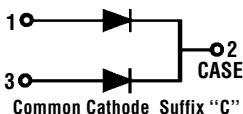
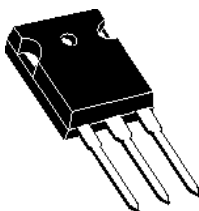
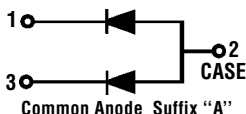
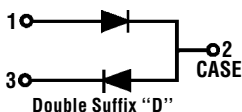
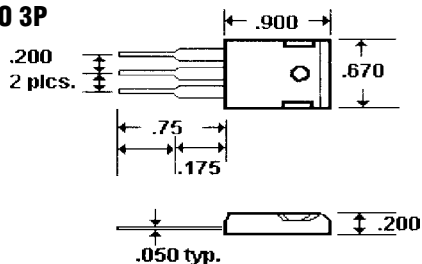


**Description****Mechanical Dimensions****TO 3P****Features**

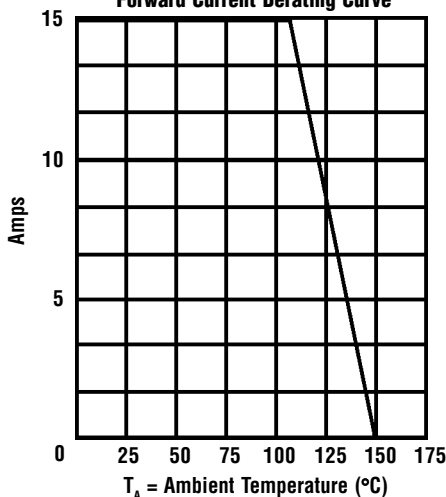
- **LOW FORWARD VOLTAGE**
- **HIGH SURGE CAPABILITY**

- **SUPERFAST RECOVERY TIME**
- **MEETS UL SPECIFICATION 94V-0**

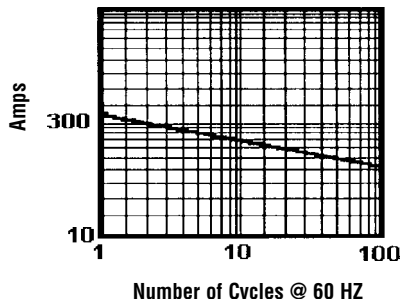
| <b>Electrical Characteristics @ 25°C.</b>                                                                              | <b>VF30C05 . . . 60 Series</b> |           |           |           |            |           |           |           | <b>Units</b>     |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|------------------|
| <b>Maximum Ratings</b>                                                                                                 | <b>05</b>                      | <b>10</b> | <b>15</b> | <b>20</b> | <b>30</b>  | <b>40</b> | <b>50</b> | <b>60</b> |                  |
| Peak Repetitive Reverse Voltage... $V_{RRM}$                                                                           | 50                             | 100       | 150       | 200       | 300        | 400       | 500       | 600       | Volts            |
| Working Peak Reverse Voltage... $V_{RWM}$                                                                              | 50                             | 100       | 150       | 200       | 300        | 400       | 500       | 600       | Volts            |
| DC Blocking Voltage... $V_{DC}$                                                                                        | 50                             | 100       | 150       | 200       | 300        | 400       | 500       | 600       | Volts            |
| RMS Reverse Voltage... $V_{R(rms)}$                                                                                    | 35                             | 70        | 105       | 140       | 210        | 280       | 350       | 420       | Volts            |
| Average Forward Rectified Current... $I_{F(av)}$<br>$T_C = 150^\circ\text{C}$ @ Rated $V_{DC}$                         | .....                          | .....     | .....     | .....     | 15         | .....     | .....     | .....     | Amps             |
|                                                                                                                        | .....                          | .....     | .....     | .....     | 30         | .....     | .....     | .....     | Amps             |
| Repetitive Peak Forward Surge Current... $I_{FM}$<br>@ Rated $V_{DC}$ , Square Wave, 20 KHZ, $T_C = 150^\circ\text{C}$ | .....                          | .....     | .....     | .....     | 30         | .....     | .....     | .....     | Amps             |
| Non-Repetitive Peak Forward Surge Current... $I_{FSM}$<br>@ Rated Load Cond., 1/2 Wave, Single Phase, 60HZ             | .....                          | .....     | .....     | .....     | 300        | .....     | .....     | .....     | Amps             |
| Forward Voltage... $V_F$<br>@ $I_F = 15$ Amps, PW = 300 $\mu$ s<br>$T_C = 150^\circ\text{C}$                           | < .....                        | 1.0       | .....     | < ...     | 1.1        | .....     | < .....   | 1.3       | Volts            |
| $T_C = 25^\circ\text{C}$                                                                                               | < .....                        | 1.4       | .....     | < ...     | 1.4        | .....     | < .....   | 1.6       | Volts            |
| DC Reverse Current... $I_R$<br>@ Rated DC Blocking Voltage<br>$T_C = 150^\circ\text{C}$                                | < .....                        | 250       | .....     | < .....   | 500        | .....     | < .....   | .....     | $\mu$ Amps       |
| $T_C = 25^\circ\text{C}$                                                                                               | < .....                        | 5.0       | .....     | < .....   | 10         | .....     | < .....   | .....     | $\mu$ Amps       |
| Reverse Recovery Time... $t_{RR}$<br>$I_F = 1.0$ Amp, di/dt = 50 Amps/ $\mu$ S                                         | < .....                        | 50        | .....     | < .....   | 75         | .....     | < .....   | .....     | nS               |
| Operating & Storage Temperature Range... $T_J, T_{STRG}$                                                               | .....                          | .....     | .....     | .....     | -65 to 175 | .....     | .....     | .....     | $^\circ\text{C}$ |



