



**GLASS PASSIVATED SILICON RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 8.0 Amperes**

**FEATURES**

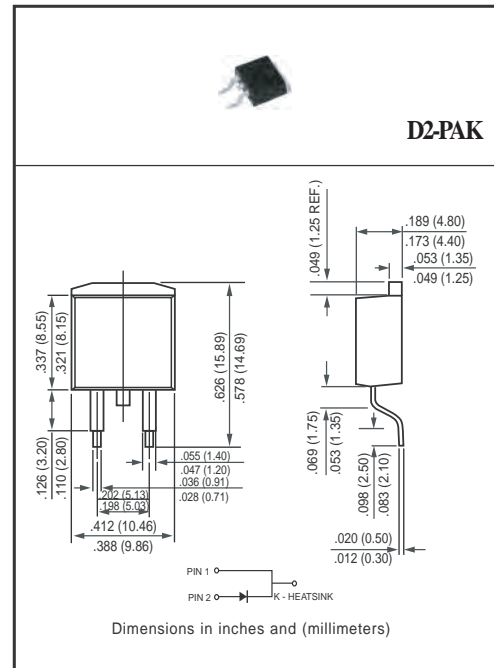
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: D2-PAK molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 1.4 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 (@ TA=25 °C unless otherwise noted)**

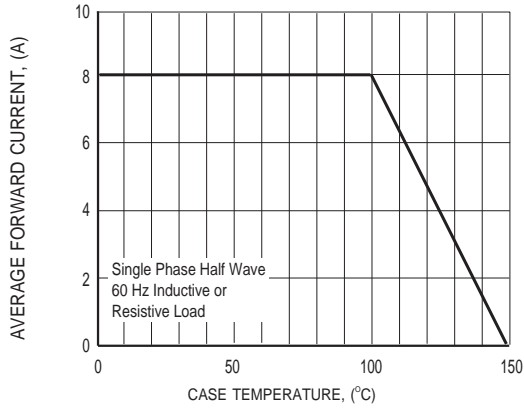
RATINGS	SYMBOL	RL801S	RL802S	RL803S	RL804S	RL805S	RL806S	RL807S	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T <sub>C</sub> = 100 °C	I <sub>O</sub>	8.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	125							Amps
Typical Current Squared Time	I <sup>2</sup> <sub>t</sub>	64.8							A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	3.6							°C/W
	R <sub>θJA</sub>	25							
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	40							pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

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

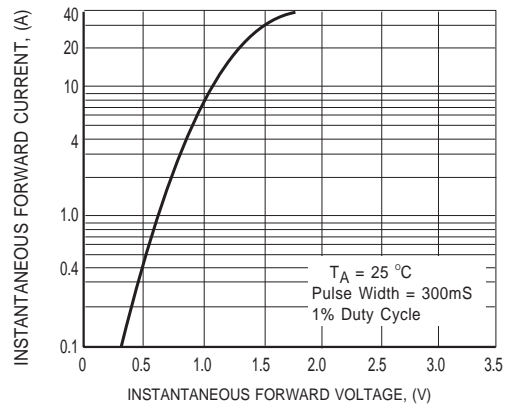
CHARACTERISTICS	SYMBOL	RL801S	RL802S	RL803S	RL804S	RL805S	RL806S	RL807S	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25 °C	1.0							uAmps
	@ T <sub>A</sub> = 100 °C	50							

- NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
4. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

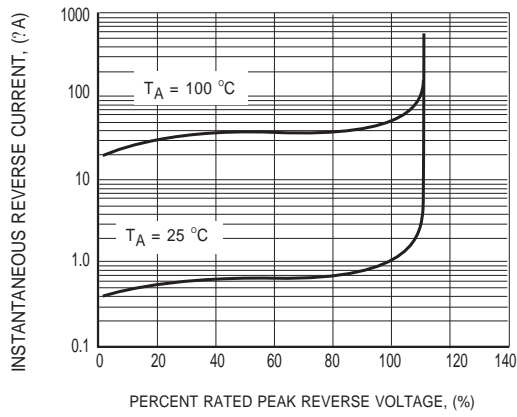
# RATING AND CHARACTERISTICS CURVES ( RL801S THRU RL807S )



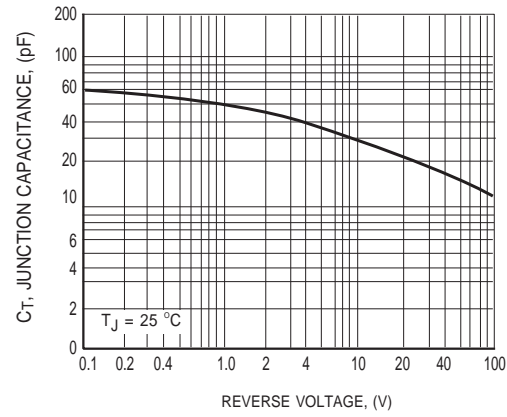
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



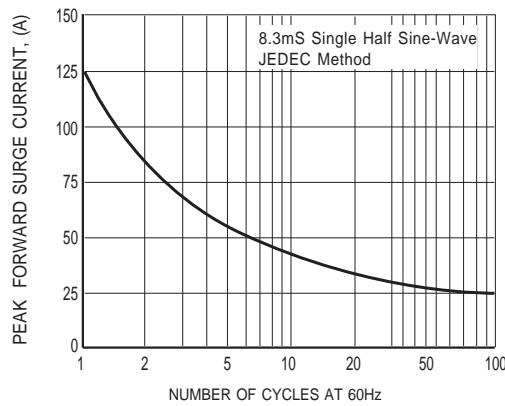
**FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**

