

Assembly Bill of Materials

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TIDA-01627

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Project Name:	Power Bank
Project File:	Power_Bank.PrjPcb
Base ID:	N/A
Schematic Rev:	E1
Assembly Variant:	Base
Build Quantity:	100
Generated:	14-Aug-18 20:23:56

Item	Designator	Description	RoHS	Manufacturer	PartNumber	Quantity	Required	Supplier 1	Supplier Part Number 1	Supplier 2	Supplier Part Number 2	Alternate Manufacturer	Alternate PartNumber
1	C1, C2	CAP, CERM, 0.047 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	TDK	CGA2B3X7R1H473K050BB	2	200	Digi-Key	445-6897-1-ND	Mouser	810-CGA2B3X7R1H473K050BB		
2	C3, C4, C5, C6, C7, C8	CAP, CERM, 22 µF, 35 V, +/- 20%, X5R, 0805	Y	TDK	C2012X5R1V226M125AC	6	600	Digi-Key	445-14428-1-ND				
3	C9, C22, C23	CAP, CERM, 1 µF, 35 V, +/- 10%, X5R, 0402	Y	MuRata	GRM155R6Y1A105KE11D	3	300	Digi-Key	490-10019-1-ND	Mouser	81-GRM155R6Y1A105KE1D		
4	C13, C20	CAP, CERM, 0.033 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	TDK	CGA2B3X7R1H333K050BB	2	200	Digi-Key	445-6896-1-ND	Newark	04X3149		
5	C17, C40, C41, C42, C43	CAP, CERM, 0.01 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	TDK	CGA2B3X7R1H103K050BB	5	500	Digi-Key	445-6893-1-ND				
6	C18	CAP, CERM, 0.47 µF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	Y	MuRata	GCM21BR71H474KA55L	1	100	Digi-Key	490-4788-1-ND				
7	C19, C44, C54	CAP, CERM, 0.1 µF, 10 V, +/- 10%, X5R, 0201	Y	Samsung	CL03A104KP3NNNC	3	300	Digi-Key	1276-1115-1-ND				
8	C21	CAP, CERM, 2.2 µF, 10 V, +/- 10%, X5R, 0402	Y	TDK	C1005X5R1A225K050BC	1	100	Digi-Key	445-7392-1-ND	Newark	87R3267		
9	C24, C36	CAP, CERM, 10 µF, 35 V, +/- 10%, X5R, 0805	Y	TDK	C2012X5R1V106K085AC	2	200	Digi-Key	445-14417-1-ND	Mouser	C2012X5R1V106K085AC		
10	C25, C26	CAP, CERM, 100 pF, 50 V, +/- 5%, COG/NPO, 0603	Y	Kemet	C0603C101J5GAC	2	200	Farnell	1414602				
11	C27, C50, C52	CAP, CERM, 10 µF, 10 V, +/- 20%, X5R, 0402	Y	Samsung	CL05A106MPSNUNC	3	300	Digi-Key	1276-1450-1-ND				
12	C28	CAP, CERM, 33 pF, 50 V, +/- 5%, COG/NPO, 0402	Y	MuRata	GRM1555C1H330JA01D	1	100	Mouser	81-GRM1555C1H330JA1D				
13	C29	CAP, CERM, 15 pF, 50 V, +/- 5%, COG/NPO, 0402	Y	MuRata	GRM1555C1H150JA01D	1	100	Mouser	81-GRM1555C1H150JA1D				
14	C30	CAP, CERM, 1800 pF, 50 V, +/- 10%, X7R, 0402	Y	MuRata	GRM155R71H182KA01D	1	100	Digi-Key	490-3246-1-ND	Mouser	81-GRM155R71H182KA1D		
15	C31	CAP, CERM, 680 pF, 50 V, +/- 5%, COG/NPO, 0402	Y	MuRata	GRM1555C1H681JA01D	1	100	Digi-Key	490-3240-1-ND	Mouser	81-GRM1555C1H681JA1D		
16	C34	CAP, CERM, 10 µF, 35 V, +/- 20%, X5R, 0603	Y	Nichicon	GRM188R6Y1A106MA73	1	100						
17	C37	CAP, CERM, 0.1 µF, 50 V, +/- 10%, X5R, 0402	Y	TDK	C1005X5R1H104K050BB	1	100	Digi-Key	445-5942-1-ND	Mouser	810-C1005X5R1H104K050BB		
18	C38, C39	CAP, CERM, 22 µF, 10 V, +/- 20%, X5R, 0603	Y	TDK	C1608X5R1A226M080AC	2	200	Digi-Key	445-9077-1-ND	Mouser	810-C1608X5R1A226M		
19	C45	CAP, CERM, 1 µF, 10 V, +/- 20%, X5R, 0201	Y	Samsung	CL03A105M3P3NSNC	1	100	Digi-Key	1276-1324-1-ND				
20	C47	CAP, CERM, 4.7 µF, 10 V, +/- 10%, X5R, 0402	Y	TDK	C1005X5R1A475K050BC	1	100	Digi-Key	445-13920-1-ND	Mouser	810-C1005X5R1A475KBC		
21	C48, C49	CAP, CERM, 330 pF, 16 V, +/- 10%, X7R, 0201	Y	MuRata	GRM033R71C331KA01D	2	200	Digi-Key	GRM033R71C331KA01D-ND	Mouser	81-GRM033R71C331KA1D		
22	C53	CAP, CERM, 22 µF, 6.3 V, +/- 20%, X5R, 0402	Y	MuRata	GRM155R60J226ME11D	1	100						
23	C105	CAP, CERM, 1 µF, 35 V, +/- 10%, JB, 0402	Y	TDK	C1005JB1V105K050BC	1	100	Digi-Key	445-11014-1-ND				
24	D1, D2, D4	Diode, Schottky, 15 V, 0.2 A, SOD-523	Y	Panasonic	DB2S20500L	3	300	Digi-Key	DB2S20500LCT-ND	Mouser	667-DB2S20500L		
25	D3	Diode, Schottky, 30 V, 2 A, 2-XFDFN	Y	ON Semiconductor	NSR20F30NXT5G	1	100	Digi-Key	NSR20F30NXT5GOSCT-ND	Mouser	863-NSR20F30NXT5G		
26	D10	LED, Green, SMD	Y	Würth Elektronik	150060VS75000	1	100	Digi-Key	732-4980-1-ND	Newark	95W3797		
27	D11	LED, Orange, SMD	Y	Lite-On	LTST-C191KFCT	1	100	Digi-Key	160-1445-1-ND	Mouser	859-LTST-C191KFCT		
28	J1, J2	Test Point, Miniature, SMT	Y	Keystone	5019	2	200	Digi-Key	5019KCT-ND	Mouser	534-5019		
29	J3	Connector, Receptacle, USB Type C, R/A, TH	Y	Amphenol Canada	12401548E4#2A	1	100	Digi-Key	12401548E4#2ACT-ND	Mouser	523-12401548E4#2A		
30	J5	Header, 1.27mm, 8x1, Gold, TH	Y	Sullins Connector Solutions	GRPB081WVFN-RC	1	100	Digi-Key	S9014E-08-ND				
31	J6	Header, 50mil, 4x1, Gold, R/A, SMT	Y	Mill-Max	850-10-004-40-001000	1	100	Digi-Key	ED1327-ND	Mouser	575-8501000440004000		
32	L1	Inductor, Shielded Drum Core, Powdered Iron, 2.2 µH, 5.8 A, 0.0292 ohm, SMD	Y	Vishay-Dale	IHLP2020CZER2R2M01	1	100	Digi-Key	541-1268-1-ND				
33	L3	Inductor, Shielded Drum Core, Powdered Iron, 3.3 µH, 5 A, 0.0547 ohm, SMD	Y	Vishay-Dale	IHLP2020CZER3R3M01	1	100	Digi-Key	541-1269-1-ND				
34	Q1, Q2, Q3, Q4	MOSFET, N-CH, 30 V, 12 A, DNH0008A (VSONP-8)	Y	Texas Instruments	CSD17551Q3A	4	400	Digi-Key	296-35025-1-ND	Mouser	595-CSD17551Q3A	None	
35	Q5	MOSFET, P-CH, -20 V, -15 A, DNH0008A (VSONP-8)	Y	Texas Instruments	CSD25402Q3A	1	100	Digi-Key	CSD25402Q3A-ND	Mouser	595-CSD25402Q3A	None	
36	Q6, Q7	MOSFET, N-CH, 20 V, 0.5 A, YJM0003A (PICOSTAR-3)	Y	Texas Instruments	CSD15380F3	2	200	Digi-Key	296-44373-1-ND	Mouser	595-CSD15380F3	None	
37	R1, R8	RES, 0.01, 1%, 1 W, 2512	Y	Vishay-Dale	WSLT2512R0100FEA	2	200	Digi-Key	WLSLT_01CT-ND	Mouser	71-WLSLT2512R0100FEA		
38	R2, R5	RES, 4.99, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW04024R99FKED	2	200	Digi-Key	541-4.99LLCT-ND	Mouser	71-CRCW0402-4.99-E3		
39	R3	RES, 2.2, 5%, 0.5 W, 1206	Y	Bourns	CRM1206-JW-2R2ELF	1	100	Mouser	652-CRM1206JW2R2ELF	Farnell	1865241		
40	R4	RES, 1.0, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW04021R00JNED	1	100	Digi-Key	541-1.0JCT-ND	Mouser	71-CRCW0402J-1.0-E3		
41	R6, R7, R10	RES, 10, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040210R0JNED	3	300	Digi-Key	541-10JCT-ND	Mouser	71-CRCW0402J-10-E3		
42	R9, R11, R14	RES, 100 k, 1%, 0.05 W, 0201	Y	Yageo America	RC0201FR-7D100KL	3	300	Mouser	603-RC0201FR-7D100KL				
43	R12	RES, 64.9 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402649FKED	1	100	Digi-Key	541-64.9KCLCT-ND	Mouser	71-CRCW0402-64.9K-E3		
44	R13	RES, 137 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402137KFED	1	100	Digi-Key	541-137KCLCT-ND	Newark	52K6684		
45	R15	RES, 30 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040230KJNED	1	100	Digi-Key	541-30KJCT-ND	Mouser	71-CRCW0402J-30K-E3		
46	R16, R37	RES, 270 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402270KJNED	2	200	Digi-Key	541-270KJCT-ND				
47	R17, R26, R32, R34, R35, R36, R40	RES, 100 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402100KFED	7	700	Digi-Key	541-100KCLCT-ND	Mouser	71-CRCW0402-100K-E3		
48	R18	RES, 40.2 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402402KFED	1	100	Digi-Key	541-40.2KCLCT-ND	Mouser	71-CRCW0402-40.2K-E3		
49	R19	RES, 10 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040210KJNED	1	100	Digi-Key	541-10KJCT-ND	Newark	59M6696		
50	R20, R21, R22, R41, R42	RES, 10.0 k, 1%, 0.05 W, 0201	Y	Yageo America	RC0201FR-0710KL	5	500	Digi-Key	311-10.0KMCT-ND	Mouser	603-RC0201FR-0710KL		
51	R23	RES, 54.9 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW0402549FKED	1	100	Digi-Key	541-54.9KCLCT-ND	Mouser	71-CRCW0402-54.9K-E3		
52	R25	RES, 10.0 k, 1%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040210K0FKED	1	100	Digi-Key	541-10.0KCLCT-ND	Mouser	71-CRCW0402-10K-E3		
53	R27, R28, R29, R30	RES, 0, 5%, 0.05 W, 0201	Y	Vishay-Dale	CRCW0201000Z0ED	4	400	Newark	72M6743				
54	R33, R50, R55	RES, 10.0 k, 1%, 0.05 W, 0201	Y	Vishay-Dale	CRCW020110K0FKED	3	300	Digi-Key	541-10.0KAABCT-ND	Newark	71R4422		

55	R38, R39, R43, R44, R45, R46	RES, 3.83 k, 1%, 0.05 W, 0201	Y	Vishay-Dale	CRCW02013K83FKED	6	600	Digi-Key	541-3.83KAABCT-ND	Mouser	71-CRCW02013K83FKED		
56	R51, R52, R53, R54	RES, 3.3 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW04023K30JNED	4	400	Digi-Key	541-3.3KJCT-ND	Mouser	71-CRCW0402J-3.3K-E3		
57	S1	Switch, SPST-NO, Off-Mom, 0.05 A, 12 VDC, SMT	Y	Omron Electronic Components	B3U-3000P	1	100	Digi-Key	SW1022CT-ND	Newark	34M5297		
58	U1	BQ25703, RSN0032B (WQFN-32)		Texas Instruments	BQ25703ARSN	1	100					Texas Instruments	
59	U3	4.5V to 17 V Input, 3-A Synchronous Step-Down Voltage Regulator in SOT-23, DDC0006A (SOT-6)	Y	Texas Instruments	TPS563200DDCR	1	100					Texas Instruments	TPS563200DDCT
60	U4	USB Type C Interface Protector: Short-to-VBUS Over Voltage and IEC 61000-4-2 ESD Protection, RUK0020B (WQFN-20)		Texas Instruments	TPD8S300RUK	1	100					Texas Instruments	
61	U5	USB Type-C and USB PD Controller with Integrated Power Switches, RSH0056E (VQFN-56)		Texas Instruments	TPS65987DDHRSHR	1	100					Texas Instruments	TPS65987DDHRSHR
62	U6	3V, 8Mbit, Serial Flash Memory with Dual and Qual SPI, SOIC-8	Y	Winbond	W25Q80DVSNI	1	100	Digi-Key	W25Q80DVSNI-ND				

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