

PMP23366 REV B Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C78	1	47pF	GRM1885C1H470JA01D	MuRata	CAP, CERM, 47 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C83	1	100pF	885012006057	Würth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C3, C4, C5, C6, C15, C16, C17, C18	8	330pF	GRM1885C1H331JA01D	MuRata	CAP, CERM, 330 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C63	1	470pF	885012206081	Würth Elektronik	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
C7, C8, C9, C10, C19, C20, C21, C22	8	0.01uF	GRM188R72A103KA01D	MuRata	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7R, 0603	0603
C1, C2, C13, C14, C39, C40	6	1000pF	C1608X7R2A102K080AA	TDK	CAP, CERM, 1000 pF, 100 V, +/- 10%, X7R, 0603	0603
C28, C30, C42, C44, C56, C73, C96	7	1000pF	GRM188R71H102KA01D	MuRata	CAP, CERM, 1000 pF, 50 V, +/- 10%, X7R, 0603	0603
C79	1	2200pF	C0603C222K5RAC	Kemet	CAP, CERM, 2200 pF, 50 V, +/- 10%, X7R, 0603	0603
C72	1	4700pF	885012206087	Würth Elektronik	CAP, CERM, 4700 pF, 50 V, +/- 10%, X7R, 0603	0603
C31, C55, C89	3	0.01uF	C1608X7R1H103K080AA	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	0603
C85	1	0.033uF	GRM188R71H333KA61D	MuRata	CAP, CERM, 0.033 uF, 50 V, +/- 10%, X7R, 0603	0603
C76, C84	2	0.047uF	C1608X7R1H473K080AA	TDK	CAP, CERM, 0.047 uF, 50 V, +/- 10%, X7R, 0603	0603
C45, C46, C49, C54, C71, C74, C80, C81, C82	9	0.1uF	885012206095	Würth Elektronik	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C27, C38, C41, C57, C75	5	0.1uF	C2012X7R2A104K125AA	TDK	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0805	0805
C50, C51, C86	3	1uF	TMK212B7105KG-T	Taiyo Yuden	CAP, CERM, 1 uF, 25 V, +/- 10%, X7R, 0805	0805
C25, C26, C34, C35, C87, C88	6	47uF	EEH3C1K470P	Panasonic	CAP, Polymer Hybrid, 47 uF, 80 V, +/- 20%, 36 milliohm, 10x10 SMD	10x10
C64	1	0.047uF	GRM31CR72E473KW03L	MuRata	CAP, CERM, 0.047 uF, 250 V, +/- 10%, X7R, 1206	1206
C68, C69, C70	3	100uF	C1210C107M8PACTU	Würth Elektronik	CAP, CERM, 100 uF, 10 V, +/- 20%, X5R, 1210	1210
C32, C33, C58, C59, C60, C61, C95	7	2.2uF	GRM32ER72A225KA35L	MuRata	CAP, CERM, 2.2 uF, 100 V, +/- 10%, X7R, 1210	1210
C11, C12, C23, C24	4	1000pF	GR443QR73D102KW01L	MuRata	CAP, CERM, 1000 pF, 2000 V, +/- 10%, X7R, 1812	1812
C62, C77	2	4700pF	1812GC472KA1	AVX	CAP, CERM, 4700 pF, 2000 V, +/- 10%, X7R, 1812	1812
C37	1	22uF	EEH3C1K220P	Panasonic	CAP, Polymer Hybrid, 22 uF, 80 V, +/- 20%, 45 milliohm, 8x10 SMD	8x10
C65, C66, C67	3	220uF	10SVPE220M	Panasonic	CAP, Aluminum Polymer, 220 uF, 10 V, +/- 20%, 0.02 ohm, F61 SMD	F61
D1, D2, D3, D4, D9, D10, D11, D12	8	100V	B2100-13-F	Diodes Inc.	Diode, Schottky, 100 V, 2 A, SMB	SMB
D17, D18, D27, D28, D37, D47, D48	7	100V	BAS516,115	Nexperia	Diode, Switching, 100 V, 0.25 A, SOD-523	SOD-523
D19, D21, D29, D30	4	58V	SMBJ58A-13-F	Diodes Inc.	Diode, TVS, Uni, 58 V, 93.6 Vc, SMB	SMB
D20, D36, D55	3	5.1V	MMBZ5231BLT1G	ON Semiconductor	Diode, Zener, 5.1 V, 225 mW, SOT-23	SOT-23

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
D22, D31, D53, D54	4	100V	BAT46WJ,115	Nexperia	Diode, Schottky, 100 V, 0.25 A, SOD-323F	SOD-323F
D23, D25, D32, D33, D38	5	10V	MMBZ5240BLT1G	ON Semiconductor	Diode, Zener, 10 V, 225 mW, SOT-23	SOT-23
D24, D26, D34	3	100V	PDS3100-13	Diodes Inc.	Diode, Schottky, 100 V, 3 A, PowerDI5	PowerDI5
D35	1	Red	HLMP-Q150-F0011	Avago	LED, Red, SMD	2.08x2.21mm
D39, D41, D42, D43, D44, D45	6	100V	MMSD4148T1G	ON Semiconductor	Diode, Switching, 100 V, 0.2 A, SOD-123	SOD-123
D40	1	10V	MMSZ5240B-7-F	Diodes Inc.	Diode, Zener, 10 V, 500 mW, SOD-123	SOD-123
D46	1	30V	BAT54S-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOT-23	SOT-23
D49, D50	2	20V	MBR0520LT1G	ON Semiconductor	Diode, Schottky, 20 V, 0.5 A, SOD-123	SOD-123
J1, J2, J3, J4	4		1-406541-1	TE Connectivity	RJ45, No LED, tab up, R/A, TH	16.26x14.54x15.75
J5, J6, J7, J8	4		PEC02SAAN	Sullins Connector Solutions	Header, 100mil, 2x1, Tin, TH	Header, 2 PIN, 100mil, Tin
J9	1		ED555/2DS	On-Shore Technology	Terminal Block, 3.5mm Pitch, 2x1, TH	7.0x8.2x6.5mm
J10	1		TSW-103-08-G-S	Samtec	Header, 2.54mm, 3x1, Gold, TH	Header, 2.54mm, 3x1, TH
J11, J12	2		HTSW-105-07-G-S	Samtec	Header, 100mil, 5x1, Gold, TH	Header, 100mil, 5x1, TH
J13	1		N2510-6002-RB	3M	Header (shrouded), 100mil, 5x2, High-Temperature, Gold, TH	5x2 Shrouded header
J14	1		ED120/2DS	On-Shore Technology	Terminal Block, 5.08 mm, 2x1, Brass, TH	2x1 5.08 mm Terminal Block
J15	1		TSW-103-07-G-S	Samtec	Header, 100mil, 3x1, Gold, TH	3x1 Header
L1, L2, L3, L4, L5, L6	6	220 ohm	MPZ1608S221A	TDK	Ferrite Bead, 220 ohm @ 100 MHz, 2.2 A, 0603	0603
L7	1	3.3uH	XAL5030-332MEB	Coilcraft	Inductor, Shielded, Composite, 3.3 uH, 8.1 A, 0.02 ohm, AEC-Q200 Grade 1, SMD	5.3x31.x5.5mm
L8	1	3.3uH	XAL1010-332MEB	Coilcraft	Inductor, Shielded, Composite, 3.3 uH, 25 A, 0.0037 ohm, SMD	Inductor, 11.3x10x10mm
L9	1	2.2mH	LPS5030-225MLB	Coilcraft	Inductor, Shielded Drum Core, Ferrite, 2.2 mH, 0.08 A, 11 ohm, SMD	LPS5030
Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8	8	100V	CSD19538Q3A	Texas Instruments	MOSFET, N-CH, 100 V, 5 A, DNH0008A (VSONP-8)	DNH0008A
Q9, Q10, Q11, Q17, Q30	5	100 V	BSS63	Fairchild Semiconductor	Transistor, PNP, 100 V, 0.2 A, SOT-23	SOT-23
Q12, Q13, Q14, Q16, Q18, Q20, Q21, Q22, Q31	9		BSS123-7-F	Diodes Incorporated	MOSFET N-CH 100V 170MA SOT23-3	SOT23
Q15, Q19	2	100V	CSD19534Q5A	Texas Instruments	MOSFET, N-CH, 100 V, 10 A, DQJ0008A (VSONP-8)	DQJ0008A
Q23	1	60 V	FCX491TA	Diodes Inc.	Transistor, NPN, 60 V, 1 A, AEC-Q101, SOT-89	SOT-89
Q24	1	-150V	FDMC2523P	Fairchild Semiconductor	MOSFET, P-CH, -150 V, -3 A, QFN-8	QFN-8
Q25, Q28	2	30V	CSD17578Q5A	Texas Instruments	MOSFET, N-CH, 30 V, 25 A, DQJ0008A (VSONP-8)	DQJ0008A
Q26	1	60 V	DXT2907A-13	Diodes Inc.	Transistor, PNP, 60 V, 0.6 A, AEC-Q101, SOT-89	SOT-89
Q27	1	150V	FDMS86250	Fairchild Semiconductor	MOSFET, N-CH, 150 V, 6.7 A, PQFN08A	PQFN08A
R70, R74, R75, R79, R81, R101, R115, R116	8	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R92, R94	2	10	CRCW060310R0JNEA	Vishay-Dale	RES, 10, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R72, R73	2	20	CRCW060320R0JNEA	Vishay-Dale	RES, 20, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R1, R2, R11, R12, R13, R14, R15, R16, R17, R18, R27, R28, R29, R30, R31, R32	16	75	CRCW060375R0FKEA	Vishay-Dale	RES, 75.0, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
