

Product Overview

MC33035: Brushless DC Motor Controller

For complete documentation, see the data sheet.

The MC33035 is a high performance second generation monolithic brushless DC motor controller containing all of the active functions required to implement a full featured open loop, three or four phase motor control system. This device consists of a rotor position decoder for proper commutation sequencing, temperature compensated reference capable of supplying sensor power, frequency programmable sawtooth oscillator, three open collector top drivers, and three high current totem pole bottom drivers ideally suited for driving power MOSFETs.

Also included are protective features consisting of undervoltage lockout, cycle-by-cycle current limiting with a selectable time delayed latched shutdown mode, internal thermal shutdown, and a unique fault output that can be interfaced into microprocessor controlled systems.

Typical motor control functions include open loop speed, forward or reverse direction, run enable, and dynamic braking. The MC33035 is designed to operate with electrical sensor phasings of 60° /300° or 120° /240° , and can also efficiently control brush DC motors.

Features

- 10 to 30 V Operation
- Undervoltage Lockout
- 6.25 V Reference Capable of Supplying Sensor Power
- Fully Accessible Error Amplifier for Closed Loop Servo Applications
- High Current Drivers Can Control External 3-Phase MOSFET Bridge
- Cycle-By-Cycle Current Limiting
- Pinned-Out Current Sense Reference
- Internal Thermal Shutdown
- Selectable 60° /300° or 120° /240° Sensor Phasings
- Can Efficiently Control Brush DC Motors with External MOSFET H-Bridge

For more features, see the data sheet

Part Electrical Specifications

Product	Compliance	Status	Phase	V _M Min (V)	V _M Max (V)	V _{CC} Min (V)	V _{CC} Max (V)	I _O Max (A)	I _O Peak Max (A)	Control Type	Package Type
MC33035DWG	Pb-free	Active	3	10	40	10	30	0.1	0.1	DC	
	Halide free										
MC33035DWR2G	Pb-free	Active	3	10	40	10	30	0.1	0.1	DC	
	Halide free										

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