

## PMP8740 REV E Bill of Materials

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
C1	1	2200pF	C1608C0G1H222J	TDK	CAP, CERM, 2200 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C2, C7, C11, C14, C17, C30, C31, C40, C41, C44, C45, C51, C52, C60, C63, C65, C68, C70, C94, C95, C97, C98	22	0.1uF	C1608X7R1H104K	TDK	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	603
C3, C10, C23, C24, C42, C43, C61, C62, C69, C71, C73	11	1uF	C1608X7R1E105K080AB	TDK	CAP, CERM, 1uF, 25V, +/-10%, X7R, 0603	603
C4, C88	2	2.2uF	C2012X7R1C225K	TDK	CAP, CERM, 2.2uF, 16V, +/-10%, X7R, 0805	805
C5, C15, C90, C91, C96, R21, R43, R124	8	DNP	DNP	TDK	DNP	603
C6, C16	2	0.22uF	C1608X7R1C224K	TDK	CAP, CERM, 0.22uF, 16V, +/-10%, X7R, 0603	603
C8	1	0.47uF	C2012X7R1C474K	TDK	CAP, CERM, 0.47uF, 16V, +/-10%, X7R, 0805	805
C9, C28	2	330pF	C1608C0G1H331J	TDK	CAP, CERM, 330pF, 50V, +/-5%, C0G/NP0, 0603	603
C12	1	560pF	C1608C0G1H561J	TDK	CAP, CERM, 560pF, 50V, +/-5%, C0G/NP0, 0603	603
C13, C36, C37, C38, C39, C46, C47, C49, C50, C66, C67, C72	12	0.022uF	C1608X7R2A223K	TDK	CAP, CERM, 0.022uF, 100V, +/-10%, X7R, 0603	603
C18	1	10uF	C4AEHBU5100A11J	KEMET	Capacitor, Polyester Film, vvV, ±10%	1220 x 0.768 inch
C19, C29, C53, C54, C55, C56	6	470uF	EKZM500ESS471MK20S	Nippon Chemi-Con	Capacitor, Electrolytic, KZM series, 50V, 105C, 20%	0.492 inch
C25	1	4.7uF	C3216X7R1E475K	TDK	CAP, CERM, 4.7uF, 25V, +/-10%, X7R, 1206	1206
C26, C27	2	10uF	C3216X7R1A106M	TDK	CAP, CERM, 10uF, 10V, +/-20%, X7R, 1206	1206
C32, C33, C34, C35	4	1000pF	CC1206KKX7RCBB102	Yageo America	CAP, CERM, 1000pF, 1000V, +/-10%, X7R, 1206	1206
C48, C58, C59	3	10uF	GRM32ER71H106KA12L	MuRata	CAP, CERM, 10uF, 50V, +/-10%, X7R, 1210	1210
C57	1	0.22uF	C2012X7R1E224K	TDK	CAP, CERM, 0.22 uF, 25 V, +/- 10%, X7R, 0805	805
C64, C74, C75, C76	4	0.1uF	C3216X7R2E104K	TDK	CAP, CERM, 0.1uF, 250V, +/-10%, X7R, 1206	1206
C77, C78	2	2200pF	DE1E3KX222MA4BL01	MuRata	CAP, CERM, 2200pF, 250V, +/-20%, E, Cap, 7x12x9 mm	Cap, 7x12x9 mm
C79	1	220pF	C0603C221J5GACTU	Kemet	CAP, CERM, 220pF, 50V, +/-5%, C0G/NP0, 0603	603
C80	1	0.01uF	C1608X7R1H103K	TDK	CAP, CERM, 0.01 uF, 50 V, +/- 10%, X7R, 0603	603
C81	1	100uF	C3216X5R1A107M160AC	TDK	CAP, CERM, 100uF, 10V, +/-20%, X5R, 1206_190	1206_190
C82	1	1000pF	C1608X7R1H102K	TDK	CAP, CERM, 1000pF, 50V, +/-10%, X7R, 0603	603
C83, C86	2	68pF	C1608C0G1H680J	TDK	CAP, CERM, 68pF, 50V, +/-5%, C0G/NP0, 0603	603
C84, C87, C89, C92, C93	5	1uF	C2012X7R1C105K	TDK	CAP, CERM, 1uF, 16V, +/-10%, X7R, 0805	805
C85	1	2700pF	C1608C0G1H272J	TDK	CAP, CERM, 2700pF, 50V, +/-5%, C0G/NP0, 0603	603
C99	1	1000pF	C1608C0G1H102J	TDK	CAP, CERM, 1000 pF, 50 V, +/- 5%, C0G/NP0, 0603	603
C100, C101, C102, C103	4	470pF	VJ1206Y471KBEAT4X	Vishay-Vitramon	CAP, CERM, 470 pF, 500 V, +/- 10%, X7R, 1206	1206
D1, D3, D28	3	30V	BAT42WS-7-F	Diodes Inc.	Diode, Schottky, 30 V, 0.2 A, SOD-323	SOD-323

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D2, D4, D6, D19, D20, D21, D29, D30, D31, D32, D33	11	BAS21	BAS21-7-F	Diodes Inc.	Diode, Switching, 200V, 0.2A, SOT-23	SOT-23
D7	1	600V	MURS360T3G	ON Semiconductor	Diode, Ultrafast, 600V, 3A, SMC	SMC
D8, D9, D11, D12, D14, D15, D16, D17	8	BAT54SLT1G	BAT54SLT1G	ON Semiconductor	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23
D10	1	MURS360T3G	MURS360T3G	ON Semiconductor	Diode, Ultrafast, 600V, 3A, SMC	SMC
D13	1	MURB1620CT	VS-MURB1620CTPBF	Vishay-Semiconductor	Diode, Ultrafast, 200V, 8A, DDPAK	DDPAK
D18	1	13V	MMSZ5243B-7-F	Diodes Inc.	Diode, Zener, 13 V, 500 mW, SOD-123	SOD-123
D23, D24, D25, D27	4	PMEG6010	PMEG6010CEH,115	NXP Semiconductor	Diode, Schottky, 60 V, 1 A, SOD-123F	SOD-123F
D26	1	5.1V	MMSZ4689T1G	ON Semiconductor	Diode, Zener, 5.1 V, 500 mW, SOD-123	SOD-123
HS1, HS2, HS3, HS4	4	2.52C/W	SK 481-50	Fischer	Heatsink, Vertical-mount	30mm x 45mm x 50mm lenght
HS5, HS6	2	7109D	7109D	Aavid	Heatsink, SMT	0.763 X 1.000 inch
HSO1, HSO2, HSO3, HSO4, HSO5, HSO6	6	5mm	R30-3000702	Harwin	HEX STANDOFF M3 BRASS 7MM	HEX STANDOFF M3 BRASS 7MM
J1	1	1757268	1757268	Phoenix Contact	Header (shrouded), 5.08 mm, 4x1, R/A, TH	Header (shrouded), 5.08mm, 4x1, R/A, TH
J2	1	87758-4016	87758-4016	Molex	Header, 2mm, 20x2, Gold, TH	20x2 Header
J4	1	66506-072LF	66506-072LF	FCI	Header (shrouded), 100mil, 10x2, Gold plated, TH	10x2 Shrouded Header
J5	1	5103308-1	5103308-1	TE Connectivity	Header (shrouded), 100mil, 5x2, Gold, TH	5x2 Shrouded header
J6	1	SBH11-PBPC-D07-ST-BK	SBH11-PBPC-D07-ST-BK	Sullins Connector Solutions	Header (shrouded), 100 mil, 7x2, Gold plated, TH	7x2 Shrouded Header