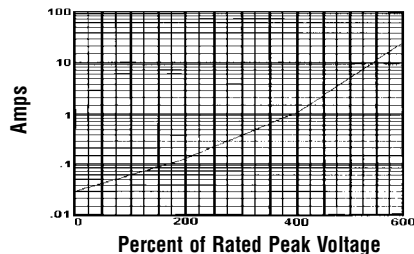
**Forward Current Derating Curve**



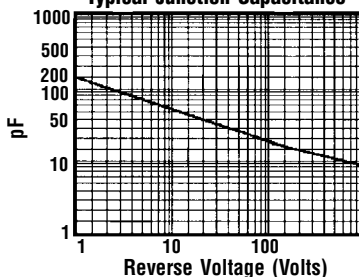
**Non-Repetitive  
Peak Forward Surge Current**



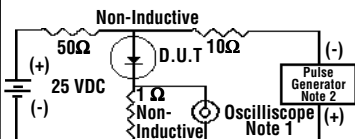
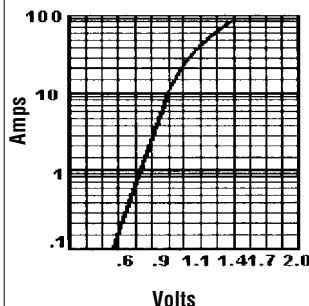
**Typical Reverse Characteristics**



**Typical Junction Capacitance**



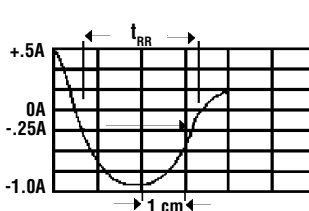
**Typical Instantaneous  
Forward Characteristics**



Notes:

1. Rise Time = 7 nS Max.  
Impedance = 1 megohm, 22 pF
2. Rise Time = 10 nS Max.  
Source Impedance = 50 Ohms

**Reverse Recovery  
Characteristics**



Time Base Set @ 50/100nS/cm

Ratings at  
25 Deg. C ambient  
temperature  
unless otherwise  
specified.

Single Phase Half  
Wave, 60 HZ  
Resistive or  
Inductive Load.

For Capacitive  
Load, Derate  
Current by 20%.