

**SILICON RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

**FEATURES**

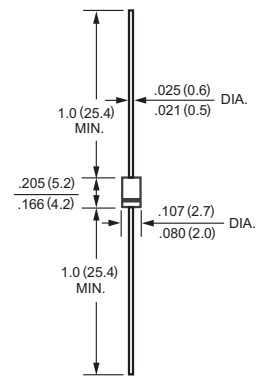
- \* High reliability
- \* Low leakage current
- \* Low forward voltage drop
- \* High current capability

**MECHANICAL DATA**

- \* Case : Molded plastic
- \* Epoxy : Device has UL flammability classification 94V-0
- \* Lead : MIL-STD-202E method 208C guaranteed
- \* Mounting position : Any
- \* Weight : 0.20 gram



**A-405**



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

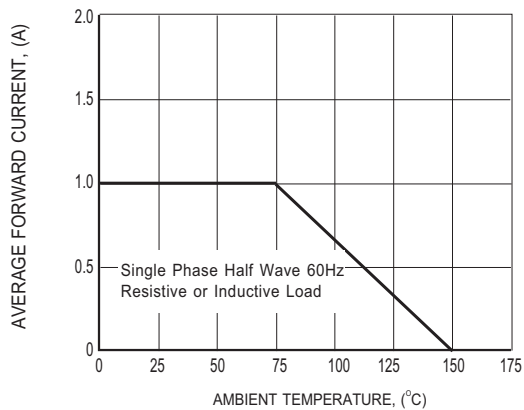
RATINGS	SYMBOL	RL1N4001	RL1N4002	RL1N4003	RL1N4004	RL1N4005	RL1N4006	RL1N4007	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA=55°C	I <sub>O</sub>	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							Amps
Typical Current Squared Time	I <sup>2</sup> t	3.74							A <sup>2</sup> /Sec
Typical Thermal Resistance	R <sub>θJA</sub>	50							°C/W
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15							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)**

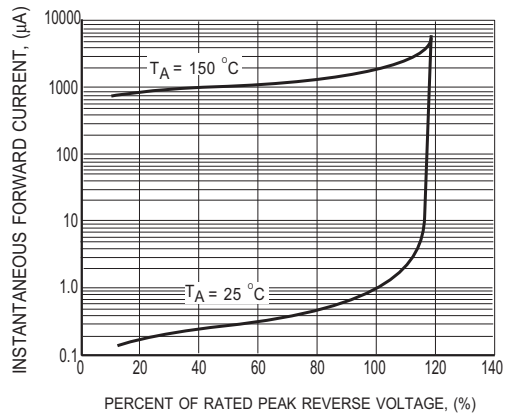
CHARACTERISTICS	SYMBOL	RL1N4001	RL1N4002	RL1N4003	RL1N4004	RL1N4005	RL1N4006	RL1N4007	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25 °C	1.0							μA
	@T <sub>A</sub> = 150 °C	2.0							mA
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T <sub>L</sub> =75°C		30							μA

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. " ROHS compliant"  
3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

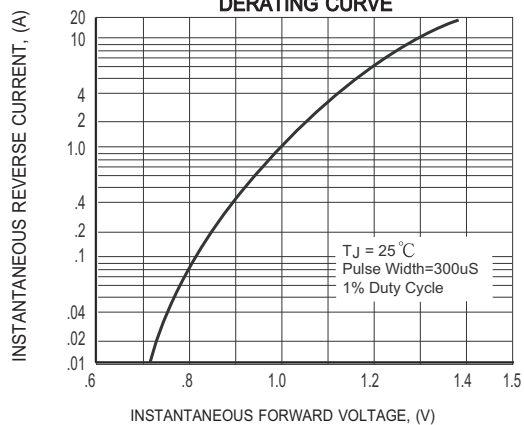
# RATING AND CHARACTERISTICS CURVES ( RL1N4001 THRU RL1N4007 )



