

Bill of Materials

TI DESIGNS

TIDA-00717

Item	Quantity	Reference	Value	Part Description	Manufacturer	Manufacturer PartNumber	Alternate Part	PCB Footprint	Note
1	39	BAT0, BAT16, CHP, COMMH+, COMMH-, COMML+, COMML-, FLT-N, FLTH+, FLTH-, FLTL+, FLTL-, RX, S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, TOP, TX, V5VA0, VDIG, VIO, VM, VP1, VREF, WAKEUP	White	Test Point, Miniature, White, TH	Keystone	5002		Keystone5002	5002
2	18	C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18	1uF	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0603	TDK	C1608X7R1C105K		0603L	C1608X7R1C105K
3	8	C19, C29, C31, C32, C34, C35, C37, C38	0.1uF	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	TDK	C1608X7R1H104K		0603L	C1608X7R1H104K
4	8	C20, C21, C22, C23, C24, C25, C26, C27	1000pF	CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	Yageo America	CC1206KKX7RCBB102		1206L	CC1206KKX7RCBB102
5	3	C28, C41, C66	4.7uF	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 0805	MuRata	GRM21BR71C475KA73L		0805_HV	GRM21BR71C475KA73L
6	16	C30, C43, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C61	1uF	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1210	MuRata	GRM32CR72A105KA35L		1210L	GRM32CR72A105KA35L
7	1	C33	0.1uF	CAP, CERM, 0.1uF, 100V, +/-10%, X7R, 1210	MuRata	GRM32NR72A104KA01L		1210	GRM32NR72A104KA01L
8	1	C36	4.7uF	CAP, CERM, 4.7uF, 50V, +/-10%, X7R, 1206	MuRata	GRM31CR71H475KA12L		1206L	GRM31CR71H475KA12L
9	5	C39, C59, C62, C63, C64	0.1uF	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	Kemet	C0603X104K3RACTU		0603L	C0603X104K3RACTU
10	1	C40	1uF	CAP, CERM, 1uF, 100V, +/-10%, X7R, 1206	MuRata	GRM31CR72A105KA01L		1206L	GRM31CR72A105KA01L
11	1	C42	0.022uF	CAP, CERM, 0.022uF, 50V, +/-10%, X7R, 0603	TDK	C1608X7R1H223K		0603L	C1608X7R1H223K
12	1	C44	4700pF	CAP, CERM, 4700pF, 25V, +/-5%, C0G/NP0, 0805	AVX	08053A472JAT2A		0805_HV	08053A472JAT2A
13	2	C45, C67	0.1uF	CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0603	MuRata	GRM188R71C104KA01D		0603L	GRM188R71C104KA01D
14	1	C60	1.8uF	CAP, CERM, 1.8uF, 25V, +/-10%, X7R, 1210	Kemet	C1210C185K3RACTU	-	1210	C1210C185K3RACTU
15	1	C68	2700pF	CAP, CERM, 2700pF, 50V, +/-5%, C0G/NP0, 0805	AVX	08055A272JAT2A		0805_HV	08055A272JAT2A

16	1	C69	1200pF	CAP, CERM, 1200pF, 50V, +/-5%, C0G/NP0, 0805	AVX	08055A122JAT2A		0805_HV	08055A122JAT2A
17	1	C70	560pF	CAP, CERM, 560pF, 50V, +/-5%, C0G/NP0, 0805	AVX	08055A561JAT2A		0805_HV	08055A561JAT2A
18	1	C71	390pF	CAP, CERM, 390pF, 50V, +/-5%, C0G/NP0, 0805	AVX	08055A391JAT2A		0805_HV	08055A391JAT2A
19	17	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D22	Green	LED 570NM GREEN DIFF 1206 SMD	Avago Technologies	HSMG-C150		HSMG-xxx	HSMG-C150
20	4	D17, D18, D20, D21	100V	Diode, Ultrafast, 100V, 0.15A, SOD-123	Diodes Inc.	1N4148W-7-F		SOD-123	1N4148W-7-F
21	1	D19	40V	Diode, Schottky, 40V, 1A, SOD-123	Diodes Inc.	1N5819HW-7-F		SOD-123	1N5819HW-7-F
22	1	GND	Triple	Terminal, Turret, TH, Triple	Keystone	1598-2	Equivalent	Keystone1598-2	Suggest using a net name here
23	4	H1, H2, H3, H4		Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	B&F Fastener Supply	NY PMS 440 0025 PH		NY PMS 440 0025 PH	NY PMS 440 0025 PH
24	4	H5, H6, H7, H8		Standoff, Hex, 0.5"L #4-40 Nylon	Keystone	1902C		Keystone_1902C	1902C
25	1	J1		2.54mm Pitch SL Crimp Housing, Single Row, 22 Circuits	Molex	70555-0056	-	70555-0056	70555-0056
26	1	J2		MOLEX CONN RECEPT 16POS 3MM VERT DUAL	Molex	43045-1601	-	43045-1601	43045-1601
27	1	J3		Right Angle Header, TH, 100mil, 6x1	Molex	22-12-4062	-	22-12-4062	22-12-4062
28	2	J4, J5		Right Angle Header, TH, 100mil, 4x1, 15u Gold Plate	Molex	70551-0038	-	70551-0038	70551-0038
29	1	OUT	SMT	Test Point, Miniature, SMT	Keystone	5015		Testpoint_Keystone_Miniature	5015
30	1	P1		Header, TH, 100mil, 7x2, Gold plated, 230 mil above insulator	Samtec, Inc.	TSW-107-07-G-D		TSW-107-07-G-D	TSW-107-07-G-D
31	16	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16	60V	MOSFET, N-CH, 60V, 0.38A, SOT-23	ON Semiconductor	2V7002KT1G	None	SOT-23	2V7002KT1G
32	1	Q17		TRANS 150V 1A NPN LED DRVR TO252	Diodes/Zetex	ZXTN4004KTC	-	DPAK	ZXTN4004KTC
33	1	Q18	-40V	MOSFET, P-CH, -40V, -2.3A, SOT-23	Vishay-Siliconix	SI2319DS-T1-E3		SOT-23	SI2319DS-T1-E3
34	1	Q19	60V	MOSFET, N-CH, 60V, 0.24A, SOT-23	Vishay-Siliconix	2N7002E-T1-E3		SOT-23	2N7002E-T1-E3
35	16	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16	75	RES 75 OHM 1W 1% 2512 SMD	Vishay/Dale	CRCW251275R0FKEG	-	2512M	CRCW251275R0FKEG
36	9	R17, R50, R53, R56, R63, R66, R68, R70, R72	10.0k	RES, 10.0k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310K0FKEA		0603L	CRCW060310K0FKEA
37	21	R18, R21, R22, R23, R24, R77, R82, R85, R90, R93, R98, R101, R106, R109, R114, R117, R122, R125, R130, R133, R137	100k	RES, 100k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-07100KL		0603L	RC0603FR-07100KL
38	1	R19	49.9k	RES, 49.9k ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-0749K9L		0603L	RC0603FR-0749K9L
39	1	R20	100	RES, 100 ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW1206100RFKEA		1206L	CRCW1206100RFKEA
40	8	R25, R26, R27, R28, R29, R30, R31, R32	10.0	RES, 10.0 ohm, 1%, 0.25W, 1206	Vishay-Dale	CRCW120610R0FKEA		1206L	CRCW120610R0FKEA

41	4	R33, R35, R36, R37	49.9	RES, 49.9 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060349R9FKEA		0603L	CRCW060349R9FKEA
42	1	R34	100	RES, 100 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW0603100RFKEA		0603L	CRCW0603100RFKEA
43	10	R38, R39, R40, R41, R42, R43, R44, R45, R57, R59	0	RES, 0 ohm, 5%, 0.1W, 0603	Vishay-Dale	CRCW06030000Z0EA		0603L	CRCW06030000Z0EA
44	8	R51, R55, R58, R65, R67, R69, R71, R73	10.0	RES, 10.0 ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW060310R0FKEA		0603L	CRCW060310R0FKEA
45	2	R52, R54	200	RES 200 OHM 1W 5% 2512 SMD	Vishay/Dale	CRCW2512200RJNEG	-	2512M	CRCW2512200RJNEG
46	17	R60, R76, R81, R83, R89, R91, R97, R99, R105, R107, R113, R115, R121, R123, R129, R131, R136	2.00k	RES, 2.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06032K00FKEA		0603L	CRCW06032K00FKEA
47	2	R61, R62	1.00	RES, 1.00 ohm, 1%, 0.1W, 0603	Yageo America	RC0603FR-071RL		0603L	RC0603FR-071RL
48	1	R64	0.39	RES, 0.39 ohm, 1%, 0.1W, 0603	Panasonic	ERJ-3RQFR39V		0603L	ERJ-3RQFR39V
49	33	R74, R75, R78, R79, R80, R84, R86, R87, R88, R92, R94, R95, R96, R100, R102, R103, R104, R108, R110, R111, R112, R116, R118, R119, R120, R124, R126, R127, R128, R132, R134, R135, R138	1.00k	RES, 1.00k ohm, 1%, 0.1W, 0603	Vishay-Dale	CRCW06031K00FKEA		0603L	CRCW06031K00FKEA
50	1	SW1		SWITCH DIP 4-POS SLIDE SMD	Copal	CHS-04TA	-	CHS-04TA	CHS-04TA
51	1	SW2		SWITCH DIP DPDT 1POS SMT	CTS Electrocomponents	204-221ST	-	204-221ST	204-221ST
52	4	T1, T2, T3, T4		CHOKE COMMON MODE 2200 OHM .4A	Würth	744242471	-	744242471	744242471
53	4	T5, T6, T7, T8		CHOKE COMMON MODE 5800 OHM .15A	TDK	ACT45B-101-2P	-	ACT-45B-xxx-2P	ACT45B-101-2P
54	1	U1		16 Cell Battery Monitor with Passive Cell Balancing, PFC0080A	Texas Instruments	bq76PL455ATPFCRQ1		PFC0080A_L	bq76PL455ATPFCRQ1
55	1	U2		UHS Inverter 2.4ns into 50pF at 5V	Fairchild	NC7SZ04M5X		MF05A_M	NC7SZ04M5X
56	16	Z1, Z2, Z3, Z4, Z5, Z6, Z7, Z8, Z9, Z10, Z11, Z12, Z13, Z14, Z15, Z16	6.2V	DIODE ZENER 6.2V 500MW SOD-123	Diodes Inc	DDZ6V2B-7	-	SOD-123	DDZ6V2B-7
57	1	Z19		DIODE TVS 90V 400W UNI 5% SMA	Littlefue Inc	SMAJ90A		SMA	SMAJ90A
58	8	Z20, Z21, Z22, Z23, Z24, Z25, Z26, Z27		DIODE ESD PROT UNI 5V SOD323-2	NXP	PESD5V0U1UA,115	-	SOD123_SOD323_dual	PESD5V0U1UA,115

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