

# Silicon Diode

## **1N4937**

600V / 1A

# DATASHEET

OEM – General Semiconductor

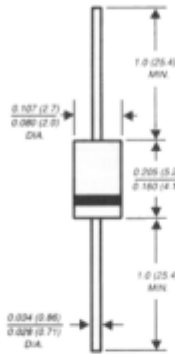
Source: General Semiconductor Databook 1998

# 1N4933 THRU 1N4937

## FAST SWITCHING PLASTIC RECTIFIER

Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

DO-204AL



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 1.0 Ampere operation at  $T_A=75^{\circ}\text{C}$  with no thermal runaway
- ◆ High temperature soldering guaranteed:  $250^{\circ}\text{C}/10$  seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounce, 0.34 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified.

	SYMBOLS	1N4933	1N4934	1N4935	1N4936	1N4937	UNITS
*Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	Volts
*Maximum RMS voltage	$V_{RMS}$	35	70	145	280	420	Volts
*Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	Volts
*Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.0					Amp
*Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=75^{\circ}\text{C}$	$I_{FSM}$	30.0					Amps
*Maximum instantaneous forward voltage at 1.0A	$V_F$	1.2					Volts
*Maximum DC reverse current at rated DC blocking voltage	$I_R$	5.0 100.0					$\mu\text{A}$
*Maximum reverse recovery time (NOTE 1) $T_J=25^{\circ}\text{C}$	$t_{rr}$	200.0					ns
*Maximum reverse recovery current (NOTE 1)	$I_{RM}$	2.0					Amps
Typical junction capacitance (NOTE 2)	$C_J$	12.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	55.0 25.0					$^{\circ}\text{C}/\text{W}$
*Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150					$^{\circ}\text{C}$

**NOTES:**

- (1) Reverse recovery test conditions:  $I_F=1.0\text{A}$ ,  $V_R=30\text{V}$ ,  $di/dt=50\text{A}/\mu\text{s}$ , and  $I_R=10\%$   $I_{FM}$  for measurement of  $t_{rr}$
  - (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
  - (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted
- \*JEDEC registered values

**RATINGS AND CHARACTERISTIC CURVES 1N4933 THRU 1N4937**

