

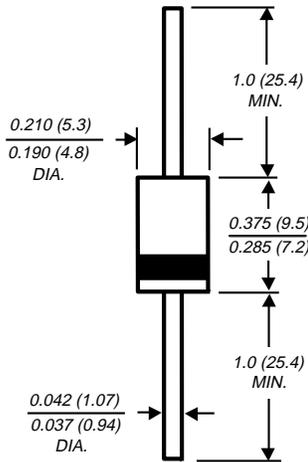
GP20A THRU GP20J

GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 2.0 Amperes

PATENTED*

Case Style GP20



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 Laboratory Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free 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 ounce, 0.8 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GP 20A	GP 20B	GP 20D	GP 20G	GP 20J	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	Volts
Maximum average forward rectified current $0.375"$ (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0					Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	65.0					Amps
Maximum instantaneous forward voltage at 2.0A	V_F	1.2		1.1			Volts
Maximum reverse current at rated DC blocking voltage	I_R	5.0					μA
Maximum full load reverse current, full cycle average $0.375"$ (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{R(AV)}$	100.0					μA
Typical reverse recovery time (NOTE 1)	t_{rr}	2.5					μs
Typical junction capacitance (NOTE 2)	C_J	40.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	25.0 10.0					$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^\circ\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) 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 GP20A THRU GP20J

FIG. 1 - FORWARD CURRENT DERATING CURVE

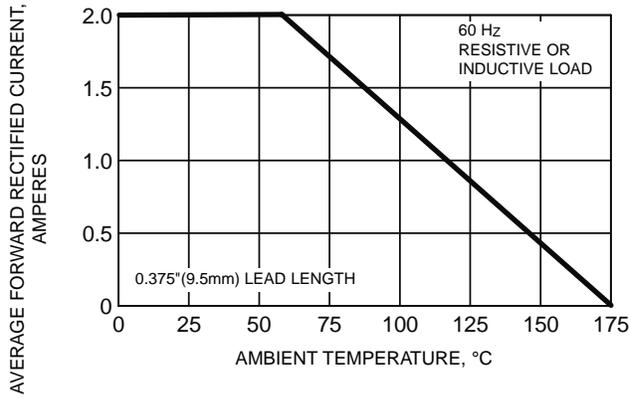


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

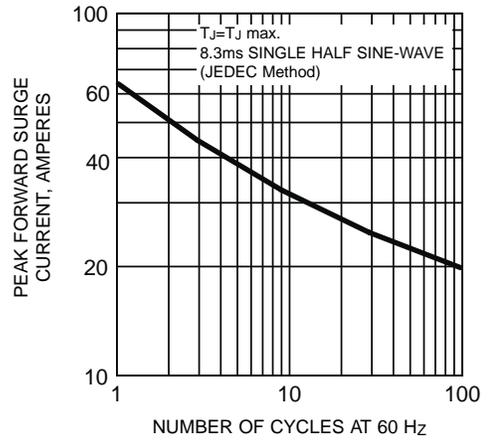


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

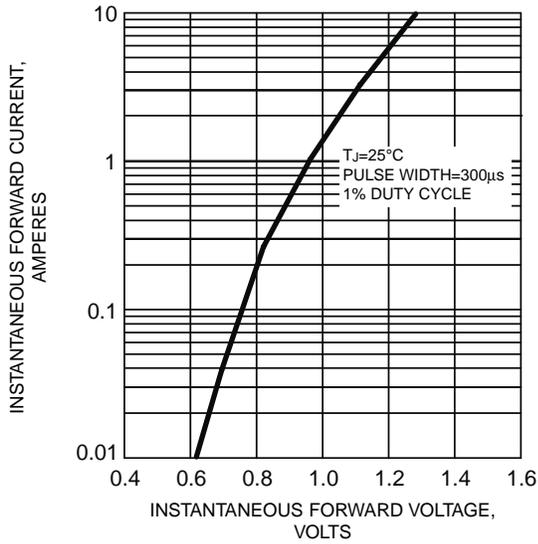


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

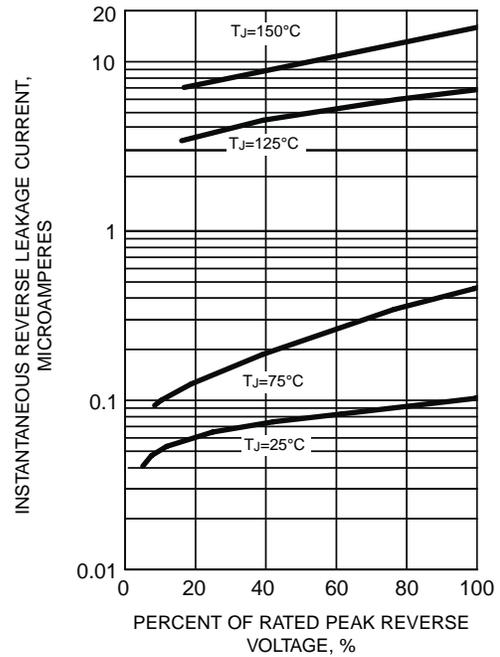


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

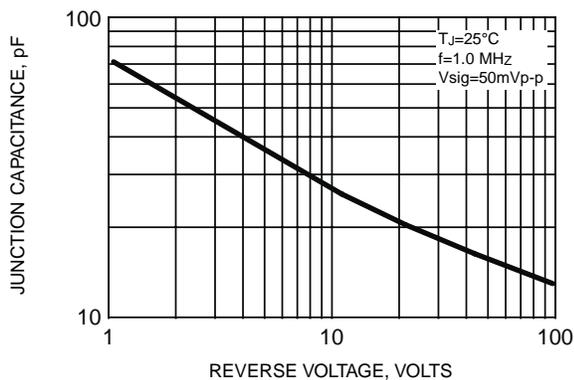


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

