

EasyDriver v4.5

An easy to use bipolar stepper motor driver
 Use 4 wire, 6 wire or 8 wire stepper motors
 From about 150mA/phase to about 750mA/phase
 Defaults to 5V for Ucc (logic supply), settable to 3.3V
 Supply 8V to 30V DC power input on JP1
 Do not connect or disconnect motor
 while EasyDriver is powered

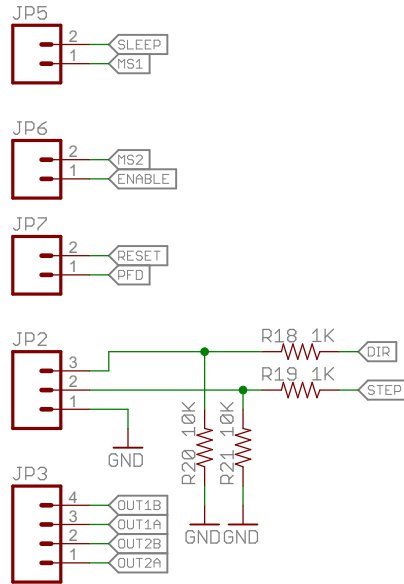
DEFAULT OPTIONS

Short JP5, JP6, JP7 pins to GND or Ucc to override

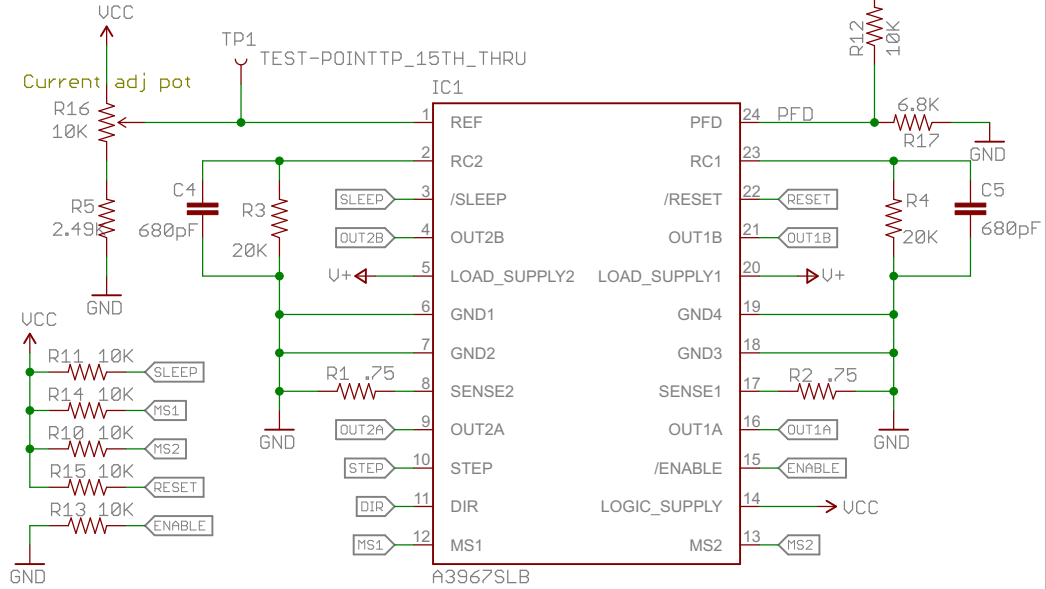
SLEEP = Ucc (awake)
 MS1 = Ucc (1/8 microstep)
 MS2 = Ucc (1/8 microstep)
 ENABLE = GND (enabled)
 RESET = Ucc (not reset)
 PFD = Ucc (slow decay mode)

DIR is level sensitive
 A rising edge on STEP causes a step
 Both take 0V to Ucc

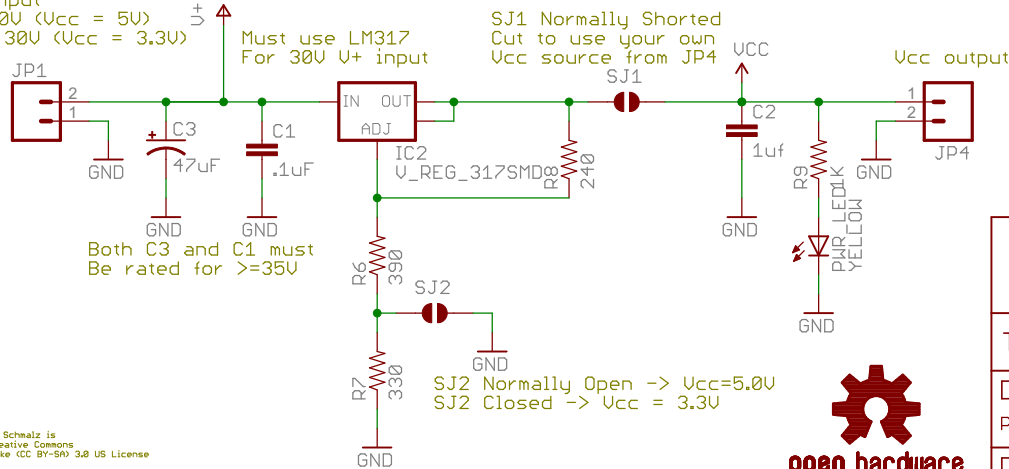
Coil 1 of motor across OUT1B and OUT1A
 Coil 2 of motor across OUT2B and OUT2A



TP1 = Uref input to driver
 Monitor this test point with meter as you adjust current adj pot
 Valid range 1.0V to Ucc
 At Uref of 5V max current will be 833mA
 At Uref of 2V max current will be 333mA
 At Uref of 1V max current will be 166mA
 Minimum current gives smoothest microsteps
 Maximum current gives highest torque
 Max Coil Current(in Amps) = Uref(in Volts)/6
 Set R16 to 2.0V at factory = 333mA/phase



Power Input
 8V to 30V (Ucc = 5V)
 6.3V to 30V (Ucc = 3.3V)



Change List:
 v4.3 12/05/09 BPS Added mounting holes
 v4.4 10/24/20 BPS Fixed MIN/MAX silkscreen
 All vias now 021
 v4.4 1/3/12 BPS + C3 now 47uF
 v4.5 2/25/14 BPS



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TITLE: EasyDriver_v45		SFE
Design by: Brian Schmalz Produced by Spark Fun Electronics		REV: 4.5
Date: 12/18/2014 9:51:38 AM	Sheet: 1/1	



Added series resistors and pull downs on STEP/DIR