

**NOT RECOMMENDED FOR NEW DESIGNS  
USE ES1A-LT~ES1J-LT SERIES**



Micro Commercial Components



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## DLSF11 THRU DLSF18

**1 Amp Glass  
Passivated Super Fast  
Recovery Rectifier  
50 to 600 Volts**

### Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low Leakage and High Surge Capability
- Super Fast Switching Speed For High Efficiency

### Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DLSF11	---	50V	35V	50V
DLSF12	---	100V	70V	100V
DLSF13	---	150V	105V	150V
DLSF14	---	200V	140V	200V
DLSF15	---	300V	210V	300V
DLSF16	---	400V	280V	400V
DLSF18	---	600V	420V	600V

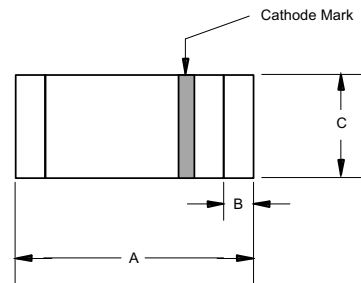
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage DLSF11-DLSF15 DLSF16-DLSF18	$V_F$	.975V 1.75V	$I_{FM} = 1.0A$ ; $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu$ A 50 $\mu$ A	$T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$
Maximum Reverse Recovery Time <sup>16-18</sup>	$T_{rr}$	35ns 50ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance DLSF11-DLSF15 DLSF16-DLSF18	$C_J$	15pF 10pF	Measured at 1.0MHz, $V_R=4.0V$

\*Pulse Test: Pulse Width 300 $\mu$ sec, Duty Cycle 1%

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

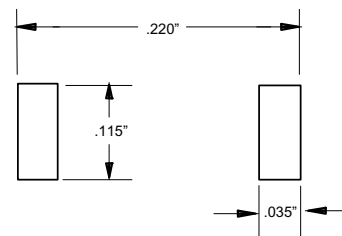
### MELF



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.185	.205	4.70	5.20	
B	.018	.022	.46	.56	
C	.095	.105	2.40	2.67	∅

### SUGGESTED SOLDER PAD LAYOUT



[www.mccsemi.com](http://www.mccsemi.com)

