



# RL101 thru RL107

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

## Features

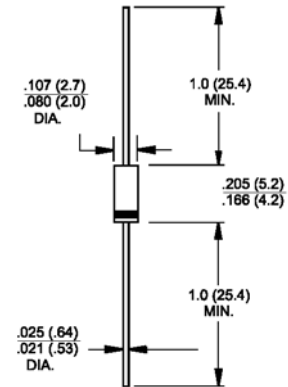
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability
- ◆  $\Phi$  0.6mm leads
- ◆  $T_J$  is 150°C (Max.) and  $T_{STG}$  is 175°C (Max.) with PI glue



A-405

## 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



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

- 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

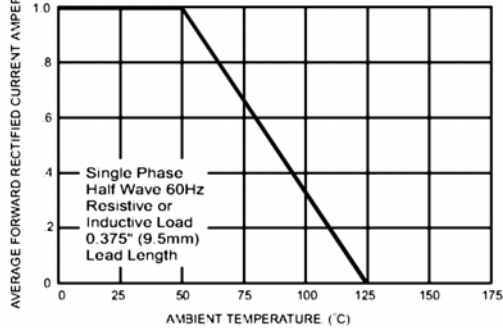


FIG.2- TYPICAL FORWARD CHARACTERISTICS

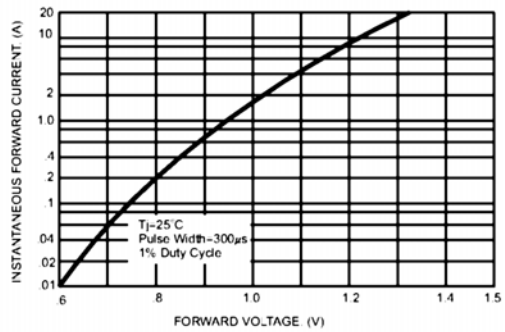


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

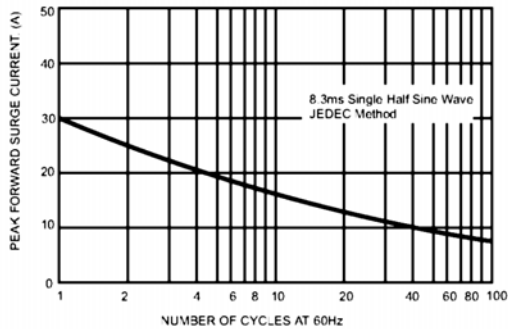


FIG.4- TYPICAL JUNCTION CAPACITANCE

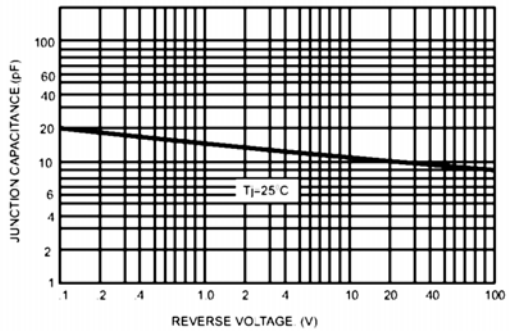


FIG.5- TYPICAL REVERSE CHARACTERISTICS

