



Bill of Materials
TI Designs

TIDM-TMS570BMS

TMS570LS0432 Launchpad

Quantity	Part	Value	Description	Manufacturer P/N	Manufacturer	Package
4	C1,C5,C47,C48	1uF	X7R Ceramic Capacitor 16V 10%	GRM188R71C105KA12D	MURATA	0603
33	C2,C10,C11,C12,C13,C15,C16,C17,C18,C20,C22,C23,C26,C27,C29,C30,C31,C32,C33,C34,C35,C36,C37,C39,C40,C41,C42,C43,C46,C50,C53,C54,C55	100nF	X7R Ceramic Capacitor 16V 10%	GRM155R71C104KA88D	MURATA	0402
2	C3,C4	22uF	Tantalum Capacitor 16V 10%	TAJB226K016RNJ	AVX	B
1	C6	47uF	Tantalum Capacitor 10V 10%	TAJB476K010RNJ	AVX	B
8	C9,C14,C19,C21,C28,C38,C44,C52	4.7uF	X7R Ceramic Capacitor 16V 10%	GRM21BR71C475KA73L	MURATA	0805
4	C24,C25,C45,C49	22pF	C0G Ceramic Capacitor 50V 5%	GRM1555C1H220JZ01D	MURATA	0402
1	C51	100pF	C0G Ceramic Capacitor 50V 5%	GRM1555C1H101JA01D	MURATA	0402
3	D1,D11,D12	White	Chip LED	17-21/W1D-ANPHY/3T	Everlight	0805
2	D2,D4	TVS	High speed series CeraDiodes	B72590D0050H160	EPCOS	0402
1	D3	NSR0320MW2T1G	Schottky Diodes	NSR0320MW2T1G	ON	SOD-323
4	D5,D6,D7,D8	Blue	Chip LED	17-215/BHC-AN1P2/3T	Everlight	0805
1	D10	Red	Chip LED	17-215SURC/S530-A3/TR8	Everlight	0805
1	F1	PTC	PTC 1A	SMD0805P100TF	PTTC	0805
3	FB1,FB2,FB3	220R @ 100M	Ferrite Bead	BLM21PG221SN1	MURATA	0805
2	J1,J2	Header20	2.54mm Pitch Double Row Pin Header,20 pins	P101-2*10SGF-116A-NX	Townes	
5	J5,J6,J7,J8,J9	Header3	2.54mm Pitch Single Row Pin Header,3 pins	P101-1*03SGF-116C-NX	Townes	
1	J11	105017-0001	Micro USB type B	105017-0001	MOLEX	
1	JP1	Header2	2.54mm Pitch Single Row Pin Header,3 pins	P101-1*02SGF-116C-NX	Townes	
2	Q1,Q3	FDV302P	P-Channel MOSFETs	FDV302P	Fairchild	SOT-23
2	R1,R2	240K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-07240KL	YAGEO	0402
6	R21,R22,R23,R24,R40,R43	1K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-071KL	YAGEO	0402
2	R4,R5	22R	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-0722RL	YAGEO	0402
2	R6,R28	100K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-07100KL	YAGEO	0402
1	R7	0R	0603 Chip Resistor SMT 5% 1/10W	RC0603JR-070RL	YAGEO	0603
14	R8,R9,R10,R25,R26,R27,R29,R30,R32,R33,R34,R42,R44,R4E	0R	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-070RL	YAGEO	0402
4	R11,R12,R13,R14	4.7K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-074K7L	YAGEO	0402
1	R15	12K	0402 Chip Resistor SMT 1% 1/16W	RC0402FR-0712KL	YAGEO	0402
3	R16,R17,R49	200R	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-07200RL	YAGEO	0402
5	R18,R37,R38,R47,R48	2.2K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-072K2L	YAGEO	0402
7	R20,R31,R35,R36,R50,R51,R52	10K	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-0710KL	YAGEO	0402

