

125mW 免输出耦合电容的立体声线路驱动器/耳机放大器

■ 特点

- 输出无需隔直电容
- 卓越的低音效果
- 无咔嗒/噼噗声
- 低 THD+N: 最低 0.001%
- 低噪声, V_N 7 μ V
- 支持单端输入和全差分输入
- 2.5V 至 5.2V 较宽的电源工作范围
- 4.2V 供电, 为 32 Ω 负载提供 125mW 输出功率
- QFN16 3mm*3mm 封装

■ 概述

HT97220为差分输入、可直接输出的线路驱动器/耳机放大器。5V供电时, 器件为32 Ω 耳机负载提供125mW驱动。IC可以通过外部电阻调整增益。

IC在整个音频频带内提供优异的THD+N。

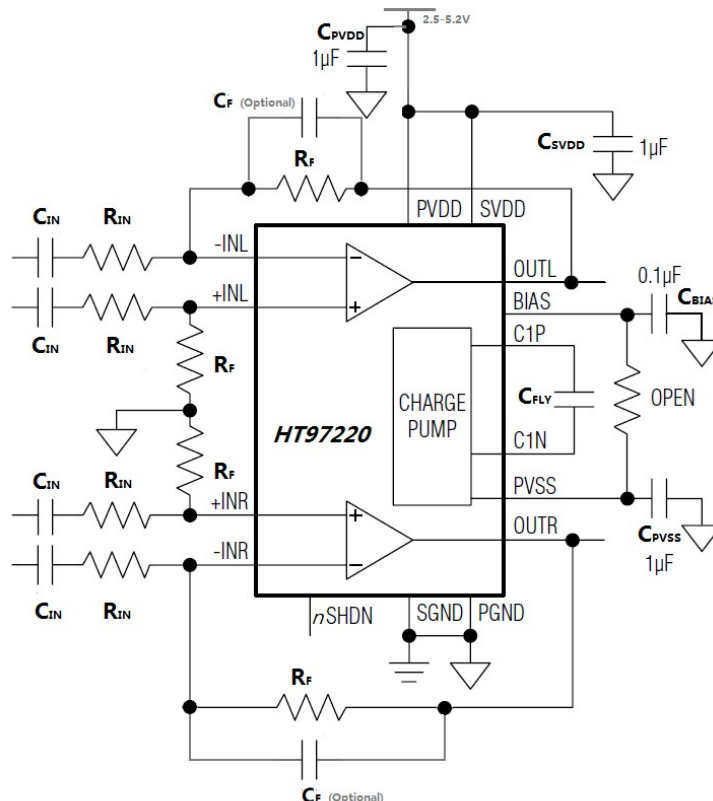
IC内部电荷泵对输入电源反相, 产生负电源。放大器的输出级由输入正电源和电荷泵输出负电源供电, 双极性供电使得输出偏置在零电位, 省去了大尺寸、容易引入失真的输出耦合电容。

