

TIDA-010036 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-010036	Any	Printed Circuit Board	
C1	1	1uF	08055C105KAT2A	AVX	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	0805
C2	1	2.2uF	C2012X7R1H225K125AC	TDK	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X7R, 0805	0805
C3	1	150uF	EKZE500ELL151MJC5S	Chemi-Con	CAP, AL, 150 uF, 50 V, +/- 20%, TH	TH, 2-Leads, Body 10x12.5mm, Pin Spacing 5mm
C4	1	47uF	GRM21BR61A476ME15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 20%, X5R, 0805	0805
C5	1	1uF	UMK107AB7105KA-T	Taiyo Yuden	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0603	0603
C6	1	0.47uF	ECQ-E6474KF	Panasonic	CAP, Film, 0.47 uF, 630 V, +/- 10%, TH	Radial 25.7x9.4x19.7
C7	1	0.1uF	CL05B104KP5NNNC	Samsung Electro-Mechanics	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
C9, C11, C13, C15	4	4.7uF	CGB3B1X5R1A475K055AC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0603	0603
C10, C12, C14, C16, C17, C24, C46, C47, C50	9	0.1uF	GCM188R71C104KA37J	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C18, C21	2	18pF	C1005C0G1H180J050BA	TDK	CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C19, C20	2	12pF	C0603C120J5GACTU	Kemet	CAP, CERM, 12 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C22	1	0.33uF	GRM188R71C334KA01D	MuRata	CAP, CERM, 0.33 uF, 16 V, +/- 10%, X7R, 0603	0603
C25	1	1000pF	C0603X102K5RACTU	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C26	1	2.2uF	GRT188R61H225KE13D	MuRata	CAP, CERM, 2.2 uF, 50 V, +/- 10%, X5R, AEC-Q200 Grade 3, 0603	0603
C27, C28, C30, C31, C32, C33, C34, C35, C36, C38	10	0.1uF	CGA3E2X8R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X8R, AEC-Q200 Grade 0, 0603	0603
C29, C45, C48	3	1uF	CGA3E1X7R1E105M080AC	TDK	CAP, CERM, 1 uF, 25 V, +/- 20%, X7R, AEC-Q200 Grade 1, 0603	0603
C41	1	6800pF	CGA3EANP02A682J080AC	TDK	CAP, CERM, 6800 pF, 100 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 0, 0603	0603
C44, C53	2	6800pF	GRM188R72A682KA01D	MuRata	CAP, CERM, 6800 pF, 100 V, +/- 10%, X7R, 0603	0603
D1, D9	2	30V	SD103BW-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.35 A, SOD-123	SOD-123
D2, D6	2	Red	SLR-342VC3F	Rohm	LED, Red, TH	Dia3.8x6.35mm
D3, D4, D5	3	Yellow	SLR-342YC3F	Rohm	LED, Yellow, TH	Dia3.8x6.35mm
D7, D8	2	75V	1N4148WT	Fairchild Semiconductor	Diode, Switching, 75 V, 0.3 A, SOD-523F	SOD-523F
H1, H2, H3, H4	4		5MM HOLE	Any	5 mm PCB Hole	5mm PCB Hole
H5, H6, H7, H8	4		RM3X6MM 2701	APM HEXSEAL	MACHINE SCREW PAN PHILLIPS M3	
H_IA1, H_IA2, H_IA3, H_IB1, H_IB2, H_IB3	6		3.5 MM HOLE	Any	3.5 mm PCB Hole	3.5mm PCB Hole
J1, J2, J5, J13, J14, J19, J20	7		961102-6404-AR	3M	Header, 2.54mm, 2x1, TH	Header, 2.54mm, 2x1, TH
J3, J16, J17, J18	4		GBC03SAAN	Sullins Connector Solutions	Header, 2.54 mm, 3x1, Gold, TH	Header, 2.54 mm, 3x1, TH
J4, J8, J23, J24	4		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator
J6, J7, J9, J15	4		PBC04SAAN	Sullins Connector Solutions	Header, 2.54 mm, 4x1, Gold, TH	Header, 2.54 mm, 4x1, TH
