



E540886

## Features

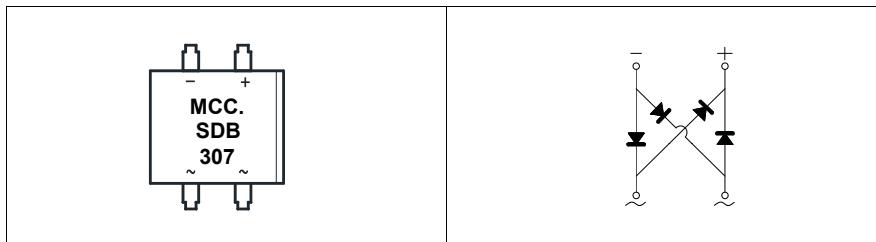
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Moisture Sensitivity Level 1
- Ideal for Automated Placement
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

# 3 Amp Bridge Rectifiers 1000 Volts

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		V
Working Peak Reverse Voltage	$V_{RWM}$	1000	V
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	700	V
Average Rectified Forward Current $T_C=120^\circ\text{C}$	$I_{F(AV)}$	3	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	80	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		160	A
$I^2t$ Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	26.6	$\text{A}^2\text{s}$

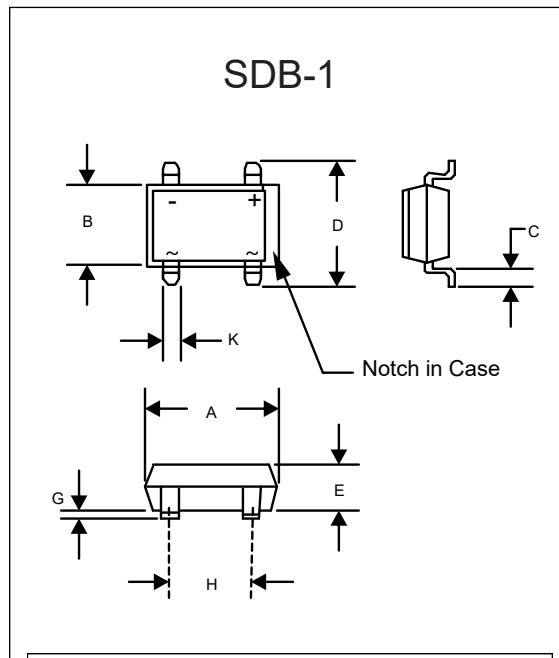
## Marking Code and Internal Structure



### Note:

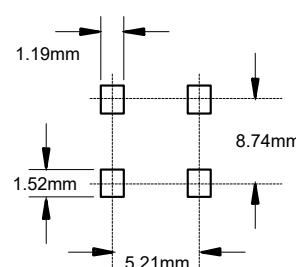
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.316	0.335	8.05	8.51	
B	0.245	0.255	6.20	6.50	
C	0.040	0.060	1.02	1.50	
D	0.360	0.410	9.40	10.40	
E	0.102	0.130	2.60	3.30	
G	0.003	0.013	0.076	0.33	
H	0.195	0.205	5.00	5.20	
K	0.038	0.047	1.00	1.20	

### Suggested Solder Pad Layout



## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		5		°C/W
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		14		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		38		°C/W

Note:

1.Device mounted on P.C.B with 35mm\*25mm\*1.7mm.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=1.5A; T_J=25°C$			1.0	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25°C$ at Rated $V_R; T_J=125°C$			5 100	µA
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25°C$		23		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

