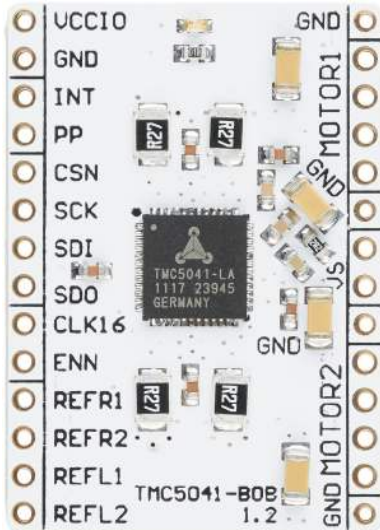


TMC5041 BOB Description

Document Revision V1.00 • 2021-Feb-01

Module Top View



Features and additional Resources

- TMC5041-LA dual stepper driver and controller
- Supply voltage 5-26V, $I_{phase,RMS}$ up to 2x1.1A
- Configuration and control via SPI
- Use off-board electrolyte cap with your supply
- 1x incremental encoder input per motor axis
- Board width 1.0", board height 1.4"
- 2x14 pin 0.1" header rows for pins/connectors
- Link to [additional information and IC data sheet](#)
- Link to [evaluation kit](#)

Pin List

Left	Signal	Right	Signal
1	VCCIO (3.3V or 5V)	15	GND
2	GND	16	O1A1 (Motor Axis 1)
3	INT	17	O1A2
4	PP	18	O1B1
5	CSN (active low)	19	O1B2
6	SCK (up to 6MHz with external CLK)	20	GND
7	SDI (data in)	21	VS (5 to 26V)
8	SDO (data out)	22	VS (5 to 26V)
9	CLK16 (pull to GND for internal CLK)	23	GND
10	ENN (active low)	24	O2B2 (Motor Axis 2)
11	REFR1	25	O2B1
12	REFR2	26	O2A2
13	REFL1	27	O2A1
14	REFL2	28	GND

Bill of Materials

Pcs.	MPN	Value	Footprint	Description
1	MC0603B223K500CT	22nF	0603	Cap, Multicomp
5	MC0603F104M500CT	100nF	0603	Cap, Multicomp
1	MC0603X474K160CT	470nF	0603	Cap, Multicomp
1	MC0603X475K100CT	4.7uF	0603	Cap, Multicomp
4	GRM319R6YA106KA12D	10uF	1206	Cap, Murata
1	LTST-C191TBKT-5A	20mA,2.8V,465nm	0603	LED, Lite-On
1	TMC5041-LA	TMC5041-LA	QFN48,7x7,0.5	Dual driver, TRINAMIC
4	RCWE1206R270FKEA	0R27/1%	1206	Res, Vishay
1	MC0063W060312R2	2R2/1%	0603	Res, Multicomp
1	MC0063W060311K	1k	0603	Res, Multicomp



BOB Schematics

