DB301 thru DB307

3.0 A Single-Phase Glass Passivated Bridge Rectifiers

Rectifier Reverse Voltage 50 to 1000V

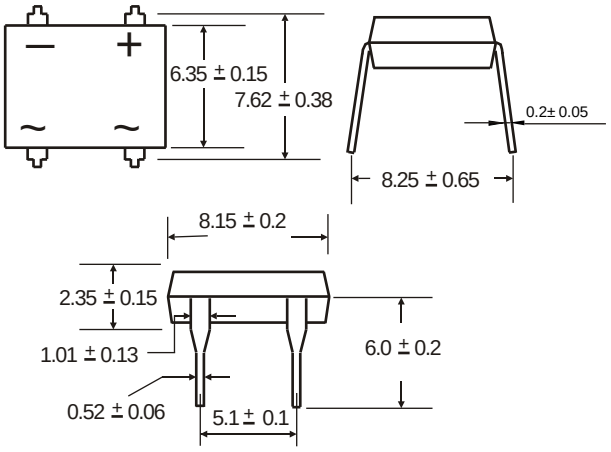
Features

- 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: 0.34 grams (approx)

DB



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	DB301	DB302	DB303	DB304	DB305	DB306	DB307	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˚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<8.3ms)	I^2t	26.5							A^2sec
Typical thermal resistance per element (1)	$R_{\theta JA}$	58							˚C / 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							˚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	DB301	DB302	DB303	DB304	DB305	DB306	DB307	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage per element T_A =25˚C T_A =125˚C	I_R	10 500							μA

Notes: (1)Thermal resistance from Junction to Ambemt 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°C Unless otherwise noted)
DB301 thru DB307

Fig. 1 Derating Curve for Output Rectified Current

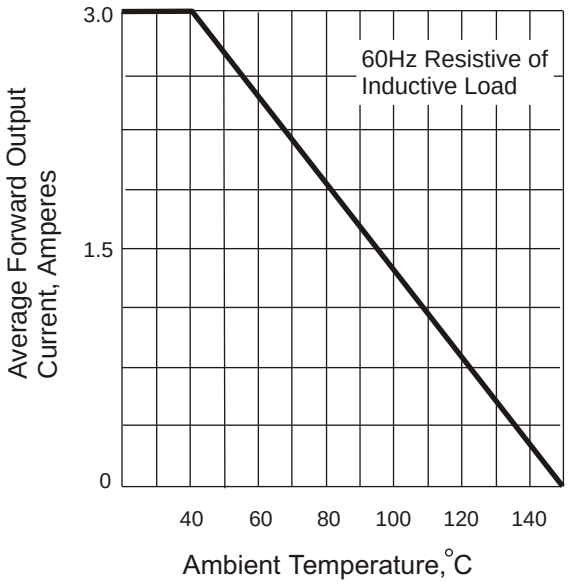


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

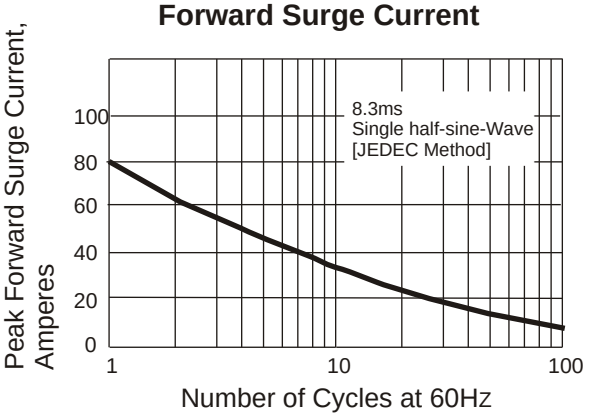


Fig. 3 Typical Instantaneous Forward Characteristics

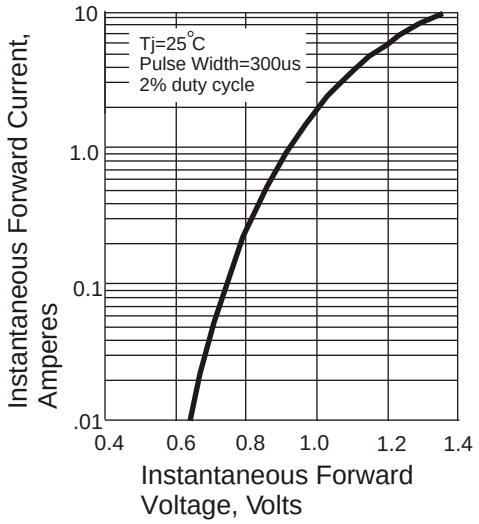


Fig. 4 Typical Revers Characteristics

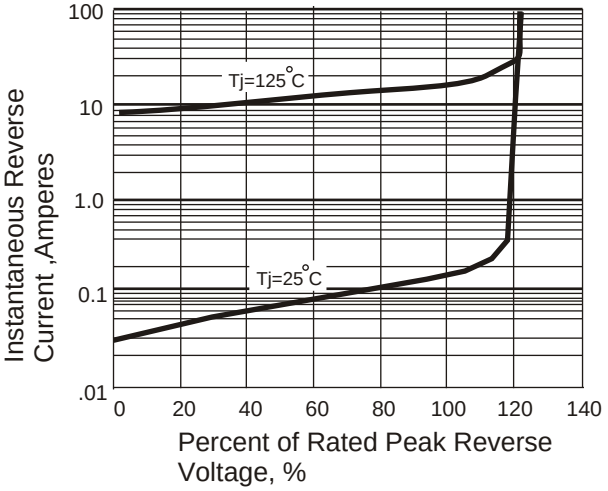


Fig. 5 Typical Junction Capacitance