

### HIGH EFFICIENCY RECTIFIERS

**VOLTAGE RANGE: 100 --- 600 V**  
**CURRENT: 8.0 A**

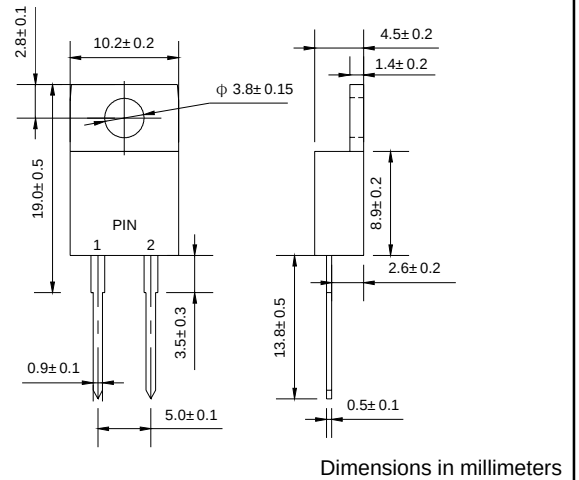
#### FEATURES

- ◇ 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
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.064 ounces, 1.96 gram
- ◇ Mounting position: Any

#### TO - 220AC



#### 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<br>810T     | HER<br>820T | HER<br>840T | HER<br>860T | 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<br>@ $T_C=75^\circ\text{C}$                                             | $I_{F(AV)}$     | 8.0             |             |             |             | A                  |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 200             |             |             |             | A                  |
| Maximum instantaneous forward voltage<br>@ 8.0A                                                                   | $V_F$           | 1.0             |             | 1.3         | 1.7         | V                  |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=100^\circ\text{C}$        | $I_R$           | 10<br>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.

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

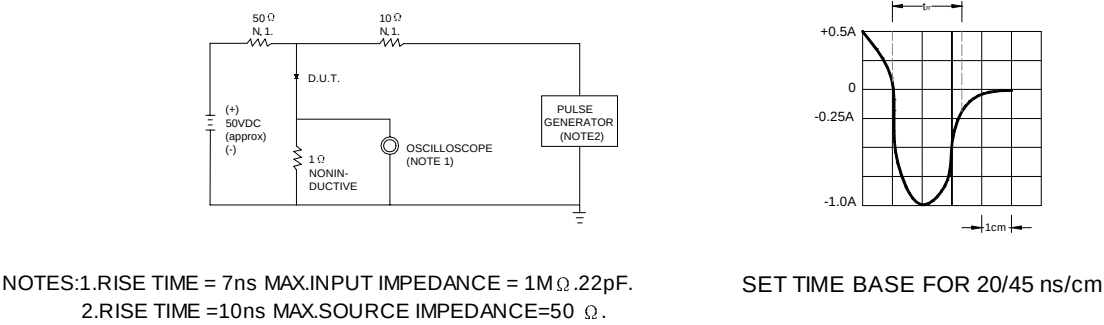


FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

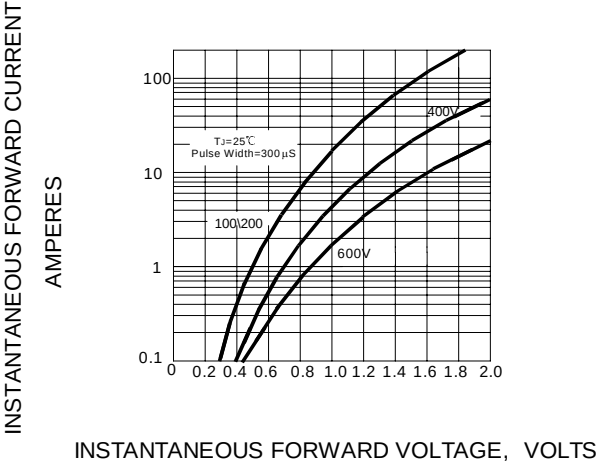


FIG.3 -- FORWARD DERATING CURVE

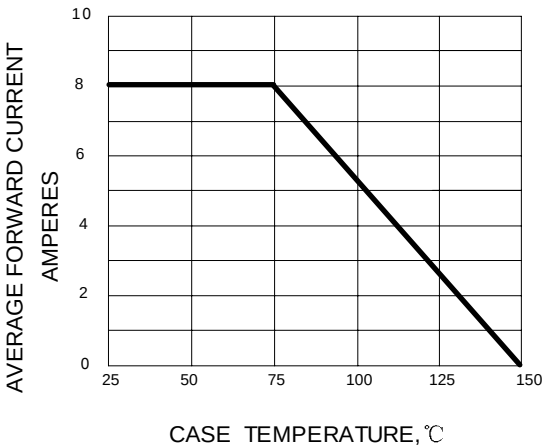


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

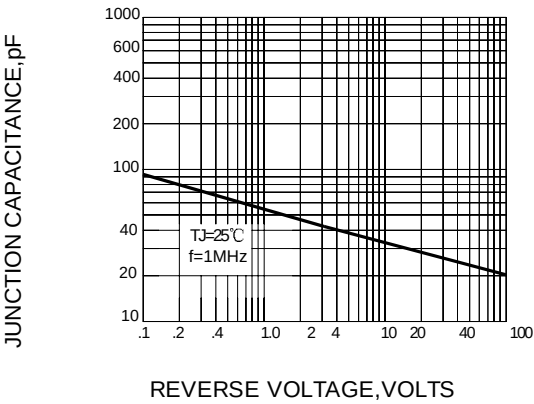


FIG.5 -- PEAK FORWARD SURGE CURRENT

