



Micro Commercial Components  
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## SOD4001 THRU SOD4007

### Features

- Low Current Leakage
- For Surface Mount Application
- Low Forward Surge Current

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 20°C/W Junction To Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| SOD4001         | D1             | 50V                                    | 35V                 | 50V                         |
| SOD4002         | D2             | 100V                                   | 70V                 | 100V                        |
| SOD4003         | D3             | 200V                                   | 140V                | 200V                        |
| SOD4004         | D4             | 400V                                   | 280V                | 400V                        |
| SOD4005         | D5             | 600V                                   | 420V                | 600V                        |
| SOD4006         | D6             | 800V                                   | 560V                | 800V                        |
| SOD4007         | D7             | 1000V                                  | 700V                | 1000V                       |

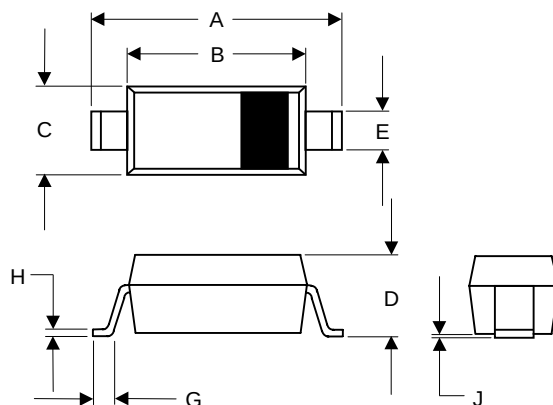
### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |                                       |                                                       |
|---------------------------------------------------------|-------------|---------------------------------------|-------------------------------------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A                                  | $T_A = 75^\circ\text{C}$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 8.0A                                  | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.3V                                  | $I_{FM} = 1.0\text{A};$<br>$T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5.0 $\mu\text{A}$<br>50 $\mu\text{A}$ | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 15pF                                  | Measured at 1.0MHz, $V_R=4.0\text{V}$                 |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

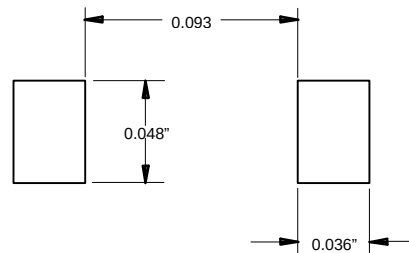
## 1 Amp Standard Recovery Rectifier 50 to 1000 Volts

### SOD-123



| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | .140   | .152  | 3.55  | 3.85  |      |
| B   | .100   | .112  | 2.55  | 2.85  |      |
| C   | .055   | .071  | 1.40  | 1.80  |      |
| D   | -----  | .053  | ----- | 1.35  |      |
| E   | .012   | .031  | 0.30  | .78   |      |
| G   | .006   | ----- | 0.15  | ----- |      |
| H   | -----  | .01   | ----- | .25   |      |
| J   | -----  | .006  | ----- | .15   |      |

