

## **Bill of Materials**

TI DESIGNS TIDA - 00454

Qty	Reference	Part Description	Manufacturer	Manufacturer Part Number	PCB Footprint	DNIe
1	!PCB1	Printed Circuit Board	Any	TIDA-00454		Fitted
1	C1	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	AVX	06035C104KAT2A	603	Fitted
5	C2, C3, C17, C23, C51	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	MuRata	GRM188R71H104KA93D	603	Fitted
11	C4, C5, C19, C48, C57, C59, C64, C65, C66, C67, C68	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	603	Fitted
3	C6, C26, C43	CAP, CERM, 0.01uF, 50V, +/-5%, X7R, 0603	Kemet	C0603C103J5RACTU	603	Fitted
2	C7, C12	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C105K	603	Fitted
6	C8, C10, C11, C15, C20, C25	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	Kemet	C0603C104K5RACTU	603	Fitted
4	C9, C27, C49, C62	CAP, CERM, 1000pF, 2KV 10% X7R 1206	Johanson Dielectrics Inc	202R18W102KV4E	1206	Fitted
1	C13	CAP, CERM, 0.022uF, 16V, +/-10%, X7R, 0603	Kemet	C0603C223K4RACTU	603	Fitted
1	C14	CAP, TA, 4.7uF, 35V, +/-10%, 1.9 ohm, SMD	Vishay-Sprague	293D475X9035C2TE3	6032-28	Fitted
12	C18, C24, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42	CAP, CERM, 47pF, 500V, +/-5%, COG/NPO, 0805	MuRata	GRM21A5C2E470JW01D	805	Fitted
6	C21, C28, C29, C30, C31, C32	CAP, CERM, 0.015uF, 50V, +/-10%, X7R, 0805	AVX	08055C153KAT2A	805	Fitted
2	C44, C46	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	MuRata	GRM32ER71H106KA12L	1210	Fitted
1	C45	CAP, CERM, 10uF, 16V, +/-10%, X7R, 1206	MuRata	GRM31CR71C106KAC7L	1206	Fitted
2	C47, C71	CAP, CERM, 0.047uF, 50V, +/-10%, X7R, 0603	TDK	C1608X7R1H473K	603	Fitted
1	C50	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 1206	TDK	C3216X7R1C475K	1206	Fitted
2	C53, C54	RES 0.0 OHM 1/10W JUMP 0603 SMD	Vishay-Dale	CRCW06030000Z0EA	603	Fitted
2	C56, C60	CAP, CERM, 0.47uF, 25V, +/-10%, X7R, 0603	MuRata	GRM188R71E474KA12J	603	Fitted
5	C58, C61, C63, C69, C70	CAP, CERM, 4.7uF, 10V, +/-10%, X5R, 0603	AVX	0603ZD475KAT2A	603	Fitted
1	C72	CAP, TA, 10uF, 25V, +/-10%, 1.5 ohm, SMD	Vishay-Sprague	293D106X9025C2TE3	6032-28	Fitted
1	C73	CAP, TA, 10uF, 25V, +/-10%, 0.3 ohm, SMD	AVX	TPSC106K025R0300	6032-28	Fitted
2	C74, C75	CAP, CERM, 22uF, 16V, +/-20%, X5R, 0805	MuRata	GRM21BR61C226ME44	805	Fitted
2	D1, D8	Diode, P-N, 70V, 0.2A, SOT-323	Diodes Inc	DESD1P0RFW-7	SOT-323	Fitted
2	D2, D3	LED, 5MM, RED, TH	VISHAY	TLHR6405	-	Fitted
2	D4, D9	TVS 18 VOLT 600 WATT BI-DIR SMB	Littelfuse Inc	SMBJ18CA	SMB	Fitted
1	D5	DIODE, SCHOTTKY, 20V, 500 mA, SOD123, SMT	DIODE INCORPORATED	B0520LW-7-F		Fitted
1	D6	LED SmartLED Green 570NM	OSRAM	LG L29K-G2J1-24-Z	603	Fitted

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1	D7	DIODE ZENER 3.9V 500MW SOD123	Diodes Incorporated	MMSZ5228B-7-F	SOD123	Fitted
1	D10	Diode, Zener, 5.6 V, 500 mW, SOD- 123	Vishay-Semiconductor	MMSZ4690-V	SOD-123	Fitted
1	D11	DIODE ZENER 15V 2W D0214AA	Microsemi Commercial Component Group	SMBJ5929BE3/TR13	DO214AA	Fitted
1	D12	DIODE ZENER 15V 500MW SOD123	Fairchild semiconductor	MMSZ4702	SOD123	Fitted
2	FB1, FB3	BEAD FERRITE 500 OHM 3.0A 3216	Bourns Inc.	MH3261-501Y	1812	Fitted
2	FB2, FB4	FERRITE CHIP 1000 OHM 300MA 0603	TDK Corporation	MMZ1608B102C	603	Fitted
1	J1	Terminal Block, 8x1, 2.54 mm, TH	Phoenix Contact	1725711	8POS Terminal Block	Fitted
3	J2, J4, J5	Header, 8x2, 100mil, TH	FCI	67997-416HLF	Header, 8x2, RA	Fitted
2	J3, J7	3 pin berger	FCI	68001-403HLF	Connector,RA, Battery 3Pos, 3mm Pitch	Fitted
4	J8, J11, J12, J13	TERMINAL BLOCK 5.08MM VERT 2POS, TH	On-Shore Technology	ED120/2DS	TERM_BLK, 2pos, 5.08mm	Fitted
2	J9, J14	Receptacle, 100mil, 4X1 TH	TE Connectivity	282834-4	10.62x10x6.5 mm	Fitted
1	J10	Header, 7x2, 100mil, SMT	Molex	N2514-6002-RB	Header, 100 mil, 7x2, SMT	Fitted
2	Q1, Q2	MOSFET, N-CH, 30V, 22A, SON 2X2 MM	TEXAS INSTRUMENTS	CSD17571Q2	DQK	Fitted
2	R1, R4	RES, 330 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603330RJNEA	603	Fitted
6	R2, R3, R39, R43, R47, R91	RES, 100k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100KFKEA	603	Fitted
7	R5, R6, R7, R8, R9, R10, R11	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA	603	Fitted
4	R12, R14, R63, R64	RES, 1.02k ohm, 0.1%, 0.1W, 0603	Yageo America	RT0603BRD071K02L	603	Fitted
2	R13, R57	RES, 15.0 ohm, 1%, 0.125W, 0805	Vishay-Dale	CRCW080515R0FKEA	805	Fitted
4	R15, R16, R70, R71	RES, 5.10k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-075K1L	603	Fitted
2	R17, R65	RES, 8.25k ohm, 0.1%, 0.1W, 0603	Susumu Co Ltd	RG1608P-8251-B-T5	603	Fitted
3	R18, R19, R33	RES, 300 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW0603300RJNEA	603	Fitted
4	R20, R21, R69, R74	RES, 750 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603750RFKEA	603	Fitted
13	R23, R25, R29, R35, R36, R50, R54, R55, R62, R67, R72, R73, R132	RES, 0 ohm,5%, 0.1W, 0603	Yageo America	RC0603JR-070RL	603	Fitted
4	R26, R34, R41, R42	RES 10K OHM 1/10W 5% 0603 SMD	Vishay-Dale	CRCW060310K0JNEA	603	Fitted
4	R32, R38, R53, R133	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale, Vishay Dale, Vishay Dale, Vishay-Dale	CRCW060310K0FKEA	603	Fitted
1	R44	RES, 47k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW060347K0JNEA	603	Fitted
12	R51, R66, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84	RES, 1.0k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06031K00JNEA	603	Fitted
3	R58, R92, R93	RES, 100 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100RFKEA	603	Fitted
1	R90	RES, 11.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060311K0FKEA	603	Fitted
3	R94, R95, R96	RES, 2.40 k, 1%, 0.25 W, 1206	Yageo America	RC1206FR-072K4L	1206	Fitted
1	R97	RES, 3.00k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-073KL	603	Fitted
4	R98, R99, R104, R105	RES, 2.2k ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06032K20JNEA	603	Fitted
1	R102	RES 0.0 OHM 1/10W JUMP 0603 SMD	Vishay-Dale	CRCW06030000Z0EA	805	Fitted
2	R106, R107	RES, 0 ohm,5%, 0.25W, 1206	Yageo America	RC1206JR-070RL	1206	Fitted
8	R108, R109, R121, R123, R125, R127, R129, R131	RES, 0 ohm, 5%, 0.125W, 0805	Vishay-Dale	CRCW08050000Z0EA	805	Fitted

