

# GP10A - GP10M

## GLASS PASSIVATED JUNCTION SILICON RECTIFIERS

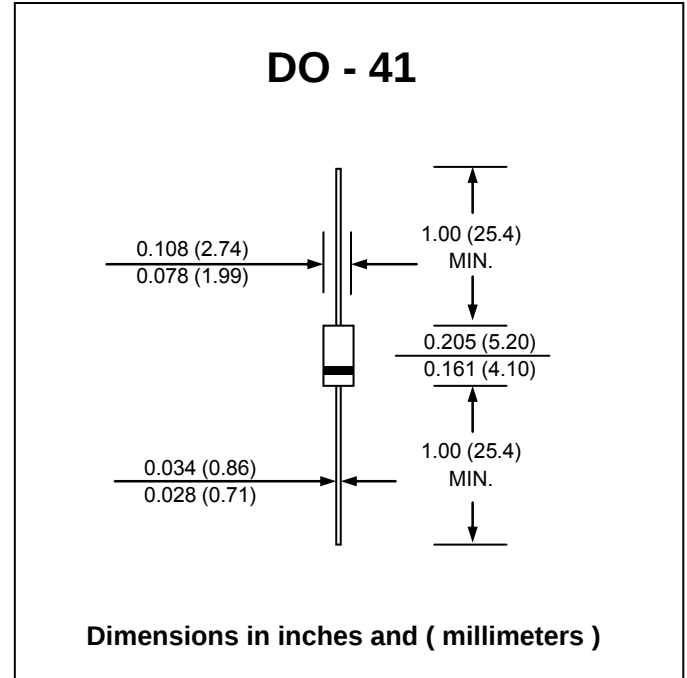
**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

### FEATURES :

- \* Glass passivated junction chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* **Pb Free / RoHS Compliant**

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.34 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

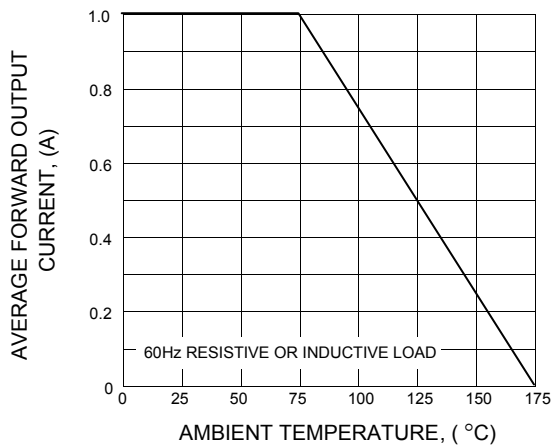
Rating at 25 °C ambient temperature unless otherwise specified  
Single phase, half wave, 60 Hz, resistive or inductive load  
For capacitive load, derate current by 20%

| RATING                                                                                                 | SYMBOL          | GP10A         | GP10B | GP10D | GP10G | GP10J | GP10K | GP10M | UNIT         |
|--------------------------------------------------------------------------------------------------------|-----------------|---------------|-------|-------|-------|-------|-------|-------|--------------|
| Maximum Repetitive 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 Current<br>0.375"(9.5mm) Lead Length $T_a = 75^\circ C$                        | $I_{F(AV)}$     | 1.0           |       |       |       |       |       |       | A            |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | $I_{FSM}$       | 30            |       |       |       |       |       |       | A            |
| Maximum Forward Voltage at $I_F = 1.0$ Amp.                                                            | $V_F$           | 1.1           |       |       |       |       | 1.2   |       | V            |
| Maximum DC Reverse Current $T_a = 25^\circ C$<br>at rated DC Blocking Voltage $T_a = 125^\circ C$      | $I_R$           | 5.0           |       |       |       |       |       |       | $\mu A$      |
|                                                                                                        | $I_{R(H)}$      | 50            |       |       |       |       |       |       | $\mu A$      |
| Maximum Reverse Recovery Time ( Note 1 )                                                               | $T_{rr}$        | 3.0           |       |       |       |       |       |       | $\mu s$      |
| Typical Junction Capacitance (Note2)                                                                   | $C_J$           | 8.0           |       |       |       |       | 7.0   |       | pF           |
| Typical Thermal Resistance (Note3)                                                                     | $R_{\theta JA}$ | 55            |       |       |       |       |       |       | $^\circ C/W$ |
| Operating Junction Temperature Range                                                                   | $T_J$           | - 65 to + 175 |       |       |       |       |       |       | $^\circ C$   |
| Storage Temperature Range                                                                              | $T_{STG}$       | - 65 to + 175 |       |       |       |       |       |       | $^\circ C$   |

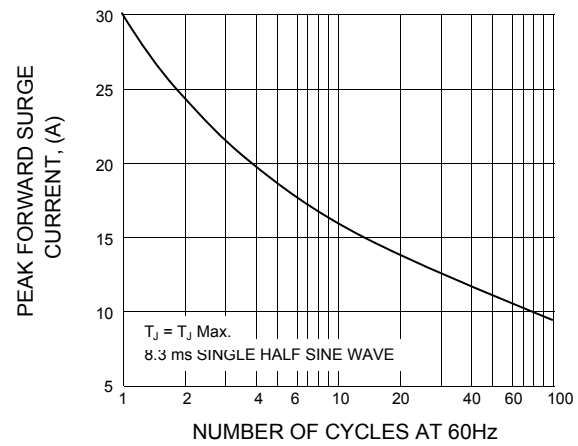
**Notes :** (1) Reverse Recovery Test Conditions  $I_F = 0.5$  A,  $I_R = 1.0$  A,  $I_{rr} = 0.25$  A.  
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC  
(3) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( GP10A - GP10M )

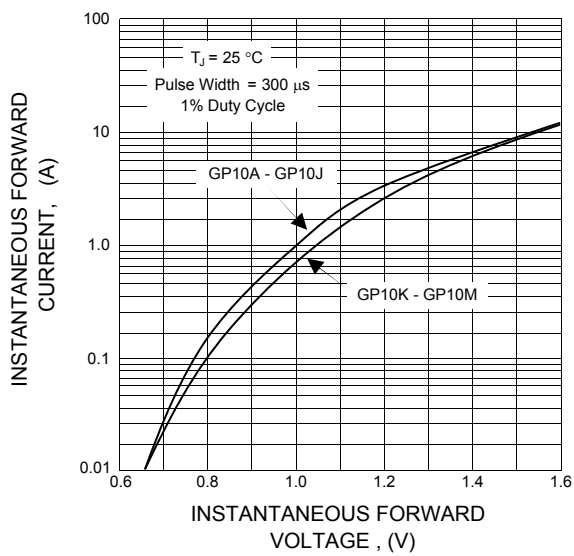
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

