

TIDA-020001 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB	1		TIDA-020001	Any	Printed Circuit Board	
C1, C19	2	100pF	04025A101FAT2A	AVX	CAP, CERM, 100 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C2, C20	2	0.1uF	GRM188R71C104KA01D	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, 0603	0603
C3, C12	2	1000pF	08051A102JAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 5%, C0G/NP0, 0805	0805
C4, C21	2	4.7uF	C3216X7R1H475K160AC	TDK	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, 1206	1206
C5, C22, C31	3	0.1uF	C2012X5R1H104M085AA	TDK	CAP, CERM, 0.1 uF, 50 V,+/- 20%, X5R, 0805	0805
C6	1	1uF	C3216X7R2A105K160AA	TDK	CAP, CERM, 1 uF, 100 V, +/- 10%, X7R, 1206	1206
C7	1	1uF	C1005X5R1E105K050BC	TDK	CAP, CERM, 1 uF, 25 V,+/- 10%, X5R, 0402	0402
C8	1	1000pF	885012205044	Wurth Elektronik	CAP, CERM, 1000 pF, 25 V,+/- 10%, X7R, 0402	0402
C9, C11	2	0.1uF	GMK105BJ104KV-F	Taiyo Yuden	CAP, CERM, 0.1 uF, 35 V,+/- 10%, X5R, 0402	0402
C10	1	0.01uF	08055C103JAT2A	AVX	CAP, CERM, 0.01 uF, 50 V,+/- 5%, X7R, 0805	0805
C13, C23	2	0.022uF	C0603C223K5RACTU	Kemet	CAP, CERM, 0.022 uF, 50 V, +/- 10%, X7R, 0603	0603
C14, C15, C26, C27	4	10uF	CL21B106KOQNNNE	Samsung Electro-Mechanics	CAP, CERM, 10 uF, 16 V, +/- 10%, X7R, 0805	0805
C16, C28	2	2.2uF	C0805C225K4RACTU	Kemet	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0805	0805
C17	1	0.47uF	C2012X5R1H474K125AB		CAP, CERM, 0.47 uF, 50 V, +/- 10%, X5R, 0805	0805
C18	1	22uF	C3216X5R1V226M160AC	TDK	CAP, CERM, 22 uF, 35 V, +/- 20%, X5R, 1206	1206
C24, C25, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C77, C88	14	10uF	GRM188R61E106MA73D	MuRata	CAP, CERM, 10 uF, 25 V, +/- 20%, X5R, 0603	0603
C29	1	22uF	JMK212BJ226KG-T	Taiyo Yuden	CAP, CERM, 22 uF, 6.3 V,+/- 10%, X5R, 0805	0805
C30	1	10uF	GRM219R61E106KA12D	MuRata	CAP, CERM, 10 uF, 25 V,+/- 10%, X5R, 0805	0805
C500	1	0.1uF	GRM188R71H104KA93D	MuRata	CAP, CERM, 0.1 uF, 50 V,+/- 10%, X7R, 0603	0603

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D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96, D97, D98,	144		KW DNLS31.RA-6G7H- FK0PM0-22C2	OSRAM	LED, White, SMD	2.3x1.4mm
D01	1	Red	LTST-C170KRKT	Lite-On	LED, Red, SMD	Red 0805 LED
D145	1	14V	SMBJ14A-13-F	Diodes Inc.	Diode, TVS, Uni, 14 V, 600 W, SMB	SMB
D146, D147	2	60V	PDS560-13	Diodes Inc.	Diode, Schottky, 60 V, 5 A, PowerDI5	PowerDI5
D148	1	28V	SMBJ28A-13-F	Diodes Inc.	Diode, TVS, Uni, 28 V, 600 W, SMB	SMB
H1, H2, H3, H4, H5	5		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
H6, H7, H8, H9, H10	5		2205	Keystone	Standoff, Hex, 1"L #4-40 Aluminum	1 inch Aluminum Hex Standoff
J1, J2	2		61301011121	Würth Elektronik	Header, 2.54mm, 10x1, Gold, TH	Header, 2.54mm, 10x1, TH
L1	1	1uH	XEL4030-102MEB	Coilcraft	Inductor, Shielded, Composite, 1 uH, 9 A, 0.0089 ohm, AEC-Q200 Grade 1, SMD	4x4mm
L2, L3	2	1.5uH	XEL4030-152MEB	Coilcraft	Inductor, Shielded, Composite, 1.5 uH, 8.1 A, 0.0151 ohm, AEC-Q200 Grade 1, SMD	4x4mm
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
Q1	1	40V	SQJ412EP-T1-GE3	Vishay-Siliconix	MOSFET, N-CH, 40 V, 32 A, PowerPAK_SO-8L	PowerPAK_SO-8L
R1, R34, R35	3	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R2	1	11.8k	CRCW060311K8FKEA	Vishay-Dale	RES, 11.8 k, 1%, 0.1 W, 0603	0603
R3	1	3.74k	RG1608P-3741-B-T5	Susumu Co Ltd	RES, 3.74 k, 0.1%, 0.1 W, 0603	0603
R4	1	510	RG1608P-511-B-T5	Susumu Co Ltd	RES, 510, 0.1%, 0.1 W, 0603	0603

