

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

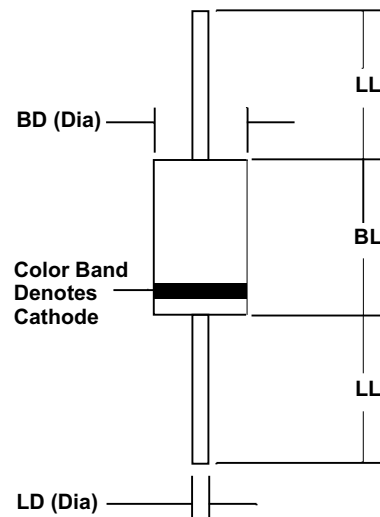
- **Case:** JEDEC DO-35 glass body
- **Terminals:** Plated axial leads
- **Soldering:** Per MIL-STD 202 Method 208 guaranteed
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.005 Ounces (0.14 Grams)

MECHANICAL SPECIFICATION

**ACTUAL SIZE OF
DO-35 PACKAGE**

1N4148

DO-35



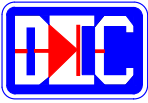
Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.142	3.6	0.150	3.81
BD	0.07	1.78	0.072	1.83
LL	1.00	25.4		
LD	0.02	0.52	0.03	0.8

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 Pulse Width = 1 Sec Pulse Width = 1 μ Sec	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 @ $V_R = 20V, T_A = 25^\circ C$ @ $V_R = 75V, T_A = 150^\circ C$	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 $I_R = 10\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\Omega$; recover to 1 mA
(2) Measured at 1 MHz & applied reverse voltage of 0 volts DC



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RATING & CHARACTERISTIC CURVES FOR THE 1N4148

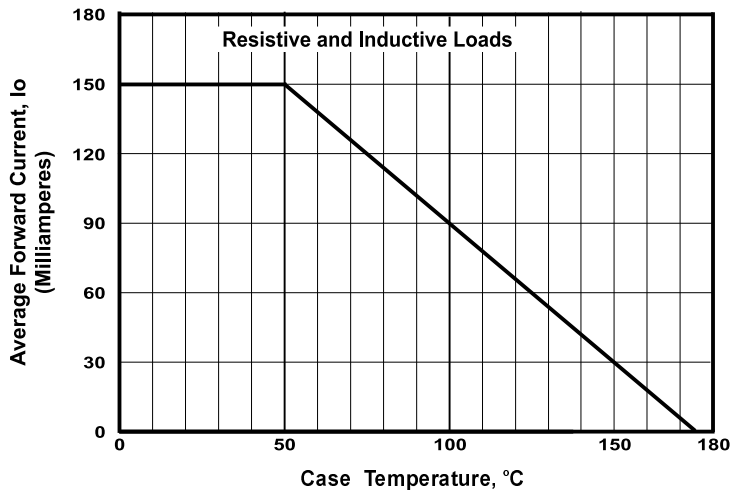


FIGURE 1. FORWARD CURRENT DERATING CURVE

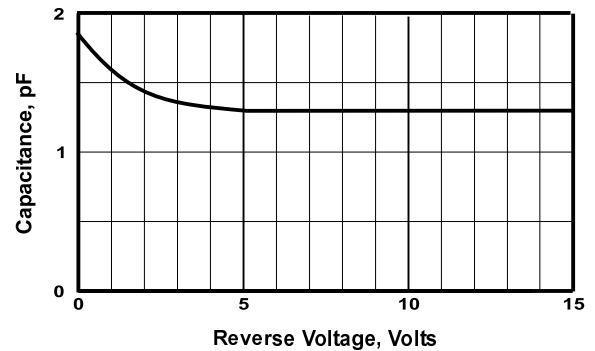


FIGURE 2. TYPICAL JUNCTION CAPACITANCE

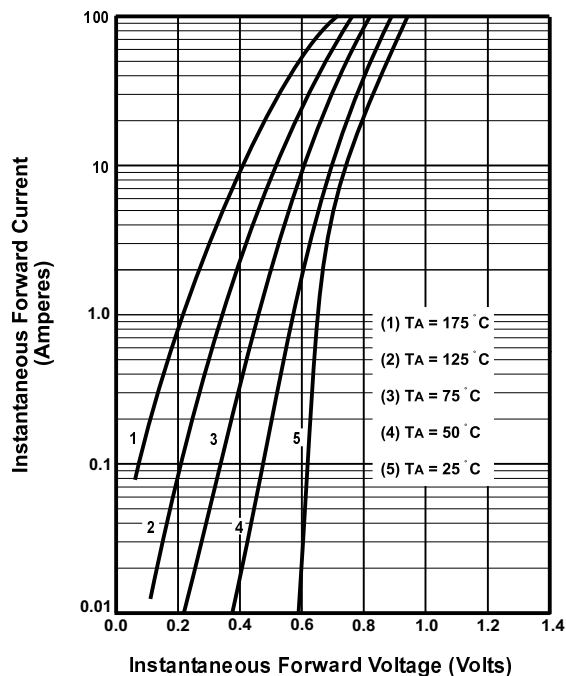


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

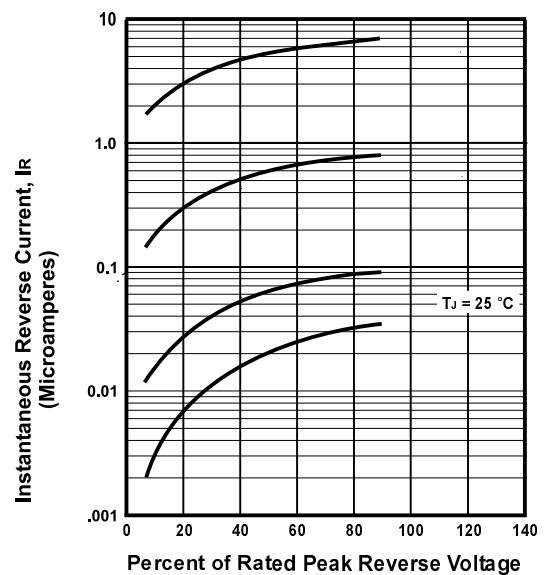


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS