



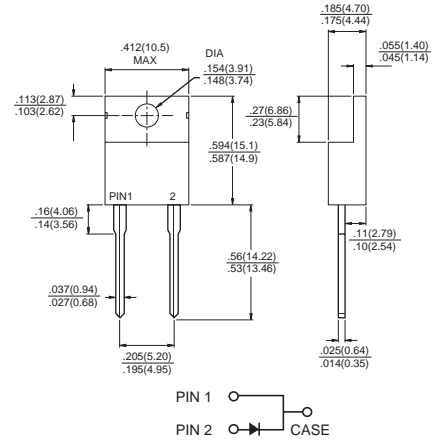
### TO-220AC

### Features

- ◇ Low Reverse Recovery Time
- ◇ Low Leakage
- ◇ Low Forward Voltage Drop
- ◇ High Current Capability
- ◇ High Surge Capability
- ◇ Plastic Material - UL Flammability Rating 94V-0
- ◇ High Reliability

### Mechanical Data

- ◇ Case: TO-220AC, Molded Plastic
- ◇ Polarity: See Diagram at Right
- ◇ Approx. Weight: 2.24 grams
- ◇ Mounting Position: Any



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25° C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.

Characteristic	Symbol	FR801	FR802	FR803	FR804	FR805	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	V
Maximum DC Blocking voltage	V <sub>DC</sub>	50	100	200	400	600	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length @ T <sub>C</sub> = 100°C	I <sub>(AV)</sub>	8.0					A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150					A
Maximum Instantaneous Forward Voltage @ 8.0A DC	V <sub>F</sub>	1.3					V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> = 25°C	I <sub>R</sub>	10					μA
Maximum Full Load Reverse Current Full Cycle @ T <sub>C</sub> = 100°C	I <sub>R</sub>	150					μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150			250		ns
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	70					pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175					°C

Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>RR</sub> = 0.25 A  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V.



# FR801-FR805

## 8.0A Fast Recovery Rectifier

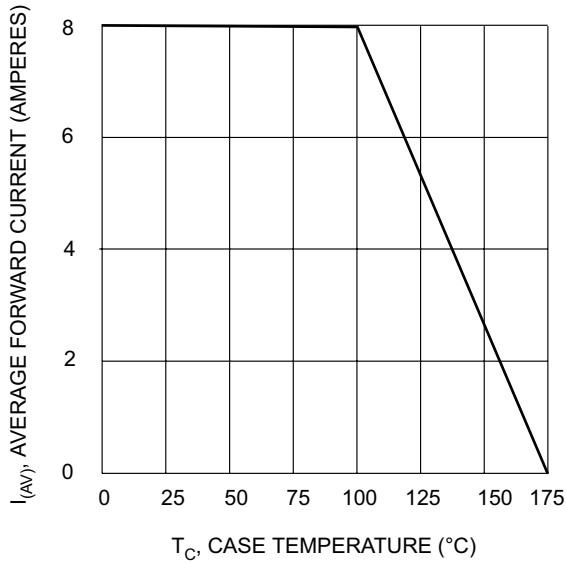


Fig. 1, Forward Current Derating Curve

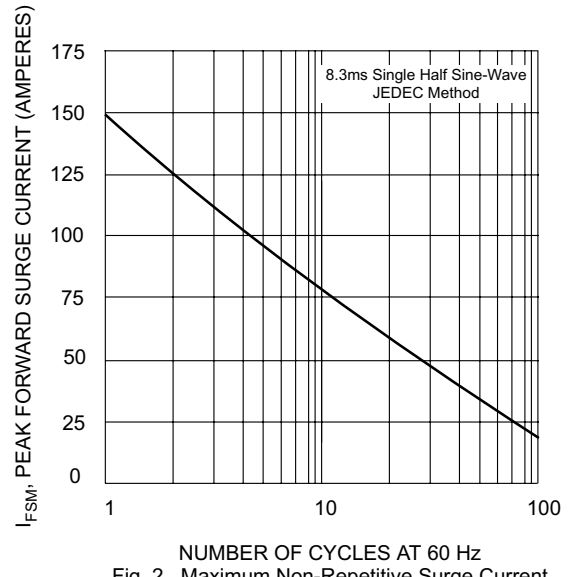


Fig. 2, Maximum Non-Repetitive Surge Current

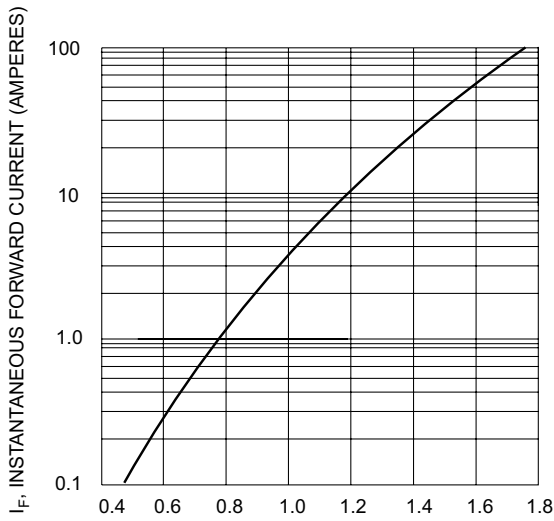


Fig. 3, Typical Instantaneous Forward Characteristics

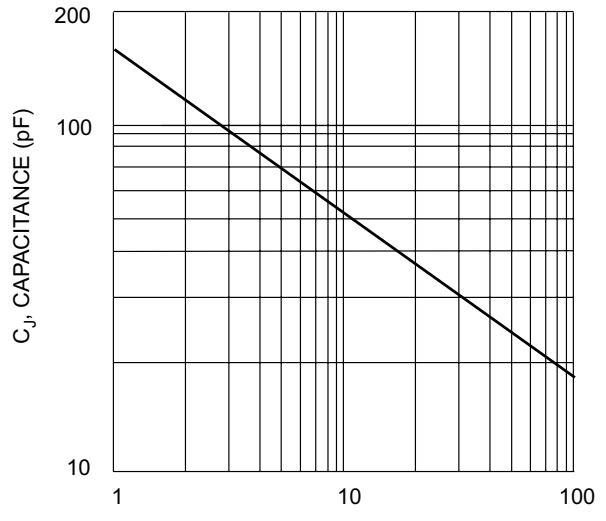


Fig. 4, Typical Junction Capacitance

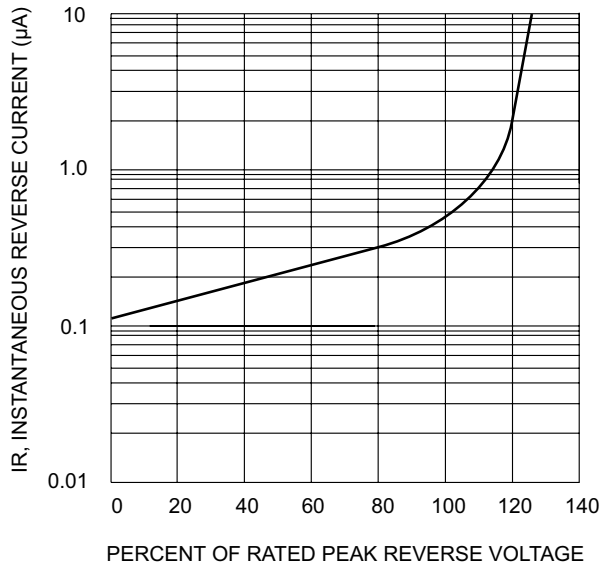


Fig. 5, Typical Reverse Characteristics