

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 μsecond)	2	A

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

Specification Features:

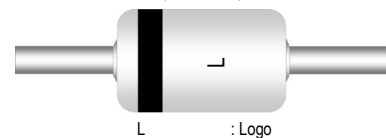
- Fast Switching Device ($T_{RR} < 4.0 \text{ nS}$)
- DO-34 Package (JEDEC DO-204)
- Through-Hole Device Type Mounting
- Hermetically Sealed Glass
- Compression Bonded Construction
- All External Surfaces Are Corrosion Resistant And Leds Are Readily Solderable
- RoHS Compliant
- Solder Hot Dip Tin (Sn)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

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

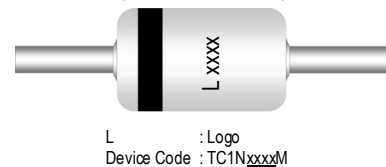
Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
B_V	Breakdown Voltage	$I_R = 100 \mu\text{A}$ $I_R = 5 \mu\text{A}$	100 75		Volts
I_R	Reverse Leakage Current	$V_R = 20\text{V}$ $V_R = 75\text{V}$		25 5	nA μA
V_F	Forward Voltage	TC1N4448M, TC1N914BM $I_F = 5\text{mA}$ TC1N4148M $I_F = 10\text{mA}$ 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



DEVICE MARKING DIAGRAM
(TC1N4148M)



DEVICE MARKING DIAGRAM
(TC1N4448M / TC1N914BM)



ELECTRICAL SYMBOL

Typical Characteristics

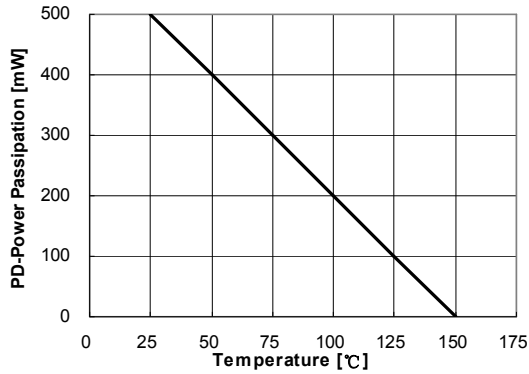


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

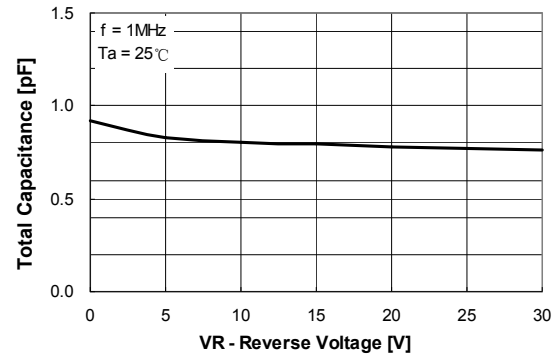


Figure 2. Total Capacitance

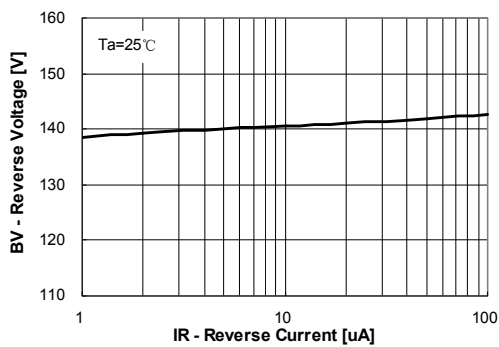


Figure 3. Reverse Voltage vs Reverse Current
BV – 1.0uA to 100uA

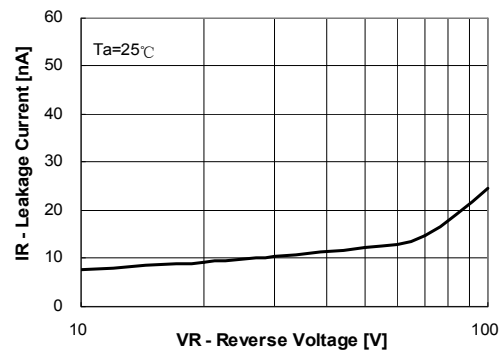


Figure 4. Reverse Current vs Reverse Voltage
IR – 10V to 100V

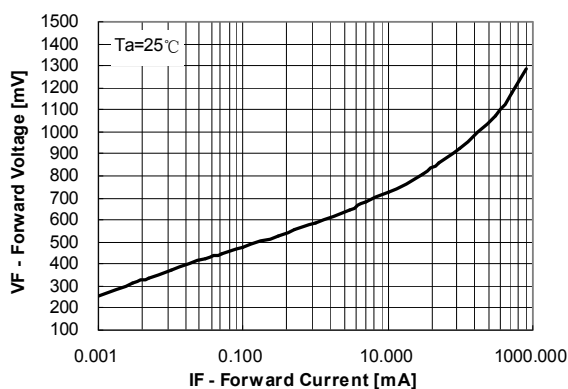


Figure 5. Forward Voltage vs Forward Current
VF – 0.001mA to 800mA

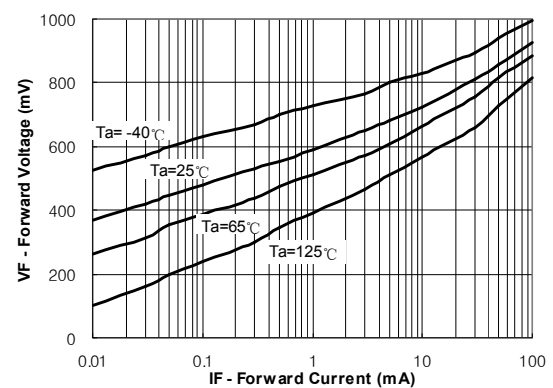
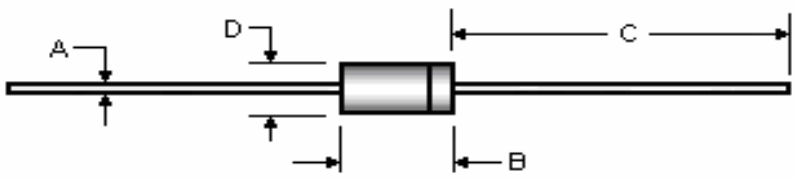


Figure 6. Forward Voltage vs Ambient Temperature
VF – 0.01mA to 100mA (-40 to +125 Deg C)

Package Outline

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

Notes:

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

NOTICE

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