

PMP31190 REV D Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
IPCB1	1		PMP31190	Any	Printed Circuit Board	
C1	1	2200pF	DE1E3RA222MA4BN01F	MuRata	CAP, Safety, 2200 pF, 250VAC,+/- 20%, X1-Y1, D9xT4mm	D9xT4mm
C2, C3	2	0.68uF	B32923C3684M000	TDK	CAP, Film, 0.68 uF, 630 V, +/- 20%, TH	B32923_16.5mm_10.5
C4, C5	2	0.33uF	890334024003	Würth Elektronik	CAP, Film, 0.33 µF, X2 275 VAC, +/- 10%, TH	15x8.5mm
C6, C17, C51, C58, C70, C72, C73	7	1000pF	885012206083	Würth Elektronik	CAP, CERM, 1000 pF, 50 V,+/- 10%, X7R, 0603	0603
C7, C8, C9, C10	4	2200uF	50YXS2200MEFC18X31.5	Rubycon	CAP, AL, 2200 uF, 50 V, +/- 20%, 0.018 ohm, TH	18x31.5
C11	1	22uF	865080542006	Wuerth	CAP, AL, 22 uF, 35 V, +/- 20%, SMD	5.0 mm x 5.5 mm
C12, C16, C62, C76, C200	5	1uF	885012207103	Würth Elektronik	CAP, CERM, 1 uF, 50 V, +/- 10%, X7R, 0805	0805
C13	1	100uF	EEE-FK1V101XP	Panasonic	CAP, AL, 100 uF, 35 V, +/- 20%, SMD	F80
C14	1	DNP	DNP	TDK	DNP	0805
C15	1	2.2uF	885012106018	Würth Elektronik	CAP, CERM, 2.2 uF, 16 V, +/- 20%, X5R, 0603	0603
C18, C22, C45, C46, C48, C49, C52, C55, C56, C59, C61, C64, C69, C77, C202	15	0.1uF	885012206095	Würth Elektronik	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C19	1	10uF	885012108021	Wuerth	CAP, CERM, 10 uF, 25 V, +/- 10%, X5R, 1206	1206
C20, C23	2	10pF	885012006051	Wuerth	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C21	1	100pF	885012006057	Würth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C24	1	0.047uF	885012206093	Wuerth	CAP, CERM, 0.047 µF, 50 V,+/- 5%, X7R, 0603	0603
C25	1	2.2uF	CGA4J3X7R1E225K125AB	TDK	CAP, CERM, 2.2 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0805	0805
C26	1	0.01uF	885012206089	Würth Elektronik	CAP, CERM, 0.01 µF, 50 V,+/- 10%, X7R, 0603	0603
C29, C30, C31, C32, C36, C37, C38, C39, C40, C41, C42, C43, C201	13	10uF	885012209073	Wuerth	CAP, CERM, 10 µF, 50 V,+/- 10%, X7R, 1210	1210
C34, C35	2	0.47uF	CGA3E3X7R1H474K080AE	TDK	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603
C44	1	100uF	870135675003	Würth Elektronik	CAP, Aluminum Polymer, 100 µF, 35 V,+/- 20%, 0.022 ohm, TH	D10xL14mm
C47	1	4.7uF	885012107018	Würth Elektronik	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0805	0805
C50, C53, C54, C57, C60, C65, C66, C67, C68	9	1uF	885012206076	Würth Elektronik	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	0603
C63	1	10uF	885012107014	Würth Elektronik	CAP, CERM, 10 µF, 16 V,+/- 20%, X5R, 0805	0805
C74, C75	2	10µF	C3225X7R1H106K250AC	TDK	Multilayer Ceramic Capacitors 10uF ±10% 50V X7R SMD 1210	1210
C101	1	470µF	EKZM350ELL471MJ16S	United Chemi-Con	Cap Aluminum 470uF 35V 20% (10 X 16mm) Radial 5mm	RADIAL
D1, D2, D12, D13, D16	5	250V	BAV21WS-TP	Micro Commercial Component	Diode, Standard Recovery Rectifier, 250 V, 0.2 A, SOD-323	SOD-323
D3	1	600V	GBU4J-BP	Micro Commercial Component	Diode, P-N-Bridge, 600 V, 4 A, TH	GBU
D4, D5, D103, D104	4	75V	SMCJ75A	Fairchild Semiconductor	Diode, TVS, Uni, 75 V, SMC	SMC
D6	1	600V	MURA160T3G	ON Semiconductor	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMA	SMA
D7	1	18V	MMSZ5248BS-7-F	Diodes Inc.	Diode, Zener, 18 V, 200 mW, SOD-323	SOD-323

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D8, D15	2	12V	MMSZ5242BS-7-F	Diodes Inc.	Diode, Zener, 12 V, 200 mW, SOD-323	SOD-323
D9, D10	2	600V	ES1JFL	Taiwan semiconductor corpora	Diode, P-N, 600 V, 1 A, MINI-SMA	MINI-SMA
D11	1	70V	BAV70-E3-08	Vishay-Semiconductor	Diode, Switching, 70 V, 0.25 A, AEC-Q101, SOT-23	SOT-23
D14, D25, D29, D100	4	15V	MMSZ5245BS-7-F	Diodes Inc.	Diode, Zener, 15 V, 200 mW, SOD-323	SOD-323
D17	1	27V	MMSZ5254BS-7-F	Diodes Inc.	Diode, Zener, 27 V, 200 mW, SOD-323	SOD-323
D18, D19, D26, D27, D28, D200	6	100V	BAT46WJ,115	Nexperia	Diode, Schottky, 100 V, 0.25 A, SOD-323F	SOD-323F
D20, D21, D22	3	Green	150120VS75000	Würth Elektronik	LED, Green, SMD	3.2x1.6mm
D23, D24	2	30V	MBR0530T1G	ON Semiconductor	Diode, Schottky, 30 V, 0.5 A, SOD-123	SOD-123
D30	1	5.1V	MMSZ4689T3G	ON Semiconductor	Diode, Zener, 5.1 V, 500 mW, SOD-123	SOD-123
D31	1	40V	BAS40-04-7-F	Diodes Inc.	Diode, Schottky, 40 V, 0.2 A, SOT-23	SOT-23
D102	1	28V	MMSZ5255BS-7-F	Diodes Inc.	Diode, Zener, 28 V, 200 mW, SOD-323	SOD-323
F1	1		39213150000	Littelfuse	Fuse, 3.15 A, 250VAC/VDC, TH	8x8.5x4mm
H1	1	10C/W	V6560W	Assman WSW	Heat Sink TO-220	Heat Sink TO-220
H2	1		6230DG (COPPER)	Aavid	Heat Sink Passive TO-220 Straight Copper 12.5°C/W Matte Tin	PTH_HTSNK
J1, J2	2		691236510003	Würth Elektronik	Terminal Block, 5.08mm, 3x1, R/A, TH	Terminal Block, 5.08mm, 3x1, R/A, TH
J3, J4	2		61302021821	Wuerth	Receptacle, 2.54mm, 10x2, Tin, TH	10x2 Receptacle
J5	1		22-05-3041	Molex		HDR4
J6	1		HTSW-103-07-G-D	Samtec	Header, 2.54mm, 3x2, Gold, TH	Header, 2.54mm, 3x2, Gold, TH
L1	1	330uH	7447060	Würth Electronics	300µH Unshielded Toroidal Inductor 2.5A 150mOhm Max Radial, Vertical (Open)	RADIAL
L2	1	2.2mH	744822222	Würth Elektronik	Coupled inductor, 2.2 mH, A, 0.07 ohm, TH	14.7x13mm
L3	1	5.5uH	744325550	Würth Elektronik	Inductor, Shielded Drum Core, Superflux, 5.5 uH, 10 A, 0.0112 ohm, SMD	WE-HC6
L4	1	10uH	74438323100	Würth Elektronik	Inductor, Shielded, Metal Composite, 10 µH, 0.6 A, 0.733 ohm, SMD	SMD, 2-Leads, Body 2.7x2.2mm
Q1, Q3, Q4, Q7	4	40 V	MMBT3904-7-F	Diodes Inc.	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23
Q2	1	600V	IPD60R600P7SAUMA1	Infineon Technologies	MOSFET, N-CH, 600 V, 6 A, DPAK	DPAK
Q5	1	NTB7D3N1 5MC	NTB7D3N15MC	On semi	MOSFET, N-CH, 150 V, 101 A, DDPAK	DDPAK
Q6	1	IPA65R190 C7XKSA1	IPA65R190C7XKSA1	Infineon Technologies	MOSFET, N-CH, 650 V, 8 A, TO-220FP	TO-220FP
Q8, Q200	2	40 V	MMBT3906-7-F	Diodes Inc.	Transistor, PNP, 40 V, 0.2 A, SOT-23	SOT-23
Q11, Q12, Q13, Q14	4	60V	CSD18534Q5A	Texas Instruments	MOSFET, N-CH, 60 V, 50 A, DQJ0008A (VSONP-8)	DQJ0008A
Q15, Q16, Q17, Q18	4	NTTFS5C6 70NLTAG	NTTFS5C670NLTAG	ON Semiconductor	MOSFET, N-CH, 60 V, 70 A, 8-PowerWDFN	8-PowerWDFN
Q19	1		RS3L110ATTB1	Rohm Semiconductor	P-Channel 60 V 4.6A (Tc) 3.75W (Tc) Surface Mount 8-SOIC	SO-8
R1	1	470	RC0603FR-07470RL	Yageo	RES, 470, 1%, 0.1 W, 0603	0603
R2, R4	2	0	RMCF1206ZT0R00	Stackpole Electronics	0Ω ±0.025W 1206 Thick Film Chip Resistor AEC-Q200 compliant	1206
R3, R5	2	499k	RC1206FR-07499KL	Yageo America	RES, 499 k, 1%, 0.25 W, 1206	1206
R6, R9, R10, R11, R23, R33, R62, R63, R64	9	1.00k	RC0603FR-071KL	Yageo	RES, 1.00 k, 1%, 0.1 W, 0603	0603
R7, R8	2	4.7	CRM2010-JW-4R7ELF	Bourns	RES, 4.7, 5%, 1 W, 2010	2010
R12	1	5.6	CRCW25125R60JNEG	Vishay-Dale	RES, 5.6, 5%, 1 W, AEC-Q200 Grade 0, 2512	2512
