

**SOFT RECOVERY/FAST SWITCHING RECTIFIER**

**VOLTAGE RANGE 50 to 600 Volts CURRENT 5.0 Amperes**

**FEATURES**

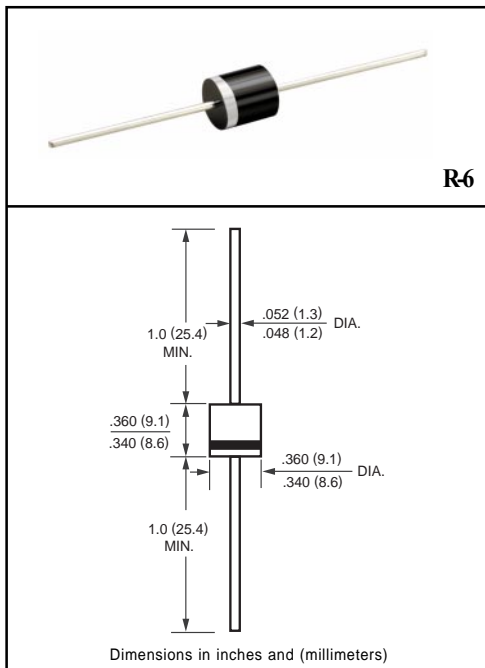
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 1.70 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

| RATINGS   | SYMBOL   | RL820        | RL821 | RL822 | RL824 | RL826 | UNITS |
|---|----------|--------------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM     | 50           | 100   | 200   | 400   | 600   | Volts |
| Maximum RMS Voltage   | VRMS     | 35           | 70    | 140   | 280   | 420   | Volts |
| Maximum DC Blocking Voltage   | Vdc      | 50           | 100   | 200   | 400   | 600   | Volts |
| Maximum Average Forward Rectified Current at TA = 55°C  | Io       | 5.0          |       |       |       |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 300          |       |       |       |       | Amps  |
| Typical Junction Capacitance (Note 2)   | RθJA     | 10           |       |       |       |       | °C/W  |
| Operating and Storage Temperature Range   | TJ, TSTG | -55 to + 150 |       |       |       |       | °C    |

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS   | SYMBOL | RL820 | RL821 | RL822 | RL824 | RL826 | UNITS |
|---|--------|-------|-------|-------|-------|-------|-------|
| Maximum Instantaneous Forward Voltage at 5.0A DC                  | VF     | 1.3   |       |       |       |       | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C | IR     | 25    |       |       |       |       | uAmps |
| Maximum Reverse Recovery Time (Note 1)                            | trr    | 200   |       |       |       |       | nSec  |

NOTES : 1. Test Conditions: IF = 1.0A, VR = 30V.

2. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead length.

# RATING AND CHARACTERISTIC CURVES ( RL820 THRU RL826 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

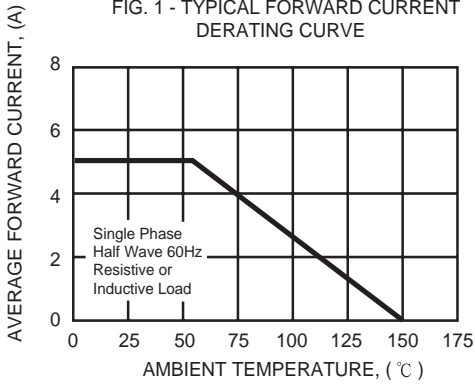


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

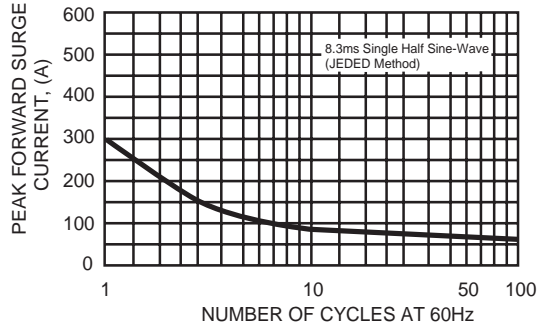


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

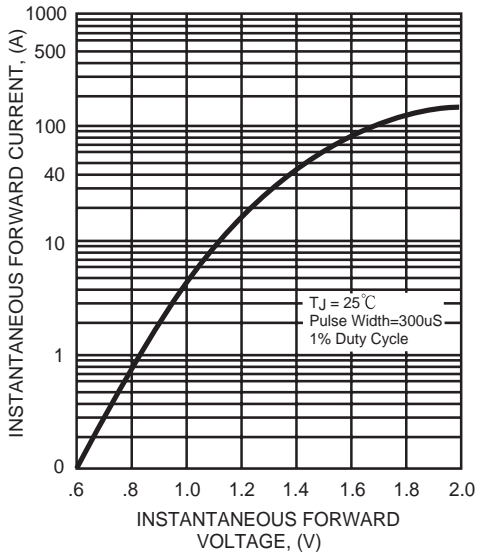


FIG. 4 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

