1. General Description

The F75133S is a “Loading Gauge IC”. Loading detection and current monitor are the major applications of the F75133S. The F75133S is following the PWM signal change of duty cycle to react related functions for user application. For instance, the F75133S can be used to sense CPU loading for FAN speed control to cool down the temperature of CPU surface. It also can be used to implement Over/Under-Clocking and Over/Under-Voltage (Vcore) with higher performance/Lower power consumption. Anyway, the F75133S can be implemented by user differential application.

In the past, if engineer would like to measure the parts consumption. He could connect a resistance between power and parts, and then they detected ΔV and capitalized the value to understand the loading condition. Although the method is convenient and needs just a cheap resistance, but some of the accuracy issues and power consumption problem will be the critical points. For example, the resistance will cause more consumption and heat questions if the end-equipment needs mass current to implement. Depends on these problems, more accuracy and more efficiency sensor chip is necessary. The F75133S will handle previous trouble.

The F75133S supports automatic PWM duty cycle detection, follows the result of detection to issue TURBO#、FAULT# and PME# signals for end-application, provides I2C interface for communication, the programmable Cycle-Length of detection rise the measurement accuracy.

The F75133S is packaged in 8-pin SOP and powered by 3.3V.

2. Feature List

- Automatic PWM Duty Cycle Detect
- Follows the Result of Detection to Issue TURBO#、FAULT# and PME# Signals for End-application
- Programmable Cycle-Length of Detection for Flexible Use and Accuracy
- 4 Steps 5 Stages Over-Clocking Machine
- Un-Hysteresis Function for CPU Over/Under-Clocking/Voltage Implementation
- Internal Oscillator for System Implement.
- 2-Wire I2C Interface
- 3.3Vcc operation voltage.
- 8-pin SOP package.

Patented: TW I235553