

Variant: 001
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TIDA-01629 REV E1 Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	!PCB1	1		TIDA-01629	Any	Printed Circuit Board	
2	C1, C3, C5, C6, C8, C9, C12, C55, C70	9	0.1uF	885012205037	Wurth Elektronik	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
3	C2, C4, C7, C10	4	0.1uF	GRM155R71A104KA01D	MuRata	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
4	C11	1	1uF	885012207103	Wurth Elektronik	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	0805
5	C13	1	0.022uF	GCM155R71H223KA55D	MuRata	CAP, CERM, 0.022 uF, 50 V, +/- 10%, COG/NP0, 0402	0402
6	C14	1	180uF	EKYB101ELL181MK20S	Chemi-Con	CAP, AL, 180 uF, 100 V, +/- 20%, TH	D12.5xL20mm
7	C15, C16	2	1uF	GRM32ER72A105KA01L	MuRata	CAP, CERM, 1 uF, 100 V, +/- 10%, X7R, 1210	1210
8	C17	1	1uF	GRM188R61H105KAALD	MuRata	CAP, CERM, 1 uF, 50 V, +/- 10%, X5R, 0603	0603
9	C18, C26, C28, C33, C40, C46	6	2200pF	GRM188R72A222KA01D	MuRata	CAP, CERM, 2200 pF, 100 V, +/- 10%, X7R, 0603	0603
10	C19, C21, C29, C31, C41, C43	6	2.2uF	GRM32ER72A225KA35L	MuRata	CAP, CERM, 2.2 uF, 100 V, +/- 10%, X7R, 1210	1210
11	C20, C22, C30, C32, C42, C44, C51	7	0.1uF	GRM188R72A104KA35J	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0603	0603
12	C23	1	10uF	GRM21BZ71E106KE15L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805
13	C24	1	0.1uF	GRM155R71E104KE14D	MuRata	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0402	0402
14	C25	1	0.047uF	GRM21BR72A473KA01L	MuRata	CAP, CERM, 0.047 uF, 100 V, +/- 10%, X7R, 0805	0805
15	C27	1	1uF	GRM155R70J105MA12D	MuRata	CAP, CERM, 1 uF, 6.3 V, +/- 20%, X7R, 0402	0402
16	C34, C35, C36, C37, C38, C39	6	47pF	885012005044	Wurth Elektronik	CAP, CERM, 47 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
17	C45	1	100pF	885012005061	Wurth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NP0, 0402	0402
18	C47	1	0.01uF	GRM188R72A103KA01D	MuRata	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7R, 0603	0603
19	C48	1	3000pF	GRM1885C1H302JA01D	MuRata	CAP, CERM, 3000 pF, 50 V, +/- 5%, COG/NP0, 0603	0603
20	C49	1	2.2uF	C2012X7R1H225K125AC	TDK	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, 0805	0805
21	C50, C52	2	3.3uF	C3216X7S2A335M160AB	TDK	CAP, CERM, 3.3 uF, 100 V, +/- 20%, X7S, 1206_190	1206_190
22	C53	1	0.1uF	GRM188R72A104KA35D	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0603	0603
23	C54	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	0603
24	C56	1	10uF	885012207026	Wurth Elektronik	CAP, CERM, 10 uF, 10 V, +/- 10%, X7R, 0805	0805
25	C57	1	10uF	C1608X5R1E106M080AC	TDK	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	0603
26	C58	1	22uF	GRM187R61A226ME15D	MuRata	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603
27	C59, C60, C61, C62, C63, C64, C65, C66	8	2200pF	GRM155R71C222KA01D	MuRata	CAP, CERM, 2200 pF, 16 V, +/- 10%, X7R, 0402	0402
28	C74, C75, C76, C77, C78, C79	6	1000pF	GRM1885C1E102JA01D	MuRata	CAP, CERM, 1000 pF, 25 V, +/- 5%, COG/NP0, 0603	0603
29	D1, D2	2	200V	DFLS1200-7	Diodes Inc.	Diode, Schottky, 200 V, 1 A, PowerDI123	PowerDI123
30	D3, D4, D7	3	Green	150060GS75000	Wurth Elektronik	LED, Green, SMD	LED_0603
31	D5, D6	2	30V	BAT54C-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
32	FID1, FID2, FID3, FID4, FID5, FID6	6		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
33	J1	1		61000218321	Wurth Elektronik	Header, 2.54mm, 2x1, Gold, SMT	Header, 2.54mm, 2x1, SMT
34	J2, J3	2		89898-310ALF	FCI	Receptacle, 2.54mm, 10x2, Gold, SMT	Receptacle, 2.54mm, 10x2, SMT
35	J4	1		61000318221	Wurth Elektronik	Header, 2.54mm, 3x1, Gold, SMT	Header, 2.54mm, 3x1, SMT

36	J5	1		691236510002	Würth Elektronik	Terminal Block, 5.08mm, 2x1, R/A, TH	Terminal Block, 5.08mm, 2x1, R/A, TH
37	J6	1		691236510003	Würth Elektronik	Terminal Block, 5.08mm, 3x1, R/A, TH	Terminal Block, 5.08mm, 3x1, R/A, TH
38	L1, L6	2	100 ohm	742792620	Würth Elektronik	Ferrite Bead, 100 ohm @ 100 MHz, 0.5 A, 0603	0603
39	L2	1	220uH	MSS7348-224MEB	Coilcraft	Inductor, Shielded, Ferrite, 220 µH, .5 A, .624 ohm, SMD	7x7mm
40	L3	1	33uH	NLFV25T-330K-PF	TDK	Inductor, Shielded, Ferrite, 33 uH, 0.085 A, 1.4 ohm, SMD	2.5x1.8x2mm
41	L4	1	100 ohm	742792711	Würth Elektronik	Ferrite Bead, 100 ohm @ 100 MHz, 0.2 A, 0402	0402
42	L5	1	2.2uH	XFL3012-222MEB	Coilcraft	Inductor, Shielded, Composite, 2.2 uH, 1.6 A, 0.08 ohm, SMD	3x1.2x3mm
43	LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
44	Q1, Q2, Q3, Q4, Q5, Q6	6	100V	CSD19532Q5B	Texas Instruments	MOSFET, N-CH, 100 V, 17 A, DNK0008A (VSON-CLIP-8)	DNK0008A
45	R1, R3, R8, R12, R21	5	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R2, R7, R11	3	0.001	CRF1206-FZ-R001ELF	Bourns	RES, 0.001, 1%, 1 W, AEC-Q200 Grade 0, 1206	1206
47	R4, R6, R10, R17	4	3.40k	CRCW04023K40FKED	Vishay-Dale	RES, 3.40 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
48	R5, R9, R14, R16	4	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
49	R13	1	301	CRCW0603301RFKEA	Vishay-Dale	RES, 301, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
50	R15	1	2.10k	CRCW06032K10FKEA	Vishay-Dale	RES, 2.10 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
51	R18	1	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
52	R19	1	17.4k	CRCW040217K4FKED	Vishay-Dale	RES, 17.4 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
53	R20, R22, R23, R32, R33, R36	6	2.7	CRCW08052R70JNEA	Vishay-Dale	RES, 2.7, 5%, 0.125 W, 0805	0805
54	R24, R25, R26, R27, R28, R29	6	20.0	CRCW040220R0FKED	Vishay-Dale	RES, 20.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
55	R30	1	1.0k	CRCW04021K00JNED	Vishay-Dale	RES, 1.0 k, 5%, 0.063 W, 0402	0402
56	R31, R46, R47, R48, R49, R51, R52, R53, R56, R57	10	22	CRCW040222R0JNED	Vishay-Dale	RES, 22, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
57	R34	1	49.9	CRCW040249R9FKED	Vishay-Dale	RES, 49.9, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
58	R35	1	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
59	R37, R45	2	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0, 5%, 0.125 W, 0805	0805
60	R38	1	20.0k	CRCW040220K0FKED	Vishay-Dale	RES, 20.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
