

TIDA-01515 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1, C2	2	0.047uF	CGA2B3X7R1H473K050BB	TDK	CAP, CERM, 0.047 μ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C3, C4, C5, C6, C7, C8	6	22uF	C2012X5R1V226M125AC	TDK	CAP, CERM, 22 μ F, 35 V, +/- 20%, X5R, 0805	0805
C9, C22, C23, C32	4	1uF	GRM155R6YA105KE11D	MuRata	CAP, CERM, 1 μ F, 35 V, +/- 10%, X5R, 0402	0402
C13, C20	2	0.033uF	CGA2B3X7R1H333K050BB	TDK	CAP, CERM, 0.033 μ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C17, C40, C41, C42, C43	5	0.01uF	CGA2B3X7R1H103K050BB	TDK	CAP, CERM, 0.01 μ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C18	1	0.47uF	GCM21BR71H474KA55L	MuRata	CAP, CERM, 0.47 μ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C19, C44, C54	3	0.1uF	CL03A104KP3NNNC	Samsung	CAP, CERM, 0.1 μ F, 10 V, +/- 10%, X5R, 0201	0201
C21	1	2.2uF	C1005X5R1A225K050BC	TDK	CAP, CERM, 2.2 μ F, 10 V, +/- 10%, X5R, 0402	0402
C24, C36	2	10uF	C2012X5R1V106K085AC	TDK	CAP, CERM, 10 μ F, 35 V, +/- 10%, X5R, 0805	0805
C25, C26	2	100pF	C0603C101J5GAC	Kemet	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C27, C50, C51, C52	4	10uF	CL05A106MP5NUNC	Samsung	CAP, CERM, 10 μ F, 10 V, +/- 20%, X5R, 0402	0402
C28	1	33pF	GRM1555C1H330JA01D	MuRata	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C29	1	15pF	GRM1555C1H150JA01D	MuRata	CAP, CERM, 15 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C30	1	1800pF	GRM155R71H182KA01D	MuRata	CAP, CERM, 1800 pF, 50 V, +/- 10%, X7R, 0402	0402
C31	1	680pF	GRM1555C1H681JA01D	MuRata	CAP, CERM, 680 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C33, C37	2	0.1uF	C1005X5R1H104K050BB	TDK	CAP, CERM, 0.1 μ F, 50 V, +/- 10%, X5R, 0402	0402
C34	1	10uF	GRM188R6YA106MA73	Nichicon	CAP, CERM, 10 μ F, 35 V, +/- 20%, X5R, 0603	0603
C35	1	0.1uF	GRM033C81E104KE14D	MuRata	CAP, CERM, 0.1 μ F, 25 V, +/- 10%, X6S, 0201	0201
C38, C39	2	22uF	C1608X5R1A226M080AC	TDK	CAP, CERM, 22 μ F, 10 V, +/- 20%, X5R, 0603	0603
C45	1	1uF	CL03A105MP3NSNC	Samsung	CAP, CERM, 1 μ F, 10 V, +/- 20%, X5R, 0201	0201
C46	1	100uF	T495C107K016ZTE200	Kemet	CAP, TA, 100 μ F, 16 V, +/- 10%, 0.2 ohm, SMD	6032-28
C47	1	4.7uF	C1005X5R1A475K050BC	TDK	CAP, CERM, 4.7 μ F, 10 V, +/- 10%, X5R, 0402	0402
C48, C49	2	330pF	GRM033R71C331KA01D	MuRata	CAP, CERM, 330 pF, 16 V, +/- 10%, X7R, 0201	0201
C53	1	22uF	GRM155R60J226ME11D	MuRata	CAP, CERM, 22 μ F, 6.3 V, +/- 20%, X5R, 0402	0402
C56, C60, C61, C62	4	0.1uF	GRM033C71A104KE14D	MuRata	CAP, CERM, 0.1 μ F, 10 V, +/- 10%, X7S, 0201	0201
C57	1	0.1uF	CGA2B3X7R1H104K050BB	TDK	CAP, CERM, 0.1 μ F, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C58	1	0.22uF	C1608X6S1H224K080AB	TDK	CAP, CERM, 0.22 μ F, 50 V, +/- 10%, X6S, 0603	0603
C59	1	2.2uF	C1005X5R1E225K050BC	TDK	CAP, CERM, 2.2 μ F, 25 V, +/- 10%, X5R, 0402	0402
C105	1	1uF	C1005JB1V105K050BC	TDK	CAP, CERM, 1 μ F, 35 V, +/- 10%, JB, 0402	0402
Cell 1, Cell 2, J1, J2	4		5019	Keystone	Test Point, Miniature, SMT	Test Point, Miniature, SMT
D1, D2, D4	3	15V	DB2S20500L	Panasonic	Diode, Schottky, 15 V, 0.2 A, SOD-523	SOD-523
D3	1	30V	NSR20F30NXT5G	ON Semiconductor	Diode, Schottky, 30 V, 2 A, 2-XDFDN	2-XDFDN
D5, D6, D7, D8, D12	5	Blue	150060BS75000	Würth Elektronik	LED, Blue, SMD	LED_0603
D9	1	30V	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323
D10	1	Green	150060VS75000	Würth Elektronik	LED, Green, SMD	LED_0603
D11	1	Orange	LTST-C191KFKT	Lite-On	LED, Orange, SMD	LED_0603
J3	1		12401548E4#2A	Amphenol Canada	Connector, Receptacle, USB Type C, R/A, TH	Connector, Receptacle, USB Type C, R/A, TH

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
J4	1		KUSBEX-SMT2-AS1N-B30TR	Kycon Inc	Connector, Receptacle, USB Type A, R/A, SMT	Connector, Receptacle, USB Type A, R/A, SMT
J5	1		GRPB081VWVN-RC	Sullins Connector Solutions	Header, 1.27mm, 8x1, Gold, TH	Header, 1.27mm, 8x1, TH
J6	1		850-10-004-40-001000	Mill-Max	Header, 50mil, 4x1, Gold, R/A, SMT	Header, 50mil, R/A,SMT
L1	1	2.2uH	IHLP2020CZER2R2M01	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 2.2 µH, 5.8 A, 0.0292 ohm, SMD	5.18x3x5.5mm
L3	1	3.3uH	IHLP2020CZER3R3M01	Vishay-Dale	Inductor, Shielded Drum Core, Powdered Iron, 3.3 µH, 5 A, 0.0547 ohm, SMD	5.18x3x5.5mm
Q1, Q2, Q3, Q4	4	30V	CSD17551Q3A	Texas Instruments	MOSFET, N-CH, 30 V, 12 A, DNH0008A (VSONP-8)	DNH0008A
Q5	1	-20V	CSD25402Q3A	Texas Instruments	MOSFET, P-CH, -20 V, -15 A, DNH0008A (VSONP-8)	DNH0008A
Q6, Q7	2	20V	CSD15380F3	Texas Instruments	MOSFET, N-CH, 20 V, 0.5 A, YJM0003A (PICOSTAR-3)	YJM0003A
Q11	1	-30V	FDN358P	Fairchild Semiconductor	MOSFET, P-CH, -30 V, -1.5 A, SSOT-3	SSOT-3
Q12, Q13	2	30V	CSD17571Q2	Texas Instruments	MOSFET, N-CH, 30 V, 22 A, DQK0006C (WSON-6)	DQK0006C
R1, R8	2	0.01	WSLT2512R0100FEA	Vishay-Dale	RES, 0.01, 1%, 1 W, 2512	2512
R2, R5	2	4.99	CRCW04024R99FKED	Vishay-Dale	RES, 4.99, 1%, 0.063 W, 0402	0402
R3	1	2.2	CRM1206-JW-2R2ELF	Bourns	RES, 2.2, 5%, 0.5 W, 1206	1206
R4	1	1.0	CRCW04021R00JNED	Vishay-Dale	RES, 1.0, 5%, 0.063 W, 0402	0402
R6, R7, R10	3	10	CRCW04021R00JNED	Vishay-Dale	RES, 10, 5%, 0.063 W, 0402	0402
R9, R11, R14	3	100k	RC0201FR-7D100KL	Yageo America	RES, 100 k, 1%, 0.05 W, 0201	0201
R12	1	64.9k	CRCW040264K9FKED	Vishay-Dale	RES, 64.9 k, 1%, 0.063 W, 0402	0402
R13	1	137k	CRCW0402137KFKED	Vishay-Dale	RES, 137 k, 1%, 0.063 W, 0402	0402
R15	1	30k	CRCW040230K0JNED	Vishay-Dale	RES, 30 k, 5%, 0.063 W, 0402	0402
R16, R20, R37	3	270k	CRCW0402270KJNED	Vishay-Dale	RES, 270 k, 5%, 0.063 W, 0402	0402
R17, R26, R32, R34, R35, R36, R40	7	100k	CRCW0402100KFKED	Vishay-Dale	RES, 100 k, 1%, 0.063 W, 0402	0402
