

Electronics and ICT

Title

Switching Amplifier with Adaptive Supply-Voltage Scaling

<p>Abstract</p>	<p>For conventional class-D amplifiers, the output pulse-width modulation (PWM) waveform is affected by the power stage's non-idealities, e.g. dead time, rise/fall time mismatch, and clock jitter, resulting in a reduced signal-to-noise ratio (SNR), dynamic range (DR) and linearity. The proposed method adaptively adjusts the supply voltage and the output pulse width according to the input magnitude of the class-D amplifier, in order to suppress the effects of power stage's non-idealities and clock jitter on the performance of class-D amplifiers.</p>
<p>Benefits</p>	<p>The proposed method adaptively adjusts the supply voltage and the output pulse width according to the input magnitude of the class-D amplifier, in order to suppress the effects of power stage's non-idealities and clock jitter on the performance of class-D amplifiers. Moreover, only low-complexity detection and control circuits are needed.</p>
<p>Industry Categories</p>	<ol style="list-style-type: none"> 1. Industry: semiconductor industry 2. Product: Class-D audio amplifier 3. Application method: Chip implementation with proposed method
<p>Keywords</p>	<p>Class-D amplifier, audio amplifier, pulse-width modulation, PWM, dead time, clock jitter, supply-voltage scaling</p>
<p>Patent No.</p>	<p>US 17/673,822</p>

Contact Us

Department : NCKU IHQ
 Contact person : Claire Huang
 Phone number : 06-2360524-133
 Email : clairehu@mail.ncku.edu.tw

