

2.5W Stereo Audio Amplifier using LM4752

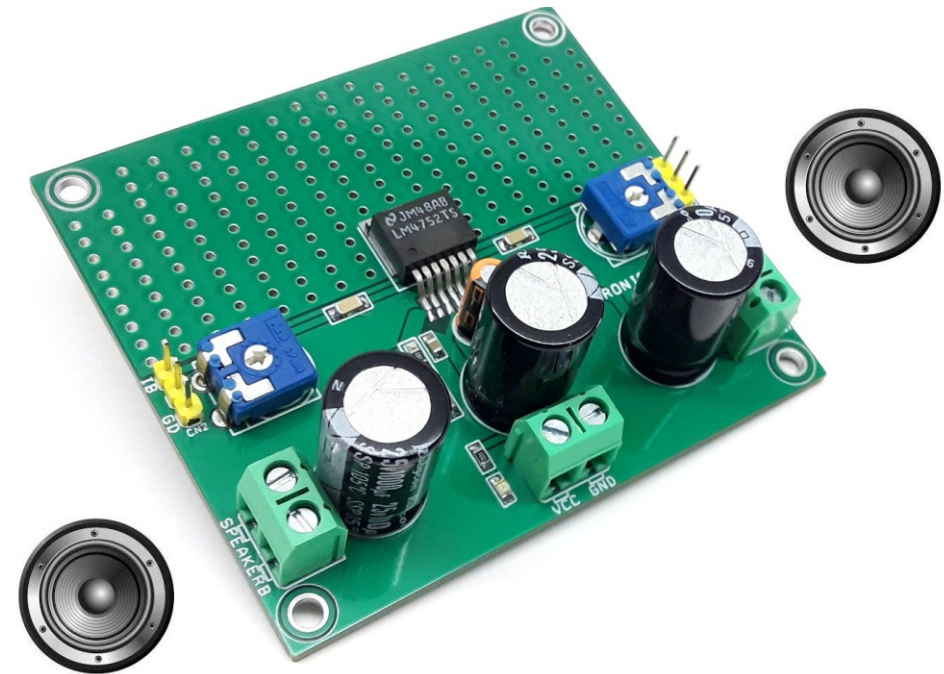
The Stereo Audio Amplifier project shown here is capable of delivering 2.5W per channel of continuous average output power to 4Ω loads using a single 12V supply at 10% THD+N. The project is built using the LM4752 chip. This chip is specifically designed for single supply operations and low external components count. The gain and bias resistors are integrated on-chip, resulting in a 2.5W stereo amplifier in a compact 7-pin TO263 SMD package. High output power levels at 12V supplies and low external component count offer high value for compact stereo and TV applications. Sufficient power dissipation is provided on PCB so no external heatsink is required for IC.

