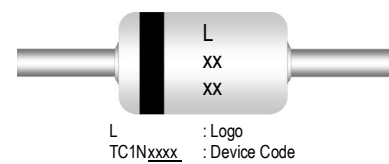


# 500 mW DO-35 Hermetically Sealed Glass Fast Switching Diodes



DEVICE MARKING DIAGRAM



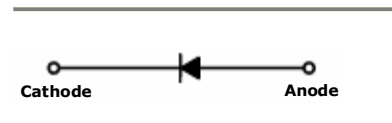
## Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	500	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 ( $T_{RR} < 4.0 \text{ nS}$ )
- DO-35 Package (JEDEC)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Leads 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	$I_R = 100 \mu\text{A}$	100		Volts
		$I_R = 5 \mu\text{A}$	75		
$I_R$	Reverse Leakage Current	$V_R = 20\text{V}$		25	nA
		$V_R = 75\text{V}$		5	$\mu\text{A}$
$V_F$	Forward Voltage	TC1N4448, TC1N914B $I_F = 5\text{mA}$	0.62	0.72	Volts
		TC1N4148 $I_F = 10\text{mA}$		1.0	
		TC1N4448, TC1N914B $I_F = 100\text{mA}$		1.0	
$T_{RR}$	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

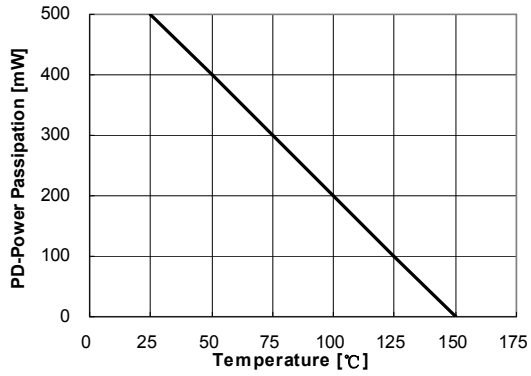


Figure 1. Power Dissipation vs Ambient Temperature  
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

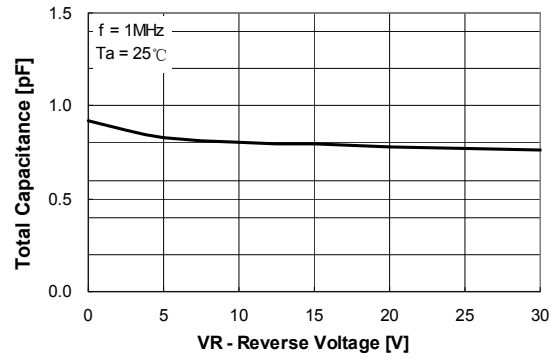


Figure 2. Total Capacitance

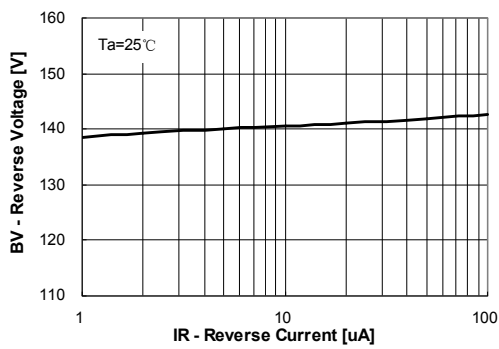


Figure 3. Reverse Voltage vs Reverse Current  
BV – 1.0uA to 100uA

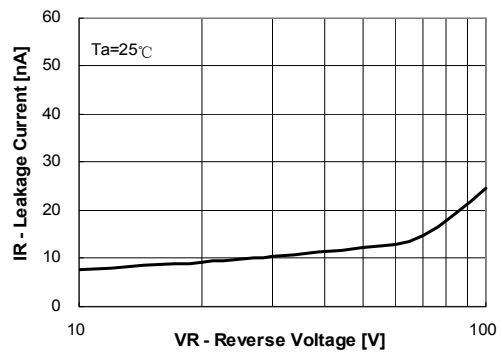


Figure 4. Reverse Current vs Reverse Voltage  
IR – 10V to 100V

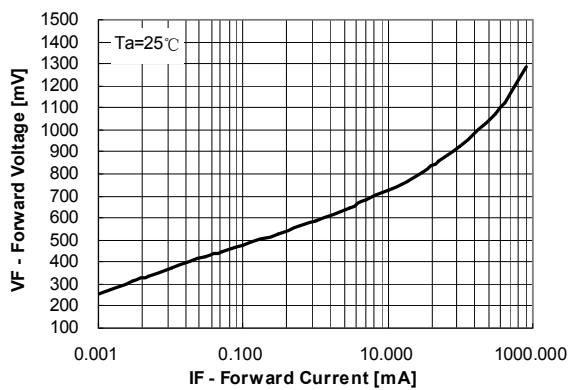


Figure 5. Forward Voltage vs Forward Current  
VF – 0.001mA to 800mA

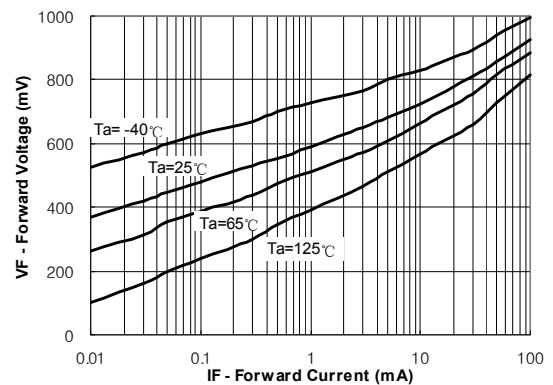
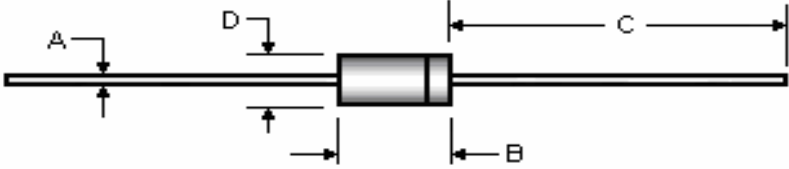


Figure 6. Forward Voltage vs Ambient Temperature  
VF – 0.01mA to 100mA (-40 to +125 Deg C)

**Package Outline**

Package	Case Outline				
DO-35					
	<b>DO-35</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>	3.05	4.00	0.120	0.157
<b>C</b>	25.40	38.10	1.000	1.500	
<b>D</b>	1.53	2.00	0.060	0.079	

**Notes:**

1. All dimensions are within JEDEC standard.
2. DO35 polarity denoted by cathode band.

**NOTICE**

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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