

PMP23578 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB	1		PMP23578	Any	Printed Circuit Board	
C1, C13	2	0.1uF	HMK107B7104KAHT	Taiyo Yuden	CAP, CERM, 0.1 uF, 100 V,+/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C2, C14, C15	3	0.1uF	CGA3E2X7R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C3	1	47uF	UCM1H470MCL1GS	Nichicon	CAP, AL, 47 uF, 50 V, +/- 20%, SMD	D6.3xL5.8mm
C4, C5	2	0.1uF	C1608X7R1H104K080AA	TDK	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C6, C7, C8, C9	4	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, 1206	1206
C10, C11	2	0.01uF	C0603X103K5RACTU	Kemet	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C12	1	0.68uF	C1608X5R1H684K080AB	TDK	CAP, CERM, 0.68 uF, 50 V, +/- 10%, X5R, 0603	0603
C16	1	150uF	EEE-FK1H151P	Panasonic	CAP, AL, 150 uF, 50 V, +/- 20%, 0.18 ohm, AEC-Q200 Grade 2, SMD	SMT Radial G
C101, C102, C103, C201, C202, C203, C401, C402, C403	9	10uF	CGA5L1X7R1H106K160AC	TDK	CAP, CERM, 10 uF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
C104, C105, C204, C205, C404, C405	6	0.1uF	GCM155R71H104KE02D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C106, C206, C406	3	1uF	GRM155R70J105KA12D	MuRata	CAP, CERM, 1 uF, 6.3 V,+/- 10%, X7R, 0402	0402
C107, C112, C209, C409	4	0.1uF	GCM188R71C104KA37J	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C108	1	4.7pF	06035A4R7CAT2A	AVX	CAP, CERM, 4.7 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C109	1	2000pF	CL10B202KB8NNNC	Samsung	CAP, CERM, 2000 pF, 50 V,+/- 10%, X7R, 0603	0603
C110, C207, C407	3	0.1uF	GCM155R71C104JA55D	MuRata	CAP, CERM, 0.1 uF, 16 V,+/- 5%, X7R, AEC-Q200 Grade 1, 0402	0402
C111	1	10pF	06035A100JAT2A	AVX	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C113, C114, C115, C116, C210, C211, C212, C213, C410, C411, C412, C413	12	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 10%, X7R, 1210	1210
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
H5, H6, H7, H8	4		1902C	Keystone	Standoff, Hex, 0.5"L #4-40 Nylon	Standoff
H9, H10, H11, H12, H13, H14	6		PMSSS 440 0025 PH	B&F Fastener Supply	MACHINE SCREW PAN PHILLIPS 4-40	Machine Screw, 4-40, 1/4 inch
J4, J6	2		TSW-104-07-G-S	Samtec	Header, 100mil, 4x1, Gold, TH	4x1 Header
J5	1		TSW-106-07-G-S	Samtec	Header, 100mil, 6x1, Gold, TH	6x1 Header
J8	1		TSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	2x1 Header
J12	1		TSW-103-07-G-S	Samtec	Header, 100mil, 3x1, Gold, TH	3x1 Header
J13	1		5-146261-1	TE Connectivity	Header, 100mil, 2x1, Gold, TH	Header, 2x1, 100mil
J14, J15	2		MMCX-J-P-H-ST-TH1	Samtec	Connector, MMCX 50 ohm, TH	Connector, MMCX, TH
L1	1	1.0uH	MPX1D2213L1R0	KEMET	1 uH Shielded Wirewound Inductor 74 A 1.0mOhm Max Nonstandard	SMD2
L100, L200, L400	3	0.35uH	XGL5030-351MEC	Coilcraft	350 nH Shielded Molded Inductor 30.6 A 2.2mOhm Max Nonstandard	SMT2_5MM28_5MM4 8
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

