

VCCIO

GND

ENC1A

ENC1B

ENC1N

CSN

SCK

SDI

SDO

CLK16

ENN

ENC2A

ENC2B

ENC2N

TMC5072-B0B
1.2

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

GND

MOTOR1

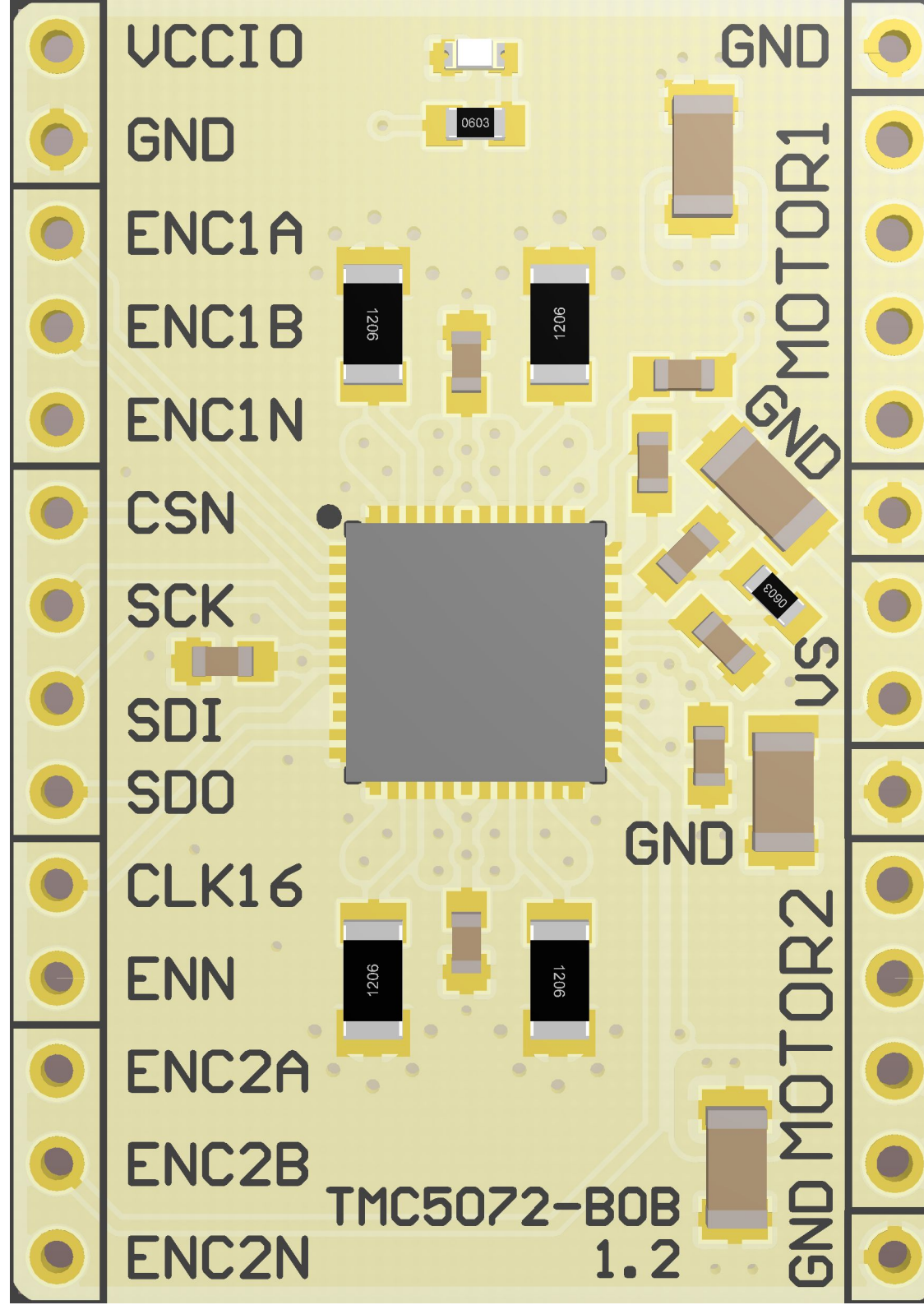
GND

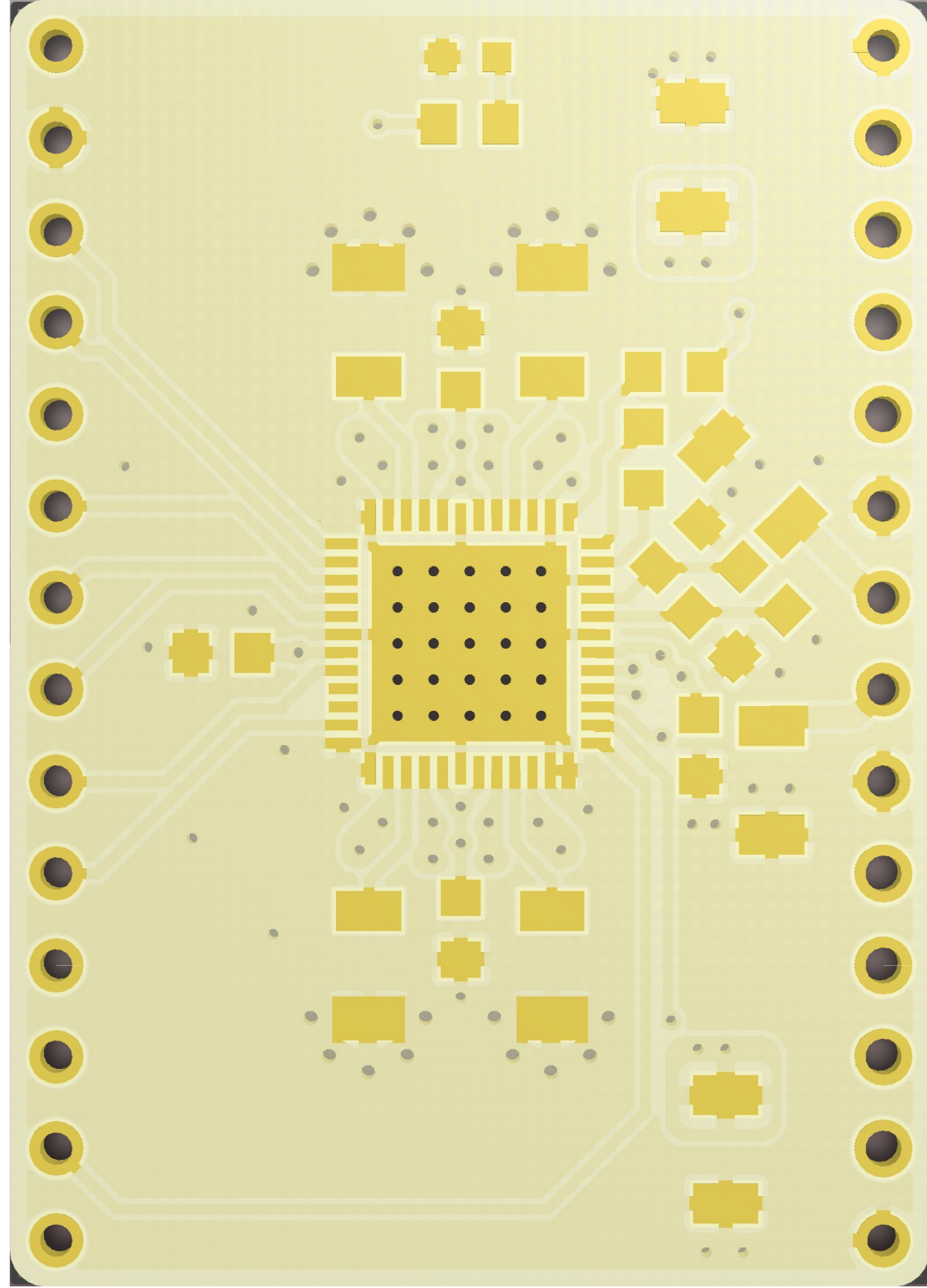
MOTOR1

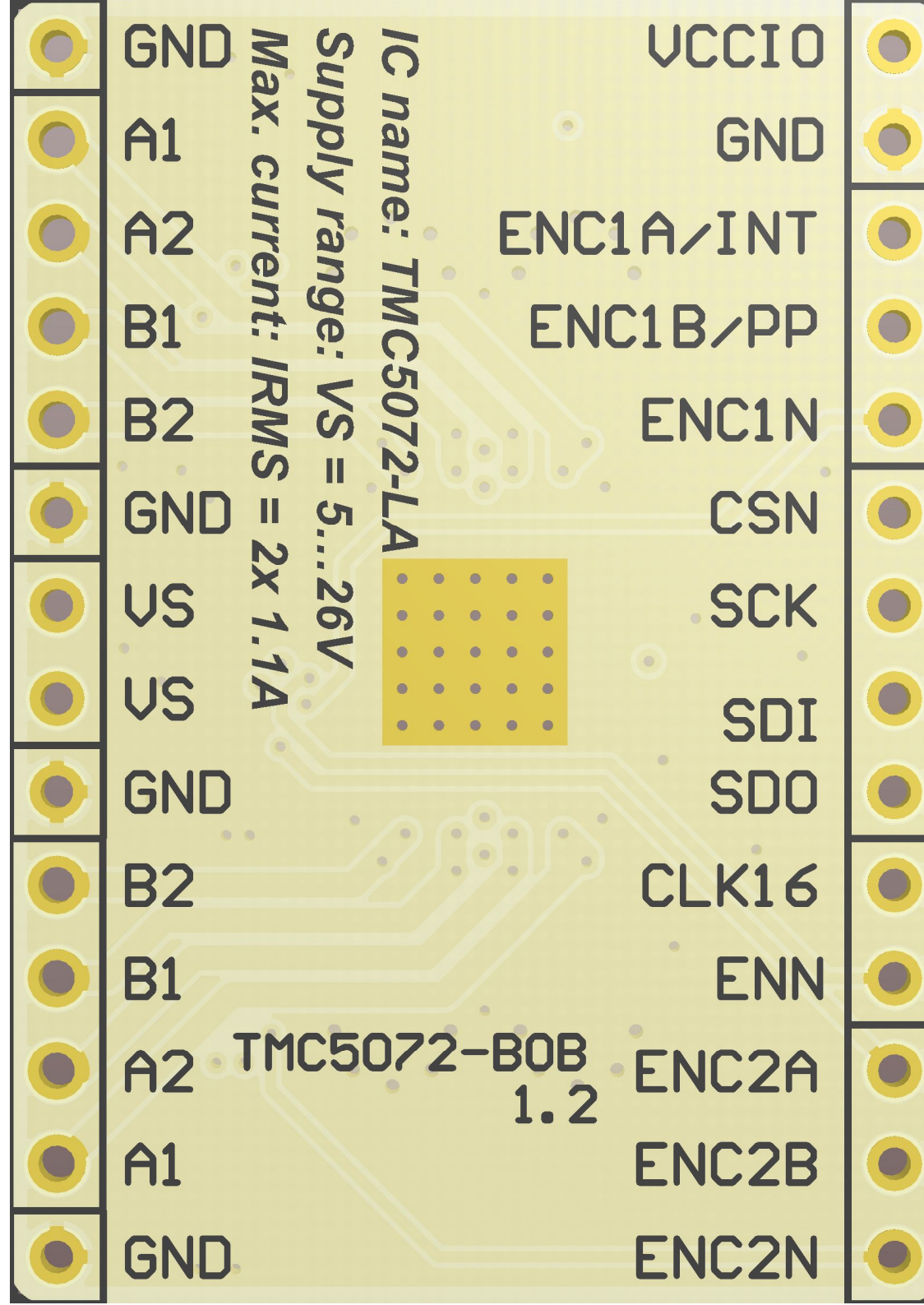
GND

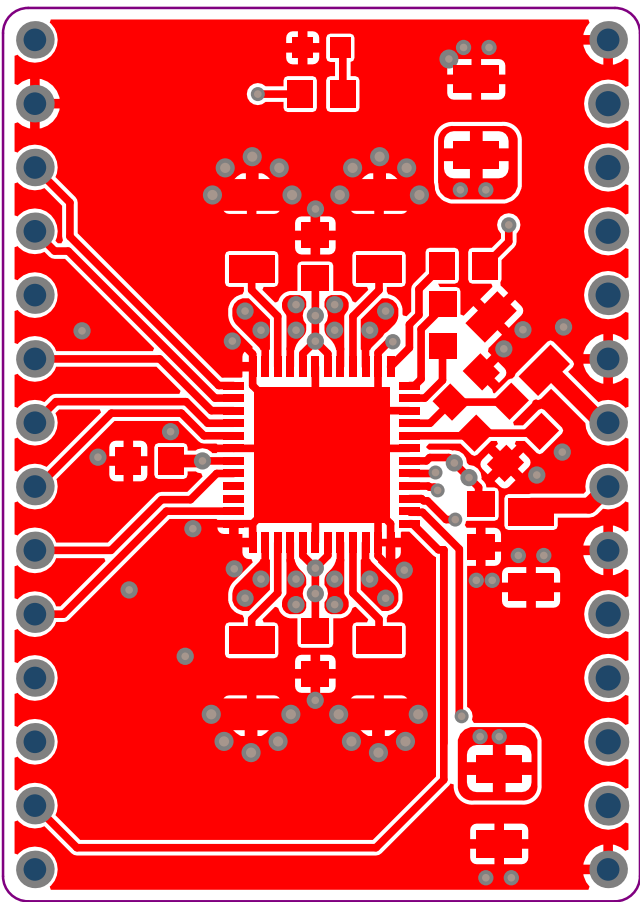
MOTOR1

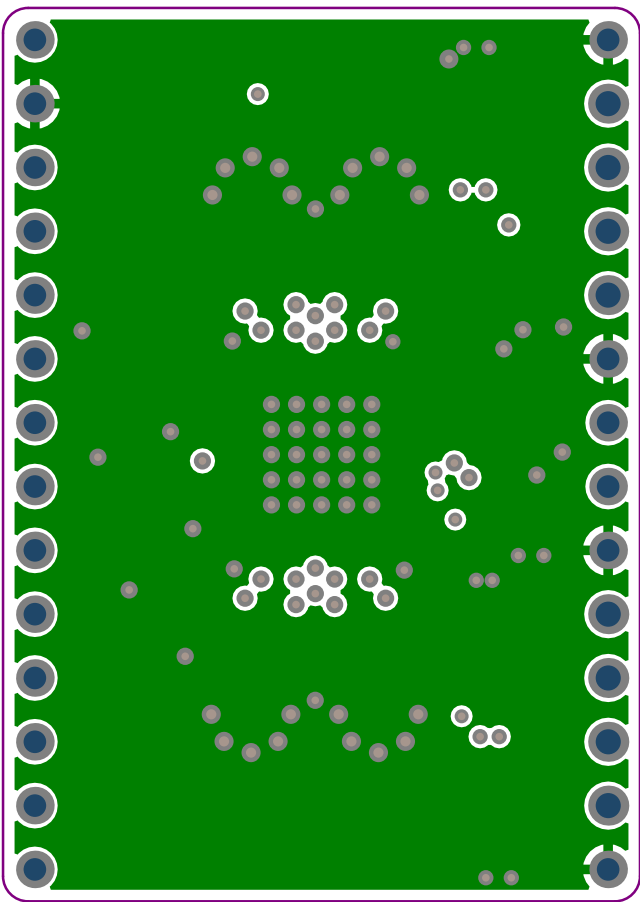
GND

