

## FR601 - FR607

**PRV : 50 - 1000 Volts**  
**Io : 6.0 Amperes**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : Void-free molded plastic body
- \* 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 : 2.1 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

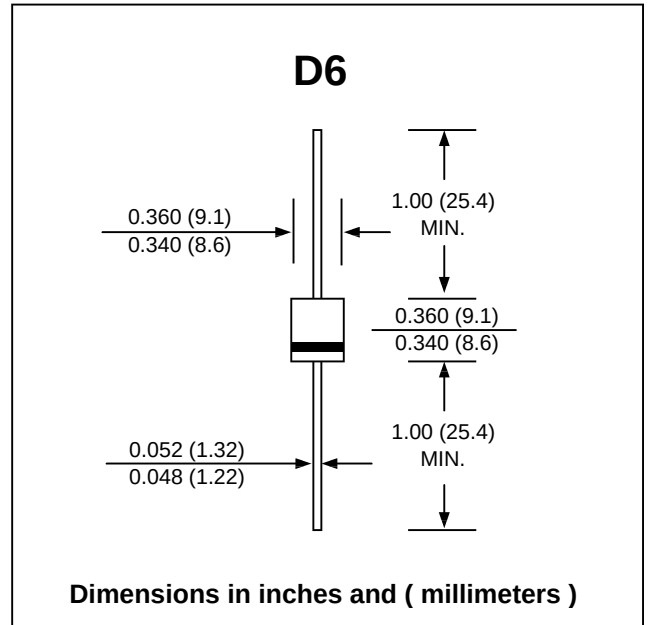
Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| RATING                                                                                                 | SYMBOL | FR601         | FR602 | FR603 | FR604 | FR605 | FR606 | FR607 | UNIT |
|--------------------------------------------------------------------------------------------------------|--------|---------------|-------|-------|-------|-------|-------|-------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                 | VRRM   | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum RMS Voltage                                                                                    | VRMS   | 35            | 70    | 140   | 280   | 420   | 560   | 700   | V    |
| Maximum DC Blocking Voltage                                                                            | VDC    | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum Average Forward Current<br>Half-Wave Resistive Load                      Ta = 75 °C            | IF(AV) | 6.0           |       |       |       |       |       |       | A    |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | IFSM   | 300           |       |       |       |       |       |       | A    |
| Maximum Peak Forward Voltage at IF = 6 A                                                               | VF     | 1.3           |       |       |       |       |       |       | V    |
| Maximum DC Reverse Current at VRRM                                                                     | IR     | 10            |       |       |       |       |       |       | µA   |
| Maximum Reverse Recovery Time ( Note 1 )                                                               | Trr    | 150           |       |       |       | 250   | 500   |       | ns   |
| Junction Temperature Range                                                                             | TJ     | - 65 to + 150 |       |       |       |       |       |       | °C   |
| Storage Temperature Range                                                                              | TSTG   | - 65 to + 150 |       |       |       |       |       |       | °C   |

### Notes :

( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.

## FAST RECOVERY RECTIFIER DIODES



## RATING AND CHARACTERISTIC CURVES ( FR601 - FR607 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

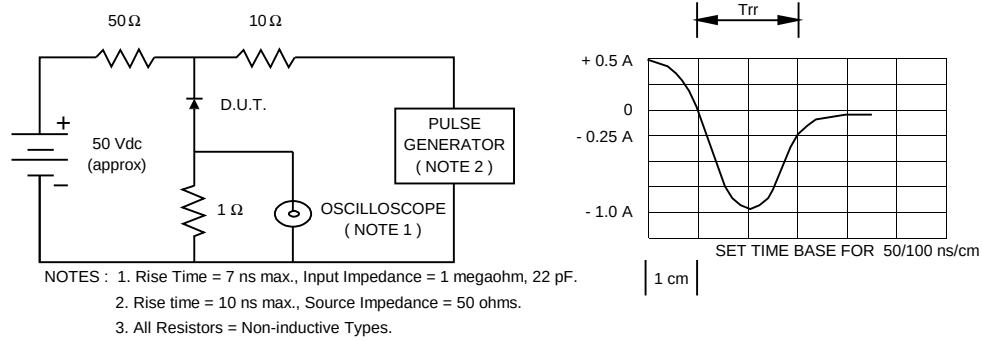


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

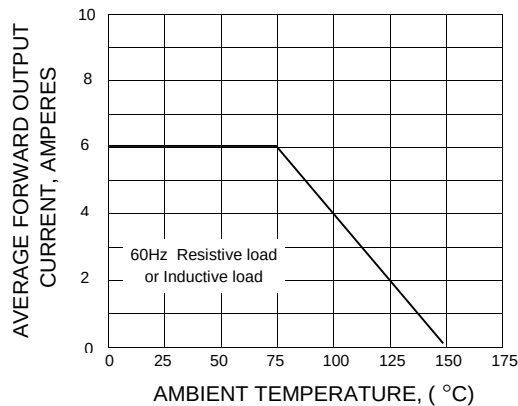


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

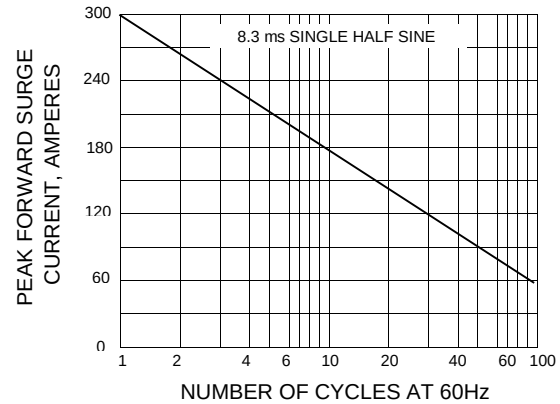


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

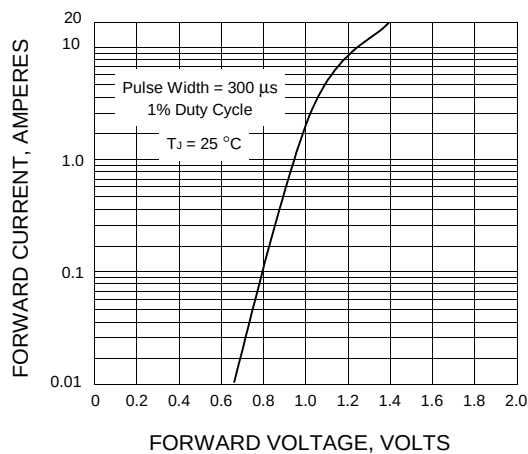


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

