OPTOCOUPLER SIGNALS

PWM — 220 R1 — U4 4N25 — R7 10k — +5V

GND_EXT

U6A 74HC14 — IN_A — U6B 74HC14 — IN_B

Place near of Vcc and Gnd
+5V
C11 10uFx16v — C12 0.1uF
GND

ENABLE — 220 R4 — U5 4N25 — R6 10k — +5V

GND_EXT

U6D 74HC14 — 220 R8 — LED D1

U6C 74HC14 — DISABLE

FULL H-BRIDGE DRIVER

PWM frequency 1 kHz
C_bootstrap = 1uF 16V or more
D_bootstrap = 1N4148 low freq.

PWR_FLAG
VIN_LOAD — V+

0.1uF C13
C6 C_bootstrap
D3 D_bootstrap
+12V

DISABLE

IN_B
IN_A

R18 100k
R9 0

GND
D4 D_bootstrap
+12V

C3 C_bootstrap
C14 0.1uF

U3 HIP4081A
1 BHB   BHO 20
2 BHI   BHS 19
3 DIS   BLO 18
4 Vss   BLS 17
5 BLI   Vdd 16
6 ALI   Vcc 15
7 AHI   ALS 14
8 HDEL   ALO 13
9 LDEL   AHS 12
10 AHB   AHO 11

+12V

R10 10 — R14 10k — Q1 IRFZ40
R19 0
R11 10 — R15 10k — Q2 IRFZ40
R12 10 — R16 10k — Q3 IRFZ40
R20 0
R13 10 — R17 10k — Q4 IRFZ40

V+
Place near of MOS Bridge (LEFT)
V+ — C8 1000uFx100v
GND

LOAD+

Place near of MOS Bridge (RIGHT)
V+ — C9 1000uFx100v
GND

LOAD−

Place near of Vdd/Vcc and Vss
+12V
C7 10uFx16v — C10 0.1uF
GND

VOLTAGE REGULATORS

VIN_REG — U2 LM7812CT — +12V

C1 0.33 uF — IN OUT — C4 0.1 uF
GND

+12V   +5V
R2 560 R3 220
D2 LED D5 LED
GND   GND

PWR_FLAG

U1 LM7805CT — +5V
C2 0.33 uF — IN OUT — C5 0.1 uF
GND