

# HER2010C-HER2060C



High Efficiency Rectifiers

**VOLTAGE RANGE: 100 --- 600 V**  
**FORWARD CURRENT: 20 A**

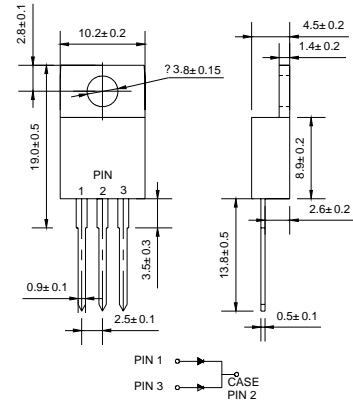
## TO - 220AB

### 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 TO-220AB, molded plastic
- ◇ Polarity: As marked
- ◇ Weight: 0.071 ounces, 2.006 grams
- ◇ 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 2010C	HER 2020C	HER 2040C	HER 2060C	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 @ $T_c=75^\circ\text{C}$	$I_{F(AV)}$	20				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 @ 10A	$V_F$	1.0		1.3	1.7	V
Maximum reverse current @ $T_c=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=100^\circ\text{C}$	$I_R$		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)	$R_{\theta JC}$		2.5			$^\circ\text{C/W}$
Operating junction temperature range	$T_J$		- 55 ---- + 150			$^\circ\text{C}$
Storage temperature range	$T_{STG}$		- 55 ---- + 150			$^\circ\text{C}$

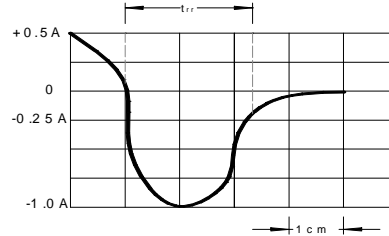
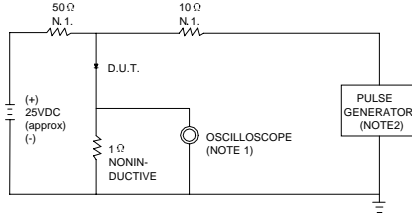
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

3. Thermal resistance junction to case.

## Ratings AND Characteristic Curves

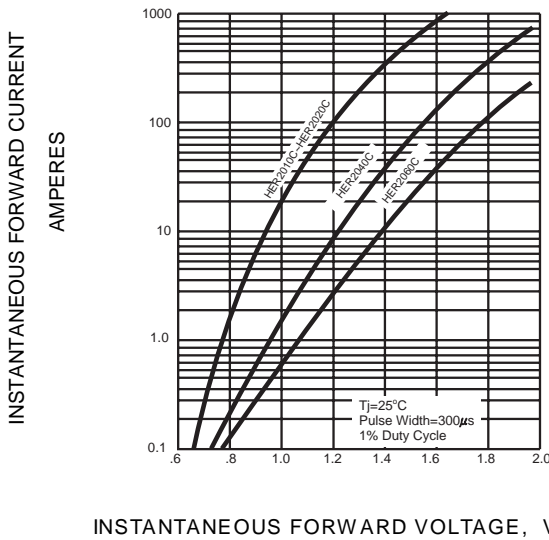
**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



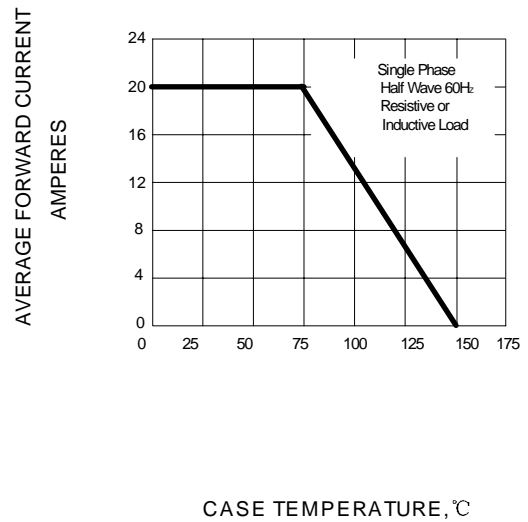
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 25 ns/cm

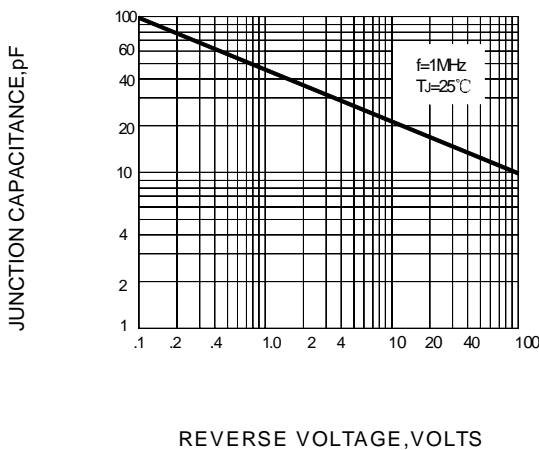
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**



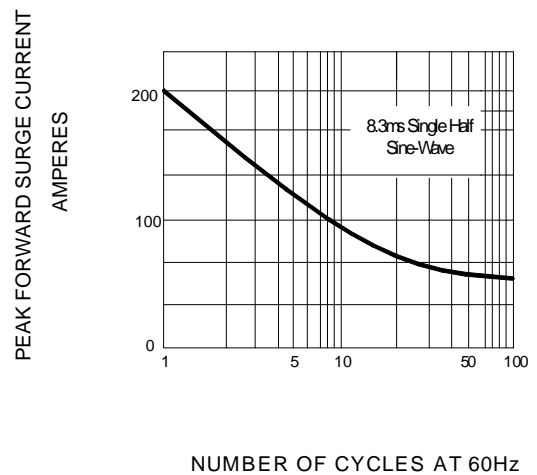
**FIG.3 -- FORWARD DERATING CURVE**



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



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



PACKAGE	PCS/TUBE	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
TO-220	50	5000	57*22*18	13	9