

# DB301F THRU DB307F

## 3.0A Glass Passivated Single Phase Bridge Rectifiers-50-1000V

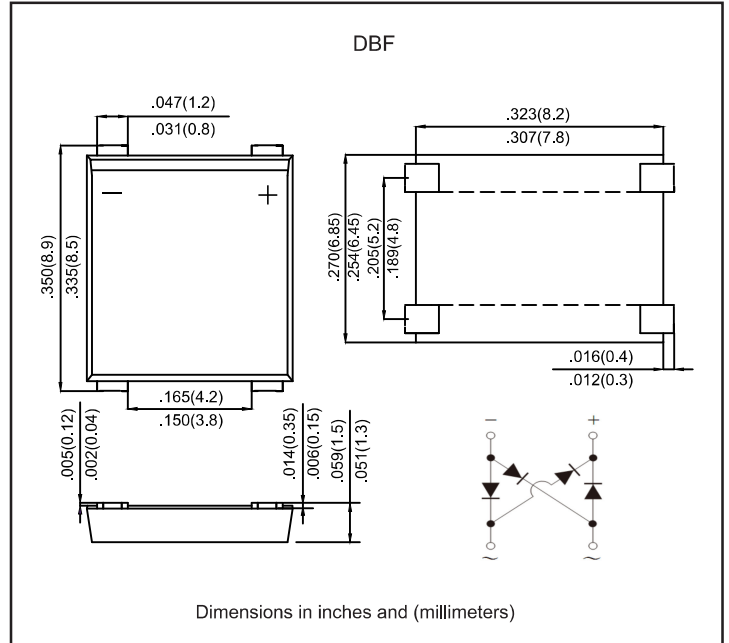
### Features

- Surge overload ratings to 90 amperes peak.
- Save space on printed circuit board.
- Ideal for automated replacement.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Lead-free parts meet RoHS requirements.

### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DBF
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 0.50 gram

### Package outline



### Maximum ratings and Electrical Characteristics (AT T<sub>a</sub>=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I <sub>O</sub>			3.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I <sub>FSM</sub>			110	A
Reverse current	V <sub>R</sub> = V <sub>RRM</sub> T <sub>J</sub> = 25°C	I <sub>R</sub>			5.0	uA
	V <sub>R</sub> = V <sub>RRM</sub> T <sub>J</sub> = 125°C				200	
I <sup>2</sup> t Rating for Fusing	t<8.3ms	I <sup>2</sup> t			50.21	A <sup>2</sup> s
Typical Junction Capacitance Per Element	Measured at 1.0MHz and applied reverse voltage of 4.0V DC	C <sub>J</sub>		45		pF
Typical thermal resistance	Junction to ambient mounted on P.C.B with 0.5*0.5"(13*13mm) copper pads.	R <sub>θJA</sub>		15		°C/W
Storage temperature		T <sub>STG</sub>	-65		+175	°C

SYMBOLS	V <sub>RRM</sub> <sup>*1</sup> (V)	V <sub>RMS</sub> <sup>*2</sup> (V)	V <sub>R</sub> <sup>*3</sup> (V)	V <sub>F</sub> <sup>*4</sup> (V)	Operating temperature T <sub>J</sub> (°C)
DB301F	50	35	50	1.10	-55 to +150
DB302F	100	70	100		
DB303F	200	140	200		
DB304F	400	280	400		
DB305F	600	420	600		
DB306F	800	560	800		
DB307F	1000	700	1000		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@I<sub>F</sub>=3.0A

## Rating and characteristic curves ( DB301F THRU DB307F )

Fig. 1 Output Current Derating Curve

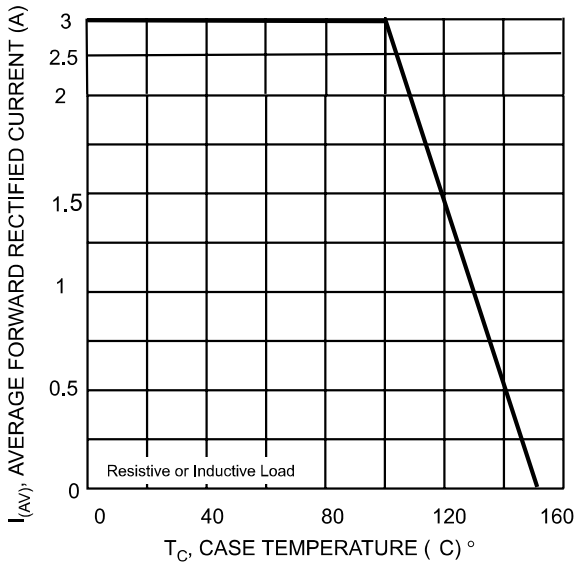


Fig. 2 Typical Forward Characteristics (per leg)