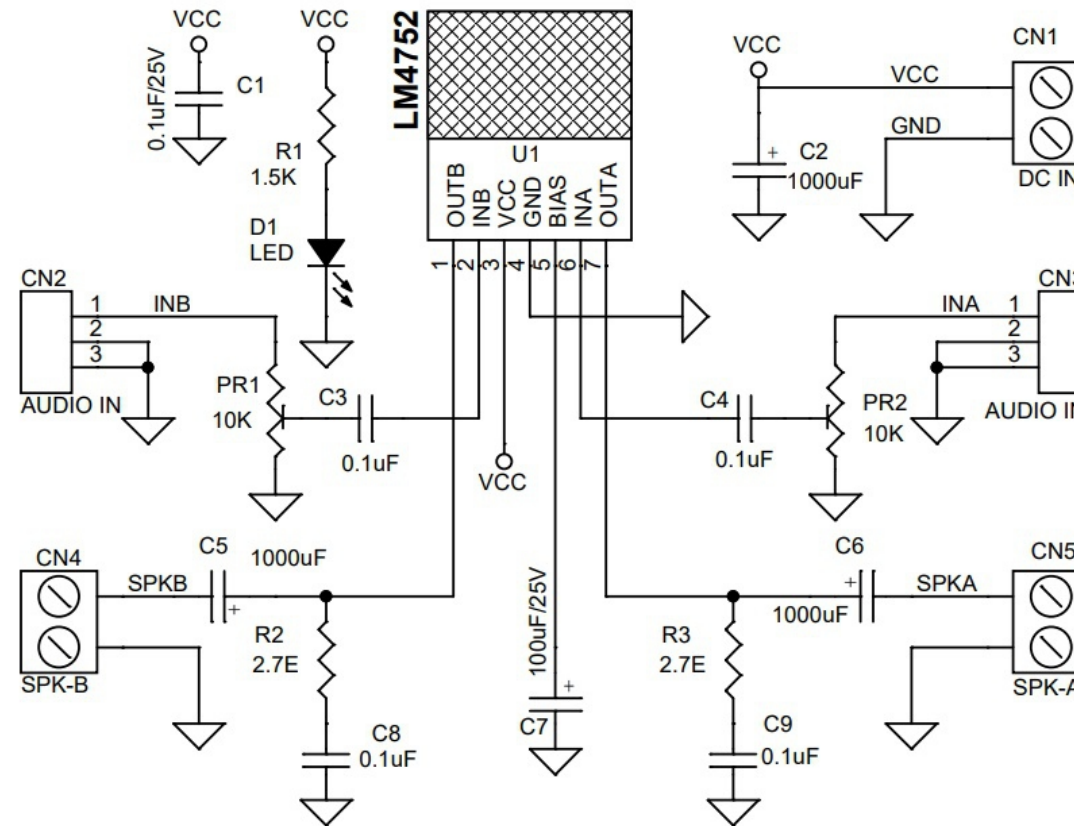
Connections

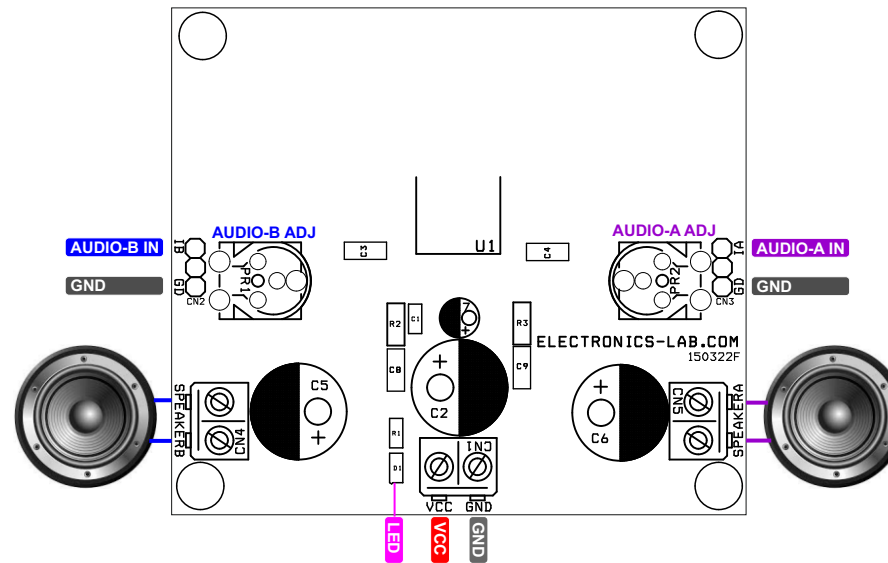
- CN1: Pin 1 VCC, Pin 2 GND
- CN2: Audio Signal Input Channel B
- CN3: Audio Signal Input Channel A
- CN4: Speaker Channel B
- CN5: Speaker Channel A
- PR1: Trimmer Potentiometer for Channel B Audio Volume Control
- PR2: Trimmer Potentiometer for Channel A Audio Volume Control
- D1 Power LED