J7	1	15244557	15244557	Molex	Header, 4POS, 200mil, Vertical, Tin, TH	8.5x23.64 mm
J8	1	1762754	1762754	Phoenix Contact	Header (shrouded), 15 mm, 3x3, R/A, TH	Header (shrouded), 15mm, 3x1, R/A, TH
J9, J10	2	2-406549-1	2-406549-1	AMP	RJ-45, Right Angle, Yellow/Green LED, tab up	RJ-45 Jack
J11	1	5-146261-1	5-146261-1	TE Connectivity	Header, 100mil, 2x1, Gold, TH	Header, 2x1, 100mil
J18, J19	2	DNP	DNP	DNP	DNP	10x16.65mm
L1	1	10uH	744878100	Würth Elektronik eiSos	Coupled inductor, 10 µH, 1 A, 0.14 ohm, +/- 20%, SMD	7 x 4 x 7 mm
L2	1	2.3uH	7443550230	Würth Elektronik eiSos	Inductor, Shielded Drum Core, WE-Perm, 2.3uH, 17A, 0.0037 ohm, SMD	WE-HCA2
L3	1	7.9uH	170782-a	Kaschke Components	Inductor, Wirewound, 7.9uH, 60A, SMD	40.40x31.6x38.1mm
LW1, LW2, LW3, LW4	4	M3 Lock Washer M3	MLWZ 003	B&F Fastener Supply	M3 Split Lock Washer 0.032" (0.81mm) Thick Steel Zinc	
MW1, MW2, MW3, MW4	4	M3, 0.53mm thickness	5205820-3	B&F Fastener Supply	WASHER FLAT M3 STEEL, 0.53mm th.	
N1	1	M4 Nut	MHNZ 004	B&F Fastener Supply	M4 Hex Nut 0.276" (7.01mm), Zinc	M4 Nut
N2, N3, N4, N5, N6, N7	6	M3 Nut	MHNZ 003	B&F Fastener Supply	M3 Hex Nut 0.217" (5.51mm), Zinc	M3 Nut
NW1, NW2, NW3, NW4	4	0.81mm thickness	3349	Keystone	Flat Nylon Washer 0.81mm thickness	Flat Nylon Washer
Q1, Q2, Q3, Q4, Q35, Q36, Q37, Q38, Q39, Q200	10	BSS138	BSS138	Fairchild Semiconductor	MOSFET, N-CH, 50V, 0.22A, SOT-23	SOT-23
Q6, Q7, Q13, Q14	4	MMBT3904	MMBT3904	Fairchild Semiconductor	Transistor, NPN, 40V, 0.2A, SOT-23	SOT-23
Q8, Q9, Q15, Q16	4	IPP65R190CFD	IPP65R190CFD	Infineon Technologies	MOSFET, N-CH, 650V, 17.5A, TO-220AB	TO-220AB

Designator	Quantity	Value	PartNumber	Manufacturer	Description	PackageReference
Q10, Q11, Q18, Q19	4	MMBT3906	MMBT3906	Fairchild Semiconductor	Transistor, PNP, 40V, 0.2A, SOT-23	SOT-23
Q12, Q17, Q20, Q25, Q26, Q27, Q28, Q29, Q30, Q31	10	CSD18532Q5B	CSD18532Q5B	Texas Instruments	MOSFET, N-CH, 60V, 172A, SON 5x6mm	SON 5x6mm
Q21, Q22, Q23, Q24	4	IPP120N20NFD	IPP120N20NFD	Infineon Technologies	MOSFET, N-CH, 200V, 84A, TO-220AB	TO-220AB
Q32	1	MMDT5551	MMDT5551	Diodes Inc.	Transistor, Dual NPN, 160 V, 0.2 A, SOT-363	SOT-363
Q33	1	60 V	MMBT2907A	Fairchild Semiconductor	Transistor, PNP, 60 V, 0.8 A, SOT-23	SOT-23
Q34	1	IRLML5203	IRLML5203	Diodes Inc.	MOSFET, P-CH, -30 V, -3 A, SOT-23	SOT-23
R1, R114	2	0	CRCW06031R00FKEA	Vishay-Dale	RES, 0 ohm, 1%, 0.1W, 0603	603
R2, R31, R33, R51, R55, R63, R66, R80, R111, R115	10	10.0k	CRCW060310K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.1W, 0603	603
R3	1	68.1k	CRCW060368K1FKEA	Vishay-Dale	RES, 68.1 k, 1%, 0.1 W, 0603	603
R4, R24, R30, R45, R52, R104, R108	7	100k	CRCW0603100KFKEA	Vishay-Dale	RES, 100k ohm, 1%, 0.1W, 0603	603
R5, R6	2	8.25k	CRCW06038K25FKEA	Vishay-Dale	RES, 8.25k ohm, 1%, 0.1W, 0603	603
R7	1	15.4k	CRCW060315K4FKEA	Vishay-Dale	RES, 15.4k ohm, 1%, 0.1W, 0603	603
R8	1	DNP	Do Not Populate	Vishay-Dale	Do Not Populate	603
R9, R10, R11	3	49.9k	CRCW060349K9FKEA	Vishay-Dale	RES, 49.9k ohm, 1%, 0.1W, 0603	603
R12, R39	2	49.9	CRCW060349R9FKEA	Vishay-Dale	RES, 49.9 ohm, 1%, 0.1W, 0603	603
R13	1	33.2k	CRCW120633K2FKEA	Vishay-Dale	RES, 33.2 k, 1%, 0.25 W, 1206	1206
R14	1	2.49k	CRCW06032K49FKEA	Vishay-Dale	RES, 2.49k ohm, 1%, 0.1W, 0603	603
R15, R42	2	60.4k	CRCW060360K4FKEA	Vishay-Dale	RES, 60.4k ohm, 1%, 0.1W, 0603	603
R16	1	4.64k	CRCW06034K64FKEA	Vishay-Dale	RES, 4.64k ohm, 1%, 0.1W, 0603	603
R17	1	348	CRCW0603348RFKEA	Vishay-Dale	RES, 348 ohm, 1%, 0.1W, 0603	603
R18	1	562	CRCW0603562RFKEA	Vishay-Dale	RES, 562, 1%, 0.1 W, 0603	603
R19	1	2.37k	CRCW06032K37FKEA	Vishay-Dale	RES, 2.37k ohm, 1%, 0.1W, 0603	603
R20	1	90.9k	CRCW060390K9FKEA	Vishay-Dale	RES, 90.9k ohm, 1%, 0.1W, 0603	603
R22	1	13.0k	CRCW060313K0FKEA	Vishay-Dale	RES, 13.0k ohm, 1%, 0.1W, 0603	603
R23, R41, R44, R61	4	47.5k	CRCW060347K5FKEA	Vishay-Dale	RES, 47.5 k, 1%, 0.1 W, 0603	603
R25, R26, R35, R46, R47, R105, R118, R121	8	4.75k	CRCW06034K75FKEA	Vishay-Dale	RES, 4.75k ohm, 1%, 0.1W, 0603	603
R27, R28, R49, R60, R83, R93, R94, R123	8	1.00k	CRCW06031K00FKEA	Vishay-Dale	RES, 1.00k ohm, 1%, 0.1W, 0603	603
R29, R50	2	102k	CRCW0603102KFKEA	Vishay-Dale	RES, 102 k, 1%, 0.1 W, 0603	603
R34	1	16.2	CRCW251216R2FKEG	Vishay-Dale	RES, 16.2, 1%, 1 W, 2512	2512
R36	1	0 Ohm	0 Ohm	Vishay-Dale	RES, 0 Ohm, 0.25 W, 1206	1206
R37	1	150k	CRCW0603150KFKEA	Vishay-Dale	RES, 150 k, 1%, 0.1 W, 0603	603
R38, R110	2	33.2	CRCW060333R2FKEA	Vishay-Dale	RES, 33.2 ohm, 1%, 0.1W, 0603	603
R40	1	28.0k	CRCW060328K0FKEA	Vishay-Dale	RES, 28.0k ohm, 1%, 0.1W, 0603	603
