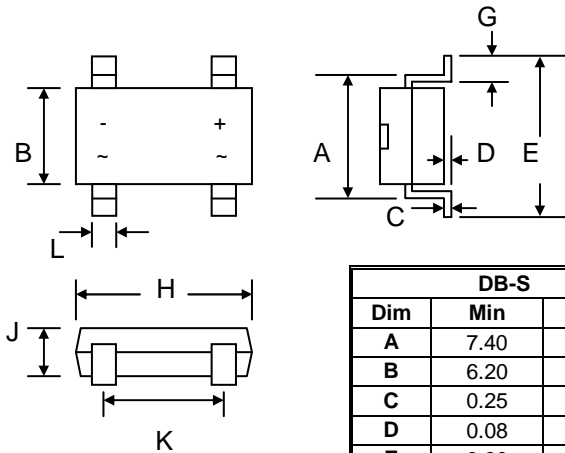


### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-0



| DB-S                 |      |       |
|----------------------|------|-------|
| Dim                  | Min  | Max   |
| A                    | 7.40 | 7.90  |
| B                    | 6.20 | 6.50  |
| C                    | 0.25 | —     |
| D                    | 0.08 | 0.33  |
| E                    | 9.30 | 10.30 |
| G                    | 1.02 | 1.53  |
| H                    | 8.00 | 8.51  |
| J                    | 2.15 | 3.40  |
| K                    | 5.00 | 5.20  |
| L                    | 0.90 | 1.20  |
| All Dimensions in mm |      |       |

### Mechanical Data

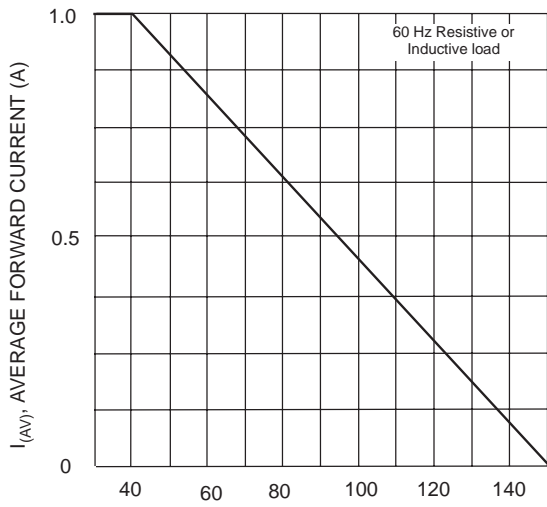
- Case: DB -S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 1.0 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

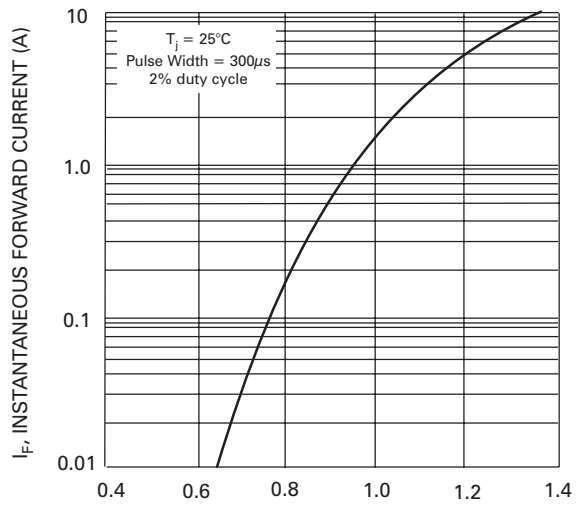
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                             | DB 101S     | DB 102S | DB 103S | DB 104S | DB 105S | DB 106S | DB 107S | Unit               |
|---|------------------------------------|-------------|---------|---------|---------|---------|---------|---------|--------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                          |             |         |         |         |         |         |         |                    |
| Working Peak Reverse Voltage  | $V_{RWM}$                          | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V                  |
| DC Blocking Voltage   | $V_R$                              |             |         |         |         |         |         |         |                    |
| RMS Reverse Voltage   | $V_{R(RMS)}$                       | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V                  |
| Average Rectified Output Current @ $T_A = 40^\circ\text{C}$   | $I_O$                              | 1.0         |         |         |         |         |         |         | A                  |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$                          | 50          |         |         |         |         |         |         | A                  |
| Forward Voltage per element @ $I_F = 1.0\text{A}$   | $V_{FM}$                           | 1.1         |         |         |         |         |         |         | V                  |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$     | $I_{RM}$                           | 5.0<br>500  |         |         |         |         |         |         | $\mu\text{A}$      |
| Typical Junction Capacitance per element (Note 1)   | $C_j$                              | 25          |         |         |         |         |         |         | pF                 |
| Typical Thermal Resistance per leg (Note 2)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 40<br>15    |         |         |         |         |         |         | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$                     | -65 to +150 |         |         |         |         |         |         | $^\circ\text{C}$   |

