

Variant: None
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 TID #: TIDA-010941



TIDA-010941 REV A Bill of Materials

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
1	!PCB1	1		TIDA-010941	Any	Printed Circuit Board	
2	BT1	1	9 V	1294	Keystone	9 V Molded Battery Holder, TH	9 V Molded Battery Holder, TH
3	C1	1	1.9pF	GRM1555C1H1R9WA01D	MuRata	CAP, CERM, 1.9 pF, 50 V, +/- 3%, C0G/NP0, 0402	0402
4	C2	1	15pF	GRM1555C1H150JA01D	MuRata	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
5	C3, C6, C24	3	0.1uF	GRM155R61A104KA01D	MuRata	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X5R, 0402	0402
6	C4, C7, C14, C17, C22, C23, C25, C26	8	1uF	GRM155R61E105KA12D	MuRata	CAP, CERM, 1 uF, 25 V, +/- 10%, X5R, 0402	0402
7	C5, C30	2	10uF	C0402C106M9PACTU	Kemet	CAP, CERM, 10 uF, 6.3 V, +/- 20%, X5R, 0402	0402
8	C8, C13, C16	3	0.1uF	GRM155R61H104ME14D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X5R, 0402	0402
9	C9	1	12pF	GRM1555C1E120JA01D	MuRata	CAP, CERM, 12 pF, 25 V, +/- 5%, C0G/NP0, 0402	0402
10	C10	1	68pF	GRM1555C1H680JA01D	MuRata	CAP, CERM, 68 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
11	C11, C19	2	1000pF	GRM1555C1H102JA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
12	C12, C27	2	0.1uF	C0402C104K8RACTU	Kemet	CAP, CERM, 0.1 uF, 10 V, +/- 10%, X7R, 0402	0402
13	C15, C18, C32, C35	4	10uF	CL05A106MP8NUB8	Samsung Electro-Mechanics	CAP, CERM, 10 uF, 10 V, +/- 20%, X5R, 0402	0402
14	C21	1	0.47uF	GRM155R61E474KE01D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X5R, 0402	0402
15	C31, C37	2	22uF	GRM187R61A226ME15D	MuRata	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603
16	C33	1	4.7uF	C1005X5R1A475K050BC	TDK	CAP, CERM, 4.7 uF, 10 V, +/- 10%, X5R, 0402	0402
17	C34	1	1000pF	GRM155R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0402	0402
18	C36	1	0.47uF	GRM155R61A474KE15D	MuRata	CAP, CERM, 0.47 uF, 10 V, +/- 10%, X5R, 0402	0402
19	C38	1	22uF	GRM188R61A226ME15D	MuRata	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0603	0603
20	D1	1	30V	BAT54C-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
21	D2	1		SFH 213	OSRAM	Silicon PIN Photodiode, TH	D5.7xH9mm
22	D3	1	RGB	19-337/R6GHBHC-A01/2T	Everlight	LED, RGB, TH	1.6x1.6mm
23	D4	1		TSAL6100	Vishay	High Power Infrared Emitting Diode, 940 nm, GaAlAs, MQW	RADIAL
24	D5	1		C503B-BAN-CZ0A0451	Cree	Blue 470nm LED Indication - Discrete 3.2V Radial	RADIAL
25	D6	1	15V	SMAJ15CA	Littelfuse	Diode, TVS, Bi, 15 V, 24.4 Vc, 400 W, 16.4 A, SMA (non-polarized)	SMA (non-polarized)
26	D8, D9, D10, D11, D12, D13, D15, D16	8	3.3V	ESD9R3.3ST5G	ON Semiconductor	Diode, TVS, Uni, 3.3 V, SOD-923	SOD-923
27	D14	1		ESD9C5.0ST5G	onsemi	ESD Suppressor TVS Uni-Dir 5V 2-Pin SOD-923 T/R	SOD923
28	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
29	H1, H2, H3, H4	4		MAE-10	Kang Yang	Spacer Support, Nylon 66	Spacer Nylon Support
30	J1, J2, J3, J6, J7, J8	6		61300211121	Würth Elektronik	Header, 2.54 mm, 2x1, Gold, TH	Header, 2.54mm, 2x1, TH
31	J4	1		61300411121	Würth Elektronik	Header, 2.54 mm, 4x1, Gold, TH	Header, 2.54mm, 4x1, TH
32	J5	1		TSW-110-08-G-S	Samtec	Header, 2.54mm, 10x1, Gold, TH	Header, 2.54mm, 10x1, TH
33	L1	1	1000 ohm	MPZ1608S102ATA00	TDK	Ferrite Bead, 1000 ohm @ 100 MHz, 0.8 A, 0603	0603
34	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
35	Q3, Q4	2	30V	NX3020NAKW,115	Nexperia	MOSFET, N-CH, 30 V, 0.18 A, SOT-323	SOT-323
36	R1	1	150k	CRCW0402150KFKED	Vishay-Dale	RES, 150 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
37	R2	1	249k	RG1608P-2493-B-T5	Susumu Co Ltd	RES, 249 k, 0.1%, 0.1 W, 0603	0603
38	R3, R29	2	499	CRCW0402499RFKED	Vishay-Dale	RES, 499, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
39	R4	1	28.0k	CRCW040228K0FKED	Vishay-Dale	RES, 28.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

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40	R5, R7, R9	3	10.0Meg	RC0603FR-0710ML	Yageo	RES, 10.0 M, 1%, 0.1 W, 0603	0603
41	R6, R27	2	38.3	ERJ-8ENF38R3V	Panasonic	RES, 38.3, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
42	R8	1	309k	RC0603FR-07309KL	Yageo	RES, 309 k, 1%, 0.1 W, 0603	0603
43	R10, R28	2	100	ERJ-8ENF1000V	Panasonic	RES, 100, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
44	R11	1	100k	RG1005P-104-B-T5	Susumu Co Ltd	RES, 100 k, 0.1%, 0.063 W, 0402	0402
45	R12, R13	2	2.4k	CRCW04022K40JNED	Vishay-Dale	RES, 2.4 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
46	R14, R15, R16, R26	4	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
47	R17	1	47.0k	RC0402FR-0747KL	Yageo America	RES, 47.0 k, 1%, 0.0625 W, 0402	0402
48	R18	1	110	CRCW0402110RJNED	Vishay-Dale	RES, 110, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
49	R19	1	15	CRCW040215R0JNED	Vishay-Dale	RES, 15, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
50	R20	1	24	CRCW040224R0JNED	Vishay-Dale	RES, 24, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
51	R21, R24	2	100k	CRCW0201100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.05 W, 0201	0201
52	R22, R23	2	100	CRCW0402100RJNED	Vishay-Dale	RES, 100, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
53	R25	1	0.47	ERJ-3RQFR47V	Panasonic	RES, 0.47, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
54	S1	1		1188E-1K2-V-TR	Diptronics	Switch, SPST, 0.05 A, 12 VDC, SMD	7.8x3.5mm
55	U1	1		TS5A623157DGSR	Texas Instruments	DUAL 10-Ohm SPDT ANALOG SWITCH WITH UNDERSHOOT/OVERSHOOT VOLTAGE PROTECTION, DGS0010A (VSSOP-10)	DGS0010A
56	U2	1		TPS7A2433DBVR	Texas Instruments	1µA, Ultra-Low Iq, 200mA Low-Dropout Regulator in a Small-Size Package, DBV0005A (SOT-23-5)	DBV0005A
57	U3	1		TPS7A2450DBVR	Texas Instruments	Linear Voltage Regulator IC 1 Output 200mA SOT-23-5	SOT23-5
58	U4	1		MSPM0L1306SRHB	Texas Instruments	MSPM0L130x Mixed-Signal Microcontrollers	VQFN32
59	U5	1		TLV9062SIDGSR	Texas Instruments	10-MHz, low-noise, RRIO, CMOS operational amplifier for cost-sensitive systems, DGS0010A (VSSOP-10)	DGS0010A
60	U6	1		SN74LVC1G66DBVR	Texas Instruments	Single Analog Switch, DBV0005A (SOT-23-5)	DBV0005A
61	U10	1		HDC2010YPAR	Texas Instruments	HDC2010 Low Power Humidity and Temperature Digital Sensor, YPA0006ABAB (DSBGA-6)	YPA0006ABAB

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