

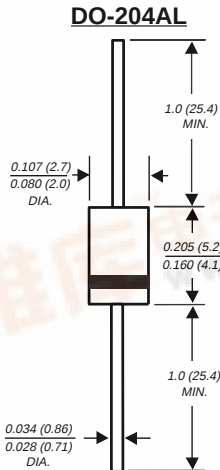
# 1N4933GP THRU 1N4937GP

## GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

Reverse Voltage - 50 to 600 Volts

Forward Current - 1.0 Ampere

**PATENTED\***



NOTE: Lead diameter is 0.026 (0.66) for suffix "E" part numbers  
0.023 (0.58)

Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation is covered by

Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

**SUPERECTIFIER®**

### FEATURES

- ♦ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ♦ High temperature metallurgically bonded construction
- ♦ Capable of meeting environmental standards of MIL-S-19500
- ♦ For use in high frequency rectifier circuits
- ♦ Fast switching for high efficiency
- ♦ 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  $0.1\mu\text{A}$
- ♦ High temperature soldering guaranteed:  $350^{\circ}\text{C}/10$  seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic over glass body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.34 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified.

|                                                                                                                       | SYMBOLS         | 1N<br>4933GP | 1N<br>4934GP | 1N<br>4935GP | 1N<br>4936GP | 1N<br>4937GP | UNITS                |
|-----------------------------------------------------------------------------------------------------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|----------------------|
| * Maximum repetitive peak reverse voltage                                                                             | $V_{RRM}$       | 50           | 100          | 200          | 400          | 600          | Volts                |
| * Maximum RMS voltage                                                                                                 | $V_{RMS}$       | 35           | 70           | 140          | 280          | 420          | Volts                |
| * Maximum DC blocking voltage                                                                                         | $V_{DC}$        | 50           | 100          | 200          | 400          | 600          | Volts                |
| * Maximum average forward rectified current<br>0.375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$                 | $I_{(AV)}$      | 1.0          |              |              |              |              | Amp                  |
| * Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method)              | $I_{FSM}$       | 30.0         |              |              |              |              | Amps                 |
| * Maximum instantaneous forward voltage at 1.0A                                                                       | $V_F$           | 1.2          |              |              |              |              | Volts                |
| * Maximum DC reverse current<br>$T_A=25^{\circ}\text{C}$<br>at rated DC blocking voltage<br>$T_A=125^{\circ}\text{C}$ | $I_R$           | 5.0<br>100.0 |              |              |              |              | $\mu\text{A}$        |
| * Maximum reverse recovery time (NOTE 1)                                                                              | $t_{rr}$        | 200.0        |              |              |              |              | ns                   |
| Typical junction capacitance (NOTE 2)                                                                                 | $C_J$           | 15.0         |              |              |              |              | pF                   |
| Typical thermal resistance (NOTE 3)                                                                                   | $R_{\theta JA}$ | 55.0         |              |              |              |              | $^{\circ}\text{C/W}$ |
| * Operating junction and storage temperature range                                                                    | $T_J, T_{STG}$  | -65 to +175  |              |              |              |              | $^{\circ}\text{C}$   |

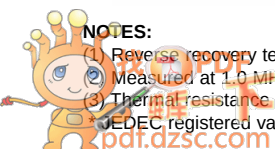
#### NOTES:

(1) Reverse recovery test conditions:  $I_F=1.0\text{A}$ ,  $V_R=30$  Volts

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

JEDEC registered values



# RATINGS AND CHARACTERISTIC CURVES 1N4933GP THRU 1N4937GP

