

**HIGH EFFICIENCY RECTIFIER**

**VOLTAGE RANGE 50 to 400 Volts CURRENT 16.0 Amperes**

**HER1601C**  
**THRU**  
**HER1605C**

**FEATURES**

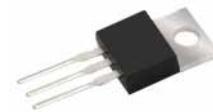
- \* Low power loss, high efficiency
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

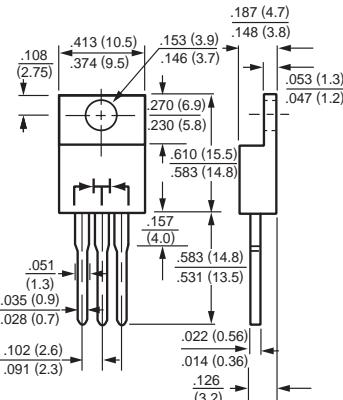
- \* Case: TO-220 molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.24 grams
- \* Polarity: As marked

**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-220**



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	HER1601C	HER1602C	HER1603C	HER1604C	HER1605C	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>			16.0			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

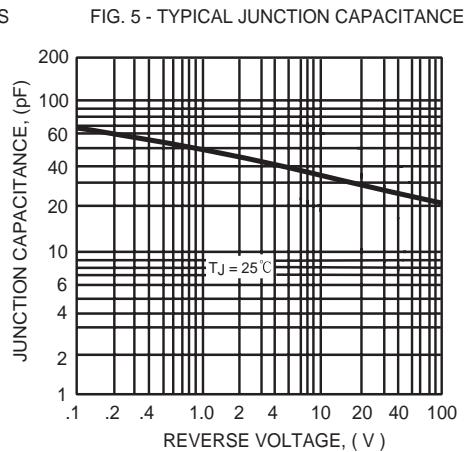
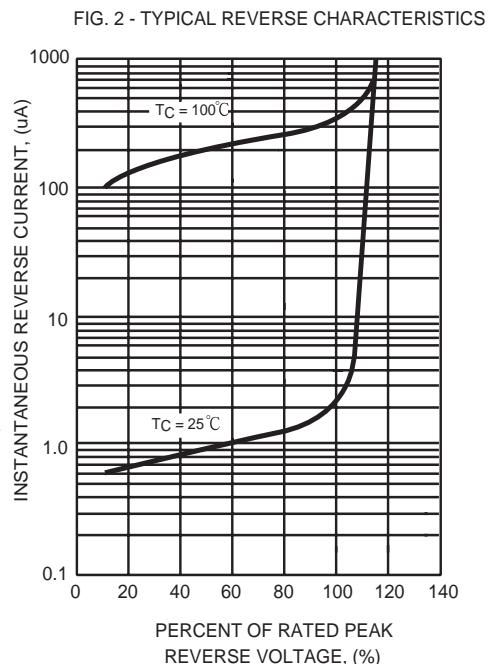
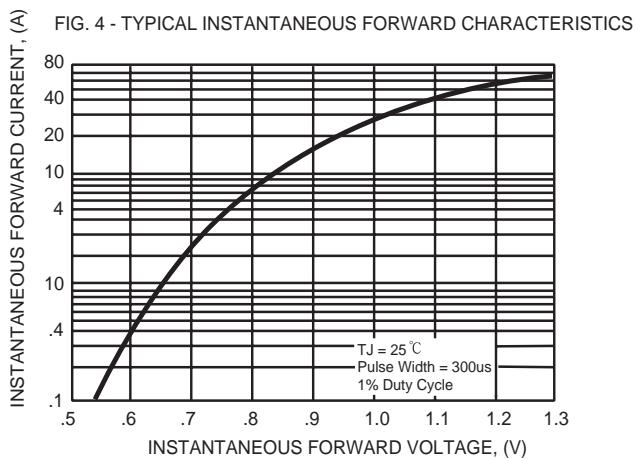
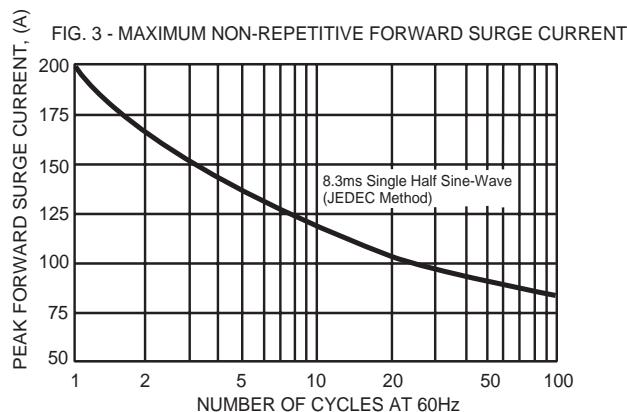
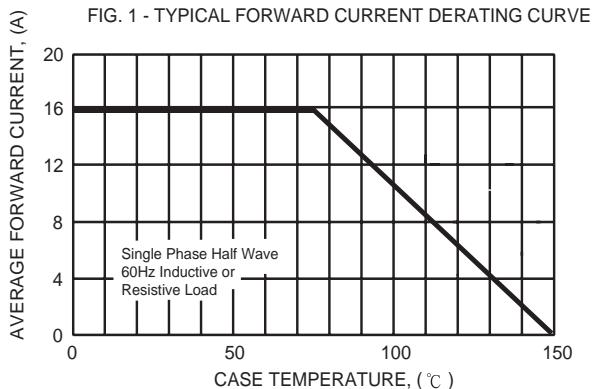
**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER1601C	HER1602C	HER1603C	HER1604C	HER1605C	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V <sub>F</sub>		1.0		1.3		Volts
Maximum DC Reverse Current @ T <sub>c</sub> = 25°C	I <sub>R</sub>			10			uAmps
at Rated DC Blocking Voltage @ T <sub>c</sub> = 100°C				150			
Maximum Reverse Recovery Time (Note 1)	trr			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 "A" = Common Anode.

2003-1

## RATING AND CHARACTERISTIC CURVES ( HER1601C THRU HER1605C )



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[HER1601C](#) [HER1603C](#) [HER1605C](#) [HER1604C](#) [HER1602C](#)