J11	1		GRPB052VWVN-RC	Sullins Connector Solutions	Header, 50mil, 5x2, Gold, TH	Header, 5x2, 50mil
J21	1		OSTVN04A150	On-Shore Technology	Terminal Block, 2.54mm, 4x1, Brass, TH	Terminal Block, 2.54mm, 4-pole, TH

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J22	1		ED120/2DS	On-Shore Technology	Terminal Block, 5.08 mm, 2x1, Brass, TH	2x1 5.08 mm Terminal Block
J25, J26	2		ED120/3DS	On-Shore Technology	Terminal Block, 5.08 mm, 3x1, Brass, TH	3x1 5.08 mm Terminal Block
J27	1		PEC08SAAN	Sullins Connector Solutions	Header, 100mil, 8x1, Tin, TH	Header, 8x1, 100mil, TH
L1	1	4.7uH	LQH2MCN4R7M02L	MuRata	Inductor, Wirewound, Ferrite, 4.7 uH, 0.3 A, 1.04 ohm, SMD	2.0x0.65x1.6mm
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
LCD1	1		FH-1152P	Adkom Elektronik	160 Segment LCD Display, TH	63x30.18mm
R1	1	2.21Meg	RC0603FR-072M21L	Yageo	RES, 2.21 M, 1%, 0.1 W, 0603	0603
R2	1	220k	CRCW0603220KJNEA	Vishay-Dale	RES, 220 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R3, R5	2	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R4	1	470	45J470E	Ohmite	RES, 470, 5%, 5 W, D8.7mm	D8.7mm
R6	1	91.0k	RG2012P-913-B-T5	Susumu Co Ltd	RES, 91.0 k, 0.1%, 0.125 W, 0805	0805
R7	1	100k	ERJ-6ENF1003V	Panasonic	RES, 100 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R8	1	10	RC0805JR-0710RL	Yageo America	RES, 10, 5%, 0.125 W, 0805	0805
R9, R15, R16	3	100k	CRCW0603100KJNEAC	Vishay-Dale	RES, 100 k, 5%, 0.1 W, 0603	0603
R10, R11, R12, R13, R14	5	100	RC0603FR-07100RL	Yageo America	RES, 100, 1%, 0.1 W, 0603	0603
R17	1	75.0k	CRCW060375K0FKEA	Vishay-Dale	RES, 75.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R18	1	47.0k	RC0402FR-0747KL	Yageo America	RES, 47.0 k, 1%, 0.0625 W, 0402	0402
R19, R22, R45, R46, R47, R50, R52, R53, R55	9	0	CRCW04020000Z0ED	Vishay-Dale	RES, 0, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R20	1	1.0k	RC0603JR-071KL	Yageo America	RES, 1.0 k, 5%, 0.1 W, 0603	0603
R24	1	120	RT0603DRE07120RL	Yageo America	RES, 120, 0.5%, 0.1 W, 0603	0603
R29, R37, R38, R43, R48, R57	6	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R30, R31, R32	3	330k	CRCW1206330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R33, R36	2	1.00k	RT0603DRD071KL	Yageo	RES, 1.00 k, 0.5%, 0.1 W, 0603	0603
R34	1		B72220S0511K101	TDK	VARISTOR 820V 6.5KA DISC 20MM	RADIAL
R35	1	750	RT0603DRE07750RL	Yageo America	RES, 750, 0.5%, 0.1 W, 0603	0603
R39, R44, R49, R58	4	2.00k	RT0603DRE072KL	Yageo America	RES, 2.00 k, 0.5%, 0.1 W, 0603	0603
R51, R56	2	6.49	CRCW06036R49FKEA	Vishay-Dale	RES, 6.49, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R59, R60	2	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
RS1	1		2-5747706-0	TE Connectivity	Receptacle, D-SUB-9, 2.74mm, Gold, TH	Receptacle, D-SUB-9, 2.74mm, TH
S1, S2	2		MJTSPMWBTR	APEM	Switch, Tactile, SPST-NO, 12 V, SMD	Switch, Body 6.2x6.3mm
SH-J1, SH-J2, SH-J3, SH-J4, SH-J5, SH-J6, SH-J7, SH-J8, SH-J9	9	1x2	SPC02SYAN	Sullins Connector Solutions	Shunt, 100mil, Flash Gold, Black	Closed Top 100mil Shunt
