

DLFR106 thru DLFR107

Features

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

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

| Microsemi Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------------|----------------|--|---------------------|-----------------------------|
| DLFR106 | --- | 800V | 560V | 800V |
| DLFR107 | --- | 1000V | 700V | 1000V |

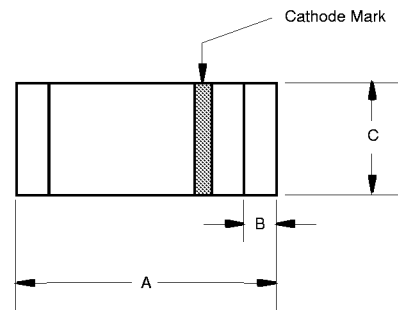
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|--|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_A = 55^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.3V | $I_{FM} = 1.0A$; $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5.0 μA 100 μA | $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 250ns 500ns | $I_F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$ |
| Typical Junction Capacitance | C_J | 15pF | Measured at 1.0MHz, $V_R = 4.0V$ |

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

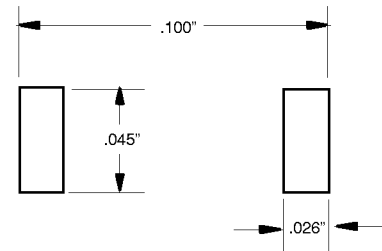
1 Amp Glass Passivated, Fast Recovery Rectifier 800 - 1000 Volts

MELF



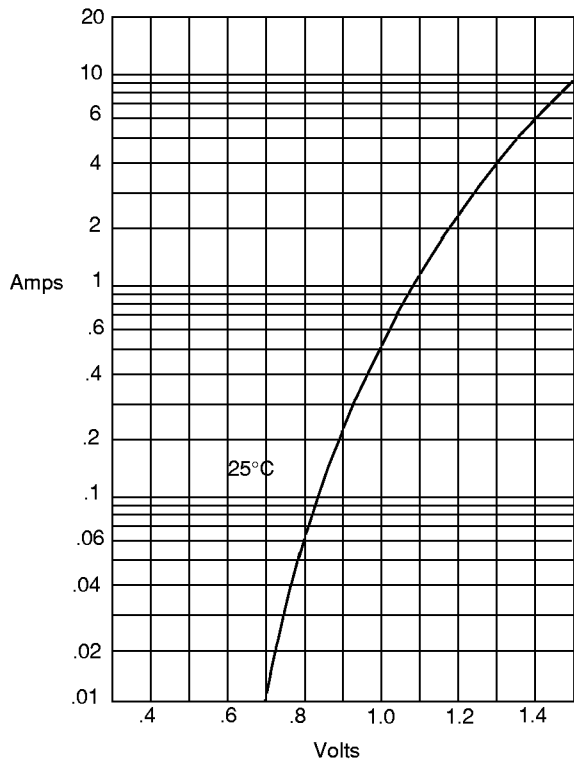
| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|---------|
| | MIN | MAX | MIN | MAX | |
| A | .190 | .205 | 4.80 | 5.20 | |
| B | --- | .022 | --- | .55 | Nominal |
| C | .095 | .099 | 2.40 | 2.50 | ∅ |

SUGGESTED SOLDER PAD LAYOUT



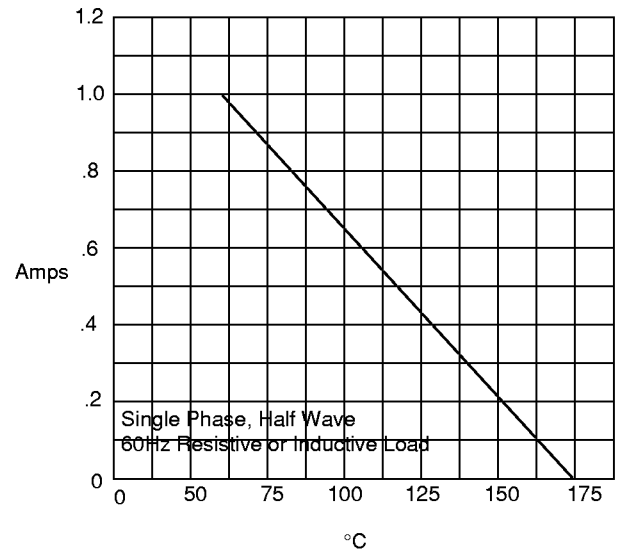
DLFR106 thru DLFR107

Figure 1
Typical Forward Characteristics



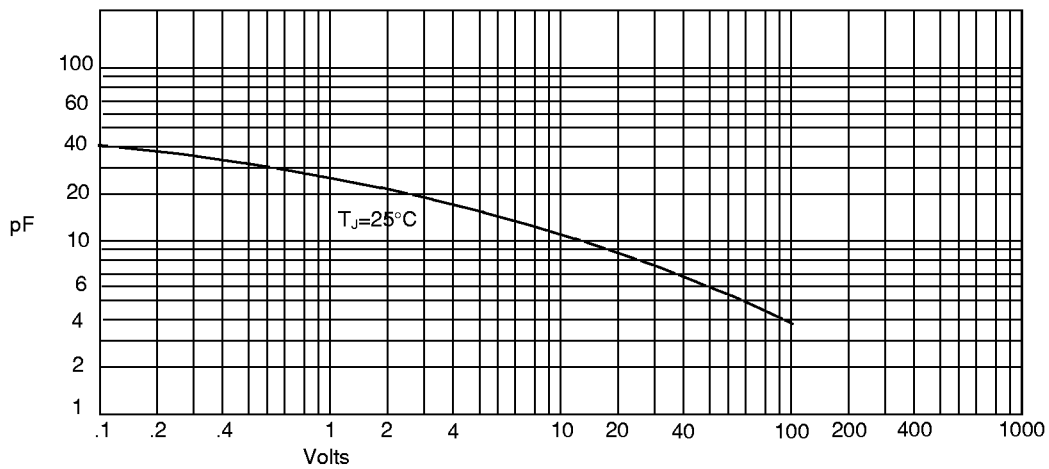
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



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

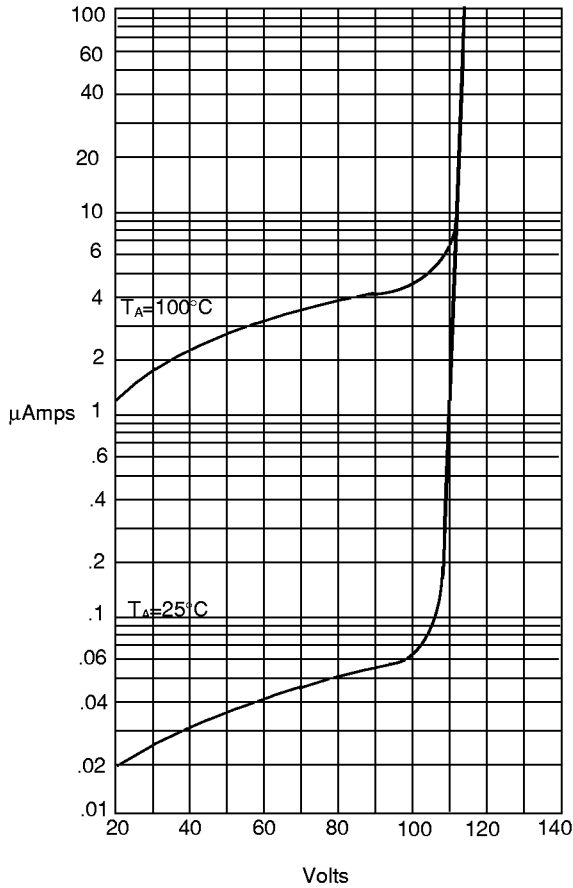
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

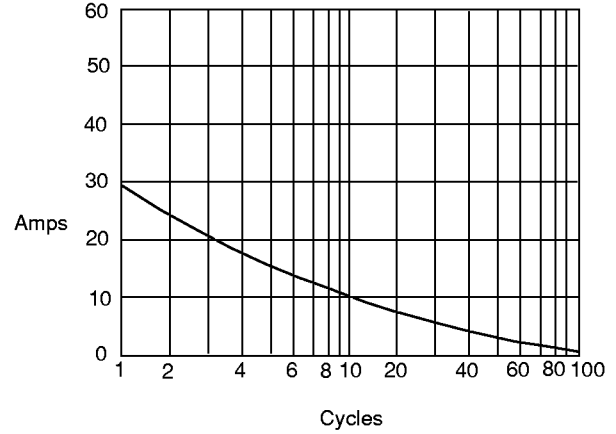
DLFR106 thru DLFR107

Figure 4
Typical Reverse Characteristics



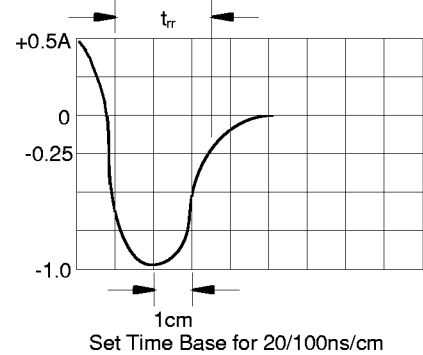
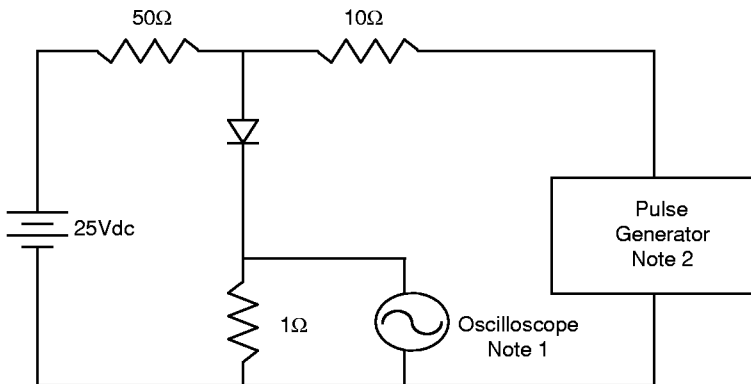
Instantaneous Reverse Leakage Current - MicroAmperes versus
Percent Of Rated Peak Reverse Voltage - Volts

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



- 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