

# RL251 THRU RL257

## GENERAL PURPOSE PLASTIC RECTIFIERS

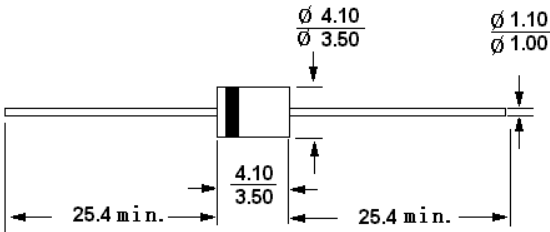
Reverse Voltage – 50 to 1000 Volts

Forward Current – 2.5 Amperes

R-3

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability.
- 2.5 ampere operation at  $T_A=75^{\circ}\text{C}$  with no thermal runaway.
- Low reverse leakage.
- Construction utilizes void-free molded plastic technique.
- High temperature soldering guaranteed:  $250^{\circ}\text{C}/10$  seconds, 0.375”(9.5mm) lead length, 5 lbs (2.3kg) tension.



Dimensions in mm

### Mechanical Data

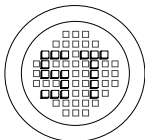
- Case: Molded plastic, R-3
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end.
- Mounting Position: Any.

Absolute Maximum Ratings and Characteristics @ 25 °C unless otherwise specified.

|                                                                                                                | Symbols         | RL251       | RL252 | RL253 | RL254 | RL255 | RL256 | RL257 | 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 current at $T_A = 75^{\circ}\text{C}$                                                  | $I_{(AV)}$      | 2.5         |       |       |       |       |       |       | Amps                        |
| Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)   | $I_{FSM}$       | 150         |       |       |       |       |       |       | Amps                        |
| Maximum instantaneous forward voltage at $I_{FM}=2.5\text{A}$ , $T_A=25^{\circ}\text{C}$ (Note 2)              | $V_F$           | 1.1         |       |       |       |       |       |       | Volts                       |
| Maximum DC reverse current $T_A = 25^{\circ}\text{C}$ at rated DC blocking voltage $T_A = 100^{\circ}\text{C}$ | $I_R$           | 5<br>50     |       |       |       |       |       |       | $\mu\text{A}$               |
| Typical thermal resistance                                                                                     | $R_{\theta JA}$ | 35          |       |       |       |       |       |       | $^{\circ}\text{C}/\text{W}$ |
| Typical junction capacitance (Note 1)                                                                          | $C_J$           | 35          |       |       |       |       |       |       | pF                          |
| Operating and storage temperature range                                                                        | $T_J, T_S$      | -65 to +175 |       |       |       |       |       |       | $^{\circ}\text{C}$          |

Notes:

- (1) Measured at 1MHz and applied reverse voltage of 4volts
- (2) Pulse test: pulse width 300uSec, Duty cycle 1%.



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