

**1 Watt Fully Differential Audio Power Amplifier with Selectable Shutdown**

CP2298\_PB\_Rev1.0 May,2005

## OVERVIEW

The CP2298 is a fully differential audio power amplifier designed for portable communication device applications. It is capable of delivering 1 watt of continuous average power to an 8 Ω BTL load with less than 1% distortion (THD+N) from a 5V battery voltage. It operates from 2.2 to 5.5V.

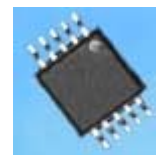
Features like 88dB PSRR at 217Hz, improved RF-rectification immunity, the space-saving 10-pin MSOP10 and 9-bump micro SMD package, the advanced pop & click circuitry, a minimal count of external components and low-power shutdown mode make CP2298 ideal for wireless handsets.

The CP2298 is unity-gain stable, and the gain can be configured by external resistors.



9-Bump micro SMD Package

-40°C ~ 85°C



Mini Small Outline (MSOP10)  
 Package

-40°C ~ 85°C

## FEATURES

- Fully differential amplifier
- Improved PSRR at 217Hz (VDD>3.0V)                      88dB (typ)
- Power output at 5.0V & 1% THD                              1.0W (typ)
- Power output at 3.6V & 1% THD                              0.5W (typ)
- Ultra low shutdown current                                    0.01μA (typ)
- Improved pop & click circuitry eliminates noises during turn-on and turn-off transitions
- Thermal overload protection circuitry
- No output coupling capacitors, bootstrap capacitors required
- Shutdown high or low selectivity
- Unity-gain stable
- External gain configuration capability
- Available in space-saving packages: 9-bump micro SMD and 10-pin MSOP10

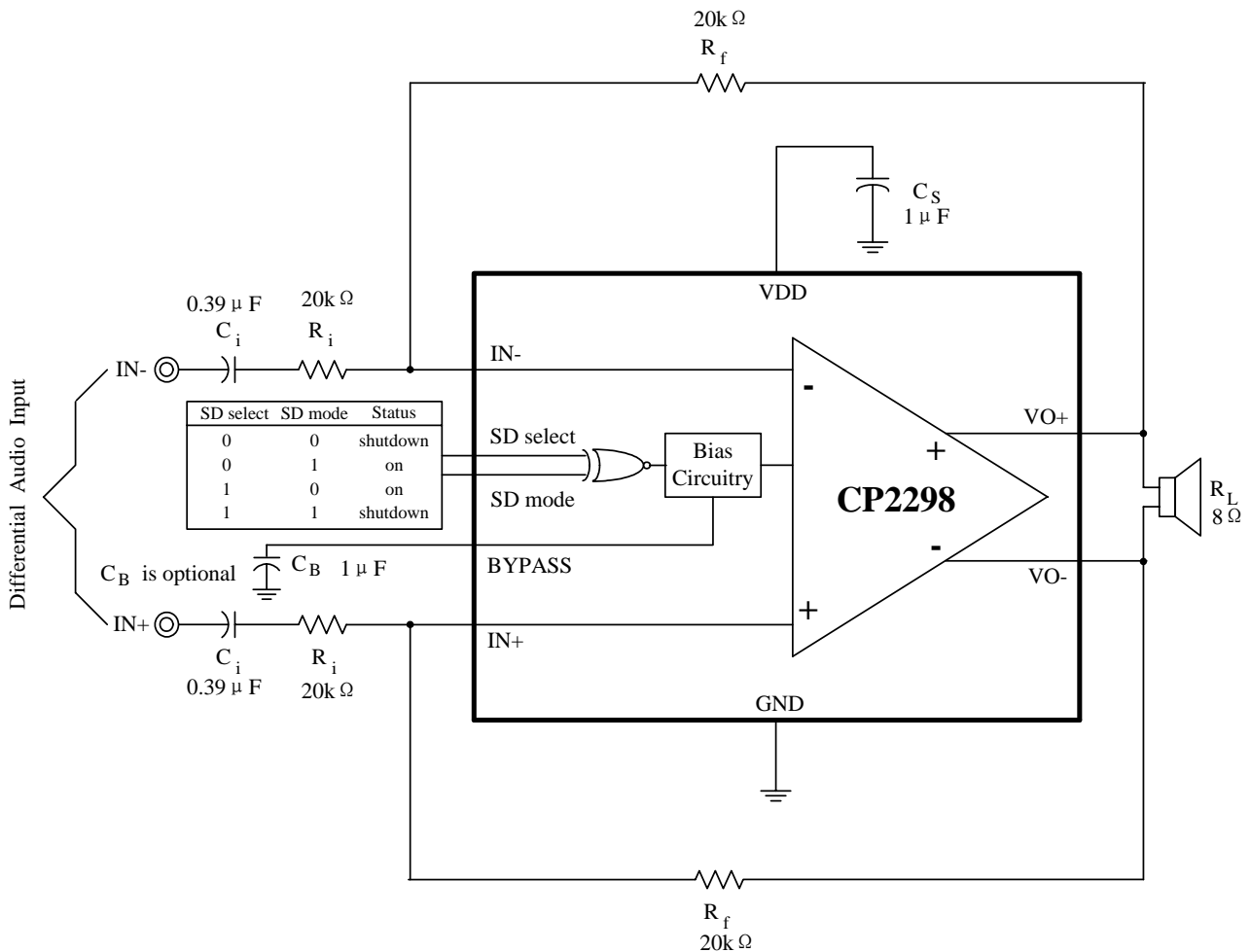
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### APPLICATIONS

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

### TYPICAL APPLICATION

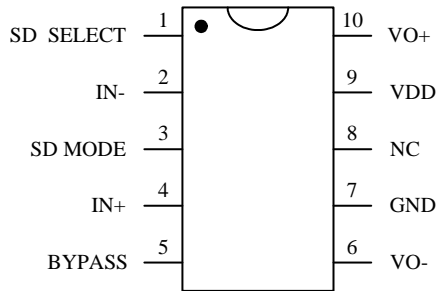


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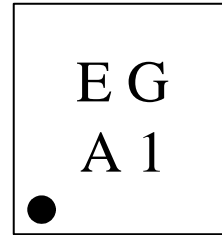
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**Pin Diagram (Top View)**

**Mini Small Outline (MSOP10) Package  
 (Top View)**

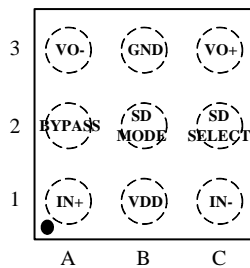


**MSOP10 Marking**

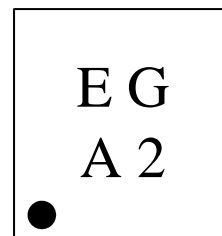


E - Die Run Traceability  
 G - Date Code  
 A1 - CP2298MM

**9 Bump micro SMD Package  
 (Top View)**



**9 Bump micro SMD Marking**



E - Die Run Traceability  
 G - Date Code  
 A2 - CP2298ITLX

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