IC上电或断电时没有咔嗒/噼噗声。

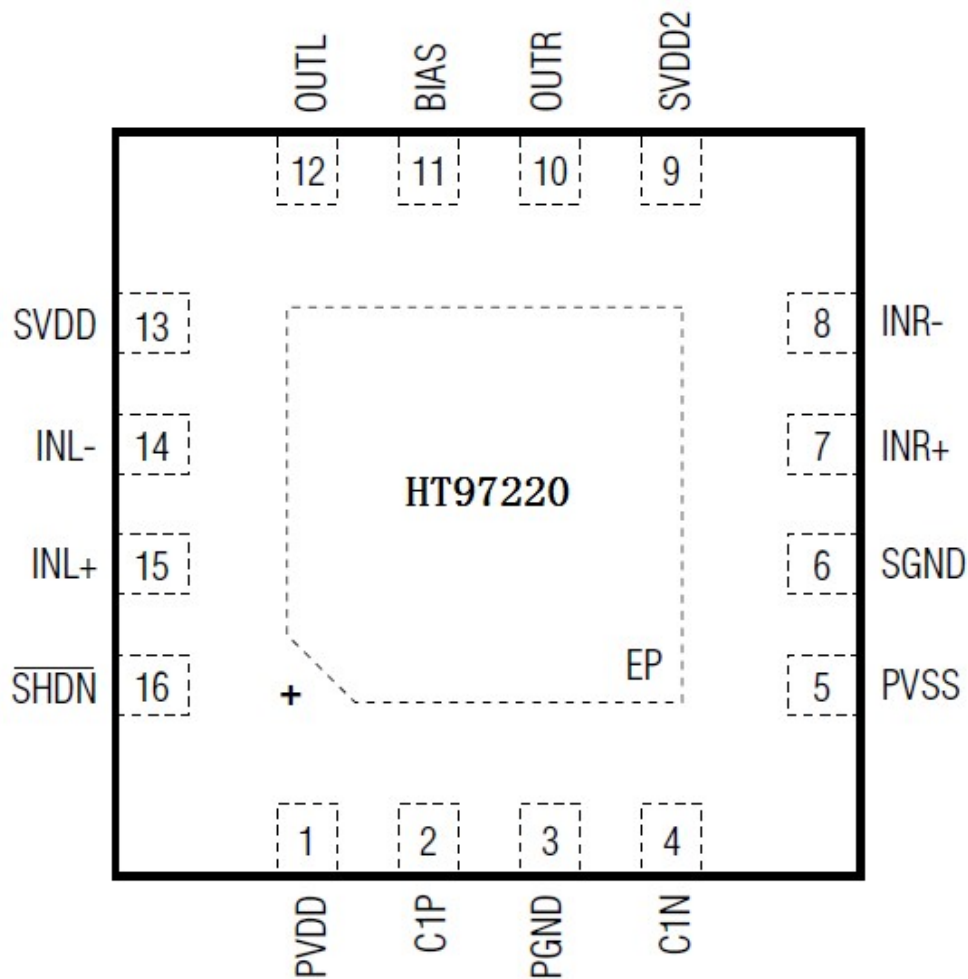
■ 应用

- 蓝牙耳机
- 音响, DVD
- 机顶盒
- 智能手机
- 平板/笔记本电脑
- 便携式游戏机

■ 典型应用图



引脚信息



引脚定义

| 序号 | 管脚名 | 功能说明 |
|----|-------|------------------------------|
| 1 | PVDD | 电荷泵电源输入，接1uF滤波电容到PGND |
| 2 | C1P | 电荷泵飞电容正端，接0.47uF电容到电荷泵飞电容负端 |
| 3 | PGND | 电源功率地，与SGND连一起接板极系统地 |
| 4 | C1N | 电荷泵飞电容负端，接0.47uF电容到电荷泵飞电容正端 |
| 5 | PVSS | 电荷泵负电源输出，接1uF滤波电容到PGND |
| 6 | SGND | 信号地，与PGND连一起接板极系统地 |
| 7 | INR+ | 右声道输入正极 |
| 8 | INR- | 右声道输入负极 |
| 9 | SVDD2 | 信号通路电源输入，接1uF滤波电容到PGND |
| 10 | OUTR | 右声道输出 |
| 11 | BIAS | 内部供电端，接1uF滤波电容到PGND |
| 12 | OUTL | 左声道输出 |
| 13 | SVDD | 信号通路电源输入，接1uF滤波电容到PGND |
| 14 | INL- | 左声道输入负极 |
| 15 | INL+ | 左声道输入正极 |
| 16 | /SHDN | SD控制输入，低电平芯片进入关断模式；高电平芯片正常工作 |
| - | EP | 裸焊盘，加强散热，可接PGND或者悬空 |

