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Power Electronics Specialists
(formerly Collmer Semiconductor, Inc.)

T10XB Series (SIP)

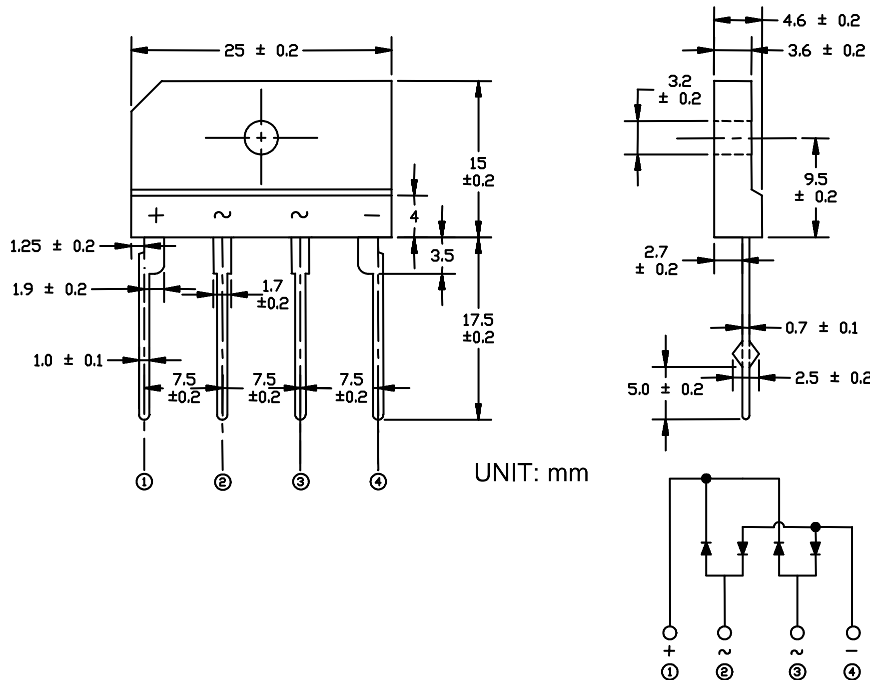
10-AMPERE SILICON BRIDGE RECTIFIER

FEATURES

- Low Reverse Leakage Current
- Surge Overload Rating to 120A Peak
- Ideal for Printed Circuit Board Applications
- Epoxy Material – UL Recognition Flammability Classification 94V-0

Mechanical Data

- Case: Molded Epoxy Resin
- Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Molded on Body



Maximum Ratings & Characteristics

Single Phase, 60 Hz, Resistive or Inductive Load
T_a = 25ºC Unless Otherwise Specified

CHARACTERISTIC	SYMBOL	T10XB40	T10XB60	T10XB80	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	400	600	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	280	420	560	V
Average Rectified Output Current @ T_C = 108ºC w/ cooling fin	Io	10.0			A
Average Rectified Output Current @ T_a = 25ºC w/o cooling fin	Io	2.7			A
Non-Repetitive Peak Forward Surge Current 10 mS single half sine-wave superimposed on rated load	I_{FSM}	120			A
Maximum Forward Voltage per Element, I_F = 5.0 A	V_F	1.05			V
Peak Reverse Current per element at V_R = V_{RRM}	I_R	10			µA
Operating and Storage Temperature Range	T_J ,T_{stg}	-40 to +150			°C

Reference Table for Heat-Sink Size

Average Rectified Output Current in Amps	3.0	5.0	7.5	9	11
Cooling Fin Single-face Area S1 (cm^2)	4	75	180	500	900
Cooling Fin Single-face Area S2 (cm^2)	8	65	100	310	490

Note: Vertical Mounting at T_a = 40ºC. HS Material: S1 = 1.5mm-Thick Aluminum, S2 = 3.0mm-Thick Copper

Manufactured by Tianjin Zhong – Huan Semiconductor Co., Ltd.

