RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

RL820 THRU RL826

SOFT RECOVERY/FAST SWITCHING RECTIFIER

VOLTAGE RANGE 50 to 600 Volts CURRENT 5.0 Amperes

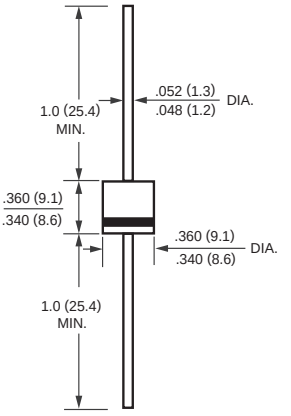
FEATURES

* 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-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 1.70 grams

R-6



Dimensions in inches and (millimeters)

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 T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	RL820	RL821	RL822	RL824	RL826	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current at T_A = 55°C	I_O	5.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300					Amps
Typical Junction Capacitance (Note 2)	$R_{\theta JA}$	10					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150					°C

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

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

NOTES : 1. Test Conditions: I_F = 1.0A, V_R = 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

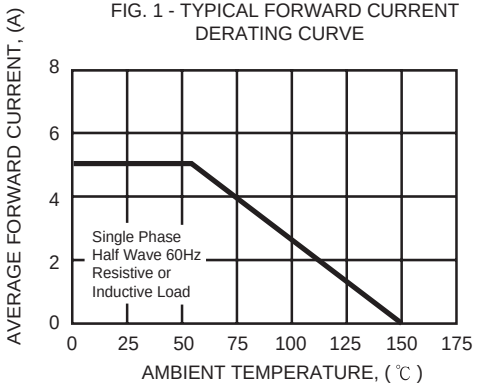


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

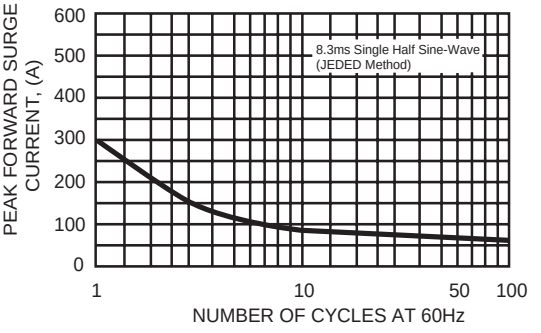


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

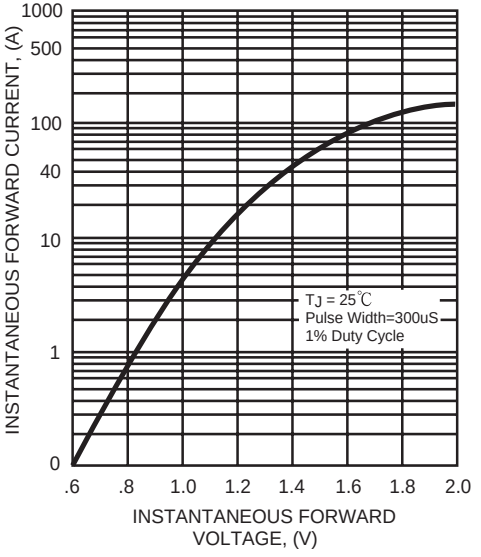


FIG. 4 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC