



Micro Commercial Components  
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# PF501 thru PF507

## Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- For Automotive Applications

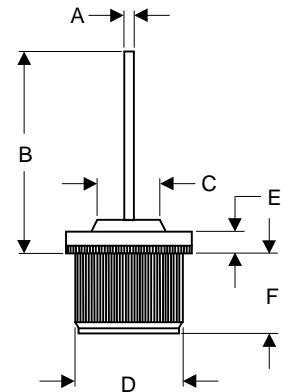
## 50Amp Standard Recovery Rectifier 50 to 1000 Volts

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
  - Storage Temperature: -55°C to +150°C
  - Standard polarity : Case is Cathode ; Lead is Anode
- Note for positive terminal part number is as shown  
 For negative terminal add an "N" to the suffix of the part number . i.e. PF501N

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| PF501              | ---            | 50V                                    | 35V                 | 50V                         |
| PF502              | ---            | 100V                                   | 70V                 | 100V                        |
| PF503              | ---            | 200V                                   | 140V                | 200V                        |
| PF504              | ---            | 400V                                   | 280V                | 400V                        |
| PF505              | ---            | 600V                                   | 420V                | 600V                        |
| PF506              | ---            | 800V                                   | 560V                | 800V                        |
| PF507              | ---            | 1000V                                  | 700V                | 1000V                       |

## PRESSFIT



## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                                     |   |
|---|-------------|-------------------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 50A                                 | $T_A = 125^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 650A                                | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.0V                                | $I_{FM} = 50A;$<br>$T_J = 25^\circ\text{C}^*$         |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 1 $\mu\text{A}$<br>10 $\mu\text{A}$ | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 150pF                               | Measured at 1.0MHz, $V_R=4.0V$                        |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | .097   | .103  | 2.464 | 2.616 |      |
| B   | 1.063  | 1.142 | 27.00 | 29.00 |      |
| C   | -----  | .395  | ----- | 10.04 |      |
| D   | .501   | .505  | 12.73 | 12.82 |      |
| E   | 1.22   | .130  | 3.10  | 3.30  |      |
| E   | .258   | .278  | 6.55  | 7.05  |      |

PF501 thru PF507

Figure 1  
Typical Forward Characteristics

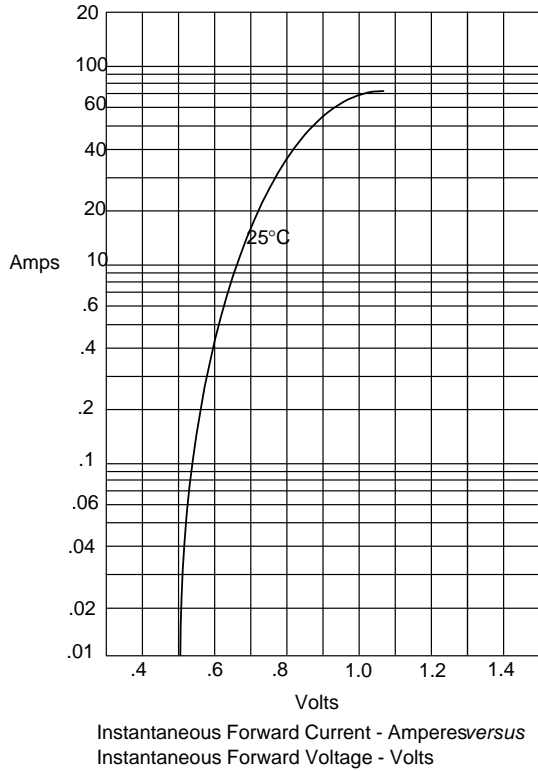


Figure 2  
Forward Derating Curve

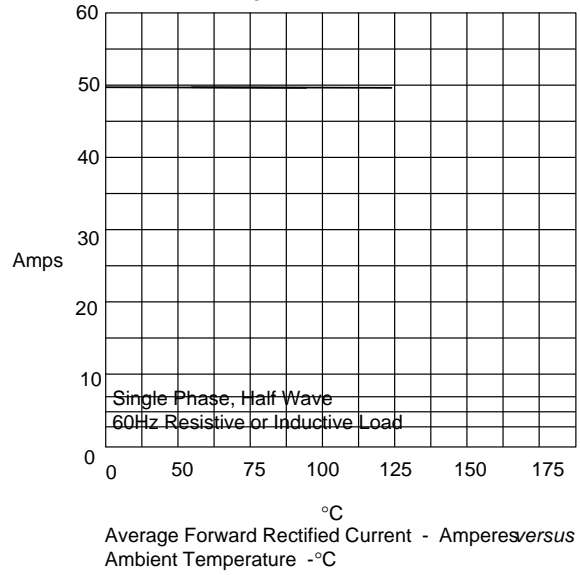


Figure 4  
Peak Forward Surge Current

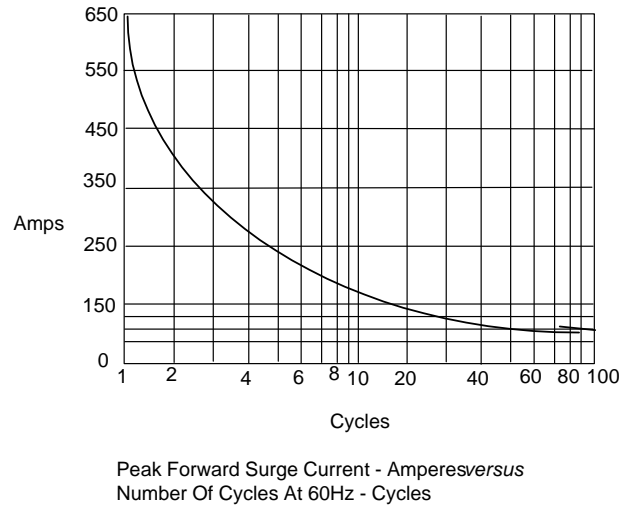


Figure 3  
Junction Capacitance