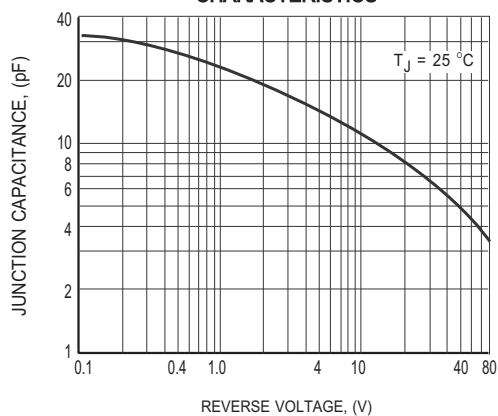
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



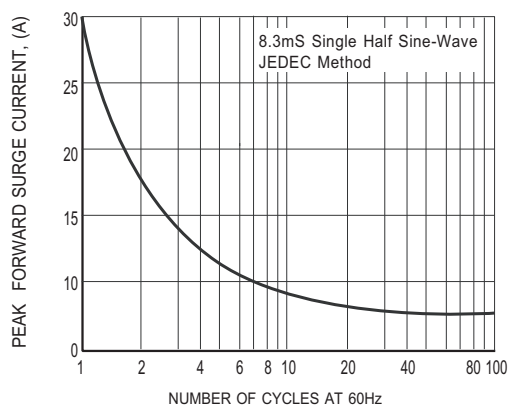
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



