

## TIDA-01052 REV E1 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
PCB	1		TIDA-01050	Any	Printed Circuit Board	
24Vin, GNDin, TP3, TP8, TP11, TP17, TP25, TP26, TP27, TP28, TP29, TP30, TP_3P8V, TP_5P5V, TP_18P5V, TPAGND1, TPAGND2, TPAGND3, TPAGND4, TPGND1, TPGND2, TPGND3, TPGND4	23		5015	Keystone	Test Point, Miniature, SMT	Testpoint_Keystone_ Miniature
C1, C43, C47, C354, Cin, Cin2, Cin3, Cout2	8	10uF	UMK325AB7106KM-T	Taiyo Yuden	CAP, CERM, 10 µF, 50 V, +/- 10%, X7R, 1210	1210
C3	1	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805
C4	1	1uF	GRM188R71A105KA61D	MuRata	CAP, CERM, 1uF, 10V, +/-10%, X7R, 0603	0603
C5	1	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 µF, 10 V, +/- 10%, X7R, 1210	1210
C9, C12, C13, C16, C17, C20, Cout4	7	47uF	C3216X5R1E476M160AC	TDK	CAP, CERM, 47 µF, 25 V, +/- 20%, X5R, 1206_190	1206_190
C10	1	1000pF	CGA3E2X7R2A102K080AA	TDK	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C11, C42, C45, Cout3	4	1uF	C2012X7S2A105K125AB	TDK	CAP, CERM, 1 µF, 100 V, +/- 10%, X7S, 0805	0805
C14, C18	2	1000pF	GRM1885C1H102FA01J	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 1%, C0G/NP0, 0603	0603
C15, C19, C318, C319, C321, C339, C348	7	1uF	GRM188R71E105KA12D	MuRata	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C21, C22, C57, C58, C59, C60, C261, C262, C271, C272, C284, C287, C288, C289, C290, C291, C304, C305, C306, C307, C308, C338, C343, C345, C347	25	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, 0805	0805
C23, C24, C33	3	10uF	GRM188R61A106ME69D	MuRata	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0603	0603
C25	1	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47 µF, 25 V, +/- 10%, X7R, 0603	0603
C26, C28	2	22uF	GRM188R60J226MEA0D	MuRata	CAP, CERM, 22 µF, 6.3 V, +/- 20%, X5R, 0603	0603
C27	1	0.1uF	GRM188R61C104KA01D	MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X5R, 0603	0603
C29	1	4.7uF	GRM188R61A475MAAJ	MuRata	CAP, CERM, 4.7 µF, 10 V, +/- 20%, X5R, 0603	0603
C30	1	0.22uF	GRM188R61A224KA01D	MuRata	CAP, CERM, 0.22 µF, 10 V, +/- 10%, X5R, 0603	0603

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C31	1	0.22uF	GCM188R71H224KA64D	MuRata	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C32, C35	2	0.1uF	C1608X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C34	1	0.033uF	GRM188R71H333KA61D	MuRata	CAP, CERM, 0.033 uF, 50 V, +/- 10%, X7R, 0603	0603
C37	1	910pF	C0603C911J5GACTU	Kemet	CAP, CERM, 910 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C38	1	10pF	CGA3E2C0G1H100D080AA	TDK	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C39	1	150pF	GRM1885C1H151JA01D	MuRata	CAP, CERM, 150 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C40	1	0.022uF	GRM188R71H223KA01D	MuRata	CAP, CERM, 0.022 uF, 50 V, +/- 10%, X7R, 0603	0603
C41	1	22uF	C2012X5R1V226M125AC	TDK	CAP, CERM, 22 uF, 35 V, +/- 20%, X5R, 0805	0805
C46	1	0.01uF	GCM188R71H103KA37D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C53, C54, C55, C56, C94, C95, C340, C344, C346, C349, C350	11	0.1uF	GRM155R71C104KA88D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0402	0402
C61, C84, C85, C91, C92, C93, C108, C112, C116, C120, C121, C122, C259, C260, C266, C267, C268, C269, C320	19	0.1uF	C0603C104J3RACTU	Kemet	CAP, CERM, 0.1 uF, 25 V, +/- 5%, X7R, 0603	0603
C62	1	10uF	ZRB18AD71A106KE01L	MuRata	CAP, CERM, 10 uF, 10 V, +/- 10%, X7T, 0603	0603
C63, C64	2	0.1uF	GRM155R61E104KA87D	MuRata	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X5R, 0402	0402
C71, C72, C96, C97	4	100pF	GRM1885C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C79, C80, C81, C82, C104, C105, C106, C107	8	0.1uF	GRM188R72A104KA35D	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0603	0603
C83	1	68pF	C0603C680J5GACTU	Kemet	CAP, CERM, 68 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C86, C87, C109, C111, C114, C115	6	1000pF	C0603C102J5GAC	Kemet	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C88, C119	2	1uF	GRM188R71A105KA61D	MuRata	CAP, CERM, 1 uF, 10 V, +/- 10%, X7R, 0603	0603
C89, C90	2	1000pF	C1608C0G2A102J080AA	TDK	CAP, CERM, 1000 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C110, C113	2	470pF	C0603C471K5RACTU	Kemet	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
C117, C118, C315, C335	4	0.01uF	CGA3E2C0G1H103J080AA	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C322, C323	2	22uF	C1608X5R1A226M080AC	TDK	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603
C351, C352, C353	3	4.7uF	293D475X9025C2TE3	Vishay-Sprague	CAP, TA, 4.7 uF, 25 V, +/- 10%, 2 ohm, SMD	6032-28
Cff	1	0.022uF	C1608X7R2A223K080AA	TDK	CAP, CERM, 0.022 uF, 100 V, +/- 10%, X7R, 0603	0603
Cff2, Cff3	2	0.022uF	08055C223KAT2A	AVX	CAP, CERM, 0.022uF, 50V, +/-10%, X7R, 0805	0805
Cout1	1	22uF	C2012JB1V226M125AC	TDK	CAP, CERM, 22 uF, 35 V, +/- 20%, JB, 0805	0805
Cout5	1	100uF	C3225X6S0J107M250AC	TDK	CAP, CERM, 100 uF, 6.3 V, +/- 20%, X6S, 1210	1210
Cout6	1	1uF	C0603C105K3RACTU	Kemet	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603
Css	1	4700pF	CGA3E2X7R2A472K080AA	TDK	CAP, CERM, 4700 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
Css2, Css3	2	0.01uF	GRM188R70J103KA01D	MuRata	CAP, CERM, 0.01 uF, 6.3 V, +/- 10%, X7R, 0603	0603
D1	1	200V	MBRS4201T3G	ON Semiconductor	Diode, Schottky, 200V, 4A, SMC	SMC
D5	1	770mV			DFLS1100-7	DFLS1100-7
D14, D18, D21, D22	4	Red	150060RS75000	Würth Elektronik	LED, Red, SMD	LED_0603
FDA1	1		THS4551IRGTR	Texas Instruments	Low Power, Precision, 160MHz, Fully Differential Amplifier, RGT0016A	RGT0016A
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, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5" L #4-40 Nylon	Standoff

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
H9, H11, H13, H15	4		9774050360R	Würth Elektronik	ROUND STANDOFF M3 STEEL 5MM	ROUND STANDOFF M3 STEEL 5MM
J3	1		61300311121	Würth Elektronik eiSos	Header, 2.54 mm, 3x1, Gold, TH	Header, 2.54mm, 3x1, TH
J4, J7	2		QTH-030-01-L-D-A	Samtec	Header(Shrouded), 19.7mil, 30x2, Gold, SMT	Header (Shrouded), 19.7mil, 30x2, SMT
J5, J6	2		61300211121	Würth Elektronik eiSos	Header, 2.54 mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
J8	1		691213710002	Würth Elektronik	Terminal Block, 2x1, Brass, TH	Terminal Block, 2-Leads, Body 10x8.3mm, Pitch 5mm
J13, J16, J17, J20	4		87898-0204	Molex	Header, 2.54 mm, 2x1, Gold, R/A, SMT	Header, 2.54 mm, 2x1, R/A, SMT
J14, J15, J18, J19	4		142-0701-801	Johnson	Connector, End launch SMA, 50 ohm, SMT	End Launch SMA
J32, J33, J34	3		TMM-103-01-G-S-SM	Samtec	Header, 2mm, 3x1, Gold, SMT	Header, 2mm, 3x1, SMT
