

# 1N4942 THRU 1N4948

**FAST SWITCHING  
PLASTIC RECTIFIER**  
VOLTAGE:50 TO 1000V      CURRENT: 1.0A



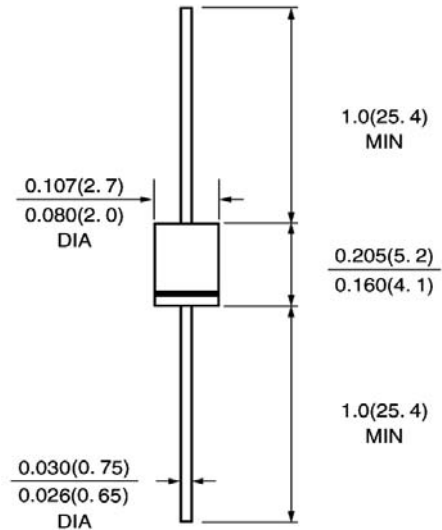
## FEATURE

Molded case feature for auto insertion  
High current capability  
Low leakage current  
High surge capability  
High temperature soldering guaranteed  
250°C/10sec/0.375"lead length at 5 lbs tension  
Fast switching for high efficiency

## MECHANICAL DATA

Terminal:Plated axial leads solderable per MIL-STD 202E, method 208C  
Case:Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy  
Polarity:color band denotes cathode  
Mounting position:any

## DO-41/DO-204AL



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	1N 4942	1N 4944	1N 4946	1N 4947	1N 4948	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>rms</sub>	140	280	420	560	700	V
Maximum DC blocking Voltage	V <sub>dc</sub>	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at T <sub>a</sub> =75°C	I <sub>f(av)</sub>	1.0					A
Peak Forward Surge Current 8.3ms single Half sine-wave superimposed on rated load	I <sub>fsm</sub>	25.0					A
Maximum Forward Voltage at rated Forward Current and 25°C	V <sub>f</sub>	1.3					V
* Maximum DC Reverse Current T <sub>a</sub> =25°C at rated DC blocking voltage	I <sub>r</sub>	5.0					μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150		250		500	nS
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	15.0					pF
Typical Thermal Resistance (Note 3)	R(ja)	50.0					°C/W
Storage and Operating Junction Temperature	T <sub>stg</sub> , T <sub>j</sub>	-50 to +150					°C

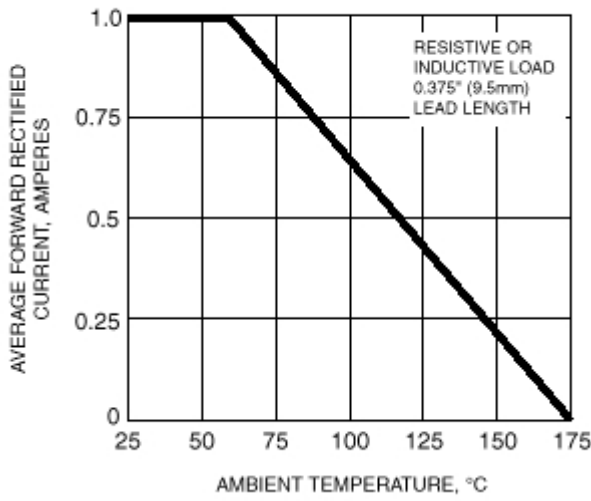
### Note:

- Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- Thermal Resistance from Junction to Ambient at 0.375"lead length, P.C. Board Mounted<sup>1</sup>

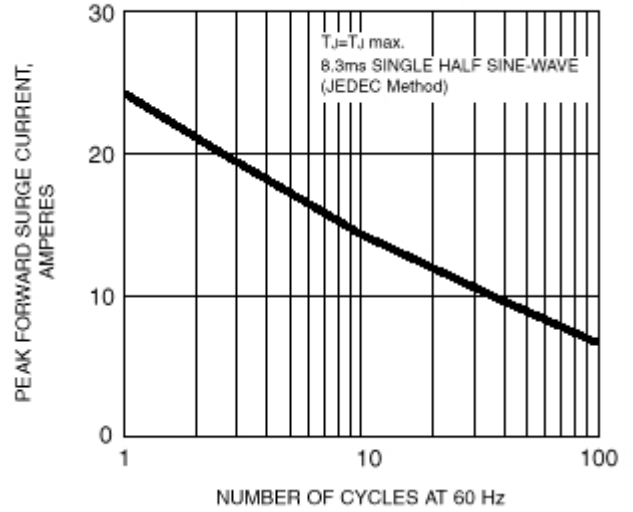
<sup>1</sup> Rev.A5, 29-Dec-10

# RATINGS AND CHARACTERISTIC CURVES 1N4942 THRU 1N4948

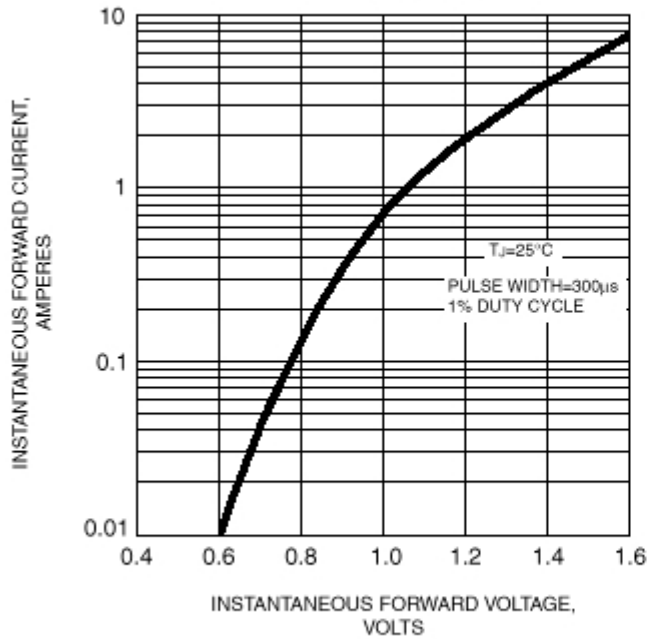
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



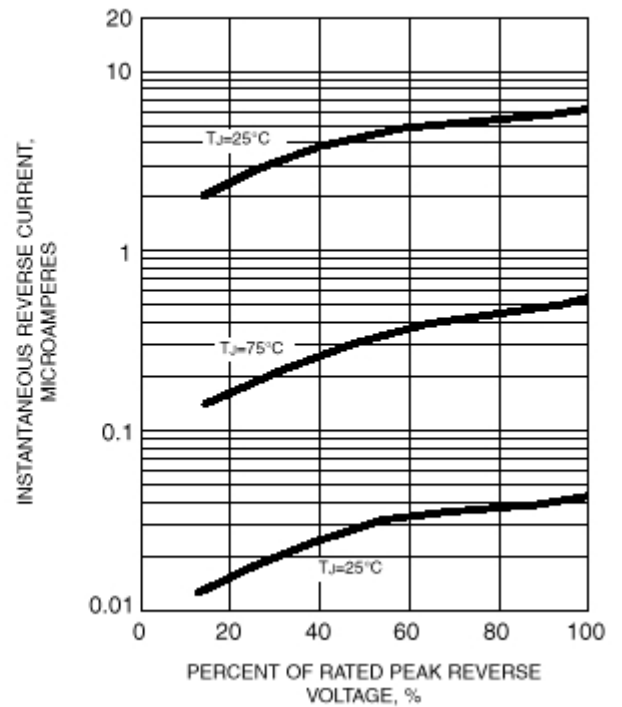
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

