

# Single-Phase Bridge Rectifier 50.0A MP Package

MP50 Series

MERITEK

## FEATURE

- Operating Temperature: -55 ~ +150°C
- Average Forward Rectified Output Current 50.0A
- Repetitive Reverse Voltage from 50~1000V
- Surge Overload Ratings to 400A
- Integrally Molded Heat Sinks Provide Low Thermal Resistance
- Flammability Classification 94V-0
- Hole for # 10 Screw
- UL Safety Approved: Certification No: E223027



## MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

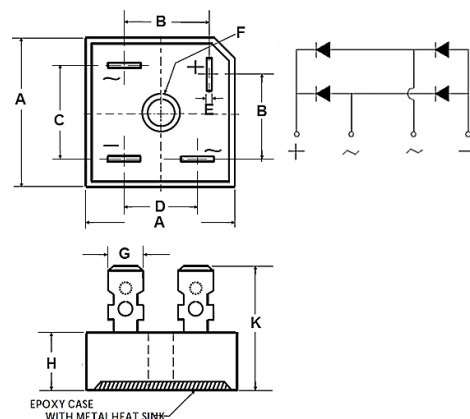


Parameter	Code	MP 50005	MP 5001	MP 5002	MP 5004	MP 5006	MP 5008	MP 5010	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Output Current	I <sub>F</sub>	50, T <sub>A</sub> =55°C							A
Peak Forward Surge Current Single Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	400							A
Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	664							A <sup>2</sup> sec
Maximum Instantaneous Forward Voltage Drop per Diode	V <sub>F</sub>	1.0, I <sub>F</sub> =25.0A							V
Maximum DC Reverse Current at Rated DC Blocking Voltage per Element	I <sub>R</sub>	10, T <sub>A</sub> =25°C							µA
	I <sub>R</sub>	500, T <sub>A</sub> =125°C							µA
Operating Junction and Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	-55~150							°C
Typical Thermal Resistance per Element	R <sub>θJA</sub>	2.1							°C/W

- Note:**
1. Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz. For Capacitive load derate current by 20%.
  2. Thermal resistance from Junction to Ambient on P.C. board mounting.

## DIMENSION AND PIN CONFIGURATION

Item	Min. (mm)	Max. (mm)
A	28.30	28.80
B	15.70	16.70
C	17.60	18.60
D	13.80	14.80
E	0.78	
F	DIA. 5.10	DIA. 5.60
G	6.35	
H	10.97	11.23
K	22.80	25.40



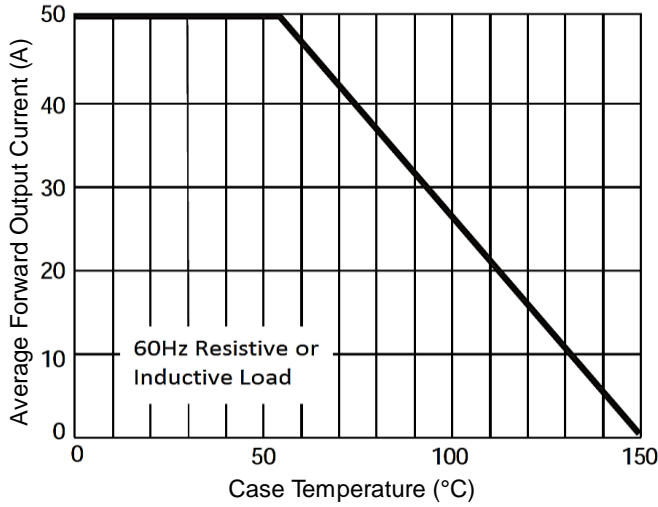
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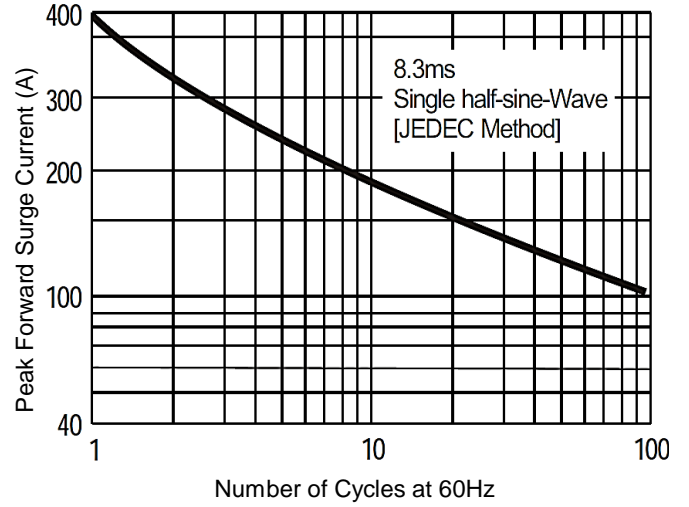
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## RATING AND CHARACTERISTIC CURVES

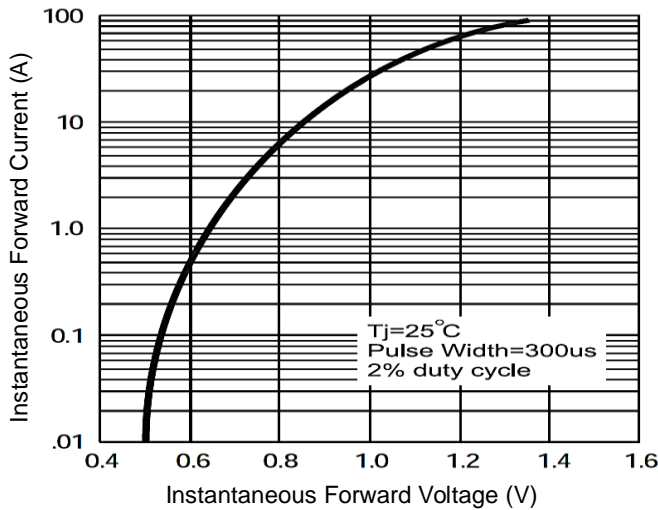
Derating Curve for Output Rectified Current



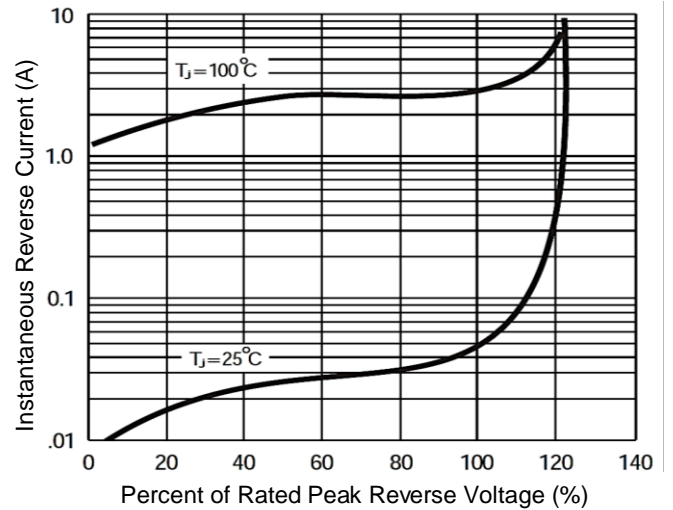
Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics at Tj=25°C



\*Specifications subject to change without notice.