

Assembly Bill of Materials

Texas Instruments

Project Name:	Backup Battery Unit
Project File:	PMP30963RevA.PrjPcb
Base ID:	PMP30963
Schematic Rev:	A
Assembly Variant:	None
Build Quantity:	100
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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, C5, C6	CAP, CERM, 1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	Y	MuRata	GCM188R71C105K64D	4	400	Digi-Key	490-5241-6-ND	Mouser	81-GCM188R71C105K64D		
2	C3	CAP, CERM, 2.2 uF, 6.3 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	Y	MuRata	GCM188R70J225KE2D	1	100	Digi-Key	490-5316-1-ND	Mouser	81-GCM188R70J225KE2D		
3	C4, C28	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	Y	TDK	CGA4J3X7R1H105K125AB	2	200	Digi-Key	445-6961-1-ND	Mouser	810-CGA4J3X7R1H105K125AB		
4	C7, C8	CAP, Aluminum Polymer, 68 uF, 35 V, +/- 20%, 0.035 ohm, AEC-Q200 Grade 2, D6.3xL8.0mm SMD	Y	Chemi-Con	HHXB350ARA680MF80G	2	200	Digi-Key	565-4186-1-ND	Newark	83X9154		
5	C9	CAP, Aluminum Polymer, 100 uF, 50 V, +/- 20%, 0.025 ohm, AEC-Q200 Grade 2, D10xL10mm SMD	Y	Chemi-Con	HHXB500ARA101MJA0G	1	100	Digi-Key	565-4187-1-ND	Newark	83X9156		
6	C10, C11, C12, C13	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	Y	TDK	CGA3E2X7R1H104K080AA	4	400	Digi-Key	445-5666-1-ND	Newark	04X3156		
7	C14, C15, C16, C17	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1210	Y	Kemet	C1210C475K5RACAUTO	4	400	Digi-Key	399-7049-1-ND	Newark	86T2694		
8	C18, C34	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	Kemet	C0402C104K4RACAUTO	2	200	Digi-Key	399-6828-1-ND	Newark	86T2557		
9	C19, C20, C21, C22	CAP, CERM, 10 uF, 50 V, +/- 20%, X7R, AEC-Q200 Grade 1, 1210	Y	Taiyo Yuden	UMJ325KB7106MMHP	4	400	Digi-Key	587-6027-1-ND	Mouser	963-UMJ325KB7106MMHP		
10	C23	CAP, AL, 330 uF, 50 V, +/- 20%, 0.12 ohm, AEC-Q200 Grade 2, SMD	Y	Panasonic	EEV-FK1H331Q	1	100	Digi-Key	PCE3475CT-ND	Mouser	667-EEV-FK1H331Q		
11	C24, C29	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0402	Y	TDK	CGA2B2C0G1H101J050BA	2	200	Digi-Key	445-5596-1-ND	Newark	52W9564		
12	C25	CAP, CERM, 680 pF, 50 V, +/- 1%, C0G/NP0, AEC-Q200 Grade 1, 0402	Y	MuRata	GCM1555C1H681FA16D	1	100						
13	C26	CAP, CERM, 0.22 uF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	Taiyo Yuden	LMK105B7224KVHF	1	100	Digi-Key	587-3770-1-ND	Mouser	963-LMK105B7224KVHF		
14	C27	CAP, CERM, 4.7 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	Y	MuRata	GCM21BR71C475KA73K	1	100	Digi-Key	GCM21BR71C475KA73K-ND	Mouser	81-GCM21BR71C475KA3K		
15	C30	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	Y	TDK	CGA2B2X7R1H471K050BA	1	100	Digi-Key	445-6888-1-ND	Mouser	810-CGA2B2X7R1H471K050BA		
16	C31, C32, C33	CAP, CERM, 0.1 uF, 50 V, +/- 20%, X7R, 0402	Y	MuRata	GRM155R71H104ME14D	3	300	Digi-Key	490-10701-1-ND	Mouser	81-GRM155R71H104ME4D		
