

BDM8-A - 2 x 300W Audio Amplifier Board

The BDM8-A is a stereo audio amplifier board boasting 2 x 300W power output. With its robust design and TPA3255 Amp IC, it offers both high power and performance. Ideal for driving speakers with strong, clear sound, it ensures reliability and efficiency for your audio needs.

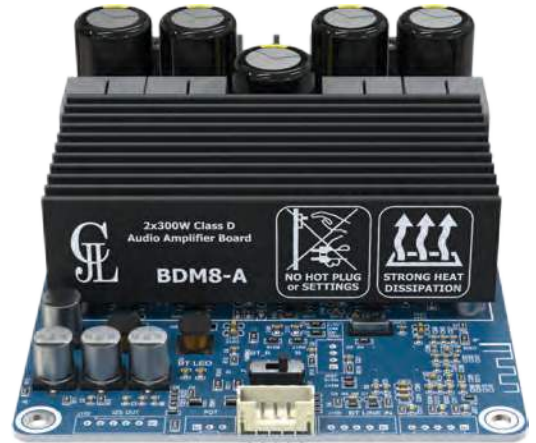
Features

High Power

- Strong Driving Capacity
- Robust Heatsink

High Reliability

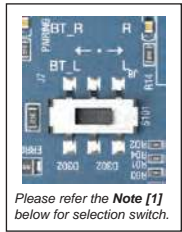
- High Performance
- TPA3255 Amp IC, 2x300W
- High Efficiency and Low Power Consumption
- High Quality Component



Specifications

Supply Voltage	: DC 18V - 48V	Output Channel	: 2 Channel
Audio Input Source	: Line Input	Product Size (mm)	: 120 x 80 x 27.50
Output Power	: 300W + 300W 4Ω	Weight (gram)	: 232.90

Port Introduction



Please refer the Note [1] below for selection switch.



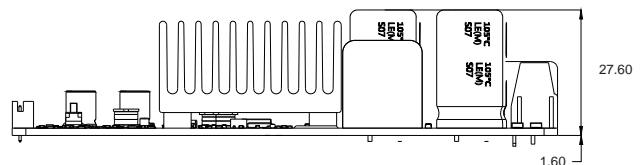
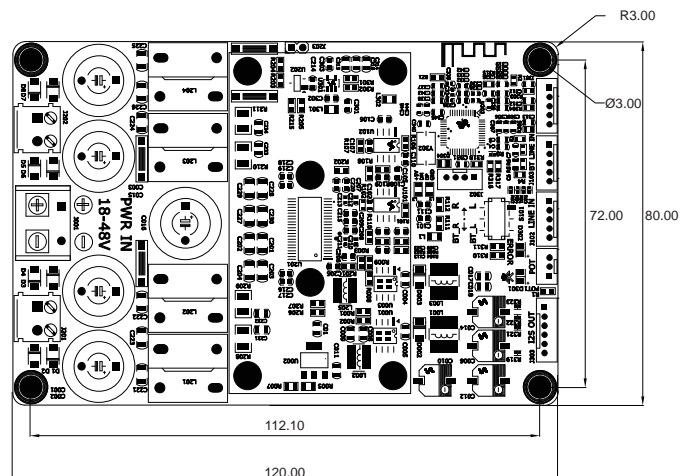
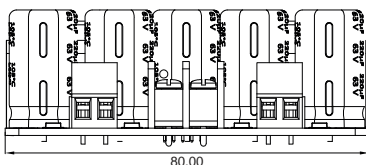
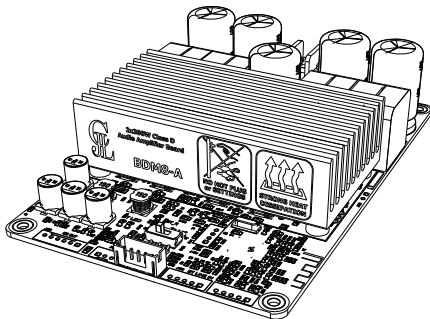
Line Input

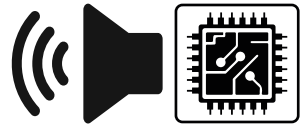


Note [1]: The BDM8-A product does not include Bluetooth functionality. The selection switch on the top board of the BDM8-A will only be functional when the user purchases the BDM8 product. By default, the selection switch should be in the "L" mode. If it is set to "BT_L," the BDM8-A board will not operate.

