RDB101 thru RDB107

1.0A, Fast Recovery Glass Passivated Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

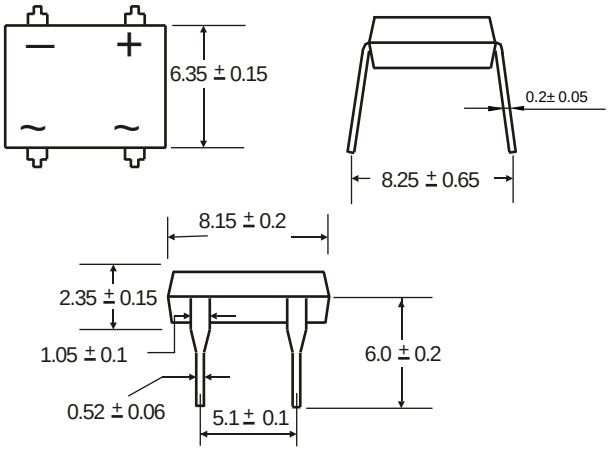
Features

- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 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: 0.04 ounce, 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	RDB101	RDB102	RDB103	RDB104	RDB105	RDB106	RDB107	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=40°C	IF(AV)	1.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							A
Rating for fusing (t<8.3ms)	I^2t	9.12							A^2sec
Maximum reverse recovery time (Note 2)	t_{rr}	150				250	500		ns
Typical junction capacitance per element	Cj	25.0							pF
Operating junction and storage temperature range	TJ, TSTG	-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	RDB101	RDB102	RDB103	RDB104	RDB105	RDB106	RDB107	Unit
Maximum instantaneous forward voltage drop per leg at 1.0A	VF	1.3							V
Maximum DC reverse current at rated DC blocking voltage per element TA =25°C TA =125°C	IR	10 500							μA

Notes: (1)Thermal resistance from Junction to Ambemt on P.C.board mounting.
(2): Reverse recovery time test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Rating and Characteristic Curves (T_A=25°C Unless otherwise noted)
RDB101 thru RDB107

Fig. 1 Derating Curve for Output Rectified Current

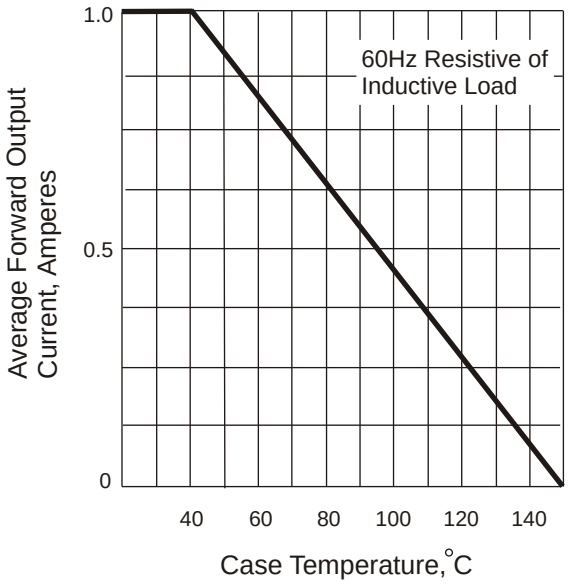


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

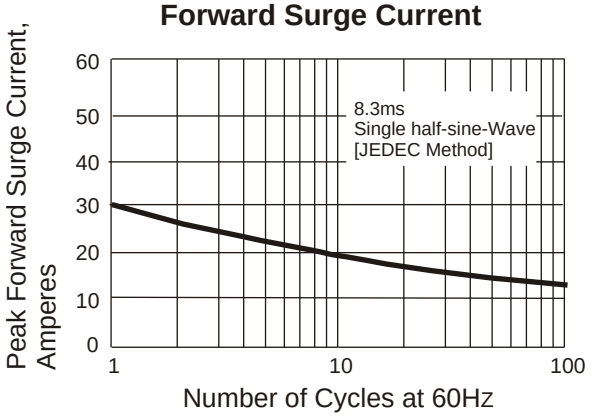


Fig. 3 Typical Instantaneous Forward Characteristics

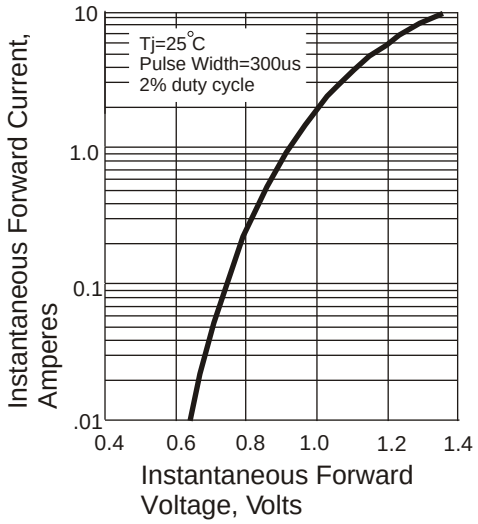


Fig. 4 Typical Revers Characteristics

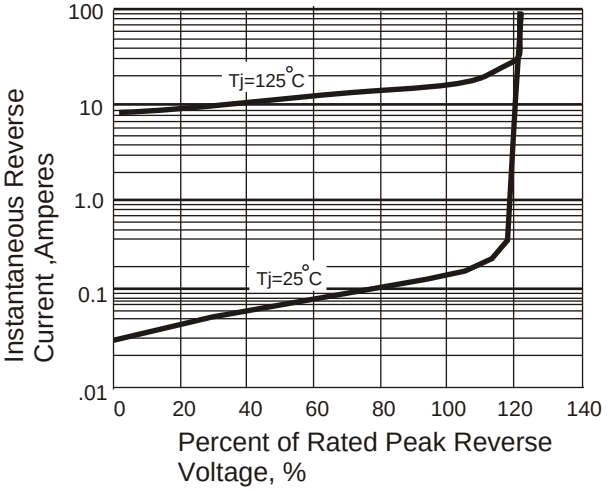


Fig. 5 Typical Junction Capacitance