17	D1, D2, D3	LED, Green, SMD	Y	Würth Elektronik	150060GS75000	3	300						
18	D4, D5	LED, Yellow, SMD	Y	Würth Elektronik	150060YS75000	2	200	Digi-Key	732-4981-1-ND	Newark	95W3798		
19	D6	Diode, TVS, Uni, 36 V, 58.1 Vc, 400 W, 6.9 A, SMA	Y	Littelfuse	SMAJ36A	1	100						
20	D8	Zener Diode 18V 250mW ±5% Surface Mount TO-236AB	TRUE	Nexperia	BZX84-C18.215	1	100						
21	J1, J3	Standard Banana Jack, Uninsulated	Y	Keystone	6095	2	200	Digi-Key	36-6095-ND				
22	J2	Header, 2.54 mm, 4x1, Tin, TH	Y	Molex	22-23-2041	1	100	Digi-Key	WM4202-ND	Newark	38C0355		
23	J4, J6, J8, J11, J12	Header, 2.54mm, 3x1, Gold, TH	Y	3M	961103-6804-AR	5	500	Digi-Key	961103-6804-AR-ND	Newark	62R7035		
24	J5	Header(shrouded), 2.54mm, 12x2, Gold with Tin, TH	Y	3M	N2524-6002-RB	1	100	Digi-Key	MHC24K-ND	Mouser	517-N2524-6002RB		
25	J7	Header, 100mil, 12x2, Gold, TH	Y	Sarntec	TSW-112-07-G-D	1	100	Digi-Key	SAM1028-12-ND				
26	J9, J13	Standard Banana Jack, Insulated, Red	Y	Keystone	6091	2	200	Digi-Key	36-6091-ND				
27	J10, J14	Standard Banana Jack, Insulated, Black	Y	Keystone	6092	2	200	Digi-Key	36-6092-ND				
28	J15, J16	Header, 2.54mm, 1x2, Tin, Black, TH	Y	Sullins Connector Solutions	PEC01DAAN	2	200	Digi-Key	S2012E-01-ND				
29	L1	Inductor, Shielded, Powdered Iron, 2.2 uH, 28 A, 0.00198 ohm, SMD	Y	Vishay-Dale	IHLP6767GZER2R2M11	1	100	Digi-Key	541-1280-1-ND				
30	Q1	MOSFET, N-CH, 30 V, 4 A, AEC-Q101, SOT-23	Y	Diodes Inc.	DMN3053L-7	1	100	Digi-Key	DMN3053L-7DICT-ND	Mouser	621-DMN3053L-7	None	
31	Q2	Transistor, NPN/PNP Pair, 40 V, 0.2 A, AEC-Q101, SOT-363	Y	ON Semiconductor	MBT3946DW1T2G	1	100						
32	Q3	N-Channel 40V 52A (Tc) 65W (Tc) Surface Mount LFPAK56, Power-SO8	TRUE	Nexperia	BUK9Y12-40E	1	100						
33	Q4, Q6	Transistor, PNP, 40 V, 2 A, AEC-Q101, SOT-23	Y	ON Semiconductor	NSS40200LT1G	2	200	Digi-Key	NSS40200LT1GOSCT-ND	Newark	46Y2630		
34	Q5	Trans MOSFET N-CH 40V 100A Automotive 8-Pin TDSO EP T/R	TRUE	Infineon Technologies	IPC100N04S5L2R6ATMA1	1	100						
35	Q7, Q11	MOSFET, N-CH, 40 V, 120 A, SOT669	Y	NXP Semiconductor	BUK9Y2R8-40H.115	2	200	Digi-Key	SQJQ900E-T1_GE3CT-ND	Mouser	78-SQJQ900E-T1_GE3	None	
36	Q8	MOSFET, 2-CH, N-CH, 40 V, 100 A, AEC-Q101, 7.9x6.22mm	Y	Vishay-Siliconix	SQJQ900E-T1_GE3	1	100	Digi-Key		Mouser		None	
37	Q9	MOSFET, 2-CH, N/P-CH, 60 V, 0.33 A, AEC-Q101, SOT-563	Y	Nexperia	NX1029X.115	1	100					None	
38	Q10	Transistor, NPN, 45 V, 0.1 A, AEC-Q101, SOT-323	Y	NXP Semiconductor	BC847BW.115	1	100	Digi-Key	568-6067-1-ND	Newark	85W3327		

39	R1, R2, R3, R8, R9, R14, R17, R50, R57	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Stackpole Electronics Inc	RMCF0603FT10K0	9	900	Digi-Key	RMCF0603FT10K0CT-ND	Newark	78Y4027		
40	R4, R5, R6	RES, 20.0, 1%, 1 W, AEC-Q200 Grade 0, 2512	E	Vishay-Dale	CRCW251220R0FKEG	3	300	Digi-Key	541-20.0AFCT-ND				
