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## **Power-Saving AC to DC Converter Power Supply System**

A computer system has a power supply unit to provide a stable working voltage. The power supply unit produces heat when gives a stable working voltage to the computer system. After a continuous long use, the electronic component parts of the mainframe of the computer system may be damaged by the heat of the power supply unit easily. Therefore, radiating fins, mini fans, and other heat dissipating devices are used for dissipating the heat of the power supply unit. These heat dissipating techniques can not completely dissipate the heat of the power supply unit out of the computer system. Further, the power supply unit is constantly electrically connected as the power switch of the computer system is switched on, and therefore much power supply is wasted as the computer system does no work and the service life of the electronic components are shortened. Therefore, a power-saving power supply unit has been developed which saves power consumption, prevents the computer system from being aged quickly and ensures the long service life of the electronic components of the electric circuit of the computer system.

The University of Toledo is seeking a company interested in utilizing this ripple feedback circuit for use with a current-sourced rectifier system with a resonant load balancing filter. The ripple feedback circuit eliminates the oscillation of the rectifiers and improves the line-current waveform by sensing the low frequency AC components of the output current and by combining such AC components with the control voltage at the input to the multiplier of the pulse width modulator of the rectifier system. A sample of the rectified line voltage is multiplied by the control voltage less ripple feedback to form the input to the pulse-width modulator which produces the gating waveform for the converter of the rectifier system.

### **Applications:**

1. Various power supply units
2. Computer systems

### **Advantages:**

1. Saves power consumption
2. Prevents electronic components from being aged quickly
3. Ensures the long life and service of the electronic components

**This invention is protected by issued patent: 5,341,284**

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