1.0A Single-Phase Glass Passivated Bridge Rectifier

1 General Description

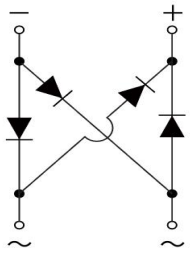
1.1 Features

- Ideal for printed circuit board mounting
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- High temperature soldering guaranteed 260 ℃ /5 seconds at 5 lbs (2.3kg) tension

REVERSE VOLTAGE
50-1000V
FORWARD CURRENT
1Ampere

1.2 Typical Applications

- General-purpose bridge rectifiers, Rectification for SMPS, PD fast chargers, small household appliance control boards, and other bridge rectification applications.



1.3 Mechanical Data

- Case: Reliable low cost construction utilizing molded plastic technique
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Polarity: Marked on body

2 Maximum Ratings(TA=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	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℃ (with heatsink)	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current Single Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	30							A
Rating for fusing (t<8.3ms)	I^2t	3.735							A^2sec
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃
Typical Thermal Resistance per element (Note1)	$R_{\theta JA}$	110							℃/W

Notes:1.Thermal resistance from Junction to Ambient on PC board mounting.
2.Resistive or Inductive load, 60 Hz.For Capacitive load derate by 20 %.)
3.Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

3 Electrical Characteristics(TA=25℃ Unless otherwise specified)

PARAMETER		SYMBOL	DB101S	DB102S	DB103S	DB104S	DB105S	DB106S	DB107S	UNIT
Maximum instantaneous Forward Voltage drop per leg at 1.0A		V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25℃	I_R	10							μA
	T_A=125℃		500							
Typical Junction Capacitance per element (Note3)		Cj	25.0							pF

4 Characteristics Curves(TA=25℃ Unless otherwise specified)

Fig. 1 Derating Curve for Output Rectified Current

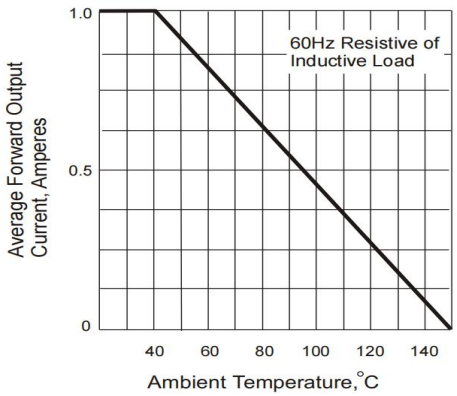


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

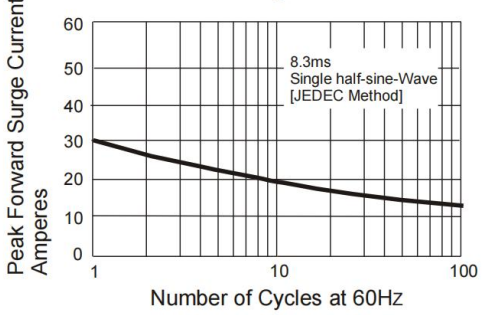


Fig. 3 Typical Instantaneous Forward Characteristics

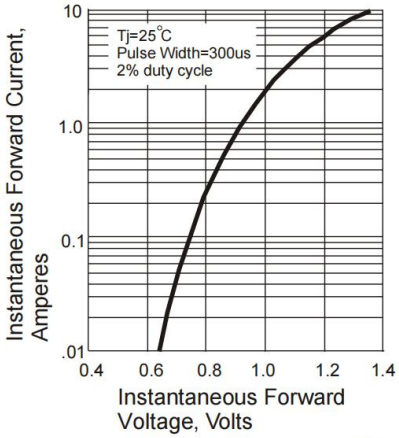


Fig. 4 Typical Revers Characteristics

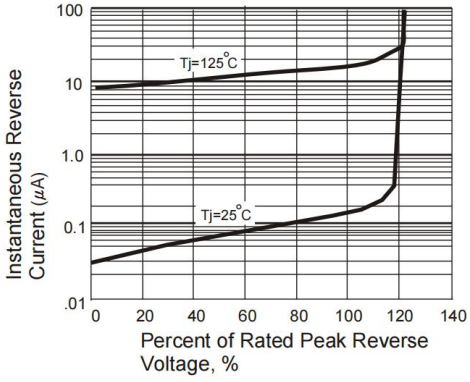
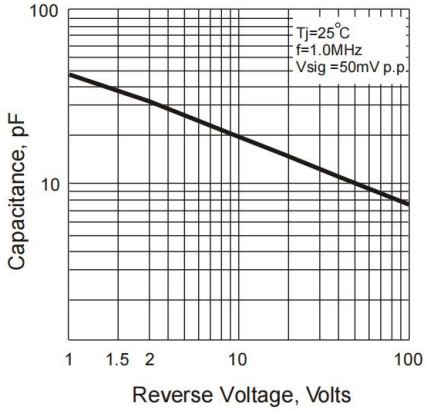
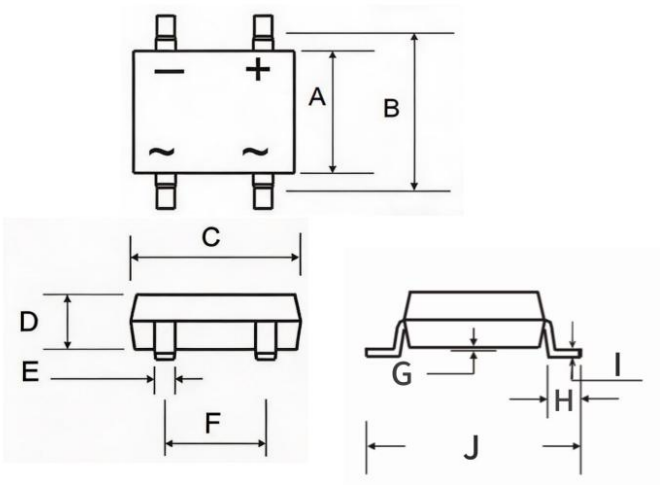


Fig. 5 Typical Junction Capacitance



5 Package Outline Dimensions



Symbol	UNIT(mm)	
	Min	Max
A	6.20	6.50
B	7.40	7.90
C	7.95	8.35
D	2.20	2.50
E	0.88	1.14
F	5.0	5.2
G	0.1	0.2
H	1.13	1.43
I	0.15	0.25
J	10.0	10.4

6 Ordering Information

PACKAGE	UNIT WEIGHT (g)	REEL (pcs)	BOX (pcs)	CARTON (pcs)
DBS	Approximate 0.53	1500	3000	18000

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