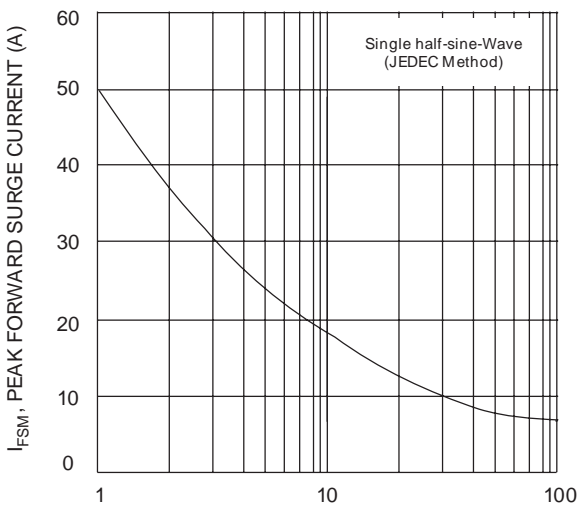
Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on PC board with 13mm<sup>2</sup> copper pad.



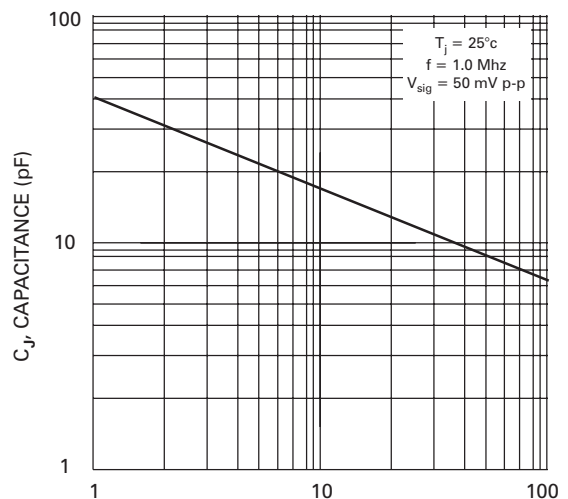
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Output Current Derating Curve



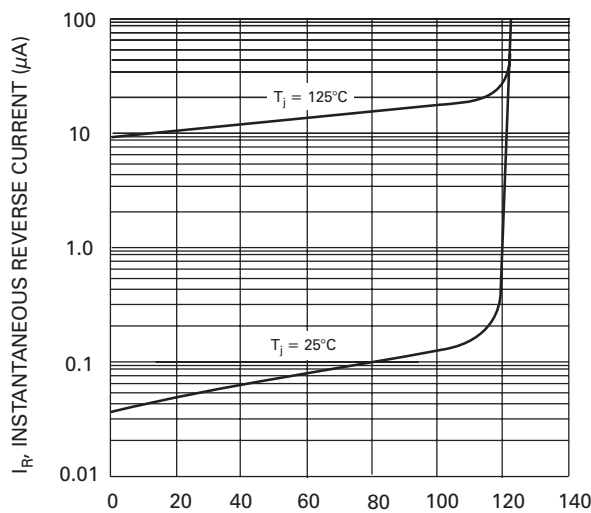
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typ Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Forward Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typ Reverse Characteristics (per element)