

## SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

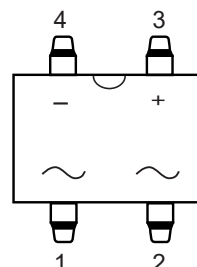
### Features

- ◆ This series is UL listed under the Recognized
- ◆ Component Index, file number E142814
- ◆ The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- ◆ Surge overload ratings to 50 amperes  
Ideal for printed circuit board application
- ◆ High temperature soldering guaranteed 265 °C /10 seconds at 5 lbs (2.3kg) tension

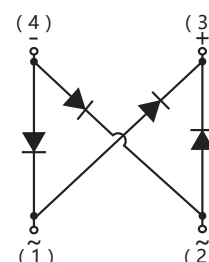
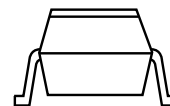
### Mechanical Data

- ◆ Case: Molded plastic
- ◆ Terminals: Plated leads solderable per MIL-STD-202, Method 208
- ◆ Polarity: Marked on body
- ◆ Mounting Position: Any
- ◆ Weight: 0.04 ounce, 1.0 grams (approx)

### DBS



**RoHS**  
COMPLIANT



### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
For Capacitive load derate current by 20%.

| Parameter                                                                             | Symbol           | DB 201S      | DB 202S | DB 203S | DB 204S | DB 205S | DB 206S | DB 207S | unit               |
|---------------------------------------------------------------------------------------|------------------|--------------|---------|---------|---------|---------|---------|---------|--------------------|
| Maximum repetitive peak reverse voltage                                               | VRRM             | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | V                  |
| Maximum RMS bridge input voltage                                                      | VRMS             | 35           | 70      | 140     | 280     | 420     | 560     | 700     | v                  |
| Maximum DC blocking voltage                                                           | VDC              | 50           | 100     | 200     | 400     | 600     | 800     | 1000    | V                  |
| Maximum average forward rectified output current at TA=40°C                           | IF(AV)           | 2.0          |         |         |         |         |         |         | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 50           |         |         |         |         |         |         | A                  |
| Rating for fusing ( t<8.3ms)                                                          | I <sup>2</sup> t | 10           |         |         |         |         |         |         | A <sup>2</sup> sec |
| Typical thermal resistance per element (1)                                            | ReJA             | 110          |         |         |         |         |         |         | °C / W             |
| Typical junction capacitance per element (2)                                          | C                | 25.0         |         |         |         |         |         |         | pF                 |
| Operating junction and storage temperature range                                      | TJ, TSTG         | -55 to + 150 |         |         |         |         |         |         | °C                 |

### Electrical Characteristics

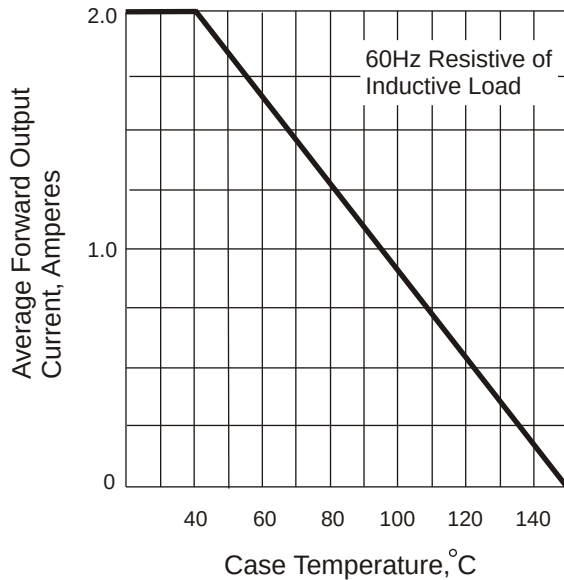
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For Capacitive load derate by 20 %.

| Parameter                                                                                 | Symbol | DB 201S   | DB 202S | DB 203S | DB 204S | DB 205S | DB 206S | DB 207S | Unit |
|-------------------------------------------------------------------------------------------|--------|-----------|---------|---------|---------|---------|---------|---------|------|
| Maximum instantaneous forward voltage drop per leg at 1.0A                                | VF     | 1.1       |         |         |         |         |         |         | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =125°C | IR     | 10<br>500 |         |         |         |         |         |         | μA   |

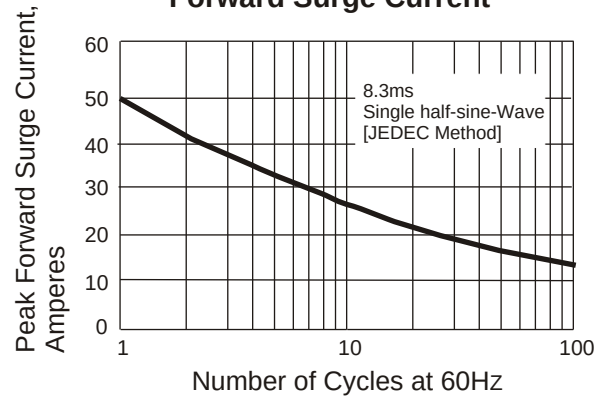
**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.  
(2)Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

