

2. Key Features

- ◆ 20W/Ch into 4Ω BTL Load from 12V Supply
- ◆ Operate from 4.5V to 15V
- ◆ Single-Ended Analog Inputs
- ◆ No Pop Noise for Start-up and Shut-down Sequences
- ◆ Internal Oscillator (No External Components Required)
- ◆ High Efficient Class-D Operation Eliminates Need for Heat Sinks
- ◆ Thermal and Short-Circuit Protection with Auto Recovery
- ◆ Space-Saving Surface-Mount 16-Pin ESOP Package
- ◆ Pb-Free Package

3. EV Board Schematic

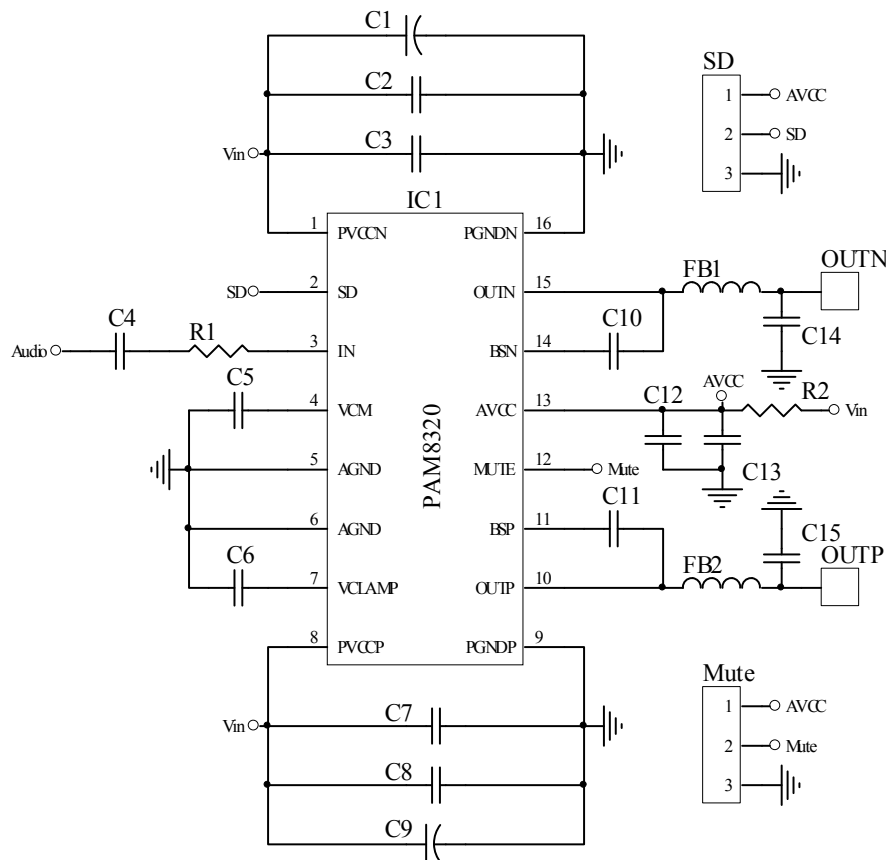


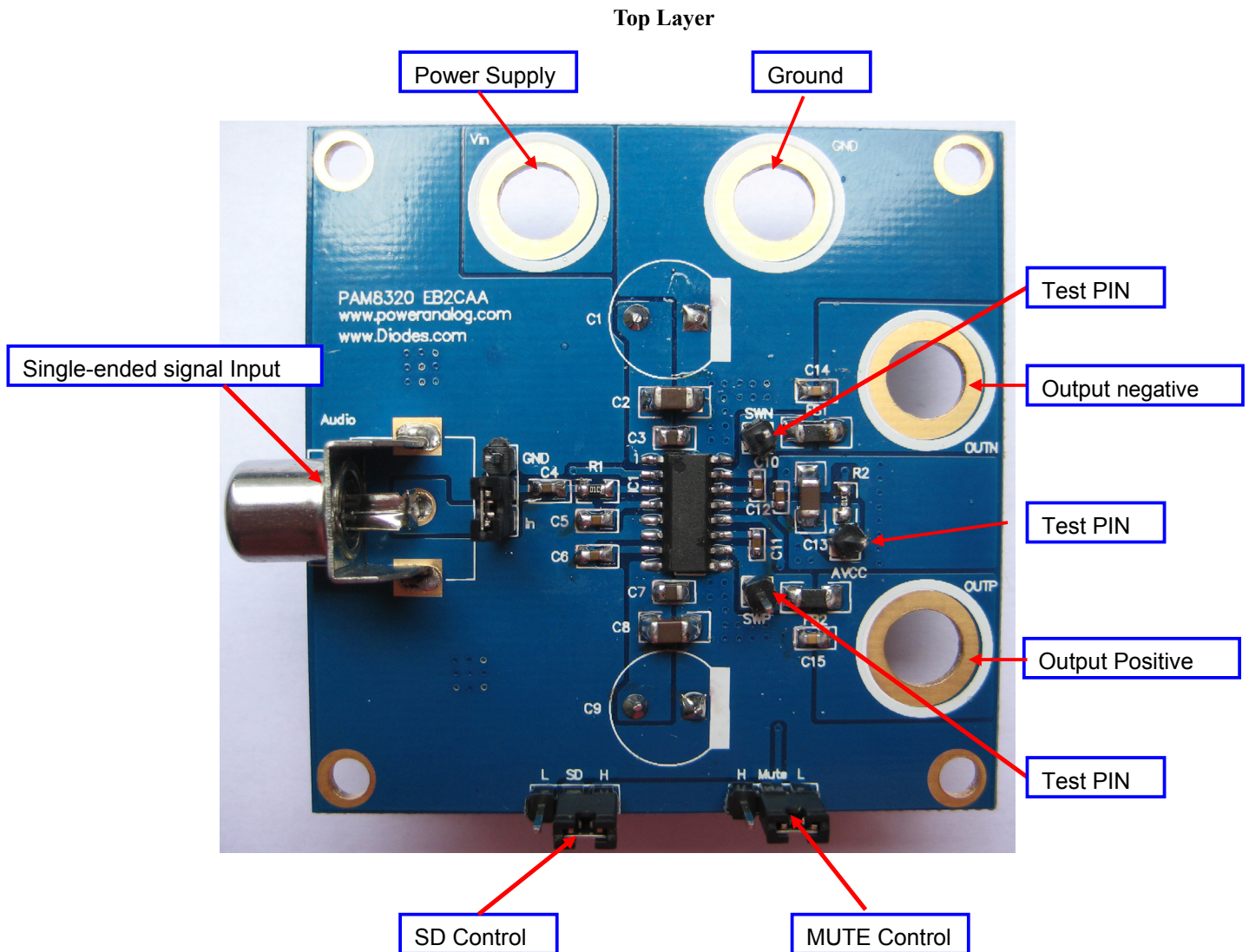
Figure 1

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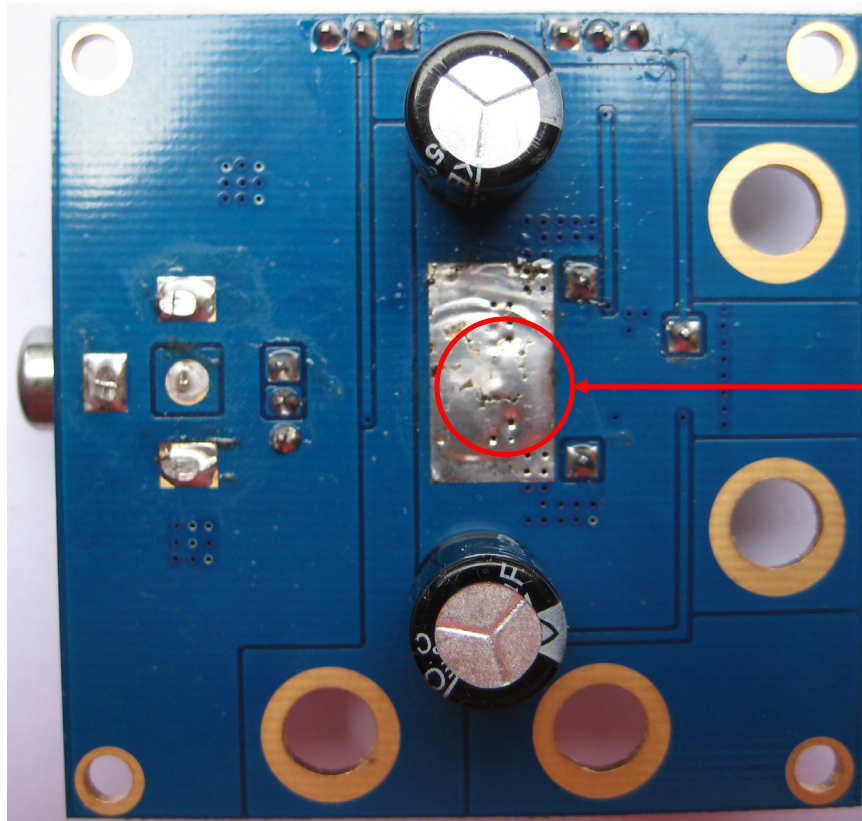
4. EV-Board PAM8320 EB2CAA Description

PAM8320 EB2CAA is designed for evaluated PAM8320. PAM8320 is a 20W Class-D amplifier for driving a mono speaker in a bridge-tied-load configuration. The PAM8320 can drive speaker as low as 4Ω. Due to the low power dissipation and high efficiency the device can be used without any external heat sink when playing music.

