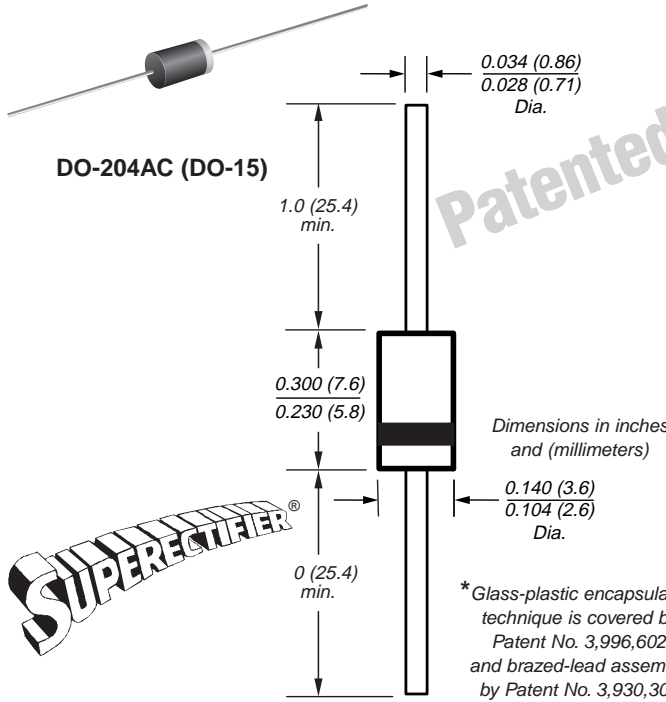




Glass Passivated Junction Rectifiers

Reverse Voltage  
50 to 1000V  
Forward Current 1.5A



Features

- Plastic package has Underwriters Laboratories 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  $T_L = 70^\circ\text{C}$  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	Symb.	1N5391GP	1N5392GP	1N5393GP	1N5394GP	1N5395GP	1N5396GP	1N5397GP	1N5398GP	1N5399GP	Unit
* Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
* Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
* Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
* Maximum average forward rectified current $0.375''$ (9.5mm) lead length at $T_L = 70^\circ\text{C}$	$I_{F(AV)}$	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 $T_A = 70^\circ\text{C}$	$I_{R(AV)}$	300									$\mu\text{A}$
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	45									$^\circ\text{C}/\text{W}$
* Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175									$^\circ\text{C}$

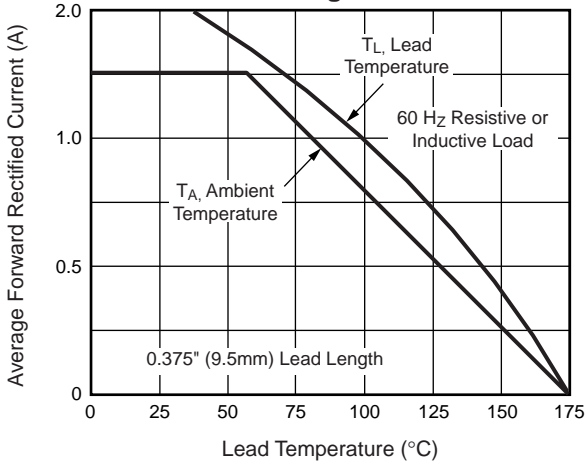
Electrical Characteristics Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

* Max. instantaneous forward voltage at 1.5A $T_A = 70^\circ\text{C}$	$V_F$	1.4	V
* Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	$I_R$	5.0 300	$\mu\text{A}$
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	$C_J$	15	pF

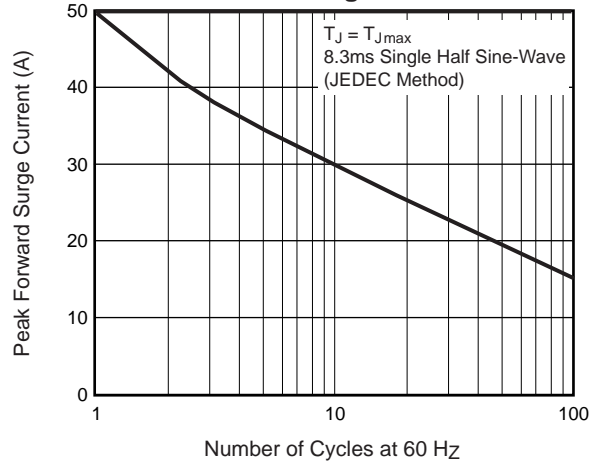
Note: (1) Thermal resistance from junction to ambient at  $0.375''$  (9.5mm) lead length, P.C.B. mounted \*JEDEC registered values

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

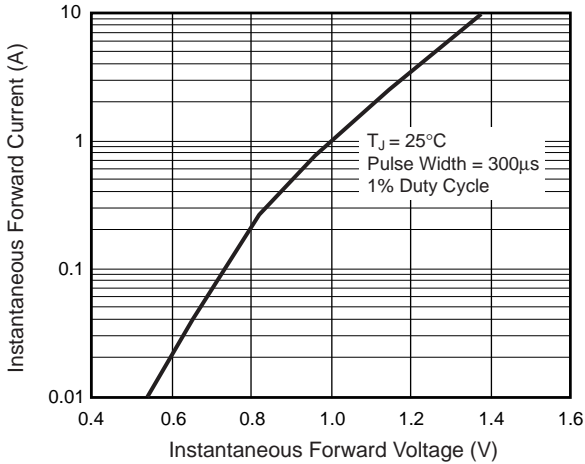
**Fig. 1 – Forward Current Derating Curve**



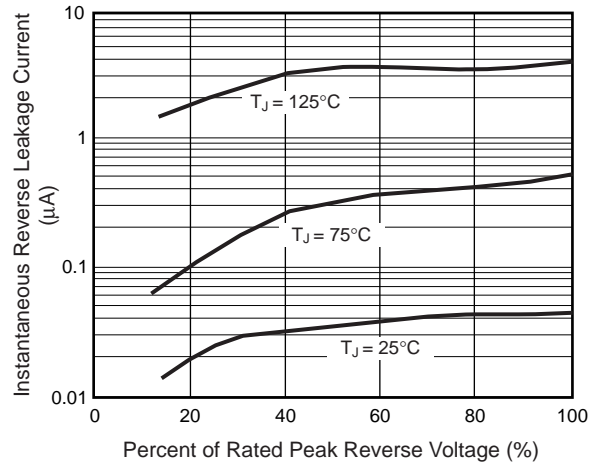
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



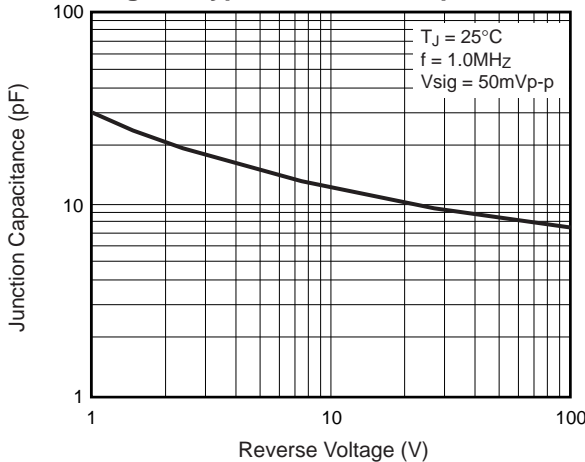
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



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