R18	1	40.2k	CRCW040240K2FKED	Vishay-Dale	RES, 40.2 k, 1%, 0.063 W, 0402	0402
R19	1	10k	CRCW040210K0JNED	Vishay-Dale	RES, 10 k, 5%, 0.063 W, 0402	0402
R21, R22, R24, R33, R50, R55, R80	7	10.0k	CRCW020110K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.05 W, 0201	0201
R23	1	54.9k	CRCW040254K9FKED	Vishay-Dale	RES, 54.9 k, 1%, 0.063 W, 0402	0402
R25, R64	2	10.0k	CRCW040210K0FKED	Vishay-Dale	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R27, R28, R29, R30, R47	5	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201
R31	1	5.10k	RC0201FR-075K1L	Yageo America	RES, 5.10 k, 1%, 0.05 W, 0201	0201
R38, R39, R43, R44, R45, R46	6	3.83k	CRCW02013K83FKED	Vishay-Dale	RES, 3.83 k, 1%, 0.05 W, 0201	0201
R41, R42	2	10.0k	RC0201FR-0710KL	Yageo America	RES, 10.0 k, 1%, 0.05 W, 0201	0201
R51, R52, R53, R54	4	3.3k	CRCW04023K30JNED	Vishay-Dale	RES, 3.3 k, 5%, 0.063 W, 0402	0402
R57	1	0.001	CSNL1206FT1L00	Stackpole Electronics Inc	RES, 0.001, 1%, 1 W, AEC-Q200 Grade 0, 1206	1206
R58, R59, R68, R70, R71, R72	6	100	ERJ-1GEF1000C	Panasonic	RES, 100, 1%, 0.05 W, 0201	0201
R60	1	300	CRCW0402300RJNED	Vishay-Dale	RES, 300, 5%, 0.063 W, 0402	0402
R61, R62, R63	3	10.0Meg	CRCW040210M0FKED	Vishay-Dale	RES, 10.0 M, 1%, 0.063 W, 0402	0402
R66, R67, R69	3	5.1k	CRCW04025K10JNED	Vishay-Dale	RES, 5.1 k, 5%, 0.063 W, 0402	0402
RT1	1	10k ohm	NCP03XH103E05RL	MuRata	Thermistor NTC, 10k ohm, 3%, 0201	0201
S1	1		B3U-3000P	Omron Electronic Components	Switch, SPST-NO, Off-Mom, 0.05 A, 12 VDC, SMT	3x2.5mm
U1	1		BQ25703ARSN	Texas Instruments	BQ25703, RSN0032B (WQFN-32)	RSN0032B

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U2	1		TLV70433DBVR	Texas Instruments	Single Output LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U3	1		TPS563200DDCR	Texas Instruments	4.5V to 17 V Input, 3-A Synchronous Step-Down Voltage Regulator in SOT-23, DDC0006A (SOT-6)	DDC0006A
U4	1		TPD6S300ARUK	Texas Instruments	USB Type C Interface Protector: Short-to-VBUS Over Voltage and IEC 61000-4-2 ESD Protection, RUK0020B (WQFN-20)	RUK0020B
U5	1		TPS65988DH	Texas Instruments	Dual Port USB Type-C and USB PD Controller with Integrated Power Switches, RSH0056E (VQFN-56)	RSH0056E
U6	1		W25Q80DVSNIG	Winbond	3V, 8Mbit, Serial Flash Memory with Dual and Qual SPI, SOIC-8	SOIC-8
U7	1		BQ4050RSMR	Texas Instruments	1-4 Series CEDV Battery Fuel (Gas) Gauge, RSM0032A (VQFN-32)	RSM0032A
U8	1		SN74LVC1G14YZVR	Texas Instruments	Single Schmitt-Trigger Inverter, YZV0004ADAD, LARGE T&R	YZV0004ADAD
U9	1		SN74LVC1G08DCKR	Texas Instruments	Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	DCK0005A
R48, R49	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, 0603	0603
R56, R65	0	0	CRCW02010000Z0ED	Vishay-Dale	RES, 0, 5%, 0.05 W, 0201	0201

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