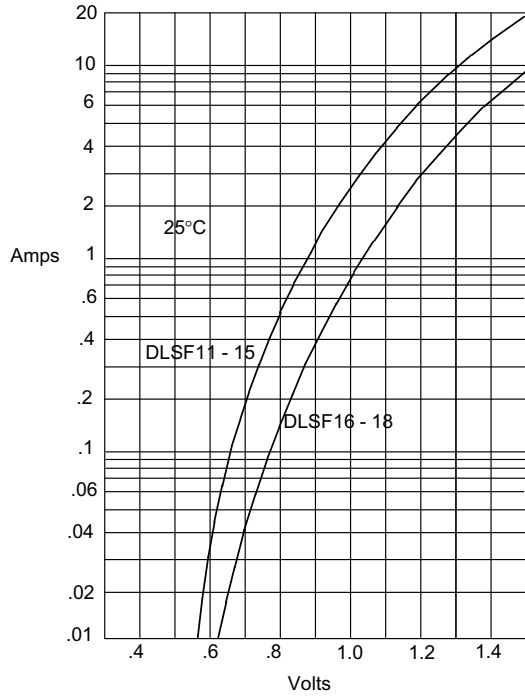
Revision: A

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2011/01/01

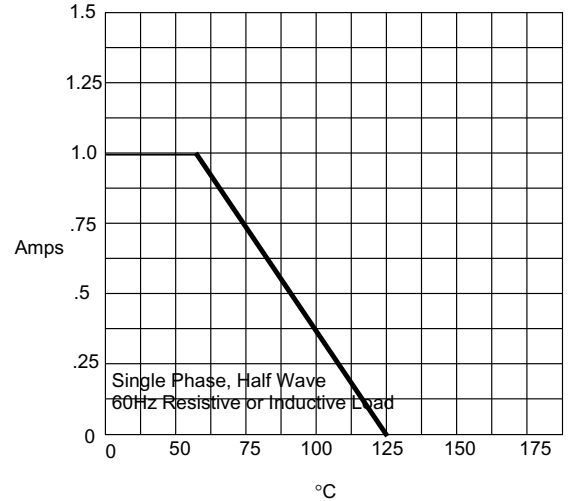
# DLSF11 thru DLSF18

Figure 1  
Typical Forward Characteristics



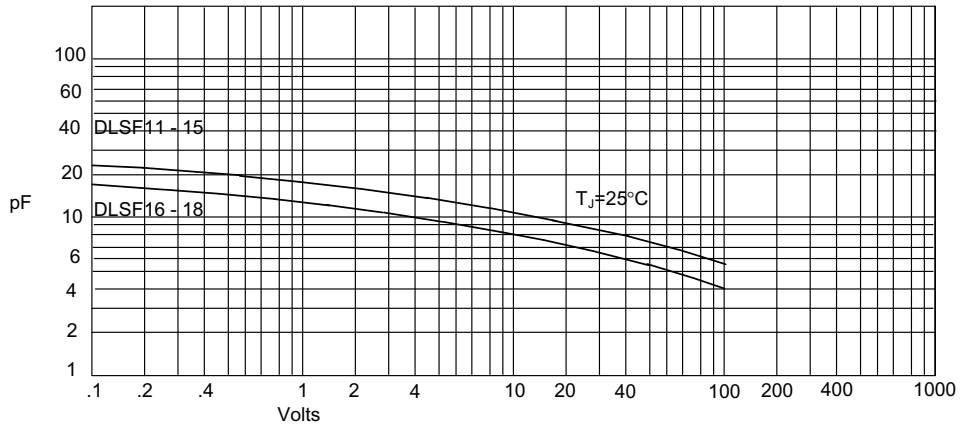
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

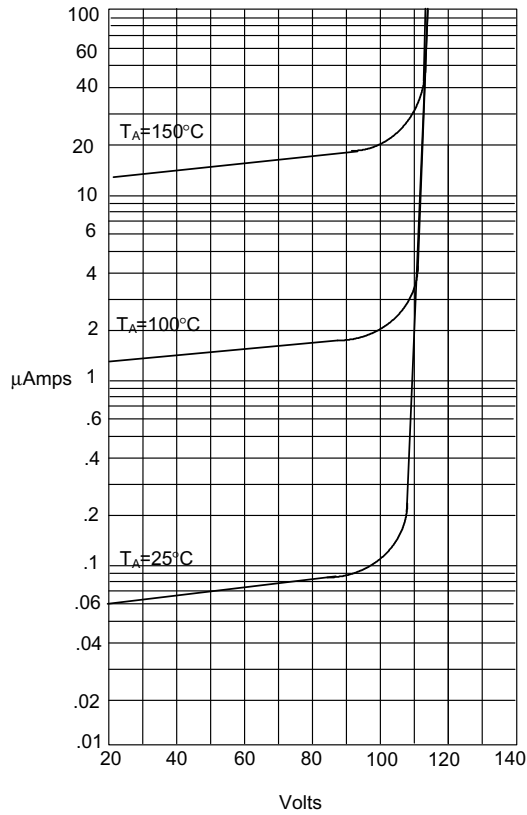
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

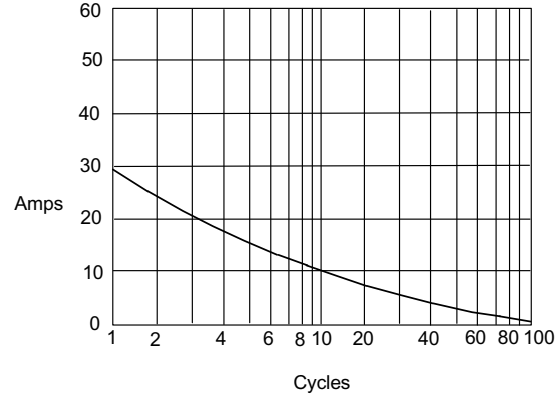
## DLSF11 thru DLSF18

Figure 4  
Typical Reverse Characteristics



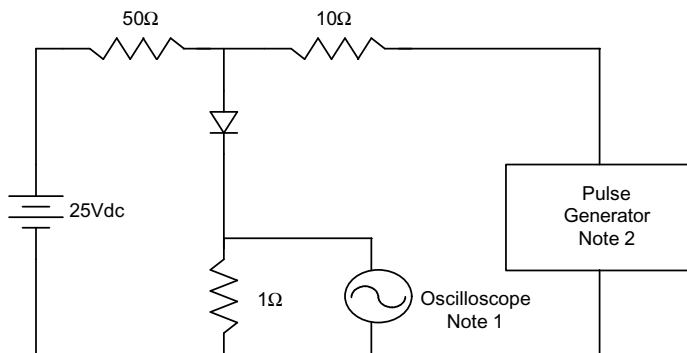
Instantaneous Reverse Leakage Current - MicroAmpere versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current

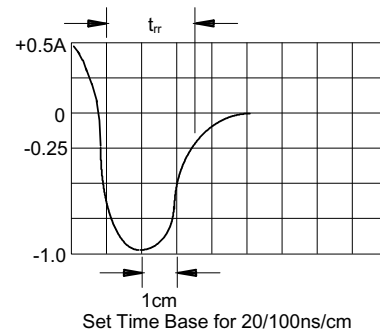


Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles

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





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel

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