

# Bill of Materials

TI DESIGNS TIDA-00208  
Single-Ended Signal Conditioning Circuit for Current and Voltage Measurement Using F

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	Note
1	!PCB	Printed Circuit Board	Any	TIDA-00208		Fitted
1	C4	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	J10	Receptacle, 100mil, 3x1, TH	TE Connectivity	534237-1	Recptacle, 100mil, 3x1	Fitted
1	J13	Connector, DC Jack 2.1X5.5 mm, TH	CUI Inc.	PJ-102A	POWER JACK, 14.4x11x9mm	Fitted
1	J15	Header, Male 8-pin, 100mil spacing,	Sullins	PEC08SAAN	0.100 inch x 8	Fitted
1	J9	Terminal Block, 2x1, 2.54mm, TH	TE Connectivity	282834-2	Terminal Block, 2x1, 2.54mm, TH	Fitted
1	LBL1	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	Brady	THT-14-423-10	PCB Label 0.650"H x 0.200"W	Fitted
1	R13	RES, 1.00k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-071KL	0603	Fitted
1	U11	Low-Noise, Very Low Drift, Precision VOLTAGE REFERENCE, 2.5V, D008A	Texas Instruments	REF5025AID	D0008A	Fitted
1	U12	DUAL OUTPUT VOLTAGE REFERENCE 3.3V, DBV0005A	Texas Instruments	REF2033DBV	DBV0005A	Fitted
1	U13	20 MHz, Low Noise, RRIO, CMOS Operational Amplifier, 1.8 to 5.5 V, -40 to 125 degC, 14-pin SOP (PW0014A), Green (RoHS & no Sb/Br)	Texas Instruments	OPA4322AIPW	PW0014A	Fitted
1	U14	Single Output LDO, 200 mA, Fixed 3.3 V Output, 2 to 5.5 V Input, with Low IQ, 5-pin SC70 (DCK), -40 to 125 degC, Green (RoHS & no Sb/Br)	Texas Instruments	TLV70033DCKR	DCK0005A	Fitted
1	U15	36-V, 1-A, 4.17-µVRMS, RF LDO Voltage Regulator, RGW0020A	Texas Instruments	TPS7A4700RGW	RGW0020A	Fitted
1	U5	20 MHz, Low Noise, RRIO, CMOS Operational Amplifier with Shutdown, 1.8 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	Texas Instruments	OPA322AIDBVR	DBV0005A	Fitted
10	R1, R3, R4, R6, R7, R9, R10, R12, R22, R24	RES, 3.30k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-073K3L	0603	Fitted
11	C1, C2, C6, C7, C8, C9, C15, C36, C37, C38, C42	CAP, CERM, 0.1uF, 16V, +/-5%, X7R, 0603	Kemet	C0603C104J4RACTU	0603	Fitted
2	J11, J14	CONN RCPT 20POS .100 DL STR SMD	FCI	89898-310ALF		Fitted
2	U16, U17	IC ADC 12BIT 1MSPS DUAL 16TSSOP	Texas Instruments	ADS7853	16TSSOP	Fitted
3	C3, C44, C51	CAP, CERM, 0.1uF, 10V, +/-10%, X7R, 0603	Kemet	C0603C104K8RACTU	0603	Fitted
3	LD1, LD2, LD3	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	0603	Fitted
3	R15, R18, R19	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	0603	Fitted
3	R16, R21, R34	RES, 10k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060310K0JNEA	0603	Fitted
4	C40, C41, C47, C48	CAP, CERM, 1000pF, 25V, +/-5%, C0G/NP0, 0603	MuRata	GRM1885C1E102JA01D	0603	Fitted
4	J5, J6, J7, J8	Connector, TH, SMA	Emerson Network Power	142-0701-201	SMA	Fitted
4	R41, R94, R96, R97	RES, 10.0 ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD0710RL	0603	Fitted
4	R48, R49, R50, R51	RES, 0.1 ohm, 1%, 0.1W, 0603	Panasonic	ERJ-3RSFR10V	0603	Fitted
4	U1, U2, U3, U4	SENSOR CURRENT 50A 5V MOD	LEM USA Inc	CKSR X-NP	Module	Fitted
5	C16, C20, C23, C24, C25	CAP, CERM, 10uF, 16V, +/-10%, X5R, 0805	MuRata	GRM21BR61C106KE15L	0805	Fitted
5	C34, C52, C53, C54, C55	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E105KA12D	0603	Fitted
5	H1, H2, H3, H5, H6	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH	Screw	Fitted
5	H4, H7, H8, H9, H10	Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C	Standoff	Fitted
5	J1, J2, J3, J4, J12	Conn Term Block, 2POS, 3.5mm, TH	Phoenix Contact	1751248	11x8.5x7.3mm	Fitted
5	R2, R5, R8, R11, R23	RES, 20.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060320K0FKEA	0603	Fitted
5	U6, U7, U8, U9, U10	IC, Dual Differential Comparators, 2-36 Vin	TI	TLC372	SO-8	Fitted
54	R14, R20, R27, R43, R44, R45, R46, R53, R55, R57, R58, R59, R62, R63, R68, R70, R72, R73, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Fitted
6	C5, C10, C12, C14, C21, C35	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	D2, D3, D4, D5, D6, D7, D8	Diode, Zener, 3.6V, 500mW, SOD-123	Diodes Inc.	MMSZ5227B-7-F	SOD-123	Fitted
7	R52, R54, R60, R61, R64, R65, R66	RES, 47 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060347R0JNEA	0603	Fitted
8	C19, C22, C39, C43, C45, C46, C49, C50	CAP, CERM, 5600pF, 25V, +/-5%, C0G/NP0, 0603	TDK	C1608C0G1E562J	0603	Fitted
8	C26, C27, C28, C29, C30, C31, C32, C33	CAP, CERM, 10uF, 25V, +/-20%, X5R, 0603	TDK	C1608X5R1E106M080AC	0603	Fitted
8	R25, R26, R30, R31, R37, R40, R95, R98	RES, 1.50 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06031K50FKEA	0603	Fitted
8	R28, R29, R32, R33, R35, R36, R38, R39	RES, 2.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06032K00FKEA	0603	Fitted
0	C11, C13, C17, C18	CAP, CERM, 0.01uF, 25V, +/-5%, C0G/NP0, 0603	Kemet	C0603H103J3GACTU	0603	Not Fitted
0	R17, R42, R47, R67, R69, R71, R74, R120, R121, R123, R124	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA	0603	Not Fitted
0	R56	RES, 100k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100K0FKEA	0603	Not Fitted
0	R99, R100, R101, R102	RES, 2.00 k, 1%, 0.1 W, 0603	Vishay-Dale	CRCW06032K00FKEA	0603	Not Fitted

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