

TIDA-010023 REV E1 Bill of Materials"

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C2, C4, C8, C12, C18, C39, C43, C44, C48, C49, C51, C52, C54, C56, C58	16	0.1uF	0603YC104JAT2A	AVX	CAP, CERM, 0.1 µF, 16 V, +/- 5%, X7R, 0603	0603
C5	1	1000pF	0603ZC102KAT2A	AVX	CAP, CERM, 1000 pF, 10 V, +/- 10%, X7R, 0603	0603
C6, C14, C20	3	560pF	GRM1885C1E561JA01D	MuRata	CAP, CERM, 560 pF, 25 V, +/- 5%, COG/NP0, 0603	0603
C7, C10, C15, C16, C21, C22	6	1.2pF	CL10C1R2BB8NNNC	Samsung Electro-Mechanics	CAP, CERM, 1.2 pF, 50 V, +/- 10%, C0G/NP0, 0603	0603
C13, C19, C68	3	220pF	06035A221FAT2A	AVX	CAP, CERM, 220 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C23, C32, C38	3	10uF	C2012X5R1E106K125AB	TDK	CAP, CERM, 10 µF, 25 V, +/- 10%, X5R, 0805	0805
C24, C25, C26	3	0.1uF	C1812V104KDRACTU	Kemet	CAP, CERM, 0.1 µF, 1000 V, +/- 10%, X7R, 1812	1812
C27, C31, C33, C37, C40, C46	6	2200pF	GRM188R71E222KA01D	MuRata	CAP, CERM, 2200 pF, 25 V, +/- 10%, X7R, 0603	0603
C28, C34, C41, C65, C66, C67	6	0.68uF	C0805C684K5RACTU	Kemet	CAP, CERM, 0.68 µF, 50 V, +/- 10%, X7R, 0805	0805
C29, C30, C35, C36, C42, C45	6	33pF	CGA3E2NP01H330J080AA	TDK	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 0, 0603	0603
C47, C53, C55, C57	4	4.7uF	GRM21BR71C475KA73L	MuRata	CAP, CERM, 4.7 µF, 16 V, +/- 10%, X7R, 0805	0805
C50	1	68uF	UCS2W680MHD	Nichicon	CAP, AL, 68 µF, 450 V, +/- 20%, TH	TH, 2-Leads, Body 18x31.5mm, Pin Spacing 7.5mm
C59	1	22uF	URZ1E220MDD1TD	Nichicon	CAP, AL, 22 µF, 25 V, +/- 20%, TH	5.0x9.0mm
C60	1	0.1uF	06033C104KAT2A	AVX	CAP, CERM, 0.1 µF, 25 V, +/- 10%, X7R, 0603	0603
C61, C62, C63, C64	4	0.047uF	06033C473JAT2A	AVX	CAP, CERM, 0.047 µF, 25 V, +/- 5%, X7R, 0603	0603
D1, D2, D3, D4, D5, D6, D7, D8, D10, D11, D13, D14, D16, D17, D21	15	40V	1N5819HW-7-F	Diodes Inc.	Diode, Schottky, 40V, 1A, SOD-123	SOD-123
D9, D12, D15	3	1000V	US1M-13-F	Diodes Inc.	Diode, Ultrafast, 1000V, 1A, SMA	SMA
D18	1	GREEN	150060GS75000	Würth Elektronik Inc	LED, Green, SMD	LED_0603
D19	1	YELLOW	150060YS75000	Würth Elektronik Inc	LED YELLOW CLEAR 0603 SMD	LED_0603
D20	1	RED	150060RS75000	Würth Elektronik Inc	LED RED CLEAR 0603 SMD	LED_0603
D22, D23, D24, D25	4	30V	CDBP0130L-G	Comchip Technology	Diode, Schottky, 30 V, 0.1 A, SOD-723	SOD-723
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
H5	1		ATS-57003-C1-R0	Advanced Thermal Solutions I	HEAT SINK 94MM X 94MM X 27MM	Heat Sink 50x100x50 mm
H11, H12, H13, H14	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J1, J2, J3	3		B2P-VH(LF)(SN)	JST Manufacturing	Header, 3.96 mm, 2x1, Tin, TH	Header, 3.96 mm, 2x1, Tin, TH
J4	1		OSTVI024152	On Shore Technology Inc.	TERMINAL BLOCK 7.50MM 2POS PCB	TERMINAL BLOCK 7.50MM 2POS PCB

