

3.0 A Single-Phase Glass Passivated Bridge Rectifiers

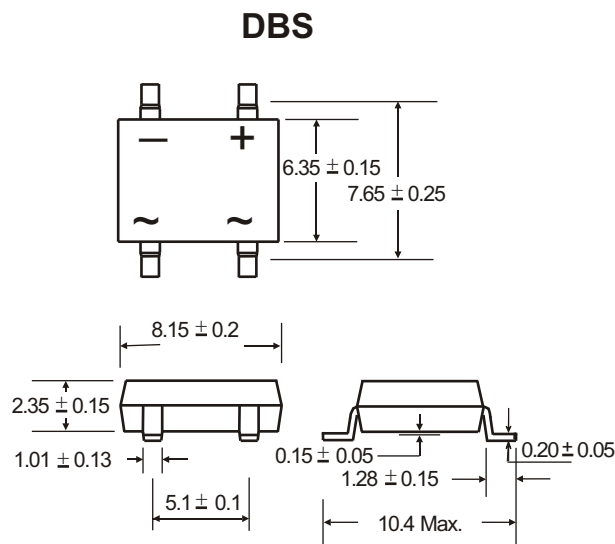
Rectifier Reverse Voltage 50 to 1000V

Features

- 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 260 °C /5 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: 0.33 grams (approx)



Dimensions in millimeters (1mm =0.0394")

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 301S | DB 302S | DB 303S | DB 304S | DB 305S | DB 306S | DB 307S | 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) | 3.0 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM | 80 | | | | | | | A |
| Rating for fusing (t<8.3ms) | I ² t | 26.35 | | | | | | | A ² sec |
| Typical thermal resistance per element (1) | ReJA | 58 | | | | | | | °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

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

| Parameter | Symbol | DB 301S | DB 302S | DB 303S | DB 304S | DB 305S | DB 306S | DB 307S | Unit |
|---|--------|-----------|---------|---------|---------|---------|---------|---------|------|
| Maximum instantaneous forward voltage drop per leg at 3.0A | VF | 1.1 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per element | IR | 10 500 | | | | | | | 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

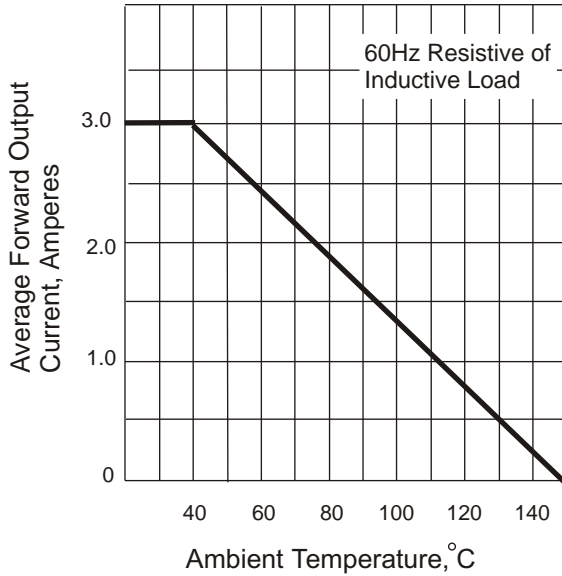


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

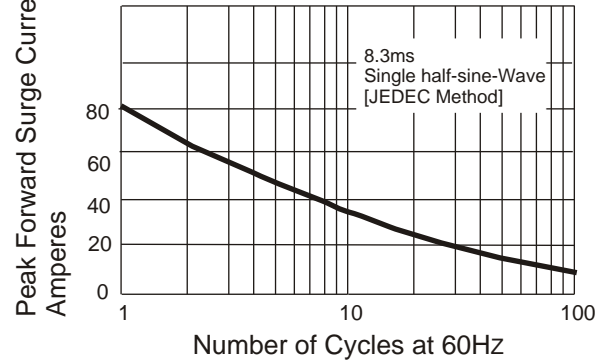


Fig. 3 Typical Instantaneous Forward Characteristics

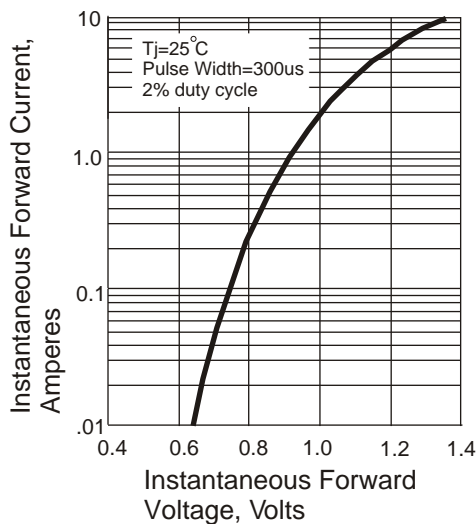


Fig. 4 Typical Revers Characteristics

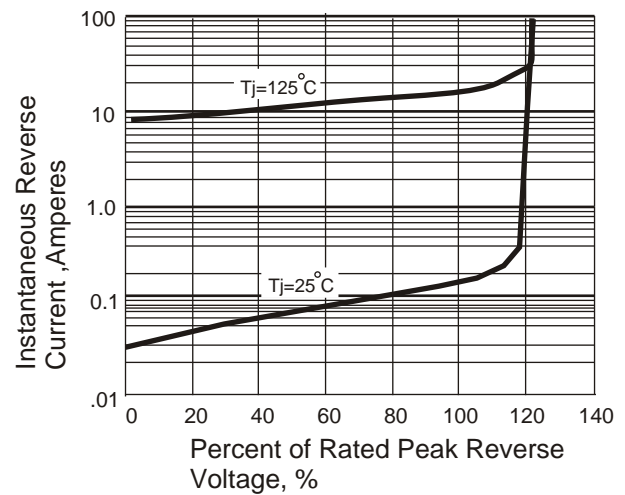
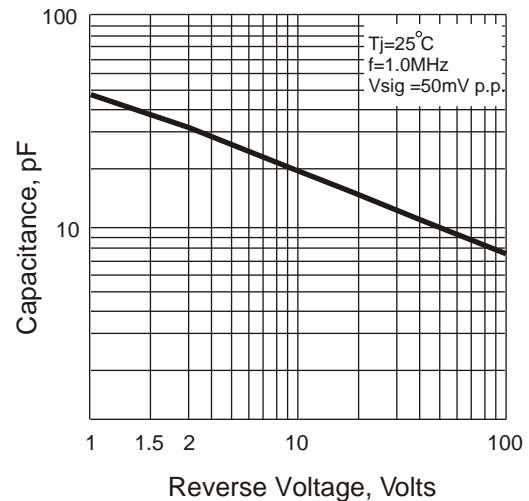


Fig. 5 Typical Junction Capacitance



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