1N5400 thru 1N5408

1N5404 and 1N5406 are Preferred Devices

Axial-Lead Standard Recovery Rectifiers

Lead mounted standard recovery rectifiers are designed for use in power supplies and other applications having need of a device with the following features:

- High Current to Small Size
- High Surge Current Capability
- Low Forward Voltage Drop
- Void–Free Economical Plastic Package
- Available in Volume Quantities
- Plastic Meets UL 94V–0 for Flammability

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.1 gram (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 220°C Max. for 10 Seconds, 1/16″ from case
- Polarity: Cathode Indicated by Polarity Band
- Marking: 1N5400, 1N5401, 1N5402, 1N5404, 1N5406, 1N5407, 1N5408

MAXIMUM RATINGS

Please See the Table on the Following Page

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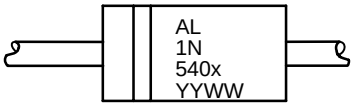
STANDARD RECOVERY RECTIFIERS 50–1000 VOLTS 3.0 AMPERES

AXIAL LEAD
CASE 267–05
STYLE 1

MARKING DIAGRAM



AL = Assembly Location
1N540x = Device Number
x = 0, 1, 2, 4, 6, 7 or 8
YY = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
1N5400	Axial Lead	500 Units/Box
1N5400RL	Axial Lead	1200/Tape & Reel
1N5401	Axial Lead	500 Units/Box
1N5401RL	Axial Lead	1200/Tape & Reel
1N5402	Axial Lead	500 Units/Box
1N5402RL	Axial Lead	1200/Tape & Reel
1N5404	Axial Lead	500 Units/Box
1N5404RL	Axial Lead	1200/Tape & Reel
1N5406	Axial Lead	500 Units/Box
1N5406RL	Axial Lead	1200/Tape & Reel
1N5407	Axial Lead	500 Units/Box
1N5407RL	Axial Lead	1200/Tape & Reel
1N5408	Axial Lead	500 Units/Box
1N5408RL	Axial Lead	1200/Tape & Reel

Preferred devices are recommended choices for future use and best overall value.

MAXIMUM RATINGS

Rating	Symbol	1N5400	1N5401	1N5402	1N5404	1N5406	1N5407	1N5408	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	Volts
Non–repetitive Peak Reverse Voltage	V_{RSM}	100	200	300	525	800	1000	1200	Volts
Average Rectified Forward Current (Single Phase Resistive Load, 1/2″ Leads, T_L = 105°C)	I_O	3.0							Amp
Non–repetitive Peak Surge Current (Surge Applied at Rated Load Conditions)	I_{FSM}	200 (one cycle)							Amp
Operating and Storage Junction Temperature Range	T_J T_{stg}	– 65 to +170 – 65 to +175							°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient (PC Board Mount, 1/2″ Leads)	$R_{\theta JA}$	53	°C/W

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Forward Voltage (I_F = 3.0 Amp, T_A = 25°C)	v_F	–	–	1.0	Volts
Reverse Current (Rated dc Voltage) T_A = 25°C T_A = 150°C	I_R	 – –	 – –	 10 100	μA

Ratings at 25°C ambient temperature unless otherwise specified.
60 Hz resistive or inductive loads.
For capacitive load, derate current by 20%.

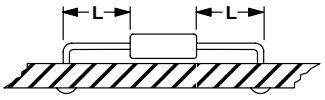
NOTE 1 — AMBIENT MOUNTING DATA

Data shown for thermal resistance junction–to–ambient ($R_{\theta JA}$) for the mountings shown is to be used as typical guideline values for preliminary engineering or in case the tie point temperature cannot be measured.

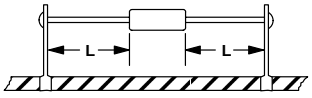
TYPICAL VALUES FOR $R_{\theta JA}$ IN STILL AIR

Mounting Method	Lead Length, L (IN)				$R_{\theta JA}$
	1/8	1/4	1/2	3/4	
1	50	51	53	55	°C/W
2	58	59	61	63	°C/W
3	28				°C/W

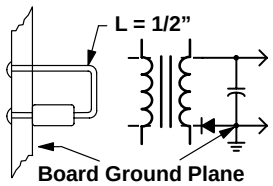
MOUNTING METHOD 1
P.C. Board Where Available Copper Surface area is small



