

PMP23380 REV A Bill of Materials

build on PCB PMP23187A

Designator	Quantity	Value	Description	PackageReference	PartNumber	Manufacturer	Alternate PartNumber	Alternate Manufacturer
C1	1	56uF	CAP, Polymer Hybrid, 82 uF, 63 V, +/- 20%, 30 ohm, 10x10 SMD	10x10	EEHZC1J560P	Panasonic		
C2, C3	2	0.1uF	CAP, CERM, 0.1 uF, 100 V, +/- 10%, X7R, 0805	0805	C0805C104K1RACTU	Kemet		
C4, C5, C6, C7, C8, C14, C15, C16, C23, C24, C25	11	4.7uF	CAP, CERM, 4.7 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 1210	1210	GCM32DC72A475KE02L	MuRata		
C9	1	0.47uF	CAP, CERM, 0.47 uF, 100 V, +/- 10%, X7R, 0805	0805	GRM21BR72A474KA73L	MuRata		
C10	1	0.47uF	CAP, CERM, 0.47 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	GCM188R71C474KA55D	MuRata		
C11, C12, C13	3	2.2uF	CAP, CERM, 2.2 uF, 10 V, +/- 10%, X7R, 0603	0603	GRM188R71A225KE15D	MuRata		
C17, C18, C19, C20, C21, C22	6	0.01uF	CAP, CERM, 0.01 uF, 100 V, +/- 10%, X7S, AEC-Q200 Grade 1, 0402	0402	CGA2B3X7S2A103K050BB	TDK		
C26, C27, C33, C39	4	0.1uF	CAP, CERM, 0.1 uF, 25 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	CGA3E2X7R1E104K080AA	TDK		
C28, C34	2	0.15uF	CAP, CERM, 0.15 uF, 50 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	CGA3E3X7R1H154K080AB	TDK		
C29, C30, C31, C32, C35, C36, C37, C38, C38B, C38C	10	47uF	CAP, CERM, 47 uF, 6.3 V, +/- 20%, X7S, AEC-Q200 Grade 1, 1210	1210	CGA6P1X7S0J476M250AC	TDK		
C40, C41	2	33pF	CAP, CERM, 33 pF, 100 V, +/- 5%, C0G/NP0, 0603	0603	06031A330JAT2A	AVX		
C42, C42A, C42B, C42C, C42D, C42E, C42F, C42G, C42H, C42I	10	220uF	CAP, Tantalum Polymer, 220 uF, 10 V, +/- 20%, 0.025 ohm, AEC-Q200 Grade 1, 7343-31 SMD	7343-31	T598D227M010ATE025	Kemet		
C44, C45	2	0.22uF	CAP, CERM, 0.22 uF, 16 V, +/- 10%, X7R, AEC-Q200 Grade 1, 0603	0603	CL10B224K08VPNC	Samsung		
C46, R16	2	0	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603L	CRCW06030000Z0EA	Vishay-Dale		
C47	1	6800pF	CAP, CERM, 6800 pF, 100 V, +/- 10%, X7R, 0603	0603	GRM188R72A682KA01D	MuRata		
C48, C49	2	220pF	CAP, CERM, 220 pF, 100 V, +/- 10%, X7R, 0603	0603	06031C221KAT2A	AVX		
D1, D2, D3*	3	100V	Diode, Schottky, 100 V, 0.25 A, SOD-323F	SOD-323F	BAT46WJ,115	Nexperia	see note 2) below	
H1, H2, H3, H4	4		Machine Screw, Round, #4-40 x 1/4, Nylon, Phillips panhead	Screw	NY PMS 440 0025 PH	B&F Fastener Supply		
H5, H6, H7, H8	4		Standoff, Hex, 0.5" L #4-40 Nylon	Standoff	1902C	Keystone		
J1	1		TEST POINT SLOTTED .118", TH	Test point, TH Slot Test point	1040	Keystone		
J2	1		Receptacle, 9.52mm, 2x1, TH	Receptacle, 9.52mm, 2x1, TH	1714971	Phoenix Contact		
J3	1		Terminal Block, 10.16mm, 2x1, Tin, R/A, TH	Terminal Block, 10.16mm, 2x1, TH	EM292902-UL	Eaton		
J4	1		Header, 100mil, 12x1, Gold, TH	12x1 Header	TSW-112-07-G-S	Samtec		
L1	1	1.2uH	Inductor, Shielded, Composite, 1.2 uH, 26.3 A, 0.0025 ohm, AEC-Q200 Grade 1, SMD	Inductor, 10x6x11.3mm	XAL1060-122MEB	Coilcraft		
L2, L3	2	1uH	Inductor, Powdered Iron, 1 uH, 32 A, 0.0021 ohm, AEC-Q200 Grade 0, SMD	Power Choke Coil	VCMT136E-1R0MN5	Cyntec		
Q1, Q2	2		N-Channel 11A (Ta), 42A (Tc) 3.6W (Ta), 54W (Tc) Surface Mount 5-DFN (5x6) (8-SOFL)	DFN5	NVMF56H852NLWFT1G	ON Semiconductor		
Q3, Q4	2		N-Channel 80 V 24A (Ta), 160A (Tc) 3.8W (Ta), 167W (Tc) Surface Mount 5-DFN (5x6) (8-SOFL)	DFN5	NVMF56H801NLT1G	onsemi		
R1	1	1	RES, 1.00, 1%, 0.1 W, 0603	0603	RC0603FR-071RL	Yageo		
R2	1	0	RES, 0, 5%, 0.25 W, AEC-Q200 Grade 0, 1206	1206	CRCW12060000Z0EA	Vishay-Dale		
R3, R4, R9, R10, R15, R17, R18, R19, R20	9	100k	RES, 100 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW0603100KFKEA	Vishay-Dale		
R5, R6	2	6.49k	RES, 6.49 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06036K49FKEA	Vishay-Dale		
R7, R8	2	7.68k	RES, 7.68 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06037K68FKEA	Vishay-Dale		
R11, R14	2	0	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW06030000Z0EA	Vishay-Dale		
R12, R13	2	100	RES, 100, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW0603100RFKEA	Vishay-Dale		
R21	1	12.4k	RES, 12.4 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060312K4FKEA	Vishay-Dale		
R22	1	22.1k	RES, 22.1 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060322K1FKEA	Vishay-Dale		
R23	1	54.9k	RES, 54.9 k, 1%, 0.1 W, AEC-Q200 Grade 0, 0603	0603	CRCW060354K9FKEA	Vishay-Dale		
R24, R25, R26, R27	4	0	RES, 0, 5%, 0.1 W, AEC-Q200 Grade 0, 0402	0402	ERJ-2GE0R00X	Panasonic		
R28, R29	2	2.2	RES, 2.2, 5%, 0.125 W, AEC-Q200 Grade 0, 0805	0805	ERJ-6GEYJ2R2V	Panasonic		
SH-J1	1		Single Operation 2.54mm Pitch Open Top Jumper Socket	Single Operation 2.54mm Pitch Open Top Jumper Socket	M7582-05	Harwin		
TP1, TP2, TP3, TP4	4		Test Point, Miniature, SMT	Testpoint_Keystone_Miniature	5015	Keystone		
U1	1		Automotive 3.5-V to 65-V Dual Synchronous Buck Controller With Low IQ	VQFN40	LM5143QRHARQ1	Texas Instruments		

Notes:

- 1) Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.
- 2) Add D3 by hand. See schematic.

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