

**TIDA-010045 REV E2 Bill of Materials**

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	IPCBB1	1		TIDA-010045	Any	Printed Circuit Board	
2	C1, C6, C7, C8, C10, C12, C15, C19, C21	9	0.1uF	C1005X5R1A104K050BA	TDK	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0402	0402
3	C2, C4	2	150pF	885012005062	Würth Elektronik	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
4	C3, C24	2	1uF	C1608X5R1H105K080AB	TDK	CAP, CERM, 1 uF, 50 V, +/- 10%, X5R, 0603	0603
5	C5, C25, C26	3	1000pF	C1005NP01H102J050BA	TDK	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
6	C9	1	4.7uF	GRM155R60J475ME87D	MuRata	CAP, CERM, 4.7 uF, 6.3 V, +/- 20%, X5R, 0402	0402
7	C11, C18, C20, C22, C23, C32	6	0.1uF	06035C104KAT2A	AVX	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
8	C13, C14	2	16pF	GRM1555C1H160JA01D	MuRata	CAP, CERM, 16 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
9	C16	1	4.7uF	885012105008	Würth Elektronik	CAP, CERM, 4.7 uF, 6.3 V, +/- 20%, X5R, 0402	0402
10	C17	1	100pF	885012205055	Würth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 10%, X7R, 0402	0402
11	C27	1	15uF	C2012X5R1V156M125AC	TDK	CAP, CERM, 15 uF, 35 V, +/- 20%, X5R, 0805	0805
12	C28	1	1200pF	C0402C122J5GACTU	Kemet	CAP, CERM, 1200 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
13	C29	1	4.7uF	C1608X5R1V475K080AC	TDK	CAP, CERM, 4.7 uF, 35 V, +/- 10%, X5R, 0603	0603
14	C30	1	10uF	C3225X7R1H106M250AC	TDK	CAP, CERM, 10 uF, 50 V, +/- 20%, X7R, 1210	1210
15	C31	1	7500pF	GRM2195C1H752JA01D	MuRata	CAP, CERM, 7500 pF, 50 V, +/- 5%, C0G/NP0, 0805	0805
16	D1, D3	2	Green	150040GS73240	Würth Elektronik	LED, Green, SMD	1x0.5mm
17	D2	1	Yellow	150040YS73240	Würth Elektronik	LED, Yellow, SMD	1x0.5mm
18	F1	1		0440.500WR	Littelfuse	Fuse, 0.5 A, 63VAC/VDC, SMD	1206
19	J1, J2	2		43-01205	Conec	M12 Socket, Backmounting, 4Pos, Gold, R/A, TH	M12 Socket, Backmounting, 4Pos, R/A, TH
20	J3	1		BB02-BS101-KA8-025B00	GradConn	Header, 1.27mm, 5x2, SMT	Header, 1.27mm, 5x2, SMT
21	L1	1	4.7uH	LQM21PN4R7MGSD	MuRata	Inductor, Multilayer, Ferrite, 4.7 uH, 0.8 A, 0.23 ohm, SMD	0805
22	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
23	Q2	1	60V	CSD18541F5	Texas Instruments	MOSFET, N-CH, 60 V, 2.2 A, YJK0003A (PICOSTAR-3)	YJK0003A
24	R1	1	1.00	CRCW08051R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
25	R2, R4, R25, R26, R27, R43	6	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
26	R3, R5, R36, R37, R39, R40, R41, R42, R45, R47, R48, R50	12	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
27	R6	1	220	CRCW0402220RJNED	Vishay-Dale	RES, 220, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
28	R10, R32	2	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
29	R11, R24	2	1.00k	ERJ-2RKF1001X	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0402	0402
30	R12	1	6.19k	CRCW04026K19FKED	Vishay-Dale	RES, 6.19 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
31	R13	1	8.45k	CRCW04028K45FKED	Vishay-Dale	RES, 8.45 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
32	R14	1	2.15k	CRCW04022K15FKED	Vishay-Dale	RES, 2.15 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
33	R15	1	3.92k	CRCW04023K92FKED	Vishay-Dale	RES, 3.92 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
34	R16	1	24.3k	CRCW040224K3FKED	Vishay-Dale	RES, 24.3 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
35	R17, R30	2	10.0k	RC0402FR-0710KL	Yageo America	RES, 10.0 k, 1%, 0.063 W, 0402	0402
36	R18	1	200k	CRCW0402200KFKED	Vishay-Dale	RES, 200 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
37	R19	1	150k	CRCW0402150KFKED	Vishay-Dale	RES, 150 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
38	R20	1	392k	CRCW0402392KFKED	Vishay-Dale	RES, 392 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
39	R21, R53	2	47k	CRCW040247K0JNED	Vishay-Dale	RES, 47 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
40	R22	1	91.0k	RG1608P-913-B-T5	Susumu Co Ltd	RES, 91.0 k, 0.1%, 0.1 W, 0603	0603
41	R23	1	84.5k	CRCW040284K5FKED	Vishay-Dale	RES, 84.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
42	R28	1	7.50k	CRCW04027K50FKED	Vishay-Dale	RES, 7.50 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
43	R29	1	7.15k	CRCW04027K15FKED	Vishay-Dale	RES, 7.15 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
44	R31	1	215k	CRCW0402215KFKED	Vishay-Dale	RES, 215 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
45	R33	1	2.7k	CRCW04022K70JNED	Vishay-Dale	RES, 2.7 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R34	1	470	CRCW0402470RJNED	Vishay-Dale	RES, 470, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
47	R35	1	20k	CRCW040220K0JNED	Vishay-Dale	RES, 20 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

