Surface Mount Bridge Rectifier

Reverse Voltage - 1000 Volts

Forward Current - 8.0 Amperes

Features

- Surface mount bridge, small package
- Ideal for printed circuit boards
- Glass passivated chip junction
- High forward current capability up to 8.0A
- High surge current capability
- High heat dissipation capability
- Low profile package
- Low forward voltage drop
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0

Mechanical Data

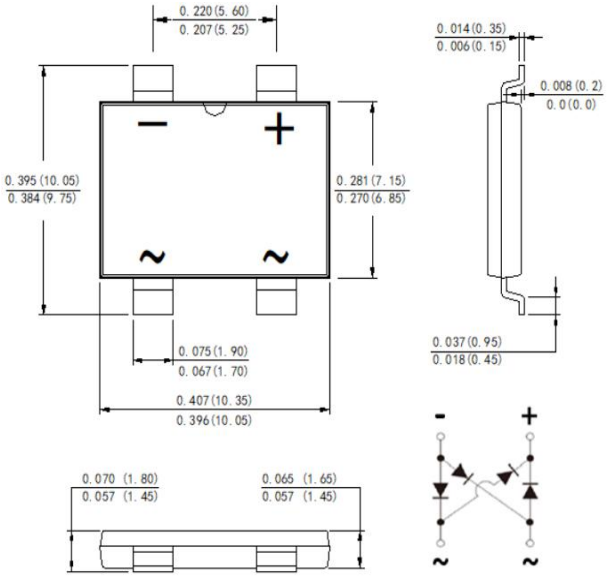
- Case:CBS
  Epoxy meets UL-94V-0 Flammability rating
- Terminals:Matte tin plated leads, solderable per
- J-STD-002 and JESD22-B102
- High temperature soldering guaranteed
- Solder Reflow 260℃,10seconds
- Polarity.:As marked on body
- Marking:Type number

Applications

- General purpose use in AC-to-DC bridge full wave rectification for Fast Charging,Switching Power Supply. USB PD,Adapter and 3-in-1 Power Board,etc.

CBS

RoHS COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	CBS810	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Maximum Average Forward Rectified Output Current @ T_A=25℃	$I_{(AV)}$	8.0	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	200	A
I^2t Rating for Fusing (t<8.3mS)	I^2t	166	A^2s
Instantaneous forward voltage drop per Diode @IF=1.0A	V_F	0.87	V
@IF=4.0A		0.94	
@IF=8.0A		1.0	
Maximum DC Reverse Current at Rated @T_J=25℃	I_R	5.0	μA
DC Bolcking Voltage per Diode @T_J=125℃		100	
Typical Junction Capacitance per Diode (Note1)	C_J	49	pF
Typical Thermal Resistance to Ambient	$R_{\theta JA}$	70	℃/W
Typical Thermal Resistance to case	$R_{\theta JC}$	11	
Typical Thermal Resistance to lead	$R_{\theta JL}$	14	
Operating Junction and StorageTemperature Range	T_J,T_{STG}	-55 to +150	℃

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 5.0V DC.