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

# RADIAL-TAPING SPECIFICATIONS FOR RECTIFIERS-PANASERT

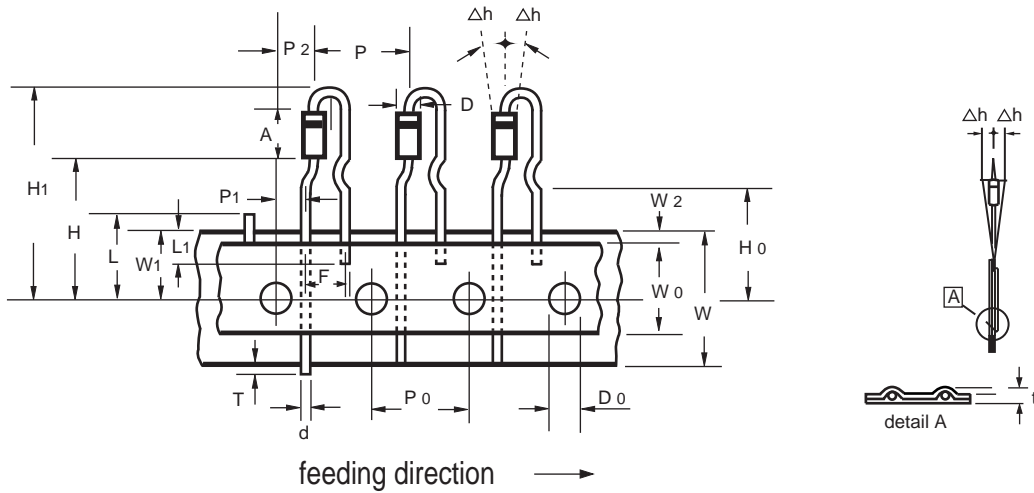


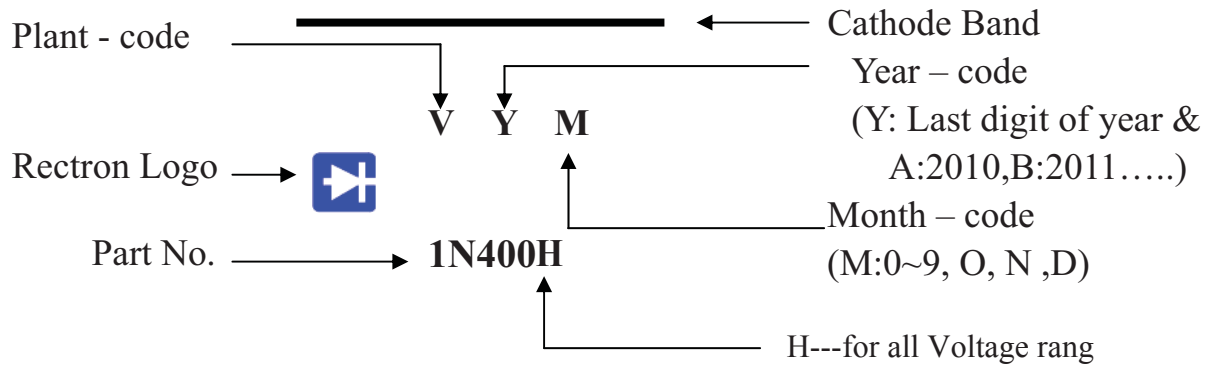
Fig.: Configuration of PANASERT

<b>CODING</b>	<b>LEAD FORMING OUTLINE CODE(A)</b>
A: LEAD FORMING OUTLINE CODE	N: PANASERT
B: COATING	

ITEM	SYMBOL	SPECIFICATIONS(mm)	SPECIFICATIONS(inch)
Body diameter	D	2.7 Max.	0.106 Max.
Body height	A	5.2 ± 0.5	0.205 ± 0.020
Lead-wire diameter	d	0.6 ± 0.1	0.024 ± 0.004
Component pitch	P	12.7 ± 1.0	0.500 ± 0.039
Feed hole pitch	P <sub>0</sub>	12.7 ± 0.3	0.500 ± 0.012
Component lead spacing	F	5.0+0.4/-0.1	0.197+0.016/-0.004
Deflection	Δh	0.0 ± 1.0	0.000 ± 0.039
Tape width	W	18.0 ± 0.5	0.709 ± 0.020
Hold-down tape width	W <sub>0</sub>	12.5 Min.	0.492 Min.
Hole position	W <sub>1</sub>	9.0+0.75/-0.50	0.354+0.030/-0.020
Length from seating plane	H	19.5 ± 1.0	0.768 ± 0.039
Component height	H <sub>1</sub>	32.25 Max.	1.27 Max.
Feed hole diameter	D <sub>0</sub>	4.0 ± 0.2	0.157 ± 0.008
Total tape thickness	t	1.5 Max.	0.059 Max.
Cut out length	L	11.0 Max.	0.433 Max.
Lead-wire (taped portion)	L <sub>1</sub>	2.5 Min.	0.098 Min.
Lead protrusion	T	0.8 Max.	0.031 Max.
Lead-wire clinch height	H <sub>0</sub>	16.0 ± 0.5	0.630 ± 0.020
Feedhole center to lead	P <sub>1</sub>	3.85 ± 0.7	0.152 ± 0.028
Center of seating plane location	P <sub>2</sub>	6.35 ± 1.0	0.250 ± 0.039
Adhesive tape position	W <sub>2</sub>	0.5 Max.	0.020 Max.
STANDARD PACKAGING/(EA)	-	TAPE REEL / 2K/BOX/2K	

- Notes :
1. Packaging per EIA/JEDEC standard RS-468. Available only for A-405 product utilizing 0.6mm diameter leads.
  2. Maximum cumulative pitch tolerance: 1.0mm/20pitch.
  3. Lead Insulation coating allow to be exposed 1.5mm Max. from body.

## Mark 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

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-41	-T	5,000	5,000	5.0	52	330	355*350*335	20,000	8.13

### AMMO PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON ( EA )	GROSS WEIGHT (Kg)
DO-41	-F	3,000	5.0	52	255*73*100	400*268*225	30,000	9.6
DO-41	-E	3,000	5.0	26	256*48*94	365*270*217	42,000	9.61
A-405	-N	2,000	12.7	---	325*170*40	355*350*335	28,000	11.41

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