
3W, Mono, Filterless, Class-D Audio Power Amplifier

General Description

The CP2210 is a high efficiency, mono, filterless, Class D audio power amplifier designed for demanding audio applications. It is capable of delivering 3W of continuous average power to a 4Ω BTL load with less than 10% distortion (THD+N) from a 5V battery voltage. It operates from 2.5V to 5.5V.

Features like 90% efficiency, -80dB PSRR at 217Hz, improved RF-rectification immunity, the space-saving CSP9 and DFN8 packages, the advanced pop & click circuitry, a minimal count of external components and low-power shutdown mode make the CP2210 ideal for wireless handsets.

The gain of the CP2210 can be configured by external input resistors, which allows independent gain control from multiple sources by summing the signals. Short circuit and thermal protection prevent the device from damage during fault conditions.



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



DFN8 Package
3mm x 3mm
-40°C ~ 85°C

Features

- Optimized PWM eliminates output Filter
- Efficiency with an 8Ω speaker at 400mW
- Power output at 5.0V, 1%THD, 8Ω
- Power output at 5.0V, 10%THD, 4Ω
- Quiescent current
- Shutdown current
- Improved PSRR
- Wide single supply voltage: 2.5V to 5.5V
- Internally generated 300kHz switching frequency
- Fully differential design reduces RF rectification
- Integrated click-and-pop suppression circuitry
- Short circuit and thermal protection
- Available in space-saving package: CSP9 & DFN8
- RoHS compliant and 100% lead(Pb)-free

90%(typ)
1.36 W(typ)
3 W(typ)
2.3mA (typ)
0.1μA (typ)
-80dB (typ)

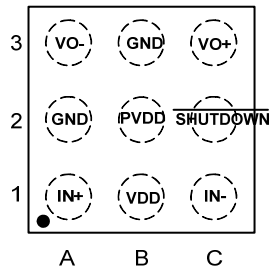
Applications

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

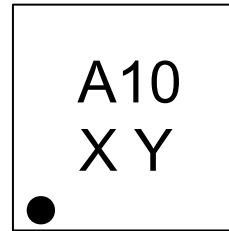
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Pin Configurations

**CSP9 Package
(Top View)**

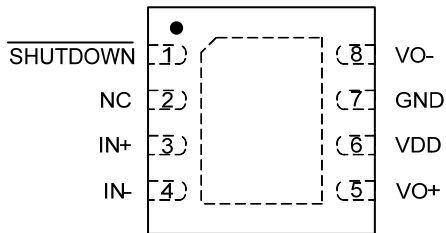


CSP9 Marking

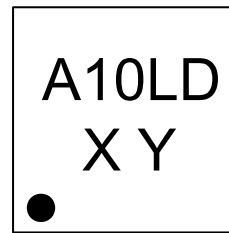


A10 - CP2210ITLX
XY - Manufacture Date Code

**DFN8 Package
(Top View)**



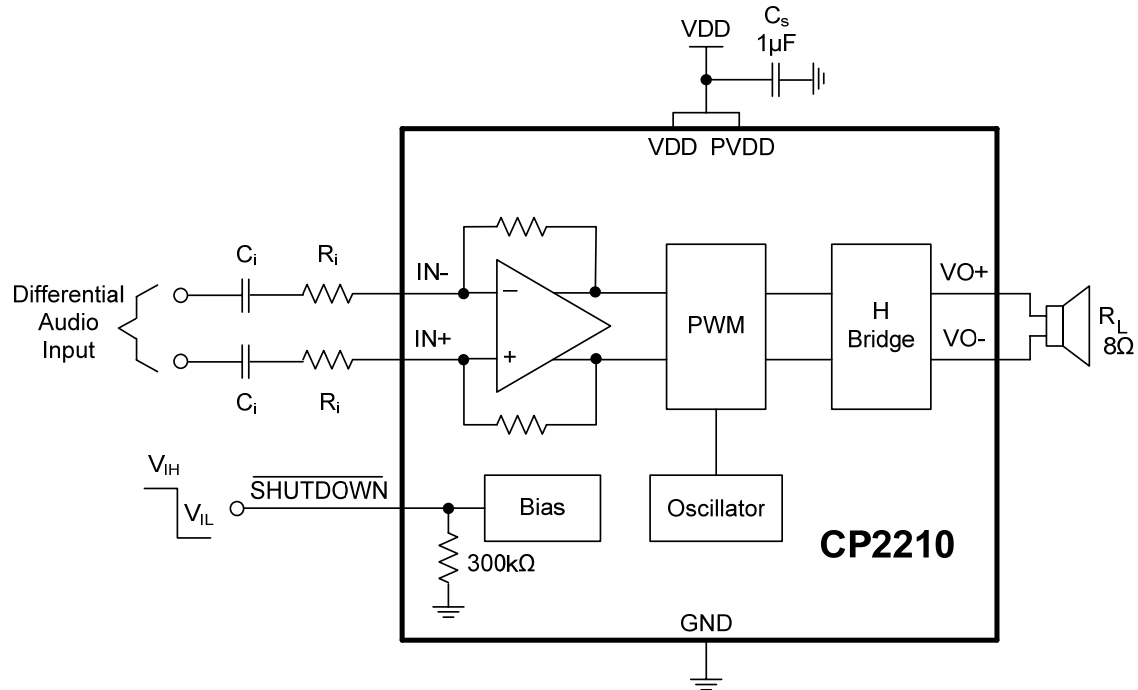
DFN8 Marking



A10LD - CP2210LD
XY - Manufacture Date Code

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Typical Application



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