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3D Effect Audio Processor

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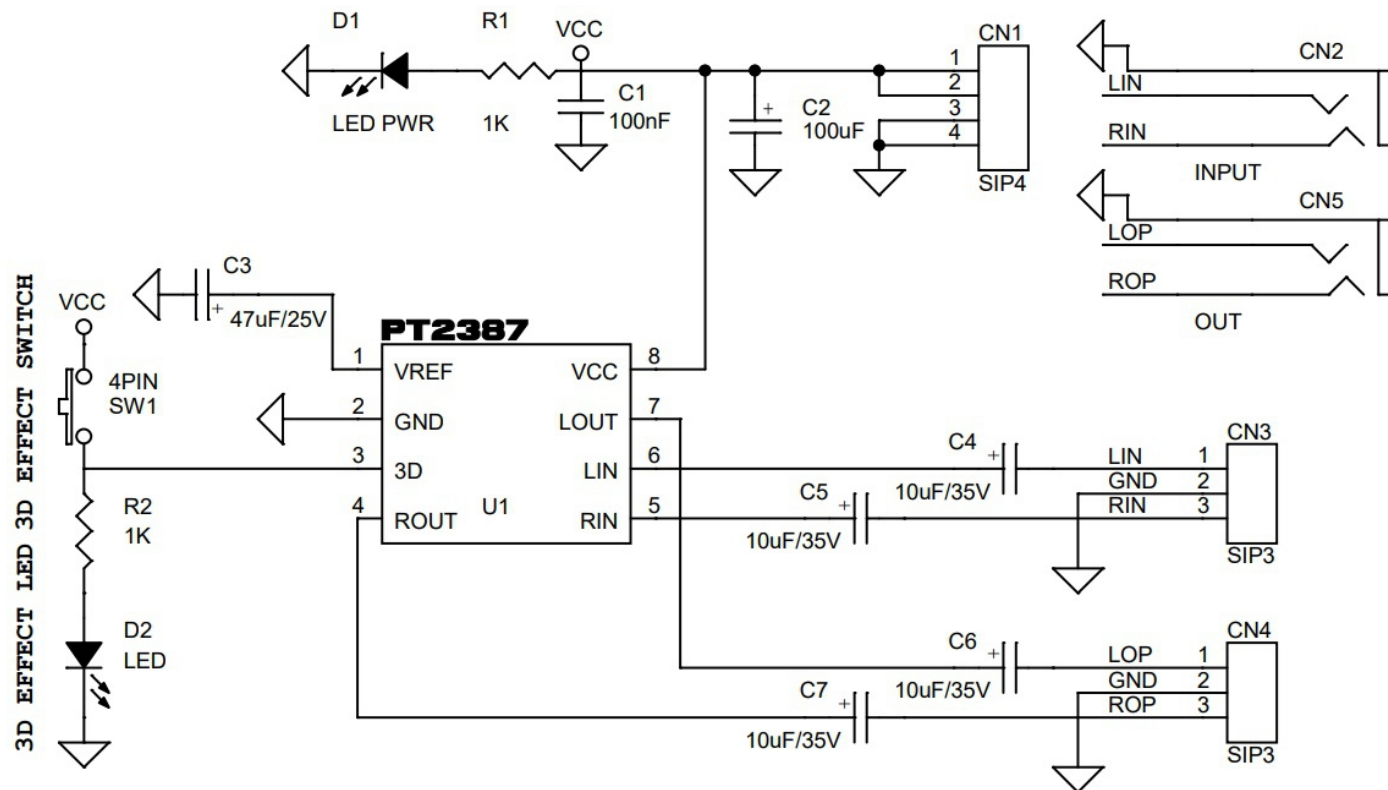
3D Effect Audio Processor

The project presented here is a 3D sound processor, that regenerates 3D sound to stereo speakers. The board is able to regenerate 3D sound from a stereo audio input. It features of wide operating voltage range, wide dynamic range, and low output noise and is suitable for any audio application. This tiny module can add 3D sound effects to your next project. Basically, this mini low-cost module converts a stereo audio signal into 3D effect audio and it is based on PT2387 chip. The chip features a specially designed PTC HRTFs filter and with its space-enhanced circuit, it provides excellent audio quality and performance. The module provides excellent 3D effect audio output from a stereo audio source and a built-in LED display when the 3D sound effect is active. A tactile switch is provided to activate the 3D sound effect.

