

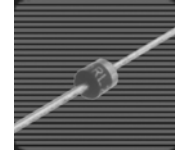


# RL251 thru RL257

General Purpose Plastic Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 2.5 Amperes

## Features

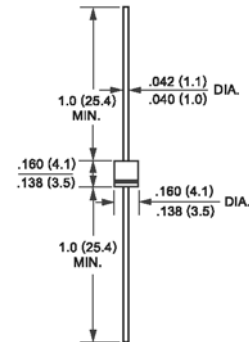
- ◆ Low cost
- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆  $T_J$  is 150°C (Max.) and  $T_{STG}$  is 175°C (Max.) with PI glue



R-3

## Mechanical Data

- ◆ Case : Molded plastic R-3
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: MIL-STD-202E method 208C guaranteed
- ◆ Mounting position: Any
- ◆ Weight: 0.021 ounce, 0.60 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	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 rectified current at $T_A=50^\circ\text{C}$	$I_{(AV)}$	2.5							Amps
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150.0							Amps
Maximum instantaneous forward voltage at 2.5A 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 $T_A=75^\circ\text{C}$	$I_{R(AV)}$	30							$\mu\text{A}$
Typical junction capacitance (Note 1)	$C_J$	35							pF
Typical thermal resistance	$R_{\theta JA}$	35							$^\circ\text{C/W}$
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

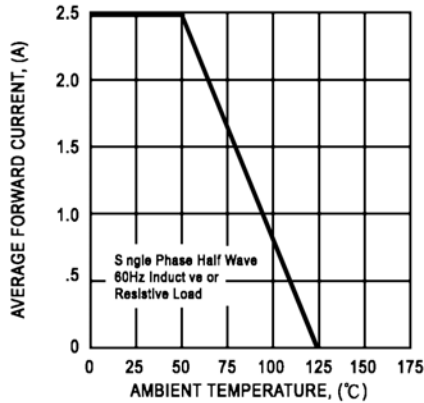


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

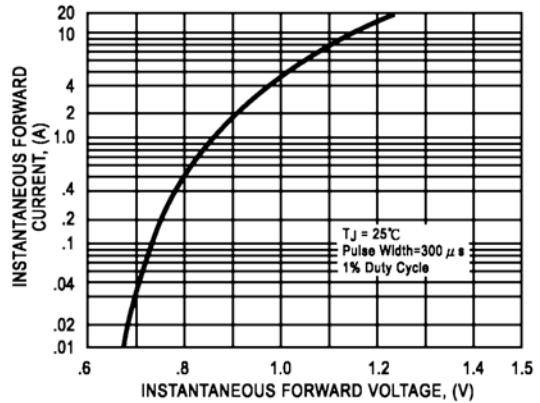


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

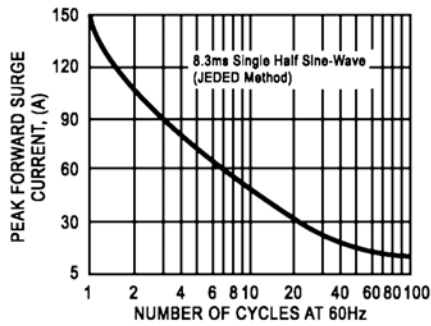


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

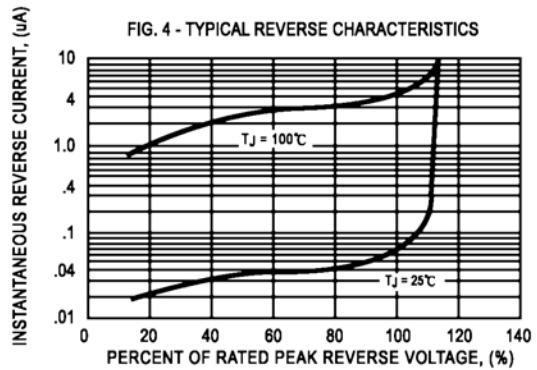


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

