



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Micro Commercial Components



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# SM4001PL thru SM4007PL

## 1.0 Ampere Silicon Rectifier 50 to 1000 Volts

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low Leakage Current
- Glass Passivated Junction
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

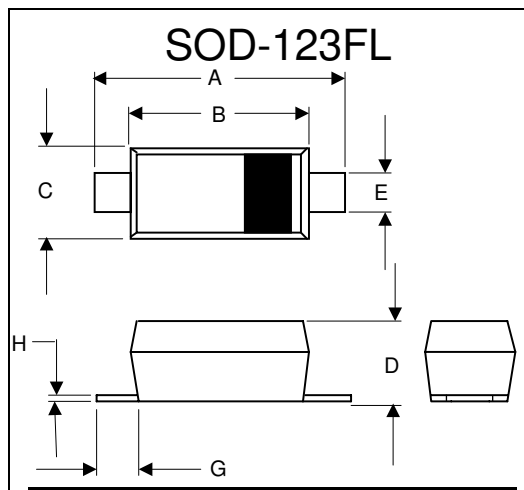
- Operating Temperature(T<sub>J</sub>): -65°C to +175°C
- Storage Temperature(T<sub>STG</sub>): -65°C to +175°C
- Typical Thermal Resistance(R<sub>thJA</sub>): 50°C/W

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SM4001PL	A1	50V	35V	50V
SM4002PL	A2	100V	70V	100V
SM4003PL	A3	200V	140V	200V
SM4004PL	A4	400V	280V	400V
SM4005PL	A5	600V	420V	600V
SM4006PL	A6	800V	560V	800V
SM4007PL	A7	1000V	700V	1000V

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

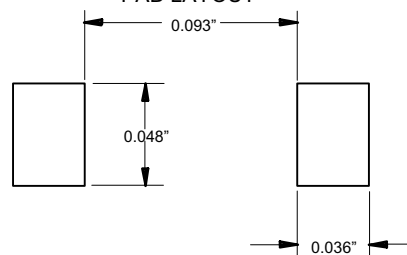
Average Forward Current	I <sub>F(AV)</sub>	1.0 A	T <sub>A</sub> = 75°C
Peak Forward Surge Current	I <sub>FSM</sub>	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V <sub>F</sub>	1.1V	T <sub>A</sub> = 25°C I <sub>F</sub> =1A
Maximum DC Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	5.0µA 50uA	T <sub>A</sub> = 25°C T <sub>A</sub> =100 °C
Maximum Full Load Reverse Current Average ,Full Cycle 9.5mm Lead Length	I <sub>R</sub>	30uA	T <sub>L</sub> =75 °C
Typical Junction Capacitance	C <sub>J</sub>	15pF	Measured at 1.0MHz, V <sub>R</sub> =4.0V

Note: 1. High Temperature Solder Exemptions 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

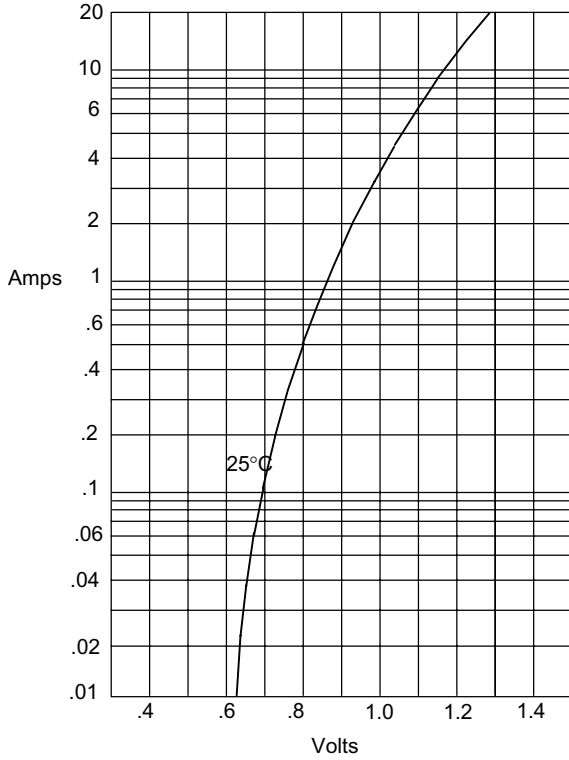


# SM4001PL thru SM4007PL



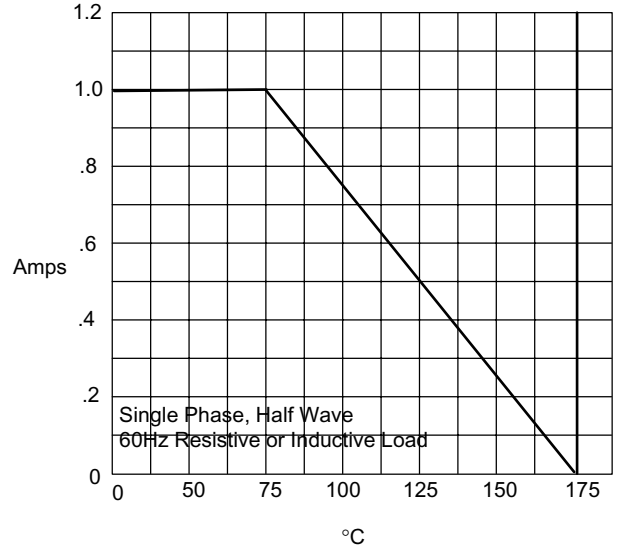
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Figure 1  
Typical Forward Characteristics



