

300 Watts

BM80A

Total Power: 300 Watts
Input Voltages: 48V or 300V
No. of Outputs: Single



Electrical Specs

Input

Input Range 180 to 400 VDC or 36 to 72 VDC
 Efficiency 83% typical (5V @ 60A)

Control

Voltage Adjust 80 to 120% V_o
 Enable TTL compatible (low to enable)
 Current Limit Adjust 20 to 100% I_o
 Clock Input (external sync) 3.3 to 5.5Vp-p @ 1MHz \pm 10%
 Clock Output (internal clock) 4.5Vp-p typical @ 1MHz \pm 0.5%
 Power Good/Identification High (V_o) = power good.
 Temperature
 Monitor Output 10 mV/ $^{\circ}$ K (2.73V = 0 $^{\circ}$ C)
 Current Monitor Output 0 to 1mA (1 mA = 100% I_o rated)
 Over Voltage
 Protection Adjust 110 to 150% V_o linear programming

Output

Load Regulation 0.1% typical down to no load
 Line Regulation 0.02% typical
 Noise/Ripple 50mV typical
 Remote sense Up to 0.5V
 Output Voltage
 Adjust Range \pm 20% of nominal output
 Transient Response 3% typical deviation with 250 μ s recovery (25-75% full load)
 Current Share Accuracy 3% typical
 Overvoltage Protection 115% V_o (nominal)
 Current Limit 110% I_o max

Notes

Nominal values apply with sense pins connected and other control pins unconnected.

Specifications subject to change without notice.

Special Features

- 300W Continuous power at 85 $^{\circ}$ C baseplate temperature
- 54W/in³ (3.3W/cm³)
- High efficiency - 83% at full rated output
- 1MHz Fixed frequency
- Low output ripple and noise
- Excellent transient response
- Safety isolated low voltage interface with ALPTM linear control
- High reliability - over 1 million hours MTBF
- Wide input voltage range
- Parallelable with accurate current sharing

Environmental

Operating temperature (baseplate):
 -20 $^{\circ}$ C to +85 $^{\circ}$ C

Storage temperature: -40 $^{\circ}$ C to +105 $^{\circ}$ C

Overtemperature protection: 90 $^{\circ}$ C typical

MTBF: > 1 million hours (50 $^{\circ}$ C baseplate)

Safety

UL L 1950

CSA CSA22.2-234 E132002

CSA22.2-950 LR53982C

VDE IEC950 20396-3336-1005 & 1006

EN60950

CECEMark (LVD)

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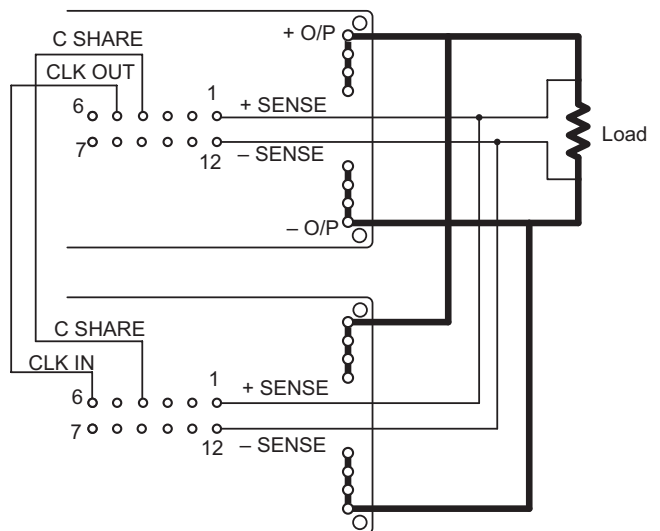
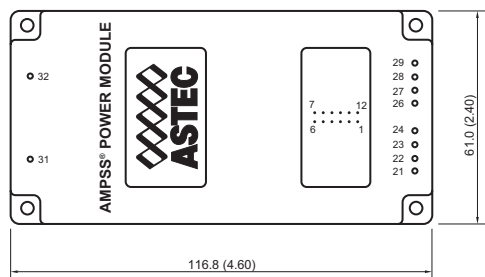
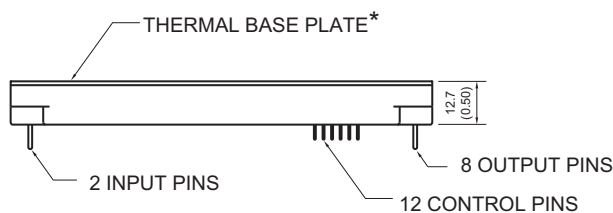
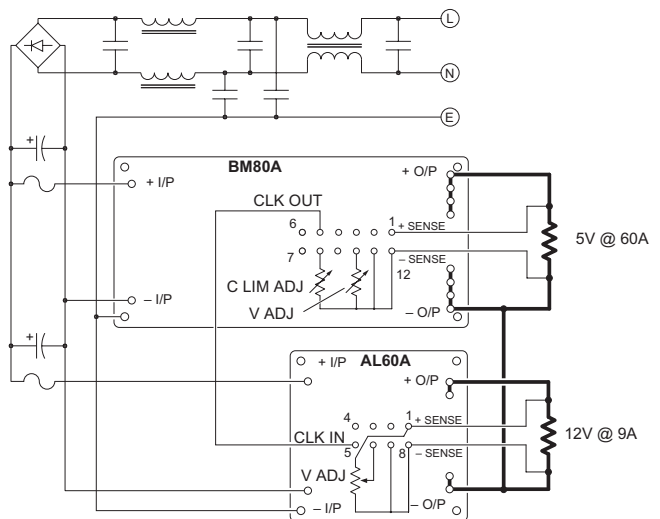
BM80A

Ordering Information

| Input Voltage | Output Voltage | Output Current | Model Number | Input Voltage | Output Voltage | Output Current | Model Number |
|---------------|----------------|----------------|-------------------|---------------|----------------|----------------|-------------------|
| 300V | 5V | 60A | BM80A-300L-050F60 | 48V | 5V | 60A | BM80A-048L-050F60 |
| 300V | 3.3V | 70A | BM80A-300L-033F70 | 48V | 3.3V | 70A | BM80A-048L-033F70 |
| 300V | 2.2V | 75A | BM80A-300L-022F75 | | | | |
| 300V | 2.2V | 85A | BM80A-300L-022F85 | | | | |
| 300V | 3.3V | 90A | BM80A-300L-033F90 | | | | |

Pin Assignments

| Input | Output | Control Pins |
|---------|--------|--------------|
| 31. +ve | 21. | 1. +SENSE |
| 32. -ve | 22. | 2. TEMP MON |
| | 23. | 3. C MON |
| | 24. | 4. C SHARE |
| | 26. | 5. CLK OUT |
| | 27. | 6. CLK IN |
| | 28. | 7. PG/ID |
| | 29. | 8. C LIM ADJ |
| | | 9. OVP ADJ |
| | | 10. V ADJ |
| | | 11. ENABLE |
| | | 12. -SENSE |



Parallel Connections


Dimensions

Connection example for a 400W dual output power supply using BM80A 300W and AL60A 100W modules

Astec Integrated Power

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