# HER101 thru HER108

**HIGH EFFICIENCY RECTIFIERS**

REVERSE VOLTAGE - **50** to **1000** Volts
FORWARD CURRENT - **1.0** Amperes

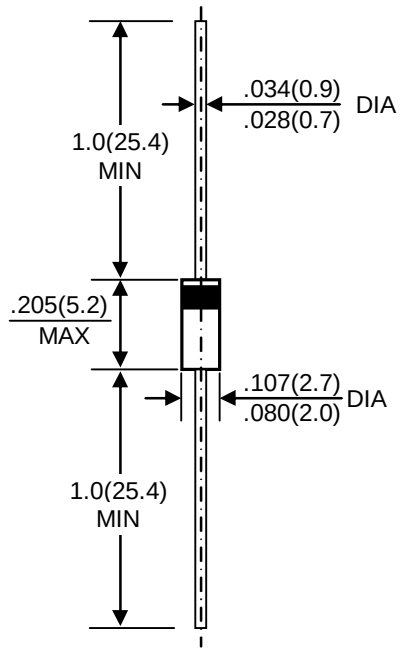
## FEATURES

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

## MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.012 ounces , 0.34 grams
- Mounting position: Any

**DO- 41**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | HER101 | HER102 | HER103 | HER104 | HER105 | HER106 | HER107 | HER108 | UNIT |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 580 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @$T_A$=55 ℃ | $I_{(AV)}$ | 1.0 | | | | | | | | A |
| Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | | A |
| Peak Forward Voltage at 1.0A DC | $V_F$ | 1.0 | | | | 1.3 | 1.7 | | | V |
| Maximum DC Reverse Current @$T_J$=25℃ at Rated DC Blocking Voltage @$T_J$=100℃ | $I_R$ | 5.0<br>100 | | | | | | | | uA |
| Maximum Reverse Recovery Time(Note 1) | $T_{RR}$ | 50 | | | | | 75 | | | nS |
| Tyical Junction Capacitance (Note2) | $C_J$ | 20 | | | | | 10 | | | pF |
| Tyical Thermal Resistance (Note3) | $R_{\theta JA}$ | 25 | | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -50 to +125 | | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -50 to +150 | | | | | | | | ℃ |

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

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

3.Thermal resistance junction of ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

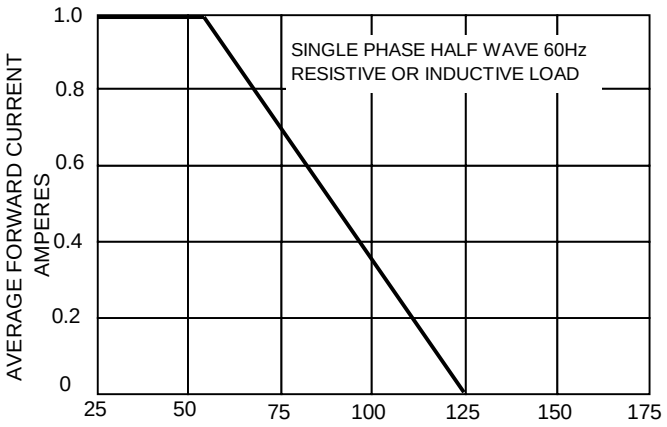



FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

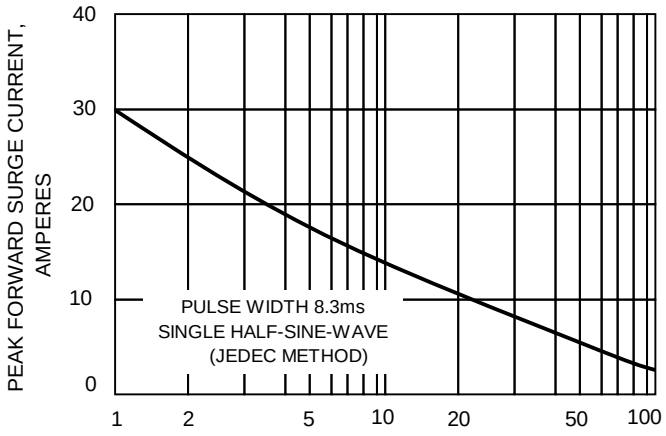



FIG.3 – TYPICAL JUNCTION CAPACITANCE

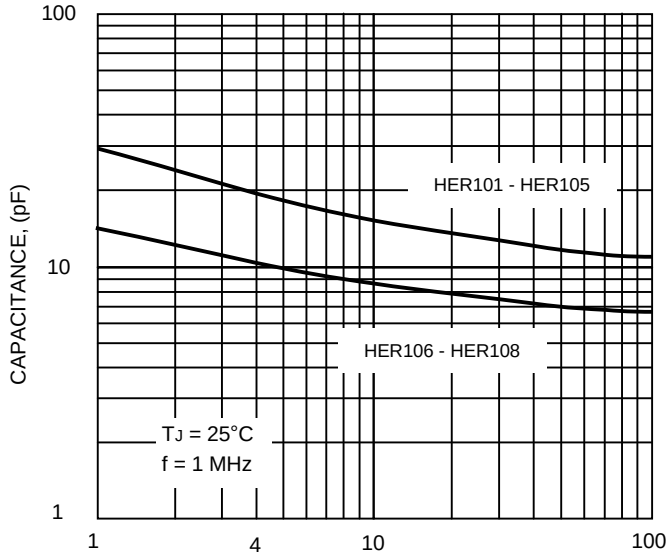



FIG.4-TYPICAL FORWARD CHARACTERISTICS