SYC SEMICONDUCTORES Y COMPONENTES

DL4933 THRU DL4937

1 Amp Glass Passivated, Fast Recovery Rectifier 50 to 600 Volts

Features

- Glass Passivated Junction
- Low Leakage Current
- Metalurgically Bonded Construction
- Surface Mount Applications
- Fast Switching

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 30 °C/W Junction To Lead

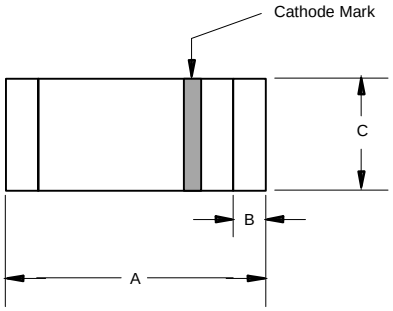
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DL4933	---	50V	35V	50V
DL4934	---	100V	70V	100V
DL4935	---	200V	140V	200V
DL4936	---	400V	280V	400V
DL4937	---	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_J = 25°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time	T_{rr}	150ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

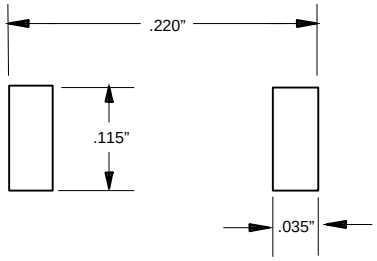
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MELF



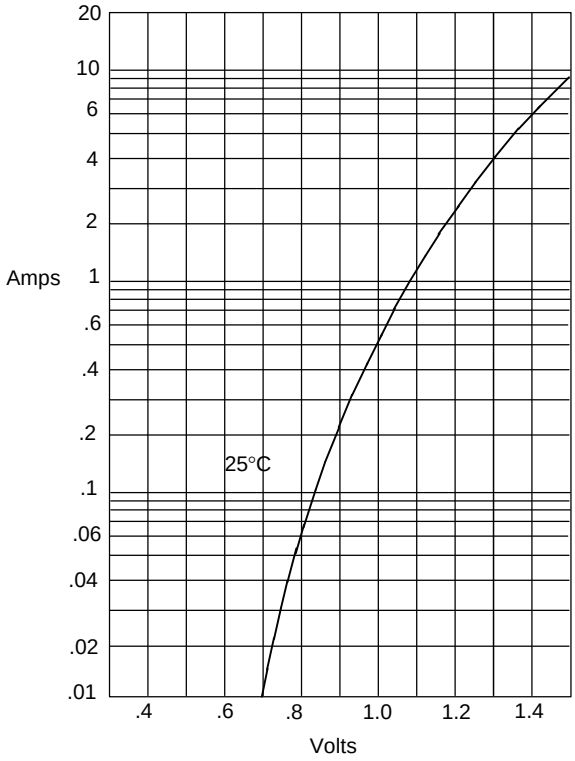
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.105	2.40	2.67	∅

