

Silicon Diode

1N4933

50V / 1A

DATASHEET

OEM – General Semiconductor

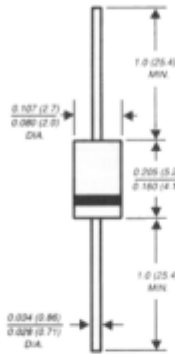
Source: General Semiconductor Databook 1998

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°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					μA
*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