FEATURES

–   Operating Voltage 5V to 9V DC
–   THD= N<0.01%, S/N>95dB
–   On Board Power LED
–   Standard Audio Signal Input and Output
–   On Board 3D function LED
–   5MM Stereo Female socket for Audio Input and Output
–   On Board Tactile Switch for 3D Sound ON/OFF
–   PCB Dimensions 55.88 x 26.67 mm
   4 x 2.5 mm Mounting Holes

# Schematic

Connections

ACTIVE SPEAKER (AMP)

AUDIO OUT

STEREO AUDIO SIGNAL INPUT

PWR LED

3D-SOUND LED

SWITCH - 3D SOUND
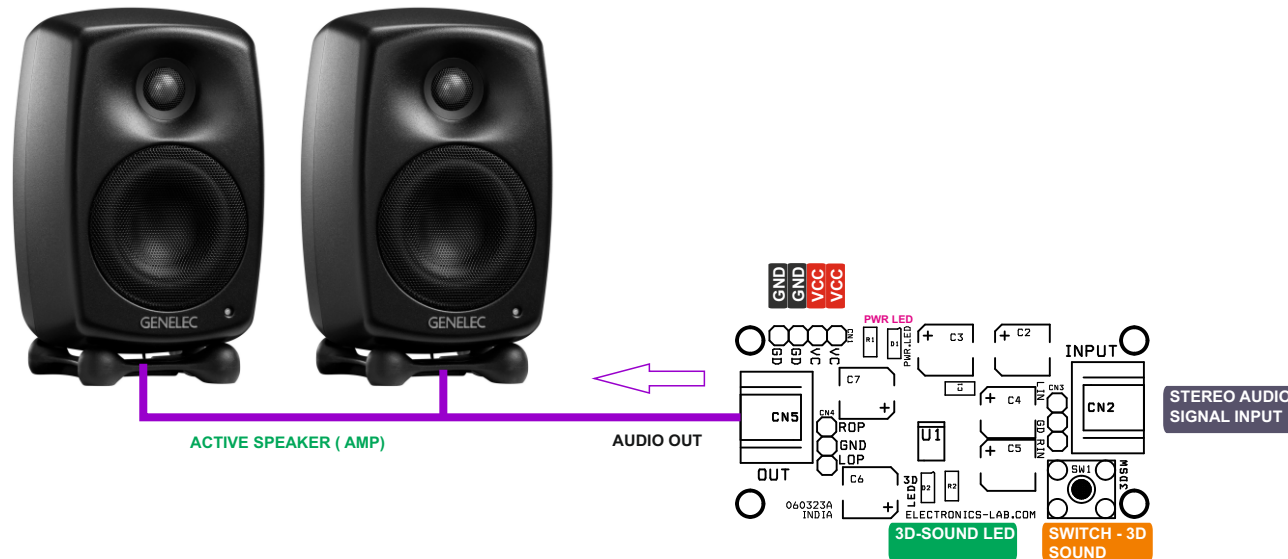
Connections

- **-** CN1: Pin 1,2 = VCC 5V TO 9V, Pin 3.4 = GND
- **-** CN2: Stereo EP 3.5MM Female Connector, Stereo Audio Signal Input
- **-** CN3: Optional Audio input
- **-** CN4: Optional Audio output
- **-** CN5: Stereo EP 3.5MM Female Connector, Stereo Audio Signal Output
- **-** SW1: Tactile Switch 3D Sound Effect ON/OFF
- **-** D1: Power LED
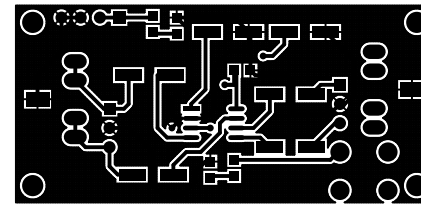- **-** D2: 3D Sound Function Display

