

MP1000 Thru 1010

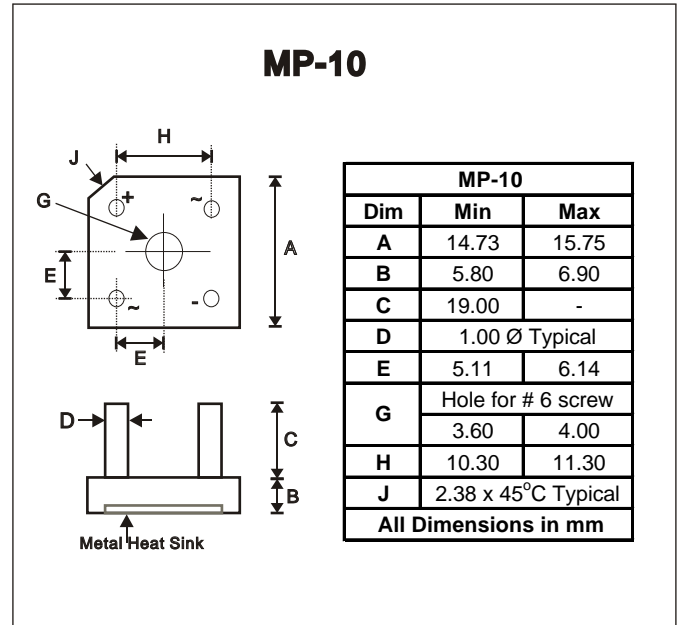
Reverse Voltage: 50 - 1000 Volts
Forward Current: 10 Amp

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 | | | | | | | uA |
| 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 $13.0 \times 13.0 \times 0.03\text{mm}$ 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.

Rating and Characteristic Curves (MP1000 thru 1010)

