



Micro Commercial Components



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 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# UFM11PL THRU UFM17PL

## 1 Amp Ultra Fast Recovery Silicon Rectifier 50 to 1000 Volts

### Features

- Halogen free available upon request by adding suffix "-HF"
- Ultra fast Recovery
- High Reliability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1)("P" Suffix designates Compliant. See ordering information)

### Maximum Ratings

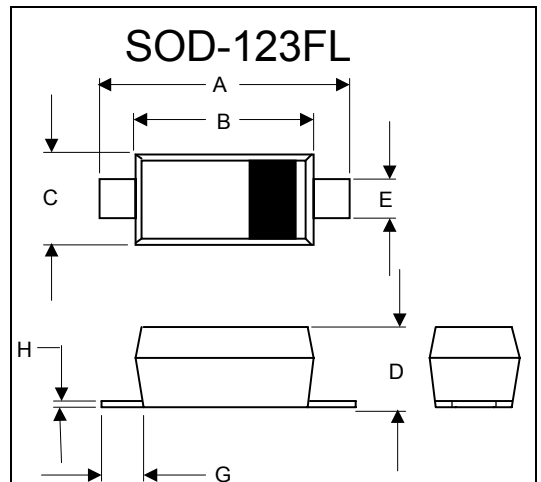
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 180°C/W Junction To Ambient.

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UFM11PL	U1	50V	35V	50V
UFM12PL	U2	100V	70V	100V
UFM13PL	U3	200V	140V	200V
UFM14PL	U4	400V	280V	400V
UFM15PL	U5	600V	420V	600V
UFM16PL	U6	800V	560V	800V
UFM17PL	U7	1000V	700V	1000V

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

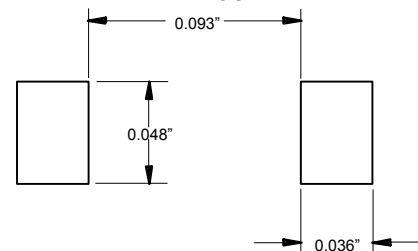
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L = 90^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage UFM11PL-13PL UFM14PL UFM15PL-17PL	$V_F$	1.0V 1.40V 1.70V	$I_{FM} = 1.0A$ ; $T_a = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu$ A 50 $\mu$ A	$T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$
Maximum Reverse Recovery Time UFM11PL-13PL UFM14PL UFM15PL-16PL UFM17PL	$T_{rr}$	35ns 50ns 75ns 100ns	$I_F = 0.5A, I_R = 1.0A,$ $I_{rr} = 0.25A$
Typical Junction Capacitance	$C_J$	20pF	Measured at 1.0MHz, $V_R = 4.0V$

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



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.122	2.55	3.10	
C	.055	.075	1.40	1.90	
D	.035	.053	0.90	1.35	
E	.020	.041	0.50	1.05	
G	.010	----	0.25	----	
H	----	.010	----	.25	