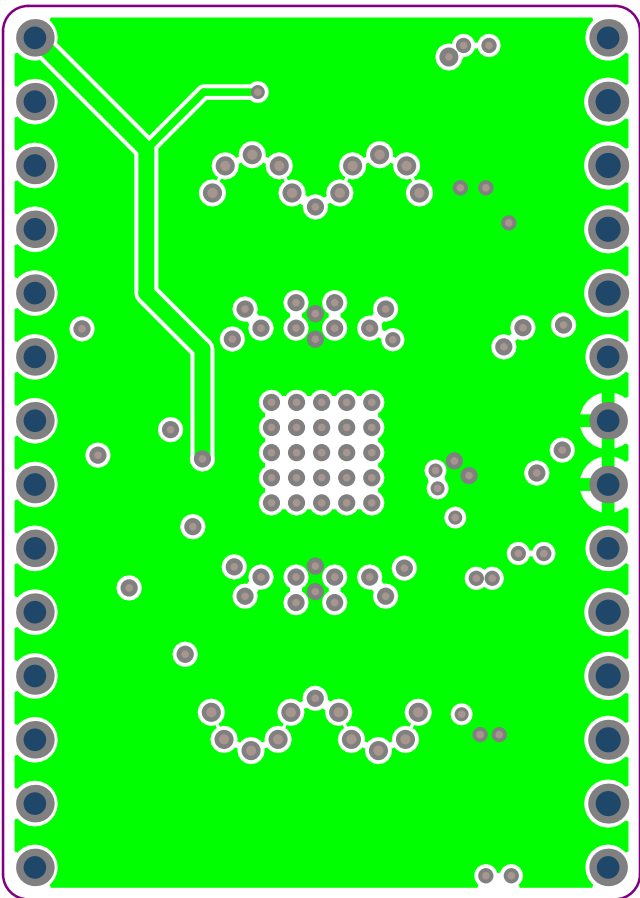


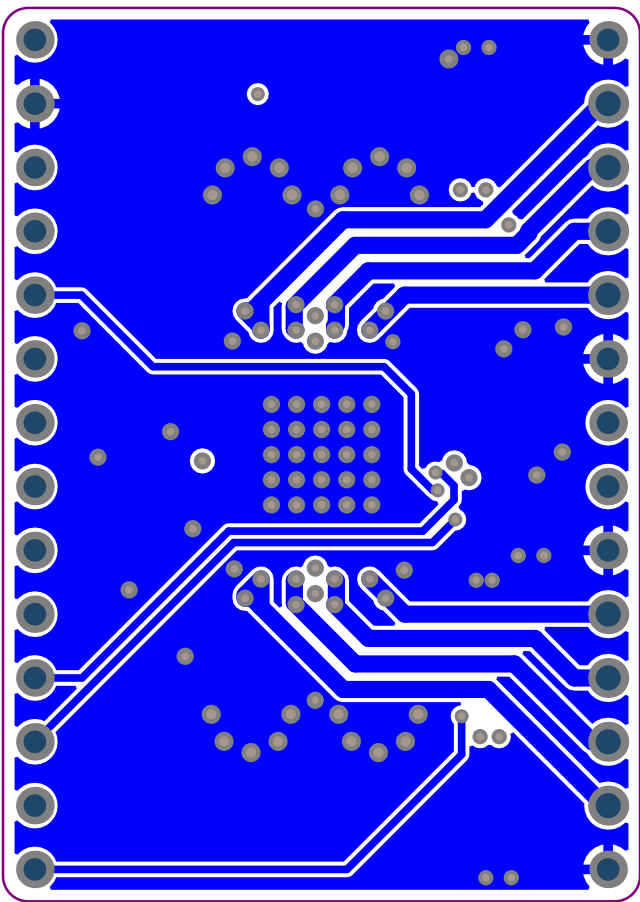












VCCIO

GND

GND

ENC1A

ENC1B

ENC1N

CSN

SCK

SDI

SDO

CLK16

ENN

ENC2A

ENC2B

ENC2N

TMC5072-BOB
1.2

GND MOTOR1

V5

GND

GND MOTOR2

GND

A1

A2

B1

B2

GND

VS

VS

GND

B2

B1

A2

A1

GND

Max. current: $I_{RMS} = 2 \times 1.1A$

Supply range: $V_S = 5...26V$

IC name: TMC5072-LA

TMC5072-BOB
1.2

VCCIO

GND

ENC1A/INT

ENC1B/PP

ENC1N

CSN

SCK

SDI

SDO

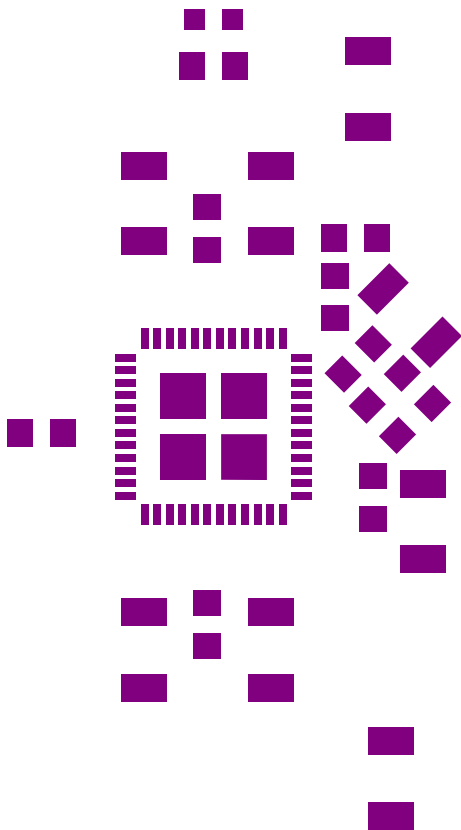
CLK16

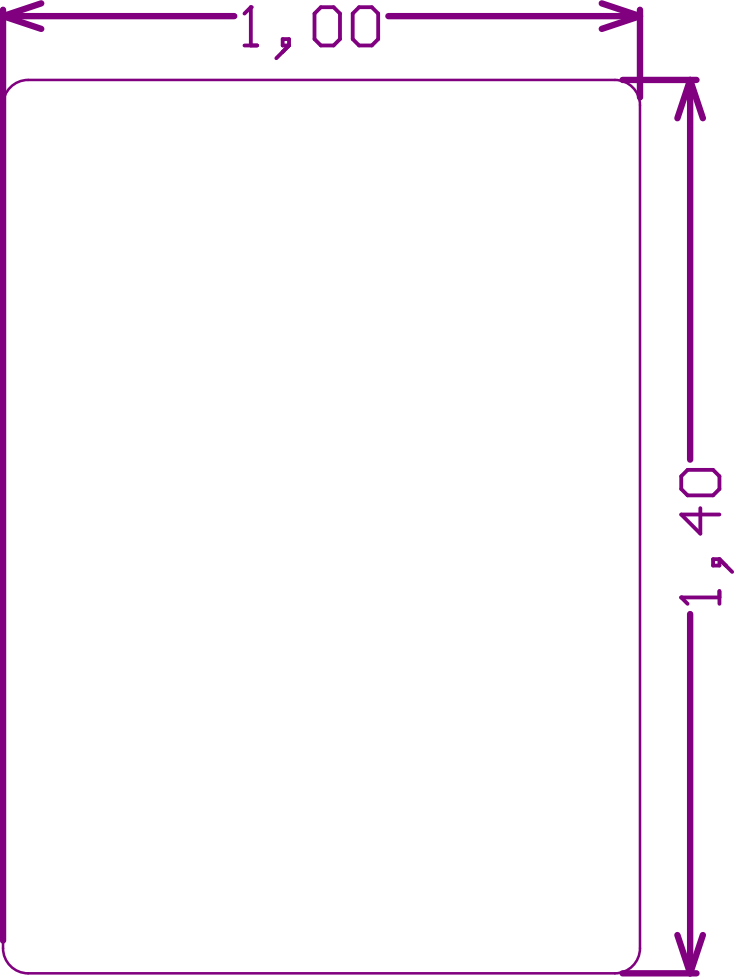
ENN

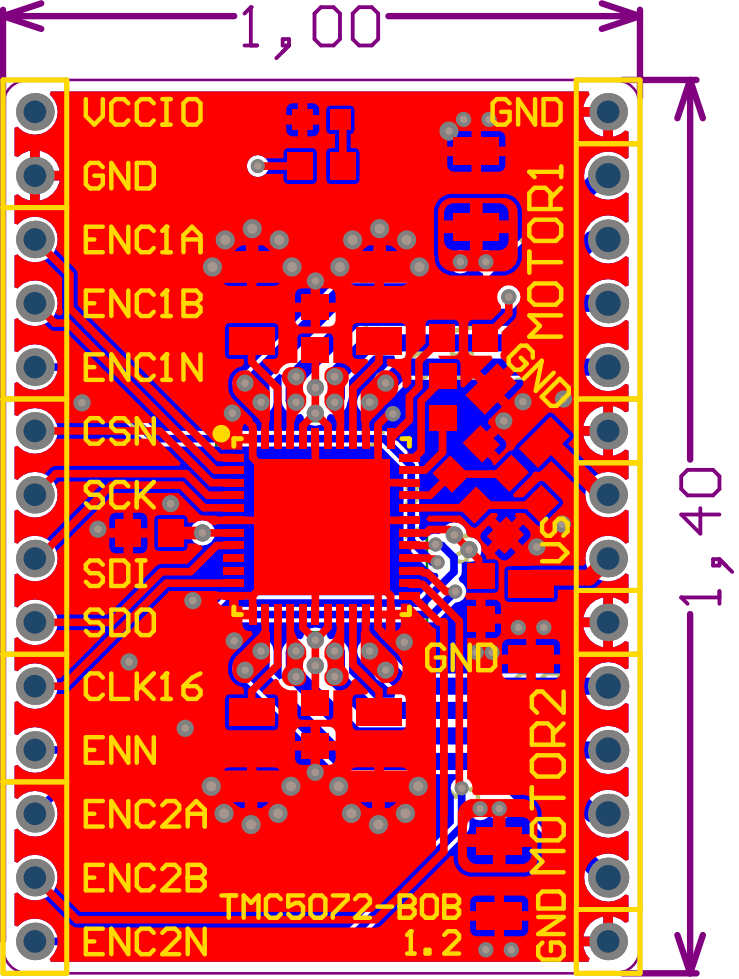
ENC2A

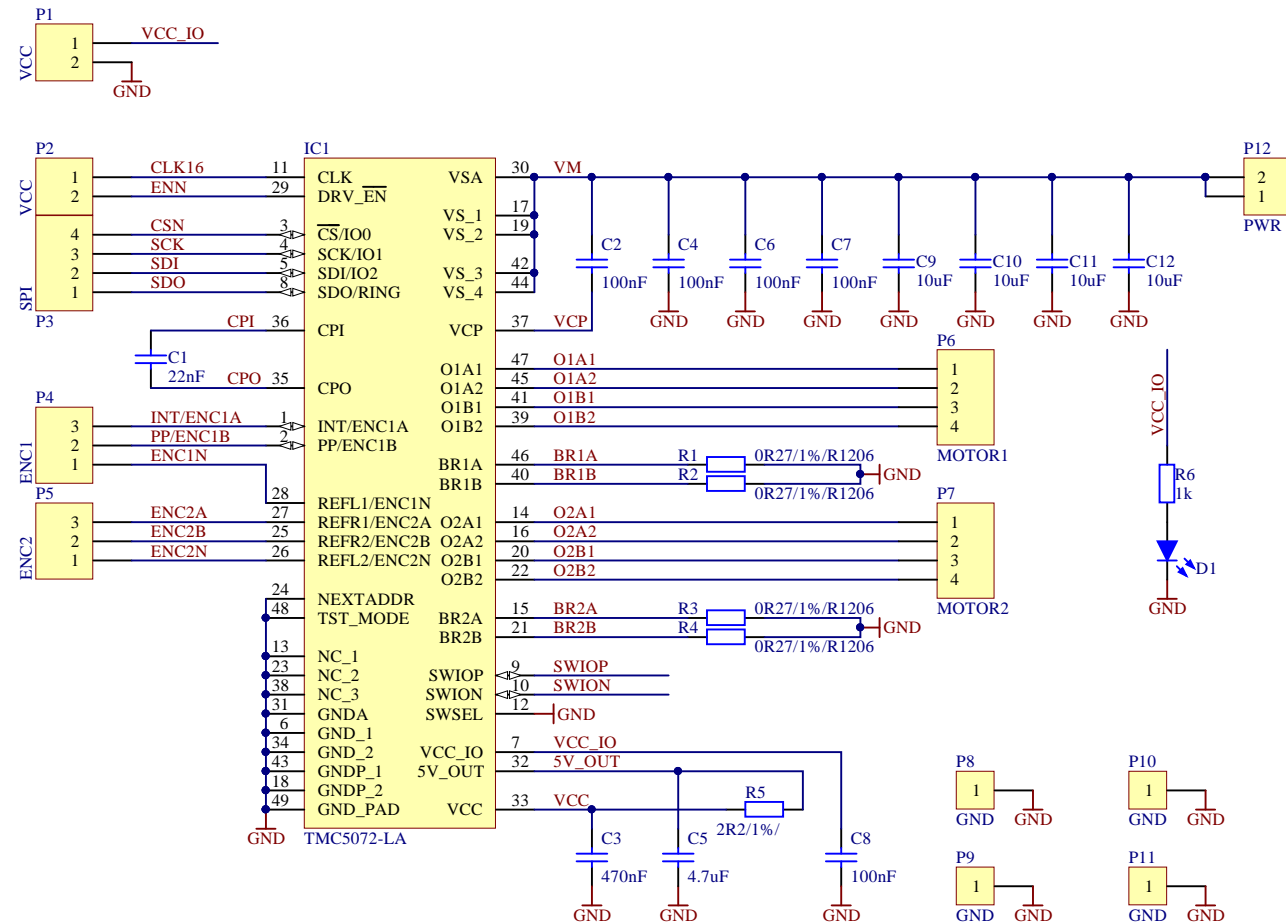
ENC2B

ENC2N



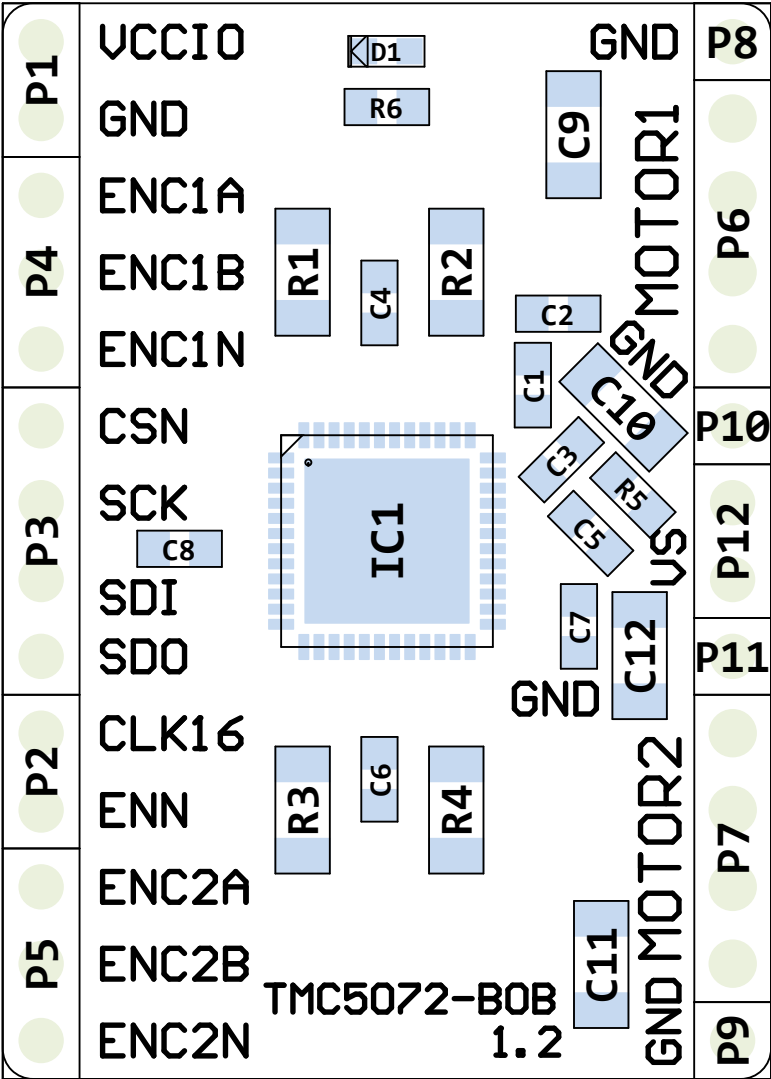




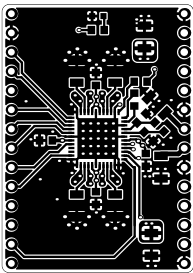


Title TMC5072-BOB		
Size A4	Number	Revision 1.2
Date: 18.07.2017	Sheet of	
