

Development of a pulse-width modulated power MOSFET-based audio amplifier

ABSTRACT

This paper presents the design and development of a pulse-width-modulated (PWM) power MOSFET-based audio amplifier. A natural sampled PWM switching strategy is implemented in the development of the amplifier to reduce its harmonic level and increase its efficiency. IRF510 power MOSFETs are used as the amplifier power switching devices. From the results obtained, it is found that the efficiency of the amplifier can be increased to more than 90%.

Keyword: PWM audio power amplifier; Power MOSFET transistors; Amplifier; Audio quality