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# MR750FR THRU MR7510FR

## Features

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

## 6 Amp Fast Recovery Rectifier 50 to 1000 Volts

## Maximum Ratings

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

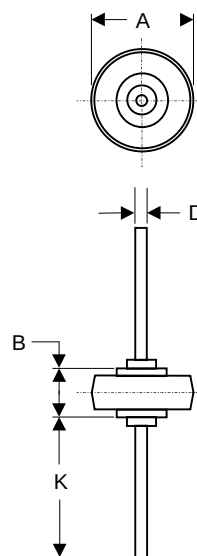
| Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MR750FR        | ---            | 50V                                    | 35V                 | 50V                         |
| MR751FR        | ---            | 100V                                   | 70V                 | 100V                        |
| MR752FR        | ---            | 200V                                   | 40V                 | 200V                        |
| MR754FR        | ---            | 400V                                   | 280V                | 400V                        |
| MR756FR        | ---            | 600V                                   | 420V                | 600V                        |
| MR758FR        | ---            | 800V                                   | 560V                | 800V                        |
| MR7510FR       | ---            | 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           | $I_R$       | 10μA<br>150μA           | $T_A = 25^\circ\text{C}$<br>$T_A = 55^\circ\text{C}$         |
| Maximum Reverse Recovery Time<br>MR750-754<br>MR756<br>MR758-7510 | $T_{rr}$    | 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, $V_R=4.0\text{V}$                     |

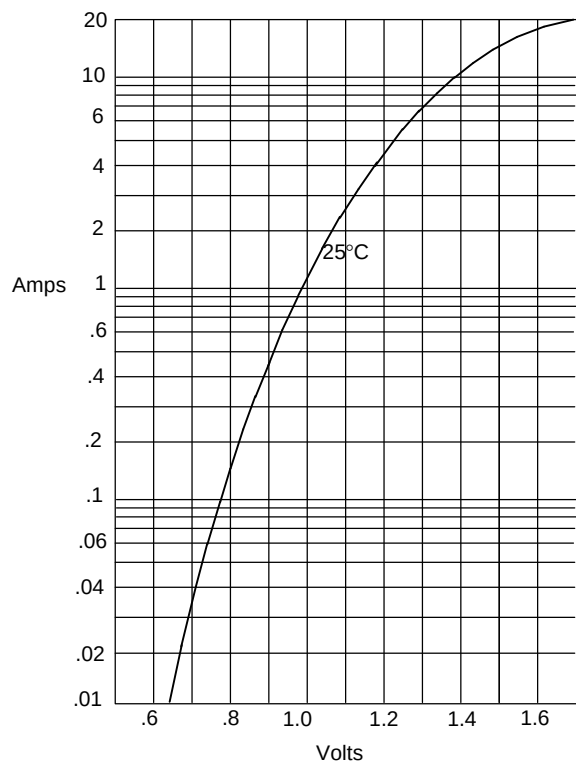
\*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

## LEADED BUTTON



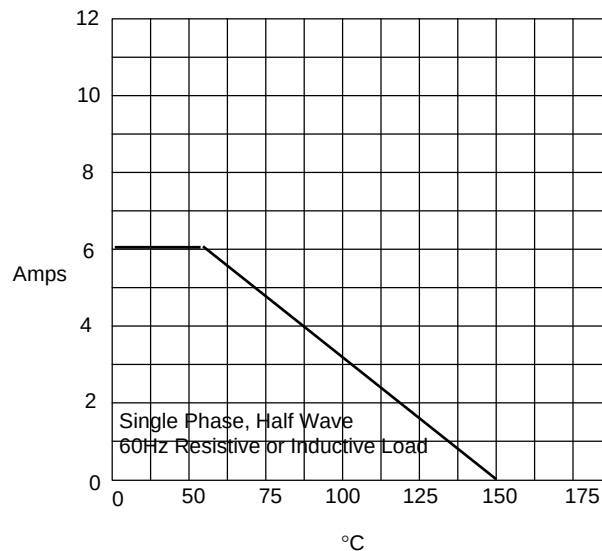
| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| A          | .332   | .342  | 8.43  | 8.69  |      |
| B          | .234   | .246  | 5.94  | 6.25  |      |
| C          | .050   | .053  | 1.27  | 1.35  |      |
| D          | .990   | 1.010 | 25.15 | 25.65 | 2PI  |

Figure 1  
Typical Forward Characteristics



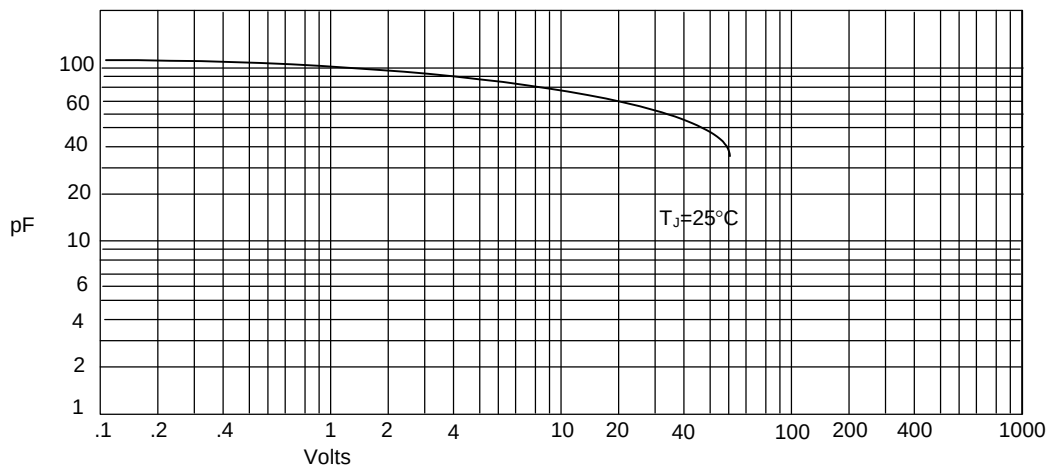
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



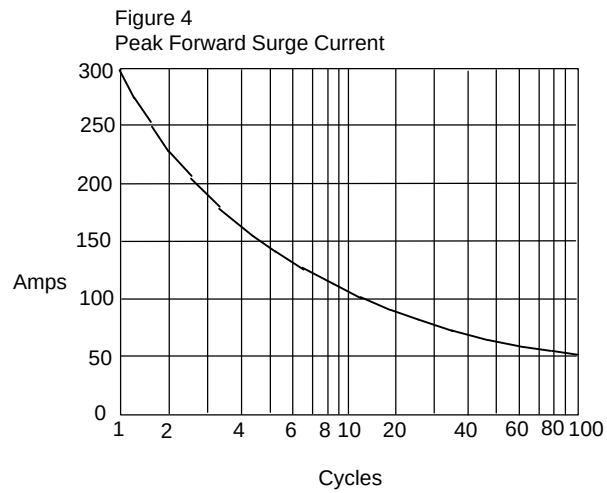
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

# MR750FR thru MR7510FR



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

Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram

