



Micro Commercial Components  
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## FR201GP THRU FR207GP

### Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

| Microsemi<br>Catalog<br>Number | Device<br>Marking | Maximum<br>Recurrent<br>Peak Reverse<br>Voltage | Maximum<br>RMS<br>Voltage | Maximum<br>DC<br>Blocking<br>Voltage |
|--------------------------------|-------------------|-------------------------------------------------|---------------------------|--------------------------------------|
| FR201GP                        | ---               | 50V                                             | 35V                       | 50V                                  |
| FR202GP                        | ---               | 100V                                            | 70V                       | 100V                                 |
| FR203GP                        | ---               | 200V                                            | 140V                      | 200V                                 |
| FR204GP                        | ---               | 400V                                            | 280V                      | 400V                                 |
| FR205GP                        | ---               | 600V                                            | 420V                      | 600V                                 |
| FR206GP                        | ---               | 800V                                            | 560V                      | 800V                                 |
| FR207GP                        | ---               | 1000V                                           | 700V                      | 1000V                                |

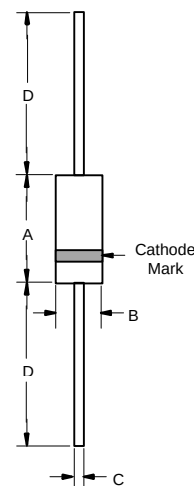
### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                            |             |                                        |                                                                    |
|----------------------------------------------------------------------------|-------------|----------------------------------------|--------------------------------------------------------------------|
| Average Forward Current                                                    | $I_{F(AV)}$ | 2 A                                    | $T_A = 55^\circ\text{C}$                                           |
| Peak Forward Surge Current                                                 | $I_{FSM}$   | 60A                                    | 8.3ms, half sine                                                   |
| Maximum Instantaneous Forward Voltage                                      | $V_F$       | 1.3V                                   | $I_{FM} = 2.0\text{A};$<br>$T_A = 25^\circ\text{C}$                |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                    | $I_R$       | 5.0 $\mu\text{A}$<br>100 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$              |
| Maximum Reverse Recovery Time<br>FR201GP-204GP<br>FR205GP<br>FR206GP-207GP | $T_{rr}$    | 150ns<br>250ns<br>500ns                | $I_F = 0.5\text{A}, I_R = 1.0\text{A},$<br>$I_{rr} = 0.25\text{A}$ |
| Typical Junction Capacitance                                               | $C_J$       | 40pF                                   | Measured at<br>1.0MHz, $V_R = 4.0\text{V}$                         |

\*Pulse Test: Pulse Width 300 $\mu\text{sec}$ , Duty Cycle 1%

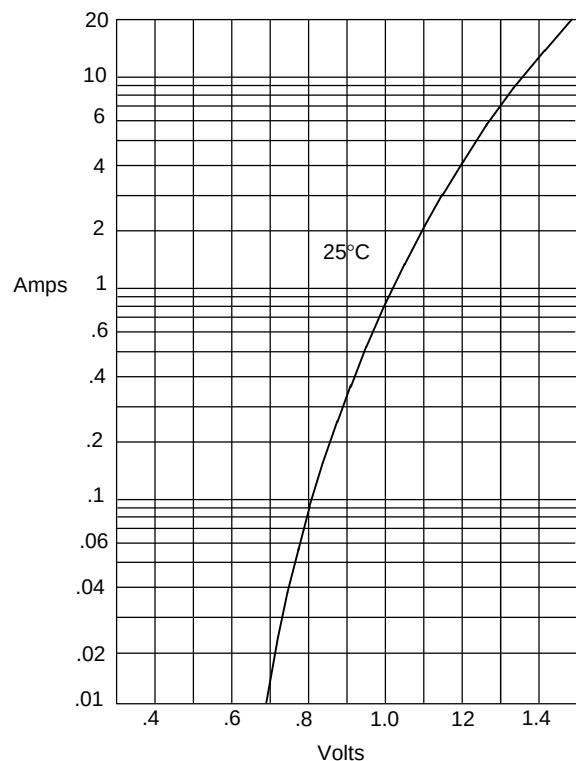
## 2 Amp Glass Passivated Fast Recovery Rectifier 50 to 1000 Volts

