

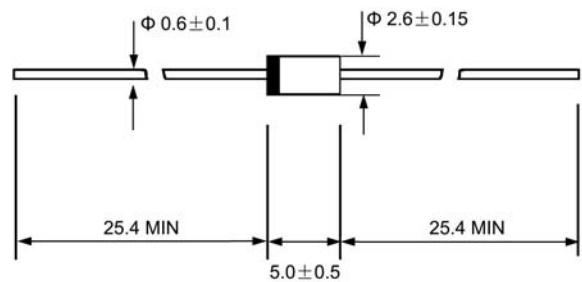
## Features

- ◇ Low cost
- ◇ Glass passivated junction
- ◇ 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 A-405, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.008 ounces, 0.23 grams
- ◇ Mounting position: Any

### A - 405



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<br>101GL    | HER<br>102GL | HER<br>103GL | HER<br>104GL | HER<br>105GL | HER<br>106GL | HER<br>107GL | HER<br>108GL | UNITS              |
|---|-----------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$       | 50              | 100          | 200          | 300          | 400          | 600          | 800          | 1000         | V                  |
| Maximum RMS voltage   | $V_{RMS}$       | 35              | 70           | 140          | 210          | 280          | 420          | 560          | 700          | V                  |
| Maximum DC blocking voltage   | $V_{DC}$        | 50              | 100          | 200          | 300          | 400          | 600          | 800          | 1000         | V                  |
| Maximum average forward rectified current<br>9.5mm lead length, @ $T_A=75^\circ\text{C}$                          | $I_{F(AV)}$     | 1.0             |              |              |              |              |              |              |              | A                  |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 30.0            |              |              |              |              |              |              |              | A                  |
| Maximum instantaneous forward voltage<br>@ 1.0 A  | $V_F$           | 1.0             |              | 1.3          |              | 1.7          |              |              |              | V                  |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=125^\circ\text{C}$        | $I_R$           | 5.0<br>100.0    |              |              |              |              |              |              |              | $\mu\text{A}$      |
| Typical reverse recovery time (Note1)   | $t_{rr}$        | 50              |              |              |              | 75           |              |              |              | ns                 |
| Typical junction capacitance (Note2)  | $C_J$           | 20              |              |              |              | 15           |              |              |              | pF                 |
| Typical thermal resistance (Note3)  | $R_{\theta JA}$ | 60              |              |              |              |              |              |              |              | $^\circ\text{C/W}$ |
| Operating junction temperature range  | $T_J$           | - 55 ---- + 150 |              |              |              |              |              |              |              | $^\circ\text{C}$   |
| Storage temperature range   | $T_{STG}$       | - 55 ---- + 150 |              |              |              |              |              |              |              | $^\circ\text{C}$   |

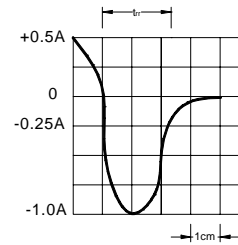
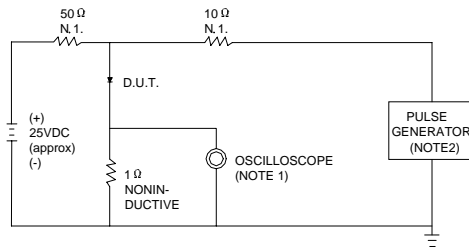
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

3. Thermal resistance junction to ambient.

### Ratings AND Characteristic Curves

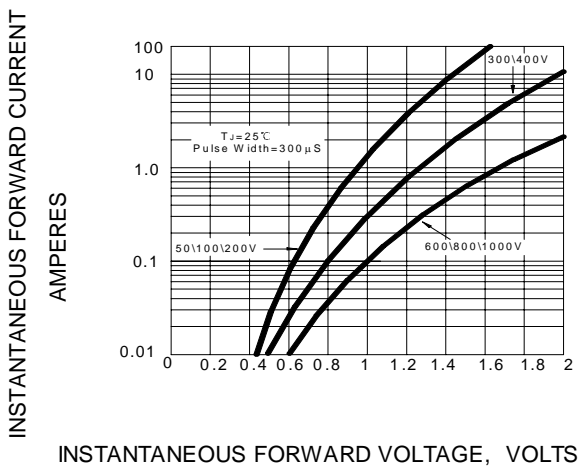
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



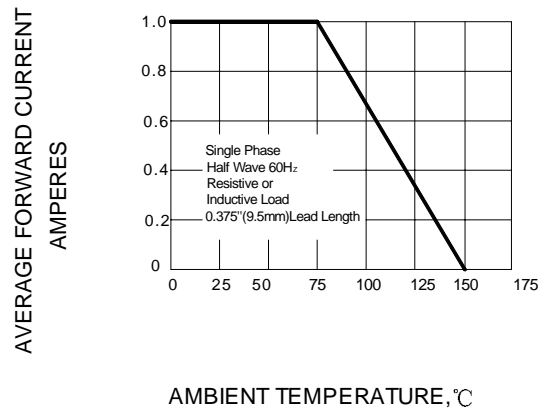
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 20/35 ns/cm

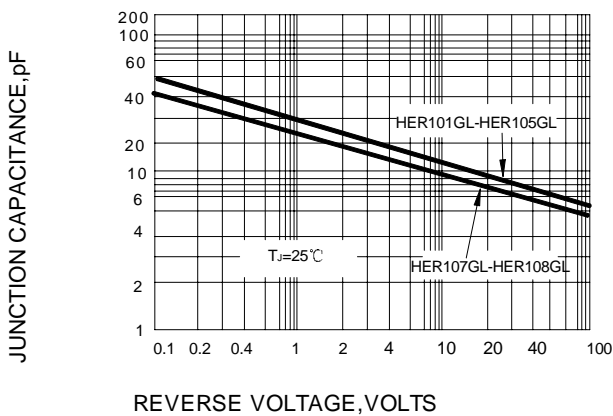
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



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

