RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

RL1N4001 THRU RL1N4007

SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

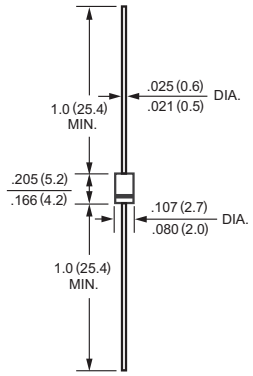
FEATURES

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

RATINGS	SYMBOL	RL1N4001	RL1N4002	RL1N4003	RL1N4004	RL1N4005	RL1N4006	RL1N4007	UNITS
Maximum Recurrent 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=55°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Current Squarad Time	I^2t	3.74							A^2/Sec
Typical Thermal Resistance	$R_{\theta JA}$	50							°C/W
Typical Junction Capacitance (Note 1)	C_J	15							pF
Operating and StorageTemperature Range	T_J,T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	RL1N4001	RL1N4002	RL1N4003	RL1N4004	RL1N4005	RL1N4006	RL1N4007	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25 °C	I_R	1.0							µA
	@T_A = 150 °C		2.0							mA
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T_L=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.

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RATING AND CHARACTERISTICS CURVES (RL1N4001 THRU RL1N4007)

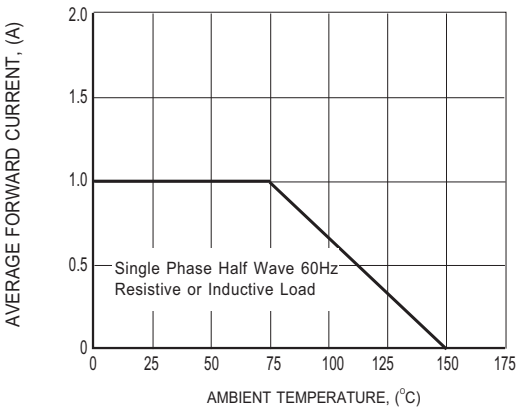


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

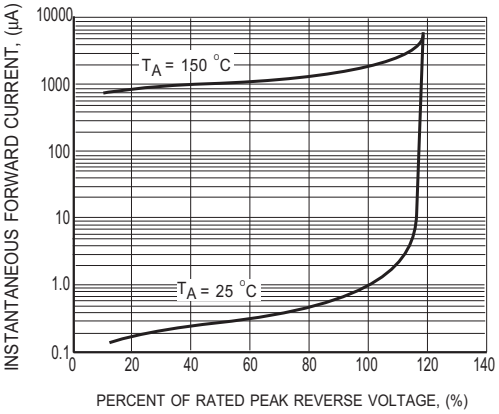


