Texas Instruments

Bill of Materials

TI DESIGNS

TIDA-00867 24V Stepper Motor with Integrated Current Sensing Reference Design

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
1	1	!PCB1		Printed Circuit Board	Any	MDBU009	
2	1	C1	100uF	CAP, AL, 100 µF, 50 V, +/- 20%,	Panasonic	EEE-FK1H101P	SMT Radial F
3	2	C2, C3	0.47uF	CAP, CERM, 0.47 µF, 6.3 V, +/- 10%, X7R, 0603	Kemet	C0603C474K9RACTU	0603
4	2	C4, C5	0.01uF	CAP, CERM, 0.01 µF, 100 V, +/- 10%, X7R, 0805	TDK	C2012X7R2A103K	0805
5	1	C6	0.22uF	CAP, CERM, 0.22 µF, 25 V, +/- 10%, X7R, 0603	MuRata	GRM188R71E224KA88D	0603
6	1	C7	0.022uF	CAP, CERM, 0.022 µF, 100 V, +/-	TDK	C1608X7R2A223K	0603
7	2	C8, C9	0.01uF	CAP, CERM, 0.01 µF, 25 V, +/-	MuRata	GRM155R71E103KA01D	0402
8	4	C10, C11, C12, C15	0.1uF	CAP, CERM, 0.1uF, 10V, +/-10%,	MuRata	GRM155R61A104KA01D	0402
9	1	C13	4.7uF	CAP, CERM, 4.7uF, 10V, +/-10%,	TDK	CGB3B1X5R1A475K055	0603
10	1	C14	1uF	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	MuRata	GRM155R61A105KE15D	0402
11	1	D1	Red	LED, Red, SMD	Lite-On	LTST-C190CKT	Red LED,
12	1	D2	Green	LED, Green, SMD	Lite-On	LTST-C190GKT	1.6x0.8x0.8mm
13	3	J1, J2, J3		Terminal Block, 6A, 3.5mm Pitch, 2-Pos, TH	On-Shore Technology	ED555/2DS	7.0x8.2x6.5mm
14	1	J4		Header, 100mil, 13x1, Gold, TH	Samtec	TSW-113-07-G-S	13x1 Header
15	1	J5		Header, 100mil, 7x2, Tin plated, TH	Sullins Connector Solut	PEC07DAAN	Header, 7x2, 100mil, Tin
16	1	J6		Connector, micro USB Type B, Receptacle, R/A, SMD	Hirose Electric Co. Ltd.	ZX62-B-5PA(11)	Micro USB-B receptacle
17	1	L1	60 ohm	Ferrite Bead, 60 ohm @ 100 MHz, 3 A, 0805	Taiyo Yuden	BKP2125HS600-T	0805
18	1	R1	20.0k	RES, 20.0 k, 1%, 0.063 W, 0402	Vishay-Dale	CRCW040220K0FKED	0402

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint
19	2	R2, R9	4.99k	RES, 4.99k ohm, 1%, 0.063W, 0402	Vishay-Dale	CRCW04024K99FKED	0402
20	4	R3, R4, R5, R6	0	RES, 0, 5%, 0.063 W, 0402	Panasonic	ERJ-2GE0R00X	0402
21	1	R7	0	RES, 0, 5%, 0.0625 W, Resistor	Panasonic	EXB-2HVR000V	Resistor Array -
22	1	R8	510	RES, 510 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402510RJNED	0402
23	1	R10	330	RES, 330 ohm, 5%, 0.063W, 0402	Vishay-Dale	CRCW0402330RJNED	0402
24	1	R12	3.32k	RES, 3.32k ohm, 1%, 0.063W,	Vishay-Dale	CRCW04023K32FKED	0402
25	1	R13	0	RES, 0 ohm, 5%, 0.063W, 0402	Panasonic	ERJ-2GE0R00X	0402
26	1	S1		Switch, Tactile, SPST-NO, 0.05A,	Panasonic	EVQP1D05M	6x5x6 mm
27	6	TP1, TP2, TP3, TP4, TP5, TP6	SMT	Test Point, Compact, SMT	Keystone	5016	Testpoint_Keystone_Compact
28	1	TP7		1mm Uninsulated Shorting Plug, 10.16mm spacing, TH	Harwin	D3082-05	Shorting Plug, 10.16mm spacing, TH
29	1	U1		1.5 A Stepper Motor Driver with STEP / DIR Interface, PWP0024B	Texas Instruments	DRV8885PWPR	PWP0024B
30	1	U2		16 MHz Mixed Signal Microcontroller with 92 KB Flash, 8192 B SRAM and 48 GPIOs, -40 to 105 degC, 64-pin QFP (PM), Green (RoHS & no Sb/Br)	Texas Instruments	MSP430F2617TPM	PM0064A
31	1	U3		USB to Serial UART, SSOP28	FTDI	FT232RL	SSOP28
32	0	FID1, FID2, FID3		Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial
33	0	R11	0	RES, 0 ohm, 5%, 0.063W, 0402	Panasonic	ERJ-2GE0R00X	0402

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