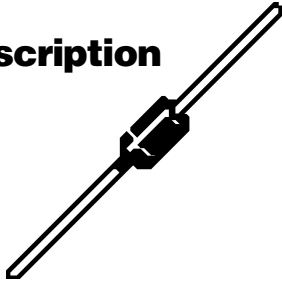


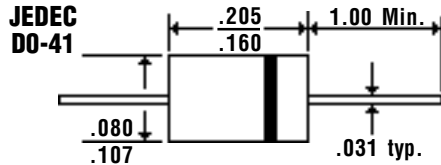
# 1.0 Amp FAST SWITCHING MEGARECTIFIERS

**1N4942GP...48GP Series**

## Description



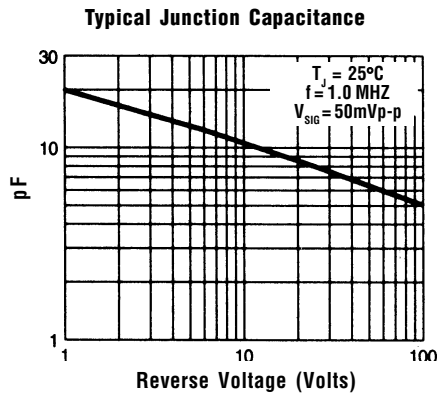
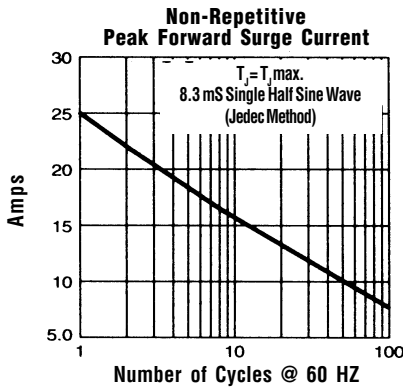
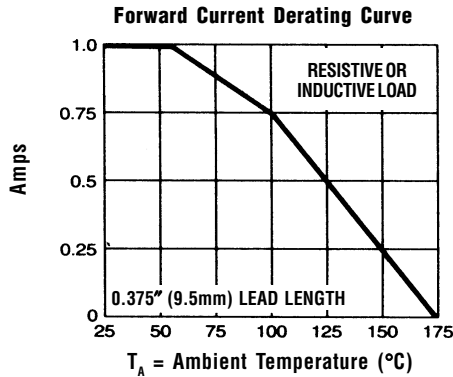
## Mechanical Dimensions



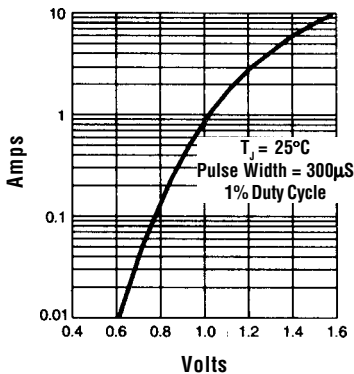
## Features

- HIGH TEMPERATURE METALLURGICALLY BONDED CONSTRUCTION
- SINTERED GLASS CAVITY-FREE JUNCTION
- 1.0 AMP OPERATION @  $T_A = 55^\circ\text{C}$ , WITH NO THERMAL RUNAWAY
- TYPICAL  $I_R < 0.1 \mu\text{Amp}$

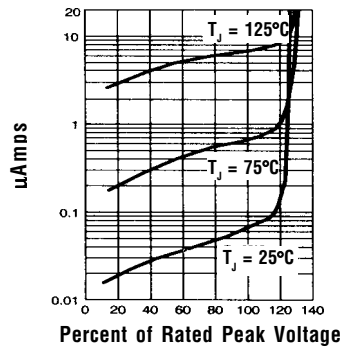
Electrical Characteristics @ 25°C.	1N4942GP . . . 48GP Series					Units
<b>Maximum Ratings</b>	<b>1N4942GP</b>	<b>1N4944GP</b>	<b>1N4946GP</b>	<b>1N4947GP</b>	<b>1N4948GP</b>	
Peak Repetitive Reverse Voltage... $V_{RRM}$	200	400	600	800	1000	Volts
RMS Reverse Voltage... $V_{R(rms)}$	140	280	420	560	700	Volts
DC Blocking Voltage... $V_{DC}$	200	400	600	800	1000	Volts
Average Forward Rectified Current... $I_{F(av)}$ Current 3/8" Lead Length @ $T_A = 75^\circ\text{C}$	..... 1.0 .....					Amps
Non-Repetitive Peak Forward Surge Current... $I_{FSM}$ 8.3mS, 1/2 Sine Wave Superimposed on Rated Load	..... 25 .....					Amps
Forward Voltage @ Rated Forward Current and 25°C... $V_F$	..... 1.3 .....					Volts
DC Reverse Current... $I_R$ @ Rated DC Blocking Voltage			$T_A = 25^\circ\text{C}$ ..... 5.0 .....			$\mu\text{Amps}$
			$T_A = 125^\circ\text{C}$ ..... 100 .....			$\mu\text{Amps}$
Typical Junction Capacitance... $C_j$ (Note 1)	..... 15 .....					pF
Typical Thermal Resistance... $R_{\theta JA}$ (Note 2)	..... 55 .....					$^\circ\text{C/W}$
Typical Reverse Recovery Time... $t_{RR}$ (Note 3)	< ..... 150 ..... > < ..... 250 ..... > < .. 500 .. >					nS
Operating & Storage Temperature Range... $T_J, T_{STRG}$	..... -65 to 175 .....					$^\circ\text{C}$



**Typical Instantaneous Forward Characteristics**



**Typical Reverse Characteristics**



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 HZ Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

- NOTES:**
1. Measured @ 1 MHz and applied reverse voltage of 4.0V.
  2. Thermal Resistance from Junction to Ambient at 3/8" Lead Length, P.C. Board Mounted.
  3. Reverse Recovery Condition  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .