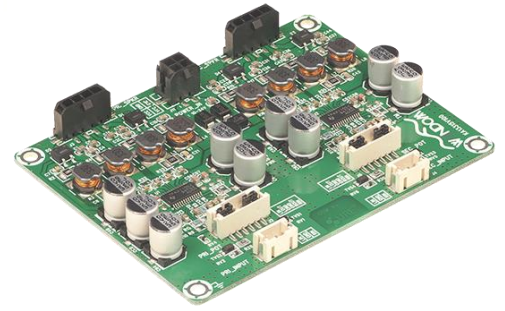


Game Machine Audio Amplifier Series

4 x 15 Watt 8 Ohm Class D Audio Amplifier Board – TPA3110 (AA-KA32475)



Key Features:

- Output Power
15W@8Ohm 16V DC THD+N 10%
- Power Indicator
- BTL Architecture
- Suitable for Audio 4.0/2.0 System
- External Volume Control Port
- Overcurrent Protection
- Overtemperature Protection
- 4-screw Easy Installation
- Size: 3.90 x 3.00 x 0.52 inches

Distributors:



All these boards are per-tested with our power supply solution to comply with FCC and CE. For all customers who need those information, please contact our distributor or Sure Electronics. RoHS compliant will need an MOQ of 1000pcs per order.

Ready for:



Contact info

• Email:
info@sure-electronics.com



Overview

This audio amplifier board is a 4CH audio amplifier specially designed for game machine applications, delivering 15W output power per channel. It features compact size, full protection and high reliability, applying to audio 4.0 system. Industrial pluggable terminal blocks make it easy to be integrated in systems. If you want this board to function as 2.1 or 2.0, please contact us for customization. The volume is set at the maximum as default. External volume control potentiometer is also available for customers to achieve volume adjustment.

Electrical Specifications

Specifications typical @ +25°C, powered by 24V DC, unless otherwise noted. Specifications subject to change without notice.

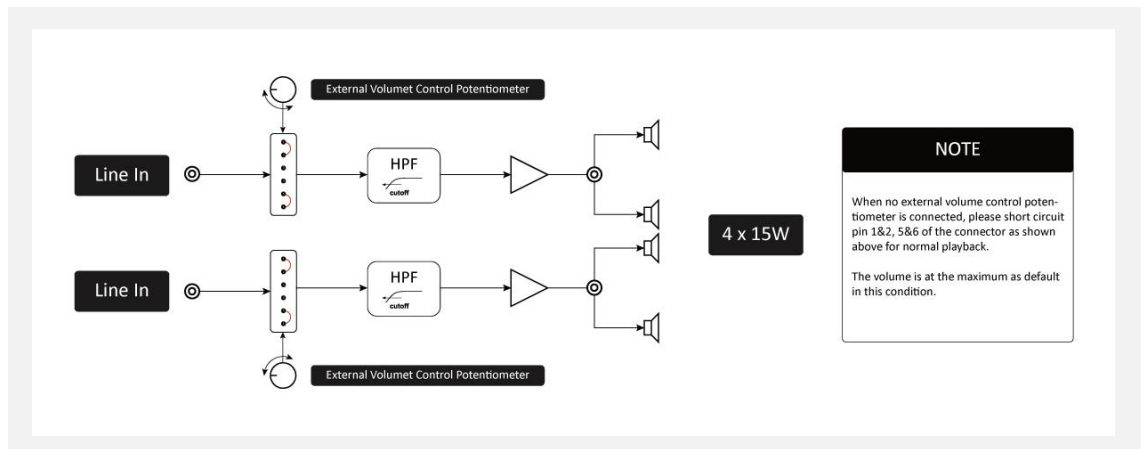
Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	10	12	24	VDC
Idle Power	-	-	1.67	-	W
Power Consumption	1/4 of max output power@8Ohm, 24V, 1kHz	-	19	-	W
	1/8 of max output power@8Ohm, 24V, 1kHz	-	10	-	W
Maximum Current	4x15W @ 8Ohm, 24V	-	3.1	-	A
Efficiency	4 x 15W@8Ohm, 1kHz	-	81	-	%
Minimum Load Impedance	7.5W @ 12V	-	4	-	Ω
Switching Frequency	SD Floating	-	310	-	kHz

Audio Performance

Specifications typical @ +25°C, powered by 24V DC, unless otherwise noted. Specifications subject to change without notice.

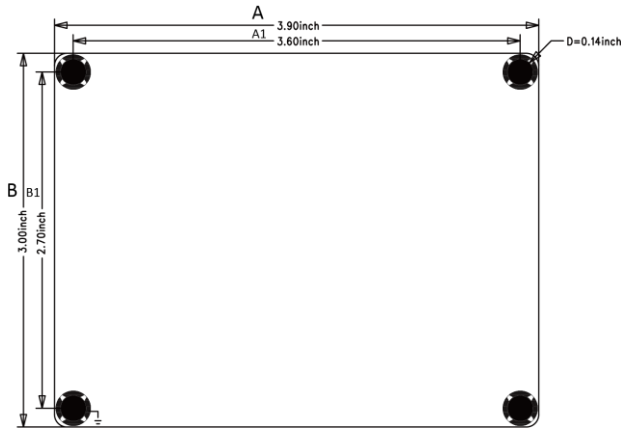
Parameter	Conditions	Min.	Typ.	Max.	Units
Gain	@8Ohm, 20Hz - 20kHz	-	25.6	-	dB
Input Sensitivity(RMS)	4x 15W@8Ohm, 1kHz	-	580	-	mV
Input Impedance	-	-	10	-	KΩ
Bandwidth @ ±3dB	@8Ohm	20	-	20K	Hz
THD	5W@8Ohm, 1kHz		0.030		%
	10W@8Ohm, 1kHz		0.051		%
Output Noise Level	A-weighting, Input Connected to GND		88		uV
SNR	4 x 15W@8Ohm, THD+N=1%, A-weighting		103		dB

