

PMP21639 REV D2 Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
!PCB1	1		PMP21639	Any	Printed Circuit Board	
C1	1	39uF	EKXJ401ELL390MU20S	Chemi-Con	CAP, AL, 39 μ F, 400 V, +/- 20%, AEC-Q200 Grade 2, TH	D14.5xL20mm
C2	1	68uF	400BXW68MEFR18X20	Rubycon	CAP, AL, 68 μ F, 400 V, +/- 20%, TH	D18xL20mm
C3	1	0.1uF	C1210W104KCRCTU	Kemet	CAP, CERM, 0.1 μ F, 500 V, +/- 10%, X7R, 1210	1210
C5	1	220pF	C1608C0G2E221J080AA	TDK	CAP, CERM, 220 pF, 250 V, +/- 5%, C0G/NP0, 0603	0603
C6, C7	2	0.22uF	CGA5L3X7T2E224K160AE	TDK	CAP, CERM, 0.22 μ F, 250 V, +/- 10%, X7T, AEC-Q200 Grade 1, 1206	1206
C8, C33	2	33uF	C3216X5R1E336M160AC	TDK	CAP, CERM, 33 μ F, 25 V, +/- 20%, X5R, 1206	1206
C9	1	0.47uF	C3216X7R2A474K160AA	TDK	CAP, CERM, 0.47 μ F, 100 V, +/- 10%, X7R, 1206	1206
C10	1	0.1uF	R46KF3100DQP1M	Kemet	CAP, Film, 0.1 μ F, 275V X2	Radial 12.5x5.5x11
C11, C16	2	1uF	GRM188R61E105KA12D	MuRata	CAP, CERM, 1 μ F, 25 V, +/- 10%, X5R, 0603	0603
C12	1	22uF	ECA1HM220	Panasonic	CAP, AL, 22 μ F, 50 V, +/- 20%, TH	
C13	1	0.047uF	GRM155R71E473KA88D	MuRata	CAP, CERM, 0.047 μ F, 25 V, +/- 10%, X7R, 0402	0402
C14	1	1uF	C2012X7R1H105K085AC	TDK	CAP, CERM, 1 μ F, 50 V, +/- 10%, X7R, 0805	0805
C15, C38	2	0.01uF	GRM155R71E103KA01D	MuRata	CAP, CERM, 0.01 μ F, 25 V, +/- 10%, X7R, 0402	0402
C17, C21	2	0.022uF	GRM155R71H223KA12D	MuRata	CAP, CERM, 0.022 μ F, 50 V, +/- 10%, X7R, 0402	0402
C18	1	4700pF	GRM155R71C472KA01D	MuRata	CAP, CERM, 4700 pF, 16 V, +/- 10%, X7R, 0402	0402
C19	1	1500pF	DK1E3EA152M86RAH01	MuRata	CAP, CERM, 1500 pF, X1 440 VAC/Y1 250 VAC, +/- 20%, E, 8x6mm	8x6mm
C20	1	2.2uF	08053C225KAT2A	AVX	CAP, CERM, 2.2 μ F, 25 V, +/- 10%, X7R, 0805	0805
C23	1	0.1uF	GRM155R61H104ME14D	MuRata	CAP, CERM, 0.1 μ F, 50 V, +/- 20%, X5R, 0402	0402
C24, C25, C200	3	100pF	GRM1555C1H101JA01D	MuRata	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C26	1	18pF	GRM1555C1H180JA01D	MuRata	CAP, CERM, 18 pF, 50 V, +/- 5%, C0G/NP0, 0402	0402
C27	1	0.1uF	C1005X7R1H104K050BB	TDK	CAP, CERM, 0.1 μ F, 50 V, +/- 10%, X7R, 0402	0402
C29	1	220pF	C1005C0G1H221F050BA	TDK	CAP, CERM, 220 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C30	1	22pF	GRM1555C1H220FA01D	MuRata	CAP, CERM, 22 pF, 50 V, +/- 1%, C0G/NP0, 0402	0402
C31, C100	2	2200pF	GRM155R71H222KA01D	MuRata	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0402	0402
C32	1	680uF	687AVG025MGBJ	Illinois Capacitor	CAP, Aluminum Polymer, 680 μ F, 25 V, +/- 20%, 0.29256 ohm, TH	D10xL12mm
C36	1	6.8uF	C2012X5R1E685K125AC	TDK	CAP, CERM, 6.8 μ F, 25 V, +/- 10%, X5R, 0805	0805
C101	1	1000pF	GRM155R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0402	0402
D1	1	600V	Z4DGP406L-HF	Comchip Technology	Diode, P-N-Bridge, 600 V, 4 A, Z4-D	Z4-D
D2, D5	2	200V	CSFMT104-HF	Comchip Technology	Diode, Superfast Rectifier, 200 V, 1 A, 3.5x1.6mm	3.5x1.6mm
D4	1	15V	CZRU52C15	Comchip Technology	Diode, Zener, 15 V, 150 mW, SOD-523F	SOD-523F
D6	1	600V	ES1JAF	Fairchild Semiconductor	Diode, Ultrafast, 600 V, 1 A, AEC-Q101, SMAF	SMAF
D7, D100	2	18V	CDSOD323-T18C	Bourns	Diode, TVS, Bi, 18 V, SOD-323	SOD-323
