

TIDA-00961 REV E2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB1	1		TIDA-00961	Any	Printed Circuit Board	
C101, C105	2	2200pF	DE2E3KY222MA2BM01	MuRata	CAP, CERM, 2200pF, 250V, +/-20%, KY, Radial D8x5mm	Radial D8x5mm
C103	1	0.47uF	ECQ-U2A474ML	Panasonic	CAP, Film, 0.47 µF, 275 V, +/- 20%, TH	Radial 25x8.5x18.5
C104	1	1uF	R46KN-4100--P1 M	Panasonic	CAP, Film, 1uF, 275V, +/-20%, TH	Radial 26x12x19.5
C107	1	1000pF	GRM188R71C102KA01D	MuRata	CAP, CERM, 1000pF, 16V, +/-10%, X7R, 0603	0603
C108, C109, C110, C111, C112, C115, C116	7	0.047uF	GRM32DR72J473KW01L	MuRata	CAP, CERM, 0.047 µF, 630 V, +/- 10%, X7R, 1210	1210
C113, C114	2	0.22uF	GRM55DR72J224KW01L	MuRata	CAP, CERM, 0.22 µF, 630 V, +/- 10%, X7R, 2220	2220
C117	1	1uF	450MPK105J	Rubycon	CAP, Film, 1 µF, 450 V, +/- 5%, TH	18x9.5mm
C118	1	2200 pF	C921U222MYWDBA7317	Kemet	CAP, CERM, 2200pF, 250V, +/-20%, E, Cap, 7x12x9 mm TH	
C119, C122	2	10uF	0805YD106MAT2A	AVX	CAP, CERM, 10uF, 16V, +/-20%, X5R, 0805	0805
C120, C123, C209	3	0.1uF	GRM188R70J104KA01D	MuRata	CAP, CERM, 0.1 µF, 6.3 V, +/- 10%, X7R, 0603	0603
C121	1	1uF	GRM185R60J105KE26D	MuRata	CAP, CERM, 1uF, 6.3V, +/-10%, X5R, 0603	0603
C124, C221, C224	3	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0603
C125	1	0.01uF	C0603X103K5RACTU	Kemet	CAP, CERM, 0.01uF, 50V, +/-10%, X7R, 0603	0603
C126, C129, C130, C131	4	1000pF	C1608X7R1H102K	TDK	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0603	0603
C128	1	0.022uF	GRM188R70J223KA01D	MuRata	CAP, CERM, 0.022 µF, 6.3 V, +/- 10%, X7R, 0603	0603
C201, C212	2	220pF	06031C221KAT2A	AVX	CAP, CERM, 220 pF, 100 V, +/- 10%, X7R, 0603	0603
C202, C205, C210, C222, C223, C225, C401, C403, C405, C407, C409, C410, C414, C416, C418, C420	16	0.1uF	GCM188R71H104KA57D	MuRata	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X7R, 0603	0603
C203, C204, C214, C219, C220, C229, C402, C404, C406, C408, C413, C415, C417, C419	14	33pF	06035A330JAT2A	AVX	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C206, C216	2	1000pF	885012206034	Wurth Elektronik	CAP, CERM, 1000 pF, 16 V, +/- 10%, X7R, 0603	0603
C207, C208, C217, C218	4	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1 µF, 25 V, +/- 10%, X7R, 0603	0603
C215	1	0.01uF	C0603C103K5RACTU	Kemet	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, 0603	0603
C226	1	100uF	T495X107K016ATE100	Kemet	CAP, TA, 100 µF, 16 V, +/- 10%, 0.1 ohm, SMD	7343-43
C227	1	4700pF	06031C472JAT2A	AVX	CAP, CERM, 4700 pF, 100 V, +/- 5%, X7R, 0603	0603
C228	1	2.2uF	12063D225KAT2A	AVX	CAP, CERM, 2.2 µF, 25 V, +/- 10%, X5R, 1206	1206
C301	1	0.033uF	GRM32DR72J333KW01L	MuRata	CAP, CERM, 0.033 µF, 630 V, +/- 10%, X7R, 1210	1210
C302	1	1000pF	C2012X7R2E102K	TDK	CAP, CERM, 1000 pF, 250 V, +/- 10%, X7R, 0805	0805
C305, C307, C311	3	3.3uF	GRM21BR71E335KA73L	MuRata	CAP, CERM, 3.3uF, 25V, +/-10%, X7R, 0805	0805

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C306, C308	2	220uF	TPSV227K016R0050	AVX	CAP, TA, 220 µF, 16 V, +/- 10%, 0.05 ohm, SMD	7361-38
C309	1	10uF	GRM31CR71E106KA12L	MuRata	CAP, CERM, 10 µF, 25 V, +/- 10%, X7R, 1206	1206
C310	1	68pF	06035A680JAT2A	AVX	CAP, CERM, 68pF, 50V, +/-5%, C0G/NP0, 0603	0603
C312	1	330uF	25ZL330MEFC10X12.5	Rubycon	CAP, AL, 330 µF, 25 V, +/- 20%, 0.053 ohm, TH	TH, 2-Leads, Body 10x12.5mm, Pin Spacing 5mm
C313, C314	2	22uF	1206YD226MAT2A	AVX	CAP, CERM, 22 µF, 16 V, +/- 20%, X5R, 1206	1206
C315, C316	2	0.1uF	C1005X7R1H104K	TDK	CAP, CERM, 0.1uF, 50V, +/-10%, C0G/NP0, 0402	0402
C317	1	10uF	GRM21BR71A106KE51L	MuRata	CAP, CERM, 10uF, 10V, +/-10%, X7R, 0805	0805
C318	1	47uF	12106D476MAT2A	AVX	CAP, CERM, 47 µF, 6.3 V, +/- 20%, X5R, 1210	1210
C319	1	2200pF	GRM155R71E222KA01D	MuRata	CAP, CERM, 2200pF, 25V, +10%, X7R, 0402	0402
C320	1	0.047uF	C0805C473K5RACTU	Kemet	CAP, CERM, 0.047 µF, 50 V, +/- 10%, X7R, 0805	0805
C321	1	1000pF	06035A102KAT2A	AVX	CAP, CERM, 1000pF, 50V, +/-10%, C0G/NP0, 0603	0603
C322	1	4.7uF	293D475X9010B2TE3	Vishay-Sprague	CAP, TA, 4.7uF, 10V, +/-10%, 3.4 ohm, SMD	3528-21
C323, C324	2	10uF	C0805C106K8PACTU	Kemet	CAP, CERM, 10 µF, 10 V, +/- 10%, X5R, 0805	0805
C325	1	0.022uF	C0603C223K3RACTU	Kemet	CAP, CERM, 0.022uF, 25V, +/-10%, X7R, 0603	0603
C412	1	0.022uF	C0603C223K4RACTU	Kemet	CAP, CERM, 0.022 µF, 16 V, +/- 10%, X7R, 0603	0603
D101, D102	2	800V	US1K-13-F	Diodes Inc.	Diode, Fast Rectifier, 800 V, 1 A, SMA	SMA
D103	1	0.65V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23
D104, D106	2	30V	STPS130A	STMicroelectronics	Diode, Schottky, 30 V, 1 A, SMA	SMA
D105	1	1V	GBU8J-BP	Micro Commercial Component	Diode, Switching-Bridge, 420V, 8A, TH	GBU
D107	1	600V	MURA160T3G	ON Semiconductor	Diode, Ultrafast, 600V, 1A, SMA	SMA
D201, D202, D206, D208	4	100V	BAS16J,135	NXP Semiconductor	Diode, Switching, 100 V, 0.25 A, SOD-323F	SOD-323F
D203, D209	2	91V	MMSZ5270BT1G	ON Semiconductor	Diode, Zener, 91 V, 500 mW, SOD-123	SOD-123
D204, D205, D207, D210, D211, D212	6	100V	BAV99,215	NXP Semiconductor	Diode, Switching, 100 V, 0.215 A, SOT-23	SOT-23
D301	1	1.7V	CGRM4007-G	Diodes Inc.	Diode, Ultrafast, 800V, 1A, SMA	SOD-123
D302, D303, D305	3	100V	SS110-TP	International Rectifier	Diode, Schottky, 100V, 1A, SMB	SMB
D304	1	200V	ES1D-13-F	Diodes Inc.	Diode, Ultrafast, 200 V, 1 A, SMA	SMA
D306	1	9.1V	MMSZ4696T1G	ON Semiconductor	Diode, Zener, 9.1 V, 500 mW, SOD-123	SOD-123
D307	1	Green	LG L29K-G2J1-24-Z	OSRAM	LED, Green, SMD	1.7x0.65x0.8mm
D401	1	30V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
F101	1		0217015.MXEP	Littelfuse	Fuse, 15 A, 250 V, TH	D5.5xL21.5mm
H1, H2, H3, H4, H14	5		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, H13	5		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
J101	1		703W-00/54	Qualtek Electronics Corporatio	AC Receptacle, 10A 250VAC	20X50X28.7mm
J102, J104, J201, J202, J203, J206, J207, J208	8		0312-0-15-15-34-27-10-0	Mill-Max	Pin Receptacle, .032-.046" .075" Dia, Gold, TH	Pin Receptacle
