



# THE DATASHEET OF DB103STR



**DB101S THRU DB107S SINGLE-PHASE  
GLASS PASSIVATED SILICON BRIDGE RECTIFIERS**

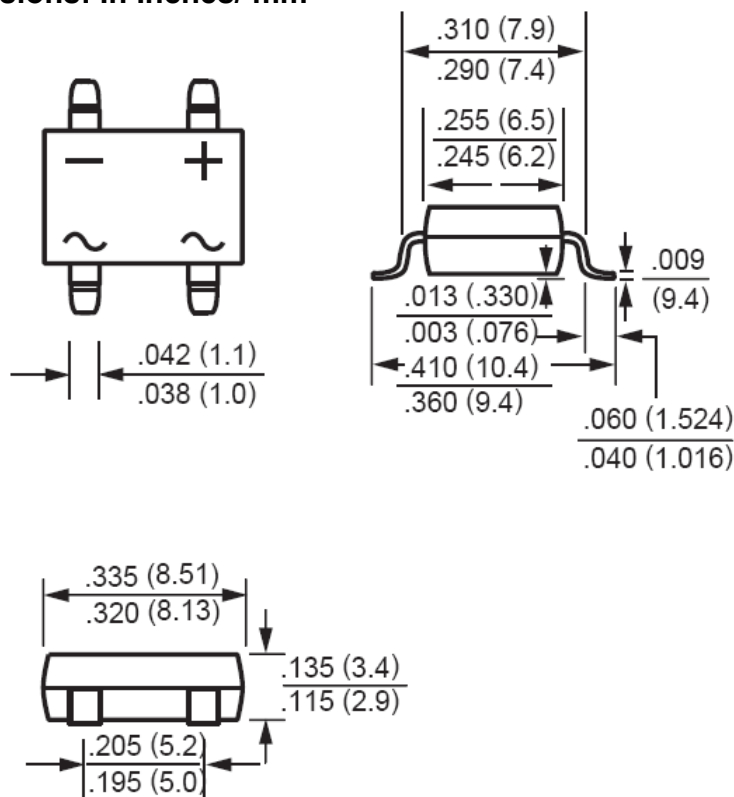
**Features:**

- Surge overload rating - 50 amperes peak
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded
- Glass passivated device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

**Mechanical Data:**

- Polarity symbols molded on body
- Mounting position: Any
- Weight: 1.0 gram
- Epoxy : Device has UL flammability classification 94V-0
- UL listed the recognized component directory, file #E94233

**Mechanical Dimensions: In Inches/ mm**



**DB-S**

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



## DB101S THRU DB107S

Technical Data  
Data Sheet N1459, Rev. -

*Green Products*

**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub>=25°C unless otherwise specified  
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic  | Symbol   | DB101S   | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | Unit |
|---|--|----------|--------|--------|--------|--------|--------|--------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                          | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50       | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum RMS Voltage   | V <sub>RMS</sub>                                       | 35       | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Maximum Average Forward Output Current<br>@ T <sub>A</sub> = 40°C   | I <sub>F(AV)</sub>                                     | 1.0      |        |        |        |        |        |        | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 50       |        |        |        |        |        |        | A    |
| Maximum Forward Voltage Drop per Bridge Element at 1.0A DC  | V <sub>F</sub>   | 1.1      |        |        |        |        |        |        | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C             | I <sub>R</sub>   | 5<br>500 |        |        |        |        |        |        | μ A  |
| Operating Junction and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub>                      | -55+150  |        |        |        |        |        |        | °C   |

NOTE: Suffix "-s" Surface Mount for Dip Bridge.

- 
- China - Germany - Korea - Singapore - United States •
  - <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



