

240 Watts

AK80A

Total Power: 240 Watts
Input Voltages: 24V
No. of Outputs: Single



Electrical Specs

Input

| | |
|-------------|--------------------------------------------------------------|
| Input Range | 18 to 36 VDC |
| Efficiency | 83% typical @ 5V; 87% typical @ 12V; 87% typical @ 15V |

Output

| | |
|------------------------|-----------------------------------------------------------------------------------|
| Load Regulation | 0.3% typical down to no load |
| Line Regulation | 0.1% typical |
| Noise/Ripple | 100 mV typical (output below 5V) 2% typical (output 5V and over) Up to 0.5V |
| Remote sense | Up to 0.5V |
| Output Voltage | ±10% of nominal output |
| Adjust Range | ±10% of nominal output |
| Transient Response | 10% typical deviation with 300µs recovery (25-75% full load) |
| Current Share Accuracy | 5% typical |
| Overvoltage Protection | 130% nominal Vo |
| Current Limit | 115% Io max |

Control

| | |
|-------------------------------|--------------------------------|
| Voltage Adjust | 90 to 110% Vo |
| Enable | TTL compatible (low to enable) |
| Current Limit Adjust | 20 to 100% Io rated |
| Clock Input (external sync) | 3.5 to 5Vp-p @ 1MHz ± 10% |
| Clock Output (internal clock) | 4.4 to 5.5Vp-p @ 1MHz ± 0.5% |
| Power Good/Identification | High (Vo) = power good |
| Temperature Monitor Output | 10 mV/°K (2.73V = 0°C) |

Notes

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

Specifications subject to change without notice.

Special Features

- High efficiency - up to 87%
- 500 KHz fixed frequency
- 85°C baseplate operating temperature (with no derating)
- Low output ripple and noise
- Excellent transient response
- High reliability - over 1 million hours MTBF
- Wide input voltage range
- TTL compatible enable control
- Parallelable
- Adjustable output voltage and current limit
- Temperature monitor output
- Overtemperature and short circuit protection
- Regulation to zero load

Environmental

Operating temperature (baseplate):
0°C to +85°C

Storage temperature: -40°C to +105°C

Overtemperature protection: 90°C typical

MTBF: > 1 million hours (50°C baseplate)

Safety

| | | |
|------------|--------------|------------------------|
| UL | UL 1950 | E132002 |
| CSA | CSA22.2-234 | LR53982C |
| | CSA22.2-950 | |
| VDE | IEC950 | 20366-3336-1002 & 1008 |
| EN | 60950 | |
| CE | CEMark (LVD) | |

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AK80A

Ordering Information

| Input Voltage | Output Voltage | Output Current | Model Number |
|---------------|----------------|----------------|-------------------|
| 24V | 3.3V | 40A | AK80A-024L-033F40 |
| 24V | 5V | 30A | AK80A-024L-050F30 |
| 24V | 12V | 14A | AK80A-024L-120F14 |
| 24V | 15V | 12A | AK80A-024L-150F12 |
| 24V | 24V | 8A | AK80A-024L-240F08 |

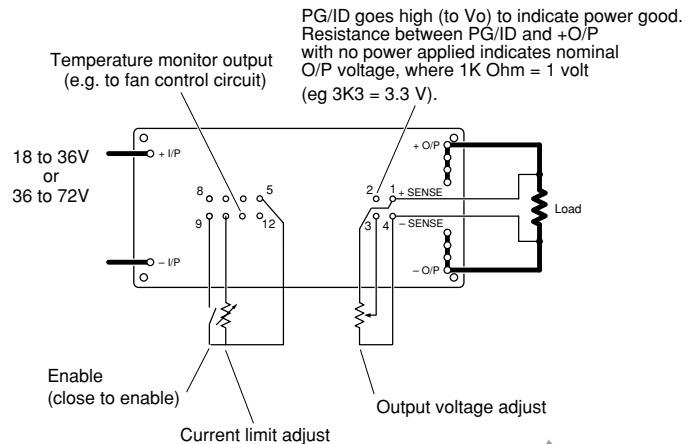
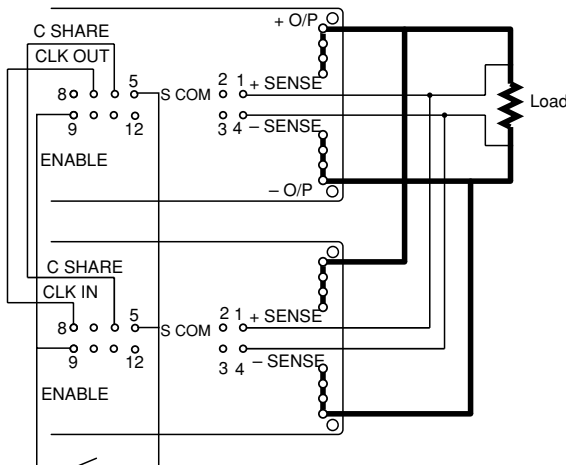
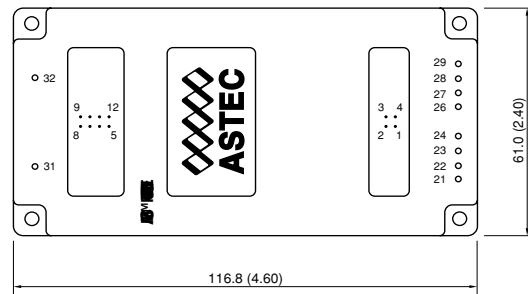
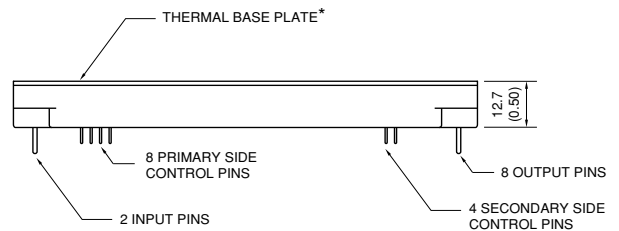
Please contact Astec for information on other output voltages, power ranges and configurations.

Pin Assignments

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

Secondary side controls

Primary side controls



Astec Integrated Power