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January 2015



# 1N4934 - 1N4937

## Fast Rectifiers

### Features

- Low Forward Voltage Drop
- High Surge Current Capability
- High Reliability
- High Current Capability



### Ordering Information

Part Number	Top Mark	Package	Packing Method
1N4934	1N4934	DO-204AL (DO-41)	Tape and Reel
1N4935	1N4935	DO-204AL (DO-41)	Tape and Reel
1N4936	1N4936	DO-204AL (DO-41)	Tape and Reel
1N4937	1N4937	DO-204AL (DO-41)	Tape and Reel

### Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value				Unit
		1N4934	1N4935	1N4936	1N4937	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	100	200	400	600	V
$I_{F(AV)}$	Average Rectified Forward Current .375 " Lead Length at $T_A = 50^\circ\text{C}$			1.0		A
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave			30		A
$T_{STG}$	Storage Temperature Range			-50 to +150		$^\circ\text{C}$
$T_J$	Operating Junction Temperature			-50 to +150		$^\circ\text{C}$

## Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Unit
$P_D$	Power Dissipation	2.5	W
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	50	°C/W

## Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	Value				Unit
			1N4934	1N4935	1N4936	1N4937	
$V_F$	Forward Voltage	$I_F = 1.0 \text{ A}$	1.2				V
$t_{rr}$	Reverse Recovery Time	$I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{rr} = 0.25 \text{ A}$	150				ns
$I_R$	Reverse Current at Rated $V_R$	$T_A = 25^\circ\text{C}$	5.0				$\mu\text{A}$
		$T_A = 125^\circ\text{C}$	100				
$C_T$	Total Capacitance	$V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$	12				pF

## Typical Performance Characteristics

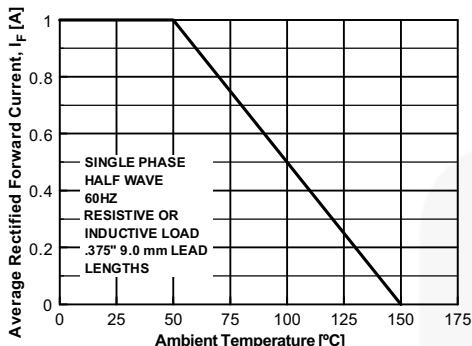


Figure 1. Forward Current Derating Curve

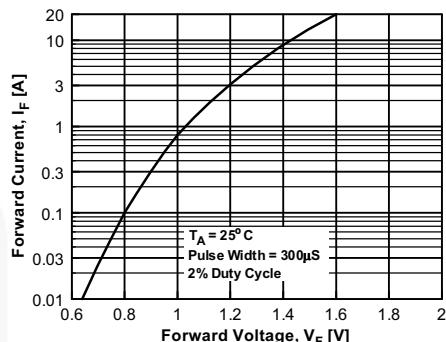


Figure 2. Forward Voltage Characteristics

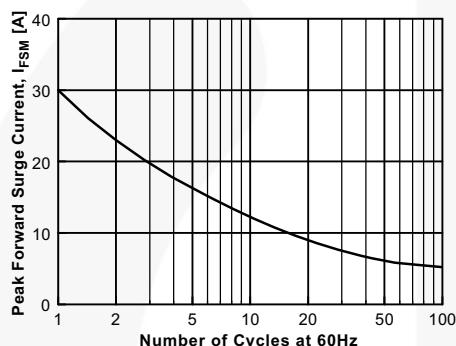


Figure 3. Non-Repetitive Surge Current

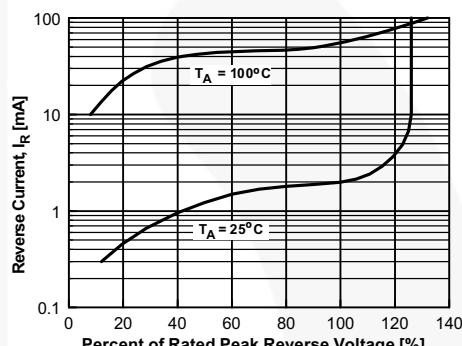


Figure 4. Reverse Current vs. Reverse Voltage

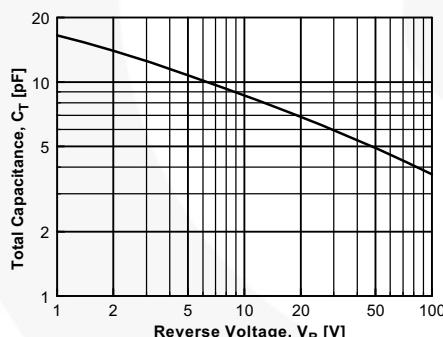
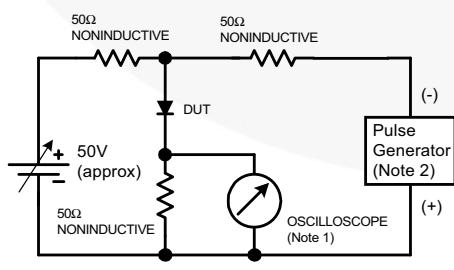


Figure 5. Total Capacitance



NOTES:  
 1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.  
 2. Rise time = 10 ns max; Source impedance = 50 ohms.

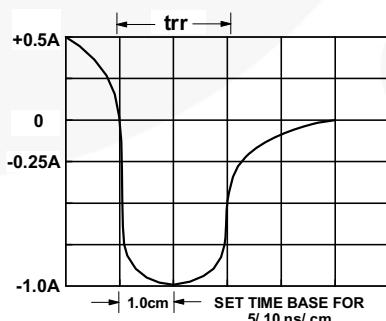
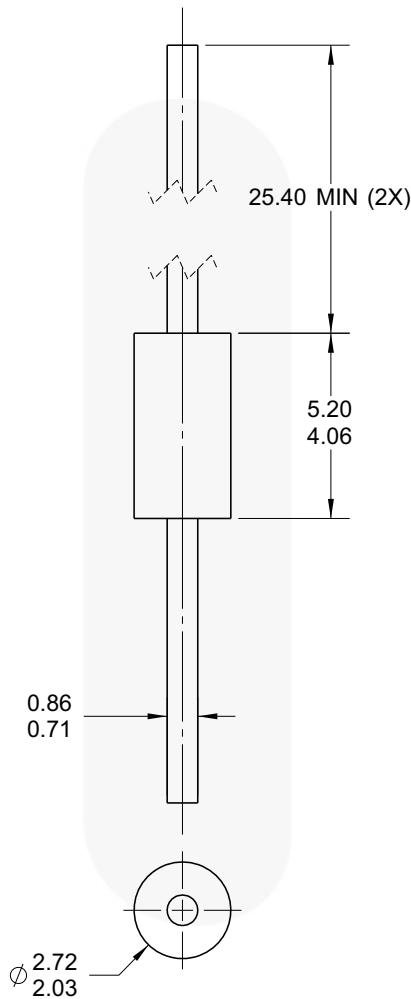


Figure 6. Reverse Recovery Time Characteristic and Test Circuit Diagram

## Physical Dimension



NOTES: UNLESS OTHERWISE SPECIFIED

- A) PACKAGE STANDARD REFERENCE:  
JEDEC DO-204 VARIATION AL.
- B) PACKAGE BODY CAN BE PLASTIC OR  
HERMETICALLY SEALED GLASS .
- C) LEAD FINISH IS NICKEL/CHROME.
- D) ALL DIMENSIONS ARE IN MILLIMETERS.
- E) DRAWING FILE NAME: DO41AREV2

Figure 7. DO-41, AXIAL LEADED, GLASS, JEDEC DO204, VARIATION AL



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