

## 300 mW DO-34 Hermetically Sealed Glass Fast Switching Diodes



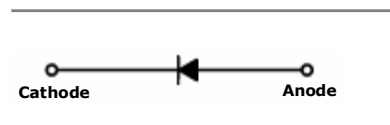
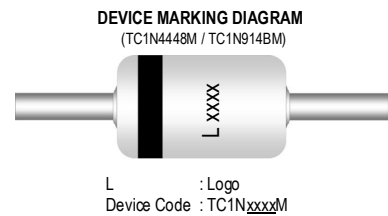
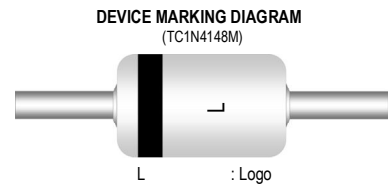
### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	300	mW
$T_{STG}$	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+150	$^\circ\text{C}$
$W_{IV}$	Working Inverse Voltage	75	V
$I_O$	Average Rectified Current	150	mA
$I_{FM}$	Non-repetitive Peak Forward Current	450	mA
$I_{FSURGE}$	Peak Forward Surge Current (Pulse Width = 1.0 $\mu\text{second}$ )	2	A

These ratings are limiting values above which the serviceability of the diode may be impaired.

### Specification Features:

- Fast Switching Device ( $T_{RR} < 4.0$  nS)
- DO-34 Package (JEDEC DO-204)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Lads Are Readily Solderable
- RoHS Compliant
- Solder Hot Dip Tin (Sn) Terminal Finish
- Cathode Indicated By Polarity Band



ELECTRICAL SYMBOL

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

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$B_V$	Breakdown Voltage	$I_R = 100\mu\text{A}$ $I_R = 5\mu\text{A}$	100 75		Volts
$I_R$	Reverse Leakage Current	$V_R = 20\text{V}$ $V_R = 75\text{V}$		25 5	nA $\mu\text{A}$
$V_F$	Forward Voltage	TC1N4448M, TC1N914BM $I_F = 5\text{mA}$ TC1N4148M $I_F = 10\text{mA}$ TC1N4448M, TC1N914BM $I_F = 100\text{mA}$	0.62	0.72 1.0 1.0	Volts
$T_{RR}$	Reverse Recovery Time	$I_F = 10\text{mA}$ , $V_R = 6\text{V}$ $R_L = 100\Omega$ $I_{RR} = 1\text{mA}$		4	nS
$C$	Capacitance	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		4	pF

Typical Characteristics

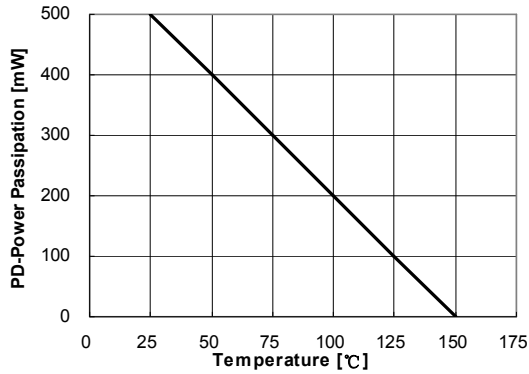


Figure 1. Power Dissipation vs Ambient Temperature  
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