61	R39	1	22k	CRCW040222K0JNED	Vishay-Dale	RES, 22 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
62	R40	1	0.91	ERJ-2BQFR91X	Panasonic	RES, 0.91, 1%, 0.125 W, 0402	0402
63	R41	1	301k	CRCW0402301KFKED	Vishay-Dale	RES, 301 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
64	R42	1	107k	CRCW0402107KFKED	Vishay-Dale	RES, 107 k, 1%, 0.063 W, 0402	0402
65	R43	1	4.02k	CRCW04024K02FKED	Vishay-Dale	RES, 4.02 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
66	R44	1	1.5k	CRCW04021K50JNED	Vishay-Dale	RES, 1.5 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
67	R50, R54	2	22	CRCW060322R0JNEA	Vishay-Dale	RES, 22, 5%, 0.1 W, 0603	0603
68	R55	1	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
69	R58	1	150k	CRCW0402150KJNED	Vishay-Dale	RES, 150 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
70	R67	1	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
71	TP1	1		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
72	U1, U2, U3	3		INA240A2PWR	Texas Instruments	High/Low Side, Bi-Directional Zero-Drift Current Sense Amp w/ Enhanced PWM Rejection, PW0008A (TSSOP-8)	PW0008A
73	U4	1		TLV431BQDBZRQ1	Texas Instruments	Automotive Catalog Low-Voltage Adjustable Precision Shunt Regulator, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
74	U5	1		TMP235DCK	Texas Instruments	TMP235DCK, DCK0005A (SOT-5)	DCK0005A
75	U6	1		DRV8350RSRGZR	Texas Instruments	100-V Three-Phase Smart Gate Driver, RGZ0048L (VQFN-48)	RGZ0048L
76	U7	1		TPS62162DSGR	Texas Instruments	Buck Step Down Regulator with 3 to 17 V Input and 3.3 V Output, -40 to 85 degC, 8-Pin WSON (DSG), Green (RoHS & no Sb/Br)	DSG0008A

77	U10	1		TS5A23157DGSR	Texas Instruments	DUAL 10-Ohm SPDT ANALOG SWITCH, DGS0010A (VSSOP-10)	DGS0010A
78	C67	0	10uF	GRM21BZ71E106KE15L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 0805	0805
79	C68	0	22uF	GRM32ER71E226KE15L	MuRata	CAP, CERM, 22 uF, 25 V, +/- 10%, X7R, 1210	1210
80	C69, C72	0	0.1uF	885012205037	Würth Elektronik	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
81	C71, C73	0	470pF	885012206081	Würth Elektronik	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
82	J7	0		90121-0766	Molex	Header, 2.54mm, 6x1, Gold, R/A, TH	Header, 2.54mm, 6x1, R/A, TH
83	R59	0	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
84	R60, R62	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
85	R61	0	24.3k	CRCW040224K3FKED	Vishay-Dale	RES, 24.3 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
86	R63, R65, R70, R71, R73, R74, R75	0	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
87	R64, R72	0	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
88	R66	0	22	CRCW040222R0JNED	Vishay-Dale	RES, 22, 5%, 0.063 W, 0402	0402
89	R68, R69, R76, R77	0	59.0	RC0603FR-0759RL	Yageo America	RES, 59.0, 1%, 0.1 W, 0603	0603
90	U8	0		LMZM23601SILR	Texas Instruments	36-V 1-A Step-Down DC-DC Nano Module, SIL0010A (uSIP-10)	SIL0010A
91	U9, U11	0		THVD1550DGKR	Texas Instruments	5-V RS-485 Transceivers With +/-16-kV IEC ESD Protection, DGK0008A (VSSOP-8)	DGK0008A

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