5. EV Board View and Jack Description



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Bottom Layer

Copper Exposed for
Thermal Transfer

6. EV board operational sequence:

- a. Connect SD to a high and MUTE to a low for normal operation
- b. Connect audio input from audio input jack (single-end signal)
- c. Connect the loading(speaker or power resistor) to the output jack
- d. Power on: 4.5V to 15V DC power supply

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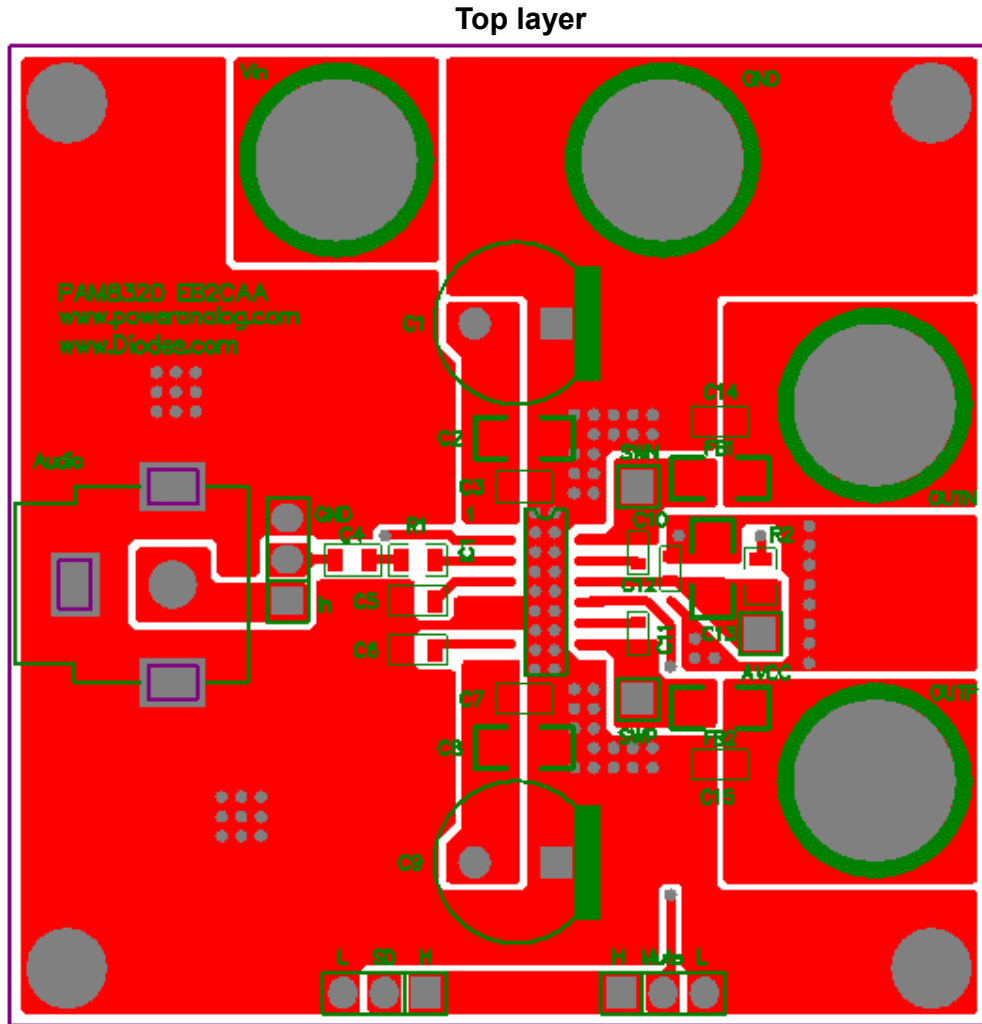
7. EV Board BOM List

