



# GP20A THRU GP20M

## 2.0 AMPS. Glass Passivated Junction Plastic Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
2.0 Amperes

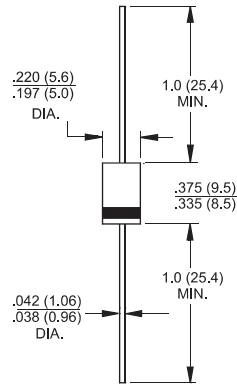
### Features

- ✦ High temperature metallurgically bonded construction
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ 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:  $350^\circ\text{C} / 10$  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  $25^\circ\text{C}$  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	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	65							A
Maximum Instantaneous Forward Voltage @2.0A	$V_F$	1.2		1.1				V	
Maximum Full Load Reverse Current at Rated DC Blocking Voltage	$I_R$	5.0							uA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_A=55^\circ\text{C}$	HTIR	100							uA
Typical Reverse Recovery Time (Note 1)	$T_{rr}$	2.5							uS
Typical Junction Capacitance ( Note 2 )	$C_j$	40.0							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{W}$
Operating 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 MHz and Applied Reverse Voltage of 4.0 Volts D.C.  
 3. Mount on Cu-Pad Size 10mm x 10mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (GP20A THRU GP20M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

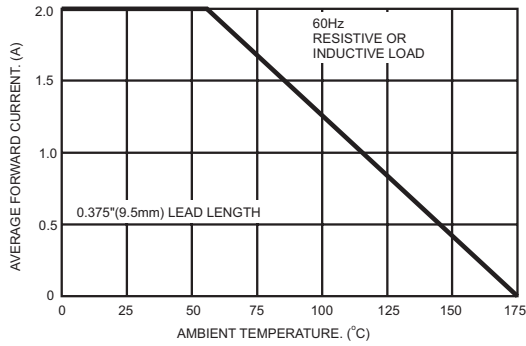


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

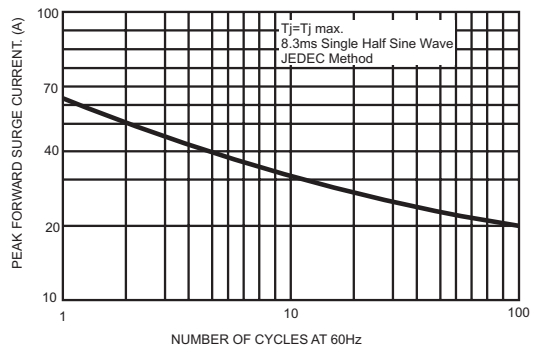


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

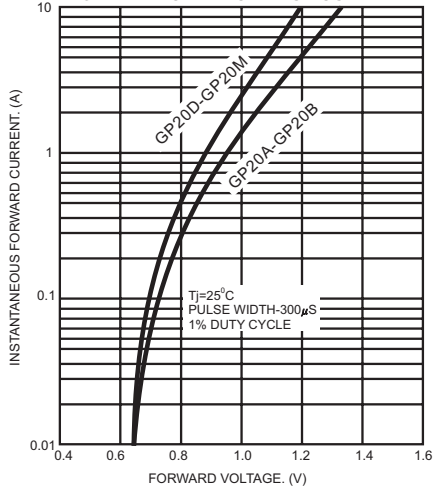


FIG.4- TYPICAL REVERSE CHARACTERISTICS

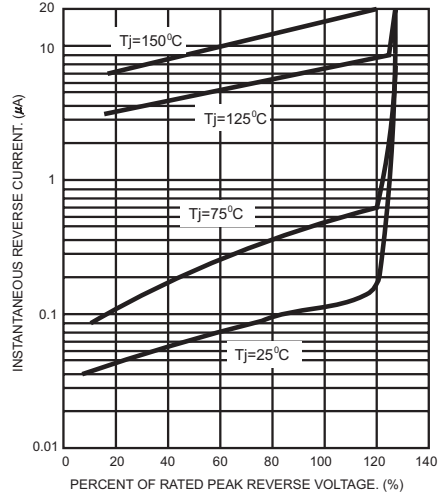


FIG.5- TYPICAL JUNCTION CAPACITANCE

