



TSA7600

2 x 100W + 200W 3 Channels Audio Amplifier Board Data sheet





1 Features:

- Wide-range 12V to 30V Supply Voltage Operation
- Size: 140*90*24mm
- Weight: 152g
- Over /under voltage protection
- Over current protection
- Over temperature protection

2 Applications:

- Personal computer
- Background music system
- Musical instrument amplifiers
- Home DIY
- Car audio

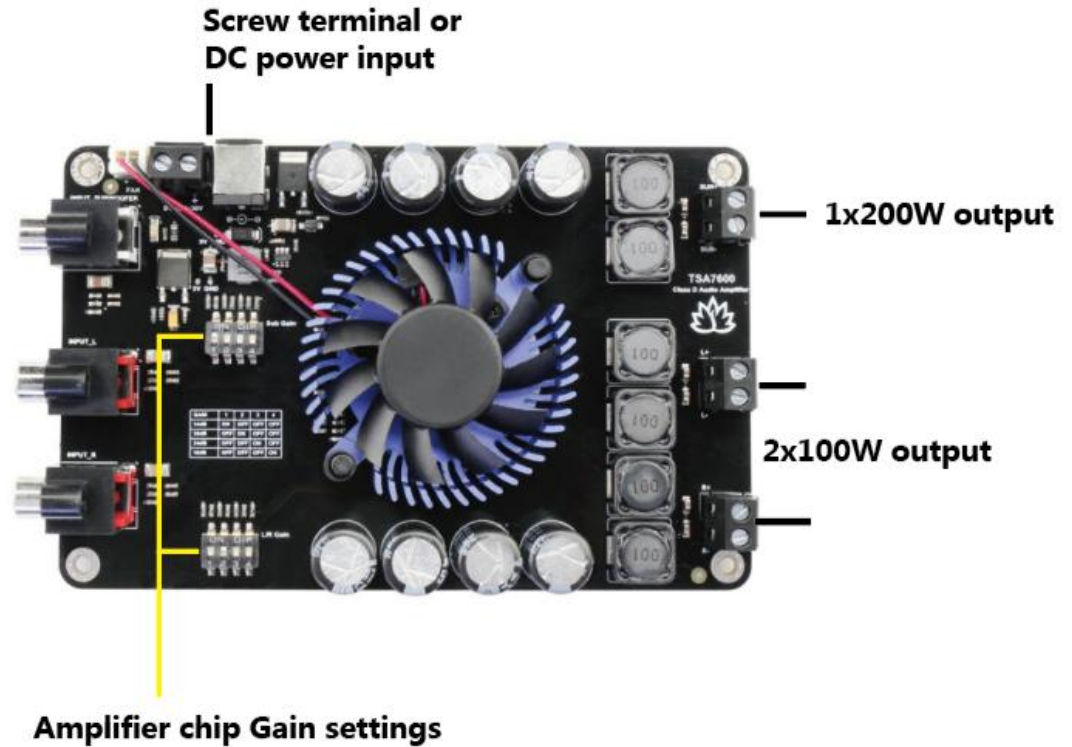
3 Description:

TSA7600 2x100W + 220W 3 channels Audio amplifier board. TSA7600 is a very flexible DSP/DAC/Amplifier combination board. It has a perfect class-D architecture (Based on TPA3221) and 2 channels have 100W power output and another one channel has 220W power output. All the channels are capable of outputting nominal power simultaneously and continuously. This board can be powered by any DC12V-30V power supply. It can be used to drive any 4Ω or 8Ω passive speakers.

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4 Device function diagram:



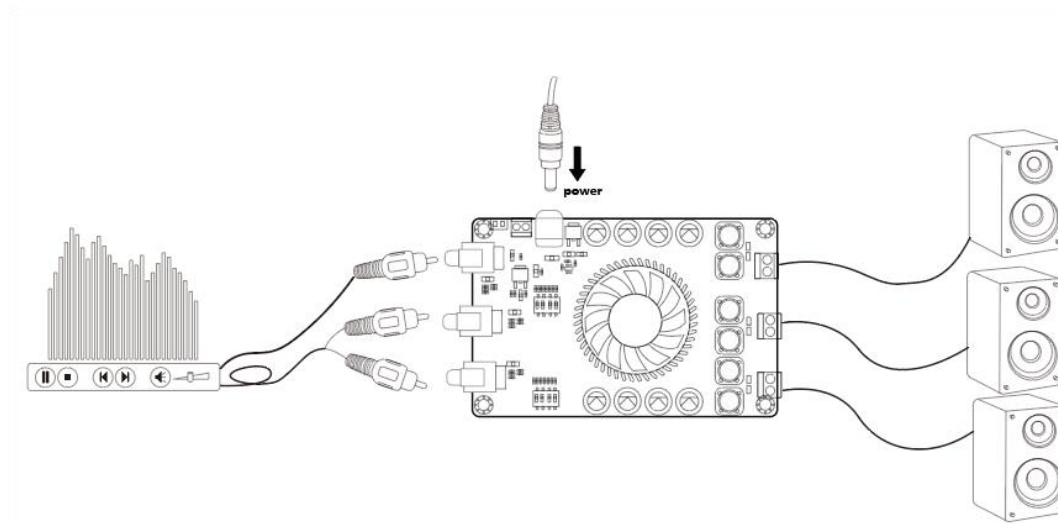
5 Specifications

Specifications typical @ +25°C, Powered by 24VDC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Condition	Min	Type	Max
Supply Voltage (VDC)	-	10	24	30
Output Power per channel(W)	RL=3Ω, 10%, THD+N	-	-	112
	RL=4Ω, 10%, THD+N	-	-	105
	RL=3Ω, 1%, THD+N	-	-	100
	RL=4Ω, 10%, THD+N	-	-	88
	200W channel: RL=2Ω, 1%, THD+N	-	-	208
THD+N	1W	-	0.02%	-
SNR	A-weighted, Gain= 18 dB	-	108 dB	-
DNR	A-weighted, Gain= 18 dB	-	109 dB	-
Minimum Load Impedance(Ω)	-	3	4	-
Gain (dB)	-	18	24	34

Efficiency	100W @4 Ohm	-	90%	-
Input Impedance	18dB	-	48K Ω	-
	24dB	-	24K Ω	-
	30dB	-	12K Ω	-
	34dB	-	7.7K Ω	-

6 Connection Ports and Functions



6.1 Power input

TSA7600 has 2 power input ports. One is a screw terminal connector and another one is a DC Jack connector. The DC input jack is 2.5mm with positive core polarity. These two ports are connected in parallel. You can only connect power to one of them at the same time.

- DC input voltage: DC12V-30V.
- Power reverse connect protection

6.2 Amplifier chip Gain settings

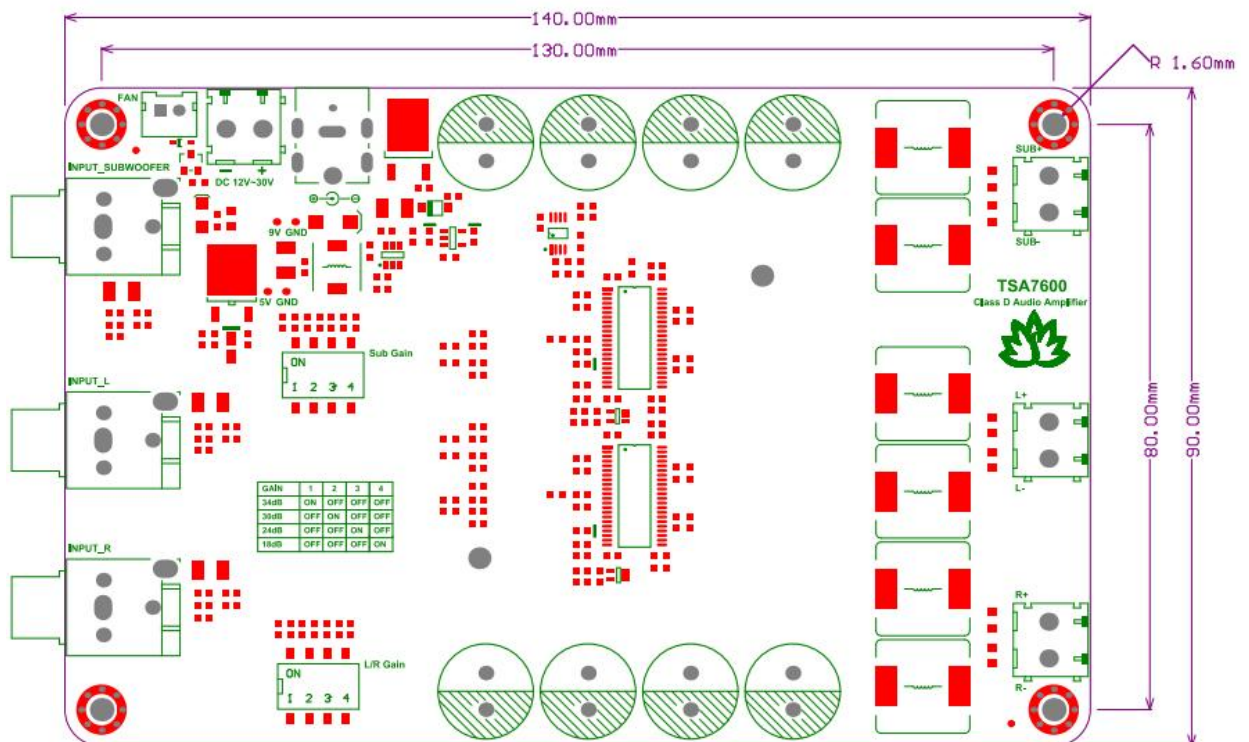
The TSA7600 board features two amplifier chips, and users have the flexibility to independently adjust the gains of each amplifier chip according to their preferences.

SUBWOOFER & L/R:

GAIN	DIP SWITCH
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	1	2	3	4
34dB	ON	OFF	OFF	OFF
30dB	OFF	ON	OFF	OFF
24dB	OFF	OFF	ON	OFF
18dB	OFF	OFF	OFF	ON

7 Dimensions



8 Revision history

Document revision history

Date	Revision	Changes
19-Jul-2024	1	Initial release