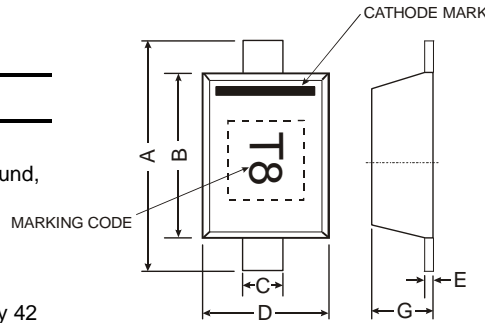


Features

- 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 Page 2
- Weight: 0.002 grams (approximate)



SOD-523		
Dim	Min	Max
A	1.50	1.70
B	1.10	1.30
C	0.25	0.35
D	0.70	0.90
E	0.10	0.20
G	0.55	0.65
All Dimensions in mm		

Maximum Ratings @_{T_A} = 25°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	I_{FSM}	@ $t = 1.0\mu s$	2.0	A
		@ $t = 1.0s$	1.0	

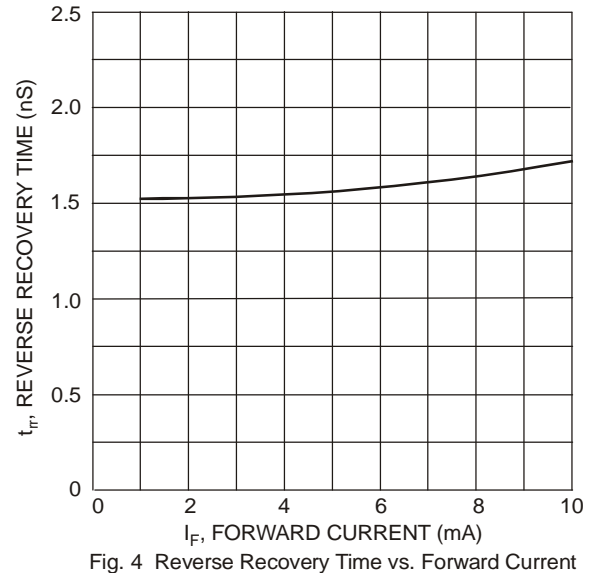
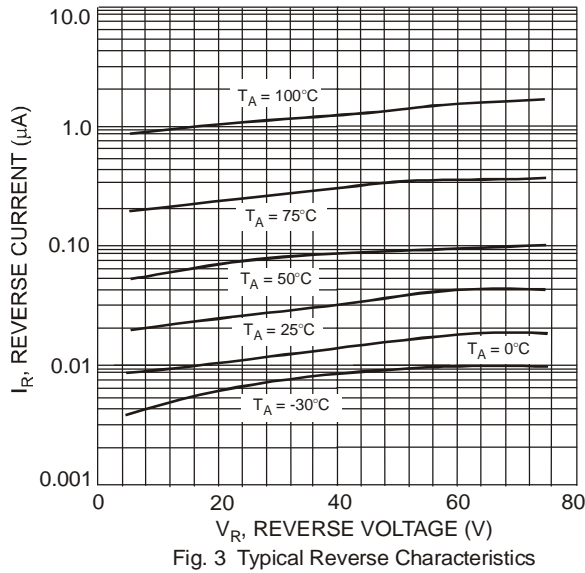
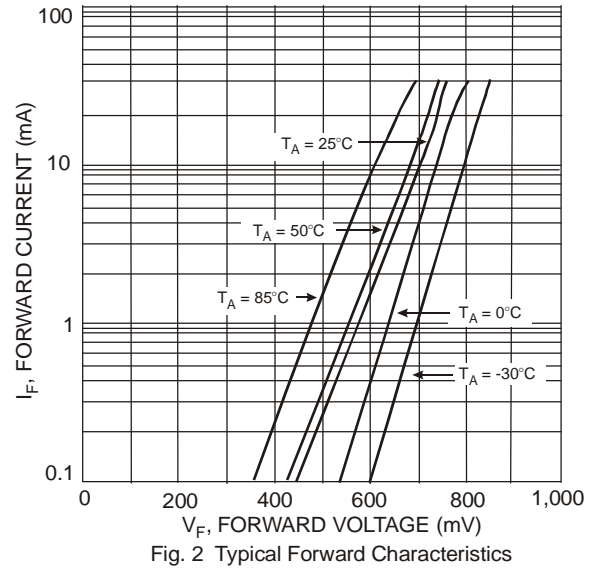
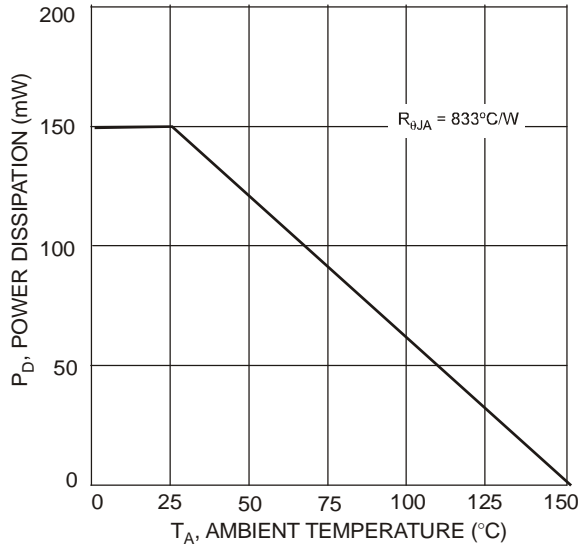
Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P_d	150	mW
Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	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 5)	$V_{(BR)R}$	80	—	V	$I_R = 100\mu A$
Forward Voltage	V_F	0.62	0.72	V	$I_F = 5.0mA$
		—	0.855		$I_F = 10mA$
		—	1.0		$I_F = 100mA$
		—	1.25		$I_F = 150mA$
Peak Reverse Current (Note 5)	I_R	—	100	nA	$V_R = 80V$
		—	50	μA	$V_R = 75V, T_j = 150^\circ C$
		—	30	μA	$V_R = 25V, T_i = 150^\circ C$
		—	25	nA	$V_R = 20V$
Total Capacitance	C_T	—	3.0	pF	$V_R = 0.5V, f = 1.0MHz$
Reverse Recovery Time	t_{rr}	—	4.0	ns	$I_F = I_R = 10mA,$ $t_{rr} = 0.1 \times I_R, R_L = 100\Omega$

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



Ordering Information (Note 4 & 6)

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

Notes: 6 For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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