

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-020D
- 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
- Ordering Information: See Page 2
- Weight: 0.13 grams (approximate)

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	1N4148	1N4448	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100		V
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	75		V
DC Blocking Voltage	V_R			
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 @ $t = 1.0\text{s}$	I_{FSM}	1.0		A
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$		2.0		

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	500	mW
Derate Above 25°C		1.68	$\text{mW}/^\circ\text{C}$
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Notes:

- Valid provided that device terminals are kept at ambient temperature.
- 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.

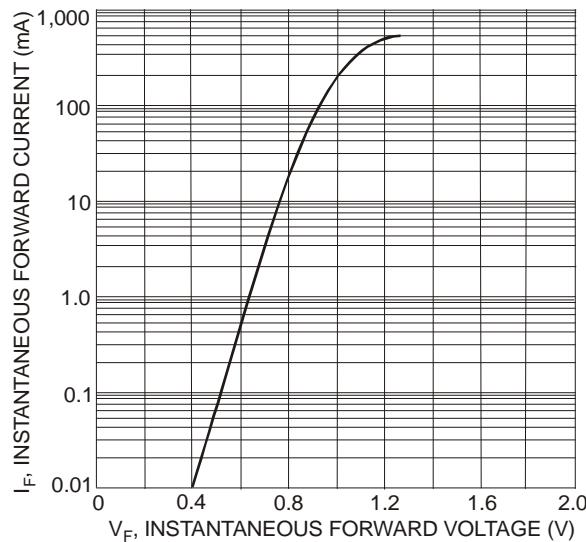


Fig. 1 Typical Forward Characteristics

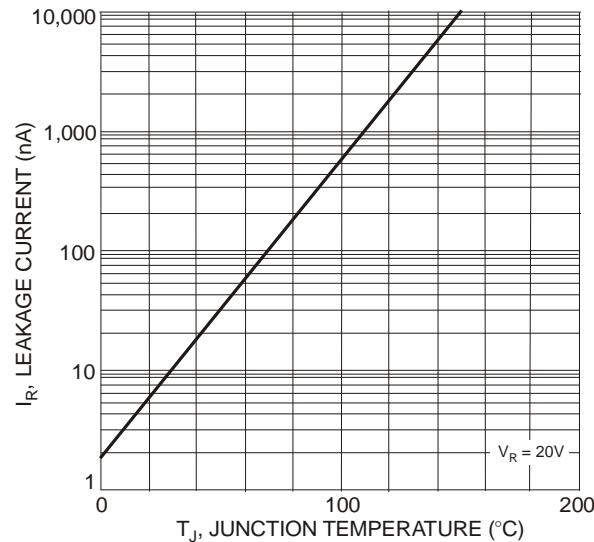


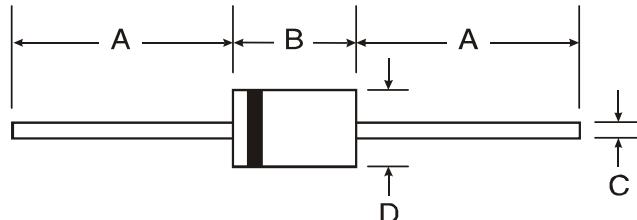
Fig. 2 Leakage Current vs. Junction Temperature

Ordering Information (Note 3)

Part Number	Case	Packaging
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, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Package Outline Dimensions



DO-35		
Dim	Min	Max
A	25.40	—
B	—	4.00
C	—	0.60
D	—	2.00

All Dimensions in mm

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