2	R39,R41	100R	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-07100RL	YAGEO	0402
1	R49	120R	0402 Chip Resistor SMT 5% 1/16W	RC0402JR-07120RL	YAGEO	0402
2	R3,R45	4.99K	0402 Chip Resistor SMT 1% 1/16W	RC0402FR-074K99L	YAGEO	0402
3	S1,S2,S3	switch	Sealed surface mount tactile switch	T062SS-043FBT04B	KALER	9.0*6.0*4.5mm
1	U1	TPS70445PWP	Dual-output,Low dropout voltage regulator	TPS70445PWP	TI	TSSOP24
1	U2	FT2232HL	Dual High Speed USB to Multipurpose UART/FIFO IC	FT2232HL	FTDI	LQFP64
1	U3	93LC56C-I/SN	2K-bit Microwire Compatible Serial EEPROM	93LC56C-I/SN	MICROCHIP	SO8
1	U4	XC2C32A-6CPG56C	CoolRunner™-II CPLD	XC2C32A-6CPG56	Xilinx	CP56
1	U5	TMS570	Hercules Safety MCU	TMX570LS00432PZ	TI	LQFP100
1	U6	TEMT6000X01	Ambient Light Sensor	TEMT6000X01	VISHAY	1206
1	Y1	12M	Crystal 12MHZ	7M-12.000MEEQ-T	TXC	3.2*2.5mm
1	Y2	16M	Crystal 12MHZ	7M-16.000MAAJ-T	TXC	3.2*2.5mm
5		Jumper	2.54mm Pitch Jumper	MJ501-EOGF-B-K	Townes	

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TI Designs

TIDM-TMS570BMS

EM1402 EVM

Item #	Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
3	12V, 12V_GND, BAT0, BAT16, DAC_OUT, VIO,	7	White	5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
4	C1, C2, C3, C9, C10, C11,	9	0.1uF	HMK212B7104KG-T	Taiyo Yuden	CAP, CERM, 0.1uF, 100V, +/-	0805
5	C4, C12, C37, C100, C106	5	1uF	C3216X7R2A105M	TDK	CAP, CERM, 1uF, 100V, +/- 20%, C Series, 1206	1206
6	C5, C13, C101	3	4.7uF	EMK212BJ475KG-T	Taiyo Yuden	CAP, CERM, 4.7uF, 16V, +/- 10%, X5R, 0805	0805
7	C6, C7, C8, C14, C15,	20	0.1uF	C0603C104K3RACTU	Kemet	CAP, CERM, 0.1 uF, 25 V, +/-	0603
8	C17, C18, C19, C20, C21, C22, C23, C56	8	0.1uF	C1608X7R1E104K	TDK	CAP, CERM, 0.1uF, 25V, +/- 10%, X7R, 0603	0603
9	C24, C25	2	1uF	C2012X7R1E105K	TDK	CAP, CERM, 1uF, 25V, +/-10%,	0805
10	C26	1	1000pF	C0603C102J5GAC	Kemet	CAP, CERM, 1000pF, 50V, +/-	0603
12	C28	1	0.1uF	C2012X7R2A104K	TDK	CAP, CERM, 0.1uF, 100V, +/-	0805
13	C29, C44, C45	3	4.7uF	C3225X7S2A475K200AB	TDK	CAP, CERM, 4.7 uF, 100 V, +/-	1210
14	C30	1	4.7uF	12063D475MAT2A	AVX	CAP, CERM, 4.7 uF, 25 V, +/-	1206
15	C31	1	0.1uF	C0603C104K5RACTU	Kemet	CAP, CERM, 0.1uF, 50V, +/- 10%, X7R, 0603	0603
16	C32, C33, C60, C64, C67,	17	1uF	GRM32ER72A105KA01L	MuRata	CAP, CERM, 1 uF, 100 V, +/-	1210
17	C38, C107	2	0.01uF	C1608C0G1E103J	TDK	CAP, CERM, 0.01 uF, 25 V, +/- 5%, C0G/NP0, 0603	0603
18	C39	1	2.2uF	C1608X5R0J225M	TDK	CAP, CERM, 2.2uF, 6.3V, +/-	0603
19	C42, C54	2	2.2uF	C0805C225K4RACTU	Kemet	CAP, CERM, 2.2uF, 16V, +/-	0805
20	C43, C108	2	4.7uF	CGA6P3X8R1E475K250AB	TDK	CAP, CERM, 4.7 uF, 25 V, +/-	1210
21	C46, C47, C109	3	3.3uF	C1206C335K4PACTU	Kemet	CAP, CERM, 3.3 uF, 16 V, +/-	1206
22	C48	1	0.01uF	C1206C103KARACTU	Kemet	CAP, CERM, 0.01 uF, 250 V, +/-	1206
23	C49, C50, C105	3	10uF	GRM31CR61E106KA12L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 1206	1206
24	C51	1	1uF	GRM32ER72A105KA01L	MuRata	CAP, CERM, 1uF, 100V, +/- 10%, X7R, 1210	1210
25	C57, C113	2	1uF	C2012X7R1E105K	TDK	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0805	0805
26	C59	1	390pF	08055A391JAT2A	AVX	CAP, CERM, 390pF, 50V, +/-	0805
27	C61	1	0.1uF	GRM32NR72A104KA01L	MuRata	CAP, CERM, 0.1uF, 100V, +/-	1210
28	C63	1	1uF	GRM31CR72A105KA01L	MuRata	CAP, CERM, 1uF, 100V, +/-	1206
29	C65	1	1.8uF	C1210C185K3RACTU	Kemet	CAP, CERM, 1.8uF, 25V, +/-	1210
30	C70	1	4.7uF	GRM21BR71C475KA73L	MuRata	CAP, CERM, 4.7uF, 16V, +/-10%, X7R, 0805	0805

31	C71	1	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7uF, 50V, +/-	1206
32	C78	1	1uF	GRM188R71C105KA12D	MuRata	CAP, CERM, 1uF, 16V, +/-10%,	0603
33	C79, C80, C81, C82, C83, C84, C85, C86	8	1000pF	CC1206KKX7RCBB102	Yageo America	CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	1206
34	C92, C93	2	4.7uF	GRM21BR71C475KA73L	MuRata	CAP, CERM, 4.7uF, 16V, +/-	0805
35	C96	1	1uF	C1608X7R1C105K	TDK	CAP, CERM, 1uF, 16V, +/-10%,	0603
36	C96	1	2.2uF	GRM31CR71H225KA88L	MuRata	CAP, CERM, 2.2 uF, 50 V, +/-	1206
37	C97	1	0.022uF	C1608X7R1H223K	TDK	CAP, CERM, 0.022uF, 50V, +/-	0603
38	C97	1	0.01uF	GCM188R71H103KA37D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/-	0603
39	C98	1	10uF	GCM21BC71C106KE36L	MuRata	CAP, CERM, 10 uF, 16 V, +/-	0805
40	C104	1	22pF	CGA3E2C0G1H220J080AA	TDK	CAP, CERM, 22 pF, 50 V, +/-	0603
41	C106	1	910pF	GRM1885C1H911JA01D	MuRata	CAP, CERM, 910 pF, 50 V, +/-	0603
42	C112	1	0.1uF	C1608X7R1E104K	TDK	CAP, CERM, 0.1 uF, 25 V, +/-	0603
43	D2, D3, D4	3	40V	BAS40TW-7-F	Diodes Inc.	Diode, Schottky, 40 V, 0.2 A,	SOT-363
44	D5, D22, D38, D40, D44	5	1V	BAT41ZFILM	ST Microelectronics	Diode, Schottky, 100V, 0.2A,	SOD-123
46	D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D26, D27	16	6.2V	DDZ6V2B-7	Diodes Inc	DIODE ZENER 6.2V 500MW SOD-123	SOD-123
47	D21	1	70V	SMAJ70A	Littelfuse	Diode, TVS, Uni, 70V, 400W,	SMA
48	D24	1	15V	MMSZ4702T1G	ON Semiconductor	Diode, Zener, 15V, 500mW,	SOD-123
49	D25	1	100V	DFLS1100-7	Diodes Inc.	Diode, Schottky, 100V, 1A,	PowerDI123
50	D28, D37, Dclamp1	3	40V	1N5819HW-7-F	Diodes Inc.	Diode, Schottky, 40 V, 1 A, SOD-123	SOD-123
51	D29, D46	2	Green	LTST-C170KGKT	Lite-On	LED, Green, SMD	LED_0805
52	D30, D31	2	1.25V	1N4148W-7-F	Diodes Inc.	Diode, Ultrafast, 100V, 0.15A,	SOD-123
53	D32, D33	2	1.4V	BAS316,115	NXP Semiconductor	Diode, Ultrafast, 100V, 0.25A, SOD-323	SOD-323
54	D35	1	2.4V	MMSZ4681	Vishay-Semiconductor	Diode, Zener, 2.4V, 500mW,	SOD-123
55	D36	1	45V	SDM10U45-7-F	Diodes Inc.	Diode, Schottky, 45V, 0.1A, SOD-523	SOD-523
56	D38	1	6.2V	BZX84C6V2LT1G	ON Semiconductor	Diode, Zener, 6.2V, 225mW,	SOT-23
57	D39	1	100V	1SMB5949BT3G	ON Semiconductor	Diode, Zener, 100 V, 550 mW, SMB	SMB
58	D41, D43	2	5.6V	DFLZ5V6-7	Diodes Inc.	Diode, Zener, 5.6 V, 1 W, PowerDI123	PowerDI123
59	D42	1	0.5V	B120-13-F	Diodes Inc.	Diode, Schottky, 20V, 1A, SMA	SMA
60	D47	1	15V	BZX84C15LT1G	ON Semiconductor	Diode, Zener, 15V, 225mW, SOT-23	SOT-23
61	D48	1	15V	PESD1LIN,115	NXP Semiconductor	Diode, TVS, Bi, 15 V, 160 W, SOD-323	SOD-323
62	F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12	17		SSQ 8	Bel Fuse	Fuse, 8 A, 125 V, SMD	6.1x2.54x2.54mm
63	F18	1		0459003	Littelfuse	Fuse, 3 A, 125 V, SMD	PicoSMF459
64	FID1, FID2, FID3	3		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	Fiducial

