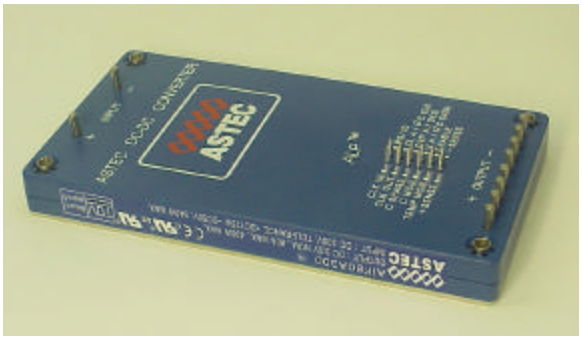
Astec Integrated Standard

600 Watts
AIF Series
Preliminary

Total Power:	600 Watts (12V@50Amps)
Input Voltages:	300V
No. of Outputs:	Single



Special Features

- 600W Continuous power at 100°C baseplate temperature
- 108W/in^3 (6.6W/cm^3)
- High efficiency - 5V, 12V@90%
- Low output ripple and noise
- Positive and Negative enable function
- Excellent transient response
- OVP, OCP, V Adj control with ALP™ analog mode linear control, or through I^{2}C bus with digital mode control.
- Paralleable with accurate current sharing

Environmental

Operating temperature

-40°C to +100°C (Case temperature)

Storage temperature: -40°C to +125°C

Overtemperature protection: 120°C max

MTBF: TBD hours

Safety

UL	60950 Recognized
cUL	
TUV	EN60950 Licensed
CE	CE Mark

Electrical Specs

Input

Input range	250 - 420 VDC
Input Surge	450V / 100ms
Efficiency	90%@5.0V (Typical)

Output

Load Regulation	0.2% typical down to no load
Line Regulation	0.2% typical
Noise / Ripple	100mV typical (below 5V) 2% typical (5V and above)
Remote sense	Up to 0.5V
Output voltage adjust range	+/-20% for 5V and above +10%/ -50% for below 5V
Transient Response	5% max for 3.3V and above, 150mV for 1.8V, deviation with 25% to 75% full load 250 µS (max) recovery
Current Share Accuracy	3% typical
Overvoltage Protection	115% Vo (nominal)
Current Limit	115% Io maximum

Control

Voltage Adjust	80 to 120% Vo linear programming for 12V, 15V, 24V 50% to 110% for 1.8V - 5.0V
Enable	TTL compatible (positive & negative enable options)
Current Limit Adjust	20 to 100% Io linear programming or digital mode control
Clock Input (external sync)	3.3 to 5.5Vp-p @TBD MHz ±10%
Clock Output (internal clock)	4.5Vp-p typical@ TBD MHz ±0.5%
Power Good Identification	High (Vo) = power good
Temperature Monitor Output	10mV/°K (2.73 = 0°C)
Current Monitor Output	0 to 1mA (1mA = 100% $I_{o\ rated}$)
Over Voltage Protection Adjust	110 to 150% Vo linear programming by voltage or resistor, or digital mode control

Notes

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

Specifications subject to change without notice.

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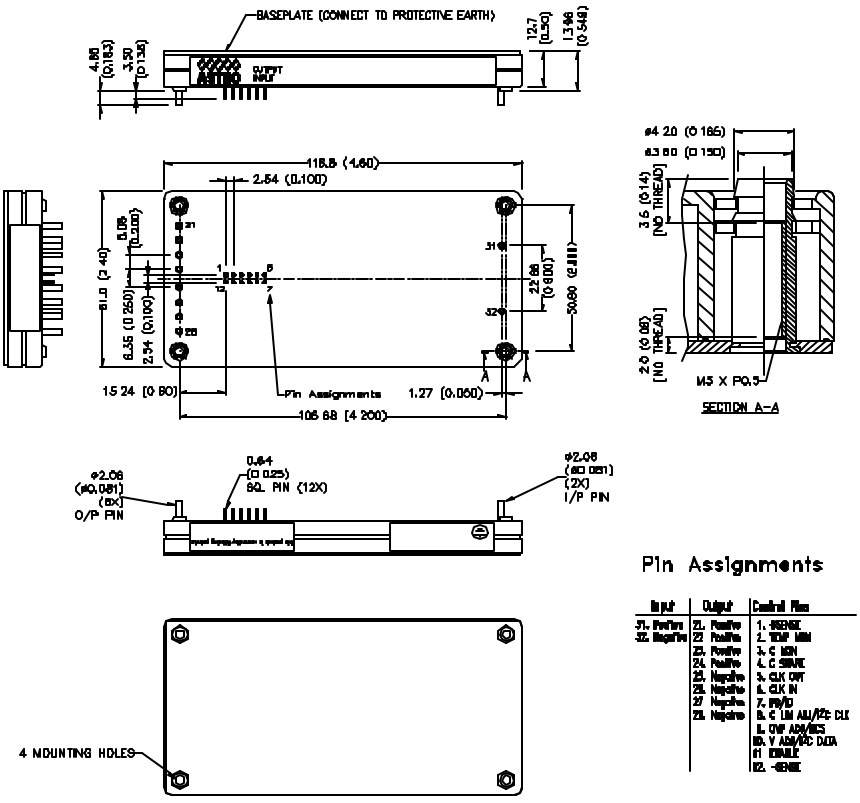
Ordering Information

Input Voltage	Output Voltage	Efficiency	Model Number
300V	1.8V @ 120A	80% (Typ)	AIF120Y300
300V	3.3V @ 120A	87% (Typ)	AIF120F300
300V	5.0V @ 80A	90% (Typ)	AIF80A300
300V	12V @ 50A	90% (Typ)	AIF50B300
300V	15V @ 40A	90% (Typ)	AIF40C300
300V	24V @ 25A	90% (Typ)	AIF25H300

Note: 1. For Negative Enable add suffix “N”

Pin Assignments



Notes:

Astec reserves the right to make changes to the information contained herein without notice and assumes no liability of its use and application.