41	R7	RES, 0.007, 1%, 1 W, 2010	Y	Vishay-Dale	WSL20107L000FEA18	1	100	Digi-Key	WSLF-.007CT-ND	Mouser	71-WSL20107L000FEA18		
42	R10, R36, R38	RES, 5.60 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Panasonic	ERJ3EKF5601V	3	300	Digi-Key	P5.60KHCT-ND	Newark	64R5354		
43	R11, R58	RES, 4.7 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Panasonic	ERJ-3GEYJ472V	2	200	Digi-Key	P4.7KGCT-ND	Newark	65T8654		
44	R12, R13, R40	RES, 22.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Panasonic	ERJ-3EKF2202V	3	300	Digi-Key	P22.0KHCT-ND	Newark	64R5330		
45	R15	RES, 330, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW0402330RFKED	1	100	Digi-Key	541-330LCT-ND	Newark	52K6981		
46	R16	TRIMMER, 50k ohm, 0.5W, TH	Y	Bourns	3296Y-1-503LF	1	100	Digi-Key	3296Y-503LF-ND	Newark	62J1559		
47	R18, R27, R30	RES, 100 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW0402100KFKEK	3	300	Digi-Key	541-100KLCT-ND	Newark	52K6607		
48	R19, R28	RES, 82 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040282K0JNED	2	200	Digi-Key	541-82KJCT-ND	Newark	89M6699		
49	R20, R29	RES, 62 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040262K0JNED	2	200	Digi-Key	541-62KJCT-ND				
50	R21, R52	RES, 47 k, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040247K0JNED	2	200	Digi-Key	541-47KJCT-ND	Newark	52K7099		
51	R22	RES, 36 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040236K0JNED	1	100	Digi-Key	541-36KJCT-ND				
52	R23	RES, 27 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040227K0JNED	1	100	Digi-Key	541-27KJCT-ND	Newark	59M6720		
53	R24	RES, 24 k, 5%, 0.063 W, 0402	Y	Vishay-Dale	CRCW040224K0JNED	1	100	Digi-Key	541-24KJCT-ND				
54	R25	RES, 18.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Y	Vishay-Dale	CRCW040218K0FKED	1	100	Digi-Key	541-18.0KLCT-ND	Newark	52K6757		
55	R26	RES, 15.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Y	Panasonic	ERA-2AEB153X	1	100	Digi-Key	P15KDCCT-ND	Newark	53W8333		
56	R31	RES, 46.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	E	Vishay-Dale	CRCW060346K4FKEA	1	100	Digi-Key	541-46.4KHCT-ND	Newark	52K8541		
57	R32, R35	RES, 33.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	E	Vishay-Dale	CRCW060333K0FKEA	2	200	Digi-Key	541-33.0KHCT-ND	Newark	52K8427		
58	R33	RES, 30.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Panasonic	ERJ-3EKF3002V	1	100	Digi-Key	P30.0KHCT-ND	Newark	65T8416		
59	R34	RES, 35.7 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040235K7FKED	1	100	Digi-Key	541-35.7KLCT-ND	Newark	52K7000		
60	R37	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	Y	Panasonic	ERJ-3EKF4999V	1	100	Digi-Key	P49.9HCT-ND	Newark	65T8468		
61	R39, R44	RES, 1.0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	E	Vishay-Dale	CRCW06031R00JNEA	2	200	Digi-Key	541-1.0GCT-ND	Newark	59M6759		
