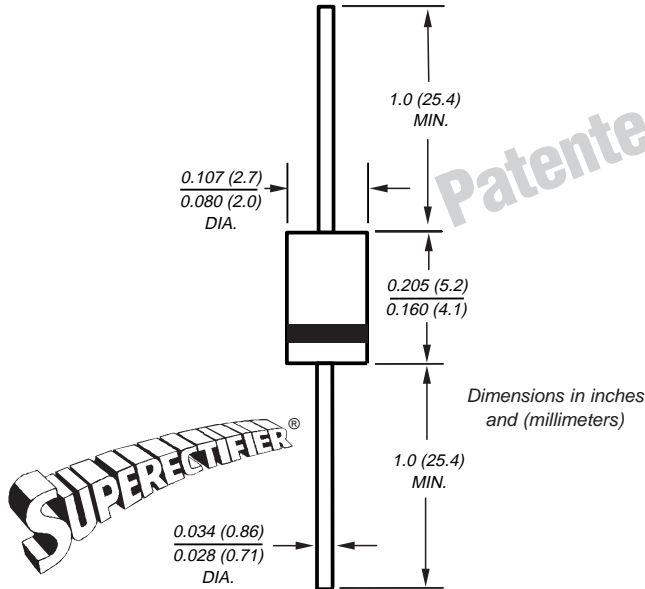


Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 50 to 600V
Forward Current 1.0A

DO-204AL (DO-41)



NOTE: Lead diameter is $\frac{0.026 (0.66)}{0.023 (0.58)}$ for suffix "E" part numbers

Dimensions in inches and (millimeters)

*Glass-plastic encapsulation technique is covered by

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

Features

- Plastic package has Underwriters Laboratories 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
- Cavity-free glass passivated 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: $300^\circ\text{C}/10$ 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 oz., 0.34 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	1N4933GP	1N4934GP	1N4935GP	1N4936GP	1N4937GP	Unit
*Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
*Maximum RMS voltage	V_{RMS}	35	70	145	280	420	V
*Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
*Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0					A
*Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	55					$^\circ\text{C}/\text{W}$
*Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

*Maximum instantaneous forward voltage at 1.0A	V_F	1.2					V
*Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5.0 100					μA
*Maximum reverse recovery time at $I_F=1.0\text{A}, V_R=30\text{V}$	t_{rr}	200					ns
Typical junction capacitance at 4.0V, 1MHz	C_J	15					pF

Notes:

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

*JEDEC registered values

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 — Forward Current Derating Curves

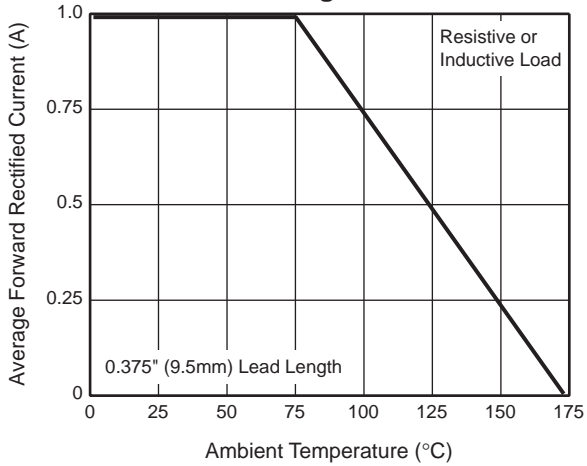


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

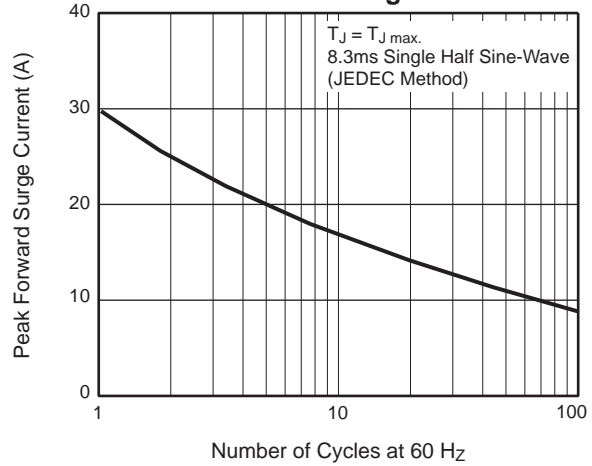


Fig. 3 — Typical Instantaneous Forward Characteristics

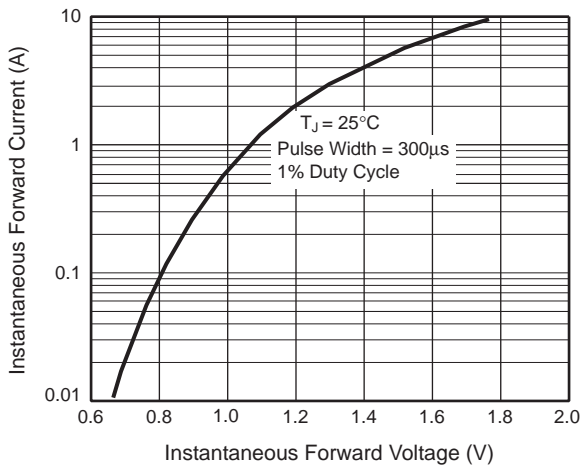


Fig. 4 — Typical Reverse Characteristics

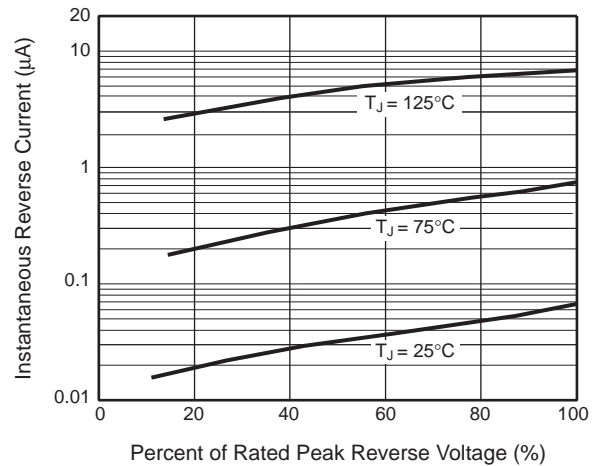


Fig. 5 — Typical Junction Capacitance

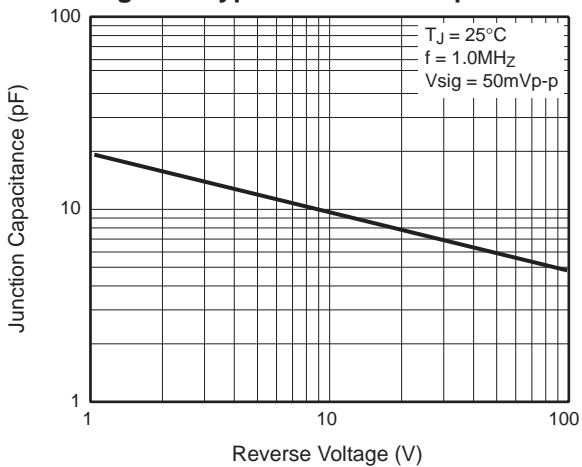


Fig. 6 — Typical Transient Thermal Impedance

