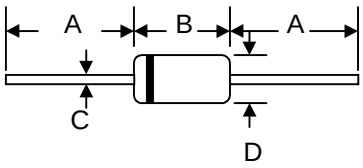
1N4148 / LL4148

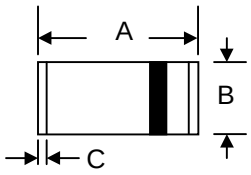
FAST SWITCHING DIODE

Features

- Fast Switching Speed
- Glass Package Version for High Reliability
- High Conductance
- Available in Both Through-Hole and Surface Mount Versions



1N4148



LL4148

Mechanical Data

- Case: DO-35, MiniMELF
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: DO-35 0.13 grams
  MiniMELF 0.05 grams
- Marking: Cathode Band Only
- **Lead Free: For RoHS / Lead Free Version,**

DO-35		
Dim	**Min**	**Max**
A	25.40	—
B	—	4.00
C	—	0.60
D	—	2.00
All Dimensions in mm		

MiniMELF		
Dim	**Mln**	**Max**
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current (Note 1)	I_{FM}	300	mA
Rectified Current (Average), Half Wave Rectification with Resistive Load and f ≧ 50MHz (Note 1)	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s @ t = 1.0μs	I_{FSM}	1.0 2.0	A
Power Dissipation (Note 1) Derate Above 25°C	P_d	500 1.68	mW mW/°C
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +175	°C

www.trr-elec.com

Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	V_{FM}	—	1.0	V	I_F = 10mA
Maximum Peak Reverse Current	I_{RM}	—	5.0 50 30 25	µA µA µA nA	V_R = 75V V_R = 70V, T_j = 150°C V_R = 20V, T_j = 150°C V_R = 20V
Capacitance	C_j	—	4.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	4.0	ns	I_F = 10mA to I_R = 1.0mA V_R = 6.0V, R_L = 100Ω

Note: 1. Diode on Ceramic Substrate 10mm x 8mm x 0.7mm.

Typical Characteristics Curves

Fig.1- Power Derating Curve

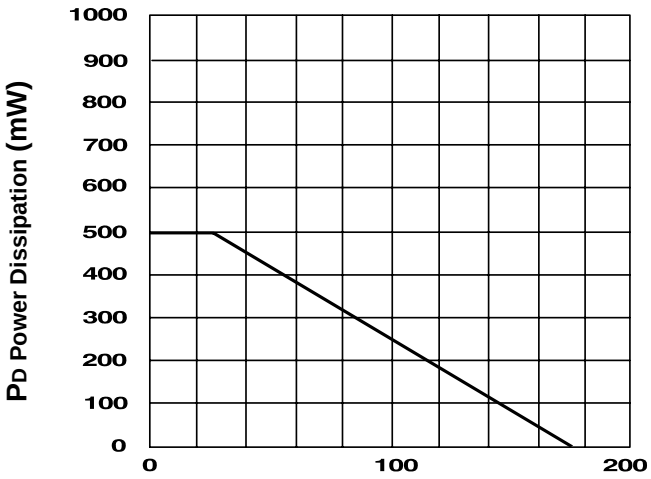


Fig.2- Typical Forward Characteristics

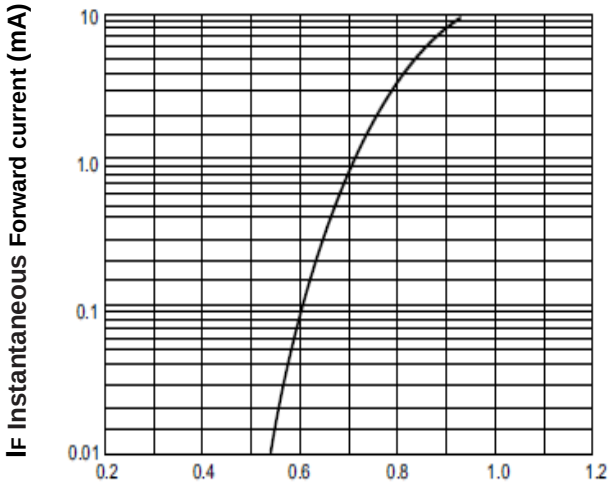


Fig.3- Typical junction capacitance

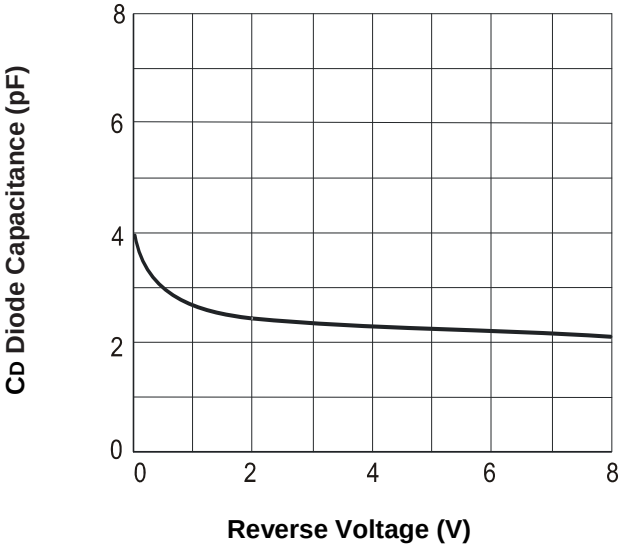
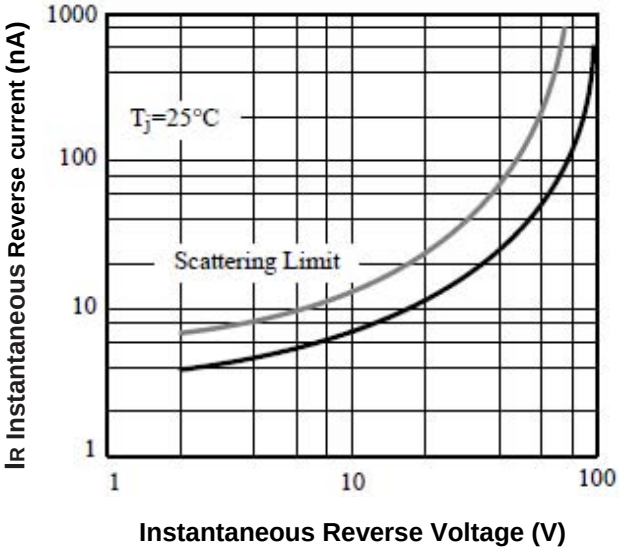


Fig.4- Typical Reverse Characteristics



www.trr-elec.com