

DFB2005 - DFB20100

Glass Passivated Bridge Rectifiers

Features

- UL certificate # E326243
- Glass passivated junction
- Ideal for printed circuit board
- Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Surge overload rating to 250 amperes peak
- High case dielectric strength of 2000 V_{RMS}
- Isolated voltage from case to lead over 2500 volts



Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

| Symbol | Parameter | Value | | | | | | | Units |
|-------------------|---|-------------|------------|------------|------------|---------|------------|-------------|-------|
| | | DFB2005*** | DFB2010*** | DFB2020*** | DFB2040*** | DFB2060 | DFB2080*** | DFB20100*** | |
| V _{RRM} | Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| V _{RMS} | Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| V _{DC} | Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| I _(AV) | Maximum Average Forward Rectified Current | 20 | | | | | | | A |
| I _{FSM} | Peak Forward Surge Current (8.3mS Single Half-wave) | 250 | | | | | | | A |
| R _{θJC} | Typical Thermal Resistance** | 4.75 | | | | | | | °C/W |
| T _J | Operating Temperature Range | -55 to +150 | | | | | | | °C |
| T _{STG} | Storage Temperature Range | -55 to +150 | | | | | | | °C |

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

** Device mounted on 4" x 5" x 0.25" Al-plate heat sink.

*** In development. Please contact Fairchild Semiconductor for more information.

Electrical Characteristics T_A = 25°C unless otherwise specified

| Symbol | Parameter | Test condition | Value | Unit |
|------------------|---|---|------------|------------------|
| V _F | Maximum Instantaneous Forward Voltage | @ 10A @ 20A | 1.0 1.1 | V |
| I _R | Maximum DC Reverse Current at Rated DC Blocking Voltage | @ T _A = 25°C @ T _A = 125°C | 10 500 | μA |
| I ² t | Rating for fusing (t < 8.3mS) | | 259 | A ² S |
| C _j | Typical Junction Capacitance per leg* | | 140 | pF |

* Measured at 1MHz and applied Reverse bias of 4.0V DC.

Typical Performance Characteristics

Figure 1. Maximum Derating Curve for Output Current

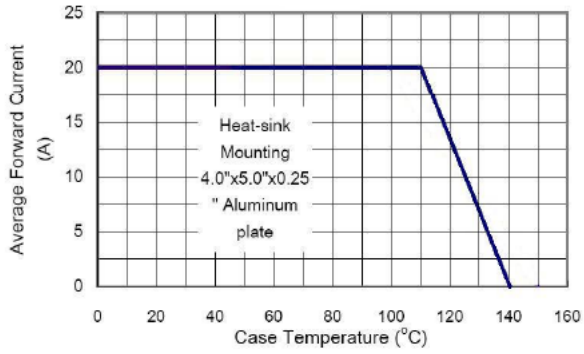


Figure 2. Maximum Forward Surge Current per Leg

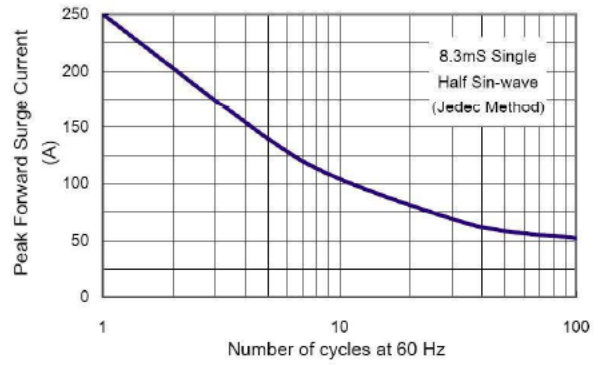


Figure 3. Typical Reverse Characteristics per Leg

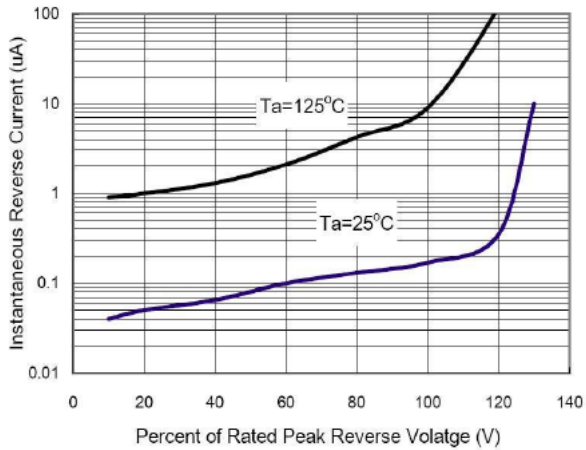


Figure 4. Typical Forward Characteristics per Leg

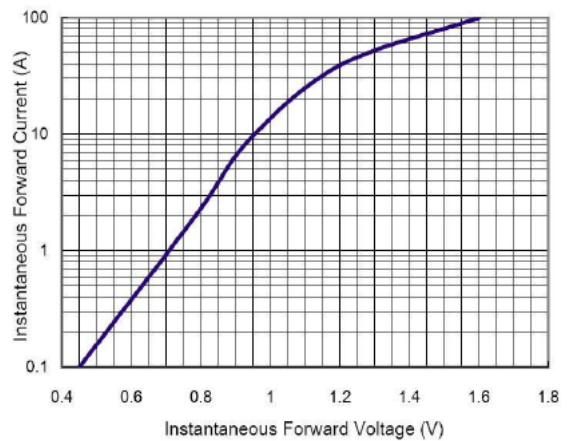
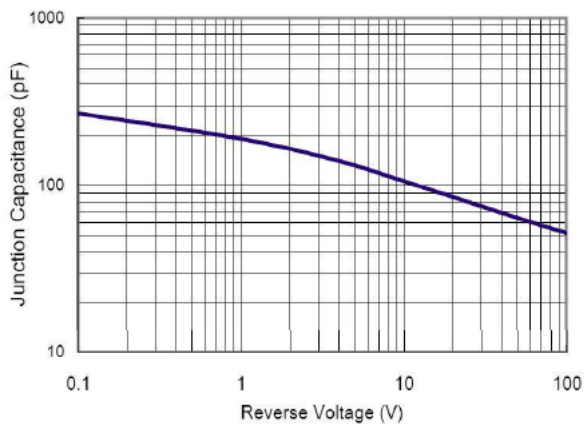
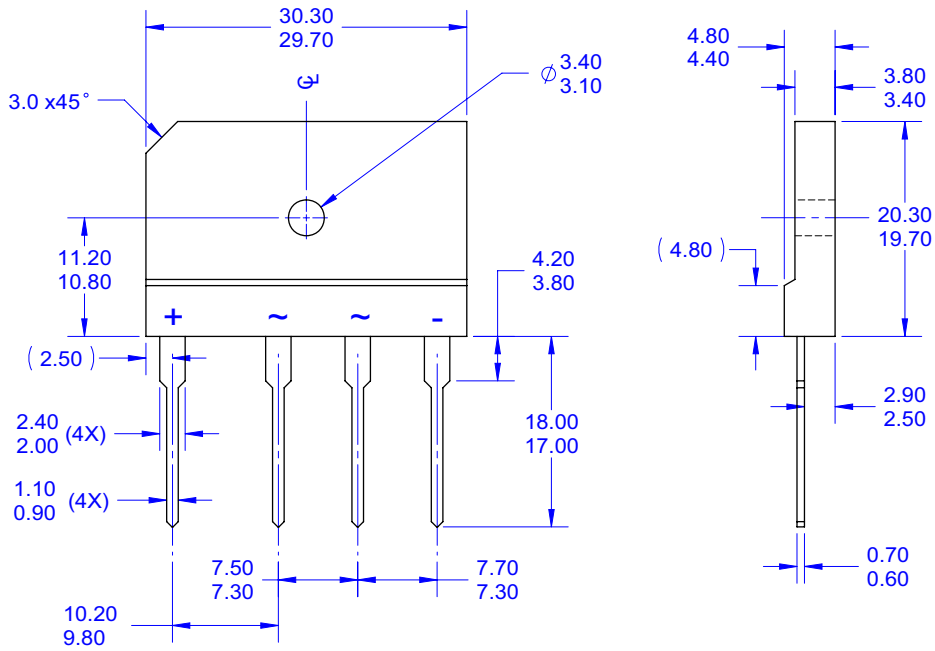


Figure 5. Typical Junction Capacitance



Physical Dimensions

TS-6P



NOTES:






- A. THIS PACKAGE DOES NOT CONFORM TO ANY STANDARDS.
- B. ALL DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- D. DRAWING FILE NAME: TS6P04AREV1

Dimensions in Millimeters



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|--------------------------|-----------------------|---|
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