62	R41	3 ±1% 1W Chip Resistor Wide 1206 (3216 Metric), 0612 Anti-Sulfur, Automotive AEC-Q200, Current Sense, Moisture Resistant, Pulse Withstanding Metal Element	TRUE	Vishay	WSL06123L000FEA	1	100	Digikey	541-10043-1-ND	Mouser	71-WSL06123L000FEA		
63	R42, R43	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	Y	Panasonic	ERJ-2GE0R00X	2	200	Digi-Key	P0.0JCT-ND	Newark	65T8307		
64	R45	RES, 47.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040247K5FKED	1	100	Digi-Key	541-47.5KLCT-ND	Newark	52K7100		
65	R46	RES, 10.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Y	Stackpole Electronics Inc	RMCF0402FT10K0	1	100	Digi-Key	RMCF0402FT10K0CT-ND				
66	R47	RES, 54.9 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040254K9FKED	1	100	Digi-Key	541-54.9KLCT-ND	Newark	52K7151		
67	R48	RES, 34.8 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	E	Vishay-Dale	CRCW040234K8FKED	1	100	Digi-Key	541-34.8KLCT-ND	Newark	52K6986		
68	R49	RES, 68.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	E	Vishay-Dale	CRCW060368K1FKEA	1	100	Digi-Key	541-68.1KHCT-ND	Newark	52K8676		
69	R51	RES, 4.70 k, 1%, 0.5 W, AEC-Q200 Grade 0, 0805	Y	Panasonic	ERJ-P06F4701V	1	100	Digi-Key	P16073CT-ND	Newark	62W9770		
70	R53, R54, R55	RES, 4.75 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	Y	Stackpole Electronics Inc	RMCF0402FT4K75	3	300	Digi-Key	RMCF0402FT4K75CT-ND				
71	R56	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	E	Vishay-Dale	CRCW0603100KFKEA	1	100	Digi-Key	541-100KHCT-ND	Newark	42K3668		
72	TP1	Test Point, Compact, Yellow, TH	Y	Keystone	5009	1	100	Digi-Key	36-5009-ND	Mouser	534-5009		
73	TP2, TP7, TP9, TP10	Test Point, Compact, Red, TH	Y	Keystone	5005	4	400	Digi-Key	36-5005-ND	Mouser	534-5005		
74	TP3, TP5, TP8, TP11	Test Point, Compact, Black, TH	Y	Keystone	5006	4	400	Digi-Key	36-5006-ND	Mouser	534-5006		
75	TP4	Test Point, Compact, White, TH	Y	Keystone	5007	1	100	Digi-Key	36-5007-ND	Mouser	534-5007		
76	TP6	Test Point, Compact, Orange, TH	Y	Keystone	5008	1	100	Digi-Key	36-5008-ND	Mouser	534-5008		
77	U1	System-Side CEDV Fuel Gauge, PW0014A (TSSOP-14)	Y	Texas Instruments	BQ34210IPWRQ1	1	100			Texas Instruments	BQ34210IPWQ1		
78	U2	BQ25171QW-Q1, DRC0010R (VSON-10)	Y	Texas Instruments	BQ25171QWDRCRQ1	1	100			Texas Instruments	BQ25171QWDRCTQ1		
79	U3	Automotive Low-IQ Synchronous Boost Controller for Start-stop	UNKNOWN	Texas Instruments	LM5152QRGRRQ1	1	100						
80	U4	Ideal Diode Controller with Load Dump Protection, DRR0012E (WSON-12)	Y	Texas Instruments	LM74800DRRQ1	1	100			Texas Instruments			
81	U6	Micropower, 18V Window Comparator with 400mV Reference, DDC0006A (SOT-23-THIN-6)	Y	Texas Instruments	TLV6700DDCR	1	100			Texas Instruments	TLV6700DDCR		

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