File: C:\Users\...\TMC5072_BOB_V1_2.SchDoc	Drawn By:	

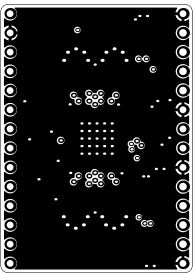
View from Top side (Scale 4:1)



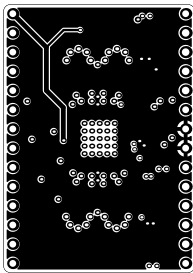
Top (Scale 1:1)



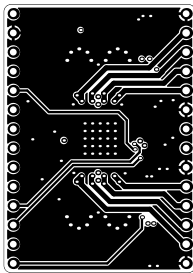
GND (Scale 1:1)



VM (Scale 1:1)



Bottom (Scale 1:1)



BOM

Project: TMC5072-BOB

Version: 1.2

Date: 18.07.2017

#	Quantity	MPN	Comment	Designator	Footprint	Description	Note	MF
1	1	MC0603B223K500CT	22nF	C1	C0603	Ceramic capacitor		Multicomp
2	5	MC0603F104M500CT	100nF	C2, C4, C6, C7, C8	C0603	Ceramic capacitor		Multicomp
3	1	MC0603X474K160CT	470nF	C3	C0603	Ceramic capacitor		Multicomp
4	1	MC0603X475K100CT	4.7uF	C5	C0603	Ceramic capacitor		Multicomp
5	4	MC1206X106K250CT	10uF	C9, C10, C11, C12	C1206	SMD Multilayer Ceramic Capacitor, 1206 [3216 Metric], 10 µF, 25 V, ± 10%, X5R, MC Series		MULTICOMP
