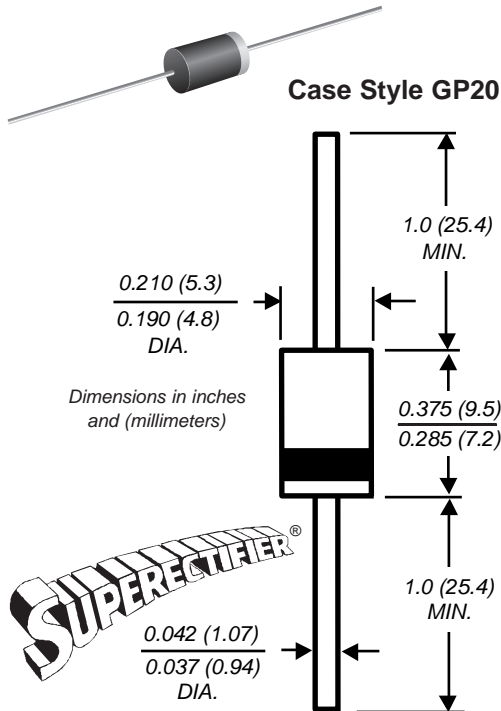


Glass Passivated Junction Rectifiers

Reverse Voltage
50 to 600V
Forward Current 2.0A



Patented*

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 g

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

Maximum 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 $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	65					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					μA
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	25 10					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°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

GP20A thru GP20J

Vishay Semiconductors
formerly General Semiconductor



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

Fig 1 – Forward Current Derating Curve

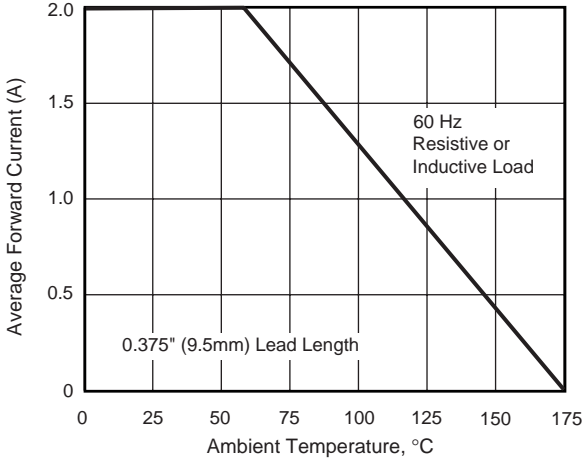


Fig 2 – Maximum Non-repetitive Peak Forward Surge Current

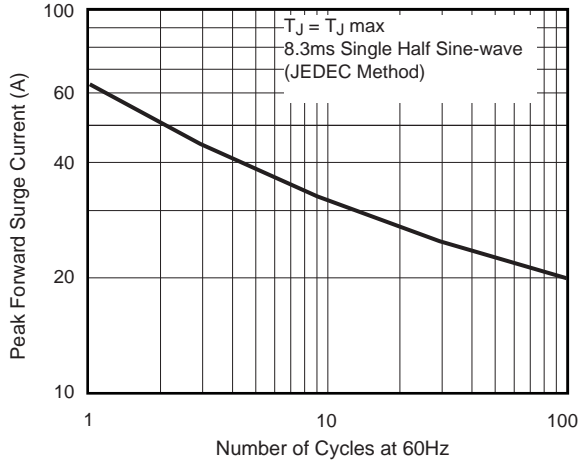


Fig 3 – Typical Instantaneous Forward Characteristics

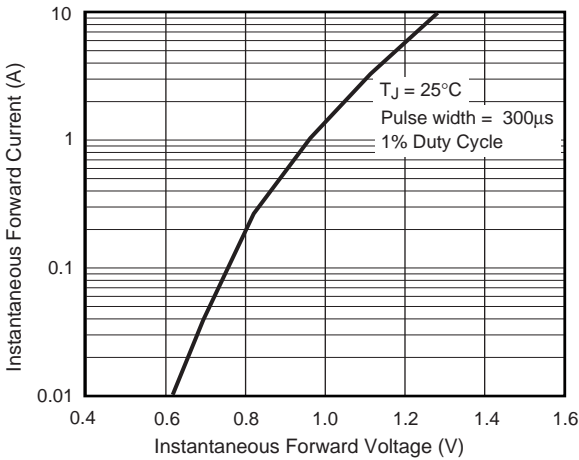


Fig 4 – Typical Reverse Characteristics

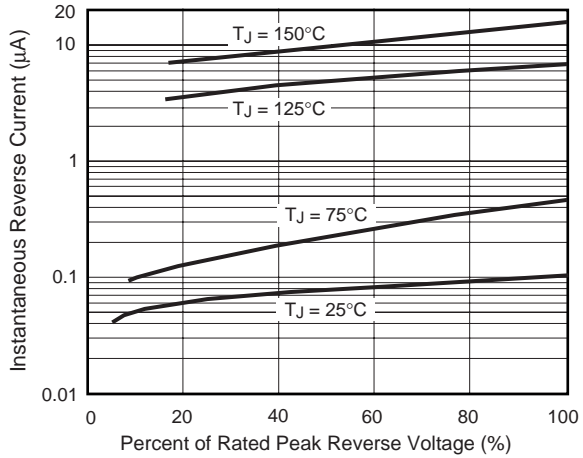


Fig 5 – Typical Junction Capacitance

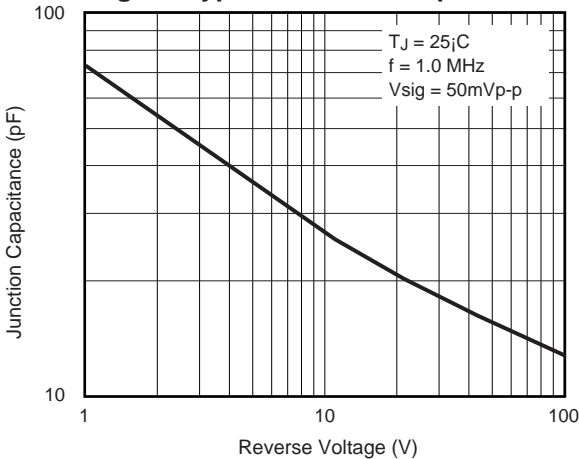


Fig. 6 – Typical Transient Thermal Impedance