L1	1	330uH	DR73-331-R	Coiltronics	Inductor, Shielded Drum Core, Ferrite, 330 µH, 0.42 A, 1.59 ohm, SMD	DR73
L4, L5, L6, L7, L8, L9, L10, L12, L16, L17, L18, L19	12	600 ohm	MPZ2012S601A	TDK	Ferrite Bead, 600 ohm @ 100MHz, 2A, 0805	0805
OPAN_1, OPAN_2, OPAP_1, OPAP_2	4		OPA827AIDR	Texas Instruments	Low-Noise, High-Precision, JFET-Input OPERATIONAL AMPLIFIER, D0008A	D0008A
R1, R2, R97, R98, R107, R108, R270, R271	8	1.00k	RG1608P-102-B-T5	Susumu Co Ltd	RES, 1.00 k, 0.1%, 0.1 W, 0603	0603
R3, R4	2	0.22	ERJ-3RQFR22V	Panasonic	RES, 0.22 ohm, 1%, 0.1W, 0603	0603
R8, R9, R10, R13, R14, R19, R25, R32, R35, R36, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R211, R212, R213, R223, R225, R226, R232, R233, R234, R235, R240, R248, R250, R252, R259, R262, R279, R280, R284, R288	52	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.063 W, 0402	0402
R22	1	4.70	RT0603DRE074R7L	Yageo America	RES, 4.70, 0.5%, 0.1 W, 0603	0603
R40	1	215k	RT0603BRD07215KL	Yageo America	RES, 215 k, 0.1%, 0.1 W, 0603	0603
R41	1	23.2k	RG1608P-2322-B-T5	Susumu Co Ltd	RES, 23.2 k, 0.1%, 0.1 W, 0603	0603
R42	1	1.65k	RG1608P-1651-B-T5	Susumu Co Ltd	RES, 1.65 k, 0.1%, 0.1 W, 0603	0603
R43	1	30.9k	RG1608P-3092-B-T5	Susumu Co Ltd	RES, 30.9 k, 0.1%, 0.1 W, 0603	0603

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R44	1	2.15k	RT0603BRD072K15L	Yageo America	RES, 2.15 k, 0.1%, 0.1 W, 0603	0603
R45	1	52.3k	RT0603BRD0752K3L	Yageo America	RES, 52.3 k, 0.1%, 0.1 W, 0603	0603
R46	1	330	RC0603JR-07330RL	Yageo America	RES, 330, 5%, 0.1 W, 0603	0603
R47	1	18.0k	RT0603BRD0718KL	Yageo America	RES, 18.0 k, 0.1%, 0.1 W, 0603	0603
R50, R216	2	20.0k	RG1608P-203-B-T5	Susumu Co Ltd	RES, 20.0 k, 0.1%, 0.1 W, 0603	0603
R64, R87	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R88, R89, R91	3	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402
R92	1	100	CRCW0402100RJNED	Vishay-Dale	RES, 100, 5%, 0.063 W, 0402	0402
R95, R256, R257, R278	4	33	CRCW040233R0JNED	Vishay-Dale	RES, 33, 5%, 0.063 W, 0402	0402
R99	1	249	CRCW0603249RFKEA	Vishay-Dale	RES, 249, 1%, 0.1 W, 0603	0603
R100, R101, R110, R114, R116, R214, RDN2, RDN4, RDP2, RDP4	10	1.00k	RT0603BRB071KL	Yageo America	RES, 1.00 k, 0.1%, 0.1 W, 0603	0603
R103, R104	2	4.42	RT0603DRE074R42L	Yageo America	RES, 4.42, 0.5%, 0.1 W, 0603	0603
R111, R219, R220, R221, R222, RDN1, RDN3, RDP1, RDP3	9	0	ERJ-3GEY0R00V	Panasonic	RES, 0, 5%, 0.1 W, 0603	0603
R112, R113	2	30.0	RC0603FR-0730RL	Yageo America	RES, 30.0, 1%, 0.1 W, 0603	0603
R115, R117	2	2.2	CRCW06032R20JNEA	Vishay-Dale	RES, 2.2, 5%, 0.1 W, 0603	0603
R215	1	499	RG1608P-4990-B-T5	Susumu Co Ltd	RES, 499, 0.1%, 0.1 W, 0603	0603
R217, R218, R246, R247	4	49.9k	RG1608P-4992-B-T5	Susumu Co Ltd	RES, 49.9 k, 0.1%, 0.1 W, 0603	0603
R258, R261	2	10.0k	RG1608P-103-B-T5	Susumu Co Ltd	RES, 10.0 k, 0.1%, 0.1 W, 0603	0603
R268, R269	2	1.00	CRCW06031R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.1 W, 0603	0603
Renb	1	20.5k	CRCW080520K5FKEA	Vishay-Dale	RES, 20.5 k, 1%, 0.125 W, 0805	0805
Renb2, Renb3	2	3.57k	RG1608P-3571-B-T5	Susumu Co Ltd	RES, 3.57 k, 0.1%, 0.1 W, 0603	0603
Rent	1	118k	RT0805BRD07118KL	Yageo America	RES, 118k ohm, 0.1%, 0.125W, 0805	0805
Rent2, Rent3	2	68.1k	RT0603BRD0768K1L	Yageo America	RES, 68.1 k, 0.1%, 0.1 W, 0603	0603
Rfbb	1	1.50k	RG1608P-152-B-T5	Susumu Co Ltd	RES, 1.50 k, 0.1%, 0.1 W, 0603	0603
