

# RL1N1000F THRU RL1N1800F

## PHOTOFLASH FAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 1000 to 1800 VOLTS  
**FORWARD CURRENT:** 0.5 AMPERE

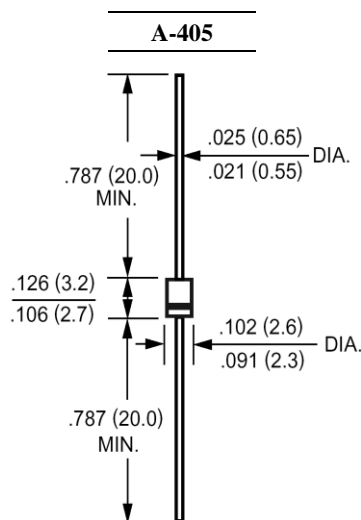
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### FEATURES

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability

### MECHANICAL DATA

Case: Molded plastic, A-405  
Epoxy: UL 94V-O rate flame retardant  
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed  
Polarity: Color band denotes cathode end  
Mounting position: Any  
Weight: 0.008ounce, 0.22gram



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%.

	Symbols	RL1N1000F	RL1N1200F	RL1N1400F	RL1N1600F	RL1N1800F	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	1200	1400	1600	1800	Volts
Maximum RMS Voltage	$V_{RMS}$	700	840	980	1120	1260	Volts
Maximum DC Blocking Voltage	$V_{DC}$	1000	1200	1400	1600	1800	Volts
Maximum Average Forward Rectified Current at $T_A=55$	$I_{(AV)}$	0.5					Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30					Amp
Maximum Forward Voltage at 0.5A DC and 25	$V_F$	1.8					Volts
Maximum Reverse Current at Rated DC Blocking Voltage $T_A=25$	$I_R$	5.0					uAmp
Maximum Full Load Reverse Current Average, Full Cycle .375", (9.5mm) lead length at $T_L = 55$		100					uAmp
Typical Junction Capacitance (Note 1)	$C_J$	10					pF
Maximum Reverse Recovery Time (Note 2)	$T_{RR}$	300					nS
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150					

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Reverse Recovery Test Conditions :  $I_F=5A$  ,  $I_R=1A$  ,  $I_{RR}=.25A$ .

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### RATINGS AND CHARACTERISTIC CURVES

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FIG. 1 - FORWARD CURRENT DERATING CURVE

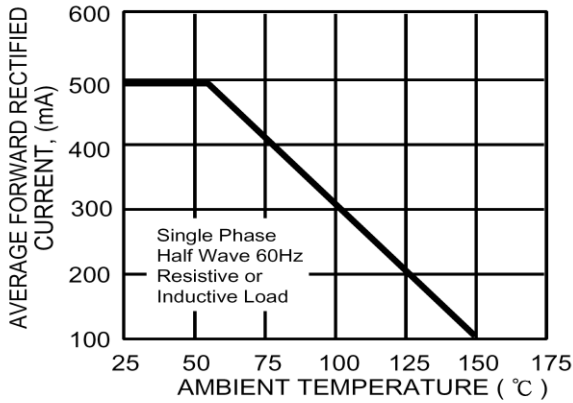


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

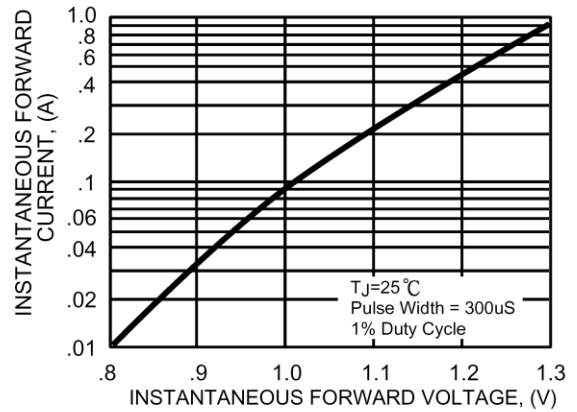


FIG. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

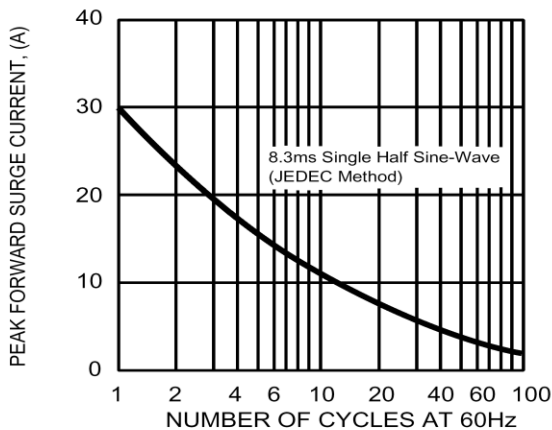


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

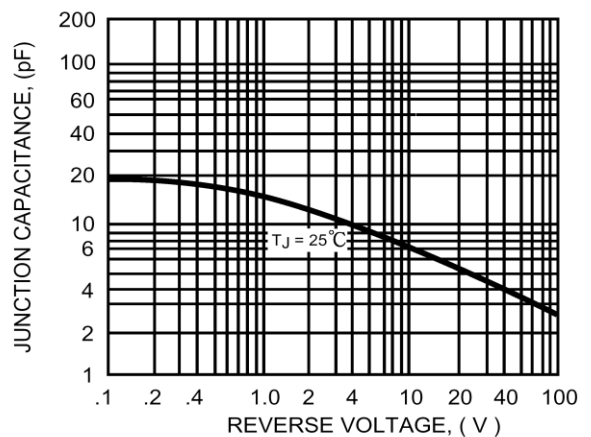
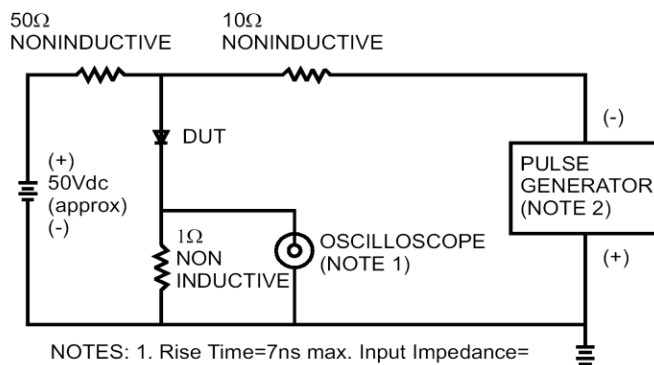


FIG. 5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

