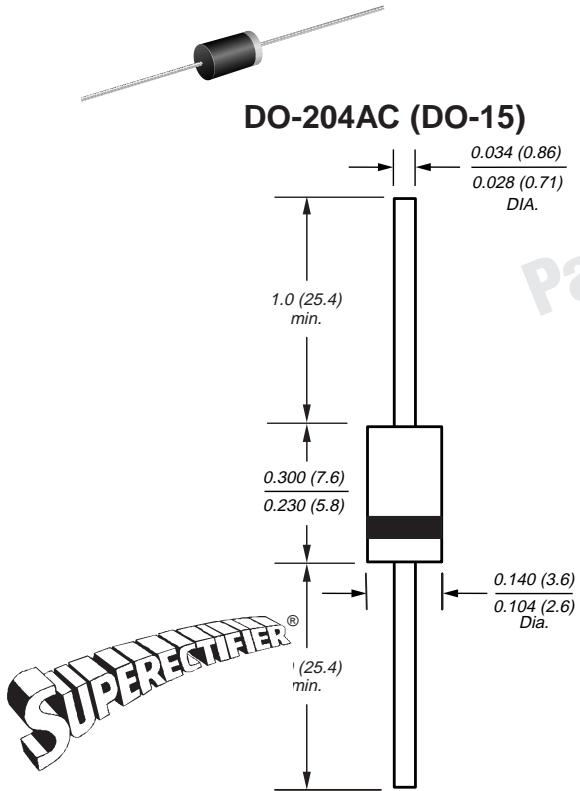


## Glass Passivated Junction Fast Switching Rectifier

Reverse Voltage 50 to 1000 V

Forward Current 1.5 A



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
- 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 ounce, 0.4 gram

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

Parameter	Symbol	RGP 15A	RGP 15B	RGP 15D	RGP 15G	RGP 15J	RGP 15K	RGP 15M	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>	$R_{\theta JA}$	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.

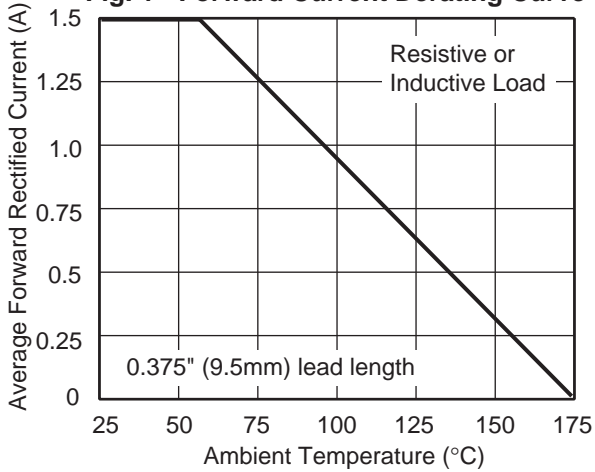
Maximum instantaneous forward voltage at 1.5A	$V_F$	1.3							V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=150^\circ\text{C}$	$I_R$	5.0 200							$\mu\text{A}$
Maximum reverse recovery time $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	$t_{rr}$	150			250		500		ns
Typical junction capacitance at 4.0V, 1MHz	$C_J$	25							pF

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

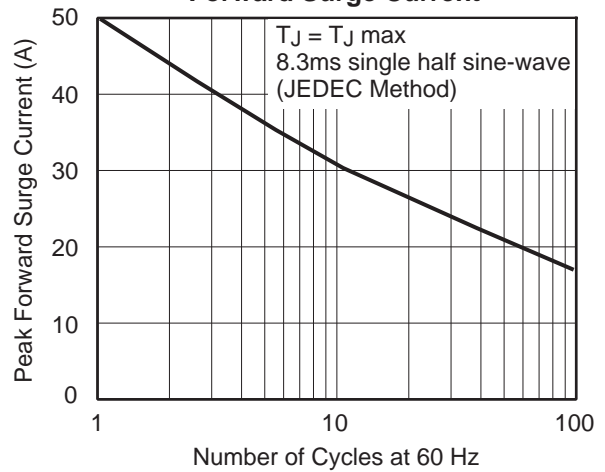
## Glass Passivated Junction Fast Switching Rectifier

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

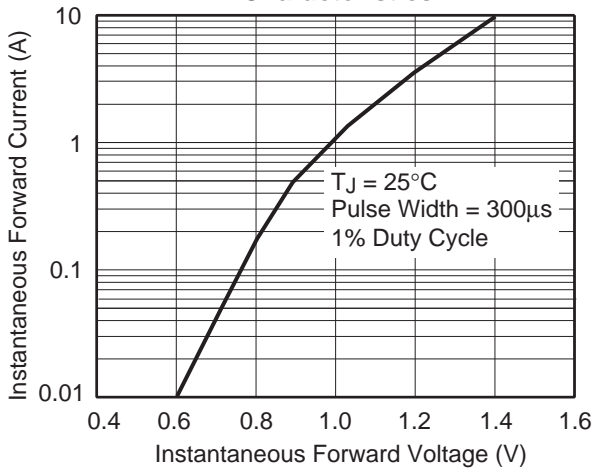
**Fig. 1 - Forward Current Derating Curve**



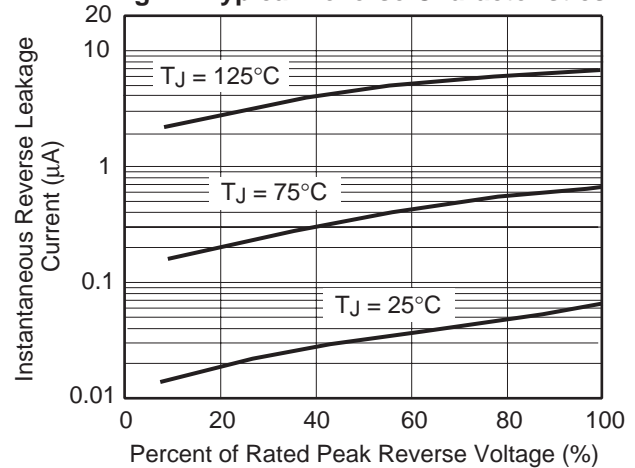
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



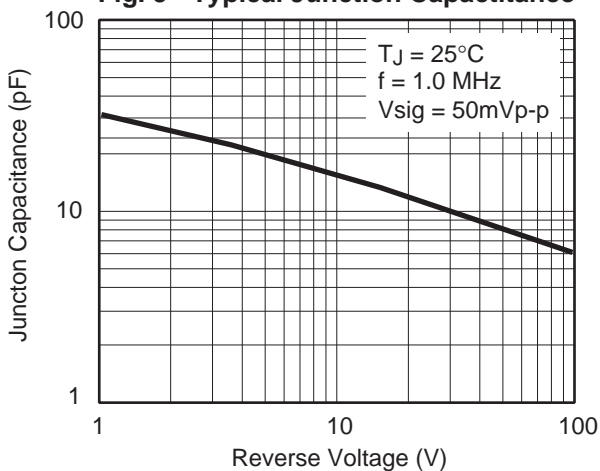
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



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

