



RL101F THRU RL107F

FAST SWITCHING PLASTIC RECTIFIER

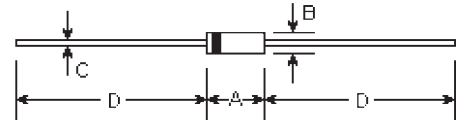
Reverse Voltage - 50 to 1000 Volts

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

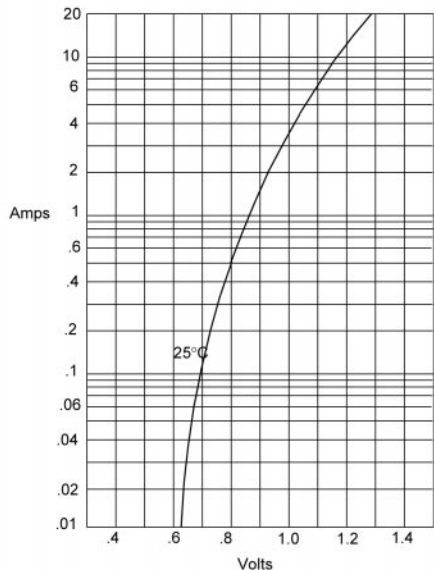
	Symbols	RL101F	RL102F	RL103F	RL104F	RL105F	RL106F	RL107F	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average forward current at $T_A=55^\circ\text{C}$	$I_{(AV)}$	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 $T_J=25^\circ\text{C}$ / $T_J=100^\circ\text{C}$	I_R	5.0 / 100.0							μA
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							°C/W
Operating and storage temperature range	$T_{J'} / T_{STG}$	-65 to +175							°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%

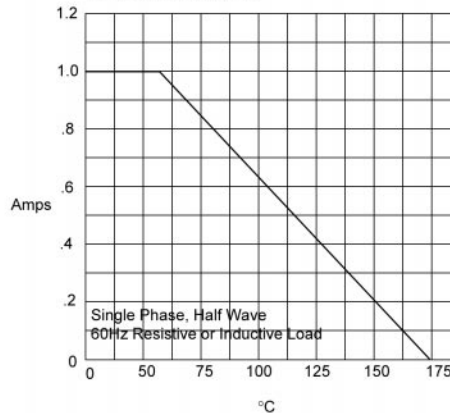
RATINGS AND CHARACTERISTIC CURVES

Figure 1
Typical Forward Characteristics



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

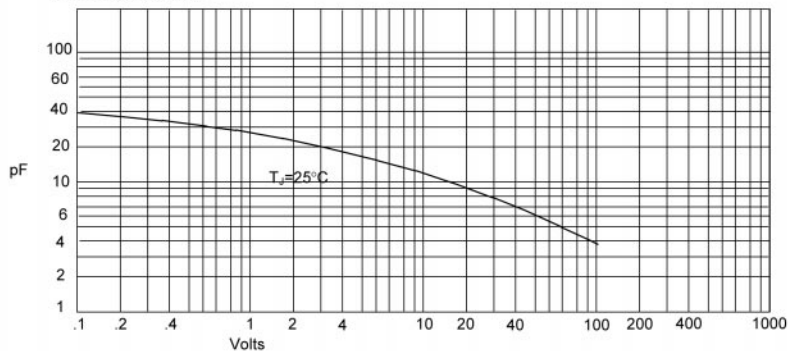
Figure 2
Forward Derating Curve



Single Phase, Half Wave
60Hz Resistive or Inductive Load

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

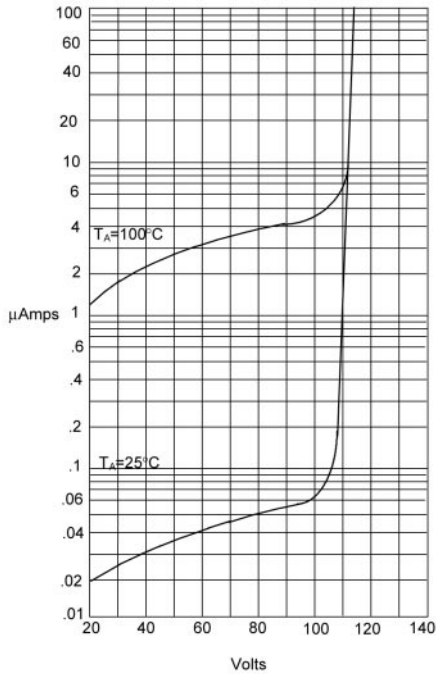
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

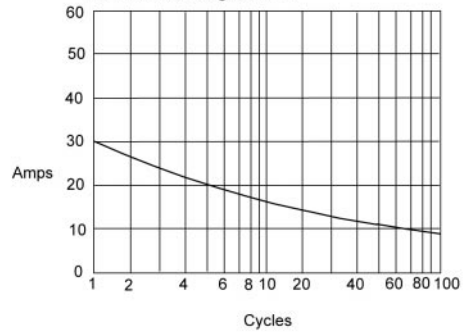
RATINGS AND CHARACTERISTIC CURVES

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