



# DATA SHEET

## CP1500 ~ CP15010

### HIGH CURRENT SILICON BRIDGE RECTIFIER

**VOLTAGE - 50 to 1000 Volts CURRENT - 15 Amperes**

**Recognized File # E111753**

#### FEATURES

- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- The plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- Surge overload ratings to 400 Amperes .

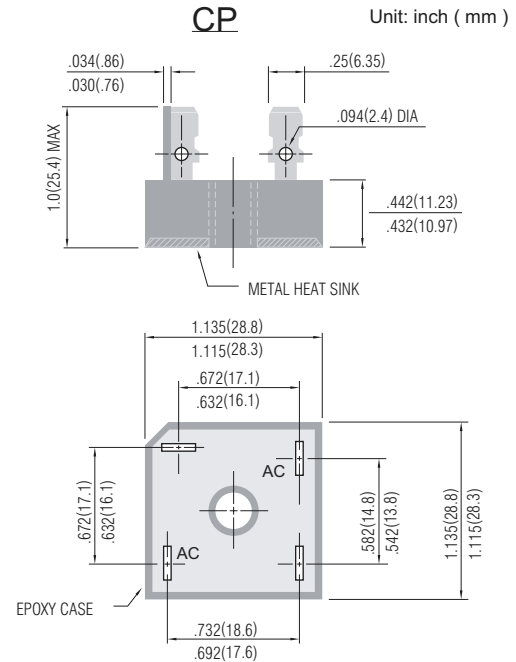
#### MECHANICAL DATA

Case: Molded plastic with heatsink integrally mounded in the bridge encapsulation.

Terminals: Plated .25" FASTON

Mounting position: Any

Weight: 1 ounce, 30 grams



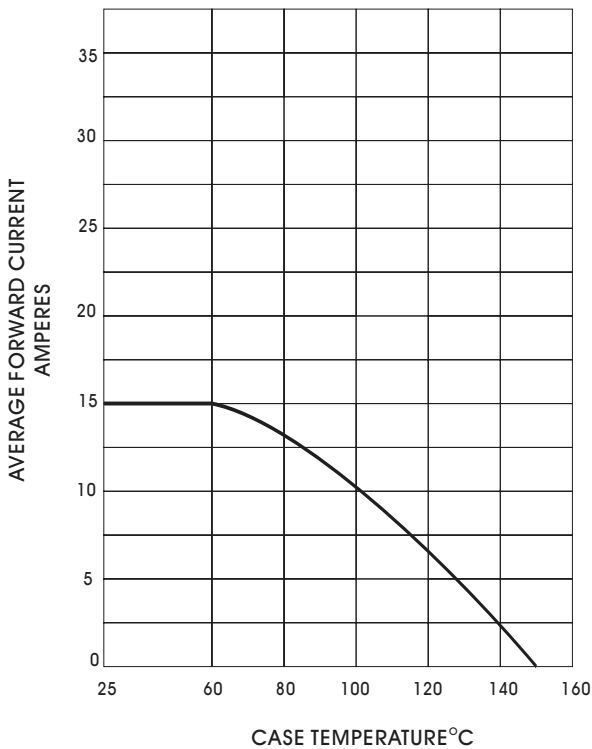
#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
For Capacitive load derate current by 20%.

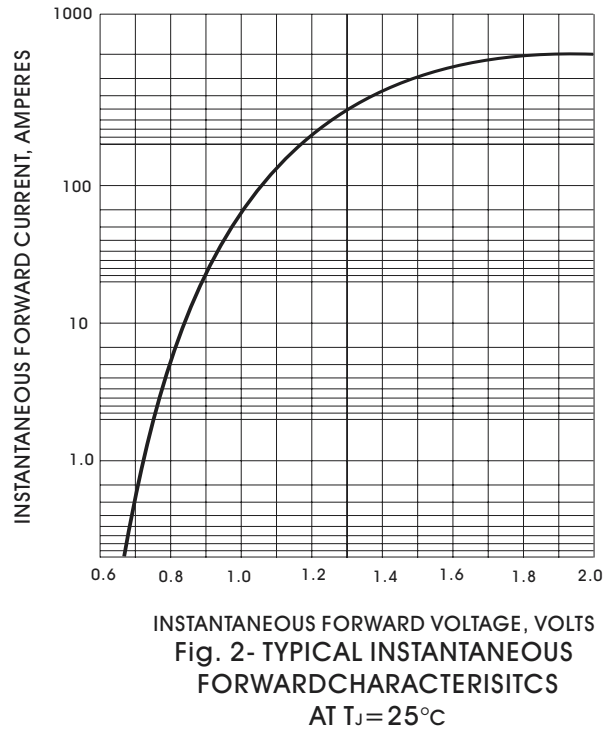
	CP1500	CP1501	CP1502	CP1504	CP1506	CP1508	CP15010	UNIT
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Input Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
DC Output Voltage, Resistive load	30	63	124	250	380	505	630	V
DC Output Voltage, Capacitive load	50	100	200	400	600	800	1000	V
Maximum Average Forward Current For Resistive Load at TC=55°C	15							A
Non-repetitive Peak Forward Surge Current at Rated Load	300							A
Maximum Forward Voltage per Bridge Element at 7.5A Specified Current	1.1							V
Maximum Reverse Leakage Current at Rated @ T <sub>A</sub> =25°C	10.0							μA
Dc Blocking Voltage @ T <sub>A</sub> =100°C	1000							
I <sup>2</sup> t Rating for fusing ( t<8.35ms)	374							A <sup>2</sup> S
Typical Thermal Resistance per leg (Fig 3) RθJC	2.0							°C / W
Operating Temperature Range, T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range, T <sub>A</sub>	-55 to +150							°C



