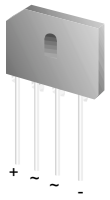
FAIRCHILD SEMICONDUCTOR®

July 2010

DFB2505 - DFB25100
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 350 amperes peak
- High case dielectric strength of 2500 V_{RMS}
- Isolated voltage from case to lead over 2500 volts



TS-6P

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

Symbol	Parameter	Value							Units
		DFB2505***	DFB2510***	DFB2520***	DFB2540***	DFB2560	DFB2580***	DFB25100***	
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	25							A
I_{FSM}	Peak Forward Surge Current (8.3mS Single Half-wave)	350							A
$R_{\theta JC}$	Typical Thermal Resistance**	0.6							°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	@ 12.5A @ 25A	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^2t	Rating for fusing (t < 8.3mS)		508	A^2S
Cj	Typical Junction Capacitance per leg*		110	pF

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

Typical Performance Characteristics

Figure 1. Maximum Derating Curve for Output Current

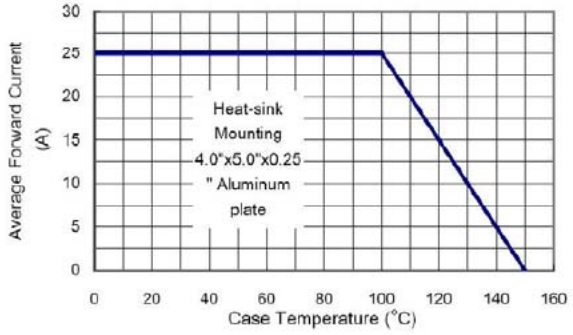


Figure 2. Maximum Forward Surge Current

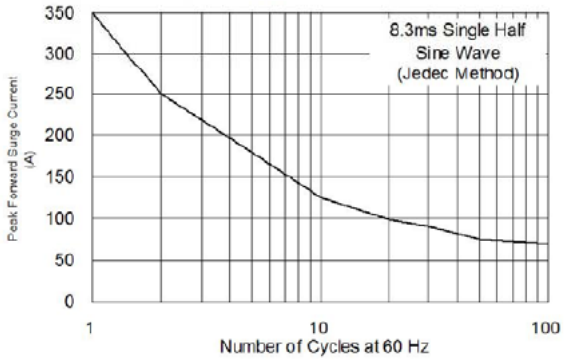


Figure 3. Typical Reverse Characteristics per Leg

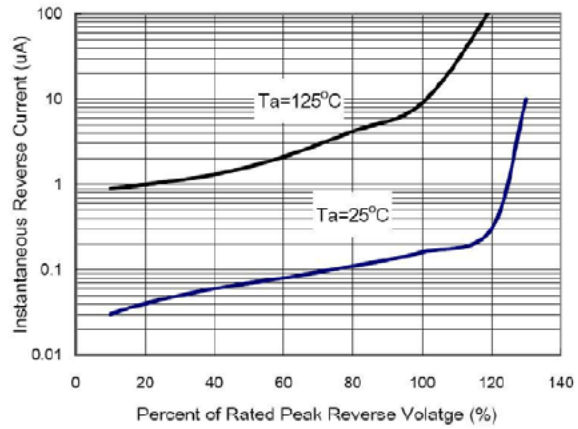


Figure 4. Typical Forward Characteristics per Leg

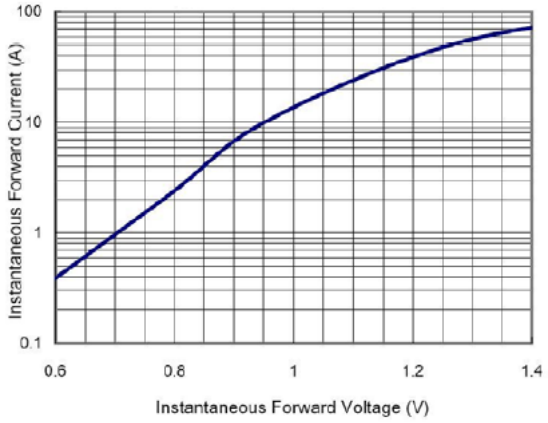
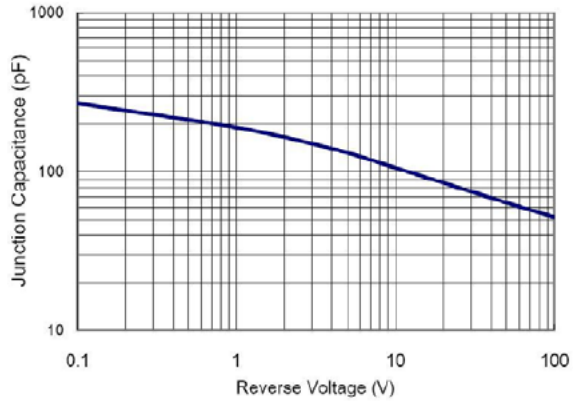
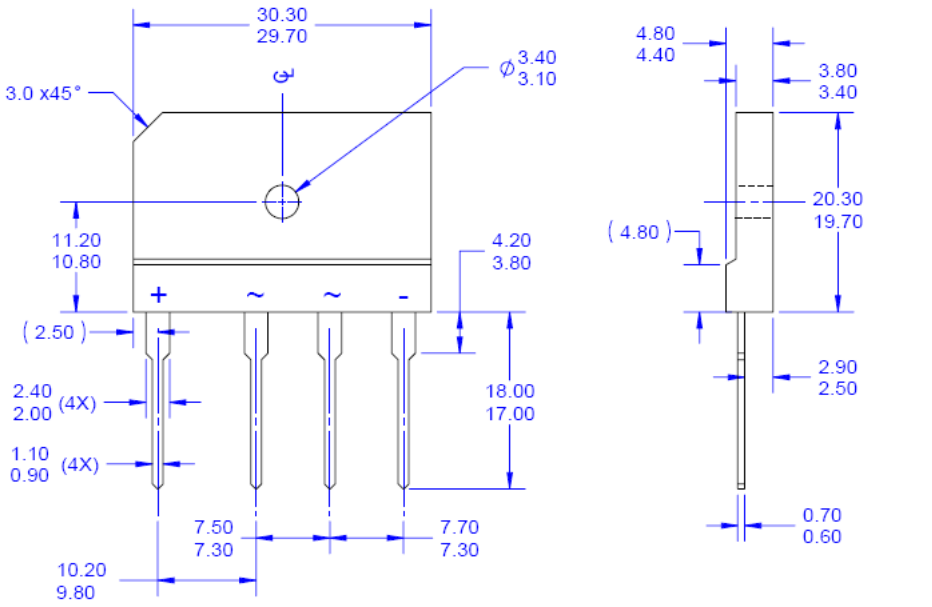


Figure 5. Typical Junction Capacitance



Physical Dimensions

TS-6P



NOTES:

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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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