

250 Watts

AIH Series

Preliminary

Total Power:	250 Watts (12V@ 20.8Amps)
Input Voltages:	300V
No. of Outputs:	Single



Special Features

- 250W Continuous power at 100°C baseplate temperature
- High efficiency - 5V@88%, 12V@86%
- Low output ripple and noise
- Positive and Negative enable function
- Excellent transient response
- Safety isolated low voltage control and monitoring
- High reliability
- Wide input voltage range
- Paralleable with accurate current sharing
- Adjustable output voltage
- Regulation to zero load
- Temperature monitor output

Environmental

Operating temperature

-40°C to +100°C (Case temperature)

Storage temperature: -40°C to +120°C

Overtemperature protection: 120°C max

MTBF: 1M hours (Demonstrated)

Safety

UL 60950 Recognized

cUL 60950 Recognized

TUV EN60950 Licensed
CE CE Mark

Electrical Specs

Input

Input range	250 - 420 VDC
Input Surge	450V / 100ms
Efficiency	88%@5.0V (Typical)

Output

Load Regulation	0.2% typical (5V and above) 10mV for below 5V
Line Regulation	0.2% typical (5V and above) 10mV for below 5V
Noise / Ripple	100mV typical (below 5V) 2% typical (5V and above)

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 μ S (max) recovery

Current Share Accuracy	3% typical
Overvoltage Protection	125% Vo (nominal)
Current Limit	120% Io maximum

Control

Voltage Adjust	80 to 120% for 5V and above +10% / -50% for below 5V
Enable	TTL compatible (positive & negative enable options)

Clock Input (external sync)	3.3 to 5.5Vp-p @800 MHz $\pm 5\%$
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Temperature
Monitor Output 10mV/°K (2.73 = 0°C)

Current Monitor Output 0 to 1mA (1mA = 100% $I_{O \text{ rated}}$)

Notes

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

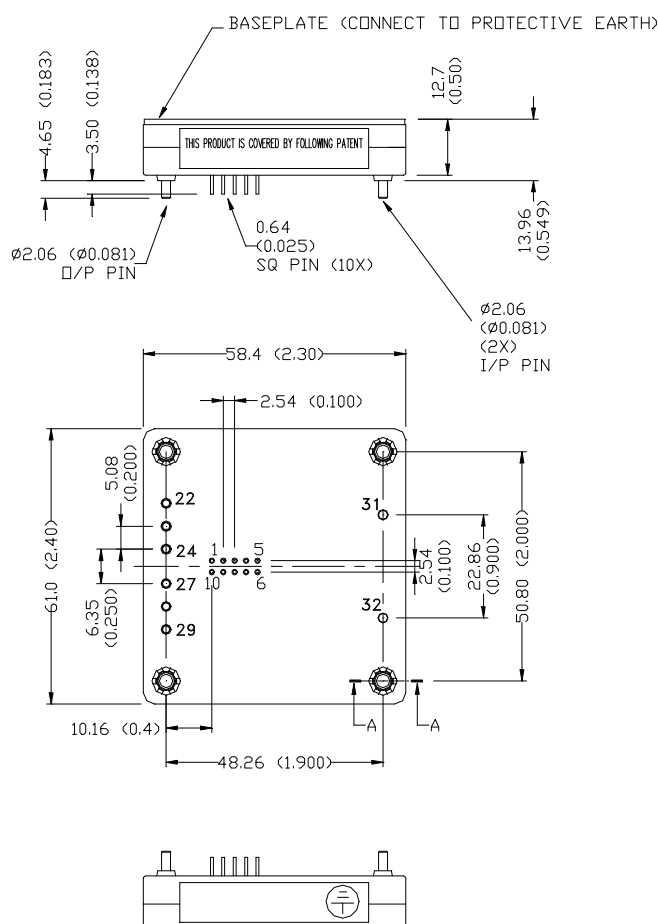
Specifications subject to change without notice.

Ordering Information

Input Voltage	Output Voltage	Efficiency	Model Number
300V	1.8V @ 50A	80% (Typ)	AIH50Y300
300V	3.3V @ 50A	82% (Typ)	AIH50F300
300V	5.0V @ 40A	88% (Typ)	AIH40A300
300V	12V @ 20.8A	86% (Typ)	AIH20B300
300V	15V @ 16.6A	90% (Typ)	AIH16C300
300V	24V @ 10.4A	90% (Typ)	AIH10H300

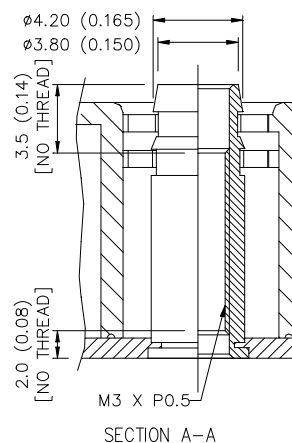
Note: 1. For Negative Enable add suffix "N"

Pin Assignments



Pin Assignments

Input	Output	Control Pins
31. Positive	22. Positive	1. +SENSE
32. Negative	23. Positive	2. TEMP MON
	24. Positive	3. C MON
	27. Negative	4. C SHARE
	28. Negative	5. SDA
	29. Negative	6. SCL
		7. CLK IN
		8. V ADJ
		9. ENABLE
		10. -SENSE



Notes:

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