



# GP20A THRU GP20M

2.0 AMPS. Glass Passivated Junction Plastic Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
2.0 Amperes

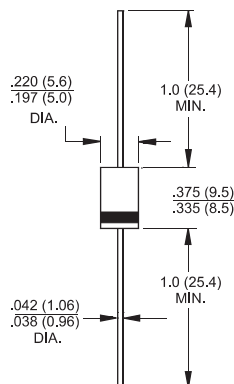
## Features

- ✧ High temperature metallurgically bonded construction
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Glass passivated cavity-free junction
- ✧ Capable of meeting environmental standards of MIL-S-19500
- ✧ 2.0 amperes operation at  $T_A=55^\circ\text{C}$  and with no thermal runaway
- ✧ Typical  $I_R$  less than 0.1 uA
- ✧ High temperature soldering guaranteed:  
350°C / 10 seconds, 0.375"(9.5mm) lead length, 5 lbs.  
(2.3kg) tension

## Mechanical Data

- ✧ Case: JEDEC DO-201 molded plastic over glass body
- ✧ Lead: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode end
- ✧ Mounting position: Any
- ✧ Weight: 0.03 ounce, 0.8 gram

### DO-201



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	GP 20A	GP 20B	GP 20D	GP 20G	GP 20J	GP 20K	GP 20M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at T <sub>A</sub> =55°C	I <sub>(AV)</sub>	2.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	65							A
Maximum Instantaneous Forward Voltage @2.0A	V <sub>F</sub>	1.2		1.1					V
Maximum Full Load Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	5.0							uA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @T <sub>A</sub> =55°C	HT <sub>IR</sub>	100							uA
Typical Reverse Recovery Time (Note 1)	T <sub>rr</sub>	2.5							uS
Typical Junction Capacitance ( Note 2 )	C <sub>j</sub>	40.0							pF
Typical Thermal Resistance (Note 3)	R θ JA R θ JL	25.0 10.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	- 65 to + 175							°C

Notes: 1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

3. Thermal Resistance from Junction to Ambient and from Junction to Lead at .375"(9.5mm) Lead Lengths, P.C.Board Mounted.

## RATINGS AND CHARACTERISTIC CURVES (GP20A THRU GP20M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

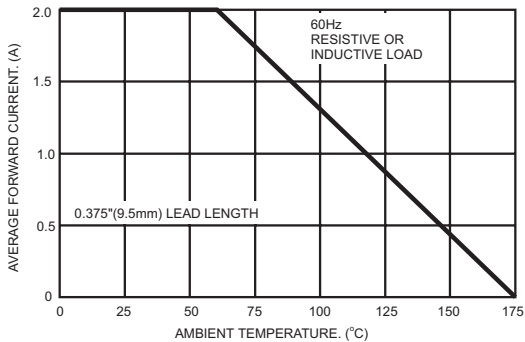


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

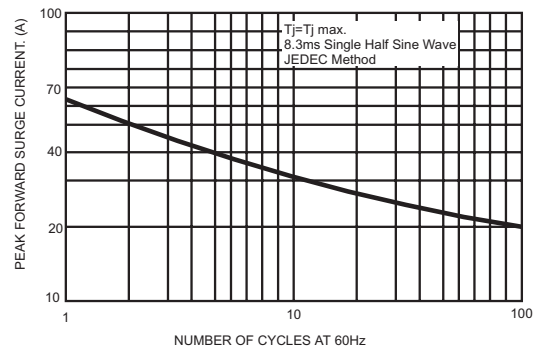


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

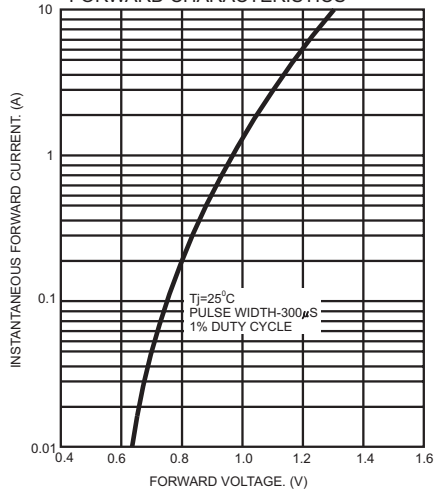


FIG.4- TYPICAL REVERSE CHARACTERISTICS

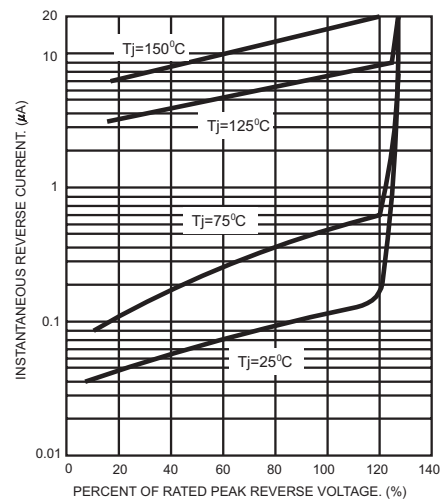


FIG.5- TYPICAL JUNCTION CAPACITANCE