6	1	LTST-C191TBKT-5A	LED, Blue, SMD, 20mA, 2.8V, 465 nm	D1	LED_0603	LED, Blue, SMD, 20mA, 2.8V, 465 nm		Lite-On
7	1	TMC5072-LA	TMC5072-LA	IC1	TMC5072_QFN48_0.5_7.0X7.0	Dual low -noise operation controllerfor up to two 2-phase bipolar stepper motors, with SPI, Step/Dir, UART, QFN48(7x7)		TRINAMIC
8	4	RCWE1206R270FKEA	0R27/1%/R1206	R1, R2, R3, R4	R1206	Resistor		Vishay
9	1	MC0063W060312R2	2R2/1%/	R5	R0603	Resistor		Multicomp
10	1	MC0063W060311K	1k	R6	R0603	1 kohm, 50 V, 0603 [1608 Metric], 63 mW, ± 1%, MC Series		MULTICOMP

Approved	Notes	32

ChangeLog

V1.0 - Initial design

V1.1 - Redesign and Optimization after 1st Round

- + Rearranged right side connector signals starting from top:
GND / A1 / A2 / B1 / B2 / GND / VS / VS / GND / B2 / B1 / A2 / A1 / GND
- + Left side connector: Pin 1 - VCCIO, Pin 2 - GND
- + Added 4x 10uF
- + Bottom side labels (IC Name, supply range, max. current of this BOB):
TMC5072-LA, VS = 5...26V, IphaseRMS = 2x 1.1A
- + Changed silkscreen text width from 5mil to 7mil.
- + Changed board name text height to 35mil.

V1.2 - Changed pin hole diameters from 0.9mm to 1mm for headers P6 (MOTOR1) and P7 (MOTOR2).

Title			<i>TMC5072-BOB</i>		
Size	Number			Revision	
A4				<i>1.2</i>	
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