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TIDA-01604 REV E3 Bill of Materials

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•	INSTRUMENTS

TID #:	TIDA-01604 TIDA-01604 REV E3 Bill of Materials INSTRUMENTS							
Item#	Designator !PCB, !PCB100	Quantity 2	Value	PartNumber TIDA-01604	Manufacturer Any	Description Printed Circuit Board	PackageReference	
2	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23.	24	150uF	350BXW150MEFR14.5X45	Rubycan	CAP, AL, 150 μF, 350 V, +/- 20%, TH	D14.5xL45mm	
3	C24 C27, C28, C29, C30, C31, C32,	8	0.1uF	C1812C104KDRAC7800	KEMET	CAP, CERM, 0.1µF, 1kV,+/- 10%, X7R, 1812	1812	
4	C33, C34 C35	1	10uF	GRM31CR71E106KA12L	MuRata	CAP, CERM, 10 µF, 25 V,+/- 10%, X7R, 1206	1206	
5	C36 C37	1 1	1000pF 68pF	C2012X7R2E102K085AA 06035A680JAT2A	TDK AVX	CAP, CERM, 1000 pF, 250 V,+/- 10%, X7R, 0805 CAP, CERM, 68pF, 50V, +/-5%, C0G/NP0, 0803	0805 0603	
7	C38, C41, C115, C119, C123,	6	1uF	GRM185R60J105KE26D	MuRata	CAP, CERM, 1uF, 6.3V, +/-10%, XSR, 0603	0603	
8	C132 C39, C40, C42	3	220uF	10TPE220ML	Panasonic	CAP, Tantalum Polymer, 220 µF, 10 V,+/- 20%, 0.025 ohm, 7343-30 SMD	7343-30	
9	C107, C108, C112, C113	4	2200pF	DE6E3KJ222MN3A	MuRata	SMU CAP, CERM, 2200 pF, 300 V, +/- 20%, E, TH, 2- Leads, Body 9x7mm, Pin Spacing 7.5mm	TH, 2- Leads, Body 9x7mm, Pin Spacing	
10	C109, C110,	3	2.2uF	890324026034	Wurth Elektronik	CAP, Film, 2.2 µF, 275 V, +/- 10%, TH	7.5mm 26x15mm	
11	C114 C111, C118, C121, C124, C130, C131,	8	0.1uF	GRM155R70J104KA01D	MuRata	CAP, CERM, 0.1uF, 6.3V, +/-10%, X7R, 0402	0402	
12	C133, C614 C116, C125,	3	1000pF	06035A102KAT2A	AVX	CAP, CERM, 1000 pF, 50 V, +/- 10%, C0G/NP0, 0603	0603	
13	C120	1	1000pF	GRM188R71C102KA01D	MuRata	CAP, CERM, 1000pF, 16V, +/-10%, X7R, 0603	0603	
14 15	C122 C127, C128	2	10uF 1000pF	0805YD106KAT2A GRM155R60J102KA01D	AVX MuRata	CAP, CERM, 10 µF, 16 V,+/- 10%, X5R, 0805 CAP, CERM, 1000pF, 6:3V, +/- 10%, X5R, 0402	0805	
16 17	C129 C600, C605,	1 4	0.022uF 1uF	GRM155R70J223KA01D C1608X7R1E105K080AB	MuRata TDK	CAP, CERM, 0.022uF, 6.3V, +/-10%, X7R, 0402 CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	0402	
18	C615, C616 C601, C604.	8	0.01uF	GRM155R70J103KA01D	MuRata	CAP, CERM 0.01uF, 6.3V, +/-10%, X7R, 0402	0402	
	C607, C611, C612, C613, C617, C618	8						
19 20 21	C602 C603 C606, C609.	1 3	0.1uF 0.1uF 470pF	GCM155R71C104KA55D GRM155R60J104KA01D GRM1555C1H471JA01D	MuRata MuRata MuRata	CAP, CERM, 0.1 µF, 16 V, +/- 10%, X7R, 0402 CAP, CERM, 0.1 uF, 6.3 V, +/- 10%, X5R, 0402 CAP, CERM, 470 pF, 50 V,+/- 5%, COG/NP0, 0402	0402 0402 0402	
22	C610 C608	1	0.047uF	C1005X5R1A473K050BA	TDK	CAP, CERM, 0.047 µF, 10 V, +/- 10%, X5R, 0402	0402	
23	D1	1	200V	ES1D-13-F	Diodes Inc. Diodes Inc.	Diode, Ultrafast, 200 V, 1 A, SMA	SMA	
24 25	D2 D3	1	1.7V 100V	CGRM4007-G PDS5100-13	Diodes Inc.	Diode, Schottky, 100 V, 5 A, PowerDI5	SOD-123 PowerDI5	
26 27	D100, D104 D102	1	800V 1000V	US1K-13-F GBJ2510-F	Diodes Inc. Diodes Inc.	Diode, Fast Rectifier, 800 V, 1 A, SMA Diode, Switching-Bridge, 1000 V, 25 A, TH	SMA Diode Bridge, TH	
28	D105 D106	1	5.1V 40V	MMSZ4689T1G BAT165E6327HTSA1	ON Semiconductor Infineon Technologies	Diode, Zener, 5.1 V, 500 mW, SOD-123 Diode, Schotiky, 40 V, 0.75 A, AEC-Q101, SOD-323	SOD-123 SOD-323	
