

# 1N5059GP THRU 1N5062GP

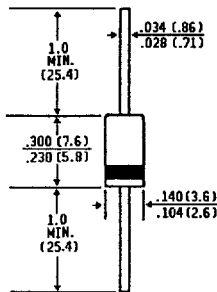
## MINIATURE GLASS PASSIVATED JUNCTION PLASTIC RECTIFIER

Voltage - 200 to 800 Volts Current - 1.0 Ampere

### FEATURES

**PATENTED\***

DO-204AC



Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 of 1976 and brazed-lead assembly to Patent No. 3,930,306 of 1976

- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated cavity-free junction
- ◆ 1.0 Ampere operation at  $T_A=75^\circ\text{C}$  with no thermal runaway
- ◆ Typical  $I_R$  less than  $0.1 \mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds/ $.375''$ , (9.5mm) lead length at 5 lbs., (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-204AC Molded plastic over glass

**Terminals:** Plated Axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode

**Mounting Position:** Any

**Weight:** 0.015 ounce, 0.4 gram

**SUPER RECTIFIER®**

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified. 60 Hz Resistive or inductive load. For capacitive load, derate current by 20%.

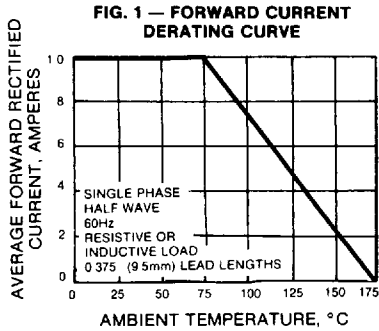
	SYMBOLS	1N5059GP	1N5060GP	1N5061GP	1N5062GP	UNITS
*Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	Volts
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	Volts
*Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	Volts
*Maximum Average Forward Rectified Current .375", (9.5mm) Lead Lengths at $T_A=75^\circ\text{C}$	$I_{(AV)}$	1.0				Amps
*Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0				Amps
*Maximum Instantaneous Forward Voltage at 1.0A $T_A=75^\circ\text{C}$	$V_F$	1.2				Volts
*Maximum Full Load Reverse Current, Full Cycle Average, .375" (9.5mm) Lead Lengths at $T_A=25^\circ\text{C}$ $T_A=75^\circ\text{C}$	$I_{R(AV)}$	5.0 150.0				$\mu\text{A}$
*Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=175^\circ\text{C}$	$I_R$	5.0 300.0				$\mu\text{A}$
Typical Reverse Recovery Time (NOTE 1)	$T_{RR}$	2.0				$\mu\text{s}$
Typical Junction Capacitance (NOTE 2)	$C_J$	15.0				pf
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	25.0				$^\circ\text{C}/\text{W}$
*Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175				$^\circ\text{C}$

#### NOTES:

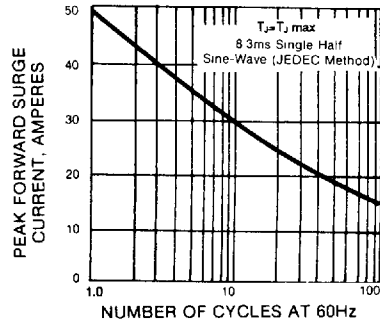
1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ , recover to 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0  $V_{DC}$ .
3. Thermal Resistance from Junction to Ambient at  $.375''$  (9.5mm) Lead Lengths, P.C. Board Mounted.

\* JEDEC Registered Value

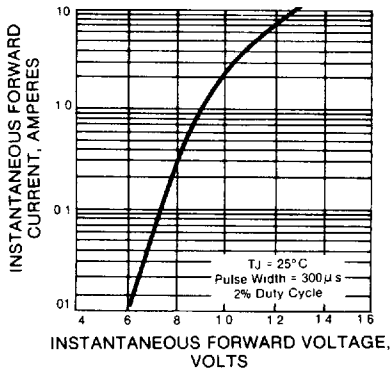
# RATINGS AND CHARACTERISTIC CURVES 1N5059GP THRU 1N5062GP



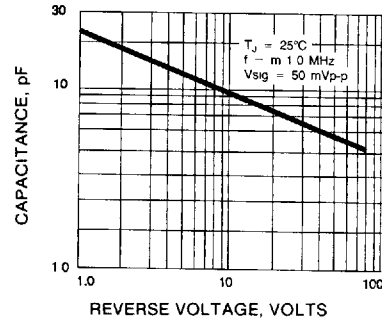
**FIG. 2 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



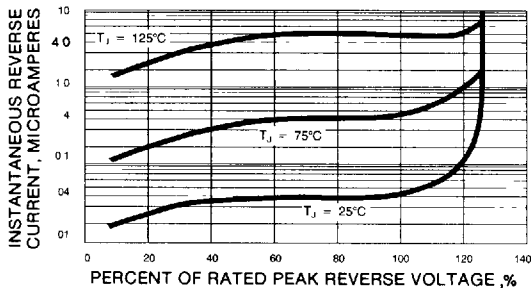
**FIG. 3 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 — TYPICAL JUNCTION CAPACITANCE**



**FIG. 5 — TYPICAL REVERSE CHARACTERISTICS**



**FIG. 6 — SUPERRECTIFIER**

