

# HER810B-HER860B

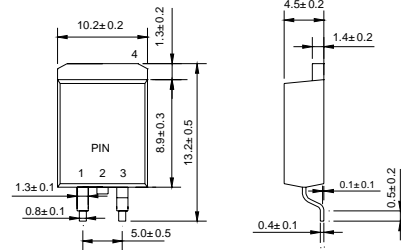
High Efficiency Rectifiers

**VOLTAGE RANGE: 100 --- 600 V**

**CURRENT: 8.0 A**



## D<sup>2</sup>PAK

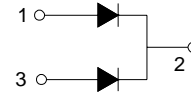


### Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

### Mechanical Data

- ◇ Case: JEDEC D<sup>2</sup>PAK, molded plastic body
- ◇ Polarity: As marked
- ◇ Weight: 0.087 ounces, 2.2 gram
- ◇ Mounting position: Any



Dimensions in millimeters

### 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 by 20%.

		HER 810B	HER 820B	HER 840B	HER 860B	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	V
Maximum DC blocking voltage	$V_{DC}$	100	200	400	600	V
Maximum average forward rectified current @ $T_C=75^\circ\text{C}$	$I_{F(AV)}$	8.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	200				A
Maximum instantaneous forward voltage @ 8.0A	$V_F$	1.0		1.3	1.7	V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	10 150				$\mu\text{A}$
Maximum reverse recovery time (Note1)	$t_{rr}$	50			100	ns
Typical junction capacitance (Note2)	$C_J$	40				pF
Typical thermal resistance (Note3)	$R_{\theta JC}$	25				$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150				$^\circ\text{C}$

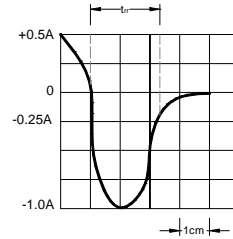
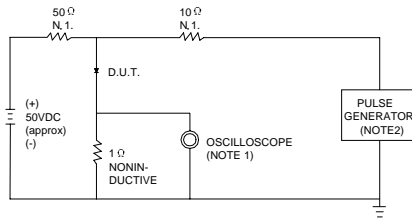
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

### Ratings AND Characteristic Curves

**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**

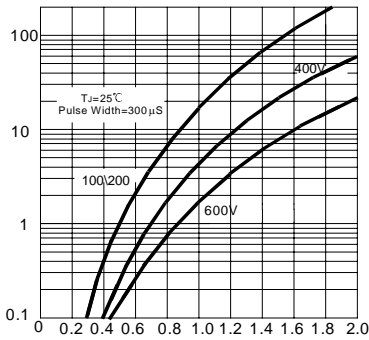


NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/45 ns/cm

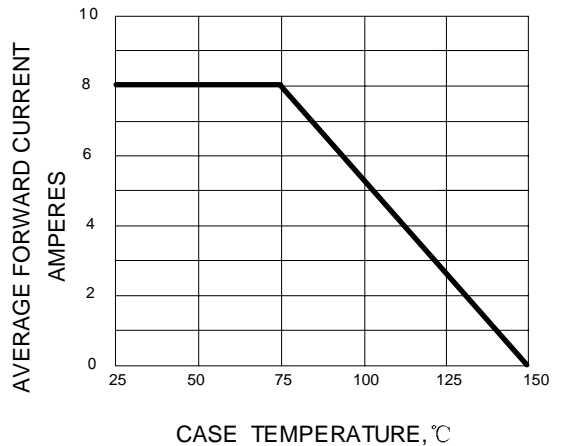
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**

INSTANTANEOUS FORWARD CURRENT AMPERES



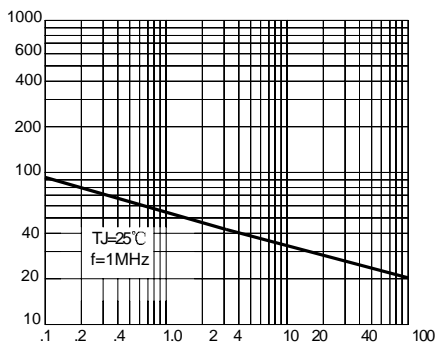
INSTANTANEOUS FORWARD VOLTAGE, VOLTS

**FIG.3 -- FORWARD DERATING CURVE**



**FIG.4 -- TYPICAL JUNCTION CAPACITANCE**

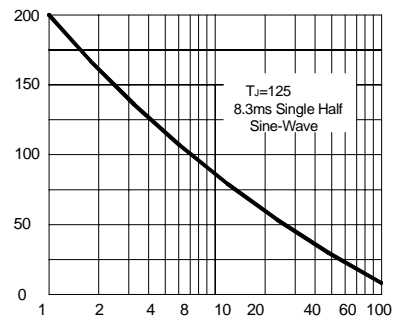
JUNCTION CAPACITANCE,pF



REVERSE VOLTAGE, VOLTS

**FIG.5 -- PEAK FORWARD SURGE CURRENT**

PEAK FORWARD SURGE CURRENT AMPERES



NUMBER OF CYCLES AT 60Hz