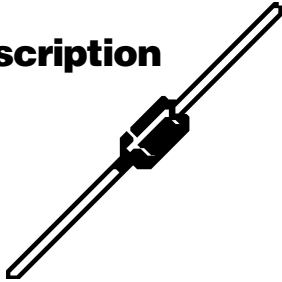


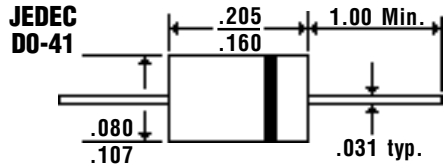
# 1.0 Amp FAST SWITCHING MEGARECTIFIERS

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

## Description



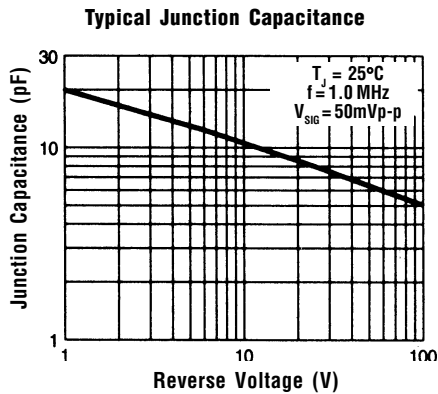
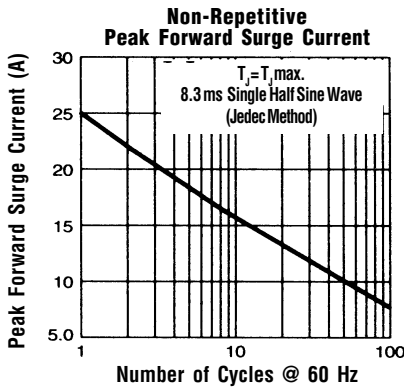
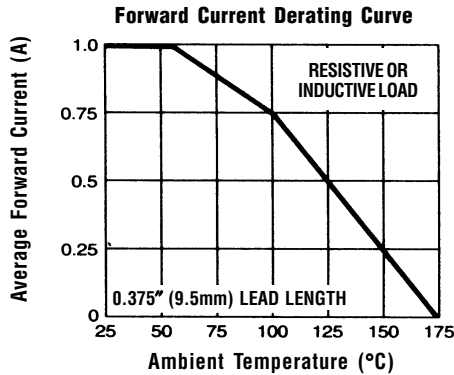
## Mechanical Dimensions



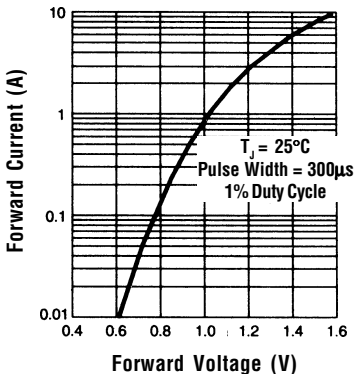
## Features

- 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  $I_R < 0.1 \mu\text{Amp}$

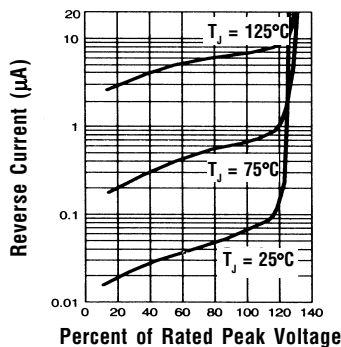
<b>1N4942GP . . . 48GP Series</b>						<b>Units</b>	
<b>Maximum Ratings</b>	<b>1N4942GP</b>	<b>1N4944GP</b>	<b>1N4946GP</b>	<b>1N4947GP</b>	<b>1N4948GP</b>		
Peak Repetitive Reverse Voltage... $V_{RRM}$	200	400	600	800	1000	Volts	
RMS Reverse Voltage... $V_{R(rms)}$	140	280	420	560	700	Volts	
DC Blocking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



**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  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .