

TIDA-01614 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB1	1		TIDA-01614	Any	Printed Circuit Board	
C1, C12, C14, C21, C29, C30, C32, C65, C67, C68, C70, C71	12	0.1uF	C1005X7R1E104M050BB	TDK	CAP, CERM, 0.1 µF, 25 V,+/- 20%, X7R, 0402	0402
C2, C3, C37, C47	4	10uF	GRM188R61E106MA73D	MuRata	CAP, CERM, 10 µF, 25 V,+/- 20%, X5R, 0603	0603
C4	1	1uF	C1608X7R1C105K080AC	TDK	CAP, CERM, 1 µF, 16 V,+/- 10%, X7R, 0603	0603
C9	1	0.01uF	0603ZC103KAT2A	AVX	CAP, CERM, 0.01 µF, 10 V,+/- 10%, X7R, 0603	0603
C10, C91	2	0.1uF	C1210C104K5RACTU	Kemet	CAP, CERM, 0.1 µF, 50 V,+/- 10%, X7R, 1210	1210
C11, C13, C24, C25, C31, C86	6	1uF	GRM155R60J105KE19D	MuRata	CAP, CERM, 1 µF, 6.3 V,+/- 10%, X5R, 0402	0402
C15, C73	2	470pF	GRM1555C1E471JA01D	MuRata	CAP, CERM, 470 pF, 25 V,+/- 5%, C0G/NP0, 0402	0402
C16	1	1500pF	GRM155R71H152KA01D	MuRata	CAP, CERM, 1500 pF, 50 V,+/- 10%, X7R, 0402	0402
C17, C19, C63, C64, C83	5	0.1uF	06033C104JAT2A	AVX	CAP, CERM, 0.1 µF, 25 V,+/- 5%, X7R, 0603	0603
C18, C20	2	2200pF	CL05B222JB5NNNC	Samsung Electro-Mechanics	CAP, CERM, 2200 pF, 50 V,+/- 5%, X7R, 0402	0402
C22	1	10uF	C0603C106M9PACTU	Kemet	CAP, CERM, 10 µF, 6.3 V,+/- 20%, X5R, 0603	0603
C23, C72	2	2200pF	CGA2B2X7R1H222K050BA	TDK	CAP, CERM, 2200 pF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C26	1	0.01uF	GCM155R71H103KA55D	MuRata	CAP, CERM, 0.01 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C27, C28	2	2.2uF	GRM188R60J225KE19D	MuRata	CAP, CERM, 2.2 µF, 6.3 V,+/- 10%, X5R, 0603	0603
C33	1	10pF	GRM1555C1H100JA01D	MuRata	CAP, CERM, 10 pF, 50 V,+/- 5%, C0G/NP0, 0402	0402
C34	1	150uF	EEH2C1V151P	Panasonic	CAP, Polymer Hybrid, 150 µF, 35 V,+/- 20%, 27 ohm, 8x10 SMD	8x10
C35	1	4.7uF	TPSC475K035R0600	AVX	CAP, TA, 4.7 uF, 35 V, +/- 10%, 0.6 ohm, SMD	6032-28
C36	1	10uF	CL21A106KOQNNNG	Samsung Electro-Mechanics	CAP, CERM, 10 µF, 6.3 V,+/- 10%, X5R, 0805	0805
C41	1	1uF	CGA4J3X5R1V105K125AB	TDK	CAP, CERM, 1 µF, 35 V,+/- 10%, X5R, AEC-Q200 Grade 3, 0805	0805
C44	1	4.7uF	GRM21BR71A475KA73L	MuRata	CAP, CERM, 4.7 µF, 10 V,+/- 10%, X7R, 0805	0805
C46	1	1000pF	06031C102JAT2A	AVX	CAP, CERM, 1000 pF, 100 V,+/- 5%, X7R, 0603	0603
C49	1	22uF	JMK212BJ226MG-T	Taiyo Yuden	CAP, CERM, 22 µF, 6.3 V,+/- 20%, X5R, 0805	0805
C53	1	1uF	GRM155R61A105KE15D	MuRata	CAP, CERM, 1 µF, 10 V, +/- 10%, X5R, 0402	0402
C54	1	4.7uF	C1005X5R1A475K050BC	TDK	CAP, CERM, 4.7 µF, 10 V, +/- 10%, X5R, 0402	0402
C55, C56, C57, C58	4	0.1uF	C1005X6S1H104K050BB	TDK	CAP, CERM, 0.1 µF, 50 V,+/- 10%, X6S, 0402	0402
C59, C60, C92	3	10uF	GRM21BR6YA106KE43L	MuRata	CAP, CERM, 10 µF, 35 V,+/- 10%, X5R, 0805	0805
