

# 1N4942 THRU 1N4948

## 1 AMP

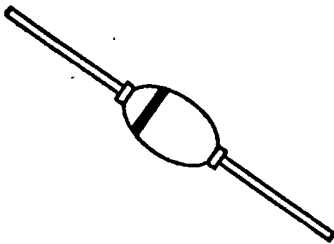
### FAST RECOVERY RECTIFIER

### 200-1000 VOLTS



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#### CASE STYLE



#### FEATURES

- FAST RECOVERY
- VOIDLESS CONSTRUCTION
- HERMETICALLY SEALED
- LOW LEAKAGE
- TX LEVEL PROCESSED DIODE CAN BE SUPPLIED ON SPECIAL ORDER

#### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	$V_{RM} (rep)$ $V_R$	200 300 400 500 600 800 1000	Volts
RMS Reverse Voltage	$V_r$	140 210 280 350 420 560 700	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave $T_A = 55^\circ C$ )	$I_O$	1	Amps
Peak Repetitive Forward Current ( $T_A = 55^\circ C$ , 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	$I_{FM} (rep)$	6	Amps
Peak Surge Current ( $T_A = 55^\circ C$ , Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)	$I_{FM} (surge)$	25	Amps
Operating and Storage Temperature	$T_J, T_{stg}$	-65 to +175	$^\circ C$

#### THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Leads, $L = 3/8"$	$R_{\theta JL}$	35	$^\circ C/W$

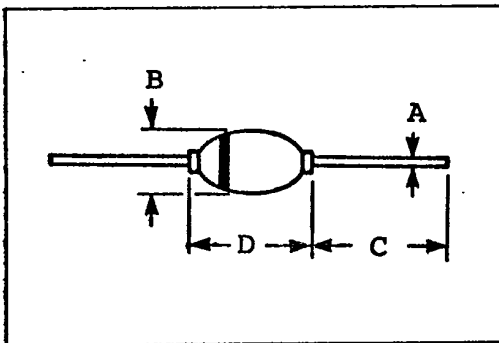
NOTE: All specifications subject to change without notice.

**ELECTRICAL CHARACTERISTICS**

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle ( $I_O$ (Max), 60 Hz, Square Wave, $T_A = 55^\circ\text{C}$ )	$V_{F(AV)}$	.6	Vdc
Max Instantaneous Forward Voltage Drop ( $I_F = 1$ Adc, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	$V_F$	1.3	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle (Rated $V_R$ 60Hz, Square Wave, $T_A = 100^\circ\text{C}$ )	$I_{R(AV)}$	20	$\mu\text{A}_{dc}$
Max Reverse Leakage Current (Rated $V_R$ , $T_A = 25^\circ\text{C}$ )	$I_R$	1	$\mu\text{A}_{dc}$
Max Junction Capacitance ( $V_R = 12$ V, $T_A = 25^\circ\text{C}$ )	$C_J$	20	pf

**REVERSE RECOVERY CHARACTERISTICS**

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ ) 1N4942 - 1N4945	$t_{rr}$	---	120	150	ns
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ ) 1N4946 & 1N4947	$t_{rr}$	---	120	200	ns
Reverse Recovery Time ( $I_F = 500\text{ma}$ , $I_R = 1\text{A}$ , $I_{RR} = 250\text{ma}$ ) 1N4948	$t_{rr}$	---	120	500	ns

**PHYSICAL DIMENSIONS****KEY TO DIMENSIONS:**

(Inches)

- A = .029 - .035  
 B = .100 - .150  
 C = 1.13 MIN.  
 D = .180 MAX.

**SSDI** SOLID STATE DEVICES, INC.