J103	1		282841-2	TE Connectivity	Terminal Block, 2x1, 5.08mm, TH	10.16x15.2x9mm
J204, J209	2		0448120024	Molex	Receptacle, 2.54mm, 6x1, Gold, TH	Receptacle, 2.54mm, 6x1, TH
J205	1		HSEC8-160-01-L-DV-A-BL	Samtec	Card Edge Socket, 0.8mm, 60x2, SMT	Edge Socket, 60x2, SMT
J210	1		851-43-004-20-001000	Mill-Max	SOCKET .050" GRID SIP 4 POS R/A, TH	R/A 4x1 receptacle
K101	1		G5Q-1A4 DC12	Omron Electronic Components	Relay, SPST-NO (1 Form A), 10 A, 12 VDC, TH	20x10mm
L101	1	1.68mH	7840-21-0021	Nova Magnetics	Coupled inductor, 1.68 mH, A, ohm, TH	D1064xT570mil
L102, L103	2	15uH	019-8903-00R	Precision Inc	Inductor, Ferrite, 15 µH, TH	Inductor, 1260x1280x539mil

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L301	1	2.2uH	SDR0403-2R2ML	Bourns	Inductor, Drum Core, Ferrite, 2.2 uH, 2.6 A, 0.047 ohm, SMD	4.5x3.2x4mm
L302, L303	2	300 ohm	742792641	Wurth Elektronik	Ferrite Bead, 300 ohm @ 100 MHz, 2 A, 0603	0603
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"H x 0.200"W
Q101	1	60V	2N7002ET1G	ON Semiconductor	MOSFET, N-CH, 60V, 0.26A, SOT-23	SOT-23
Q102, Q103	2	500V	STY105NM50N	STMicroelectronics	MOSFET, N-CH, 500 V, 110 A, TO-247	TO-247
Q301	1	800V	STD3NK80Z-1	ST Microelectronics	MOSFET, N-CH, 800V, 2.5A, IPAK	IPAK
Q302, Q303	2	30V	3LN01C-TB-E	ON Semiconductor	MOSFET, N-CH, 30 V, 0.15 A, SOT-23	SOT-23
R101, R102, R103, R104, R105, R106	6	348k	RT0805BRD07348KL	Yageo America	RES, 348k ohm, 0.1%, 0.125W, 0805	0805
R107	1	51.1	CRCW060351R1FKEA	Vishay-Dale	RES, 51.1 ohm, 1%, 0.1W, 0603	
R108, R109, R124, R125	4	5.11k	CRCW06035K11FKEA	Vishay-Dale	RES, 5.11 k, 1%, 0.1 W, 0603	0603
R110	1	51.1	CRCW060351R1FKEA	Vishay-Dale	RES, 51.1 ohm, 1%, 0.1W, 0603	0603
R111	1	10.0k	RC0603FR-0710KL	Yageo America	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
R112, R116	2	10.0	CRCW080510R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.125 W, 0805	0805
R113, R119	2	4.99k	ERJ-6ENF4991V	Panasonic	RES, 4.99 k, 1%, 0.125 W, 0805	0805
R114, R115, R117, R118, R120, R121, R203, R205, R209	9	271k	RT0805BRD07271KL	Yageo America	RES, 271 k, 0.1%, 0.125 W, 0805	0805
R122	1	12.7k	CRCW060312K7FKEA	Vishay-Dale	RES, 12.7 k, 1%, 0.1 W, 0603	0603
R123, R207, R212, R217, R226	5	10k	RNCF0603TKY10K0	Stackpole Electronics Inc	RES, 10 k, 0.01%, 0.063 W, 0603	0603
R126	1	200	CRCW0603200RFKEA	Vishay-Dale	RES, 200 ohm, 1%, 0.1W, 0603	0603
R127	1	5.49k	CRCW06035K49FKEA	Vishay-Dale	RES, 5.49 k, 1%, 0.1 W, 0603	0603
R128	1	330k	CRCW0603330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.1 W, 0603	0603
R129, R130	2	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.1 W, 0603	0603
R131, R211, R420, R421, R430, R431	6	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R201, R208	2	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, 0603	0603
R202, R213, R216, R228	4	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, 0603	0603
R204, R401, R409	3	3.3k	CRCW06033K30JNEA	Vishay-Dale	RES, 3.3 k, 5%, 0.1 W, 0603	0603
R206, R220	2	100	CRCW0603100RJNEA	Vishay-Dale	RES, 100, 5%, 0.1 W, 0603	0603
R210, R219	2	2.00k	CPF0603B2K0E	TE Connectivity	RES, 2.00 k, 0.1%, 0.063 W, 0603	0603
R214	1	16.2k	RT0805BRD0716K2L	Yageo America	RES, 16.2 k, 0.1%, 0.125 W, 0805	0805
R215	1	5.11k	RT0805BRD075K11L	Yageo America	RES, 5.11k ohm, 0.1%, 0.125W, 0805	0805
R218	1	1.40k	CRCW06031K40FKEA	Vishay-Dale	RES, 1.40 k, 1%, 0.1 W, 0603	0603
R221, R222, R310	3	2.0k	CRCW06032K00JNEA	Vishay-Dale	RES, 2.0k ohm, 5%, 0.1W, 0603	0603
R223	1	10.0	ERJ-8ENF10R0V	Panasonic	RES, 10.0, 1%, 0.25 W, 1206	1206
R224, R405, R408, R412	4	1.00k	RC0603FR-071KL	Yageo America	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R225	1	3.09	CRCW06033R09FKEA	Vishay-Dale	RES, 3.09, 1%, 0.1 W, 0603	0603
R227	1	10Meg	CRCW060310M0DHEAP	Vishay-Dale	RES, 10 M, 0.5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R229, R231	2	1.00	CRCW06031R00FKEA	Vishay-Dale	RES, 1.00, 1%, 0.1 W, 0603	0603
R230, R232, R233, R234	4	1.0Meg	CRCW06031M00JNEA	Vishay-Dale	RES, 1.0 M, 5%, 0.1 W, 0603	0603
R235, R236	2	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603

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R301	1	300k	RC1206FR-07300KL	Yageo America	RES, 300 k, 1%, 0.25 W, 1206	1206
R302	1	200	ERJ-6GEYJ201V	Panasonic	RES, 200, 5%, 0.125 W, 0805	0805
R303	1	20.0	RC0603FR-0720RL	Yageo America	RES, 20.0, 1%, 0.1 W, 0603	0603
R304	1	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4k ohm, 1%, 0.1W, 0603	0603
R305	1	22.1k	CRCW080522K1FKEA	Vishay-Dale	RES, 22.1 k, 1%, 0.125 W, 0805	0805
R306, R314	2	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603	0603
R307	1	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5k ohm, 1%, 0.1W, 0603	0603
R308	1	0.91	CRM0805-FX-R910ELF	Bourns	RES, 0.91, 1%, 0.25 W, 0805	0805
R309	1	100k	CRCW0402100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.063W, 0402	0402
R311	1	3.01k	CRCW08053K01FKEA	Vishay-Dale	RES, 3.01 k, 1%, 0.125 W, 0805	0805
R312	1	2.00k	CRCW08052K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.125 W, 0805	0805
R313	1	196k	ERJ-6ENF1963V	Panasonic	RES, 196 k, 1%, 0.125 W, 0805	0805
R315	1	330k	RG1608P-334-B-T5	Susumu Co Ltd	RES, 330 k, 0.1%, 0.1 W, 0603	0603
R316	1	12.1k	CRCW080512K1FKEA	Vishay-Dale	RES, 12.1 k, 1%, 0.125 W, 0805	0805
R317	1	750	RT0603DRE07750RL	Yageo America	RES, 750, 0.5%, 0.1 W, 0603	0603
R318	1	1.24k	CRCW08051K24FKEA	Vishay-Dale	RES, 1.24 k, 1%, 0.125 W, 0805	0805
R402, R407, R410, R411, R414, R415	6	6.19k	CRCW06036K19FKEA	Vishay-Dale	RES, 6.19 k, 1%, 0.1 W, 0603	0603
R403	1	32.4k	RT0805BRD0732K4L	Yageo America	RES, 32.4 k, 0.1%, 0.125 W, 0805	0805
R404, R413	2	511	CRCW0603511RFKEA	Vishay-Dale	RES, 511, 1%, 0.1 W, 0603	0603
R406	1	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.1 W, 0603	0603