D8	1	13V	MMSZ5243BS-7-F	Diodes Inc.	Diode, Zener, 13 V, 200 mW, SOD-323	SOD-323
D9	1	40V	PMEG4030ER,115	Nexperia	Diode, Schottky, 40 V, 3 A, AEC-Q101, SOD-123W	SOD-123W
F1	1		39213150000	Littelfuse	Fuse, 3.15 A, 250VAC/VDC, TH	8x8.5x4mm
J1	1		632 723 300 011	Würth Elektronik	Connector, Receptacle, USB Type C, R/A	Connector, Receptacle, USB Type C, R/A, THT/SMT
L1	1		7447052	Würth	WE-FI Leaded Toroidal Line Choke	PTH D10MM0
L2	1	1.3mH	7448201036010	Würth	Coupled inductor, 1.3 mH, 0.035 ohm, TH	15.24x9.906mm
L3	1	22uH	BRC2518T220K	Taiyo Yuden	Inductor, Wirewound, 22 μ H, 0.49 A, 0.56 ohm, SMD	1007(2518)
L4	1	0.68uH	74479136	Würth Elektronik	Inductor, 1206, 0.68 μ H, 0.15 A, SMD	4.8x1.8x4.8mm
L5	1	1uH	744316100	Würth Elektronik	Inductor, Shielded, 1 μ H, 11.5 A, 5.225 ohm, SMD	5.5x5.3mm
LINE, NEUT	2		5012	Keystone	Test Point, Multipurpose, White, TH	White Multipurpose Testpoint

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Q1	1	100V	BSS123	Fairchild Semiconductor	MOSFET, N-CH, 100 V, 0.17 A, SOT-23	SOT-23
Q2	1	150V	BSC093N15NS5ATMA1	Infineon Technologies	MOSFET, N-CH, 150 V, 87 A, PG-TDSON-8	PG-TDSON-8
Q3, Q100	2	-20V	BSS223PWH6327	Infineon Technologies	MOSFET, P-CH, -20 V, -0.39 A, SOT-323	SOT-323
Q4	1		IPN60R1K0CEATMA1	Infineon Technologies	N-Channel 600V 6.8A (Tc) 5W (Tc) Surface Mount PG-SOT223	SOT223-3
Q5	1	600V	BSS126H6327XTSA2	Infineon Technologies	MOSFET, N-CH, Depletion Mode, 100 V, 0.17 A, AEC-Q101, SOT-23	SOT-23
Q6	1	50V	BSS138	Fairchild Semiconductor	MOSFET, N-CH, 50 V, 0.22 A, SOT-23	SOT-23
Q7, Q101	2	60V	2N7002KW	Fairchild Semiconductor	MOSFET, N-CH, 60 V, 0.31 A, SOT-323	SOT-323
R1	1	22	CRCW080522R0JNEA	Vishay-Dale	RES, 22, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R2	1	49.9k	CRCW040249K9FKED	Vishay-Dale	RES, 49.9 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R3, R16	2	301	CRCW0402301RFKED	Vishay-Dale	RES, 301, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R4	1	4.7	CRCW04024R70JNED	Vishay-Dale	RES, 4.7, 5%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R6	1	75.0k	CRCW040275K0FKED	Vishay-Dale	RES, 75.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R8, R15, R41, R45	4	150k	ERJ-2RKF1503X	Panasonic	RES, 150 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0402	0402
R9	1	30.1k	RC0402FR-0730K1L	Yageo America	RES, 30.1 k, 1%, 0.063 W, 0402	0402
R10	1	10.0k	RC0402FR-0710KL	Yageo America	RES, 10.0 k, 1%, 0.063 W, 0402	0402
R11	1	1.00Meg	RC0402FR-071ML	Yageo America	RES, 1.00 M, 1%, 0.063 W, 0402	0402
R12	1	121	CRCW0402121RFKED	Vishay-Dale	RES, 121, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R13, R14, R20	3	1.00Meg	CRCW04021M00FKED	Vishay-Dale	RES, 1.00 M, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R17, R25, R100	3	511k	CRCW0402511KFKED	Vishay-Dale	RES, 511 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R18, R23	2	1.00k	CRCW04021K00FKED	Vishay-Dale	RES, 1.00 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R19	1	3.01k	CRCW04023K01FKED	Vishay-Dale	RES, 3.01 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R21	1	20.0k	CRCW040220K0FKED	Vishay-Dale	RES, 20.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R22	1	0.15	ERJ-8B5FR15V	Panasonic	RES, 0.15, 1%, 0.5 W, 1206	1206
