

Single-Supply 2Vrms Output Stereo Audio DAC

The AK4420 and AK4421 are single-supply 24-bit stereo audio DAC's with integrated 2Vrms output buffers. A charge pump in the buffer develops an internal negative power supply rail that enables a ground-referenced 2Vrms output. The AK4420 operates off of a +5V supply, while the AK4421 operates off of a +3.3V supply. Using AKM's multi bit modulator architecture, the AK4420/21 deliver wide dynamic range while preserving linearity for improved THD+N performance. The AK4420/21 integrate a combination of switched-capacitor and continuous-time filters, increasing performance for systems with excessive clock jitter. The 24-bit word length and 192kHz sampling rate make these parts ideal for a wide range of consumer audio applications, such as set-top boxes, A/V players/recorders, and digital televisions. The devices are offered in a space saving 16pin TSSOP package.

FEATURES

- High performance 24-bit 192kHz stereo DAC
- Wide dynamic range
 - 105dB (AK4420); 103dB (AK4421)
- Low distortion (THD+N)
 - -92dB (AK4420); -90dB (AK4421)
- Integrated low-pass filter
 - Switched-capacitor + continuous time
- 2Vrms single-ended output
 - Ground-referenced (0V bias)
 - No coupling capacitor required
 - No pop-noise on power-up or reset
- Simple hardware control interface
 - I2S or MSB-justified data format
 - Soft mute
- Automatic reset
- Power supply
 - Single +5V (AK4420); +3.3V (AK4421)
 - Integrated charge pump for negative rail
 - Power-on reset function
- 16-pin TSSOP package

APPLICATIONS

- Digital set-top boxes
- Digital television
- A/V receivers
- DVD players and recorders

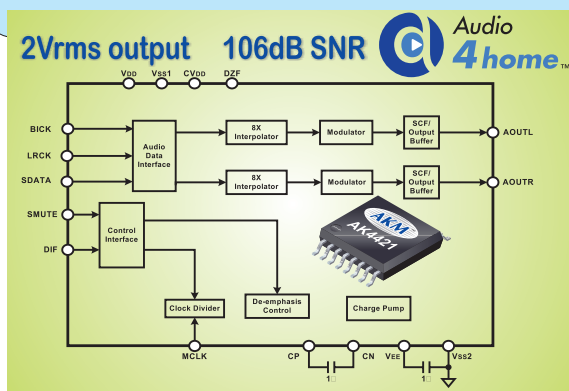
BENEFITS

- Single power supply reduces regulators
- Ground-referenced outputs eliminate coupling capacitors
- Pop noise free audio outputs
- High dynamic range exceeds system specifications



About **Audio4home™**

Audio4home™ identifies products designed for consumer applications including home and car audio. These products often feature high channel counts for surround-sound, outstanding cost-to-performance ratios, and integration of audio transport functions.