R106	1	665	CRCW0603665RFKEA	Vishay-Dale	RES, 665, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R53, R76, R77, R98, R114	5	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R89, R136	2	1.02k	CRCW06031K02FKEA	Vishay-Dale	RES, 1.02 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R42, R43	2	1.78k	CRCW06031K78FKEA	Vishay-Dale	RES, 1.78 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R103, R105	2	2.00k	CRCW06032K00FKEA	Vishay-Dale	RES, 2.00 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R111	1	3.24k	CRCW06033K24FKEA	Vishay-Dale	RES, 3.24 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R83	1	4.7k	CRCW06034K70JNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R82, R109	2	4.99k	CRCW06034K99FKEA	Vishay-Dale	RES, 4.99 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R35, R51, R52, R54, R59, R78, R91, R97, R104, R107, R131	11	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R80	1	15.0k	CRCW060315K0FKEA	Vishay-Dale	RES, 15.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R33, R86, R134	3	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R112	1	24.9k	CRCW060324K9FKEA	Vishay-Dale	RES, 24.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R34, R60	2	27.4k	CRCW060327K4FKEA	Vishay-Dale	RES, 27.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R49, R69, R88	3	30.1k	CRCW060330K1FKEA	Vishay-Dale	RES, 30.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R55, R56, R57, R58	4	35.7k	RC0603FR-0735K7L	Yageo	RES, 35.7 k, 1%, 0.1 W, 0603	0603
R45, R50	2	44.2k	CRCW060344K2FKEA	Vishay-Dale	RES, 44.2 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R46, R66, R108, R110	4	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R40, R64, R102	3	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R95	1	93.1k	CRCW060393K1FKEA	Vishay-Dale	RES, 93.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R36, R38, R39, R41, R61, R63, R85, R87, R135	9	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R37, R62, R133	3	137k	CRCW0603137KFKEA	Vishay-Dale	RES, 137 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R7, R8, R9, R10, R23, R24, R25, R26	8	232k	CRCW0603232KFKEA	Vishay-Dale	RES, 232 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R100	1	237k	CRCW0603237KFKEA	Vishay-Dale	RES, 237 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R113	1	499k	CRCW0603499KFKEA	Vishay-Dale	RES, 499 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R3, R4, R5, R6, R19, R20, R21, R22	8	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R71	1	0.1	RL0805FR-070R025L	Yageo America	RES, 0.025, 1%, 0.125 W, AEC-Q200 Grade 1, 0805	0805
R47, R67	2	63.4	CRCW080563R4FKEA	Vishay-Dale	RES, 63.4, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R48, R68	2	249	CRCW0805249RFKEA	Vishay-Dale	RES, 249, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R90	1	499	CRCW0805499RFKEA	Vishay-Dale	RES, 499, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R84, R130	2	39k	CRCW080539K0JNEA	Vishay-Dale	RES, 39 k, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
R99	1	0.068	MCR50JZHFSR068	Rohm	RES, 0.068, 1%, .5 W, AEC-Q200 Grade 0, 2010	2010
