ONSEMÍ,

Glass-Passivated Bridge Rectifiers

DFB2505, DFB2510, DFB2520, DFB2540, DFB2560, DFB2580, DFB25100

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
- Screw Torque Specification: 8.17 in-lbs Maximum
- These Devices are Pb-Free and are RoHS Compliant

ORDERING AND MARKING INFORMATION

Part Number	Marking	Package	Packing Method	
DFB2505	DFB2505	TS-6P 4L	Rail	
DFB2510	DFB2510	(Pb-Free)		
DFB2520	DFB2520			
DFB2560	DFB2560			
DFB2580	DFB2580			
DFB25100	DFB25100			

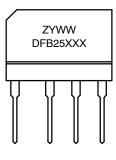
DISCONTINUED (Note 1)

DFB2540	DFB2540	TS-6P 4L (Pb-Free)	Rail
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1. **DISCONTINUED:** These devices are not recommended for new design. Please contact your **onsemi** representative for information. The most current information on these devices may be available on <u>www.onsemi.com</u>.



MARKING DIAGRAM



Z YWW DFB25XXX

= Assembly Plant Code

= Date Code (Year & Week)= Specific Device Code

= Specific Device

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		Value							
Symbol	Parameter	DFB2505	DFB2510	DFB2520	DFB2540	DFB2560	DFB2580	DFB25100	Unit
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_{\thetaJC}	Typical Thermal Resistance (Note 3)	4.75			°C/W				
Τ _J	Operating Temperature Range	-55 to +150			°C				
T _{STG}	Storage Temperature Range	–55 to +150				°C			

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C, Unless otherwise specified) (Note 2)

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

3. Device mounted on 4 inch x 6 inch x 0.25 inch Al-plate heat sink.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Test 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		$T_A = 25^{\circ}C$	10	μΑ
	at Rated DC Blocking voltage	T _A = 125°C	500	
l ² t	Rating for Fusing (t < 8.3 ms)		508	A ² s
CJ	Typical Junction Capacitance per Leg (Note 4)		110	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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

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TYPICAL PERFORMANCE CHARACTERISTICS

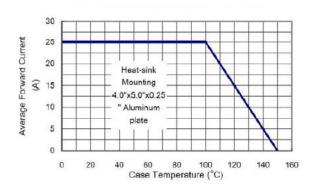


Figure 1. Maximum Derating Curve for Output Current

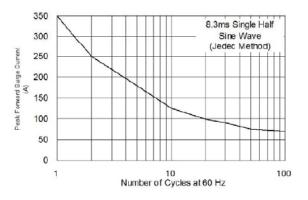


Figure 2. Maximum Forward Surge Current per Leg

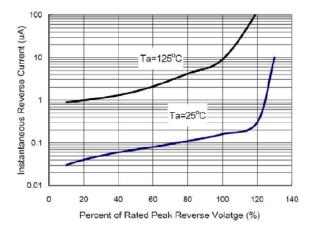


Figure 3. Typical Reverse Characteristics per Leg

1000

Junction Capacitance (pF)

100

10

0.1

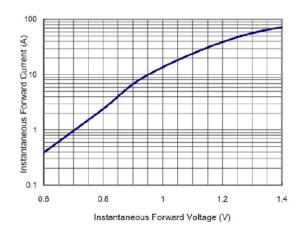
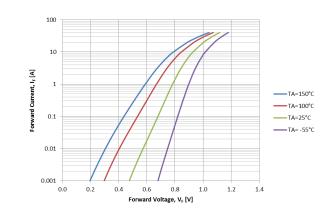


Figure 4. Typical Forward Characteristics per Leg





Reverse Voltage (V)

10

1

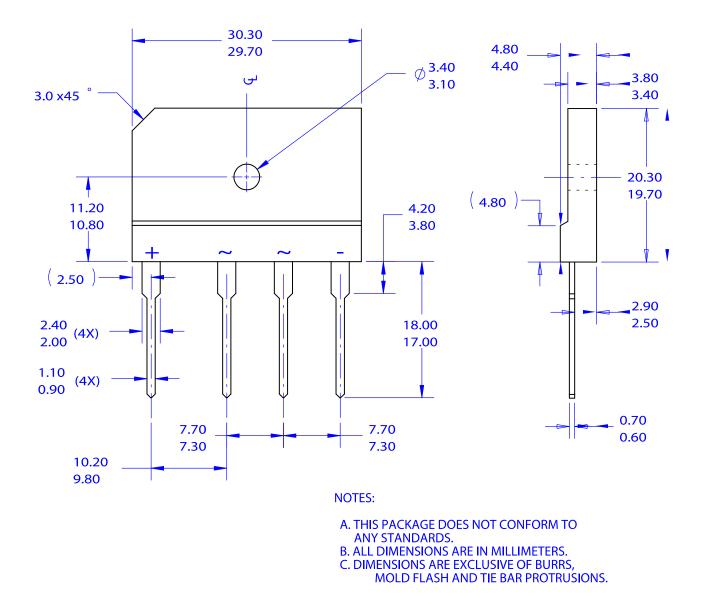
Figure 6. Forward Voltage Characteristics

100

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SIP4 30x20 CASE 127EP ISSUE O

DATE 31 DEC 2016



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