

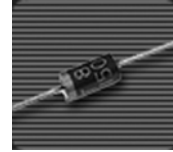


# RL151 thru RL157

General Purpose Plastic Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 1.5 Amperes

## Features

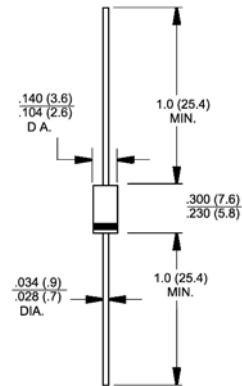
- ◆ Low cost
- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆  $T_J$  is 150°C (Max.) and  $T_{STG}$  is 175°C (Max.) with PI glue



DO-204AC (DO-15)

## Mechanical Data

- ◆ Case : JEDEC DO-204AC (DO-15) molded plastic
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: MIL-STD-202E method 208C guaranteed
- ◆ Mounting position: Any
- ◆ Weight: 0.014 ounce, 0.39 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         | RL151       | RL152 | RL153 | RL154 | RL155 | RL156 | RL157 | 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 at $T_A=50^\circ\text{C}$                                       | $I_{(AV)}$      | 1.5         |       |       |       |       |       |       | Amps               |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)         | $I_{FSM}$       | 60.0        |       |       |       |       |       |       | Amps               |
| Maximum instantaneous forward voltage at 1.5A DC  | $V_F$           | 1.1         |       |       |       |       |       |       | Volts              |
| Maximum DC reverse current at rated DC blocking voltage   | $I_R$           | 5.0         |       |       |       |       |       |       | $\mu\text{A}$      |
| Maximum full load reverse current full cycle average, .375" (9.5mm) lead length at $T_I=75^\circ\text{C}$ | $I_{R(AV)}$     | 30          |       |       |       |       |       |       | $\mu\text{A}$      |
| Typical junction capacitance (Note 1)   | $C_J$           | 20          |       |       |       |       |       |       | pF                 |
| Typical thermal resistance  | $R_{\theta JA}$ | 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

# RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

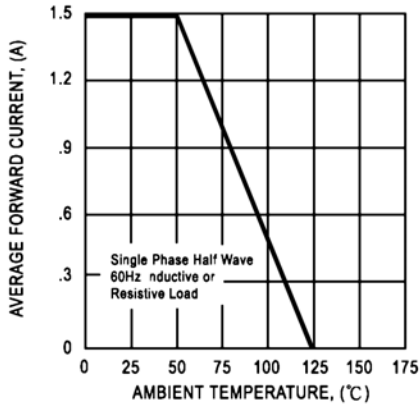


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

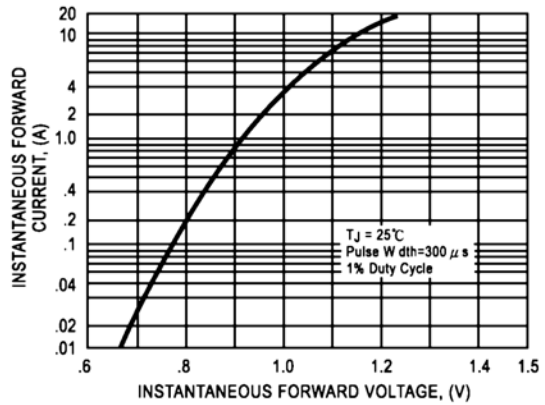


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

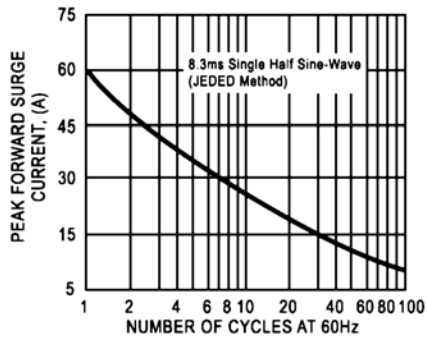


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

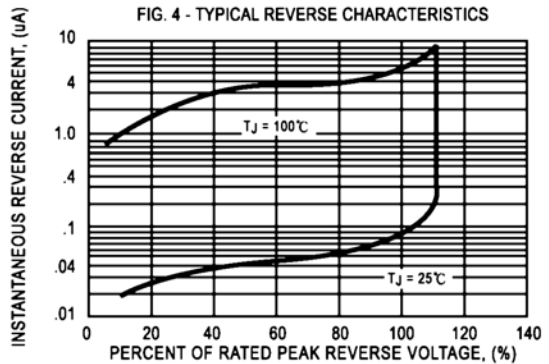


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