U1	1		TPS7A7833PWPR	Texas Instruments	100-mA Non-Isolated Line Power Voltage Regulator, PWP0014C (HTSSOP-14)	PWP0014C
U2	1		MSP432P4111IPZR	Texas Instruments	SimpleLink™ Mixed-Signal Microcontroller, PZ0100A (LQFP-100)	PZ0100A
U3	1		TPS3840DL20DBVR	Texas Instruments	Nano Power, Wide VIN Voltage Detector with Programmable Delay, DBV0005A (SOT-23-5)	DBV0005A
U4	1		ISO7720DR	Texas Instruments	High Speed, Robust EMC Dual-Channel Digital Isolator, D0008B (SOIC-8)	D0008B
U5	1		TPS70933DBVR	Texas Instruments	150-mA, 30-V, Ultra-Low IQ, Wide Input Low-Dropout Regulator with Reverse Current Protection, DBV0005A (SOT-23-5)	DBV0005A

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U6	1		ISO7731BDWR	Texas Instruments	High-Speed Basic Insulation Triple-Channel Digital Isolator, DW0016B (SOIC-16)	DW0016B
U7	1		TRS3232ECPW	Texas Instruments	3-V to 5.5-V Multichannel RS-232 Line Driver / Receiver with ±15-kV IEC ESD Protection, 0 to 70 degC, 16-Pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0016A
U8	1		THVD1500DR	Texas Instruments	250 kbps RS-485 Transceivers With +/-12-kV IEC ESD Protection, D0008A (SOIC-8)	D0008A
U9	1		ADS131M04IPWR	Texas Instruments	4-Channel, 24-Bit, Simultaneously-Sampling, Delta-Sigma ADC, PW0020A (TSSOP-20)	PW0020A
Y1	1		CMR200T-32.768KDZY-UT	Citizen Finetech Miyota	Crystal, 32.768 MHz, SMD	D1.9xL6mm
Y2	1		FA-238 16.3840MB-K	Epson	Crystal, 16.384 MHz, 50 ppm, 10 pF, SMD	3.2x2.5mm
C8	0	4.7uF	CC0805ZRY5V6BB475	Yageo America	CAP, CERM, 4.7 uF, 10 V, +80/-20%, Y5V, 0805	0805
C23	0	0.01uF	GCM155R71H103KA55D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, C0G/NP0, 0402	0402
C37, C39	0	10pF	CGA3E2C0G1H100D080AA	TDK	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C40, C42, C43, C49, C52, C54	0	10pF	GCM1885C2A100JA16D	MuRata	CAP, CERM, 10 pF, 100 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C51	0	10pF	C0402C100K4GACTU	Kemet	CAP, CERM, 10 pF, 16 V, +/- 10%, C0G, 0402	0402
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J10	0		961102-6404-AR	3M	Header, 2.54mm, 2x1, TH	Header, 2.54mm, 2x1, TH
J12	0		PBC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Gold, TH	Sullins 100mil, 1x2, 230 mil above insulator
R21, R25, R26	0	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R23	0	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
R27, R28	0	50	FC0603E50R0BTBST1	Vishay Thin Film	RES, 50, 0.1%, 0.125 W, 0603	0603
R40, R42	0	6.49	CRCW06036R49FKEA	Vishay-Dale	RES, 6.49, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R41, R54	0	13.0	RT0603DRE0713RL	Yageo America	RES, 13.0, 0.5%, 0.1 W, 0603	0603
R61	0	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
U10, U11, U12, U13	0		TVS0500DRVR	Texas Instruments	5-V Precision Surge Protection Clamp, DRV0006A (WSON-6)	DRV0006A
Y3	0		SIT8924BA-22-33E-8.192000G	SiTime	Oscillator, 8.192 MHz, 15 pF, AEC-Q200 Grade 1, SMD	3.2x2.5mm

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