



ER800~ER806

SUPERFAST RECOVERY RECTIFIERS

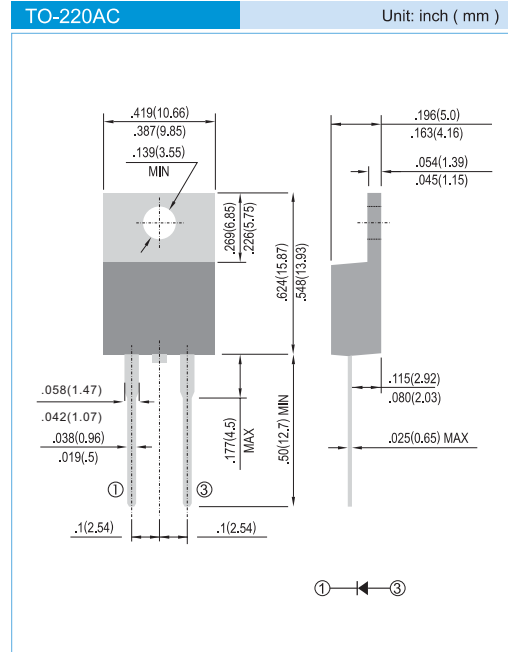
VOLTAGE 50 to 600 Volts **CURRENT** 8.0 Amperes

FEATURES

- Superfast recovery times-epitaxial construction.
- Low forward voltage, high current capability.
- Exceeds environmental standards of MIL-S-19500/228.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: Molded plastic, TO-220AC
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: As marking
- Weight: 0.0655 ounces, 1.859 grams.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	ER800	ER801	ER801A	ER802	ER803	ER804	ER806	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Current at $T_c=75^\circ\text{C}$	$I_{F(AV)}$	8.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125							A
Maximum Forward Voltage at 8.0A (Note 1)	V_F	0.95			1.3		1.7	V	
Maximum DC Reverse Current $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_j=100^\circ\text{C}$	I_R	1.0			300			μA	
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35			50			ns	
Typical Junction capacitance (Note 2)	C_j	65							pF
Typical thermal Resistance (Note 3)	$R_{\theta JC}$	3.0							$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_j, T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

1. Pulse Test with PW=300 usec, 2% Duty Cycle.
2. Reverse Recovery Tset Conditions: $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
3. Mounted on P.C. Board with 14mm² (.013mm thick) copper pad areas.



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RATING AND CHARACTERISTIC CURVES

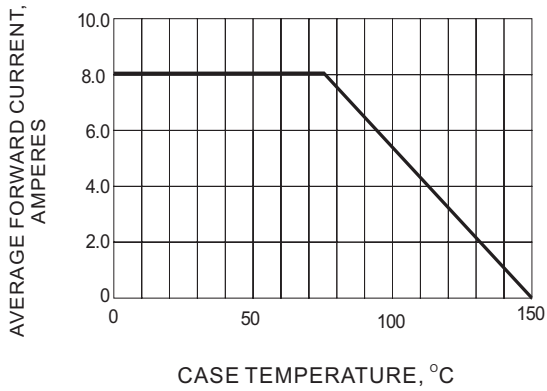


Fig.1-FORWARD CURRENT DERATING CURVE

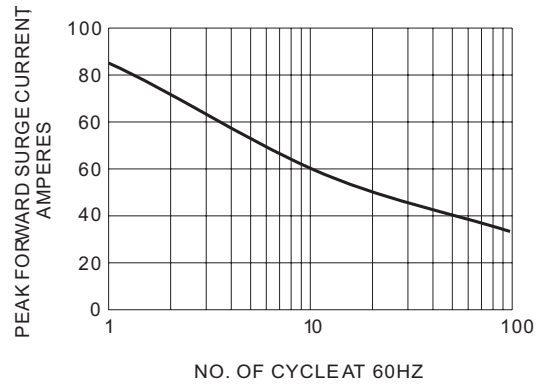


Fig.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

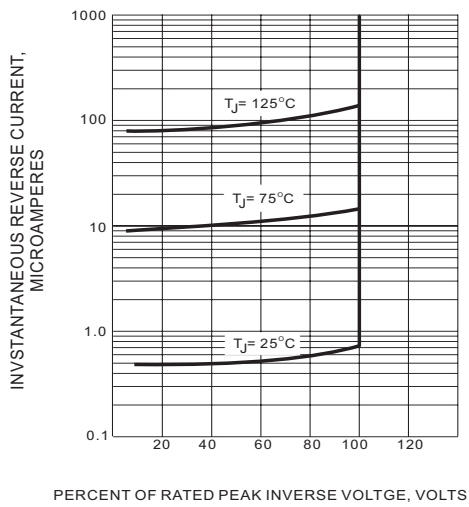


Fig.3-TYPICAL REVERSE CHARACTERISTICS

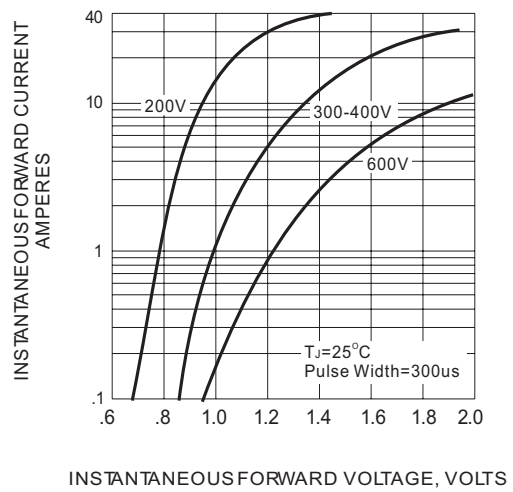


Fig.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS