

# 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 $\mu$ 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/in<sup>3</sup> (3.3W/cm<sup>3</sup>)
- 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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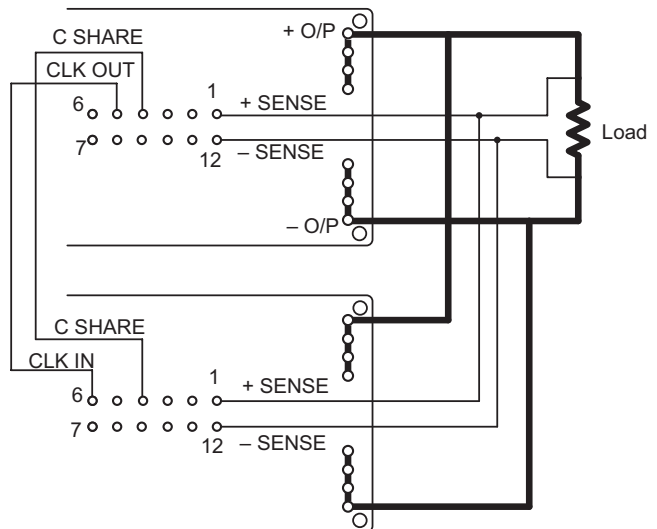
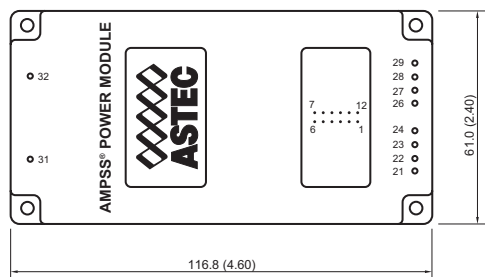
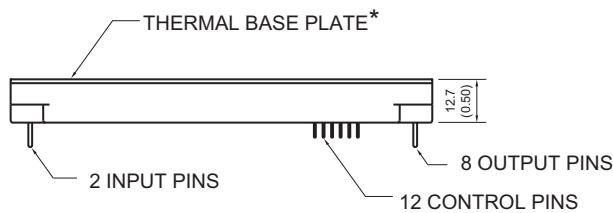
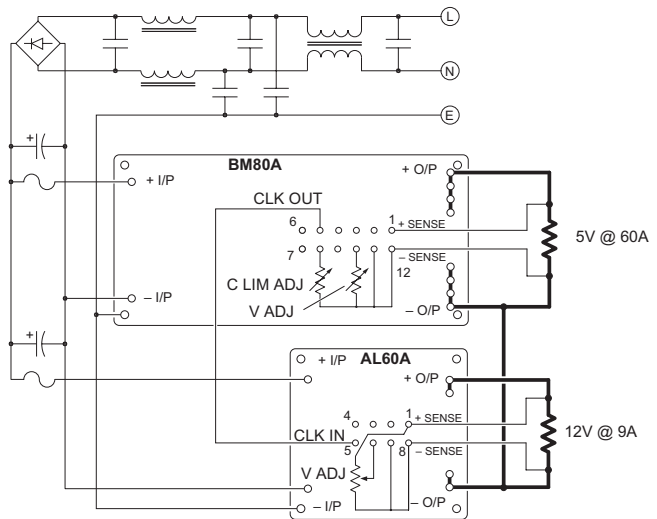
BM80A

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