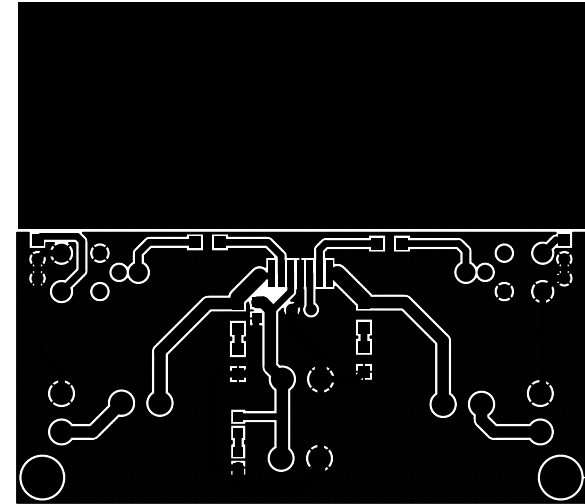
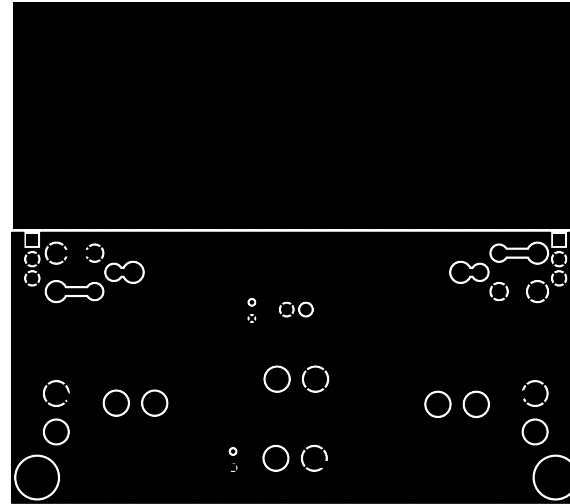
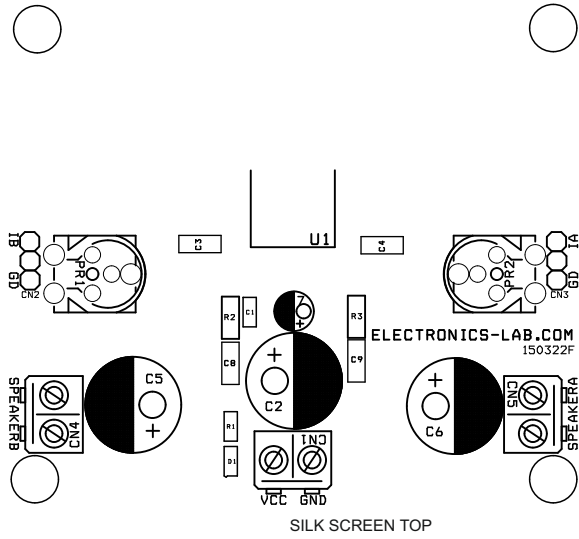
Features

- Supply 12V-16V DC
- PO 2.5W Stereo at 10% THD+N @ 1 kHz into 4Ω
- Drives 4Ω and 8Ω Loads
- Internal Gain Resistors (AV = 34 dB)
- Minimum External Component
- Single Supply Operation
- Internal Current Limiting
- Internal Thermal Protection
- On Board Power LED
- On Board Trimmer Potentiometer for Volume Control
- Screw Terminal for Power Supply
- Screw Terminal for Speaker Connections
- 3 Pin Male Header for Audio Signal Input
- On Board Thermal Area for Power Dissipation
- 4 x 3MM Mounting Holes
- PCB Dimensions 75.72 x 89.99mm









PCB DIMENSIONS 75.72 X 89.99MM



BOM						
NO	QNTY	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	2 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1247-ND
2	2	CN2,CN3	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
3	1	CN4	2 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1247-ND
4	1	CN5	2 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1247-ND
5	1	C1	0.1uF/25V	YAGEO/MURATA	DIGIKEY	
6	3	C2,C5,C6	1000uF/25V ELECKTROLYTIC	NICHICON	DIGIKEY	493-13150-1-ND
7	4	C3,C4,C8,C9	0.1uF/50V SMD SIZE 1206	YAGEO/MURATA	DIGIKEY	
8	1	C7	100uF/25V		DIGIKEY	493-1548-ND
9	1	D1	LED RED SMD SIZE 0805	LITE ON INC	DIGIKEY	160-1427-1-ND
10	2	PR1,PR2	10K TRIMMER POT	AMPHENON PHIER	DIGIKEY	1993-PT10MH10-103A2020-E-S-ND
11	1	R1	1.5K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
12	2	R2,R3	2.7E 5% SMD SIZE 1206	YAGEO/MURATA	DIGIKEY	
13	1	U1	LM4752	TI	DIGIKEY	296-44782-ND

