



RL251 THRU RL257

GENERAL PURPOSE PLASTIC RECTIFIER

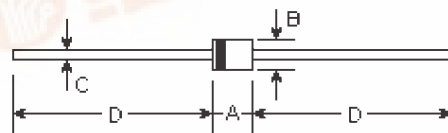
Reverse Voltage - 50 to 1000 Volts

Forward Current - 2.5 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- 2.5 ampere operation at $T_A = 75^\circ\text{C}$ 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

R-3



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		mm		Note
	Min.	Max.	Min.	Max.	
A	0.138	0.161	3.50	4.10	
B	0.138	0.161	3.50	4.10	ϕ
C	0.040	0.043	1.00	1.10	ϕ
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_{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}	150.0							Amps
Maximum instantaneous forward voltage at $I_{FM} = 2.5\text{A}$, $T_A = 25^\circ\text{C}$ (Note 2)	V_F	1.0							Volts
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	5.0 50.0							μA
Typical junction capacitance (Note 1)	C_J	35.0							pF
Typical thermal resistance	$R_{\theta JA}$	35							$^\circ\text{C}/\text{W}$
Operating and storage temperature range	T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

Notes:

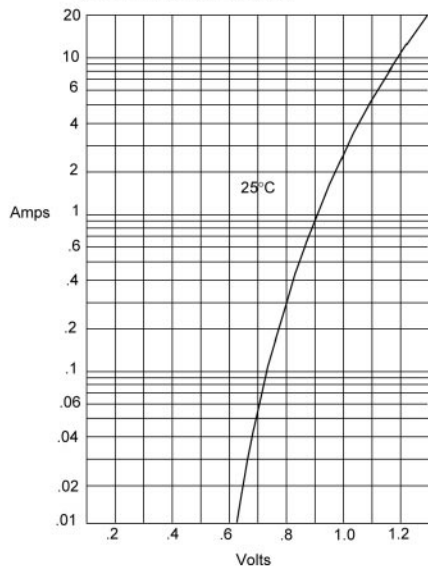
(1) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

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



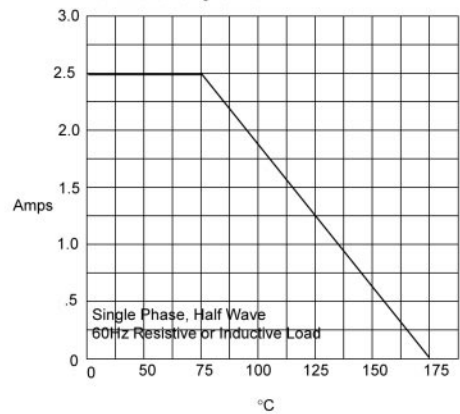
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



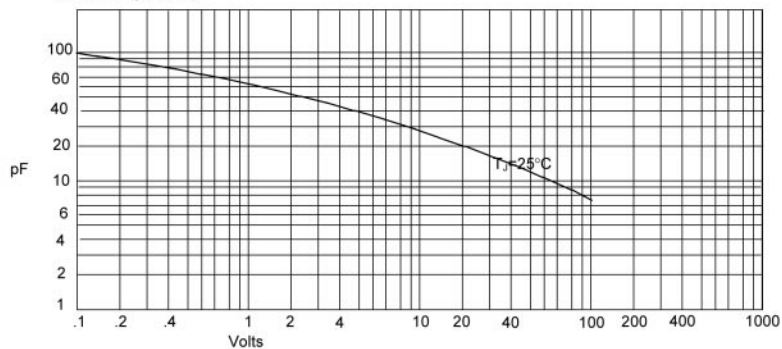
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



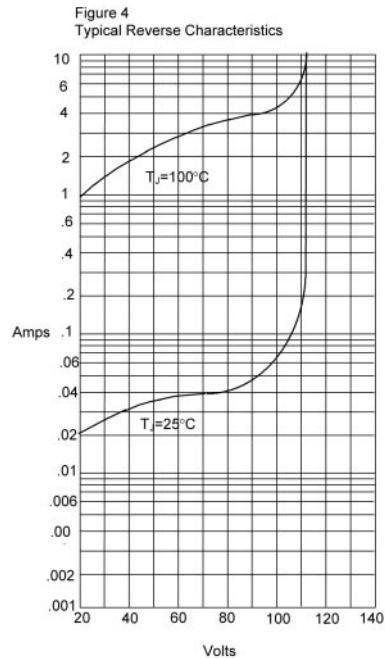
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance

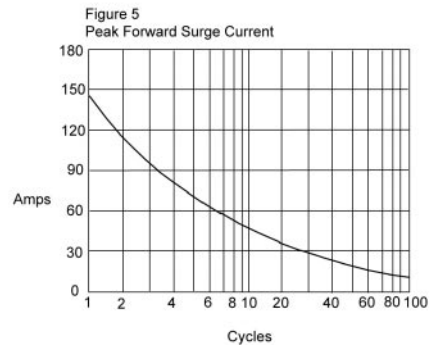


Junction Capacitance - pF *versus*
Reverse Voltage - Volts

RATINGS AND CHARACTERISTIC CURVES



Instantaneous Reverse Current - Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles