

Bill of Materials

TI DESIGNS TIDA-00177

Two-Wire Interface to a HIPERFACE DSL Encoder

Quantity	Designator	Description	Manufacturer	PartNumber	PackageReference	Fitted
1	IPC B1	Printed Circuit Board	Any	TIDA-00177		Fitted
3	C1, C11, C12	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H104KA93D	0603	Fitted
3	C2, C3, C4	CAP, CERM, 4.7 µF, 50 V, +/- 10%, X5R, 0805	TDK	C2012X5R1H475K125AB	0805	Fitted
2	C5, C6	CAP, CERM, 2.2 µF, 50 V, +/- 10%, X7R, 1206	MuRata	GRM31CR71H225KA88L	1206	Fitted
1	C7	CAP, CERM, 2200pF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C222KA01D	0603	Fitted
1	C8	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H150JA01D	0603	Fitted
1	C9	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71H105KA12L	0805	Fitted
1	C10	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM216R71H103KA01D	0805	Fitted
1	C13	CAP, CERM, 8200 pF, 25 V, +/- 10%, X7R, 0603	MuRata	GRM188R71E822KA01D	0603	Fitted
1	C14	CAP, CERM, 0.022µF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C223KA01D	0603	Fitted
2	C15, C16	CAP, CERM, 2.2µF, 50V, +/-10%, X5R, 1206	MuRata	GRM31CR61H225KA88L	1206	Fitted
2	C17, C18	CAP, CERM, 10µF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M	0603	Fitted
1	C20	CAP, CERM, 0.033µF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C333KA01D	0603	Fitted
2	C21, C26	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C104KA01D	0603	Fitted
2	C22, C23	CAP, CERM, 1000 pF, 25 V, +/- 10%, X7R, 0603	MuRata	GRM188R71E102KA01D	0603	Fitted
1	C24	CAP, AL, 470 µF, 25 V, +/- 20%, 0.15 ohm, SMD	Panasonic	EEE-FC1E471P	SMT Radial G	Fitted
1	C25	CAP, CERM, 0.22 µF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C224KA01D	0603	Fitted
2	C27, C32	CAP, CERM, 220 pF, 50 V, +/- 5%, C0G/NP0, 0603	MuRata	GRM1885C1H221JA01D	0603	Fitted
2	C28, C31	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71H474KA88L	0805	Fitted
1	C29	CAP, CERM, 2.2 µF, 25 V, +/- 10%, X7R, 0805	MuRata	GRM21BR71E225KA73L	0805	Fitted
1	C30	CAP, CERM, 0.01 µF, 50 V, +/- 5%, C0G/NP0, 0805	MuRata	GRM2195C1H103JA01D	0805	Fitted
3	D1, D4, D6	LED, Green, SMD	OSRAM	LG L29K-G2J1-24-Z	1.7x0.65x0.8mm	Fitted
2	D2, D3	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
1	D5	Diode, Zener, 8.2 V, 500 mW, SOD-123	Vishay-Semiconductor	MMSZ4694-V	SOD-123	Fitted
6	FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Fitted
4	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
4	H5, H6, H7, H8	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	Standoff	Fitted
1	J1	Header, 100mil, 2x2, Tin, TH	Sullins Connector Solutions	PEC02DAAN	Header, 2x2, 2.54mm, TH	Fitted
1	J2	Power Jack, mini, 2.1mm OD, R/A, TH	Switchcraft	RAPC722X	Jack, 14.5x11x9mm	Fitted
1	J3	Header, 100mil, 3x2, Tin, TH	Sullins Connector Solutions	PEC03DAAN	3x2 Header	Fitted
2	J4, J6	Header, 1x1, Tin, TH	Sullins Connector Solutions	PEC01SAAN	Header, 1x1	Fitted
1	J5	Header, 100mil, 3x1, Tin, TH	Sullins Connector Solutions	PEC03SAAN	Header, 3 PIN, 100mil, Tin	Fitted
1	J7	Header, 100mil, 5x2, Tin, TH	Sullins Connector Solutions	PEC05DAAN	Header, 5x2, 100mil, Tin	Fitted
1	J8	Terminal Block, 2-pole, 200mil, TH	On-Shore Technology	OSTTC022162	THD, 2-Leads, Body	Fitted
1	J9	Header, 100mil, 2x1, Tin, TH	Sullins Connector Solutions	PEC02SAAN	Header, 2 PIN, 100mil, Tin	Fitted
1	L1	Inductor, Shielded Drum Core, Ferrite, 150uH, 0.7A,	Würth Elektronik eiSos	7447713151	10x3x10mm	Fitted
1	L2	Inductor, Shielded Drum Core, Ferrite, 1 µH, 1.5 A, 0.09 ohm, SMD	Coilcraft	LPS3010-102MLB	LPS3010	Fitted
2	L3, L4	Inductor, Shielded Drum Core, Ferrite, 100 µH, 0.3	Würth Elektronik eiSos	744043101	WE-TPC-M2	Fitted
1	Q1	MOSFET, N-CH, 20 V, 10 A, SON 2x2mm	Texas Instruments	CSD15571Q2	SON 2x2mm	Fitted
1	Q2	MOSFET, P-CH, -20 V, -15 A, SON 3.3x3.3mm	Texas Instruments	CSD25402Q3A	SON 3.3x3.3mm	Fitted
7	R1, R11, R12, R21, R23, R34, R40	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Fitted
1	R2	RES, 84.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060384K5FKEA	0603	Fitted
2	R3, R31	RES, 560, 5%, 0.1 W, 0603	Vishay-Dale	CRCW0603560RJNEA	0603	Fitted
1	R4	RES, 10 ohm, 5%, 0.25W, 0603	Vishay-Dale	CRCW060310R0JNEAHP	0603	Fitted
1	R5	RES, 178 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603178KFKEA	0603	Fitted
1	R6	RES, 51 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060351R0JNEA	0603	Fitted
1	R7	RES, 115 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603115KFKEA	0603	Fitted
1	R8	RES, 165k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603165KFKEA	0603	Fitted
1	R9	RES, 40.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060340K2FKEA	0603	Fitted
1	R10	RES, 9.31 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-079K31L	0603	Fitted
1	R13	RES, 90.9k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060390K9FKEA	0603	Fitted
1	R14	RES, 15.4k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060315K4FKEA	0603	Fitted
4	R15, R22, R28, R36	RES, 4.99k ohm, 1%, 0.1W, 0603, RES, 4.99 k, 1%, 0.1 W, 0603, RES, 4.99 k, 1%, 0.1 W, 0603, RES, 4.99k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06034K99FKEA	0603	Fitted
1	R16	RES, 36.5k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060336K5FKEA	0603	Fitted
1	R17	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FKEA	0603	Fitted
1	R18	RES, 100, 5%, 0.1 W, 0603	Vishay-Dale	CRCW0603100RJNEA	0603	Fitted
2	R19, R25	RES, 4.7 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06034K70JNEA	0603	Fitted
1	R20	RES, 6.34 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-076K34L	0603	Fitted
1	R24	RES, 309 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603309KFKEA	0603	Fitted
1	R26	RES, 23.7 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060323K7FKEA	0603	Fitted
1	R27	RES, 49.9 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060349K9FKEA	0603	Fitted
1	R29	RES, 0.1, 1%, 0.1 W, 0603	Panasonic	ERJ-3RSFR10V	0603	Fitted
1	R30	RES, 510, 5%, 0.1 W, 0603	Vishay-Dale	CRCW0603510RJNEA	0603	Fitted
1	R32	RES, 50, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060350R0FKEA	0603	Fitted
1	R33	RES, 1.0 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00JNEA	0603	Fitted
1	R35	RES, 1.33 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K33FKEA	0603	Fitted
1	R37	RES, 71.5 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060371K5FKEA	0603	Fitted
1	R38	RES, 9.76 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06039K76FKEA	0603	Fitted
1	R39	RES, 10 k, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	Fitted
1	R41	RES, 22, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060322R0JNEA	0603	Fitted

