Single Phase Bridge Rectifiers

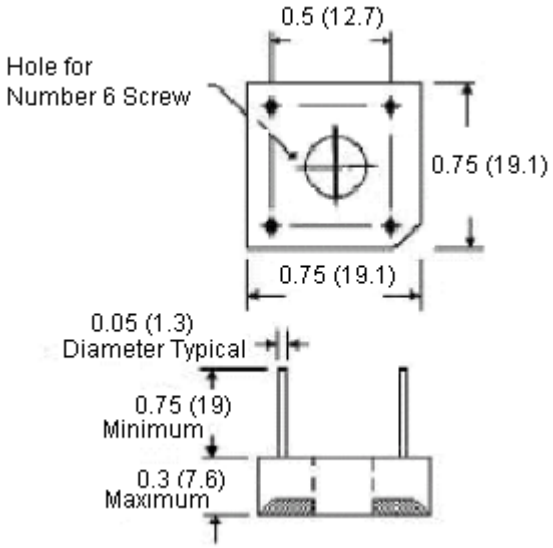
CP 10 A Series

Features:

- High surge current capability
- PCB mounted / screw fixing
- Surge overload rating-200 amperes peak
- Low forward voltage drop and reverse leakage
- Small size, simple installation
- Reliable low cost construction utilizing moulded plastic technique

Mechanical Data

Case : Moulded plastic with heatsink integrally mounted in the bridge encapsulation
Terminals : Lead solderable per MIL-STD-202 method 208



Dimensions : Inches (Millimetres)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise noted; resistive or inductive load at 60 Hz

Parameter	CP1000	CP1001	CP1004	CP1006	CP1008	Units
Maximum Recurrent Peak Reverse Voltage	50	100	400	600	800	V
Maximum Bridge Input Voltage RMS	35	70	280	420	560	
Maximum Average Rectified Output at T_A = 50°C* See Figure 2	10					A
Peak One Cycle Surge Overload Current	200					
Maximum Forward Voltage Drop Per Element at 5 A dc and 25°C See Figure 3	1.1					V
Maximum Reverse Leakage at Rated DC Blocking Voltage Per Element at 25°C See Figure 4 at 100°C	10 1					µA mA
Typical Junction Capacitance Per leg (Note 4) CJ	200					pF
I^2t Rating for Fusing (t <8.3 ms)	164					A^2S

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Parameter	CP1000	CP1001	CP1004	CP1006	CP1008	Units
Typical Thermal Resistance (Note 2) RθJA Typical Thermal Resistance (Note 3) RθJC	25 5					°C / W
Operating Temperature Range	-55 to +125					°C
Storage Temperature Range	-55 to +150					

Notes:

* Unit mounted on PC board

1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with number 6 screw
2. Unit mounted in free air, no heatsink, PCB at 0.375 inches (9.5 mm) lead length with 0.5 × 0.5 inches (12 × 12 mm) copper pads
3. Unit mounted on a 3 × 3 × 0.11 inches thick (7.5 × 7.5 × 0.3 cm) aluminium plate heatsink
4. Measured at 1 MHz and applied reverse voltage of 4 V

Rating and Characteristic Curves

Figure 1 - Non-Recurrent Surge Rating

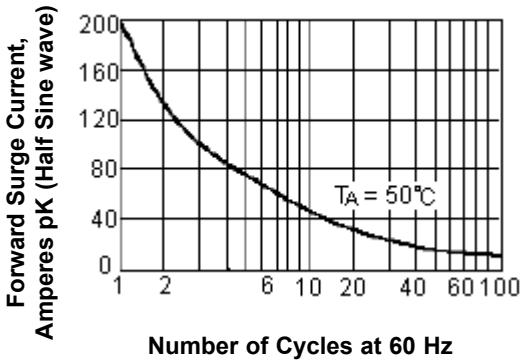


Figure 2 - Derating Curve for Output Rectified Current

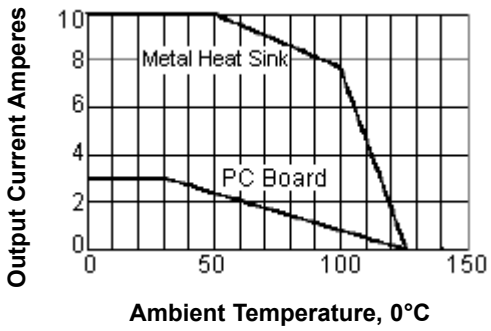


Figure 3 - Typical Forward Characteristics (25°C)

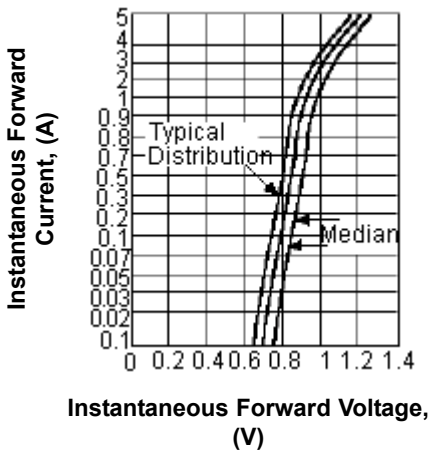
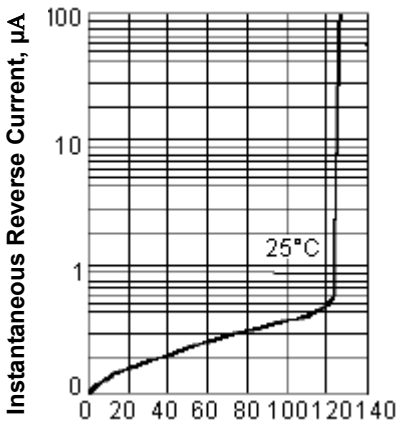


Figure 4 - Reverse Characteristics



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Specification Table

I_o (A) at T_A = 50°C	I_{FSM} (A)	Body		Lead			Current Rating (A)	Part Number
		Height	Width / Depth	Length	Spacing	Diameter (Typical)		
10	200	7.6	19.1	19	12.7	1.3	10	CP1000
								CP1001
								CP1004
								CP1006
								CP1008

Dimensions : Millimetres