

FR801 - FR805

PRV : 50 - 600 Volts

Io : 8.0 Amperes

FEATURES :

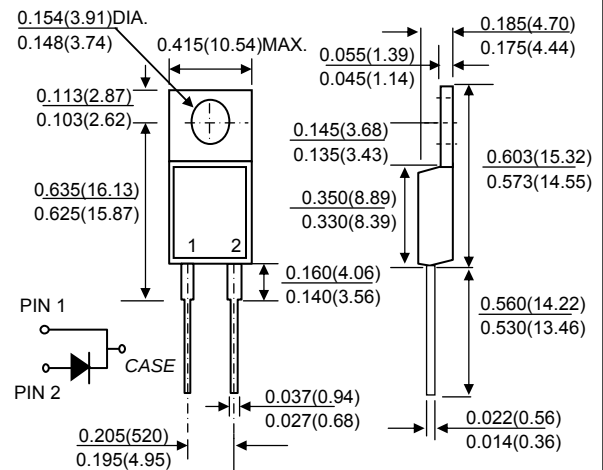
- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * **Pb / RoHS Free**

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

TO-220AC



Dimensions in inches and (millimeters)

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 Tc = 100 °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 Tc = 25 °C	I _R	10					μA
Rated DC Blocking Voltage Tc = 100 °C	I _{R(H)}	150					μA
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					°C

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (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

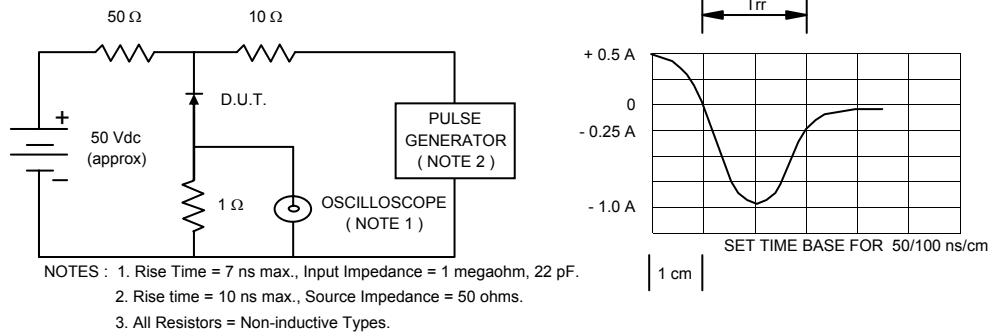


FIG.2 - FORWARD CURRENT DERATING CURVE

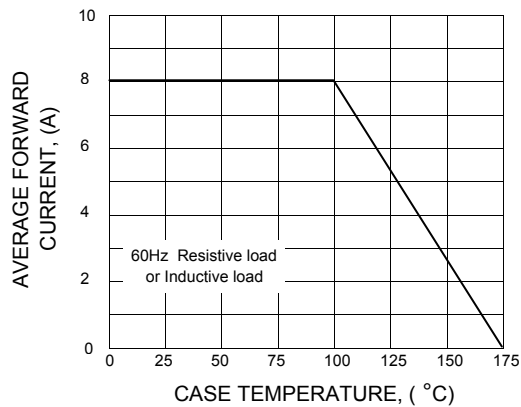


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

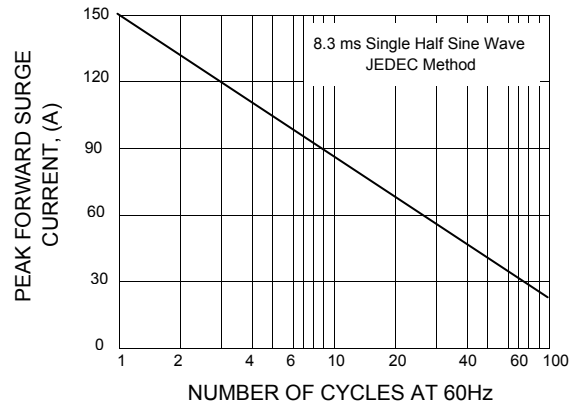


FIG.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

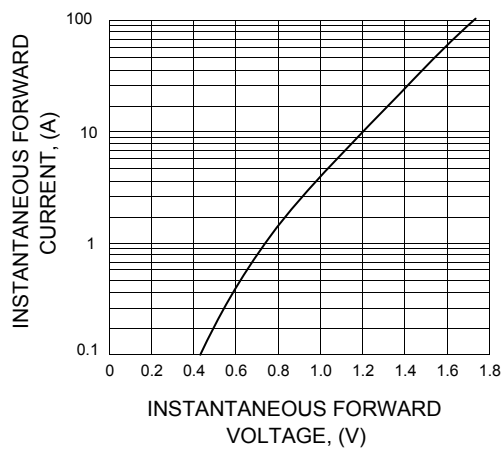


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

