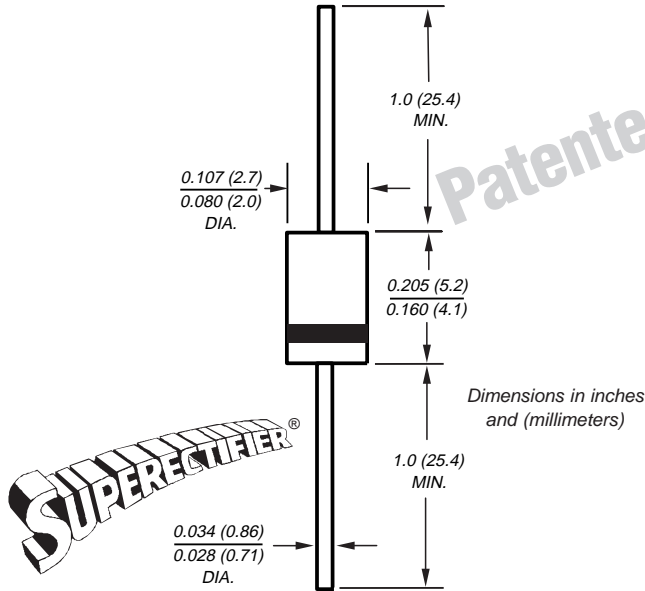


## Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 200 to 1000V  
Forward Current 1.0A

DO-204AL (DO-41)



NOTE: Lead diameter is  $\frac{0.026 (0.66)}{0.023 (0.58)}$  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
- 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 <sup>(1)</sup>	R $\theta$ JA	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	V <sub>F</sub>	1.3					V
* Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$	I <sub>R</sub>	1.0 200					μA
* Maximum reverse recovery time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	150	250	500			ns
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	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

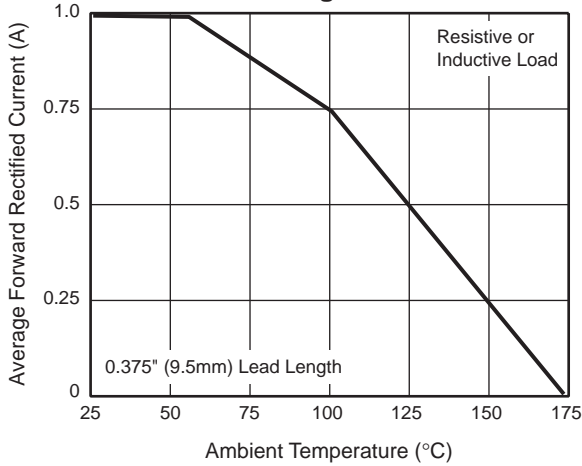
# 1N4942GP thru 1N4942GP



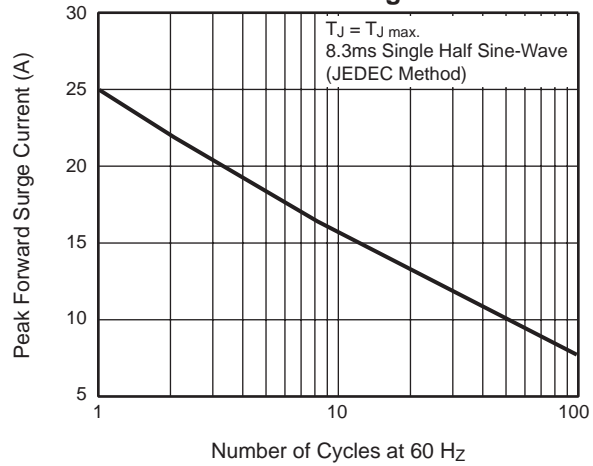
Vishay Semiconductors  
formerly General Semiconductor

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

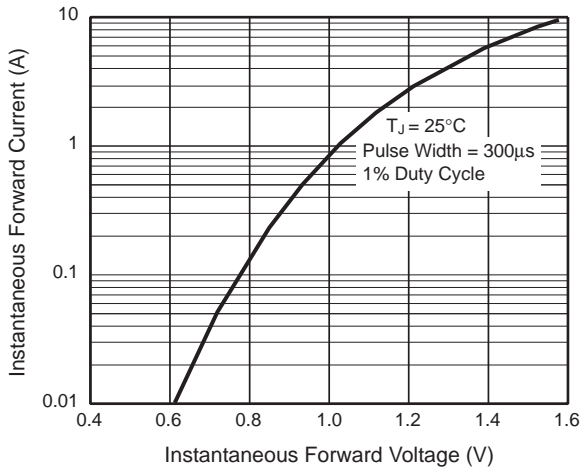
**Fig. 1 — Forward Current Derating Curves**



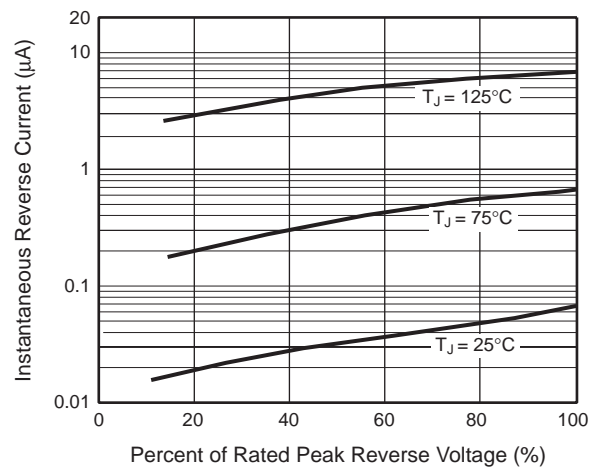
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



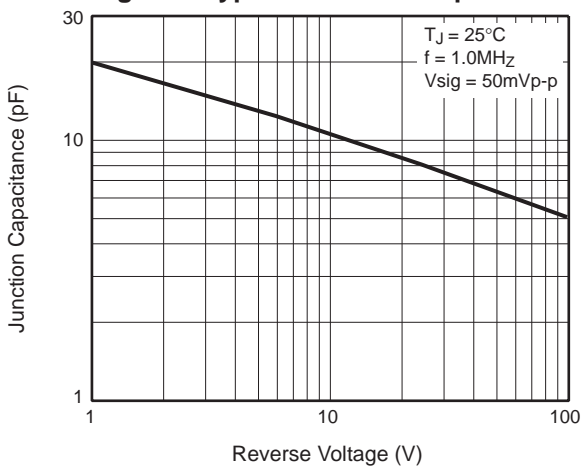
**Fig. 3 — Typical Instantaneous Forward Characteristics**



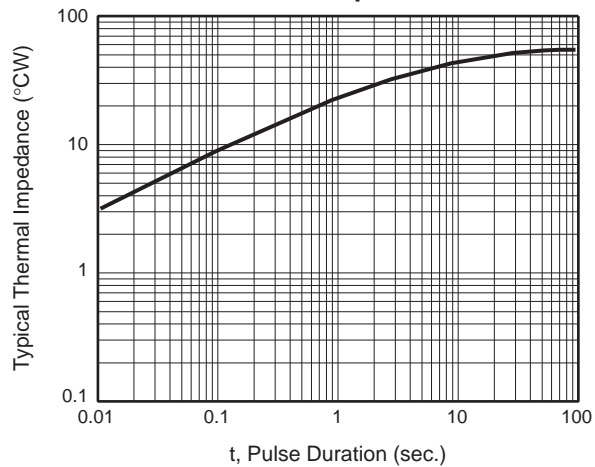
**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



**Fig. 6 — Typical Transient Thermal Impedance**





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