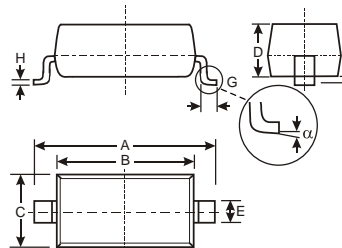


### Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- **Lead Free/RoHS Compliant (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

### Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking: Date Code and Type Code: See Page 3
- Type Code: T5
- Ordering Information See Page 3
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
	0°	8°
All Dimensions in mm		

### 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 Working Peak Reverse Voltage DC Blocking Voltage	V <sub>R(RM)</sub> V <sub>R(WM)</sub> V <sub>R</sub>	75	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current	I <sub>FM</sub>	500	mA
Average Rectified Output Current	I <sub>O</sub>	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0µs @ t = 1.0s	I <sub>FSM</sub>	4.0 2.0	A
Power Dissipation (Note 2)	P <sub>d</sub>	400	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>JA</sub>	315	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	75		V	I <sub>R</sub> = 10µA
Forward Voltage	V <sub>FM</sub>	0.62	0.72 0.855 1.0 1.25	V	I <sub>F</sub> = 5.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 100mA I <sub>F</sub> = 150mA
Peak Reverse Current (Note 1)	I <sub>RM</sub>		2.5 50 30 25	µA µA µA nA	V <sub>R</sub> = 75V V <sub>R</sub> = 75V, T <sub>J</sub> = 150°C V <sub>R</sub> = 25V, T <sub>J</sub> = 150°C V <sub>R</sub> = 20V
Total Capacitance	C <sub>T</sub>		4.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>		4.0	ns	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100

- Notes:
1. Short duration pulse test used to minimize self-heating effect.
  2. Part mounted on FR-4 PC board with minimum recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  3. No purposefully added lead.

