

# FR801 - FR805

**PRV : 50 - 600 Volts**  
**Io : 8.0 Amperes**

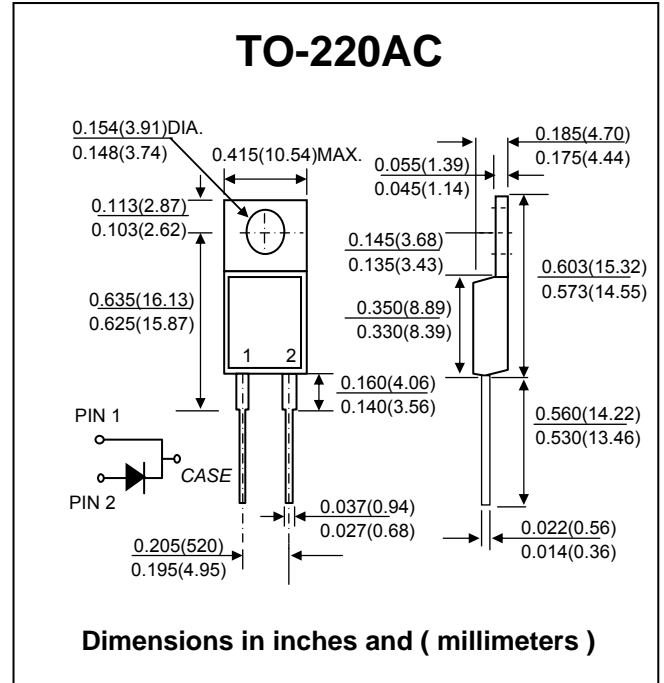
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : Epoxy, Molded
- \* Lead Temperature for Soldering Purposes:  
260°C Max. for 10 Seconds
- \* Polarity: As marked
- \* Mounting Position: Any
- \* Weight : 2.24 grams (Approximately)

# FAST RECOVERY RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

RATING	SYMBOL	FR801	FR802	FR803	FR804	FR805	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V
Maximum Average Forward Current Half-Wave Resistive Load $T_c = 100^\circ C$	$I_{F(AV)}$	8.0					A
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	150					A
Maximum Peak Forward Voltage at $I_F = 8 A$	$V_F$	1.3					V
Maximum Reverse Current at $T_c = 25^\circ C$	$I_R$	10					$\mu A$
Rated DC Blocking Voltage $T_c = 100^\circ C$	$I_{R(H)}$	150					$\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	150			250		ns
Typical Junction Capacitance( Note 2)	$C_J$	70					pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	- 65 to + 175					$^\circ C$

### Notes :

- (1) Reverse Recovery Test Conditions :  $I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A.$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V.

## RATING AND CHARACTERISTIC CURVES ( FR801 - FR805 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

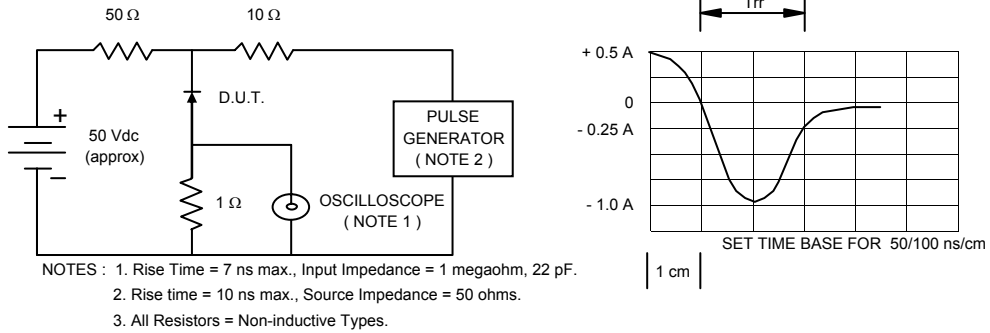


FIG.2 - FORWARD CURRENT DERATING CURVE

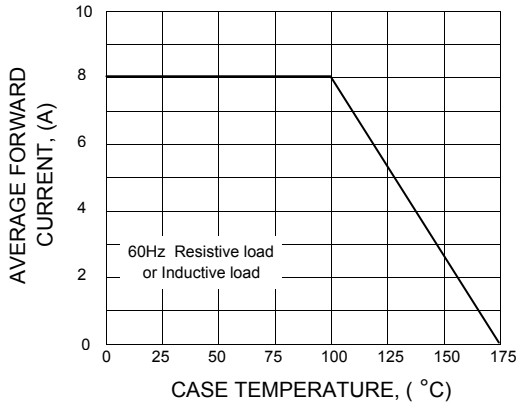


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

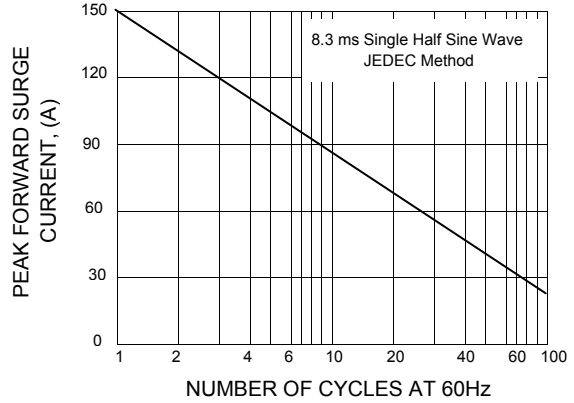


FIG.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

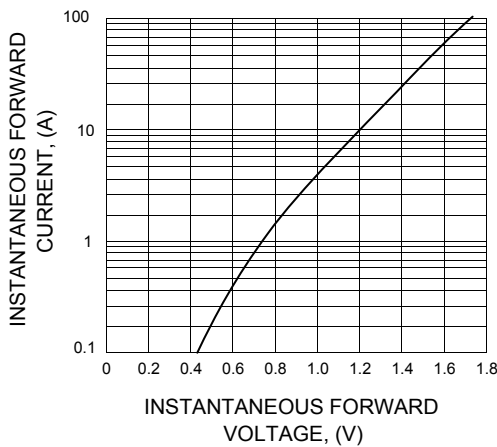


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

