

3.1W, Mono, Fully Differential Audio Power Amplifier with Internal Feedback Resistors

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General Description

The CP2297 is a fully differential audio power amplifier designed for demanding audio applications. It is capable of delivering 3.1 watt of continuous average power to a 3Ω BTL load with less than 10% distortion (THD+N) from a 5V battery voltage. It operates from 2.2V to 5.5V.

Features like -86dB PSRR at 217Hz, improved RF-rectification immunity, the space-saving CSP9, DFN8, MSOP8 and SOP8-PP(EXP PAD) packages, the advanced pop & click circuitry, a minimal count of external components and low-power shutdown mode make the CP2297 ideal for wireless handsets.

The CP2297 is unity-gain stable, and the gain can be configured by external input resistors and internal feedback resistors.



CSP9 Package
1.5mm x 1.5mm
-40°C ~ 85°C



DFN8 Package
3mm x 3mm
-40°C ~ 85°C



MSOP8 Package
-40°C ~ 85°C

Features

- Fully differential amplifier
- Improved PSRR at 217Hz
- Power output at 5.0V, 10% THD, 3 Ω (DFN8, SOP8-PP only)
- Power output at 5.0V, 1% THD, 8 Ω
- Ultra low shutdown current
- Improved pop & click circuitry eliminates noises during turn-on and turn-off transitions
- Thermal overload protection circuitry
- Unity-gain stable
- External gain configuration capability
- Available in space-saving packages: CSP9, DFN8, MSOP8 and SOP8-PP(EXP PAD)
- RoHS compliant and 100% lead(Pb)-free

-86dB (typ)

3.1W (typ)

1.36W (typ)

0.01μA (typ)

Applications

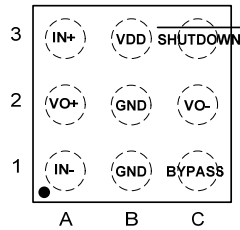
- Wireless handsets
- Portable audio devices
- PDAs
- Notebook computers

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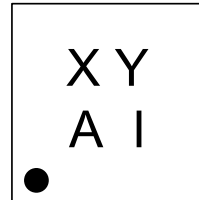
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Pin Configurations

**CSP9 Package
(Top View)**

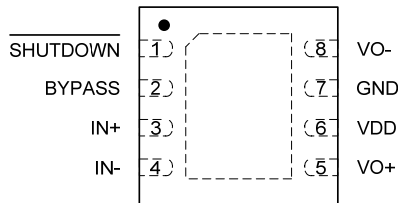


CSP9 Marking

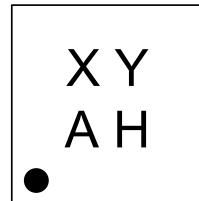


XY -Manufacture Date Code
AI - CP2297ITLX

**DFN8 Package
(Top View)**

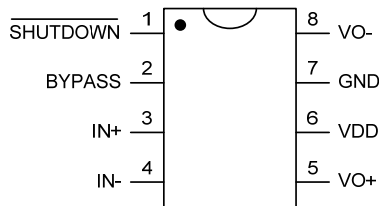


DFN8 Marking

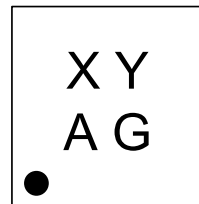


XY -Manufacture Date Code
AH - CP2297LD

**MSOP8 Package
(Top View)**

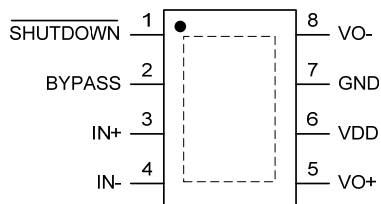


MSOP8 Marking

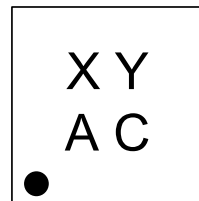


XY -Manufacture Date Code
AG - CP2297MM

**SOP8-PP Package
(Top View)**



SOP8-PP Marking

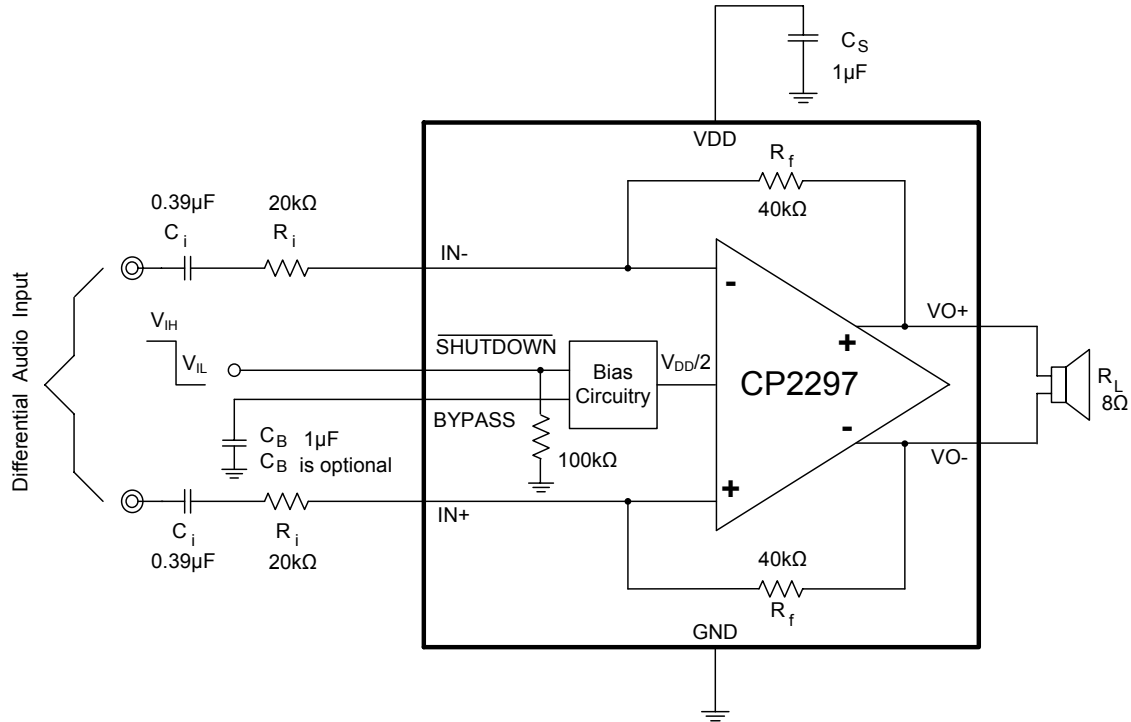


XY -Manufacture Date Code
AC - CP2297SP

3.1W, Mono, Fully Differential Audio Power Amplifier with Internal Feedback Resistors

Typical Application

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