

ABSTRACT

A Non-intrusive Microwave Oven Operating Identification Method Based on Hybrid Criteria

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Provided is a non-intrusive microwave oven operating identification method based on hybrid criteria, comprising the following steps: sampling voltage and current signals of a main power inlet line to form a voltage signal sampling sequence u and a current signal sampling sequence i ; calculating the active power variation $\Delta P(i)$ and the reactive power variation $\Delta Q(i)$; determining the rising or falling of power through the power variation, and storing the active power rising value $\Delta P_u(i)$, the reactive power rising value $\Delta Q_u(i)$ and the rising time $\Delta T_{on}(i)$ in a started electric appliance list when reactive power rises; and recording the active power falling value $\Delta P_d(i)$, the reactive power falling value $\Delta Q_d(i)$ and the falling time $\Delta T_{off}(i)$ when active power falls, and matching the load information in the started electric appliance list, and determining the operation of a microwave oven and calculating the similar rated power of the microwave oven according to the active power, reactive power and time characteristics of the load. By means of the method, the operation of the microwave oven can be accurately sensed, and technological support is provided for non-intrusive microwave oven identification.

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