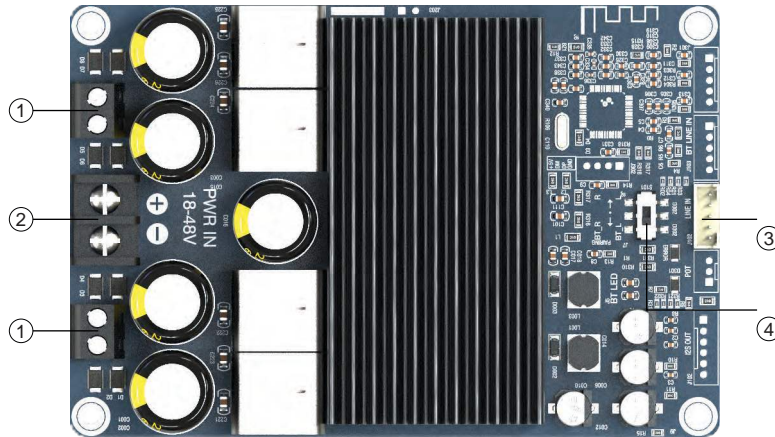
Mechanical Drawing

(Nominal Dimensions, mm)





Board Components



① Speaker Components

The Speaker Output Port is designed for connecting speakers to the amplifier. It utilizes a 2-Position Wire-to-Board Terminal Block Horizontal. Ensure a secure connection for optimal audio performance.

② Power Input

The Power Input is where the DC power source (18V - 48V) should be connected. It uses a 2-Circuit Barrier Block Connector with screws for a secure and stable power supply connection.

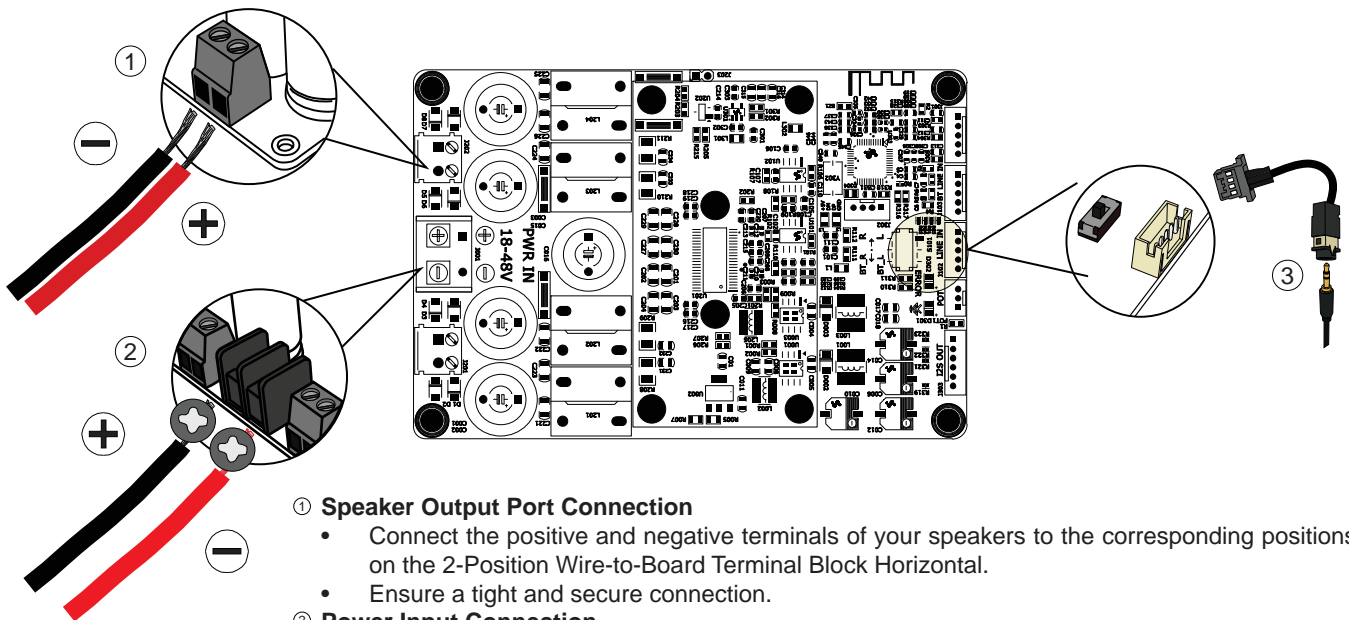
③ Line Input

The Line Input is where the audio source is connected to the amplifier. It uses a Connector Header Through Hole with 5 pins for a reliable audio input connection.

④ Line Input Selection Switch

The selection switch on the top board of the BDM8-A will only be functional when the user purchases the BDM8 product. By default, the selection switch should be in the "L" mode. If it is set to "BT_L," the BDM8-A board will not operate.

Connection Setup



① Speaker Output Port Connection

- Connect the positive and negative terminals of your speakers to the corresponding positions on the 2-Position Wire-to-Board Terminal Block Horizontal.
- Ensure a tight and secure connection.

② Power Input Connection

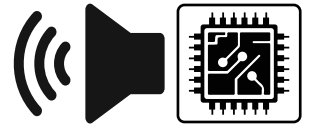
- Connect the positive and negative terminals of your power source (DC 18V - 48V) to the 2-Circuit Barrier Block Connector.
- Tighten the screws to secure the power connection.

③ Line Input Connection

- Connect the audio source by using 3.5mm to the Connector Header Through Hole with 5 pins.
- Ensure that each pin is correctly aligned with the corresponding channel.

Safety Guidelines

- Ensure proper power supply within the specified voltage range.
- Disconnect the power source before making any connections or maintenance

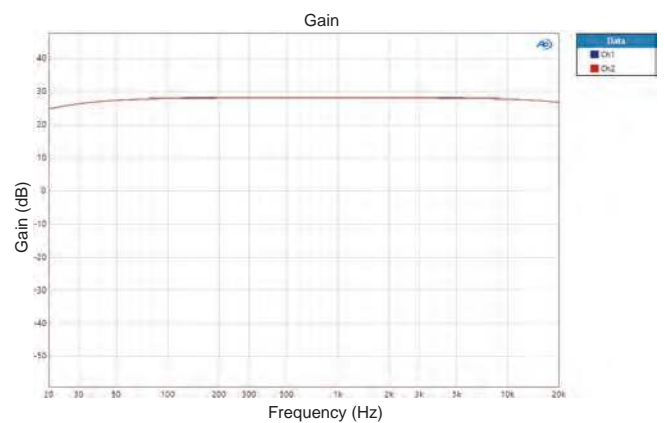
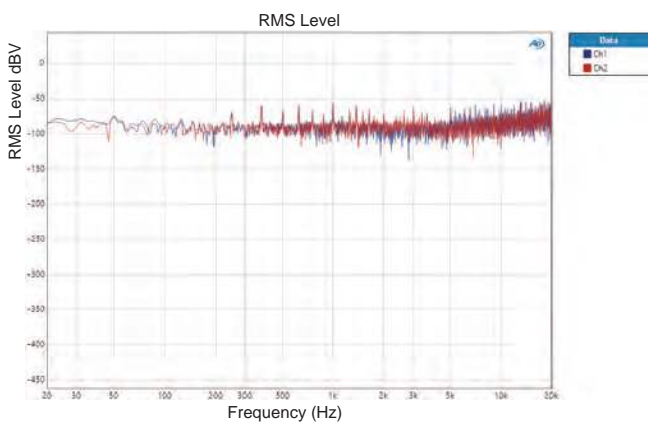
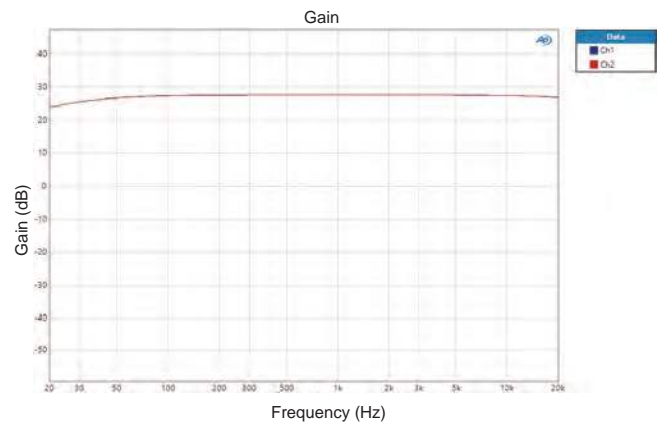
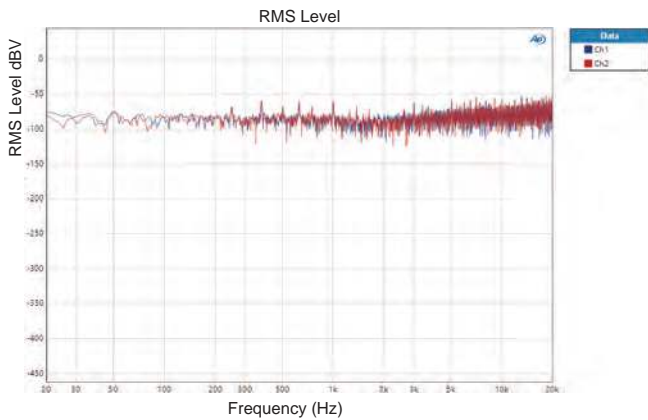


