Power Management Control IC for TV Platform

1. General Description

The FA6620 is a high-efficiency power management control IC which is specified for TV platform. The FA6620 is used with a 12V power supply and a 5V standby power supply; besides, it integrates two synchronous PWM controllers, one regulator, monitoring, and control functions into a 40 pin QFN package.

A brief analog block description of the FA6620 describes here. LDO provides output current 350mA with output voltage 3.3V ±2%. PWM1 and PWM2 are the synchronous buck DC/DC controllers with constant on time control scheme that provides fast response to load transients while maintaining a relatively constant switching frequency. PWMVDD3V is the asynchronous buck DC/DC converter which provide up to 200mA output current.

The high performance digital block consists of power sequence interval time controlled by DT pin, monitoring and protection functions, LED function controlled by the host via I^{2}C interface and provides an adjustable linear controller mechanism for dynamic over-current/ under-voltage usage.

The FA6620 provides two working modes. In the normal mode, it works with a system supplies 12V power and a 5V standby power. In the suspend mode, it works by supplying 5V standby power or a 12V power supply only system; besides, it can wake up the TV system from the suspend mode by KEYPAD/IR/CEC function.

Features:

- ◆ Provide one LDO
  - LDO output current is 350mA and output voltage is 3.3V ± 2%
  - Power up soft-start and under-voltage monitoring for the linear regulator
- ◆ Provide dual PWM controllers and single PWM converter
  - PWM1 and PWM2 synchronous buck DC /DC controllers
  - PWMVDD3V asynchronous buck DC /DC converter
  - Programmable Feedback Voltage from 0.6V to 1.2V (PWM1 and PWM2)
  - Quick Load-step Response
  - Adjustable Delay Time
  - Built-In OCP, UVP, OTP
- ◆ Digital Control Functions
  - Programmable Hardware Reset
  - Real Time Clock
  - Programmable KEYPAD/IR/CEC wake up
  - PWRGD input signal
  - Provide reset signal (RESET#) and interrupt signal to the host
  - Programmable power LED control
  - Integrate I^{2}C interface

Ordering Information

FA6620 ☐ ☐

└─────── Packing Code
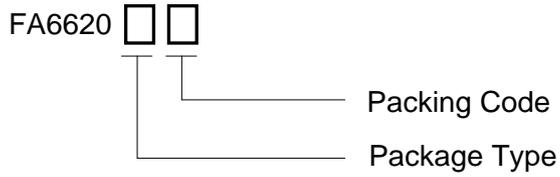
└─────────── Package Type

Package Type
  N: QFN 5x5mm^2-40L
Packing Code
  R: Tape & Reel

Marking Information

FA6620
YYWWZZ

FA: Company Name
6620 : Product Code
YY: Year 2016→16
WW: Week 01~53
ZZ: Series Code