# RL101 thru RL107

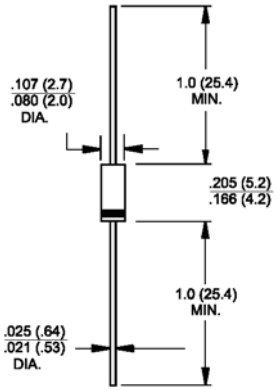
General Purpose Plastic Rectifiers
Reverse Voltage 50 to 1000 Volts  Forward Current 1.0 Ampere

## Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Φ 0.6mm leads
- $T_J$ is 150°C (Max.) and $T_{STG}$ is 175°C (Max.) with PI glue



**A-405**




**Dimensions in inches and (millimeters)**

## Mechanical Data

- Case: Molded plastic A-405
- Epoxy: UL 94V-O rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- High temperature soldering guaranteed: 250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- Weight: 0.008 ounce, 0.23 gram

## 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 | RL101 | RL102 | RL103 | RL104 | RL105 | RL106 | RL107 | 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 0.375" (9.5mm) lead length @$T_A$=50°C | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage @ 1.0A | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC reverse current @$T_A$=25°C<br>at rated DC blocking voltage @$T_A$=100°C | $I_R$ | 5.0<br>50 | | | | | | | uA |
| Maximum full load reverse current full cycle average, 0.375" (9.5mm) lead length @$T_A$=75°C | $I_{R(AV)}$ | 30 | | | | | | | uA |
| Typical junction capacitance (Note 1) | $C_J$ | 15 | | | | | | | pF |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ | 50 | | | | | | | °C/W |
| Operating junction temperature range | $T_J$ | -55 to +125 | | | | | | | °C |
| Storage temperature range | $T_{STG}$ | -55 to +150 | | | | | | | °C |

**Notes:** 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length

## RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

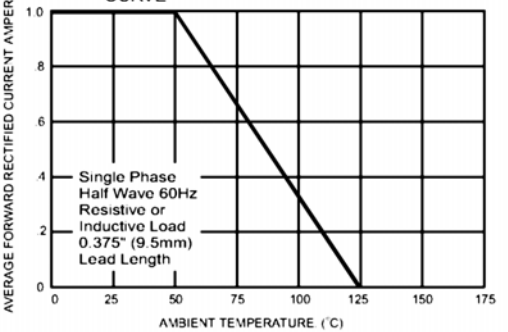



FIG.2- TYPICAL FORWARD CHARACTERISTICS

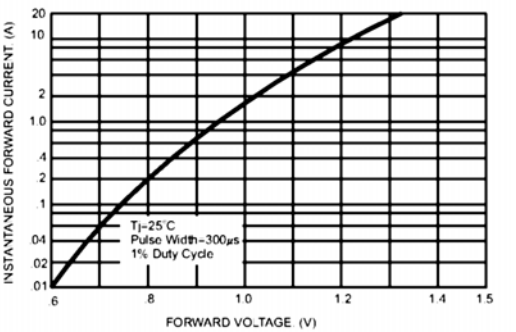



FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

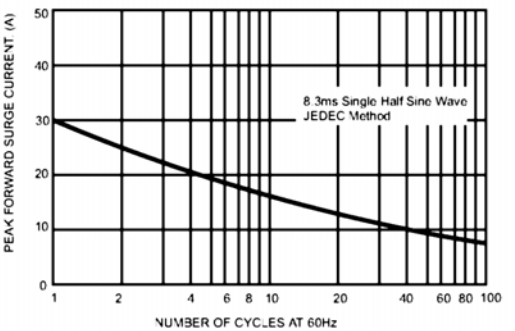



FIG.4- TYPICAL JUNCTION CAPACITANCE

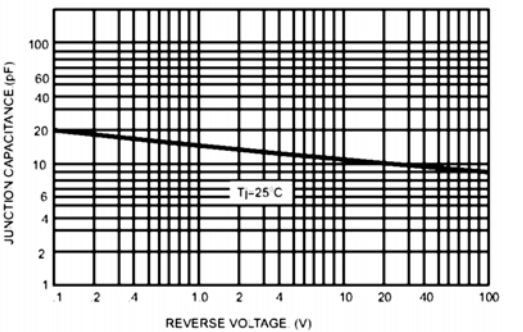



FIG.5- TYPICAL REVERSE CHARACTERISTICS