48	R44	1	300	CRCW0402300RJNED	Vishay-Dale	RES, 300, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
49	U1	1		MSP432P401RIZXHR	Texas Instruments	Low-Power and High Performance 32-Bit ARM Cortex M4F With 256KB Flash and 64KB RAM, ZXH0080A (NFBGA-80)	ZXH0080A
50	U2	1		TIOL111	Texas Instruments	IO-Link Device Transceiver with Integrated Surge Protection, TIOL111 (WSON-10)	TIOL111
51	U3	1		INA190A1RSW	Texas Instruments	Low Supply, Voltage Output, Low- or High-Side Measurement, Bidirectional, Zero-Drift Series, Current-Shunt Monitor, RSW0010A (UQFN-10)	RSW0010A
52	U4	1		TPS79801QDGNRQ1	Texas Instruments	50 mA, 3 V to 50 V, Micropower, Low-Dropout Linear Regulator, DGN0008B (VSSOP-8)	DGN0008B
53	U5	1		TLV76033DBZR	Texas Instruments	100-mA, 30-V, Fixed-Output, Linear-Voltage Regulator, DBZ0003A (SOT-23-3)	DBZ0003A
54	U6	1		TLV431IDBVR	Texas Instruments	Low Voltage Adjustable Precision Shunt Regulator, 39 ppm / degC, 15 mA, -40 to 85 degC, 5-pin SOT-23 (DBV), Green (RoHS & no Sb/Br)	DBV0005A
55	U7	1		TL4050C25QDBZR	Texas Instruments	Precision Micropower Shunt Voltage Reference, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
56	U8	1		OPA4171AIPWR	Texas Instruments	Low Power, RRO, General Purpose Operational Amplifier, 2.7 to 36 V, -40 to 125 degC, 14-pin SOP (PW14), Green (RoHS & no Sb/Br)	PW0014A
57	U9	1		TVS3300DRVR	Texas Instruments	33-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
58	U10	1		LMZM23600SILR	Texas Instruments	36-V 0.5-A Step-Down DC-DC Nano Module, SIL0010A (uSIP-10)	SIL0010A
59	U11	1		OPA196IDBVR	Texas Instruments	36V, Low Power, All-Purpose Amplifier with MUX-Friendly Input, DBV0005A (SOT-23-5)	DBV0005A
60	Y1	1		FA-128 48.0000MF20X-K0	Epson	Crystal, 48 MHz, 10pF, SMD	1.6x.5x2mm
61	R8, R38, R46, R49, R52	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
62	R51	0	300	CRCW0402300RJNED	Vishay-Dale	RES, 300, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

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