

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
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: DO-35, Mini MELF/DL-35
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Weight: DO-35 0.13 grams
Mini MELF/DL-35 0.05 grams
- Marking: Cathode band

Maximum Ratings@T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Units
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 $f \geq 50\text{MHz}$ (Note 1)	I_o	150	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\text{s}$ @ $t=1.0\mu\text{s}$	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	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to +175	°C

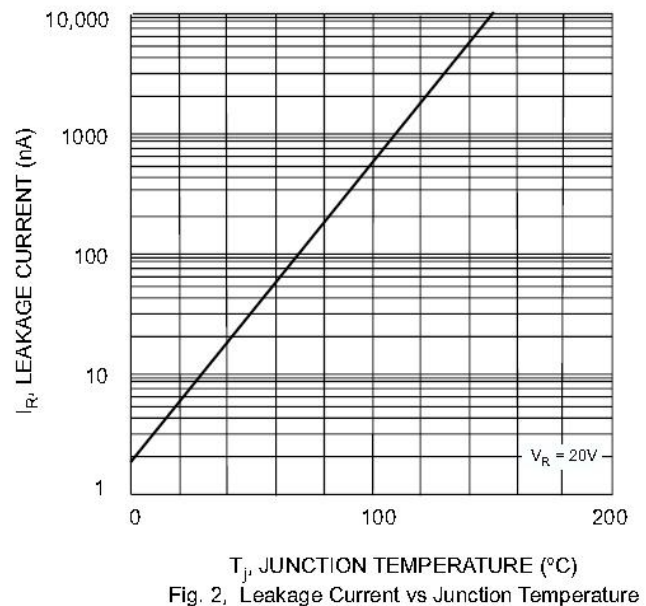
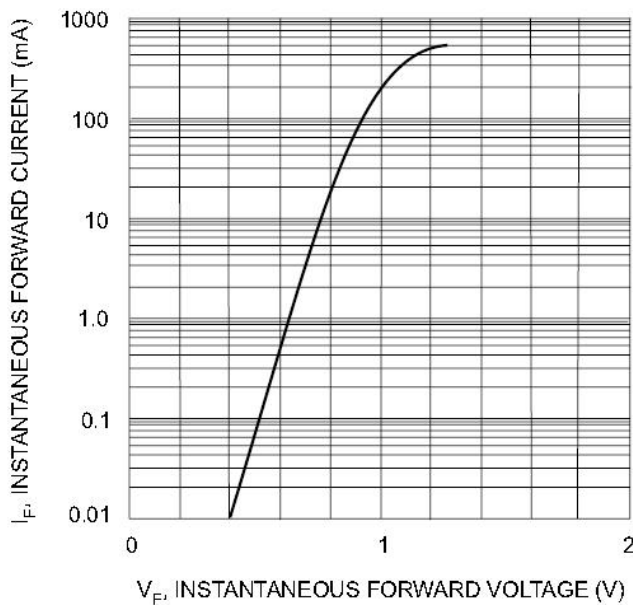
Note: 1. Diode on Ceramic substrate 10×8×0.7mm

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

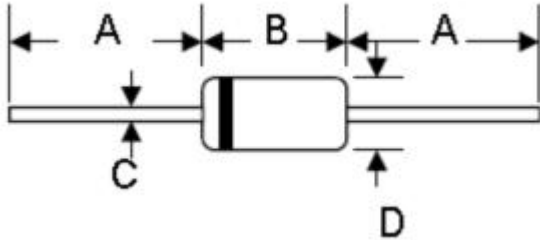
Characteristic	Symbol	Min	Max	Units	Test Condition
Forward Voltage*	V_{FM}	-	1.0	V	@ $I_F=10\text{mA}$
Peak Reverse Current*	I_{RM}	-	5.0 50 30 25	μA μA μA nA	@ $V_R=75\text{V}$ @ $V_R=70\text{V}, T_J=150^\circ\text{C}$ @ $V_R=20\text{V}, T_J=150^\circ\text{C}$ @ $V_R=20\text{V}$
Capacitance	C_j	-	4.0	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	-	4.0	ns	$I_F=10\text{mA}$ to $I_R=1.0\text{mA}$ $V_R=6.0\text{V}, R_L=100\Omega$

* Pulse width < 300 μs , duty cycle < 2%

Ratings and Characteristics Curves

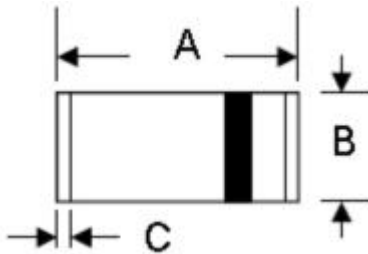


Mechanical Dimensions DO-35(1N4148)



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	-	4.00	-	0.157
C	-	0.60	-	0.024
D	-	2.00	-	0.079

Mechanical Dimensions Mini MELF/DL-35 (LL4148)



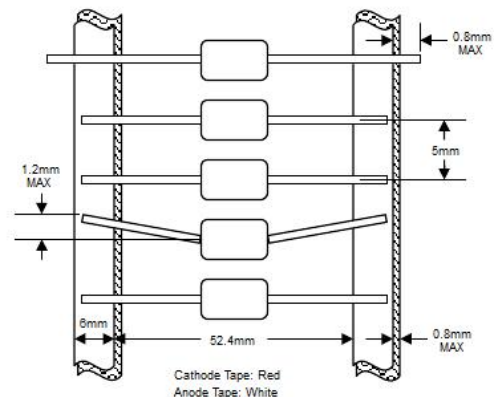
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
B	1.30	1.60	0.051	0.063
C	0.28	0.50	0.011	0.020

Ordering Information

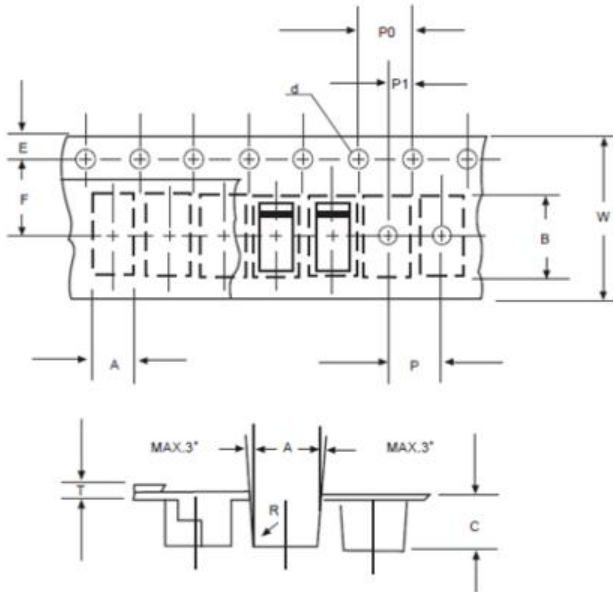
Device	Package	Shipping
1N4148	DO-35 (Pb-Free)	5000pcs /tape
LL4148	Mini MELF/DL-35 (Pb-Free)	2500pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Carrier Tape Specification DO-35



Carrier Tape Specification Mini MELF/DL-35



SYMBOL	Millimeters	
	Min.	Max.
A	1.50	1.70
B	3.60	3.80
C	1.55	1.75
d	1.40	1.60
E	1.65	1.85
F	5.45	5.55
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.17	0.27
W	7.90	8.10

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