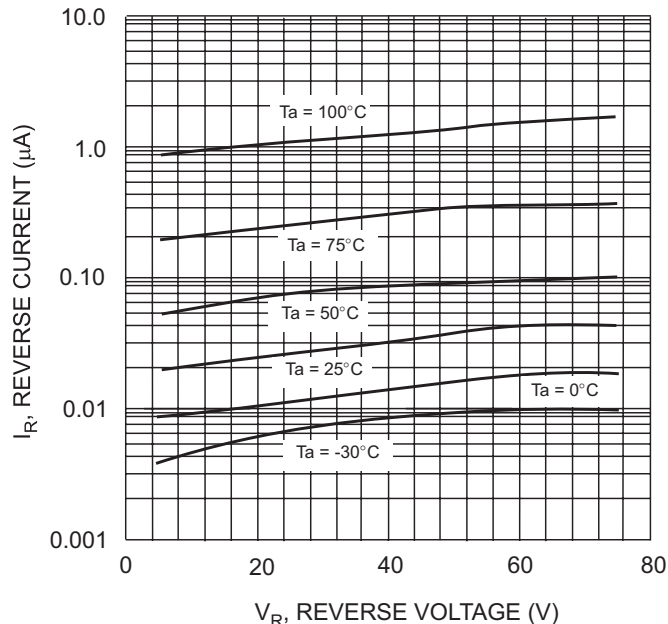


Fig. 3 Typical Reverse Characteristics

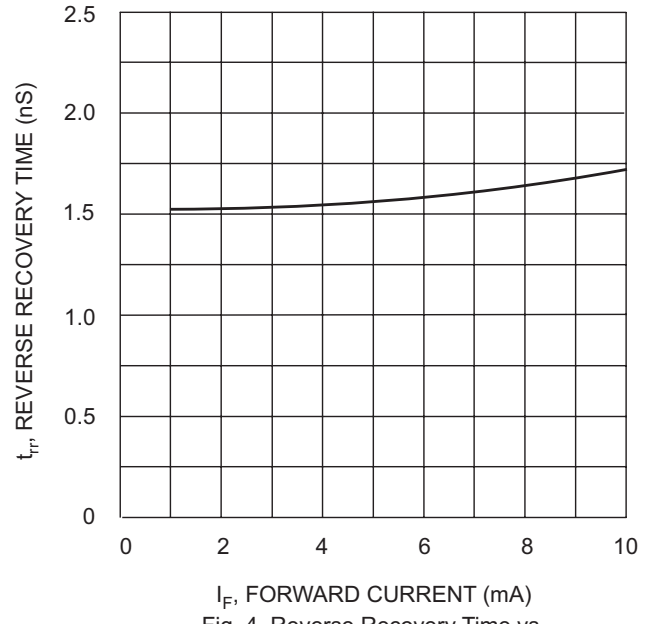


Fig. 4 Reverse Recovery Time vs. Forward Current

**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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