65	GND	1	Triple	1598-2	Keystone	Terminal, Turret, TH, Triple	Keystone1598-2
66	H1, H2, H3, H4	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
67	H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
68	H9, H10, H11, H12	4		MPMS 002 0005 PH	B&F Fastener Supply	MACHINE SCREW PAN PHILLIPS M2	
69	J1	1		175785-1	TE Connectivity	CONN RCPT CAP 20POS R/A TIN, TH	1860x1580x6030mm
70	J2	1		43045-1601	Molex	MOLEX CONN RECEPT 16POS 3MM VERT DUAL	43045-1601
71	J3	1		22-12-4062	Molex		22-12-4062
72	J4, J5	2		70551-0038	Molex		70551-0038
73	J6	1		20021111-00008T4LF	FCI	Header, Unshrouded, 50mil, 4x2, TH	Header, 4x2, 50mil
74	L1	1	6.8uH	7443320680	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 6.8 µH, 13 A, 0.009 ohm, SMD	12.1x9.5x11.4mm
75	L2	1	0.1uH	SRP4020TA-R10Y	Bourns	Inductor, Shielded, Powdered Iron, 0.1 µH, 12 A, 0.004 ohm, SMD	4.45x1.8x4.06mm
76	L6	1	220uH	SDR0403-221KL	Bourns	Inductor, Drum Core, Ferrite, 220 µH, 0.22 A, 4.4 ohm, SMD	4.5x3.2x4mm
77	L?	1	100uH	ACT45B-101-2P-TL003	TDK	Inductor, Ferrite, 100 µH, 0.15 A, 2 ohm, SMD	SMD, 4-Leads, Body 4.7 x 3.7 mm
78	P1	1		1452625-1	Tyco	Tyco .64 Series GET Connector 2 position	
79	Q1	1	-20V	DMP2035U-7	Diodes Inc.	MOSFET, P-CH, -20 V, -3.6 A, SOT-23	SOT-23
80	Q3, Q4	2	30V	PSMN4R0-30YLDX	NXP Semiconductor	MOSFET, N-CH, 30 V, 100 A, LFPK	LFPK
81	Q5	1	150V	SI7846DP-T1-E3	Vishay/Siliconix	100A, 47nC, rDS(on) @ 4.5V =0.0021 Ohm	PowerPak SO-8
82	Q6	1	-100V	SI7489DP-T1-GE3	Vishay-Semiconductor	MOSFET, P-CH, -100 V, -28 A, PowerPAK SO-8	PowerPAK SO-8