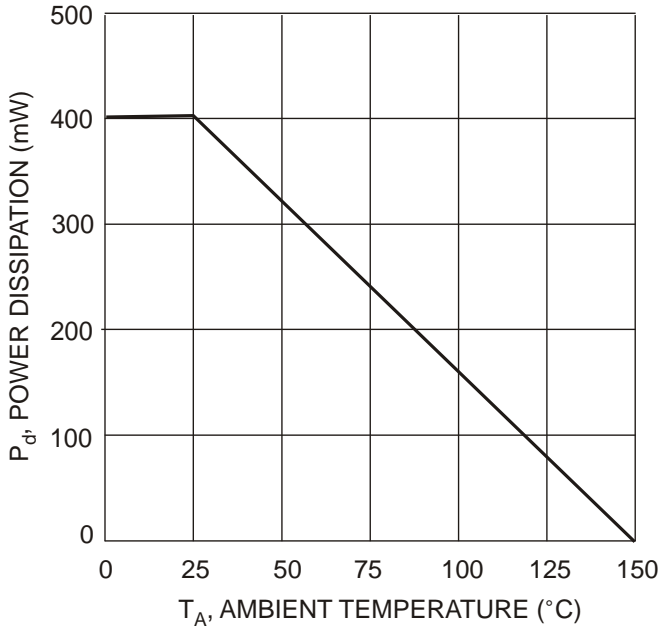


Fig. 1 Power Derating Curve

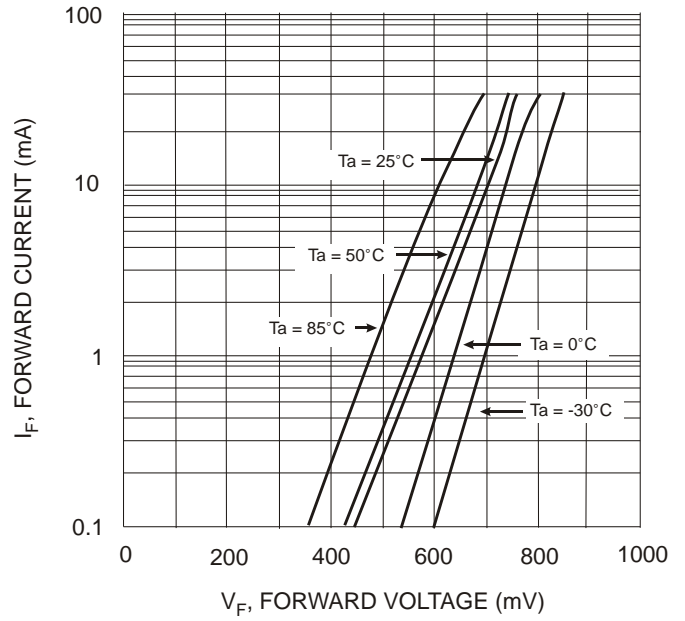


Fig. 2 Typical Forward Characteristics

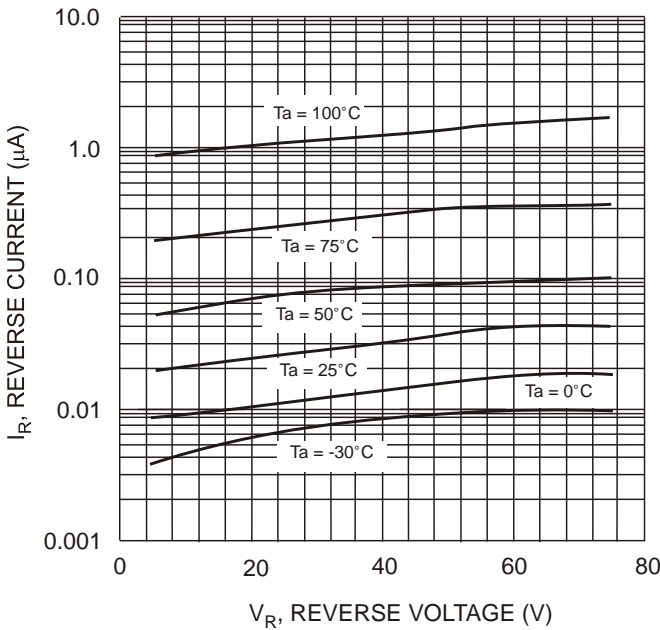


Fig. 3 Typical Reverse Characteristics

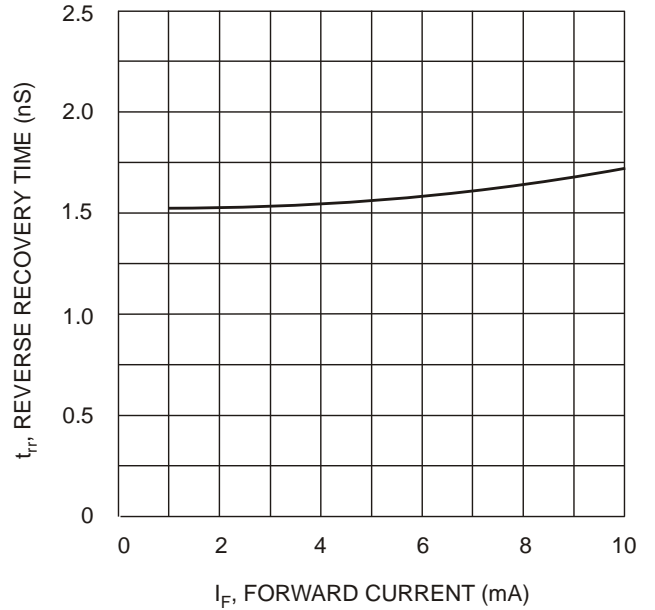


Fig. 4 Reverse Recovery Time vs. Forward Current

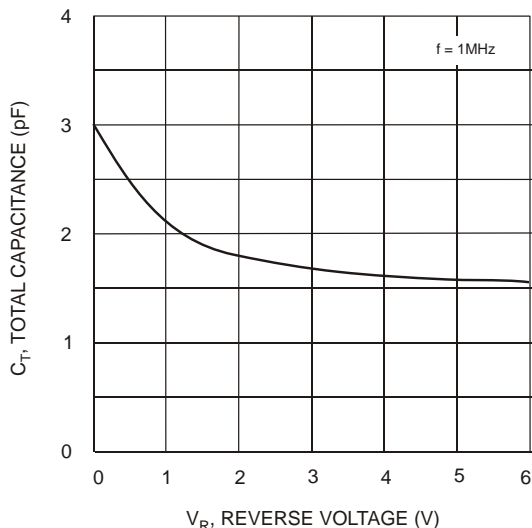


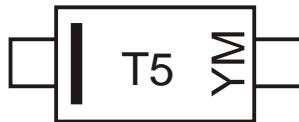
Fig. 5 Total Capacitance vs. Reverse Voltage

**Ordering Information** (Note 4)

Device	Packaging	Shipping
1N4448W-7-F	SOD-123	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



T5 = Product Type Marking Code  
 YM = Date Code Marking  
 Y = Year (ex: N = 2002)  
 M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	J	K	L	M	N	P	R	S	T	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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