

PMP31179 REV A Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1A, C1B, C1C	3	330µF	861011385023	Wuerth	330µF 400V Aluminum Electrolytic Capacitors Radial, Can - Snap-In 2000 Hrs @ 85°C	RADIAL, 30mm x 30mm
C2, C3	2	0.068uF	B32642B6683J	EPCOS (TDK)	CAP FILM 0.068UF 10% 630VDC RAD	18x8mm
C4, C5, C61	3	0.33µF	ECW-FE2W334K	Panasonic Electronic Components	0.33µF Film Capacitor 450V Polypropylene (PP), Metallized Radial	13x12x6mm
C6, C8, C11, C47, C49	5	2200pF	AY2222M35Y5US63L7	Vishay-Bccomponents	CAP, CERM, 2200 pF, 300 V, +/- 20%, Y5U, AEC-Q200 Grade 1, D9.5xT5mm	D9.5xT5mm
C7, C65	2	0.01uF	885342208009	Wuerth	CAP, CERM, 0.01 uF, 500 V, +/- 10%, X7R, 1206	1206
C9, C10	2	0.33uF	B32922C3334K	TDK	CAP, Film, 0.33 uF, 630 V, +/- 10%, TH	B32922_14.5mm
C12, C13, C14, C76	4	680uF	860080678021	Wurth Electronics	CAP ALUM 680UF 20% 50V THRU HOLE	RADIAL, 13mm x 25mm
C15, C30, C55, C57	4	1uF	885012206076	Wurth Elektronik	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0603	603
C16, C27, C28, C32, C52, C63	6	0.1uF	885012206095	Wurth Elektronik	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	603
C17, C34	2	0.01uF	885012206040	Wurth Elektronik	CAP, CERM, 0.01 uF, 16 V, +/- 10%, X7R, 0603	603
C18	1	100pF	885012006023	Wurth Electronics Inc.	CAP CER 100PF 16V C0G/NP0 0603	603
C19	1	3.3pF	885012007048	Wuerth	CAP, CERM, 3.3 pF, 50 V, +/- 8%, C0G/NP0, 0805	805
C20, C50	2	10pF	885012006051	Wuerth	CAP, CERM, 10 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C21	1	1200pF	GRM1885C1H122JA01D	MuRata	CAP, CERM, 1200 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C22	1	8200pF	GRM188R71H822KA01D	MuRata	CAP, CERM, 8200 pF, 50 V, +/- 10%, X7R, 0603	603
C23, C59	2	2.2uF	885012207079	Wuerth	CAP, CERM, 2.2 uF, 25 V, +/- 10%, X7R, 0805	805
C24, C25	2	33pF	885012006054	Wuerth	CAP, CERM, 33 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C26	1	0.1uF	885012207128	Wurth Elektronik	CAP, CERM, 0.1 µF, 100 V, +/- 10%, X7R, 0805	805
C29	1	1000pF	885012206083	Wurth Elektronik	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	603
C31, C64	2	0.47uF	885012207102	Wurth Elektronik	CAP, CERM, 0.47 uF, 50 V, +/- 10%, X7R, 0805	805
C33	1	470pF	885012006061	Wuerth	CAP, CERM, 470 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C35, C56	2	4.7uF	GRM188R61E475KE11D	MuRata	CAP, CERM, 4.7 uF, 25 V, +/- 10%, X5R, 0603	603
C36	1	0.68uF	CL10B684KO8NFNC	Samsung	CAP, CERM, 0.68 uF, 16 V, +/- 10%, X7R, 0603	603
C37, R37, R70	3	DNP	DNP	DNP	DNP	603
C38	1	0.22uF	GRM188R71H224KAC4D	MuRata	CAP, CERM, 0.22 uF, 50 V, +/- 10%, X7R, 0603	603
C39	1	150pF	GRM31A7U3A151JW31D	MuRata	CAP, CERM, 150 pF, 1000 V, +/- 5%, U2J, 1206	1206
C40	1	82pF	GRM31A7U3A820JW31D	MuRata	CAP CER 82PF 1KV U2J 1206	1206
C41	1	1000pF	885012206108	Wuerth	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0603	603
C42	1		885012206069	Wurth Electronics	0.047µF ±10% 25V Ceramic Capacitor X7R 0603 (1608 Metric)	603
C43	1	680pF	885012206082	Wuerth	CAP, CERM, 680 pF, 50 V, +/- 10%, X7R, 0603	603
C44, C45	2	330pF	885012008070	Wuerth	CAP, CERM, 330 pF, 100 V, +/- 5%, C0G/NP0, 1206	1206
C46, C48	2	1uF	885012207078	Wuerth	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0805	805
C51	1	1uF	885012208064	Wuerth	CAP, CERM, 1 uF, 25 V, +/- 10%, X5R, 1206	1206
C53, C54	2	2.2uF	GRM188R6YA225KA12D	MuRata	CAP, CERM, 2.2 uF, 35 V, +/- 10%, X5R, 0603	603
C58, C62	2	100pF	885012006057	Wurth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C60	1	1000µF	860160575031	Wuerth	1000µF 35V Aluminum Electrolytic Capacitors Radial, Can 6000 Hrs @ 105°C	10mm x 30mm
C67, C68, C72, C73	4	4.7uF	C3225X7S2A475K200AE	TDK	CAP, CERM, 4.7 uF, 100 V, +/- 10%, X7S, 1210	1210
C100, C101	2	100pF	885342006003	Wuerth	CAP, CERM, 100 pF, 250 V, +/- 5%, C0G/NP0, 0603	603
C102	1	0.1uF	C0805C104K1RACTU	Kemet	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0805	805
D1, D5	2	MUR860G	MUR860G	ON Semiconductor	Diode, Ultrafast, 600 V, 8 A, TH	TO-220AC
D2, D6, D12, D13, D15	5	BAT54HT1G	BAT54HT1G	ON Semiconductor	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D3	1	GBU2510-G	GBU2510-G	Comchip Technology	RECT BRIDGE GPP 1000V 25A GBU	GBU
D4	1	15V	BZX384-C15,115	NXP Semiconductor	Diode, Zener, 15 V, 300 mW, SOD-323	SOD-323
D7, D8	2	SD103BW-7-F	SD103BW-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.35 A, SOD-123	SOD-123
D9, D10	2	RS1MB-13-F	RS1MB-13-F	Diodes Inc.	Diode, P-N, 1000 V, 1 A, SMB	SMB
D11	1	PMEG6010CEH,115	PMEG6010CEH,115	Nexperia	Diode, Schottky, 60 V, 1 A, SOD-123F	SOD-123F
D14	1	BAS20HT1G	BAS20HT1G	ON Semiconductor	Diode, Switching, 200 V, 0.2 A, AEC-Q101, SOD-323	SOD-323
D18	1	US1J-13-F	US1J-13-F	Diodes Inc.	Diode, Ultrafast, 600 V, 1 A, SMA	SMA
D20	1	LM4040D50	LM4040D50QDBZR	Texas Instruments	Precision Micropower Shunt Voltage Reference, 1% accuracy, 5 V, 15 ppm / degC, 15 mA, -40 to 125 degC, 3-pin SOT-23 (DBZ), Green (RoHS & no Sb/Br)	DBZ0003A
D100	1	S3J-E3/57T	S3J-E3/57T	Vishay-Semiconductor	Diode, Switching, 600 V, 3 A, SMC	SMC
F1	1	10A	38321000000	LITTELFUSE INC	FUSE, BOARD MOUNT, 10 A, 300 V, TH-2P	
H1, H2, H3, H4, H5, H6	6		SJ-5303 (CLEAR)	3M	Bumpon, Hemisphere, 0.44 X 0.20, Clear	Transparent Bumpon
H7	1		V9733E1-LP	Assmann WSW components	Heat Sink 11 K/W, 25,4x42x25 mm, black anodized, for TO-220	THERMAL_HEATSINK_25MM0_42MM0
J3	1		691213510003	Wuerth	Terminal Block, 5.08 mm, 3x1, Brass, TH	3x1 5.08 mm Terminal Block
L1, L6	2	150µH	750318973r00	Würth Electronics	INDUCTOR	PTH_30MM35_29MM2
L2	1	150uH	7447076	Würth Elektronik	Inductor, Toroid, Powdered Iron, 150 uH, 5 A, 0.045 ohm, TH	D27.5xT13mm
L3, L5	2	1mH	7448031501	Würth Electronics	FILTER, WE-CMBNC COMMON MODE POWER LINE CHOKE, 1mH, 15A, VERTICAL, TH-4P	
L4	1	300nH	7443081030	Würth Electronics	WE-HCM SMT High Current Flat Wire Inductor 34.6A 300nH @ 10% 100kHz 0.3045mohm	SMT_IND_9MM4_6MM2
L7	1	17uH	750318974r00	Würth Electronics	INDUCTOR, 17uH, 20A	PTH_23MM88_23MM36
L8	1	DNP	DNP	Würth Elektronik	DNP	WE-PD4-S
M1, M2, M3, M4, M5, M6, M7, M8	8		WA-T220-101E	OHMITE	HEATSINK, ALUMINIUM WITH CLIP, VERTICAL MOUNT, SOLDERABLE PIN, TO-220	
Q1, Q12	2	IPA60R120P7XKSA1	IPA60R120P7XKSA1	Infineon Technologies	MOSFET N-CHANNEL 600V 26A TO220	TO-220AB
Q2, Q3	2	IPP60R070CFD7	IPP60R070CFD7XKSA1	Infineon Technologies	MOSFET N-CHANNEL 600V 26A TO220	TO-220AB
Q4	1	MMBTA05LT1G	MMBTA05LT1G	ON Semiconductor	Transistor, NPN, 60 V, 0.5 A, AEC-Q101, SOT-23	SOT-23
Q5, Q7	2	CSD19531KCS	CSD19531KCS	Texas Instruments	MOSFET, N-CH, 100 V, 100 A, KCS0003B (TO-220-3)	KCS0003B
Q6	1	MMBT2222LT1G	MMBT2222LT1G	ON Semiconductor	Transistor, NPN, 30 V, 0.6 A, SOT-23	SOT-23
Q8	1	BSS84-7-F	BSS84-7-F	Diodes Inc.	MOSFET, P-CH, -50 V, -0.13 A, SOT-23	SOT-23
Q9	1	MMBT3904LT1G	MMBT3904LT1G	ON Semiconductor	Transistor, NPN, 40 V, 0.2 A, SOT-23	SOT-23
Q10	1	IPD60R360P7S	IPD60R360P7SAUMA1	Infineon Technologies	MOSFET, N-CH, 600 V, 9 A, DPAK	DPAK
Q11	1	MMBT3906-7-F	MMBT3906-7-F	Diodes Inc.	Transistor, PNP, 40 V, 0.2 A, SOT-23	SOT-23
Q13, Q14	2	BC858C-7-F	BC858C-7-F	Diodes Inc.	Transistor, PNP, 30 V, 0.1 A, SOT-23	SOT-23
R1, R11	2	0	RMCF0603ZT0R00	Stackpole Electronics Inc	RES, 0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R2	1	4.53k	ERJ-3EKF4531V	Panasonic	RES, 4.53 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R3	1	150	CRCW0805150RFKEA	Vishay-Dale	RES, 150, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R4, R54	2	18	ERJ-6GEYJ180V	Panasonic	RES, 18, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R5	1	18.2	CRCW080518R2FKEA	Vishay-Dale	RES, 18.2, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R6, R19, R74	3	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R7, R8	2	0.03	CSRN2512FK30L0	Stackpole Electronics Inc	RES, 0.03, 1%, 2 W, 2512	2512
R9	1	44.2k	CRCW060344K2FKEA	Vishay-Dale	RES, 44.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R10, R22, R31	3	1.00k	CRCW12061K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R12	1	8.06k	RC0603FR-078K06L	Yageo	RES, 8.06 k, 1%, 0.1 W, 0603	603
R13, R57	2	2.2	RC0805JR-072R2L	Yageo America	RES, 2.2, 5%, 0.125 W, 0805	805
R14	1	49.9k	ERJ-3EKF4992V	Panasonic	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R15, R79	2	100k	CRCW0603100KFKFA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R16	1	44.2k	RC0603FR-0744K2L	Yageo	RES, 44.2 k, 1%, 0.1 W, 0603	603
R17	1	12.0k	RC0603FR-0712KL	Yageo	RES, 12.0 k, 1%, 0.1 W, 0603	603

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R18	1	51.1k	CRCW060351K1FKEA	Vishay-Dale	RES, 51.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R20	1	3.0Meg	CRCW12063M00JNEA	Vishay-Dale	RES, 3.0 M, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R21, R23, R33	3	2.20Meg	RC0805FR-072M2L	Yageo America	RES, 2.20 M, 1%, 0.125 W, 0805	805
R24, R26	2	6.81k	CRCW06036K81FKEA	Vishay-Dale	RES, 6.81 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R25	1	213k	RT0603DRE07213KL	Yageo America	RES, 213 k, 0.5%, 0.1 W, 0603	603
R27, R34, R46, R86	4	2.74Meg	CRCW08052M74FKEA	Vishay-Dale	RES, 2.74 M, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R28, R77	2	511k	CRCW1206511KFKEA	Vishay-Dale	RES, 511 k, 1%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R29, R36, R43	3	330k	CRCW1206330KJNEA	Vishay-Dale	RES, 330 k, 5%, 0.25 W, AEC-Q200 Grade 0, 1206, RES, 330 k, 5%, 0.25 W, 1206	1206
R30	1	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R32	1	120k	RC0603FR-07120KL	Yageo	RES, 120 k, 1%, 0.1 W, 0603	603
R35	1	215k	RT0603DRE07215KL	Yageo America	RES, 215 k, 0.5%, 0.1 W, 0603	603
R38, R40	2	22	CRCW060322R0JNEA	Vishay-Dale	RES, 22, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R39	1	200k	RC0603FR-07200KL	Yageo	RES, 200 k, 1%, 0.1 W, 0603	603
R41	1	30.0k	ERJ-3EKF3002V	Panasonic	RES, 30.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R42	1	27.0k	RC0603FR-0727KL	Yageo	RES, 27.0 k, 1%, 0.1 W, 0603	603
R44, R45	2	4.7k	CR0603-JW-472GLF	Bourns	RES, 4.7 k, 5%, 0.1 W, 0603	603
R47, R71, R73	3	6.04k	CRCW06036K04FKEA	Vishay-Dale	RES, 6.04 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R48	1	147k	CRCW0603147KFKEA	Vishay-Dale	RES, 147 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R49	1	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R50	1	13.3k	RC0603FR-0713K3L	Yageo	RES, 13.3 k, 1%, 0.1 W, 0603	603
R51, R63	2	113k	CRCW0603113KFKEA	Vishay-Dale	RES, 113 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R52, R53	2	10	CRCW080510R0JNEA	Vishay-Dale	RES, 10, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R55, R64	2	10.0k	RNCF0603TKY10K0	Stackpole Electronics Inc	RES, 10.0 k, 0.01%, 0.063 W, 0603	603
R56	1	100k	RT0603BRD07100KL	Yageo America	RES, 100 k, 0.1%, 0.1 W, 0603	603
R58, R59	2	100	ERJ-3EKF1000V	Panasonic	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R60, R61	2	4.7	CRCW08054R70JNEA	Vishay-Dale	RES, 4.7, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R62	1	6.81k	RC0603FR-076K81L	Yageo	RES, 6.81 k, 1%, 0.1 W, 0603	603
R65	1	0.001	WSL2512R0010FEA18	Vishay-Dale	RES, 0.001, 1%, 2 W, 2512	2512
R66, R78	2	10	CRCW060310R0FKEAHP	Vishay-Dale	RES, 10.0, 1%, 0.25 W, AEC-Q200 Grade 0, 0603	603
R67	1	1.00Meg	CRCW08051M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	805
R68	1	392k	RC0603FR-07392KL	Yageo	RES, 392 k, 1%, 0.1 W, 0603	603
R69	1	330k	ERJ-3EKF3303V	Panasonic	RES, 330 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R72	1	825k	RC0603FR-07825KL	Yageo	RES, 825 k, 1%, 0.1 W, 0603	603
R75	1	1.10Meg	CRCW06031M10FKEA	Vishay-Dale	RES, 1.10 M, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R76	1	90.9k	CRCW060390K9FKEA	Vishay-Dale	RES, 90.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R80	1	75.0k	RC0603FR-0775KL	Yageo	RES, 75.0 k, 1%, 0.1 W, 0603	603
