SENSITRON
SEMICONDUCTOR

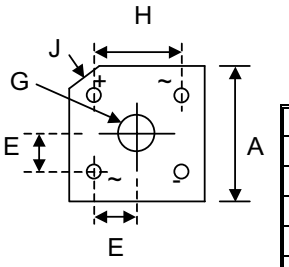
MP1500 – MP1510

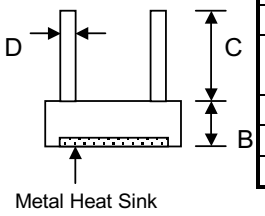
15A BRIDGE RECTIFIER

Data Sheet 1319, 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





MP-15				
Dim	**Min**	**Max**	**Min**	**Max**
A	18.54	19.56	0.730	0.770
B	6.35	7.60	0.25	0.299
C	19.00	—	0.748	—
D	1.27 Ø Typical		0.05 Ø Typical	
E	5.33	7.37	0.210	0.290
G	Hole for #6 screw			
	3.60	4.00	0.142	0.157
H	12.20	13.20	0.480	0.520
J	2.38 X 45°C Typial		0.094 X 45°C Typial	
	In mm		**In inch**	

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

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 1500	MP 1501	MP 1502	MP 1504	MP 1506	MP 1508	MP 1510	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T_C = 70°C	I_O	15							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300							A
Forward Voltage (per element) @I_F = 7.5A	V_{FM}	1.1							V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 100°C	I_R	10 1.0							µA mA
I^2t Rating for Fusing (t<8.3ms) (Note 2)	I^2t	64							A^2s
Typical Junction Capacitance (Note 3)	C_j	110							pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	7.5							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125							°C

Note: 1. Mounted on metal chassis.
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.

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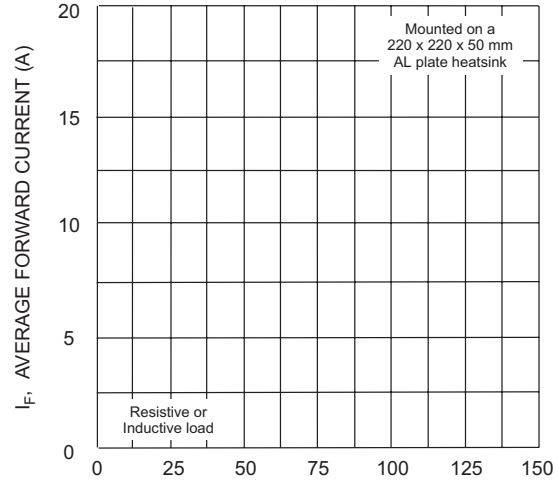

Fig. 1 Forward. Current Derating Curve

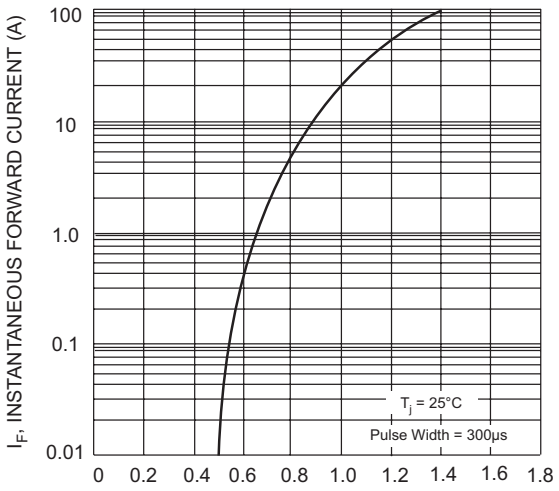

Fig. 2 Typical Forward Characteristics (per element)

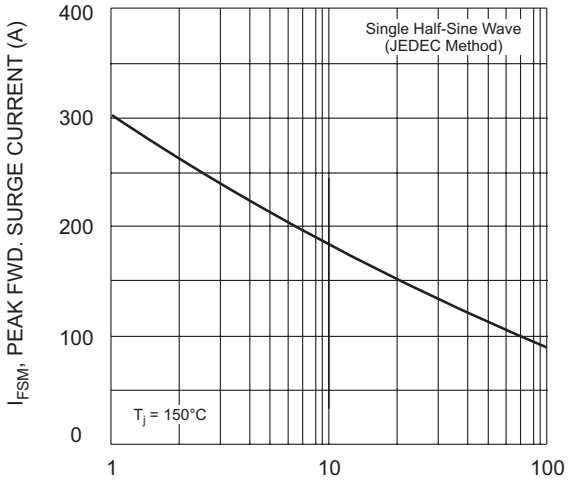

Fig. 3 Max Non-Repetitive Surge Current

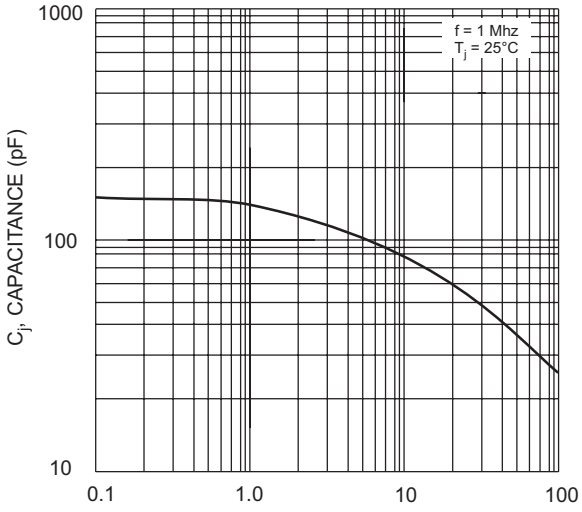

Fig. 4 Typical Junction Capacitance (per element)

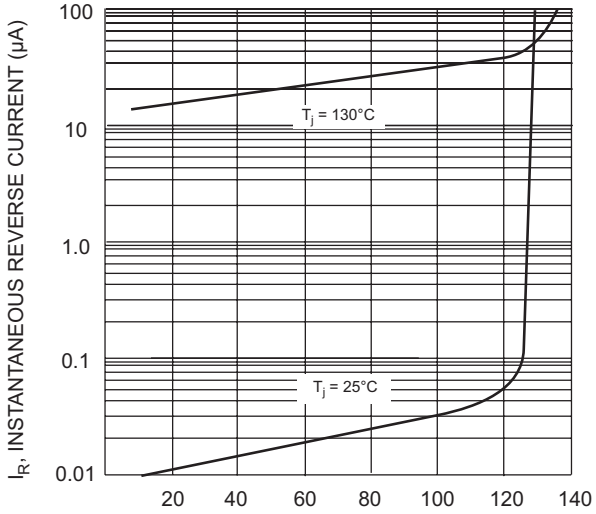

Fig. 5 Typical Reverse Characteristics (per element)

TECHNICAL DATA

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