R48, R70, R71, R72, R75, R76, R77, R81, R82, R85, R88, R89, R90, R117, R120	15	100	CRCW0603100RFKEA	Vishay-Dale	RES, 100 ohm, 1%, 0.1W, 0603, RES, 100, 1%, 0.1 W, 0603	603
R53, R84	2	10.0k	CRCW080510K0FKEA	Vishay-Dale	RES, 10.0k ohm, 1%, 0.125W, 0805	805
R62	1	105k	CRCW0603105KFKEA	Vishay-Dale	RES, 105k ohm, 1%, 0.1W, 0603	603
R64	1	20.0k	CRCW060320K0FKEA	Vishay-Dale	RES, 20.0k ohm, 1%, 0.1W, 0603	603

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R65, R67, R109, R112, R113	5	22.1k	CRCW060322K1FKEA	Vishay-Dale	RES, 22.1k ohm, 1%, 0.1W, 0603	603
R68, R125, R126, R127, R128	5	10	CRCW201010R0FKEF	Vishay-Dale	RES, 10.0, 1%, 0.75 W, 2010	2010
R69	1	100k	CRCW0805100KJNEA	Vishay-Dale	RES, 100k ohm, 5%, 0.125W, 0805	805
R73, R74, R86, R87	4	10	CRCW120610R0FKEA	Vishay-Dale	RES, 10.0, 1%, 0.25 W, 1206	1206
R78, R79, R95, R96, R97, R99	6	2.21	CRCW12062R21FKEA	Vishay-Dale	RES, 2.21 ohm, 1%, 0.25W, 1206	1206
R91	1	47.5	CRCW080547R5FKEA	Vishay-Dale	RES, 47.5 ohm, 1%, 0.125W, 0805	805
R92	1	0.2 milli-Ohm	BVR-Z-R0002-1.0	Isabellenhuetten	Resistor, precision shunt, 5W, 1%,	3637
R98	1	1K	RTO020F10000JTE3	Vishay-Dale	RES, 1Kohm, 5%, 20W, TH	TO-220-2
R100, R101	2	165k	CRCW0603165KFKEA	Vishay-Dale	RES, 165k ohm, 1%, 0.1W, 0603	603
R102	1	27.4k	CRCW060327K4FKEA	Vishay-Dale	RES, 27.4 k, 1%, 0.1 W, 0603	603
R103	1	169k	CRCW0603169KFKEA	Vishay-Dale	RES, 169 k, 1%, 0.1 W, 0603	603
R106	1	332	RC0603FR-07332RL	Yageo America	RES, 332 ohm, 1%, 0.1W, 0603	603
R107, R119, R122	3	1.00Meg	CRCW06031M00FKEA	Vishay-Dale	RES, 1.00 M, 1%, 0.1 W, 0603	603
R116	1	121	CRCW1206121RFKEA	Vishay-Dale	RES, 121, 1%, 0.25 W, 1206	1206
RS1, RS2, RS3, RS4, RS5, RS6, RS7, RS8	8		THFU 3	Fischer Elektronik	Retaining Spring for Transistors, 50N	
RT1, RT2	2	22 ohm	PTCCL09H171HBE	Vishay	Thermistor PTC, 15 ohm, 8.5mm Disc	8.5mm Disc
S1	1	NK236W	NK236W	APEM	Switch, Slide Flush actuator, SPDT, R/A, TH	R/A TH SWITCH
SC1	1	Srew M4 x 30mm	7985IO4302	Buerklin	M4 x 30mm Screw Fillister head	Screw M4 x 30mm
SC2, SC3, SC4, SC5, SC6, SC7, SC8, SC9, SC10, SC11	10	Srew M3 x 10mm	M3 10 PRSTMC Z100	TR Fastenings	Machine Screw, M3, 10 mm, Steel, Bright Zinc, Pan Head Pozidriv	Screw M3 x 10mm
SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8	8	Isolation for TO220	WSC3P	Fischer Elektronik	Silicon Insulating Sleeve, Tube 11x25mm	11x25mm
