

500 mW DO-35 Hermetically Sealed Glass Fast Switching Diodes



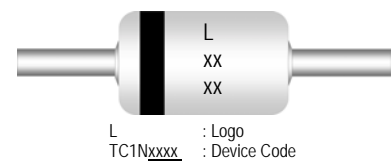
AXIAL LEAD
DO35

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	+175	$^\circ\text{C}$
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 μsecond)	2	A

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

DEVICE MARKING DIAGRAM



L : Logo
TC1Nxxxx : Device Code

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	$I_R = 100 \mu\text{A}$ $I_R = 5 \mu\text{A}$	100 75		Volts
I_R	Reverse Leakage Current	$V_R = 20\text{V}$ $V_R = 75\text{V}$		25 5	nA μA
V_F	Forward Voltage	TC1N4448, TC1N914B $I_F = 5\text{mA}$ TC1N4148 $I_F = 10\text{mA}$ TC1N4448, TC1N914B $I_F = 100\text{mA}$	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

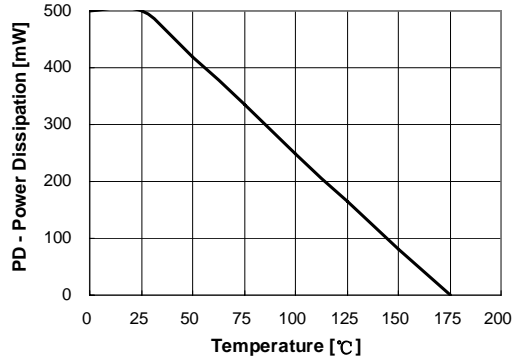


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

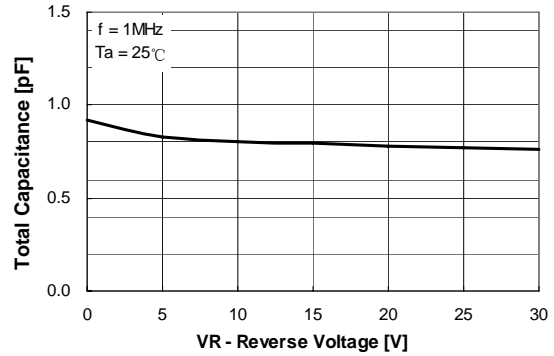


Figure 2. Total Capacitance

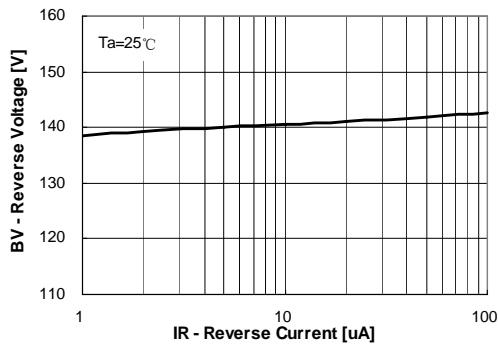


Figure 3. Reverse Voltage vs Reverse Current
BV – 1.0uA to 100uA

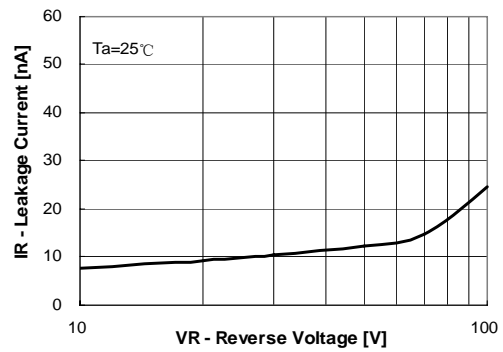


Figure 4. Reverse Current vs Reverse Voltage
IR – 10V to 100V

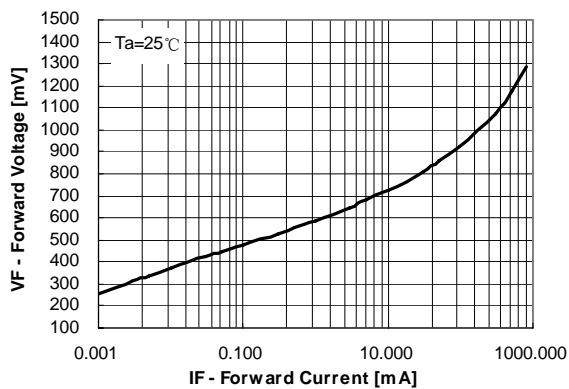


Figure 5. Forward Voltage vs Forward Current
VF – 0.001mA to 800mA

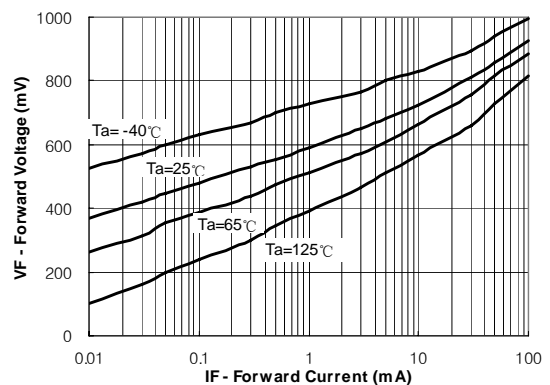
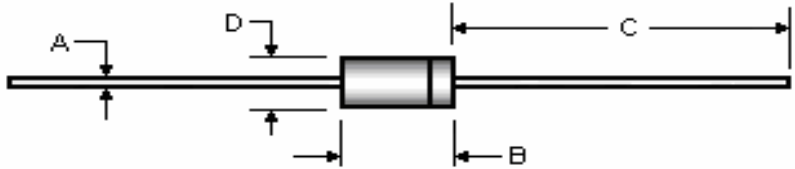


Figure 6. Forward Voltage vs Ambient Temperature
VF – 0.01mA to 100mA (-40 to +125 Deg C)

Package Outline

Package	Case Outline				
DO-35					
	DO-35				
	DIM	Millimeters		Inches	
		Min	Max	Min	Max
	A	0.46	0.55	0.018	0.022
	B	3.05	4.00	0.120	0.157
C	25.40	38.10	1.000	1.500	
D	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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