



1N4933 - 1N4937

1N4933-1N4937

Features

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



DO-41

COLOR BAND DENOTES CATHODE

Fast Rectifiers

Absolute Maximum Ratings*

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

Symbol	Parameter	Value					Units
		4933	4934	4935	4936	4937	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ $T_A = 50^\circ\text{C}$	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					$^\circ\text{C}$

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	2.5	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C/W}$

Electrical Characteristics

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

Symbol	Parameter	Device					Units
		4933	4934	4935	4936	4937	
V_F	Forward Voltage @ 1.0 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 @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	5.0 100					μA μA
C_T	Total Capacitance $V_R = 4.0\text{ V}$, $f = 1.0\text{ MHz}$	12					pF

Typical Characteristics

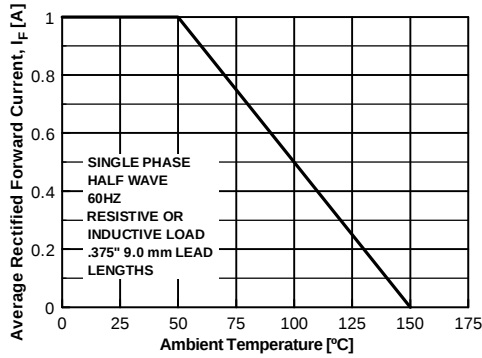


Figure 1. Forward Current Derating Curve

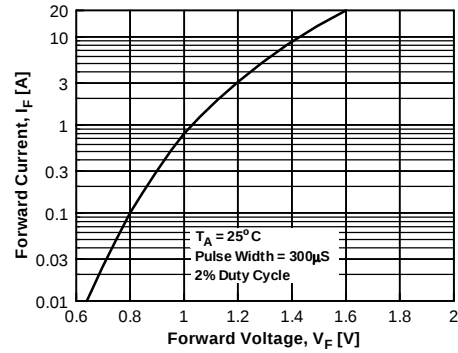


Figure 2. Forward Voltage Characteristics

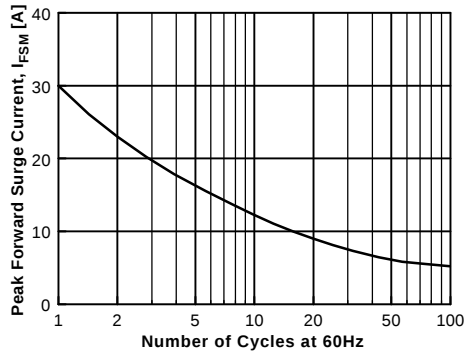


Figure 3. Non-Repetitive Surge Current

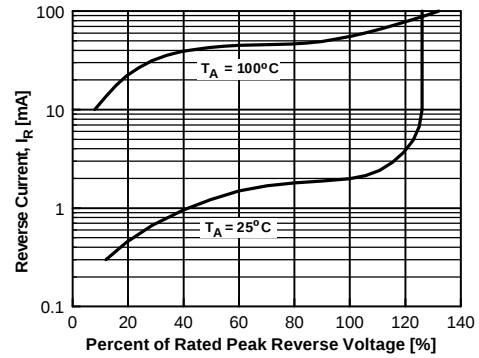


Figure 4. Reverse Current vs Reverse Voltage

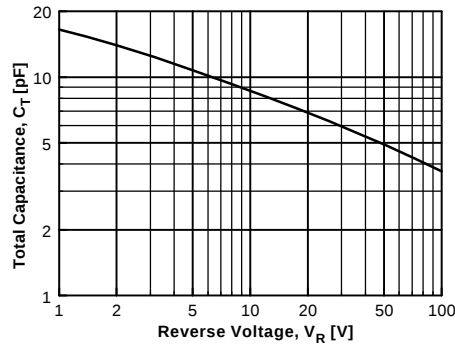
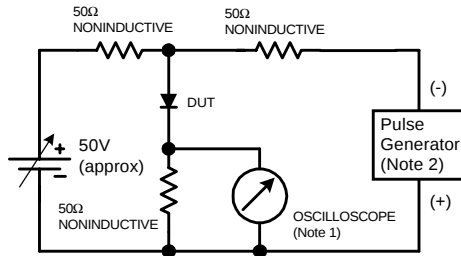


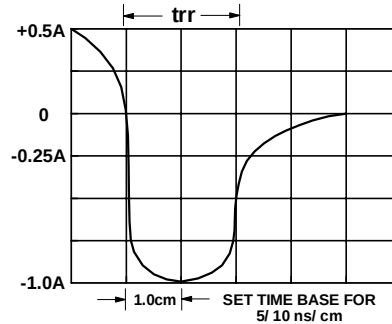
Figure 5. Total Capacitance



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.

Reverse Recovery Time Characteristic and Test Circuit Diagram



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