



Micro Commercial Components



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MCL4148

500mW 100 Volt Silicon Epitaxial Diode

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Silicon epitaxial planar diode
- Fast Switching Speed
- This diode is also available in the DO-35 case with the type designation 1N4148, in the Mini-MELF case with the type designation DL4148

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 350°C/W Junction To Ambient
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

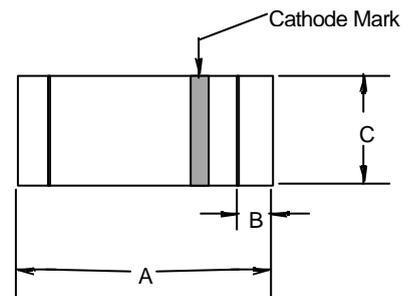
Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Maximum Average Rectified Current	I_o	200mA	Resistive Load $f > 50\text{Hz}$
Power Dissipation	P_{TOT}	500mW ¹⁾	$T_A=25^\circ\text{C}$
Junction Temperature	T_J	150°C	
Surge Forward Current	I_{FSM}	2A	$t=1\mu\text{s}, T_J=25^\circ\text{C}$
Maximum Forward Voltage	V_F	1.0V	$I_{FM} = 50\text{mA};$ $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 5.0uA 50uA	$V_R=20\text{V}$ $T_J=25^\circ\text{C} V_R=75\text{V},$ $T_J=150^\circ\text{C} V_R=20\text{V}$
Typical Junction Capacitance	C_J	4.0pF	Measured at $V_R=V_F=0\text{V}$
Reverse Recovery Time	T_{rr}	4.0nS	$I_F=10\text{mA},$ $V_R = 6.0\text{V}$ $R_L=100\text{OHMS}$

*Pulse test: Pulse width 300 usec, Duty cycle 2%

1) Valid provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)

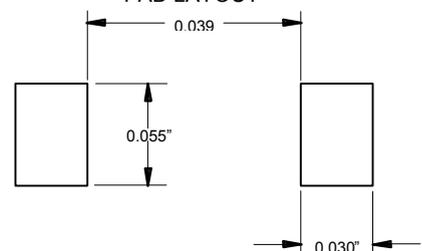
Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

MICROMELF

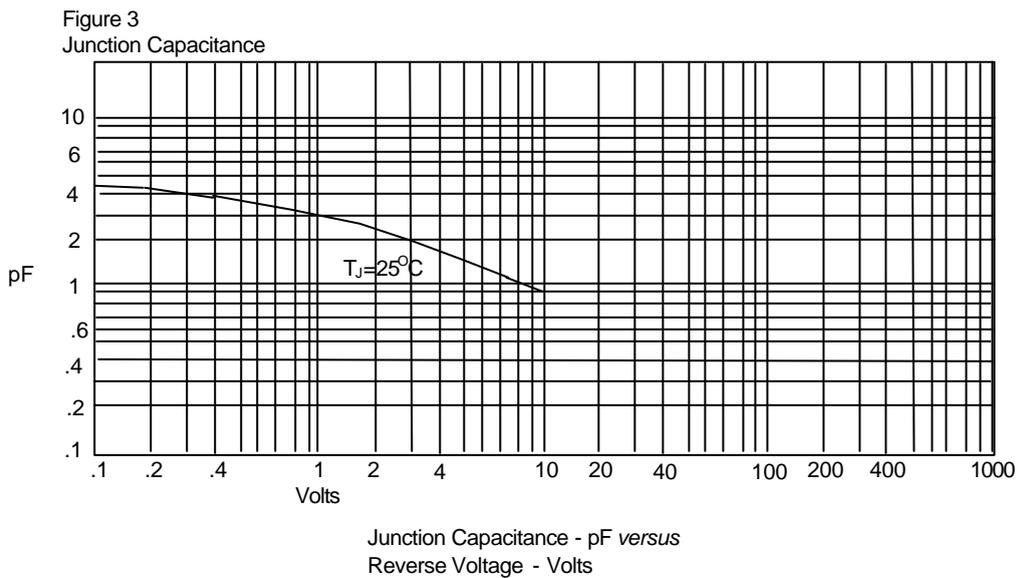
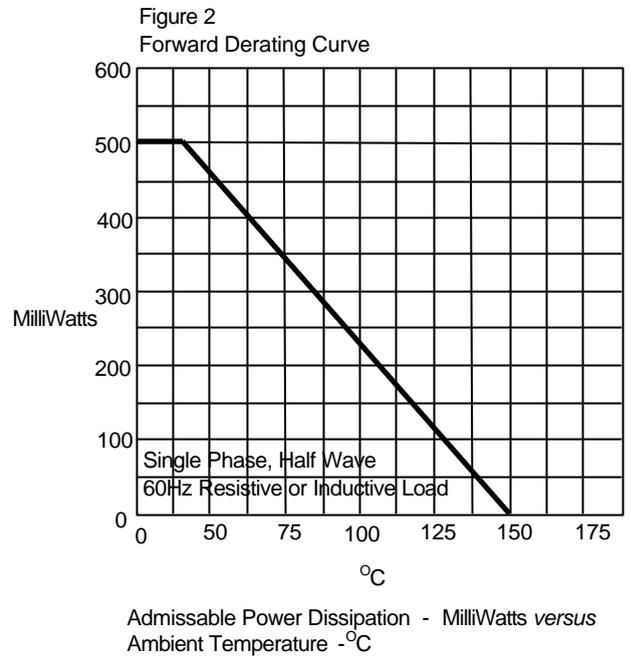
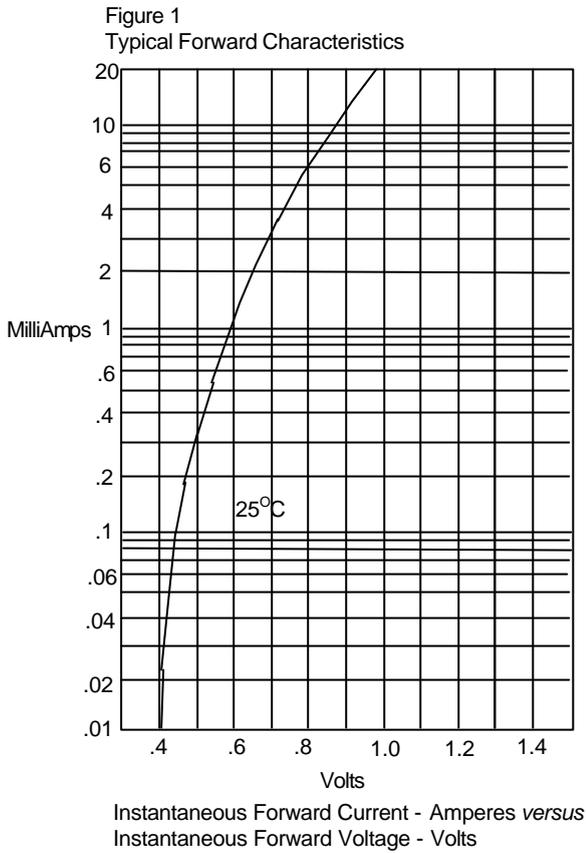


