

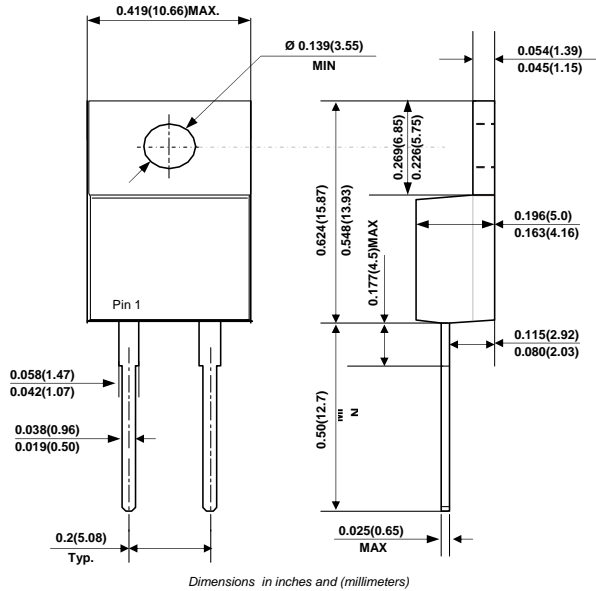


FR801T THRU FR807T

SUPERFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 8.0 Ampere

TO-220AC



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- ◆ Flame Retardant Epoxy Molding Compound.
- ◆ Exceeds environmental of MIL-S-19500/228
- ◆ Low power loss, high efficiency.
- ◆ Low forward voltage, high current capability.
- ◆ High surge capability.
- ◆ Super fast recovery times, high voltage.
- ◆ Epitaxial chip construction.
- ◆ In compliance with EU RoHS 2002/95/EC directives.

MECHANICAL DATA

Case: TO-220AC, Molded plastic.

Terminals: Solderable per MIL-STD-750 Method 2026

Weight: 1.859 gram (0.0655 ounces).

Standard Packaging : Tube.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOLS	FR 801T	FR 802T	FR 803T	FR 804T	FR 805T	FR 806T	FR 807T	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Minimum DC Breakdown Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average Rectified current at $T_L = 100^\circ\text{C}$	$I_{(AV)}$	8.0							Amp
Non-repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							Amps
Maximum Forward Voltage at $I_F = 8.0\text{A}$	V_F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	10.0 100							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	150				250	500		nS
Typical Junction Capacitance (NOTE 2)	C_J	15							pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$	20							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150							$^\circ\text{C}$

- Note:**
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.
 3. Both Bonding and Chip structure are available.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

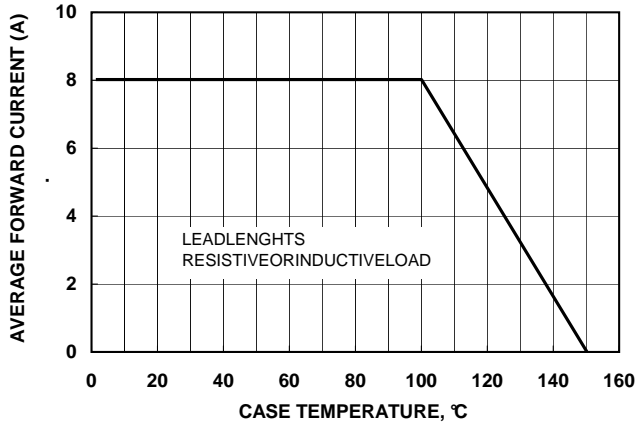


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

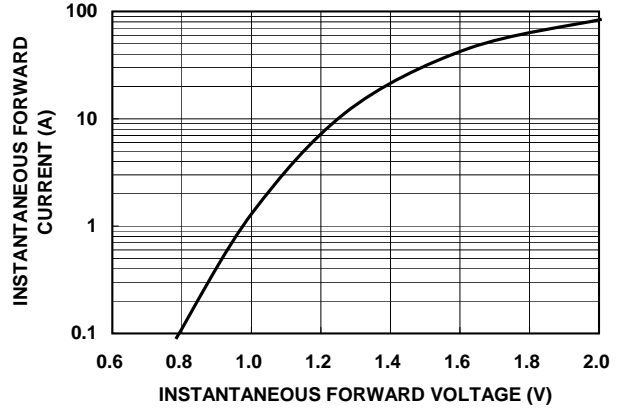


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

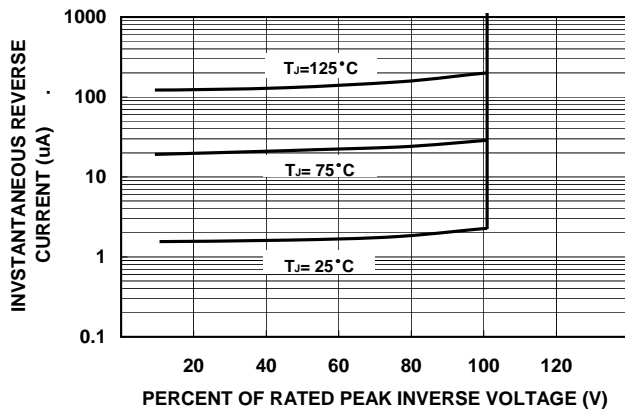


FIG. 4-MAXIMUM NON-REPETITIVE SURGE CURRENT

