



# STEVAL-CCA009V1

High performance stereo headphone driver demonstration board  
based on the TS4601B

Data brief

## Features

- Power supply range: 2.9 V to 5.5 V
- 107 dB of PSRR at 217 Hz
- Fully differential inputs
- I<sup>2</sup>C interface for volume control
- Digital volume control range from -60 dB to +4 dB
- 101 dB of SNR A-weighted
- Independent right and left channel shutdown control
- Low quiescent current: 4.8 mA typ. at 3.0 V
- Low standby current: 2  $\mu$ A max
- RoHS compliant



## Description

The STEVAL-CCA009V1 demonstration board is designed to evaluate the TS4601B, a stereo headphone driver dedicated to high audio performance and space constrained applications.

It is based on low power dissipation, amplifier core technology with capacitor-less outputs and an I<sup>2</sup>C interface.

The STEVAL-CCA009V1 demonstration board can drive at a minimum 0.9 V<sub>rms</sub> output voltage into 16  $\Omega$  and 1.6 V<sub>rms</sub> into 10 k $\Omega$  whatever the power supply voltage, in the range from 2.9 V to 5.5 V.

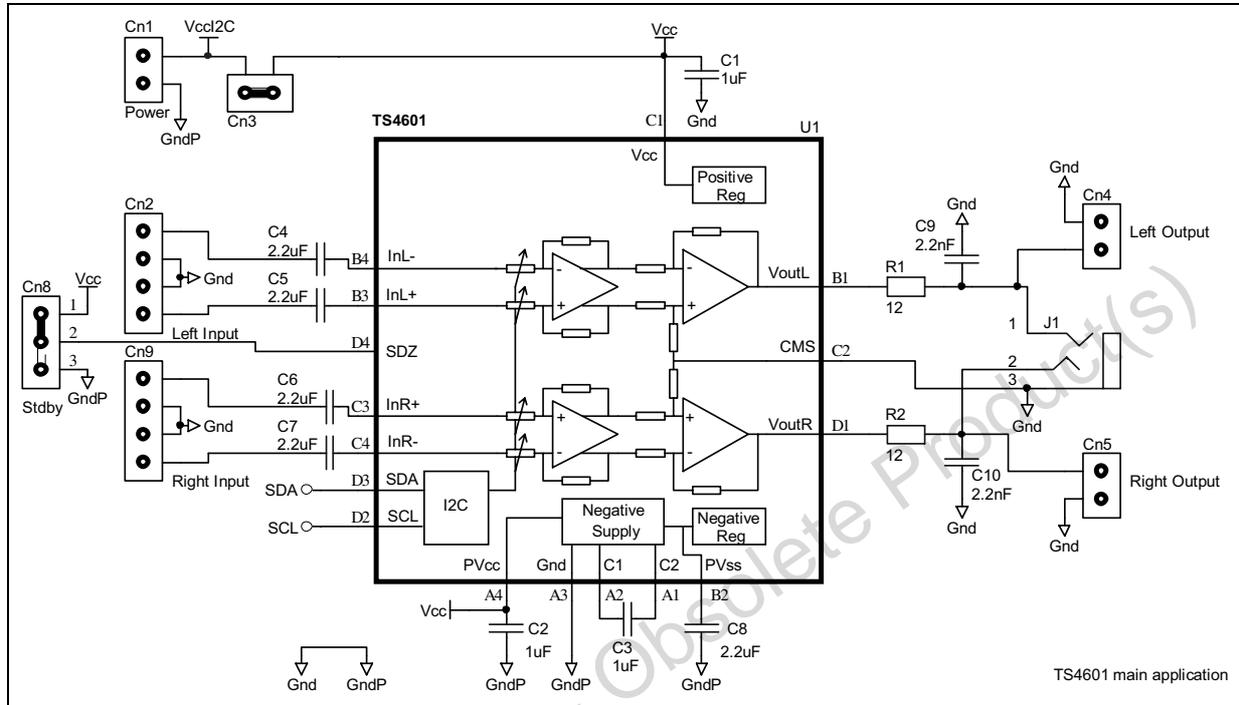
The I<sup>2</sup>C interface is used to control the volume by means of 64 steps from -60 dB to +4 dB and to configure the device in multiple modes.

