



# GP10A THRU GP10M

1.0 AMP. Glass Passivated Junction Plastic Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

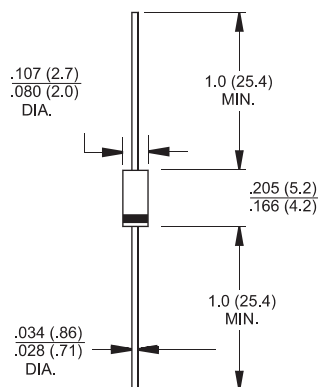
## Features

- ✧ 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
- ✧ 1.0 ampere operation at  $T_A=75^{\circ}\text{C}$  and  $55^{\circ}\text{C}$  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: JEDEC DO-41 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: 0.012 ounce, 0.3 gram

## DO-41



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 10A	GP 10B	GP 10D	GP 10G	GP 10J	GP 10K	GP 10M	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 (See Fig. 1)	I <sub>(AV)</sub>	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	I <sub>FSM</sub>	30							A
Maximum Instantaneous Forward Voltage @1.0A	V <sub>F</sub>	1.1					1.2		V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =125°C	I <sub>R</sub>	5.0 50					uA uA		
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @T <sub>A</sub> =75°C	HT <sub>IR</sub>	30							uA
Typical Junction Capacitance ( Note 1 )	C <sub>j</sub>	8.0					7.0		pF
Typical Thermal Resistance (Note 2)	R θ JA	55.0							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	- 65 to + 175							°C

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

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

## RATINGS AND CHARACTERISTIC CURVES (GP10A THRU GP10M)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

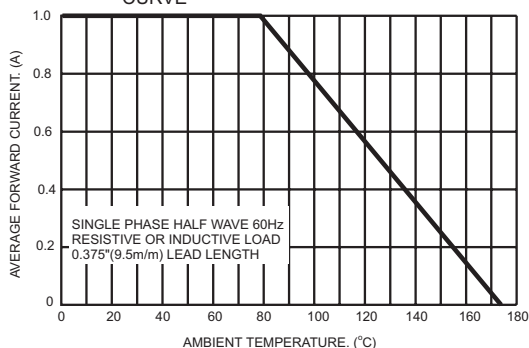


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

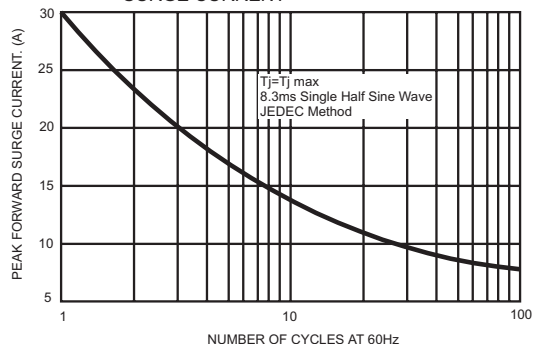


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

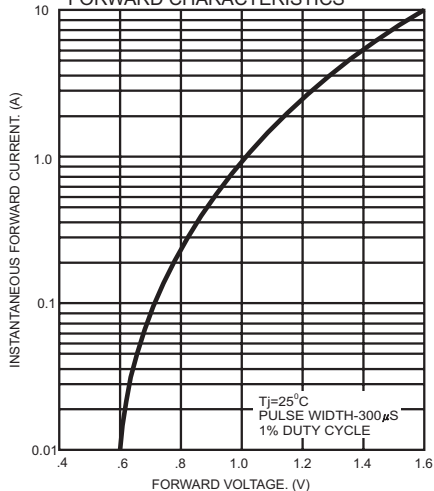


FIG.4- TYPICAL REVERSE CHARACTERISTICS

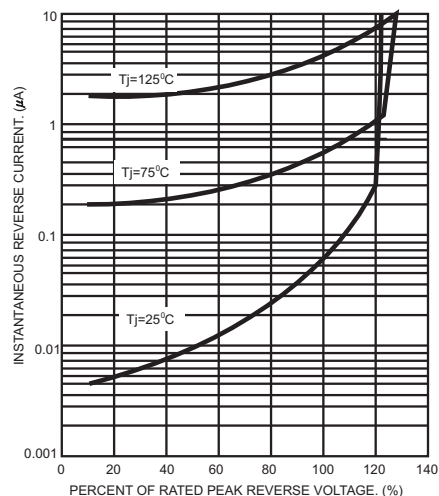


FIG.5- TYPICAL JUNCTION CAPACITANCE

