

1N4148 MINIATURE ULTRA FAST SWITCHING DIODE

FEATURES

- Hermetically sealed glass package
- Low cost
- Super fast recovery time
- Low leakage
- Low forward voltage drop
- High current capability
- **RoHS COMPLIANT**

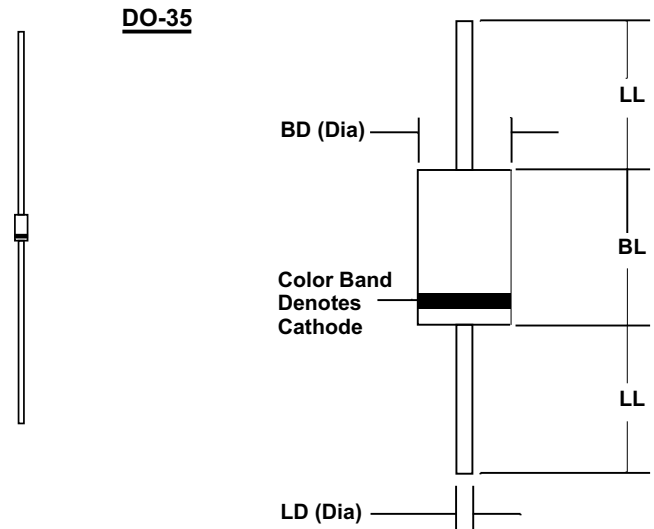
MECHANICAL DATA

- Case: JEDEC DO-35 glass body
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.005 Ounces (0.14 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-35 PACKAGE

1N4148



| Sym | Minimum | | Maximum | |
|-----|---------|------|---------|------|
| | In | mm | In | mm |
| BL | 0.142 | 3.6 | 0.150 | 3.81 |
| BD | 0.07 | 1.78 | 0.072 | 1.83 |
| LL | 1.00 | 25.4 | | |
| LD | 0.02 | 0.52 | 0.03 | 0.8 |

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive loads, derate current by 20%.

| PARAMETER (TEST CONDITIONS) | SYMBOL | RATINGS | UNITS |
|--|----------------|-------------|---------------|
| Series Number | | 1N4148 | |
| Breakdown Voltage at $I_R = 5 \mu A$ | V_B | 75 | VOLTS |
| Breakdown Voltage at $I_R = 100 \mu A$ | V_B | 100 | |
| Maximum Peak Recurrent Reverse Voltage | V_{RRM} | 75 | |
| Average Forward Rectified Current @ $T_A = 50^\circ C$, Lead length = 0.375 in. (9.5 mm) | I_o | 150 | mA |
| Peak Forward Surge Current | I_{FSM} | 1 4 | AMPS |
| Maximum Forward Voltage at 10 mA DC | V_{FM} | 1 | VOLTS |
| Maximum Power Dissipation | P_{FM} | 500 | mW |
| Maximum Average DC Reverse Current | I_{RM} | 25 5 | nA μA |
| Maximum Reverse Recovery Time (Note 1) | T_{RR} | 4 | nS |
| Typical Junction Capacitance (Note 2) | C_J | 4 | pF |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +175 | $^\circ C$ |

NOTES: (1) Measured at $I_R = 10 \text{ mA}$, $V_R = 6V$, $R_L = 100\Omega$; recover to 1 mA
 (2) Measured at 1MHz & applied reverse voltage of 0 volts DC

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RATING & CHARACTERISTIC CURVES FOR THE 1N4148

