

PMP23501 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
PCB1	1		PMP23501	Any	Printed Circuit Board	
C0, C3, C106, C119, C206, C219	6	1000pF	CGA3E2X7R2A102K080AA	TDK	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C1, C6, C10, C11	4	0.1uF	GCJ188R72A104KA01D	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C2	1	2.2uF	CGA5L3X7S2A225K160AB	TDK	CAP, CERM, 2.2 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1206	1206
C4, C130, C230	3	0.1uF	GCM188R71H104KA57D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C5, C9	2	33uF	EEE-TG2A330P	Panasonic	CAP, AL, 33 µF, 100 V, +/- 20%, 1 ohm, AEC-Q200 Grade 1, SMD	Dia 10 mm
C7, C8, C107, C108, C109, C207, C208, C209	8	4.7uF	GCM32DC72A475KE02L	MuRata	CAP, CERM, 4.7 µF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1210	1210
C12	1	10uF	GCJ21BR71A106KE01L	MuRata	CAP, CERM, 10 µF, 10 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C13, C14	2	0.01uF	CGA3E2X7R2A103K080AA	TDK	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C15, C16, C17, C18	4	220pF	GRM188R72A221KA01D	MuRata	CAP, CERM, 220 pF, 100 V, +/- 10%, X7R, 0603	0603
C19, C103, C203	3	4.7uF	GRM188Z71A475ME15D	MuRata	CAP, CERM, 4.7 uF, 10 V, +/- 20%, X7R, 0603	0603
C20	1	0.47uF	GCM188R71E474KA64D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C21	1	1uF	CGA3E1X7R1V105K080AE	TDK	CAP, CERM, 1 µF, 35 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C100, C200	2	100pF	GCM1885C2A101JA16D	MuRata	CAP, CERM, 100 pF, 100 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C101, C201	2	3300pF	GCM188R72A332KA37D	MuRata	CAP, CERM, 3300 pF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C104, C204	2	22uF	GRM188C80J226ME15D	MuRata	CAP, CERM, 22 µF, 6.3 V, +/- 20%, X6S, 0603	0603
C105, C118, C205, C218	4	0.047uF	CGA3E3X7S2A473K080AB	TDK	CAP, CERM, 0.047 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0603	0603
C110, C210	2	0.047uF	CGA3E2X7R1H473K080AA	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C111, C211	2	33pF	CGA3E2NP01H330J080AA	TDK	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 0, 0603	0603
C113, C114, C115, C116, C213, C214, C215, C216	8	10uF	CGA6P1X7R1E106M250AC	TDK	CAP, CERM, 10 uF, 25 V, +/- 20%, X7R, AEC-Q200 Grade 1, 1210	1210
C117, C217	2	47uF	HHXC250ARA470MF61G	Chemi-Con	CAP, AL, 47 µF, 25 V, +/- 20%, 0.05 ohm, AEC-Q200 Grade 1, SMD	D6.3xL6.1mm
C131, C231	2	1uF	GCM31MR71H105KA55L	MuRata	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
D1	1	70V	SMBJ70CA-13-F	Diodes Inc.	Diode, TVS, Bi, 70 V, SMB	SMB
D130, D131, D230, D231	4	5V	SM24T1G	ON Semiconductor	Diode, TVS, Uni, 5 V, SOT-23	SOT-23
H1, H3, H5, H7	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
H2, H4, H6, H8	4		NY PMS 440 0025 PH	B&F Fastener Supply	Machine Screw, Round, #4-40 x 1/4, Nylon, Philips panhead	Screw
J1	1		691253510002	Würth Electronics	2 Position Wire to Board Terminal Block Horizontal with Board 0.200" (5.08mm) Through Hole	CONN_TERM_BLOC K2
J10	1		61300411121	Würth Elektronik	Header, 2.54 mm, 4x1, Gold, TH	Header, 2.54mm, 4x1, TH

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J30	1		N2510-6002-RB	3M	Header (shrouded), 100mil, 5x2, High-Temperature, Gold, TH	5x2 Shrouded header
J100, J200	2		TSW-111-07-G-S	Samtec	Header, 100mil, 11x1, Gold, TH	11x1 Header
J100 & J200: pin 2 to pin 3	2		shorting jumper: 0.10" pins 2 pos	any		
J130, J230	2		KUSBX-MM-CS1-B30TR	Kycon	USB Connectors USB TYPE C SOCKET MIDMOUNT BLK 30u T/R	CONN_USB
L1	1		CM7060P701R-10	Laird	Common Mode Choke Power 700Ω 4A -40 to 125°C Wire Wound Surface Mount T/R	SMT_CMC_7MM0_6MM0
L2	1	1uH	74438356010	Würth Elektronik	Inductor, Shielded, 1 uH, 7.2 A, 0.012 ohm, SMD	4.1x4.1mm
L100, L200	2	22uH	VCHA085D-220MS6	Cyntec	Power Choke Coil	SMD
LBL1	1		THT-14-423-10	Brady	Thermal Transfer Printable Labels, 0.650" W x 0.200" H - 10,000 per roll	PCB Label 0.650 x 0.200 inch
Q1	1		NVMFS6H852NLT1G	onsemi	N-Channel 80 V 11A (Ta), 42A (Tc) 3.6W (Ta), 54W (Tc) Surface Mount 5-DFN (5x6) (8-SOFL)	DFN5
Q10	1	60 V	PBSS4160T	NXP Semiconductor	Transistor, NPN, 60 V, 0.9 A, SOT-23	SOT-23
R1	1	0.1	RCWE1020R100FKEA	Vishay	100 mOhms ±1% 2W Chip Resistor Wide 2010 (5025 Metric), 1020 Automotive AEC-Q200, Current Sense, Moisture Resistant Thick Film	1020
R10, R11, R12, R14, R15, R22, R25, R26, R102, R202	10	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R13, R106, R108, R112, R135, R136, R137, R138, R206, R208, R212, R235, R236, R237, R238	15	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
R16, R21	2	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R19	1	681k	CRCW0603681KFKEA	Vishay-Dale	RES, 681 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R24	1	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R27, R28	2	2.00k	ERJ3EKF2001V	Panasonic	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R100, R200	2	5.23k	CRCW06035K23FKEA	Vishay-Dale	RES, 5.23 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R101, R201	2	21.5k	CRCW060321K5FKEA	Vishay-Dale	RES, 21.5 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R104	1	41.2k	CRCW060341K2FKEA	Vishay-Dale	RES, 41.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R105, R205	2	10kΩ	TMP6131QDYARQ1	Texas Instruments	Automotive ±1% tolerance 10kΩ linear thermistor available in an 0402 package option 2-SOT-5X3 -40 to 150	SOT-523
R107, R207	2	51	CRCW060351R0JNEA	Vishay-Dale	RES, 51, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R111, R211	2	0.008	KRL2012E-M-R008-F	Susumu Co Ltd	RES, 0.008, 1%, 1 W, AEC-Q200 Grade 0, 0508	0508
R113, R213	2	5.1Meg	CRCW06035M10JNEA	Vishay-Dale	RES, 5.1 M, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R204	1	54.9k	CRCW060354K9FKEA	Vishay-Dale	RES, 54.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
TP1, TP3, TP100, TP200	4		5000	Keystone Electronics	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP2, TP4, TP101, TP201	4		5001	Keystone Electronics	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1	1		LM74500QDDFRQ1	Texas Instruments	Low IQ Reverse Battery Protection Controller	SOT23-8
U10	1		TPS26744EAATRHBRQ1	Texas Instruments	Automotive Dual-Port USB Type-C® PD Controller with 240W EPR and DisplayPortTM over USB Type-C	VQFN32
U100, U200	2		LM72880-Q1	Texas Instruments	DC to DC converter with I2C 80Vin max 8A max	VQFN29
C102, C202	0	10pF	GCM1885C2A100JA16D	MuRata	CAP, CERM, 10 pF, 100 V, +/- 5%, C0G/NP0, AEC-Q200 Grade 1, 0603	0603
C112, C212	0	100pF	GRM1885C2A101JA01D	MuRata	CAP, CERM, 100 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603

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C140, C141, C240, C241	0	0.1uF	GCJ188R72A104KA01D	MuRata	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
R20, R23, R32, R110, R210	0	0	RC0603JR-070RL	Yageo	RES, 0, 5%, 0.1 W, 0603	0603
R30, R31	0	2.00k	ERJ3EKF2001V	Panasonic	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R109, R209	0	2	CRCW06032R00FKEA	Vishay-Dale	RES, 2.00, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
U140, U240	0		TPD4S481QRGRRQ1	Texas Instruments	USB Type-C® 48V EPR Port Protector: Short-to-VBUS Overvoltage and IEC ESD Protection	VQFN20

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