



**VOLTAGE RANGE: 100 --- 600 V**  
**CURRENT: 10 A**



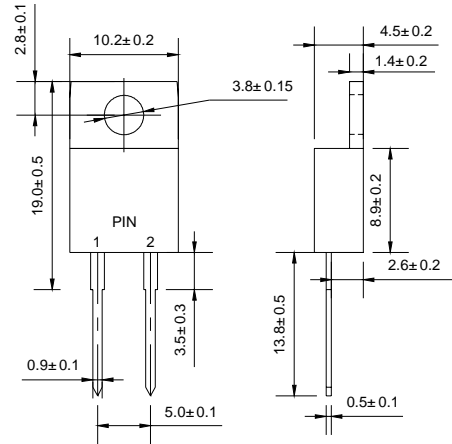
**TO - 220AC**

### 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-220AC, molded plastic body
- ◇ Polarity: As marked
- ◇ Weight: 0.064 ounces, 1.96 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 1010	HER 1020	HER 1040	HER 1060	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 @ $T_C=75^\circ C$	$I_{F(AV)}$	10				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	200				A
Maximum instantaneous forward voltage @ 10 A	$V_F$	1.0		1.3	1.7	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	10 150				$\mu A$
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				$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ---- + 150				$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150				$^\circ C$

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

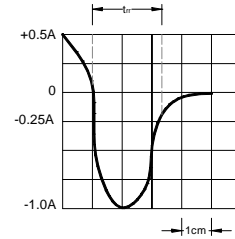
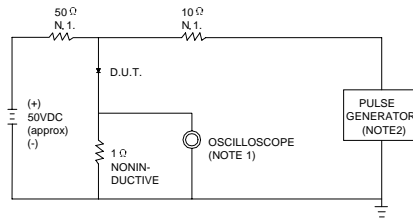
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.



### Ratings AND Characteristic Curves

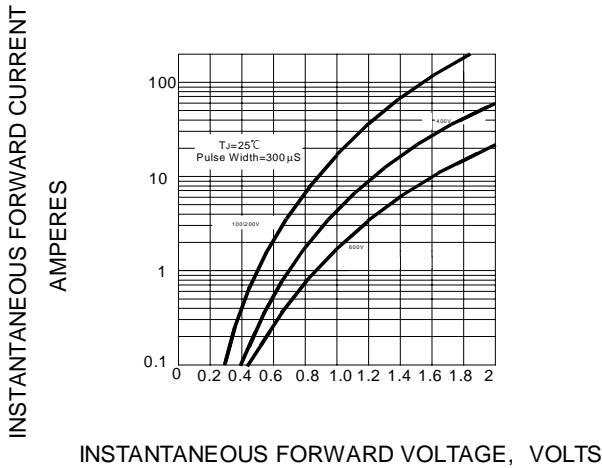
**FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



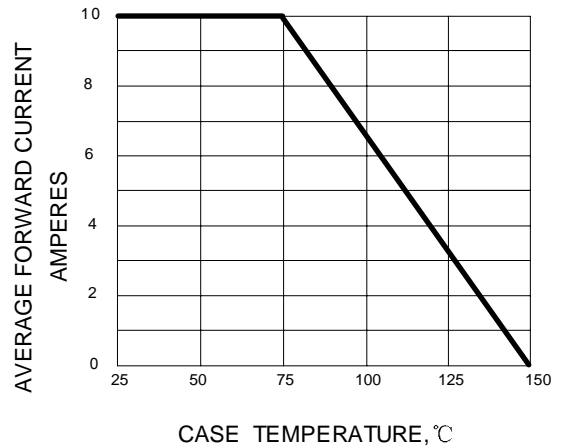
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/45 ns/cm

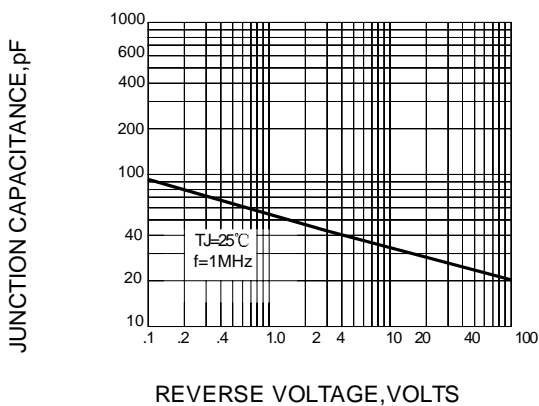
**FIG.2 -- TYPICAL FORWARD CHARACTERISTIC**



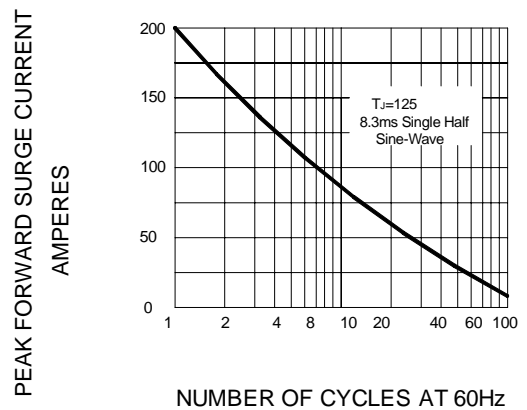
**FIG.3 -- FORWARD DERATING CURVE**



**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