

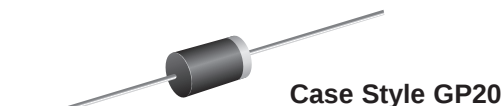


Glass Passivated Junction Rectifiers

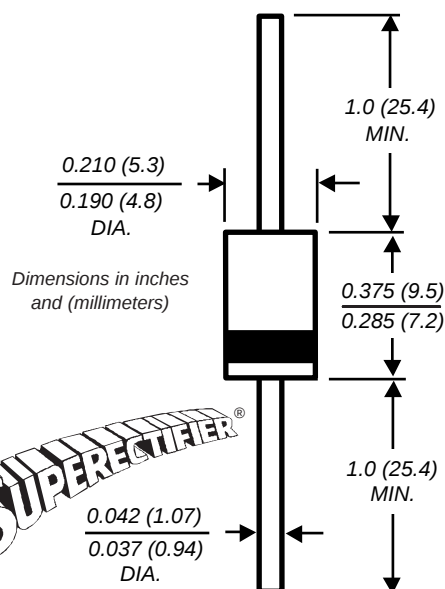
Reverse Voltage

50 to 600V

Forward Current 2.0A



Case Style GP20



*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
- 2.0 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: Molded plastic over glass body**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026**Polarity:** Band denotes cathode end**Mounting Position:** Any**Weight:** 0.03 oz., 0.8 gMaximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GP20A	GP20B	GP20D	GP20G	GP20J	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°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}	65					A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead length at T _A = 55°C	I _{R(AV)}	100					μA
Typical thermal resistance ⁽¹⁾	R _{θJA}	25					°C/W
	R _{θJL}	10					
Operating junction and storage temperature range	T _J , T _{STG}	−65 to +175					°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 2.0A	V_F	1.2	1.1	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	5.0		μA
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}	5.0		μs
Typical junction capacitance at 4.0V, 1MHz	C_J	40		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

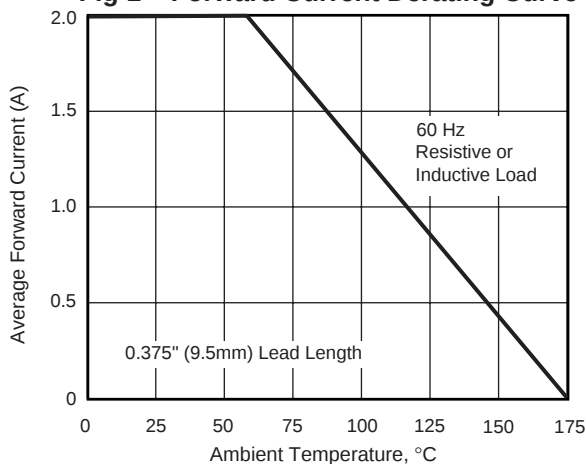


Fig 2 – Maximum Non-repetitive Peak Forward Surge Current

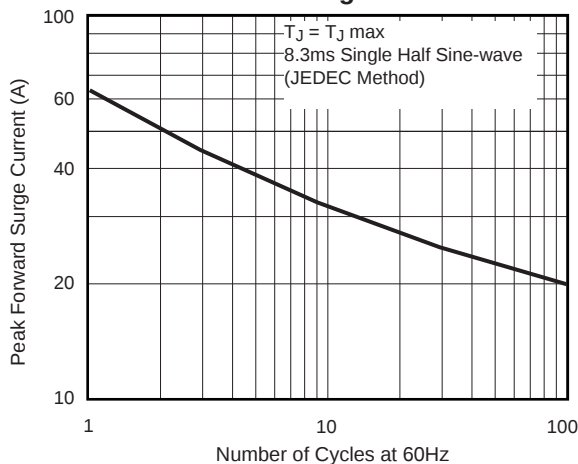


Fig 3 – Typical Instantaneous Forward Characteristics

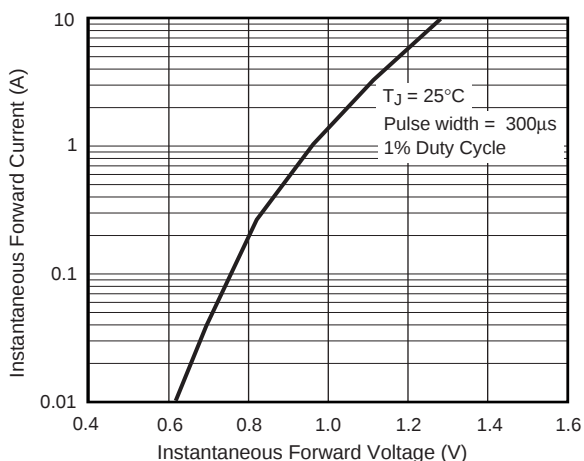


Fig 4 – Typical Reverse Characteristics

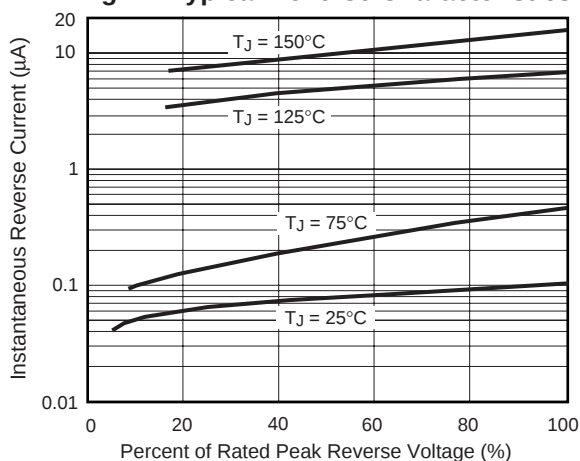


Fig 5 – Typical Junction Capacitance

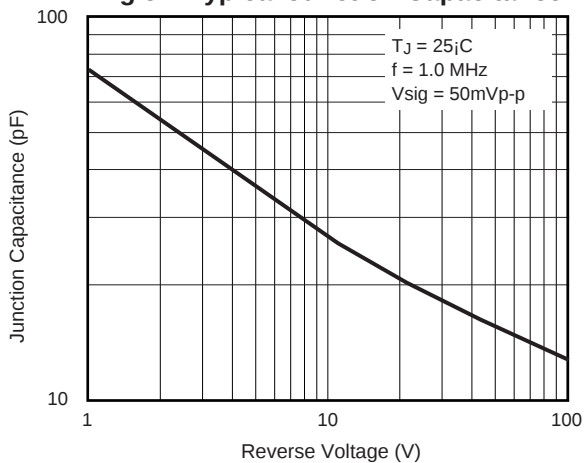


Fig. 6 – Typical Transient Thermal Impedance

