Bill of Materials

TI DESIGNS TIDA-00180

Power Supply with Programmable Output Voltage and Protection for Position Encoder Interfaces

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
2	C1, C18	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H104KA93D		
4	C2, C3, C4, C17	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X5R, 0805	TDK	C2012X5R1H475K125AB		
2	C5, C6	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	MuRata	GRM21BR71H105KA12L		
2	C7, C8	CAP, CERM, 2.2uF, 50V, +/-10%, X5R, 1206	MuRata	GRM31CR61H225KA88L		
1	C9	CAP, AL, 100uF, 63V, +/-20%, 0.35 ohm, SMD	Panasonic	EEE-FK1J101P		
1	C11	CAP, CERM, 2200pF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C222KA01D		
1	C12	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H100JA01D		
1	C13	CAP, CERM, 6800 pF, 25 V, +/- 10%, X7R, 0603	MuRata	GRM188R71E682KA01D		
1	C14	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	TDK	C2012X5R1E106K125AB		
2	C15, C16	CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0603	AVX	06033D104KAT2A		
1	C19	CAP, CERM, 0.068 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C683KA01D		
3	D1, D4, D5	LED, Green, SMD	OSRAM	LG L29K-G2J1-24-Z		
2	D2, D3	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G		
4	H1, H2, H3, H4	MACHINE SCREW PAN PHILLIPS M3 5mm	B&F Fastener Supply	MPMS 003 0005 PH		
1	J1	Header, 100mil, 2x1, Tin plated, TH	Sullins Connector Solutions	PEC02SAAN		
3	J2, J3, J5	Terminal Block, 2-pole, 200mil, TH	On-Shore Technology	OSTTC022162		
1	J4	Header, 10x2, 2.54mm, TH	Sullins Connector Solutions	PEC10DAAN		
1	L1	Inductor, Shielded Drum Core, Ferrite, 150uH, 0.7A,	Wurth Elektronik eiSos	7447713151		
1	L2	Inductor, Wirewound, Ferrite, 4.7uH, 0.9A, 0.2 ohm,	TDK	NLCV32T-4R7M-PFR		
3	R1, R14, R19	RES, 560, 5%, 0.1 W, 0603	Vishay-Dale	CRCW0603560RJNEA		
1	R2	RES, 10 ohm, 5%, 0.25W, 0603	Vishay-Dale	CRCW060310R0JNEAHP		
1	R3	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA		
8	R5, R13, R15, R29, R30, R31,	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JNEA		
1	R6	RES, 51 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060351R0JNEA		
1	R7	RES, 43.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060343K2FKEA		
1	R8	RES, 165k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603165KFKEA		
2	R9, R24	RES, 49.9 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060349K9FKEA		
1	R10	RES, 2.49 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06032K49FKEA		
1	R11	RES, 46.4 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060346K4FKEA		
1	R12	RES, 1.00, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031R00FKEA		
1	R16	RES, 75.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060375K0FKEA		
1	R17	RES, 0.1, 1%, 0.1 W, 0603	Panasonic	ERJ-3RSFR10V		
1	R18	RES, 16.9 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060316K9FKEA		
1	R20	RES, 80.6, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060380R6FKEA		
1	R21	RES, 12.7 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060312K7FKEA		
1	R22	RES, 22.1 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060322K1FKEA		
1	R23	RES, 10.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0FKEA		
1	R25	RES, 21.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060321K5FKEA		
1	R26	RES, 23.7 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060323K7FKEA		
1	R27	RES, 1.37 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K37FKEA		
1	R28	RES, 4.99k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06034K99FKEA		
2	TP1, TP8	Test Point, Miniature, Black, TH	Keystone	5001		
2	TP2, TP3	Test Point, Miniature, Red, TH	Keystone	5000		
9	TP4, TP5, TP6, TP7, TP9, TP10,	Test Point, Miniature, White, TH	Keystone	5002		
1	U1	0.5 A, 42 V Step Down DC/DC Converter with Eco-	Texas Instruments	TPS54040ADGQ		
1	U2	128 TAPS Single Channel Digital Potentiometer with I2C	Texas Instruments	TPL0401A-10DCKR		
1	U3	2.5 to 18 V Positive Voltage 10A Integrated Hot-Swap Controller, RUV0036A	Texas Instruments	TPS24750RUV		
1	U4	Quadruple FET Bus Switch, 2.5-V/3.3-V Low-Voltage High-Bandwidth Bus Switch, DGV0014A	Texas Instruments	SN74CB3Q3125DGV		
0	C10	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X5R, 0805	TDK	C2012X5R1H475K125AB		

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