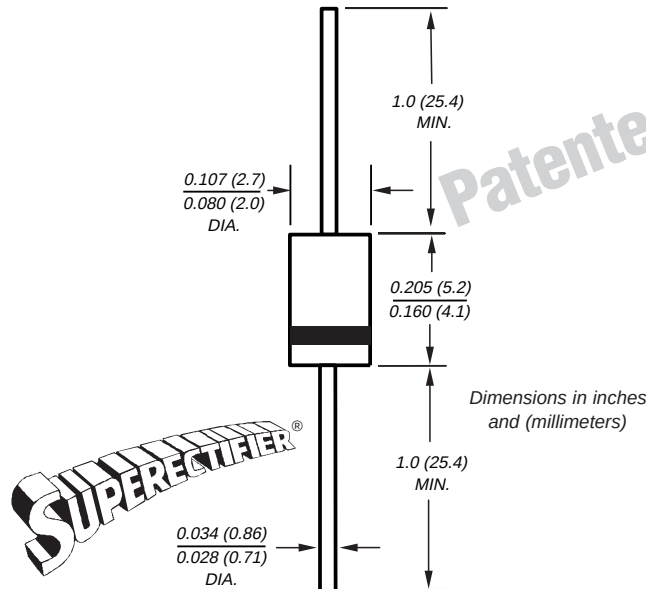




Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 200 to 1000V
Forward Current 1.0A

DO-204AL (DO-41)

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 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
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- High temperature soldering guaranteed:
350°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., 0.3 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	1N4942GP	1N4944GP	1N4946GP	1N4947GP	1N4948GP	Unit
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
* Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25					A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	55					°C/W
* Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

* Maximum instantaneous forward voltage at 1.0A	V _F	1.3			V
* Maximum DC reverse current at rated DC blocking voltage	T _A = 25°C T _A =150°C I _R	1.0 200			μA
* Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	150	250	500	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

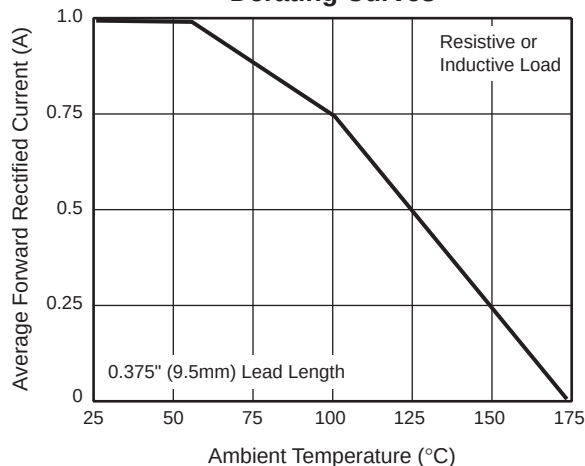


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

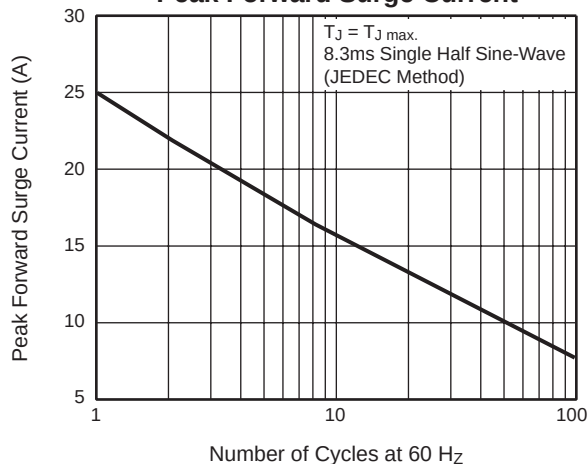


Fig. 3 — Typical Instantaneous Forward Characteristics

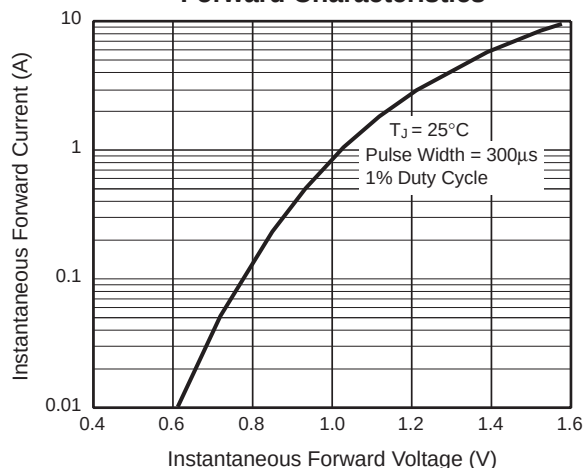


Fig. 4 — Typical Reverse Characteristics

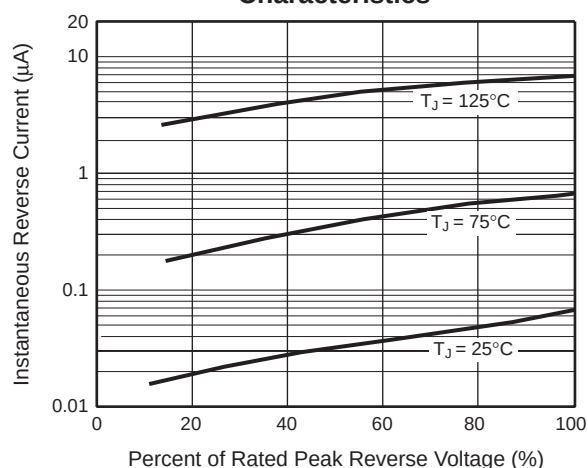


Fig. 5 — Typical Junction Capacitance

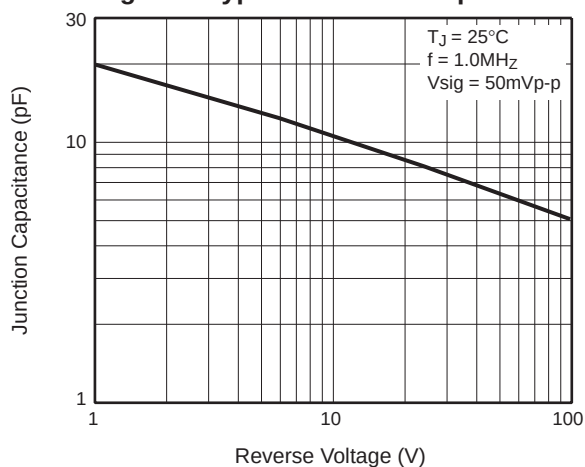


Fig. 6 — Typical Transient Thermal Impedance

