

# RL251 THRU RL257

## **GENERAL PURPOSE PLASTIC RECTIFIER**

R-3

Reverse Voltage - 50 to 1000 Volts

Forward Current - 2.5 Amperes

#### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- 2.5 ampere operation at T<sub>A</sub>=75℃ with no thermal runaway
- Low reverse leakage
- Construction utilizes void-free molded plastic technique
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension



#### **Mechanical Data**

- Case: R-3 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.021 ounce, 0.60 gram

DIMENSIONS													
DIM	inches		m	Noto									
	Min.	Max.	Min.	Max.	Note								
A	0.138	0.161	3.50	4.10									
В	0.138	0.161	3.50	4.10	ф								
С	0.040	0.043	1.00	1.10	ф								
D	1.000	-	25.40	-									

#### Maximum Ratings and Electrical Characteristics @25°C unless otherwise specified

	Symbols	RL251	RL252	RL253	RL254	RL255	RL256	RL257	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum average forward current at $T_{\rm A}\text{=}75^\circ\!\!\!\!\!^\circ C$	I <sub>(AV)</sub>	2.5							Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I <sub>fsm</sub>	150.0							Amps
Maximum instantaneous forward voltage at $I_{\rm FM}{=}2.5A,~T_{\rm A}{=}25^\circ\!\!\!\!\!\!\!^\circ C$ (Note 2)	V <sub>F</sub>	1.0							Volts
$\begin{array}{ll} \mbox{Maximum DC reverse current} & T_{A} = 25^{\circ} \mbox{C} \\ \mbox{at rated DC blocking voltage} & T_{A}^{-1} 100^{\circ} \mbox{C} \end{array}$	I <sub>R</sub>	5.0 50.0							μA
Typical junction capacitance (Note 1)	C <sup>1</sup>	35.0							ρF
Typical thermal resistance	R <sub>UJA</sub>	35							°C/W
Operating and storage temperature range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +175						°C	

Notes:

(1) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(2) Pulse test: pulse width 300uSec, Duty cycle 1%

## **RATINGS AND CHARACTERISTIC CURVES**





Average Forward Rectified Current - Amperes/ersus Ambient Temperature  $\ -^{\circ}C$ 





Junction Capacitance - pF versus Reverse Voltage - Volts

## **RATINGS AND CHARACTERISTIC CURVES**



Instantaneous Reverse Current - Ampsversus Percent Of Rated Peak Reverse Voltage - Volts