Quantity	Designator	Description	Manufacturer	PartNumber	PackageReference	Fitted
2	R42, R43	RES, 56.0, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0756RL	0603	Fitted
1	T1	Transformers, Gate Drive , 785uH, SMT	Pulse Engineering	PE-68386NL	8.6x2.5x6.7 mm	Fitted
2	TP1, TP2	Test Point, Miniature, Red, TH	Keystone	5000	Red Miniature Testpoint	Fitted
2	TP3, TP4	Test Point, Miniature, Black, TH	Keystone	5001	Black Miniature Testpoint	Fitted
1	U1	Buck Step Down Regulator with 3.5 to 42 V Input and 0.8 to 39 V Output, -40 to 150 degC, 10-Pin MSOP-PowerPAD (DGQ), Green (RoHS & no Sb/Br)	Texas Instruments	TPS5401DGQ	DGQ0010D	Fitted
1	U2	1A SIMPLE SWITCHER® Power Module with 42V	National Semiconductor	LMZ14201TZ-ADJ/NOPB	TZA07A	Fitted
1	U3	Dual Comparator, D0008A	Texas Instruments	LM2903D	D0008A	Fitted
1	U4	2.5 to 18 V Positive Voltage 10A Integrated Hot-	Texas Instruments	TPS24750RUV	RUV0036A	Fitted
1	U5	3.3V-Supply RS-485 with IEC ESD Protection, D0008A	Texas Instruments	SN65HVD78D	D0008A	Fitted
0	C19	CAP, CERM, 10uF, 10V, +/-20%, X5R, 0603	TDK	C1608X5R1A106M	0603	Not Fitted

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