

DATA SHEET

CM5000~CM50010

HIGH CURRENT SILICON BRIDGE RECTIFIER

VOLTAGE 50 to 1000 Volts CURRENT - 50 Ampere



Recognized File # E111753

FEATURES

- Metal Case for Maximum Heat Dissipation.
- Surge Overload Ratings to 400 Amperes.
- These bridges are on the U/L Recognized Products List for currents of 50 amperes.

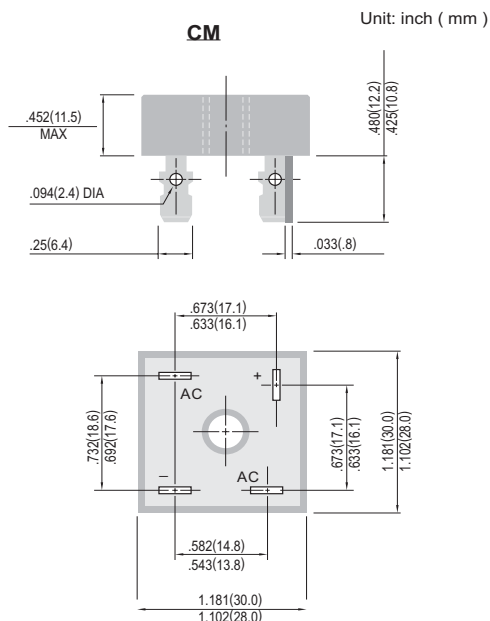
MECHANICAL DATA

Case: Metal

Terminals: Plated 25" FASTON

Mounting Position: Any

Weight: 1.0 ounce, 30 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, Resistive or inductive load.

For capacitive load, derate current by 20%

| | CM5000 | CM5001 | CM5002 | CM5004 | CM5006 | CM5008 | CM50010 | UNITS |
|---|-------------|--------|--------|--------|--------|--------|---------|----------------------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Bridge input Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current $T_A=55^{\circ}\text{C}$ | 50.0 | | | | | | | A |
| Non-repetitive Peak Forward Surge Current , rated load | 400 | | | | | | | A |
| Maximum Forward Voltage per Bridge Element Specified Current at 25A | 1.2 | | | | | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage per element | 10.0 | | | | | | | μA |
| I^2t Rating for fusing ($t < 8.35 \text{ ms}$) | 664 | | | | | | | A^2S |
| Typical Thermal resistance (Fig 3) R θJC | 2.5 | | | | | | | $^{\circ}\text{C/W}$ |
| Operating Temperature Range T_J | -55 to +150 | | | | | | | $^{\circ}\text{C}$ |
| Storage Temperature Range T_A | -55 to +150 | | | | | | | $^{\circ}\text{C}$ |

