Micro Commercial Components

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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

Maximum Ratings

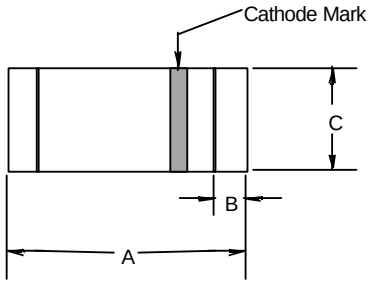
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 350K/W Junction To Ambient

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 > 50Hz
Power Dissipation	P_{TOT}	500mW[1)]	T_A=25°C
Junction Temperature	T_J	150°C	
Surge Forward Current	I_{FSM}	500mA	t<1S, T_J=25°C
Instantaneous Forward Voltage	V_F	1.0V(MAX) 0.62-0.72V	I_{FM} = 100mA; I_{FM} = 5.0mA
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 5.0uA 50uA	T_J=25°C, V_R=20V V_R=75V, V_R=20V T_J=150°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=0V
Reverse Recovery Time	T_{rr}	4.0nS	I_F=10mA, V_R = 6.0V R_L=100OHMS

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

MICROMELF



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

SUGGESTED SOLDER PAD LAYOUT

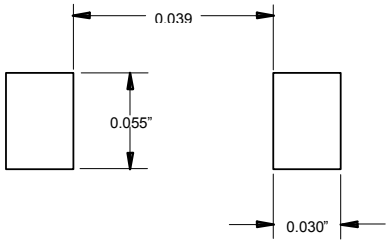
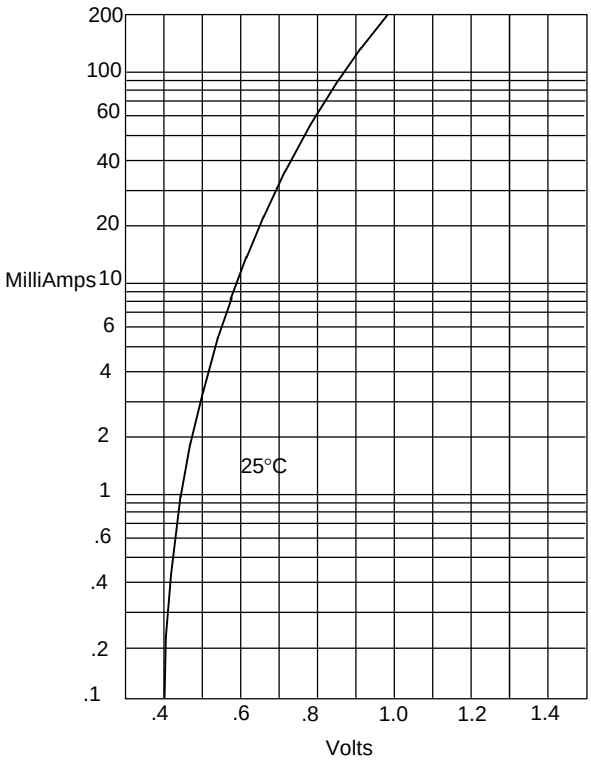
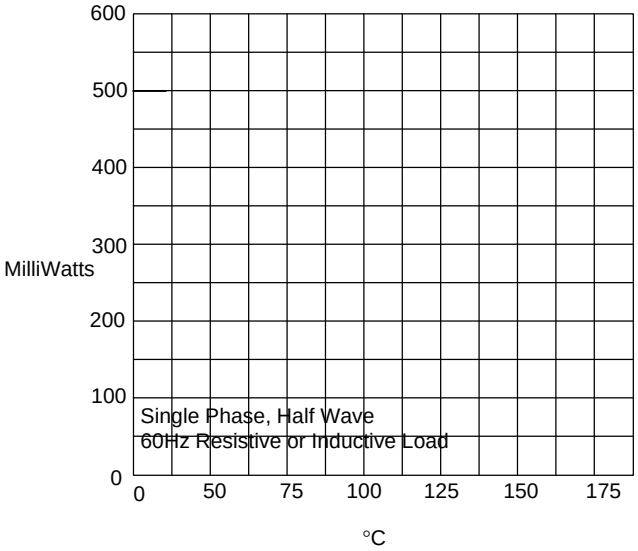


