

## Mini Audio Power Amplifier

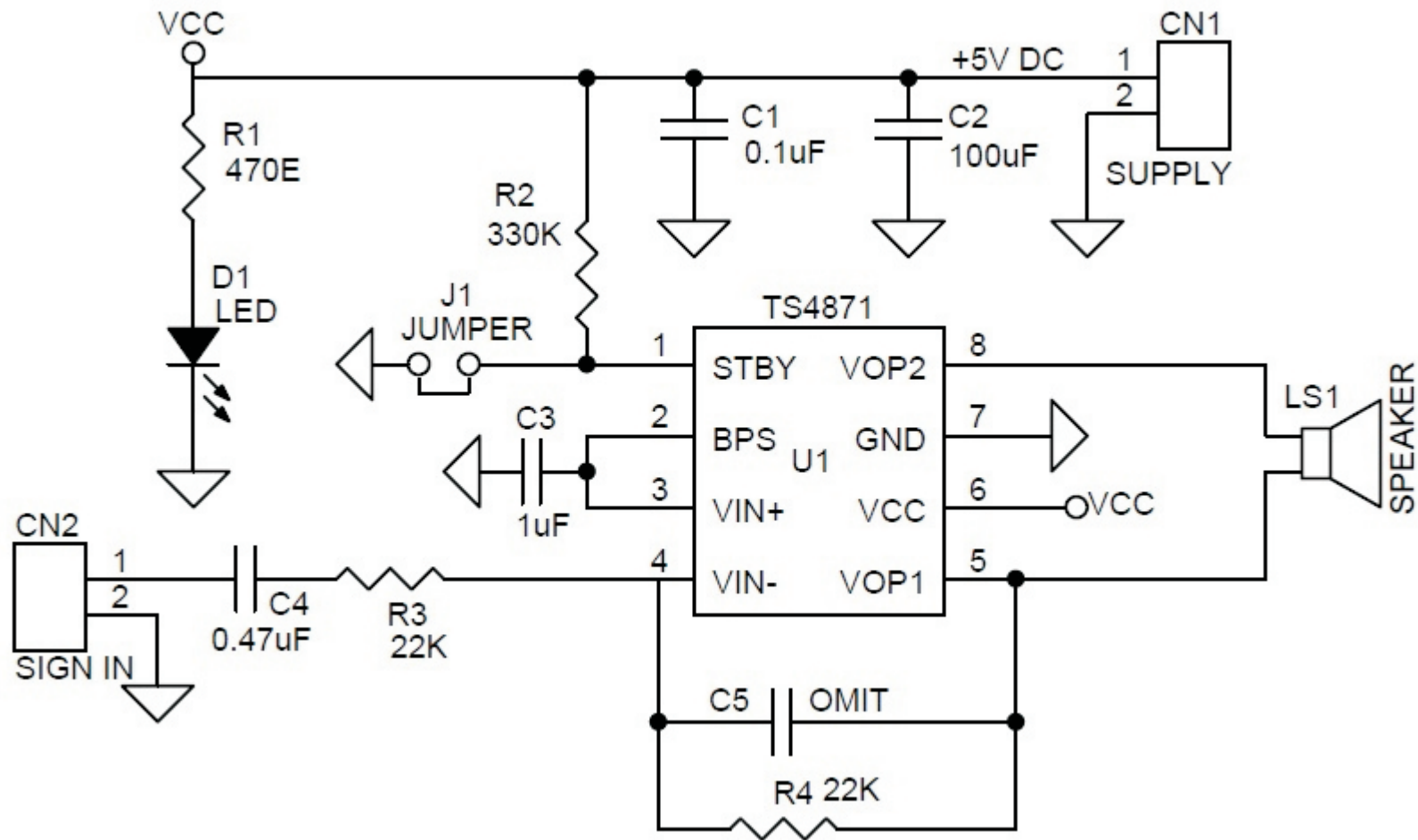
The Mini Audio Power Amplifier capable of delivering 1W of continuous RMS Output Power into 8 ohms load @ 5V. Amplifier built using TS4871 IC from ST. This Audio Amplifier is exhibiting 0.1% distortion level (THD) from a 5V supply for a  $P_{out} = 250\text{mW}$  RMS. An external standby mode control reduces the supply current to less than 10nA. An internal thermal shutdown protection is also provided. The Amplifier has been designed for high quality audio applications such as mobile phones, media players and portable device. The gain is set to 6dB but unity-gain stable amplifier can be configured by external gain setting resistor R4. 28mm ID hole provided for easy mounted of PCB on speaker directly.

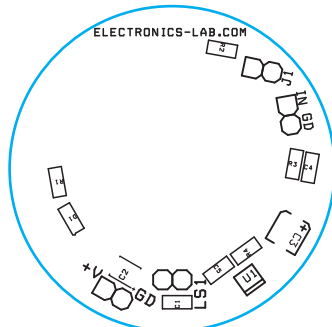
**Connections:** D1 Power LED, CN1 Power input, LS1 Speaker, CN2 Audio Signal Input.

**Note :** Default Gain 6dB, Change R4 to 110K to set the Gain to 20dB.

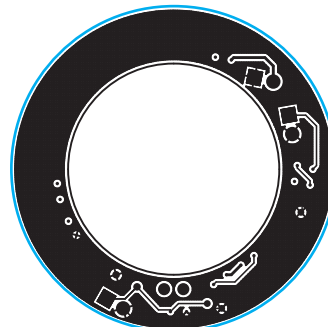
- SUPPLY 5V
- 1W RAIL TO RAIL OUTPUT POWER
- $V_{cc}=5\text{V}$ , THD=1%,  $f=1\text{kHz}$ , with 8W LOAD
- ULTRA LOW CONSUMPTION IN STANDBY MODE (10nA)
- 75dB PSRR @ 217Hz from 5V to 2.6V
- Gain 6dB
- ULTRA LOW POP & CLICK
- ULTRA LOW DISTORTION (0.1%)
- UNITY GAIN STABLE



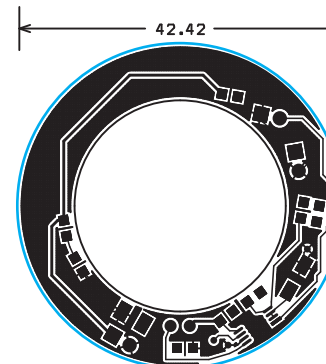




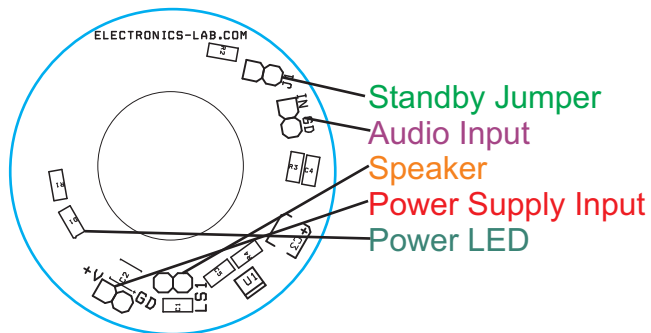
Silk Screen Top  
PCB Dimensions 42.42MM



Bottom layer



Top Layer



BOM			
SR.	QNTY	REF	DESCRIPTION
1	1	CN1	2 PIN MALE HEADER CONNECTOR
2	1	CN2	2 PIN MALE HEADER CONNECTOR
3	1	C1	0.1uF SMD 0805
4	1	C2	100uF/16V SMD 1210
5	1	C3	1uF/16V SMD 0805
6	1	C4	0.47uF SMD 0805
7	1	C5	OMIT
8	1	D1	LED RED SMD 0805
9	1	J1	JUMPER
10	1	LS1	2 PIN MALE HEADER CONNECTOR
11	1	R1	470E SMD 0805
12	1	R2	330K SMD 0805
13	2	R3,R4	22K SMD 0805
14	1	U1	TS4871 MINI SO8