

Silicon Bridge Rectifiers

MP1000 Thru 1010

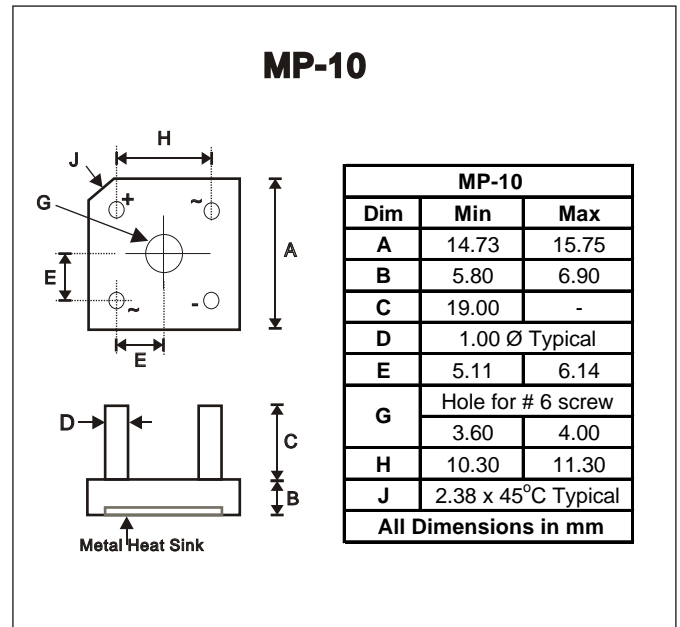
Reverse Voltage: 50 - 1000 Volts
 Forward Current: 10 Amp

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

Mechanical Data

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



Maximum Ratings and Electrical Characteristics

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

CHARACTERISTICS	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 (Note1) @ $T_A = 50^\circ\text{C}$	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) @ $I_F = 5.0\text{A}$	V_{FM}	1.1							V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$	I_R	10							μA
At Rated DC Blocking Voltage @ $T_C = 100^\circ\text{C}$		1.0							mA
I^2t Rating for Fusing ($t < 8.3\text{ms}$) (Note2)	I^2t	64							A^2s
Typical Junction Capacitance (Note3)	C_j	110							pF
Typical Thermal Resistance (Note4)	$R_{\theta JC}$	7.5							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							$^\circ\text{C}$

- Note:**
1. Non-repetitive for $t > 1\text{ms}$ and $< 8.3\text{ms}$.
 2. Thermal resistance junction to ambient mounted on PC board with 13.0 x 13.0 x 0.03mm thick land areas.
 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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Rating and Characteristic Curves (MP1000 thru 1010)

