

PMP21783 REV C Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
I PCB1	1		PMP21783	Any	Printed Circuit Board	
C1, C2, C6	3	0.1uF	C1210C104KBRAC7800	Kemet	CAP, CERM, 0.1 uF, 630 V, +/- 10%, X7R, 1210	1210
C3, C4, C5, C22	4	47uF	450BXW47MEFC12.5X35	Rubycon	CAP, AL, 47 uF, 450 V, +/- 20%, TH	D12.5xL35mm
C7	1	4.7uF	GRM31CR71H475KA12L	MuRata	CAP, CERM, 4.7 uF, 50 V, +/- 10%, X7R, 1206	1206
C8	1	22uF	EMK316BB7226ML-T	Taiyo Yuden	CAP, CERM, 22 uF, 25 V, +/- 20%, X7R, 1206_190	1206_190
C9, C32	2	270pF	GRM188R71H271KA01D	MuRata	CAP, CERM, 270 pF, 50 V, +/- 10%, X7R, 0603	0603
C10	1	0.01uF	GRM188R71H103KA01D	MuRata	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C11	1	2200pF	GRM188R71E222KA01D	MuRata	CAP, CERM, 2200 pF, 25 V, +/- 10%, X7R, 0603	0603
C12	1	0.47uF	GRM188R71E474KA12D	MuRata	CAP, CERM, 0.47 uF, 25 V, +/- 10%, X7R, 0603	0603
C13	1	0.1uF	890324025017	Wurth Elektronik	CAP, Film, 0.1 uF, 275 V, +/- 10%, TH	18x6mm
C14	1	270uF	RR71C271MDN1PH	Nichicon	CAP, Aluminum Polymer, 270 uF, 16 V, +/- 20%, 0.007 ohm, TH	D10x12.5mm
C15, C16, C17, C18	4		860080578019	Wurth Electronics	CAP ALUM 680UF 20% 35V THRU HOLE	RADIAL
C20, C36, C37	3	10uF	GRM32DR71E106KA12L	MuRata	CAP, CERM, 10 uF, 25 V, +/- 10%, X7R, 1210	1210
C21, C34, C35	3	0.1uF	GRM155R71E104KE14D	MuRata	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0402	0402
C23	1	0.047uF	VJ1206Y473KXEAT5Z	Vishay-Vitramon	CAP, CERM, 0.047 uF, 500 V, +/- 10%, X7R, 1206	1206
C24	1	1000pF	12061C102JAT2A	AVX	CAP, CERM, 1000 pF, 100 V, +/- 5%, X7R, 1206	1206
C26	1	2.2uF	C0805C225K4RACTU	Kemet	CAP, CERM, 2.2 uF, 16 V, +/- 10%, X7R, 0805	0805
C27	1	1uF	GCM21BR71H105KA03K	MuRata	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C28	1	10uF	CGA5L1X7R1H106K160AC	TDK	CAP, CERM, 10 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 1206	1206
C29	1	0.1uF	C1608X7R1E104K080AA	TDK	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, 0603	0603
C30	1	0.047uF	GRM188R71C473KA01D	MuRata	CAP, CERM, 0.047 uF, 16 V, +/- 10%, X7R, 0603	0603
C31	1	0.015uF	GRM188R71E153KA01D	MuRata	CAP, CERM, 0.015 uF, 25 V, +/- 10%, X7R, 0603	0603
C33	1	2200pF	C921U222MVVDBA7317	Kemet	CAP, CERM, 2200 pF, X1 400 VAC/Y1 400 VAC, +/- 20%, Y5V, D9xL13mm	D9xL13mm
C38, C39, C40, C41, C138, C139, C140	7	22uF	GRM21BR61A226ME44L	MuRata	CAP, CERM, 22 uF, 10 V, +/- 20%, X5R, 0805	0805
C42	1	150pF	GRM1885C2A151JA01D	MuRata	CAP, CERM, 150 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
C43	1	82pF	GRM1885C2A820JA01D	MuRata	CAP, CERM, 82 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603
D1	1	400V	MUR1640CTG	ON Semiconductor	Diode, Ultrafast, 400 V, 8 A, TO-220AB	TO-220AB
D2	1	400V	MURS140-13-F	Diodes Inc.	Diode, Ultrafast, 400 V, 1 A, SMB	SMB
D3	1	13V	SMCJ13A-TR	STMicroelectronics	Diode, TVS, Uni, 13 V, 21.5 Vc, 1500 W, 73 A, SMC	SMC
D4	1	56V	MMSZ5263BT1G	ON Semiconductor	Diode, Zener, 56 V, 500 mW, AEC-Q101, SOD-123	SOD-123
D5	1	5.1V	MMSZ4689T1G	ON Semiconductor	Diode, Zener, 5.1 V, 500 mW, SOD-123	SOD-123
D6	1	600V	KBP06G	Diodes Inc.	Diode, Switching-Bridge, 600 V, 1.5 A, TH	Diode Bridge
D7	1	200V	SMCJ200A	Littelfuse	Diode, TVS, Uni, 200 V, 324 Vc, SMC	SMC
D8	1	1000V	US1M-13-F	Diodes Inc.	Diode, Ultrafast, 1000 V, 1 A, SMA	SMA
D9	1	100V	PMEG10010ELRX	Nexperia	Diode, Schottky, 100 V, 1 A, AEC-Q101, SOD-123W	SOD-123W
F1	1		37216300001	Littelfuse	Fuse, 6.3 A, 250VAC/VDC, TH	TR5 fuse 8.5mm DIA
H1, H2	2		7020B-MTG	Aavid Thermalloy	Heat Sink TO-220 Aluminum 8.0W @ 70°C Board Level, Vertical	HEAT_SINK_TO220
H3	1		7173DG	Aavid	Heat Sink, TO-220 Vertical	9.52x19.05x19.05 mm
J1	1		ED120/2DS	On-Shore Technology	Terminal Block, 5.08 mm, 2x1, Brass, TH	2x1 5.08 mm Terminal Block
J2	1		770W-X2/10	Qualtek Electronics Corporation	AC Receptacle, 2.5A, R/A, TH	AC, Reception 14.5x15x22 mm
J3, J4, J5	3		691214310002	Wurth Elektronik	Terminal Block, 2x1, 3.81mm, 24-16 AWG, 10A, 300VAC, TH	2x1 Terminal Block

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
L1	1	220uH	74437529203221	Würth Elektronik	Inductor, Shielded, Mn-Zn, 220 µH, 5.3 A, 0.040095 ohm, SMD	SMT High Current Inductor
L2	1	22uH	744065220	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 22 uH, 1.8 A, 0.11 ohm, SMD	WE-TPC-XLH2
L3	1	5mH	7448011305	Würth Elektronik	Coupled inductor, 5 mH, 1.3 A, 0.2 ohm, TH	TH, 14x7.5mm
L4	1	140uH	7447031	Würth Elektronik	Inductor, Toroid, Powdered Iron, 140 uH, 1 A, 0.11 ohm, TH	D13.5xH7mm
L5, L6	2	3.3uH	7443330330	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 3.3 uH, 14 A, 0.0054 ohm, SMD	Inductor, 10.9x9.3x10mm
L101	1	300nH	744306030	Würth Elektronik	Inductor, Shielded Drum Core, Ferrite, 300 nH, 24 A, 0.0003 ohm, SMD	10.5x5x10.3mm
LN	1		5125	Keystone	Test Point, Multipurpose, Brown, TH	Brown Multipurpose Testpoint
NEU	1		5127	Keystone	Test Point, Multipurpose, Blue, TH	Blue Multipurpose Testpoint
Q1	1	500V	AOD3N50	AOS	MOSFET, N-CH, 500 V, 2.8 A, DPAK	DPAK
Q2	1	300V	IPP410N30NAKSA1	Infineon Technologies	MOSFET, N-CH, 300 V, 44 A, TO-220-3	TO-220-3
Q3	1	100V	CSD19531KCS	Texas Instruments	MOSFET, N-CH, 100 V, 100 A, KCS0003B (TO-220-3)	KCS0003B
Q4	1	700V	IPD70R360P7SAUMA1	Infineon Technologies	MOSFET, N-CH, 700 V, 12.5 A, DPAK	DPAK
R1, R4	2	1.0Meg	CRCW12061M00JNEA	Vishay-Dale	RES, 1.0 M, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R2, R5	2	100k	CRCW1206100KJNEA	Vishay-Dale	RES, 100 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R3	1	1.54k	CRCW12061K54FKEA	Vishay-Dale	RES, 1.54 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R6	1	390	RC1206FR-07390RL	Yageo America	RES, 390, 1%, 0.25 W, 1206	1206
R7	1	0	MCR10EZPJ000	Rohm	RES, 0, 5%, 0.125 W, 0805	0805
R8	1	49.9	RC1206FR-0749R9L	Yageo America	RES, 49.9, 1%, 0.25 W, 1206	1206
R9, R30	2	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R10, R11	2	0.15	CSR2010FTR150	Stackpole Electronics Inc	RES, 0.15, 1%, 1 W, 2010	2010
R12, R15	2	590k	CRCW1206590KFKEA	Vishay-Dale	RES, 590 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R13	1	113k	CRCW0603113KFKEA	Vishay-Dale	RES, 113 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R14	1	86.6k	CRCW060386K6FKEA	Vishay-Dale	RES, 86.6 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R16, R46, R47	3	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R17	1	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R18, R19, R22	3	2.00Meg	ERJ-6ENF2004V	Panasonic	RES, 2.00 M, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R20	1	0	CRCW12060000Z0EA	Vishay-Dale	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R21, R27, R29	