# DB101S THRU DB107S

Green Products

Technical Data  
Data Sheet N1459, Rev. -

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

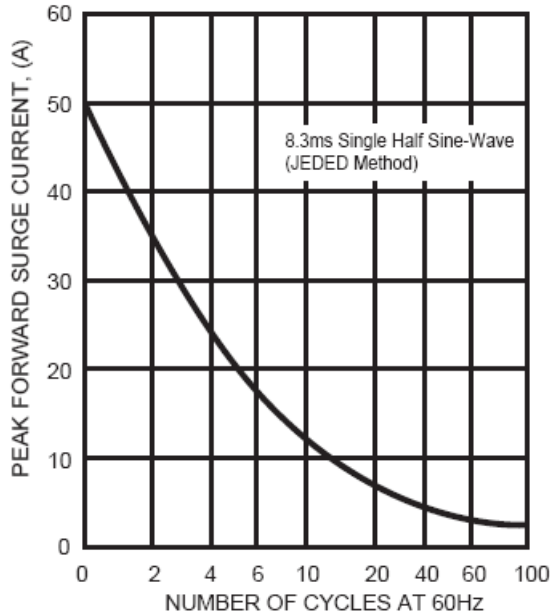


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

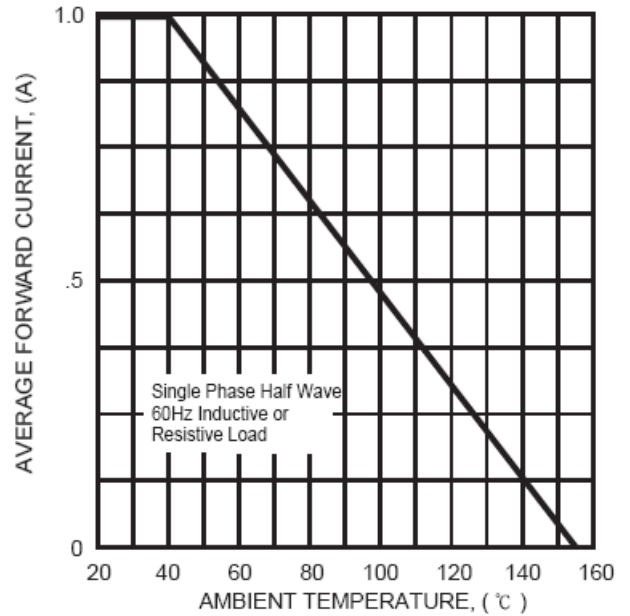


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

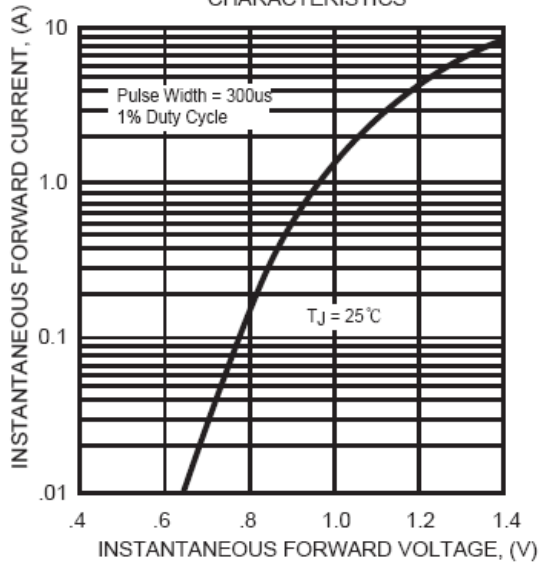
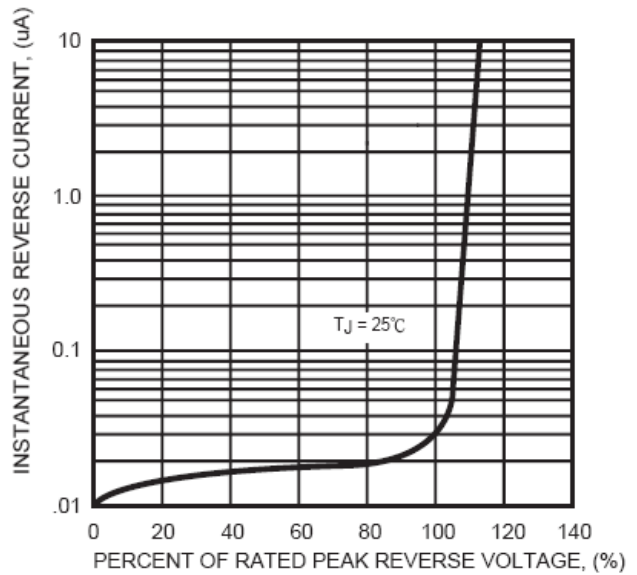


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS





## DB101S THRU DB107S

Technical Data  
Data Sheet N1459, Rev. -



*Green Products*

**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View DB103STR on WIN SOURCE](#)
-  [SMC Diode Solutions Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management