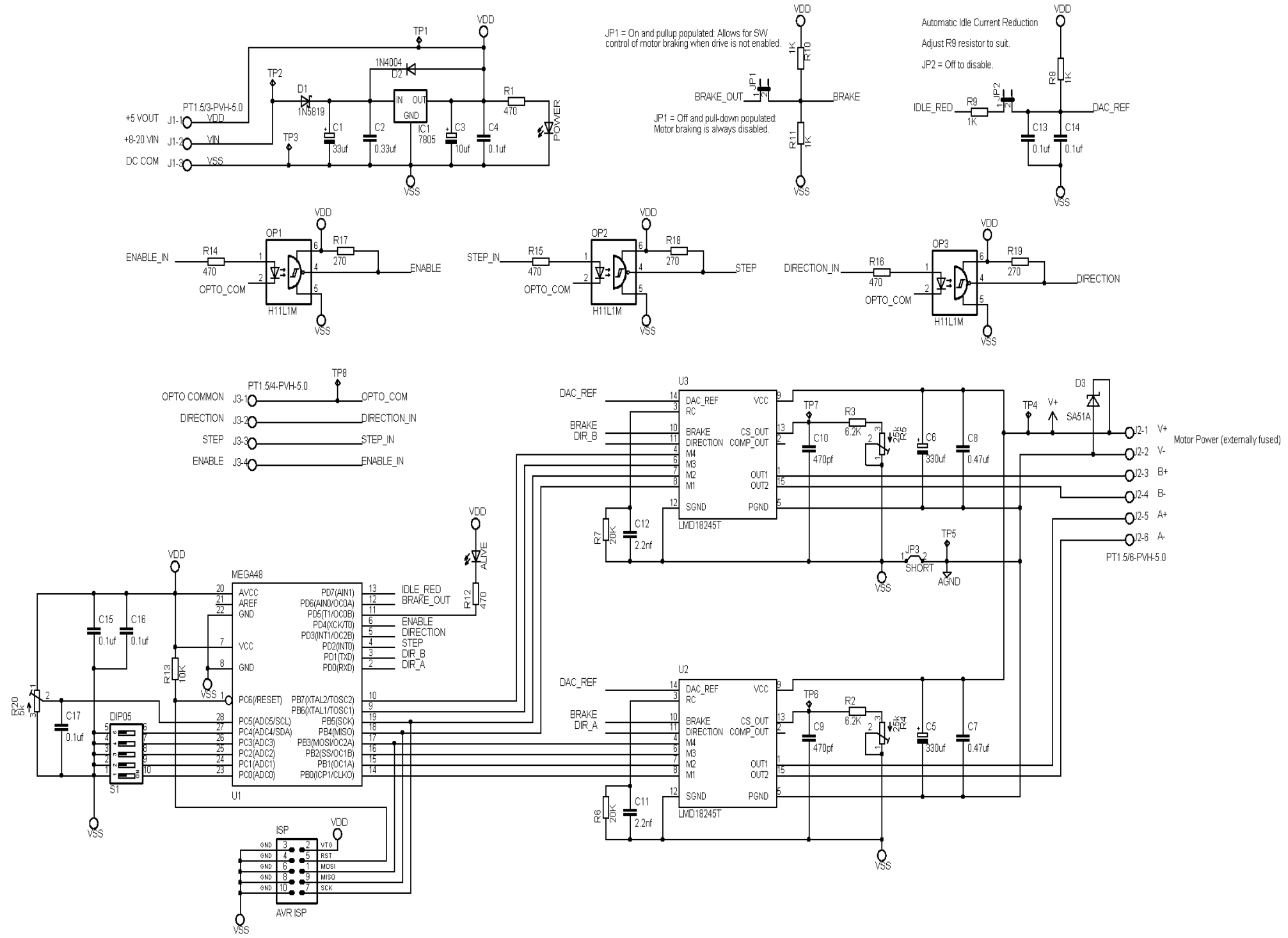
+5 VOUT
+8-20 VIN
DC COM
PT1.5/3-PVH-5.0
J1-1
J1-2
J1-3
VDD
VIN
VSS
TP1
TP2
TP3
D1
1N5819
1N4004
D2
C1
33uf
C2
0.33uf
IC1
7805
IN
OUT
GND
C3
10uf
C4
0.1uf
R1
470
POWER
JP1 = On and pullup populated: Allows for SW control of motor braking when drive is not enabled.
JP1 = Off and pull-down populated: Motor braking is always disabled.
BRAKE_OUT
JP1
R10
1K
R11
1K
BRAKE
Automatic Idle Current Reduction
Adjust R9 resistor to suit.
JP2 = Off to disable.
IDLE_RED
R9
1K
JP2
R8
1K
C13
0.1uf
C14
0.1uf
DAC_REF
ENABLE_IN
R14
470
OP1
H11L1M
R17
270
ENABLE
OPTO_COM
STEP_IN
R15
470
OP2
H11L1M
R18
270
STEP
OPTO_COM
DIRECTION_IN
R16
470
OP3
H11L1M
R19
270
DIRECTION
OPTO_COM
OPTO COMMON
DIRECTION
STEP
ENABLE
PT1.5/4-PVH-5.0
J3-1
J3-2
J3-3
J3-4
TP8
OPTO_COM
DIRECTION_IN
STEP_IN
ENABLE_IN
U3
DAC_REF
BRAKE
DIR_B
LMD18245T
TP7
R3
6.2K
R5
25k
C10
470pf
C6
330uf
C8
0.47uf
R7
20K
C12
2.2nf
TP4
V+
D3
SA51A
TP5
JP3
SHORT
AGND
J2-1 V+
J2-2 V-
J2-3 B+
J2-4 B-
J2-5 A+
J2-6 A-
Motor Power (externally fused)
PT1.5/6-PVH-5.0
U2
DAC_REF
BRAKE
DIR_A
LMD18245T
TP6
R2
6.2K
R4
25k
C9
470pf
C5
330uf
C7
0.47uf
R6
20K
C11
2.2nf
MEGA48
AVCC
AREF
GND
VCC
GND
PC6(/RESET)
PC5(ADC5/SCL)
PC4(ADC4/SDA)
PC3(ADC3)
PC2(ADC2)
PC1(ADC1)
PC0(ADC0)
PD7(AIN1)
PD6(AIND/OC0A)
PD5(T1/OC0B)
PD4(XCK/T0)
PD3(INT1/OC2B)
PD2(INT0)
PD1(TXD)
PD0(RXD)
PB7(XTAL2/TOSC2)
PB6(XTAL1/TOSC1)
PB5(SCK)
PB4(MISO)
PB3(MOSI/OC2A)
PB2(SS/OC1B)
PB1(OC1A)
PB0(ICP1/CLKO)
IDLE_RED
BRAKE_OUT
ENABLE
DIRECTION
STEP
DIR_B
DIR_A
U1
ALIVE
R12
470
R13
10K
R20
5K
C15
0.1uf
C16
0.1uf
C17
0.1uf
DIP05
S1
ISP
GND
VTG
RST
MOSI
MISO
SCK
AVR ISP