

Bill of Materials

TI DESIGNS TIDA-00316
Interfacing current output Hall sensors and CTs with Pseudo-differential ADC/MCU reference design

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	IPC81	Printed Circuit Board	Any	TIDA-00316		Fitted
1	C1	CAP, CERM, 10 µF, 35 V, +/- 20%, X7R, 1206_190	TDK	C3216X7R1V106M160AC	1206_190	Fitted
1	C2	CAP, CERM, 3300 pF, 50 V, +/- 10%, X7R, 0805	Kemet	C0805C332K5RACTU	0805	Fitted
4	C3, C5, C10, C23	CAP, CERM, 100 pF, 100 V, +/- 5%, COG/NPO, 0603	TDK	C1608COG2A10J1	0603	Fitted
9	C6, C8, C20, C21, C29, C36, C38, C54, C56	CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805_140	MuRata	GRM21BR61E106KA73L	0805_140	Fitted
11	C7, C18, C22, C30, C32, C33, C34, C35, C37, C53, C55	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	MuRata	GRM188R71H104KA93D	0603	Fitted
2	C9, C12	CAP, CERM, 22 µF, 16 V, +/- 10%, X5R, 0805	TDK	C2012X5R1C226K125AC	0805	Fitted
1	C14	CAP, CERM, 2700 pF, 50 V, +/- 5%, COG/NPO, 0603	TDK	C1608COG1H27J1	0603	Fitted
4	C15, C16, C58, C59	CAP, CERM, 0.01 µF, 25 V, +/- 5%, COG/NPO, 0603	TDK	C1608COG1E10J1	0603	Fitted
8	C24, C25, C47, C48, C49, C50, C51, C52	CAP, CERM, 1µF, 10V, +/-10%, X7R, 0805	Kemet	C0805C105K8RACTU	0805	Fitted
1	C19	CAP, CERM, 470 pF, 50 V, +/- 5%, COG/NPO, 0603	AVX	06035A471JAT2A	0603	Fitted
1	C57	CAP, CERM, 200 pF, 100 V, +/- 5%, COG/NPO, 0603	MuRata	GRM1885C2A201JA01D	0603	Fitted
2	C42, C43	CAP, CERM, 4.7 µF, 10 V, +/- 10%, X5R, 0603	AVX	0603ZD475KAT2A	0603	Fitted
3	C44, C45, C61	CAP, CERM, 330 pF, 50 V, +/- 1%, COG/NPO, 0603	TDK	C1608COG1H331F080AA	0603	Fitted
5	D1, D2, D7, D8, D9	Diode, Schottky, 40 V, 0.015 A, SOD-123	Diodes Inc.	SD101CW-7-F	SOD-123	Fitted
2	D3, D4	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
2	D10, D13	Diode, Zener, 3.6V, 500mW, SOD-123	Diodes Inc.	MMS25227B-7-F	SOD-123	Fitted
4	H1, H2, H3, H4	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
4	H9, H10, H11, H12	Standoff, Hex, 0.5" L #4-40 Nylon	Keystone	1902C	Standoff	Fitted
1	J1	Conn Term Block, 2POS, 5.08mm, TH	Phoenix Contact	1715721	2POS Terminal Block	Fitted
1	J2	Terminal Block, 3.5 mm, 2x1, Tin, TH	Molex	39357-0002	Terminal Block, 3.5 mm, 2x1, TH	Fitted
1	J3	Terminal Block, 3.5 mm, 3x1, Tin, TH	Molex	39357-0003	Terminal Block, 3.5 mm, 3x1, TH	Fitted
2	J4, J12	Header, 2.54 mm, 6x1, Gold, TH	Würth Elektronik	61300611121	Header, 2.54mm, 6x1, TH	Fitted
2	J5, J8	Connector, TH, SMA	Emerson Network Power	142-0701-201	SMA	Fitted
1	J9	Header, 100mil, 2x1, Tin, TH	Molex	90120-0122	Header 2x1	Fitted
1	J10	CONN HIGH SPD CARD EDGE 60 POS	3M	SPD08-060-RB-TR	28.6x7mm	Fitted
1	J11	CONN HIGH SPD CARD EDGE 120 POS	3M	SPD08-120-L-RB	7x56mm	Fitted
1	L1	Inductor, Shielded, Composite, 2.2 µH, 3.7 A, 0.02 ohm, SMD	Coilcraft	XFL4020-222MEB	4x2x4mm	Fitted
2	LD1, LD2	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	0603	Fitted
38	R1, R2, R3, R4, R7, R36, R41, R46, R47, R50, R51, R60, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R92, R95, R96, R97, R98	RES, 0, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Fitted
1	R5	RES, 154 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603154KFKEA	0603	Fitted
1	R6	RES, 42.2, 1%, 0.125 W, 0805	Vishay-Dale	CRCW080542R2FKEA	0805	Fitted
1	R8	RES, 1.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00FKEA	0603	Fitted
9	R10, R11, R12, R14, R16, R17, R18, R27, R91	RES, 2.00 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-072KL	0603	Fitted
1	R13	RES, 1.0 M, 5%, 0.1 W, 0603	Vishay-Dale	CRCW06031M00JNEA	0603	Fitted
2	R22, R34	RES, 673, 0.1%, 0.1 W, 0603	Yageo America	RT0603BRD0763RL	0603	Fitted
1	R26	RES, 5.23 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06035K23FKEA	0603	Fitted
2	R28, R29	RES, 2.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06032K00FKEA	0603	Fitted
2	R30, R32	RES, 18.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060318K2FKEA	0603	Fitted
1	R35	RES, 1.15 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K15FKEA	0603	Fitted
1	R42	RES, 9.76 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06039K76FKEA	0603	Fitted
2	R43, R45	RES, 43.2 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060343K2FKEA	0603	Fitted
1	R44	RES, 20.0 k, 1%, 0.1 W, 0603	Yageo America	RC0603FR-0720KL	0603	Fitted
1	R52	RES, 10.0 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW060310K0FKEA	0603	Fitted
4	R53, R55, R93, R94	RES, 511, 0.5%, 0.1 W, 0603	Yageo America	RT0603DRE07511RL	0603	Fitted
1	R56	RES, 2.49 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06032K49FKEA	0603	Fitted
2	R57, R61	RES, 22, 5%, 0.1 W, 0603	Vishay-Dale	CRCW060322R0JNEA	0603	Fitted
2	R87, R90	RES, 0, 5%, 0.25 W, 1206	Yageo America	RC1206JR-070RL	1206	Fitted
1	U1	Buck Step Down Regulator with 3 to 17 V Input and 0.9 to 6 V Output, -40 to 85 degC, 16-Pin QFN (RGT), Green (RoHS & no Sb/Br)	Texas Instruments	TPS62150RGT	RGT0016C	Fitted
1	U2	Current Transducer, 25A, TH	LEM	LAH 25-NP	14.93x33.3mm	Fitted
1	U4	Single Output High PSRR LDO, 200 mA, Adjustable -1.18 to -33 V Output, -3 to -36 V Input, with Ultra-Low Noise, 8-pin MSOP (DGN), -40 to 125 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TPS7A3001DGNR	DGN0008D	Fitted
1	U5	Single Output High PSRR LDO, 150 mA, Adjustable 1.2 to 33 V Output, 3 to 36 V Input, with Ultra-Low Noise, 8-pin MSOP (DGN), -40 to 125 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TPS7A4901DGNR	DGN0008D	Fitted

