

SENSITRON SEMICONDUCTOR

MP1000 – MP1010 10A BRIDGE RECTIFIER

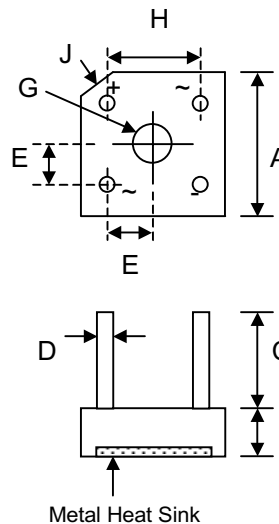
Data Sheet 1318, Rev. A

Features

- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Plastic Material has Underwriters Laboratory Flammability Classification 94V-O
- UL Recognized File # E223064

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Weight: 5.4 grams (approx.)
- Mounting Position: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Marking: Type Number



MP-10				
Dim	Min	Max	Min	Max
A	14.73	15.75	0.580	0.620
B	5.80	6.90	0.228	0.272
C	19.00	—	0.748	—
D	1.00 Ø Typical		0.039 Ø Typical	
E	5.11	6.14	0.201	0.242
G	Hole for #6 screw			
	3.60	4.00	0.142	0.157
H	10.30	11.30	0.406	0.445
J	2.38 X 45°C Typical		0.094 X 45°C Typical	
	In mm		In inch	

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MP 1000	MP 1001	MP 1002	MP 1004	MP 1006	MP 1008	MP 1010	Unit
Peak Repetitive Reverse Voltage	V _{RRM}								
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V _R								
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T _A = 50°C	I _O	10							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	200							A
Forward Voltage (per element) @I _F = 5.0A	V _{FM}	1.1							V
Peak Reverse Current @T _C = 25°C	I _R	10							µA
At Rated DC Blocking Voltage @T _C = 100°C		1.0							
I ² t Rating for Fusing (t<8.3ms) (Note 2)	I ² _t	64							A ² s
Typical Junction Capacitance (Note 3)	C _j	110							pF
Typical Thermal Resistance (Note 4)	R _{θJC}	7.5							K/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +125							°C

- Note: 1. Mounted on heatsink.
2. Non-repetitive, for t > 1ms and < 8.3ms.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
4. Thermal resistance junction to case per element.

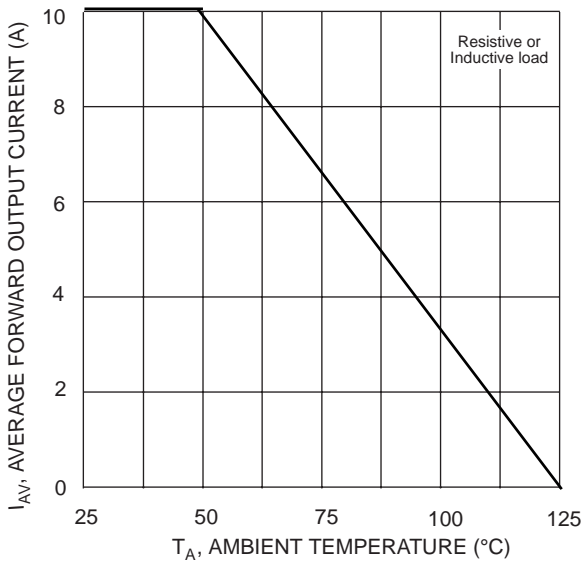


Fig. 1 Forward Current Derating Curve

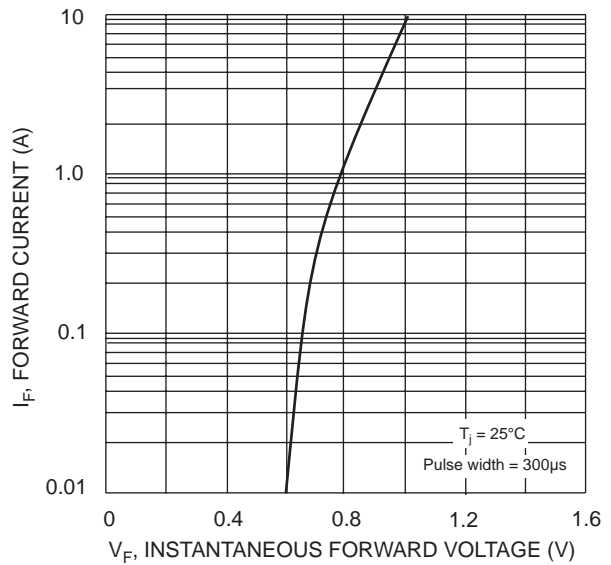


Fig. 2 Typical Forward Characteristics, per element

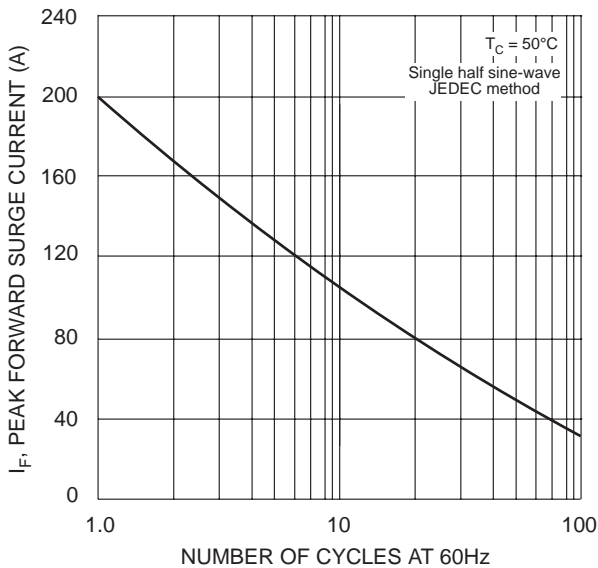


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

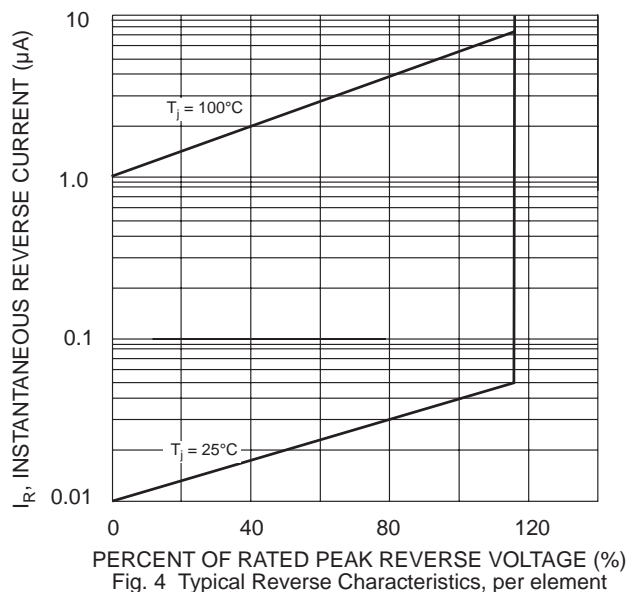


Fig. 4 Typical Reverse Characteristics, per element