



PT-301E PWM Speed Controller

Overview

The PT301E is a universal DC brushless motor driver IC. PT301E is design for varies motor applications. PT301E driver IC can use for signal coil DC and traditional double coil DC brushless motor. This driver IC accepts the hall IC input and drives the motor coil directly without any other describe transistor. Driver IC can drive the DC brushless motor to start operation at the lowest voltage of 1.5V, but this IC can operate for a wide voltage range from 2.0V up to 6.5V. PT301E driver IC can support large current up to 400mA

Applications

- Single coils DC brushless motor.
- Traditional double coil DC Brushless motor
- DC 1.5V~6.5V.
- FG(Divide 2) / Eight Pole fan

Features

- PWM speed control
- Motor lock protection
- Built-in protection circuit for transient output
- Frequency Generation output (Divide 2)
- Low power dissipation and high driving efficiency
- Ultra-low start voltage

Input Devices

- Hall IC

Specifications

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Conditions	Ratings	Units
Maximum supply voltage	V_{DD}^{max}		6.5	V
Allowable power dissipation	P_d		350*	mW
Operating temperature	T_a		-30 ~ +125	°C
Storage temperature	T_s		-55 ~ +150	°C
Output Continuous current	I_{out}	Max.	400	mA
Output Peak current	I_{out}	$T \leq 20\mu s$	600	mA

* On 50mm x 50mm x 1.6mm glass epoxy board

Package: SOT-28

Unit: mm

SYMBOLS	DIMENSIONS IN MILLIMETERS		
	MIN	NOM	MAX
A2	0.70	0.80	0.90
A1	0.00	-	0.15
A	1.00	1.10	1.30
b	0.25	0.30	0.40
C	0.10	0.15	0.20
D	2.80	2.90	3.00
E	1.60	1.80	2.00
HE	2.60	2.80	3.00
e	-	0.65	-
L	0.10	-	0.60

Name	Pin	Description	Type
V_{CC}	6	DC power supply	P
Gnd	2/3	DC ground	G
O1	4	First output pin	O
O2	1	Second output pin	O
Hin	5	Hall IC signal input	I
PWM	7	PWM control input	I
FG	8	Tacho meter output(Frequency Generation)	O

Pin Description
P: Power, G: Ground, O: Output, I: Input