

RL1N1000F THRU RL1N1800F

PHOTOFLASH FAST RECOVERY RECTIFIER



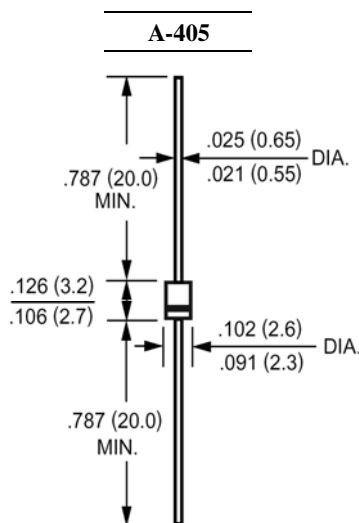
REVERSE VOLTAGE: 1000 to 1800 VOLTS
FORWARD CURRENT: 0.5 AMPERE

FEATURES

- Low leakage
- Low forward voltage drop
- High current capability
- 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 $T_A=55^\circ\text{C}$ | $I_{(AV)}$ | 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°C | V_F | 1.8 | | | | | Volts |
| Maximum Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ | I_R | 5.0 | | | | | uAmp |
| Maximum Full Load Reverse Current Average, Full Cycle .375", (9.5mm) lead length at $T_L = 55^\circ\text{C}$ | | 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 | | | | | °C |

NOTES:

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

2- Reverse Recovery Test Conditions: $I_F=5A$, $I_R=1A$, $I_{RR}=0.25A$.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

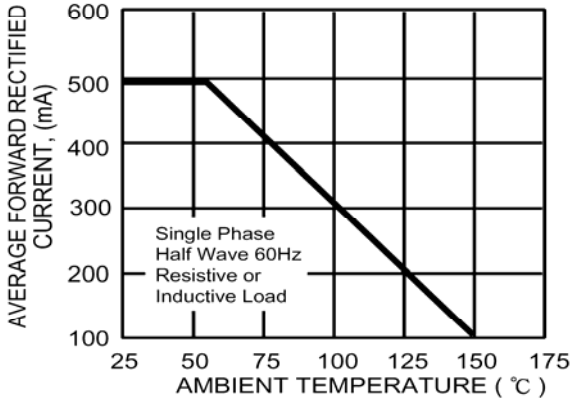


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

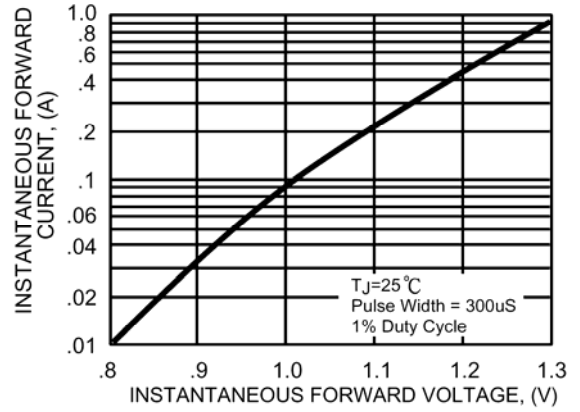


FIG. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

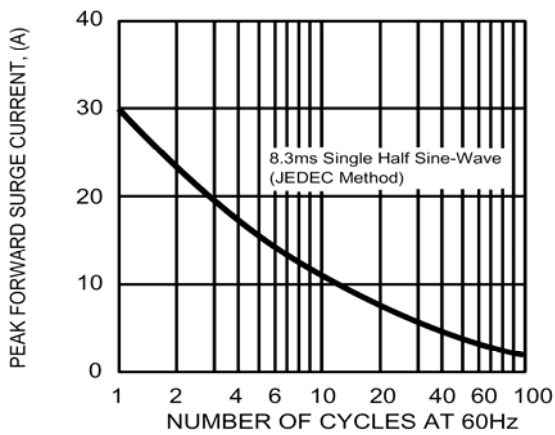


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

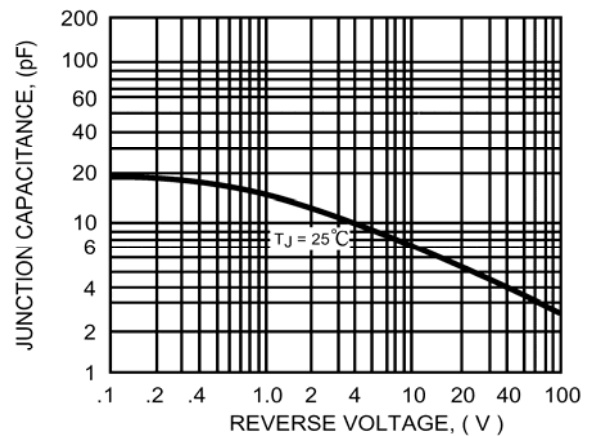
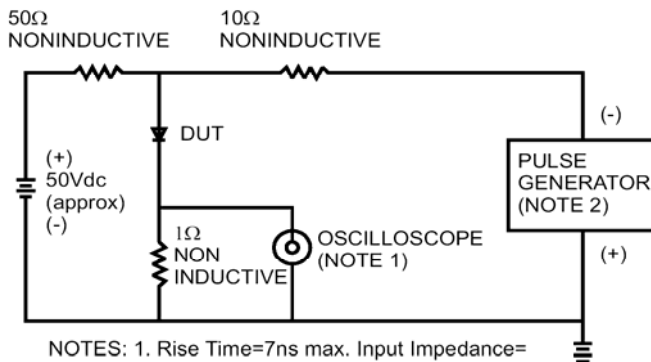


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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