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

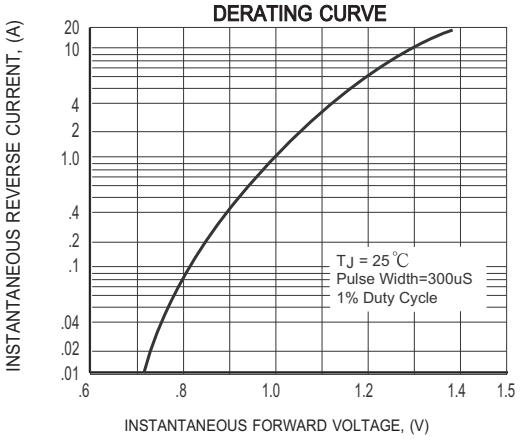


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

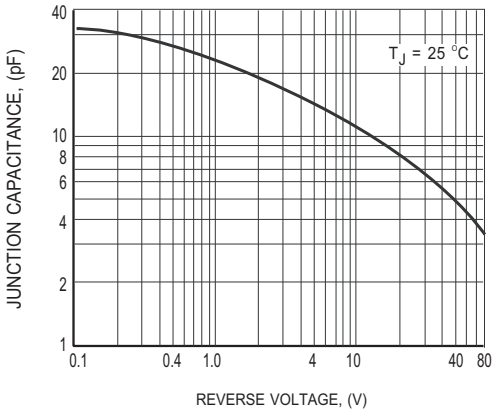


FIG.4 TYPICAL JUNCTION CAPACITANCE

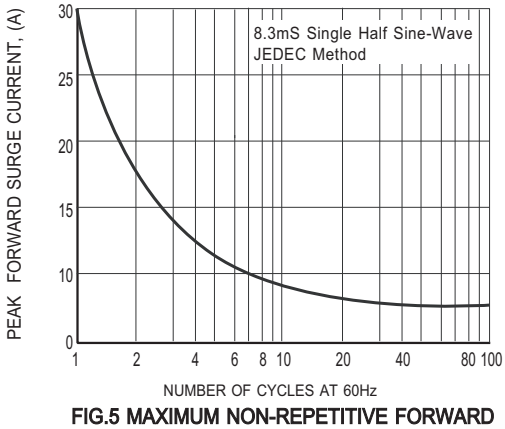


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

RADIAL-TAPING SPECIFICATIONS
FOR RECTIFIERS-PANASERT

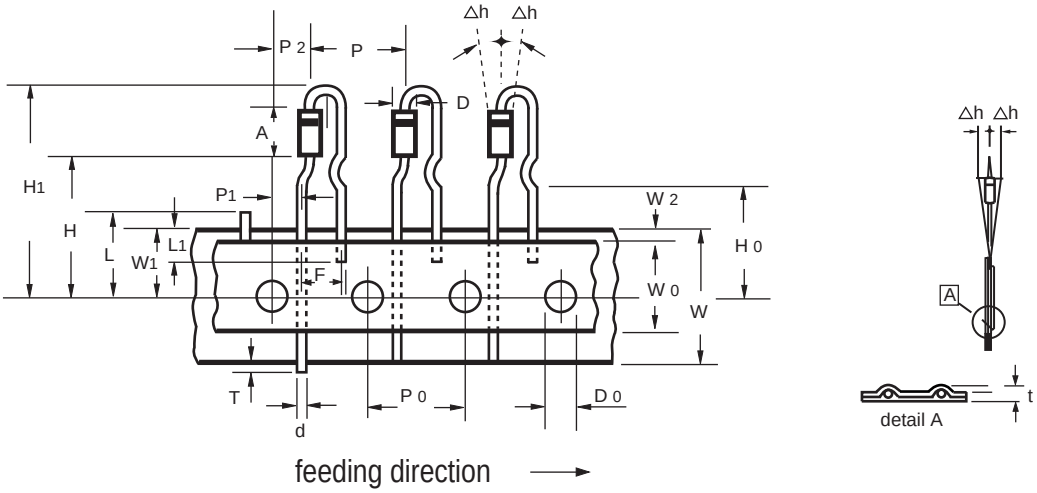


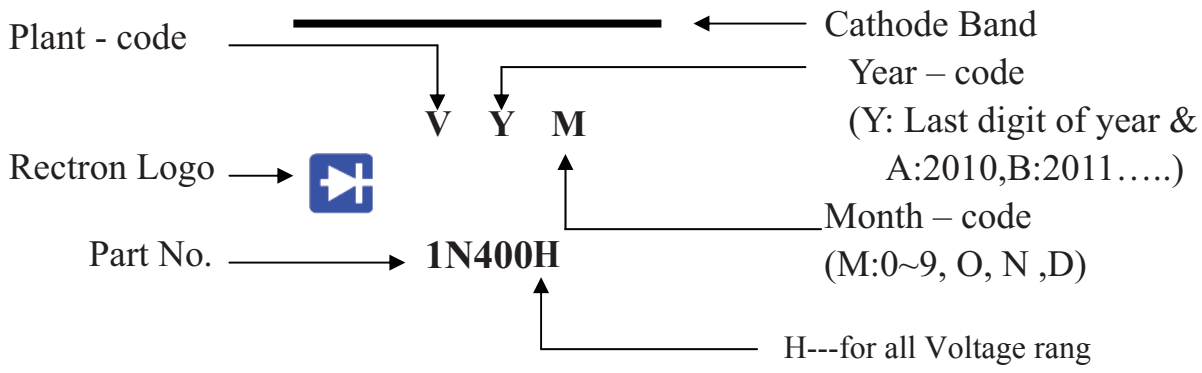
Fig.: Configuration of PANASERT

CODING	LEAD FORMING OUTLINE CODE(A)
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_0	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	△h	0.0 ± 1.0	0.000 ± 0.039
Tape width	W	18.0 ± 0.5	0.709 ± 0.020
Hold-down tape width	W_0	12.5 Min.	0.492 Min.
Hole position	W_1	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_1	32.25 Max.	1.27 Max.
Feed hole diameter	D0	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_1	2.5 Min.	0.098 Min.
Lead protrusion	T	0.8 Max.	0.031 Max.
Lead-wire clinchh height	H_0	16.0 ± 0.5	0.630 ± 0.020
Feedhole center to lead	P_1	3.85 ± 0.7	0.152 ± 0.028
Center of seating plane location	P_2	6.35 ± 1.0	0.250 ± 0.039
Adhesive tape position	W_2	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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