Item	Value	Type	Rating	Description	Vender and port
C4	0.47uF	X5R/X7R, Ceramic/0603	25V	Input coupling CAP	EMK107B7474KA-T
C10, C11	1uF	X5R/X7R, Ceramic/0603	25V	High side driver bootstrap CAP	TMK107B7105KA-T
C3, C7	0.1uF	X5R/X7R, Ceramic/0603	25V	PVCC coupling CAP,	UMK212B7104KG-T
C2, C8	10uF	X5R/X7R, Ceramic/1210	25V	PVCC main coupling CAP,	TMK316AB7106KL-T
C1, C9	470uF	Electrolytic	25V	Power supply decoupling CAP	
C6	1uF	X5R/X7R, Ceramic/0603	16V	Vclamp coupling CAP	EMK107B7105KA-T
C5	1uF	X5R/X7R, Ceramic/0603	16V	Internal VCM decoupling CAP	EMK107B7105KA-T
C12	0.1uF	X5R/X7R, Ceramic/0603	25V	AVCC coupling CAP	UMK212B7104KG-T
C13	10uF	X5R/X7R, Ceramic/1210	25V	AVCC main coupling CAP	TMK316AB7106KL-T
R1	0ohm	0603	1%	Input Resistor	
R2	10Ω	0805	5%	Separate AVCC from PVCC	
FB1, FB2	600Ω	1206		For EMI eliminate components	
C14, C15	1nF	X5R/X7R, Ceramic/0603	25V	form a FB-CAP filter	UMK107SD102KA-T
IC1	PM8320	SOP-16L(EP)			

Note: For good performance, out+ and out- need add a resistor to ground, a 10kΩ resistor is recommend.

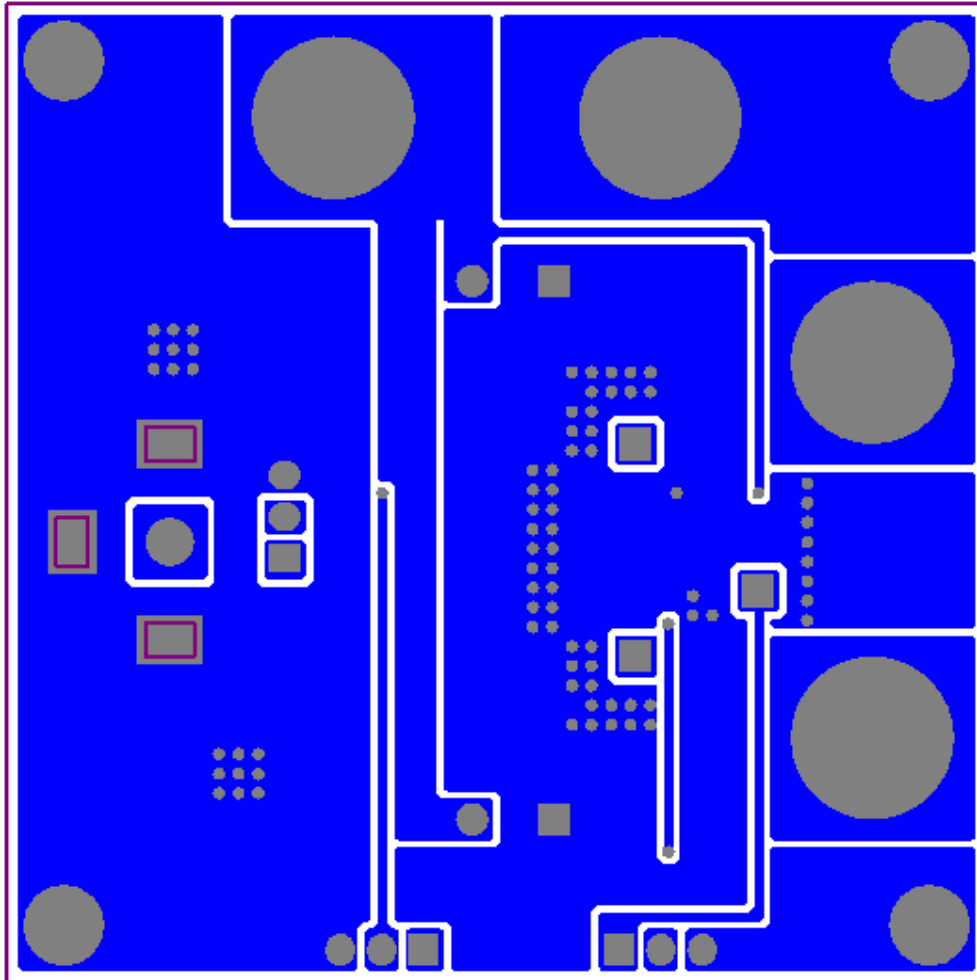
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8. PCB Layout Example



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Bottom layer



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