R81	1	390k	CRCW0603390KJNEA	Vishay-Dale	RES, 390 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R82	1	49.9k	RC0603FR-0749K9L	Yageo	RES, 49.9 k, 1%, 0.1 W, 0603	603
R83	1	22.0k	ERJ-3EKF2202V	Panasonic	RES, 22.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R87	1	2.7Meg	CRCW12062M70JNEA	Vishay-Dale	RES, 2.7 M, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206
R88	1	97.6k	CRCW060397K6FKEA	Vishay-Dale	RES, 97.6 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R89	1	82.0k	RC0603FR-0782KL	Yageo	RES, 82.0 k, 1%, 0.1 W, 0603	603
R90	1	130k	CRCW0603130KFKEA	Vishay-Dale	RES, 130 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	603
R91	1	47	DNP	Vishay-Dale	DNP	2512
R100, R101	2	1.00k	ERJ-3EKF1001V	Panasonic	RES, 1.00 k, 1%, 0.1 W, 0603	603
RT1	1	22	B57237S0220M000	TDK	Thermistor NTC, 22 ohm, 20%, 15x7mm	15x7mm
RV1	1	275V	820512711	Wuerth	Varistor 275V RMS 10MM Radial, TH	10mm Radial
T1	1	750318984r00	750318984r00	Würth Electronics	TRANSFORMER	PTH_41MM9_49MM0
Thp1, Thp2, Thp3, Thp4, Thp5, Thp6, Thp7, Thp8	8	Thermal pad	CP23-TO220-21.5-11.4-5.8-0.3	Keystone	THERM PAD 21.5MMX11.4MMX5.8MM	

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U1, U9	2	UCC27517	UCC27517DBVR	Texas Instruments	4A/4A Single Channel High-speed Low-side Gate Driver, DBV0005A (SOT-23-5)	DBV0005A
U2	1	UCC256404	UCC256404DDBR	Texas Instruments	Switching Controllers LLC resonant controller with ultra-low power, ultra-quiet standby operation and high voltage startup 14-SOIC -40 to 125	SOIC14
U3	1	UCC28064A	UCC28064ADR	Texas Instruments	Natural Interleaving Transition Mode PFC Controller with Improved Light Load Efficiency, D0016A (SOIC-16)	D0016A
U4	1	LP2951	LP2951DR	Texas Instruments	Single Output LDO, 100 mA, 1.2 to 29 V Output, 2 to 30 V Input, -40 to 125 degC, 8-Pin SOIC (D), RoHS, Tape and Reel	D0008A
U5	1	TL431LI	TL431LIAIDBZR	Texas Instruments	Programmable Shunt Regulator with Optimized Reference Current, DBZ0003A (SOT-23-3)	DBZ0003A
U6	1	VO618A-3	VO618A-3	Vishay-Semiconductor	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP, 4-Leads, Body 6.86x4.83mm, Pitch 2.54mm
U7, U8	2	UCC24612-1	UCC24612-1DBVR	Texas Instruments	High-Frequency Multi-Mode Synchronous Rectifier Controller, DBV0005A (SOT-23-5)	DBV0005A
U10	1	LP2981-50	LP2981-50DBVR	Texas Instruments	Micropower 100 mA Ultra Low-Dropout Regulator, 5-pin SOT-23, Pb-Free	DBV0005A
U11	1	TL331B	TL331BIDBVR	Texas Instruments	Single Differential Comparator	SOT-23-5
U12	1	VO618A	VO618A	Vishay-Semiconductor	Optocoupler, 5.3 kV, 50-600% CTR, TH	DIP, 4-Leads, Body 6.86x4.83mm, Pitch 2.54mm
U13	1	TLV171	TLV171IDBVR	Texas Instruments	36V, Low-Power, RRO, General-Purpose Operational Amplifier, DBV0005A (SOT-23-5)	DBV0005A
U14	1	INA181A4	INA181A4IDBVR	Texas Instruments	Bidirectional, Low- and High-Side Measurement, Multichannel, Voltage Output, Current-Sense Amplifier, DBV0006A (SOT-6)	DBV0006A

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