



# DB301S thru DB307S

## 3.0 A Single-Phase Glass Passivated Bridge Rectifiers

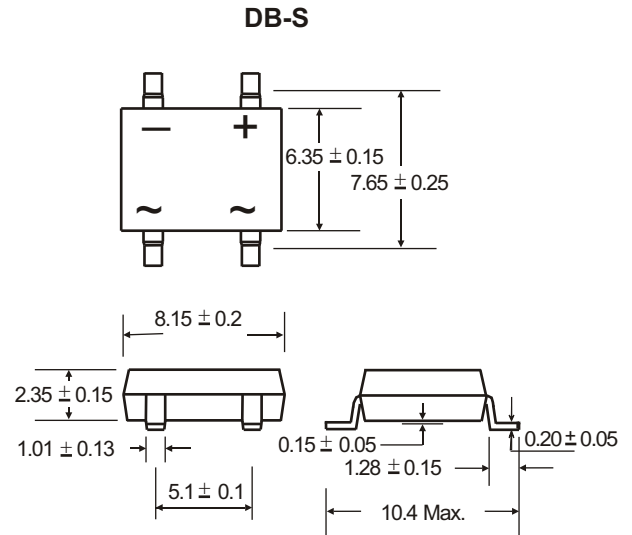
Rectifier Reverse Voltage 50 to 1000V

### Features

- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 50 amperes
- Ideal for printed circuit board application
- High temperature soldering guaranteed 260 °C /5 seconds at 5 lbs (2.3kg) tension

### Mechanical Data

Case: Molded plastic  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Polarity: Marked on body  
 Mounting Position: Any  
 Weight: 0.33 grams (approx)



Dimensions in millimeters ( 1mm =0.0394" )

### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

Parameter	Symbol	DB 301S	DB 302S	DB 303S	DB 304S	DB 305S	DB 306S	DB 307S	unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at $T_A=40^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80							A
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2 t$	26.35							$\text{A}^2 \text{sec}$
Typical thermal resistance per element (1)	$R_{\theta JA}$	58							$^\circ\text{C} / \text{W}$
Typical junction capacitance per element (2)	$C_J$	25.0							pF
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to + 150							$^\circ\text{C}$

### Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

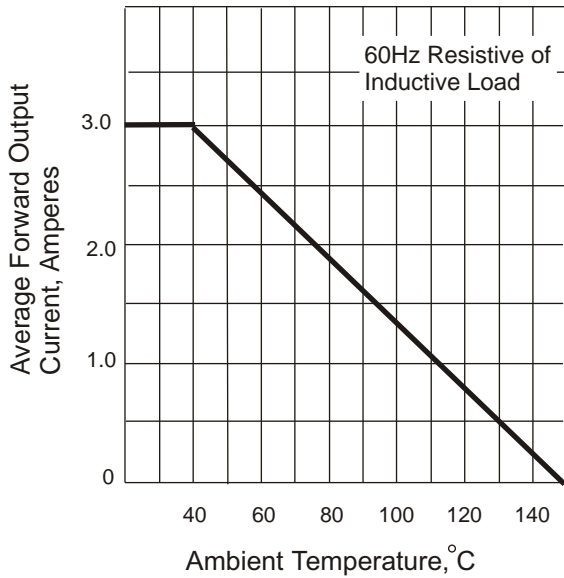
Parameter	Symbol	DB 301S	DB 302S	DB 303S	DB 304S	DB 305S	DB 306S	DB 307S	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	$V_F$	1.1							V
Maximum DC reverse current at rated $T_A = 25^\circ\text{C}$ DC blocking voltage per element $T_A = 125^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$

**Notes:** (1) Thermal resistance from Junction to Ambient on P.C. board mounting.  
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

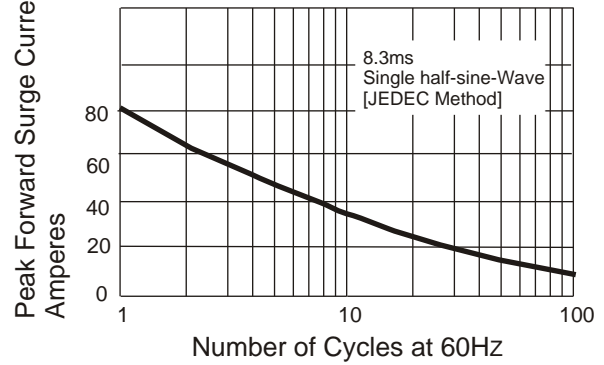
# Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted )

## DB301S thru DB307S

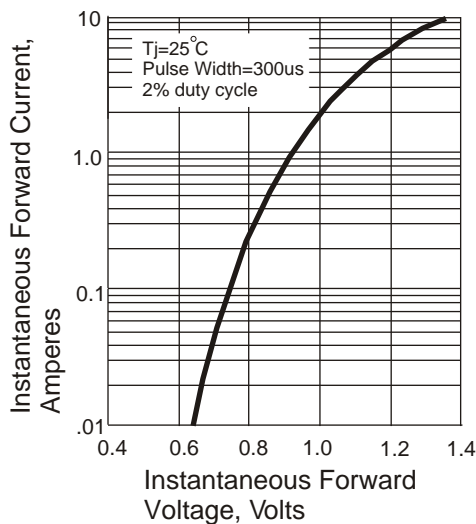
**Fig. 1 Derating Curve for Output Rectified Current**



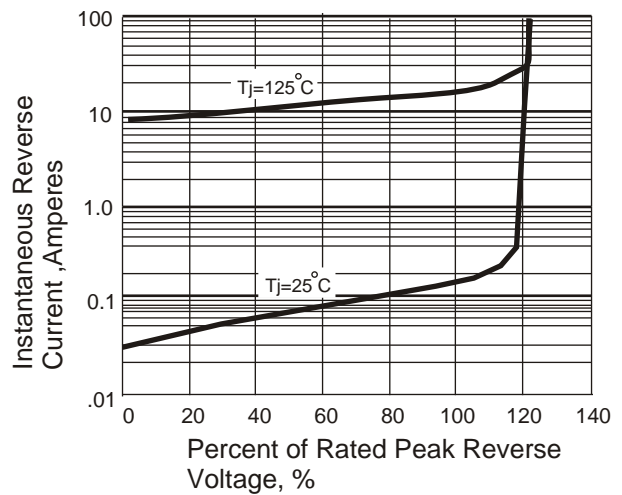
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Revers Characteristics**



**Fig. 5 Typical Junction Capacitance**