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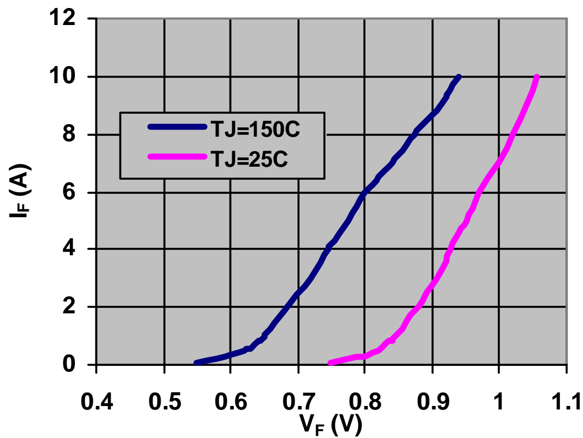

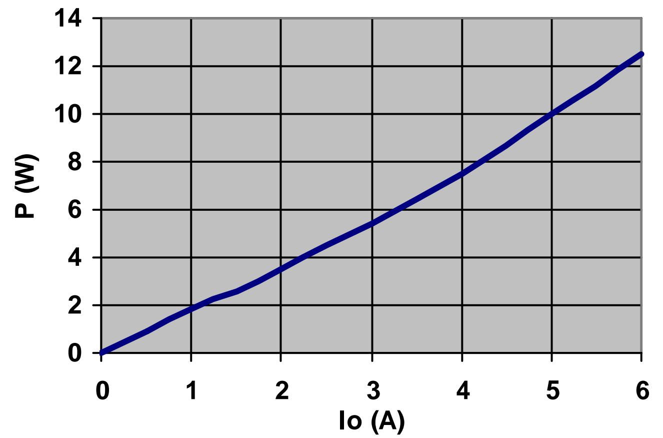

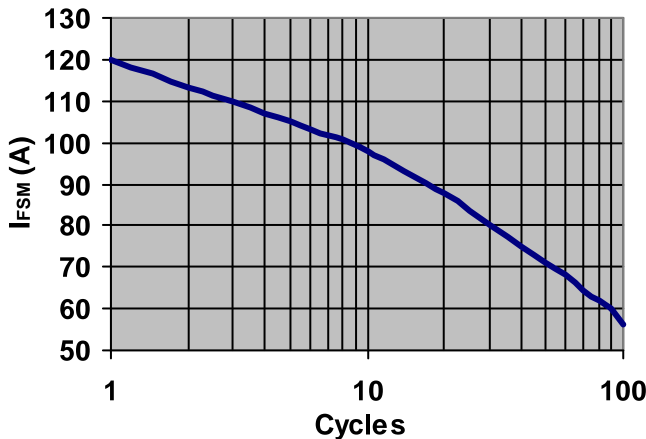

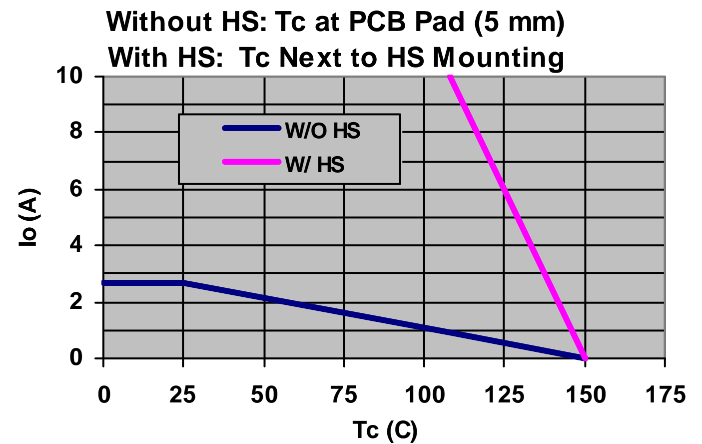

In order to avoid damaging devices, please observe the following precautions:

1. When using automated soldering equipment, use 60/40 (Sn/Pb) solder (melting point of 180ºC) with a neutral flux similar to rosin. Preheat time should be limited to 1 – 2 minutes at 150ºC.
2. When using a soldering iron, use a tip temperature of less than 300ºC (or a soldering iron power of less than 60W). Keep the soldering time below 5 seconds.
3. After soldering, remove any flux residue to avoid corrosion.
4. Because over-voltage or over-current testing may cause permanent damage to the devices, be sure to check the test equipment for proper voltage, current and ground connection prior to beginning the test.
5. If the devices are to be encapsulated, they should be cleaned and dried at 120º ± 5ºC for at least 24 hours prior to encapsulation. Test for compatibility between the device package and the encapsulation material.

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