



NOT RECOMMENDED FOR NEW DESIGN, USE 1N4148W / 1N4448W

1N4148 / 1N4448

FAST SWITCHING DIODE



Features

- Fast Switching Speed
- General Purpose Rectification
- Silicon Epitaxial Planar Construction
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

Mechanical Data

- Case: DO-35
- Case Material: Glass: UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- 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)

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: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 2. See <http://www.diodes.com> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. For packaging details, go to our website at <http://www.diodes.com>.

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	V _R			
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 4)	I _{FM}	300	500	mA
Average Rectified Output Current (Note 4)	I _O	150		mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s	I _{FSM}	1.0		A
@ t = 1.0µs		2.0		

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	P _D	500	mW
Derate Above 25°C		1.68	mW/°C
Thermal Resistance, Junction to Ambient Air (Note 4)	R _{θJA}	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	V _{FM}	—	1.0	V	I _F = 10mA I _F = 5.0mA I _F = 100mA
		0.62	0.72		
		—	1.0		
Maximum Peak Reverse Current	I _{RM}	—	5.0	µA	V _R = 75V
			50	µA	V _R = 70V, T _J = 150°C
			30	µA	V _R = 20V, T _J = 150°C
			25	nA	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: 4. Valid provided that device terminals are kept at ambient temperature.

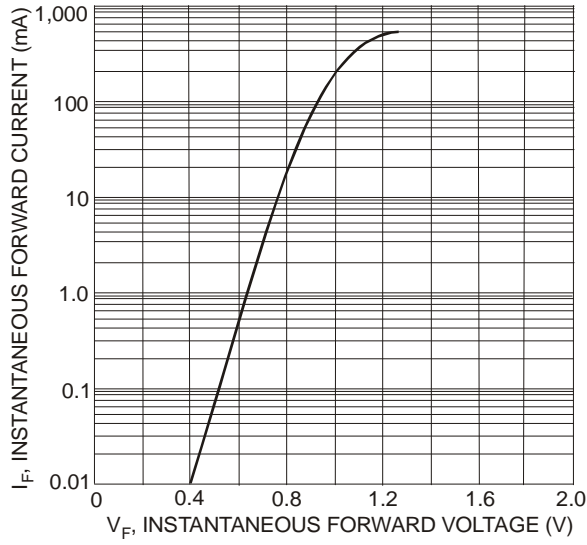


Fig. 1 Typical Forward Characteristics

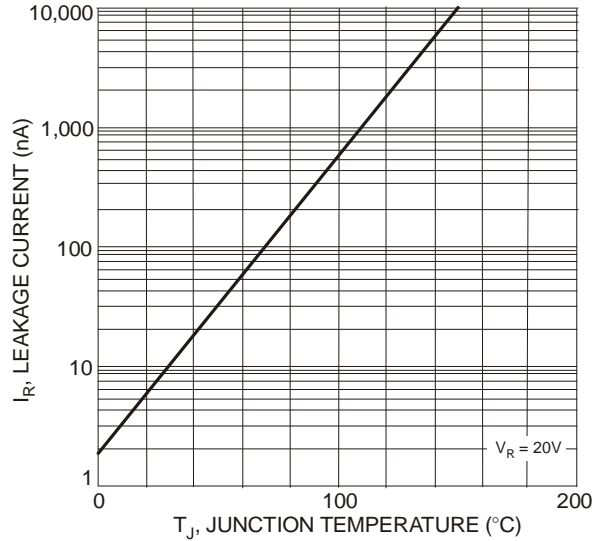
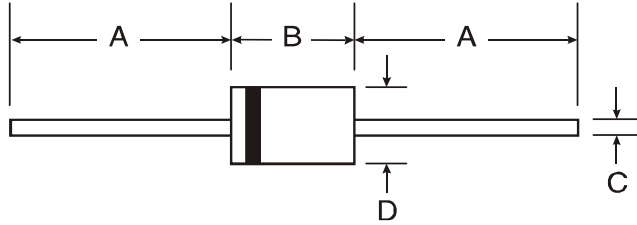


Fig. 2 Leakage Current vs. Junction Temperature

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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