
Power Management Integrated Circuit with 4 Bucks and 2 LDOs

1 Description

The SY5885 is a power management IC (PMIC) designed for notebook, desktop, and embedded computing platforms. There are four DCDC converters and two linear regulators integrated into the SY5885, which can minimize the need for external components so that it can ease the layout in a constrained PCB area. The DCDC converters are of high accuracy, high efficiency, and high flexibility. Two LDOs provide power rails for peripherals and pull-up resistors.

The SY5885 provides protection for a device when a fault occurs, such as overcurrent, output overvoltage, output undervoltage, short circuit, input overvoltage, and over temperature.

The SY5885 is a halogen- and lead-free device, compliant with RoHS. The package is CSP-34

3.3x3.1.

2 Applications

Solid-state drive

Video system

3 Features

- ◆ AVIN input supply range: 2.7V to 5.5V
- ◆ Four buck regulators
 - BUCK1, output range 1.7V ~3.3V
 - BUCK2, output range 0.9V ~2.0V
 - BUCK3, output range 0.5V ~1.3V
 - BUCK4, output range 0.9V ~2.0V
- ◆ 2 linear regulators
 - LDO1, 1V ~3.3V, 50mV/Step, 0.4A
 - LDO2, 1V ~3.3V, 50mV/Step, 0.4A
- ◆ 2 external converters
- ◆ DCDC voltage accuracy: $\pm 1\%$ FB Voltage
- ◆ PWM frequency adjustable:
1MHz ~3MHz, step 500KHz
- ◆ BUCK1 can be set as load switch
- ◆ BUCK4 can be set as linear regulator
- ◆ LDO1/LDO2 can be set as load switch
- ◆ Configurable Soft-start Time for All output
- ◆ Configurable power on sequence
- ◆ Configurable sleep and wake-up sequence
- ◆ I2C Interface 400kHz/1MHz/3.4MHz
- ◆ Built-in AVIN OV/UV warning indication and fault protection
- ◆ Built-in VOUT OVP/UVP/OCL
- ◆ Built-in Overd Temperature Protection
- ◆ Built-in EFUSE for configurable default value
- ◆ of registers
- ◆ 7 multifunctional IOs

4 Typical Application Circuit