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.071	.079	1.8	2.0	
B	.004	.008	.10	.20	
C	.047	.051	1.20	1.30	Ø

SUGGESTED SOLDER PAD LAYOUT

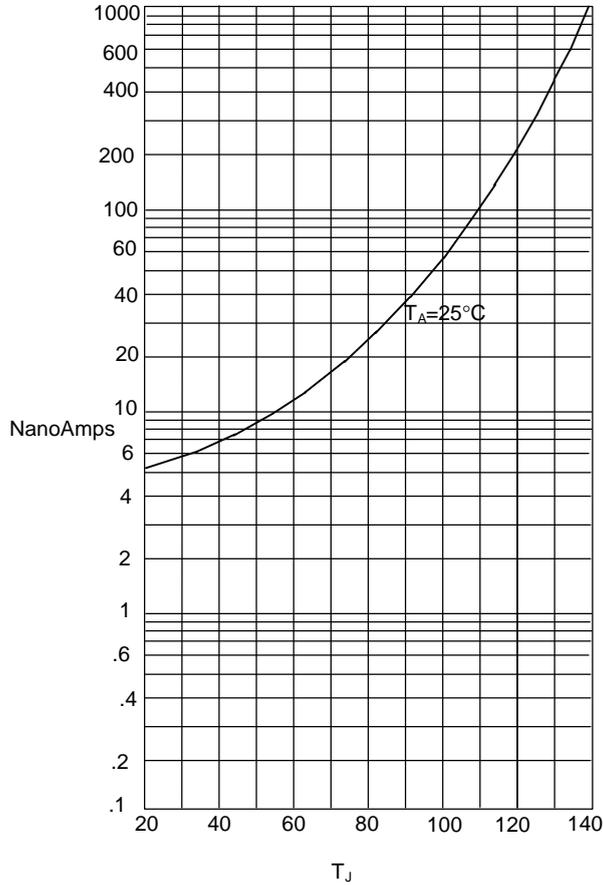


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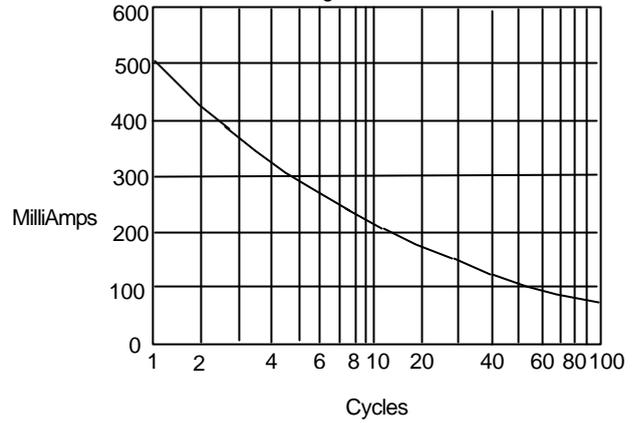
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Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmpere versus Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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