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Q1, Q2, Q3, Q4	4		TQM050NB06CR RLG	Taiwan Semiconductor	MOSFET N-Channel 60 V 16A (Ta), 104A (Tc) 3.1W (Ta), 136W (Tc) Surface Mount, Wettable Flank 8-PDFNU (5x6)	PDFN56U
Q5	1	25V	CSD16556Q5B	Texas Instruments	MOSFET, N-CH, 25 V, 40 A, DNK0008A (VSON-CLIP-8)	DNK0008A
R1, R2, R3	3	0.002	CRF1206-FZ-R002ELF	Bourns	RES, 0.002, 1%, 1 W, AEC-Q200 Grade 0, 1206	1206
R4, R11	2	3.32k	CRCW06033K32FKEA	Vishay-Dale	RES, 3.32 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R5	1	69.8	CRCW060369R8FKEA	Vishay-Dale	RES, 69.8, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R6, R7, R101, R107, R108, R205, R206	7	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R8, R9, R10	3	10.0k	RMCF0603FT10K0	Stackpole Electronics Inc	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R12	1	8.45k	CRCW06038K45FKEA	Vishay-Dale	RES, 8.45 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R13	1	2.49k	CRCW06032K49FKEA	Vishay-Dale	RES, 2.49 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14	1	18.2k	CRCW060318K2FKEA	Vishay-Dale	RES, 18.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16, R201, R202, R401, R402, R602	6	0	MCR03EZPJ000	Rohm	RES, 0, 5%, 0.1 W, 0603	0603
R17	1	1	CRCW06031R00JNEA	Vishay-Dale	RES, 1.0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R18	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R19, R20	2	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R21	1	0.05	CSR2512C0R05F	RIDEON	RES, 0.05, 1%, 3 W, 2512	2512
R102, R110, R113, R208	4	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R103	1	150k	CRCW0603150KFKEA	Vishay-Dale	RES, 150 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R104	1	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R105	1	7.15k	CRCW06037K15FKEA	Vishay-Dale	RES, 7.15 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R106	1	7.50k	CRCW06037K50FKEA	Vishay-Dale	RES, 7.50 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R109, R112, R207	3	105k	CRCW0603105KFKEA	Vishay-Dale	RES, 105 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R111	1	10	CRCW060310R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R114	1	49.9k	CRCW040249K9FKED	Vishay-Dale	RES, 49.9 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R203, R404	2	4.75k	CRCW06034K75FKEA	Vishay-Dale	RES, 4.75 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R204, R403	2	2.37k	CRCW06032K37FKEA	Vishay-Dale	RES, 2.37 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
T1, T2, T3, T4	4		CB35-36-CY	Panduit	Terminal 50A Lug	CB35-36-CY
TP1, TP4, TP6	3		5010	Keystone Electronics	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
TP2, TP5	2		5011	Keystone Electronics	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint
TP3	1		5012	Keystone Electronics	Test Point, Multipurpose, White, TH	White Multipurpose Testpoint
U1	1		LM74910QRGERQ1	Texas Instruments	Ideal Diode with Circuit Breaker, Under and Over Voltage Protection with Fault Output	VQFN24
U100, U200, U400	3		LM684B0TFVDARQ1	Texas Instruments	20A Stackable ASIL C Buck Converters	WQFN-FCRLF26
C301, C302, C303, C501, C502, C503, C601, C602, C603	0	10uF	CGA5L1X7R1H106K160AC	TDK	CAP, CERM, 10 µF, 50 V,+/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
C304, C305, C504, C505, C604, C605	0	0.1uF	GCM155R71H104KE02D	MuRata	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0402	0402
C306, C506, C606	0	1uF	GRM155R70J105KA12D	MuRata	CAP, CERM, 1 uF, 6.3 V,+/- 10%, X7R, 0402	0402
C307, C507, C607	0	0.1uF	GCM155R71C104JA55D	MuRata	CAP, CERM, 0.1 µF, 16 V,+/- 5%, X7R, AEC-Q200 Grade 1, 0402	0402

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C309, C509, C609	0	0.1uF	GCM188R71C104KA37J	MuRata	CAP, CERM, 0.1 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C310, C311, C312, C313, C510, C511, C512, C513, C610, C611, C612, C613	0	47uF	GRM32ER71A476KE15L	MuRata	CAP, CERM, 47 uF, 10 V, +/- 10%, X7R, 1210	1210
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
J1, J2, J3, J11	0		5102	Keystone	Shorting Jumper, 5.375mm, 2 Position, Tin, SMT	Shorting Jumper, 5.375mm, 2 Position, SMT
J7, J9, J10	0		TSW-102-07-G-S	Samtec	Header, 100mil, 2x1, Gold, TH	2x1 Header
L300, L500, L600	0	0.35uH	XGL5030-351MEC	Coilcraft	350 nH Shielded Molded Inductor 30.6 A 2.2mOhm Max Nonstandard	SMT2_5MM28_5MM4 8
R15, R301, R302, R501, R502, R601	0	0	MCR03EZPJ000	Rohm	RES, 0, 5%, 0.1 W, 0603	0603
R303	0	4.32k	CRCW06034K32FKEA	Vishay-Dale	RES, 4.32 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R304	0	2.87k	CRCW06032K87FKEA	Vishay-Dale	RES, 2.87 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R503	0	1.43k	CRCW06031K43FKEA	Vishay-Dale	RES, 1.43 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R504	0	5.76k	CRCW06035K76FKEA	Vishay-Dale	RES, 5.76 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R603	0	1.18k	CRCW06031K18FKEA	Vishay-Dale	RES, 1.18 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R604	0	5.90k	CRCW06035K90FKEA	Vishay-Dale	RES, 5.90 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
U300, U500, U600	0		LM684B0TFVDARQ1	Texas Instruments	20A Stackable ASIL C Buck Converters	WQFN-FCRLF26

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](#) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265

Copyright © 2025, Texas Instruments Incorporated

DRAFT
TI Confidential – NDA Restrictions

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265

Copyright © 2025, Texas Instruments Incorporated