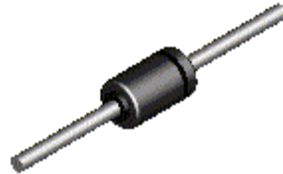


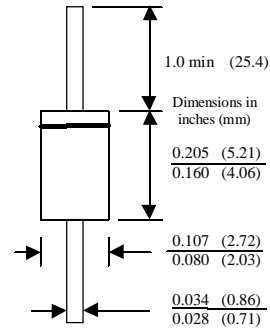
# 1N4933 - 1N4937

## Features

- Low forward voltage drop.
- High surge current capability.
- High reliability.
- High current capability.



**DO-41**  
COLOR BAND DENOTES CATHODE



## 1.0 Ampere Fast Recovery Rectifiers

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current .375" lead length @ $T_A = 50^\circ\text{C}$	1.0	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	2.5 20	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-50 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-50 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

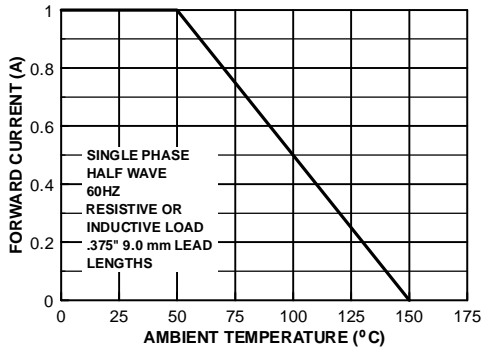
### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

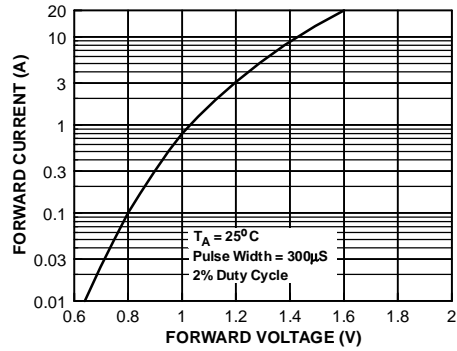
Parameter	Device					Units
	4933	4934	4935	4936	4937	
Peak Repetitive Reverse Voltage	50	100	200	400	600	V
Maximum RMS Voltage	35	70	140	280	420	V
DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	V
Maximum Reverse Current @ rated $V_R$	5.0 100					$\mu\text{A}$
$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$						$\mu\text{A}$
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{RR} = 0.25 \text{ A}$	150					nS
Maximum Forward Voltage @ 1.0 A	1.2					V
Typical Junction Capacitance $V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$	12					pF

## Typical Characteristics

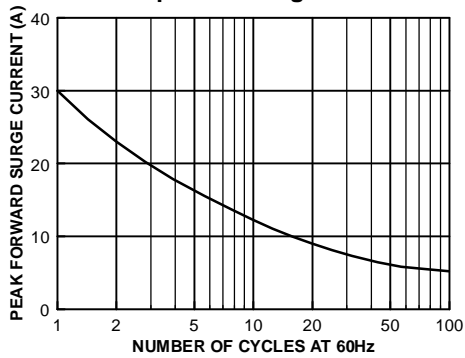
### Forward Current Derating Curve



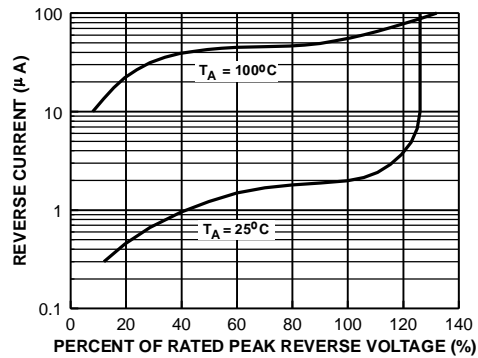
### Forward Characteristics



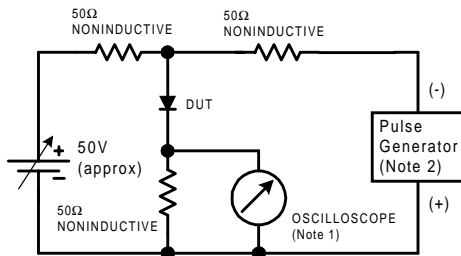
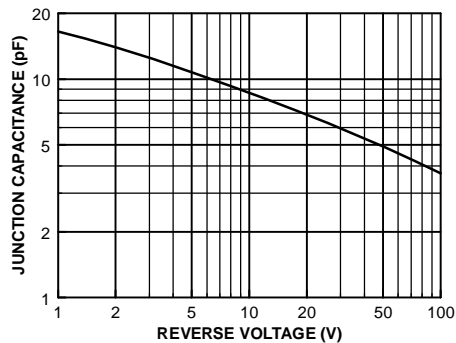
### Non-Repetitive Surge Current



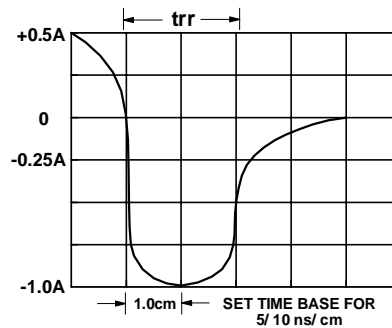
### Reverse Characteristics



### Typical Junction 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.



### Reverse Recovery Time Characteristic and Test Circuit Diagram

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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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