

# CP1000 THRU CP1008

## SINGLE-PHASE SILICON BRIDGE

VOLTAGE - 50 to 800 Volts CURRENT - P.C. MTG 3A, HEAT-SINK MTG 10A

### FEATURES

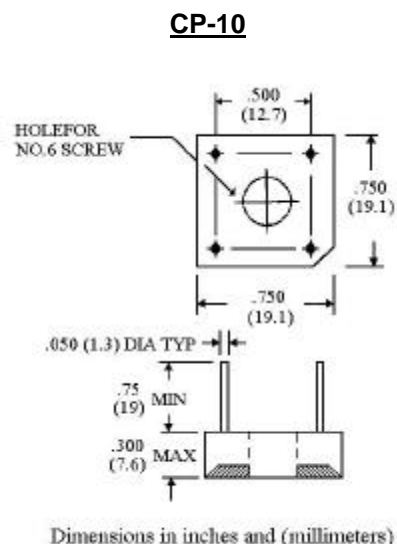
- Surge overload rating—200 Amperes peak
- Low forward voltage drop and reverse leakage
- Small size, simple installation
- Plastic package has Underwriter Laboratory Flammability Classification 94V-O
- Reliable low cost construction utilizing molded plastic technique

### MECHANICAL DATA

Case: Molded plastic with heatsink integrally mounted in the bridge encapsulation

Terminals: Leads solderable per MIL-STD-202, Method 208

Weight: 0.21 ounce, 6.1 grams



### MACXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

At 25 °C ambient temperature unless otherwise noted; resistive or inductive load at 60Hz .

	CP1000	CP1001	CP1002	CP1004	CP1006	CP1008	UNITS
Max Recurrent Peak Rev Voltage	50	100	200	400	600	800	V
Max Bridge Input Voltage RMS	35	70	140	280	420	560	V
Max Average Rectified Output at $T_C=50\text{ }^{\circ}\text{C}$ *	10.0						A
See Fig. 2 at $T_C=100\text{ }^{\circ}\text{C}$ *	3.0						A
at $T_A=50\text{ }^{\circ}\text{C}$ **	3.0						
Peak One Cycle Surge Overload Current	200						A
Max Forward Voltage Drop per element at 5.0A DC & 25 °C. See Fig. 3	1.1						V
Max Rev Leakage at rated Dc Blocking Voltage per element at 25 °C	10.0						Eg A
See Fig 4 at 100 °C	1.0						mA
Typical junction capacitance per leg (Note 4) C <sub>J</sub>	200						pF
I <sup>2</sup> t Rating for fusing ( $t < 8.3\text{ms}$ )	164						A <sup>2</sup> S
Typical Thermal Resistance (Note 2) R $\theta$ KJA	25						°C/W
Typical Thermal Resistance (Note 3) R $\theta$ KJC	5						
Operating Temperature Range	-55 TO +125						°C
Storage Temperature Range	-55 TO +150						°C

#### NOTES:

\* Unit mounted on metal chassis.

\*\* Unit mounted on P.C. board.

1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
2. Units Mounted in free air, no heatsink. P.C.B at 0.375" (9.5mm) lead length with 0.5"  $\times$  0.5" (12.7  $\times$  12.7mm) copper pads.
3. Units Mounted on a 3.0"  $\times$  3.0"  $\times$  0.11" thick (7.5  $\times$  7.5  $\times$  0.3cm) AL plate heatsink.
4. Measured at 1.0MHZ and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES

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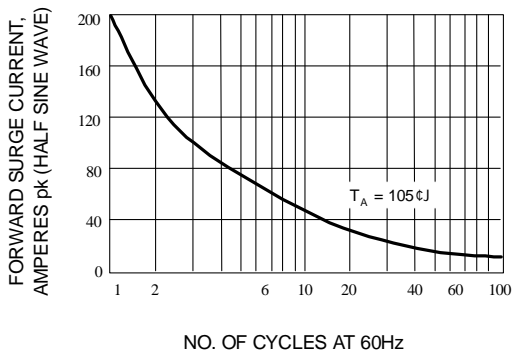


Fig. 1-NON-RECURRENT SURGE RATING

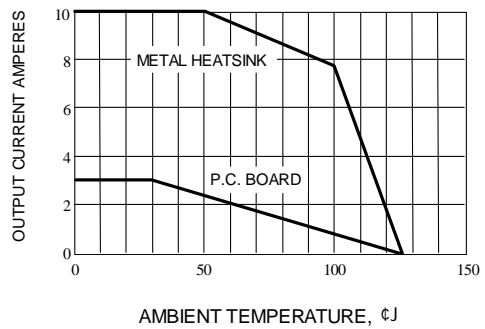


Fig. 2-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

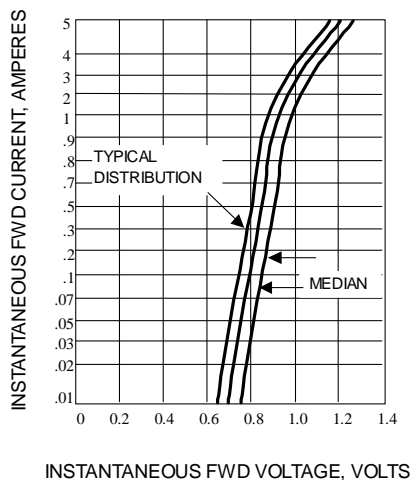


Fig. 3-TYPICAL FORWARD CHARACTERISTICS(25 °C)

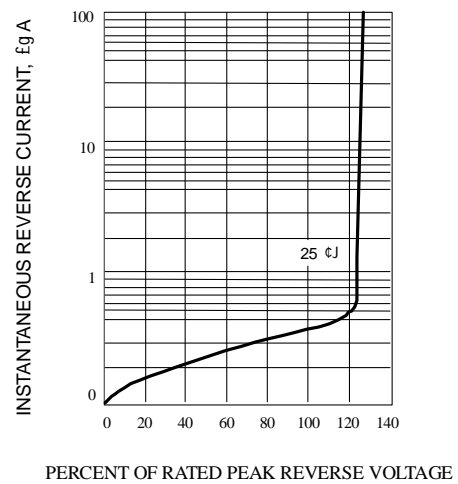


Fig. 4-REVERSE CHARACTERISTICS