+V

C1 C2 C3
C_10uF_50v_1206_X7R_CL31B106KBHNNNE

GND

+V

C4
C_100nF_50v_0402_X7R_CL05B104KB54PNC

GND

3.3

default to max speed

R1
R_10k_0805_RC0805FR-0710KL
RC0805FR-0710KL

R5
R_10k_0805_RC0805FR-0710KL
RC0805FR-0710KL

U8
hole_1mm

Speed

C9
C_100nF_50v_0402_X7R_CL05B104KB54PNC

GND

3.3

R2   R3
R_10k_0805_RC0805FR-0710KL
RC0805FR-0710KL

U9
hole_1mm

U11
hole_1mm

not connected on dev board

3.3 AVDD can source up to 20mA externally

C5 C6
C_1uF_16v_C0805C105K4RACTU

GND

C7 TI recommended 16v rating
C_1uF_16v_C0805C105K4RACTU

+V

C8
C_0.047uF_100v_0805_X7R_CL21B473KCFNNNE

Needs to be rated for at least 2x the supply voltage

U5
MCF8316ARGF

+V
9   VM
10   VM
11   VM
2   DGND
26   AGND
12   PGND
15   PGND
18   PGND
41   PAD Always connect pad to GND

GND

34   DIR direction command
35   BRAKE
21   DRVOFF motor coast when high
28   SPEED/WAKE

GND
Speed

30   SDA
31   SCL

32   EXT_WD
33   EXT_CLK

29   FG FG = open drain speed indication, pull up to 1.8-5v
38   SOX configurable current sense amplifier output of A, B, or C
40   nFAULT open drain fault indicator, pull up to 1.8 to 5v if used

27   AVDD
1   DVDD

8   CP
7   CPH
6   CPL

3   FB_BK   VBK
5   SW_BK   SW_Buck
4   GND_BK   GND

13   OUT_A
14   OUT_A   U6 hole_1mm

16   OUT_B
17   OUT_B   U7 hole_1mm

19   OUT_C
20   OUT_C   U10 hole_1mm

22   NC
23   NC
24   NC
25   NC
36   NC
37   NC
39   NC

R4
R_22_2512_RC2512JK-0722RL

SW_Buck   VBK

C10
C_22uF_10v_0805_X7R_GRM21BZ71A226ME15L

GND

add signal labels to solder points

U14 +V
hole_1mm

U15 +V
hole_1mm

hole_1mm power input

hole_1mm Fan power output (passthrough)

U16
hole_1mm GND

U17
hole_1mm GND