



CONFERENCE

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Amphitheater: Mokhtar LAATIRI



Reduction of Lower Sidetone Problems in Pulse Width Modulation System

Abstract

For many years, pulse width modulation (PWM) systems have remained important and widely used in various applications, including inverters, power electronics, switching, and particularly in the field of communication engineering for transmitting data over different communication channels such as optical fibers.

The presence of unwanted lower side tones poses a challenge in pulse width modulation (PWM) (open loop) systems. This study focuses on addressing this issue by introducing a technique called "Two Reduction Stages of Natural Pulse Width Modulation". The proposed method aims to minimize unwanted lower side tones through a two-stage approach.

The findings reveal a significant reduction in the amplitude of unwanted lower side tones using the proposed method compared to conventional single-stage modulation systems. In this lecture, it will give briefly discuss another method for reducing lower side tones known as feedback pulse width modulation (closed loop PWM).

This lecture provides valuable insights for engineers and researchers working in the field of modulation techniques, particularly those concerned with minimizing unwanted side effects in PWM systems. The proposed approach has the potential to enhance the quality and reliability of various applications, including audio systems, communication systems, and power electronics.



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