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Voltage Regulators

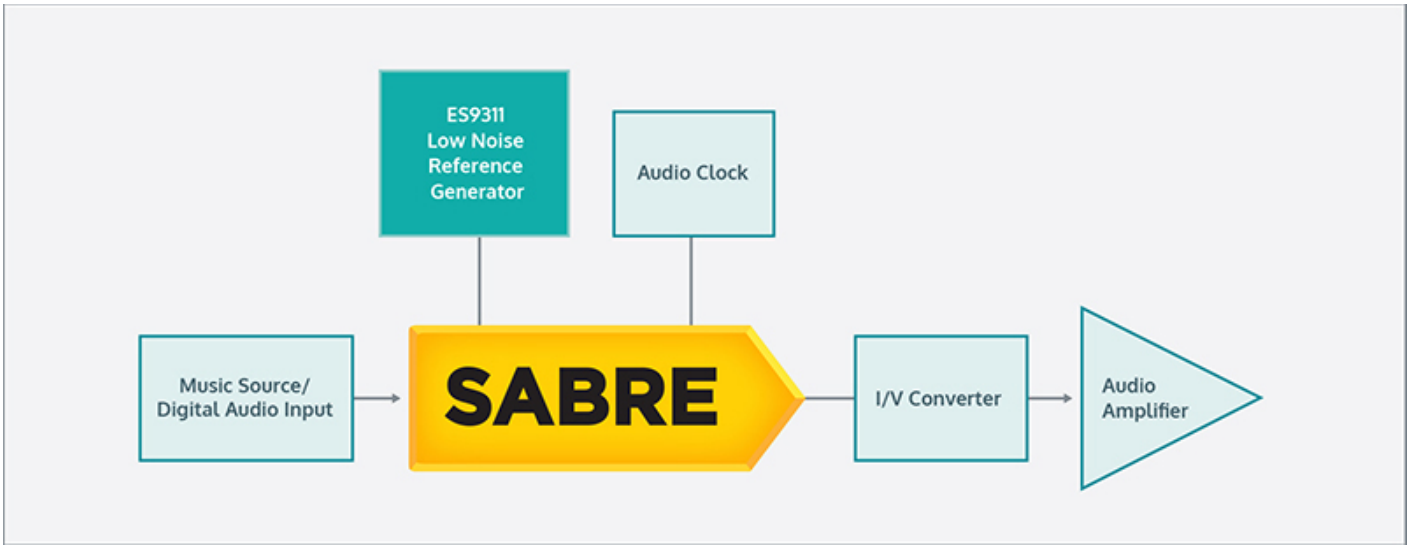
The ES9311 Low-Noise, Low Dropout Regulator

Simplifying Audio System Design

The ES9311 is the industry's first low-noise, low-dropout regulator designed specifically for high-performance audio systems. It is optimized for high resolution audio (HRA) thanks to its revolutionary dual regulator architecture. This innovative architecture contains series-voltage and shunt-voltage elements, eliminating the need for output decoupling capacitors – an industry first in audio system design. The ES9311 provides the extremely low-noise outputs that are necessary for driving the reference inputs of audio converters and offers significant value-add for audio system designers.

The ES9311 regulator replaces three active devices and several passive components typically used in audio system designs, shortening design cycles for faster time-to-market.This best-in-class dual, low-dropout regulator consists of a low-noise bandgap voltage reference, two high-performance low-noise low-dropout buffers, protection circuitry against over-current and over-temperature fault conditions, plus control logic and signaling. The regulated outputs use remote sensing to maintain voltage accuracy at the load under varying load currents, and the output voltage can be trimmed, if required, to be exactly +3.3V.

Audio Operating Circuit



A product brief with further technical details and specifications can be found here (/index.php/download_file/view/211/364/).

For information about samples or product datasheets, please contact your local ESS Sales Representative (/index.php/en/contact/sales-offices/).

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