

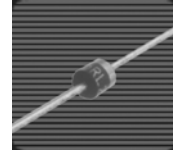


RL251 thru RL257

General Purpose Plastic Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 2.5 Amperes

Features

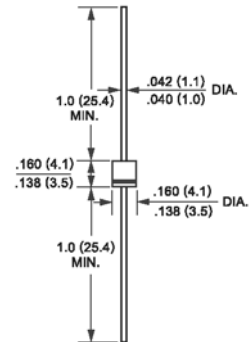
- ◆ Low cost
- ◆ Low leakage
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ T_J is 150°C (Max.) and T_{STG} is 175°C (Max.) with PI glue



R-3

Mechanical Data

- ◆ Case : Molded plastic R-3
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: MIL-STD-202E method 208C guaranteed
- ◆ Mounting position: Any
- ◆ Weight: 0.021 ounce, 0.60 gram



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%

Parameter	Symbols	RL251	RL252	RL253	RL254	RL255	RL256	RL257	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
Maximum average forward rectified current at $T_A=50^\circ\text{C}$	I_{AV}	2.5							Amps
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 2.5A DC	V_F	1.1							Volts
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 50							μA
Maximum full load reverse current full cycle average, .375" (9.5mm) lead length at $T_i=75^\circ\text{C}$	$I_{R(AV)}$	30							μA
Typical junction capacitance (Note 1)	C_J	35							pF
Typical thermal resistance	$R_{\theta JA}$	35							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +125							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

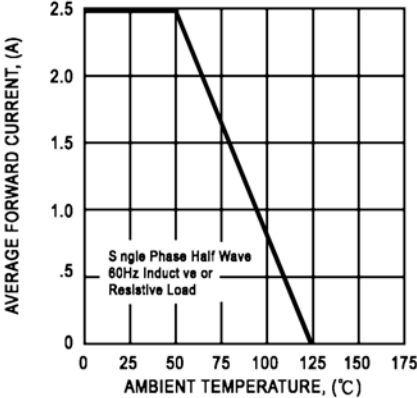


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

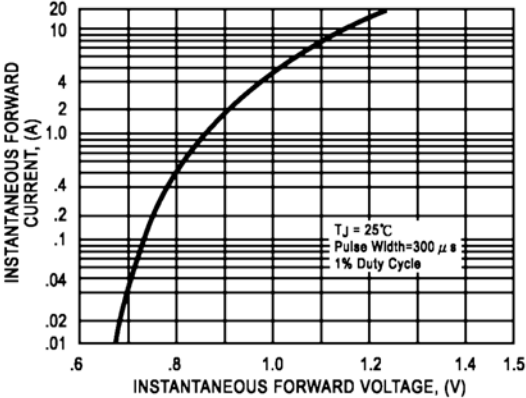


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

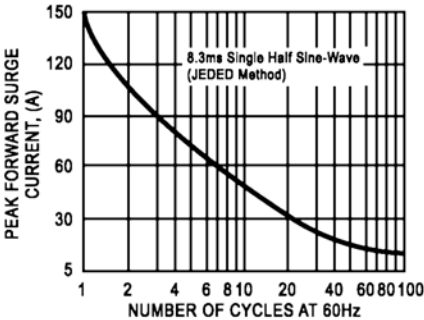


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

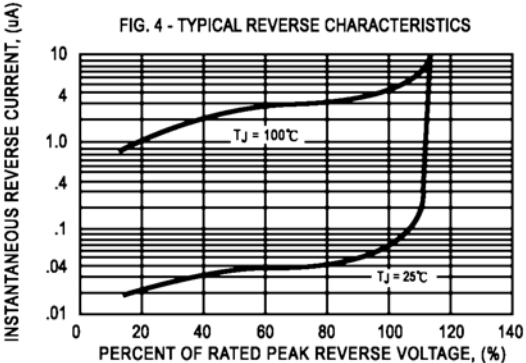


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

