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DIGITAL AUDIO $\Delta\Sigma$ DACs

AK4420

5V 192kHz 24-Bit 2ch DAC with 2Vrms Output

The AK4420 is a 5V 24-bit stereo DAC with an integrated 2Vrms output buffer. A charge pump in the buffer develops an internal negative power supply rail that enables a ground-referenced 2Vrms output. Using AKM's multi bit modulator architecture, the AK4420 delivers a wide dynamic range while preserving linearity for improved THD+N performance. The AK4420 integrates 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 this part ideal for a wide range of consumer audio applications, such as DVD, AV receiver system and set-top boxes. The AK4420 is offered in a space saving 16pin TSSOP package.



- Applications: Set Top Boxes, DVD Recorders/Players, Digital TVs, and AV Receivers
- Sampling Rate Ranging from 8kHz to 192kHz
- 128 times Oversampling (Normal Speed Mode)
- 64 times Oversampling (Double Speed Mode)
- 32 times Oversampling (Quad Speed Mode)
- 24-Bit 8 times FIR Digital Filter
- Switched-Capacitor Filter with High Tolerance to Clock Jitter
- Single Ended 2Vrms Output Buffer
- Digital de-emphasis
- Soft mute
- I/F format: 24-Bit MSB justified or I2S
- Master clock: 512fs, 768fs or 1152fs (Normal Speed Mode)
256fs or 384fs (Double Speed Mode)
128fs, 192fs (Quad Speed Mode)
- THD+N: -92dB
- Dynamic Range: 105dB
- Automatic Power-on Reset Circuit
- Power supply: +4.5 ~ +5.5V
- Ta = -20 to 85°C
- Small Package: 16pin TSSOP (6.4mm x 5.0mm)
- Evaluation Board: AKD4420

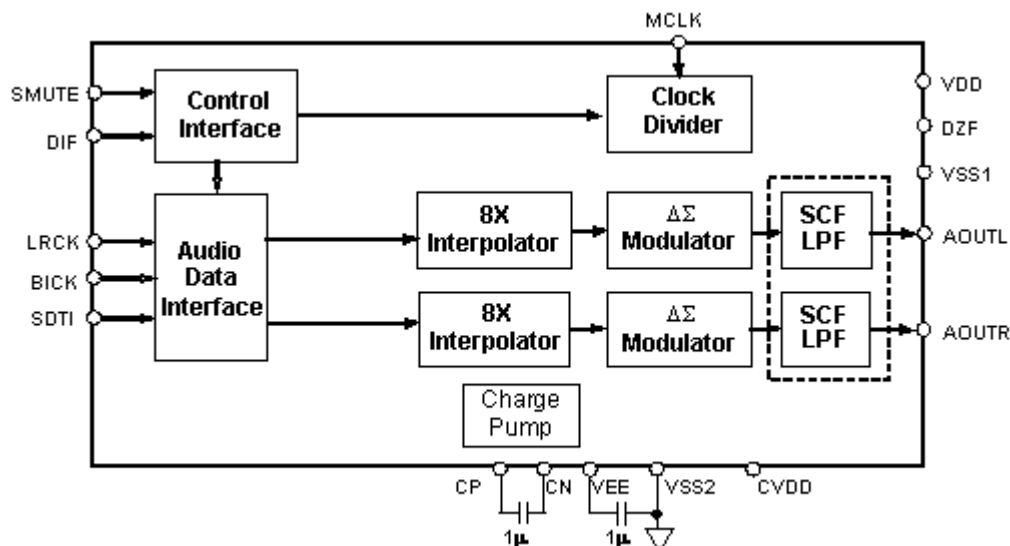
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Data Sheet
Rev. MS0683-E-05 2008/08
PDF : 368KB / 20pages



Evaluation Board Manual
Rev. KM091904 2009/07
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AK4420 BLOCK DIAGRAM

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