SUGGESTED SOLDER PAD LAYOUT



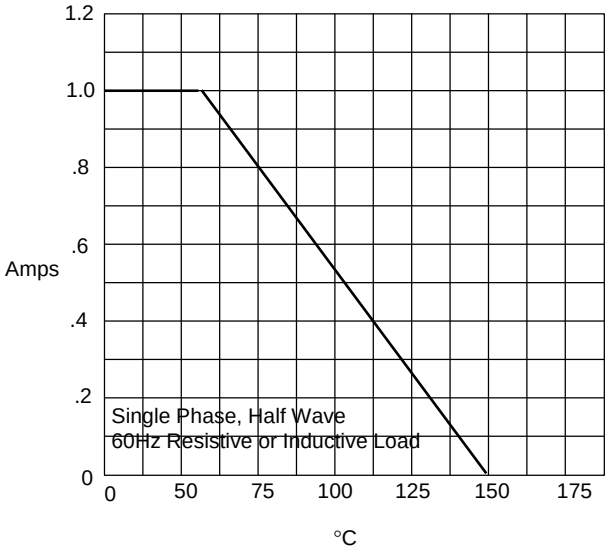
DL4933 thru DL4937

Figure 1
Typical Forward Characteristics



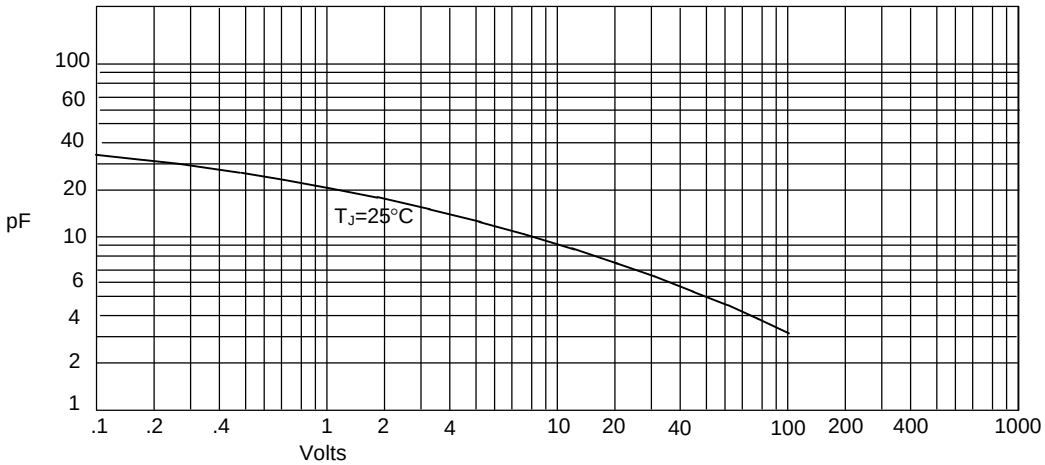
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

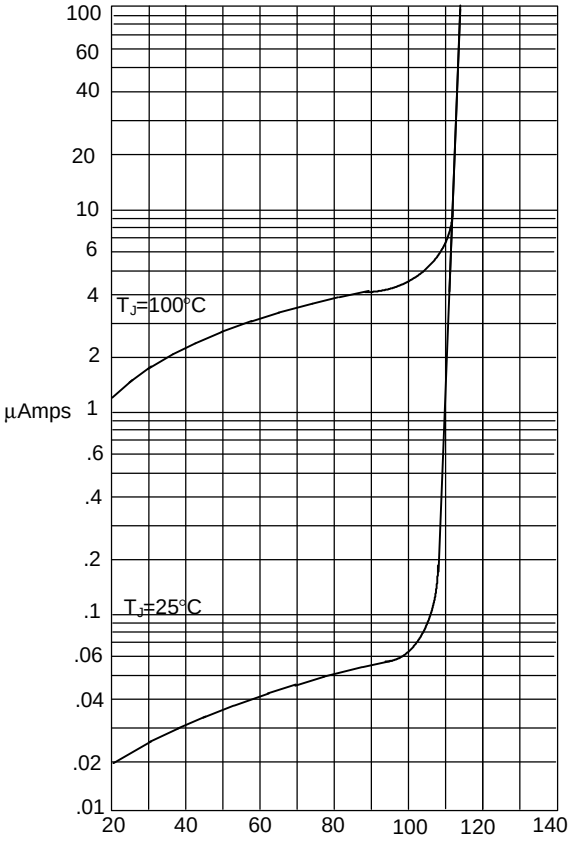
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

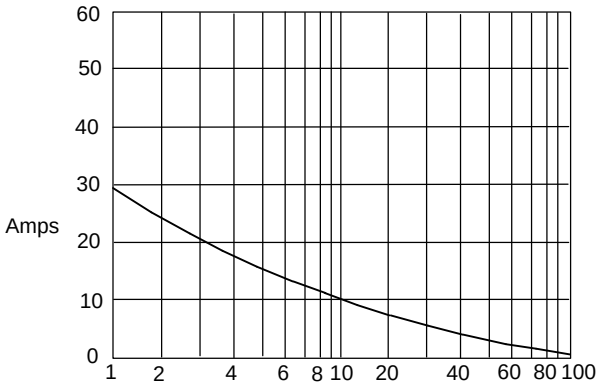
DL4933 thru DL4937

Figure 4
Typical Reverse Characteristics



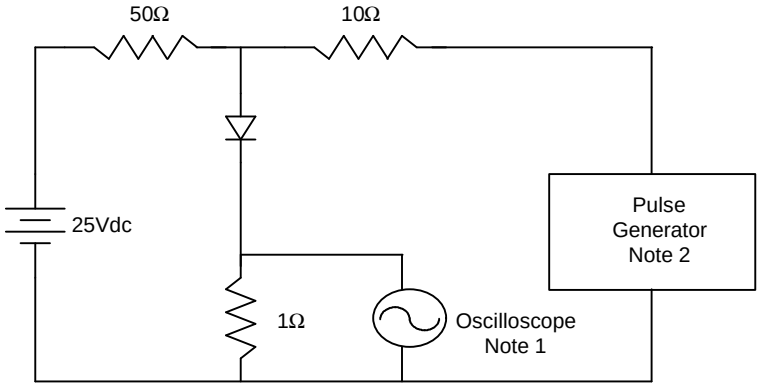
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

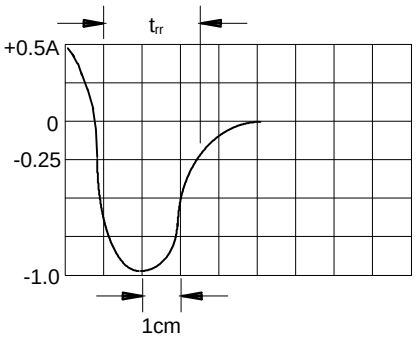
Figure 5
Peak Forward Surge Current



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

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive