

CP300 THRU CP3010

SINGLE-PHASE SILICON BRIDGE-P.C. MTG 2A, HEAT-SINK MTG 3A
VOLTAGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

CP-3

 Recognized File #E111753

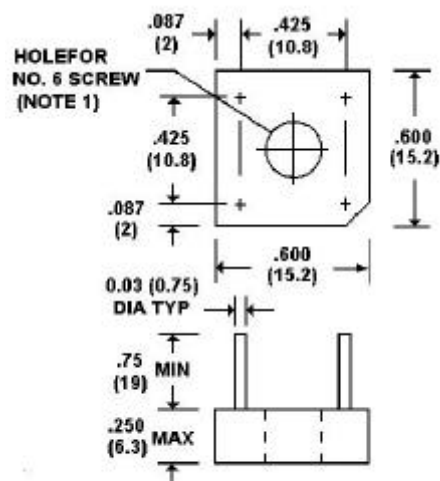
FEATURES

- Surge overload rating—50 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

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

Weight: 0.08 ounce, 2.5 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	CP300	CP301	CP302	CP304	CP306	CP308	CP3010	UNITS
Max Recurrent Peak Rev Voltage	50	100	200	400	600	800	1000	V
Max Bridge Input Voltage RMS	35	70	140	280	420	560	700	V
Max Average Rectified Output at $T_C=50\text{ }^{\circ}\text{C}$ * See Fig.2 at $T_A=25\text{ }^{\circ}\text{C}$ **	3.0 2.0							A
Peak One Cycle Surge Overload Current	50							A
Max Forward Voltage Drop per element at 1.5A DC & 25 °C. See Fig.3	1.0							V
Max Rev Leakage at Rated DC Blocking Voltage per element at 25 °C See Fig.4 at 100 °C	10.0 1.0							µg A mA
I^2t Rating for fusing ($t<8.3\text{ms}$)	15.0							A ² Sec
Typical Junction capacitance per leg(Note 4)CJ	21.0							pF
Typical Thermal Resistance per leg(Note 2) R θ KJA (Note 3) R θ KJL	12.0 8.0							°C/W
Operating Temperature Range	-55 TO +125							°C
Storage Temperature Range	-55 TO +150							°C

NOTES:

1. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw.
2. Unit mounted on 4.0 \times 4.0 \times 0.11" thick (10.5 \times 10.5 \times 0.3cm) AL. Plate.
3. Unit mounted on P.C.B at 0.375"(9.5mm) lead length with 0.5 \times 0.5" (12 \times 12mm) copper pads.
4. Measured at 1 MHz and applied reverse voltage of 4.0 Volts.

RATING AND CHARACTERISTIC CURVES

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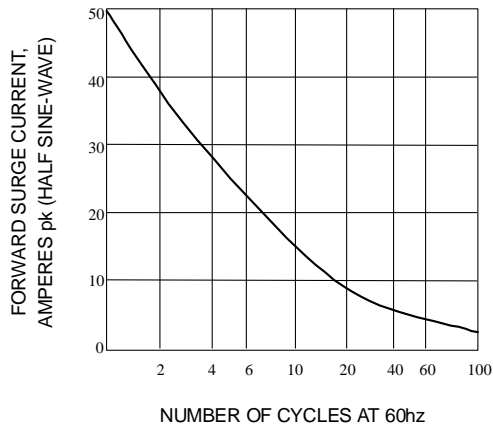


Fig. 1- NON-RECURRENT SURGE RATING

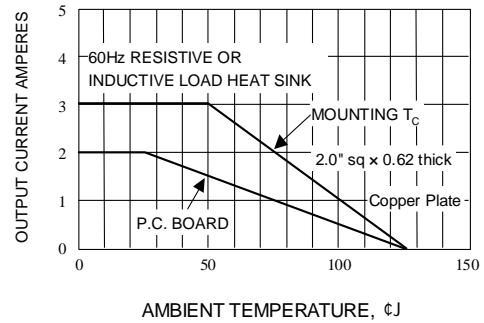


Fig. 2- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

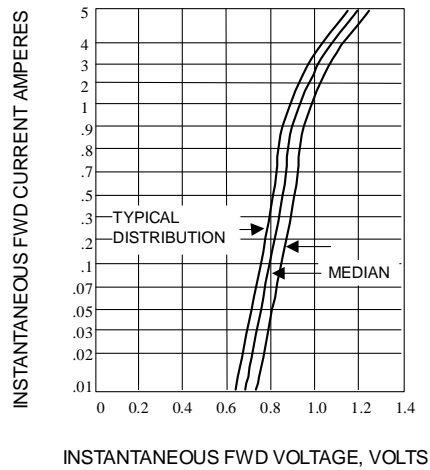


Fig. 3- TYPICAL FORWARD CHARACTERISTICS(25°C)

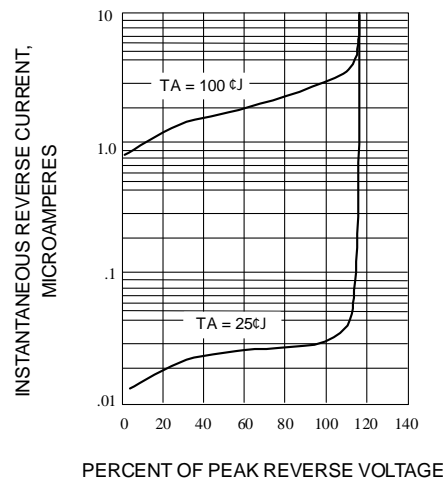


Fig. 4- TYPICAL REVERSE CHARACTERISTICS