



# DATA SHEET

## CM5000~CM50010

**HIGH CURRENT SILICON BRIDGE RECTIFIER**  
**VOLTAGE 50 to 1000 Volts CURRENT - 50 Ampere**



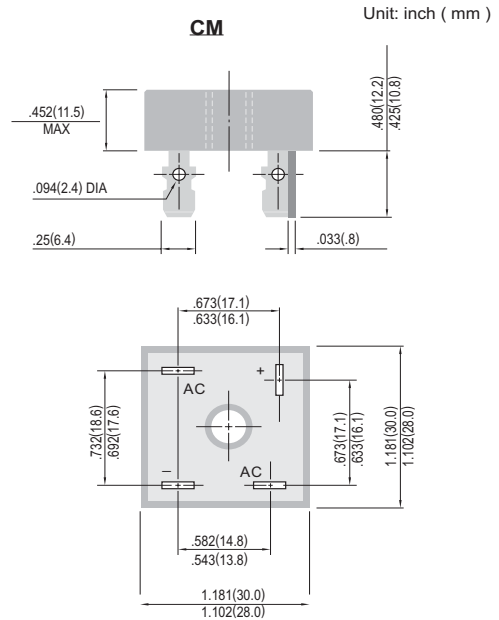
Recognized File # E111753

### 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

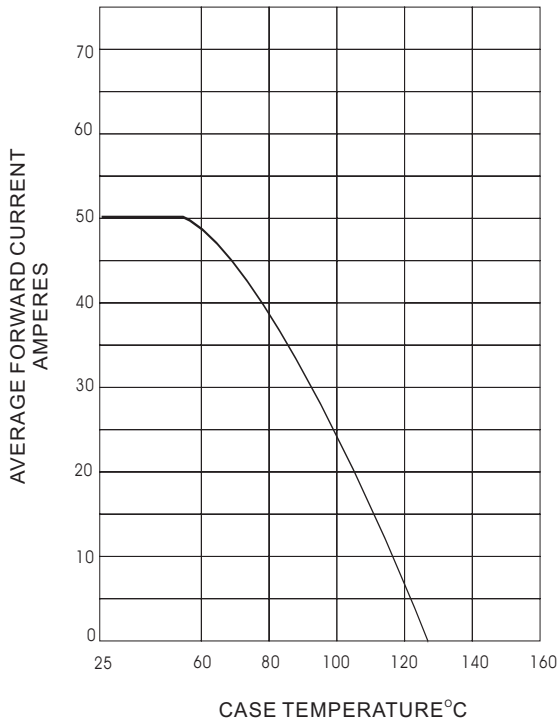
Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, Resistive or inductive load.  
For capacitive load, derate current by 20%

	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							$\mu\text{A}$
$I^2t$ Rating for fusing ( $t < 8.35$ ms)	664							$\text{A}^2\text{S}$
Typical Thermal resistance ( Fig 3) $R_{\theta\text{JC}}$	2.5							$^\circ\text{C}/\text{W}$
Operating Temperature Range $T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range $T_A$	-55 to +150							$^\circ\text{C}$

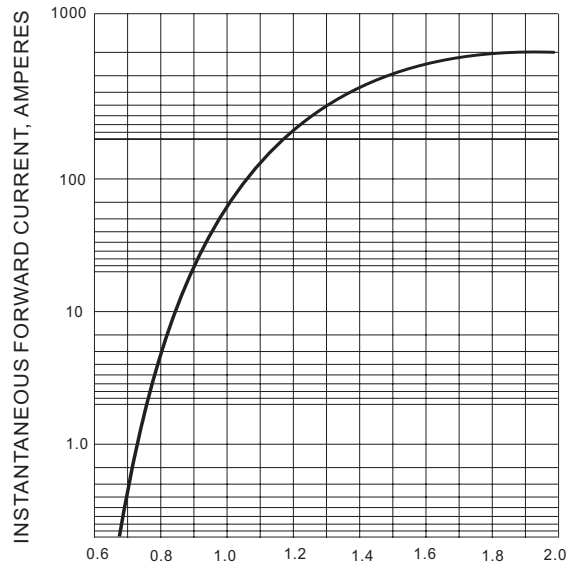
NOTES: \*Unit mounted on metal heat-sink



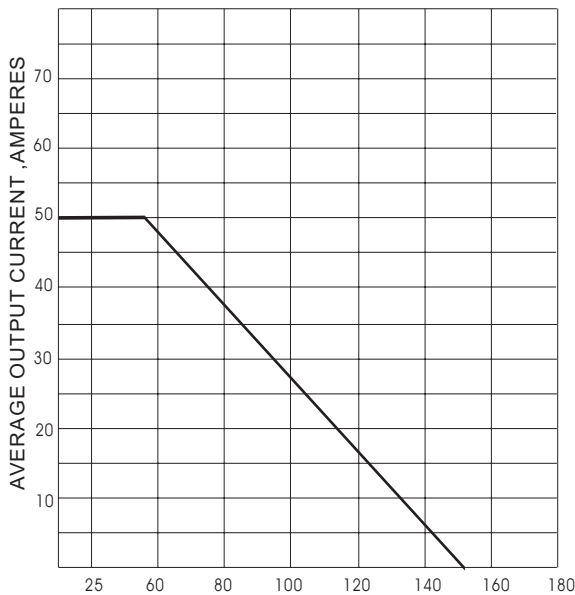
**RATING AND CHARACTERISTIC CURVES**



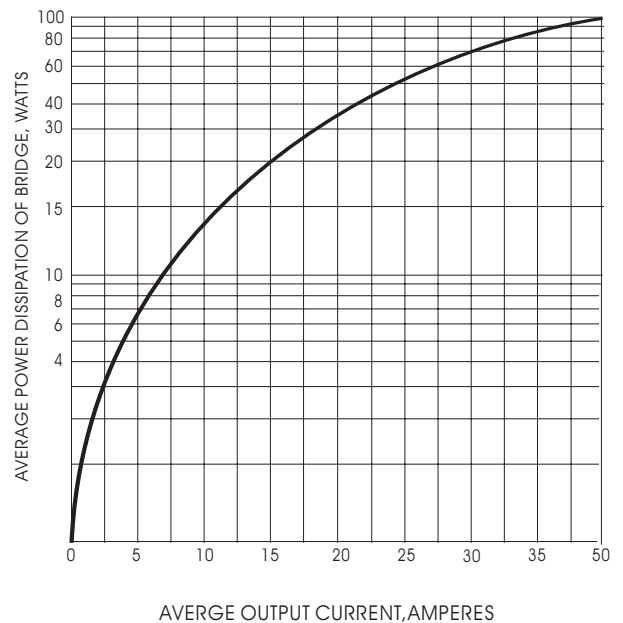
**Fig. 1- OUTPUT CURRENT VS. CASE TEMPERATURE  
RESISTIVE OR INDUCTIVE LOAD  $T_J=150^{\circ}\text{C}$**



**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  
 $T_J=150^{\circ}\text{C}$**