



DATA SHEET

Single Phase Full wave direct PWM Fan Motor Driver
 QW1961

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1.0		2015-10-24			
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APPROVED DOCUMENT CHANGE NOTICE (DCN) ON FILE IN DOCUMENT CONTROL

TITLE OF SPECIFICATION: Datasheet QW1961 Single phase full wave direct PWM fan motor driver	SPECIFICATION NO.:
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Single Phase Full wave direct PWM Fan Motor Driver QW1961

1. Description

QW1961 is a full wave driver IC based on PWM controller technology for single phase fan motor. The chip provides speed control between Min. and Max. value by changing output duty cycle. And the minimal percent of full speed depends on RMI pin voltage.

2. Features

- Single-phase full-wave drive (16V, 1.0A transistors are built in)
- Built-in variable speed function controlled by a thermistor input
- The QW1961 can implement quiet, low-vibration variable speed control using externally clocked

high side transistor

- Direct PWM drive.
- Built-in regenerative diode (Di); only requires a minimal number of external components.
- Built-in HB
- Minimum speed setting pin (allows full-speed mode operation at startup)
- Operates in full-speed mode when the thermistor is removed.
- Built-in lock protection and automatic recovery circuits
- FG (speed detection) and RD (lock detection) outputs
- Built-in thermal shutdown circuit

3. Application

CPU cooler fan in Personal Computer.

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4. Package of QW1961 HTSSOP-14 and SSOP-16

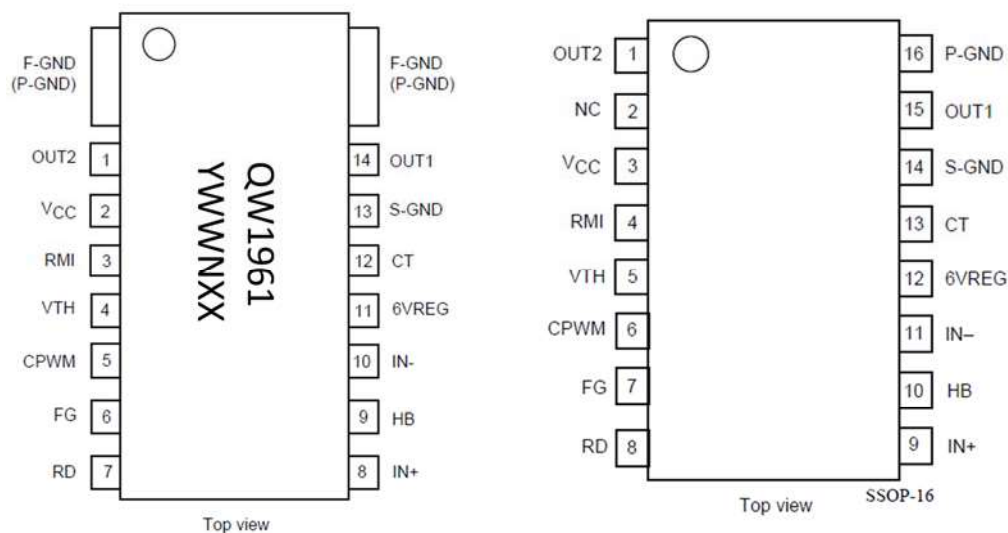


Figure 1. Package Type of QW1961

5. Pin Description

Pin Number		Pin Name	Function
HTSSOP-14	SSOP-16		
1	1	OUT2	Driver output 2
2	NC	No connection	
2	3	VCC	Power supply
3	4	VMIN	Minimum duty setting
4	5	VPWM	Adjustable Input
5	6	COSC	Oscillator capacitor
6	7	FG	Rotation speed indicator
7	8	RD	Rotation/lock state indicator
8	9	HIN+	Hall sensor input +
9	10	HB	Hall sensor bias regulator
10	11	HIN-	Hall sensor input
11	12	VREF	Reference voltage regulator
12	13	CT	Lock and rotation setting capacitor terminal
13	14	GND	Ground for control circuit
14	15	OUT1	Driver output 1
16	PGND	Power ground	