

# HER801K THRU HER805K

## 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: D-PAK molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

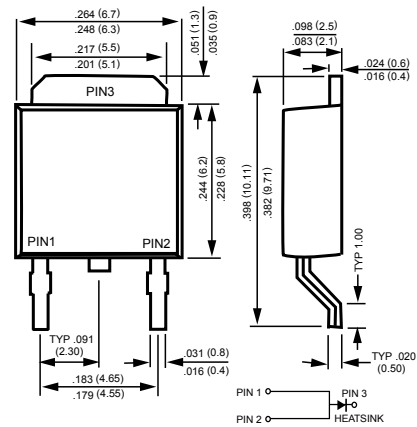
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

NEW RELEASE

### D-PAK



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	HER801K	HER802K	HER803K	HER804K	HER805K	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>A</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 (Note 1)	R <sub>θJC</sub>	2.5					°C/W
	R <sub>θJA</sub>	30					
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

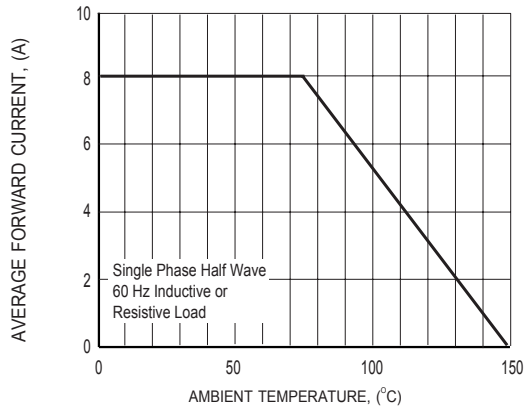
ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER801K	HER802K	HER803K	HER804K	HER805K	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	@T <sub>A</sub> = 25°C	2					uAmps
	@T <sub>A</sub> = 100°C	150					
Maximum Reverse Recovery Time (Note 3)	t <sub>rr</sub>	50					nSec

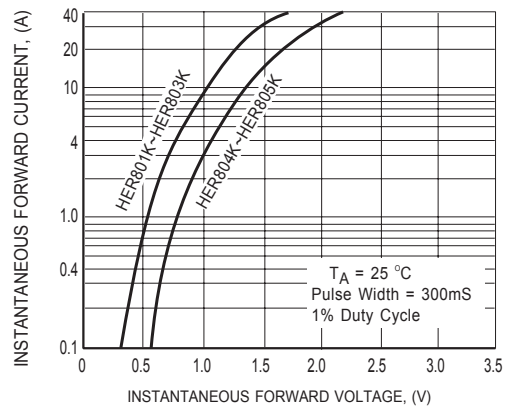
- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts. □  
 3. Test Conditions: I<sub>F</sub>= 0.5A, I<sub>R</sub>= -1.0A, I<sub>RR</sub>= -0.25A.  
 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
 5. Suffix "R" for Reverse Polarity.  
 6. Suffix "S" for D2-PAK Pkg.

2006-12

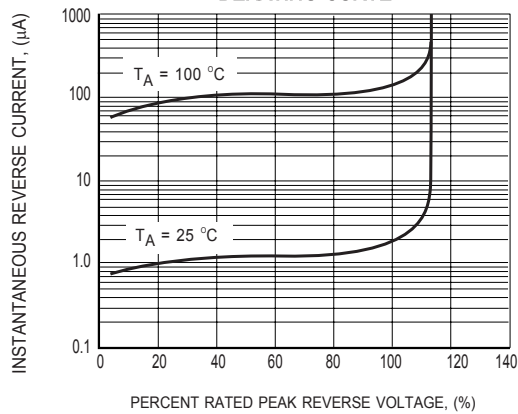
# RATING AND CHARACTERISTICS CURVES ( HER801K THRU HER805K )



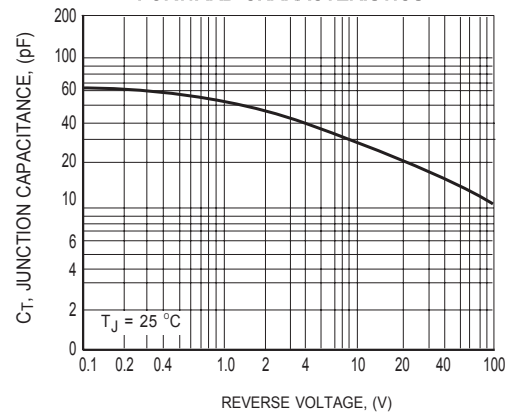
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



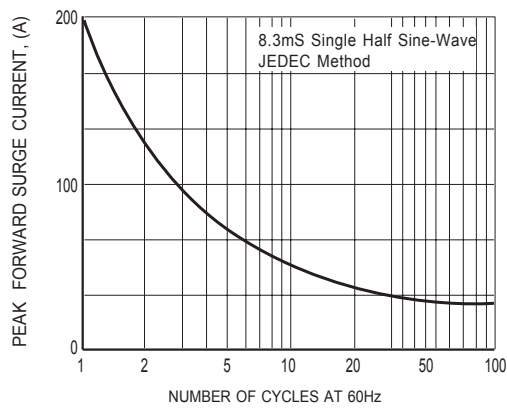
**FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

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