



Micro Commercial Components  
21201 Itasca Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

## FR601GP THRU FR607GP

### Features

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

### Maximum Ratings

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

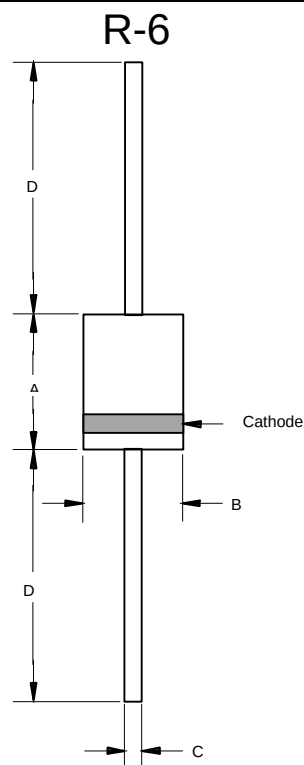
| MCC Catalog Number | Device Marking | Maximum Reccurent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|----------------------------------------|---------------------|-----------------------------|
| FR601GP            | ---            | 50V                                    | 35V                 | 50V                         |
| FR602GP            | ---            | 100V                                   | 70V                 | 100V                        |
| FR603GP            | ---            | 200V                                   | 140V                | 200V                        |
| FR604GP            | ---            | 400V                                   | 280V                | 400V                        |
| FR605GP            | ---            | 600V                                   | 420V                | 600V                        |
| FR606GP            | ---            | 800V                                   | 560V                | 800V                        |
| FR607GP            | ---            | 1000V                                  | 700V                | 1000V                       |

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

|                                                                            |             |                                       |                                                                    |
|----------------------------------------------------------------------------|-------------|---------------------------------------|--------------------------------------------------------------------|
| Average Forward Current                                                    | $I_{F(AV)}$ | 6 A                                   | $T_A = 55^\circ\text{C}$                                           |
| Peak Forward Surge Current                                                 | $I_{FSM}$   | 300A                                  | 8.3ms, half sine                                                   |
| Maximum Instantaneous Forward Voltage                                      | $V_F$       | 1.3V                                  | $I_{FM} = 6.0\text{A};$<br>$T_A = 25^\circ\text{C}$                |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                    | $I_R$       | 10 $\mu\text{A}$<br>150 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$<br>$T_A = 55^\circ\text{C}$               |
| Maximum Reverse Recovery Time<br>FR601GP-604GP<br>FR605GP<br>FR606GP-607GP | $T_{rr}$    | 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                                               | $C_J$       | 150pF                                 | Measured at<br>1.0MHz, $V_R = 4.0\text{V}$                         |

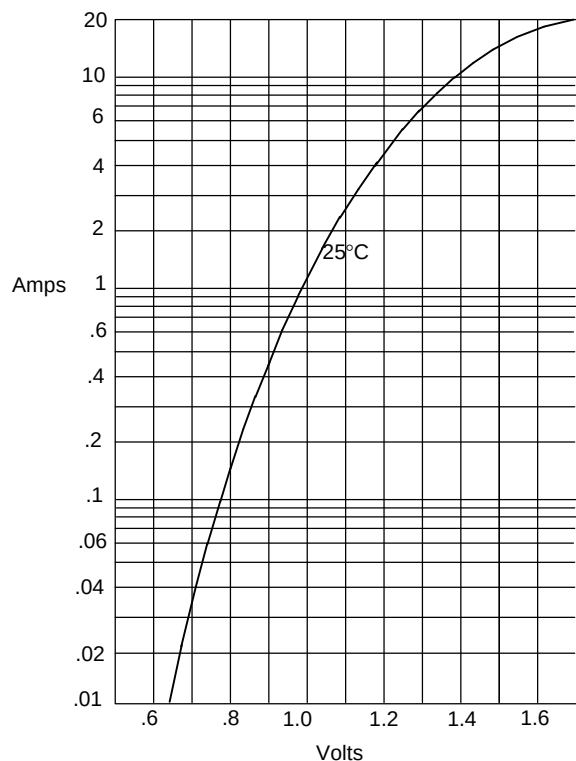
\*Pulse Test: Pulse Width 300 $\mu\text{sec}$ , Duty Cycle 1%

