



Micro Commercial Components

Micro Commercial Components  
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# MB5005 THRU MB5010

## Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 400 Amps
- UL Recognized File # E165989
- Case to Terminal Isolation Voltage 2500V (RMS)

## Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB5005	MB5005	50V	35V	50V
MB501	MB501	100V	70V	100V
MB502	MB502	200V	140V	200V
MB504	MB504	400V	280V	400V
MB506	MB506	600V	420V	600V
MB508	MB508	800V	560V	800V
MB5010	MB5010	1000v	700V	1000v

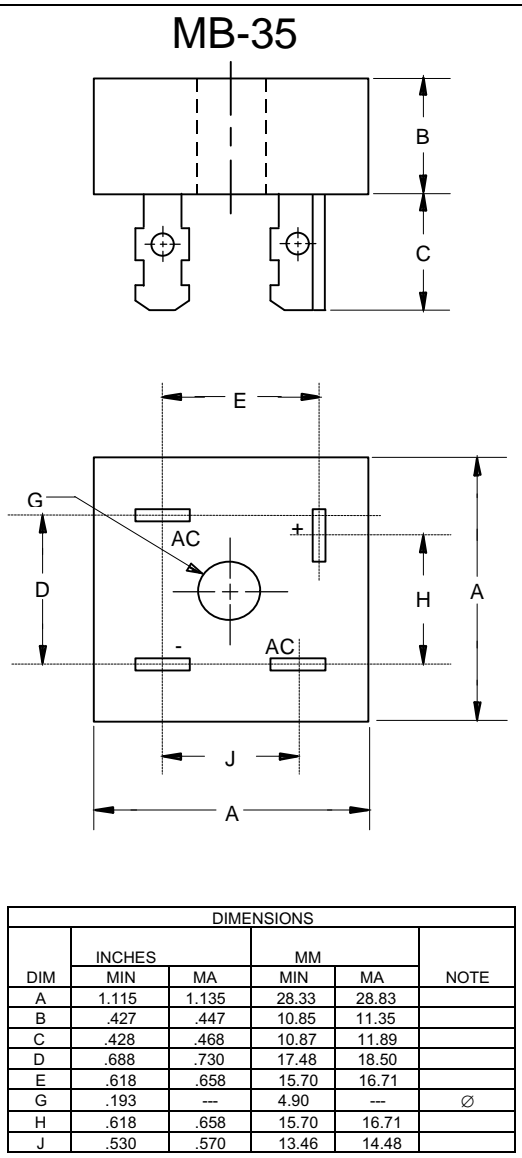
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	50.0A	$T_C = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	400A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element *	$V_F$	1.2V	$I_{FM} = 25\text{A per element};$ $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	1 $\mu$ A 1mA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	1.5K/W	Per element

Note: 1. Thermal resistance junction to case mounted on heatsink.

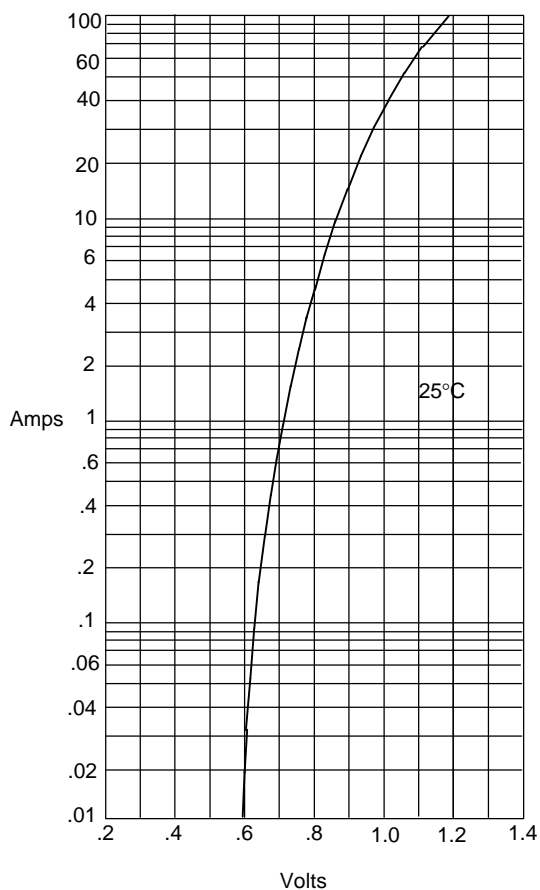
\*Pulse test: Pulse width 300  $\mu$ sec, Duty cycle 1%