The traditionally used output-coupling capacitors can be removed and a dedicated common-mode sense pin suppresses parasitic noise from the jack.

TS4601B control software is also provided.

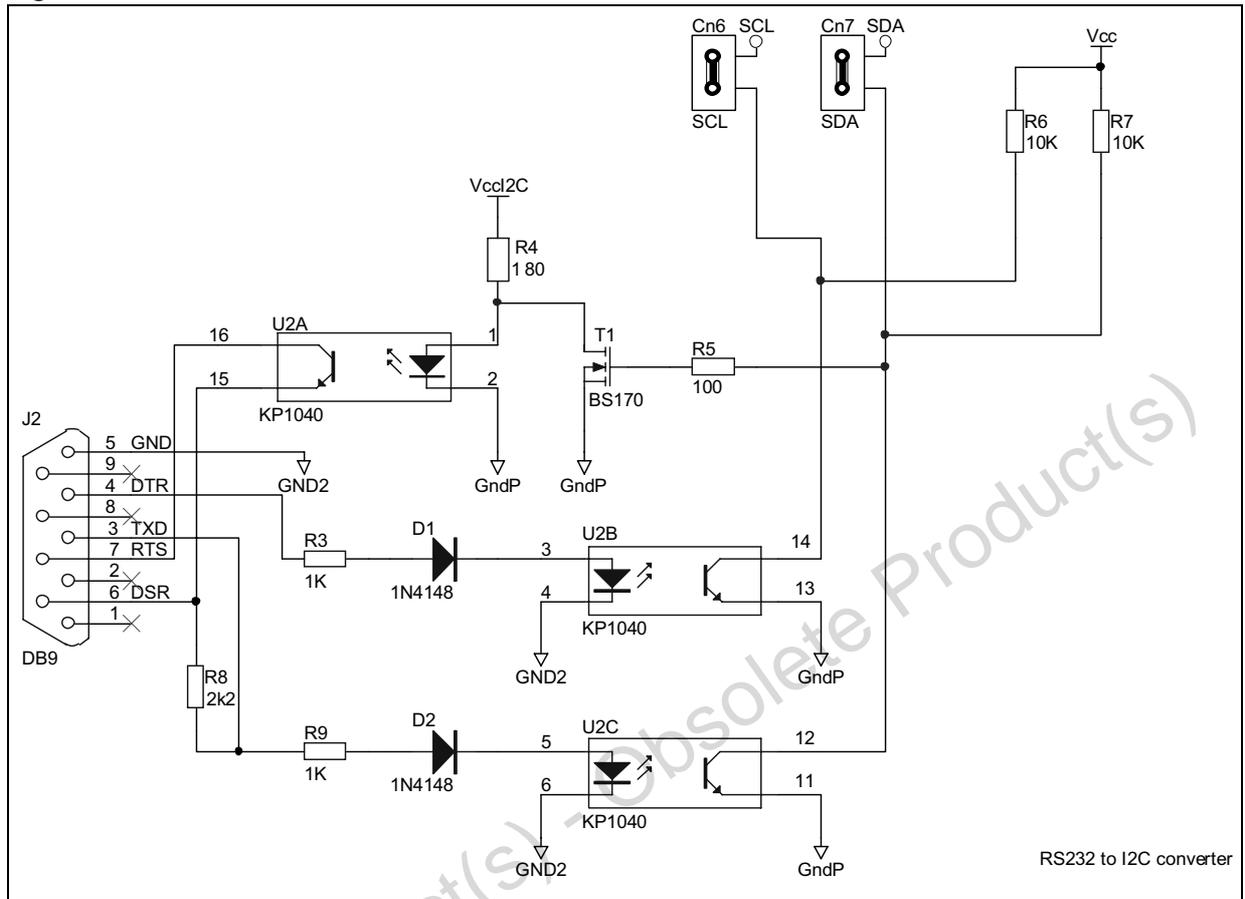
# 1 Circuit schematic

Figure 1. TS4601 main application



TS4601 main application

Figure 2. RS232 to I<sup>2</sup>C converter



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Nov-2010	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

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