

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

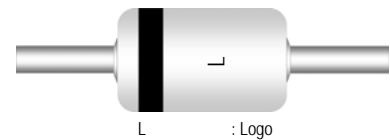
| Symbol | Parameter | Value | Units |
|--------------|---|-------------|------------------|
| P_D | Power Dissipation | 300 | mW |
| T_{STG} | Storage Temperature Range | -65 to +150 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | +175 | $^\circ\text{C}$ |
| W_{IV} | Working Inverse Voltage | 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.

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)

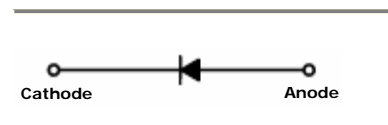


L : Logo

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 | $I_R=100\mu\text{A}$ $I_R=5\mu\text{A}$ | 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 |

Typical Characteristics

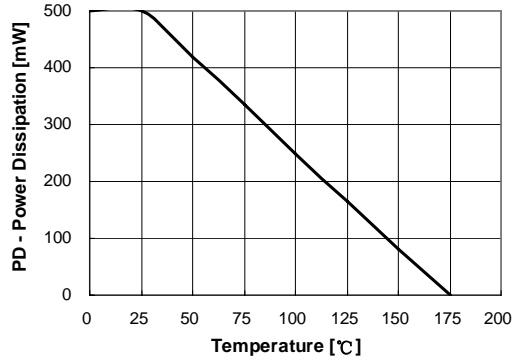


Figure 1. Power Dissipation vs Ambient Temperature
Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature

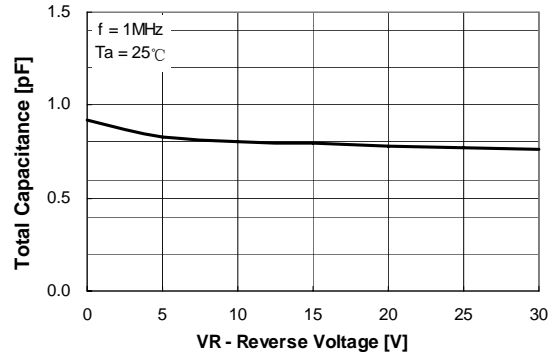


Figure 2. Total Capacitance

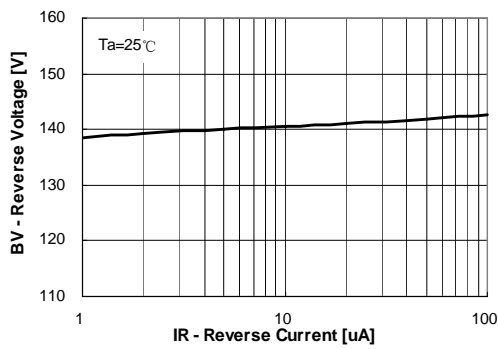


Figure 3. Reverse Voltage vs Reverse Current
BV – 1.0uA to 100uA

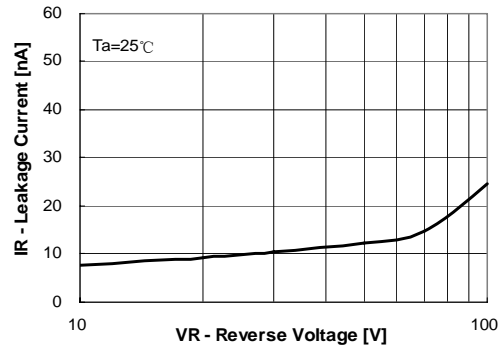


Figure 4. Reverse Current vs Reverse Voltage
IR – 10V to 100V

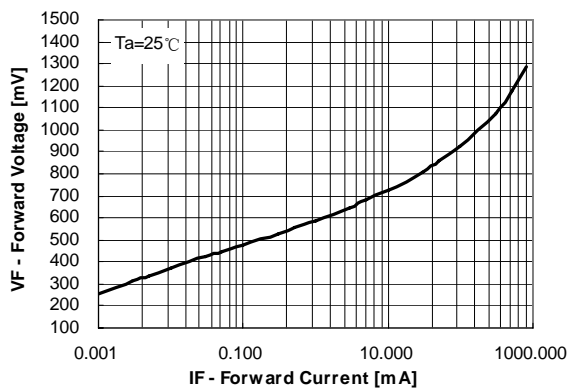


Figure 5. Forward Voltage vs Forward Current
VF – 0.001mA to 800mA

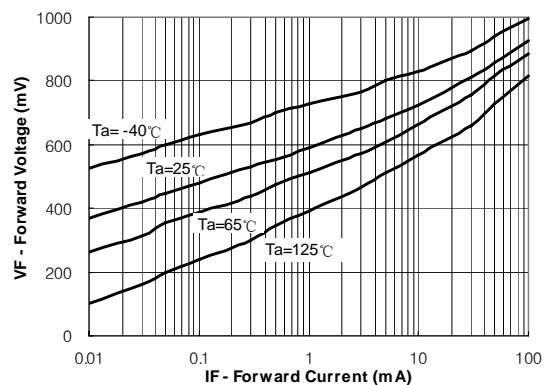
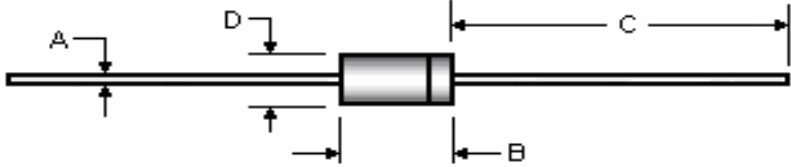


Figure 6. Forward Voltage vs Ambient Temperature
VF – 0.01mA to 100mA (-40 to +125 Deg C)

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 | 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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