

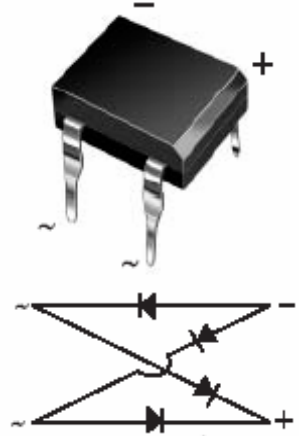
Single-Phase Bridge Rectifier in DFM

Features

- Ideal for automated placement
- Applicable for automotive insertion
- High surge current capability
- Solder Dip 260°C, 10 seconds

Mechanical Data

- Case:DFM
- Epoxy meets UL-94V-0 Flammability rating
- Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D
- Polarity: As marked on body



Typical Applications

General purpose use in AC-to-DC bridge full wave rectifications for SMPS, Lighting Ballasters, Adapters, Battery Chargers, Home Appliances, Office Equipment and Telecommunication applications.

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | DB101 | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | Unit |
|---|-----------------|-------------|-------|-------|-------|-------|-------|-------|------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Output Rectified Current at $T_A=40$ | $I_{F(AV)}$ | 1.5 | | | | | | | A |
| Peak Forward Surge Current Single Sine-Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 50 | | | | | | | A |
| Rating for Fusig ($t \leq 8.3\text{ms}$) | I^2t | 10 | | | | | | | A^2sec |
| Maximum Instantaneous Forward Voltage Drop per Leg at 1.5A | V_F | 1.10 | | | | | | | V |
| Maximum DC Reverse Current at $T_A=25^\circ\text{C}$ | I_R | 5 | | | | | | | μA |
| Rated DC Blocking Voltage per Leg $T_A=125^\circ\text{C}$ | | 500 | | | | | | | |
| Typical Junction Capacitance per Element at 4.0V, 1MHz | C_j | 16 | | | | | | | pF |
| Typical Thermal Resistance per Leg (Note 1) | $R_{\theta JA}$ | 40 | | | | | | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | 15 | | | | | | | |
| Operating Junction Temperature Range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes: 1. Device mounted P.C.B with 0.47x0.47"(12mmx12mm) Copper Pads.

2. JEDEC registered values

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

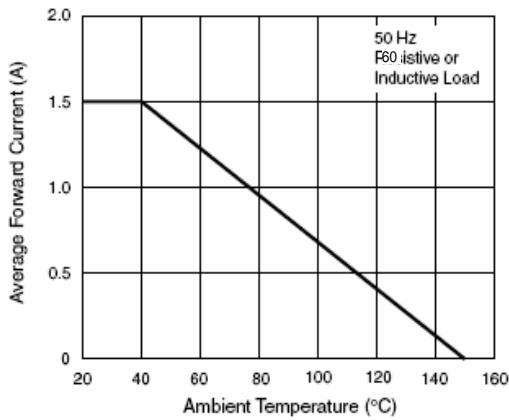


Figure 1. Forward Current Derating Curve Per Diode

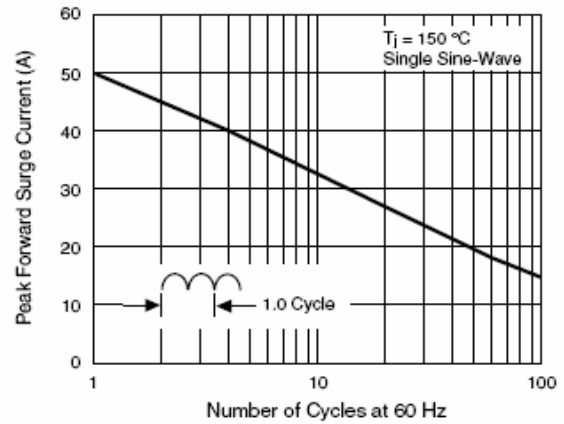


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

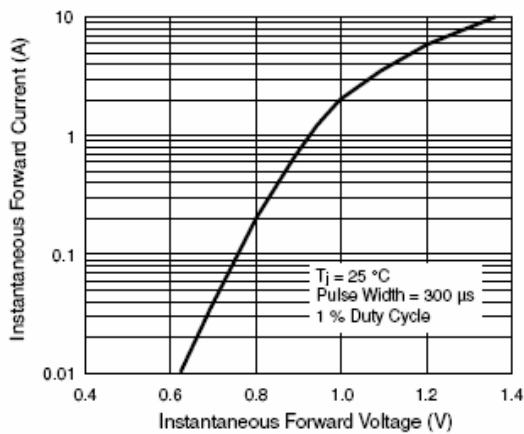


Figure 3. Typical Forward Characteristics Per Diode

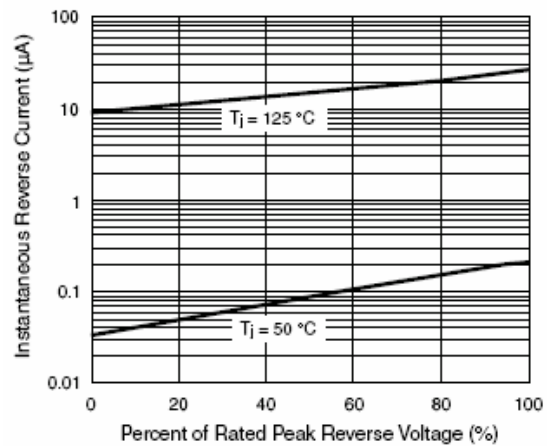


Figure 4. Typical Reverse Leakage Characteristics Per Diode

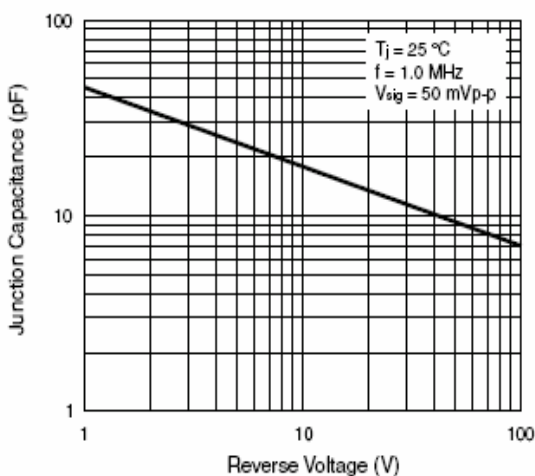


Figure 5. Typical Junction Capacitance Per Diode

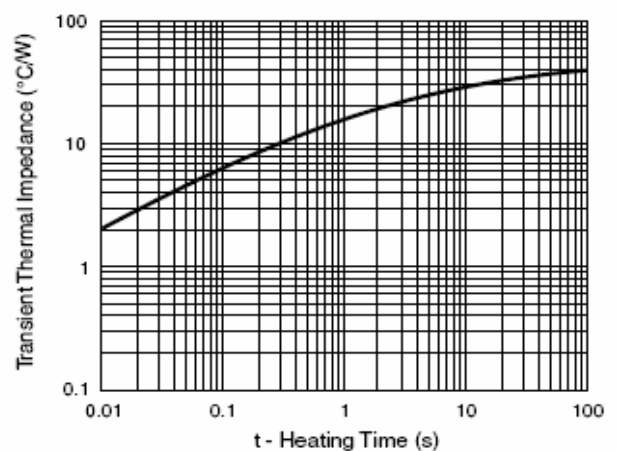
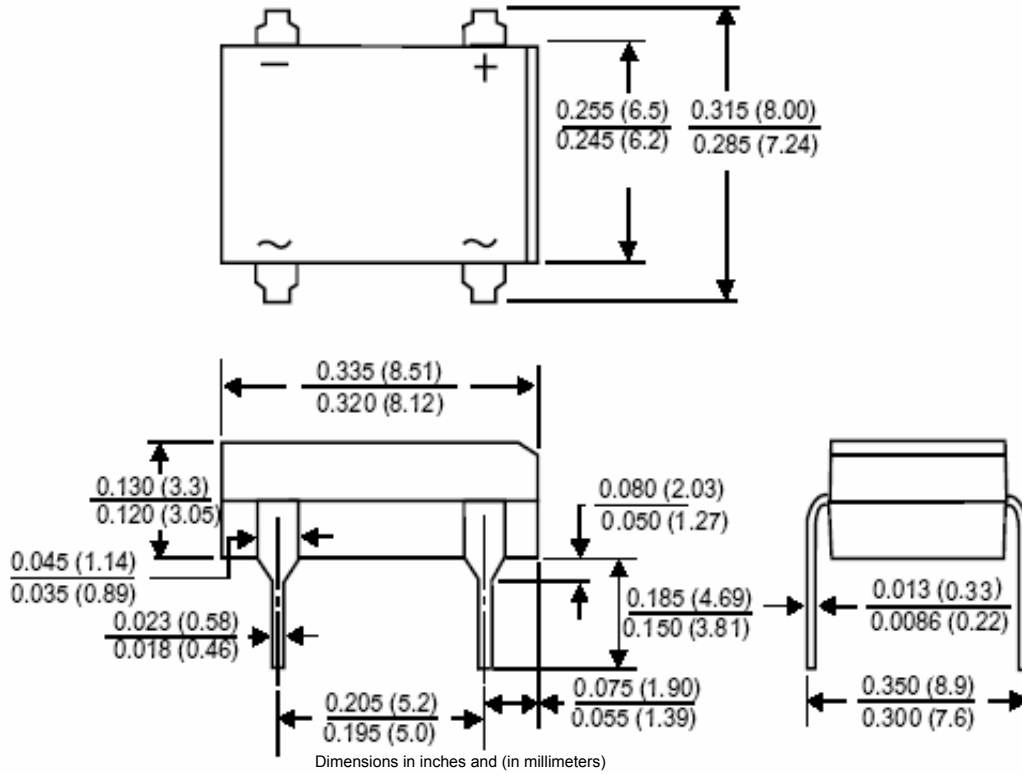


Figure 6. Typical Transient Thermal Impedance

Package Dimensions



Ordering information

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|------------------|---------|------------------|---------------|-------------------------|
| DB101 Thru DB107 | DFM | Tube | 50pcs | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|-----------------|
| 23-May-2020 | 1.0 | Initial release |

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