Block Diagram



For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)

Mechanical Dimensions



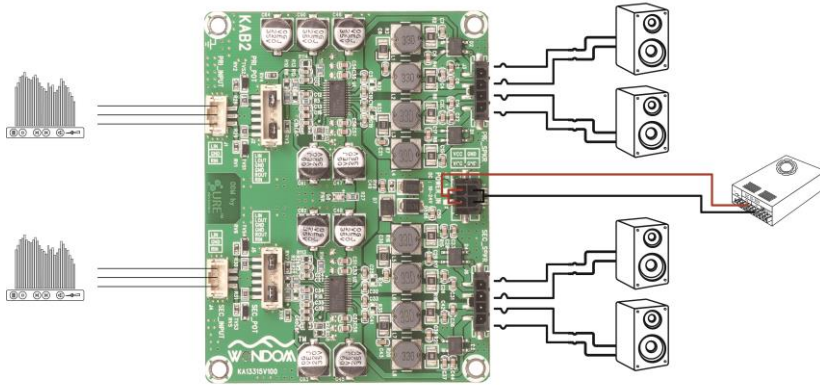
Dimensions	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	D (inch/mm)
	3.90/99.06	3.6/91.44	3.00/76.20	2.70/68.58	0.14/3.56

- All dimensions are typical in inches/mm
- Tolerance x.xx = $\pm 0.02(\pm 0.50)$
- Height: 0.52inch / 13.22mm

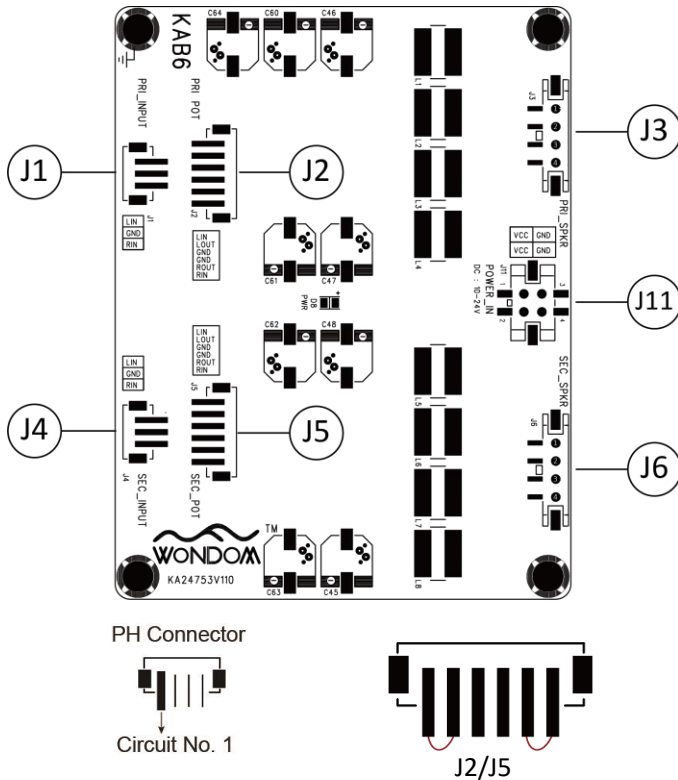
Notes:

1. This audio amplifier board can be configured as 2.1 or 2.0 output mode before shipment. If you are interested, please contact us.
2. The output power is rated at the condition THD+N 10%, 1kHz sine wave.
3. All amplifier boards don't employ power supply reverse polarity protection. Stresses beyond the power supply range maximum ratings may cause permanent damage.
4. None typical load may cause rating power reduction.
5. Dimensions mean length and width of PCB only, excluding excessive part out of the PCB outline.
6. All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and AP AUX0025 filter. Linear Power Supply units were used for testing.
7. Sure Electronics promises all standard products life cycle more than 5 years. Sure Electronics reserves the right to update the version without notice. All the products sent to retail customers are the latest version. We will provide back-to-order service (100 Pieces MOQ needed) for our distributors in 5 years.

Minimum System



Connections



Power Supply

Power Supply Connector:

- J11 MicroFit-4Pos-3.81mm

Pin	Function
1, 2	VCC
3, 4	GND

Audio Input

Audio Line Input Connector:

- J1, J4 PH-3Pos-2mm

Pin	Function
1	RIN
2	GND
3	LIN

Audio Output

Speaker Output Connector:

- J3, J6 MicroFit-4Pos-3.81mm

Pin	Function
1	L+
2	L-
3	R+
4	R-

Volume Control

External Volume Control Connector:

- J2, J5 PH-6Pos-2mm

Pin	Function
1	LIN
2	LOUT
3	GND
4	GND
5	ROUT
6	RIN

J2 and J5 is for external volume control.

In default, there are two jumpers on J2 and J5 separately to short circuit pin 1&2, pin 5&6 for normal playback. Under this circumstance, the volume is set at the maximum.

When customers want to adjust volume, please connect with WNDOM Volume Control Potentiometer with a 6pin cable. Please keep the jumpers for future use. Once the external volume control potentiometer is disconnected, place the jumpers on J2 and J5 as original.



Sure Electronics

Make Your Audio Application Simple!

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