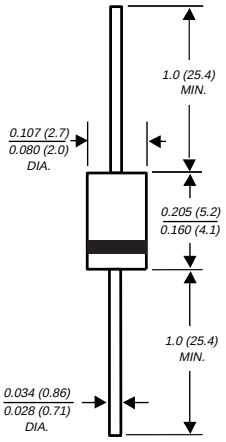
1N4933 THRU 1N4937

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°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°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°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 T_A=25°C / T_A=100°C	I_R	5.0 100.0					µA
*Maximum reverse recovery time (NOTE 1) T_J=25°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					°C/W
*Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150					°C

NOTES:
(1) Reverse recovery test conditions: I_F=1.0A, V_R=30V, di/dt=50A/µs, 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

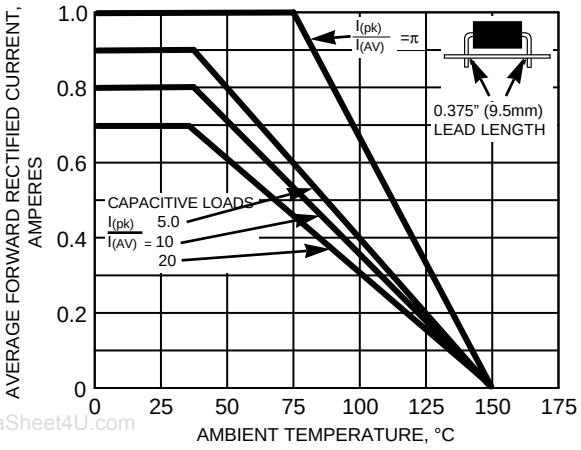


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

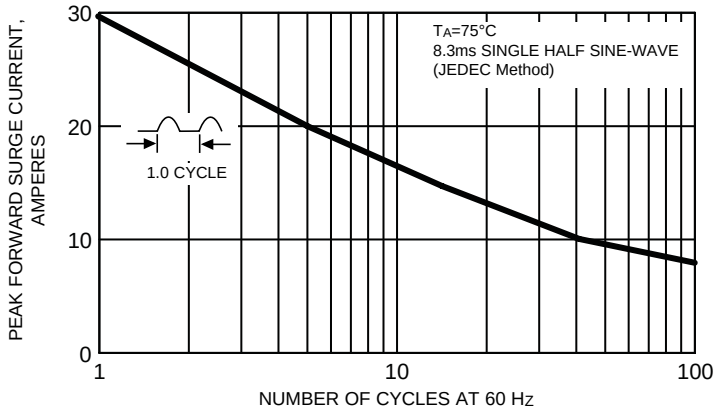


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

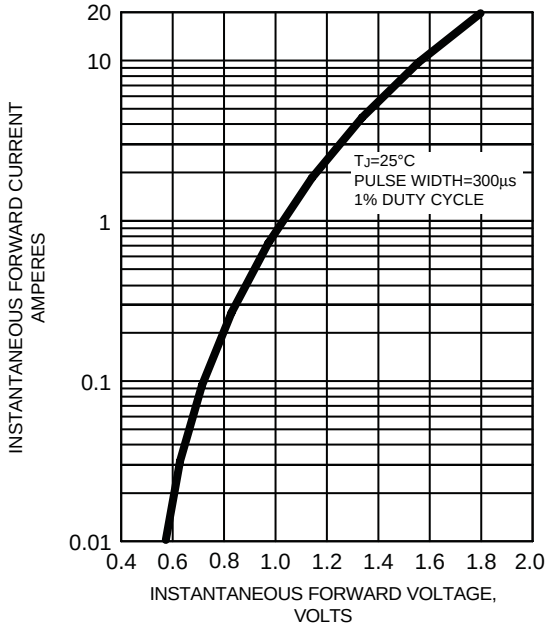


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

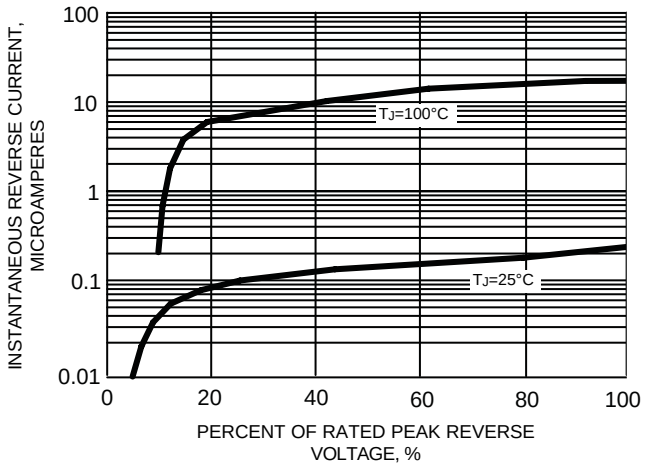


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

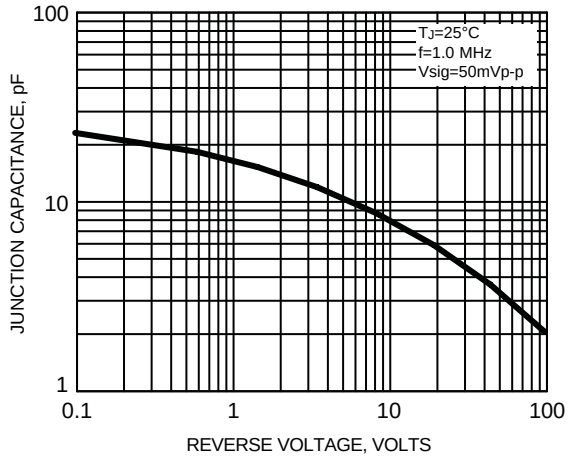


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE