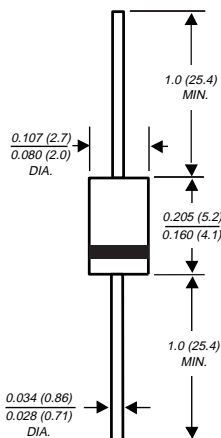


1N4933 THRU 1N4937

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°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 | $T_A=25^\circ\text{C}$: 5.0 $T_A=100^\circ\text{C}$: 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 | | | | | $^\circ\text{C/W}$ |
| *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 $I_{rr}=10\%$ I_{RM} 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

FIG. 1 - FORWARD CURRENT DERATING CURVE

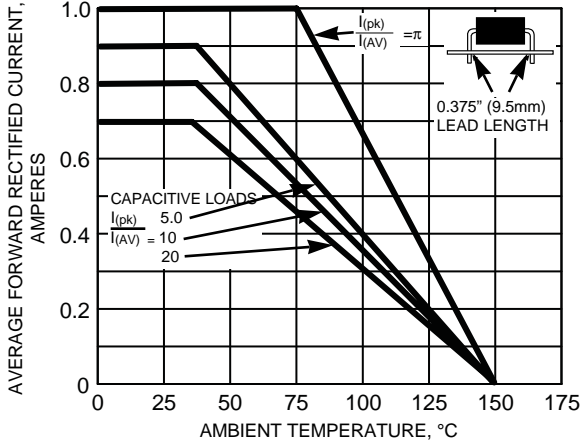


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

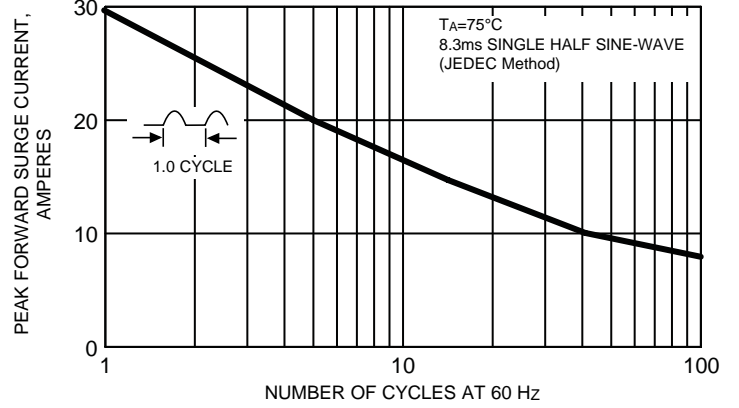


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

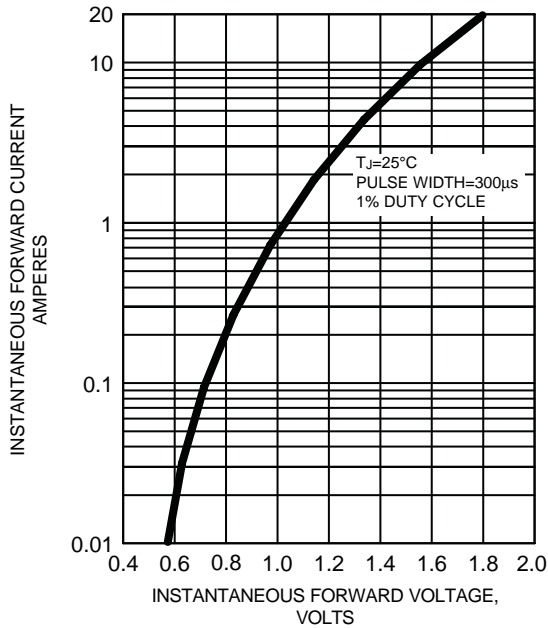


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

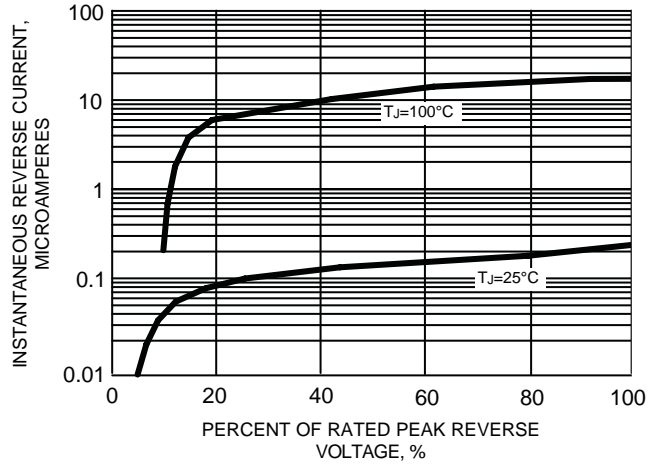


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

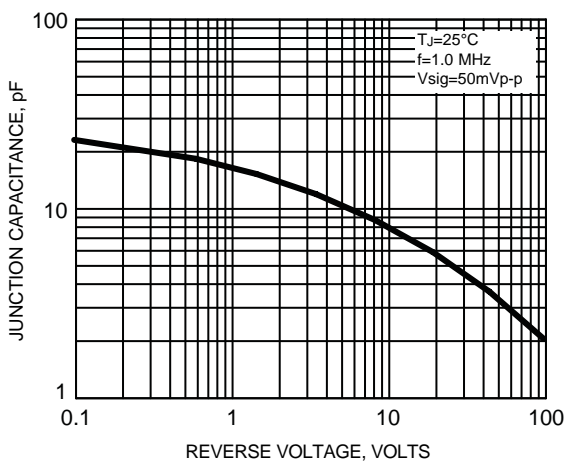


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

