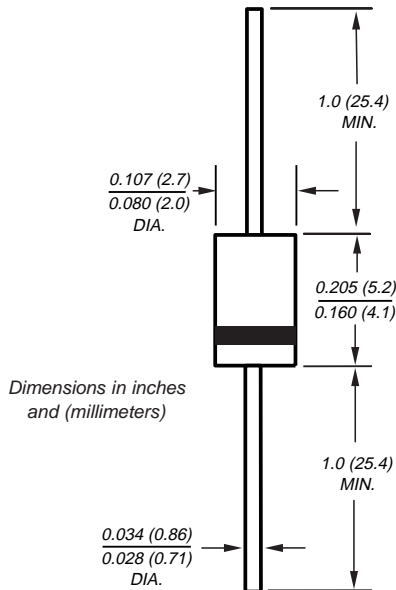


## Fast Switching Plastic Rectifier

Reverse Voltage 50 to 600V  
Forward Current 1.0A

DO-204AL (DO-41)



### Features

- Plastic package has Underwriters Laboratories 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 oz., 0.3 g

**Packaging codes/options:**

E2/4K per Ammo mag. (52mm tape), 20K/box  
E3/5K per 13" reel (52mm tape), 10K/box

### Maximum Ratings & Thermal Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameter	Symbol	1N4933	1N4934	1N4935	1N4936	1N4937	Unit
*Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	V
*Maximum RMS voltage	$V_{RMS}$	35	70	145	280	420	V
*Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	V
*Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0					A
*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					A
*Maximum reverse recovery current (NOTE 1)	$I_{RM}$	2.0					A
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$	55 25					$^\circ\text{C}/\text{W}$
*Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150					$^\circ\text{C}$

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

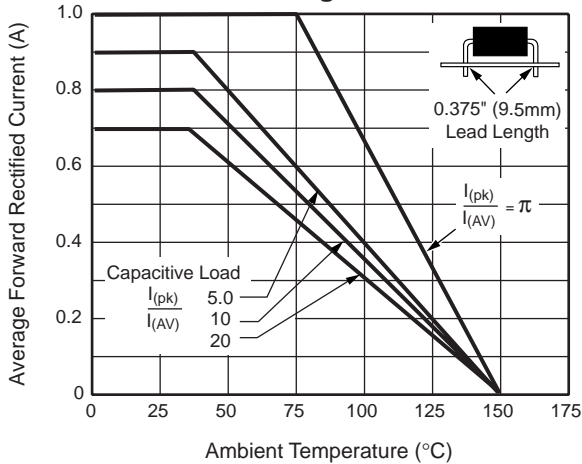
Parameter	Symbol	1N4933	1N4934	1N4935	1N4936	1N4937	Unit
*Maximum instantaneous forward voltage at 1.0A	$V_F$	1.2					V
*Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 100					$\mu\text{A}$
*Maximum reverse recovery time $I_F=1.0\text{A}$ , $V_R=30\text{V}$ , $di/dt=50\text{A}/\mu\text{s}$ , and $I_{rr}=10\% I_{RM}$	$t_{rr}$	200					ns
Typical junction capacitance at 4.0V, 1MHz	$C_J$	12					pF

**Notes:**

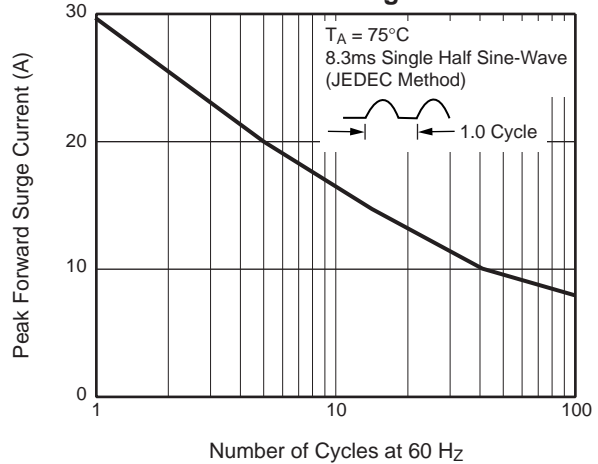
(1) Thermal resistance from junction to ambient, and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted  
\*JEDEC registered values

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

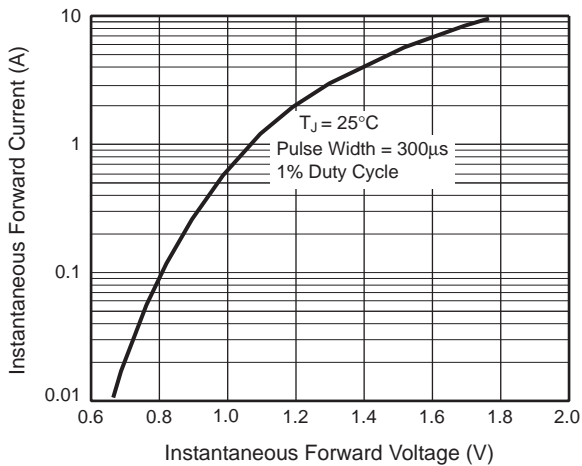
**Fig. 1 — Forward Current Derating Curves**



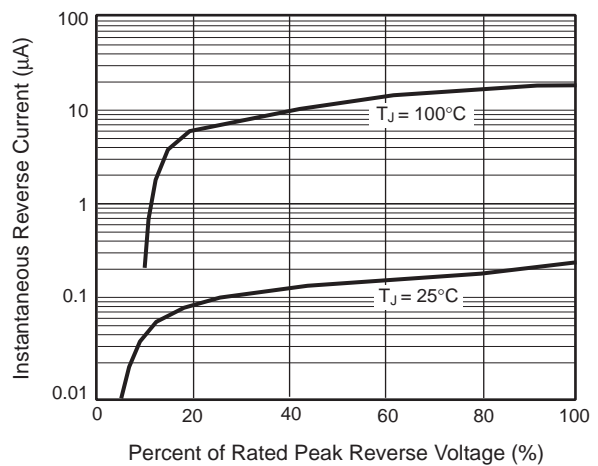
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



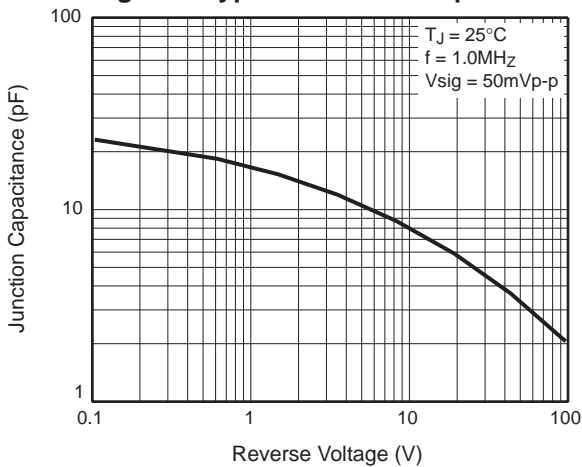
**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



**Fig. 6 — Typical Transient Thermal Impedance**