C61, C62, C81	3	1uF	GRM188R61H105KAALD	MuRata	CAP, CERM, 1 µF, 50 V,+/- 10%, X5R, 0603	0603
C66	1	4.7uF	0805ZD475KAT2A	AVX	CAP, CERM, 4.7 µF, 10 V,+/- 10%, X5R, 0805	0805
C69	1	10uF	293D106X9016A2TE3	Vishay-Sprague	CAP, TA, 10 µF, 16 V, +/- 10%, 3 ohm, SMD	3216-18
C74, C75	2	22pF	C1005C0G1H220J050BA	TDK	CAP, CERM, 22 pF, 50 V,+/- 5%, C0G/NP0, 0402	0402
C76	1	0.1uF	GRM155R70J104KA01D	MuRata	CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X7R, 0402	0402
D1, D2, D3, D4, D5	5	75V	BAV99W-7-F	Diodes Inc.	Diode, Switching, 75 V, 0.15 A, SOT-323	SOT-323
D6, D13	2	Green	LTST-C190GKT	Lite-On	LED, Green, SMD	1.6x0.8x0.8mm
D7	1	Red	150060RS75000	Würth Elektronik	LED, Red, SMD	LED_0603
D8, D9, D10, D11, D15, D17, D19	7	100V	BAV99,215	Nexperia	Diode, Switching, 100 V, 0.215 A, SOT-23	SOT-23
D18	1	2.7V	MMSZ5223BS-7-F	Diodes Inc.	Diode, Zener, 2.7 V, 200 mW, SOD-323	SOD-323
H1, H2, H3, H4	4		TCBS-6-01	Richco Plastics	HEX STANDOFF SPACER, 9.53 mm	7.9x9.5 mm
J1, J17	2		HTSW-102-09-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	Header, 2x1, 2.54mm, TH

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
J2, J16	2		5-146278-3	TE Connectivity	Header, 100mil, 3x1, Tin, TH	Header, 3x1, 100mil, TH
J3, J4, J13	3		PEC05SAAN	Sullins Connector Solutions	Header, 2.54mm, 5x1, Tin, TH	Header, 2.54mm, 5x1, TH
J5, J10	2		K202XHT-E9S-N	KYCON, INC	CONN, D-SUB STANDARD CONNECTORS, SMT, D-9	-
J6	1		1051640001	Molex	Receptacle, USB 2.0, Micro B, 5 Position, R/A, SMT	Receptacle, USB 2.0, Micro B, 5 Pos, 0.65mm Pitch, R/A, SMT
J7	1		MMS-102-01-F-SV	Samtec	Header(shrouded), 2mm, 2x1, Tin, TH	Header(shrouded), 2mm, 2x1, TH
J8	1		FTSH-105-01-F-D-K	Samtec	Header, 1.27 mm, 5x2, Gold, TH	Header, 1.27 mm, 5x2, TH
J9	1		PPTC052LFBN-RC	Sullins Connector Solutions	Receptacle, 2.54mm, 5x2, Gold, TH	Receptacle, 2.54mm, 5x2, TH
J11, J12	2		SSQ-110-23-L-D	Samtec	Receptacle, 2.54mm, 10x2, Gold, TH	Receptacle, 2.54mm, 10x2, TH
J15	1		1734354-1	TE Connectivity	Receptacle, D-Sub, 9 Position, R/A, TH	Receptacle, D-Sub, 9 Position, R/A, TH
L1, L8, L12, L13, L14, L15, L16, L17, L18, L22, L23	11	100 ohm	HI1206N101R-10	Steward	3A Ferrite Bead, 100 ohm @ 100MHz, SMD	1206
L2	1		744232090	Würth	Coupled inductor, 0.37 A, 0.3 ohm, SMD	3.2x1.6mm
L3	1	2.2uH	74479276222C	Würth	Inductor, Wirewound, Powdered Iron, 2.2 µH, 1.3 A, 0.192 ohm, SMD	2.0x1.2x1.6mm
L4	1	2.2uH	74405042022	Würth	Inductor, 2.2 µH, 2.8 A, 0.045 ohm, SMD	4x4mm
L5, L6	2	60 ohm	742792602	Würth Elektronik	Ferrite Bead, 60 ohm @ 100 MHz, 3 A, 0603	0603