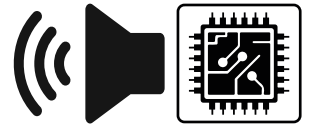
Electrical and Audio Performance

Parameter	Conditions	Min.	Typ.	Max.	Units
Number of Channels	-	-	2	-	-
Minimum Load Impedance	-	3	4	-	Ω
Efficiency	2x150W @ 36V, 4 Ω , 1kHz	-	85	-	%
Nominal Power Requirement	@ 36V, 1kHz	-	300	-	W
Operating Voltage	@ 1kHz, 4 Ω	18	24	36	V
Idle Power	Signal detected @ 36V	-	3.3	-	W
Switching Frequency	SD Floating @ 36V	-	450	-	kHz
Power Consumption	1/4 of max output power @ 4 Ω , 36V, 1kHz	-	90	-	W
	1/8 of max output power @ 4 Ω , 36V, 1kHz	-	50	-	W
Number of Channels	SD short to GND	-	0.1	-	mW







Parameter	Conditions	Output	Min.	Typ.	Max.	Units
Amp Gain	Line in	OUT1	-	27.53	-	dB
		OUT2	-	27.47	-	dB
SNR	Line In 2x150W @ 4 Ω , A-weighting	OUT1	-	95.0	-	dB
		OUT2	-	94.5	-	dB
THD + N	Line In 1W @ 4 Ω , 1kHz	OUT1	-	0.0048	-	%
		OUT2	-	0.0050	-	%
Output Noise Level	Line In A-weighting, Input Connect to GND	OUT1	-	235	-	μ V
		OUT2	-	257	-	μ V
Input Impedance	Line In @ 4 Ω , 1kHz		-	20	-	k Ω
Input Sensitivity	Line In, 2 x 150W @ 4 Ω , 1kHz	OUT1 & OUT2	-	1	-	V
DC Offset	-		-	15	-	mW

Graph Performance





BDM Series Product Overview

 <p>BDM0</p> <p>Output Power 2x5W</p> <p>Power Supply USB Type-C DC 5V</p> <p>BT V5.0 BT TWS</p> <p>PC UI N</p>	 <p>BDM1</p> <p>Output Power 2x5W</p> <p>Power Supply DC 5V/ Battery</p> <p>BT V5.0 BT V.50</p> <p>PC UI N</p>	 <p>BDM3</p> <p>Output Power 2x25W</p> <p>Power Supply DC12-19V</p> <p>BT V5.0 BT V5.0</p> <p>PC UI Y</p>	 <p>BDM3P</p> <p>Output Power 2x50W</p> <p>Power Supply DC12-19V</p> <p>BT V5.0 BT V5.0</p> <p>PC UI Y</p>	 <p>BDM5</p> <p>Output Power 2x200W</p> <p>Power Supply DC 18-48V</p> <p>BT V5.0 BT V5.0</p> <p>PC UI Y</p>	 <p>BDM8/8A</p> <p>Output Power 2x300W (TPA3255)</p> <p>Power Supply DC24-48V</p> <p>NO BT BDM8 has BT</p> <p>PC UI N</p>
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BDM Series Product Accessories

Product accessories can be downloaded on our website. We provide STL files for the purpose of 3D printing. If you have a 3D printer, you can continue to print them on your own. Alternatively, if you don't have a printer, you can send the STL file we provided to a store that offers 3D printing services.



Warranty Terms and Product Usage Restrictions

CJL products come with a one-year warranty starting from the date of purchase. Customers are responsible for the cost of returning the goods to the seller, and by making a purchase, you agree to this condition. Due to the nature of DIY products, visible damage or use on screw holes or tinning of solder pads directly invalidates the warranty. Damage caused by the use of incorrect power sources, such as exceeding the specified voltage range or reverse polarity, is not covered under warranty. All CJL products undergo thorough testing before shipment. We do not accept bulk returns after a bulk purchase. If you are unsure of the quantity you need, please purchase the appropriate quantity as needed. All CJL products are intended for DIY use only and do not support any industrial applications. The rated operating temperature range is 0-40°C. Please refrain from using CJL products in industrial or any special industrial environments. If you require products tested for industrial operating temperature ranges, we recommend seeking products clearly labeled to support operating ranges such as -20-65°C or -40-85°C.

Designed by:



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(Please use phone calls or email instead of WhatsApp or iMessage.)

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