

Product Overview

NFAQ1060L36T: Intelligent Power Module (IPM), 600 V, 10 A

For complete documentation, see the data sheet.

The NFAQ1060L36T is a fully-integrated inverter power stage consisting of a high-voltage driver, six IGBT's and a thermistor, suitable for driving permanent magnet synchronous (PMSM) motors, brushless-DC (BLDC) motors and AC asynchronous motors. The IGBT's are configured in a 3-phase bridge with separate emitter connections for the lower legs for maximum flexibility in the choice of control algorithm.

The power stage has a full range of protection functions including cross-conduction protection, external shutdown and under-voltage lockout functions. An internal comparator and reference connected to the over-current protection circuit allows the designer to set the over-current protection level.

Features

- Three-phase 10 A / 600 V IGBT module with integrated drivers using DBC substrate
- Typical values: $V_{CE(sat)} = 1.9V$, $V_F = 2.4V$, $ESW = 400 \mu J$ at 10 A
- Compact 29.6 mm x 18.2 mm dual in-line package
- Adjustable over-current protection level
- Integrated bootstrap diodes and resistors
- Thermistor
- Short lead length (3.4mm, module bottom to pin end)

Benefits

- Good heat dissipation with DBC (low thermal resistance)
- Using the latest tech to optimize loss, good EMI
- PCB size reduce with compact sized packaged
- Adjustable OCP level
- Multi function integrated for compact design, cost optimization
- More accurate module temperature measurement by embedded NTC
- Module assembly to PCB more closely to reduce stress from vibration

Applications

- Industrial fan
- Washing machine
- Air conditioner
- Pump

End Products

- Industrial fan
- Washing machine
- Air conditioner
- Pump

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Family	Type	Substrate	Input Logic	Rated Voltage Min (V)	$I_o @ 25^\circ C$ Min (A)	$V_{CE(sat)} @ 25^\circ C$ Typ (V)	$R_{DS(on)}$ (Ω)	Emitter Configuration	Shutdown Pin	Mounting Type	Package Type
NFAQ1060L36T	7.0209	Pb-free non AEC-Q and PPAP	Active	Compact IPM	3-Phase Inverter IGBT	DBC	Active High	600	10	1.9	N/A	3 Emitter Pins	Yes	DIP	DIP38, 29.6x18.2 EP-4

For more information please contact your local sales support at www.onsemi.com.

Created on: 10/22/2021