83	Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q29, Q30, Q31, Q32, Q33, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46, Q47, Q48, Q49, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59, Q60, Q61, Q62, Q63, Q64, Q65, Q66, Q67, Q68, Q69, Q70, Q73, Q74	60	40V	CSD18504Q5A	Texas Instruments	MOSFET, N-CH, 40V, 15A, SON 5x6mm	SON 5x6mm
84	Q27	1	80V	SI2337DS-T1-E3	Vishay/Siliconix	MOSFET P-CH 80V 2.2A SOT23-3	SOT23
85	Q28, Q37, Q72	3	60V	2N7002W-7-F	Vishay-Siliconix	MOSFET N-CH 60V 115MA SOT323	SOT323
86	Q34	1		ZXTN4004KTC	Diodes/Zetex	TRANS 150V 1A NPN LED DRVR TO252	DPAK
87	Q75	1	-40V	SQJ463EP-T1-GE3	Vishay-Siliconix	MOSFET, P-CH, -40 V, -30 A, PowerPAK_SO-8L	PowerPAK_SO-8L
88	Q?	1	150 V	ZXTN4004ZTA	Diodes Inc.	Transistor, NPN, 150 V, 1 A, SOT-89	SOT-89
89	R4	1	15.0k	CRCW060315K0FKEA	Vishay-Dale	RES, 15.0k ohm, 1%, 0.1W, 0603	0603
90	R6, R7, R8, R41, R99, R113, R115, R123, R124, R125, R127, R138	12	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	0603
91	R9, R25, R119	3	499	CRCW0603499RFKEA	Vishay-Dale	RES, 499 ohm, 1%, 0.1W, 0603	0603
92	R10, R12, R26, R37, R56, R70, R73, R77, R112,	12	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
93	R11	1	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00k ohm, 1%, 0.1W, 0603	0603
94	R13	1	130k	CRCW0603130KFKEA	Vishay-Dale	RES, 130k ohm, 1%, 0.1W, 0603	0603
95	R14	1	46.4k	CRCW060346K4FKEA	Vishay-Dale	RES, 46.4k ohm, 1%, 0.1W, 0603	0603
96	R15	1	127k	CRCW0603127KFKEA	Vishay-Dale	RES, 127k ohm, 1%, 0.1W, 0603	0603
97	R16	1	8.25k	RC0603FR-078K25L	Yageo America	RES, 8.25 k, 1%, 0.1 W, 0603	0603
98	R17	1	8.25k	CRCW06038K25FKEA	Vishay-Dale	RES, 8.25k ohm, 1%, 0.1W, 0603	0603

