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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

November 2013

DFB2505 - DFB25100
Glass-Passivated Bridge Rectifiers

Features

- UL Certificate: # E258596
- Glass-Passivated Junction
- Ideal for Printed Circuit Board
- Reliable Low-Cost Construction
- Plastic Material has Underwriters Laboratory Flammability Classification 94V-0
- Surge Overload Rating: 350 A Peak
- High Case Dielectric Strength: 2500 V_{RMS}
- Isolated Voltage from Case to Lead: > 2500 V

TS-6P

Ordering Informations

Part Number	Marking	Package	Packing Method
DFB2505	DFB2505	TS-6P 4L	Rail
DFB2510	DFB2510		
DFB2520	DFB2520		
DFB2540	DFB2540		
DFB2560	DFB2560		
DFB2580	DFB2580		
DFB25100	DFB25100		

Absolute Maximum Ratings(1)

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value							Unit
		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 (8.3 ms Single Half-wave)	350							A
$R_{\theta JC}$	Typical Thermal Resistance(2)	4.75							°C/W
T_J	Operating Temperature Range	-55 to +150							°C
T_{STG}	Storage Temperature Range	-55 to +150							°C

Notes:

1. Single-phase, half-wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.
2. Device mounted on 4 inch x 6 inch x 0.25 inch Al-plate heat sink.

Electrical Characteristics

Values are at T_A = 25°C unless otherwise specified.

Symbol	Parameter	Conditions	Value	Unit
V_F	Maximum Forward Voltage	12.5 A	1.0	V
	Instantaneous Forward Voltage	25 A	1.1	
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A = 25°C	10	µA
		T_A = 125°C	500	
I^2t	Rating for fusing (t < 8.3 ms)		508	A^2s
C_J	Typical Junction Capacitance per Leg(3)		110	pF

Note:

