

# Bill of Materials

TI DESIGNS TIDA-00201  
 Differential Signal Conditioning Circuit for Current and Voltage Measurement Using Fluxgate

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	!PCB1	Printed Circuit Board	Any	TIDA-00201		Fitted
1	C23	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0603	Taiyo Yuden	EMK107BBJ106MA-T	0603	Fitted
1	D1	Diode, Schottky, 60V, 1A, SMA	ON Semiconductor	MBRA160T3G	SMA	Fitted
1	J15	CONN HIGH SPD CARD EDGE 60 POS	3M	SPD08-060-RB-TR	28.6x7mm	Fitted
1	J16	CONN HIGH SPD CARD EDGE 120 POS	3M	SPD08-120-L-RB	7x56mm	Fitted
1	J17	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	Terminal Block, 2x1, 2.54mm, TH	Fitted
1	J18	Header, Male 12-pin, 100mil spacing,	Sullins	PEC12SAAN	0.100 inch x 12	Fitted
1	J19	Header, Male 8-pin, 100mil spacing,	Sullins	PEC08SAAN	0.100 inch x 8	Fitted
1	J5	Connector, DC Jack 2.1X5.5 mm, TH	CUI Inc.	PJ-102A	POWER JACK, 14.4x11x9mm	Fitted
1	LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H -	Brady	THT-14-423-10	PCB Label 0.650"H x 0.200"W	Fitted
1	R20	RES, 1.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K00FKEA	0603	Fitted
1	R34	RES, 1.00k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-071KL	0603	Fitted
1	U10	Single Output LDO, 200 mA, Fixed 3.3 V Output, 2 to 5.5	Texas Instruments	TLV70033DCKR	DCK0005A	Fitted
1	U13	DUAL OUTPUT VOLTAGE REFERENCE 2.5V, DBV0005A	Texas Instruments	REF2025DBV	DBV0005A	Fitted
1	U14	Low-Noise, Very Low Drift, Precision VOLTAGE	Texas Instruments	REF5025AID	D0008A	Fitted
1	U15	20 MHz, Low Noise, RRIO, CMOS Operational Amplifier	Texas Instruments	OPA322AIDBVR	DBV0005A	Fitted
1	U5	36-V, 1-A, 4.17-µVRMS, RF LDO Voltage Regulator,	Texas Instruments	TPS7A4700RGW	RGW0020A	Fitted
10	C37, C38, C39, C40, C54, C55,	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E105KA12D	0603	Fitted
10	C5, C6, C7, C10, C25, C32, C33,	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	Kemet	C0603C104J4RACTU	0603	Fitted
10	R2, R4, R5, R7, R8, R10, R11, R13,	RES, 3.30k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-073K3L	0603	Fitted
2	C15, C20	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	Kemet	C0603C104K8RACTU	0603	Fitted
2	R44, R45	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	Fitted
2	U11, U12	IC ADC 12BIT 1MSPS DUAL 16TSSOP	Texas Instruments	ADS7854	16TSSOP	Fitted
3	LD1, LD2, LD3	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	0603	Fitted
3	R110, R111, R112	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	0603	Fitted
4	C26, C27, C28, C29	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C103KA01D	0603	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
4	R18, R19, R24, R25	RES, 0.22 ohm, 1%, 0.1W, 0603	Panasonic	ERJ-3RQFR22V	0603	Fitted
4	U1, U2, U3, U4	SENSOR CURRENT 50A 5V MOD	LEM USA Inc	CKSR X-NP	Module	Fitted
4	U17, U18, U19, U20	Ultra Low Power, Rail-to-Rail Output, Fully-Differential	Texas Instruments	THS4531IDGK	DGK0008A	Fitted
5	C1, C3, C4, C9, C13	CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805	MuRata	GRM21BR61C106KE15L	0805	Fitted
5	J1, J2, J3, J4, J6	Conn Term Block, 2POS, 3.5mm, TH	Phoenix Contact	1751248	11x8.5x7.3mm	Fitted
5	R3, R6, R9, R12, R92	RES, 20.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060320K0FKEA	0603	Fitted
5	U6, U7, U8, U9, U16	IC, Dual Differential Comparators, 2-36 Vin	TI	TLC372	SO-8	Fitted
6	C2, C8, C14, C21, C22, C53	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0805	Kemet	C0805C105K8RACTU	0805	Fitted
6	FID1, FID2, FID3, FID4, FID5, FID6	Fiducial mark. There is nothing to buy or mount.	N/A	N/A	Fiducial	Fitted
7	R16, R17, R22, R23, R31, R81,	RES, 47 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060347R0JNEA	0603	Fitted
8	C11, C12, C16, C17, C18, C19,	CAP, CERM, 10uF, 25V, +/-20%, X5R, 0603	TDK	C1608X5R1E106M080AC	0603	Fitted
8	C45, C46, C47, C48, C49, C50,	CAP, CERM, 0.039uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C393KA01D	0603	Fitted
8	C60, C61, C62, C63, C64, C65,	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0603	MuRata	GRM188R71C102KA01D	0603	Fitted
8	D2, D3, D4, D5, D6, D7, D8, D9	Diode, Zener, 3.6V, 500mW, SOD-123	Diodes Inc.	MMSZ5227B-7-F	SOD-123	Fitted
8	J7, J8, J9, J10, J11, J12, J13, J14	Connector, TH, SMA	Emerson Network Power	142-0701-201	SMA	Fitted
8	R125, R126, R127, R128, R129,	RES, 7.87 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06037K87FKEA	0603	Fitted
8	R137, R138, R139, R140, R141,	RES, 205, 1%, 0.1 W, 0603	Vishay-Dale	CRCW0603205RFKEA	0603	Fitted
8	R83, R84, R85, R86, R87, R88,	RES, 10 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310R0JNEA	0603	Fitted
8	R95, R97, R99, R101, R103, R105, R107, R109	RES, 10.9 k, 0.5%, 0.1 W, 0603	Yageo America	RT0603DRE0710K9L	0603	Fitted
80	R1, R14, R15, R21, R26, R27, R28, R29, R30, R33, R35, R36, R39,	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Fitted
0	C24	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	Kemet	C0603C104K8RACTU	0603	Not Fitted

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