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



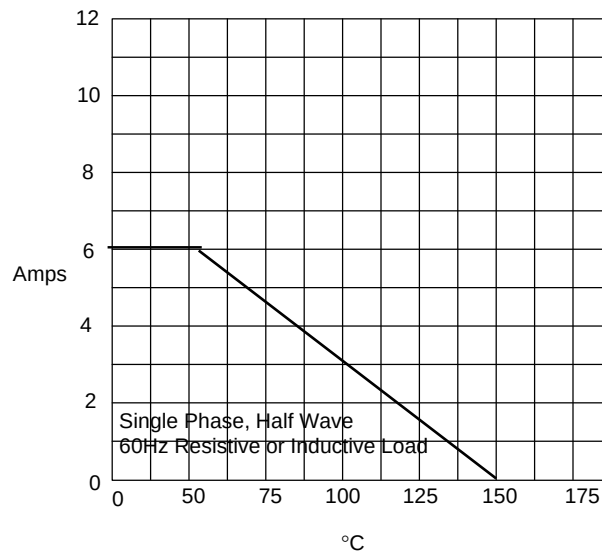
| DIMENSIONS |        |      |       |      |      |
|------------|--------|------|-------|------|------|
| DIM        | INCHES |      | MM    |      | NOTE |
|            | MIN    | MAX  | MIN   | MAX  |      |
| A          | .340   | .360 | 8.60  | 9.10 |      |
| B          | .340   | .360 | 8.60  | 9.10 |      |
| C          | .048   | .052 | 1.20  | 1.30 |      |
| D          | 1.000  | ---  | 25.40 | ---  |      |

Figure 1  
Typical Forward Characteristics



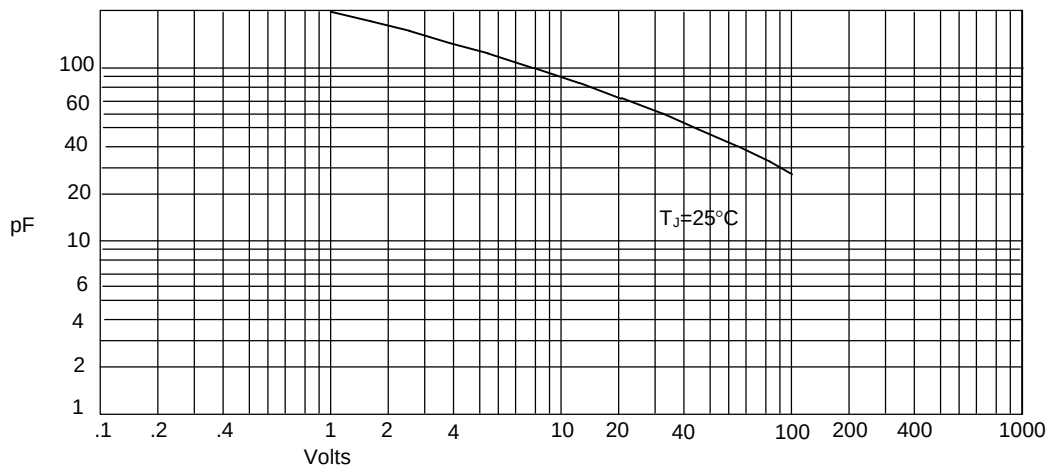
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



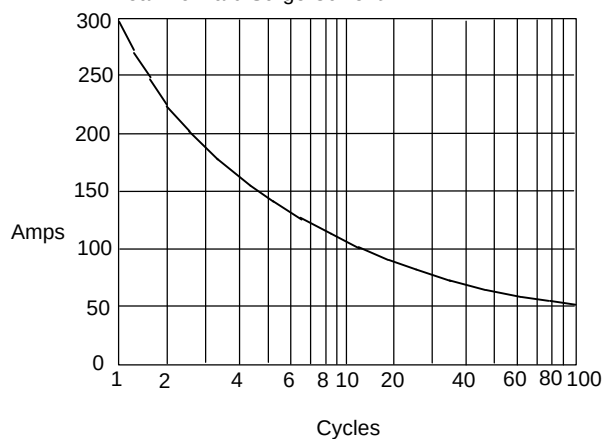
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



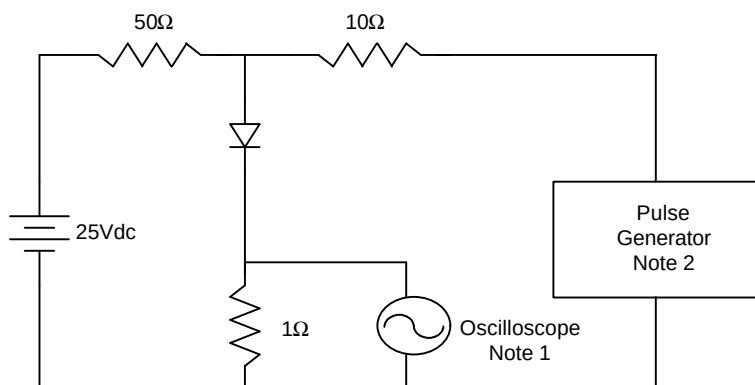
Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 4  
Peak 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

