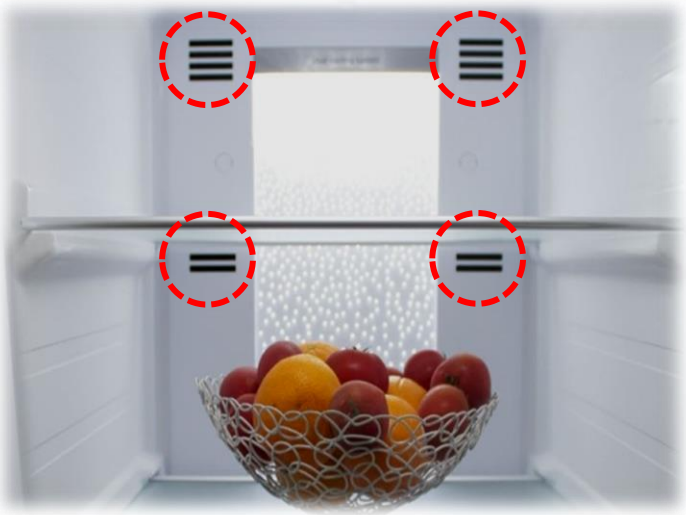
AP8100 Application Note

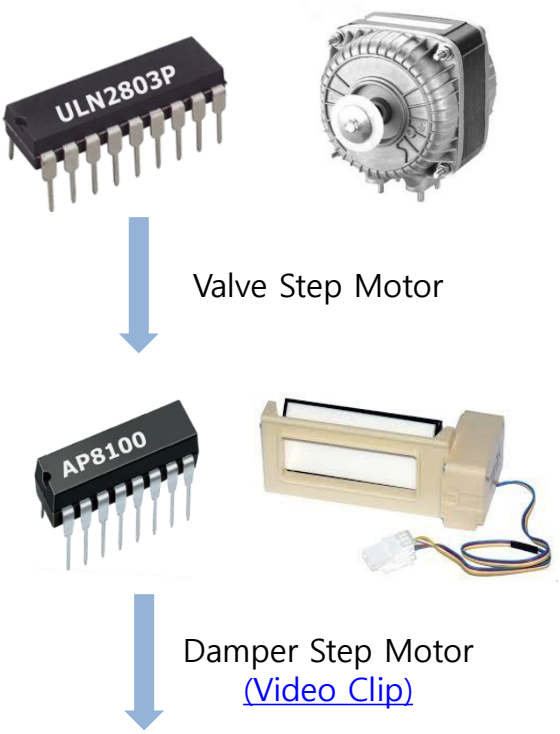
Stepper Motor Driver IC

Abstract

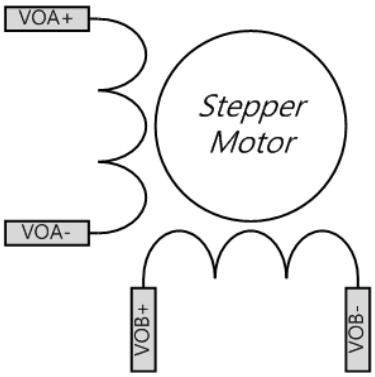
This document is containing function of AP8100 bipolar step motor driver and its application board. Further information about AP8100 is available on APSemi website.

Contents





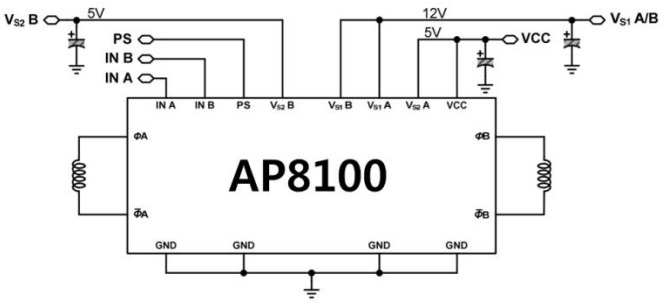
Motor configuration

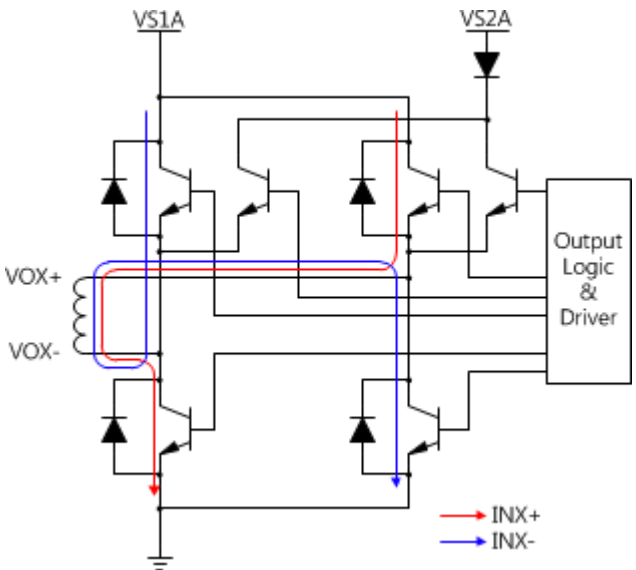


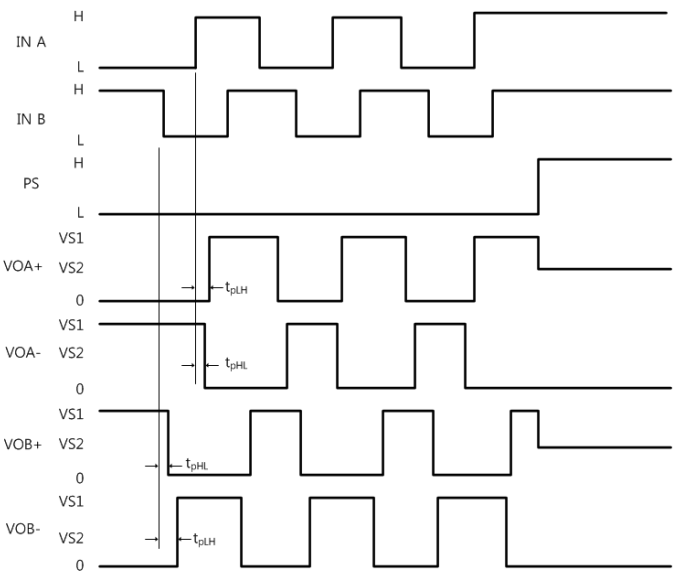
VOA+	L	H	H	L
VOA-	H	L	L	H
VOB+	L	L	H	H
VOB-	H	H	L	L
Rotation	↖	↗	↘	↙

Two phase bipolar stepper motor has 4 input which are 2-pair differential.
Stepper motor moves one step when direction of current flow in the coil's change, reversing Magnetic field of the stator poles

AP8100 functional explanation





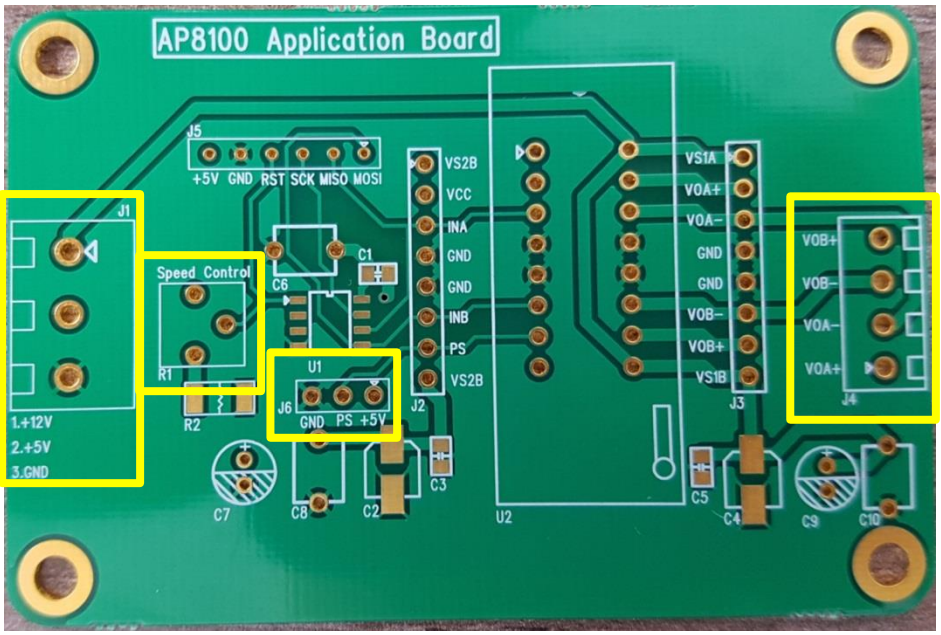


※ Simplified block digram used for explanation

Direction of current flow is determined by TTL compatible input stage level.
Set PS pin as ground to select power source VS1, as high to select power source VS2.

AP8100 application board

1) Place connector 'PS-GND' on **J6** to disable power save option or 'PS-+5V' for enabling power save option.
2) Adjust variable resistor **R1** to control speed of AP8100.
3) Connect stepper motor on **J4**.
4) Connect power to **J1** for supplying voltage.



5) Use voltmeter to measure voltage of each pin.