R13, R47, R48, R53, R57	5		560050316012	Würth Electronics	WRIS-KSKE Thick Film Resistors	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R14, R20, R36, R80, R81, R82	6	4.75k	RC0603FR-074K75L	Yageo	RES, 4.75 k, 1%, 0.1 W, 0603	0603
R15, R19, R70, R72	4	750k	RC1206FR-07750KL	Yageo America	RES, 750 k, 1%, 0.25 W, 1206	1206
R16	1	100	ESR03EZPJ101	Rohm	RES, 100, 5%, 0.25 W, AEC-Q200 Grade 0, 0603	0603
R17	1	DNP	DNP	Panasonic	DNP	1206
R18	1	270k	RC0603FR-07270KL	Yageo	RES, 270 k, 1%, 0.1 W, 0603	0603
R21, R88, R89, R94, R200, R201	6	100k	CRCW0603100KDHEAP	Vishay-Dale	RES, 100 k, 0.5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R22, R49, R50, R51, R52, R54, R90	7	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R24	1	2.21k	ERJ-6ENF2211V	Panasonic	RES, 2.21 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R25	1	9.53k	RC0603FR-079K53L	Yageo	RES, 9.53 k, 1%, 0.1 W, 0603	0603
R26	1	30.0k	ERJ-3EKF3002V	Panasonic	RES, 30.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R27, R28	2	0.5	560050363011	Wuerth	RES, 0.5, 1%, 1 W, 2512	2512
R29	1	1.50k	RC0603FR-071K5L	Yageo	RES, 1.50 k, 1%, 0.1 W, 0603	0603
R30, R37, R71, R73, R74, R76, R79, R86, R87	9	10.0k	RC0603FR-0710KL	Yageo	RES, 10.0 k, 1%, 0.1 W, 0603	0603
R31	1	2.21k	RC0603FR-072K21L	Yageo	RES, 2.21 k, 1%, 0.1 W, 0603	0603
R32	1	86.6k	RT0603DRE0786K6L	Yageo America	RES, 86.6 k, 0.5%, 0.1 W, 0603	0603
R34	1	47.0k	RC0603FR-0747KL	Yageo	RES, 47.0 k, 1%, 0.1 W, 0603	0603
R35	1	20.0k	RC0603FR-0720KL	Yageo	RES, 20.0 k, 1%, 0.1 W, 0603	0603
R46	1	0.002	580070763001	Wuerth	RES, 0.002, 1%, 2 W, 2512	2512
R55	1	0.005	580070763005	Wuerth	RES, 0.005, 1%, 2 W, 2512	2512
R56	1	113k	RC0603FR-07113KL	Yageo	RES, 113 k, 1%, 0.1 W, 0603	0603
R58	1	2.55k	RC0603FR-072K55L	Yageo	RES, 2.55 k, 1%, 0.1 W, 0603	0603
R59	1	249k	RC0603FR-07249KL	Yageo	RES, 249 k, 1%, 0.1 W, 0603	0603
R60	1	15.0k	RC0603FR-0715KL	Yageo	RES, 15.0 k, 1%, 0.1 W, 0603	0603
R61	1	4.22k	RT0603DRE074K22L	Yageo America	RES, 4.22 k, 0.5%, 0.1 W, 0603	0603
R65	1	66.5k	RC0603FR-0766K5L	Yageo	RES, 66.5 k, 1%, 0.1 W, 0603	0603
R66	1	24.3k	CRCW060324K3FKEA	Vishay-Dale	RES, 24.3 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R67	1	4.99k	RC0603FR-074K99L	Yageo	RES, 4.99 k, 1%, 0.1 W, 0603	0603
R68	1	30.1k	RT0603BRD0730K1L	Yageo America	RES, 30.1 k, 0.1%, 0.1 W, 0603	0603
R69	1	5.23k	RT0603BRD075K23L	Yageo America	RES, 5.23 k, 0.1%, 0.1 W, 0603	0603
R75, R78	2	22.0k	RC0603FR-0722KL	Yageo	RES, 22.0 k, 1%, 0.1 W, 0603	0603
R77	1	88.7k	RC0603FR-0788K7L	Yageo	RES, 88.7 k, 1%, 0.1 W, 0603	0603
R84, R85	2	110k	CRCW0603110KFKEA	Vishay-Dale	RES, 110 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R93	1	1.00k	CRCW20101K00FKEF	Vishay-Dale	RES, 1.00 k, 1%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R202	1	1.80k	RC0603FR-071K8L	Yageo	RES, 1.80 k, 1%, 0.1 W, 0603	0603
T1	1		750320256r00H	Würth Electronics	Transformer 6:1 3000VAC 250uH 41.90x44.00x31.75mm	TRANSFORMER_41 MM9 44MM0
T2	1	340uH	750313638	Würth Elektronik	Transformer, 340 uH, TH	8x9.14mm
TP1, TP2	2		5012	Keystone Electronics	Test Point, Multipurpose, White, TH	White Multipurpose Testpoint
U1, U4	2		SFH6156-2	Vishay-Semiconductor	Optocoupler, 5.3 kV, 63-125% CTR, SMT	SMD, 4-Leads, Body 4.83x6.81mm, Pitch 2.54mm
U2	1	UCC24612-1DBVR	UCC24612-1DBVR	Texas Instruments	High-Frequency Multi-Mode Synchronous Rectifier Controller, DBV0005A (SOT-23-5)	DBV0005A

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U3	1		UCC28810DR	Texas Instruments	LED Lighting Power Controller, -40 to +105 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	D0008A
U5	1	TL431AIDBZT	TL431AIDBZT	Texas Instruments	Adjustable Precision Shunt Regulator, 34 ppm / degC, 100 mA, -40 to 85 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
U7	1	BQ25751RRVR	BQ25751RRVR	Texas Instruments	70V, buck-boost, lead acid battery charge controller	VQFN36
U8	1	AMC1311BDWVR	AMC1311BDWVR	Texas Instruments	Precision, 2-V Input, Reinforced Isolated Amplifier, DWV0008A (SOIC-8)	DWV0008A
U9	1	TLV6001UIDBVR	TLV6001IDBVR	Texas Instruments	1-MHz, Low-Power Operational Amplifier for Cost-Sensitive Systems, DBV0005A (SOT-23-5)	DBV0005A
U10	1	TLV70450DBVR	TLV70450DBVR	Texas Instruments	Single Output LDO, 150 mA, Fixed 5 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A
U11	1	TPS560430YDBVR	TPS560430YDBVR	Texas Instruments	4V to 36 V 0.6 A Synchronous Step-Down Converter, DBV0006A (SOT-23-6)	DBV0006A
U12	1	SN6501DBVR	SN6501DBVR	Texas Instruments	Low-Noise 350 mA, 410 kHz Transformer Driver, DBV0005A (SOT-23-5)	DBV0005A
U13	1	TLV70433DBVR	TLV70433DBVR	Texas Instruments	Single Output LDO, 150 mA, Fixed 3.3 V Output, 2.5 to 24 V Input, with Ultra-Low IQ, 5-pin SOT-23 (DBV), -40 to 125 degC, Green (RoHS & no Sb/Br)	DBV0005A

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, 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 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](#), [TI's General Quality Guidelines](#), 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. Unless TI explicitly designates a product as custom or customer-specified, TI products are standard, catalog, general purpose devices.

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

Copyright © 2026, Texas Instruments Incorporated

Last updated 10/2025