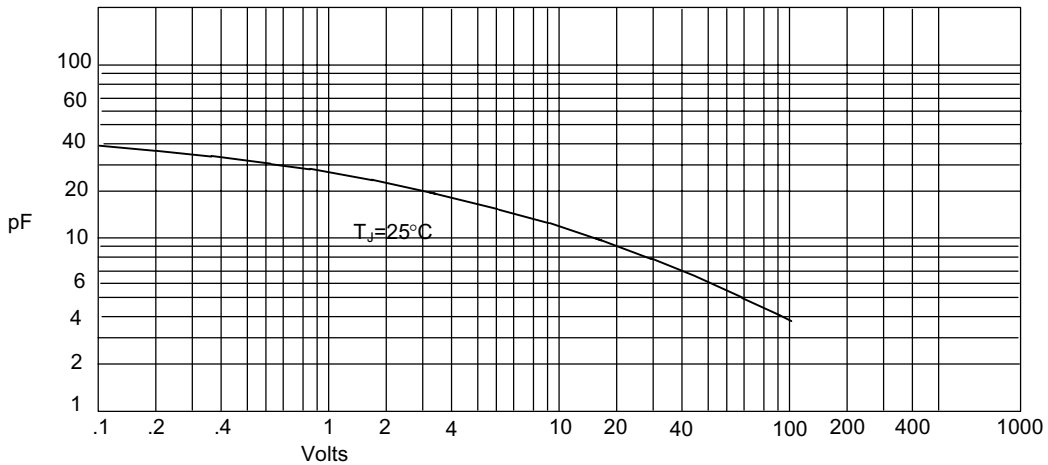
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



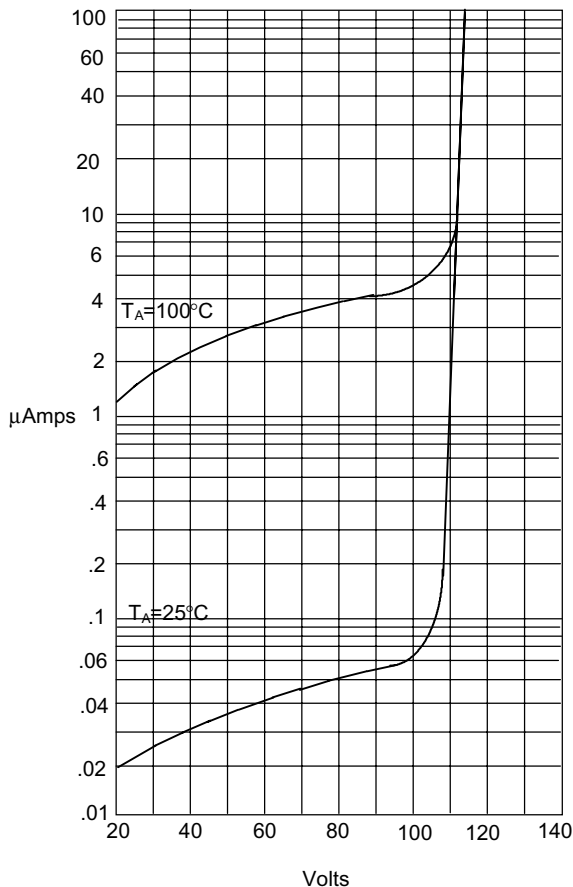
Average Forward Rectified Current - Amperes versus  
Ambient Temperature - °C

Figure 3  
Junction Capacitance



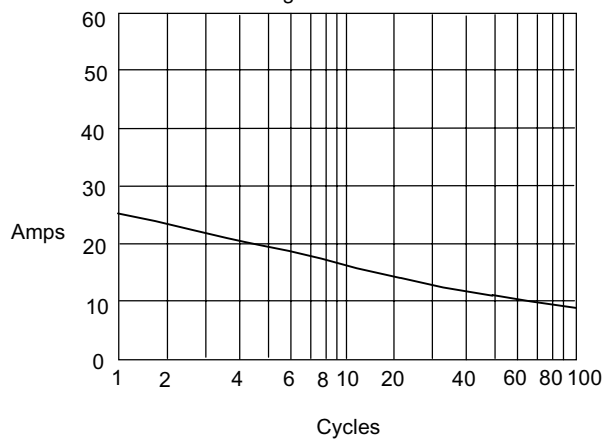
Junction Capacitance - pF versus  
Reverse Voltage - Volts

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



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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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