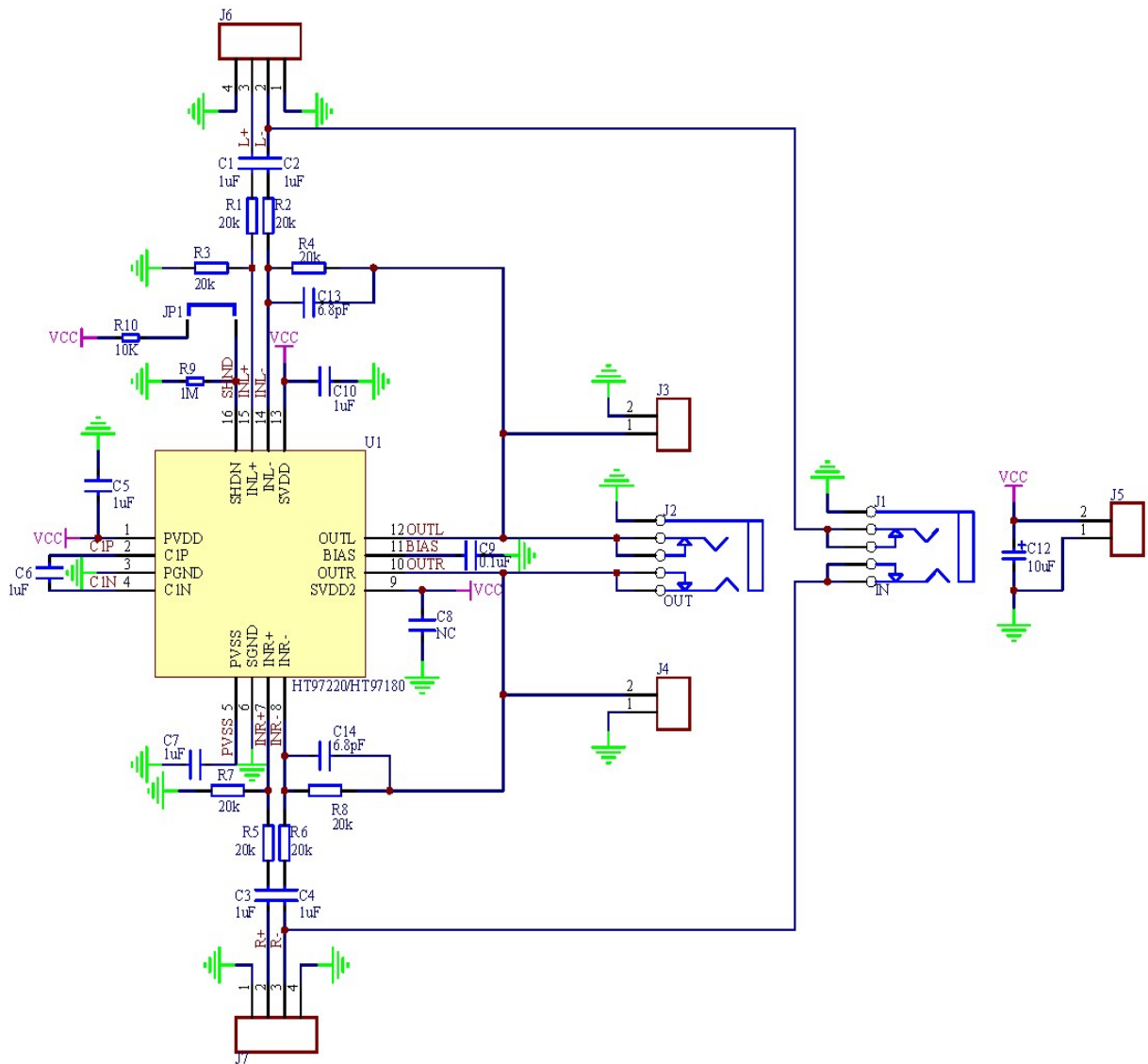


Fig.1 Typical Application of HT97220(L) Demo

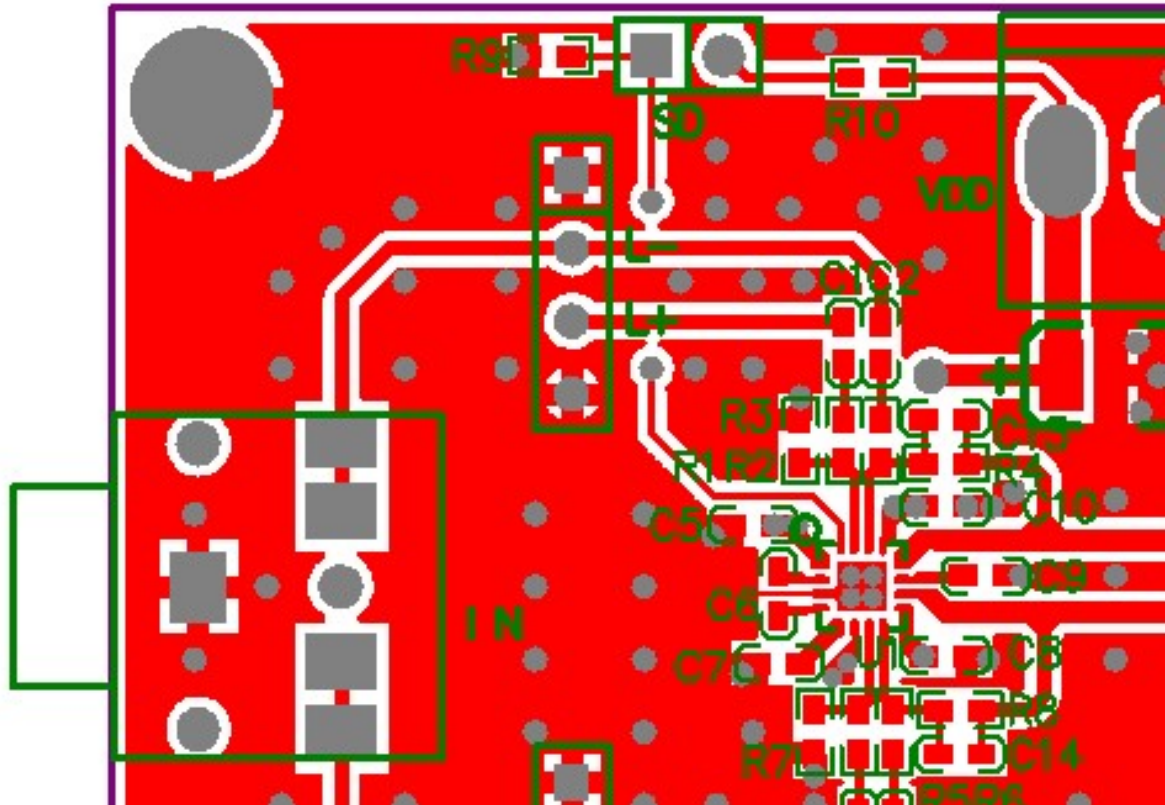


Fig.2 Top View of HT97220(L) Demo Board PCB Layout

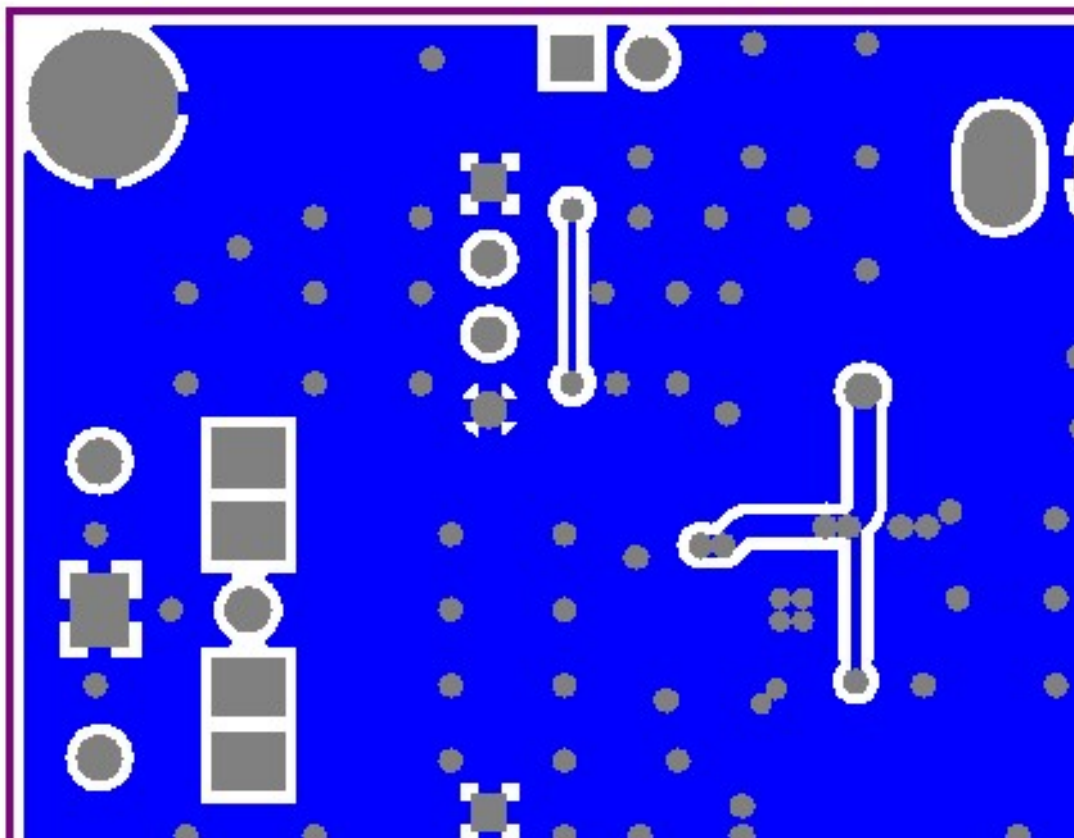