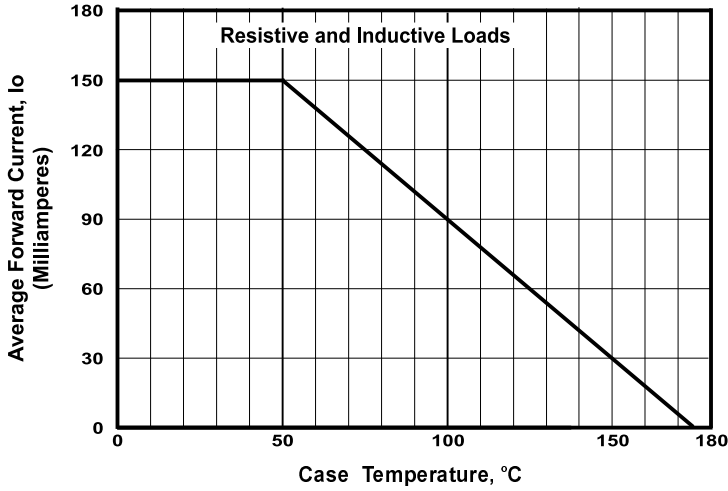


FIGURE 1. FORWARD CURRENT DERATING CURVE

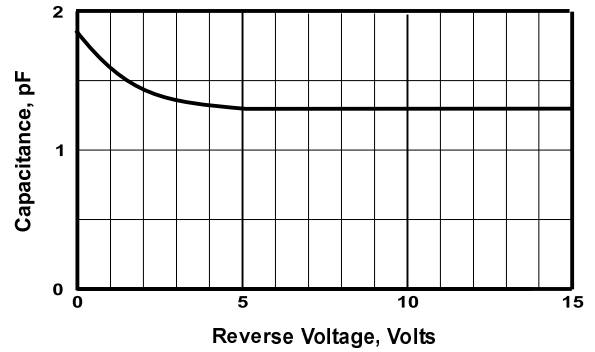


FIGURE 2. TYPICAL JUNCTION CAPACITANCE

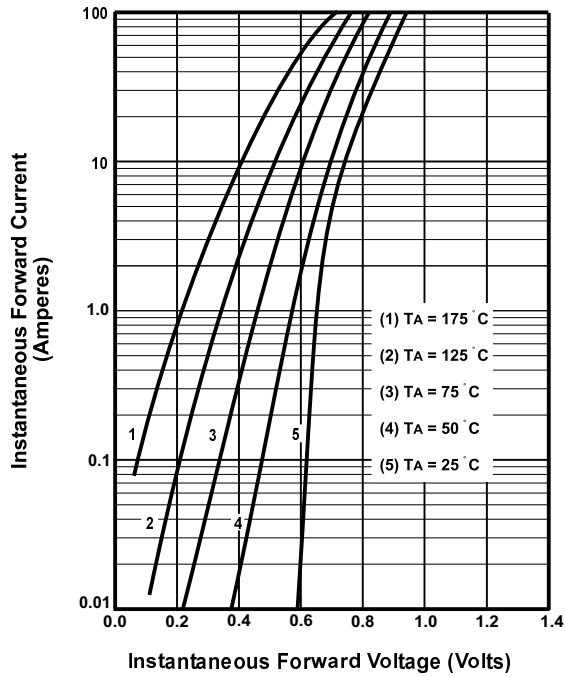


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

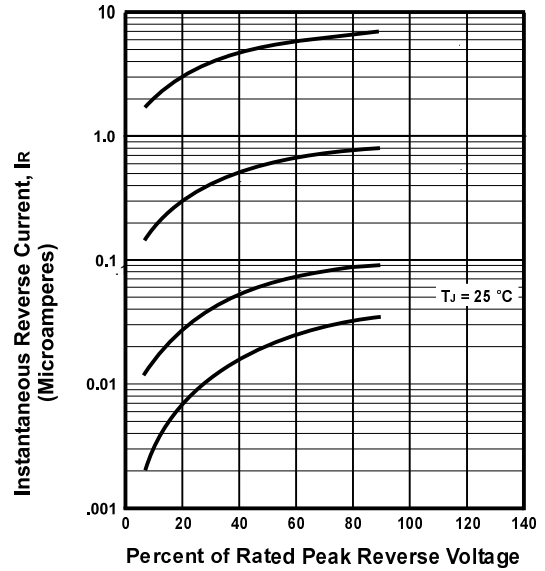


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS