

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 8.0 Amperes

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High fast switching capability
- * High surge capability

MECHANICAL DATA

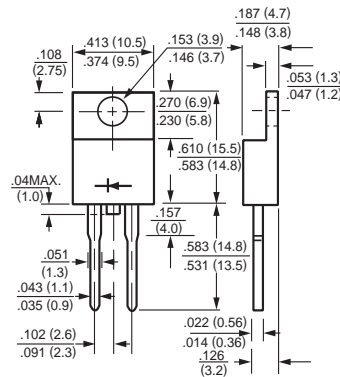
- * Case: TO-220A molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



TO-220A



MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	HER801	HER802	HER803	HER804	HER805	HER805P	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	400	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	280	Volts
Maximum DC Blocking Voltage	V_{bc}	50	100	200	300	400	400	Volts
Maximum Average Forward Rectified Current at $T_c = 75^\circ\text{C}$	I_O	8.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200						Amps
Typical Thermal Resistance	$R_{\theta JC}$	2.5						$^\circ\text{C/W}$
Typical Junction Capacitance (Note 2)	C_J	40						pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 150						$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER801	HER802	HER803	HER804	HER805	HER805P	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V_F	1.0			1.3		1.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	10			150			uAmps
Maximum Reverse Recovery Time (Note 1)	t_{rr}	50						nSec

NOTES : 1. Test Conditions: $I_F = 0.5A$, $I_R = -1.0A$, $I_{RR} = 0.25A$
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTIC CURVES (HER801 THRU HER805)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

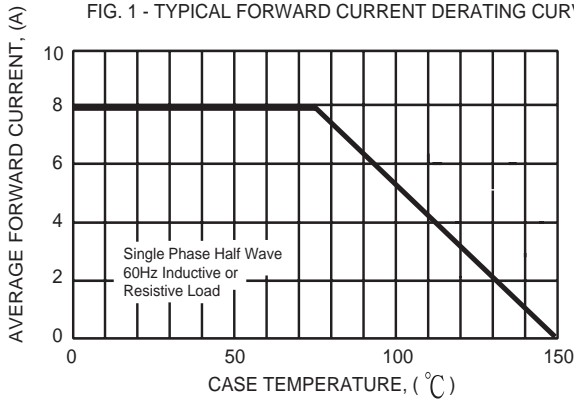


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

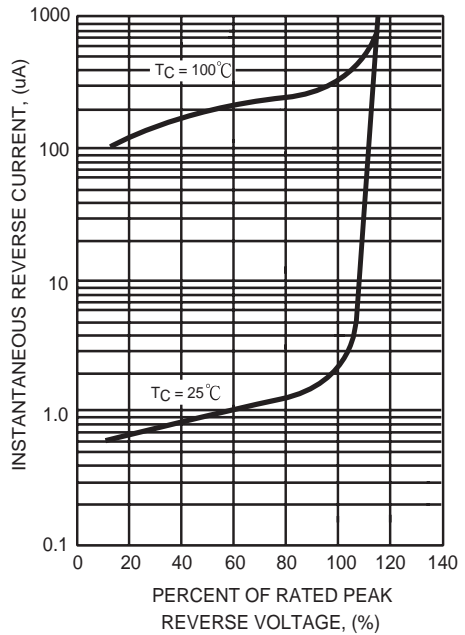


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

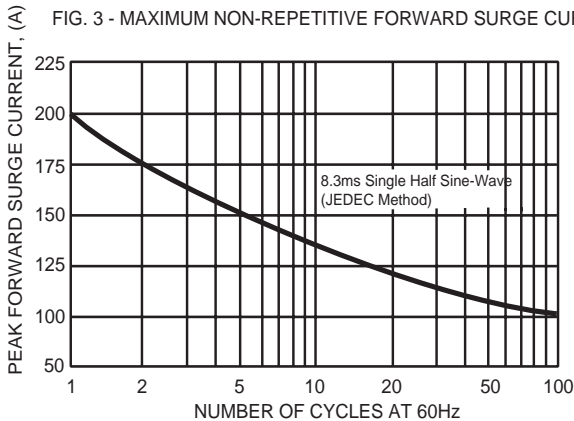


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

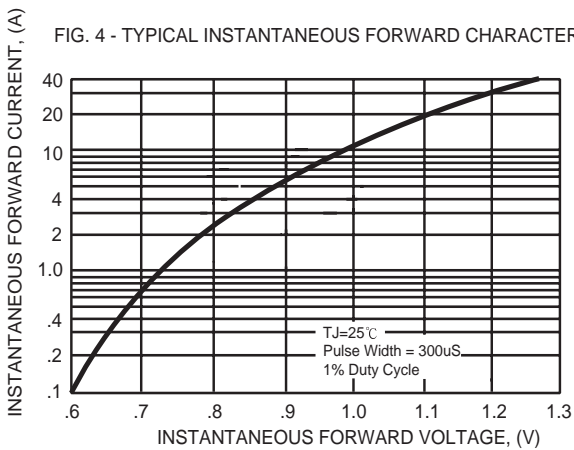


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

