

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## **Data Sheet**

AIF Series
600 Watts

Total Power: 600 Watts

(12 V @ 50 A)

Input Voltage: 300 V # of Outputs: Single

# **SPECIAL FEATURES**

- 600 W continuous power at 100 °C baseplate temperature
- 108 W/in³ (6.6 W/cm³)
- High efficiency up to 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 I²C bus with digital mode control
- Paralleable with accurate current sharing
- EU Directive 2002/95/EC compliant for RoHS
- Two year warranty

#### **SAFETY**

UL 60950 Recognized
cUL 60950 Recognized
TUV EN60950 Licensed

■ CE CE Mark



Electrical Specifications				
Input				
Input range	250 - 420 Vdc			
Input surge	450 V / 100 ms			
Efficiency	90% @ 5.0 V (Typical)			
Output				
Load regulation	0.2% typical down to no load			
Line regulation	0.2% typical			
Noise ripple	100 mV typical (below 5 V); 2% typical (5 V and above)			
Remote sense	Up to 0.5 V			
Output voltage adjust range	+/-20% for 5V and above; +10%/-50% for below 5 V			
Transient response	$5\%$ max for $3.3$ V and above, $150$ mV for $1.8V$ , deviation with $25\%$ to $75\%$ full load $250~\mu S$ (max) recovery			
Current share accuracy	3% typical			
Overvoltage protection	115% Vo (nominal)			
Current limit	115% lo maximum			
Control				
Voltage adjust	80 to 120% Vo linear programming for 12 V, 15 V, 24 V, 48 V 50% to 110% for 1.8 V - 5.0 V			
Enable	TTL compatible (positive & negative enable options)			
Current limit adjust	20 to 100% lo linear programming or digital mode control			
Clock input (external sync)	3.3 to 5.5 Vp-p @ 800 KHz ±10%			
Clock output (internal clock)	4.5 Vp-p typical@ 800 KHz ±5%			
Power good identification	High (Vo) = power good			
Temperature monitor output	10 mV/°K (2.73 = 0°C)			
Current monitor output	0 to 1 mA (1 mA = 100% lo rated)			
Overvoltage 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. ALP: Astec Linear Programming



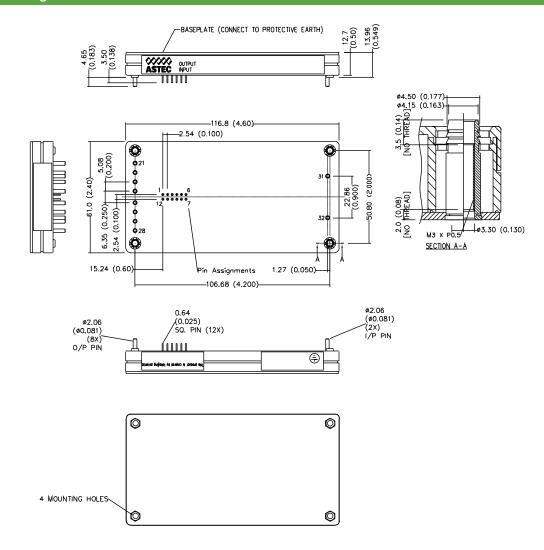
Environmental Specifications		
Operating temperature	-20 °C to +100 °C (case temperature)	
Start up temperature	-40 °C to +100 °C (case temperature)	
Storage temperature	-40 °C to +125 °C	
Overtemperature protection	110 °C max	

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

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

Pin Assignments				
Input (AC)	Output (DC)	Control Pins		
31. Positive	21. Positive	1. +Sense		
32. Negative	22. Positive	2. Temp Mon		
	23. Positive	3. C Mon		
	24. Positive	4. C Share		
	25. Negative	5. Clk Out		
	26. Negative	6. Clk In		
	27. Negative	7. PG/ID		
	28. Negative	8. C Lim Adj		
		9. OVP Adj		
		10. V Adj		
		11. Enable		
		12Sense		

# **Mechanical Drawings**



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