

300 mW DO-34 Hermetically Sealed Glass Fast Switching Diodes



AXIAL LEAD
DO34

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

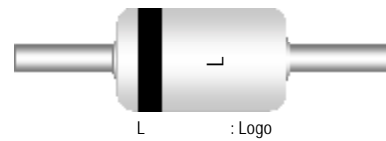
Symbol	Parameter	Value	Units
P_D	Power Dissipation	300	mW
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$
W_{IV}	Working Inverse Voltage	75	V
I_O	Average Rectified Current	150	mA
I_{FM}	Non-repetitive Peak Forward Current	450	mA
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 Lads Are Readily Solderable
- § RoHS Compliant
- § Solder Hot Dip Tin (Sn) Terminal Finish
- § Cathode Indicated By Polarity Band

DEVICE MARKING DIAGRAM
(TC1N4148M)

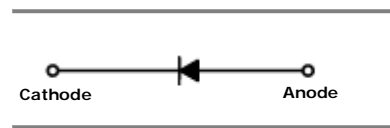


L : Logo

DEVICE MARKING DIAGRAM
(TC1N4448M / TC1N914BM)



L : Logo
Device Code : TC1NxxxxM



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	μA
V_F	Forward Voltage	TC1N4448M, TC1N914BM $I_F = 5\text{mA}$	0.62	0.72	Volts
		TC1N4148M $I_F = 10\text{mA}$		1.0	
		TC1N4448M, TC1N914BM $I_F = 100\text{mA}$		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

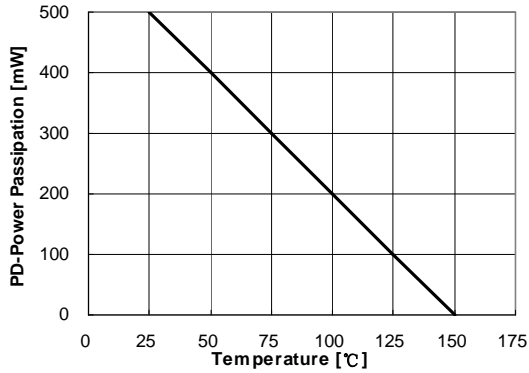


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

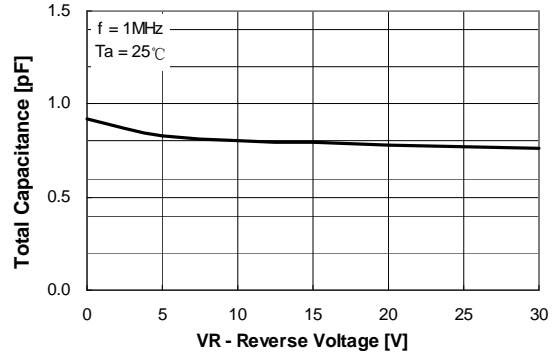


Figure 2. Total Capacitance

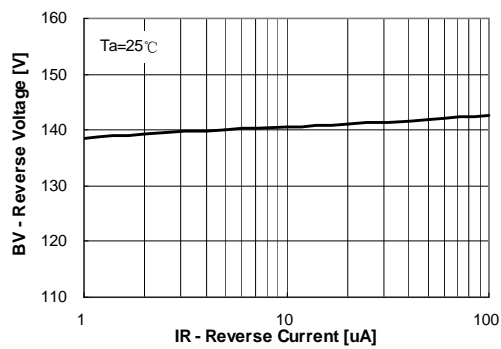


Figure 3. Reverse Voltage vs Reverse Current
BV – 1.0uA to 100uA

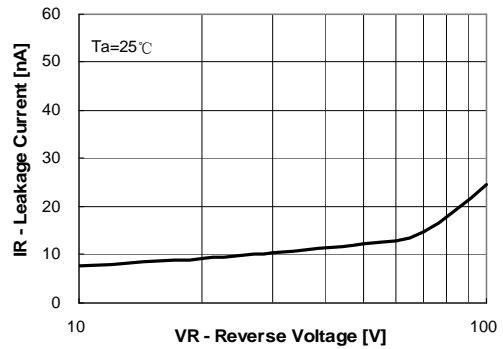


Figure 4. Reverse Current vs Reverse Voltage
IR – 10V to 100V

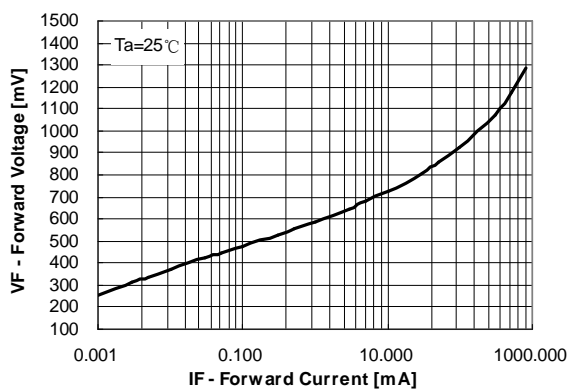


Figure 5. Forward Voltage vs Forward Current
VF – 0.001mA to 800mA

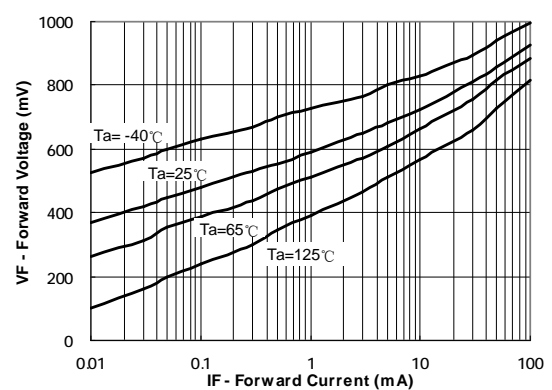
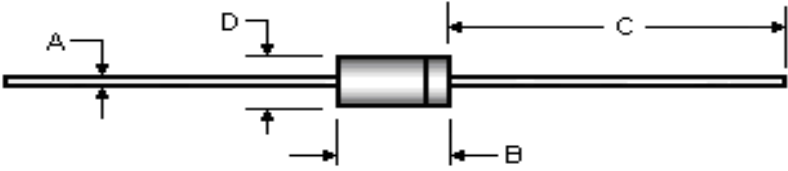


Figure 6. Forward Voltage vs Ambient Temperature
VF – 0.01mA to 100mA (-40 to +125 Deg C)

Package Outline

Package	Case Outline				
DO-34					
	DO-34				
	DIM	Millimeters		Inches	
		Min	Max	Min	Max
	A	0.46	0.55	0.018	0.022
	B	---	3.04	---	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.