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R5, R7, R8, R10, R12, R16, R18	7	1.6k	CRCW06031K60JNEA	Vishay-Dale	RES, 1.6 k, 5%, 0.1 W, 0603	0603
R6, R19	2	10	CRCW040210R0JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R9, R21	2	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R11, R22	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R13	1	100	RC0603FR-07100RL	Yageo	RES, 100, 1%, 0.1 W, 0603	0603
R14, R23	2	23.2k	RC0603FR-0723K2L	Yageo	RES, 23.2 k, 1%, 0.1 W, 0603	0603
R15, R20	2	4.70k	RC0603FR-074K7L	Yageo America	RES, 4.70 k, 1%, 0.1 W, 0603	0603
R17, R24, R25	3	10.0k	RMCF0603FT10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R26, R27, R29, R30, R33	5	0	CRCW08050000Z0EA	Vishay-Dale	RES, 0, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R28, R32	2	3.3	CRCW04023R30JNED	Vishay-Dale	RES, 3.3, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R31	1	0.33	ERJ-3RQFR33V	Panasonic	RES, 0.33, 1%, 0.1 W, 0603	0603
R57	1	1.00k	RNCF0603TKY1K00	Stackpole Electronics Inc	RES, 1.00 k, 0.01%, 0.063 W, 0603	0603
R58	1	3.30k	RC0603FR-073K3L	Yageo America	RES, 3.30 k, 1%, 0.1 W, 0603	0603
TP1, TP12	2		5004	Keystone	Test Point, Miniature, Yellow, TH	Yellow Miniature Testpoint
TP2, TP3, TP6, TP8, TP10	5		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP4, TP5, TP7, TP9, TP11	5		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1, U6	2		LMR14030SQDDARQ1	Texas Instruments	Automotive 40V, 3.5A SIMPLE SWITCHER(R), 2.2MHz Step-Down Regulator with 40uA IQ, DDA0008E (SOIC-8)	DDA0008E
U2	1		LM74700QDBVRQ1	Texas Instruments	Low Iq Always ON Smart Diode Controller, DBV0006A (SOT-23-6)	DBV0006A
U3	1		TPS7A5201QRGRRQ1	Texas Instruments	Automotive-Grade 2-A, High-Accuracy, Low-Noise, LDO Voltage Regulator, RGR0020A (VQFN-20)	RGR0020A
U4	1		TPS22918QDBVRQ1	Texas Instruments	5.5-V, 2-A, 54mohm On-Resistance Load Switch, DBV0006A (SOT-23-6)	DBV0006A
U5	1		OPT3001IDNPRQ1	Texas Instruments	Ambient Light Sensor (ALS), DNP0006A (USON-6)	DNP0006A
U8, U9, U10, U11	4		TLC6C5724QDAPRQ1	Texas Instruments	24-Channel, Full Diagnostics, Constant-Current LED Driver with 7-Bit Dot Correction and 12-Bit PWM Dimming, DAP0038E (TSSOP-38)	DAP0038E
U12, U13, U14	3		TLC6C5716QDAPRQ1	Texas Instruments	Automotive Grade 16-Channel, Full Diagnostics, Constant-Current LED Driver with 7-Bit Dot Correction and 12-Bit PWM Dimming, DAP0038E (TSSOP-38)	DAP0038E
U500	1		LMT87QDCKRQ1	Texas Instruments	Automotive Grade, 2.7V-Capable, 10 uA Analog Output Temperature Sensor, DCK0005A (SOT-SC70-5)	DCK0005A
Vbatt1	1		691213710002	Würth Elektronik	Terminal Block, 2x1, Brass, TH	Terminal Block, 2-Leads, Body 10x8.3mm, Pitch 5mm

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