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# SM4001 THRU SM4007

## Features

- Glass Passivated Junction
- Low Current Leakage
- Surface Mount Applications
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant.)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

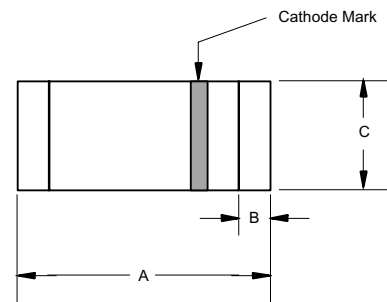
## Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SM4001	-----	50V	35V	50V
SM4002	-----	100V	70V	100V
SM4003	-----	200V	140V	200V
SM4004	-----	400V	280V	400V
SM4005	-----	600V	420V	600V
SM4006	-----	800V	560V	800V
SM4007	-----	1000V	700V	1000V

## 1 Amp Glass Passivated Rectifier 50 to 1000 Volts

### MELF



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.185	.205	4.70	5.20	
B	.018	.022	0.46	0.56	Nominal
C	.095	.105	2.40	2.67	∅

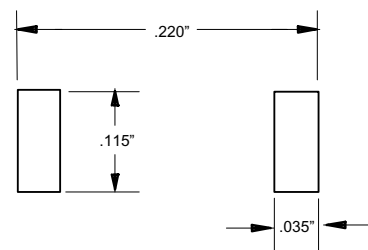
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.1V	$I_{FM} = 1.0A$ ; $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5.0μA 50μA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	12pF	Measured at 1.0MHz, $V_R=4.0V$

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

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

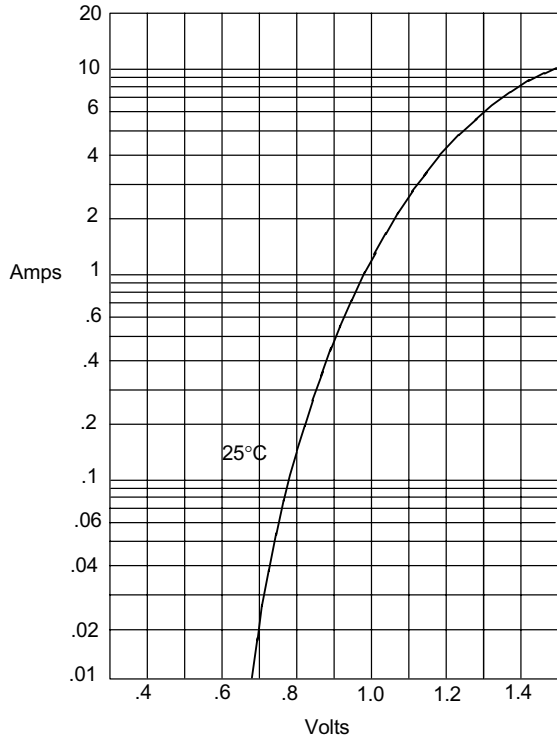
### SUGGESTED SOLDER PAD LAYOUT





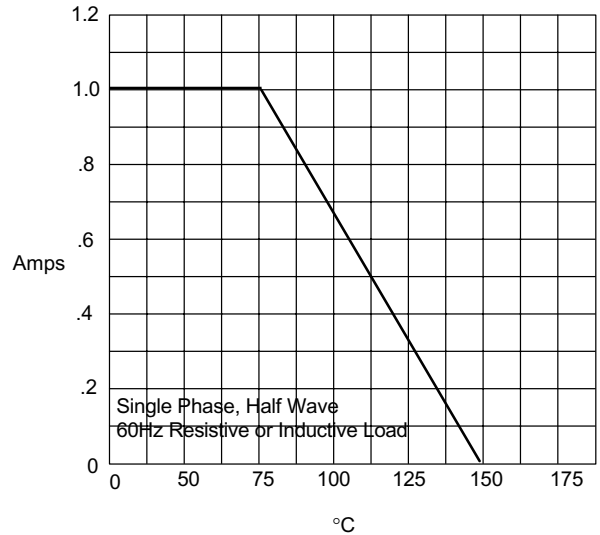
# SM4001 thru SM4007

Figure 1  
Typical Forward Characteristics



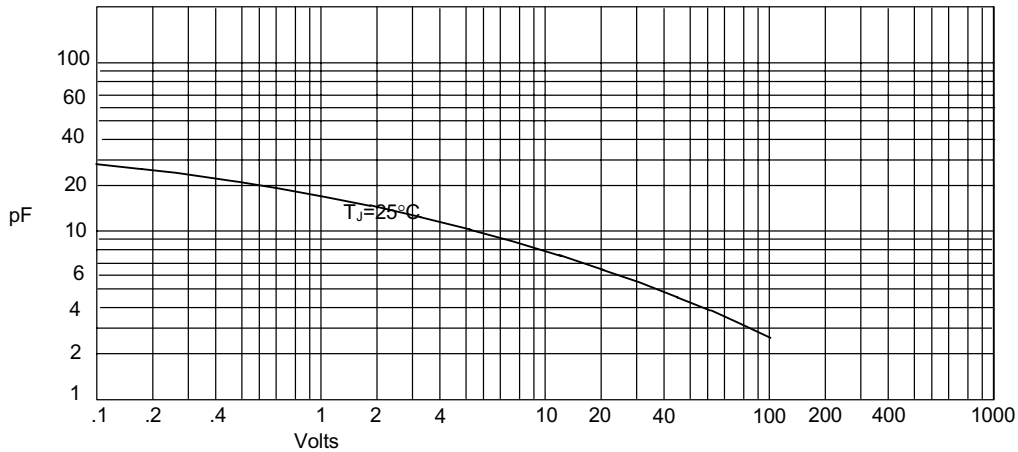
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

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