3	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R23, R42, R43	3	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R25	1	1.0	CRCW06031R00JNEA	Vishay-Dale	RES, 1.0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R26	1	2.05k	CRCW06032K05FKEA	Vishay-Dale	RES, 2.05 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R28	1	95.3k	CRCW060395K3FKEA	Vishay-Dale	RES, 95.3 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R31	1	107k	CRCW0603107KFKEA	Vishay-Dale	RES, 107 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R32	1	32.4k	CRCW060332K4FKEA	Vishay-Dale	RES, 32.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R33	1	1.47k	CRCW06031K47FKEA	Vishay-Dale	RES, 1.47 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R34	1	17.8k	CRCW060317K8FKEA	Vishay-Dale	RES, 17.8 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R35	1	0.25	CSRN2512FKR250	Stackpole Electronics Inc	RES, 0.25, 1%, 2 W, 2512	2512
R36	1	4.02k	CRCW06034K02FKEA	Vishay-Dale	RES, 4.02 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R37	1	11.0k	CRCW060311K0FKEA	Vishay-Dale	RES, 11.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R38, R39	2	511k	CRCW0603511KFKEA	Vishay-Dale	RES, 511 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R40, R41	2	105k	CRCW0603105KFKEA	Vishay-Dale	RES, 105 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R44	1	54.9k	CRCW060354K9FKEA	Vishay-Dale	RES, 54.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R45	1	33.2k	CRCW060333K2FKEA	Vishay-Dale	RES, 33.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
T1	1	150uH	RTL1-1311	Renco Electronics	Transformer, 150 uH, TH	1450x1090mil
TP1, TP2, TP3	3		5010	Keystone	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
TP4, TP7, TP8	3		5002	Keystone	Test Point, Miniature, White, TH	White Miniature Testpoint
TP5, TP6	2		5011	Keystone	Test Point, Multipurpose, Black, TH	Black Multipurpose Testpoint

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U1	1		LM5022QDGSRQ1	Texas Instruments	60V Low Side Controller for Boost and SEPIC, 10-pin MSOP	DGS0010A
U2	1		UCC24612-1DBVR	Texas Instruments	High-Frequency Multi-Mode Synchronous Rectifier Controller, DBV0005A (SOT-23-5)	DBV0005A
U3	1		VO618A-3	Vishay-Semiconductor	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP, 4-Leads, Body 6.86x4.83mm, Pitch 2.54mm
U4	1		UCC28742DBVR	Texas Instruments	High-Efficiency Low-Cost Flyback Controller with Secondary-Side Regulation, DBV0006A (SOT-23-6)	DBV0006A
U5	1		TLVH431AQDBZR	Texas Instruments	Low-Voltage Adjustable Precision Shunt Regulator, 80 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U6, U7	2		TPS564201DDCR	Texas Instruments	4.5V to 17V Input, 4A Output, Synchronous Step-Down Converter, DDC0006A (SOT-23-T-6)	DDC0006A
C25	0	2200pF	GRM188R72A222KA01D	MuRata	CAP, CERM, 2200 pF, 100 V, +/- 10%, X7R, 0603	0603
R24	0	10k	CRCW120610K0JNEA	Vishay-Dale	RES, 10 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATASHEETS), 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, 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 (www.ti.com/legal/termsofsale.html) 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.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2019, Texas Instruments Incorporated