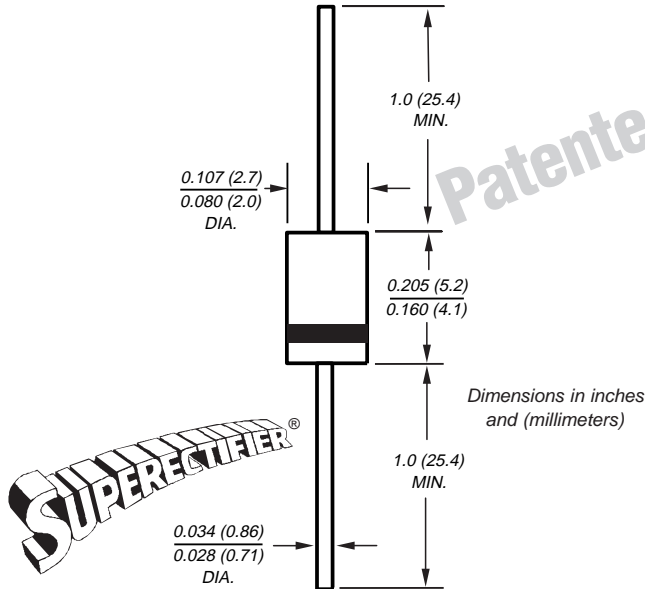


Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 200 to 1000V
Forward Current 1.0A

DO-204AL (DO-41)



NOTE: Lead diameter is $\frac{0.026}{0.023}$ ($\frac{0.66}{0.58}$) 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
- 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: $350^\circ\text{C}/10$ 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., 0.3 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	VRRM	200	400	600	800	1000	V
* Maximum RMS voltage	VRMS	140	280	420	560	700	V
* Maximum DC blocking voltage	VDC	200	400	600	800	1000	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	IF(AV)	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	25					A
Typical thermal resistance ⁽¹⁾	RθJA	55					°C/W
* Operating junction and storage temperature range	TJ, TSTG	-65 to +175					°C

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

* Maximum instantaneous forward voltage at 1.0A	VF	1.3					V
* Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$	IR	1.0 200					μA
* Maximum reverse recovery time at IF=0.5A, IR=1.0A, Irr=0.25A	trr	150	250	500			ns
Typical junction capacitance at 4.0V, 1MHz	CJ	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

1N4942GP thru 1N4942GP



Vishay Semiconductors
formerly General Semiconductor

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

Fig. 1 — Forward Current Derating Curves

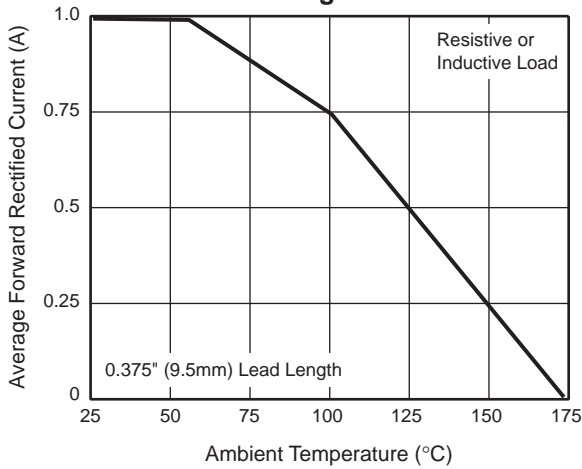


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

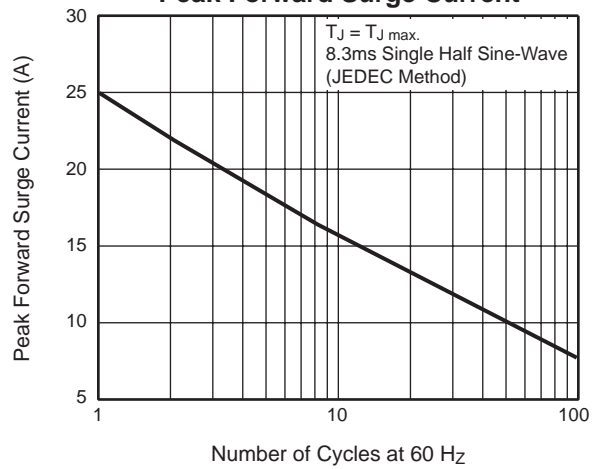


Fig. 3 — Typical Instantaneous Forward Characteristics

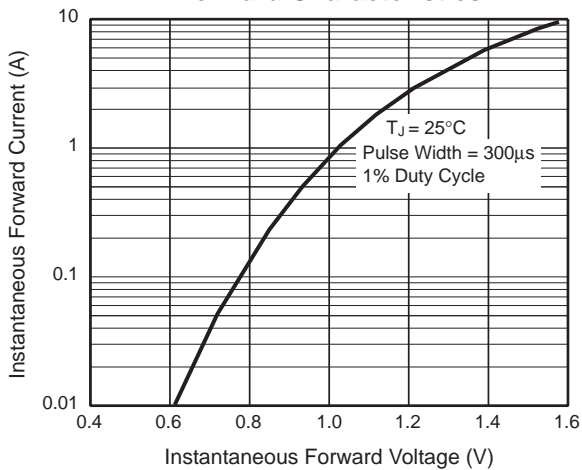


Fig. 4 — Typical Reverse Characteristics

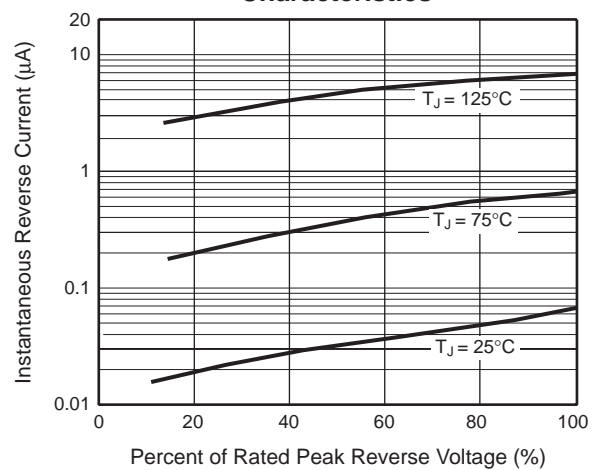


Fig. 5 — Typical Junction Capacitance

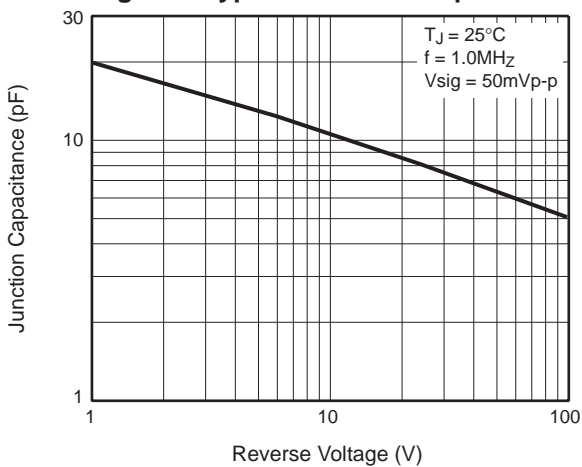


Fig. 6 — Typical Transient Thermal Impedance