T1	1	1:100, Ls=20 mH	CS4100V-01L	Coilcraft	Transformer , Current sense, 1:100, 20 mH, TH	Transformer, 770x780x570 mil
T2, T3	2	900uH	56PR3362	Vitec Corporation	Transformer, 900 uH, TH	12.5x11.5mm
T4	1	3.2mH	PQ50-50 145400-A	Kaschke Components	Transformer, 3.2mH, TH	Transformer, 52x54x62 mm
T7	1	10uH	Custom: see test report	Custom: see test report	Inductor, PQ20/20/14-1, Ferrite, 10 uH, 15 A, TH	PQ20/20/14-1
TP1	1	Black	5006	Keystone	Test Point, Compact, Black, TH	Black Compact Testpoint
TP2, TP5	2	Orange	5008	Keystone	Test Point, Compact, Orange, TH	Orange Compact Testpoint
TP3, TP6	2	Red	5005	Keystone	Test Point, Compact, Red, TH	Red Compact Testpoint
TP4, TP7, TP8, TP13	4		8600-0-05-80-00-00-03-0	Mill-Max	PCB Pin, solderless Pressfit, Tin over Nickel	PCB Pin
U1	1	TLC272CD	TLC272CD	TI	IC, Precision Dual Operational Amplifiers	SO8
U2	1	UCC28951PWR	UCC28951PWR	Texas Instruments	Green Phase-Shifted Full-Bridge Controller with Synchronous Rectification with Current Control, 97 % Duty Cycle, -40 to +125 degC, 24-pin TSSOP (PW), Green (RoHS & no Sb/Br)	PW0024A
U3	1	LMT87DCKR	LMT87DCKR	Texas Instruments	Analog Temperature Sensor with Class-AB Output, 5-pin SC-70	MAA05A
U4	1	TLC2272A	TLC2272ACDA	Texas Instruments	Advanced LinCMOS(TM) Rail-to-Rail Dual Operational Amplifier, 4.4 to 16 V, 0 to 70 degC, 8-pin SOIC (D0008A), Green (RoHS & no Sb/Br)	D0008A
U6	1	TPS560200DBV	TPS560200DBV	Texas Instruments	4.5V to 18V Input, 500mA Synchronous Step Down SWIFT Converter, DBV0005A	DBV0005A

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U7	1	TPS715345DCKR	TPS715345DCKR	Texas Instruments	50 mA, 24 V, 3.2-mA Supply Current Low-Dropout Linear Regulator, DCK0005A	DCK0005A
U8	1	TL431AIDBZ	TL431AIDBZ	Texas Instruments	PRECISION PROGRAMMABLE REFERENCE, DBZ0003A	DBZ0003A
U9, U10, U12, U13	4	UCC27524DGN	UCC27524DGN	Texas Instruments	Dual 5-A High-Speed Low-Side Gate Driver, DGN0008D	DGN0008D
U11	1	OPA378AIDBV	OPA378AIDBV	Texas Instruments	Low-Noise, Low Quiescent Current, Precision Operational Amplifier e-trim Series, DBV0005A	DBV0005A
U14	1	SN65HVD256D	SN65HVD256D	Texas Instruments	CAN Transceiver with Fast Loop Times for Highly Loaded Networks, 85 mA, 5 V, -40 to 125 degC, 8-pin SOIC (D), Green (RoHS & no Sb/Br)	D0008A