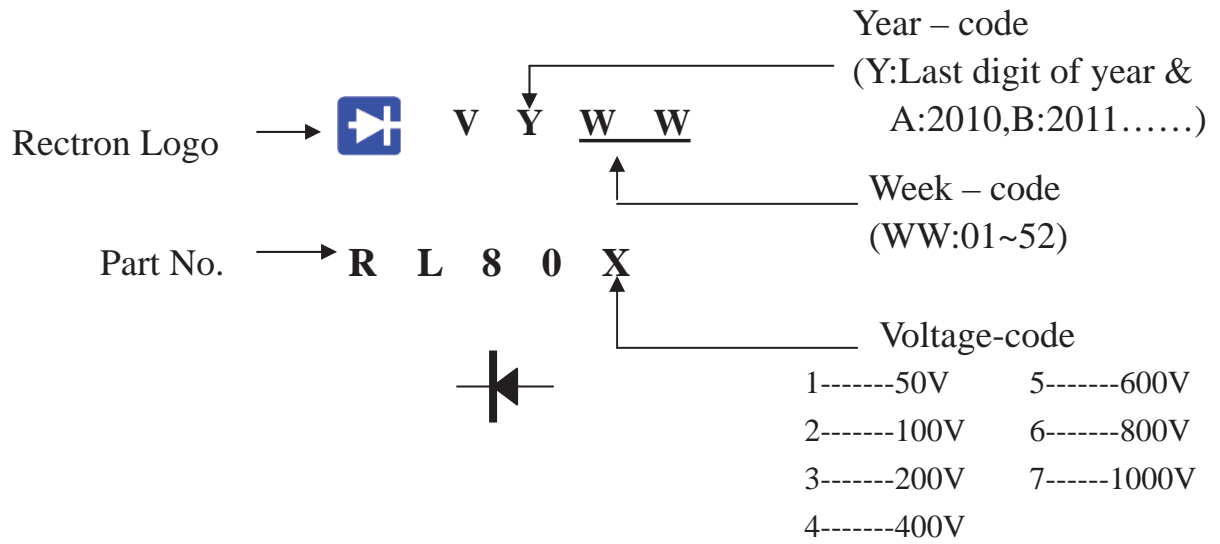


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

# Marking Description



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

## BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
A-405	-B	1,000	194*84*21	415*220*255	50,000	15.64
BR-3/-6	-B	200	206*208*55	450*220*255	1,600	6.00 / 6.80
BR-8/-10	-B	200	236*236*50	497*251*282	2,000	12.24
BR-15/-25/-35(W)	-B	50	206*208*57	450*220*255	400	12.50 (14.40)
DO-15	-B	500	194*84*21	415*220*255	25,000	12.74
DO-201	-B	500	300*73*40	347*320*271	12,000	15.90
DO-41	-B	1,000	194*75*21	415*220*255	50,000	16.2
HVM	-B	200	165*214*52	353*226*290	2,000	---
HVP	-B	40	236*236*40	502*251*145	240	8.80
MB-15/-25/-35(W)	-B	50	206*208*57	450*220*255	400	13.60 (14.30)
MP-15/-25/-35(W)	-B	50	206*208*57	450*220*255	400	7.7 (8.26)
R-1/-3	-B	1000 / 500	192*75*21	415*220*255	50,000 / 25,000	11.74 / 16.17
R-6/R-7	-B	200	300*73*40	347*320*271	4,800	12.93 / 14.57
RB-15	-B	1,000	165*252*59	347*320*271	10,000	11.6
RBU	-B	450	240*239*35	502*251*126	2,700	13.00
RC-2	-B	600	165*252*59	347*320*271	6,000	9.4
RS-1	-B	600	240*239*35	497*255*162	4,800	9.264
RS-2L	-B	400	210*160*52	502*251*126	2,400	8.59
RS-4L	-B	300	230*162*52	502*251*126	1,800	11.3
RS-6/-8	-B	200	236*236*34	497*255*162	1,600	13.6 / 14.5
RS-1M	-B	600	240*239*35	497*255*162	4,800	8.62
RS-2M	-B	600	236*236*40	502*251*145	3,600	10.28
RS-4M/-10M	-B	600	236*236*40	497*251*100	2,400	11.09
RS-6/8/15/20/25M	-B	300	230*190*46	410*243*157	1,800	13.37
WOM	-B	600	165*252*59	347*320*271	6,000	11.0

## TUBE PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	WEIGHT(Kg)
BDB	-C	2,000	450*140*84	464*305*283	12,000	14.18
D2PAK	-C	2,000	550*140*92	572*308*120	4,000	10.20
DB-1	-C	2,500	450*140*84	464*305*283	15,000	14.30
DB-LS	-C	4,000	450*140*84	464*305*283	24,000	16.45
DB-S	-C	4,000	450*140*84	464*305*283	24,000	18.44
RBU	-C	1,000	490*135*110	510*293*131	2,000	13.62
RS-1M/-2M	-C	1,350	540*118*118	560*259*144	2,700	12.03
RS-4M/-10M	-C	900	540*118*118	560*259*144	1,800	12.82
RS-6/8/15/20/25M	-C	600	490*135*110	510*293*131	1,200	13.12
(I)TO-220/TO-220(A)	-C	2,000	550*140*92	572*308*120	4,000	11.80
TO-247	-C	900	550*140*92	572*308*120	1,800	7.60

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