

**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**

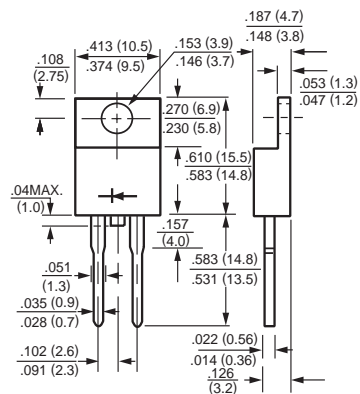
- \* Case: TO-220A molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.24 grams

**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 TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	HER801	HER802	HER803	HER804	HER805	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	Volts
Maximum Average Forward Rectified Current at T <sub>c</sub> = 75°C	I <sub>O</sub>	8.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200					Amps
Typical Thermal Resistance	R <sub>θJC</sub>	2.5					°C/W
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	40					pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150					°C

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER801	HER802	HER803	HER804	HER805	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V <sub>F</sub>	1.0			1.3		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	10			150		uAmps
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	50					nSec

NOTES : 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = -1.0A, I<sub>RR</sub> = -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

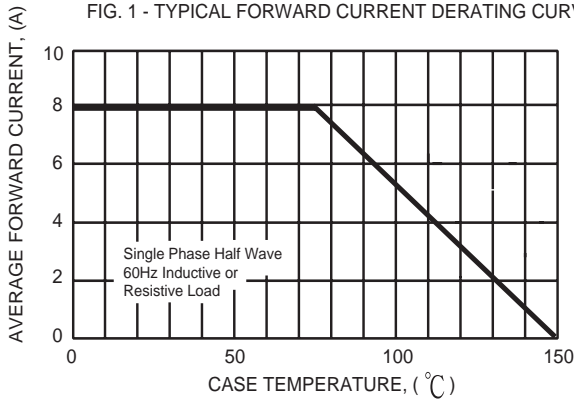


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

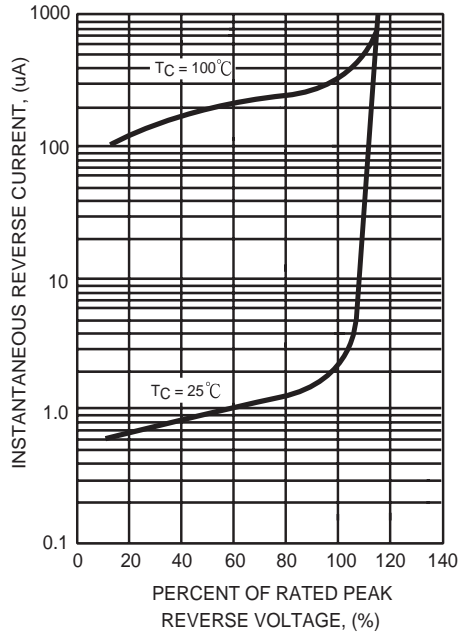


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

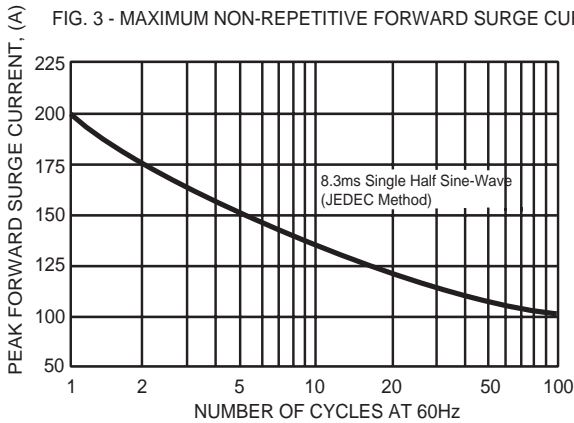


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

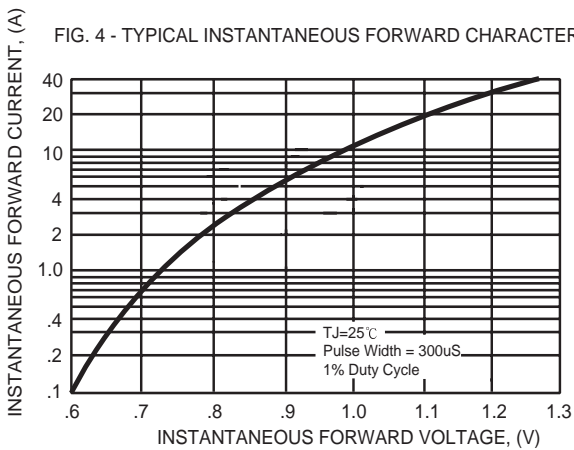


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

