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(54) **POWER CONVERTER AND ASSOCIATED  
CONTROL METHOD FOR  
HIGH-EFFICIENCY AUDIO AMPLIFIER**

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(57) **ABSTRACT**

The present invention provides an amplifier system including an audio amplifier and a power converter. The audio amplifier is supplied by at least a first supply voltage and a second supply voltage, and the audio amplifier is configured to receive an audio signal to generate an output signal. The power converter includes only one inductor, and is configured to generate the first supply voltage and the second supply voltage according to an input voltage.

