



1N4936

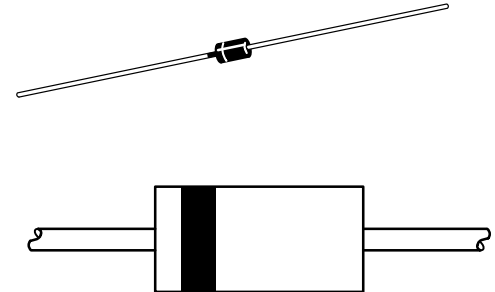
Axial-Lead Fast-Recovery Rectifier

**FAST RECOVERY
RECTIFIER
1.0 AMPERE
400 VOLTS**

Axial-lead, fast-recovery rectifiers are designed for special applications such as dc power supplies, inverters, converters, ultrasonic systems, choppers, low RF interference and free wheeling diodes. A complete line of fast recovery rectifiers having typical recovery time of 150 nanoseconds providing high efficiency at frequencies to 250 kHz.

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 0.4 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, 1000 per bag.
- Available Tape and Reeled, 5000 per reel, by adding a "RL" suffix to the part number
- Polarity: Cathode Indicated by Polarity Band
- Marking: 1N4936





1N4936

MAXIMUM RATINGS (Note 1)

| Rating | Symbol | 1N4936 | Unit |
|--|---------------------------------|------------------------------|------------------|
| *Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 400 | Volts |
| *Non-Repetitive Peak Reverse Voltage RMS Reverse Voltage | V_{RSM} $V_{R(RMS)}$ | 400 280 | Volts |
| *Average Rectified Forward Current (Single phase, resistive load, $T_A = 75^\circ\text{C}$) (Note 2) | I_O | 1.0 | Amp |
| *Non-Repetitive Peak Surge Current (Surge applied at rated load conditions) | I_{FSM} | 30 | Amps |
| Operating Junction Temperature Range Storage Temperature Range | T_J T_{stg} | - 65 to +150 - 65 to +150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|-----------------|-----|--------------------|
| Thermal Resistance, Junction to Ambient (Typical Printed Circuit Board Mounting) | $R_{\theta JC}$ | 65 | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|--------|--------|-----------|------------|---------------|
| Instantaneous Forward Voltage ($I_F = 3.14$ Amp, $T_J = 125^\circ\text{C}$) | V_F | - | 1.0 | 1.2 | Volts |
| Forward Voltage ($I_F = 1.0$ Amp, $T_A = 25^\circ\text{C}$) | V_F | - | 1.0 | 1.1 | Volts |
| *Reverse Current (Rated dc Voltage) $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$ | I_R | - - | 1.0 50 | 5.0 100 | μA |

*REVERSE RECOVERY CHARACTERISTICS

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|---------------|--------|------------|------------|------|
| Reverse Recovery Time ($I_F = 1.0$ Amp to $V_R = 30$ Vdc) ($I_{FM} = 15$ Amp, $di/dt = 10$ A/ μs) | t_{rr} | - - | 150 175 | 200 300 | ns |
| Reverse Recovery Current ($I_F = 1.0$ Amp to $V_R = 30$ Vdc) | $I_{RM(REC)}$ | - | 1.0 | 2.0 | Amp |

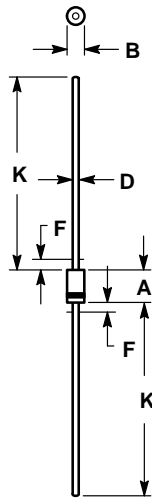
1. Ratings at 25°C ambient temperature unless otherwise specified.

2. Derate by 20% for capacitive loads.

*Indicates JEDEC Registered Data for 1N4933 Series.

PACKAGE DIMENSIONS

AXIAL LEAD



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 59-04 OBSOLETE, NEW STANDARD 59-09.
4. 59-03 OBSOLETE, NEW STANDARD 59-10.
5. ALL RULES AND NOTES ASSOCIATED WITH JEDEC DO-41 OUTLINE SHALL APPLY
6. POLARITY DENOTED BY CATHODE BAND.
7. LEAD DIAMETER NOT CONTROLLED WITHIN F DIMENSION.

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.161 | 0.205 | 4.10 | 5.20 |
| B | 0.079 | 0.106 | 2.00 | 2.70 |
| D | 0.028 | 0.034 | 0.71 | 0.86 |
| F | --- | 0.050 | --- | 1.27 |
| K | 1.000 | --- | 25.40 | --- |