

## Bill Of Materials

TI Designs # TIDA-00175

Interface to an BiSS-C Position Encoder

Quantity	Designator	Value	Description	Manufacturer	PartNumber	PackageReferer	Fitted
3	C1, C5, C6	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	TDK	C2012X5R1E106K	0805	Fitted
4	C11, C19, C20	2.2uF	CAP, CERM, 2.2uF, 50V, +/-10%, X5R, 1206	MuRata	GRM31CR61H225K	1206	Fitted
1	C12	100uF	CAP, AL, 100uF, 63V, +/-20%, 0.35 ohm, SMD	Panasonic	EEE-FK1J101P	SMT Radial G	Fitted
1	C14	2200pF	CAP, CERM, 2200pF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C222K	0603	Fitted
1	C16	12pF	CAP, CERM, 12pF, 50V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1H120J	0603	Fitted
1	C17	0.012uF	CAP, CERM, 0.012uF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H123K	0603	Fitted
1	C18	0.022uF	CAP, CERM, 0.022uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C223K	0603	Fitted
1	C2	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	TDK	C1608X7R1E104K	0603	Fitted
2	C21, C22	10uF	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M	0603	Fitted
1	C24	0.033uF	CAP, CERM, 0.033uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C333K	0603	Fitted
6	C30, C34, C35	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0603	AVX	06033D104KAT2A	0603	Fitted
6	C32, C33, C36	220pF	CAP, CERM, 220pF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H221K	0603	Fitted
1	C3	0.033uF	CAP, CERM, 0.033uF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H333K	0603	Fitted
3	C4, C25, C26	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0603	MuRata	GRM188R61C104K	0603	Fitted
2	C8, C9	1uF	CAP, CERM, 1uF, 50V, +/-10%, X7R, 0805	MuRata	GRM21BR71H105K	0805	Fitted
2	D1, D4	Green	LED, Green, SMD	OSRAM	LG L29K-G2J1-24-2	1.7x0.65x0.8mm	Fitted
2	D2, D3	60V	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
1	J1		Header, 2 Pos, 6A, 63V, TH	Phoenix Contact	1725656	6.2x8.5x5.54 mm	Fitted
1	J2		Header, 100mil, 3x1, Tin plated, TH	Sullins Connector S	PEC03SAAN	Header, 3 PIN, 100	Fitted
1	J22		Header, 8x1, 100mil, Tin, TH	Sullins Connector S	PEC08SAAN	Header, 8x1, 100	Fitted
1	J3		Header, 100mil, 5x2, Tin plated, TH	Sullins Connector S	PEC05DAAN	Header, 5x2, 100	Fitted
1	J4		Conn D-SUB RCPT R/A 9POS GOLD/FL, TH	TE Connectivity	1734348-1	D-SUB 9 PIN	Fitted
1	J6		Header, 100mil, 4x2, Tin plated, TH	Sullins Connector S	PEC04DAAN	Header, 4x2, 100	Fitted
1	L1	82uH	Inductor, Shielded Drum Core, Ferrite, 82uH, 0.84A, 0.25 ohm, SMD	Würth Elektronik eiS	7447779182	WE-PD-M	Fitted
1	L2	4.7uH	Inductor, Wirewound, Ferrite, 4.7uH, 0.9A, 0.2 ohm, SMD	TDK	NLCV32T-4R7M-PP	3.2x2.2x2.5mm	Fitted
1	R1	0.05	RES, 0.05 ohm, 1%, 0.1W, 0603	Panasonic	ERJ-L03KF50MV	0603	Fitted
7	R37, R41, R42	10	RES, 10 ohm, 5%, 0.25W, 0603	Vishay-Dale	CRCW060310R0JN	0603	Fitted
6	R2, R23, R44, R45	0	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0	0603	Fitted
14	R39, R45, R46	4.7k	RES, 4.7k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06034K70JN	0603	Fitted
2	R16, R22	51	RES, 51 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060351R0JN	0603	Fitted
1	R17	54.9k	RES, 54.9k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060354K9FK	0603	Fitted
2	R19, R28	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FK	0603	Fitted
1	R2	50	RES, 50 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060350R0FK	0603	Fitted
1	R20	38.3k	RES, 38.3k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060338K3FK	0603	Fitted
1	R21	165k	RES, 165k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603165KFK	0603	Fitted
1	R24	90.9k	RES, 90.9k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060390K9FK	0603	Fitted
1	R25	15.4k	RES, 15.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060315K4FK	0603	Fitted
1	R27	36.5k	RES, 36.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060336K5FK	0603	Fitted
1	R29	10	RES, 10 ohm, 5%, 3W, TH	Vishay Draloric	AC03000001009JA	Axial resistor	Fitted
1	R30	390	RES, 390 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603390RJN	0603	Fitted
1	R36	120	RES, 120 ohm, 5%, 0.5W, 0805	Panasonic	ERJ-P06J121V	0805	Fitted
1	R4	1.0k	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JN	0603	Fitted
4	R47, R48, R49	22	RES, 22 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060322R0JN	0603	Fitted
1	R5	1.69k	RES, 1.69k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K69FK	0603	Fitted
2	R6, R26	4.99k	RES, 4.99k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06034K99FK	0603	Fitted
1	R7	93.1k	RES, 93.1k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060393K1FK	0603	Fitted
1	R8	20.5k	RES, 20.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060320K5FK	0603	Fitted
1	R9	30.0k	RES, 30.0k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-0730KL	0603	Fitted
2	TP1, TP2	Red	Test Point, Miniature, Red, TH	Keystone	5000	Red Miniature Test	Fitted
1	U1		2.5 to 18 V Positive Voltage 10A Integrated Hot-Swap Controller, RUV0036A	Texas Instruments	TPS24750RUV	RUV0036A	Fitted
1	U2		0.5 A, 42 V Step Down DC/DC Converter with Eco-mode, DGQ0010D	Texas Instruments	TPS54040ADGQ	DGQ0010D	Fitted
1	U3		1A SIMPLE SWITCHER® Power Module with 42V Maximum Input, 7 pin TO-PMOD	National Semicondu	LMZ14201TZ-ADJ	TZA07A	Fitted
1	U4		200-mA, Low-IQ, LDO Regulator for Portable Devices, DDC0005A	Texas Instruments	TLV70025DDC	DDC0005A	Fitted

