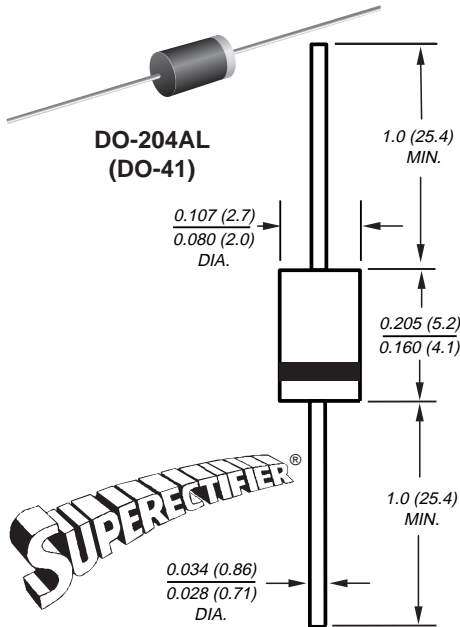




## Glass Passivated Junction Rectifiers

Rev. Voltage 200 to 1000V  
Forward Current 1.0A



Patented\*

### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Capable of meeting environmental standards of MIL-S-19500
- Cavity-free glass passivated junction
- 1.0 Ampere operation at  $T_A=75^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- 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

**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

## Maximum Ratings & Thermal Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameter	Symbol	1N 3611GP	1N 3612GP	1N 3613GP	1N 3614GP	1N 3957GP	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	A
* Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30					A
Typical thermal resistance <small>(Note 1)</small>	$R_{\theta JA}$ $R_{\theta JL}$	55 25					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175					$^\circ\text{C}$

## Electrical Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 1.0A	$V_F$	1.0	V
* Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 150^\circ\text{C}$	$I_R$	1.0 300	$\mu\text{A}$
Typical reverse recovery time at $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$	$t_{rr}$	2.0	$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	8.0	pF

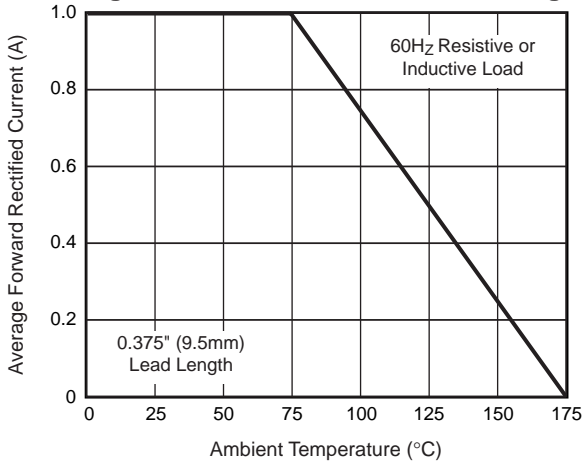
**Notes:** (1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted  
\*JEDEC registered values



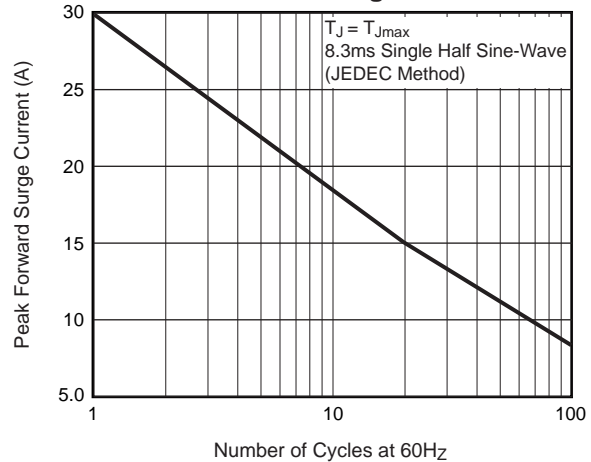
Vishay Semiconductors  
formerly General Semiconductor

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

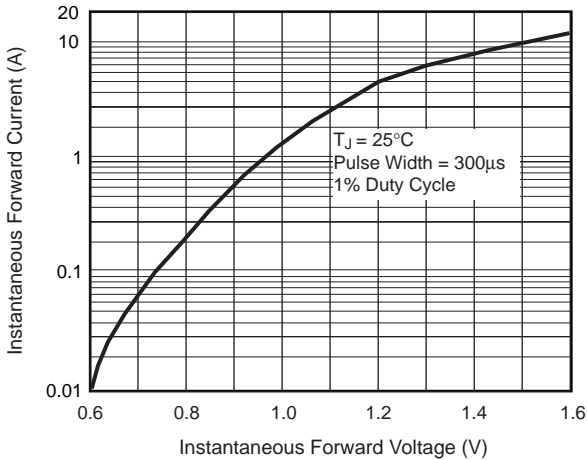
**Fig. 1 – Max. Forward Current Derating**



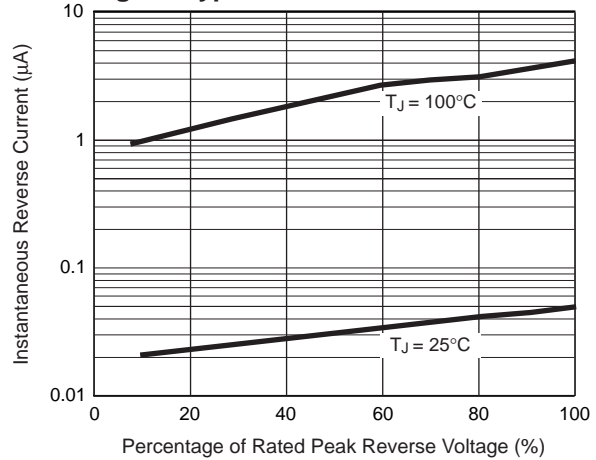
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



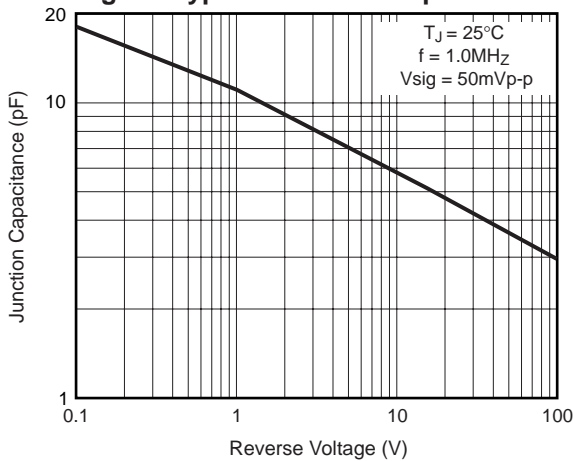
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



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

