



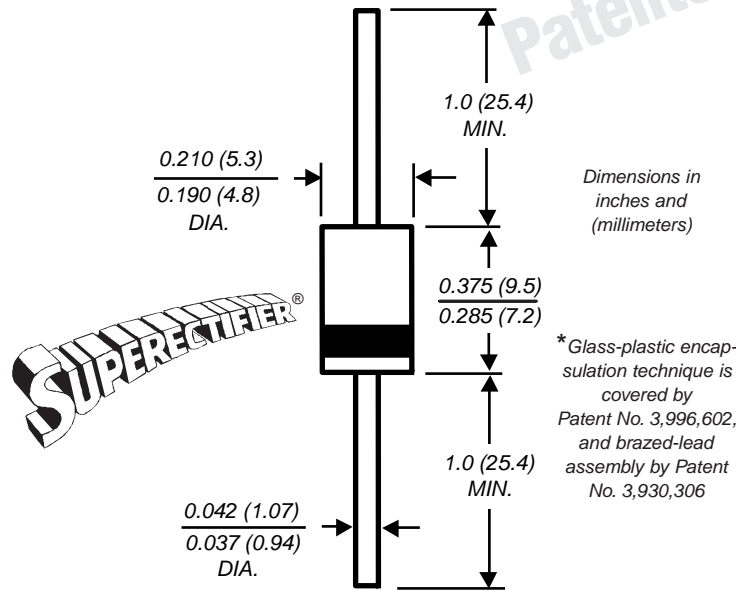
Reverse Voltage 50 to 600V  
Forward Current 2.0A

## Glass Passivated Junction Fast Switching Rectifier

Case Style GP20

### 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
- 2.0 Ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.2\mu\text{A}$
- High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds,  $0.375"$  (9.5mm) lead length, 5 lbs. (2.3kg) tension



### Mechanical Data

**Case:** Molded plastic over solid glass body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.03 oz., 0.8 g  
**Packaging codes/options:**  
 1/Bulk - 1.5K per bulk box  
 4/1.4K per 13" reel (52mm Tape)  
 23/1K per Ammo. box (52mm Tape)

### Maximum Ratings & Thermal Characteristics

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

Parameter	Symbol	RGP 20A	RGP 20B	RGP 20D	RGP 20G	RGP 20J	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80					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>	$R_{\theta JA}$	22					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175					$^\circ\text{C}$

### Electrical Characteristics

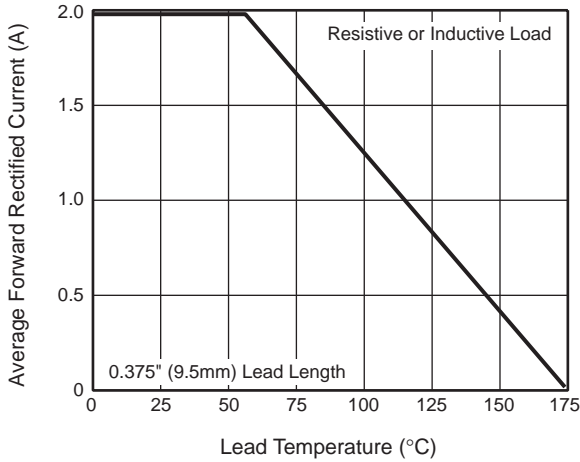
Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 2.0A	$V_F$	1.3					V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5.0 100					$\mu\text{A}$
Maximum reverse recovery time at $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	$t_{rr}$	150				250	ns
Typical junction capacitance at 4.0V, 1MHz	$C_J$	35					pF

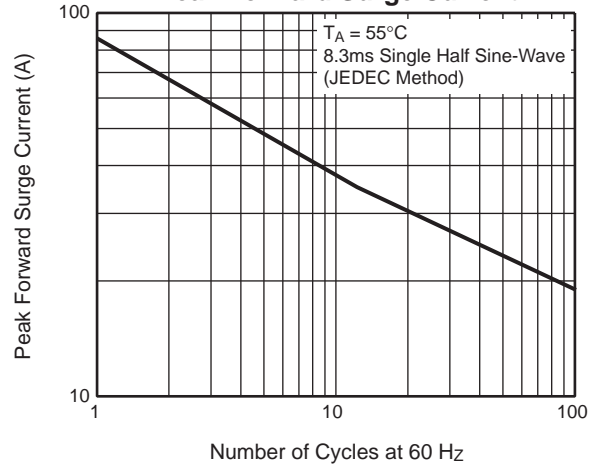
**Note:** (1) Thermal resistance from junction to ambient at  $0.375"$  (9.5mm) lead length, P.C.B. mounted

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

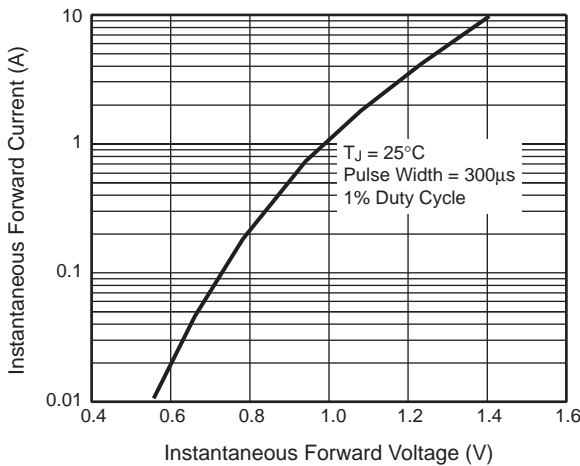
**Fig. 1 — Forward Current Derating Curve**



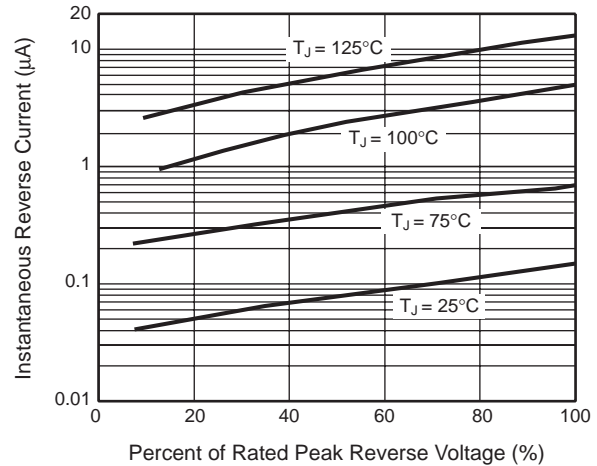
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



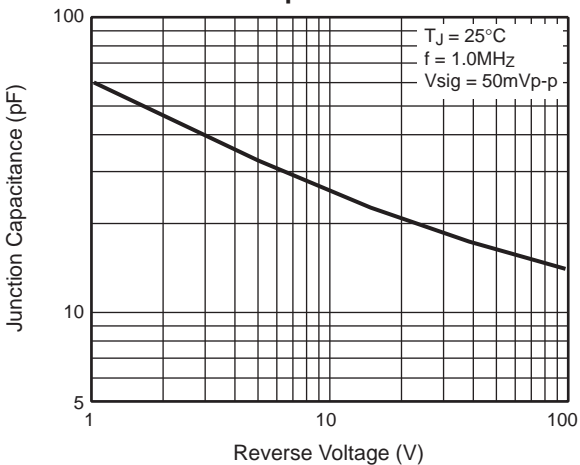
**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



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

