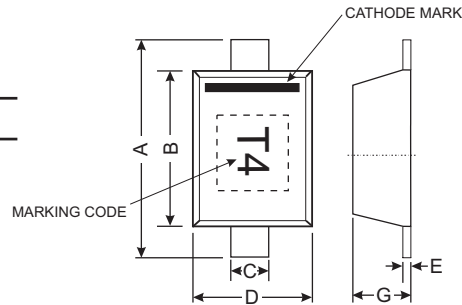


Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- **Lead Free By Design/RoHS Compliant (Note 1)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOD-523
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking: T4
- Ordering Information: See Last Page
- 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
Reverse Voltage	V _R	80	V
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current	I _{FM}	250	mA
Average Rectified Output Current	I _O	125	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 100ms	I _{FSM}	2.0 1.0	A
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P _d	150	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R _{θJA}	833	°C/W

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	75	—	V	I _R = 1.0μA
Forward Voltage	V _F	—	0.715 0.855 1.0 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Peak Reverse Current (Note 3)	I _R	—	1.0 50 30 25	μA μA μA nA	V _R = 75V V _R = 75V, T _j = 150°C V _R = 25V, T _j = 150°C V _R = 20V
Total Capacitance	C _T	—	2.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	4.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

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

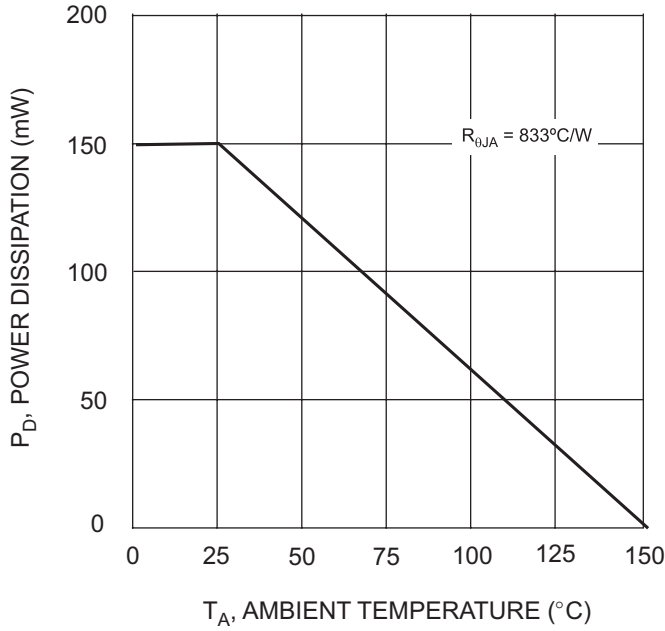


Fig. 1 Derating Curve

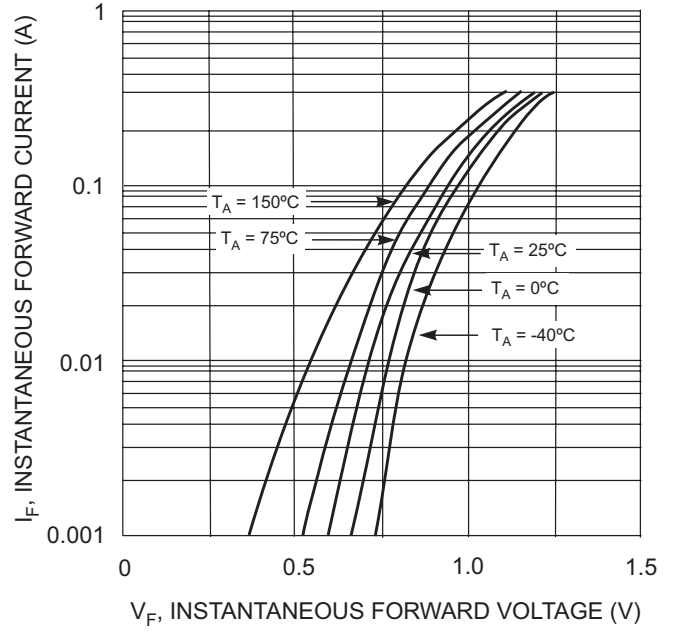


Fig. 2 Forward Characteristics

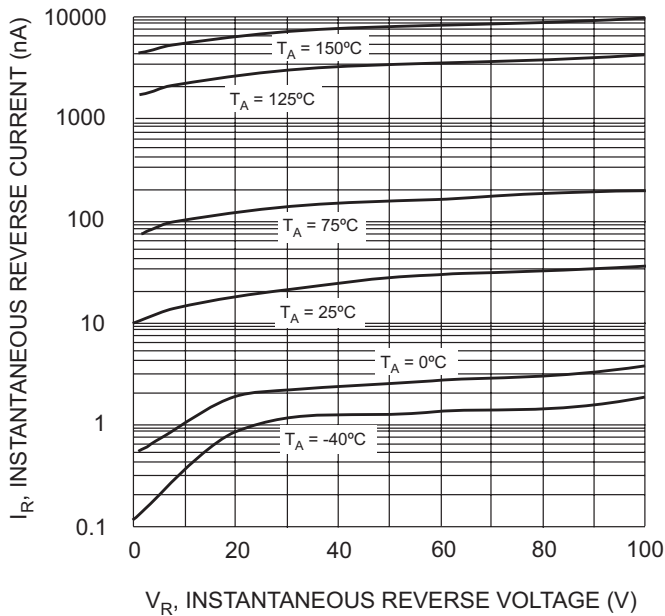


Fig. 3 Typical Reverse Characteristics

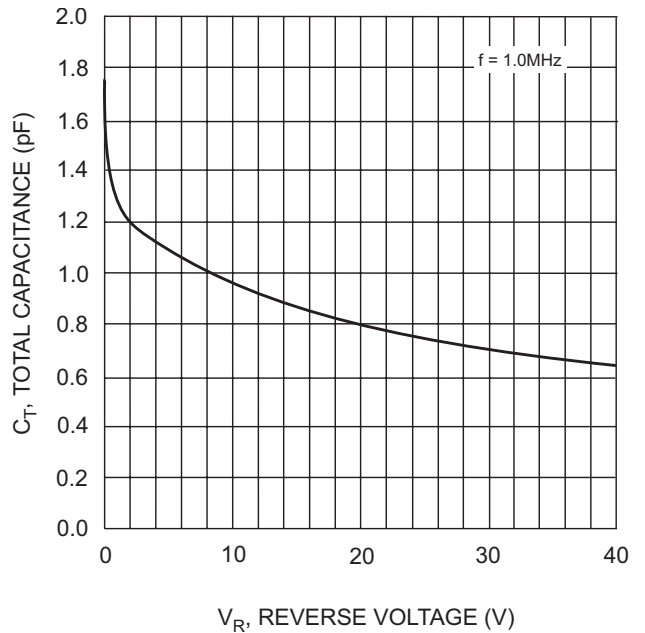


Fig. 4 Typical Capacitance vs. Reverse Voltage

Ordering Information (Note 4)

Device	Packaging	Shipping
1N4148WT-7	SOD-523	3000/Tape & Reel

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