

# STEVAL-CCA002V1

### Low voltage differential audio power amplifier based on the TS4994

### Features

- TS4994 low voltage differential audio power amplifier with Programmable standby mode
- Operates from V<sub>CC</sub>=2.5 V to 5.5 V
- 1 W output power @ V<sub>CC</sub>=5 V, THD+N=1%, F=1 kHz, with 8 W load
- Ultra low power consumption in standby mode (10 nA)
- 100 dB PSRR @ 217 Hz in grounded mode (Av=1 V/V)
- Near zero pop & click
- Ultra low distortion (0.1%)
- Module gain set at 1V/V
- Thermal and short-circuit protection

### Description

This evaluation board is designed with the TS4994 low power differential audio amplifier. The micro-package DFN10 (dual flat non-leaded 10 pins) allows space saving and good thermal dissipation. The differential gain is set at 1 V/V and can be adapted as necessary through a modification of the R1 to R4 values.

#### **Equation 1**

Av =  $\frac{R2}{R1}$  =  $\frac{R4}{R3}$  with R2 = R4 with R1 = R3

On the board, you can set the Cn3 and Cn4 jumpers can be set to modify the input configuration from capacitor coupled to common mode feedback. In capacitor coupled configuration, the -3dB cut-off frequency in Hz is:

#### **Equation 2**

$$\frac{1}{(6.28 \cdot R1 \cdot C1)} = \frac{1}{(6.28 \cdot R3 \cdot C2)}$$

with R in ohms, C in farads and C1=C2. For more detailed information about component calculation, refer to the TS4994 datasheet.

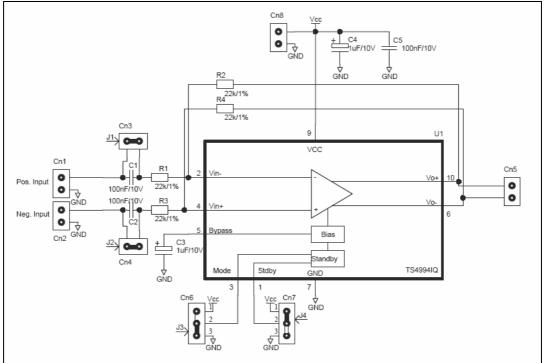
December 2007





## 1 Board schematic







## 2 Revision history

Table 1.Document revision history

Date	Revision	Changes
19-Dec-2007	1	Initial release



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