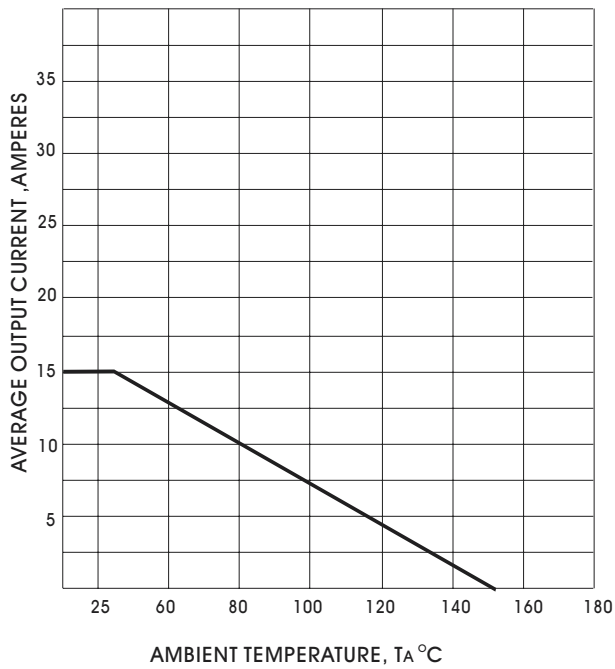
**RATING AND CHARACTERISTIC CURVES**



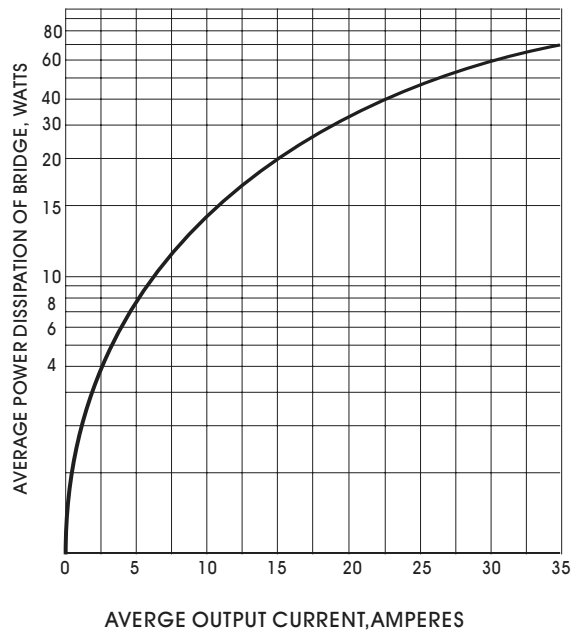
**Fig. 1 - OUTPUT CURRENT VS. CASE TEMPERATURE  
RESISTIVE OR INDUCTIVE LOAD  $T_J = 150^\circ\text{C}$**



**Fig. 2- TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS  
AT  $T_J = 25^\circ\text{C}$**



**Fig. 3- OUTPUT CURRENT VS. AMBIENT TEMPERATURE  
RESISTIVE OR INDUCTIVE LOAD  
BRIDGE MOUNTED ON A 8" x 8" ALUMINUM PLATE 25" THICK**



**Fig. 4- POWER DISSIPATION VS. AVERAGE OUTPUT  
CURRENT RESISTIVE OR INDUCTIVE LOAD  
 $T_J = 150^\circ\text{C}$**