L7	1	4.7uH	74479776247A	MuRata	Inductor, Wirewound, Ferrite, 4.7 µH, 0.3 A, 1.04 ohm, SMD	2.0x0.65x1.6mm
L9, L10, L19, L20	4	120 ohm	BLM18SG121TN1D	MuRata	3A Ferrite Bead, 120 ohm @ 100MHz, SMD	0603
L11, L21	2	100uH	ACT45B-101-2P-TL003	TDK	Inductor, Ferrite, 100 uH, 0.15 A, 2 ohm, SMD	SMD, 4-Leads, Body 4.7 x 3.7 mm
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
Q1, Q2, Q3, Q4	4	45 V	BC847BW,115	NXP Semiconductor	Transistor, NPN, 45 V, 0.1 A, AEC-Q101, SOT-323	SOT-323
R1, R2, R7, R13, R19, R20, R21, R26, R28, R46, R53, R76	12	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.063 W, 0402	0402
R3, R4	2	4.70k	ERA-2AEB472X	Panasonic	RES, 4.70 k, 1%, 0.063 W, 0402	0402
R5, R31, R33, R34, R37, R38, R39, R40, R41, R59, R62, R78, R79, R81, R82, R83, R84, R85, R86	19	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R8, R14, R73	3	2.00k	OX202KE	Ohmite	RES, 2.00 k, 10%, 1 W, Body 16.5x5.5mm	Body 16.5x5.5mm
R9, R10	2	10.0k	RMCF0603FT10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R11, R12, R74, R75	4	47.0k	RC0603FR-0747KL	Yageo America	RES, 47.0 k, 1%, 0.1 W, 0603	0603
R15, R17, R54, R72	4	10.0Meg	CRCW040210M0FKED	Vishay-Dale	RES, 10.0 M, 1%, 0.063 W, 0402	0402
R16, R71	2	4.70k	RC0603FR-074K7L	Yageo America	RES, 4.70 k, 1%, 0.1 W, 0603	0603
R18, R29	2	10k	ERJ-2GEJ103X	Panasonic	RES, 10 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R22	1	1.00Meg	RMCF0402FT1M00	Stackpole Electronics Inc	RES, 1.00 M, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R23, R25, R89, R90, R94, R95	6	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R24	1	100k	ERJ-2GEJ104X	Panasonic	RES, 100 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R27, R92	2	470	CRCW0402470RJNED	Vishay-Dale	RES, 470, 5%, 0.063 W, 0402	0402
R30	1	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, 0402	0402
R32, R61, R65	3	22	ERJ-2GEJ220X	Panasonic	RES, 22, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R42	1	1.05Meg	CRCW04021M05FKED	Vishay-Dale	RES, 1.05 M, 1%, 0.063 W, 0402	0402
R43	1	523k	RC0603FR-07523KL	Yageo America	RES, 523 k, 1%, 0.1 W, 0603	0603
R44	1	249k	ERJ-6ENF2493V	Panasonic	RES, 249 k, 1%, 0.125 W, 0805	0805
R45	1	169k	RC0603FR-07169KL	Yageo America	RES, 169 k, 1%, 0.1 W, 0603	0603
R47	1	453k	CRCW0402453KFKED	Vishay-Dale	RES, 453 k, 1%, 0.063 W, 0402	0402
R48	1	97.6k	CRCW040297K6FKED	Vishay-Dale	RES, 97.6 k, 1%, 0.063 W, 0402	0402
R49, R55	2	1.05k	CRCW04021K05FKED	Vishay-Dale	RES, 1.05 k, 1%, 0.063 W, 0402	0402
R50	1	7.32k	CRCW04027K32FKED	Vishay-Dale	RES, 7.32 k, 1%, 0.063 W, 0402	0402
