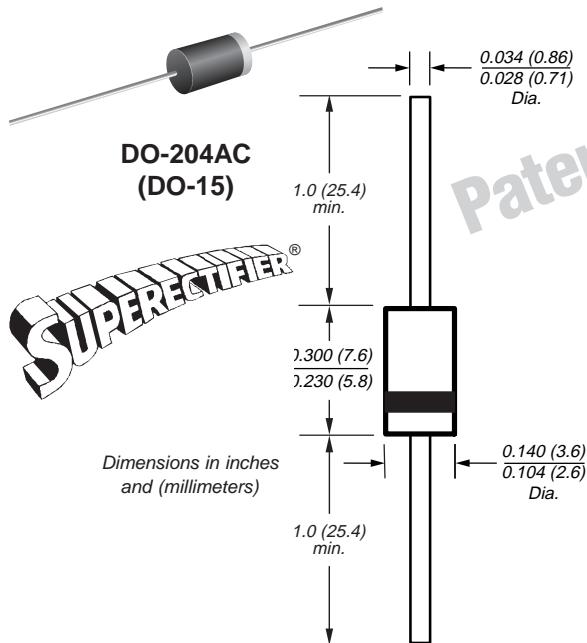


## Glass Passivated Junction Rectifiers

**Reverse Voltage**  
50 to 1000V  
**Forward Current** 1.5A



\*Glass-plastic encapsulation technique is covered by  
Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

Patented\*

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.5 Ampere operation at  $T_A=55^\circ\text{C}$  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-204AC, 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:** 0.015 oz., 0.4 g

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

Parameter	Symbol	GP15A	GP15B	GP15D	GP15G	GP15J	GP15K	GP15M	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current $0.375''$ (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.5							A
Peak forward surge current 8.3ms single half-sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							A
Maximum full load reverse current, full cycle average $0.375''$ (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{R(AV)}$	100							$\mu\text{A}$
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	45 20							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

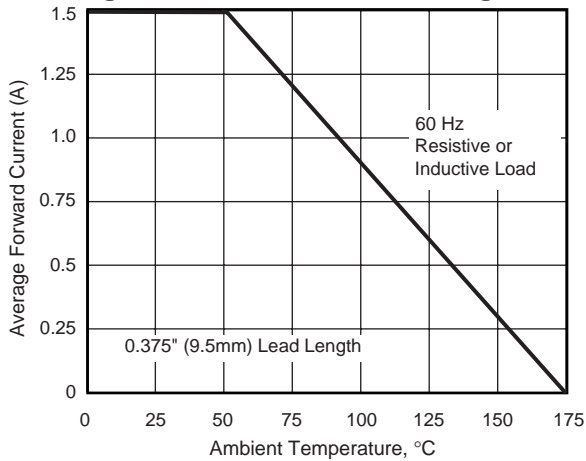
## Electrical Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameter	Symbol	GP15A	GP15B	GP15D	GP15G	GP15J	GP15K	GP15M	Unit
Maximum instantaneous forward voltage at 1.5A	$V_F$	1.1							V
Maximum reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 150^\circ\text{C}$	$I_R$	5.0 200							$\mu\text{A}$
Typical reverse recovery time $I_F = 0.5\text{A}$ , $I_R = 1.0\text{V}$ , $I_{rr} = 0.25\text{A}$	$t_{rr}$	3.5							$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	15							pF

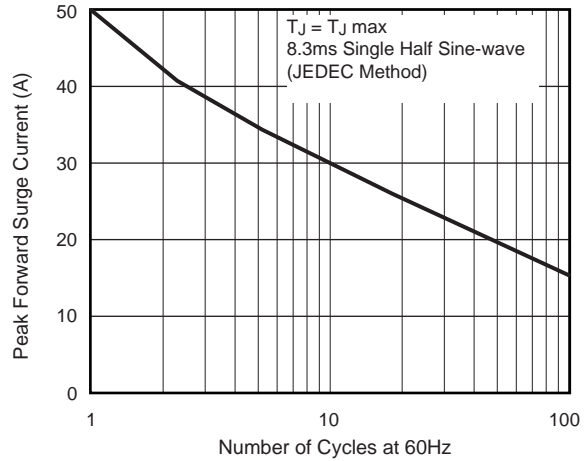
**Note:** (1) Thermal resistance from junction to ambient and from junction to lead at  $0.375''$  (9.5mm) lead length, P.C.B. mounted

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

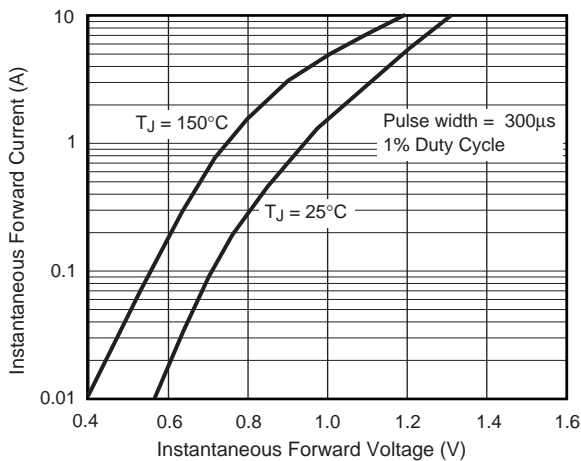
**Fig 1 – Forward Current Derating Curve**



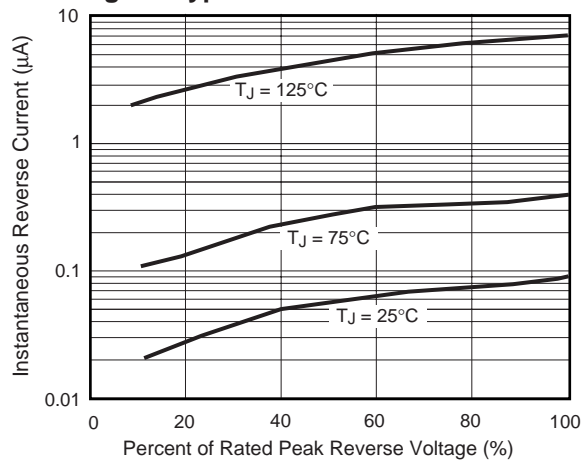
**Fig 2 – Maximum Non-repetitive Peak Forward Surge Current**



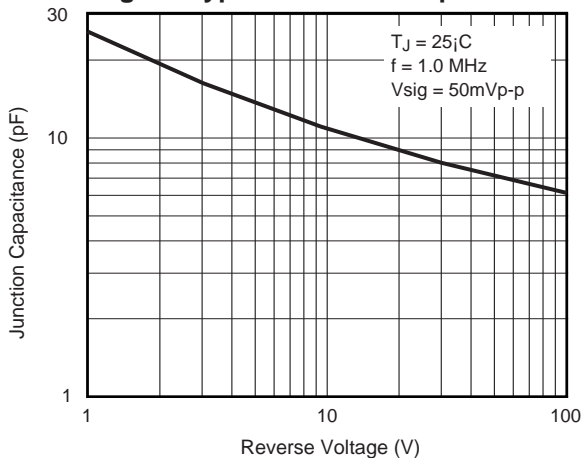
**Fig 3 – Typical Instantaneous Forward Characteristics**



**Fig 4 – Typical Reverse Characteristics**



**Fig 5 – Typical Junction Capacitance**



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