3. Measured at 1 MHz and applied reverse bias of 4.0 V DC.

Typical Performance Characteristics

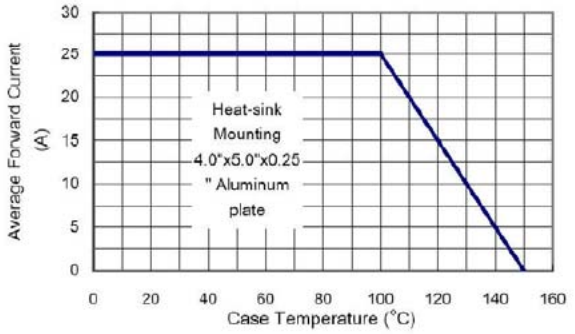


Figure 1. Maximum Derating Curve for Output Current

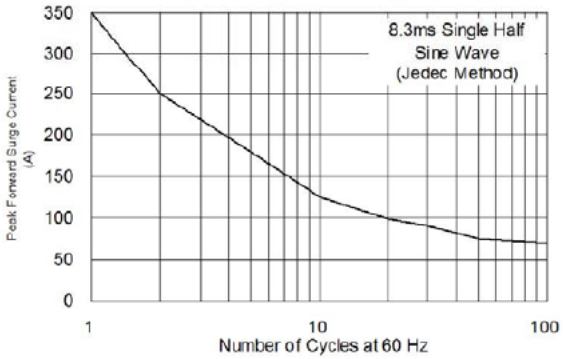


Figure 2. Maximum Forward Surge Current

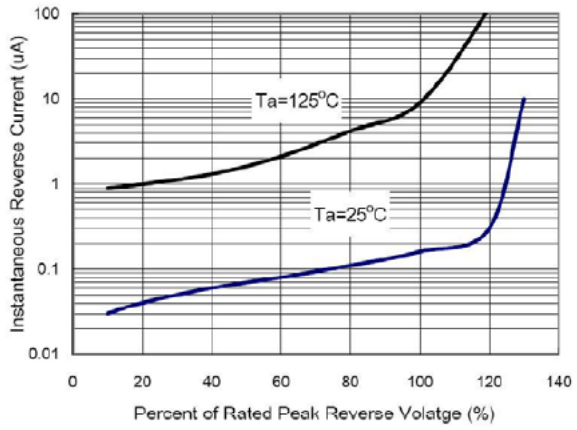


Figure 3. Typical Reverse Characteristics per Leg

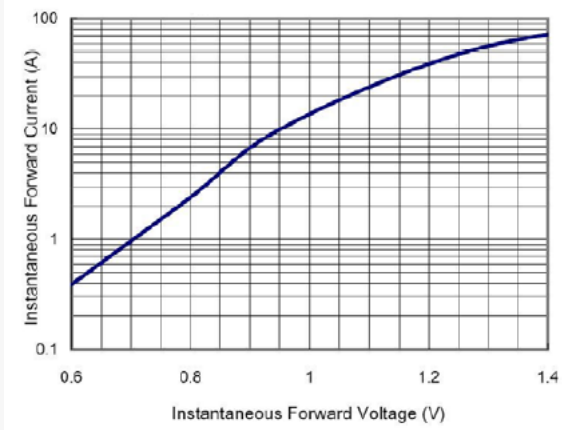


Figure 4. Typical Forward Characteristics per Leg

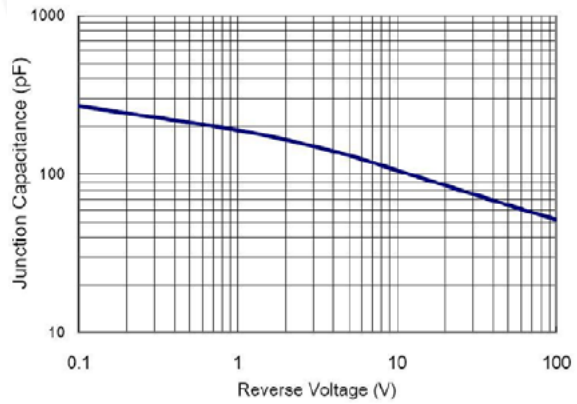
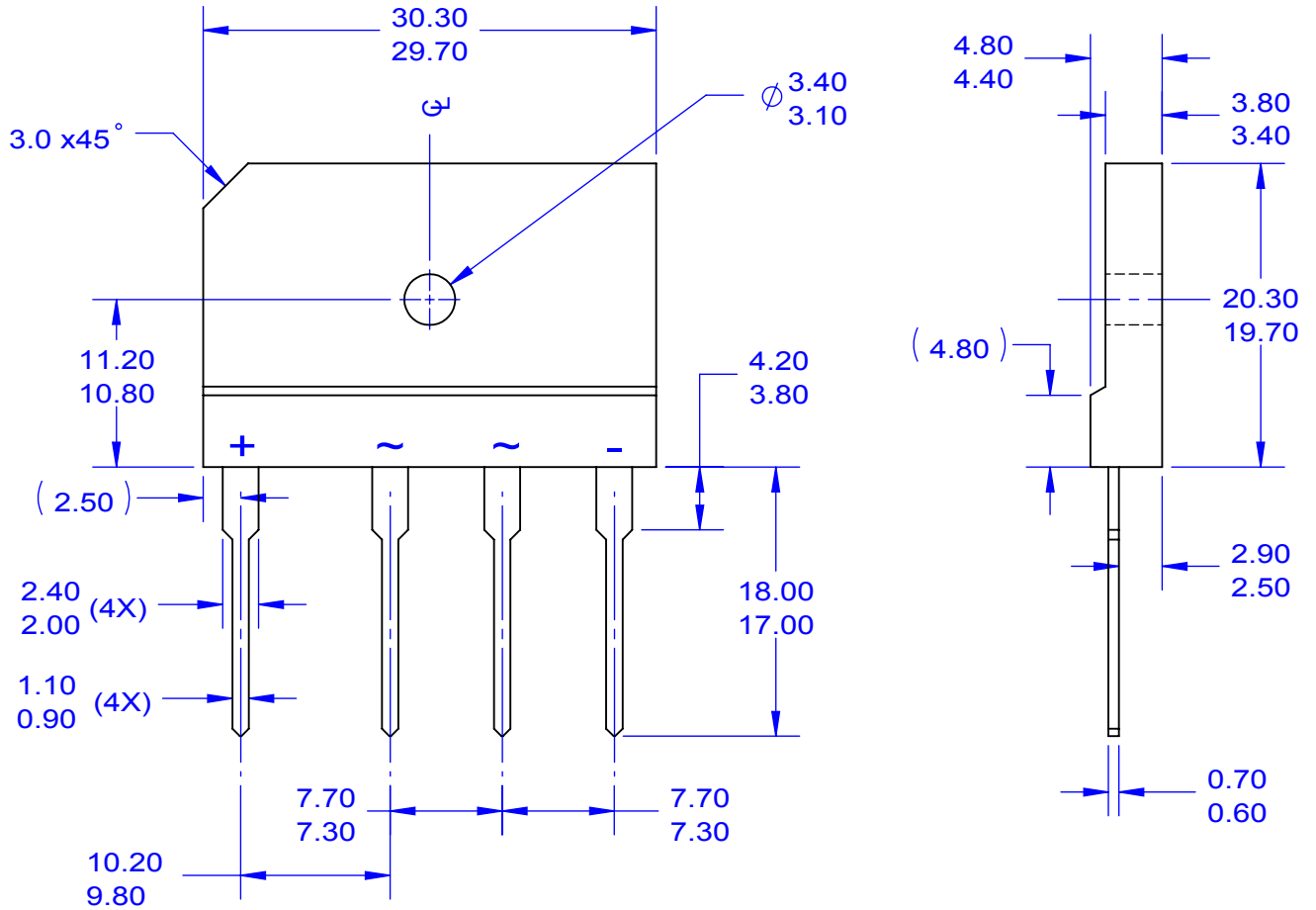


Figure 5. Typical Junction Capacitance



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: TS6P04AREV2

FAIRCHILD

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Order Literature: http://www.onsemi.com/orderlit

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DFB2580

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