



## PRESS FIT AUTOMOTIVE RECTIFIER (HITACHI)

### DRH301 THRU DRH306

VOLTAGE RANGE 100 to 400 Volts

CURRENT 30.0 Amperes

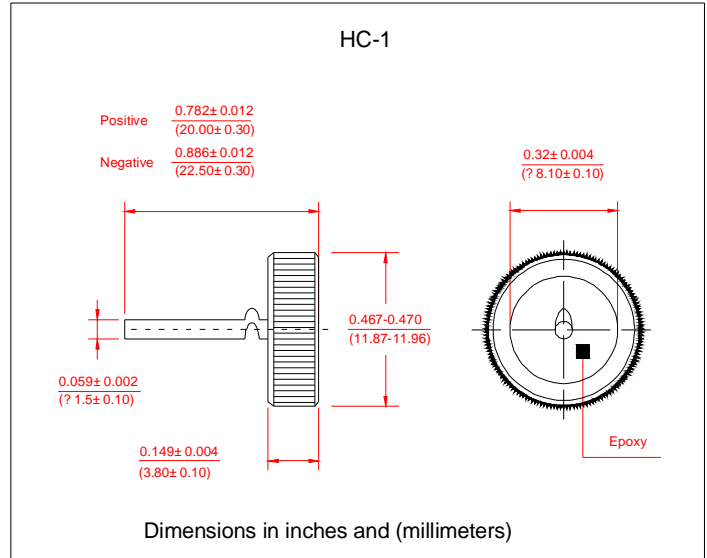
#### TECHNICAL SPECIFICATION:

#### FEATURES

- Low Leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity
- Glass passivated chip

#### MECHANICAL DATA

- Technology: vacuum soldered
- Case: Copper case
- Polarity: As marked of case bottom
- Lead: Plated Ni lead, solderable per MIL-STD-202E method 208C
- Mounting: Press Fit
- Weight: 0.11 ounces, 3.15 grams



#### 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%

|   | SYMBOLS         | DRH301        | DRH302 | DRH303 | DRH304 | DRH306 | UNIT                      |
|---|-----------------|---------------|--------|--------|--------|--------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 100           | 200    | 300    | 400    | 600    | Volts                     |
| Maximum RMS Voltage   | $V_{RMS}$       | 70            | 140    | 210    | 280    | 420    | Volts                     |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 100           | 200    | 300    | 400    | 600    | Volts                     |
| Maximum Average Forward Rectified Current, At $T_c=105^\circ\text{C}$                                     | $I_O$           | 30            |        |        |        |        | Amps                      |
| Peak Forward Surge Current<br>3.3mS single half sine wave superimposed on<br>Rated load (JEDEC method)    | $I_{FSM}$       | 400           |        |        |        |        | Amps                      |
| Rating for fusing ( $t < 8.3\text{ms}$ )  | $I^2t$          | 664           |        |        |        |        | $\text{A}^2\text{S}$      |
| Maximum instantaneous Forward Voltage at 100A   | $V_F$           | 1.10          |        |        |        |        | Volts                     |
| Maximum DC Reverse Current at Rated $T_A=25^\circ\text{C}$<br>DC Blocking Voltage $T_A=100^\circ\text{C}$ | $I_R$           | 5.0           |        |        |        |        | UA                        |
|   |                 | 450           |        |        |        |        |                           |
| Typical Thermal Resistance  | $R_{\theta JC}$ | 0.8           |        |        |        |        | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range   | $T_J, T_{STG}$  | (-65 to +175) |        |        |        |        | $^\circ\text{C}$          |

#### Notes:

1. Enough heatsink must be considered in application.



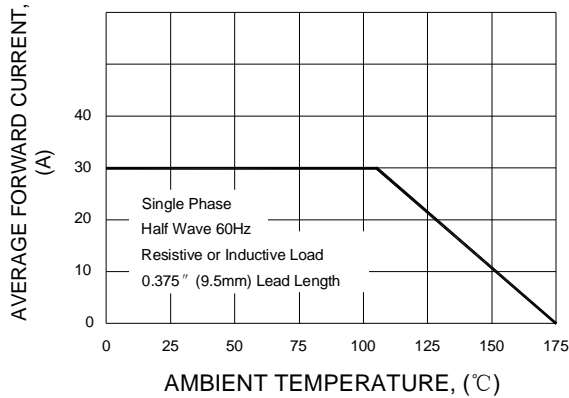
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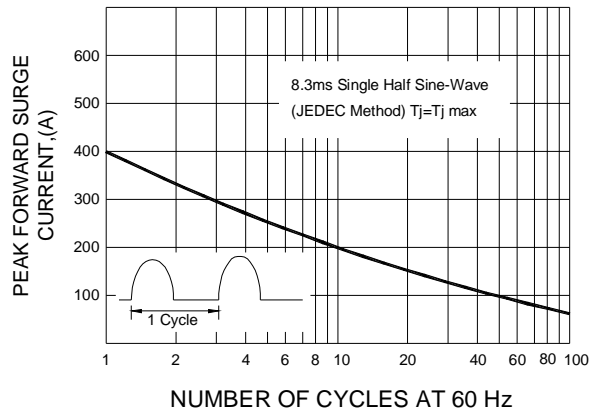
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## RATINGS AND CHARACTERISTIC CURVES DRH301 THRU DRH306

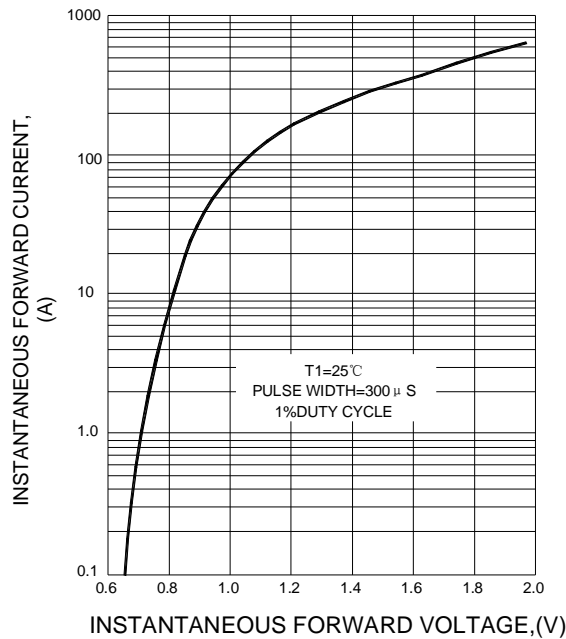
**F1G.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**F1G.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**F1G.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**F1G.4 FORWARD POWER DISSIPATION**