30 31	F100 J0	1	~	0324040.MXP	Littelfuse	Diode, Scholsky, 40 V, U.75 A, AEC-U101, SGD-323 Fuse, 40 A, 280 VAC, 150 VDC, TH Socket	3AB	
32	J600 J602, J603	1 2		HSEC8-160-01-L-DV-A-BL DF59-3S-2V(51)	Samtec Hirose Electric Co. Ltd.	Societ C2000 controlCARD-120HSEC connector, SMT Receptacle, 2mm, 3x1, Gold, Natural, SMT	C2000 pin numbering	
34	K1	1		T90S1D12-6	TE Connectivity	Relay, SPST-NO (1 Form A), 30 A, 5 V, TH	3x1, SMT 27 43x32 26mm	
35	L1	1	15 ohm	MMZ1608R150ATA00 G184014LF	TDK GCI Technologies	Ferrite Bead, 15 ohm @ 100 MHz, 1.5 A, 0603	0603 23 6x42 5mm	
36 37	L103, L104	2	260uH 2.5mH	7448052502	Wurth Elektronik	Inductor, Toroid, 260 µH, 0.038 ohm, TH CMC 2.5MH 25A 2LN TH	23.6x42.5mm 37x23mm	
38	P1, P2, P3, P4	4		Connectors for TIDA-01605	Sulins Connector Solutions	Connectors for driver daughter card (include one PPPC032LFBN-RC and two PPPC021LFBN-RC)		
39 40	Q1, Q2, Q3, Q4, Q5, Q6 Q7, Q8, Q9, Q10	6	1000V 1200V	C3M0065100K C2M0025120D	Cree	MOSFET, N-CH, 1000 V, 35 A, TO-247-4 MOSFET, N-CH, 1200 V, 90 A, TO-247	TO-247-4 TO-247	
41 42	Q11 Q12	1	1000V 70V	STD2NK100Z ZXMN7A11GTA	STMicroelectronics Diodes Inc.	MOSFET, N-CH, 1000 V, 1.85 A, DPAK MOSFET, N-CH, 70 V, 3.8 A, AEC-Q101, SOT-223	DPAK SOT-223	
43	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24	24	1.00Meg	CRCW12061MD0FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.25 W, 1206	1206	
44 45	R25 R35	1 1	10.0k 80.6k	CRCW060310K0FKEA CRCW060380K6FKEA	Vishay-Dale Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603 RES, 80.6 k, 1%, 0.1 W, 0603	0603 0603	
46 47	R36 R37	1 1	28.0k 20.0	CRCW060328K0FKEA RC0603FR-0720RL	Vishay-Dale Yageo America	RES, 28.0 k, 1%, 0.1 W, 0603 RES, 20.0, 1%, 0.1 W, 0603	0603 0603	
48 49	R38, R39	2	2.0Meg	CRCW12062M00UNEA RC1206FR-07300KL	Vishay-Dale	RES. 2.0 M. 5%, 0.25 W. 1206	1206	
50	R40 R41	1	300k 200	ERJ-6GEYJ201V	Yageo America Panasonic	RES, 300 k, 1%, 0.25 W, 1206 RES, 200, 5%, 0.125 W, 0806	1206 0805	
51 52	R42 R43	1 1	1.00k 2.7	CRCW06031K00FKEA CRCW08052R70JNEA	Vishay-Dale Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603 RES, 2.7, 5%, 0.125 W, 0805	0603	
53	R44 R45	1 1	20.5k 6.19k	RC0603FR-0720K5L RC0603FR-076K19L	Yageo America Yageo America	RES, 20.5 k, 1%, 0.1 W, 0603 RES, 6.19 k, 1%, 0.1 W, 0603	0603	
55	R100, R101, R102, R119, R121, R123, R602, R605, R607	9	361k	RT0805BRD07361KL	Yageo America	RES, 361 k, 0.1%, 0.125 W, 0805	0805	
56	R105, R106, R107, R108, R109, R110, R111, R112, R113	9	330k	CRCW1206330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.25 W, 1206	1206	
57 58	R116 R117	1	10.0k 12.7k	CRCW040210K0FKED CRCW040212K7FKED	Vishay-Dale Vishay-Dale	RES, 10.0k ohm, 1%, 0.063W, 0402 RES, 12.7k ohm, 1%, 0.063W, 0402	0402 0402	
59 60	R118, R120 R122	2	6.2 10.0k	CRCW12066R20JNEA RC0603FR-0710KL	Vishay-Dale Yageo America	RES, 6.2, 5%, 0.25 W, 1206 RES, 10.0k ohm, 1%, 0.1W, 0603	1206 0603	
61 62	R124 R125	1	5.49k 330k	CRCW04025K49FKED CRCW0402330KJNED	Vishay-Dale Vishay-Dale	RES, 5.49k ohm, 1%, 0.063W, 0402	0402	
63	R600, R603, R608, R630	4	1.40k	CRCW04021K40FKED	Vishay-Dale	RES, 1.40k ohm, 1%, 0.063W, 0402	0402	
