Rev. 04.25.11 AIH Series 1 of 2

# **AIH Series** 250 Watts

Total Power: 250 Watts (12V @ 20.8A

Input Voltage: 300V # of Outputs: Single





### **Special Features**

- 250W Continuous power at 100°C baseplate temperature
- High efficiency up to 88%
- 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
- EU Directive 2002/95/EC compliant for RoHS

## Safety

UL 60950 Recognized CUL 60950 Recognized TUV EN60950 Licensec

# **Electrical Specifications**

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 $250~\mu S$ (max) recovery
Current share accuracy	3% typical
Overvoltage protection	130% Vo (3.3 Vo and 5 Vo); 125% Vo (other Vo)
Current limit	120% lo 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 ±5%
Temperature monitor output	10mV/°K (2.73 = 0°C)
Current monitor output	0 to 1mA (1mA = 100% I <sub>o rated</sub> )
Notes	

#### Notes

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

\*For detailed technical information, please refer to the product's Technical Reference Notes found at www.PowerConversion.com.





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## **Environmental Specifications**

Operating temperature -20°C to +100°C (case temperature)
Startup temperature -40°C to +100°C (case temperature)

Storage temperature -40°C to +100°C Overtemperature protection 120°C max

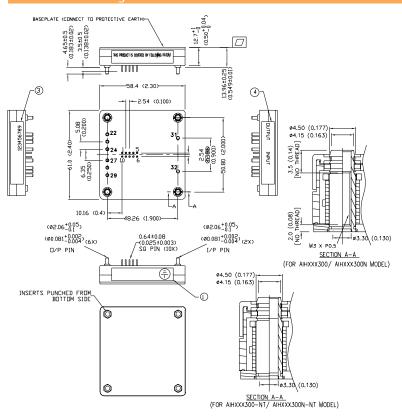
MTBF 1M hours (Demonstrated)

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		

- 1. For Negative enable add suffix "N".
- 2. Fon Non-thread hole, add suffix "-NT".
- 3. Fon RoHS 6, add suffix "-L". Default is RoHS 5.

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			
		10Sense			

#### Mechanical Drawing



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