



MCL4448

500mW 100 Volt Silicon Epitaxial Diode

Features

- Silicon epitaxial planar diode
- Fast Switching diodes
- 500mW power dissipation
- This diode is also available in the DO-35 case with the type designation 1N4448, in the Minimelf case with the type designation DL4448
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

Maximum Ratings

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

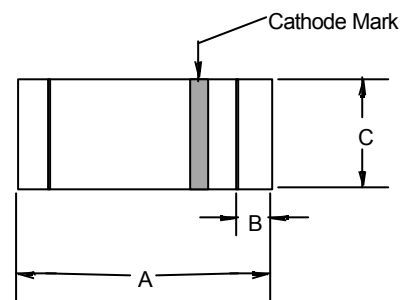
Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_{AV}	150mA	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}	500mA	$t < 1\text{S}, T_J=25^\circ\text{C}$
Instantaneous Forward Voltage	V_F	1.0V(MAX) 0.62-0.72V	$I_{FM} = 100\text{mA};$ $I_{FM} = 5.0\text{mA}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 5.0uA 50uA	$T_J=25^\circ\text{C}, V_R=20\text{V}$ $V_R=75\text{V},$ $V_R=20\text{V } T_J=150^\circ\text{C}$
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	100V	Tested with 100uA puse
Typical Junction Capacitance	C_J	4.0pF	Measured at $V_R=V_F=0\text{V}$
Reverse Recovery Time	T_{rr}	4.0nS	$I_F=10\text{mA},$ $V_R = 6.0\text{V}$ $R_L=100\text{OHMS}$

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

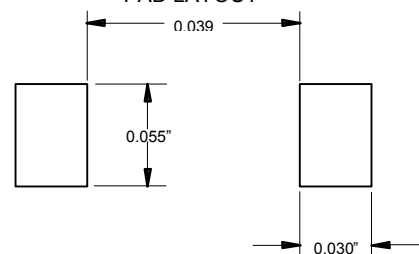
Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

MICROMELF



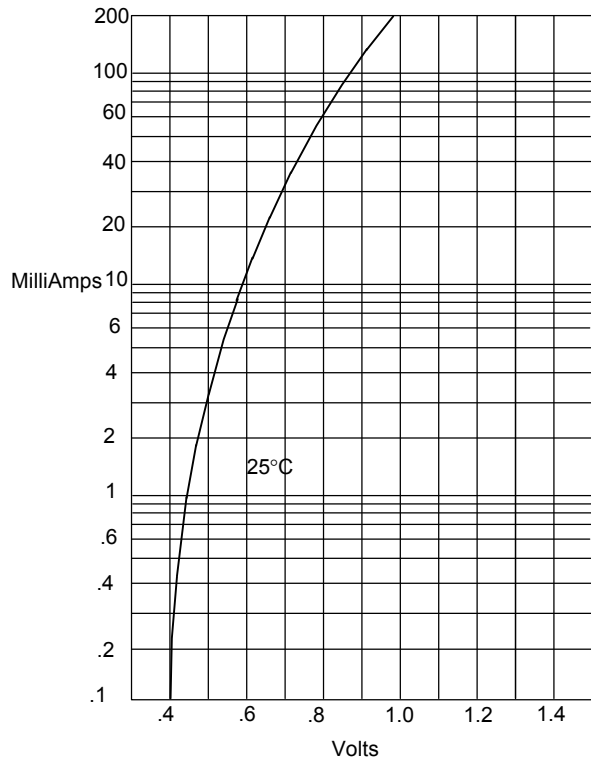
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.079	1.8	2.0	
B	.004	.008	.10	.20	
C	.047	.051	1.20	1.30	∅

SUGGESTED SOLDER PAD LAYOUT



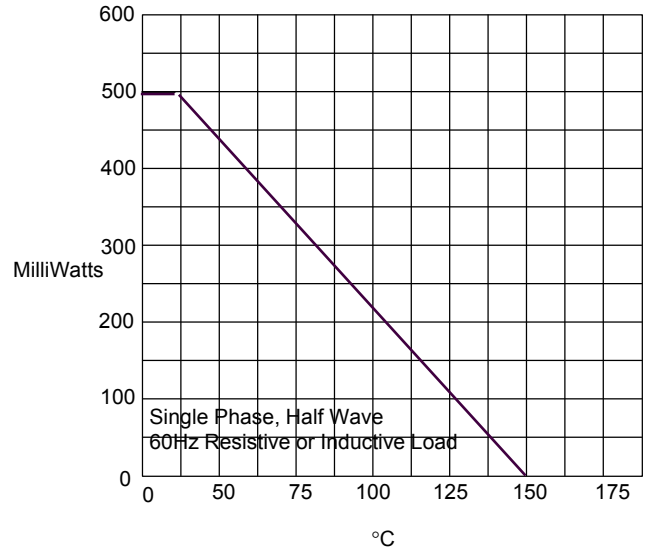
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Figure 1
Typical Forward Characteristics



