

# 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

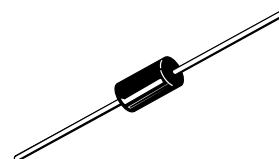
## Mechanical Characteristics

- 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
- Shipped in plastic bags, 5,000 per bag.
- Available Tape and Reeled, 1500 per reel, by adding a "RL" suffix to the part number
- Polarity: Cathode Indicated by Polarity Band
- Marking: 1N5400, 1N5401, 1N5402, 1N5404, 1N5406, 1N5407, 1N5408

**1N5400  
thru  
1N5408**

1N5404 and 1N5406 are  
Motorola Preferred Devices

**STANDARD  
RECOVERY RECTIFIERS  
50–1000 VOLTS  
3.0 AMPERE**



CASE 267-03

## 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, $T_L = 105^\circ\text{C}$ )	$I_O$	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
*Instantaneous Forward Voltage (1) ( $i_F = 9.4$ Amp)	$v_F$	—	—	1.2	Volts
Average Reverse Current (1) DC Reverse Current (Rated dc Voltage, $T_L = 80^\circ\text{C}$ )	$I_{R(AV)}$ $I_R$	— —	— —	500 500	$\mu\text{A}$

\* JEDEC Registered Data.

(1) Measured in a single phase halfwave circuit such as shown in Figure 6.25 of EIA RS-282, November 1963. Operated at rated load conditions  
 $T_L = 80^\circ\text{C}$ ,  $I_O = 3.0$  A,  $V_R = V_{RWM}$ .

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

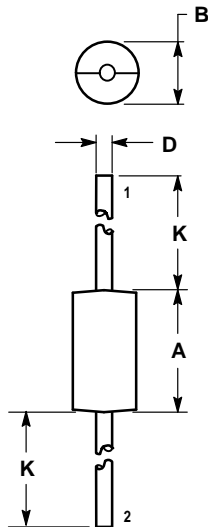
Ratings at 25°C ambient temperature unless otherwise specified.

60 Hz resistive or inductive loads.

For capacitive load, derate current by 20%.



## PACKAGE DIMENSIONS




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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.370	0.380	9.40	9.65
B	0.190	0.210	4.83	5.33
D	0.048	0.052	1.22	1.32
K	1.000	—	25.40	—

STYLE 1:  
PIN 1. CATHODE  
2. ANODE

**CASE 267-03  
ISSUE C**

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