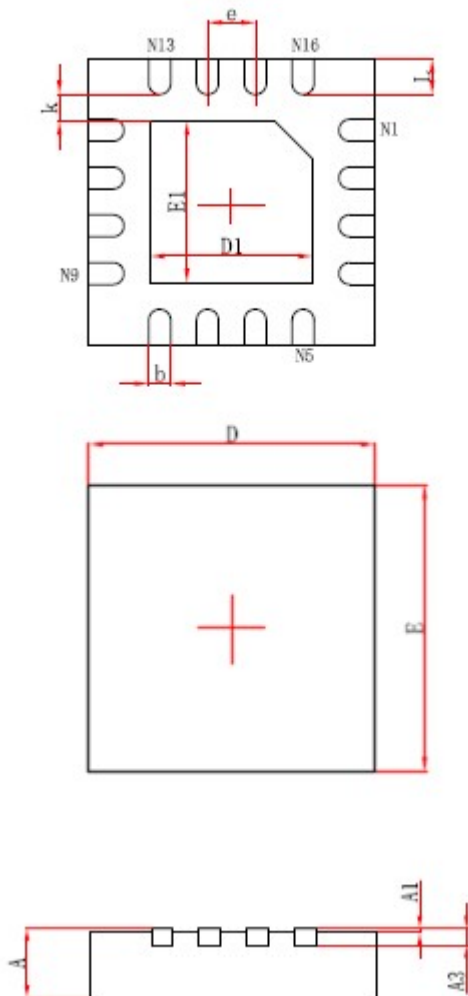


Fig.3 Bottom View of HT97220(L) Demo Board PCB Layout

■ 封装外形



| 符号 | 尺寸 (mm) | |
|----|------------|-------|
| | 最小 | 最大 |
| A | 0.700 | 0.900 |
| A1 | 0.000 | 0.050 |
| A3 | 0.203(REF) | |
| D | 2.900 | 3.100 |
| E | 2.900 | 3.100 |
| D1 | 1.600 | 1.800 |
| E1 | 1.600 | 1.800 |
| k | 0.200MIN | |
| b | 0.180 | 0.300 |
| e | 0.500TYP | |
| L | 0.300 | 0.500 |

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