R51	1	33.0	RMCF0402FT33R0	Stackpole Electronics Inc	RES, 33.0, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R52	1	3.09k	CRCW04023K09FKED	Vishay-Dale	RES, 3.09 k, 1%, 0.063 W, 0402	0402
R56, R57	2	1.00Meg	RC0603FR-071ML	Yageo America	RES, 1.00 M, 1%, 0.1 W, 0603	0603
R58	1	470	RC0603FR-07470RL	Yageo America	RES, 470, 1%, 0.1 W, 0603	0603
R60	1	96k	ERA-6AEB96V	Vishay-Dale	RES SMD 96K OHM 0.1% 1/8W 0805	0805
R63, R69	2	220	RC0603FR-07220RL	Yageo America	RES, 220, 1%, 0.1 W, 0603	0603
R64, R96	2	100	ERJ-2GEJ101X	Panasonic	RES, 100, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R66	1	47	ERJ-2GEJ470X	Panasonic	RES, 47, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R67, R68, R70, R77	4	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0, 5%, 0.125 W, 0805	0805
R80	1	47k	RC0603JR-0747KL	Yageo America	RES, 47 k, 5%, 0.1 W, 0603	0603
R88, R93	2	39k	CRCW040239K0JNED	Vishay-Dale	RES, 39 k, 5%, 0.063 W, 0402	0402
R91	1	47	CRCW040247R0JNED	Vishay-Dale	RES, 47, 5%, 0.063 W, 0402	0402
R99	1	8.66k	CRCW04028K66FKED	Vishay-Dale	RES, 8.66 k, 1%, 0.063 W, 0402	0402
R100	1	56.2k	CRCW040256K2FKED	Vishay-Dale	RES, 56.2 k, 1%, 0.063 W, 0402	0402
S2	1		1188E-1K2-V-TR	Diptronics	Switch, SPST, 0.05 A, 12 VDC, SMD	7.8x3.5mm
SW1	1		EVQ-21505R	Panasonic	Switch, Tactile, SPST-NO, 0.02A, 15V, TH	6.0x5.0x6mm
TP1, TP18, TP23, TP24, TP25, TP26	6		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP2, TP12, TP14, TP15, TP16, TP17	6		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10	8	STD	STD	STD	Test Point, 0.025"	
TP21	1		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1	1		TLV75530PDBVR	Texas Instruments	500-mA, Low IQ, Small Size, Low Dropout Regulator, DBV0005A (SOT-23-5)	DBV0005A
U2	1		AFE4403YZPR	Texas Instruments	Ultra-Small, Integrated Analog Front-End for Heart Rate Monitors and Low-Cost Pulse Oximeters, YZP0036AKAK (DSBGA-36)	YZP0036AKAK
U3	1		TPS61099YFFR	Texas Instruments	Synchronous Boost Converter with 800 nA Ultra-Low Quiescent Current, YFF0006AFAD (DSBGA-6)	YFF0006AFAD
U4	1		TPS76901DBVR	Texas Instruments	Single Output LDO, 100 mA, Adjustable 1.2 to 5.5 V Output, 2.7 to 10 V Input, with Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U5	1		TLV62569DBVR	Texas Instruments	2-A High Efficiency Synchronous Buck Converter in SOT Package, DBV0005A (SOT-23-5)	DBV0005A

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U6	1		TRS3232EIPW		3-V to 5.5-V Multichannel RS-232 Line Driver / Receiver with ±15-kV IEC ESD Protection, -40 to 85 degC, 16-Pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0016A
