Variant: 001
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TIDA-01093 REV E3 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	!PCB1	1		TIDA-01093	Any	Printed Circuit Board	
2	C1, C2, C7, C13, C14, C15, C17, C18, C20, C24, C26, C28, C29, C40, C41, C44, C53, C54, C57, C60, C61, C63, C65, C66, C67, C69, C70, C72, C74, C76	30	1uF	GRM21BR71C105KA01L	MuRata	CAP, CERM, 1 µF, 16 V, +/- 10%, X7R, 0805	0805
3	C3	1	3300pF	GRM188R71E332KA01D	MuRata	CAP, CERM, 3300 pF, 25 V, +/- 10%, X7R, 0603	0603
4	C4, C6, C10, C42, C45, C48, C49, C50, C55, C58	10	0.1uF	06033C104KAT2A	AVX	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0603	0603
5	C5, C9, C30, C31	4	10uF	0805YD106MAT2A	AVX	CAP, CERM, 10 µF, 16 V, +/- 20%, X5R, 0805	0805
6	C8, C23, C25, C71, C73	5	10uF	GRM32ER7YA106KA12L	MuRata	CAP, CERM, 10 µF, 35 V, +/- 10%, X7R, 1210	1210
7	C11, C27, C59, C62	4	4700pF	08055C472KAT2A	AVX	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0805	0805
8	C12, C39, C64	3	4.7uF	GRM21BR71C475KA73L	MuRata	CAP, CERM, 4.7 µF, 16 V, +/- 10%, X7R, 0805	0805
9	C16, C19	2	12pF	06035A120JAT2A	AVX	CAP, CERM, 12 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
10	C21, C68	2	470pF	06031C471KAT2A	AVX	CAP, CERM, 470 pF, 100 V, +/- 10%, X7R, 0603	0603
11	C22, C35, C79, C80	4	1000pF	GRM188R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
12	C32, C37	2	22uF	CKG57NX5R1H226M500JH	TDK	CAP, CERM, 22 µF, 50 V, +/- 20%, X5R, 6x5x5mm	6x5x5mm
13	C33	1	2200pF	GRM31BR72J222KW01L	MuRata	CAP, CERM, 2200 pF, 630 V, +/- 10%, X7R, 1206	1206
14	C34, C43, C46	3	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603	0603
15	C36	1	0.1uF	C0805C104K5RACTU	Kemet	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0805	0805
16	C38	1	0.47uF	GRM21BR71H474KA88L	MuRata	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, 0805	0805
17	C47	1	0.047uF	GRM21BR72A473KA01L	MuRata	CAP, CERM, 0.047 µF, 100 V, +/- 10%, X7R, 0805	0805
18	C51, C52, C75, C77	4	0.1uF	12061C104JAT2A	AVX	CAP, CERM, 0.1 µF, 100 V, +/- 5%, X7R, 1206	1206
19	C56	1	1uF	GRM31MR71H105KA88L	MuRata	CAP, CERM, 1 µF, 50 V, +/- 10%, X7R, 1206	1206
20	D1, D2, D19, D31, D55, D56	6	13V	MMSZ5243BS-7-F	Diodes Inc.	Diode, Zener, 13 V, 200 mW, SOD-323	SOD-323
21	D3, D7, D9, D17, D18, D22, D23, D25, D29, D30, D32, D34, D37, D43, D45, D46, D48, D49, D51, D58, D67	21	100V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100 V, 0.15 A, SOD-123	SOD-123
22	D4, D5, D59	3	91V	MMSZ5270BT1G	ON Semiconductor	Diode, Zener, 91 V, 500 mW, SOD-123	SOD-123
23	D6, D8, D11, D12, D13, D14, D15, D16, D20, D24, D26, D28, D33, D47, D50, D52, D53, D54, D57, D60, D61, D62, D63	23	5.6V	MMSZ5232BS-7-F	Diodes Inc.	Diode, Zener, 5.6 V, 200 mW, SOD-323	SOD-323
24	D10	1	22V	MMSZ5251B-7-F	Diodes Inc.	Diode, Zener, 22 V, 500 mW, SOD-123	SOD-123
25	D21	1	56V	1SMB5943BT3G	ON Semiconductor	Diode, Zener, 56 V, 550 mW, SMB	SMB
26	D27, D64	2	58V	SMAJ58A	Diodes Inc.	Diode, TVS, Uni, 58 V, 400 W, SMA	SMA
27	D35, D36	2	30V	BAT45J,115	NXP Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323F	SOD-323F
28	D38	1	60V	PMEG6010CEH,115	NXP Semiconductor	Diode, Schottky, 60 V, 1 A, SOD-123F	SOD-123F
29	D39	1	45V	SDM10U45-7-F	Diodes Inc.	Diode, Schottky, 45 V, 0.1 A, SOD-523	SOD-523
30	D40, D41, D42, D44	4	100V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100V, 0.15A, SOD-123	SOD-123
31	D65	1	100V	5.0SMDJ100A	Littelfuse	Diode, TVS, Uni, 100 V, 5000 W, SMC	SMC
32	D66	1	600V	MURS360T3G	ON Semiconductor	Diode, Ultrafast, 600 V, 3 A, SMC	SMC
33	H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
34	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
35	J1, J7	2		395021011	Molex	Terminal block, 3.5mm, 11x1, R/A, TH	39.90x7.03x9.33 mm
36	J2	1		800-10-008-10-001000	Mill-Max	Header, 100mil, 8x1, TH	Header, 8x1, 100mil, TH
37	J3	1		5-146278-4	TE Connectivity	Header, 100mil, 4x1, Tin, TH	Header, 4x1, 100mil, TH
38	J4, J5, J6, J8	4		8199	Keystone	TERMINAL SCREW PC 30AMP, TH	12.9x6.3x7.9 mm
39	L1	1	1000 ohm	BLM15AX102SN1D	MuRata	Ferrite Bead, 1000 ohm @ 100 MHz, 0.35 A, 0402	0402
40	L2	1	100uH	MSD1260-104MLB	Coilcraft	Coupled inductor, 100 µH, 1.1 A, 0.322 ohm, +/- 20%, SMD	MSD1260
41	P1, P2, P3, P4	4				Header, 2-Pin	
42	Q1, Q9, Q10, Q15, Q23, Q24, Q33, Q46, Q49, Q52	10	60V	2N7002-7-F	Diodes Inc.	MOSFET, N-CH, 60 V, 0.17 A, SOT-23	SOT-23
43	Q2, Q28, Q29, Q53	4	-100V	ZXMP10A13FTA	Diodes Inc.	MOSFET, P-CH, -100 V, -0.6 A, SOT-23	SOT-23
44	Q3, Q5, Q6, Q14, Q18, Q20, Q26, Q27, Q30, Q32, Q45	11	100V	BSS123	Fairchild Semiconductor	MOSFET, N-CH, 100 V, 0.17 A, SOT-23	SOT-23
45	Q4, Q8, Q11, Q13, Q17, Q44, Q47, Q48, Q50, Q54, Q55	11	20V	FDY1002PZ	Fairchild Semiconductor	MOSFET, P-CH, 20 V, 0.83 A, SOT-563	SOT-563
46	Q7, Q12, Q25	3	-20V	RZE002P02TL	Rohm	MOSFET, P-CH, -20 V, -0.2 A, SOT-416	SOT-416
47	Q16, Q19, Q51, Q56	4	-50V	BSS84W-7-F	Diodes Inc.	MOSFET, P-CH, -50 V, -0.13 A, SOT-323	SOT-323
48	Q21	1	100V	ZXMN10A11G	Diodes Inc.	MOSFET, N-CH, 100 V, 1.9 A, SOT-223	SOT-223
49	Q22, Q31	2	-50V	BSS84W-7-F	Diodes Inc.	MOSFET, P-CH, -50V, -0.13A, SOT-323	SOT-323
50	Q34, Q35	2	40 V	MMBT3906	Fairchild Semiconductor	Transistor, PNP, 40 V, 0.2 A, SOT-23	SOT-23
51	Q36, Q37	2	40 V	MMBT3904	Fairchild Semiconductor	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23
52	Q38, Q39, Q40, Q41, Q42, Q43	6	200V	FDB2614	Fairchild Semiconductor	MOSFET, N-CH, 200 V, 62 A, DDPAK	DDPAK
53	R1, R8, R43, R44, R48, R62, R69, R76, R103, R105, R108, R124, R155	13	100k	CRCW0805100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.125 W, 0805	0805
54	R2, R6, R20	3	1.2Meg	CRCW08051M20JNEA	Vishay-Dale	RES, 1.2 M, 5%, 0.125 W, 0805	0805
55	R3, R72, R74, R87, R95, R96, R129, R131, R153, R154	10	5.1Meg	CRCW08055M10JNEA	Vishay-Dale	RES, 5.1 M, 5%, 0.125 W, 0805	0805
56	R4, R12, R17, R24, R29, R33, R35, R38, R39, R42, R46, R47, R53, R60, R66, R89, R101, R106, R113, R118, R122, R125, R128, R134, R139, R141, R143, R145, R147, R150	30	1.0k	CRCW08051K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.125 W, 0805	0805
57	R5, R100	2	200	CRCW0805200RFKEA	Vishay-Dale	RES, 200, 1%, 0.125 W, 0805	0805
58	R7, R13, R15, R19, R26, R32, R36, R41, R49, R55, R56, R61, R102, R107, R116, R120, R123, R132, R136, R140, R144, R148	22	10k	CRCW080510K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.125 W, 0805	0805
59	R9	1	620k	CRCW0805620KJNEA	Vishay-Dale	RES, 620 k, 5%, 0.125 W, 0805	0805
60	R10	1	172k	RT0805BRD07172KL	Yageo America	RES, 172 k, 0.1%, 0.125 W, 0805	0805
61	R11, R16, R23, R28, R34, R37, R45, R51, R58, R65, R104, R111, R117, R121, R127, R133, R138, R142, R146, R149	20	100	CRCW1206100RFKEA	Vishay-Dale	RES, 100, 1%, 0.25 W, 1206	1206
62	R14	1	8.25k	CRCW08058K25FKEA	Vishay-Dale	RES, 8.25 k, 1%, 0.125 W, 0805	0805
63	R18, R27, R59, R70, R85, R88, R92, R93, R114, R151	10	100	CRCW0805100RJNEA	Vishay-Dale	RES, 100, 5%, 0.125 W, 0805	0805
64	R21, R22, R30, R31, R112, R115	6	4.7k	CRCW08054K70JNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.125 W, 0805	0805
65	R25, R52, R64, R110, R119, R126	6	3.0Meg	CRCW08053M00JNEA	Vishay-Dale	RES, 3.0 M, 5%, 0.125 W, 0805	0805
66	R40, R54, R135	3	510k	CRCW0805510KJNEA	Vishay-Dale	RES, 510 k, 5%, 0.125 W, 0805	0805
67	R50	1	8.2Meg	CRCW08058M20JNEA	Vishay-Dale	RES, 8.2 M, 5%, 0.125 W, 0805	0805
68	R57, R63	2	3.3k	CRCW08053K30JNEA	Vishay-Dale	RES, 3.3 k, 5%, 0.125 W, 0805	0805
69	R67	1	47k	CRCW080547K0JNEA	Vishay-Dale	RES, 47 k, 5%, 0.125 W, 0805	0805
70	R68	1	3.3k	CRCW20103K30JNEF	Vishay-Dale	RES, 3.3 k, 5%, 0.75 W, 2010	2010
71	R71	1	2.00k	CRCW08052K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.125 W, 0805	0805
72	R73	1	20	CRCW060320R0JNEA	Vishay-Dale	RES, 20, 5%, 0.1 W, 0603	0603
73	R75	1	46.4k	CRCW080546K4FKEA	Vishay-Dale	RES, 46.4 k, 1%, 0.125 W, 0805	0805
74	R77	1	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.125 W, 0805	0805
75	R78	1	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0, 5%, 0.125 W, 0805	0805
76	R79	1	124k	CRCW0805124KFKEA	Vishay-Dale	RES, 124 k, 1%, 0.125 W, 0805	0805
77	R80	1	64.9k	CRCW080564K9FKEA	Vishay-Dale	RES, 64.9 k, 1%, 0.125 W, 0805	0805
78	R81	1	3.40k	CRCW08053K40FKEA	Vishay-Dale	RES, 3.40 k, 1%, 0.125 W, 0805	0805
79	R82	1	11.8k	CRCW080511K8FKEA	Vishay-Dale	RES, 11.8 k, 1%, 0.125 W, 0805	0805
80	R83	1	60.4	CRCW080560R4FKEA	Vishay-Dale	RES, 60.4, 1%, 0.125 W, 0805	0805
81	R84, R86, R90, R91, R109	5	330	CRCW0805330RJNEA	Vishay-Dale	RES, 330, 5%, 0.125 W, 0805	0805
82	R94, R98, R99	3	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, 1206	1206
83	R97	1	0.001	WSR21L000FEA	Vishay-Dale	RES, 0.001, 1%, 2 W, 4527	4527
84	R130	1	6.2Meg	CRCW08056M20JNEA	Vishay-Dale	RES, 6.2 M, 5%, 0.125 W, 0805	0805
85	R137	1	680k	CRCW0805680KJNEA	Vishay-Dale	RES, 680 k, 5%, 0.125 W, 0805	0805
86	S1	1		4-1437565-1	TE Connectivity	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	SW, SPST 6x6 mm
87	U1, U8	2		BQ7693003DBT	Texas Instruments	Battery Monitor for Lithium-Ion and Phosphate Battery Packs, DBT0030A	DBT0030A
88	U2	1		MSP430G2755IDA38	Texas Instruments	MIXED SIGNAL MICROCONTROLLER, DA0038A	DA0038A
89	U3	1		TL431ACDBZR	Texas Instruments	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, 0 to 70 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
90	U4	1		LM25018MR/NOPB	Texas Instruments	48V, 325mA Constant On-Time Synchronous Buck Regulator, DDA0008B	DDA0008B
91	U5	1	TLP124	TLP124	Toshiba	IC, Photocoupler	SOP-4
92	U6	1		ISO1050DUBR	Texas Instruments	Isolated CAN Transceiver, -55 to 105 degC, 8-pin SOP (DUB), Green (RoHS & no Sb/Br)	DUB0008A
93	U7	1		ISO1541D	Texas Instruments	Low-Power Bidirectional I2C Isolators, D0008A	D0008A
94	Y1	1		FC-135 32.7680KA-A3	Epson	Crystal, 32.768 KHz, 12.5 pF, SMD	SMD, 2-Leads, Body 3.2x1.5mm