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12	R111, R112, R113, R114, R115, R116, R117, R118, R119, R122, R124, R126	RES, 332 k, 1%, 0.25 W, 1206	Panasonic	ERJ-8ENF3323V	1206	Fitted
3	R120, R128, R130	RES, 0, 5%, 0.25 W, 1206	Vishay-Dale	CRCW12060000Z0EA	1206	Fitted
1	S1	Switch, Tactile, SPST-NO, 0.1A, 16V, SMT	Bourns	7914G-1-000E	4.93x4.19x6.2 mm	Fitted
3	T1, T2, T3	TRANSFORMER, PRECISE CURRENT, 15 A, 330 OHM, TH	TALEMA GROUP LLC	AP-2500		Fitted
1	U1	40V 7-Channel Low Side Driver, PW0016A	Texas Instruments	TPL7407LPW	PW0016A	Fitted
2	U2, U7	IC, Industrial Analog Current/Voltage Output Driver		XTR300AIRGWR	QFN	Fitted
1	U3	IC, 300-mA 40-V LOW-DROPOUT REGULATOR WITH 25-uA QUIESCENT CURRENT	TI	TPS7A6533QKVURQ1	PFM	Fitted
2	U4, U8	Robust EMC, Low Power, Quad- Channel Digital Isolators, DW0016B	Texas Instruments	ISO7341FCDWR	DW0016B	Fitted
1	U5	DUAL 16-/14-/12-BIT, ULTRALOW-GLITCH, LOW-POWER, BUFFERED, VOLTAGE-OUTPUT DAC WITH 2.5-V, 4-PPM/°C INTERNAL REFERENCE IN SMALL 3-MM ?3-MM SON, DGS0010A	Texas Instruments	DAC8563DGS	DGS0010A	Fitted
1	U6	IC, MCU 16BIT 512KB FLASH, LQFP- 128	TEXAS INSTRUMENTS	MSP430F67661A	PEU	Fitted
1	U9	IC, 28-V Input Voltage, 50-mA Voltage Regulator	TI	TPS7A4201DGN	TSSOP	Fitted
0	C16, C22	CAP, CERM, 12pF, 50V, +/-5%, COG/NPO, 0603	AVX	06035A120JAT2A	603	Not Fitted
0	C52, C55	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	AVX	06033C104JAT2A	603	Not Fitted
0	R22, R24, R27, R28, R30, R31, R37, R40, R45, R46, R48, R49, R52, R56, R60, R61, R68	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay Dale, Vishay Dale	CRCW060310K0FKEA	603	Not Fitted
0	R59, R85, R86	RES, 100 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100RFKEA	603	Not Fitted
0	R87, R88, R89	RES, 2.40 k, 1%, 0.25 W, 1206	Yageo America	RC1206FR-072K4L	1206	Not Fitted
0	R100, R101, R103	RES 560K OHM 1/10W 1% 0603 SMD	Vishay-Dale	CRCW0603560KFKEA	603	Not Fitted
0	Y1	CRYSTAL, 32.768KHz, 6PF, +/- 20PPM, SMD-3P	CITIZEN	CMR200T-32.768KDZBT	-	Not Fitted

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