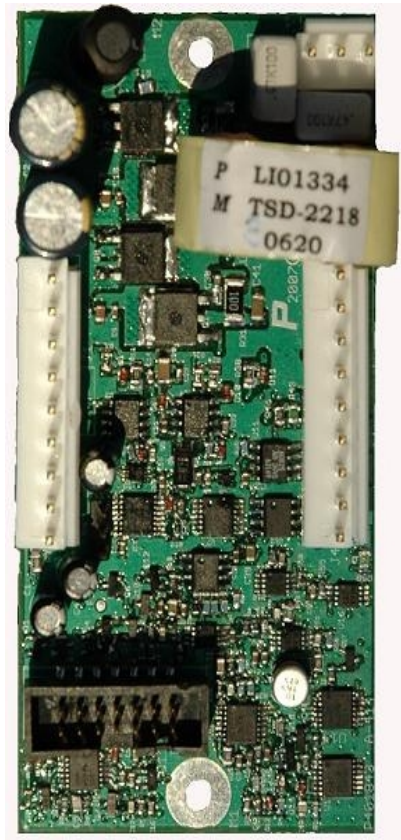


## Features:

- Proprietary One-Cycle Sound™ Control with Output Feedback
- 117 dBA dynamic Range
- THD+N < 0.05%, 0.1W – Rated Power
- Full range 20 to 20kHz Bandwidth
- System Efficiency > 85%
- Damping Factor > 375 @ 100Hz 4 Ohms
- DC offset < 25mV
- Remote Disable
- Silent Turn-On
- Full Protection:
  - Over Current Protection to Speaker Short
  - Over Current Protection Short to Chassis Ground
  - Over Temperature Protection
  - Power On Self Test (POST)
  - Power Supply Under Voltage Lockout
- Monitor Outputs:
  - Output Current Monitor
  - Temperature Monitor
  - Protect, Clip and Signal Present Indicators
- Switching Frequency Adjust Jumper
- Power Supply Daisy Chain Connector
- Compatible with P-500PFC, P-600-80, LP-400 and LP-600 Power Supplies and DSPn and DSPc Preamplifiers
- Dimensions:
  - inches: 2.0 x 4.0 x 1.4 (1.65 mounted)
  - mm: 52 x 103 x 36 (42 mounted)

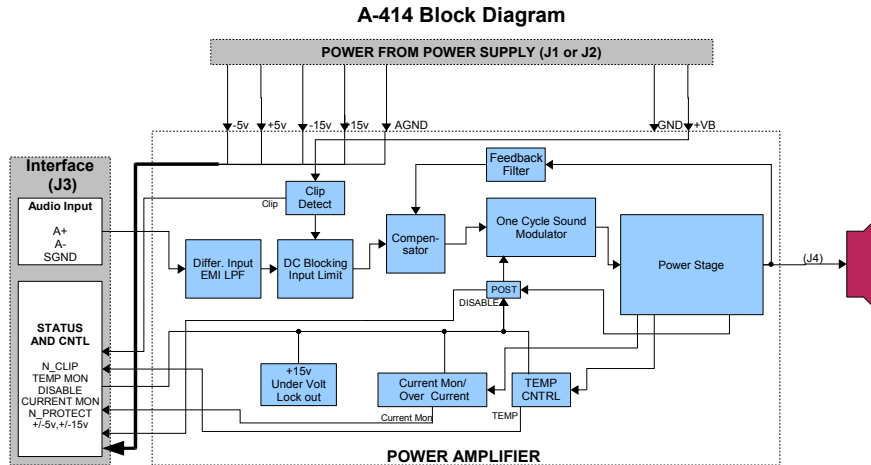


## Product Description:

Based on PowerPhysics proprietary "One Cycle Sound™" PWM control method, the A-414 provides 400 Watts of audio power into 4 ohm speakers before clipping and 500 Watts at 1% distortion. The amplifier has temperature and current monitoring outputs ideally suited for off board analysis in our DSP series of preamplifier. The amplifier's full or "H" bridge output stage is thoroughly protected against any type of output short or speaker fault to provide robust, long term operation.

The A-414 accepts a bus voltage up to 85 Volts for high peak power. Like all of PowerPhysics A-series amplifiers, the A-414 is very efficient and a high bus voltage does not force the use of large heat sinks or fans. Musical transients have the headroom they need and unused power is not converted into heat.

The A-414 is the first building block in a series of new 400 Watt per channel amplifiers. The A2-414 will have two amplifier channels on the same PCB, and the A5-414 will have, yep, 5 channels. For more information please give us a call.



### A-414 Amplifier specifications:

Unless otherwise specified, f = 1kHz, RL=4Ω, Ta=25 °C, Vbus=80v

Parameters	Symbols	Test Condition/ Comment	Min	Typ	Max	Unit
Load Resistance	RL		2.5	-	-	Ω
Max Output Power	Pmax	f=20Hz-20KHz (1% THD)	-	500	-	W
Ouput Power	Po	f=20Hz-20kHz (0.1% THD)	-	400	-	W
Sensitivity	Vsen	Input Signal to 400W	-	3.5	-	Vrms
Gain	A		20.5	21	21.5	dB
Mute Gain	Amute	Disable Pin pulled low.	-45	-	-	dB
Distortion	THD+N	10Hz < f < 20kHz, 100mW < Pout < Po	-	.03	.05	%
Freq. Response	f	20Hz-20kHz	-	+/- 0.5	-	dB
Noise Floor	VNF	Input Shorted, A-weighted	-	70	80	μV
Maximum Current	Imax		23	26	29	A
Damping Factor	DF	RL = 4 ohms @ 100 Hz	-	375	-	Ω/Ω
Power Bandwidth	BWpw	Output Power: Pmax	-	60k	-	Hz
Small Signal Bandwidth	BWsm	Output Power: 1Watt	-	90k	-	Hz
Signal to Noise	SNR		108.5	-	-	dB
Turn off threshold for the +15v input	UVLO		-	12.5	-	V
Turn on threshold for the +15v input	Von_15	Above this level, the amp will operate	-	13.75	-	V
P.O.S.T. Duration	Tpost		1	-	2	Sec
Bus Voltage	Vbus		30		85	V
Current Sense Gain	Acs			.125		V/A