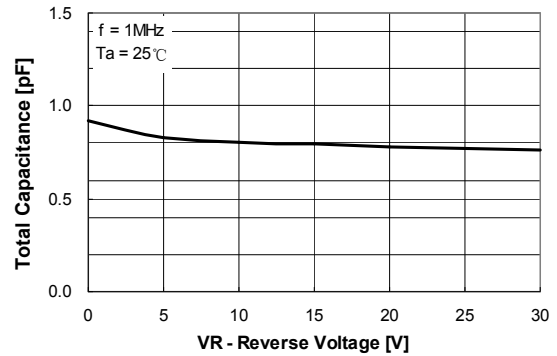


Figure 2. Total Capacitance

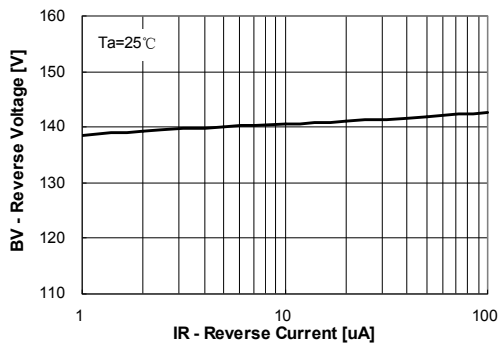


Figure 3. Reverse Voltage vs Reverse Current  
BV – 1.0uA to 100uA

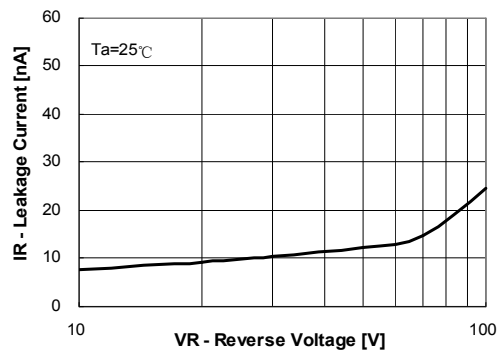


Figure 4. Reverse Current vs Reverse Voltage  
IR – 10V to 100V

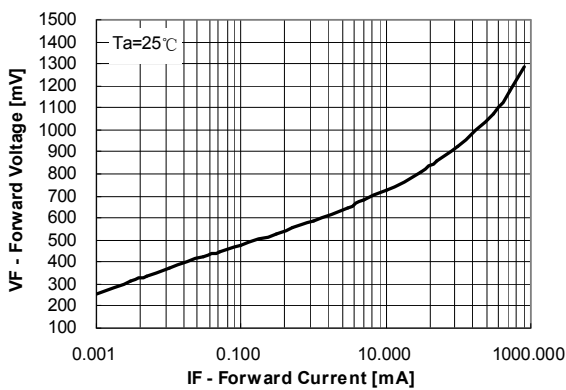


Figure 5. Forward Voltage vs Forward Current  
VF – 0.001mA to 800mA

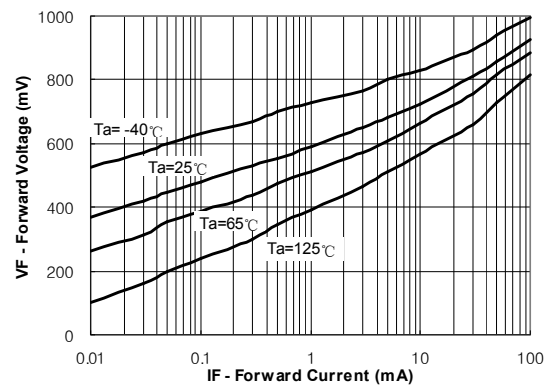
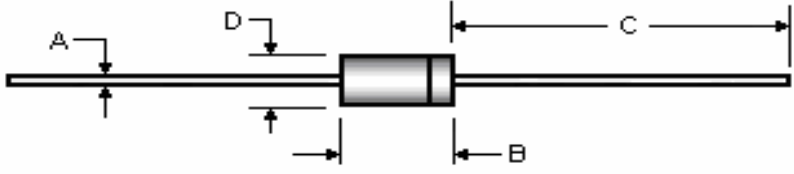


Figure 6. Forward Voltage vs Ambient Temperature  
VF – 0.01mA to 100mA (-40 to +125 Deg C)

**Package Outline**

Package	Case Outline				
DO-34					
	<b>DO-34</b>				
	<b>DIM</b>	<b>Millimeters</b>		<b>Inches</b>	
		Min	Max	Min	Max
	<b>A</b>	0.46	0.55	0.018	0.022
	<b>B</b>	2.16	3.04	0.085	0.120
<b>C</b>	25.40	38.10	1.000	1.500	
<b>D</b>	1.27	1.90	0.050	0.075	

**Notes:**

1. All dimensions are within JEDEC standard.
2. DO34 polarity denoted by cathode band.