99	R18	1	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603	0603
100	R19, R20, R79, R80, R82, R85, R88, R91, R94, R95, R97, R98, R100, R102, R104, R106, R107	17	1.0k	CRCW06031K00JNEA	Vishay-Dale	RES, 1.0 k, 5%, 0.1 W, 0603	0603
101	R27, R28, R29, R30, R31, R32, R33	7	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0k ohm, 1%, 0.1W, 0603	0603
102	R34	1	200k	CRCW0603200KJNEA	Vishay-Dale	RES, 200k ohm, 5%, 0.1W, 0603	0603
103	R39	1	442k	CRCW0603442KFKEA	Vishay-Dale	RES, 442k ohm, 1%, 0.1W, 0603	0603
104	R43	1	100k	RT0603DRE07100KL	Yageo America	0.5%, 0.1W	0603
105	R44, R45, R46, R47, R48, R49, R50	7	10.0	RC0603FR-0710RL	Yageo America	RES, 10.0 ohm, 1%, 0.1W, 0603	0603
106	R51, R96	2	100k	CRCW0603100KJNEA	Vishay-Dale	RES, 100k ohm, 5%, 0.1W, 0603	0603
107	R52	1	49.9k	RC0603FR-0749K9L	Yageo America	RES, 49.9k ohm, 1%, 0.1W, 0603	0603
108	R53	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, 0603	0603
109	R54, R57, R60, R121, R122	5	1.00k	RC0603FR-071KL	Yageo America	RES, 1.00 k, 1%, 0.1 W, 0603	0603
110	R55	1	0.01	PMR50HZPFU10L0	Rohm	RES, 0.01, 1%, 1 W, 2010	2010
111	R59, R120	2	1.87k	CRCW06031K87FKEA	Vishay-Dale	RES, 1.87k ohm, 1%, 0.1W, 0603	0603
112	R61, R65, R67, R114	4	20.0	CRCW060320R0FKEA	Vishay-Dale	RES, 20.0, 1%, 0.1 W, 0603	0603
113	R62	1	0	RC0603JR-070RL	Yageo America	RES, 0, 5%, 0.1 W, 0603	0603
114	R63, R66, R68, R142, R143, R144	6	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.1W, 0603	0603
115	R64	1	0.01	ERJ-M1WSF10MU	Panasonic	RES, 0.01 ohm, 1%, 1W, 2512	2512
116	R69, R100, R117	3	10k	RC0603JR-0710KL	Yageo America	RES, 10 k, 5%, 0.1 W, 0603	0603
117	R71, R72	2	402	CRCW2512402RFKEG	Vishay-Dale	RES, 402, 1%, 1 W, 2512	2512
118	R74	1	100	CRCW1206100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.25W, 1206	1206
119	R75, R76	2	1.0	CRCW06031R00JNEA	Vishay-Dale	RES, 1.0 ohm, 5%, 0.1W, 0603	0603
120	R78	1	0.39	ERJ-3RQFR39V	Panasonic	RES, 0.39 ohm, 1%, 0.1W, 0603	0603
121	R81, R83, R84, R86, R87, R89, R90, R92	8	10.0	CRCW120610R0FKEA	Vishay-Dale	RES, 10.0 ohm, 1%, 0.25W, 1206	1206
122	R84	1	261k	CRCW0603261KFKEA	Vishay-Dale	RES, 261 k, 1%, 0.1 W, 0603	0603
123	R85	1	52.3k	CRCW060352K3FKEA	Vishay-Dale	RES, 52.3 k, 1%, 0.1 W, 0603	0603