## Rating and Characteristic Curves ( $T_A=25^\circ\text{C}$ Unless otherwise noted )

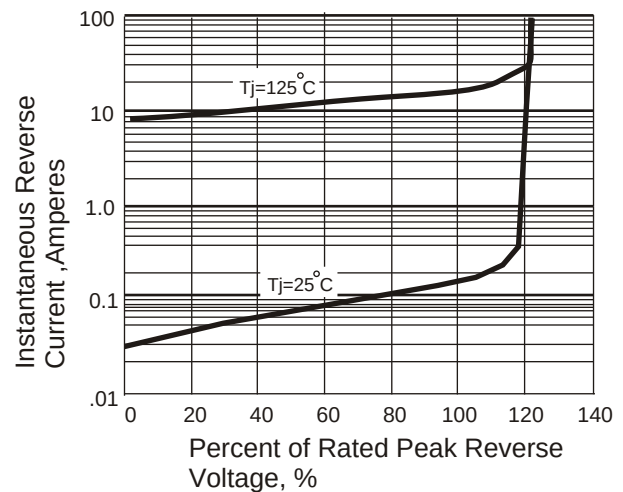
**Fig. 1 Derating Curve for Output Rectified Current**



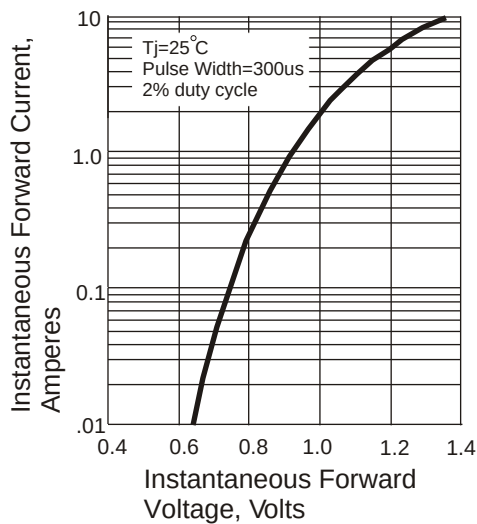
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



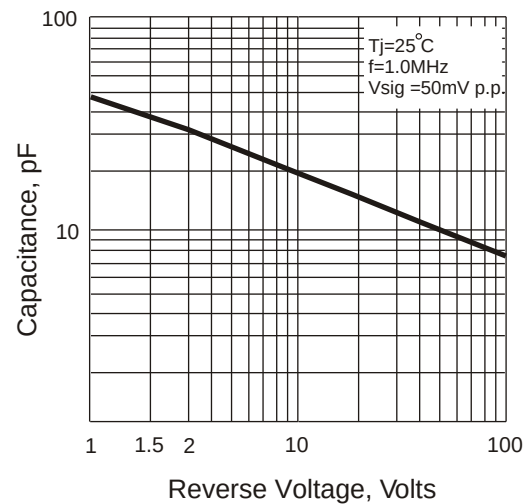
**Fig. 4 Typical Revers Characteristics**



**Fig. 3 Typical Instantaneous Forward Characteristics**



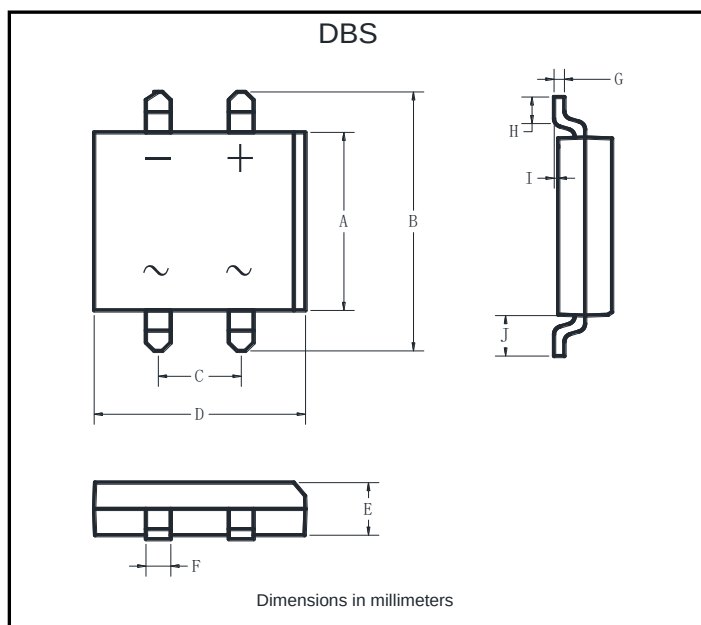
**Fig. 5 Typical Junction Capacitance**



## PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

DBS



| DBS |       |       |
|-----|-------|-------|
| Dim | Min   | Max   |
| A   | 6.20  | 6.50  |
| B   | 9.60  | 10.30 |
| C   | 5.00  | 5.20  |
| D   | 8.13  | 8.51  |
| E   | 2.80  | 3.30  |
| F   | 1.02  | 1.2   |
| G   | 0.22  | 0.33  |
| H   | 1.02  | 1.53  |
| I   | 0.076 | 0.33  |
| J   | 1.80  | 2.10  |