R24, R36	2	34.0k	CRCW040234K0FKED	Vishay-Dale	RES, 34.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R26	1	392k	CRCW0402393KFKED	Vishay-Dale	RES, 392 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R28	1	82.5k	CRCW040282K5FKED	Vishay-Dale	RES, 82.5 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R32	1	191k	CRCW0402191KFKED	Vishay-Dale	RES, 191 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R37	1	69.8k	CRCW040269K8FKED	Vishay-Dale	RES, 69.8 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R38	1	10.0k	ERJ-2RKF1002X	Panasonic	RES, 10.0 k, 1%, 0.1 W, 0402	0402
R39	1	100	CRCW0402100RFKED	Vishay-Dale	RES, 100, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R40	1	0	RC0402JR-070RL	Yageo America	RES, 0, 5%, 0.063 W, 0402	0402
R42	1	24.9k	CRCW040224K9FKED	Vishay-Dale	RES, 24.9 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
R101	1	1.00k	CRCW08051K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R200	1	7.50k	CRCW04027K50FKED	Vishay-Dale	RES, 7.50 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402
RT1	1	47k	NCP18WB473J03RB	MuRata	Thermistor NTC, 47k ohm, 5%, 0603	0603
T1	1		750318662	Würth Elektronik	Transformer	PTH_TRANSFORMER R_24MM64_24MM64
TP1	1		5000	Keystone	Test Point, Miniature, Red, TH	Red Miniature Testpoint
TP2	1		5010	Keystone	Test Point, Multipurpose, Red, TH	Red Multipurpose Testpoint
TP3	1		5001	Keystone	Test Point, Miniature, Black, TH	Black Miniature Testpoint
U1	1		MP6908GJ-Z	Monolithic Power Systems	FAST TURN-OFF INTELLIGENT RECTIF	TSOT23-6
U2	1		UCC5350SBDR	Texas Instruments	3-kVRMS Single-Channel Isolated Gate Drivers, D0008B (SOIC-8)	D0008B
U3	1		LMG3411R150	Texas Instruments	600-V 12-A Single Channel GaN Power Stage, RWH0032A (VQFN-32)	RWH0032A
U4	1		TLV7021DCKR	Texas Instruments	Small-Size Micropower Low-Voltage Comparator, DCK0005A (SOT-SC70-5)	DCK0005A
U5	1		VOL618A-3T	Vishay-Semiconductor	Optocoupler, 5 kV, 100-200% CTR, SMT	8x2x4mm
U6	1		UCC28780RTER	Texas Instruments	Active-Clamp Flyback Controller, RTE0016C (WQFN-16)	RTE0016C

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U8, U9	2		TPD1E05U06QDPYRQ1	Texas Instruments	Automotive 1-Channel Ultra-Low-Capacitance IEC ESD Protection Diode, DPY0002A (X1SON-2)	DPY0002A
U10	1		ATL431AIDBZR	Texas Instruments	2.5V Low Iq Adjustable Precision Shunt Regulator, DBZ0003A (SOT-23-3)	DBZ0003A
C34	0	33uF	C3216X5R1E336M160AC	TDK	CAP, CERM, 33 uF, 25 V, +/- 20%, X5R, 1206	1206
D3	0	100V	SMF100A-T13	Littelfuse	Diode, TVS, Uni, 100V, SOD-123FL	SOD-123FL
J2	0		GRPB051VWVN-RC	Sullins Connector Solutions	Header, 50mil, 5x1, Gold, TH	Header, 50mil, 5x1, TH
J3	0		GRPB021VWVN-RC	Sullins Connector Solutions	Header, 50mil, 2x1, Gold, TH	2x1 Header
R43	0	15.0k	CRCW040215K0FKED	Vishay-Dale	RES, 15.0 k, 1%, 0.063 W, AEC-Q200 Grade 0, 0402	0402

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