Quantity	Designator	Value	Description	Manufacturer	PartNumber	PackageReferer	Fitted
2	U5, U7		8-BIT DUAL-SUPPLY BUS TRANSCEIVER WITH CONFIGURABLE VOLTAGE TRANSLATION AND 3-STATE OUTPUTS, PW0024A	Texas Instruments	SN74AVC8T245PW	PW0024A	Fitted
2	U6, U8		3.3-V Full-Duplex RS-485 Transceivers With $\pm 12$ kV IEC ESD, D0008A	Texas Instruments	SN65HVD77D	D0008A	Fitted
0	C13	10uF	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	MuRata	GRM188R60J106M	0603	Not Fitted
0	C15	10pF	CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0603	TDK	C1608C0G1H100D	0603	Not Fitted
0	C23	10uF	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M	0603	Not Fitted
0	C7	10uF	CAP, CERM, 10uF, 25V, +/-10%, X5R, 0805	TDK	C2012X5R1E106K	10805	Not Fitted
0	D5, D6, D7	7V	Diode, TVS, Bi, 7V, 400W, SOT-23	Bourns	CDSOT23-SM712	SOT-23	Not Fitted
0	J40, J41		Header, 100mil, 2x1, Tin plated, TH	Sullins Connector S	PEC02SAAN	Header, 2 PIN, 1	Not Fitted
0	R13	10k	RES, 10k ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW080510K0JN	0805	Not Fitted
0	R18	3.9k	RES, 3.9k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06033K90JN	0603	Not Fitted
0	R43	0	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0	0603	Not Fitted
0	TP3	White	Test Point, Miniature, White, TH	Keystone	5002	White Miniature	Not Fitted
0	TP5	Red	Test Point, Miniature, Red, TH	Keystone	5000	Red Miniature Te	Not Fitted

Notes:

Substitutions made according to Alternate PartNumber must meet datasheet parameters, not just the Description specified.

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