



# RL101F THRU RL107F

## FAST SWITCHING PLASTIC RECTIFIER

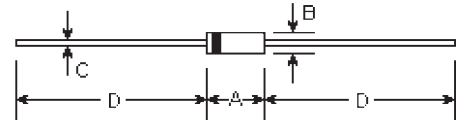
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.0 Ampere

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Construction utilizes void-free molded plastic technique
- 1.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- High temperature soldering guaranteed:  $250^\circ\text{C}/10$  seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

### A-405



### Maximum Ratings

- **Case:** A-405 molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.008 ounce, 0.23 gram

DIMENSIONS					Note
DIM	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	φ
C	0.020	0.024	0.5	0.6	φ
D	1.000	-	25.40	-	

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

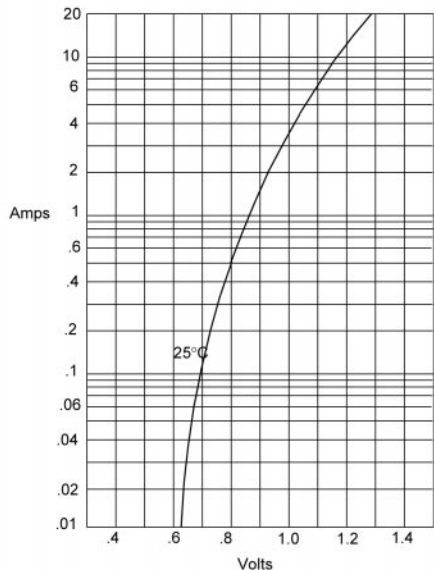
	Symbols	RL101F	RL102F	RL103F	RL104F	RL105F	RL106F	RL107F	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Average forward current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3mS single half sine-wave	$I_{FSM}$	30.0							Amps
Maximum instantaneous forward voltage at $I_{FM}=1.0\text{A}$ ; $T_J=25^\circ\text{C}$ (Note 3)	$V_F$	1.30							Volts
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 100.0							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$T_{rr}$	150			250	500			nS
Typical junction capacitance (Note 2)	$C_J$	15.0							pF
Maximum thermal resistance	$R_{\theta(JL)}$	50							$^\circ\text{C}/\text{W}$
Operating and storage temperature range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

#### Notes:

- (1) Reverse recovery test conditions:  $I_r=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{tr}=0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Pulse test: pulse width 300uSec, Duty cycle 2%

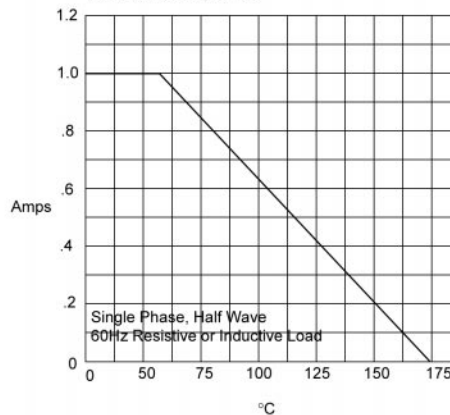
# RATINGS AND CHARACTERISTIC CURVES

Figure 1  
Typical Forward Characteristics



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

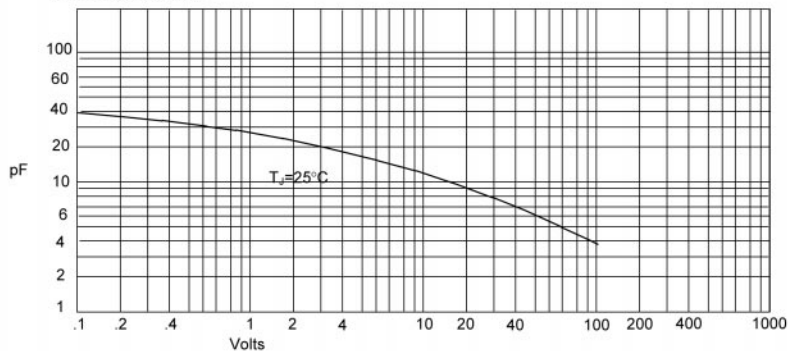
Figure 2  
Forward Derating Curve



Single Phase, Half Wave  
60Hz Resistive or Inductive Load

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

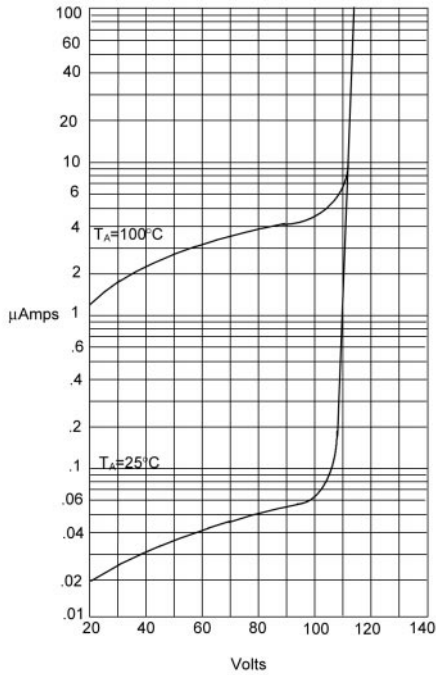
Figure 3  
Junction Capacitance



Junction Capacitance - pF *versus*  
Reverse Voltage - Volts

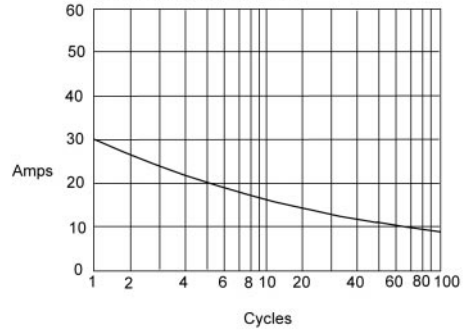
# RATINGS AND CHARACTERISTIC CURVES

Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



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