NOTES: *Unit mounted on metal heat-sink

RATING AND CHARACTERISTIC CURVES

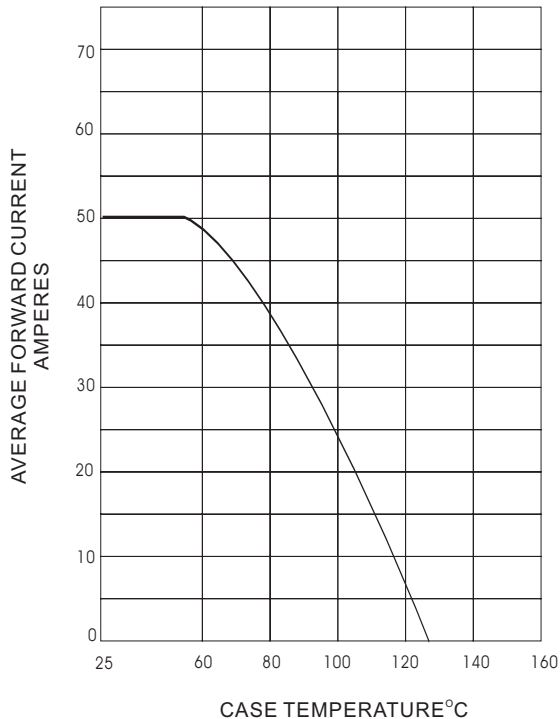


Fig. 1- OUTPUT CURRENT VS. CASE TEMPERATURE
RESISTIVE OR INDUCTIVE LOAD $T_J=150^{\circ}\text{C}$

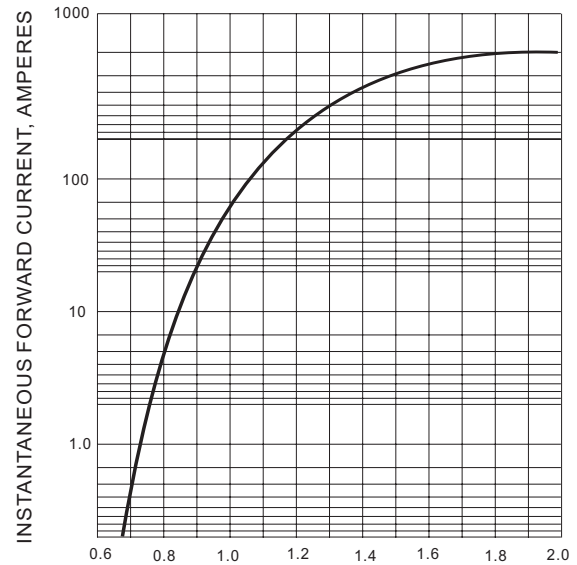


Fig. 2- TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS
AT $T_J=25^{\circ}\text{C}$

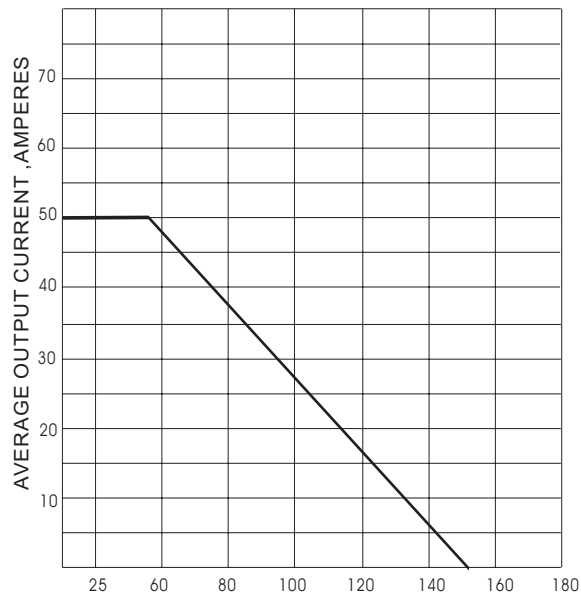


Fig. 3- OUTPUT CURRENT VS. AMBIENT TEMPERATURE
RESISTIVE OR INDUCTIVE LOAD
BRIDGE MOUNTED ON A 8" x 8" ALUMINUM PLATE 25" THICK

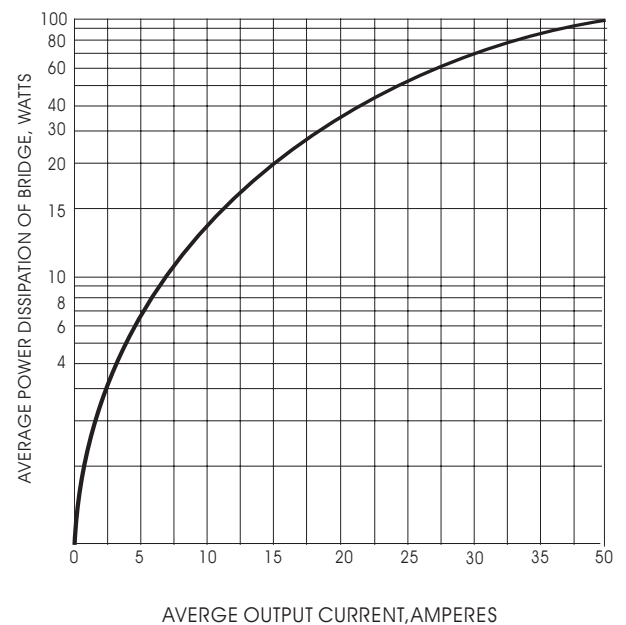


Fig. 4- POWER DISSIPATION VS. AVERAGE OUTPUT
CURRENT RESISTIVE OR INDUCTIVE LOAD
 $T_J=150^{\circ}\text{C}$