Figure 1
Typical Forward Characteristics



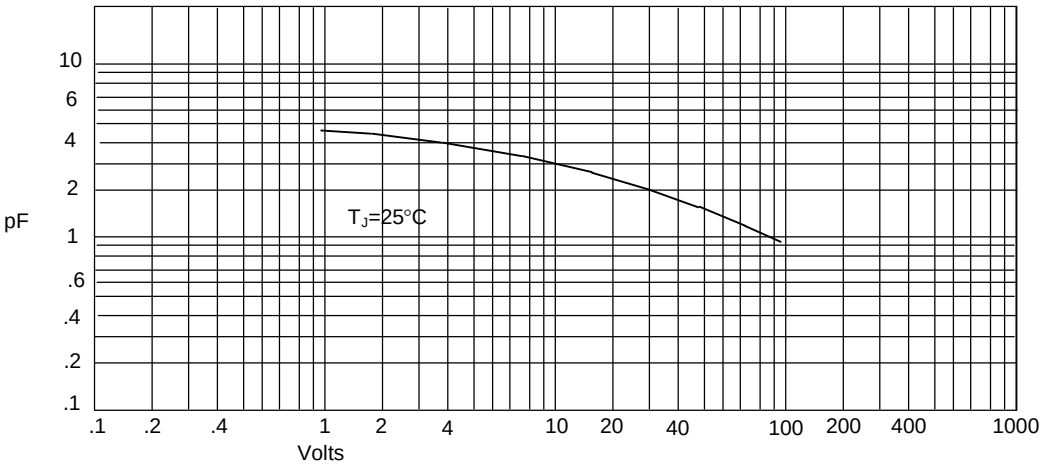
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



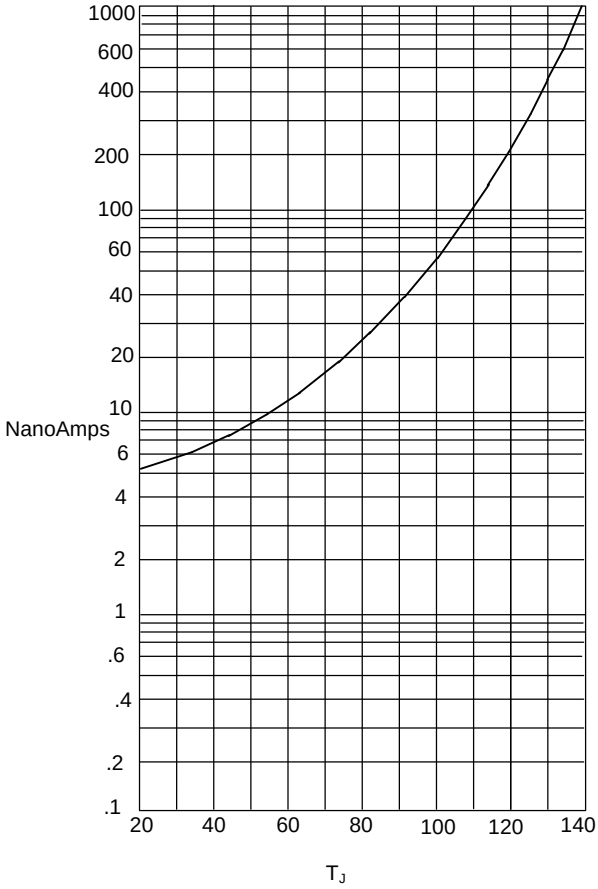
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

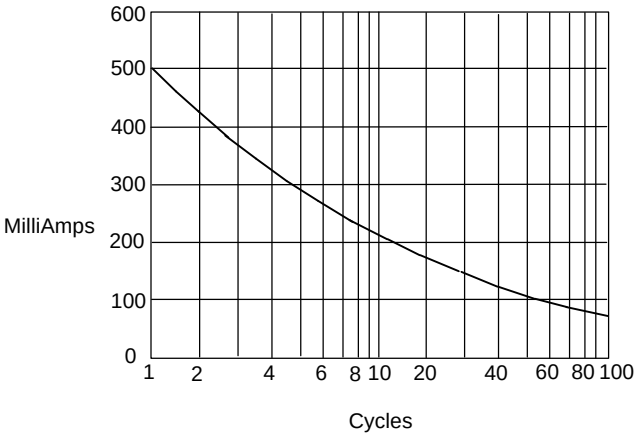
Figure 4
Typical Reverse Characteristics



T_A=25°C
T_A=100°C

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

Figure 5
Peak Forward Surge Current



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