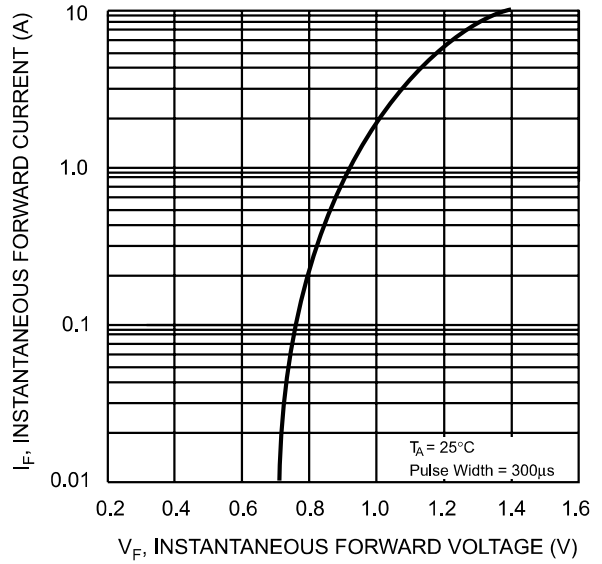


Fig. 3 Maximum Peak Forward Surge Current (per leg)

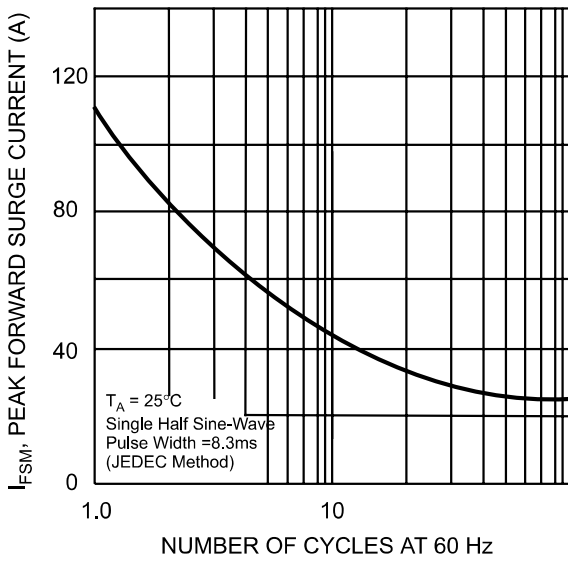
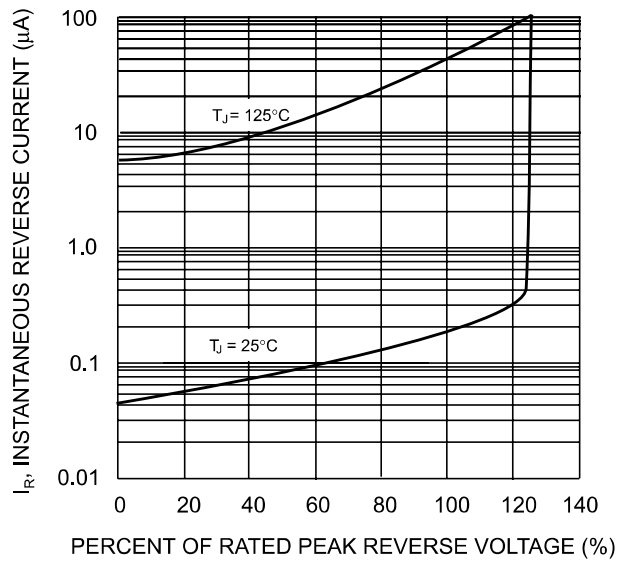
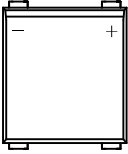
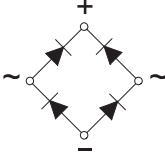


Fig. 4 Typical Reverse Characteristics (per element)



# DB301F THRU DB307F

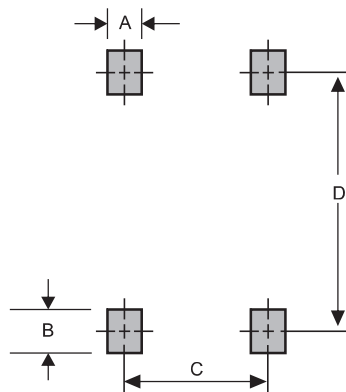
## Pinning information

Simplified outline	Symbol
	

## Marking

Type number	Marking code
DB301F	DB301F
DB302F	DB302F
DB303F	DB303F
DB304F	DB304F
DB305F	DB305F
DB306F	DB306F
DB307F	DB307F

## Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D
DBF	0.055 (1.40)	0.063 (1.60)	0.197 (5.00)	0.299 (7.60)