

## TIDA-010237 REV E3 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		TIDA-010237	Any	Printed Circuit Board	
C1	1	22uF	CL32B226KAJNFNE	Samsung Electro-Mechanics	CAP, CERM, 22 $\mu$ F, 25 V,+/- 10%, X7R, 1210	1210
C2	1	0.1uF	06035C104KAZ2A	AVX	CAP, CERM, 0.1 $\mu$ F, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C3, C4, C5, C7, C8, C10, C11, C14, C15, C17, C18, C24, C25, C26, C27	14	0.1uF	EMK107B7104KA-T	Taiyo Yuden	CAP, CERM, 0.1 $\mu$ F, 16 V, +/- 10%, X7R, 0603	0603
C6, C9, C16, C19	4	1uF	EMK107B7105KAHT	Taiyo Yuden	CAP, CERM, 1 $\mu$ F, 16 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C12	1	2200pF	GRM1885C1H222JA01D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C13	1	22uF	1206YD226KAT2A	kyocera	General Purpose Ceramic Capacitor, 1206, 22uF, 10%, X5R, 15%, 16V	1206
C21	1	1 $\mu$ F	GMC10X7R105K50NT	Cal-Chip Electronics	1 $\mu$ F $\pm$ 10% 50V Ceramic Capacitor X7R 0603 (1608 Metric)	0603
C22	1	2.2uF	EMK107BB7225MA-T	Taiyo Yuden	CAP, CERM, 2.2 $\mu$ F, 16 V,+/- 10%, X7R, 0603	0603
C23	1	47uF	GRM32EC81C476KE15K	Murata	Chip Multilayer Ceramic Capacitors for General Purpose, 1210, 47uF, X6S, 22%, 10%, 16V	1210
D1, D5	2		SML-D12U8WT86C	Rohm	LED RED 1608 SMD	
D4	1		SML-D12P8WT86	Rohm	LED GREEN DIFFUSED 0603 SMD	
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J1, J8	2		PEC03SAAN	Sullins Connector Solutions	Header, 100mil, 3x1, Tin, TH	Header, 3 PIN, 100mil, Tin
J2, J3	2		SSQ-110-03-T-D	Samtec	Receptacle, 2.54mm, 10x2, Tin, TH	10x2 Receptacle
J4, J5, J6, J7	4		6.91138E+11	Würth Electronics	Term BLK 2pos side entry 5mm PCB	
Q1, Q2	2		BC847C,235	Nexperia	TRANS NPN 45V 100MA TO236AB	TO236AB
R1, R2, R5, R6, R28, R29, R33, R36, R41, R46, R48, R50	12	0	5.60112E+11	Würth Electronics	0 Ohms Jumper Chip Resistor 0603 (1608 Metric) Anti-Sulfur Thick Film	0603
R3	1	3	CRCW12063R00JNEA	Vishay-Dale	RES Thick Film, 3 $\Omega$ , 5%, 0.25W, 200ppm/ $^{\circ}$ C, 1206	0603
R4	1	536k	CRCW0603536KFKEA	Vishay-Dale	RES, 536 k, 1%, 0.1 W, 0603	0603
R7, R10	2	1.07k	CRCW06031K07FKEA	Vishay-Dale	RES, 1.07 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R8	1	75k	CRCW060375K0JNEA	Vishay-Dale	RES, 75 k, 5%, 0.1 W, 0603	0603
R9	1	143k	RC0603FR-07143KL	Yageo	RES, 143 k, 1%, 0.1 W, 0603	0603
R11	1	1.00Meg	MCT06030C1004FP500	Vishay/Beyschlag	RES, 1.00 M, 1%, 0.125 W, 0603	0603
R12, R18, R31, R60, R61	5	1.30k	RC0603FR-071K3L	Yageo	RES, 1.30 k, 1%, 0.1 W, 0603	0603
R13	1	1.18k	CRCW06031K18FKEA	Vishay-Dale	RES, 1.18 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14	1	75	CRCW060375R0JNEA	Vishay-Dale	RES, 75, 5%, 0.1 W, 0603	0603
R15	1	1.00k	ERA3AEB102V	Panasonic	RES, 1.00 k, 0.1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16	1	750	CRCW0603750RFKEA	Vishay-Dale	RES, 750, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R17	1	6.19k	RT0603BRD076K19L	Yageo America	RES, 6.19 k, 0.1%, 0.1 W, 0603	0603
R19	1	18.7k	RT0603BRD0718K7L	Yageo America	RES, 18.7 k, 0.1%, 0.1 W, 0603	0603
R21, R58, R59	3	118	RC0603FR-07118RL	Yageo	RES, 118, 1%, 0.1 W, 0603	0603
R22, R38	2	147	RC0603FR-07147RL	Yageo	RES, 147, 1%, 0.1 W, 0603	0603
R25, R26, R34, R35, R42, R43, R44, R53	9	10.0k	RC0603FR-0710KL	Yageo	RES, 10.0 k, 1%, 0.1 W, 0603	0603

