

# SDB101 THRU SDB107

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. )
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Surface Mount and Low Profile Package
- 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

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

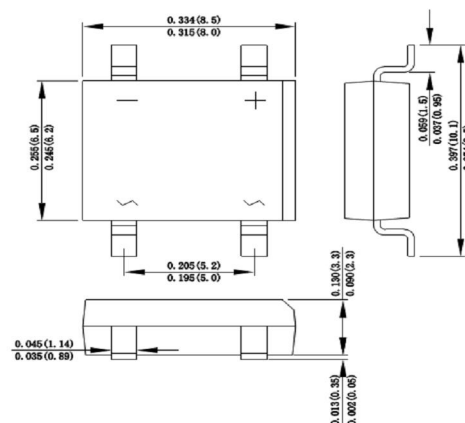
## Electrical Characteristics @ 25°C Unless Otherwise Specified

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 $\mu\text{A}$ 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

## 1.0 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

### SDB-1

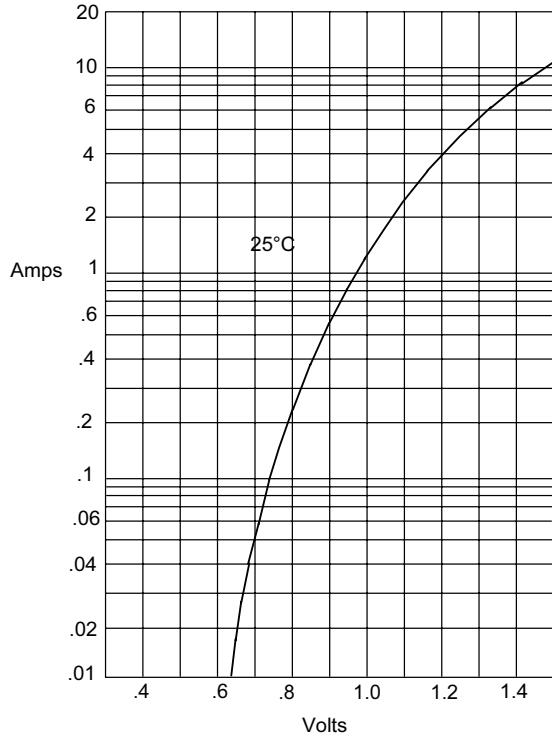


Dimensions in inches and (millimeters)



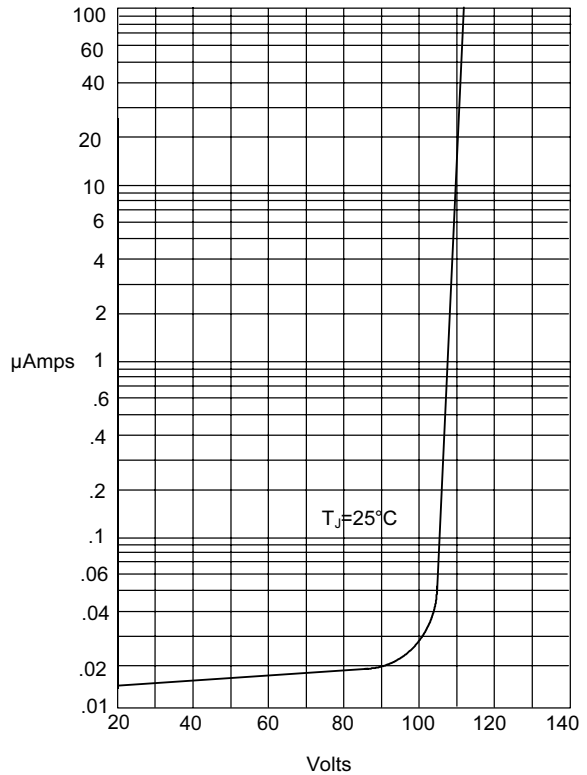
# SDB101 thru SDB107

Figure 1  
Typical Forward Characteristics



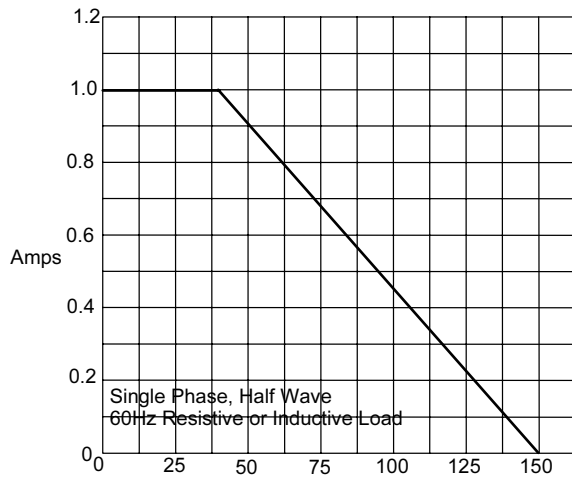
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



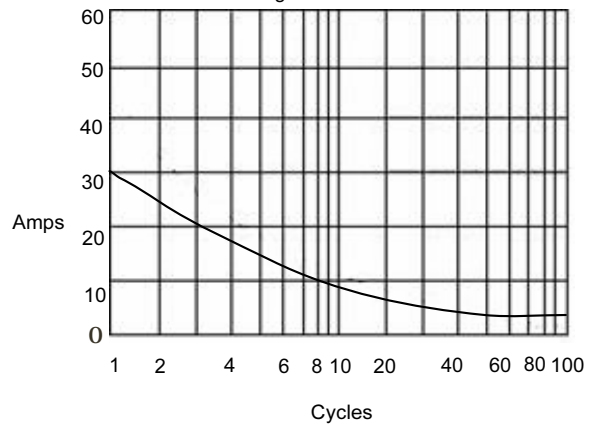
Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

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