R93, R96	2	5.1	CRCW20105R10JNEF	Vishay-Dale	RES, 5.1, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
R44, R65	2	1.3k	CRCW20101K30JNEF	Vishay-Dale	RES, 1.3 k, 5%, 0.75 W, AEC-Q200 Grade 0, 2010	2010
T1, T2	2	350uH	7490220122	Würth Elektronik	Transformer, 350 uH, SMT	14.7x18.29mm
T3	1		LDT8618-50	LinkCom	DC/DC Transformer	SMT_XFRFMR_21M M5 21MM1
U1, U7	2		TPS2372-3RGWR	Texas Instruments	IEEE 802.3bt PoE High-Power PD Interface with Automatic MPS & Autoclass, RGW0020B (VQFN-20)	RGW0020B
U2, U3, U4, U5, U6, U15	6		TCMT1107	Vishay-Semiconductor	Optocoupler, 3.75 kV, 80-160% CTR, SMT	SOP-4

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
U8	1		TLV76050DBZR	Texas Instruments	100-mA, 30-V, Fixed-Output, Linear-Voltage Regulator, DBZ0003A (SOT-23-3)	DBZ0003A
U10	1		INA237AQDGSRQ1	Texas Instruments	High-Voltage, Zero-Drift, 16-Bit ADC, I ² C, Bidirectional Shunt Current, Bus Voltage, Power, and Temperature Monitor	VSSOP10
U11, U12, U17	3		FOD817DS	Fairchild Semiconductor	Optocoupler, 5 kV, 300-600% CTR, SMT	DIP-4L Gullwing
U13, U20	2		TPS3808G01DBVR	Texas Instruments	Low Quiescent Current, Programmable-Delay Supervisory Circuit, 1 Supply Monitored, -40 to 125 degC, 6-pin SOT-23 (DBV), Green (RoHS & no Sb/Br)	DBV0006A
U14	1		TPS23734RMT	Texas Instruments	IEEE 802.3bt Type 3 Class 1-4 PoE PD with High Efficiency DC-DC Controller	VQFN45
U16	1		TLV431AIDBVR	Texas Instruments	Low Voltage Adjustable Precision Shunt Regulator, 39 ppm / degC, 15 mA, -40 to 85 degC, 5-pin SOT-23 (DBV), Green (RoHS & no Sb/Br)	DBV0005A
C29, C43	0	0.047uF	C2012X7R2A473K125AA	TDK	CAP, CERM, 0.047 uF, 100 V, +/- 10%, X7R, 0805	0805
C36	0	47uF	EEHZC1K470P	Panasonic	CAP, Polymer Hybrid, 47 uF, 80 V, +/- 20%, 36 milliohm, 10x10 SMD	10x10
C47, C48, C52, C53, C90, C91	0	0.1uF	885012206095	Würth Elektronik	CAP, CERM, 0.1 uF, 50 V, +/- 10%, X7R, 0603	0603
C92, C93	0	100pF	885012006057	Würth Elektronik	CAP, CERM, 100 pF, 50 V, +/- 5%, C0G/NP0, 0603	0603
C94	0	470pF	885012206081	Würth Elektronik	CAP, CERM, 470 pF, 50 V, +/- 10%, X7R, 0603	0603
D5, D6, D7, D8, D13, D14, D15, D16	0	100V	B2100-13-F	Diodes Inc.	Diode, Schottky, 100 V, 2 A, SMB	SMB
D51	0	100V	MMSD4148T1G	ON Semiconductor	Diode, Switching, 100 V, 0.2 A, SOD-123	SOD-123
D52	0	10V	MMSZ5240B-7-F	Diodes Inc.	Diode, Zener, 10 V, 500 mW, SOD-123	SOD-123
FID1, FID2, FID3	0		N/A	N/A	Fiducial mark. There is nothing to buy or mount.	N/A
Q29	0	60 V	FCX491TA	Diodes Inc.	Transistor, NPN, 60 V, 1 A, AEC-Q101, SOT-89	SOT-89
R117, R118, R125, R126, R127, R129	0	0	CRCW06030000Z0EA	Vishay-Dale	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R119, R120, R121, R122, R123, R124, R128	0	4.7k	CRCW06034K70JNEA	Vishay-Dale	RES, 4.7 k, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603
R132	0	499	CRCW0805499RFKEA	Vishay-Dale	RES, 499, 1%, 0.125 W, AEC-Q200 Grade 0, 0805	0805
U9	0		TLV76050DBZR	Texas Instruments	100-mA, 30-V, Fixed-Output, Linear-Voltage Regulator, DBZ0003A (SOT-23-3)	DBZ0003A
U18	0		TCA9517ADGKR	Texas Instruments	Level-Translating I ² C Bus Repeater, DGK0008A (VSSOP-8)	DGK0008A
U19	0		ISO1640BDR	Texas Instruments		SOIC8

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 © 2024, Texas Instruments Incorporated