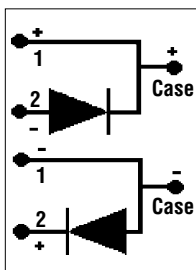
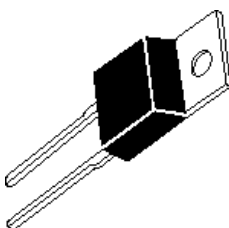
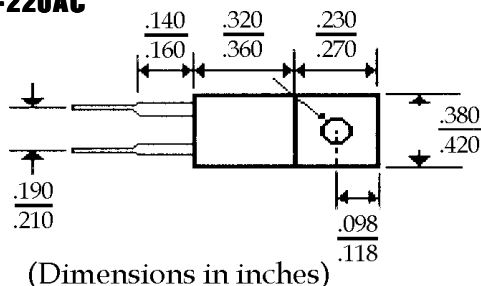


# 8.0 Amp FAST RECOVERY PLASTIC RECTIFIERS

## Mechanical Dimensions

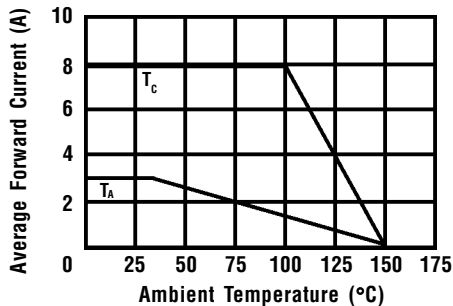
**JEDEC  
 TO-220AC**


### Features

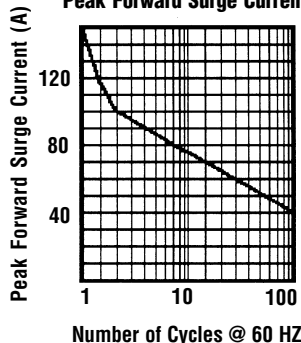
- FAST SWITCHING FOR HIGH EFFICIENCY
- HIGH SURGE CAPABILITY
- 8.0 AMP OPERATION @  $T_A = 55^\circ\text{C}$ , WITH NO THERMAL RUNAWAY
- MEETS UL SPECIFICATION 94V-0

| FR80 . . . 810 Series  |            |      |      |      |      |      |       | Units                    |
|--|------------|------|------|------|------|------|-------|--------------------------|
| Maximum Ratings  | FR80       | FR81 | FR82 | FR84 | FR86 | FR88 | FR810 |                          |
| Peak Repetitive Reverse Voltage... $V_{RRM}$                                     | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | Volts                    |
| RMS Reverse Voltage... $V_{R(rms)}$  | 35         | 70   | 140  | 280  | 420  | 560  | 700   | Volts                    |
| DC Blocking Voltage... $V_{DC}$  | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | Volts                    |
| Average Forward Rectified Current... $I_{F(av)}$<br>$T_c = 100^{\circ}C$         | 8.0        |      |      |      |      |      |       | Amps                     |
| Non-Repetitive Peak Forward Surge Current... $I_{FSM}$<br>@ Rated Current & Temp | 150        |      |      |      |      |      |       | Amps                     |
| Operating & Storage Temperature Range... $T_J, T_{STRG}$                         | -50 to 150 |      |      |      |      |      |       | $^{\circ}C$              |
| Electrical Characteristics   |            |      |      |      |      |      |       |                          |
| Maximum Forward Voltage @ 8.0A... $V_F$  | 1.3        |      |      |      |      |      |       | Volts                    |
| Maximum DC Reverse Current... $I_R$<br>@ Rated DC Blocking Voltage               | 10<br>250  |      |      |      |      |      |       | $\mu$ Amps<br>$\mu$ Amps |
| Typical Junction Capacitance... $C_J$ (Note 1)                                   | 55         |      |      |      |      |      |       | pF                       |
| Maximum Reverse Recovery Time... $t_{RR}$  | 150        | 150  | 150  | 150  | 250  | 500  | 500   | ns                       |

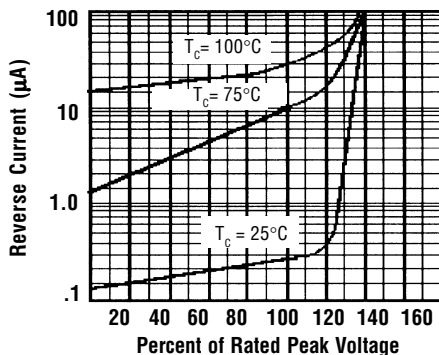
**Forward Current Derating Curve**



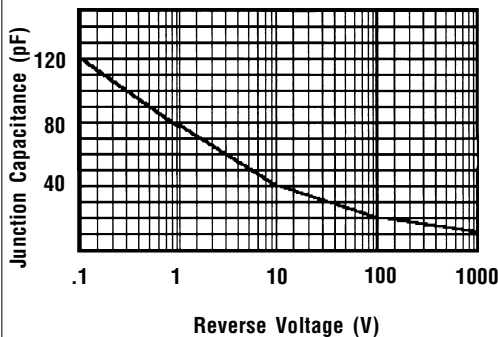
**Non-Repetitive  
Peak Forward Surge Current**



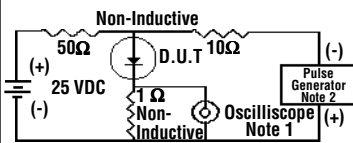
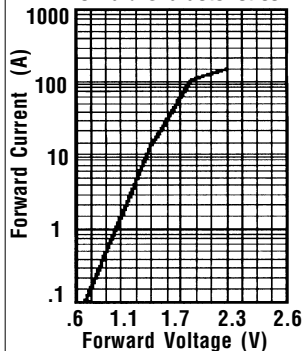
**Typical Reverse Characteristics**



**Typical Junction Capacitance**



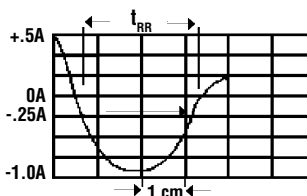
**Typical Instantaneous  
Forward Characteristics**



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**



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%.

**NOTES:** 1. Measured @ 1 MHz and applied reverse voltage of 4.0V.  
2. Thermal Resistance Junction to Case, Jedec Method.