1N4148 / 1N4448

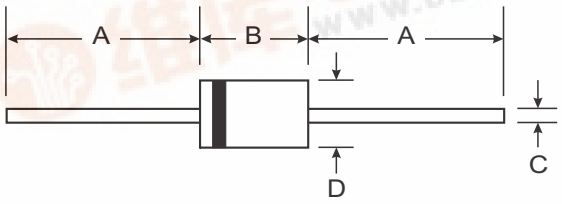
FAST SWITCHING DIODE

Features

- Fast Switching Speed
- General Purpose Rectification
- Silicon Epitaxial Planar Construction
- **Lead Free Finish, RoHS Compliant (Note 2)**

Mechanical Data

- Case: DO-35
- Case Material: Glass
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Terminals: Finish — Sn96.5Ag3.5. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.13 grams (approximate)



DO-35		
Dim	**Min**	**Max**
A	25.40	—
B	—	4.00
C	—	0.60
D	—	2.00
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	1N4148	1N4448	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100		V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75		V
RMS Reverse Voltage	$V_{R(RMS)}$	53		V
Forward Continuous Current (Note 1)	I_{FM}	300	500	mA
Average Rectified Output Current (Note 1)	I_O	150		mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s @ t = 1.0μs	I_{FSM}	1.0 2.0		A
Power Dissipation (Note 1) Derate Above 25°C	P_d	500 1.68		mW mW/°C
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300		°C/W
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +175		°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	1N4148 1N4448 1N4448	V_{FM}	— 0.62 —	1.0 0.72 1.0	V	I_F = 10mA I_F = 5.0mA I_F = 100mA
Maximum Peak Reverse Current		I_{RM}	—	5.0 50 30 25	μA μA μA nA	V_R = 75V V_R = 70V, T_j = 150°C V_R = 20V, T_j = 150°C V_R = 20V
Total Capacitance		C_T	—	4.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time		t_{rr}	—	4.0	ns	I_F = 10mA to I_R =1.0mA V_R = 6.0V, R_L = 100Ω

Notes: 1. Valid provided that device terminals are kept at ambient temperature.
2. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see *EU Directive Annex Notes 5 and 7*.

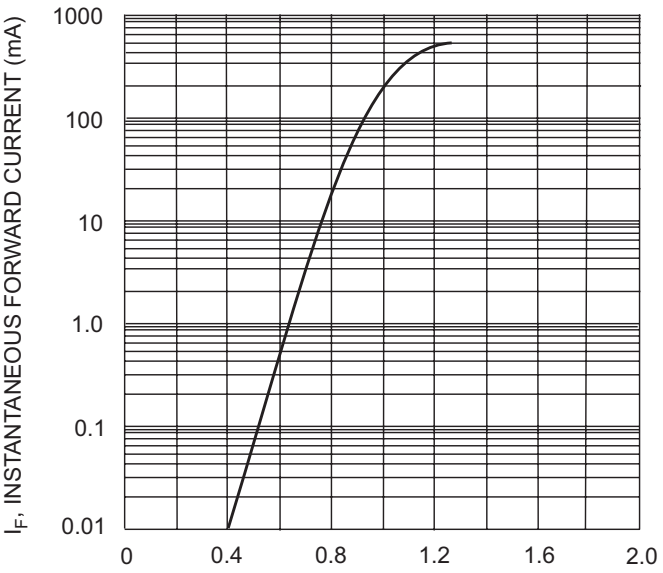


Fig. 1 Forward Characteristics

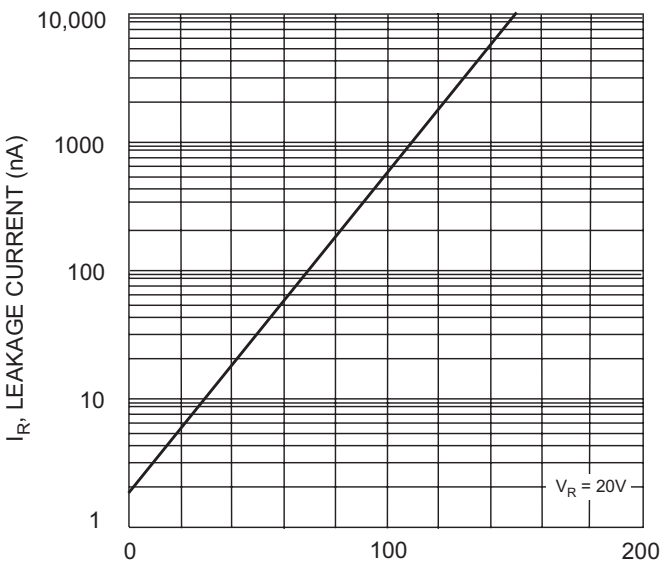


Fig. 2, Leakage Current vs Junction Temperature

Ordering Information (Note 3)

Device	Packaging	Shipping
1N4148-A	DO-35	10K/Ammo Pack
1N4148-T	DO-35	10K/Tape & Reel, 13-inch
1N4448-A	DO-35	10K/Ammo Pack
1N4448-T	DO-35	10K/Tape & Reel, 13-inch

Notes: 3. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.