



Micro Commercial Components



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

SDB101 THRU SDB107

Features

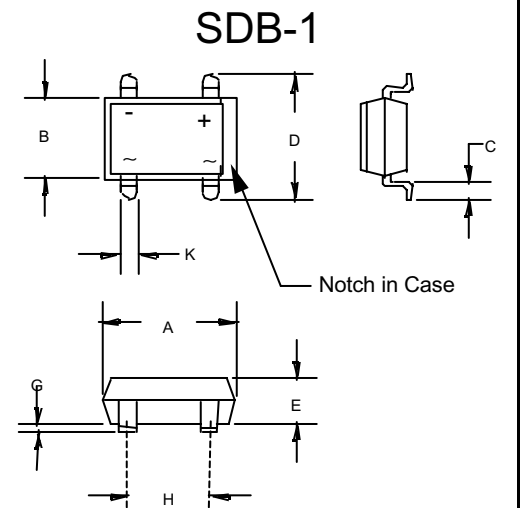
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Surface Mount and Low Profile Package
- UL Recognized File # E165989
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

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

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

1.0 Amp Single Phase Bridge Rectifier 50 to 1000 Volts



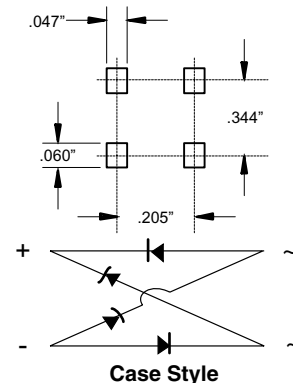
| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .316 | .335 | 8.05 | 8.51 | |
| B | .245 | .255 | 6.20 | 6.50 | |
| C | .040 | .060 | 1.02 | 1.50 | |
| D | .360 | .410 | 9.40 | 10.4 | |
| E | .102 | .130 | 2.60 | 3.30 | |
| G | .003 | .013 | .076 | .330 | |
| H | .195 | .205 | 5.00 | 5.20 | |
| K | .038 | .047 | 1.00 | 1.20 | |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|------------------------------------|---------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0 A | $T_A = 40^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.1V | $I_{FM} = 1.0\text{A};$ $T_A = 25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 10 μA 0.5mA | $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 25pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |
| Typical thermal Resistance Per Leg (Note 2) | $R_{\theta JA}$ $R_{\theta JL}$ | 40°C/W 15°C/W | |

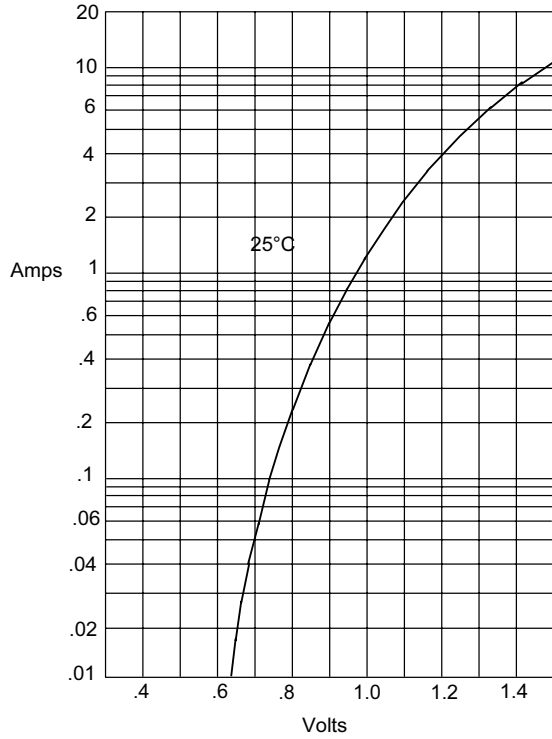
- Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7
 2. Units mounted on P.C.B with 0.51x0.51"(13x13mm) copper pads

Suggested Solder Pad Layout



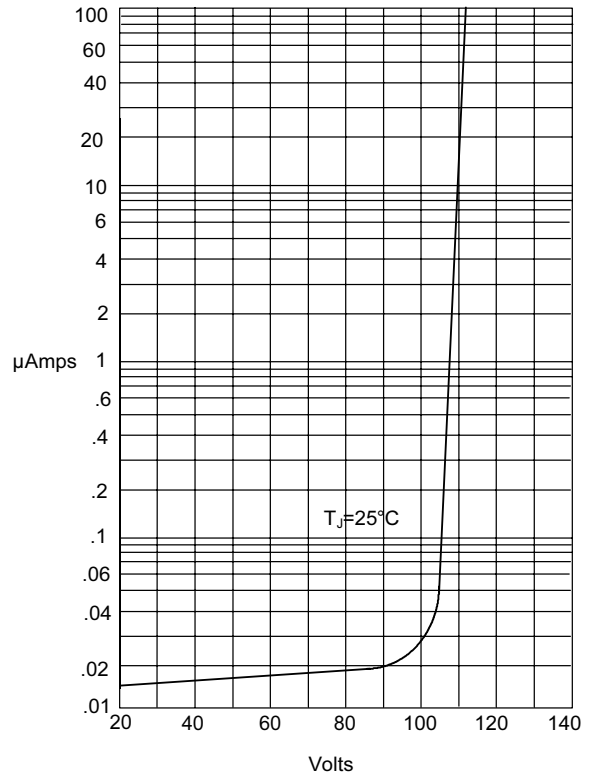
SDB101 thru SDB107

Figure 1
Typical Forward Characteristics



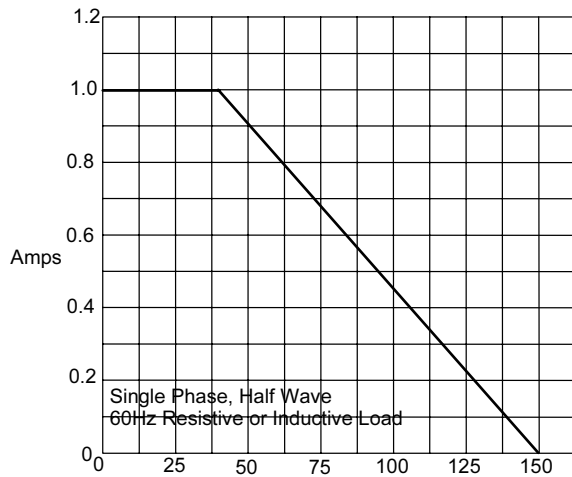
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



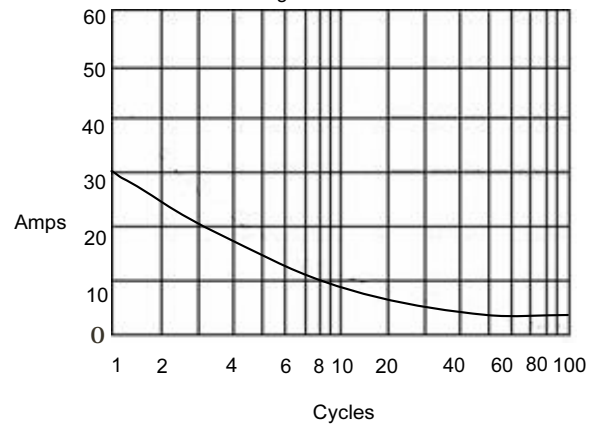
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



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



Micro Commercial Components

Ordering Information

| Device | Packing |
|------------------|------------------------|
| (Part Number)-TP | Tape&Reel;1.5Kpcs/Reel |
| (Part Number)-BP | Bulk;20Kpcs/Ctn |

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

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

www.mccsemi.com