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J5	1		B4B-XH-A(LF)(SN)	JST Manufacturing	Header (Shrouded), 2.5mm, 4x1, Tin, TH	Header (Shrouded), 2.5mm, 4x1, TH
J6	1		B2B-XH-A(LF)(SN)	JST Manufacturing	Header (Shrouded), 2.5mm, 2x1, Tin, TH	Header (Shrouded), 2.5mm, 2x1, TH
J7	1		PEC07DAAN	Sullins Connector Solutions	Header, 100mil, 7x2, Tin, TH	Header, 7x2, 100mil, Tin
Q1, Q2, Q3, Q4, Q5, Q6	6	650 V	IXYP15N65C3D1	IXYS	Transistor, IGBT, 650 V, 38 A, TO-220AB	TO-220AB
Q7	1	40 V	MMBT2222A	Fairchild Semiconductor	Transistor, NPN, 40 V, 0.15 A, SOT-23	SOT-23
R1, R13, R23, R67, R69	5	1.91k	CRCW06031K91FKEA	Vishay-Dale	RES, 1.91 k, 1%, 0.1 W, 0603	0603
R2, R14, R24	3	2.0k	CRCW06032K00JNEA	Vishay-Dale	RES, 2.0 k, 5%, 0.1 W, 0603	0603
R3, R9, R15, R22, R25, R29	6	40.2k	CRCW060340K2FKEA	Vishay-Dale	RES, 40.2 k, 1%, 0.1 W, 0603	0603
R4, R16, R26, R120	4	47	CRCW060347R0JNEA	Vishay-Dale	RES, 47, 5%, 0.1 W, 0603	0603
R5, R7, R17, R21, R27, R28	6	1.50k	CRCW06031K50FKEA	Vishay-Dale	RES, 1.50 k, 1%, 0.1 W, 0603	0603
R6, R11	2	0	MCR03EZPJ000	Rohm	RES, 0, 5%, 0.1 W, 0603	0603
R10, R121, R122	3	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
R12, R112, R113, R114, R115, R116, R117, R119	8	10k	CRCW060310K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.1 W, 0603	0603
R18, R20, R63	3	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R19	1	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5 k, 1%, 0.1 W, 0603	0603
R30, R40, R59	3	3.3	CRCW12063R30JNEA	Vishay-Dale	RES, 3.3 ohm, 5%, 0.25W, 1206	1206
R31, R38, R41, R57, R60, R75	6	12.0	RC1206FR-0712RL	Yageo America	RES, 12.0, 1%, 0.25 W, 1206	1206
R32, R42, R61	3	2.2	CRM1206-JW-2R2ELF	Bourns	RES, 2.2, 5%, 0.5 W, 1206	1206
R33, R37, R45, R55, R62, R72	6	5.11	CRCW12065R11FKEA	Vishay-Dale	RES, 5.11, 1%, 0.25 W, 1206	1206
R34, R39, R49, R58, R64, R76	6	20k	CRCW060320K0JNEA	Vishay-Dale	RES, 20 k, 5%, 0.1 W, 0603	0603
R35, R36, R50, R54, R65, R71	6	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, 0603	0603
R43, R46, R47, R51, R53, R56, R66, R68, R70, R74, R79, R87	12	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R44, R48, R52	3	0.005	CRE2512-FZ-R005E-3	Bourns	RES, 0.005, 1%, 3 W, AEC-Q200 Grade 0, 2512	2512
R73, R77	2	2.55k	CRCW06032K55FKEA	Vishay-Dale	RES, 2.55 k, 1%, 0.1 W, 0603	0603
R78	1	20k	3386P-1-203LF	Bourns	TRIMMER, 20k ohm, 0.5W, TH	375x190x375mil
R80, R83	2	300k	CRCW1206300KJNEA	Vishay-Dale	RES, 300 k, 5%, 0.25 W, 1206	1206
R81	1	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.1 W, 0603	0603
R82, R85	2	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.1 W, 0603	0603
R84	1	5.1k	CRCW06035K10JNEA	Vishay-Dale	RES, 5.1 k, 5%, 0.1 W, 0603	0603
R86, R99, R100, R101, R102, R103	6	4.7k	CRCW06034K70JNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.1 W, 0603	0603
R88	1	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603

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R91, R92, R93, R94, R95, R96, R97, R98, R104, R105, R106, R107	12	374k	RC1206FR-07374KL	Yageo America	RES, 374 k, 1%, 0.25 W, 1206	1206
R108, R109, R110, R111	4	9.09k	CRCW06039K09FKEA	Vishay-Dale	RES, 9.09 k, 1%, 0.1 W, 0603	0603
RT1	1	10k ohm	NTCALUG03A103G	Vishay-Bccomponents	Thermistor NTC, 10k ohm, 2%, NTC Thermistor, Mini Lug Sensor, Pitch 1.5mm	NTC Thermistor, Mini Lug Sensor, Pitch 1.5mm
S1	1		434121025816	Würth Elektronik	Switch, Tactile, SPST, 12 V, SMD	SMD, 6x3.9mm
TP1, TP2	2		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
U1	1		TLV2774AIDA	Texas Instruments	Quad High-Slew-Rate Rail-to-Rail Output Operational Amplifier, 2.5 to 6 V, -40 to 125 degC, 14-pin SOIC (D0014A), Green (RoHS & no Sb/Br)	D0014A
U2	1		SN74AHC367DR	Texas Instruments	Hex Buffers And Line Drivers With 3-State Outputs, D0016A, LARGE T&R	D0016A
U3	1		TLV1701AIDBVR	Texas Instruments	2.2-V to 36-V, microPower Comparator, DBV0005A	DBV0005A
U4, U5, U6	3		UCC27712DR	Texas Instruments	620-V High-Side Low-Side Gate Driver with 2.5A Peak Output and RobustDrive, D0008B (SOIC-8)	D0008B
U7	1		TLV6001IDBVT	Texas Instruments	1-MHz, Low-Power Operational Amplifier	DBV0005A
U8	1	TMS320F2802xPTA	TMS320F28027FPTT	TI	IC, 32-Bit Piccolo Microcontrollers, xx MHz	LQFP
U9, U10, U11	3		TPD1E10B06DPYR	Texas Instruments	ESD in 0402 Package with 10 pF Capacitance and 6 V Breakdown, 1 Channel, -40 to +125 degC, 2-pin X2SON (DPY), Green (RoHS & no Sb/Br)	DPY0002A

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