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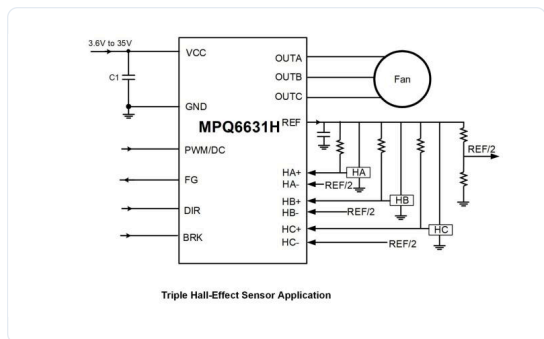
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MPQ6631H-AEC1

MPQ6631H-AEC1

35V Input, 3A Peak Phase Current, 3-Phase BLDC Motor Driver, AEC-Q100 Qualified

New

[Datasheet](#)

Description

The MPQ6631H-AEC1 is a three-phase, brushless DC (BLDC) motor driver with integrated power MOSFETs. The device supports a single external Hall sensor or three external Hall-effect sensors to drive a three-phase BLDC motor, with up to 3A of peak phase current and an input voltage (V_{IN}) range between 3.6V and 35V.

The MPQ6631H-AEC1 controls the motor speed through the pulse-width modulation (PWM) signal or the DC signal on the PWM/DC pin with closed-/open-loop control. The device features a built-in, configurable speed curve function. It also features a sinusoidal drive for maximum torque, as well as low speed ripple and noise across the full speed range.

The MPQ6631H-AEC1 provides rotational speed detection. The rotational speed detector (the FG/RD pin) is an open-drain output. It outputs a high or low voltage relative to the Hall comparator's output. Direction control is achieved via the DIR pin's input.

Rich protection features include input overvoltage protection (OVP), under-voltage lockout (UVLO), locked-rotor protection, over-current protection (OCP), and thermal shutdown protection.

The MPQ6631H-AEC1 is available in a TQFN-26 (3mmx4mm) package with wettable flanks. It is available in AEC-Q100 Grade 1.

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Features & Benefits

- 3.6V to 35V Operating Input Voltage (V_{IN}) Range
- Up to 3A of Peak Phase Current
- Integrated 160mΩ High-Side MOSFETs (HS-FETs) and Low-Side MOSFETs (LS-FETs)
- Sinusoidal Drive
- Supports a 0V to 1.2V DC Input or 1kHz to 100kHz Pulse-Width Modulation (PWM) Input
- Supports Triple-Hall or Single-Hall Inputs
- Closed-/Open-Loop Speed Control
- Direction/Brake Input
- Power-Save Mode
- 0.5s/4.5s Lock Protection
- Over-Current Protection (OCP)

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MPQ6631H-AEC1 | 35V Input, 3A Peak Phase Current, 3-Phase BLDC Motor Driver, AEC-Q100 Qualified | MPS

Single-Pulse or Triple-Pulse FG Output per Electrical Cycle

FG Signal: Rotational Speed Indication

Soft Start (SS) for Low Noise and Current Overshoot

Available in a TQFN-26 (3mmx4mm) Package with Wettable Flanks

Available in AEC-Q100 Grade 1

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Active Part Numbers:

MPQ6631HGLTE-xxxx-AEC1-Z MPQ6631HGLTE-xxxx-AEC1-P MPQ6631HGLTE-0000-AEC1-Z MPQ6631HGLTE-0000-AEC1-P