FIG.1 Derating Curve Output Rectified Current

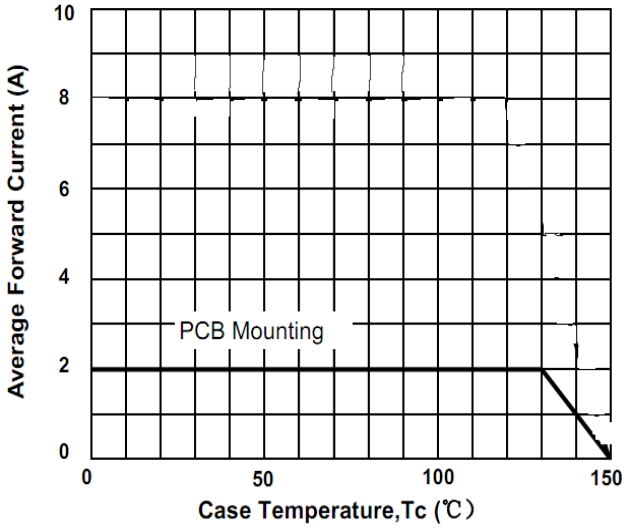


FIG.2 Typical Forward Characteristics per Diode

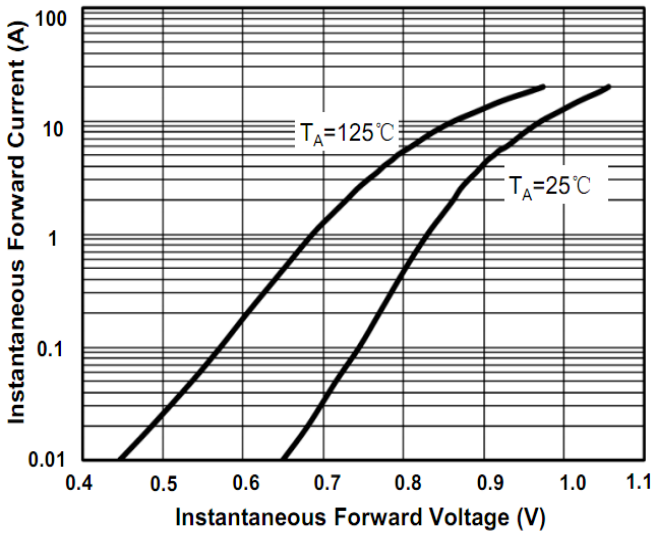


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

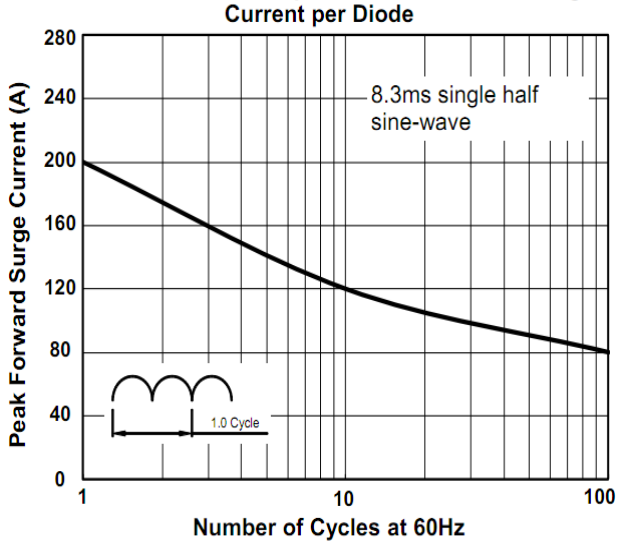


FIG.4 Typical Reverse Characteristics per Diode

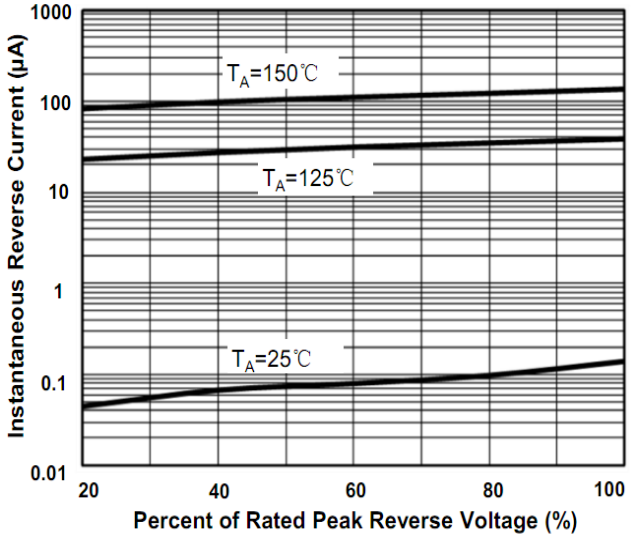
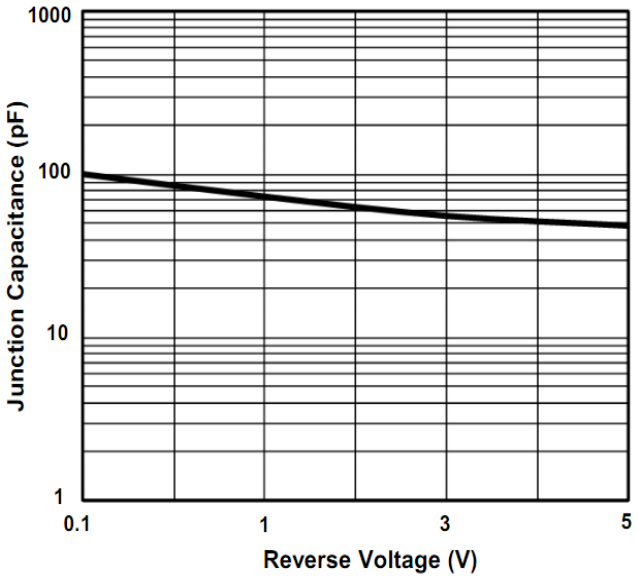
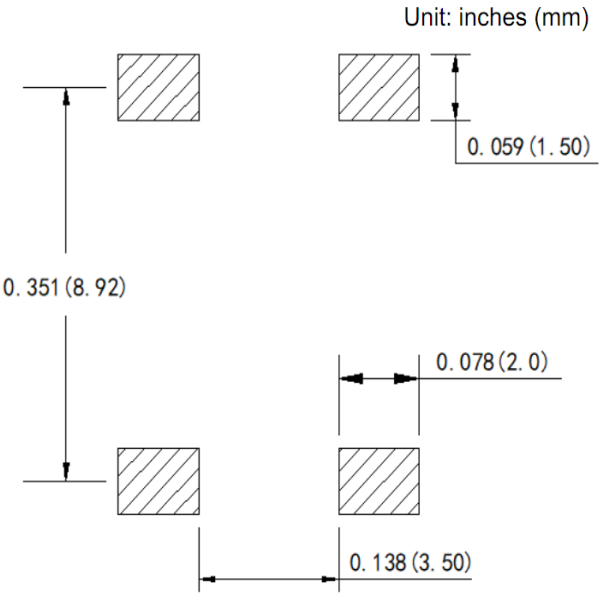


FIG.5 Typical Junction Capacitance per Diode



Suggested PCB printfoot layout



The curve above is for reference only.

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