

### PLASTIC SILICON RECTIFIERS

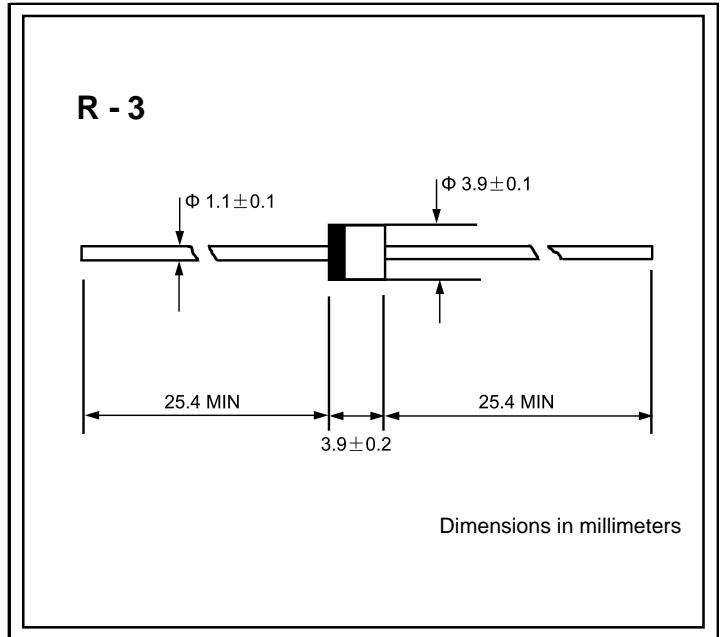
VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 2.5 A

#### FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC R-3, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: 0.021 ounces, 0.58 grams
- ◇ Mounting position: Any



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

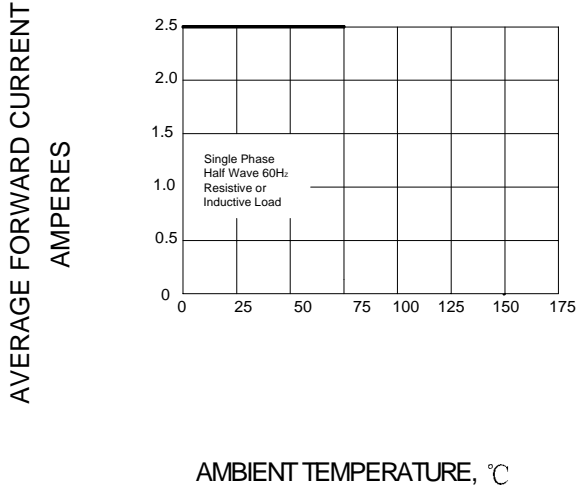
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		RL 251	RL 252	RL 253	RL 254	RL 255	RL 256	RL 257	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	2.5							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	150.0							A
Maximum instantaneous forward voltage @ 2.5 A	$V_F$	1.1							V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Typical junction capacitance (Note1)	$C_J$	25							pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55----+125							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55----+150							$^\circ\text{C}$

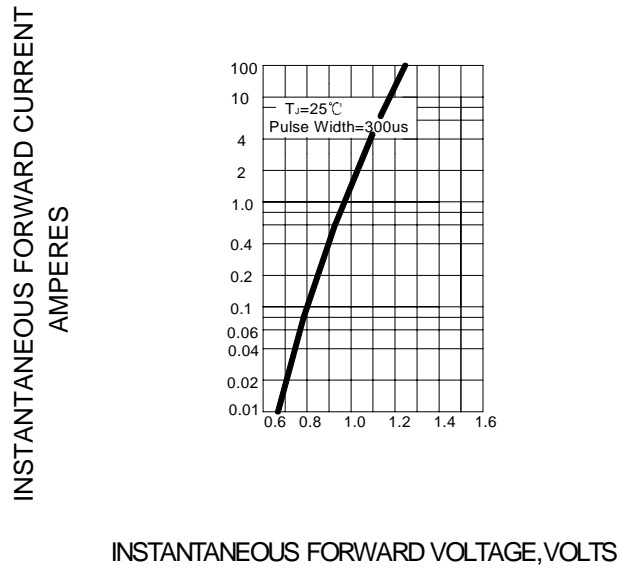
NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2. Thermal resistance from junction to ambient.

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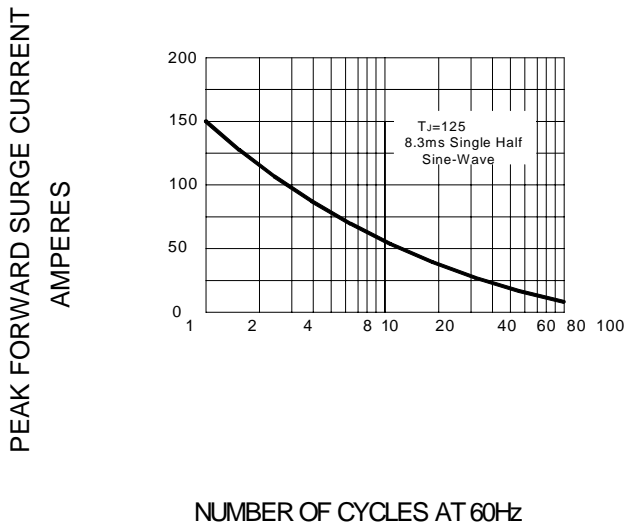
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