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R27	1	35.7k	RC0603FR-0735K7L	Yageo	RES, 35.7 k, 1%, 0.1 W, 0603	0603
R30	1	2.7k	RC0603JR-072K7L	Yageo	RES, 2.7 k, 5%, 0.1 W, 0603	0603
R31	1	2.87k	RC0603FR-072K87L	Yageo	RES, 2.87 k, 1%, 0.1 W, 0603	0603
R32, R39, R45	5	23.2k	CRCW060323K2FKEA	Vishay-Dale	RES, 23.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R37	1	9.76k	RC0603FR-079K76L	Yageo	9.76 kOhms ±1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thick Film	0603
R40	1	18.2k	RT0603DRE0718K2L	Yageo	RES, 18.2 k, 0.5%, 0.1 W, 0603	0603
R47, R52	2	2.49k	CRCW06032K49FKEA	Vishay-Dale	RES, 2.49 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R49	1	10.5k	CRCW060310K5FKEA	Vishay-Dale	RES, 10.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R51	1	12.1k	RT0603DRE0718K2L	Yageo	18.2 kOhms ±0.5% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Thin Film	0603
R54	1	75.0k	RC0603FR-0775KL	Yageo	RES, 75.0 k, 1%, 0.1 W, 0603	0603
R55	1	24.0k	RC0603FR-0724KL	Yageo	RES, 24.0 k, 1%, 0.1 W, 0603	0603
R56, R57	2	270	RC0603JR-07270RL	Yageo	RES, 270, 5%, 0.1 W, 0603	0603
S1, S2	2		FSM4JSMA	TE Connectivity	Switch, Tactile, SPST-NO, 0.05A, 12V, SMT	SW, SPST 6x6 mm
TP1, TP3, TP6, TP8, TP9, TP10	6				Test Point, White, Through Hole, RoHS, Bulk	5012
TP4, TP12, TP22, TP23	4			Keystone	Test Point, Red, Through Hole, RoHS, Bulk	5010
TP13, TP14, TP15, TP16, TP17, TP19	6			Keystone	Test Point, Black, Through Hole, RoHS, Bulk	5011
U1	1		DRV8220DRLR	Texas Instruments	18V, 1A H-bridge motor driver, PWM, PH/EN, ½ bridge control, with low power sleep mode	SOT563
U2	1			Texas Instruments	IC FF D-TYPE SNGL 1BIT US8	
U3	1		INA293A1IDBVR	Texas Instruments	INA293 High-Voltage, High Bandwidth, Unidirectional, 110-V Common-Mode, Current-Sense Amplifier, DBV0005A (SOT-23-5)	DBV0005A
U4	1		TLV7011DCKR	Texas Instruments	Low power, small size comparator with push-pull output, DCK0005A (SOT-SC70-5)	DCK0005A
U5	1		OPA2323IDGKR	Texas Instruments	Dual, 5.5V, 20MHz, zero-cross low-noise (6nV/√Hz) RRIO operational amplifier 8-VSSOP -40 to 125	VSSOP8
U6	1		INA600AIDBVR	Texas Instruments	40V, wide common-mode voltage (-40V to 85V) difference amplifier with fixed attenuation ratios 6-SOT-23 -40 to 125	SOT23-6
U7	1		OPA4383PWR	Texas Instruments	Quad, zero-drift, micropower (65µA), high speed-to-power ratio (2.5MHz) RRIO operational amplifier 14-TSSOP -40 to 125	TSSOP-14
U8, U10	2		TLV9022LRUG	Texas Instruments	Precision, Self-Latching Comparator	X2QFN10
U9	1		SN74AHCT1G08DBVT	Texas Instruments	Single 2-Input Positive-AND Gate, DBV0005A (SOT-23-5)	DBV0005A
U11	1		TLV76701DRVR	Texas Instruments	1-A, Positive Voltage Regulator, DRV0006A (WSON-6)	DRV0006A
U12	1		TLV431BQDBZR	Texas Instruments	Low-Voltage Adjustable Precision Shunt Regulator, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A

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