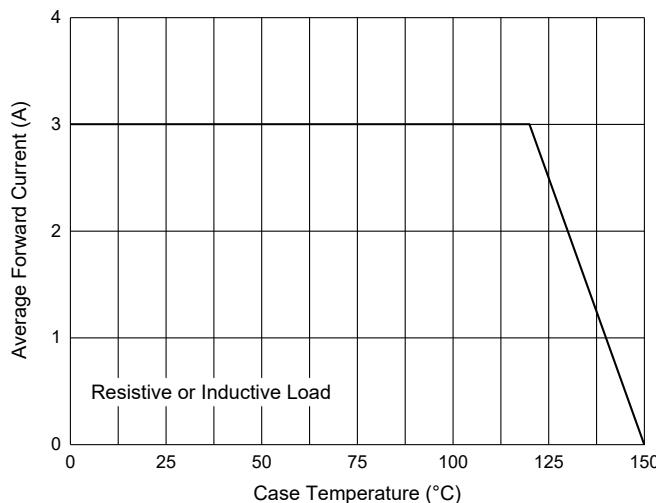


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

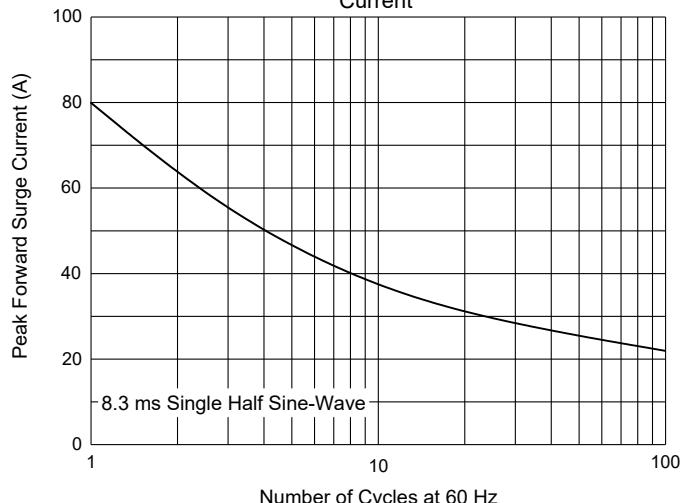


Fig. 3 - Typical Forward Characteristics

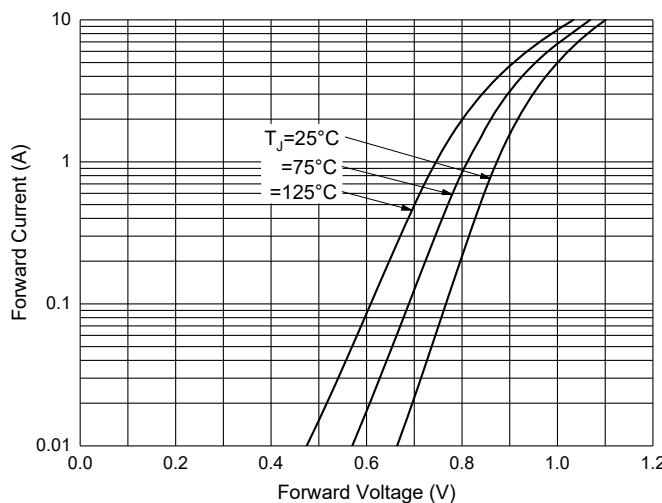


Fig. 4 - Typical Reverse Leakage Characteristics

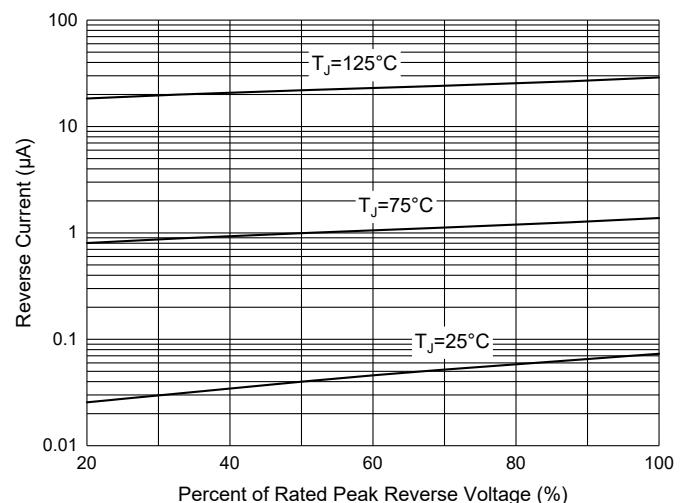
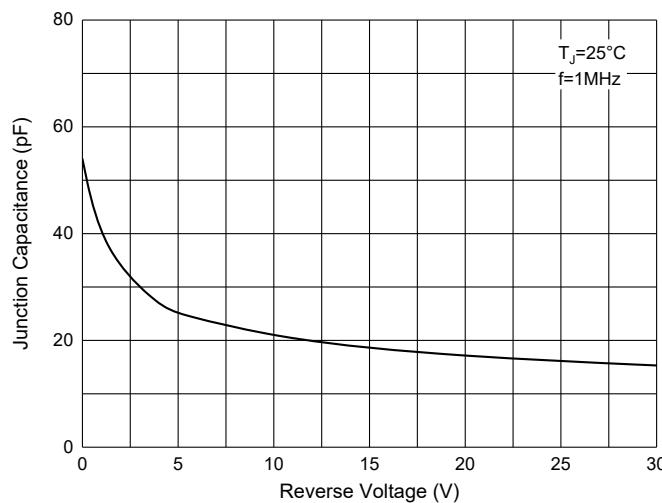


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
SDB307-TP	Tape&Reel:1.5Kpcs/Reel
SDB307-BP	Bulk:50pcs/Tube,5K/Box,20K/Carton

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