Enable Select

J5
ENABLE

D13	1	2	
D12	3	4	
D8	5	6	
+5V	7	8	

HIGH to Enable

ENABLE

D3
LED

634 R9

GND

PWM B Source

J8
PWMB

PWM5	1	2	
PWM10	3	4	
PWM3	5	6	

PWM-B

D1
LED

R7
634

GND

Current Feedback Select

J10
SENSOR

A0	1	2	CURR-B
A1	3	4	
A2	5	6	
A3	7	8	
A4	9	10	
A5	11	12	CURR-A

PWM A Source

J9
PWMA

PWM6	1	2	
PWM9	3	4	
PWM11	5	6	

PWM-A

D2
LED

R8
634

GND

Current Sense
Ratio 8500:1
$Vcurr = Imot/8500 * 635$
10A -> 0.75V
40A -> 2.98V

ENABLE — R3 10k — INH (3)
R2 10k — IN (2)
CURR-A — IS (6)
SR (5)
R5 634
Q1 BTN8982TA
VCC C1 1.0uF 25V GND
OUT_B (8)
GND

R1 10k — INH (3)
IN (2)
CURR-B — IS (6)
SR (5)
R4 10k
R6 634
Q2 BTN8982TA
VCC C2 1.0uF 25V GND
OUT_A (8)
GND

Terminal Blocks

OUT_B 1
OUT_A 2
J7
MegaMoto_Motor

VCC
D4
SMBJ30A
C3
470uF 35V axial
J6
MegaMoto_PowerSupply
GND

Arduino Headers

J1
Power

1	
2	
3	
4	
+5V 5	
6	
7	
8	

GND

J2
Digital/PWM

1		
2		
3		
4		
5	13	D13
6	12	D12
7	*11	PWM11
8	*10	PWM10
9	*9	PWM9
10	8	D8

GND

J3
Analog

A0	A0	1
A1	A1	2
A2	A2	3
A3	A3	4
A4	A4	5
A5	A5	6

J4
Digital/PWM

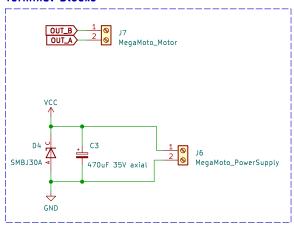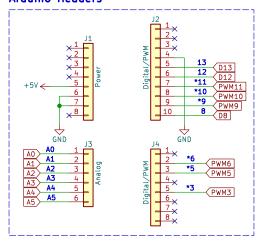|		
1		
2	*6	PWM6
3	*5	PWM5
4		
5	*3	PWM3
6		
7		
8		

Motor Control for Arduino
7V-28V, 12A Continuous — 40A Peak

* Indicates a PWM-capable pin

Sheet: /
File: MegaMoto_Driver_Shield.kicad_sch
Title: MegaMoto UNO Shield
Size: A4   Date: 2023-05-21   Rev: 1.0
KiCad E.D.A. kicad 7.0.1   Id: 1/1