### DO-15



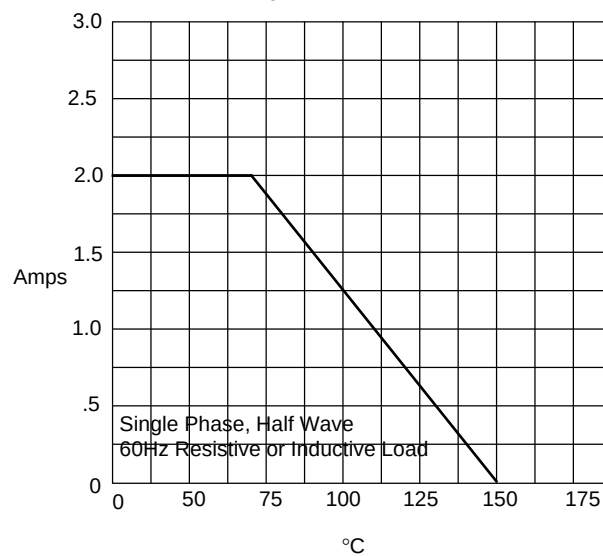
| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | .230   | .300 | 5.80  | 7.60 |      |
| B          | .104   | .140 | 2.60  | 3.60 |      |
| C          | .026   | .034 | .70   | .90  |      |
| D          | 1.000  | ---  | 25.40 | ---  |      |

Figure 1  
Typical Forward Characteristics



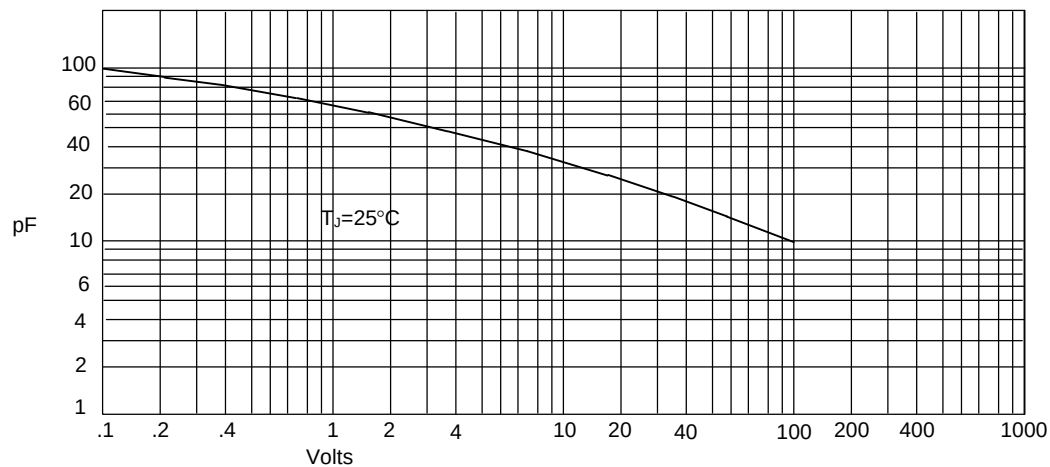
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



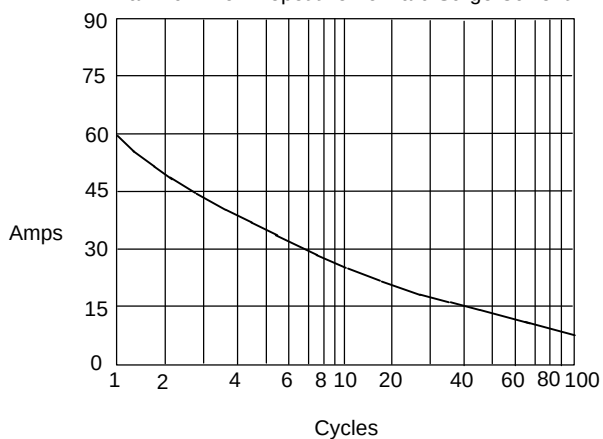
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



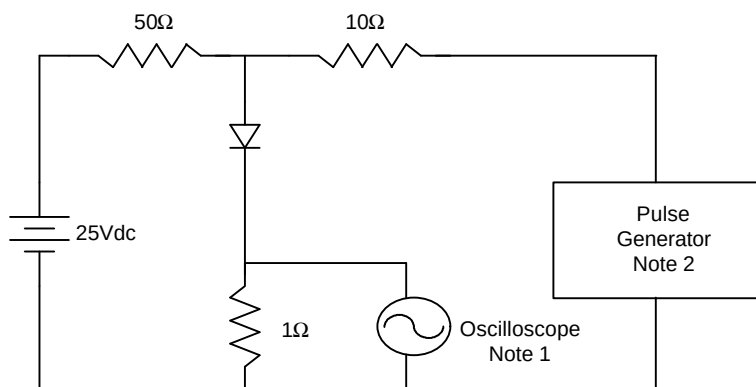
Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 4  
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles

Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:

1. Rise Time = 7ns max.  
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.  
Source impedance = 50 ohms
3. Resistors are non-inductive