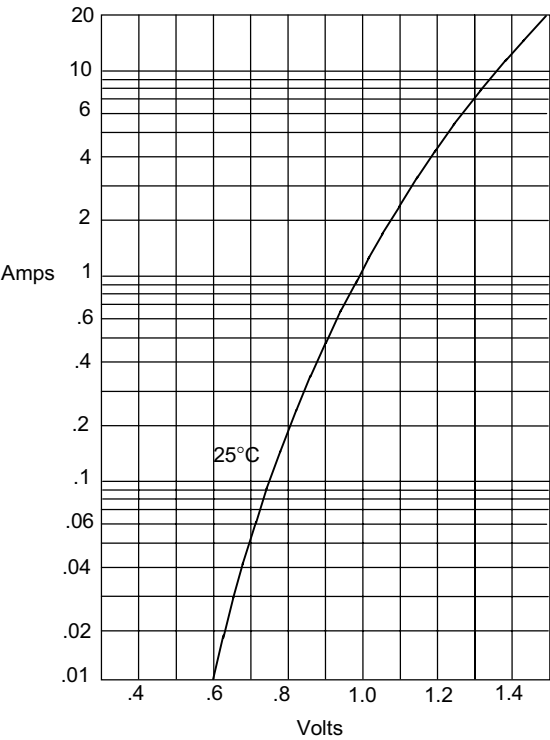
### SUGGESTED SOLDER PAD LAYOUT



# SOD4001 thru SOD4007

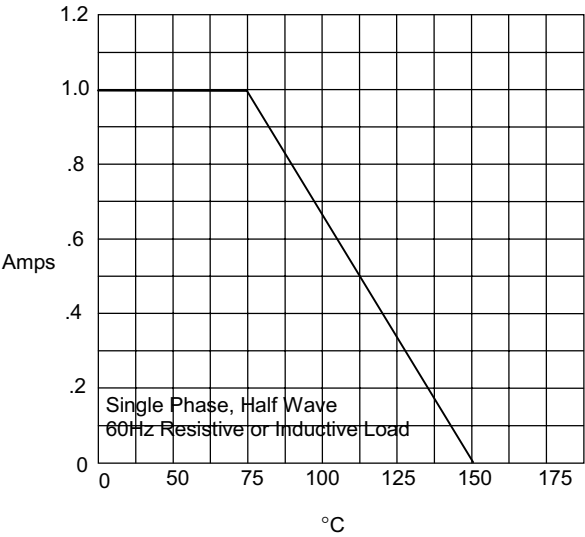


Figure 1  
Typical Forward Characteristics



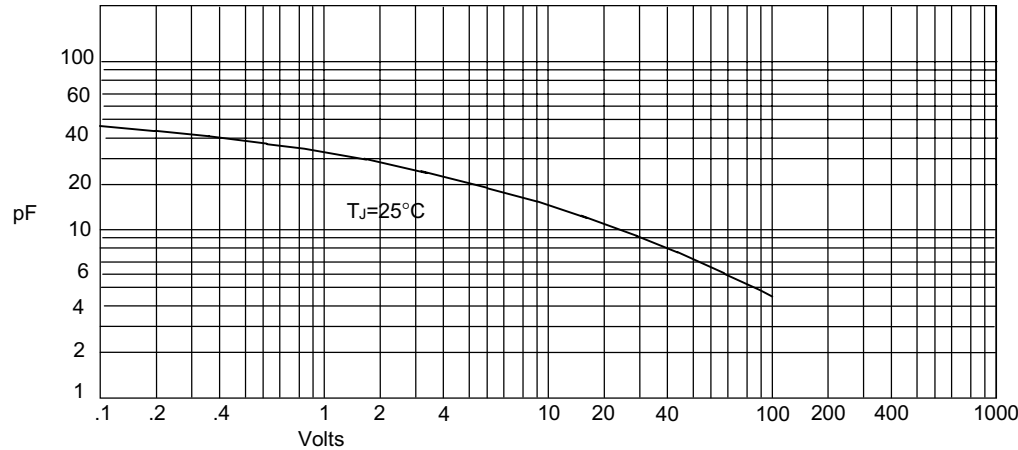
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

Figure 3  
Junction Capacitance

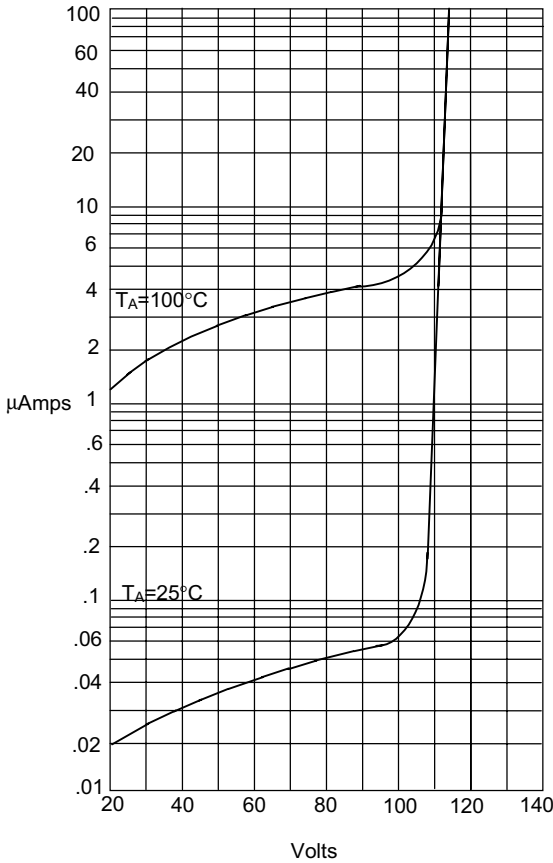


Junction Capacitance - pF versus  
Reverse Voltage - Volts

# SOD4001 thru SOD4007

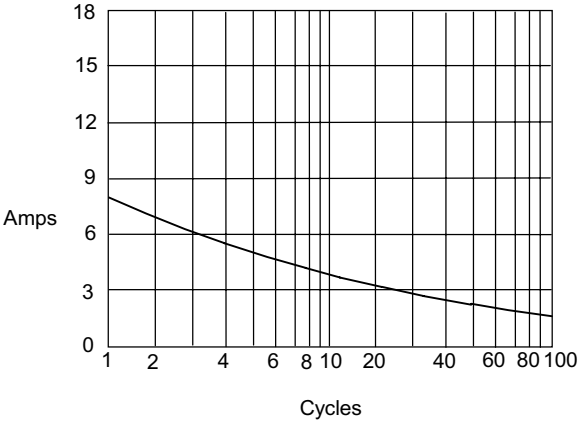


Figure 4  
Typical Reverse Characteristics



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