

## Realization of a Temperature Based Automatic Controlled Domestic Electric Boiling System

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**Abstract :** This paper presents a kind of analog circuit based temperature control system, which is mainly composed by threshold control signal circuit, synchronization signal circuit and trigger pulse circuit. Firstly, the temperature feedback signal function is realized by temperature sensor TS503F3950E. Secondly, the main control circuit forms the cycle controlled pulse signal to control the thyristor switching model. Finally two reverse paralleled thyristors regulate the output power by their switching state. In the consequence, this is a modernized and energy-saving domestic electric heating system.

**Keywords :** time base circuit, automatic control, zero-crossing trigger, temperature control

**Conference Title :** ICEMPE 2017 : International Conference on Electrical Machines and Power Electronics

**Conference Location :** London, United Kingdom

**Conference Dates :** March 14-15, 2017