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PCB
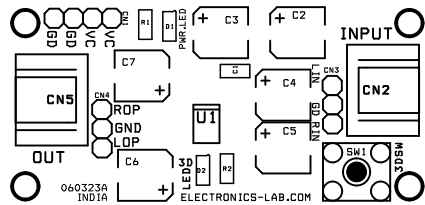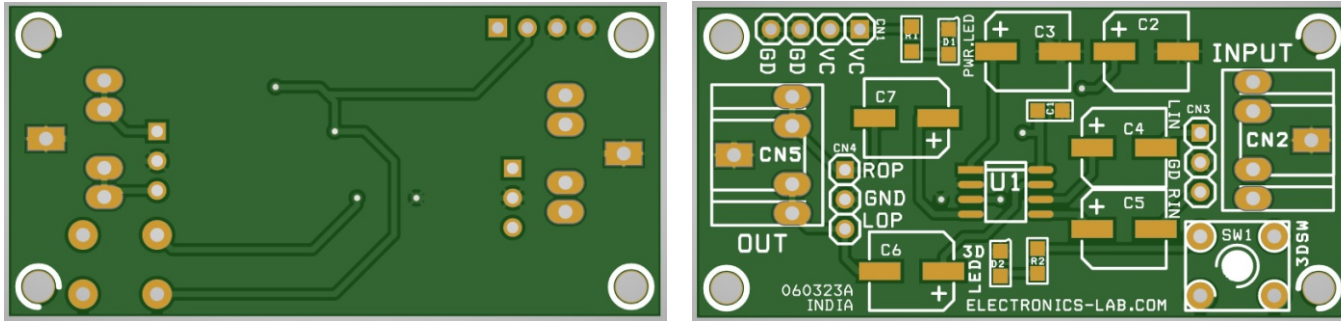
SILK SCREEN TOP
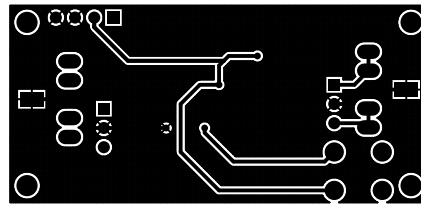
BOTTOM LAYER

TOP LAYER

PCB DIMENSIONS 55.88 X 26.67MM

Parts List

			BOM			
NO.	QNTY.	REF	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART'S NO
1	1	CN1	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
2	1	CN2	3.5MM FEMALE STEREO EP SOCKET	CUI AUDIO	DIGIKEY	CP1-3525N-ND
3	2	CN3,CN4	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
4	1	CN5	3.5MM FEMALE STEREO EP SOCKET	CUI AUDIO	DIGIKEY	CP1-3525N-ND
5	1	C1	100nF/50V CERAMIC SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
6	1	C2	100uF/16-35V ELECTROLYTIC SMD	UNITED CHEMI	DIGIKEY	565-EMHL250ARA101MF80GCT-ND
7	1	C3	47uF/25V ELECTROLYTIC SMD	PANASONIC	DIGIKEY	PCE3804CT-ND
8	4	C4,C5,C6,C7	10uF/35V ELECTROLYTIC SMD	PANASONIC	DIGIKEY	PCE3947CT-ND
9	1	D1	LED RED SMD SIZE 0805	LIGHT ON INC	DIGIKEY	160-1427-1-ND
10	1	D2	LED GREEN SMD SIZE 0805	DIALLIGHT	DIGIKEY	350-2044-1-ND
11	2	R1,R2	1K 5% SMD SIZE 0805	YAGEO/MURATA	DIGIKEY	
12	1	SW1	4 PIN TACTILE SWITCH	NKK SWITCH	DIGIKEY	HP0215AFKP2-ND
13	1	U1	PT2387 SOIC8	PRINCETON TECH CORP	DIGIKEY	ALIEXPRESS

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Notes

APP

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Android App

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