

FT320

Three phase sensorless BLDC driver
For low noise and low power motor

Description

The FT320 is a Three-Phase sensorless Brushless DC motor driver for low noise and low power motor.

FT320 Sensorless BLDC drive chip allows for the removal of rotor position sensors such as Hall Sensors, and simplification of the motor structure. This provides for savings in cost yet improving the reliability of the motor system. As the number of connection between the motor and drive is reduced, the assembling is simplified and testing of the motor system is straightforward. Being sensorless, the motor driver can be installed out of the motor body, and this allows for flexibility in the design and extension of its application.

FT320 has robust starting capability. Robustness of starting is preserved whilst configuration of starting parameters is largely simplified with tuning of a few external resistors.

Feature

- Position sensorless BLDC controller (No hall sensor required)
- Two speed control can be selected(direct-PWM and analog control)
- Low power standby mode
- FG (Frequency detection) and RD (Lock detection) output
- Over current protection
- Built-in lock protection and automatic recovery circuit
 (External capacitor not necessary)
- Built-in thermal shutdown protection(TSD)
- Built-in under voltage lock out (UVLO)

Specifications

Absolute Maximum Ratings (@Ta=25°C)

Parameter	Symbol	Condition	Ratings	Unit
Power supply voltage	VCC max		30	V
	VM max		30	V
Output current	I _{OUT} max	Peak (startup and lock rotor)	1.5	A
		Duty cycle = 100%	700	mA
Logic input pin withstand voltage	V _{logic} max		6.5	V
RD/FG output pin withstand voltage	V _{FG} max		30	V
RD/FG output current	I _{FG} max		10	mA
Power dissipation	Pd max1	Independent IC	1	W
Operating temperature	Topr		-40 ~ +85	°C
Storage temperature	Tstg		-65 ~ +150	°C

Recommended Operating Conditions

Parameter	Symbol	Condition	Ratings	Unit
Power supply voltage	VCC		6~28	V
	VM		6~28	V