

1N4933 THRU 1N4937

FAST RECOVERY RECTIFIER



REVERSE VOLTAGE: 50 to 600 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

- High surge current capability
- 1.0 ampere operation at $T_A=55^{\circ}\text{C}$ with no thermal runaway.
- Void-free Plastic in a DO-41 package.
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.

MECHANICAL DATA

Case: Molded plastic, DO-41

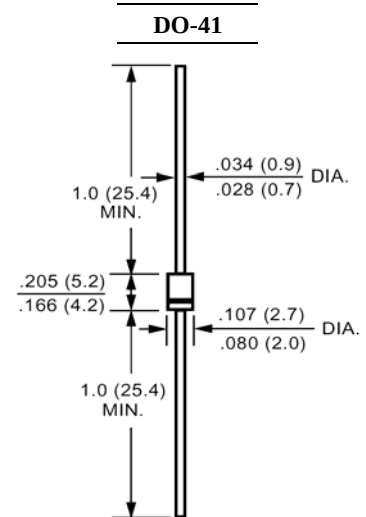
Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.012ounce, 0.33gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	1N4933	1N4934	1N4935	1N4936	1N4937	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at $T_A=55^{\circ}\text{C}$	$I_{(AV)}$	1.0					Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30					Amp
Maximum Forward Voltage at 1.0A DC and 25°C	V_F	1.2					Volts
Maximum Reverse Current at $T_A=25^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=100^{\circ}\text{C}$	I_R	5.0 50					μAmp
Typical Junction Capacitance (Note 1)	C_J	12					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50					$^{\circ}\text{C/W}$
Maximum Reverse Recovery Time (Note 3)	T_{RR}	200					nS
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150					$^{\circ}\text{C}$

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.375" (9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions: $I_F=1.0\text{A}, V_R=30\text{V}$

1N4933 THRU 1N4937

FAST RECOVERY RECTIFIER



RATINGS AND CHARACTERISTIC CURVES

FIG. 1- MAXIMUM TYPICAL FORWARD CURRENT DERATING CURVE

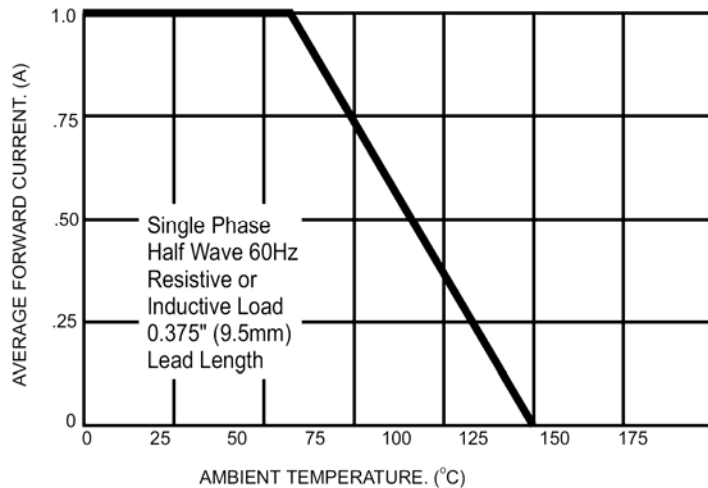


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

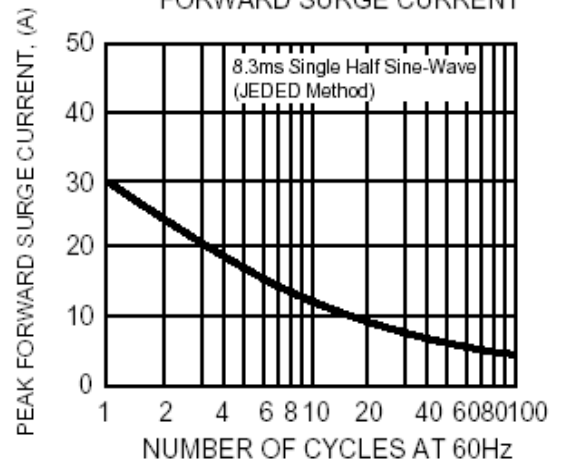


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

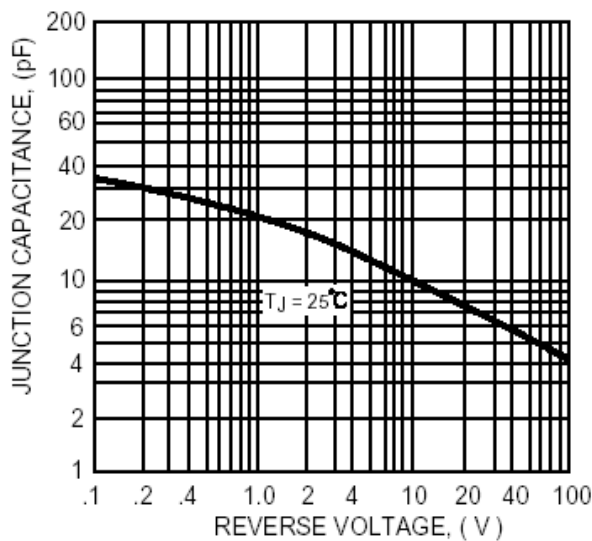


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

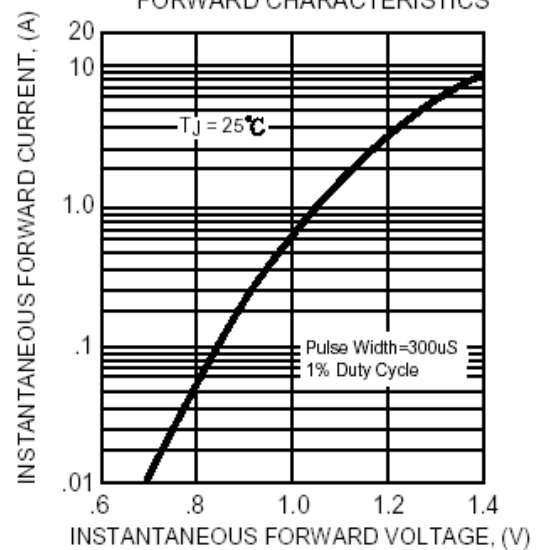


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

