

# **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



- 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

CHARACTERISTIC	SYMBOL	T10XB40	T10XB60	T10XB80	UNIT
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	400	600	800	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	280	420	560	V
Average Rectified Output Current @ $T_c = 108^{\circ}C$ w/ cooling fin	lo		10.0	7-0	А
Average Rectified Output Current @ $T_a = 25^{\circ}C$ w/o cooling fin	lo	2.7			А
Non-Repetitive Peak Forward Surge Current 10 mS single half sine-wave superimposed on rated load	I <sub>FSM</sub>	120			A
Maximum Forward Voltage per Element, I <sub>F</sub> = 5.0 A	VF	1.05			V
Peak Reverse Current per element at $V_R = V_{RRM}$	I <sub>R</sub>	10			μA
Operating and Storage Temperature Range	T <sub>J</sub> ,Tstg	(	-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 <sup>2</sup> )	4	75	180	500	900	
Cooling Fin Single-face Area S2 (cm <sup>2</sup> )	8	65	100	310	490	
Nata Martine Martine at T., 1000, U.O.Matarial, O.C., A Franz Thial, Aluminum, O.O., O.O., Thial, O., and						

Note: Vertical Mounting at  $T_a = 40^{\circ}$ C. 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 180°C) with a neutral flux similar to rosin. Preheat time should be limited to 1 – 2 minutes at 150°C.

0

0

25

50

75

100

Tc (C)

125

150

175

2. When using a soldering iron, use a tip temperature of less than 300°C (or a soldering iron power of less than 60W). Keep the soldering time below 5 seconds.

100

3. After soldering, remove any flux residue to avoid corrosion.

10

Cycles

- 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.
- If the devices are to be encapsulated, they should be cleaned and dried at 120° ± 5°C for at least 24 hours prior to encapsulation. Test for compatibility between the device package and the encapsulation material.

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