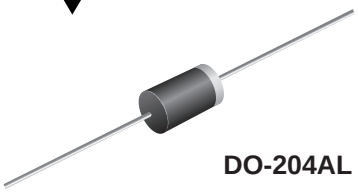
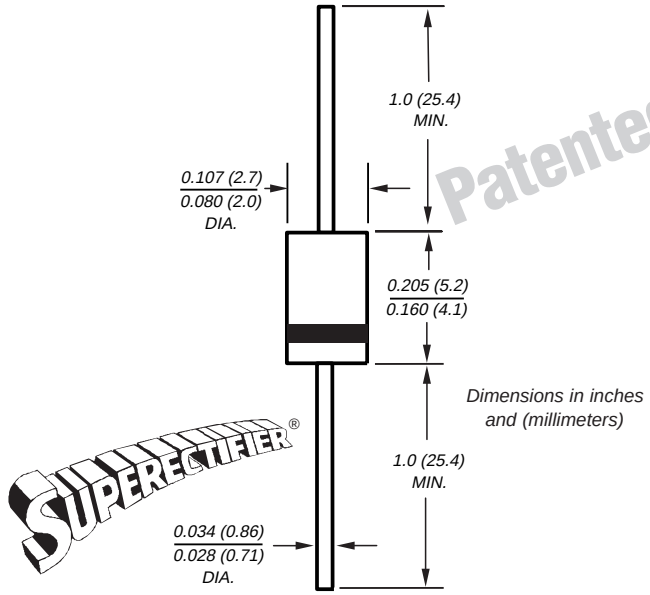
Vishay Semiconductors
formerly General Semiconductor

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) / 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°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°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°C unless otherwise noted)

Fig. 1 — Forward Current Derating Curves

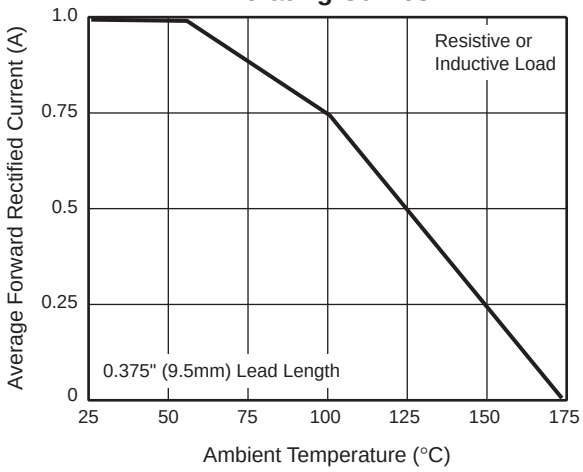


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

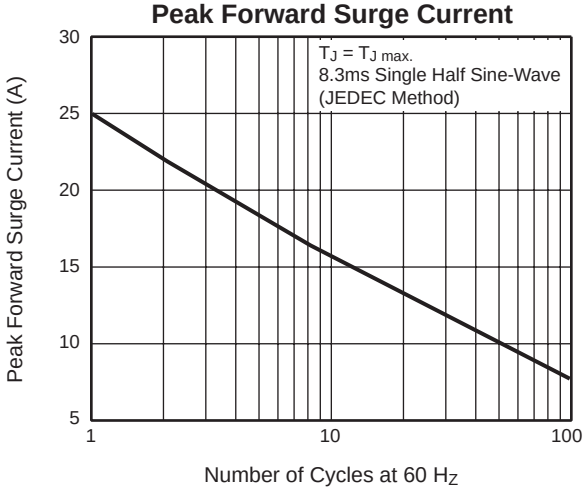


Fig. 3 — Typical Instantaneous Forward Characteristics

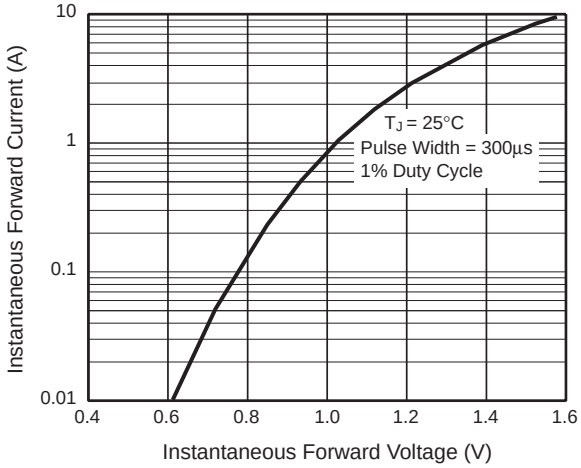


Fig. 4 — Typical Reverse Characteristics

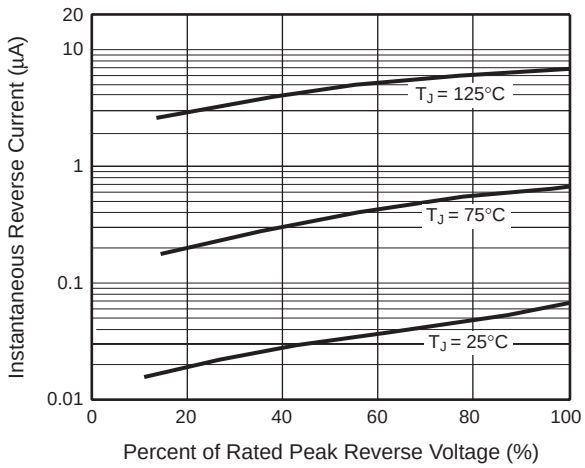


Fig. 5 — Typical Junction Capacitance

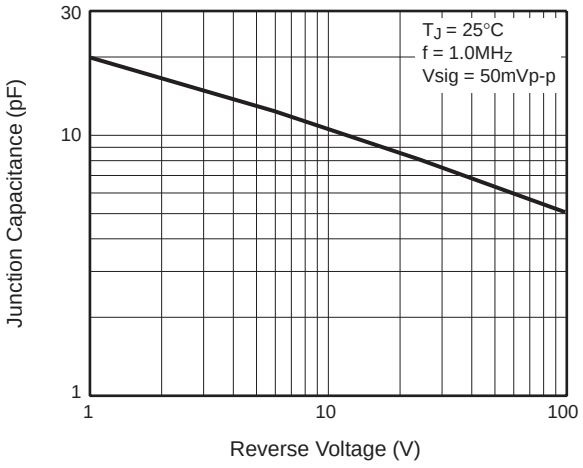
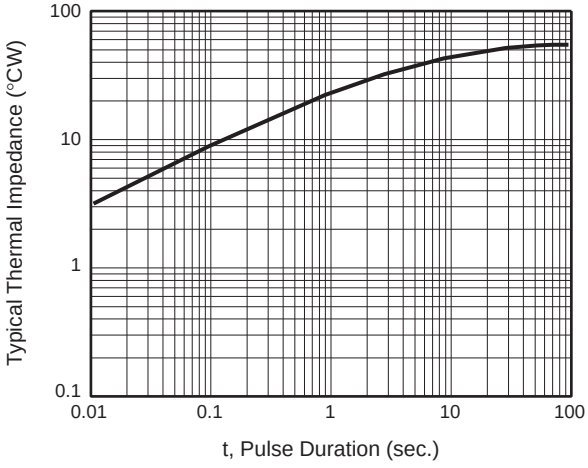


Fig. 6 — Typical Transient Thermal Impedance



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