R416	1	459	RT0805BRD07459RL	Yageo America	RES, 459, 0.1%, 0.125 W, 0805	0805
R417	1	200k	CRCW0603200KJNEA	Vishay-Dale	RES, 200 k, 5%, 0.1 W, 0603	0603
R418, R419, R422	3	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, 0603	0603
RT101	1	50 ohm	B59751B0120A070	TDK	Thermistor NTC, 50 ohm, 25%, D12.5xH16.5mm	D12.5xH16.5mm
T301	1		750315894	Würth Elektronik	Transformer, 13 mH, TH	14.73x14.73mm
TP101, TP103, TP301, TP302, TP304, TP305, TP306	7	Red	5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP102, TP104, TP105, TP204, TP205, TP206, TP303	7	Black	5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
TP201, TP202, TP203, TP207, TP208, TP209, TP210, TP211, TP212, TP213, TP214, TP215, TP216, TP217, TP218, TP219, TP220, TP230, TP401, TP402, TP403	21		5015	Keystone	Test Point, Miniature, SMT	Testpoint_Keystone_ Miniature
U101	1		ACS716KLATR-12CB-NL-T	Allegro Microsystems Inc	120 kHz Bandwidth, High-Voltage Isolation Current Sensor with Integrated Overcurrent Detection	SOIC, 16-Leads, Body 10.3x7.5mm, Pitch 1.27mm
U102	1		UCC27712DR	Texas Instruments	620-V High-Side Low-Side Gate Driver with 2.5A Peak Output and RobustDrive, D0008A (SOIC-8)	D0008A
U201	1		TLV3502AID	Texas Instruments	4.5ns Rail-to-Rail, High-Speed Comparator in Microsize Packages, D0008A (SOIC-8)	D0008A
U204	1		SN74LVC1G3157DRYR	Texas Instruments	SINGLE-POLE DOUBLE-THROW ANALOG SWITCH, DRY0006A	DRY0006A

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U205, U402	2		CD74HC74M96	Texas Instruments	Dual D Flip-Flop with Set and Reset Positive-Edge Trigger, D0014A	D0014A
U207	1		OPA237NA/250	Texas Instruments	Single-Supply Operational Amplifier MicroAmplifier(TM) Series, 2.7 to 36 V, -55 to 125 degC, 5-pin SOT23 (DBV0005A), Green (RoHS & no Sb/Br)	DBV0005A
U302	1		TPS62153RGTT	Texas Instruments	Buck Step Down Regulator with 3 to 17 V Input and 5 V Output, -40 to 85 degC, 16-Pin QFN (RGT), Green (RoHS & no Sb/Br)	RGT0016C
U303	1		UCC28740DR	Texas Instruments	Constant-Voltage, Constant-Current Flyback Controller Using Opto-Coupler Feedback, D0007A	D0007A
U304	1		LP2986AIM-3.3/NOPB	Texas Instruments	Micropower, 200 mA Ultra Low-Dropout Fixed or Adjustable Voltage Regulator, 8-pin Mini SOIC	MUA08A
U305	1		LTV-817S	Lite-On	Optocoupler, 5 kV, 50-600% CTR, TH-4	DIP-4
U306	1		TLV431ACDBZR	Texas Instruments	Low Voltage Adjustable Precision Shunt Regulator, 39 ppm / degC, 15 mA, 0 to 70 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U401, U406, U407	3		TLV3502AIDCNR	Texas Instruments	4.5 ns Rail-to-Rail, High-Speed Comparator, DCN0008A	DCN0008A
U403	1		TS3V330PWR	Texas Instruments	QUAD SPDT WIDE-BANDWIDTH VIDEO SWITCH WITH LOW ON-STATE RESISTANCE, PW0016A (TSSOP-16)	PW0016A
U404	1		LMV612MA/NOPB	Texas Instruments	Dual 1.4 MHz, Low Power General Purpose, 1.8V, D0008A (SOIC-8)	D0008A
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

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