64 65	R604 R606	1	10k 1.8k	CRCW040210K0JNED CRCW04021K80JNED	Vishay-Dale Vishay-Dale	RES, 10k ohm, 5%, 0.063W, 0402 RES, 1.8 k, 5%, 0.063 W, 0402	0402 0402	
66 67	R609 R610	1 1	5.49k 1.00k	CRCW08055K49FKEA CRCW04021K00FKED	Vishay-Dale Vishay-Dale	RES, 5.49 k, 1%, 0.125 W, 0805 RES, 1.00 k, 1%, 0.063 W, 0402	0805 0402	
68	R611 R614, R621, R625, R626, R634, R640, R641, R644, R645, R646	10	33.0	RC0402FR-0733RL CRCW04020000Z0ED	Yageo America Vishay-Dale	RES, 33.0, 1%, 0.062 W, 0402 RES, 0, 6%, 0.063 W, 0402	0402 0402	
70 71	R616, R617 R618, R620,	2	5.23k 4.99k	CRCW04025K23FKED CRCW04024K99FKED	Vishay-Dale Vishay-Dale	RES, 5.23 k, 1%, 0.063 W, 0402 RES, 4.99 k, 1%, 0.063 W, 0402	0402 0402	
72	R624, R635 R631, R632,	4	9.31k	CRCW04029K31FKED	Vishay-Dale Vishay-Dale	RES, 9.31 k, 1%, 0.063 W, 0402	0402	
73	R633, R636 RT100, RT101	2	50	B59751B0120A070	TDK EPCOS Inc	Thermistor NTC, 50 ohm, 25%, D12.5xH16.5mm	D12.5xH16.5mm	
74 75	RV100 T1	1		S10K275E2 7508110162	Wurth Elektronik	Varistor 275V RMS 10MM Radial, TH Transformer, TH	10mm Radial 20.45x10.16x13.72m m	
76 77	TP100, TP101 TP102, TP103	2	Red Black	5000	Keystone Keystone	Test Point, Miniature, Red, TH Test Point, Miniature, Black, TH	Red Miniature Testpoint Black Miniature	
78	U1	1		UCC28700QDBVRQ1	Texas Instruments	Constant-Voltage Constant-Current Controller With Primary-Side	Testpoint DBV0006A	
79	U2	1		TL1963AQKTTRQ1	Texas Instruments	Regulation, DBV0006A (SOT-23-6) Single Output Fast Transient Response LDO, 1.5 A, Adjustable 1.21 to 20 V Output, 2.1 to 20 V Input, 5-pin DDPAK (KTT), -40 to 125 degC, Green (RoAlS & en Shift)	KTT0005A	
80	U100, U102, U104 U101	3		ACS722LLCTR-20AB-T ACS716KLATR-25CB-NL-T	Allegro Microsystems Inc Allegro Microsystems Inc	High Accuracy, Galvanically Isolated Current Sensor IC, SOIC-8 SENSOR CURRENT HALL 25A AC/DC	SOIC-8 SOIC, 16-Leads, Body 10.3x7.5mm,	
81				TLV71333PQDBVRQ1	Texas Instruments	Capacitor-Free, 150-mA, Low-Dropout Regulator with Foldback Current Limit for Portable Devices, DBV0005A	Pitch 1.27mm DBV0005A	
82	U103, U203	2						
82	U601	1		OPA2376AQDRQ1	Texas Instruments	Precision, Low Noise, Low Quiescent Current Operational Amplifier, 2 to 5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	D0008A	
82 83 84	U601 U602	1		OPA2376AQDRQ1 ISO7831DWR	Texas Instruments	5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RcHS & no Sb/Br) High-Performance, 8000 VPK Reinforced Triple Digital Isolator, DW0016B	DW0016B	
82 83 84 85 86	U802 FID1, FID2, FID3 R801	1 0 0	2.00k	ISO7831DWR N/A CRCW04022K00FKED	Texas Instruments N/A Vishay-Dale	5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no StrBr) High-Performance, 8000 VPK Reinforced Triple Digital Isolator, DW00168 Fliducial mark. There is nothing to buy or mount. RSS. 2.00 k, 1%, 0.063 W, 0.005	DW0016B Fiducial 0402	
82 83 84 85	U601 U602 FID1, FID2, FID3	1 0	2.00k 4.87k 10.0k	ISO7831DWR NA	Texas Instruments N/A	5.5 V, -40 to 125 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br) High-Performance, 8000 VPK Reinforced Triple Digital Isolator, DW0016B Fiducial mark. There is nothing to buy or mount.	DW0016B Fiducial	

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