### SUGGESTED SOLDER PAD LAYOUT



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## TYPICAL CHARACTERISTICS

Figure 1  
Typical Forward Characteristics

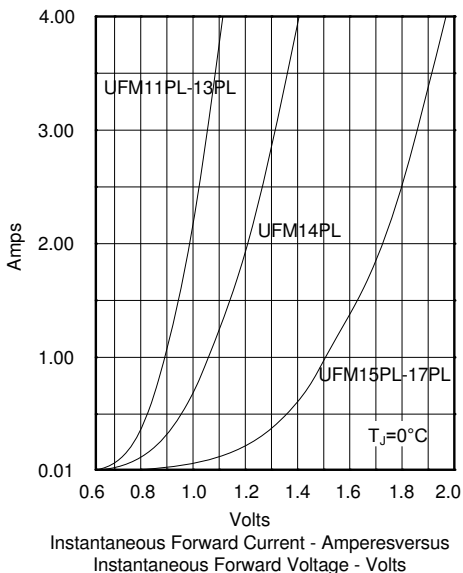


Figure 2  
Typical Forward Characteristics

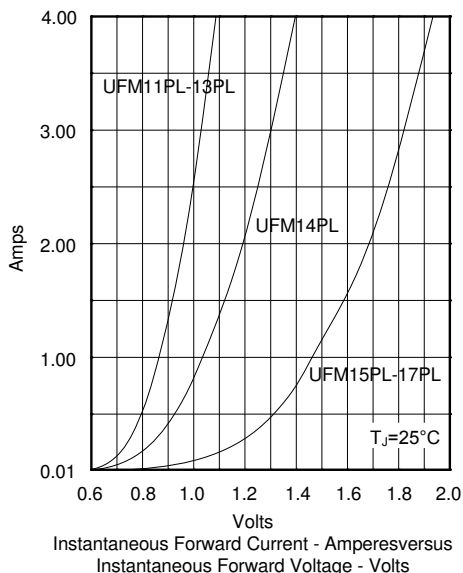


Figure 3  
Typical Forward Characteristics

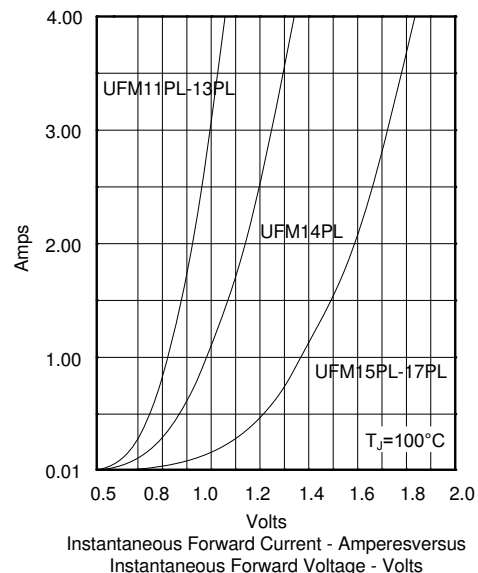
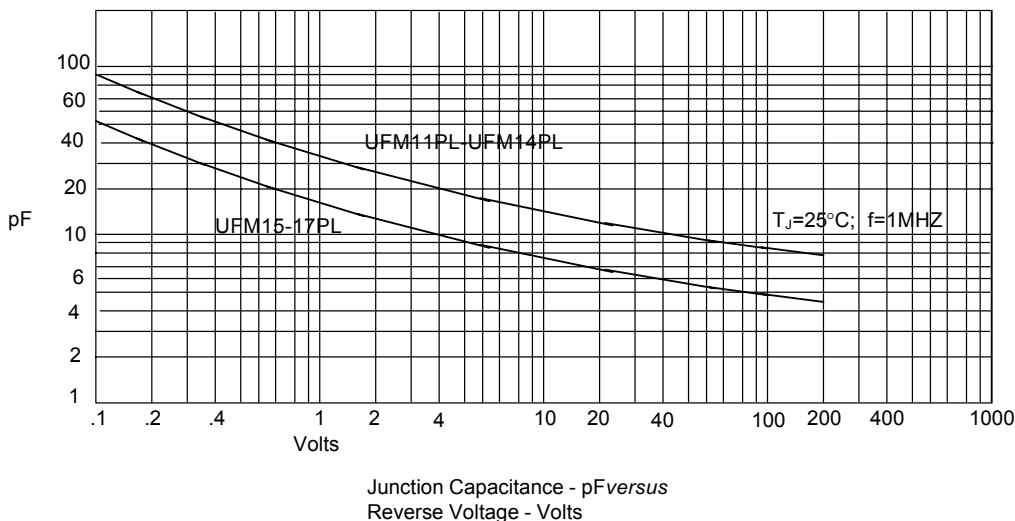


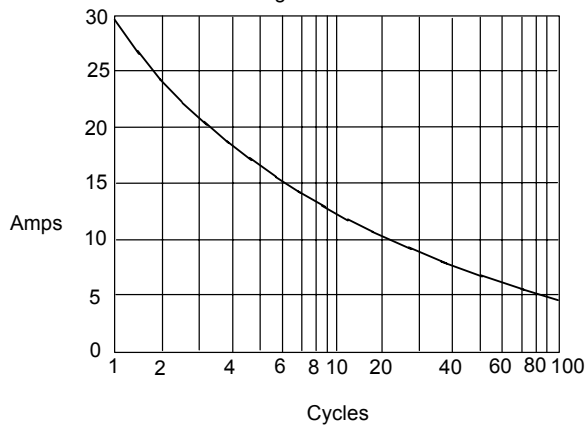
Figure 4  
Junction Capacitance



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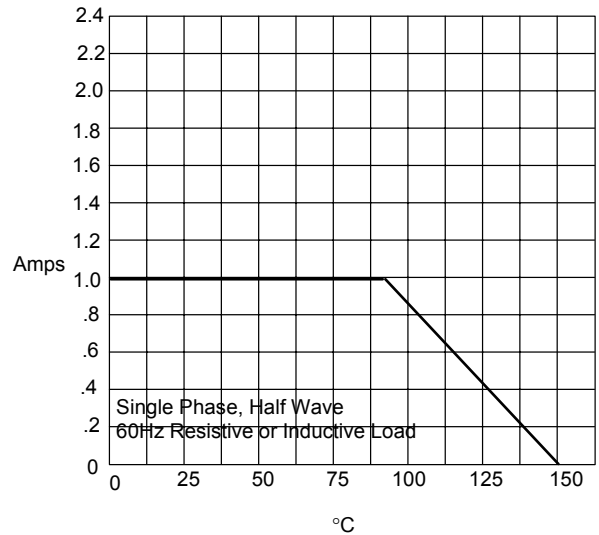
## TYPICAL CHARACTERISTICS

Figure 5  
Peak Forward Surge Current



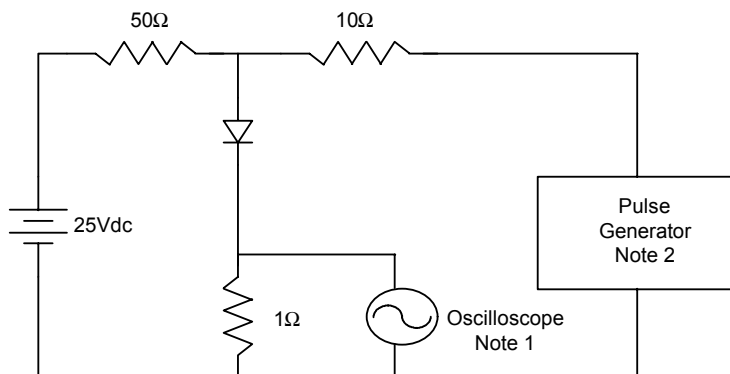
Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles

Figure 6  
Forward Derating Curve

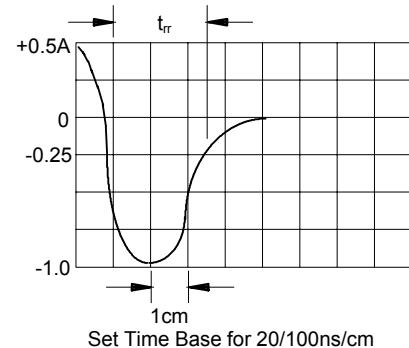


Average Forward Rectified Current - Amperes *versus*  
Lead Temperature - °C

Figure 7  
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: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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