Contact Information

On the web - <http://www.akm.com>

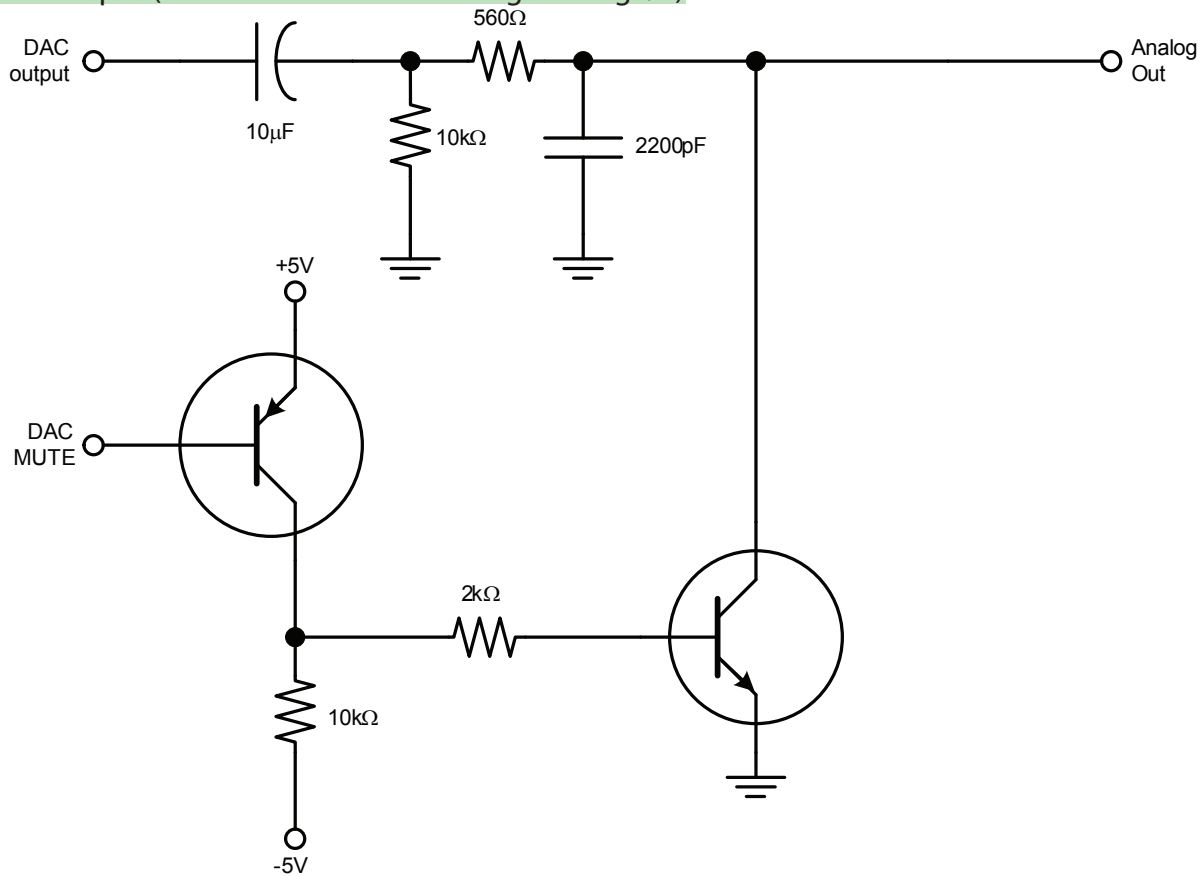


AKM Semiconductor, Inc.

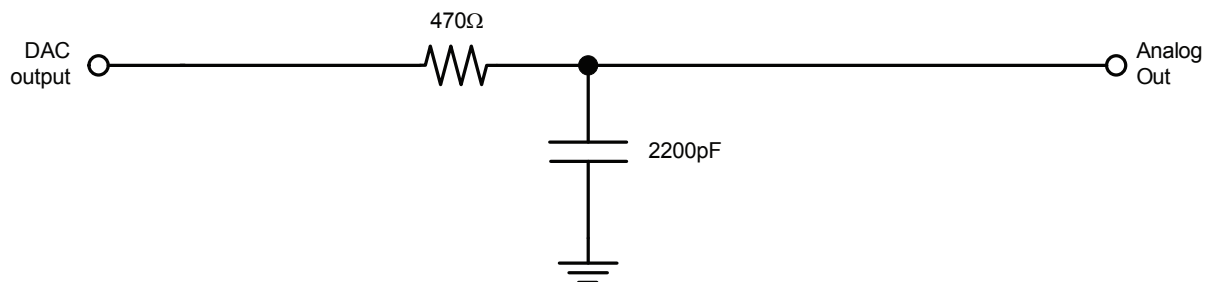
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Competitive Solution
 Dual-supply DAC (+3/5V and +9/12V)
 Biased output (2Vrms centered around high voltage/2)



AK4421
 Single +3.3V supply
 Ground-referenced output



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