

SDB101 THRU SDB107

Features

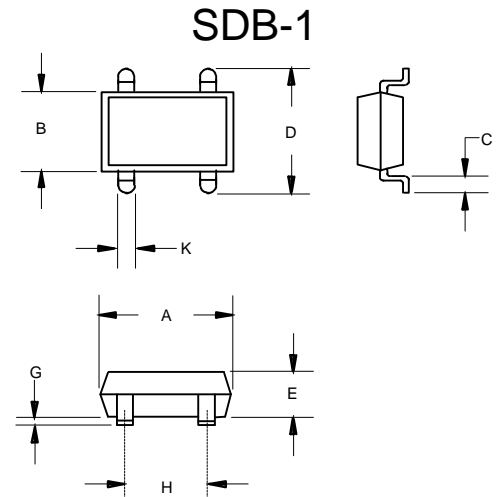
- Surface Mount Package
- Glass Passivated Diode Construction
- Moisture Resistant Epoxy Case
- High Surge Current Capability

1 Amp Single Phase Glass Passivated Bridge Rectifier 50 to 1000 Volts

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

| Microsemi Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------------|----------------|--|---------------------|-----------------------------|
| SDB101 | --- | 50V | 35V | 50V |
| SDB102 | --- | 100V | 70V | 100V |
| SDB103 | --- | 200V | 140V | 200V |
| SDB104 | --- | 400V | 280V | 400V |
| SDB105 | --- | 600V | 420V | 600V |
| SDB106 | --- | 800V | 560V | 800V |
| SDB107 | --- | 1000V | 700V | 1000V |

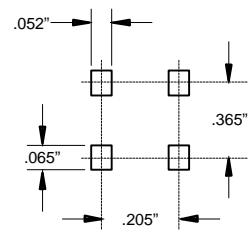


| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | .355 | .365 | 9.00 | 9.30 | |
| B | .245 | .255 | 6.20 | 6.60 | |
| C | .040 | .060 | 1.02 | 1.52 | |
| D | --- | .441 | --- | 11.20 | |
| E | .115 | .135 | 2.90 | 3.40 | |
| G | --- | .012 | --- | 0.30 | |
| H | .195 | .205 | 5.00 | 5.20 | |
| K | .040 | .047 | 1.20 | 1.02 | TYP |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|---------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 1 A | $T_A = 40^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 50A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.1V | $I_{FM} = 1.0\text{A};$ $T_A = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 10 μA 0.5mA | $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 36ns | $I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance | C_J | 25pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |

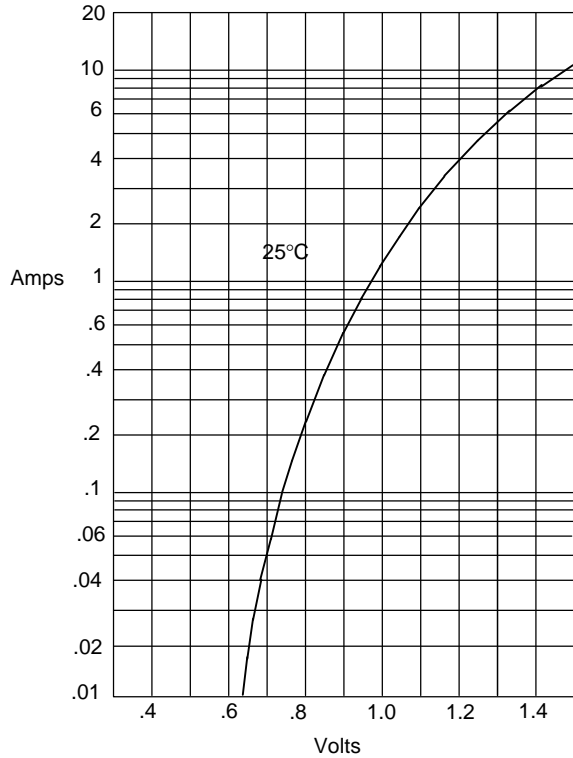
Suggested Solder Pad Layout



*Pulse Test: Pulse Width 300 μsec , Duty Cycle 1%

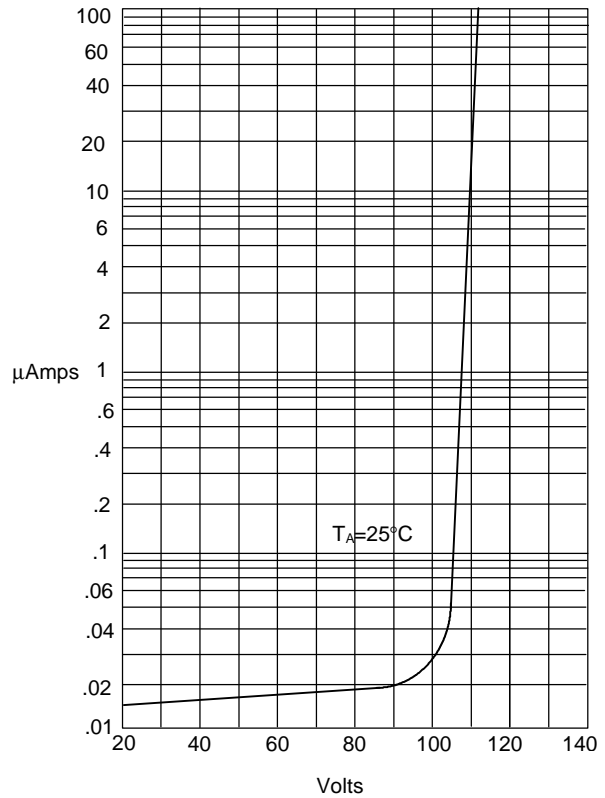
SDB101 thru SDB107

Figure 1
Typical Forward Characteristics



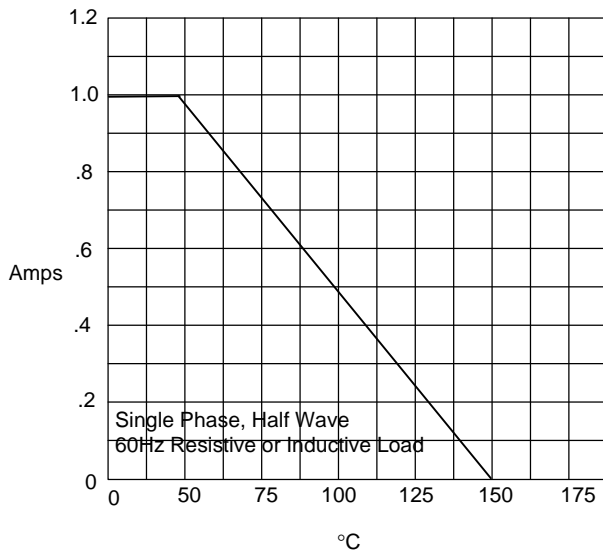
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



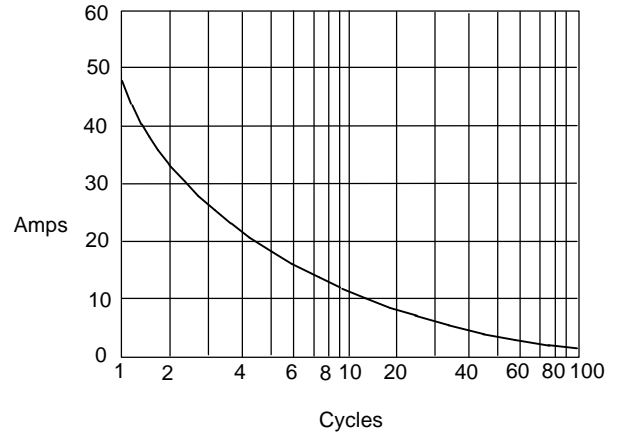
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



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

Figure 4
Peak Forward Surge Current



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