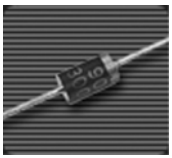
# HER3001G thru HER3007G

Glass Passivated High Efficient Rectifiers
Reverse Voltage 50 to 1000 Volts  Forward Current 3.0 Amperes

## Features

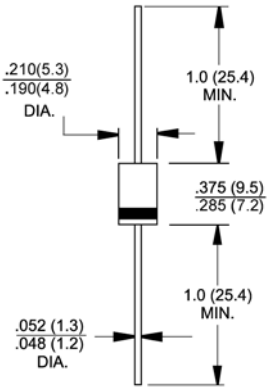
- Glass passivated chip
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon, Alcohol, Chlorothene and similar solvents
- Plastic material has UL flammabitily classification 94V-0



**DO-201AD**

## Mechanical Data

- Case : JEDEC DO-201AD molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.042 ounce, 1.195 grams
- Mounting position : Any




**Dimensions in inches and (millimeters)**

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| Parameter | Symbols | HER 3001G | HER 3002G | HER 3003G | HER 3004G | HER 3005G | HER 3006G | HER 3007G | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current @ $T_A$=55°C | $I_{(AV)}$ | 3.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 125.0 | | | | | | | Amps |
| Maximum forward voltage at 3.0A DC | $V_F$ | 1.0 | | | 1.3 | 1.7 | | | Volts |
| Maximum DC reverse current @$T_J$=25°C<br>at rated DC blocking voltage @$T_J$=100°C | $I_R$ | 5.0<br>100 | | | | | | | uA |
| Maximum reverse recovery time (Note 1) | $t_{rr}$ | 50 | | | | 75 | | | nS |
| Typical junction capacitance (Note 2) | $C_J$ | 60 | | | | 30 | | | pF |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ | 20 | | | | | | | °C/W |
| Operating junction temperature range | $T_J$ | -55 to +150 | | | | | | | °C |
| Storage temperature range | $T_{STG}$ | -55 to +150 | | | | | | | °C |

**Notes:** 1. Test condition of $T_{rr}$: $I_F$=0.5A,$I_R$=1.0A,$I_{RR}$=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 - FORWARD CURRENT DERATING CURVE

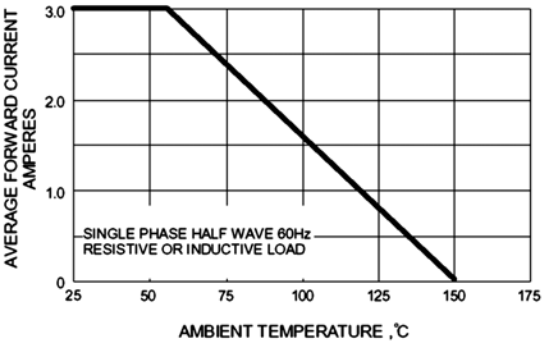



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

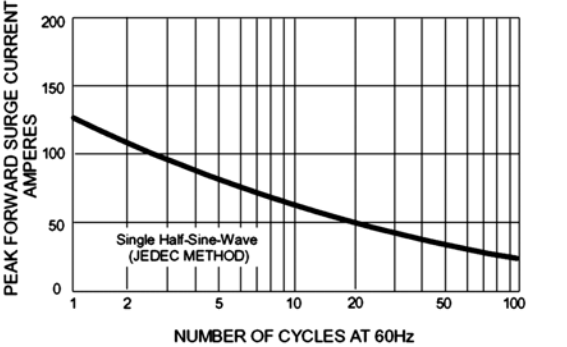



FIG.3 - TYPICAL JUNCTION CAPACITANCE

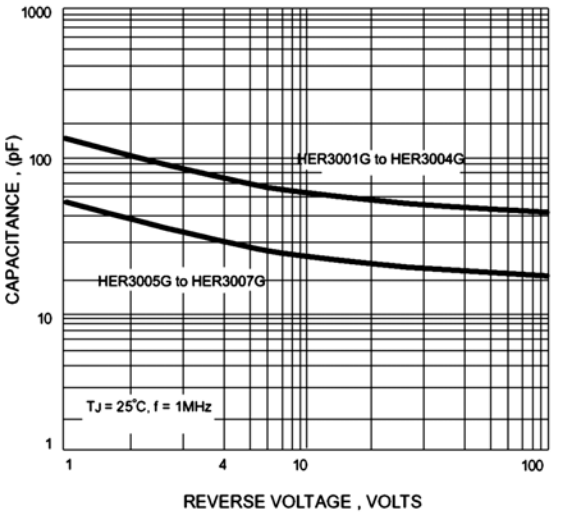



FIG.4 - TYPICAL FORWARD CHARACTERISTICS