

3W, Mono, Ultra-Low EMI, Filterless, Class-D Audio Power Amplifier with Spread Spectrum

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General Description

The CP2215 is a high efficiency, mono, filterless, Class D audio power amplifier with spread spectrum designed for demanding audio applications. An advanced spread spectrum modulation reduces EMI and eliminates output filter. 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 CP2215 ideal for wireless handsets.

The gain of the CP2215 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

- Spread spectrum modulation reduces EMI and eliminates output filter
- Efficiency with an 8Ω speaker at 400mW 90%(typ)
- Power output at 5.0V, 1%THD, 8Ω 1.36 W(typ)
- Power output at 5.0V, 10%THD, 4Ω 3 W(typ)
- Quiescent current 2.3mA (typ)
- Shutdown current 0.1μA (typ)
- Improved PSRR -80dB (typ)
- Wide single supply voltage: 2.5V to 5.5V
- Fully differential design reduces RF rectification
- Integrated click-and-pop suppression circuitry
- Short circuit and thermal protection
- Available in space-saving packages: CSP9 & DFN8
- RoHS compliant and 100% lead(Pb)-free

Applications

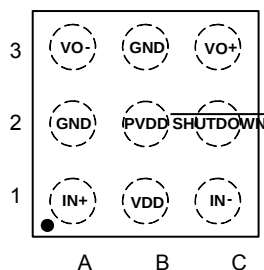
- Wireless handsets
- Portable audio devices
- PDAs
- Notebook computers

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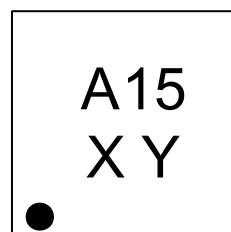
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Pin Configurations

**CSP9 Package
(Top View)**

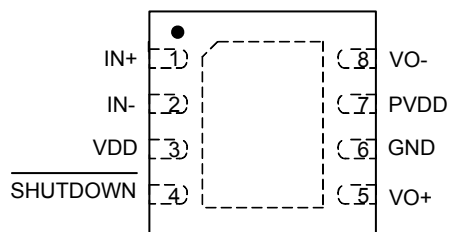


CSP9 Marking

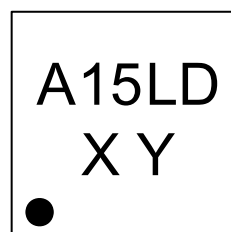


A15 - CP2215ITLX
XY - Manufacture Date Code

**DFN8 Package
(Top View)**



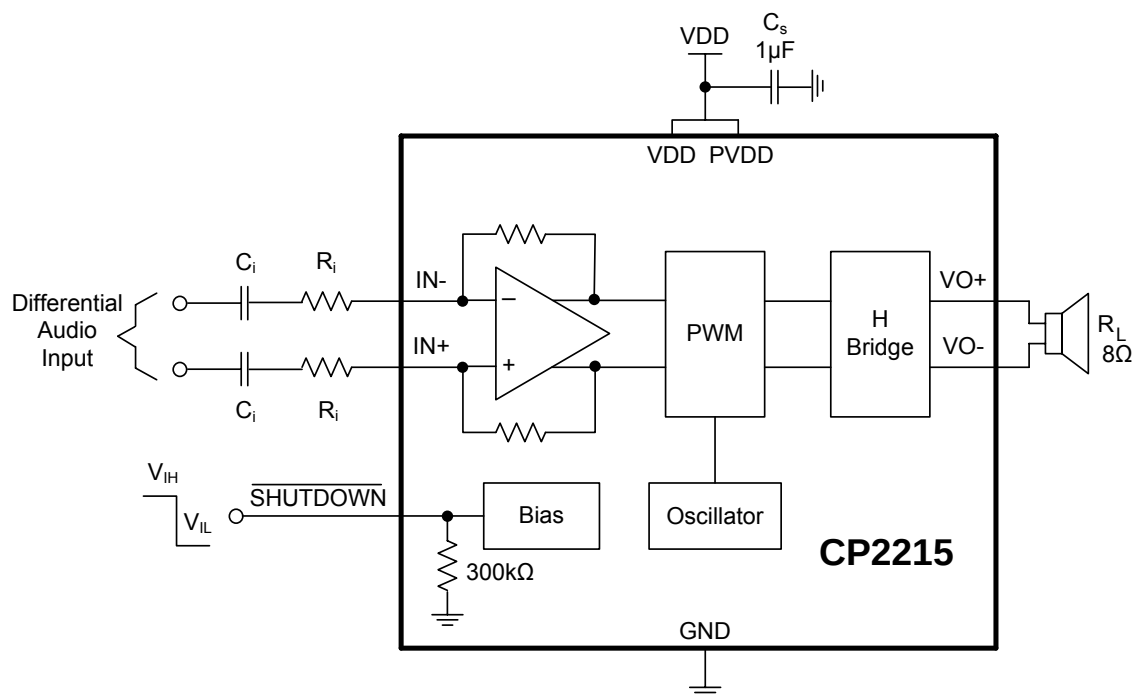
DFN8 Marking



A15LD - CP2215LD
XY - Manufacture Date Code

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Typical Application



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