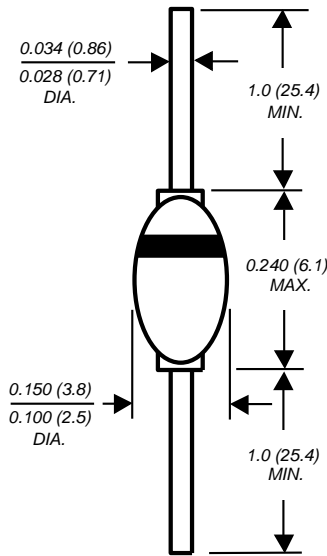




DO204AP

Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 200 to 1000V
Forward Current 1.0A



Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,306

Features

- High temperature metallurgically bonded construction
- Hermetically sealed package
- Cavity-free glass passivated junction
- 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- Capable of meeting environmental standards of MIL-S-19500
- Fast switching for high efficiency
- 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-204AP Solid glass body

Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.02 oz., 0.56 g

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

Parameter	Symbol	1N4942	1N4944	1N4946	1N4947	1N4948	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 (Note 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.

Parameter	Symbol	1N4942	1N4944	1N4946	1N4947	1N4948	Unit
* Minimum reverse breakdown voltage at $50\mu\text{A}$	$V_{(BR)}$	220	440	660	880	1100	V
* Max. instantaneous forward voltage at 1.0A at 2.0A, $T_A = -40^\circ\text{C}$	V_F	1.3 2.5					V
* Maximum DC reverse current at Rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 175^\circ\text{C}$	I_R	1.0 500					μA
* Max. reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=25\text{A}$	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 at 0.375" (9.5mm) lead length, P.C.B. mounted
*JEDEC registered values

1N4942 thru 1N4948

Vishay Semiconductors
formerly General Semiconductor



Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

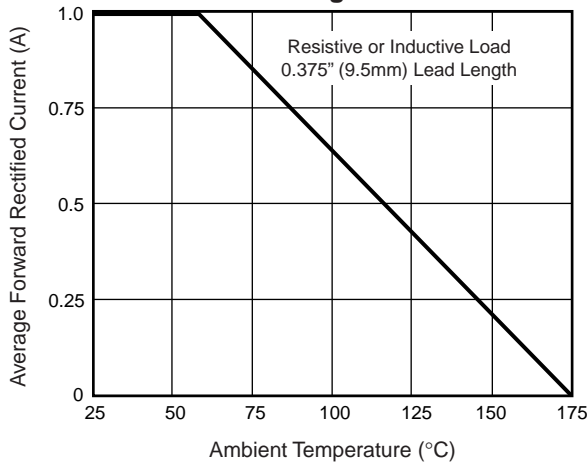


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

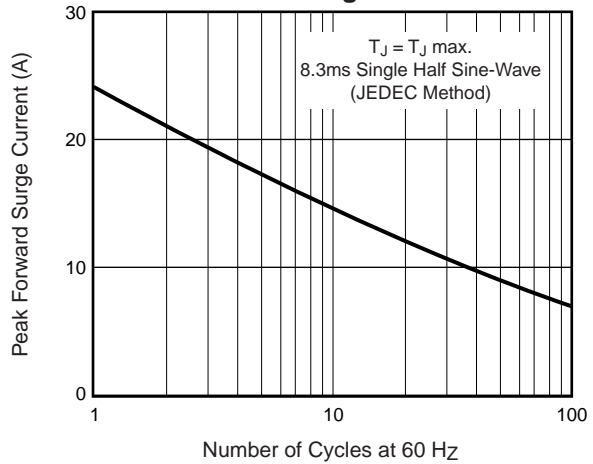


Fig. 3 – Typical Instantaneous Forward Characteristics

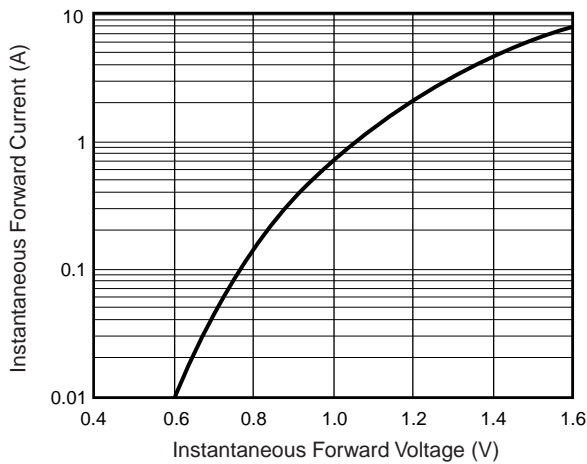


Fig. 4 – Typical Reverse Leakage Characteristics

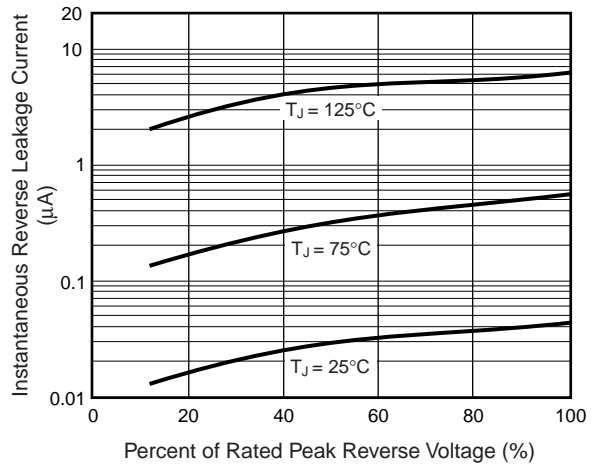


Fig. 5 – Typical Junction Capacitance