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	U6	High Voltage, Rail-to-Rail Input/Output, Precision Operational Amplifiers, e-trim™ Series, D0008A	Texas Instruments	OPA2192IDR	D0008A	Fitted
1	U7	20 MHz, Low Noise, RRIO, CMOS Operational Amplifier, 1.8 to 5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	Texas Instruments	OPA2322AIDR	D0008A	Fitted
1	U9	2.2-V to 36-V, microPower Comparator, DGK0008A	Texas Instruments	TLV1702AIDGK	DGK0008A	Fitted
1	U10	Micropower 250 mA Low-Noise Ultra Low-Dropout Regulator, 6-pin LLP, Pb-Free	Texas Instruments	LP2992AID-5.0/NOPB	LDE06A	Fitted
1	U11	Low-Drift, Low-Power, Dual-Output, VREF and VREF / 2 Voltage References, DDC0005A	Texas Instruments	REF2033AIDDCR	DDC0005A	Fitted
1	U12	DUAL OUTPUT VOLTAGE REFERENCE 2.5V, DBV0005A	Texas Instruments	REF2025DBV	DBV0005A	Fitted
0	C39, C41	CAP, CERM, 330 pF, 50 V, +/- 1%, C0G/NPO, 0603	TDK	C1608C0G1H331F080AA	0603	Not Fitted
0	FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Not Fitted
0	R54	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Not Fitted
0	R85, R86, R88, R89	RES, 0, 5%, 0.25 W, 1206	Yageo America	RC1206JR-070RL	1206	Not Fitted

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