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October 2013

DFB2005 - DFB20100
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 to 250 A Peak
- High Case Dielectric Strength: 2000 V_{RMS}
- Isolated Voltage from Case to Lead: > 2500 V

TS-6P

Ordering Informations

Part Number	Marking	Package	Packing Method
DFB2005	DFB2005	TS-6P 4L	Rail
DFB2010	DFB2010		
DFB2020	DFB2020		
DFB2040	DFB2040		
DFB2060	DFB2060		
DFB2080	DFB2080		
DFB20100	DFB20100		

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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							Units
		DFB 2005	DFB 2010	DFB 2020	DFB 2040	DFB 2060	DFB 2080	DFB 20100	
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 (8.3 ms Single Half-wave)	250							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 5 inch x 0.25 inch Al-plate heat sink.

Electrical Characteristics

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

Symbol	Parameter	Test condition	Value	Unit
V_F	Maximum Instantaneous Forward Voltage	10 A	1.0	V
		20 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)		259	A^2s
C_J	Typical Junction Capacitance per Leg(3)		140	pF

Note:

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

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Typical Performance Characteristics

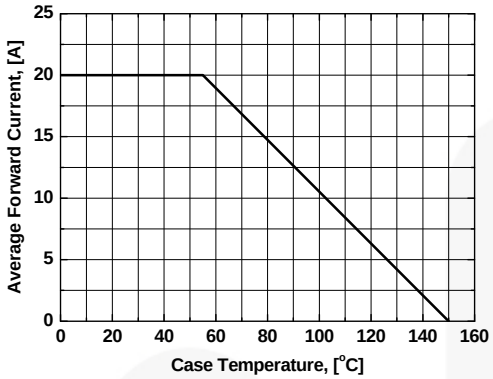

Figure 1. Maximum Derating Curve for Output Current

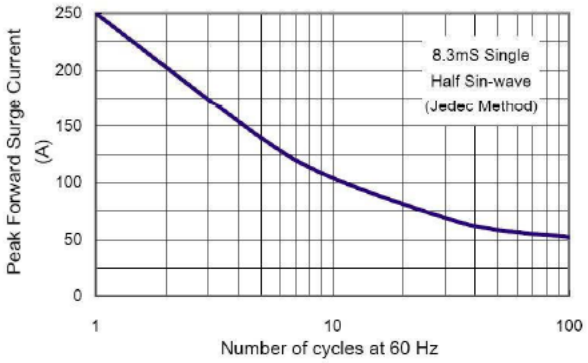

Figure 2. Maximum Forward Surge Current per Leg

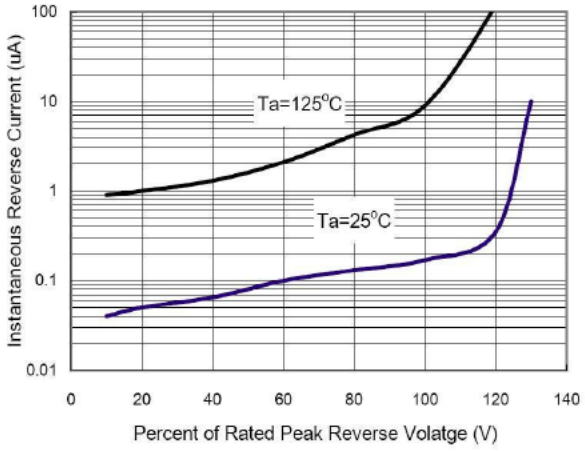

Figure 3. Typical Reverse Characteristics per Leg

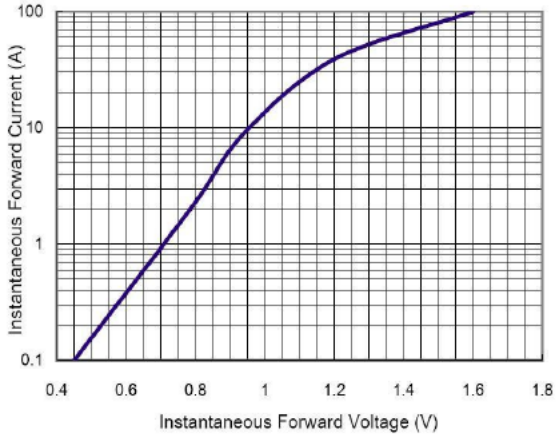

Figure 4. Typical Forward Characteristics per Leg

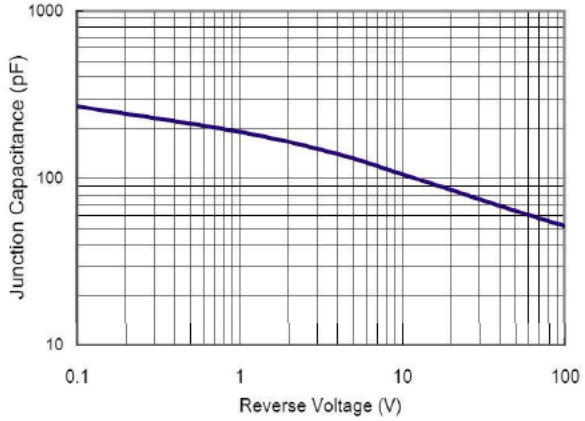

Figure 5. Typical Junction Capacitance

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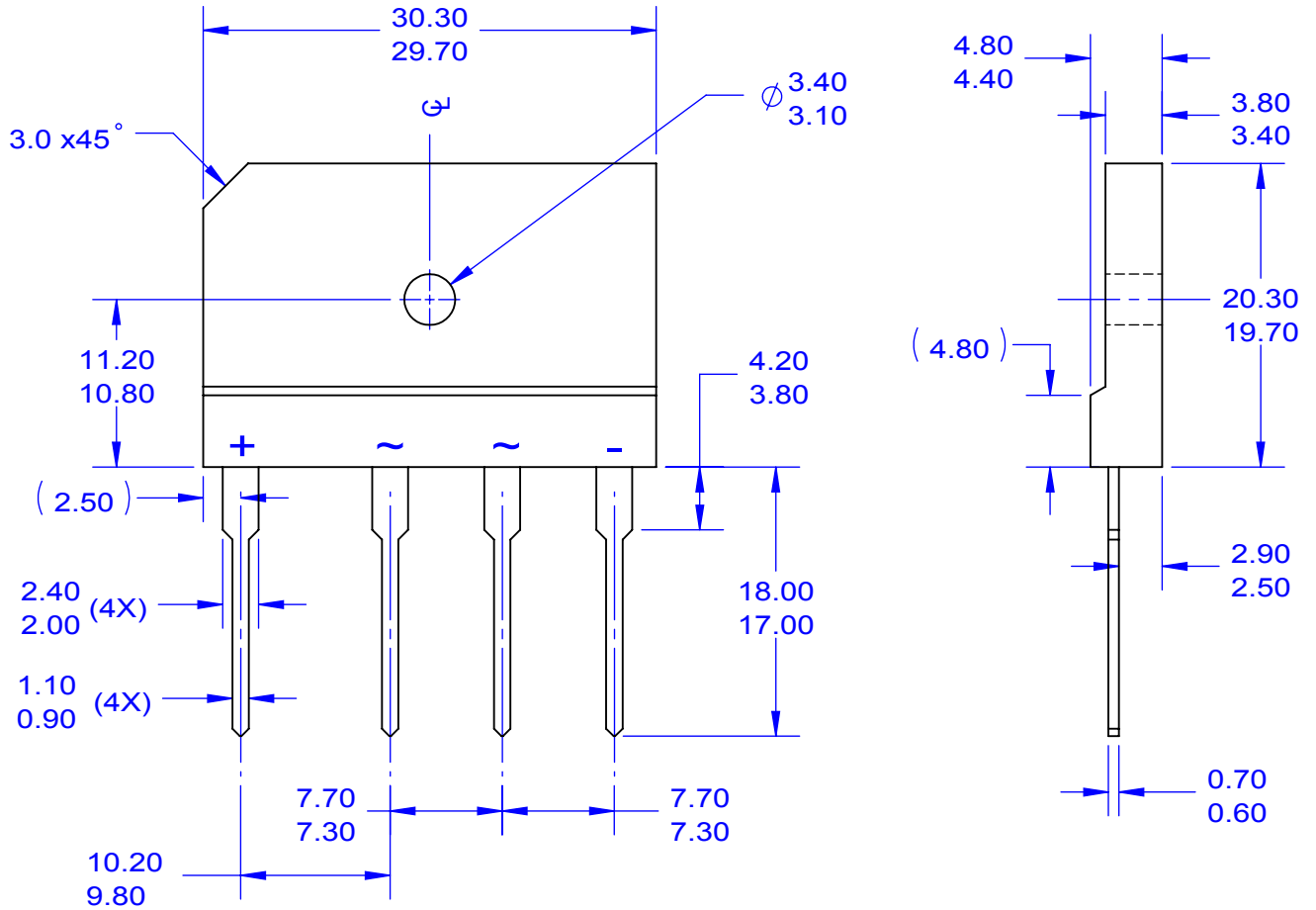

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