## 50 Amp Single Phase Bridge Rectifier 50 to 1000 Volts



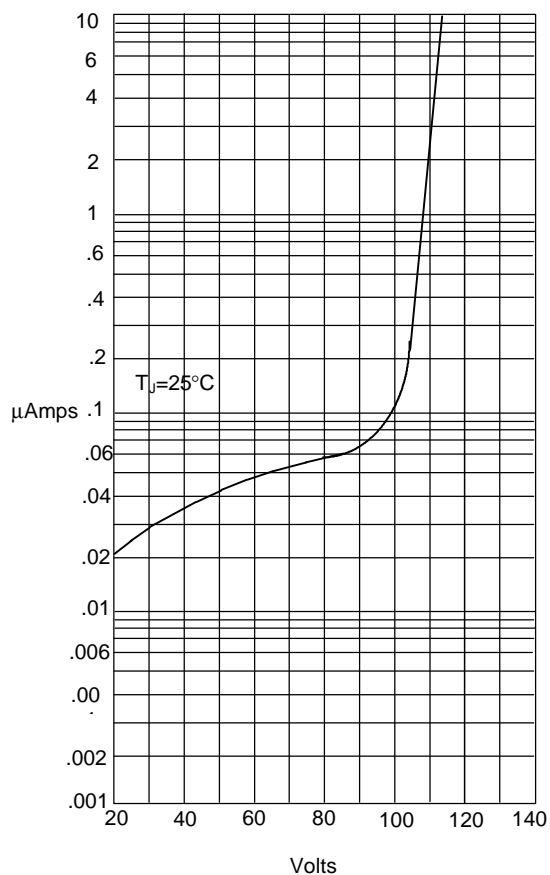
## MB5005 thru MB5010

Figure 1  
Typical Forward Characteristics



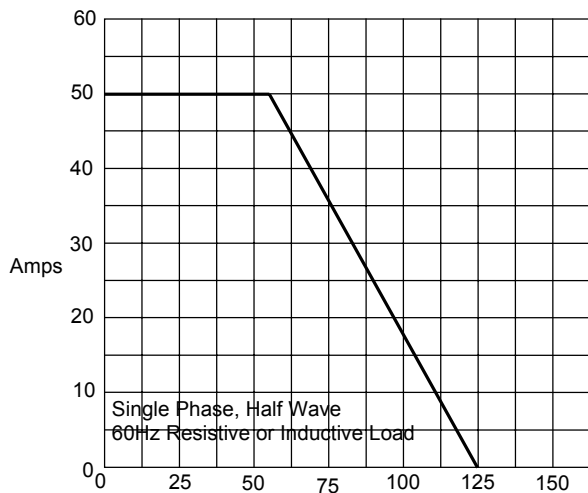
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



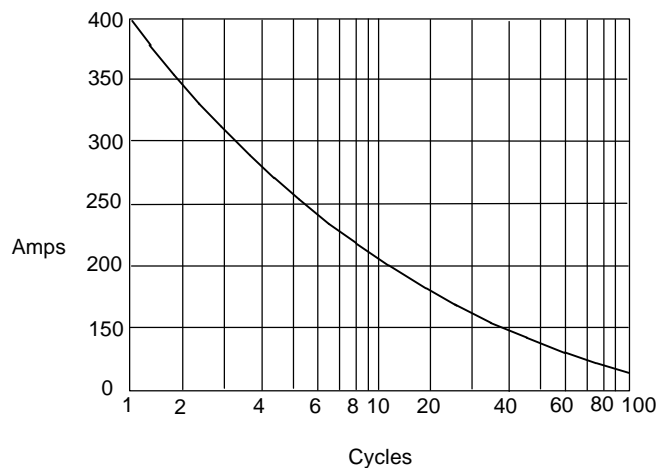
Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Single Phase, Half Wave  
60Hz Resistive or Inductive Load  
Mounted on a 220x220x50mm AL plate heatsink  
Average Forward Rectified Current - Amperes versus  
Case Temperature - °C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles



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