

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

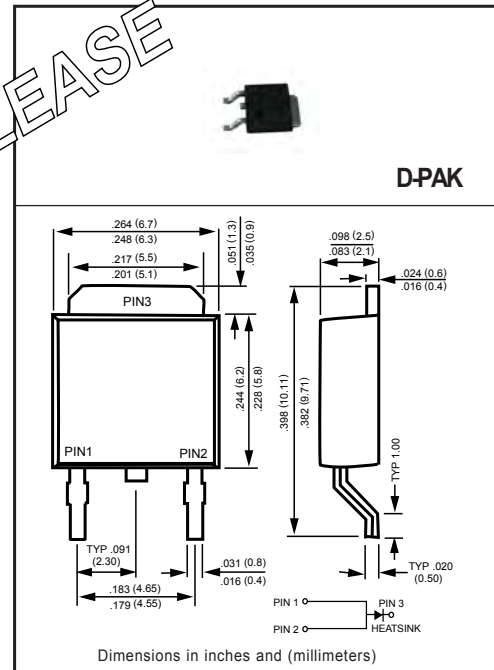
MECHANICAL DATA

- * 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

NEW RELEASE

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 (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	HER801K	HER802K	HER803K	HER804K	HER805K	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	Volts
Maximum Average Forward Rectified Current at T _A = 75 °C	I _O	8.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200					Amps
Typical Thermal Resistance (Note 1)	R _{θJC}	2.5					°C/W
	R _{θJA}	30					
Typical Junction Capacitance (Note 2)	C _J	40					pF
Operating and Storage Temperature Range	T _J , T _{STG}	-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 _F	1.0			1.3		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _A = 25°C	2					uAmps
	@T _A = 100°C	150					
Maximum Reverse Recovery Time (Note 3)	t _{rr}	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_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.
4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
5. Suffix "R" for Reverse Polarity.
6. Suffix "S" for D2-PAK Pkg.

RATING AND CHARACTERISTICS CURVES (HER801K THRU HER805K)

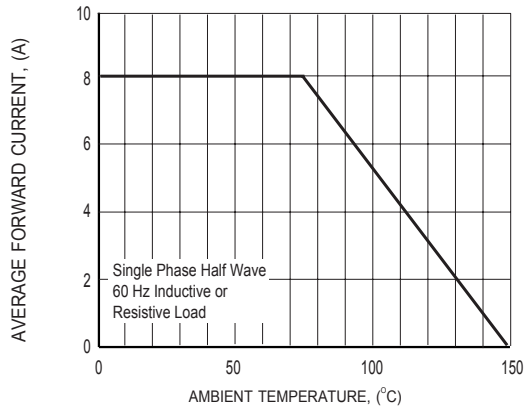


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

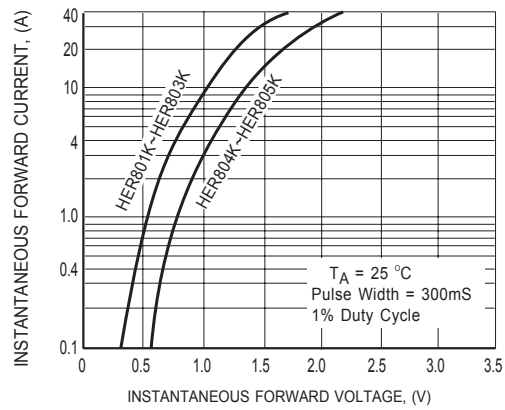


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

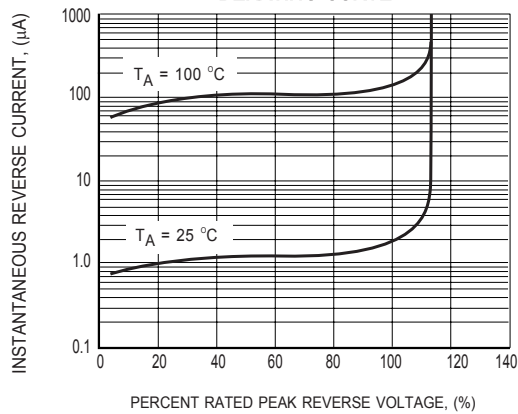


FIG.3 TYPICAL REVERSE CHARACTERISTICS

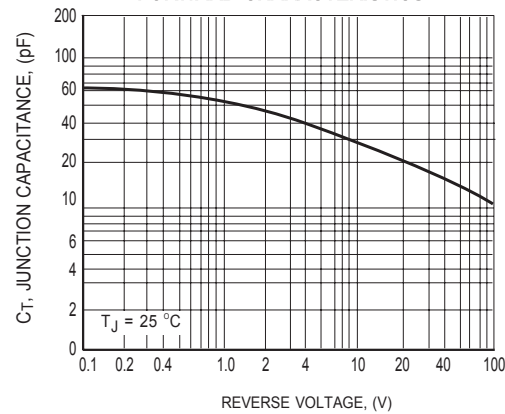


FIG.4 TYPICAL JUNCTION CAPACITANCE

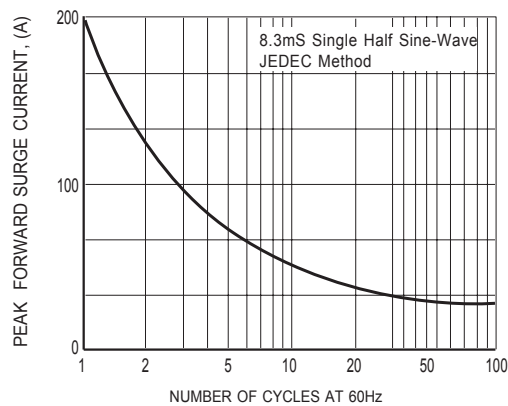


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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