124	R93, R101, R103, R105	4	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9 ohm, 1%, 0.1W, 0603	0603
125	R98	1	46.4k	CRCW060346K4FKEA	Vishay-Dale	RES, 46.4 k, 1%, 0.1 W, 0603	0603
126	R99	1	102k	CRCW0603102KFKEA	Vishay-Dale	RES, 102 k, 1%, 0.1 W, 0603	0603
127	R101	1	110k	CRCW0603110KFKEA	Vishay-Dale	RES, 110 k, 1%, 0.1 W, 0603	0603
128	R118	1	26.1k	CRCW060326K1FKEA	Vishay-Dale	RES, 26.1 k, 1%, 0.1 W, 0603	0603
129	R139, R140	2	2.0k	RC0603JR-072KL	Yageo America	RES, 2.0 k, 5%, 0.1 W, 0603	0603
130	R141	1	22	ERJ-1TYJ220U	Panasonic	22 Ohm 1%, 1W	2512
131	SW2	1		CL-SB-12B-01T	Copal Electronics	Switch, Slide, SPDT, 0.2A, GULL, 12V, SMD	SMD, 3-Leads, Body 8.5x3.5mm, Pitch 2.5mm
132	T1, T2, T3, T4	4		744242471	Würth	CHOKE COMMON MODE 2200 OHM .4A	744242xxx
133	T5, T6, T7, T8	4		ACT45B-510-2P	TDK	CHOKE COMMON MODE 2800 OHM .20A	744242xxx
134	T9	1		LPD5030-473MRC	Coilcraft	Coupled Power Inductor, 47uH, 0.47A, 5x5mm, SMD	LPD5030
135	T10	1	128uH	PA3856.005NL	Pulse Engineering	Transformer, 128uH, 2250V Isolation, SMT	17.53x12.45x13.44 mm
136	T?	1	128uH	PA3856.005NLT	Pulse Engineering	Transformer, 128 uH, SMT	SMD, 10-Leads, Body 14.5x14.5mm
137	U1	1		bq76PL455ATPFCRQ1	Texas Instruments	16 Cell Battery Monitor with Passive Cell Balancing, PFC0080A	PFC0080A
138	U2	1		TPS70950DBVR	Texas Instruments	150-mA, 30-V, 1-uA IQ Voltage Regulators with Enable, DBV0005A	DBV0005A
139	U2, U3, U15	3		EMB1428QSQ	Texas Instruments	12 channel Gate Controller	LLP48
140	U4	1		CD74HC595SM96	Texas Instruments	8-BIT SHIFT REGISTER WITH 3-STATE TPUT REGISTERS, DB0016A	DB0016A
141	U4	1		SN74AHC595PWR		8-Bit Shift Register with 3-State Output Registers	D016
142	U6	1		EMB1499QMH	Texas Instruments	PWM Controller	TSSOP-28
143	U7	1		ISO7342FCDWR	Texas Instruments	Robust EMC, Low Power, Quad-Channel Digital Isolators, DW0016B	DW0016B
144	U8, U9	2	6.1V	ESDA6V1SC5	STMicroelectronics	DIODE ARRAY ESD 6.1V Breakdown	SOT23-5
145	U10	1		LM5018MRE/NOPB	Texas Instruments	100V, 300mA Constant On-Time Synchronous Buck Regulator, DDA0008B	DDA0008B

146	U11	1		NC7SZ04M5XTR	Rohm Semiconductor	IC INVERTER WITH SCHMITT TRIGGER SINGLE	tot23-5
147	U12	1		BU4S584G2-TR	Rohm Semiconductor	IC INVERTER WITH SCHMITT TRIGGER SINGLE	tot23-5
148	U14	1		LM5110-3M/NOPB	Texas Instruments	Dual 5A Compound Gate Driver with Negative Output Voltage Capability, 8-pin Narrow SOIC, Pb-Free	M08A
149	U16	1		TLV3012AIDCKR	Texas Instruments	Nanopower, 1.8V, Comparator with Voltage Reference, DCK0006A	DCK0006A
150	U17	1		DAC081S101CIMK/NOPB	Texas Instruments	8-Bit Micro Power Digital-to-Analog Converter with Rail-to-Rail Output, 6-pin Tiny SOT23, Pb-Free	MK06A
151	U17	1		TPS54061QDRBRQ1	Texas Instruments	Wide Input 60-V, 200-mA Synchronous Step-Down DC-DC Converter With Low IQ, DRB0008B	DRB0008B
152	U21, U22	2		TPD4E05U06QDQARQ1	Texas Instruments	1, 4, 6 CHANNEL PROTECTION SOLUTION FOR SUPER-SPEED (UP TO 6 GBPS) INTERFACE, DQA0010A	DQA0010A
153	Zener1	1	30V	1SMB5936BT3G	ON Semiconductor	Diode, Zener, 30V, 550mW, SMB	SMB
154	ZZ1	1		TTL-232R-5V	FTDI	USB Serial Cable	
155	!PCB1	0		PWR580	Any	Printed Circuit Board	
156	C52	0	22pF	C0603C220J5GACTU	Kemet	CAP, CERM, 22 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
157	R21, R22, R23, R24, R35, R36, R38, R40, R126	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0 ohm, 5%, 0.1W, 0603	0603
158	R42	0	402k	CRCW0603402KFKEA	Vishay-Dale	RES, 402k ohm, 1%, 0.1W, 0603	0603
159	R58	0	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.1W, 0603	0603

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