Rfbb3, Rfbb5	2	1.07k	RT0805BRD071K07L	Yageo America	RES, 1.07 k, 0.1%, 0.125 W, 0805	0805
Rfbt	1	34.0k	RT0603BRD0734KL	Yageo America	RES, 34.0 k, 0.1%, 0.1 W, 0603	0603
Rfbt2	1	6.34k	CPF0603B6K34E	TE Connectivity	RES, 6.34 k, 0.1%, 0.063 W, 0603	0603
Rfbt3	1	4.02k	RG1608P-4021-B-T5	Susumu Co Ltd	RES, 4.02 k, 0.1%, 0.1 W, 0603	0603
Ron	1	383k	RT0603BRD07383KL	Yageo America	RES, 383 k, 0.1%, 0.1 W, 0603	0603
Ron2	1	113k	RT0603BRD07113KL	Yageo America	RES, 113 k, 0.1%, 0.1 W, 0603	0603
Ron3	1	78.7k	RT0603BRD0778K7L	Yageo America	RES, 78.7 k, 0.1%, 0.1 W, 0603	0603
U1, U2	2		OPA625IDBVR	Texas Instruments	High Bandwidth, High Precision, Low Noise and Distortion Amplifier with Ultra-Fast Transition time Low Power mode, DBV0006A	DBV0006A
U3	1		REF6050IDGKR	Texas Instruments	High-Precision Voltage Reference with Integrated High-Bandwidth Buffer, DGK0008A (VSSOP-8)	DGK0008A
U4	1		OPA376AIDBVR	Texas Instruments	Precision, Low Noise, Low Iq Operational Amplifier, 2.2 to 5.5 V, -40 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U5	1		LMZ14202TZX-ADJ/NOPB	Texas Instruments	2A SIMPLE SWITCHER® Power Module with 42V Maximum Input, 7 pin TO-PMOD	TZA07A
U6, U7, U8	3		TPS7A4700RGWR	Texas Instruments	36-V, 1-A, 4.17-µVRMS, RF LDO Voltage Regulator, RGW0020A	RGW0020A
U9	1		LM5574MT	Texas Instruments	SIMPLE SWITCHER® 75V, 0.5A Step-Down Switching Regulator, 16-pin TSSOP	MTC16
U10	1		LM7705MM/NOPB	Texas Instruments	Low Noise Negative Bias Generator, 8-pin Mini SOIC, Pb-Free	MUA08A
U11	1		TPS7A3001MDGNTEP	Texas Instruments	Single Output High PSRR LDO, 200 mA, Adjustable -1.18 to -33 V Output, -3 to -36 V Input, with Ultra-Low Noise, 8-pin MSOP (DGN), -55 to 125 degC, Green (RoHS & no Sb/Br)	DGN0008D
U13, U14	2		BR24G32FVT-3AGE2	Rohm	2-Wire I2C BUS EEPROM (2-Wire), TSSOP-B8	TSSOP-8

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U15	1		LMK61E2-SIAR	Texas Instruments	Ultra-Low Jitter Programmable Oscillator with Internal EEPROM, SIA0008B	SIA0008B
U18, U31	2		SN74AUP1G80DCKR	Texas Instruments	LOW-POWER SINGLE POSITIVE-EDGE-TRIGGERED D-TYPE FLIP-FLOP, DCK0005A	DCK0005A
U19, U32	2		SN74AHC1G04DBVR	Texas Instruments	SINGLE SCHMITT-TRIGGER INVERTER GATE, DBV0005A	DBV0005A
U22	1		LMZ14201TZX-ADJ/NOPB	Texas Instruments	1A SIMPLE SWITCHER® Power Module with 42V Maximum Input, 7 pin TO-PMOD	TZA07A
U23	1		LMZ14203TZ-ADJ/NOPB	Texas Instruments	3A SIMPLE SWITCHER® Power Module with 42V Maximum Input Voltage, 7-pin TO-PMOD, Pb-Free	TZA07A
U33	1		LMK00804BPW	Texas Instruments	Low Skew, 1-to-4 Multiplexed Differential/LVCMOS-to-LVCMOS/TTL Fanout Buffer, PW0016A	PW0016A
UADS1, UADS2	2		ADS8910BIRGER	Texas Instruments	18-Bit, 1-MSPS SAR ADC with Integrated Reference Buffer, LDO, and Enhanced Serial Interface, RGE0024H	RGE0024H
C316, C317	0	0.1uF	C0603C104J3RACTU	Kemet	CAP, CERM, 0.1 µF, 25 V, +/- 5%, X7R, 0603	0603
FID1, FID2, FID3, FID4, FID5, FID6	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial
R11, R12, R15, R17, R18, R20, R24, R26, R27, R29, R30, R31, R33, R34, R255, R260, R263	0	0	ERJ-2GE0R00X	Panasonic	RES, 0, 5%, 0.063 W, 0402	0402
R21	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R90	0	4.7k	CRCW04024K70JNED	Vishay-Dale	RES, 4.7 k, 5%, 0.063 W, 0402	0402

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