MOUNTING METHOD 2
Vector Push–In Terminals T–28



MOUNTING METHOD 3
P.C. Board with 1–1/2” x 1–1/2” Copper Surface



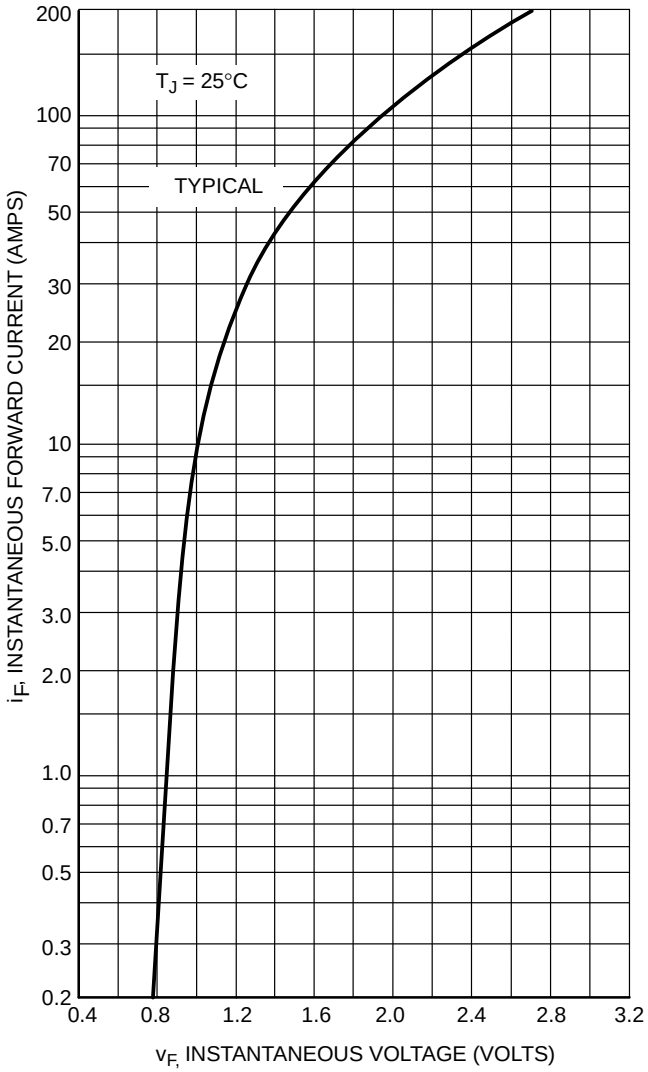


Figure 1. Forward Voltage

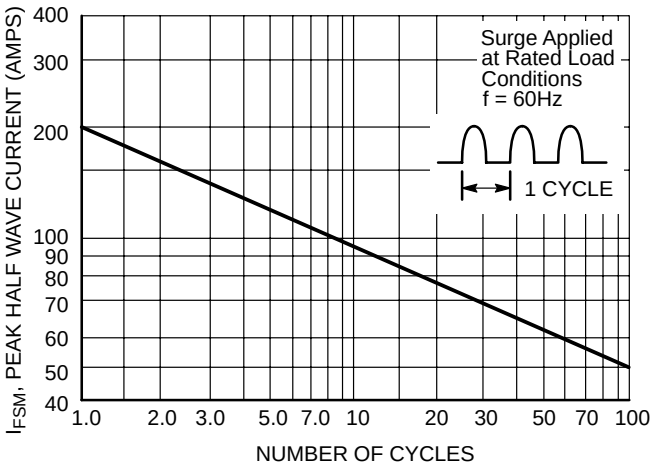


Figure 2. Maximum Nonrepetitive Surge Current

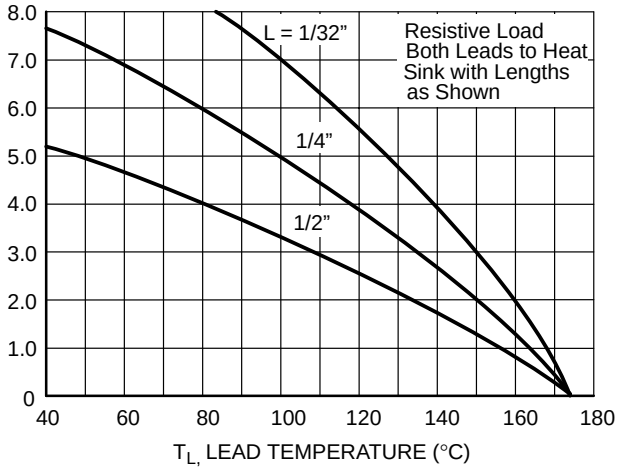


Figure 3. Current Derating Various Lead Lengths

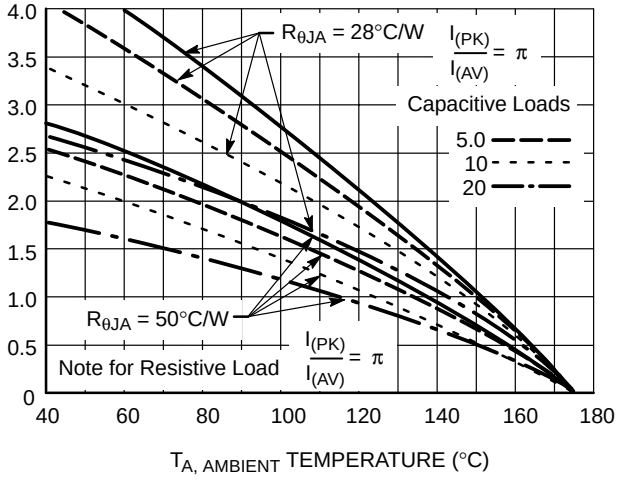
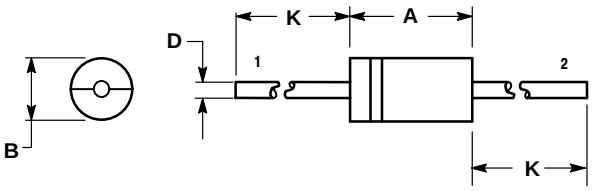


Figure 4. Current Derating PC Board Mounting

PACKAGE DIMENSIONS

AXIAL LEAD
CASE 267–05
ISSUE G



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.287	0.374	7.30	9.50
B	0.189	0.209	4.80	5.30
D	0.047	0.051	1.20	1.30
K	1.000	---	25.40	---

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

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