

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 30 Amperes

FEATURES

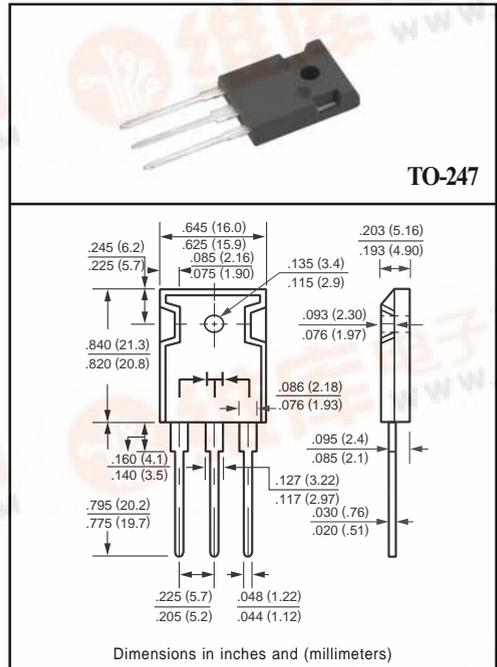
- * Low power loss, high efficiency
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High reliability
- * High surge capability

MECHANICAL DATA

- * Case: TO-247 molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 5.60 grams
- * Polarity: As marked

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%.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	HER3001C	HER3002C	HER3003C	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	Volts
Maximum RMS Voltage	VRMS	35	70	140	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	Volts
Maximum Average Forward Rectified Current at Tc = 75°C	IO	30			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	300			Amps
Typical Thermal Resistance	RθJC	1.0			°C/W
Typical Junction Capacitance (Note 2)	CJ	125			pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 150			°C

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

CHARACTERISTICS	SYMBOL	HER3001C	HER3002C	HER3003C	UNITS
Maximum Instantaneous Forward Voltage at 15.0A DC	VF	1.0			Volts
Maximum DC Reverse Current @ Tc = 25°C	IR	10			uAmps
Maximum DC Reverse Current at Rated DC Blocking Voltage @ Tc = 100°C		150			
Maximum Reverse Recovery Time (Note 1)	trr	50			nSec

NOTES: 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Reverse recovery time is measured at 100°C.

RATING AND CHARACTERISTIC CURVES (HER3001C THRU HER3003C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

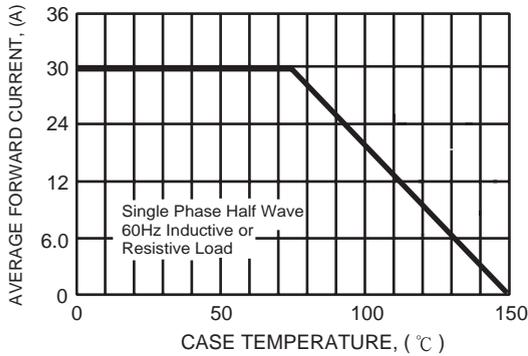


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

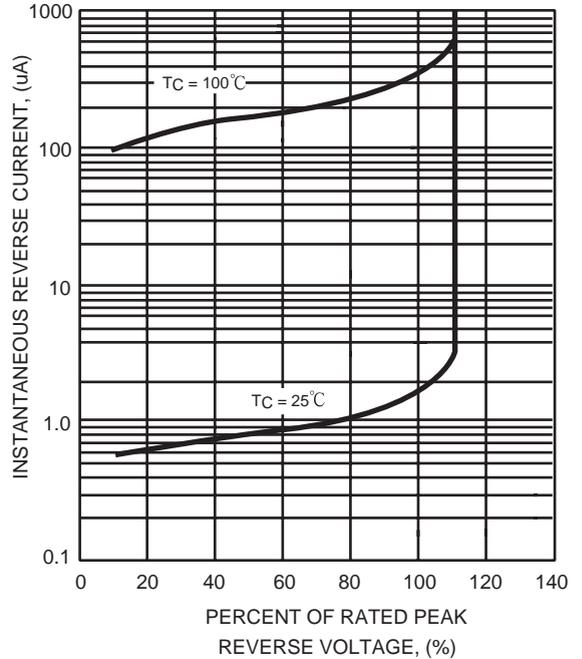


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

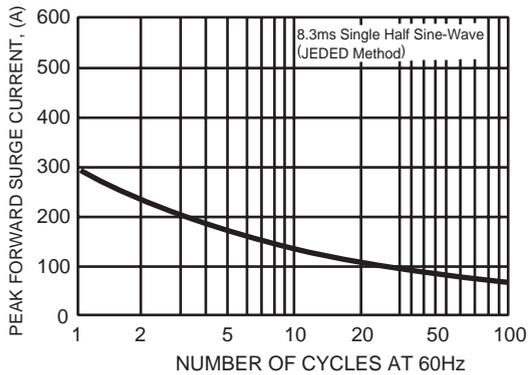


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

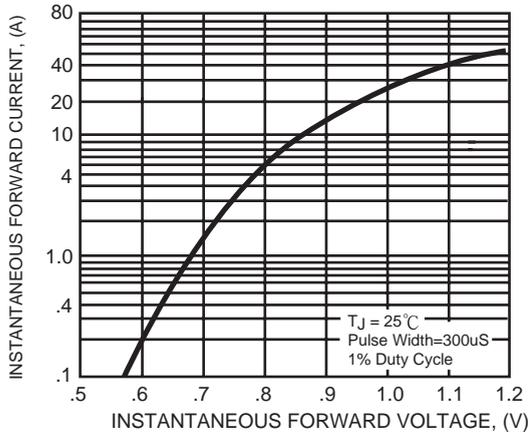


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