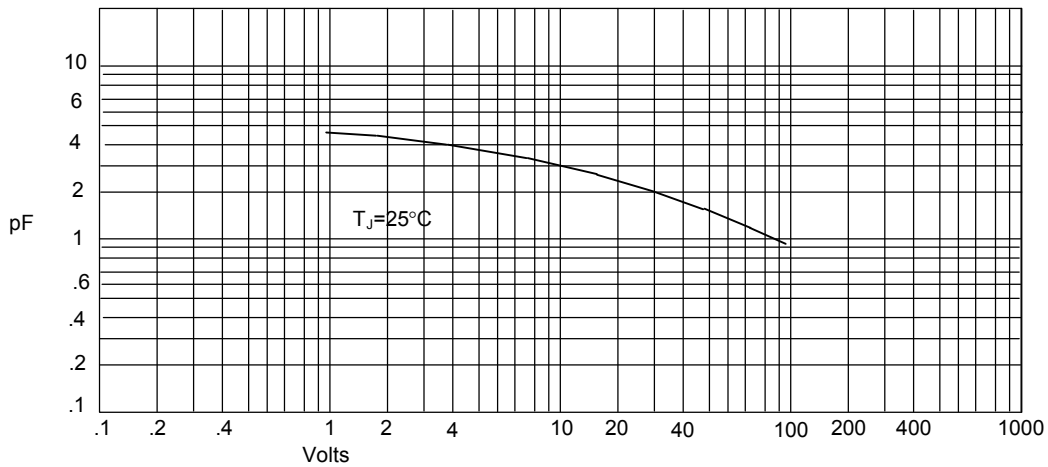
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Admissible Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

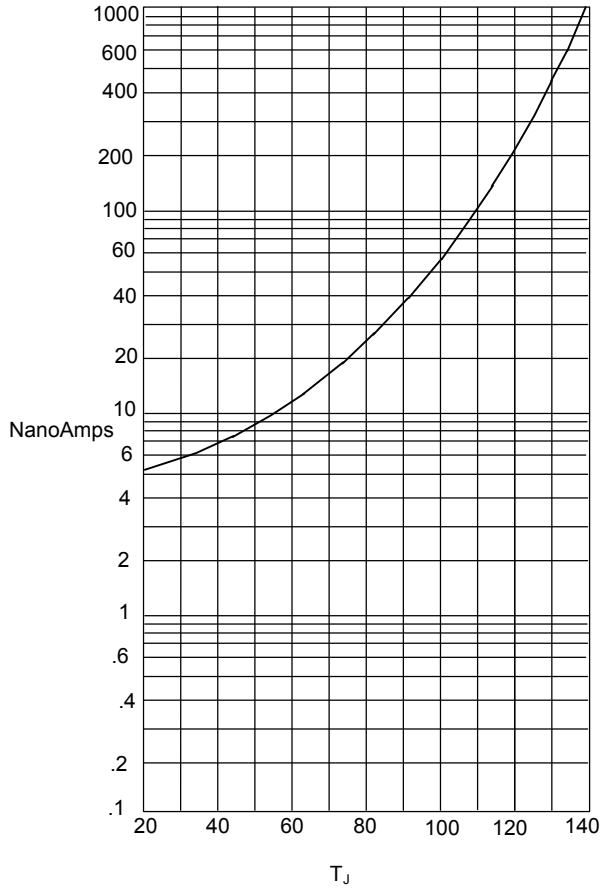
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

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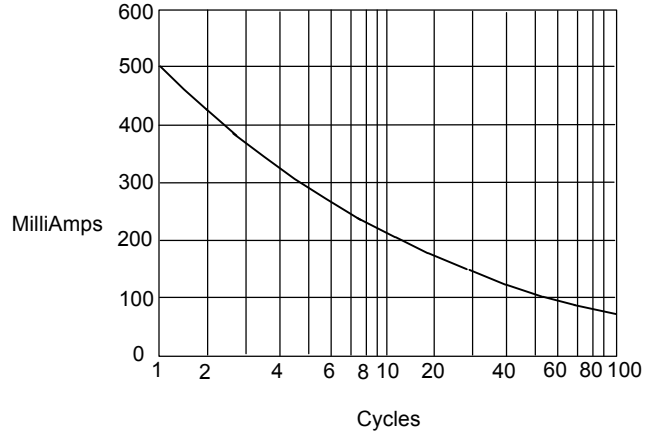
Figure 4
Typical Reverse Characteristics



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

T_A=25°C
T_A=100°C

Figure 5
Peak Forward Surge Current



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