

# 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
- 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<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	1N4148	1N4448	Unit
Non-Repetitive Peak Reverse Voltage		$V_{RM}$	10	00	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	7	5	V
RMS Reverse Voltage		$V_{R(RMS)}$	5	3	V
Forward Continuous Current (Note 4)		I <sub>FM</sub>	300	500	mA
Average Rectified Output Current (Note 4)		lo	1:	50	mA
Non-Repetitive Peak Forward Surge Current	@ t = 1.0s @ t = 1.0μs	I <sub>FSM</sub>		.0 .0	А

#### Thermal Characteristics

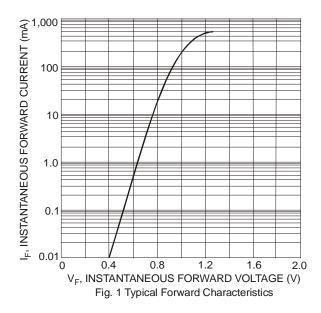
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 4)	6	500	mW
Derate Above 25°C	P <sub>D</sub>	1.68	mW/°C
Thermal Resistance, Junction to Ambient Air (Note 4)	$R_{ heta JA}$	300	°C/W
Operating and Storage Temperature Range	$T_J$ , $T_{STG}$	-65 to +175	°C

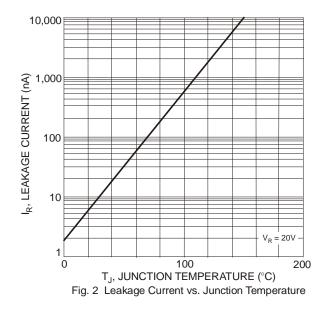
## **Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic		Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	1N4148		_	1.0		$I_F = 10mA$
	1N4448	$V_{FM}$	0.62	0.72	V	$I_F = 5.0 \text{mA}$
	1N4448			1.0		$I_F = 100 \text{mA}$
				5.0	μΑ	$V_R = 75V$
Maximum Peak Reverse Current		I <sub>RM</sub>	_	50	μΑ	$V_R = 70V, T_J = 150^{\circ}C$
				30	μΑ	$V_R = 20V, T_J = 150^{\circ}C$
				25	nA	$V_R = 20V$
Total Capacitance		Ст		4.0	pF	$V_R = 0, f = 1.0MHz$
Reverse Recovery Time		4		4.0	20	$I_F = 10$ mA to $I_R = 1.0$ mA
Reverse Recovery Time		t <sub>rr</sub>	_	4.0	ns	$V_R = 6.0V, R_L = 100\Omega$

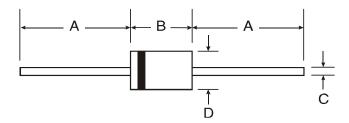
Notes: 4. Valid provided that device terminals are kept at ambient temperature.







## **Package Outline Dimensions**



DO-35				
Dim	Min	Max		
Α	25.40			
В		4.00		
С		0.60		
D		2.00		
All Dimensions in mm				

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