

5W 单声道高保真 D 类音频功率放大器

概述

PA8159是一款高保真、高效率、低EMI、免滤波、5W单声道D类音频功率放大器。PA8159内部集成智能增益控制（AGC）功能，通过检测输出信号的大小智能调整系统的增益，避免了过载对于扬声器的损害，并提高了听觉体验。

PA8159采用了全差分免滤波PWM调制的系统架构，具有较好的抗干扰能力。其内部集成的过温保护、欠压保护、过流保护、“咔哒”杂音抑制等功能模块，给PA8159提供了更强壮的鲁棒性，使其拥有了更好的适应能力。

PA8159采用了典型的SOP_8封装。

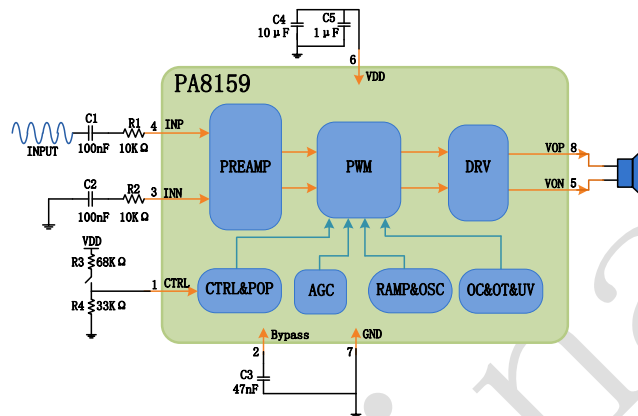


图1. 典型应用图

特点

- 免滤波 D 类
- 集成 AGC 功能
- 输出功率 5W@2Ω (THD+N=10%, 5V)
- 工作电压域: 2.5V~5.5V
- 低失真 THD+N=0.02%@1W, 5V
- POP 声抑制
- 高效率 90%
- 高 PSRR=80dB
- 过流、过温、欠压保护
- 全差分/单端输入
- 低噪声 70uVrms (GAIN=10V/V)
- 失调电压 <10mV
- 静态电流 4mA
- 关断电流 <0.1uA
- SOP_8 封装

应用

- 蓝牙音箱
- 便携式音响设备
- 玩具

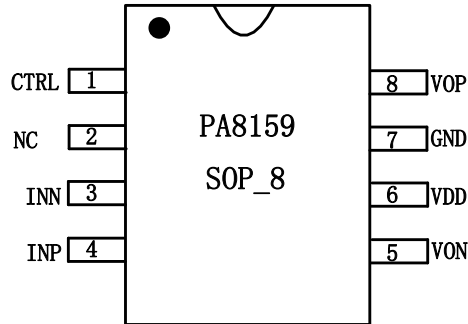
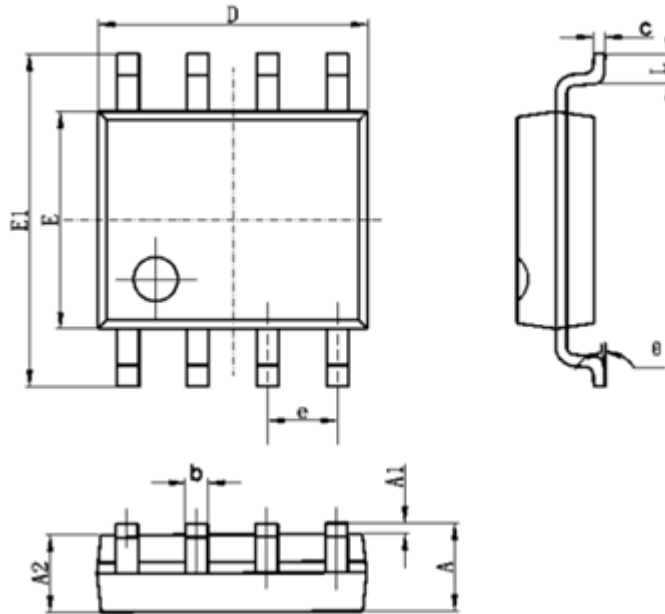
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封装


图2. PA8159 封装图

管脚定义


编号	管脚名	描述
1	CTRL	工作模式控制
2	NC	NC
3	INN	信号输入负端
4	INP	信号输入正端
5	VON	输出负端
6	VDD	电源
7	GND	地
8	VOP	输出正端

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封装信息 SOP_8L


符号	外形尺寸 (毫米)		外形尺寸 (英寸)	
	最小值	最大值	最小值	最大值
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270 (BSC)		0.050 (BSC)	
L	0.400	0.800	0.016	0.050
θ	0°	8°	0°	8°




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