

Motor Driver IC with High-Definition Micro Stepping

TB67S128FTG, a bipolar stepping motor driver with 128 micro steps, is released for high-precision 3D printers, surveillance cameras, electric actuators, and others where higher accuracy and quieter operation are required. It supports high power drive with a 50V/5A rating and is excellent in space-saving.



Features

- A high accuracy drive is realized by high-definition micro stepping with up to 128 steps, which contributes to much lower vibration than conventional 32-step products.
- High power drive (50V/5A rating) supports higher torque operation.
- AGC(Note1) technology prevents motor stalls and reduces power consumption, ACDS(Note2) technology eliminates components, and ADMD(Note3) technology improves current following capability.

Applications

- 3D printers, surveillance cameras, electric actuators
- Industrial equipment (banking terminals such as ATMs, office equipment, facsimile machines)
- Game machines such as slot machines

Product Specifications

Item	Specification
Control I/F	Supports either of CLK input and serial input
Absolute maximum ratings	50V, 5A
Package	QFN64
Other features	High accuracy drive due to high-definition micro stepping (up to 128 steps). Optimization of motor drive current control by AGC(Note1). Elimination of current detection resistor by ACDS(Note2). Improvement of current following capability by ADMD(Note3). Adjustment of constant current by SMD(Note4). Error detection functions (thermal shutdown, over current protection, under voltage lockout, and load open) Built-in error detection signal output function Supports the power-on sequence by the single power drive.

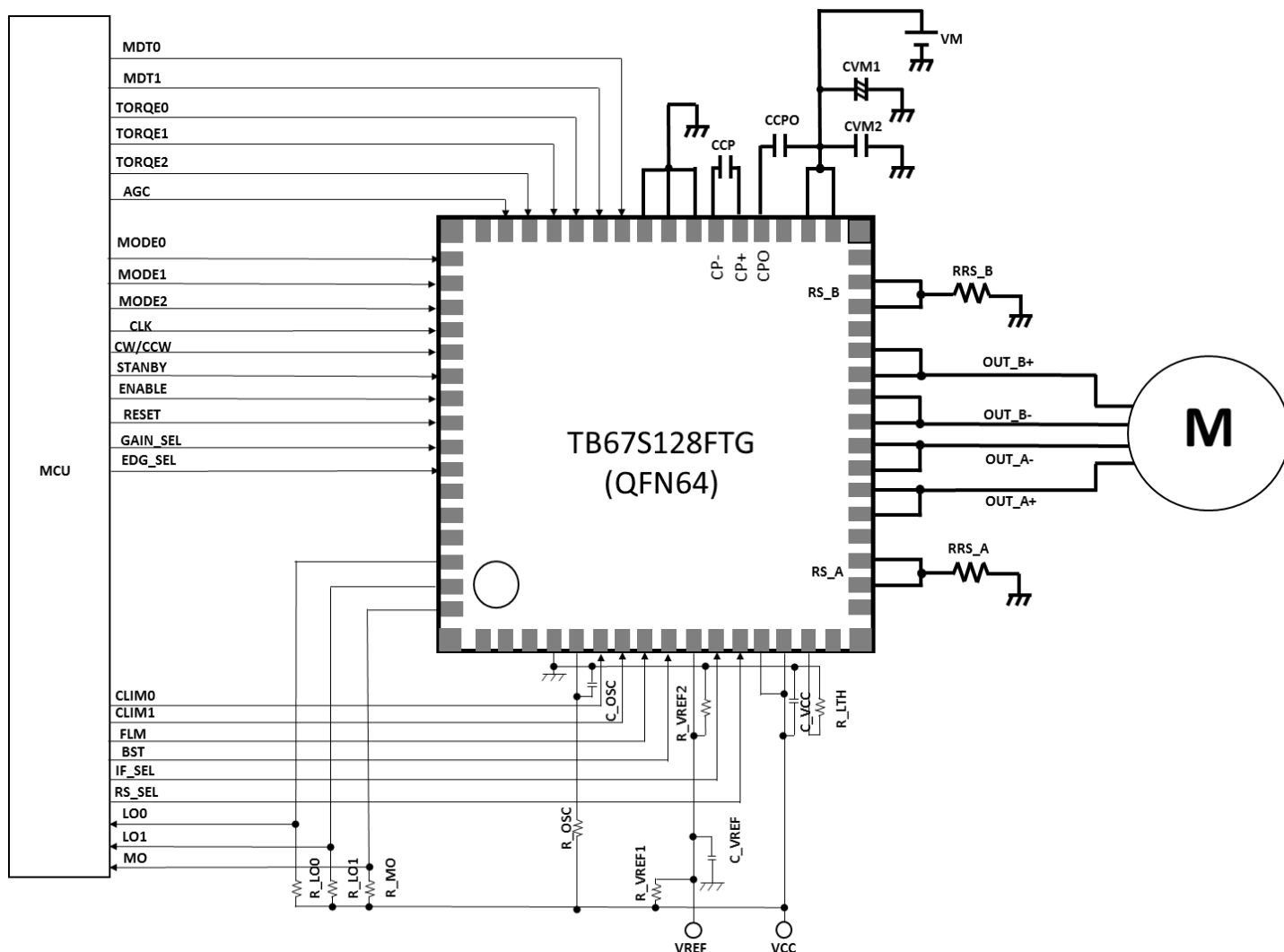
Note1: AGC: Active Gain Control optimizes drive current to suit required torque. Our original technology that prevents stalls and realizes power savings.

Note2: ACDS: Advanced Current Detection System controls motor current without any need for a current detection resistor.

Note3: ADMD: Advanced Dynamic Mixed Decay automatically optimizes switching control of Fast Decay and Slow Decay modes to secure high speed rotation.

Note4: SMD: The SMD means Selectable Mixed Decay. This is the technology in which the ideal current control can be set according to the characteristics of the motor to be used.

Application Circuit Example



Application circuit example (RS_SEL pin=H, IF_SEL pin=L)

Note: The application circuits shown in this document are provided for reference purposes only. Thorough evaluation is required, especially at the mass production design stage. Providing these application circuit examples does not grant any license for industrial property rights.

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