RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

HER3001C THRU HER3003C

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 30 Amperes

FEATURES

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

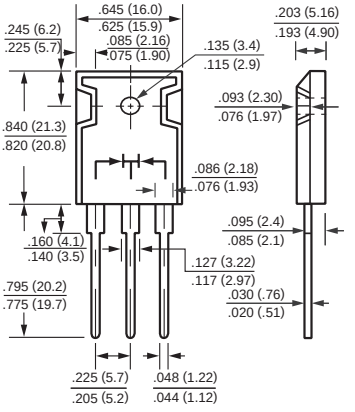
MECHANICAL DATA

* Case: TO-247 molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* 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%.

TO-247



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	HER3001C	HER3002C	HER3003C	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	Volts
Maximum Average Forward Rectified Current at T_C = 75°C	I_O	30			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300			Amps
Typical Thermal Resistance	$R_{\theta JC}$	1.0			°C/W
Typical Junction Capacitance (Note 2)	C_J	125			pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150			°C

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

CHARACTERISTICS		SYMBOL	HER3001C	HER3002C	HER3003C	UNITS
Maximum Instantaneous Forward Voltage at 15.0A DC		V_F	1.0			Volts
Maximum DC Reverse Current	@T_C = 25°C	I_R	10			uAmps
at Rated DC Blocking Voltage	@T_C = 100°C		150			
Maximum Reverse Recovery Time (Note 1)		trr	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 "A" = Common Anode.

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RATING AND CHARACTERISTIC CURVES (HER3001C THRU HER3003C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

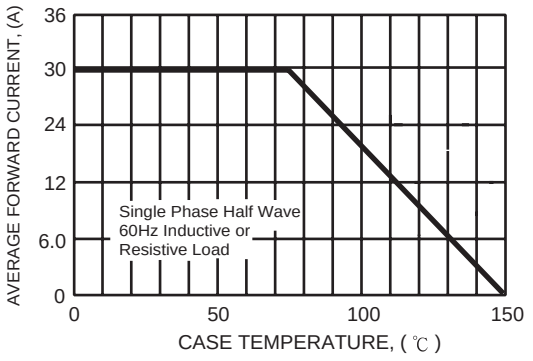

FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

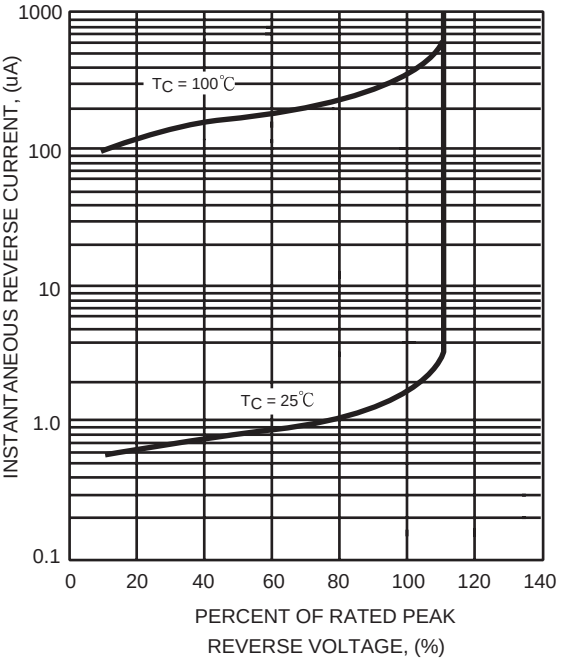

FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

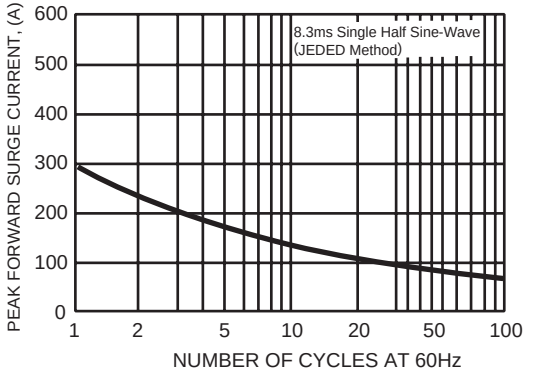

FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

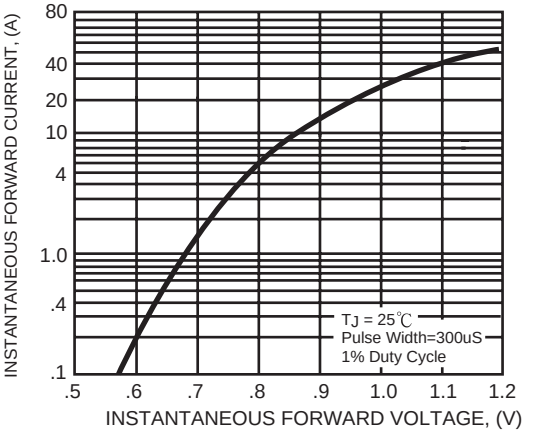

FIG. 5 - TYPICAL JUNCTION CAPACITANCE