U7	1		BQ24232RGTR	Texas Instruments	USB Friendly 0.5 A Li+ Charger with Dynamic Power Management, 10.5 V OVP, 4.3 V, -40 to 85 degC, 16-pin QFN (RGT), Green (RoHS & no Sb/Br)	RGT0016C
U8	1		ISOW7821DWER	Texas Instruments	High-Performance Dual-Channel Reinforced Digital Isolators with Integrated High-Efficiency, Low Emissions DC-DC Converter, DWE0016A (SOIC-16)	DWE0016A
U10	1		MSP432P4011IRGCR	Texas Instruments	SimpleLink(TM) Mixed-Signal Microcontroller, RGC0064B (VQFN-64)	RGC0064B
U12	1		CD74HC4040M96	Texas Instruments	High Speed CMOS Logic 12-Stage Binary Counter, D0016A (SOIC-16)	D0016A
U15	1		ADS1292RIPBS	Texas Instruments	2-Channel, 24-Bit Analog-To-Digital Converter w/Integrated Respiration Impedance and ECG Front End, PBS0032A (TQFP-32)	PBS0032A
U17, U18, U19, U20, U21, U22	6		TVS0500DRVR	Texas Instruments	5-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
Y3	1		Q22FA1280009200	Epson	Crystal, 32 MHz, 10pF, SMD	Crystal, 2.6x0.5x1.6mm
C5, C6, C7	0	1uF	C1608X7R1C105K080AC	TDK	CAP, CERM, 1 µF, 16 V,+/- 10%, X7R, 0603	0603
C8, C82, C84, C85, C87, C88	0	47pF	GRM1555C1E470JA01D	MuRata	CAP, CERM, 47 pF, 25 V,+/- 5%, COG/NPO, 0402	0402
C38, C39, C48	0	10uF	GRM188R61E106MA73D	MuRata	CAP, CERM, 10 µF, 25 V,+/- 20%, X5R, 0603	0603
C40	0	22uF	GRM21BR61A226ME44L	MuRata	CAP, CERM, 22 µF, 10 V,+/- 20%, X5R, 0805	0805
C42	0	47uF	T520B476M006ATE025	Kemet	CAP, Tantalum Polymer, 47 µF, 6.3 V,+/- 20%, 0.025 ohm, 3528-21 SMD	3528-21
C43	0	4.7uF	GRM21BR71A475KA73L	MuRata	CAP, CERM, 4.7 µF, 10 V,+/- 10%, X7R, 0805	0805
C45	0	0.068uF	C1608X7R1H683K080AA	TDK	CAP, CERM, 0.068 µF, 50 V,+/- 10%, X7R, 0603	0603
C50, C51, C52	0	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10 µF, 10 V,+/- 10%, X7R, 0805	0805
FID1, FID2, FID3, FID4, FID5, FID6	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J14	0		PEC04DAAN	Sullins Connector Solutions	Header, 100mil, 4x2, Tin, TH	Header, 4x2, 100mil, Tin
R6, R35, R36	0	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, 0402	0402
R87	0	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
U11	0		SN74HC74-Q1	Texas Instruments	Automotive Catalog Dual D-Type Positive-Edge-Triggered Flip-Flops With Clear and Preset, PW0014A, LARGE T&R	PW0014A
U14	0		TLV75530PDBVR	Texas Instruments	500-mA, Low IQ, Small Size, Low Dropout Regulator, DBV0005A (SOT-23-5)	DBV0005A
Y1	0		CSTCE8M00G55-R0	MuRata	Resonator, 8 MHz, 5000 ppm, 33, SMD	3-Pin SMD, Body 3.2 x 1.3 mm, Height 0.8 mm

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